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UNITED CATALOG PUBLISHERS, INC.
60 Madison Avenue • Hempstead, N. Y.

Affiliated Publications and Services: eem—*Electronic Engineers Master* • *Electronic Products Magazine* • *UCP Pricing Service* • *File-O-Matic* • *Audio-File*

The Radio-Electronic MASTER

1961 (25th) Edition

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Library of Congress Catalog Card No. 39-15586

PRINTED IN U.S.A.

THE RADIO-ELECTRONIC MASTER

GUIDE TO PRODUCT SECTIONS

As publishers of The Radio-Electronic MASTER, we take great pride in the fact that this publication has reflected the changes and growth of the electronic industry for more than 25 years. To continue this policy of "changing to meet the times," the product sections in this edition have been revised in order to facilitate the user's selection and buying decisions.

The 32 Product Sections listed below broadly categorize related electronic products and services so that you can quickly compare similar items within the sections. However, to locate specific products within the catalog pages, always refer to the General Index. NOTE: Manufacturers' pages are arranged alphabetically within each section.

Sec. 1200 Pages 23 thru 61	Antennas & Accessories
Sec. 1300 Pages 62 thru 103	Audio: High Fidelity Tuners, Amplifiers, Sound Systems, Intercoms, Kits
Sec. 1320 Pages 104 thru 183	Audio: Speakers & Systems, Enclosures, Microphones, Headphones, Accessories
Sec. 1340 Pages 184 thru 238	Audio: Recording & Playback Equipment, Accessories
Sec. 1400 Pages 240 thru 329	Cabinets, Chassis, Racks, Boxes, etc.
Sec. 1500 Pages 330 thru 603	Capacitors (All Types), Circuits
Sec. 1600 Pages 604 thru 614	Chemicals (Acids, Coatings, Paints, Varnishes, Lubricants, etc.)
Sec. 1800 Pages 616 thru 629	Coils (Inductors, Toroids), Assemblies, Forms
Sec. 1900 Pages 630 thru 688	Communications Equipment (Broadcast, Television, Amateur, Facsimile)
Sec. 2100 Pages 689 thru 783	Connectors (Plugs, Jacks, Receptacles, Sockets, Clips)
Sec. 2200 Pages 784, 785	Controls, Control Components & Systems
Sec. 2300 Pages 786 thru 788	Crystals, Equipment & Accessories
Sec. 2400 Pages 789 thru 802	Dials, Knobs, Handles, Panel Components
Sec. 2600 Pages 804, 805	Fans & Blowers; Air Conditioners; Environmental Chambers
Sec. 2800 Pages 806 thru 858	Hardware (Bolts, Nuts, Screws, Washers, Terminals, Terminal Boards, etc.)
Sec. 2900 Pages 859 thru 942	Instruments (Electrical Measuring & Test)

Sec. 3100 Pages 943 thru 946	Insulators, Insulating Material & Parts
Sec. 3400 Page 947	Microware Radar Equipment, Components & Accessories
Sec. 3500 Pages 948 thru 951	Motors, Rotating Components, Accessories
Sec. 3700 Pages 952 thru 955	Photoelectric Equipment & Components
Sec. 3900 Pages 956 thru 975	Pilot & Signal Lamps, Lights & Accessories
Sec. 4000 Pages 976 thru 1035	Power Supplies, Converters, Inverters, Vibrators, Batteries, Flashlights, etc.
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Sec. 5100 Pages 1201 thru 1257	Switches, Circuit Breakers, Fuses, Counters, Motors
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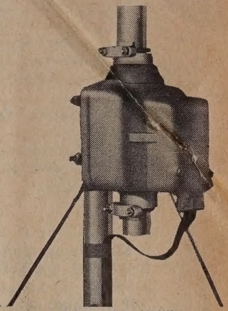
ALLIANCE TV PRODUCTS

ALLIANCE TENNA-ROTORS

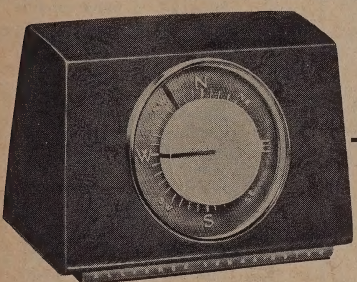
ALLIANCE TENNA-ROTOR

The Alliance Tenna-Rotor, available in three models illustrated below, is a TV or FM antenna rotator. Designed to rotate all conventional type antennas. It consists of a fully enclosed electrically driven rotor into which the antenna center-post is clamped. Four-conductor "zip" cable connects rotator with plastic control case placed near receiver, which plugs into any 60 cycle 110-volt AC house circuit. A selector switch controls rotation clockwise or counter-clockwise to point antenna in any direction for optimum reception.



ROTATOR UNIT

Most Widely Advertised Rotator on the Market



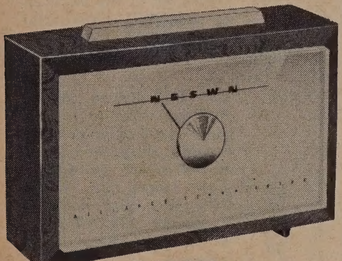
Model U-98 Automatic
Available in *Forest Green, *Ivory and Mahogany Grain. List Price $48.68
**Slightly Higher*

FULLY AUTOMATIC MODEL U-98

"SET IT AND FORGET IT"

The first and finest fully automatic rotator on the market.
BEAUTIFUL NEW DECORATOR MODELS!
New Colors—*Forest Green, *Ivory, as well as Standard Mahogany.

Simply set the pointer—antenna automatically turns by itself and stops at the direction shown on the indicator dial. New styling plus the exclusive automatic feature makes Model U-98 the ultimate in rotators!



Model T-12
(with Tenna-Teller Dial)
Available in *Forest Green, *Ivory and Mahogany Grain. List Price $37.68
**Slightly Higher*

MODEL T-12

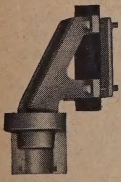
WITH EXCLUSIVE TENNA-TELLER DIRECTION INDICATOR

This finger-tip electrically driven and manually operated Alliance Tenna-Rotor is noted for extreme accuracy, compactness and smart styling. The "Tenna-Teller" indicator dial shows the exact compass direction to which the antenna is pointed and gives a constant reading.

Both new model Alliance Tenna-Rotors, the U-98 automatic and the T-12 have many new and advanced features of design which include increased speed of rotation and incorporate 32 distinct improvements.

The new rotator unit has double-action, magnetic anti-drift brake, plus smoother synchronization with control units. All Alliance Tenna-Rotors are pre-sold through years of continuous nationwide television advertising.

THRUST BEARING BRACKETS FOR ALLIANCE TENNA-ROTORS

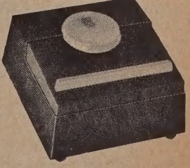


Model TBB
List Price...$4.95

The Alliance Thrust Bearing Bracket, accessory to Alliance Tenna-Rotor, is made to provide added support for all heavier conventional type antennas. It assures extra rigid support and maximum resistance to high winds.

MODEL K22

Alliance Model K-22 Tenna-Rotor features a fingertip control bar. When pressed on one end the antenna rotates in one direction, reverses when other end is depressed. Center disc signal light indicates limit of travel is reached.



Model K-22
Standard Color Only
List Price $26.95

THE ALLIANCE MANUFACTURING COMPANY, INC. • Alliance, Ohio

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the antenna specialists company

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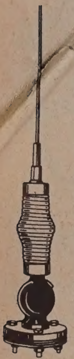
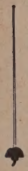


G-1 Standard professional communication antenna comprised of the following:
ASP-3 Base is cadmium plated swivel ball coated with corrosion resistant paint, plated hardware.
ASP-3A Spring, Cadmium plated.
ASP-3BL Stainless steel, 96" whip with plated set screw adaptor.

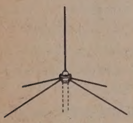
G-2 Same as G-1 except is all stainless and is comprised of the following:
ASP-81 Base same as ASP-3 except with stainless hardware.
ASP-70 All stainless steel spring.
ASP-121 Stainless steel, 96" whip with stainless set screw adaptor.

RUBBER HOLE PLUGS

M-10 Plug to fill 1$\frac{5}{16}$" hole.
M-11 Plug to fill ¾" hole.
M-16 Plug to fill ⅜" hole.
M-18 Plug to fill ⅞" hole.



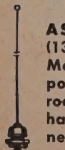
ASPC201 ¼ wave length roof top antenna (130-470 MC) mounts in ⅜" hole. Same as IPC (Danbury-Knudson) Has snap-in split finger mounting sleeve for fast installation. Provides quick, solderless lead connection. Lead is not furnished.



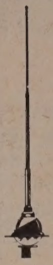
ASPB11 Ground plane antenna for 144-470 MC. Non-directional. Will handle up to 3 K.W. Vertically polarized. Radiator and radials are ⅜" aluminum. Mounts on 1¼" IPS pipe. Adaptor not included.

ASPB12 Skirt to be mounted ¼ wave length below ASPB11 to lower angle of radiation. Has ⅜" dia. aluminum radials.

ASP-13 Adaptor for ASPB11 connects PL-259 adaptor to antenna.



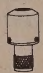
ASPR1 Roof top antenna (130-176 MC, 450-470 MC) Mounts in ¾" hole. Provides positive 4 point grounding to roof top. Stainless steel whip has solderless type cable connector. No lead furnished.



ASPR80 Disguise antenna looks like ordinary telescoping antenna. Joints permanently soldered. 56" chrome plated whip. For 25-174 MC. Swivel base permits mounting on cowl, fender or rear deck. Cable not supplied.

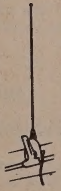
ASPR85 Same as ASPR80 except with tapered, stainless steel, 56" whip.

ASPH85 Same as ASPR85 except whip is 72" for 39-59 MC. Lead not supplied.

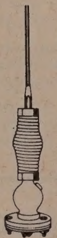


Antenna Base Loading Coil for use on portable radios or portable tranceivers in the 25-54 MC band. Fits into SO-239 receptacle. Has #10-32 threaded stud at top to accept whip. Used with a/s Model ASP-58.

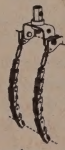
Model	Range
ASP-172	**25-29 MC**
ASPA172	**29-33 MC**
ASPB172	**33-37 MC**
ASPC172	**37-42 MC**
ASPD172	**42-47 MC**
ASPE172	**47-50 MC**
ASPF172	**50-54 MC**



ASP-157 Gutter clamp antenna for 130-470 MC. Clamps to rain gutter of any car. Complete with 12' of RG-58/U cable and PL-259 adaptor. Specify frequency when ordering.

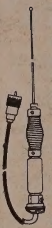


M-1D-96" Professional Size. Chrome plated swivel base, chrome plated spring and cutable 96" stainless steel whip with removable adaptor. Swivel base has thick, one-piece Polyester Fiberglas insulator and steel back-up plate. Water sealing gasket and mounting hardware furnished.

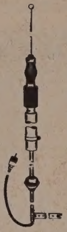


ASP-143 Double chain bumper mount. Fits on virtually all American and foreign cars. Cadmium plated alloy steel interlocking "Z" links assure secure mounting. Accepts ⅜"-24 threaded spring or whip.

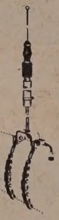
ASP-143S Same as ASP-143 except stainless.



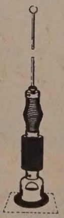
ASP-177 ½ wave length, high gain roof top antenna (108-174 MC) mounts in ¾" hole. 3 Db. gain doubles transmitting power. Receiver becomes 1.56 times more sensitive (4 Db.) thus increasing range. Audio is improved. Solderless, weather-tight mounting unit. Sealed, tamperproof transformer. Includes 12' RG-58/U cable and PL-259 connector.



ASP-197 ½ wave length, high gain cowl mount antenna (108-174 MC) mounts in ⅞" hole. Has all the performance features of ASP-177. Includes a tuneable sleeve for added peaking adjustment. Includes 12' RG-58/U cable with PL-259 connector and under-fender mounting support.

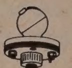


ASP-200 ½ wave length, high gain bumper mount antenna. (108-174 MC) Same as ASP-197 except mounts on bumper with double chain of links. Includes 12' of RG-58/U cable and PL-259 connector.

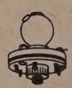


ASP-203 Kit to convert roof top antenna to high gain. Construction and features are the same as ASP-177. Converts existing ¼ wave length G.E., R.C.A., D&K, IPC. and Antenna Specialists ASP-201 to ½ wave length. Lead is not included.

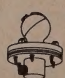
ASP-206 Conversion kit. Same as ASP-203 except converts Motorola antenna to ½ wave high gain.



ASP-180 Painted aluminum swivel base with ASP-160 adaptor. Mounts on any surface.



ASP-175 Painted aluminum swivel base with ASP-161 adaptor. Mounts from outside of rear body.



ASP-181 Painted aluminum swivel base with ASP-162 adaptor. Adaptor permits insertion of cable from side.

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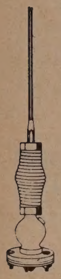
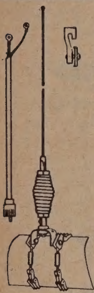


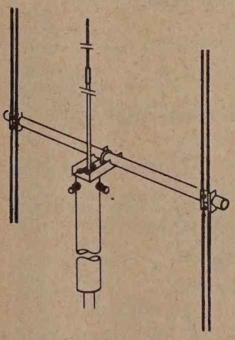
M-1D-102″ Professional size chrome swivel base, chrome spring and 102″ stainless steel whip. Swivel ball has thick one-piece Polyester Fiberglas insulator and steel back up plate. Water sealing gasket and mounting hardware furnished.

M-1-102″ Same as M-1D-102″ except has aluminum base and cadmium plated spring.

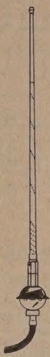


MB24 Bumper mount antenna fits virtually all U. S. and foreign cars. Mount has cadmium plated alloy steel interlocking "Z" links. Cadmium plated spring. 102″ stainless steel whip. Furnished with whip gutter clip and 20′ of RG-58/U cable having PL-259 connector on one end and solder lugs on the other.

M-24 Same as MB24 except with single bumper mount.



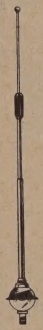
M-37 Vertical beam antenna provides both directional and vertical polarized radiation. Gives 7 Db. forward gain over ground plane with 5x power gain. Provides 13.5 Db. front to back ratio and wide half power angle. All aluminum. 18′ high and 11′ wide. Accepts PL-259 connector. Operates with 52 ohm cable.



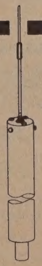
M-52 Fiberglas mobile antenna with continuously loaded whip. 4′ whip sealed in white plastic covering to prevent shorting. Patented rocker support fits in 15/16″ to 1 1/4″ hole. Furnished with 5′ of RG-58/U cable and PL-259 connector.

M-53 Fiberglas, continuously loaded whip.* 4′ high. Plastic covered. Continuously wound conductor produces uniform current distribution with 52 ohm match. Chrome plated brass ferrule has 3/8-24″ male thread.

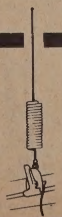
*Process patent 2938210



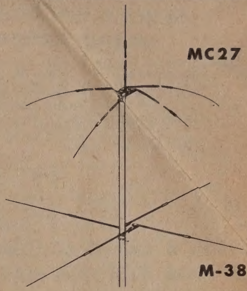
M-49 Center loaded antenna provides excellent horizontal pattern and eliminates fading when changing direction. Not necessary to trim or clip whip to tune. Sealed loading coil. Low VSWR. Collapsible chrome plated tube assembly and stainless steel whip. 60″ extended, 43″ collapsed. Patented rocker support fits in 15/16″ to 1 1/4″ hole. Furnished with 5′ of RG-58/U cable with coax fittings on both ends.



M-36 One half wave length coaxial antenna consists of 9′ jointed solid aluminum vertical radiator bolted to 9′ two inch diameter aluminum skirt. Accepts PL-259 connector. Lowers angle of radiation. Operates with 52 ohm cable.

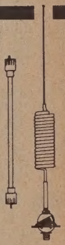


ASP-185 Auto gutter clamp antenna. Ideal for temporary use. Has Vinyl covered loading coil wound for 27 MC. Complete with 12′ RG-58/U cable and PL-259 adaptor. 40″ whip.

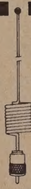


MC27 Ground plane antenna. Vertical radiator and radials are solid, heat treated aluminum in two 54″ lengths joined by threaded coupling nuts. Mounting bracket fits 1″ pipe or 1 1/4″ tubing. Radials droop to offer 50 ohm match. Antenna base accepts PL-259 connector. Hardware furnished.

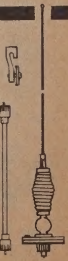
M-38 Isolating skirt for MC27. Lowers angle of radiation and minimizes effects of mounting structure. Mounts 9′ (1/4 wave length) below MC27.



ASP-189 Front cowl mounting antenna with Vinyl covered loading coil wound into stainless steel rod. Has patented rocker support that fits in 15/16″ to 1 1/4″ hole. Whip is 43″. Complete with 6′ of RG-58/U cable and PL-259 connectors on both ends.



ASP-63 For portable tranceivers. Vinyl covered loading coil wound into 40″ whip. Has PL-259 connector.



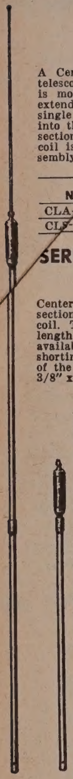
M-23 For rear or side mounting. 102″ stainless steel whip. Cadmium plated spring. Base is beautiful chrome plated with thick phenolic insulator, coax adaptor, rubber mounting pads and hardware. Complete with 20′ RG-58/U cable and PL-259 connector on both ends.

PREMAX ANTENNAS--MOUNTINGS--ACCESSORIES

SERIES C CENTER-LOADED MARINE ANTENNAS

A Center-Loaded Collapsible type Antenna, consisting of two telescoping, adjustable base sections on which the loading coil is mounted, with a tapered top whip section, giving a total extended length of about 19 feet. This Antenna collapses to a single unit with the whip section telescoping through the coil into the lower section, making a collapsed length of 7 feet. The sections are of seamless aluminum, or stainless steel and the coil is wound on low-loss bakelite tubing and treated after assembly with weatherproof coating.

No.	Type	Base O.D.	Base I.D.	Wt. Lbs.	List Price
CLA-119	Aluminum	1.000″	.834″	5	$50.00
CLS-1119	Stainless	1.000″	.900″	7	110.00



SERIES C

SERIES B CENTER-LOADED ANTENNAS FOR MOBILE & MARINE USE

Center-Loaded Whip-Type Antennas consist of a standard base section or spring-type on which is mounted a special Premax coil. The top is a taper-ground stainless steel whip 6 ft. in length, giving a total overall height of 9 ft. Various coils are available or the standard 75-meter coil can be adapted by shorting out turns on the coil. Antennas can be used with any of the Standard Premax Mountings shown below, or will fit any 3/8″ x 24-thread mounting.

NO.	FREQ.	PRICE
BXS-14	14,000 kc. (20M.)	$15.00
BXS-23	2374 kc. (CAP)	15.00
BXS-31	3105 kc. (APT)	15.00
BXS-38	3800 kc. (75M)	15.00
BXS-43	4325 kc. (CAP)	15.00
BXS-46	4585 kc. (CAP)	15.00
BXM-25	2000 to 3000 kc. (Marine)	15.00
	(Same as BXS but with Spring)	
BSS-14	14,000 kc. (20M.)	22.50
BSS-23	2374 kc. (CAP)	25.00
BSS-31	3105 kc. (APT)	25.00
BSS-38	3800 kc. (75M.)	25.00
BSS-43	4325 kc. (CAP)	25.00
BSS-46	4585 kc. (CAP)	25.00
BSM-25	2000 to 3000 kc. (Marine)	25.00

SERIES B COILS

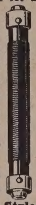
Premax also supplies the Series "B" coils in the standard frequencies above. Special frequencies available on request.

List Price......................................**$9.00 ea.**

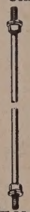
MAST EXTENSIONS

Polished Stainless Mast Extensions—threaded ⅜″-24 on both ends and supplied with stainless nuts and lockwashers. Available in 12″, 18″, 24″, 30″ and 36″ lengths.

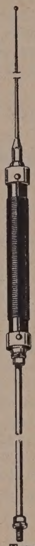
Prices range from $4.00 to $8.00 list each



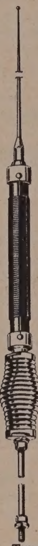
Style B Coil



BX Mast Extension



Type BXS



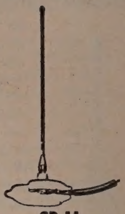
Type BSS

MOBILE VHF WHIPS

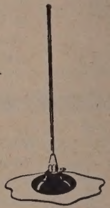
Style CD-11 Series—Permanent type. Porcelain insulator mounts thru ½″ hole in rooftop.

Style CD-21 Series—Emergency type. Attaches by heavy duty suction cup.

NO.	FREQ.	PRICE
CD-112	108 to 120 mc.	$4.00
CD-114	144 mc.	4.00
CD-115	152 to 162 mc.	4.00
CD-212	108 to 120 mc.	2.80
CD-214	144 mc.	2.80
CD-215	152 to 162 mc.	2.80



CD-11

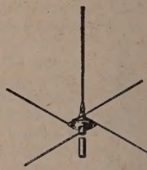


CD-21

GROUND PLANE ANTENNAS FOR POINT-TO-POINT USE

For point-to-point installations, Premax has two VHF Antennas: The Style GP-3 which has elements of heavily-plated spring steel with skirt wires that can be bent down to any angle to match coax cable. Mounting is within a water-proof housing that fits standard 1/2″ pipe. Cable carries down thru pipe.

NO.	FREQ.	USE	PRICE
GP-312	120 mc.	For aircraft and CAP.	$8.00
GP-314	140 mc.	For 2 meter and CD.	8.00
GP-315	150 mc.	For police and taxi	8.00

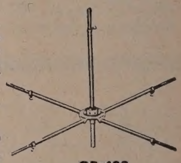


GP-3

PREMAX ADJUSTABLE GROUND PLANE ANTENNAS 20-60 mc

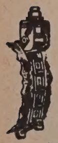
Another low-cost type Ground Plane Antenna is adjustable from 20 to 40 mc. or 40 to 60 mc. Standing wave ratio matching to 52-ohm line is 1.07 to 1.13 and to 72-ohm line is 1.27 to 1.23 depending on type of transformer cable. All-aluminum construction employing adjustable tubular elements.

GP-430	Adjustable 20-40 mc.	$50.00
GP-450	Adjustable 40-60 mc.	40.00



GP-400 Series

MOBILE MOUNTINGS FOR USE WITH WHIPS WITH ⅜″—24 MALE THREAD

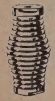


Type CA

CA BUMPER MOUNTING

"Chain Style — clamps on any bumper with 1″ clearance; no drilling; theft-proof.

Price **$11.00**

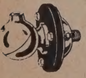


Type SA-2

SA-2 SPRING ADAPTOR

Stainless steel Spring Adaptor—can be attached to types R-2, R-3, L-1, CA and NA-1 to provide greater flexibility. Height 4¼″, diameter 2⅜″.

Price **$12.50**

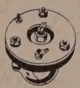


Type R-2

R-2 UNIVERSAL COAX TYPE MOUNTING

Solid Polished Aluminum split-ball can be adjusted to any angle. Has shielded coax connection and stainless hardware.

Price **$15.00**

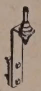


Type R-3

R-3 UNIVERSAL MOUNTING

Solid Polished Aluminum Swivel Ball. Heavy stainless steel backup plate with grounding screws. Stainless steel hardware.

Price **$15.00**

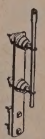


Type NA-1

TYPE NA-1

Bumper mounting with ceramic cone insulator and steel bracket.

Price **$8.50**

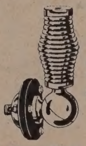


Type L-1

TYPE L-1

Bumper mounting, 2 pairs ceramic cone insulators with steel bracket. 10″ adjustment.

Price **$14.00**

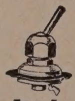


Type RS-2

TYPE RS-2 COMBINATION

Similar to R-2 except has spring as shown under SA-2.

Price **$25.00**

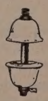


Type F

TYPE F

30° adjustable mounting for fender, cowl or gravel pan. Chrome-plated brass with phenolic insulation.

Price **$13.50**



Type V

TYPE V

Thru-deck mounting designed for Style BX and BS Center-Loaded Marine Antennas. White porcelain cones with a maximum opening for 1-1/2″ deck. Stud threaded 7/16″-24.

Price **$9.00**

PREMAX PRODUCTS, DIV. CHISHOLM-RYDER CO., NIAGARA FALLS, N. Y.

PREMAX ANTENNAS--MOUNTINGS--ACCESSORIES

VERTICAL TELESCOPING ANTENNAS
PREMAX STAINLESS STEEL ANTENNAS

Premax stainless steel antennas, fully telescoping and adjustable, have a locking device that holds the sections firmly at any desired point insuring a perfect electrical contact. Made of a high grade polished stainless steel tubing, hard-drawn to an extremely high tensile and yield strength, they are well suited for the most severe strains from high seas or winds.

PREMAX ALUMINUM ANTENNAS

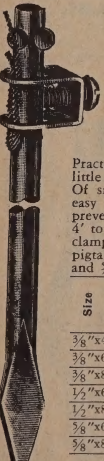
Premax aluminum antennas are lightweight, corrosion resistant and have adequate strength to meet practically all needs for marine, commercial and mobile installations that demand convenience in erecting and dependable performance. They are constructed of highly polished, specially tempered aluminum tubing engineered to withstand wind velocities up to 60 miles per hour.

PREMAX STEEL ANTENNAS

Inexpensive, popular, fully adjustable telescoping steel antennas for commercial, amateur, civil defense or other installations, made of high-tensile copper-nickel steel tubing, are heavily cadmium-plated. A positive locking device insures proper electrical contact between sections. *Not recommended for marine use on salt water.*

SPECIFICATIONS & DESCRIPTIONS OF TELESCOPING VERTICALS

NO.	DESCRIPTION	EXTD.	COLL.	BASE O.D.	BASE I.D.	WGT.	LIST PRICE
SS-1118	3-Sec. Stainless	18′4″	6′3″	.750″	.680″	6	$ 90.00
SS-1124	4-Sec. Stainless	24′3″	6′3″	1.000″	.900″	9	135.00
SS-1130	5-Sec. Stainless	30′0″	6′4″	1.250″	1.120″	13	185.00
SS-1135	6-Sec. Stainless	35′7″	6′4″	1.500″	1.370″	19	255.00
AL-312	2-Sec. Aluminum	12′4″	6′4″	.500″	.334″	1½	15.00
AL-518	3-Sec. Aluminum	18′5″	6′4″	.750″	.584″	3	25.00
AL-324	4-Sec. Aluminum	24′4″	6′4″	1.000″	.834″	5	35.00
AL-530	5-Sec. Aluminum	30′0″	6′5″	1.250″	1.084″	7	55.00
AL-535	6-Sec. Aluminum	35′8″	6′5″	1.500″	1.310″	12	75.00
112-M	2-Sec. Steel	11′8″	6′0″	.656″	.556″	4	12.00
318-M	3-Sec. Steel	17′3″	6′2″	.875″	.775″	7	18.00
224-M	4-Sec. Steel	22′9″	6′3″	1.063″	.963″	11	25.00
130-M	5-Sec. Steel	28′3″	6′4″	1.250″	1.150″	15	30.00
136-M	6-Sec. Steel	33′9″	6′5″	1.500″	1.400″	20	38.00



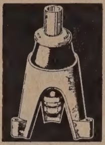
PROTECT YOUR EQUIPMENT WITH A PREMAX GROUND ROD!

Practical and efficient Ground Rods, costing so little that it doesn't pay to fuss with makeshifts! Of smooth, hard-drawn steel, chisel-pointed for easy driving and heavily copper-plated for rust prevention and to insure clean electrical contact. 4′ to 8′ lengths in ⅜″, ½″ and ⅝″ with screw clamp (illustrated) or in 6′ and 8′ lengths in pigtail wire, drilled hole or plain style, ½″ and ⅝″ only.

Size	Screw No.	Clamp List	Hole No.	Hole List	Pigtail No.	Pigtail List	Plain No.	Plain List
⅜″x4′	J-64	$ 80						
⅜″x6′	J-66	110						
⅜″x8′	J-68	165						
½″x6′	G-86	210	H-86	$200	P-86	$225	X-86	$180
½″x8′	G-88	250	H-88	240	P-88	265	X-88	220
⅝″x6′	G-106	300	H-106	290	P-106	315	X-106	265
⅝″x8′	G-108	380	H-108	370	P-108	395	X-108	345

(Prices are per 100 rods, bundled in 25s)

BASE MOUNTINGS FOR VERTICALS



TYPE 1 BASE INSULATOR

Heavy-duty type Base Mounting Insulator with compression rating up to 10,000 lbs. Has wet-process brown-glazed porcelain cones. Available in galvanized malleable iron, plain brass and chrome-plated brass, in rigid-post, hinged-post. Ht. to post base, 7 to 9 inches. Wt. 8 lbs.

List Price..............................$52.00 to $105.00

TYPE 6 BASE INSULATOR

For marine, mobile unit, roof-top or tower. Lead-thru construction permits connections below deck. Flanges 6″ in diameter with 6 bolts on a 5″ circle. For ½″ to 3″ deck. Available in galvanized malleable iron, only, except on special order. Rigid post, and hinged post styles. Ht. from flange to post base, 3″ to 5″. Wt., 11½ lbs.

List Price..............................$78.00 to $85.00

STANDOFF INSULATORS

TYPE 10-S

A heavy-duty Insulator with chrome-plated brass base and head caps—regular or hinged clamps. Insulator is brown-glazed porcelain in extra heavy style. Ht. to center of clamp, about 4½″. Wt., 3 lbs.

List Price..............................$60.00 to $72.00

TYPE 13-S

Heavy, rugged cast caps and base plates in aluminum, or chrome-plated brass. Heavy brown-glazed porcelain insulator, 3 inches in diameter. Ht. to center of clamp, 4¾″. Wt., 2½ lbs.

List Price .... $13.00 to $25.00

MOBILE WHIP ANTENNAS

HEAVY DUTY TAPERED STAINLESS—TYPE ES

Solid one-piece taper-ground whips, ¼″ at base tapering to 3/32″ at tip with top ball. High-tensile stainless steel fabricated by special formula, comparing favorably with the best spring steel, yet having excellent corrosion-resistant properties.

HEAVY DUTY TAPERED CHROME-SILICON—TYPE EC

Same as above only fabricated from chrome-silicon steel of exceptionally high-tensile strength and uniformity of temper, with high fatigue values developed by special heat treatment during fabrication.

STANDARD WEIGHT TAPERED STAINLESS WHIP WITH NON-REMOVABLE ADAPTOR—TYPE TS

Stainless steel whips of extremely high tensile strength with a permanent type stainless adaptor, with ⅜″ male thread.

STANDARD WEIGHT WHIP WITH REMOVABLE ADAPTOR—TYPE VS

Same whip as above except supplied with a removable adaptor locked in place by dual set screws.

NO.	LENGTH	PRICE
ES-760	60″	$6.00
ES-772	72″	6.00
ES-784	84″	7.00
ES-796	96″	7.00
EC-660	60″	5.50
EC-672	72″	5.50
EC-684	84″	6.50
EC-696	96″	6.50

AD-700 — Separate Stainless Adaptor with ⅜″ male thread for ES and EC series whips.

NO.	LENGTH	PRICE
TS-860	60″	$7.00
TS-872	72″	7.00
TS-884	84″	7.50
TS-896	96″	7.50
TS-8108	108″	8.00
VS-960	60″	8.00
VS-972	72″	8.00
VS-984	84″	8.50
VS-996	96″	8.50
VS-9108	108″	9.00

AD-900 Same as AD-700 except drilled for VS series whips.

ALL PRICES SHOWN ARE LIST PRICES SUBJECT TO USUAL COMMERCIAL DISCOUNTS.

PRICES EFFECTIVE AT TIME OF PRINTING AND ARE SUBJECT TO CHANGE WITHOUT NOTICE.

PREMAX PRODUCTS, DIV. CHISHOLM-RYDER CO., NIAGARA FALLS, N. Y.

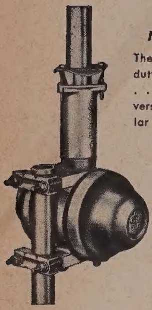
CORNELL-DUBILIER RADIART

CDE

CORNELL-DUBILIER ELECTRONICS DIVISION • FEDERAL PACIFIC ELECTRIC COMPANY • SOUTH PLAINFIELD • NEW JERSEY

Automatic ROTORS

THE INDUSTRY'S SHARPEST TUNING ROTORS

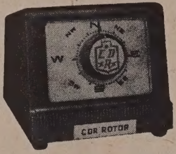


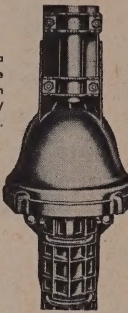
MODEL AR-1

The standard heavy duty economy model . . . the automatic version of the popular TR-11

MODEL AR-22

The rugged extra heavy duty, time tested and proven famous TR-2, NOW FULLY AUTOMATIC.



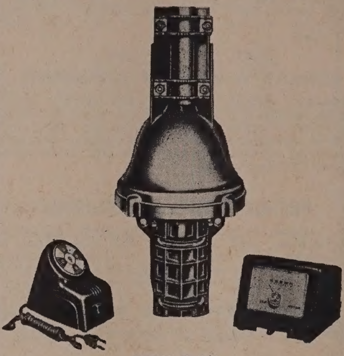


- Mechanical Brake magnetically released
- Quick Mounting Mast Collet
- Speedy Installation . . . no loose parts to assemble
- Minimum Wind Resistance
- Takes Masts up to 1½" O.D. — self-centering sawtooth clamps
- Fits Standard Towers
- Completely Weather Sealed . . . Factory Lubricated

MODEL AR-2.............**same as AR-1 but with thrust bearing.**

- Powerful beyond any TV need . . . the giant of the industry.
- Handles loads to 150 pounds
- Heavy ball bearings in 6½" races
- Reinforced die cast housing
- Mechanical Brake magnetically released
- Will handle ⅞" to 2" masts
- Heavy duty motor — reverses instantly
- Mast, tower or platform mounting
- 3 heavy duty guy wire lugs
- Completely weather-sealed — factory lubricated

HEAVY-DUTY ROTORS



MODEL TR-2/4

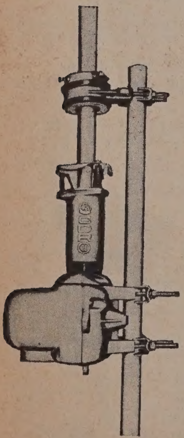
CDR MODEL TR-2 . . . same as TR-4 except furnished with COMPACT CONTROL cabinet with illuminated "perfect pattern" dial.

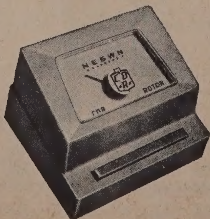
CDR MODEL TR-4 . . . the most POWERFUL and dependable DeLuxe Heavy Duty ROTOR on the market . . . complete with modern design METER CONTROL DIAL cabinet using 4-wire cable.

CDR TR-16 ROTOR

WITH FEATURES NEVER BEFORE AVAILABLE IN THE POPULAR PRICE RANGE.

- Quick-mounting mast collet permits speedy installation.
- Self-centering sawtooth clamps take masts up to 1½" in diameter.
- Instant locking prevents drift.
- Magnetically released mechanical brake.
- Direction of rotation is instantly reversible.
- Rotor makes complete 360° revolution in 45 seconds.
- Completely weather-sealed. Meets rigid Joint Army-Navy salt-water test.





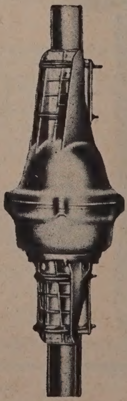
CDR TR-15 ROTOR

Same as TR-16 but without thrust bearing.

CDR MODEL "HAM-M"

DESIGNED EXCLUSIVELY FOR HAMS

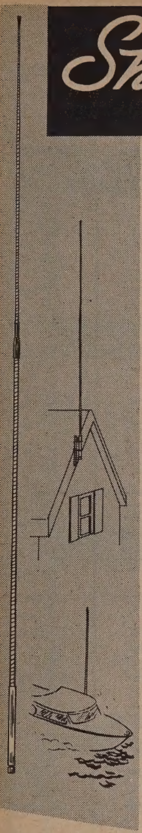
- A complete rotational system
- Supports 1000 lbs. of dead weight
- Super-accurate calibration
- Double-stage switch permits instant direction reading without moving rotor
- Positive brake locks rotor in position against any wind
- Will support and operate heaviest beams commercially available



TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

Shakespeare WONDERODS

COMPLETE ANTENNA LINE

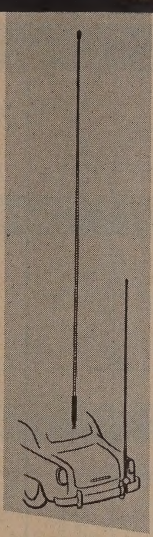


Standard Whip Antenna

Light weight . . . high flexural and impact strength . . . corrosion resistant.

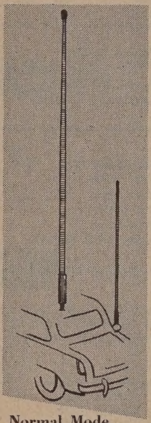
Whips –
STYLE
10-1 54"-60" – $5.75
10-2 60"-104" – $6.95
10-3 96" 27 mc citizens band – $6.95

Base Extensions –
STYLE
29-1 18" – $4.80
29-2 27" – $5.48
29-3 36" – $5.82



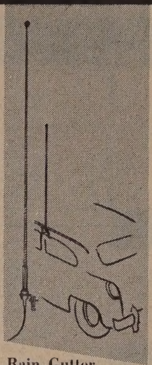
Loaded Coaxial Sleeve Antenna

Ideal for both marine and base station application. Antenna terminated with UHF connector. –STYLE 72-0 – $42.50



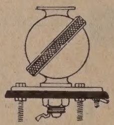
Normal Mode Helical Antenna

Distributed-load antenna eliminates additional loading coils. 4' length permits choice of mounting positions.



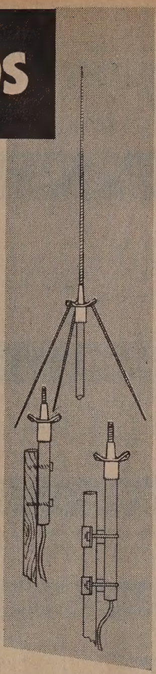
Rain Gutter Mounted Antenna

The convenient, detachable citizens band installation with all exceptional benefits of light-weight fiberglass. –Includes 9' RG 58/U transmission cable.
–STYLE 74-0 – $14.40



Aluminum Ball Mount

–Has low-loss molded fiberglass insulator plate, neoprene gasket, unique locking band.
STYLE 70-1 – $7.95

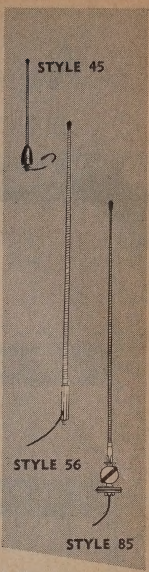


Ground Plane Antenna

High strength fiberglass radiating elements. Supplied to fit 1¼" pipe thread. Antenna terminated with UHF connector. –$41.60

STYLE 61-0 citizens band
61-1 for 25-30 mc
61-2 for 30-35 mc
61-3 for 35-40 mc
61-4 for 40-47 mc
61-5 for 47-54 mc
61-6 for 54-72 mc
61-7 for 72-88 mc

Resonated for low end of band, with curve furnished for cutting to higher frequencies.



3 DB Gain Mobile High-Gain Antennas

Double your effective mobile transmitter power.

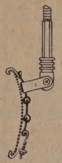
19" roof top antenna, for 440-470 mc.
STYLE 45U (UHF connector) – $20.00
45B (BNC connector) – $21.50

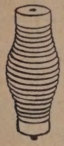
Cowl or bumper mounted. 52" height, furnished with ⅜-24 mounting stud, 10' RG 58/U transmission cable and connector (specify whether UHF or BNC) – $18.75
STYLE
56-1 for 144-155 mc
56-2 for 155-165 mc
56-3 for 165-174 mc

Cowl or bumper height mounted. 54½" height includes aluminum ball mount, 10' RG 58/U transmission cable and UHF connector. Transmission cable passes through ball mount for maximum protection. ¾" mounting hole required. (Specify whether UHF or BNC connector.) – $25.50
STYLE
85-1 for 144-155 mc
85-2 for 155-165 mc
85-3 for 165-174 mc

Bumper Mount

Adjustable link bumper mount with low-loss insulator. Metal parts cadmium plated.
STYLE 97 – $7.50



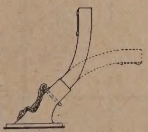


Barrel Spring

Cadmium plated
STYLE 71-1 – $4.50

Marine Mount

Self-supporting fold-down mount for use with Style 72-0 antenna. Chrome plated. Includes neoprene gasket and hardware. –STYLE 99 –$27.30



Normal Mode Helical Antenna

Standard Model metallic gray	11.25									
	73-0	73-1	73-2	73-3	73-4					
Deluxe Model white	15.90					18.75			21.00	
	62-0	62-1	62-2	62-3	62-4	62-5	62-6	62-7	62-8	62-9
Band	27 mc Citizens	30-35 mc	35-42 mc	10 Meters	15 Meters	20 Meters	40 Meters	80 Meters	40 Meters	80 Meters
Approx. Length	4'	4'	4'	4'	4'	6'	6'	6'	8'	8'

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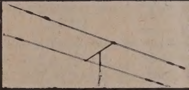
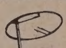
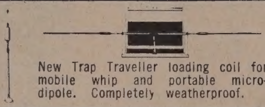
ANTENNAS FOR AMATEUR RADIO COMMUNICATION

VERTICALS	Description	Shpg Weight	Model No.	Ham Net Price
No traps used in Hy-Tower. New Slim-Traps in 12 and 14-AVS. Less than 2:1 SWR . . . Top quality construction throughout.	Hy-Gain Hy-tower (10-80M) 12 AVS Vertical (10-20M) 14 AVS Vertical (10-40M) Mount Kit for 12 AVS Mount Kit for 14 AVS Loading Coil, add 80M to 14 AVS Decoupling Stub, adds 6M	105 lbs. 9 lbs. 10 lbs. 7 lbs. 9 lbs. ½ lb. 2 lbs.	18HT 12AVS 14AVS 12RMK 14RMK LC80 6MK	$129.50 21.95 27.95 9.50 11.95 7.95 4.95
MONOBANDERS Guaranteed for One Year; maximum legal power rating. Fully adjustable Beta Match is factory pre-tuned . . . SWR less than 1.5:1.	10 Meter, 3 Element 15 Meter, 3 Element 20 Meter, 3 Element 40 Meter, 2 Element	12 lbs. 19 lbs. 35 lbs. 40 lbs.	103B 153B 203B 402B	32.95 38.50 65.95 To be anncd.
GROUND PLANES High strength and Commercial Duty. One year warranty with 100 mph rating.	Ground Plane, 25-50MC Ground Plane, 50-80MC Ground Plane, 108-500MC Discone Broadband, 50-500MC	10 lbs. 7 lbs. 4 lbs. 9 lbs.	GP-1C GP-2C GP-3C DS-1	32.70 21.90 9.98 29.97
MULTI-BAND DOUBLETS Extruded and perforated polyethylene ribbon offers full size performance with NO TRAPS. Handle 1 KW CW & AM, 2 KW SSB (PEP).	Doublet for 40 and 80M Doublet for 6-20M Doublet for 6-40M Doublet for 6-80M Center Insulator End Insulator (4 per carton)	5¾ lbs. 3¾ lbs. 4½ lbs. 6 lbs. 8 oz. 12 oz.	2BD 4BD 5BD 6BD CI EI	34.95 21.95 29.95 37.50 3.95 1.00
TRIBANDERS  Utilizing the solid state Slim-Traps. . . . Exceptionally designed . . . unconditionally guaranteed.	4 Element Deluxe Thunderbird 3 Element Standard Thunderbird 2 Element Thunderbird (10-20M)	42 lbs. 36 lbs. 23 lbs.	TH4 TH3 TH2	117.50 89.95 59.95
VHF HIBANDERS Employing new Beta Match. May be stacked for additional 3 or 6 db. Guaranteed for One Year.	432MC 13 Element Beam 220MC 11 Element Beam 144MC 5 Element Beam 144MC 10 Element Beam 6 Meter, 5 Element Beam 6 Meter, 8 Element Beam Duo Stacking Kits (specify) Quad Stacking Kits (specify) Stacking Frames (specify)	3 lbs. 5 lbs. 3 lbs. 6 lbs. 8 lbs. 13 lbs. 1½-3 lbs. 4-8 lbs. 30-45 lbs.	313 111 25 210 65B 68B add "S" add "QS" add "SF"	12.95 13.95 8.95 14.95 18.95 32.95 4.95 15.95 59.50
HALOS  Compact, handsome advanced design . . . No external matching sections.	2 Meter Halo Antenna 6 Meter Halo Antenna Mounting Mast Stacking Kit for both	1½ lbs. 5 lbs. 3 lbs. ⅓ lb.	HH-2 HH-6 HM HHS-2	5.95 12.95 4.95 3.00
MOBILE & PORTABLE  New Trap Traveller loading coil for mobile whip and portable microdipole. Completely weatherproof.	Trap Traveller Coil, 10-20M Telescoping Base and Whip Complete Traveller Micro-Dipole Kit Complete Dipole with Coils Mounting Bracket for Dipole Carrying Case for Dipole	1 lb. 2 lbs. 3 lbs. 3 lbs. 5 lbs. 5 lbs. 1 lb.	T3 TBW T3TBW TDK T3TDK UB TCC	16.95 15.00 29.95 13.50 44.95 9.75 8.95
ROTO-BRAKE 1000 In. Lbs. rotating power, 5 In. Tons braking power . . . Complete with Great Circle Wall Map Indicator.	Roto-Brake, Indicator, Control Small Tower Side Mount Kit Pipe Mast Side Mount Kit Telephone Pole Side Mount	47 lbs. 22 lbs. 24 lbs. 26 lbs.	RBX-1 XK-1 XK-2 XK-3	199.95 34.50 34.50 34.50

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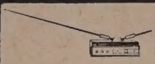
ANTENNAS FOR CITIZENS BAND RADIO

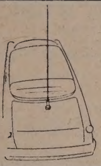
CLOSE RANGE



Chrome plated whips telescoping from 45" to 15"; polypropylene plastic bases. Swivel joints . . . May be oriented horizontally or vertically.

Description	Shpg Weight	Model No.	List Price
Citizens Whip (6 per pack)	6 lbs.	CW	$ 9.95 each
Auto Door Mount Bracket for CW (3 per pack)	3 lbs.	ADMC	14.95 each
Rabbit Ear Dipole (4 per pack)	6 lbs.	CD	21.95 each

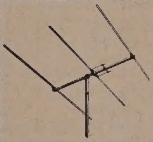
MOBILE



An exciting new line of whips for automobile and commercial use, sturdy and weatherproof, with a variety of mounts . . . Whips generally telescope for maximum efficiency yet ease in garaging.

Description	Shpg Weight	Model No.	List Price
73" telescoping disguise whip	1½ lbs.	CM	14.95
52" stainless steel whip	1 lb.	CMS	14.95
48" fiberglass whip	1¼ lb.	CMF	12.00
102" stainless steel whip	1¼ lb.	W-102	8.50
102" Fiberglass mobile whip	2½ lbs.	FW-102	13.95
Bumper Mount	1½ lb.	BPR	10.95
Body Mount	1 lb.	BDY	8.95
Heavy Duty Spring	2 lbs.	SPG	9.50
Gutter Clip	1/6 lb.	GC	1.95
AM-Citizens Band Coupler	¼ lb.	CPR	14.95

BEAMS



3-Element Beam multiplies power **eight** times, for mounting either horizontally or vertically. Power can be redoubled by stacking.

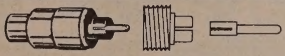
Description	Shpg Weight	Model No.	List Price
3-Element Beam	15 lbs.	113-B	52.50

GROUND PLANES

For high efficiency point-to-point or base station to mobile operation. Precision tuned and matched for 52 ohm coax. Finest construction of heat-treated aluminum tubing elements.

Description	Shpg Weight	Model No.	List Price
Standard Ground Plane	5 lbs.	SGP	26.95
Heavy duty Ground Plane	10 lbs.	GP--1	43.75
Half-wave Coaxial	7½ lbs.	CXL	33.25
Colinear Ground Plane	15 lbs.	CLR	49.95

ACCESSORIES

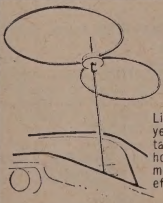


Coax adapters of precision matched brass, silver-plated for maximum performance. No soldering necessary. Cable kits of RG-58/U cable.

Description	Shpg Weight	Model No.	List Price
PL-259 coax/auto radio adptr.	⅓ lb.	PLSA	.75
PL-259 coax/phone-type adptr.	⅓ lb.	PLP	.75
SO-239 coax/std. auto radio adptr.	⅓ lb.	SOSA	.75
auto radio/phone-type adptr.	¼ lb.	SAP	.40
12' coax cable	½ lb.	CC-12	6.95
12' Coax cable, PL-259 both ends	½ lb.	CC-12PL	9.50
25' coax cable	1 lb.	CC-25	9.95
50' coax cable	2 lbs.	CC-50	15.75

FM ANTENNAS

FM ANTENNAS



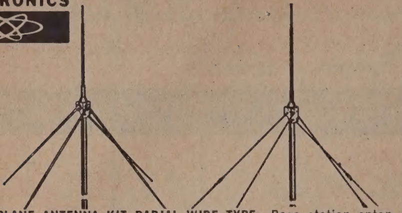
Lightweight, handsome yet nearly indestructable antennas for home and auto. Easily mounted. Of maximum efficiency.

Description	Shpg Weight	Model No.	List Price
FM Omnidirectional Halo	11 oz.	FMH	9.95
6-Element Fringe Area Hy-Log	3½ lbs.	FM-6	22.95
11-Element Fringe Area Hy-Log	5½ lbs.	FM-11	37.95
FM Auto Butterfly	2 oz.	FMB	9.95

COMPLETE CATALOG INFORMATION AVAILABLE ON ALL HY-GAIN ANTENNA SYSTEMS!

GC CITIZENS BAND ANTENNAS and ACCESSORIES

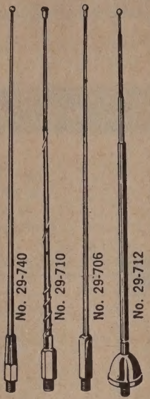
ELECTRONICS



GROUND PLANE ANTENNA KIT RADIAL WIRE TYPE—Base station antenna kit—including mast, co-ax cable and all hardware. Most parts are pre-assembled average installation time is ½ hour. 4 guy wires act as "ground plane." Cat. No. 29-730 List **$39.75**

102" STAINLESS STEEL TAPERED WHIP—High-impact, flexible whip made of selected alloy. Standard threated fitting used with body mount or bumper mount. Cat. No. 29-700 List **$11.50**

100" STAINLESS STEEL TAPERED WHIP—Same as 102" Whip #29-700, but designed for use with flexing spring type body mount or bumper mount. Cat. No. 29-702 List **$11.50**

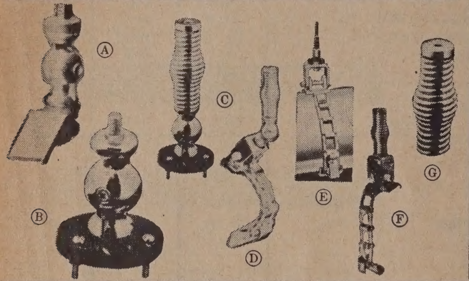


GROUND PLANE ANTENNA KIT ROD RADIAL TYPE—Complete Base Station Antenna, pre-assembled and including mast, cable and all hardware. No guy wires. Radial elements are durable aluminum tubing. For use with chimney, wall or tripod mount.
Cat. No. 29-740 List **$42.50**

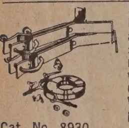
"TEL-COIL" WHIP (Pat. Pend)—48" tapered fibre glass whip, "loaded" type. Step-taper wound helical conductor is superior to other "short" Whips which use base or center loading coils. Standard threaded fitting for any body or bumper mount, trunk lid mount.
Cat. No. 29-710 List **$15.50**

101" FIBRE GLASS TAPERED WHIP—Unaffected by weather conditions, comparable performance to steel whips. Conductor is fibre glass insulated. Standard threaded fitting.
Cat. No. 29-706 List **$14.00**

"TEL-E-SCOPE" FOUR-SECTION TELESCOPING WHIP—Chrome plated, 101" extended, 32" collapsed. For installations where constant-length whip is inconvenient and fully extended use is occasional. Standard threaded fitting for use with body mounts or bumper mounts.
Cat. No. 29-712 List **$8.00**



(A) TRUNK LID MOUNT—Unique mount requiring no outside holes on car. Designed specifically for "Telcoil" 29-710 antenna, but may be used with other short "whips." Cat. No. 29-716 List **$5.50**
(B) BODY MOUNT—Heavy-duty, chrome plated body mount fastens to side, cowl, or fender. Ball swivel provides all angle adjustment, from vertical to horizontal. Cat. No. 29-718 List **$8.00**
(C) BODY MOUNT—Same as Body Mount #29-718 except this model is supplied with flexing spring #29-726. Cat. No. 29-720 List **$14.00**
(D) BUMPER MOUNT—With Swivel Joint and Spring For cars where bumpers do not protrude sufficiently for standard mount. Cat. No. 29-728 List **$25.75**
(E) BUMPER MOUNT—Durable, chrome plated chain type bumper adjusts to most bumpers from sports car to truck. Cat. No.29-722 List **13.25**
(F) BUMPER MOUNT—Same as Bumper Mount #29-722 except this model includes flexing spring #29-726. Cat. No. 29-724 List **$19.75**
(G) FLEXING ANTENNA SPRING—Tapered, heavy-duty, chrome plated steel spring built-in flexible center conductor. Cat. No. 29-726 List **$6.50**



SNAP-IN CHIMNEY MOUNT—Fits masts up to 1¾" diameter. Extra heavy gauge steel. Zinc plated and dichromate dipped. Complete with straps and hardware.
Cat. No. 8610 List **$3.65**
With Stainless Steel Strapping
Cat. No. 8930 List **$5.25**

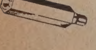
CHIMNEY QUICK MOUNT—Brackets will support masts up to 1¾" diameter. Straps and hardware included.
Cat. No. 8005 List **$2.95**
With Stainless Steel Strapping
Cat. No. 9025 List **$4.55**

"Z" MOUNT—Same as No. 8005 Mount with 20 feet of strapping supplied for each mount.
Cat. No. 9125 List **$2.75**
With Stainless Steel Strapping
Cat. No. 9127 List **$4.20**

SPECIAL "Z" MOUNT — Galvanized Strapping Steel zinc plated finish. Eyebolts attached to one end of heavy galvanized strapping.
Cat. No. 8005-U List **$2.75**
With Stainless Steel Strapping
Cat. No. 9025-U List **$3.65**

CABLE ASSEMBLIES—Made of RG 58/U cable, terminated on one end with PL 259 plug, other end stripped and terminated with lugs.

Cat. No.	Cable Lengths	List Price
29-760	6 ft.	**$4.85**
29-762	10 ft.	**5.35**
29-764	15 ft.	**5.95**



DIS-CO-NECT — Remove mobile whip antennas in two seconds — without tools. Incorporates bayonet lock device . . . made of stainless steel.
Cat. No. 29-772 List **$4.95**

HUB CAP STATIC SPRING—Stops static caused by wheel friction. Springs have riveted metal points for firm, smooth contact.
Cat. No. 1058 List **$ .15**

STATIC CHASER—Dissipates static which causes radio noise and contact shock. Minimizes static interference caused by friction of wheels, tires, etc.
Cat. No. 5604 Injector Only List **$1.95**
5605 Static Powder for 5 Tires **1.20**

V-7 WALL MOUNT — Constructed of heavy gauge steel. Fully plated nuts, U-bolt and hardware. Completely assembled.
Cat. No. 9236 List **$1.85 per set**

CLOSE WALL MOUNTS—Ideal where large clearance is not needed. Complete with hardware. Hold masts up to 1¾" diameter.

Cat. No.		List
8302	Clearance 2¼"	**$1.65 per set**
8304	Clearance 4"	**2.00 per set**

4-INCH SPECIAL WALL MOUNT—Economy close wall mount. Made of heavy gauge steel, zinc-plated for extra protection.
Cat. No. 9241 List **$1.10**

SNAP-IN WALL MOUNTS—Simply snap the mast in, tighten and the job is done. Holds mast up to 1¾" diameter.

Cat. No.		List
8306	6" Wall Mount	**$2.65**
8308	8" Wall Mount	**4.30**

MASTER DELUXE SNAP-IN MOUNTS—Brackets are spaced 16" wide so as to fasten solid to 16" 2x4 spacing in homes. Eliminates "side sway" of antennas. Will fit mast up to 1¾" diameter.

Cat. No.		List
8312	12" Clearance	**$4.60**
8318	18" Clearance	**5.95**
8324	24" Clearance	**8.05**

RIGHT ANGLE ADAPTER—Designed for attaching Tel Coil Loaded Whip #29-710 or similar antenna to base station. Fits all transceivers using PL 259 antenna plug.
Cat. No. 29-780 List **$5.75**

ADAPTER—Adapts a PL 259 plug to a standard auto radio (Motorola type) plug.
Cat. No. 29-782 List **$ .75**

ADAPTER—Adapts a PL 259 plug to a phono pin (RCA type) plug.
Cat. No. 29-784 List **$ .75**

ADAPTER—Adapts a SO 239 Socket to a standard auto radio (Motorola type) socket.
Cat. No. 29-786 List **$ .75**

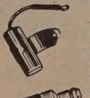
ADAPTER—Adapts a standard auto radio (Motorola type) plug to a phono pin (RCA type) plug.
Cat. No. 29-788 List **$ .40**

GUTTER CLAMP—Holds long whip antennas down when not in use. Fastens easily to drain rails on any car.
Cat. No. 29-770 List **$1.65**

2 FT. TOWER TRI-POD ANTENNA BASE—For supporting masts up to 10 feet without guying. Extra sturdy support for higher installations where guying is necessary.
Approx. 24 inches high. Supports masts up to 1½" diameter.
Cat. No. 9063 List **$7.85**

3 FT. TOWER—Self supporting. Made of electro galvanized tubing. Folds and unfolds like an umbrella.
Cat. No. 9144 List **$9.15**

5 FT. TOWER—Self supporting. Made of electro galvanized tubing. Folds and unfolds like an umbrella.
Cat. No. 9143 List **$17.50**



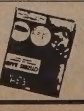
AMMETER SILENCER CONDENSER
Cat. No. A-837 List **$ .75**
GENERATOR TYPE CONDENSER
Cat. No. A-838 List **$ .99**
HEAVY DUTY TYPE CONDENSER
Cat. No. A-841 List **$1.25**

SLIP-ON SUPPRESSORS. FITS ALL CARS CARBON TYPE.
Cat. No. A-830 List **$ .45**
DISTRIBUTOR SUPPRESSORS CARBON TYPE.
Cat. No. A-832 List **$ .45**
SUPPRESSOR SPARK PLUG TYPE. FITS ALL CARS. CARBON TYPE.
Cat. No. A-833 List **$ .45**
SUPPRESSOR SLIP-ON TYPE. SUPER WIRE WOUND.
Cat. No. A-835 List **$ .75**
SUPPRESSOR DISTRIBUTOR MODEL. SUPER WIRE WOUND.
Cat. No. A-836 List **$ .75**

17 18 19 20
21 22 23 24
25 26 27 28
29 30 31 32

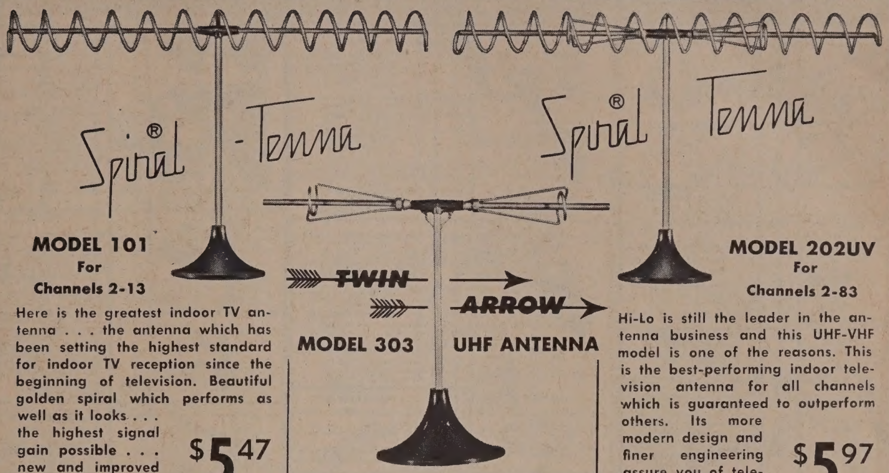
CALL LETTERS—Metal foil, pressure sensitive labels to mark mobile station with FCC call letters. Set of 78 numerals plus two "W"s Characters ¾" high.

Cat. No.	Description	List Per Set
29-776	Gold Letters on White	**$2.00**
29-778	Silver Letters on Black	**2.00**



SEND FOR FREE CATALOG on the complete GC Electronics line of Citizens Band equipment.

HI-LO TV ANTENNAS are BEST



MODEL 101
For
Channels 2-13

Here is the greatest indoor TV antenna . . . the antenna which has been setting the highest standard for indoor TV reception since the beginning of television. Beautiful golden spiral which performs as well as it looks . . . the highest signal gain possible . . . new and improved for better television pictures. Shipping weight: 2 lbs.

$5.47 Dealer net

HI-LO TV ANTENNAS ARE BETTER FOR UHF, VHF, AND COLOR

MODEL 303 UHF ANTENNA

Unsurpassed reception in UHF areas with this proven and accepted indoor antenna which works better in tough areas. Shipping weight: 1½ lbs.

Dealer net $3.57

MODEL 202UV
For
Channels 2-83

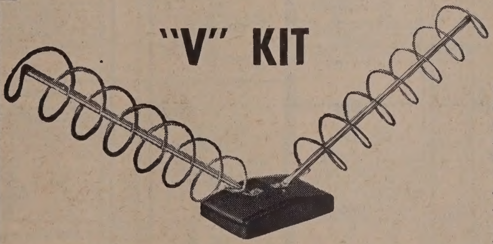
Hi-Lo is still the leader in the antenna business and this UHF-VHF model is one of the reasons. This is the best-performing indoor television antenna for all channels which is guaranteed to outperform others. Its more modern design and finer engineering assure you of television reception at its highest peak. Shipping wt.: 2 lbs.

$5.97 Dealer net

You will obtain the sharpest, clearest TV pictures with HI-LO

"SELL THE GENUINE HI-LO ANTENNAS"

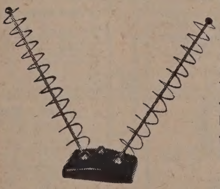
"V" KIT



MODEL 606
For
Channels 2-13

Utilizing the Spiral-Tenna design, the 606 produces clearest reception. The luxurious brown plastic base rests lightly and firmly on any flat surface and the gold color on the spiral blends with any room. The antenna is so designed to completely eliminate any pulling or pushing of rods and carries the same guarantee as all other *Hi-Lo* antennas, famous throughout the country.

Dealer Net $4.80



MODEL 505
For
Channels 2-83

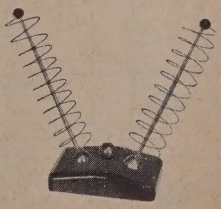
The spiral antenna that is designed for maximum performance, featuring the NEW TELESCOPING DIPOLES. This versatile antenna swivels on ball and socket in any direction. Gold spirals, plastic base blends with any room.

Dealer Net $5.00

MODEL 404
For
Channels 2-83

NEW INDOOR ANTENNA that swivels with a gentle touch of your little finger. Dipoles swivel on ball and socket in every direction. Golden spirals and decorative plastic base blend with all furniture. RECEPTION IS GUARANTEED.

Dealer Net $4.80



U.S. Pat. No. 2,495,579
Canadian Pats. 1951
Other Pats. Pending

Mfd. By Hi-Lo TV Antenna Corporation
Chicago 13, Illinois

iE MANUFACTURING
CHICAGO 12, ILLINOIS

HARDWARE
RADIO PARTS
ACCESSORIES

iE MANUFACTURING
CHICAGO 12, ILLINOIS

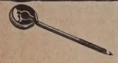
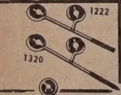
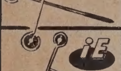
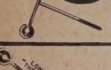
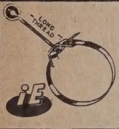
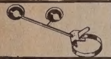
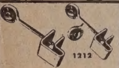
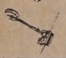
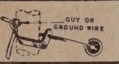
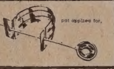
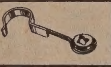
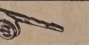
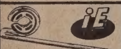
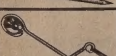
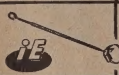
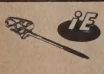
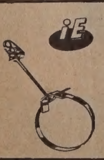
ILLUSTRATION	PART NO.	DESCRIPTION
		**iE - STAND-OFFS** WOOD SCREW TYPE
	1330	3½" Wood Screw
	1350	5½" Wood Screw
	1370	7½" Wood Screw
	1390	12" Wood Screw
		**iE INLINE DOUBLE STANDOFF** FOR HIGH-LOW, 2 LEAD-INS
	1222	7½" Machine Screw type
	1320	7½" Wood Screw type
		**iE 3-WAY STANDOFF** WOOD SCREW TYPE
	1345	7½" Wood Screw 3-way
		**iE "T"-TYPE DOUBLE STAND-OFF** WOOD SCREW TYPE
	1380	3½" Wood Screw T-type
	1343	5½" Wood Screw T-type
	1340	7½" Wood Screw T-type
	1341	12" Wood Screw T-type
		**iE MAST STAND-OFFS** MACHINE SCREW TYPE *Will accommodate masts up to 3" diameter* WITH GALVANIZED STRAP
	1230	3½" Machine Screw Galvanized Strap
	1250	5½" Machine Screw Galvanized Strap
	1270	7½" Machine Screw Galvanized Strap
	1290	12" Machine Screw Galvanized Strap
		WITH STAINLESS STEEL STRAP
	1231	3½" Machine Screw Stainless Strap
	1251	5½" Machine Screw Stainless Strap
	1271	7½" Machine Screw Stainless Strap
	1291	12" Machine Screw Stainless Strap
		**iE INLINE DOUBLE MAST STAND-OFF** MACHINE SCREW TYPE *For 2 lead ins*
	1220	7½" Inline double-galvanized strap
	1221	7½" Inline double-stainless steel strap
		**iE GUTTER TYPE STAND-OFF** *Anchors securely to roof gutters and eaves. Prevents lead-in wire from wearing due to whipping and swaying*
	1200	3½" Gutter Type Machine Screw
	1210	7½" Gutter Type Machine Screw
	1212	7½" Gutter Double In Line
		**iE GUY WIRE STAND-OFF** *Permanently fastens to guy wire. Carries lead-in wires and rotor wires. Simple to use*
	1780	3½" Guy wire Standoff
	1790	7½" Guy wire Standoff
		**iE GUY WIRE CLAMP AND MAST STAND-OFF** *Clamps on guy wire. Clamps on masts up to 1-3/8" dia. For dual use as ground clamp. Slip wire into groove at bottom of clamp "V" lip.*
	1850	3½" Mast and Guy Wire Stand-off
		**iE LOK-ON STAND-OFF** *This new, improved LOK-ON STAND-OFF snaps on without effort, remains secure under the severest conditions*
	1214	1" Lok-On Stand-Off
	1215	1¼" Lok-On Stand-Off
	1216	1½" Lok-On Stand-Off
		**iE SNAP-ON STAND-OFF** *Snap-on teeth prevent rotating, will not "flick" off.*
	1234	1" Mast Snap-on Stand-off
	1235	1¼" Mast Snap-on Stand-Off
	1236	1½" Mast Snap-on Stand-Off
		**iE HOT NAIL STAND-OFF** *Masonry type Hot Nail Stand-off Made of highly tempered steel.*
	1260	Hot Nail Stand-Off
		**iE NAIL IN STAND-OFF** DRIVE IN TYPE *For fast installations in any wood*
	1310	3½" Nail in Stand-Off
	1300	7½" Nail in Stand-Off
		**iE MORTAR NAIL STAND-OFF** *Fastens into concrete, cement, mortar and brick. Complete with masonry drive nail. Large arm to prevent twisting another special iE feature*
	1305	Mortar Nail Stand-Off
		**iE ROTOR STAND-OFF** *Spring-type design prevents breaking and stretching of transmission line caused by movement of rotor*
	1720	Rotor Stand-Off
		**iE WOOD SCREW LINE-LOK STAND-OFF** WOOD SCREW TYPE
	LL1330	3½" Wood Screw Line-Lok Stand-Off
	LL1350	5½" Wood Screw Line-Lok Stand-Off
	LL1370	7½" Wood Screw Line-Lok Stand-Off
		**iE LINE-LOK MAST STAND-OFF** MACHINE SCREW TYPE *Will accommodate masts up to 3" diamet* WITH GALVANIZED STRAP
	LL1230	3½" Line-Lok Mast Stand-Off
	LL1250	5½" Line-Lok Mast Stand-Off
	LL1270	7½" Line-Lok Mast Stand-Off
		WITH STAINLESS STEEL STRAI
	LL1231	3½" Line-Lok Mast Stand-Off
	LL1251	5½" Line-Lok Mast Stand-Off
	LL1271	7½" Line-Lok Mast Stand-Off

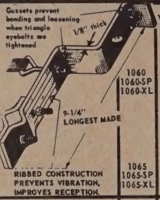
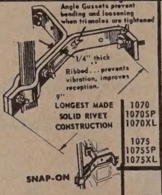
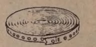
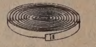
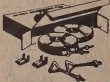
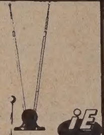
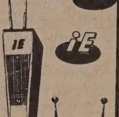
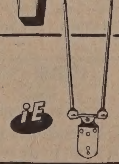
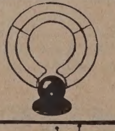
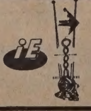
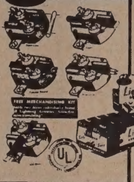
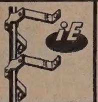
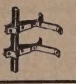
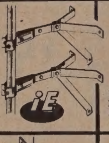
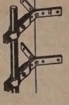
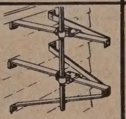
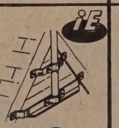
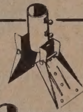
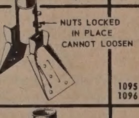
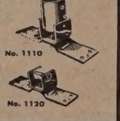
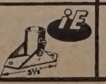
ILLUSTRATION	PART NO.	DESCRIPTION
 Gussets prevent bending and loosening when triangle eyebolts are tightened 1/8" thick 1-3/8" wide 9-1/4" LONGEST MADE RIBBED CONSTRUCTION PREVENTS VIBRATION, IMPROVES RECEPTION.		**iE CHIMNEY MOUNT** DELUXE "Z" TYPE SETS INDIVIDUALLY BOXED WITH HARDWARE *Supports masts to 1-7/8" Triangle eye bolt, factory assembled on strapping with* GALVANIZED STRAPPING
	1060	Chimney Mount - 24 ft. Strapping
	1060-SP	Chimney Mount - 20 ft. Strapping
	1060-XL	Chimney Mount - 32 ft. Strapping
		iE CHIMNEY MOUNT DELUXE "Z" TYPE *Supports masts to 1-7/8" triangle eye bolts factory assembled on strapping.* WITH STAINLESS STEEL STRAPPING
	1065	Chimney Mount - 24 ft. Strapping
	1065-SP	Chimney Mount - 20 ft. Strapping
	1065-XL	Chimney Mount - 32 ft. Strapping
 Angle Gussets prevent bending and loosening when triangles are tightened 1/4" thick Ribbed . . . prevents vibration, improves reception. 9" LONGEST MADE SOLID RIVET CONSTRUCTION SNAP-ON		**iE SNAP-ON CHIMNEY MOUNT** SETS INDIVIDUALLY BOXED WITH HARDWARE *Requires no special tools --- Mount Kit, supplied complete with 24 ft. of strapping. Triangles factory assembled to eye bolts at one end, 2 brackets and hardware --- Just strap brackets on chimney and Snap-On Mast. Chimney Mount is designed for the most rapid assembly possible. Brackets fabricated of heavy gauge steel. Supports masts to 1-7/8 dia.* WITH GALVANIZED STRAPPING
	1070	Snap-on mount - 24 ft. strapping
	1070SP	Snap-on mount - 20 ft. strapping
	1070XL	Snap-on mount - 32 ft. strapping
		WITH STAINLESS STEEL STRAPPING
	1075	Snap-on mount - 24 ft. strapping
	1075SP	Snap-on mount - 20 ft. strapping
	1075XL	Snap-on mount - 32 ft. strapping
		**iE PERFORATED STEEL STRAPPING** *3/4" Zinc Plated to resist rust ... 1/4" holes in extra strong flexible strapping*
	1610	12 ft. Coil Perforated Steel Strapping
	1620	100 ft. Coil Perforated Steel Strapping
		**iE STEEL STRAPPING** *Galvanized and stainless* *Extra strong and flexible*
	1640	12 ft. Coil Galvanized Steel Strapping
	1641	12 ft. Coil Stainless Steel Strapping
	1630	100 ft. Coil Galvanized Steel Strapping
	1631	100 ft. Coil Stainless Steel Strapping
 INDIVIDUALLY BOXED		**iE CHIMNEY STRAPPING REPAIR KIT** *Handy replacement kit for defective or worn-out strapping. Complete with 4 eye bolts, 2 clips, 4 nuts and 24 ft. of strapping. Eye bolts factory assembled on ends.*
	1645	Chimney Strapping repair kit galvanized
	1646	Chimney strapping repair kit stainless
		**iE INDOOR VHF T-V ANTENNA** *3 section telescoping dipoles, 300 OHM lead-in with lugs fastened on ends tip proof, ratchet grip locks dipoles in any position.*
	AT6000	Indoor Antenna Aluminum DiPoles
	AT6100	Indoor Antenna Nickel Plated DiPoles
		**iE PUSH DOWN TENNA** *Universal disappearing antenna. Attaches easily. Can be moved any angle. 4 section dipoles mounted on ball swivels. Complete with lead-in wire and mounting screws. Plastic case Comes in brown, ivory and black case. Individually boxed.*
	6012	Push-down-tenna Brass Dipoles
	6013	Push-down-tenna Nickel Plated Dipoles
		**UNIVERSAL ANTENNA** *For all portables and T.V. sets. 360 degree movement. Can be fastened any where. Swings down out of way when not in use. 3 section dipoles completely assembled with twin line. Individually boxed with hardware*
	AT6010	Universal Antenna Aluminum dipoles
	AT6011	Universal Antenna Nickel plated dipoles
		**iE GOLDEN CIRCLE ANTENNA** *Indoor Antenna for all channel reception UHF and VHF. Gold finish, padded base, 10" high. Complete with lead-in. Individually boxed.*
	6014	Golden Circle Indoor Antenna
		**6-POSITION SWITCH ANTENNA** *Brass DiPoles for UHF-VHF 6-position switch for maximum signal pick up on every channel. Top detail for black - White and Color Fully assembled with twin line. Channels 2 to 83. Will not tip.*
	AT6009	Individually Boxed

ILLUSTRATION	PART NO.	DESCRIPTION
		**iE LIGHTNING ARRESTOR** *Combines the 4 most-wanted features in 1 outstanding model* *Multi-Purpose Design! Provides a perfect electrical path for every standard type of transmission line.* *Quick-N-Easy Installation! Easily mounted - anywhere - indoors or outdoors, without wire stripping, loss of signal or "Misses."* *Positive Protection! Long, piercing teeth insure positive contact: Shunt static and lightning charges harmlessly to the ground.* *Compact, Sturdy Construction Small and light weight in design. Underwriters approved.*
	4000	Lightning Arrestor
	4005	Lightning arrestor with strap
		**iE DELUXE UTILITY WALL MOUNT** *Made of heavy gauge steel 1⅛" wide. Zinc plated. Heavy clamp fastens with two 1/4" bolts. All iE wall brackets are designed for quick, easy installation ... Individually boxed ... Complete with hardware. For masts to 1-7/8"*
	1422	2¼" Clearance - 1⅛" wide material
	1440	4" Clearance - 1⅛" wide material
		**iE QUALITY SNAP-ON WALL MOUNT** *A sturdy steel wall mount ... Zinc plated. Designed for quick, easy installation. Kit complete with 2 brackets and hardware ... Assembled and individually boxed ... Holds mast to 1-7/8" dia.*
	1460	6" Snap-On Wall Mount
	1480	8" Snap-On Wall Mount
		**iE DELUXE SNAP-ON WALL MOUNT** PRE-ASSEMBLED FOR FASTER INSTALLATION *Snap-On Mast Mount has 16" spread to fit on 2 x 4 joists. Heavy gauge steel, Zinc plated. For masts to 2⅛" dia.... Third leg support*
	1430	13½" Deluxe Snap-On Wall Mount
	2180	18" Deluxe Snap-On Wall Mount
	2240	24" Deluxe Snap-On Wall Mount
		**CORNER WALL MOUNT** *Mounts quickly on any corner, wood or brick. Snap on type for masts to 1-7/8". Complete with hardware Individually boxed with 2 mounts.*
	1420	Corner Wall Mount
		**iE ADJUSTABLE WALL MOUNT** PRE-ASSEMBLED FOR FASTER INSTALLATION *For difficult overhanging installations, this adjustable mount allows clearance from wall 1" to 20". As rugged as it's versatile. Fabricated of 1/8" steel. Zinc plated. Complete with installation hardware and extra leg for firm support. Individually boxed. Pre-assembled for quick and easy installation. Holds mast to 1-7/8" diameter.*
	1450	20" Adjustable for masts to 1-7/8"
		**iE EAVES MOUNT** *Developed to provide simple, long lasting support of mast to eave where a roof-peak installation is necessary or desirable rugged heavy gauge steel construction. Carriage bolts hold without turning for fast installation. Designed to hold masts up to 1-7/8" diameter. Kit comes complete with clamps and hardware.*
	1469	25" Eaves Mount
	1470	30" Eaves Mount
	1471	36" Eaves Mount
	1472	48" Eaves Mount
	1473	60" Eaves Mount
		**iE RIDGE MOUNT-HINGE TYPE** *Popular hinge-type design. Adjustable for flat roofs, walls, or peak roofs of any slope. Allows tall masts to be swung up along ridge completely assembled. Permits one-man roof installation. Available in two sizes.*
	1090	Masts up to 1½" Heavy Duty
	1091	Masts up to 2" Heavy Duty
 NUTS LOCKED IN PLACE CANNOT LOOSEN		**iE RIDGE MOUNT - UNIVERSAL** *For all types of roof installations - flat roofs, walls or peaked roofs. Completely assembled for quick and easy installation. Allows tall masts to be swung up along the ridge of the roof. Provides secure mounting available in two sizes.*
	1095	Masts up to 1½" Heavy Duty
	1096	Masts up to 2" Heavy Duty
		**iE SWIVEL MAST BASE** HEAVY DUTY *The new Qui-N-Easy swivel mast base. Mounts on roof ridge or flat surface with new iE engineered base. Makes installation quick and easy -- Just swivel mast to greatest signal strength and lock in any position. Takes masts and telescoping towers up to 2⅜" diameters.*
	1110	Swivel Mast base with tube for mast to 2-3/8"
	1120	Swivel Mast base without tube for mast to 2⅜" includes bolt and nut
		**ECONOM-iE BASE MOUNT** *New Pivot Swing up base Mount Permanent nut in tube cannot loosen For mast up to 1½".*
	1121	Econom-iE Swing-up mount. Masts to 1½

(Use Index Page 1 for Quick, Easy Location of ALL Products)

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

iE MANUFACTURING
CHICAGO 12, ILLINOIS

HARDWARE
RADIO PARTS
ACCESSORIES

iE MANUFACTURING
CHICAGO 12, ILLINOIS

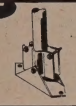
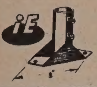
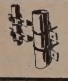
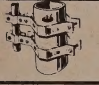
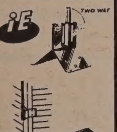
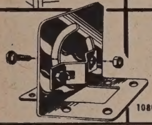
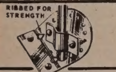
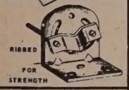
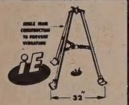
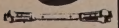
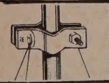
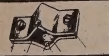
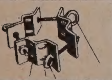
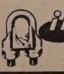
ILLUSTRATION	PART NO.	DESCRIPTION
	1123	**iE ECONOMY ANGLE BASE MOUNTS** For Masts up to 1¼" Designed for the small installation job -- from 5 to 10 ft. Will accommodate masts to 1¼". Clamp type. Constructed of heavy gauge steel. Zinc plated to resist rust and corrosion completely assembled to save time and save work. Econom-iE angle base mount
	1127 1128	**iE DELUXE ANGLE BASE MOUNT** Designed for flat or slanty roofs of any pitch. Will tilt 180 degrees. Durable construction features. Heavy gauge steel. Zinc plated, rust-proof finish, completely assembled. Deluxe angle base Mount for 1½" masts Deluxe angle base Mount for 2" masts
	1405	**iE VENT PIPE MOUNT** Features special "U" bolt for holding vent pipes up to 2" in diameter. Installation is simple, sure-quick and easy! Construction extra sturdy. Heavily plated throughout to withstand all kinds of weather. Vent Mount to 2"
	1406	**iE VENT PIPE MOUNT** Quickly and simply attached to any vent or round object. Adjustable bracket permits fastening to pipe from 4" to 6" in diameter. Positive clamp action assures extra rugged installation. Vent Mount 4" to 6"
	1540	**iE UNIVERSAL MOUNT** A universal mount for ridge roofs, chimneys and corners. Adjustable clamp, mounts masts to either of two positions. Will hold masts up to 1-7/8" diameter. Steel Zinc Plated against rust and corrosion. Kit comes complete with mast clamp and hardware. Apex Mounts for Mast to 1-7/8"
	1080	**iE UNIVERSAL RIDGE MOUNT HEAVY DUTY** "JUMBO" SIZE—MASTS TO 2¼" DIA. Mast base for large masts and telescoping towers. Allow you to "Walk-Up" large masts and towers with ease and safety. Safety-sure construction with non-twisting mast clamp and carriage bolts for "one hand" installation. Adjustable for any installation. Universal Ridge Mount Masts to 2¼"
	1550	**iE MAST BASE** For Masts to 1-7/8" diameter. Adjustable base mount permits mounting of masts at any angle. Will not slip. Complete with necessary hardware. Masts base for Masts to 1-7/8"
	1560	**iE SLOTTED MAST BASE** For Masts to 1-7/8" diameter Similar in design to the regular iE Standard Mast base. Special slot arrangement permits "walk up" of antenna mast. Will accommodate mast to 1-7/8" completely assembled includes necessary hardware for quick easy installation. Mast Base for Masts to 1-7/8"
	2702 2703 2705 2710	**iE TRIPOD MOUNT** Opens and closes like an umbrella. Completely assembled with solid rivets. Flexible grippers, fits roofs of any slope. Angle iron construction makes a sturdy vibration proof assembly. Legs adjustable to 32" center, fits any 2 by 4. Shipped Assembled-fast installation. 2 ft. Tripod Mount for Mast to 1⅜" 3 ft. Tripod Mount for Mast to 1⅜" 5 ft. Tripod Mount for Mast to 1⅜" 10 ft. Tripod Mount for Mast to 1⅜"
	1050	**iE ADAPTOR BRACKET** FOR U.H.F. & V.H.F. This adaptor bracket permits addition of another antenna to existing installation. Snap-on feature allows for masts up to 1-7/8" diameter. Completely assembled. Adaptor Bracket
	1500	**iE GUY WIRE CLAMP** Fastens on masts for attaching guy wires. Clamps on masts up to 1¼" diameter with firm, sure grip. Two round eye bolts provide best guy wire attachment. Individually Packed. Guy Wire Clamp for Masts to 1¼"
	1510	**iE GUY WIRE CLAMP** Fastens on masts for attaching guy wires. Furnished with screws and individually packed. Guy Wire Clamp for Masts to 1⅜"
	1512	**iE 3-WAY WIRE CLAMP** Clamps on masts up to 2½" in diameter with firm, secure, grip. Three screw eye, balanced arrangement provides easy, sure fastening of guy wire. Constructed of heavy gauge steel for long-life. Zinc plated to prevent rust and corrosion. 3 Way Guy Wire Clamp for Masts to 2½"
	1650 1651	**iE CABLE CLAMP** Heavy gauge steel ... Zinc plated ... Fits guy wires from 1/8" to 3/16". Complete with hardware to hold clamp securely. 1/8" Cable Clamp Small Size 3/16" Cable Clamp Standard Size

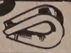
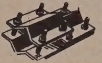
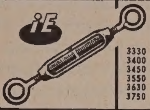
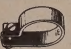
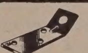
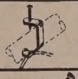
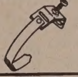
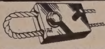
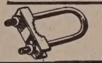
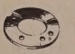
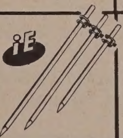
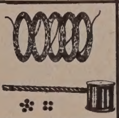
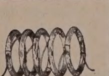
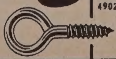
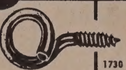
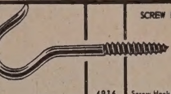
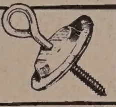
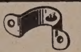
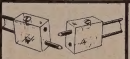
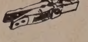
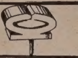
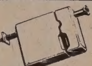
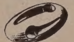
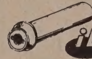
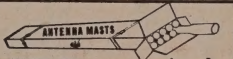
ILLUSTRATION	PART NO.	DESCRIPTION
	1660	**iE GUY WIRE THIMBLE** Prevents wire from fraying and loosening. Quickly fastens guy wires securely ... Zinc plated to prevent rust. Guy Wire Thimble
	2320	**iE MAST COUPLER** 3-PIECE 3 Piece Vise Clamp to hold any masts of equal or unequal diameter ... for masts 3/4" to 1-7/8" diameter. Heavy gauge steel. Zinc plated. Mast Coupler 3/4" to 1-7/8" Masts
	7110	**iE 300 OHM TUBING** Clear plastic protective tubing protects twin lead thru doors, windows and tight places 100 ft. Coil
	3330 3400 3450 3550 3630 3750	**iE TURN-BUCKLES** Heavy duty rust resistant SIZE CLOSED · SIZE OPEN · TAKE UP · BOLT SIZE 3-3/8" · 4-5/8" · 1-1/4" · 5/32" 4" · 5-5/8" · 1-5/8" · 3/16" 4-1/2" · 6-3/8" · 1-7/8" · 7/32" 5-1/2" · 7-5/8" · 2-1/8" · 1/4" 6-3/4" · 9-1/4" · 2-1/2" · 5/16" 7-1/2" · 10-1/2" · 3" · 3/8"
	3800 3810	**iE GUY RING CLAMP** Holds Guy ring in place. Ring is full floating when clamped on mast under guy ring. For Masts of 3/4" to 1" For Masts of 1¼" to 1½"
	1670	**iE GUY WIRE ANCHOR BRACKET** Anchors end of guy wire firmly to roof. 1/8" steel. Edges on hole rounded prevents wire from fraying. Guy Wire Anchor Bracket
	1675	**iE GROUND CLAMP** C-Clamp type to fit pipe up to 1-3/8" for fast and permanent installation. Slip wire into groove at bottom of clamp. In the "V" lip. Ground Clamp for pipe to 1-3/8" diameter
	1676	**iE GROUND WIRE CLAMP** Strap type ground clamp for pipe 3/8" to 2" diameter ... Adjustable for pipe 1/2" to 3" in diameter. Copper plated for good conductivity Ground Clamp Copper for Pipe ½" to 3"
	1680	**iE GUY CLAMP** Easy and simple ways of fastening guy wire ends. Guy wipe Clamp for 1/8" to 1/4" wire.
	5100	**POSITIVE GRIP "U" CLAMP** Clamp Assembly with lock washers and nuts.
	3900 3910 3920 3930 3940 3941 3942 3950 3951 3953	**iE FLOATING GUY RING** STEEL ... ZINC PLATED For 1" Mast Size For 1-1/8" Mast Size For 1-1/4" Mast Size For 1-3/8" Mast Size For 1-1/2" Mast Size For 1-5/8" Mast Size For 1-3/4" Mast Size For 2" Mast Size For 2-1/4" Mast Size For 2-1/2" Mast Size
	4401 4402 4403 4404	**iE GROUND ROD** Heavy gauge steel rod, heavy copper plated, with sharp point for easy installation. Ground wire clamp included. Assembled on rod. 4 Ft. - 3/8" diameter 6 Ft. - 3/8" diameter 8 Ft. - 3/8" diameter 8 Ft. - 1/2" diameter
	4600L 4600M 4601L 4601M 4602L 4602M	**iE STEEL STRANDED GUY WIRE** Heavy Galvanized Steel Rust Proof Television Guy Wire. Non Tang-Ling Coils. 4 Strand No. 20 - 50' Connecting Coils 4 Strand No. 20 - 1000' Spools 6 Strand No. 20 - 50' Connecting Coils 6 Strand No. 20 - 1000' Spools 6 Strand No. 18 - 50' Connecting Coils 6 Strand No. 18 - 1000' Spools
	4604 4605 4606 4607	**iE ALUMINUM GROUND WIRE** Aluminum Ground Wire uncoated. Pliable, easy to use, for grounding. Mast from lightning and electrical disturbances. 50' Coil 1/8 Dia. Aluminum Wire 100' Coil 1/8 Dia. Aluminum Wire 500' Coil 100' Interconnecting Al. Wire 1000' Spool 1/8 Dia. Aluminum Wire
	4902	**SCREW EYE** Screw Eye - Steel Zinc Plated

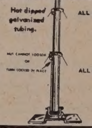
ILLUSTRATION	PART NO.	DESCRIPTION
	1730	**BRIDLE RINGS** Handy for tying any size or number Guy Wires. Made of heavy gauge steel, zinc plated to prevent corrosion. For masting and rotator installation. Bridle Rings 3/16" Dia. Wire
	4916	**SCREW HOOK** Screw Hook Steel Zinc Plated
	1671 1672	**iE WATER-TIGHT ANCHOR SCREW AND SHIELD** For anchoring mast to the roof. Water-tite design. Protects roof from leaks. Zinc Plated. Water-Tite Screw Eye 3½" long Water-Tite Screw Eye 5" long
	1580 1590	**iE MAST AND PIPE STRAP** Ideal for fastening Pipes, Poles, etc. to roofs, chimneys and walls. Heavy gauge. Galvanized 1" Masts 1¼" Masts
	1750	**iE TWIN LEAD CONNECTORS** Solderless 300 ohm twin lead connector. Slip on wire and tighten screw. Use in pairs. Twin Lead Plug 2-Pieces
	1602 1602-X	**iE 3-WAY CLIP** No soldering, connects leads to TV sets or testing equipment. 3-way Clip Bag of 10. Transparent plastic.
	1770	**iE RUBBER WALL STANDOFF** For indoor use in securing twin lead to walls, base, boards and moulding. Comes assembled with nails Wall Standoff
	3000	**iE PORCELAIN 300 OHM NAIL-IN STANDOFF** This handy porcelain insulator protects lead-in from sway and whip, fully water proof. Complete with screw. Porcelain Nail-in-Standoff
	3090 3100	**iE PORCELAIN STRAIN INSULATORS** Made of white glazed porcelain. Strain insulator 1½" x 3/4" dia. Strain insulator 1¾" x 2" dia.
	3110 3120 3130	**iE PORCELAIN LEAD-IN TUBES UHF TYPE** For oval and round wire thru walls. Drill 3/4" hole. 4" long UHF Tube 6" long UHF Tube 8" long UHF Tube



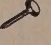
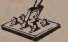
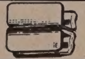
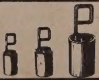
EXPANDED MASTING
PACKED 10 TO A CARTON

- iE electro galvanized finish.
- Finish will not crack or peel.
- Plastic finish coating on inside.
- 6" Expanded end, lock joint.
- Bright silver finish.

2604	1¼"	16	10'
2603	1¼"	16	5'
2606	1½"	16	10'
2602	1¼"	18	10'
2601	1¼"	18	5'
2607	1¼"	20	10'
2608	1¼"	20	5'


Hot dipped galvanized tubing.
MAST CANNOT LOOSEN OR TURN LOCKED IN PLACE

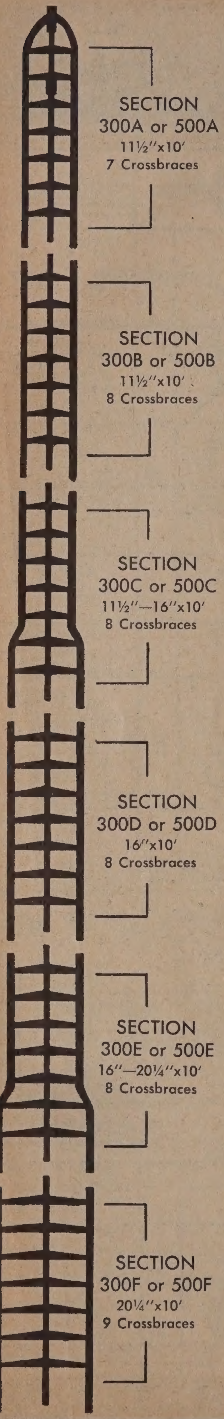
DESCRIPTION ALL SECTIONS WITH FULL 18 Ga. STEEL	PART NO.	STAND PACK	LIST PRICE
20' Telescoping Mast	2820	1	8.95
30' Telescoping Mast	2830	1	13.50
40' Telescoping Mast	2840	1	19.00
50' Telescoping Mast	2850	1	25.00
ALL SECTIONS WITH FULL 16 Ga. STEEL	1120	MAST	BASE
20' Telescoping Mast	2520	1	11.95
30' Telescoping Mast	2530	1	16.95
40' Telescoping Mast	2540	1	24.50
50' Telescoping Mast	2550	1	33.00

ILLUSTRATION	PART NO.	DESCRIPTION
	1771	**FIBRE HEAD WIRING TACK** Fully insulated with fiber head for nailing any television transmission wire along base of woodwork and walls. Fiber head prevents signal loss. Fiber Head Tack
	1603	**iE KNIFE SWITCH D.P. D.T.** For Hi-lo antenna installation and shop use. Nickel plated brass fittings. Bakelite base. Knife Switch D.P. D.T.
	1690	**iE FUSE CLIP** Just snap fuse clip over burnt out fuse and insert new fuse. Covered with insulation. TV Fuse Clip
	4300 4305 4301	**iE TUBE & VIBRATOR PULLERS** 3 Sizes in a set 5 Sizes in a set Vibrator Puller Only

JONTZ MFG. CO.

SELF SUPPORTING SUPER KWICK CLIMB TOWERS

TOWER SECTIONS AVAILABLE AS ILLUSTRATED



Model 300 Economy—Self-supporting up to 60 foot; tested to withstand high wind loads. Sections are zinc electroplated, dipped in clear Butyrate lacquer for extra-long weather protection. Tower may be erected as one piece or by sections, and relocated without loss of length by using separate foundation mountings. Additional sections may be added up to 200 feet by use of guys every 20 feet. Each 10 foot tower section is constructed from 1¼" x 18 gauge tubular uprights with ⅛" x 1¼" corrugated cross-braces. A 60 foot tower is shipped in 2 bundles, i.e. Sections A, C, D, E and 2 F's, for economical freight and storage rates. Sections are bolted together with 2 self-locking ⅜" bolts in each leg. The splined bolts allow the threaded section to be inserted with no damage, and when secured makes each joint solid, preventing the hole from stretching as the tower moves in the wind. Wall brackets furnished with drive-in bases. Please specify when ordering whether tower mounting is to be set in concrete or of the drive-in type, so that proper hardware can be supplied.

Model 300—40'	shpg. wt. 135 lb.	**$ 59.95**
Model 300—50'	shpg. wt. 185 lb.	**$ 74.95**
Model 300—60'	shpg. wt. 235 lb.	**$ 91.45**
Model 300—70'	shpg. wt. 270 lb.	**$105.95**
Model 300—80'	shpg. wt. 320 lb.	**$122.45**

Model 500 Heavy Duty—self-supporting up to 60 foot; tested to withstand wind loads up to 80 M.P.H. Sections are zinc electroplated, dipped in clear Butyrate lacquer for extra-long weather protection. Tower may be erected as one piece or by sections, and relocated without loss of length by using separate foundation mountings. Additional sections may be added up to 400 feet by use of guys every 20 feet. Each 10 foot section is constructed from 1¼" x 16 gauge tubular cross-braces. A 60 foot tower is shipped in two bundles, i.e. Sections A, C, D, E and 2 F's, for economical freight and storage rates. Sections are bolted together with two self-locking ⅜" bolts in each leg. The splined bolts allow the threaded section to be inserted with no damage, and when secured makes each joint solid, preventing the hole from stretching as the tower moves in the wind. Wall brackets are furnished with drive-in bases. Please specify when ordering whether tower mounting is to be set in concrete or of the drive-in type, so that proper hardware can be supplied.

Model 500—40'	shpg. wt. 160 lb.	**$ 72.45**
Model 500—50'	shpg. wt. 205 lb	**$ 89.95**
Model 500—60'	shpg. wt. 206 lb.	**$110.20**
Model 500—70'	shpg. wt. 303 lb.	**$127.70**
Model 500—80'	shpg. wt. 355 lb.	**$147.95**

HEAVY DUTY DRIVE-IN BASE

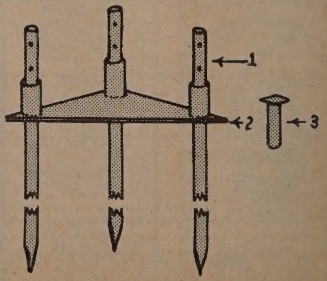
For Jontz self-supporting towers

Specifications:

1—Drive-in legs: 1¼" x 16 gauge x 36"

2—Base plate: 18" triangle x 11 gauge for 40' towers—22" triangle for towers 50' or higher —state tower height

3—Driving cap: 2" x 1¼" to drive individual legs.



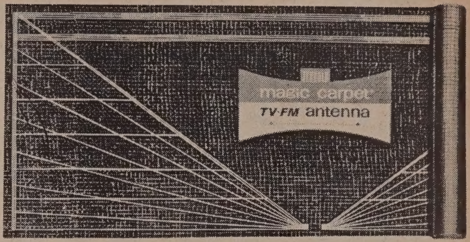
JERROLD

TV RECEPTION AIDS FOR THE HOME

JERROLD MAGIC CARPET* ANTENNA

THE INDOOR ANTENNA WITH OUTDOOR PERFORMANCE

MODEL MK-1



This new antenna by Jerrold is the first full-scale printed-circuit antenna. Truly a "Magic Carpet" carrying quality TV/FM signals to receivers in the home, the MK-1 is easily installed (lay it on any flat, horizontal surface in the attic, under a rug, or staple to a ceiling) and simple to orientate (shift its position for best reception). Ideal for use with the Jerrold Amplified TV/FM Home System, the Magic Carpet eliminates the unsightliness and maintenance costs of outdoor antennas. When properly installed, the Magic Carpet provides reception comparable to an outdoor, conical-type antenna mounted in the same location. This means that the MK-1 will provide excellent reception of TV stations within a 30-mile radius and of FM stations within a much greater radius. The antenna is shipped complete with 6 plastic strap insulators (Model HS-36) and 25 feet of twin-lead for attachment to a home amplifier or to a TV receiver. Shipping Weight — 1¾ lbs.
List Price $9.95

*Trademark Patent Pending

JERROLD TV RECEPTOR*

THE ANTENNA THAT HIDES WHILE IT WORKS

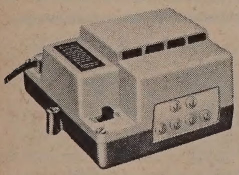
MODEL TVR

An easily tuned (simply slide the Receptor up and down the ac cord) capacitive antenna, Model TVR provides excellent TV reception in most locations within 15 miles of the TV station. Shipping weight — ¾ lb.

*Trademark Patent Pending List Price $3.95

NEW TV/FM AMPLIFIED COUPLERS

MODEL HSA-43 (FOR 3 SETS)



The new JERROLD amplified, 3-set coupler, Model HSA-43, employs a single 6DJ8 tube to provide 5 db minimum gain from two outlets and unity gain from the other. It is ideal for operating 2 TV and 1 FM receivers from a common antenna. The HSA-43 amplified coupler operates on an input as low as 100 microvolts and has an excellent noise figure. The input and output impedance of 300 ohms permit the use of twin-lead in installation. This compact (4½" x 4½" x 3") rugged unit is powered from 117 V 60 cycle ac, consumes only 10 watts and incorporates "no-strip" twin-lead terminals. Shipping weight — 1¼ lbs. UL Approved. List Price $29.95

MODEL HSA-44 (FOR 4 SETS)

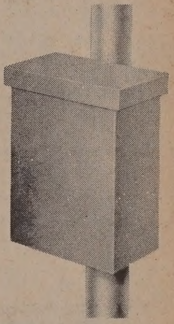
Similar to the HSA-43 but serves up to four TV/FM sets with a minimum of 1½ db gain at each output. List Price $29.95

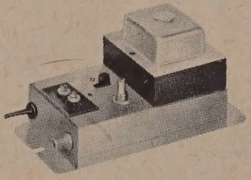
Note: Where desired, use Jerrold's no-strip twin-lead outlets to create convenient plug-in locations.

NEW PRE-AMPLIFIER

THE DE-SNOWER TV/FM PRE-AMPLIFIER

MODEL DSA-202 WITH REMOTE POWER SUPPLY 407-P





MODEL DSA-202

The new TV/FM pre-amplifier, Model DSA-202 uses only two tubes to provide high gain (20 db) for the entire TV band. In addition, it provides 8 db minimum gain at 108 mcs., the extreme edge of the FM band. Complete with a new remote power supply (Model 407-P) this pre-amplifier features an even better noise figure than the famous DSA-132 and consumes only 25 watts. The new remote power supply provides 22 to 27 v ac in logarithmic steps. Ideal for fringe areas where "snow-free" TV pictures and "hiss-free" FM sound is desired.

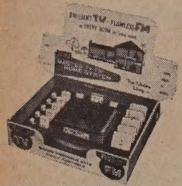
See "DESNOWER" PRE-AMPLIFIERS on page 39 for complete specifications. List Price $79.95

(Includes Power Supply and Coax Connectors)

ALL JERROLD EQUIPMENT DESIGNED FOR COLOR

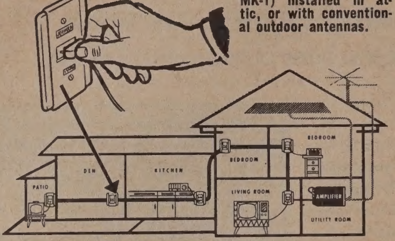
JERROLD TV RECEPTION AIDS

JERROLD'S AMPLIFIED TV-FM HOME SYSTEM



HOME SYSTEM KIT . . . Model HSK-300 Contains all items necessary (except antenna) for a complete installation in either new construction or existing buildings. Contains one HSA-46, five HS-140, twelve HS-36 and 100′ of twin-lead. List Price $67.75.

Jerrold's amplified home antenna system can be used with the new Magic Carpet Antenna (Model MK-1) installed in attic, or with conventional outdoor antennas.



The 1st Completely Engineered, Amplified System For The Home. Produces . . . Plug-In . . . High Fidelity TV and FM Reception . . . Anywhere In The Home.

FEATURES

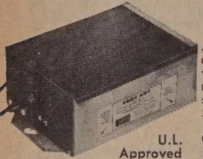
- HIGH-OUTPUT, NOISE FREE AMPLIFIER
- ALL VHF CHANNEL TV AND FM RECEPTION
- 300 OHM TWIN-LEAD OPERATION
- PRESS-ON, PLUG-IN OUTLETS
- SCREW-DRIVER INSTALLATION . . . SOLDERLESS
- IMPEDANCE MATCHED THROUGHOUT
- HIGH ISOLATION BETWEEN OUTLETS

DESCRIPTION

The JERROLD Home System is a completely new innovation in supplying exceptional quality television and FM signals to a number of receivers located anywhere in the home. This is the first truly engineered, amplified system designed especially for the home.

The Home System consists of a low-noise, high output amplifier that permits clear reception of VHF television and FM radio signals in both fringe and metropolitan areas. AM reception is included by utilizing one side of the distribution wiring as an efficient AM antenna. The amplifier distributes the TV and FM signals throughout the house over regular twin-lead. Connection to the twin-lead is made by a special tap unit. A quick disconnect press-on plug is supplied for connecting the antenna terminals of each receiver to any of the tap units. This feature allows any receiver to be moved from room-to-room . . . receivers are no longer tied down.

SYSTEM COMPONENTS



HOME AMPLIFIER Model HSA-46
A printed circuit amplifier with a low noise input. Response is flat, ±1.5 db over TV and FM band. Gain is a minimum of 15 db. U.L. Approved. Output capabilities permit input signals as high as 30,000 microvolts without overload. Input and output matched to 300 ohms. Utilizes two 6BK7-A tubes. List Price $49.95.

HOME OUTLET . . . Model HS-21 An efficient press-on tap unit for surface or flush mounting (with HS-22 and HS-23). Offers 10 db isolation between receiver and 300 ohm line. List Price $1.45.

MOUNTING RING . . . Model HS-22 Plastic bracket used to adapt HS-21 for flush mounting in standard plastic outlet box. List Price $.30.

COVER PLATE Model HS-23
Ivory cover plate to cover the outlet in flush mounting applications. List Price $.50.

PRESS-ON PLUG Model HS-24
Male plug for simple attachment to 300 ohm twin-lead. No soldering. Inserts into HS-21 Outlet. List Price $.50.

TWIN-LEAD INSULATORS Model HS-36
Plastic insulators for attaching twin-lead throughout the home. List Price $1.80/24.

OUTLET ASSEMBLIES
SURFACE MTG. Model HS-135
Contains all items for surface mounting. One HS-21 and one HS-24. List Price $1.95.

FLUSH MOUNTING . . . Model HS-140
Contains all items for flush mounting. One HS-21, one HS-22, one HS-23 and one HS-24. List Price $2.75.

SYSTEM ACCESSORIES

Model HS-37
Weather-proof flush outlet plate. List Price $1.70

Model HS-50
Non metallic outlet box for new construction. List Price $.45

Model IV-300
A convenient 100′ coil of ivory, 300-ohm twin-lead. List Price $3.50

MULTI-SET TV/FM COUPLERS

Jerrold Multi-Set Couplers provide the best method of connecting 2, 3 or 4 television and/or FM receivers to a common antenna array. Units feature positive matching, extremely low forward loss and high isolation. All models equipped with "No-Strip" serrated washers which bite into twin-lead to make positive, permanent connections.

INDOOR MOUNTING—on the baseboard for a neat and attractive appearance, with connectors concealed and protected. For attic or basement use, the unit mounts with terminals exposed for ease of servicing.

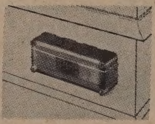
OUTDOOR MOUNTING—a bracket is supplied for strapping to antenna mast. The unit is weather resistant.

MODEL M-2* TWO SET COUPLER FOR STRONG SIGNAL AREAS—inductively compensated with emphasis on positive matching for reduction of ghosting and smear. Color: blue grey. List $3.50

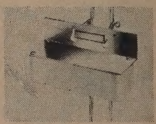
MODEL MF-2 TWO SET COUPLER FOR FRINGE AREAS—for use wherever extremely low forward losses are mandatory. Featuring a highly efficient transformer design and positive matching. Provides complete isolation between receivers. Color: ivory. List $4.50

MODEL MF-4 FOUR SET COUPLER FOR ALL AREAS—designed with the same basic circuit as MF-2, but for use in feeding 3 or 4 sets from one antenna. Color: ivory. List $5.75

MODEL TX-FM SPECIAL TV-FM COUPLER—splits TV and FM signals frequency-wise and without loss to either signal from a common antenna. Gives complete isolation between TV and FM sets. List $5.95

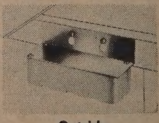


Baseboard



Mast

Attic & Basement



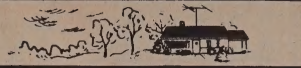
Outside

(Each unit packed with special bracket, for outdoor mounting, and necessary hardware.)

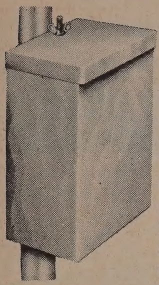
*Best for UHF

TECH DATA SHEETS AVAILABLE FOR PRODUCTS LISTED ON THIS PAGE

FOR THE HOME



"DE-SNOWER" PREAMPLIFIERS



JERROLD "DE-SNOWER" preamplifiers, Models DSA-202, DSA-132, and DSA-*, produce "snow-free" pictures from extremely weak signals. The new DSA-202 and the DSA-FM greatly improve reception of weak or noisy FM stations and provide reception of distant FM stations not normally received. These mast-mounted preamplifiers bring your TV-FM tuner to the antenna thus overcoming noise pick-up and losses due to antenna lead-ins. Each is equipped with a remote power supply which may be placed at an easily accessible location. Only one cable is necessary to carry ac power up to the preamplifier and amplified signal down to the receiver. Used as a preamplifier, the low noise figure and high gain of DSA amplifiers will improve color TV reception and boost TV/FM signal strengths in all fringe areas. See specifications chart for prices. All prices include remote power supply.

FM RANGE EXTENDER MODEL 406A-FM

This FM pre-amplifier has the same electrical specifications as the DSA-FM except that it has a self-contained power supply. Designed for indoor mounting, the 406A-FM operates from any 60 cycle, 117-volt ac source. The physical appearance and shipping weight are the same as those for the 406A pre-amplifier listed on page 40 of this catalogue.

UL Approved. List Price $64.25*

SPECIFICATIONS

PREAMPLIFIERS	DSA-202	DSA-132	DSA-*	DSA-FM
GAIN	20 db min.	25 db	28 db	25 db min.
BANDWIDTH	54-98, 174-216	54-88, 174-216	6mc any TV ch.	88-108
FREQUENCY RESP.	1½ db max. peak to valley	1 db max. peak to valley	½ db max. peak to valley	1 db max. peak to valley
NOISE FIGURE	4.5 db max. lo-ch. 6 db max. hi-ch.	6.5 db max. lo-ch. 8.5 db max. hi-ch.	6 db max. lo-ch. 7.5 db max. hi-ch.	
SKIRT SHARPNESS	8 db min. gain at 108 mc.			
MAXIMUM INPUT	17,000 microvolts pr. ch./3 lo chs. 11,000 microvolts pr. ch./4 hi channels	5,500 microvolts	40,000 microvolts	
MAXIMUM OUTPUT AT 300 ohms	.17 v/pr. ch. at each of 3 ch. lo .11v/pr. ch. at each of 4 ch. hi	0.2 v/pr. ch. at each of 7 ch.	1.2 v rms lo 1.0 v rms hi	0.5 rms.
MAXIMUM OUTPUT AT 75 ohms	.085 v/pr. ch. at each of 3 ch. lo. .055 v/pr. ch. at each of 4 ch. hi.	0.1 v/pr. ch. at each of 7 ch.	0.6 v rms lo 0.5 v rms hi	
INPUT IMPEDANCE	300 ohms	300 ohms	300 ohms	300 ohms
OUTPUT IMPEDANCE	75 or 300 ohms	75 or 300 ohms	75 or 300 ohms	75 or 300 ohms
TUBE COMPLEMENT	2-6DJ8	(3) 6BQ7-A (1) 6CB6 (1) 6AK5	Lo-band (1) 6BQ7-A (1) 6CB6 Hi-band (1) 6BQ7-A (1) 6AK5	(1) 6BQ7-A (1) 6CB6
FINISH	Iridite	Iridite	Iridite	Iridite
DIMENSIONS	4″x8½″x4″	5″x10¼″x 7¼″	2½″x5″x 10¼″	2½″x5″x 10¼″
POWER SUPPLY	407-P	405-P	405-P	405-P
INPUT	117 V 60 cycle	117 V 60 cycle	117 V 60 cycle	117 V 60 cycle
OUTPUT VOLTAGE	22-27 volts	24-32 volts	24-32 volts	24-32 volts
POWER CONSMPTN.	25 watts	50 watts	30 watts	30 watts
DIMENSIONS	3½″x3½″x 6½″	2⅞″x6¾″x 5⅛″	2⅞″x6¾″x 5⅛″	2″x⅞″x6¾″ x5⅛″
SHIPPING WEIGHT	5½ lbs.	12¾ lbs.	8¼ lbs.	8¼ lbs.
ACCESSORIES FURN. (All Models)	3 F-59 Cable fittings, mounting screws for power supply, mast clamp and strap			
LIST PRICE†	$79.95	$109.50	$90.00	$90.00

*Specify Channel desired

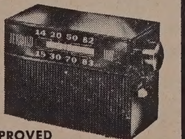
J E R R O L D

ULTRACON Model TCU UHF CONVERTER

FEATURING

- PRESELECTION — a must in 2 channel areas, UHF or VHF.
- COAXIAL TUNING — for no drift-stability, low noise operation, no wiping contacts.
- LONG LIFE OPERATION — newly developed 6AF4-A oscillator tubes, low noise mixer-diodes.
- VERNIER TUNING — coupled to slide rule dials for easy station selection.

. . . for quality reception in normal signal areas. Lowest noise figure over entire UHF band of any similarly priced converter! Handsomely styled cabinet in dark maroon. Complete with 6AF4-A and 1N72. List Price $22.95.



UL APPROVED

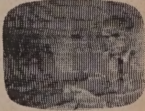
"TRAP-EASE"

TUNABLE INTERFERENCE TRAPS

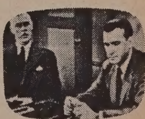
Eliminate adjacent channel interference, permit reception of weak, distant stations normally blocked by a strong local channel.

"TRAP-EASE" KNOCKS OUT ADJACENT CHANNEL INTERFERENCE. This tunable "deep notch" antenna trap (greater than 50 db) permits TV viewers to remove "beat" or "herringbone" patterns caused by adjacent channel sound or video carriers. Permits clear reception of even weak distant stations.

Works with any TV receiver and any 300 ohm antenna that would normally bring in pictures from the distant stations if the interfering adjacent channel was not on the air. Does not affect reception of regularly viewed channels.



BEFORE



AFTER

$19.95 List

TWO MODELS AVAILABLE

LOW TRAP-EASE	HIGH TRAP-EASE
(Model HQ-91) covers Channels 2 to 6.	(Model HQ-92) covers Channels 7 to 13

TECH DATA SHEETS AVAILABLE FOR PRODUCTS LISTED ON THIS PAGE

†Prices slightly higher in the West and Southwest.

TRADE DISCOUNT APPLIES TO *LIST* PRICES ONLY

JERROLD

TV DISTRIBUTION SYSTEMS

as simple as A-B-C

A AMPLIFYING

Amplify the signals, one channel or all channels. Achieve undistorted reproduction of TV signals over long distances of coaxial cable with simplicity of installation and continuous 24-hour maintenance-free operation. Each Jerrold amplifier is designed with:

- Flat Response over entire band
- Matched 300 ohm or 75 ohm input
- Matched 75 ohm output
- High Overload Characteristics

MODEL 2300

COVERS CHANNELS 2 TO 6 AND 7 TO 13

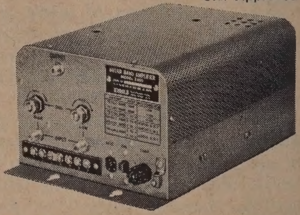
The Jerrold high gain, high output TV distribution amplifier for large motels, hotels, apartment buildings and "neighborhood cable" systems.

$164.00 List

FEATURES:

- Hi and Lo band locking gain controls.
- Hi and Lo band "tilt" controls for cable compensation. (No external line equalizers needed.)
- Ground clamp for lightning protection.
- Complete with coax connectors.

U.L. Approved



SPECIFICATIONS

Gain: 38 db min.

Gain Controls: 16 db range Hi and Lo bands.

Tilt Controls: Hi and Lo bands.

Rated Output (Max.): .3v/channel for 9 channel operation

Rated Input (Max.): 26000 uv

Tube Complement: 4-6BQ7-A, 2-12BY7A, 1-6CB6.

Cable Fittings: 75 ohms — (3) F-61; 300 ohms — screw terminals

Fuses: Primary — 1 amp.

Finish: Gray hammertone.

Dimensions: 11" x 7¼" x 5¼"

Shipping Weight: 10 lbs.

Power Requirements: 117 volts AC .58 amps.; 63 watts

MODELS ABD-1, ABD-8 and 406A

Provide the key to superior television distribution for small economical systems. Combining latest cascode circuitry and superior mechanical design, these amplifiers deliver strong, snow-free pictures and keep installation costs to a minimum.

SPECIFICATIONS: MODEL ABD-1

COVERS CHANNELS 2 TO 6 and 7 TO 13

Gain: 25 db

Rated Output (Max.): 0.1 v/channel (7 channel operation)

Rated Input (Max.): 5500μv

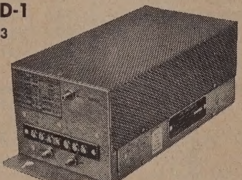
Noise Figure: 6 db low band, 7.5 db high band

Tube Complement: 3-6BQ7A, 1-6AK5, 1-6CB6

Cable Fittings: 75 ohms-(3) F-61; 300 ohms — screw terminals

Fuses: B+, 1/10 amp. Slo Blo; Pri. ½ amp. Slo Blo

Dimensions: 11" x 4" x 5"



U.L. Approved

Shipping Weight: 7 lbs. 7 ozs.

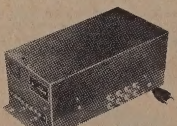
Power Requirements: 117 v AC, 50-60 cps, 35 Watts

Includes coax connectors **$99.50 List**

SPECIFICATIONS: MODEL ABD-8

COVERS CHANNELS 2 TO 13

Same circuitry as ABD-1 except output circuit, which delivers 15 db gain to each of eight F-61 output terminals. No coax connectors supplied. **$99.50 List**

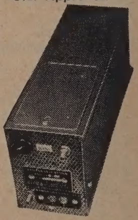


U.L. Approved

SPECIFICATIONS: MODEL 406A-*

COVERS ANY SINGLE CHANNEL FROM 2 TO 13

U.L. Approved



* Specify channel desired

Gain: 28 db

Bandwidth: 6 mc. ±½ db

Rated Output (Max.): .6v RMS Lo band, .5 v RMS Hi band

Noise Figure: 6 db Lo band, 8 db Hi band

Tube Complement: Lo band, 1-6CB6, 1-6BQ7A; Hi band, 1-6BQ7A, 1-6AK5

Housing: Gray hammertone finish

Dimensions: 3" x 4" x 10½" overall

Shipping Weight: 4¼ lbs.

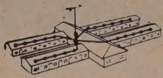
Power Consumption: 15 Watts

$64.25 List
Includes coax connectors

TECHNICAL DATA SHEETS AVAILABLE FOR PRODUCTS LISTED ON THIS PAGE

Above units shipped complete with coaxial fittings and hardware.

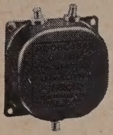
ALL JERROLD EQUIPMENT DESIGNED FOR COLOR



B BRANCHING

Branch amplifier outputs into 2 or more trunks with minimum loss, no distortion, no overload and high isolation between legs.

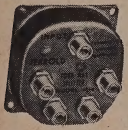
TWO-WAY SPLITTER
Model 1562



Hybrid two way splitter with only 3 db forward loss in each leg. Isolation between outputs is 15-20 db. B-59 coax bushings do not require cable connectors.

$7.50 List

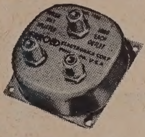
FOUR-WAY SPLITTER
Model 1514



Four-way reactive splitter with only 6 db forward loss to each output. Isolation between outputs, 12 db. Complete with five F-59 cable connectors. (Unused outputs must be terminated with TR-72F terminating resistors.)

$14.50 List

HYBRID DUAL SPLITTER
MODEL 1582



A low-loss, high-isolation, three-terminal directional coupler. VSWR 1.2 input, 1.3 output. JERROLD F-fittings for convenient cable connections. Connectors incl. List Price $12.50

TERMINATORS

Model TR-72B

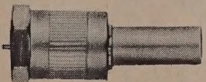
Inexpensive 75 ohm terminator for easy connection to B-59 type bushings.

$1.50 List

Model TR-72

Close tolerance 75 ohm resistor for line or equipment termination. Mates with C-61, C-81 or C-5911.

$1.50 List



Model TR-72F

Similar to TR-72. Mates with F-61, F-81, A-61 or F-101-59.

$1.50 List

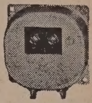
C CONNECTING

Connect the signal to TV receivers quickly and efficiently — using simple and rapidly installed Jerrold tap-off units. Designed for high isolation between receivers. Compensates for cable characteristics.

FOR INDOOR USE

Surface Mounting

Model LT-310 — 300 ohm output



Taps RG-59/U line to 300 ohm receivers. Full AC isolation. B-59 coax bushings do not require cable connectors. Surface mounting, ivory radiation-proof steel case. Three color-coded attenuation values (specify R, Y or G). Terminate the last tap on feeder line with model TR-72B terminator.

$5.00 List

Model LT-77 — 75 ohm output

Taps RG-59/U line to 75 ohm receiver or to 300 ohm in direct pick-up locations. B-59 coax bushings do not require cable connectors. Surface mounting, ivory radiation-proof steel case. Three color-coded attenuation values (specify R, Y or G). Terminate the last tap on a feeder line with model TR-72B terminator.

$5.00 List

Flush Mounting

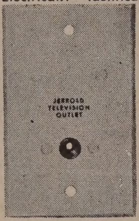
Model 1431 — 300 ohm output

JERROLD TELEVISION OUTLET

Electrically identical to LT-310. Mounts in 2″ x 4″ electrical outlet box or 4″ x 4″ outlet box with single gang plaster ring. Specify R, Y or G. Terminate the last tap on a feeder line with model TR-72B terminator.

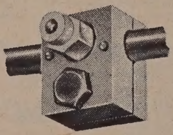
$5.00 List

Model 1477 — 75 ohm output



Electrically identical to Model LT-77. Mounts in 2″ x 4″ electrical outlet box or 4″ x 4″ outlet box with single gang plaster ring. Specify R, Y or G. Complete with 75 ohm output plug. Terminate the last tap on a feeder line with model TR-72B terminator. Available in satin-finish stainless steel plate at slight additional cost. (min. order of 100) **$5.00 List**

FOR OUTDOOR USE

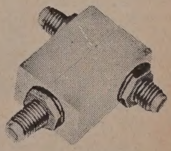


Model PT 1461 — For RG-11/U

Pressure tap for RG-11/U type feeders. Surface mounting. Removable color coded isolation units. (Specify R, Y or GR.) Unique design minimizes shunt capacity. (Requires use of CD-11 Cutting Punch.) Complete with F-59 cable connector. Terminate the last tap on a feeder line with TR-72F terminator. (Use F101-59 cable adaptor.)

$7.50 List

Model 1401 — For RG-59/U, RG-6/U



Surface mounting non-resistive line tap for RG-59/U type feeders. Color coded attenuation values permit use with highest gain amplifiers. Specify R, Y, GR. Complete with mounting bracket and three C-52 cable connectors. (Use C-56 connectors for RG-6 type feeders.) Terminate the last tap on a feeder line with TR-72 terminator.

$7.50 List

TECH DATA SHEETS AVAILABLE FOR PRODUCTS LISTED ON THIS PAGE

LOOK TO JERROLD FOR AIDS TO BETTER TELEVIEWING

JERROLD

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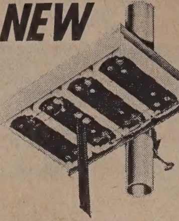
JERROLD TV SYSTEM ACCESSORIES

ANTENNA MIXING NETWORKS

NEW



Group of 4 Model TX-(†) Units on GP-4 Mount

For mixing single channel or broadband antennas into a common line. May be used in reverse as channel splitters.

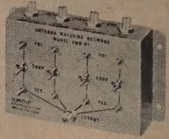
INDOOR OR MAST MTG.—FIXED FILTER—300 OHM

Comp'ete with Matched Mixing Jumpers, and appropriate hardware.	LIST
TX-(†) Specify Channel Desired Ch. 2 thru 13	$5.95
TX-(FM) FM From TV Antenna With No Losses	$5.95
TX-(H-L) To Be used When Mixing Hi and Lo VHF Chs.	$5.95
TX-(VHF-UHF) Mix or Separate VHF and UHF Signals	$5.95
GP-4 GANG PLATE For Mounting 4 TX-(†) Complete With Hardware and Strap	$1.95

INDOOR MTG.—TUNABLE FILTER—75 OHM

AMN-HI Gray Hammertone Finish 4 ch. 7-13	$27.50*
AMN-LO Gray Hammertone Finish 3 ch. 2-6	$27.50*

† Specify channel desired.

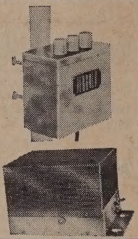


Model AMN-HI

UHF CONVERTER MODEL U2V

UHF Converter Model U2V

Pulling UHF pictures out of the snow where other converters haven't a chance, the U2V mast mounting mixer head converts right at the antenna. The UHF oscillator is mounted at the amplifier location (or at the TV receiver for individual home installation) and sends local oscillator signals up to the mixer, (a technique developed in radar installations). Signals leave the mixer as VHF so coaxial cable may be used. The U2V will convert any UHF channel to any VHF channel. Order by specifying UHF channel to be converted to a specific VHF channel. $124.50 list*



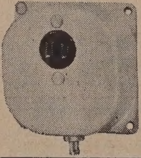
MIXER HEAD

UHF Input: double cavity tuned, 10 mc bandwidth, 75 ohms
VHF Output: 75 ohms
Mixer Crystal: CK 710 or CK 731
Dimensions: 4¼" x 4⁹⁄₁₆" x 2⁹⁄₁₆"
Weight: 1 lb. 13 oz.
Mounting: Mast mounted, brackets and straps supplied

OSCILLATOR

Tube complement: 1-6AF4, 1-OB2.
Oscillator Output: 1.0. v RMS
Power Requirements: 117v AC, 50-60 cps, 25 watts
Dimensions: 4½" x 5½" x 7"
Weight: 3½ lbs.
Mounting: May be mounted horizontally on a shelf or vertically on a wall.
Shipping Weight: 7 lbs. (Head & Oscillator).

WALL TERMINAL UNITS



Model ST 1611

Features quick-disconnect receptacle.

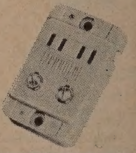
Matches receiver to 75 ohm line. Terminates tap line. Isolates line from AC-DC receivers. Metal construction minimizes radiation. Male plug not included.
$3.75 list*

MODEL 1201

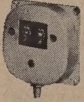
Matches receiver to 75 ohm line. Terminates line. Isolates line from AC-DC receivers. Molded plastic economy model. Surface mounting.
$2.40 list*

MODEL 1202

Same as model 1201 but mounts flush in 2 x 4 electric outlet box. Requires one Model 1202-P Cover Plate.
1202 $2.40 list*
1202P $ .25 list*



MATCHING TRANS-FORMERS



Model T-372

Surface mounting. 6 db voltage gain between 75 ohm and 300 ohm line. Flat response 50-250 mc. VSWR 1.26. Isolates line from AC-DC receivers. C-52 male connector included.
$6.00 list*

Model T-373

Flush Mounting version of T-372.
$6.00 list*

Model TO-374

Antenna mounting. Outdoor version of T-372. Bypasses AC open line in long runs between De-Snower preamplifier and power supply. Matches 300 ohm broadband or yagi antennas to 75 ohm line. Complete with mounting strap and cable connector (F-59). $10.00 list*

Model T-375

Receiver mounting. Economy version of T-372. Has B-59 crimp-on bushing in place of C-61 female 75 ohm connector, preconnected 6" 300 ohm lead instead of terminal strip for mounting directly to receiver.
$4.85 list*

Model T-377

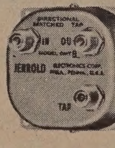
Receiver mounting, miniaturized version of T-375. Complete with C-52 fitting for attachment to coaxial cable and a solidly connected length of twin-lead (with terminals) for attachment to receiver terminals.
List $3.25*

HIGH Q TRAPS

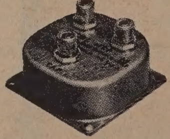
Each trap consists of two tunable L-C circuits in a modified bridged-tee network. Tuning is by Teflon-dielectric trimmers with screwdriver adjustment. With both circuits tuned to an interfering signal, rejection is 40 db minimum with insertion loss only 1 db at 1 mc off the interfering frequency. Complete with two F-59 connectors for RG-59/U cable each $58.50 list*

Model TLB-1 59.75 — 83.75 mc
Model TFM-1 88-108 mc
Model THB-1 179.75 — 211.25 mc

MATCHED T PADS



Model DC-8 is a back-matched directional-coupler type tap unit with a band pass from 7 mc to 216 mc. The insertion loss is 1.5 db and tap loss is 8 db. Isolation between line and tap outputs is 30 db at channel 6. Excellent 75-ohm match on all three terminals. VSWR is 1.3. Shipped complete with 3 mating F-59 connectors. Shipping weight — 6 oz. List Price $11.66*



Model MTP-20 is a resistive splitting device designed to match the trunk line in and out as well as the tap. The band width is 0-216 mc. The insertion loss is 2 db and tap loss is 20 db. Excellent 75-ohm match on all three terminals. VSWR is better than 1.2. Shipped complete with 3 mating F-59 connectors. Shipping weight — 6 oz.
List Price $12.50*

FIXED RF PADS

Model PDL — Fixed attenuator or pad for 75-ohm circuits. Shipped with two F-59 connectors for in-line applications. For chassis mounting, order F-71 connectors. Specify 3, 6, 10, or 20 db.
List Price $5.85*

TECH DATA SHEETS AVAILABLE FOR PRODUCTS LISTED ON THIS PAGE

* Prices slightly higher in West and Southwest.

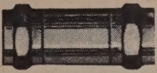
TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

JERROLD *Solderless* COAXIAL CABLE CONNECTORS and ADAPTERS

JERROLD solderless connectors can be permanently bonded to all types of RG-59/U, RG-6/U and RG-35/U cables with simple crimping tools. JERROLD connectors are carefully machined of brass and all exposed surfaces are heavily silver plated. All the new JERROLD "F" series connectors are accurately matched to 75 ohm with a V.S.W.R. less than 1.05 up to 200 mc. "F" connectors can be wrench tightened and all sizes will adapt to each other.

NEW "F" SERIES

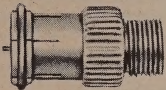
FOR RG-59/U AND RG-6/U



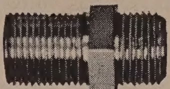
F-71 Male Coupling Adapter. Mates with F-61, F-81, F-101-59 or A-61. $1.60 List

F-61 Female Chassis Fitting. Accepts F-59, F-56 and TR-72F. Mounts in 3/8" diameter chassis hole. $.92 List

A-61 Adapter. Mates new F-59 or F-56 male connectors to older type C-61 female fittings. $2.00/25 List



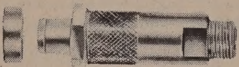
PF-59 Push-On Connector eliminates need for screwing an F-59 connector on an F-61 fitting in temporary equipment hook-ups. Simply pushes on and pulls off. Features a split - spring - tightened F-59 connector on one end and an F-61 fitting on the other. List Price$2.83



F-81 Female Coupling. Accepts F-59 or F-56. Mounts in 3/8" diameter panel hole for use as feed-thru. $1.25 List

FOR RG-11/U

MODEL F-101-59 ADAPTER ASSEMBLY



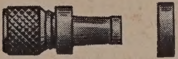
Connects RG-11/U type cables to F-59, F-56 or TR-72F. Requires Crimping Tool PL-602. $2.43 List

MODEL AF-101 ADAPTA-FIT MALE CONNECTOR

For RG-11/U type cables. Mates with F-81, F-1159, F-61, F-101-59 and A-61. Requires Crimping Tool PL-602. $2.10 List

AF-201. Same as AF-101, but for RG-11 Poly Foam Cables. $2.10 List

"C" SERIES



C-52 Male Connector mates with C-61 or C-5911. For RG-59/U type cables requires Crimping Tool PL-601 or PL-602. $.80 List

C-56 Male Connector. Same as C-52 but for RG-6/U type cables. $1.03 List

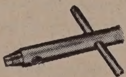
C-61 Female Chassis Fitting. Accepts C-52, C-56 or A-61. Mounts in 5/16" diameter chassis hole. $.80 List

C-81 Female Coupling. Accepts two C-52, C-56 or A-61. Mounts in 1/4" diameter panel hole and feed-thru. $1.00 List

TOOLS and FERRULES

Crimping Tool PL-601 — Crimps type 1051 ferrules. For F-59, F-56 and C-52 connectors and B-59 bushings. Does not distort cable or cause impedance mismatches. $6.50 List

Crimping Tool PL-602 — Crimps all three ferrules — 1051, 1026 and 1095. For F-59, C-52, F101-59, AF-101 and B-59 bushings. Does not distort cable or cause impedance mismatches. Made of hardened steel. $8.17 List



Cable Cutting Tool CD-11 — Cuts attenuator opening in coax cable for JERROLD pressure taps. Made of hardened steel. $3.25 List

CT-1. Replacement cutting tip for CD-11. $1.66 List

Ferrules — for use with Jerrold Solderless Fittings

1026 Ferrule—For use with RG-6/U type cables. $3.85/100 List

1051 Ferrule—For use with RG-59/U type cables. $2.00/100 List

1095 Ferrule—For use with RG-11/U type cables. $6.00/100 List

TECH DATA SHEETS AVAILABLE FOR PRODUCTS LISTED ON THIS PAGE

LOOK TO JERROLD FOR AIDS TO BETTER TELEVIEWING

JERROLD

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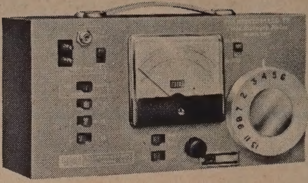
JERROLD TEST EQUIPMENT

TRANSISTORIZED

FIELD STRENGTH METER
Model TMT



Direct Reading . . . Portable Field Strength Meter for Television Signal Measurements . . . Channels 2 to 6 and 7 to 13.

FEATURES

- TRANSISTORIZED PRINTED CIRCUIT . . . 200 operating hours on 4 flashlight cells.
- EXTREMELY LIGHT WEIGHT . . . 4½ lbs.
- UP TO 2,000,000 MICROVOLTS...in eight switchable ranges.
- NO FALSE READINGS ON NON-TV INTERFERENCE.
- METER CALIBRATED IN BOTH MICROVOLTS AND DB.
- WEATHER PROTECTIVE CARRYING CASE, WITH NECK STRAP, AVAILABLE
- DESIGNED FOR EASY ONE MAN ANTENNA ORIENTATION.

APPLICATIONS

- CHECKING ANTENNA PERFORMANCE ON SERVICE CALLS
- ANTENNA ORIENTATION
- SIGNAL PROBING FROM ROOF TOPS, VEHICLES, ON HILLSIDES AND OTHER LOCATIONS WHERE PORTABILITY AND BATTERY OPERATION ARE A NECESSITY
- MEASURING TELEVISION SIGNALS IN ALL TV DISTRIBUTION SYSTEMS.

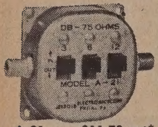
The Jerrold Model TMT is a direct reading Field Strength Meter that represents a radically new concept in the design of an instrument for measuring television signal strengths. In operation, the meter is relatively immune to noise and interfering signals; it responds only to the channel to which the meter has been tuned. The input to the meter is designed for both 75 and 300 ohm applications.

Utilization of transistors, crystal diodes and printed circuit wiring offer many advantages. Principal among these are: extremely long life, minimum maintenance, stable operation, minimum power consumption and compact portability. Model TMT features these and many more advantages for the television serviceman and system technician. Unit shipped complete with transistors, crystal diodes and instructions. Net Price $135.00

WEATHER PROTECTIVE CARRYING CASE

A sturdy water repellent case designed for the TMT. Makes it possible for one man operation with hands free. Net Price $12.95

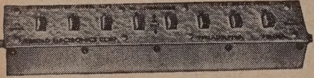
VARIABLE ATTENUATORS



A-21 $11.70 net*

Models A-72 and A-21

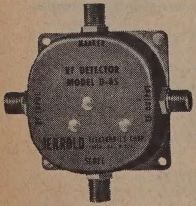
Switch type, Variable RF Attenuators providing precise attenuation over the frequency range of 0 to 250 megacycles. The units are matched to 75 ohms with a VSWR of less than 1.05 and are capable of handling 500 milliwatts of power. Model A-72 attenuates from 0 to 82 db in 1 db steps. Model A-21 attenuates from 0 to 21 db in 3 db steps. Two F-59 connectors included with both items.



A-72
$54.50 net*

SPLIT RF DETECTOR—Model D-86

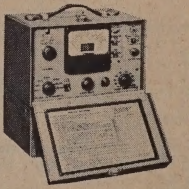
Model D-86 Detector removes the modulation envelope from an RF carrier and applies it to the vertical input of an oscilloscope. Terminals are: RF Input; RF Output; Scope; and External Marker Input. Voltage doubler circuit for up to 1 volt DC output. For testing and aligning RF amplifiers, VSWR measurements and checking impedance match of RF devices. Response flat from 1.5 to 220 mc. Impedance of 75 ohms with a VSWR of 1.06. Price includes three F-59 and one TR-72F.



Price $25.00 Net*

THE UTMOST IN RELIABILITY AND SENSITIVITY—
The Incomparable

MODEL 704B FIELD STRENGTH METER
Reads Down to 5 Microvolts and Up to 3 Volts



Recognized throughout the industry as outstandingly accurate and reliable, the Model 704B—Jerrold's Top-of-the-Line in field strength meters—is a calibrated, direct reading instrument for TV and FM measurements. It is a professional quality instrument for making measurements of RF signal strength within the frequency range of 54 to 220 mc. Its specially-designed tuner assures increased selectivity, 75 ohm impedance and uniform gain—as required for highest accuracy. Extremely versatile, its range of uses includes field intensity surveys, orienting antennas, measuring RF attenuation of coaxial cables and balancing TV distribution systems.

FEATURES

- Reads down to 5 microvolts and up to 3 volts, in 8 ranges
- Bandwidth is 0.6 mc
- Separates audio carriers from adjacent video carriers.
- Precise readings in db or microvolts ±0.8 db over entire range
- Reads percent of amplitude modulation of FM carriers, percent of AM distortion of FM amplifiers and percent of AM of RF generators.
- Lightweight, durable aluminum cabinet with carrying handle
- Calibration card on hinged door panel for permanent reference
- Phone outputs for listening to FM signals
- Oscilloscope output for examining composite video

Net Price $365.00*

TECH DATA SHEETS AVAILABLE FOR PRODUCTS LISTED ON THIS PAGE

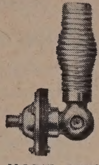
LOOK TO JERROLD FOR THE BEST IN EVERY TEST

JERROLD

* Prices slightly higher in West and Southwest.

ANTENNAS *Master Mobile* MOUNTS

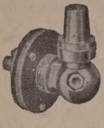
MODEL 232



MODEL 232C

MODEL 232C (COAXIAL TYPE)

(Coaxial Type Base Mounts Optional)



MODEL 321C

232 SERIES

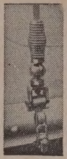
MODEL 140

MODEL 142

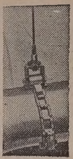
100 SERIES

SEPARATE SPRINGS FOR UNIV. MOUNTS

100W SERIES



No. 444 Universal $17.80



No. 445 Mount $7.95

No. 446 Mount $13.45

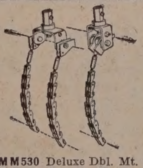
All products are for Universal Use—Mobile, Home, Marine, C.A.P., Civil Defense, Emergency, etc.

MOUNT SPECIFICATIONS (All types are tapped for ⅜'' Stud Fitting on Antenna End. Shipping Weight Approx. 3 lbs.)

232	Base Mount—Double Tapered Spring—Swivel Base	$ 8.75
232C	Base Mount—Double Tapered Spring—Swivel Base Coax Conn.	8.75
232SS	Base Mount—Double Tapered Spring—Spec. Stainless	12.95
232SSC	Base Mount—Double Tapered Spring—Spec. Stainless—Coax. Conn.	12.95
232X	Base Mount—Heavy Duty—Double Tapered Spring—Swivel Base	9.85
232XC	Base Mount—Heavy Duty—Double Tapered Spring—Coax. Conn.	9.85
232XSSC	Base Mount—Heavy Duty—Double Tapered Spring— Spec. Stainless—Coax Conn.	14.95
232XSS	Base Mount—Heavy Duty—Double Tapered Spring—Spec. Stainless	14.95
232XX	Base Mount—Extra Heavy Duty Spring	10.85
232XXC	Base Mount—Extra Heavy Duty Spring—Double Tapered Spring—Coax Conn.	10.85
232XXSS	Base Mount—Extra Heavy Duty Spring—Double Tapered—Spec. Stainless	15.95
232XXSSC	Base Mount—Extra Heavy Duty Spring—Double Tapered—Spec. Stainless—Coax Conn.	15.95
321 or 321C	Base Mount—Where no spring desired—with spec. rigid type ball joint	7.95
140	Universal Mount—Double Tapered Spring	6.95
140X	Universal Mount—Heavy Duty—Double Tapered Spring	7.95
140SS	Universal Mount—Special Stainless	9.65
140XSS	Universal Mount—Special Heavy Duty Stainless	10.95
140XX	Universal Mount—Extra Heavy Duty—Double Tapered Spring	8.95
140XXSS	Univresal Mount—Extra Heavy Duty—Stainless Steel	11.95
142	Universal Mount—Less Spring, with Insulators for Direct Mounting by Series 100 Ant. or 92 Ext. and 106 Antenna	3.95
446SS	Universal Mount—Special Stainless—Chain Mount	14.90
446XSS	Universal Mount—Heavy Duty—Special Stainless—Chain Mount	15.90
446XXSS	Universal Mount—Extra Heavy Duty—Special Stainless—Chain Mount	16.90
446	Universal Mount—Heavy Duty Spring—Chain Mount	13.45
446L	Universal Mount—Double Tapered Spring—Chain Mount	12.45
446XX	Universal Mount—Extra Heavy Duty Doubled Tapered Spring—Chain Mount	14.45
444	Universal Mount—Heavy Duty Spring—Swivel Base—Chain Mount	17.80
444L	Universal Mount—Double Tapered Spring—Swivel Base—Chain Mount	16.70
444XX	Universal Mount—Extra Heavy Duty Spring—Swivel Base—Chain Mount	18.80
444SS	Universal Mount—Special Stainless—Swivel Base—Double Tapered Spring—Chain Mount	20.90
444XSS	Universal Mount—Special Stainless—Heavy Duty—Swivel Base—Chain Mount	22.90
444XXSS	Universal Mount—Extra Heavy Duty—Special Stainless—Swivel Base—Chain Mount	23.90
445	Universal Mount—Threaded, ⅜"-24—Chain Mount	7.95

SEPARATE SPRINGS FOR BUMPER MOUNTS

	Net
100—Regular	$4.50
100-X—Heavy Duty	5.50
100SS—Stainless Steel	6.95
100XSS—Heavy Duty Stain. Steel	7.95
100WX —Hvy. Duty w/Male stud.	5.50
100XX—Extra Heavy Duty Spring	6.50
100WXX—Extra Heavy Duty Spring —Male Stud on one end.	6.50
100XXSS—Extra Heavy Duty Spring —Stainless Steel	8.95



UNIVERSAL MOUNTINGS

Unique shaped links adjustable to fit any width surface. For use with spring and or whip. (⅜"-24 thread.) Easily attaches in minutes.

MM530	Deluxe Dbl. Mt. Stain. Steel	Net	$21.95
MM531	Deluxe Sgl. Mt. Stain. Steel	Net	11.95
MM520	Dbl. Mt. S-Cad. Plated	Net	7.95
MM519	Single Mt. S-Cad. Plated	Net	4.95

SILICON-CHROME WHIP ANT.

New 9 Series—with ⅜" Thr. Studs

Model No.	Overall Length	Net Price
9-60T	60"	$2.97
9-72T	72"	3.24
9-84T	84"	3.30
9-86T	86"	3.60
9-96T	96"	3.75

New 8 Series—without Studs

Model No.	Overall Length	Net Price
8-60	60"	$2.82
8-72	72"	3.07
8-84	84"	3.13
8-86	86"	3.42
8-96	96"	3.55

New Model No. 132-J Junior Body Mount—Same design as standard No. 232 Master Mount but smaller size. Built to approved Master spec, for quality, workmanship and finish.

Attractively priced at only $4.17

Model No. 132-JC—Same as above with Coax Connector ....**Only $5.17**

New Model No. 140-J Junior Bumper Mount—Same design as our standard No. 140 Master Mount but smaller spring—yet of same high quality construction and finish. **Net $4.17**

Coaxial Conversion Kit—No. 118 fits No. 232 and No. 118J fits No. 132J Models. **Net $1.00**

WHIP ANTENNA SPECIFICATIONS

MODEL St. Steel	Overall Length	Base Specifications	Net Price
100-60S	60"	Threaded ⅜" Stud to fit all Mounts	$4.95
100-72S	72"	Threaded ⅜" Stud to fit all Mounts	4.95
100-78S	78"	Threaded ⅜" Stud to fit all Mounts	5.00
100-86S	86"	Threaded ⅜" Stud to fit all Mounts	5.15
100-90S	90"	Threaded ⅜" Stud to fit all Mounts	5.20
100-96S	96"	Threaded ⅜" Stud to fit all Mounts	5.25
100-103S	103''	Threaded ⅜" Stud to fit all Mounts	6.95
106-60S		Pl. End 3/16" Dia. (Fits Mod. 92 Ext.)	4.15
106-72S	72"	Pl. End 3/16" Dia. (Fits Mod. 92 Ext.)	4.15
106-78S	78"	Pl. End 3/16" Dia. (Fits Mod. 92 Ext.)	4.20
106-86S	86"	Pl. End 3/16" Dia. (Fits Mod. 92 Ext.)	4.35
106-90S	90"	Pl. End 3/16" Dia. (Fits Mod. 92 Ext.)	4.40
106-96S	96"	Pl. End 3/16" Dia. (Fits Mod. 92 Ext.)	4.50
106-103S	103''	Pl. End ¼" Dia. (Fits Mod. 92 Ext.)	6.45

Comb. 106-96" whip with #92 Ext. (18") gives up to 112" adj. ....Net $8.00

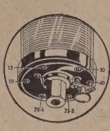
ORDER FROM YOUR JOBBER TODAY!

Master Mobile Mounts, Inc.

LOS ANGELES, CALIFORNIA

ANTENNAS *Master Mobile* MOUNTS

THE ARISTOCRAT
No. 900



10-15-20-40-75
METERS

THE VICTORY

No. 999
10-15-20
METERS
ONLY

NEW
MULTI-BAND
TRANS. ANTENNA COILS

New Plug-In Coils! Just plug into desired pair of jacks and presto! . . . your coil is ready for operation on the desired band. No switches, no sliding contacts, no loose connections. Built and tested for maximum resonance.

- Rigidly tested and engineered—found to have a "Q" of 525
- Operates into a 52-ohm cable
- Positive contact—noisefree, trouble-free operation
- Weathersealed
- Ruggedized construction
- Factory pre-tuned—no adjustment is necessary
- Higher efficiency—lower loss

YOUR CHOICE $14.95

All products are for Universal Use—Mobile, Home, Marine, C.A.P., Civil Defense, Emergency, etc.

NEW
SLIM-JIM
All-Band
BASE LOADING
Antenna Coil

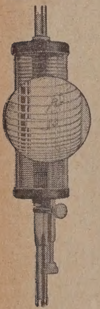
For 10, 11, 15, 20, 40, 80 Meters.

96″ S.S. Whip included. Positive locking action whip provides accurate and tight contact wherever set. Just slide in or out to final loading point and lock whip into position.

No. B-1080
$17.95

THE GREAT NEW ADVANCEMENT IN VARIABLE ANTENNA COILS!

HY "Q" construction with wider spacing of turns for **high** frequency bands. Use as center or base loaded antenna with 60″ whip.



New! . . . Silver-Plated Roller with Positive Action, Stay-Put Contact

No. 333
MASTER
MIGHTY
MIDGET
For 40-20-15-11-10 Meters
$9.95

No. 750
MASTER DELUXE ALL-BANDER

Covers 10 thru 75 and all intermediate frequencies.

Silverplated single turn contact, positive spring. Eccentric cam contact, easy selection of turn.

Automatic lock prevents damage to coil.

Net **$14.95**

Ultra-Hi "Q" COILS

FOR 80-40-20 & 15, METERS

After many years of experimentation, here is the coil with the highest "Q" ever obtained. Tested and found to have a "Q" of well over 515. Use with 36″ base section, 60″ whip.

- **Ruggedized construction • Greater efficiency • Precision made • 2¾″ Diameter**

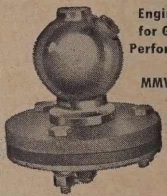
ANY BAND . . . AMATEUR

NET EA.
$5.25

BASE MOUNT

Engineered for Greater Performance!

MMW-3 APS

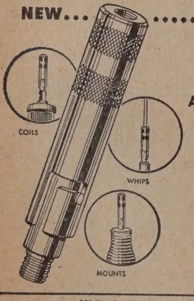


Latest and greatest is this new design in universal swivel bases, incorporating the last word in modern design for strength and service.

Easy one man installation, no special tools needed. Mounts watertight on curved or flat surface. Mounting Template provided. ⅜-24 thread mounting hole for whips and antennas.

Model MMW-3AE $6.95
High Gloss Ebony Finish
Model MMW-3AP $7.95
High Gloss Polished Finish
Model MMW-3AES $8.95
Ebony Finish with Stainless Steel Hardware
Model MMW-3APS $9.25
Polish Finish with Stainless Steel Hardware

NEW. . . ••••• *Master Mobile*



NOISE-FREE
E-Z-OFF
ANTENNA CONNECTOR

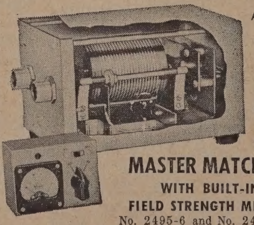
Connect or remove your loading coils, whips or mounts in a jiffy. No wrenches, pliers or screwdrivers needed. High-grade stainless steel throughout.

- Precision made
- Maximum efficiency
- Positive lock — will not corrode

AMATEUR NET $2.95
Model No. E-Z-295

ULTRA HY "Q" C.A.P. COILS

		Net
UH "Q" 2374 KC.	Additional HY "Q" C.A.P. Coils to be used with HY "Q" C.A.P. Antennas according to frequency desired. These coils are interchangeable. Other freq. coils priced upon request.	$ 8.95
UH "Q" 2738 KC.		8.95
UH "Q" 2768 KC.		8.95
UH "Q" 4507.5 KC.		7.95
UH "Q" 4585 KC.		7.95
UH "Q" 4325 KC.		7.95
UH "Q" 160 Meters	....	12.95
UH "Q" 2251 KC.	....	12.95



Automatically tunes the band by remote control

Available in 6 (2495-6) and 12 (2495-12) volt models.

MASTER MATCHER
WITH BUILT-IN
FIELD STRENGTH METER

No. 2495-6 and No. 2495-12

Motor driven variable inductance controlled by a switch from the operating position, enabling him to remotely tune the antenna to the exact resonant frequency. Just flip the switch and presto! . . . the Master-Matcher goes to work! QSY in any PARTICULAR band without moving to adjust antenna loading coil. All guesswork is eliminated with the Master-Matcher and the built-in FIELD STRENGTH METER. Automatic panel light indicates when the roller is at minimum inductance position. With the Master-Matcher, maximum efficiency is possible with minimum of time and effort.

Complete $24.95 Amateur Net

HEAVY DUTY UNIVERSAL SPRINGS

Heavy duty flexible mounting spring mounts on the base and holds the antenna. Special flexible "give" spring prevents sharp impacts and breakage. Maintains vertical antenna position under normal wind loads.

⅜-24 tapped hole for antenna mast. ⅜-24 stud for antenna base. 5″ h. Tightening wrenches supplied.

Model MMW-7 ....$4.50
Cadmium plated with black painted ends. Lockwasher included.
Model MMW-7HC $5.50
Heavy Cadmium plated for extra protection. Lockwasher included.
Model MMW-7SS $8.95
Deluxe—Stainless Steel spring high quality appearance. lockwasher included.

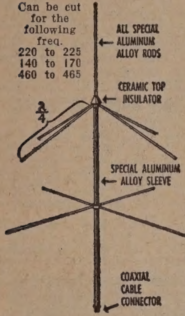
ANTENNAS *Master Mobile* MOUNTS

2 METER ANTENNAS — FIXED • MOBILE

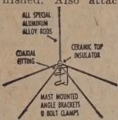
GROUND PLANE ANTENNA

Model 300—Master DeLuxe . . . NEW! . . . brings in that DX. Outperforms any type of vertical dipole. "Drooping" Type Ground Plane plus four straight radials to give a low angle of radiation for general coverage, an almost perfect circle radiation pattern. Ideal for CD and defense nets. Covers complete Amateur and with Broad Band char. Matches 52 ohm coax cable through threaded coax fitting at end. Straight radials are adjustable (up or down) to eliminate standing waves on trans. lines. For medium or low-powered trans. Sturdily built of finest alloys to withstand corrosion, high winds and extreme icing. With 36″ length of ¾″ pipe for mounting purposes.

Model 300 Amateur's . . Net $12.95
MB-1—Mounting Bracket Net 1.00


Can be cut for the following freq.
220 to 225
140 to 170
460 to 465
ALL SPECIAL ALUMINUM ALLOY RODS
CERAMIC TOP INSULATOR
¾
SPECIAL ALUMINUM ALLOY SLEEVE
COAXIAL CABLE CONNECTOR

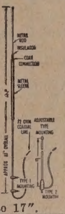
Model GP-4 — Four "Drooping" Radials for perfect match to 52 ohm coax cable. Complete amateur band coverage. Specify other frequencies. Attaches to Mast with U-Bolts. (U-Bolts and Mounting Brackets furnished. Also attachable to side of building. Sturdy, with special alloys, to withstand corrosion and extreme weather.


ALL SPECIAL ALUMINUM ALLOY RODS
CERAMIC TOP INSULATOR
COAXIAL FITTING
MAST MOUNTED ANGLE BRACKETS U BOLT CLAMPS

MODEL GP-4
Amateur's Net
$5.95

TWO METER COAX ANTENNAS

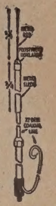
No. 214—MASTER DELUXE . . . ruggedly constructed, vertically polarized, frequency range 140 to 170 MC. Completely waterproofed. Highly polished chrome enhances appearance of any vehicle. Furnished with 10 ft. of 72 Ohm Coax Cable.
Type 1—On side with 2 brackets furnished. **$15.95**
Type 2 — Master Mount (No. 232X or 140X)— Mounts sold separately.
Complete $17.45
Adjustable mtg.—adjusts to 17″.


METAL ROD
INSULATOR
COAX CONNECTION
METAL SLEEVE
APPROX. 41″ OVERALL
72 OHM COAXIAL LINE
ADJUSTABLE TYPE MOUNTING
TYPE 1 MOUNTING
TYPE 2 MOUNTING

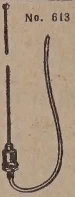
2 METER STANDARD MODEL

No. 114 COAX VHF ANTENNA — At a popular price! For OPEN TYPE VEHICLES using 140 MC to 165 MC. Mounts any convenient place with standard Master Mounts. Baked enamel finish. With 10 ft. Coax Cable and 18″ Adjustable Section.

Net, Only $9.95


METAL ROD
POLYSTYRENE INSULATOR
METAL SLEEVE
72 OHM COAXIAL LINE

232X
Sugg'd Mtg.

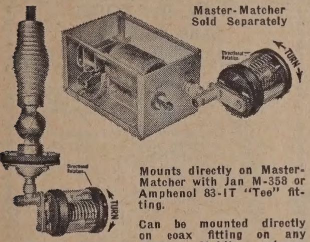


No. 613—NEW IMPROVED MASTER VHF ROOF TOP ANTENNA. This new high performance antenna features an improved type positive-lock coaxial connector. Designed for police, fire, taxi cabs and amateurs using 140 MC to 165 MC. Stainless steel wire with threaded fitting. Easily changed without disturbing mounting. Comes with 10 ft. coax cable....................... Net $4.95
No. 113—ROOF TOP ANTENNA without De Luxe Connections .... Net **3.96**
No. 117—Extra Antenna for No. 113 and No. 114.... Net **.97**
No. 116—Extra Antenna for No. 214 and No. 613.... Net **1.70**

All products are for Universal Use—Mobile, Home, Marine, C.A.P., Civil Defense, Emergency, etc.

MICRO-Z-MATCH

MICROMETER IMPEDANCE MATCHING INDUCTANCE for MOBILE ANTENNAS


Directional Rotation
TURN
Directional Rotation
TURN

Master-Matcher Sold Separately

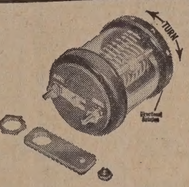
Mounts Sold Separately

Mounts directly on Master-Matcher with Jan M-358 or Amphenol 83-1T "Tee" fitting.

Can be mounted directly on coax fitting on any Master Mobile antenna mount.

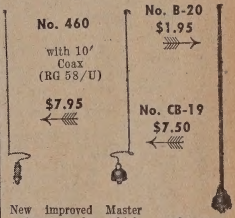
- Used on all bands with any type coaxial cable to match any mobile antenna.
- Roller coil construction with rear cap rotating the inductance within the case. 4 microhenries maximum inductance.
- Silver plated coil and roller contacts for low loss.
- Micrometer type calibration permits infinite adjustment and positive resetting.
- Adjustability — Easily adjustable for minimum standing wave ratio (1:1).

Without coax adapter kit Micro-Z-Match may be connected between antenna connector and ground connection.


TURN
Directional Rotation

No. 825
Complete with Coax Adp. Kit
Net
$7.95

CITIZEN BAND 2 METER

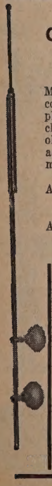


No. 460
with 10′ Coax (RG 58/U)
$7.95

No. B-20
$1.95

No. CB-19
$7.50

New improved Master antennas for high performance. Stainless steel and chrome plated brass. Self-tapping threads. Easy to install with one 7/16″ hole.



CIVIL DEFENSE ANTENNAS

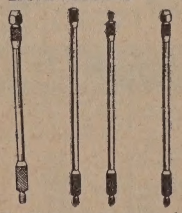
Freq. Range 220-225 MC

Master deluxe antennas, ruggedly constructed, vertically polarized. Completely waterproofed, highly polished chrome. Furnished with 10′ of 72 ohm coax. Special designed positive action rubber suction cups for easy mounting . . . **No. 220-3......$15.95**

Available in Type 1..............**$15.95**
(Similar to No. 214)

Available in Type 2..............**$17.45**
(Similar to No. 214)

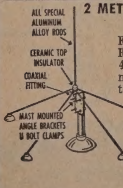
EXTENSIONS — with ⅜″-24 thread, fits all mounts and coils



Model 92 Model 90 Model 88 Model 115

EXTENSIONS			Net
88	36″	Lower Section for all Band Antennas	$4.95
88C		In Chrome Plate	5.25
90	26″	Extension for 100 Series Whips	3.95
92	18¼″	Extension for 106 Series Whips	3.50
94	36¼″	Extension for 106 Series Whips	4.95
115	36″	Extension for Models No. 114 and No. 214	4.25
12*	12″	Base Section for AB Antenna (baked enamel)	2.95
12C*	12″	Chrome Base Section for AB Antenna	3.50
18*	18″	Base Section for AB Antenna (baked enamel)	3.25
18C*	18″	Chrome Base Section for AB Antenna	3.75
24*	24″	Base Section for AB Antenna (baked enamel)	3.95
24C*	24″	Chrome Base Section for AB Antenna	4.50
88*	36″	Base Section for AB Antenna (baked enamel)	4.95
88C*	36″	Chrome Base Section for AB Antenna	5.25

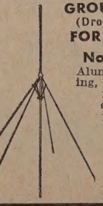
*NOTE: Base Sections for use with ALL-BANDER Antenna Coils.


ALL SPECIAL ALUMINUM ALLOY RODS
CERAMIC TOP INSULATOR
COAXIAL FITTING
MAST MOUNTED ANGLE BRACKETS U BOLT CLAMPS

2 METER (DROOPING TYPE) GROUND PLANE GP4-3

For temporary vehicle installations. For 2 meter, 220 MC, 450 to 470 MC. Made of special aluminum alloy. 5 positive action suction cups permit fast mounting on all vehicle rooftops. 4 drooping radials for perfect match to 52 or 72 ohm coaxcable. Spec. Freq. when ordering.

$8.95

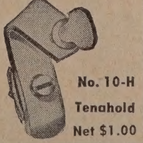


GROUND PLANE
(Drooping Type)
FOR 6 METERS

No. MGP-6

Aluminum alloy tubing, coax cable connector. For medium or low powered trans.

$14.95



No. 10-H
Tenahold
Net $1.00

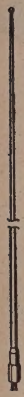
NEW MASTER FLEX-'R
No. 711

Designed to relieve stress and strain and prevent damage that could be transmitted to the loading voil.

$1.95

Master Mobile Mounts, Inc.
LOS ANGELES, CALIFORNIA

ANTENNAS *Master Mobile* MOUNTS



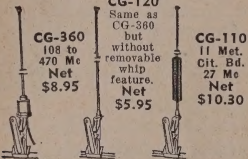
MASTER FIBRE-GLAS WHIPS

FLEXIBLE, INDESTRUCTIBLE UNIVERSAL ANTENNA

- **Completely Weatherproof** — permanent and rust resistant, corrosion proof.
- **Break-Proof** — specially designed flexibility prevents failure due to fatigue or breakage.
- **Safe**—permanent insulation featured in Master Whips make it absolutely safe, prevents burns.
- **Base Fitting**—⅜″ x 24 thread with male brass—chrome plated fittings.

FG-60	**60″**	**Amateur Net**	**$4.95**
FG-72	**72″**	**Amateur Net**	**$4.95**
FG-84	**84″**	**Amateur Net**	**$5.15**
FG-96	**96″**	**Amateur Net**	**$5.25**
FG-103	**103″**	**Amateur Net**	**$6.95**

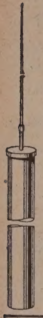
CLAMP-ON ANTENNAS



CG-360
108 to 470 Mc
Net $8.95

CG-120
Same as CG-360 but without removable whip feature.
Net $5.95

CG-110
11 Met. Cit. Bd. 27 Mc
Net $10.30



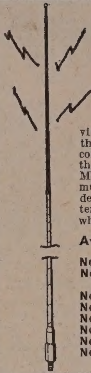
SKYMASTER COAX ANTENNA

Skymaster gives you a lower "radiation angle" of your antenna for a better contact for vertically polarized stations in the citizens band. The Skymaster has a nominal impedance of 72 ohms, used with 72 ohm cable. Matches RG59/U coax cable for perfect match to most transmitters and improves receiving.

Both radiator and skirt are of heavy-gauge aluminum tubing, and a resilient machined polyethylene insulator is used for low weight and high strength. Silver-plated coax connector is used for easier connection and lowest SWR.

- **Easily installed on any existing mount**
- **Concentrated signal for best coverage**
- **Perfect match for transmitting and receiving.**
- **Highest quality components**
- **Tested and approved in Master Mobile's own laboratory**

SM-700- 2	**2 Meters**	**Net $10.95**
SM-700- 6	**6 Meters**	**Net $15.95**
SM-700-10	**10 Meters**	**Net $17.95**
SM-700-11	**11 Meters**	**Net $17.95**



MASTER MAGIC WAND

COMBINATION COIL & WHIP

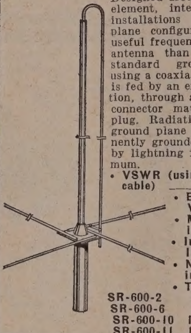
New Magic-Wand Top-Loaded Antenna Mounts On Any Standard Base Mount.

A newly designed single band coil and whip antenna in 1 compact and attractive unit. Top loaded to provide top performance and efficiency at the most useful radiation angle for communications. Built and tested in the Master Mobile Laboratories, the Master Magic-Wand provides a minimum wind resistance which minimizes detuning effects at high speeds. Antenna wound over tapered fiberglass whip for maximum strength.

Available in 5 ft. & 6 ft. Lengths

No. MM810—10 Meters—5 Ft. L.	**$8.95**
No. MM811—11 Meters—27 Mc.—5 Ft. L.	**8.95**
No. MM811-35—11 Meters—35″	**8.95**
No. MM811-45—11 Meters—45″	**8.95**
No. MM815—15 Meters—5 Ft. L.	**8.95**
No. MM820—20 Meters—5 Ft. L.	**8.95**
No. MM840—40 Meters—6 Ft. L.	**9.95**
No. MM880—80 Meters—6 Ft. L.	**9.95**

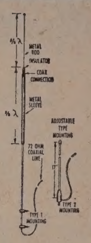
BASE STATION MONOPOLE ANTENNA



Designed around a folded radiating element, intended for service in installations requiring a ground plane configuration and a wider useful frequency range for a single antenna than is possible in the standard ground plane design using a coaxial stub tuner. Antenna is fed by an end seal type termination, through a Type SO.239 female connector mating with a PL.259 plug. Radiating elements and all ground plane elements are permanently grounded, hterefore, damage by lightning is reduced to a minimum.

- **VSWR (using 50 ohm cable)** ________ **1.31**
- **Bandwidth (under 2.1 VSWR)** ______ **±4%**
- **Max. power input** ______ **750 watts**
- **Internal feed-line** ______ **RG-8A/U**
- **Nominal input imped.** ______ **50 ohms**
- **Termination SO. 239**

SR-600-2	**2 Meters**	**Net $14.95**
SR-600-6	**6 Meters**	**Net $16.95**
SR-600-10	**10 Meters**	**Net $24.50**
SR-600-11	**11 Meters**	**Net $24.50**



2-METER COAX ANTENNA 5/8 WAVE

MASTER DELUXE . . . Ruggedly constructed, vertically polarized, frequency range 140 to 170 MC. Completely water-proofed. Highly polished chrome enhances appearance of any vehicle. Furnished with 10 ft. of 72 Ohm Coax Cable.

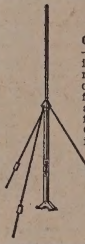
58W-1—On side with 2 brackets furnished.

58W-2—Master Mount (No. 232X or 140X)—Mounts sold separately.

Adjustable mounting — adjusts to 17″.

58W2......$19.95 **58W1......$17.95**

All products are for Universal Use—Mobile, Home, Marine, C.A.P., Civil Defense, Emergency, etc.



CITIZENS BAND ANTENNA

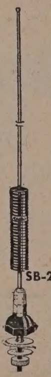
26.960 to 27.225 MC

Citizens Band Home Station Ground Plane—Designed to give maximum performance in the 27.0 MC range with minimum space requirements, easy installation. Constructed of heavy wall special alloy aluminum tube for the whip and support pipe. Swivel type antenna base mount permits installation on flat or peaked roof.

Ground plane radials made of heavy flexible tinned copper braid.

VSWR under 1.5:1 at resonance. Furnished complete with all mounting hardware, insulators, guy hooks, screws and 50 ft. of RG 58/U cable terminated with Motorola type auto radio connector.

GP27-11 ________ $34.50



11 METER CITIZENS BAND ANTENNA

A base-loaded stainless-steel whip antenna with an overall height of 40 inches.

The bottom of the whip has been wound into a coil which is potted in a pliable plastic to add rigidity to the coil.

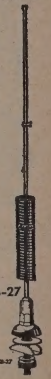
The base of the whip is fitted with a ¼″ diameter brass slug, for use with a standard-broadcast 8-ball type cowl mount; also roof-top or trunk-lid type mounting.

The antenna is cut to offer very low standing-wave ratio over most of the band when fed with a 52-ohm coax.

YOUR CHOICE EACH $12.95

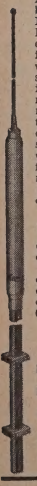
SB-27

8B-27



ANTENNA WITH PL-259 PLUG

Model No. C-259__$6.95



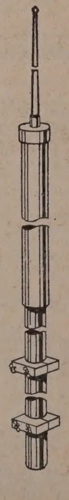
MASTER MARINE MARVEL MARINE ANTENNA

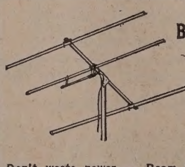
Designed, built and tested in Master Mobile's own floating laboratory, the new center-loaded Master Marine Antenna is the latest result of many years of experience in producing the finest in Antennas used throughout the world! The Marine Marvel, seasure and powerful, provides maximum power radiation on all marine frequencies from 2 to 3 megacycles. Here is the Antenna that was made for your boat! . . engineered to withstand the most severe type of marine service, with long life assurance by being fabricated of the highest quality material available.

- **10½ Ft. Overall Length.**
- **Capacity 4 Ft. Stainless Steel Plastic-Coated Whip**
- **18″ Center-Loaded Impregnated Coil.**
- **5 Ft. Anodized Base Section.**
- **Absolutely Waterproof - Weatherproof.**
- **No Electrolysis.**
- **Rugged Insulators.**
- **Adjustable Antenna Lead.**

COLORS AVAILABLE —
WHIP—Yellow, Blue or Black
COIL—Yellow, Blue or Black
BASE—Gold (Spec. Saltwater Anodized)

No. MMM-2710 Antenna & Solid Mounts—5 Ft. Base	**$29.95**
No. MMM-2715 Antenna & Solid Mounts—10 Ft. Base	**$35.95**
No. MMM-2700 Antenna—5 Ft. Base (less Mts.)	**$27.95**
No. MMM-2705 Antenna—10 Ft. Base (less Mts.)	**$33.95**
MMM-10 SOLID MOUNTS per set	**$5.00**





3 ELEMENT Beam Antenna

Designed for maximum power up to 1 KW Input

Don't waste power — Beam your signal where you want it.

Sturdy and lightweight 3 element beam provides a power gain of approximately 2½ (8 DB) in the forward direction and reduces interference from the sides and rear by approximately 10 to 1 (Front to back ratio 20 DB).

A coaxial gamma match is pretuned at the factory to give an excellent VSWR of 1.1 to 1 at band center when fed with a 52 OHM coax.

SR-500-11	**11 Meters**	**Net $36.00**
SR-500-2	**2 Meters**	**Net $10.95**
SR-500-6	**6 Meters**	**Net $12.95**
SR-500-10	**10 Meters**	**Net $36.00**

MASTER SUPER MARINE ANTENNA No. MMM-2750

MMM-2750

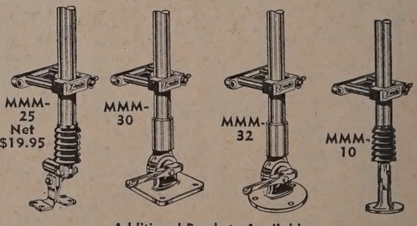
The Master Super-Deluxe Marine Antenna in 12 ft. anodized 1⅜″ tubing. Coil section is 35″ long. Impregnated coil covered with phenolic tubing. 8′ fibreglas whip. Here is the ultimate in Marine Antennas!

MMM-2750 Antenna &

Solid Mounts	**$49.95**
Without Mounts	**$47.95**

MARINE LAYDOWN MOUNTS

New deluxe laydown mounts that can be mounted on either the side of cabin or upright on the deck. Mounts swivel and are adjustable to any position or mount. Made of chrome-plated brass with high impact waterproof-weatherproof phenolic insulator.



MMM-25 Net $19.95

MMM-30

MMM-32

MMM-10

Additional Brackets Available

Master Mobile Mounts, Inc.
LOS ANGELES, CALIFORNIA

Kreco Antennas

CUT TO FREQUENCY COMMUNICATIONS ANTENNAS

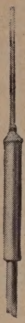
for COMMERCIAL ● INDUSTRIAL
AMATEUR ● CIVIL DEFENSE

CO-AXIAL

"A" Models Are All Aluminum
"B" Models Are All Brass

Mounts on Standard Pipe
Feed with RG-8/U

Model	Frequency Range	Support Pipe	Weight	Price
CO-CBA	27 MC Citizen Band	¾	5	41.25
CO-30A	25 to 30 MC*	¾	5	41.25
CO-30B	25 to 30 MC*	¾	11	75.00
CO-40A	25 to 30 MC*	1¼	6½	75.00
CO-40B	25 to 30 MC*	1¼	14	112.50
CO-30A	30 to 50 MC*	¾	4½	37.50
CO-30B	30 to 50 MC*	¾	9	67.50
CO-40A	30 to 50 MC*	1¼	5½	67.50
CO-40B	30 to 50 MC*	1¼	12	93.75
CO-30A	50 to 100 MC*	¾	4	30.00
CO-30B	50 to 100 MC*	¾	6	45.00
CO-40A	50 to 100 MC*	1¼	4	52.50
CO-40B	50 to 100 MC*	1¼	7	67.50
CO-150A	108 to 470 MC*	¾	1½	18.75
CO-150B	108 to 470 MC*	¾	2½	26.25
CO-155A	108 to 470 MC*	1¼	1½	30.00
CO-155B	108 to 470 MC*	1¼	4	45.00
CO-2A	2 Meters	¾	1½	15.00
CO-6A	6 Meters	¾	4	24.00
CO-10A	10 Meters	¾	5	30.00

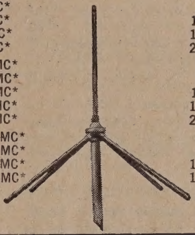


GROUND PLANE

"A" Models Are All Aluminum
"B" Models Are All Brass

Mounts on Standard Pipe
Feed with RG-8/U
GP-17 Requires RG-17/U

Model	Frequency Range	Support Pipe	Weight	Price
GP-30A	25 to 30 MC*	¾	7½	75.00
GP-30B	25 to 30 MC*	¾	18½	123.75
GP-40A	25 to 30 MC*	1¼	14	112.50
GP-40B	25 to 30 MC*	1¼	19½	150.00
GP-17	25 to 30 MC*	2	18	187.50
GP-30A	30 to 50 MC*	¾	6½	53.50
GP-30B	30 to 50 MC*	¾	15	101.50
GP-40A	30 to 50 MC*	1¼	10	86.25
GP-40B	30 to 50 MC*	1¼	16	127.50
GP-17	30 to 50 MC*	2	14	150.00
GP-30A	50 to 100 MC*	¾	4	45.00
GP-30B	50 to 100 MC*	¾	9½	67.50
GP-40A	50 to 100 MC*	1¼	6	67.50
GP-40B	50 to 100 MC*	1¼	10½	86.25
GP-17	50 to 100 MC*	2	9½	123.75
GP-150A	108 to 480 MC*	¾	1½	18.75
GP-150B	108 to 480 MC*	¾	3	26.25
GP-155A	108 to 480 MC*	1¼	2	26.25
GP-155B	108 to 480 MC*	1¼	4	30.00
GP-2A	2 Meters	¾	1½	15.00
GP-6A	6 Meters	¾	4	36.00
GP-10A	10 Meters	¾	7	42 00



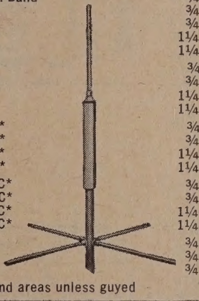
CO-PLANE

"A" Models Are All Aluminum
"B" Models Are All Brass
3 DB gain

Mounts on Standard Pipe
Feed with RG-8/U

Model	Freq. Range	Support Pipe	Weight	Price
CP-CBA+	27 MC Citizen Band	¾	11½	93.75
CP-30A+	25 to 30 MC*	¾	11½	93.75
CP-30B+	25 to 30 MC*	¾	25½	150.00
CP-40A	25 to 30 MC*	1¼	15½	150.00
CP-40B	25 to 30 MC*	1¼	28½	225.00
CP-40A	30 to 50 MC*	¾	10	71.25
CP-30B	30 to 50 MC*	¾	21½	123.75
CP-40A	30 to 50 MC*	1¼	11½	123.75
CP-40B	30 to 50 MC*	1¼	24½	187.50
CP-30A	50 to 100 MC*	¾	7	60.00
CP-30B	50 to 100 MC*	¾	14½	93.75
CP-40A	50 to 100 MC*	1¼	7½	93.75
CP-40B	50 to 100 MC*	1¼	15½	112.50
CP-150A	108 to 470 MC*	¾	2	30.00
CP-150B	108 to 470 MC*	¾	4½	37.50
CP-155A	108 to 470 MC*	1¼	2½	41.25
CP-155B	108 to 470 MC*	1¼	7½	56.25
CP-2A	2 Meters	¾	2	24.00
CP-6A	6 Meters	¾	7	48.00
CP-10A	10 Meters	¾	10½	57.00

*Not suitable for high wind areas unless guyed

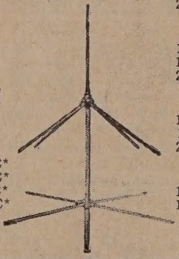


DUO-GROUND PLANE

"A" Models Are All Aluminum
"B" Models Are All Brass
Extra Ground Plane Lowers Radiation Angle

Mounts on Standard Pipe
Feed with RG-8/U
DGP-17 Requires RG-17/U

Model	Freq. Range	Support Pipe	Weight	Price
DGP-30A	25 to 30 MC*	¾	14	120.00
DGP-30B	25 to 30 MC*	¾	33	225.00
DGP-40A	25 to 30 MC*	1¼	23	225.00
DGP-40B	25 to 30 MC*	1¼	34	262.50
DGP-17	25 to 30 MC*	2	31	300.00
DGP-30A	30 to 50 MC*	¾	12	90.00
DGP-30B	30 to 50 MC*	¾	27½	187.50
DGP-40A	30 to 50 MC*	1¼	16	150.00
DGP-40B	30 to 50 MC*	1¼	28½	225.00
DGP-17	30 to 50 MC*	2	22½	262.50
DGP-30A	50 to 100 MC*	¾	7	67.50
DGP-30B	50 to 100 MC*	¾	18	112.50
DGP-40A	50 to 100 MC*	1¼	9½	112.50
DGP-40B	50 to 100 MC*	1¼	19	150.00
DGP-17	50 to 100 MC*	2	15½	187.50
DGP-150A	108 to 470 MC*	¾	2	30.00
DGP-150B	108 to 470 MC*	¾	5	37.50
DGP-155A	108 to 470 MC*	1¼	3	37.50
DGP-155B	108 to 470 MC*	1¼	7½	41.25
DGP2A	2 Meters	¾	2	24.00
DGP-6A	6 Meters	¾	7	54.00
DGP-10A	10 Meters	¾	13	72.00

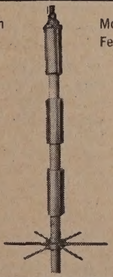


STACKED CO-AXIAL

"A" Models Are All Aluminum
"B" Models Are All Brass
6 DB Gain

Mounts on Standard Pipe
Feed with RG-8/U

Model	Freq. Range	Support Pipe	Weight	Price
SC-150A	108 to 470 MC*	¾	3½	45.00
SC-150B	108 to 470 MC*	¾	8	60.00
SC-155A	108 to 470 MC*	1¼	4½	75.00
SC-155B	108 to 470 MC*	1¼	12	112.50
SC-2A	2 Meters	¾	3½	36.00

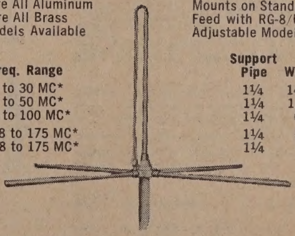


FOLDED GROUND PLANE

"A" Models Are All Aluminum
"B" Models Are All Brass
Adjustable Models Available

Mounts on Standard Pipe
Feed with RG-8/U
Adjustable Models Available

Model	Freq. Range	Support Pipe	Weight	Price
FGP-40A	25 to 30 MC*	1¼	14	135.00
FGP-40A	30 to 50 MC*	1¼	11	112.50
FGP-40A	50 to 100 MC*	1¼	6	75.00
FGP-155A	108 to 175 MC*	1¼	3	37.50
FGP-155B	108 to 175 MC*	1¼	7	48.75

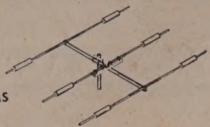


*EXACT FREQUENCY MUST BE SPECIFIED WHEN ORDERING

HERB KRECKMAN CO. CRESCO, PENNSYLVANIA

AMATEUR RADIO ANTENNAS

Mosley



3 BAND BEAMS
10 – 15 – 20

3 ELEMENT beam provides outstanding performance on 10, 15 and 20 meter bands. Up to 8 db., forward gain with 25 db., or better, front-to-back. 1.1/1 or less, SWR at resonant frequencies.

Model TA-33 . . . . Amateur Net, $99.75

2 ELEMENT version of the famed TRAP MASTER Beam rated to a full KW. 5.5 db. forward gain with 20 db. front-to-back. 7' boom and 28' maximum element length.

Model TA-32 . . . . . Amateur Net, $69.50

3 BAND DIPOLE is rated to 1 KW. For the Ham who wants to begin with an inexpensive three band dipole and in two additional steps have the Famous TA-33 "Trap-Master" Beam.

Model TA-31 . . . . . Amateur Net, $25.85

Conversion Kit to make the TA-31 a TA-32.

Model TA-31-32 . . . . . Amateur Net, $43.65

Conversion Kit to make the TA-32 a TA-33.

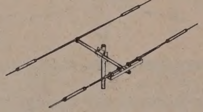
Model TA-32-33 . . . . . Amateur Net, $30.25

"JR" FOR 300 WATTS OR LESS
10 – 15 – 20 METER BANDS

Trap-Master "Junior" Beams provide the same fine performance as the world famous Model TA-33. Traps are rated to 300 watts (AM).

3 ELEMENT "JUNIOR" with up to 8 db. forward gain and 25 db. front-to-back. SWR is usually less than 1.5/1 at resonant frequencies. Aluminum boom is 1¼" OD. x 12'. Maximum element length, 26' 8". Turning radius is 14' 9". Wind load, 86 pounds. Assembled weight, 20 pounds. Recommended feed-line, RG-8/U.

Model TA-33 Jr. . . . . Amateur Net, $69.50



2 ELEMENT "JUNIOR" with 5.5 db. forward gain with approximately 20 db. front-to-back. Aluminum boom is 6' long and maximum element length is 26' 8". Has turning radius of just 13' 9". Assembled weight, 14 pounds. Wind load, 62 pounds.

Model TA-32 Jr. . . . . Amateur Net, $49.50

3 BAND DIPOLE rated to 300 watts. For the Ham who wants to begin with an inexpensive three band dipole and in two additional steps have the famous TA-33 Jr. "Trap-Master" Beam.

Model TA-31 Jr. . . . . Amateur Net, $19.75

Conversion Kit to make the TA-31 Jr. a TA-32 Jr.

Model TA-31-32 Jr. . . Amateur Net, $29.75

Conversion Kit to make the TA-32 Jr. a TA-33 Jr.

Model TA-32-33 Jr. . . Amateur Net, $25.85

"TRAP-MASTER" VERTICAL ANTENNAS

3 BAND VERTICALS for 10, 15 and 20 meter bands. Weatherproof traps need no adjusting and provide automatic band-switching. One quarter wave operation for low angle radiation. Requires 4 or more 16' radials. With guy rope and base. The V-3 is rated to a full KW (AM), the V-3 Jr. is rated to 300 watts (AM).

Model V-3 . . . Net, $22.95

Model V-3 Jr. . Net, $17.95

Six meter adapter kit for V-4-6 and V-3 Antennas.

Model AK-6 . . . . Amateur Net, $2.90

10 thru 40 Meters

No bandswitching with this vertical. Electrical ¼ wave length each band with low angle radiation makes this an excellent low cost DX antenna. Low SWR with exceptionally flat response over full bandwidth. Traps are weather and dirt proof for long, reliable service. Will handle full KW (AM). Sturdy aluminum construction. Requires 4 radial wires, 30' each. With guy rope and base.

Model V-4-6 . . Amateur Net, $27.95

80 Meter **BASE LOADING COIL.** Base loading coil for operating V-4-6 Vertical on 75 and 80 meter bands. Space wound on heavy ceramic form. Handles full KW (AM). Mounts on base section of vertical. With coax connectors.

Model D-4BC . . . . . . Amateur Net, $14.95

5 BANDS!

Work 10, 15, 20, 40 and 80 with one antenna . . . one RG-8/U feed line. Designed and built to meet United States Air Force electrical and structural specifications. The V-5 is 100% rust proof and performs brilliantly on each of the 5 bands. It is capable of handling power of 1 KW to the antenna! Weather proof trap assemblies are used throughout . . . no external loading coil needed. Maximum length of antenna is 43 ft., 8 in. Supplied complete with polyethylene guy rope, heavy duty base with internal coax fitting and all necessary hardware.

Model V-5 . . . Amateur Net, $118.50

HEAVY DUTY BASE MOUNT

Supplied with the V-5 and V-4-8 Antennas.

2 BANDS!

For 40 and 80 meter bands. ¼ wave-length vertical on each band. Oversize trap assembly handles 1 KW(AM). Maximum overall length of antenna is 52' 3". Requires 12 radials each 64' in length. Complete with base mount (heavy duty), polyethylene guy rope and hardware.

Model V-4-8 . . Amateur Net, $85.00

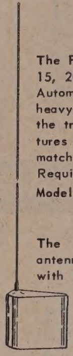
Mosley

TRAP-MOBILE
for 10, 15 and 20 Meters

No Bandswitching!

3 band mobile antenna functions without switches. Overall length of 7' 8" provides electrical ¼ wavelength on each band assuring excellent performance with low SWR over full bandwidth. Stainless steel whip sections permit antenna to lay forward over car for garaging. Stainless steel base stud, 3/8"–24, fits standard mounts. Feed with RG-8/U coax, preferably 22½ feet in length.

Model MA-3 . . . . . Amateur Net, $19.95



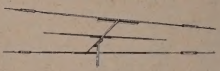
NEW! NEW!

The PentaMatic Mobile Antenna for 10, 15, 20, 40 and 75/80 meter operation. Automatic bandswitching by means of a heavy-duty switching mechanism from the transmitter position. Antenna features shunt transformer feed impedance match and complete with control cable. Requires 12 volt DC. to operate.

Model MA-5 . . . . Amateur Net, $112.75

The AutoWhip–5 is a 5 band mobile antenna for 10, 15, 20 and 40 meters with a parallel network that achieves near unity SWR on 80 meters. Fully automatic, changes bands without switches.

Model TM-5 . . Amateur Net, $69.95



3 ELEMENT BEAM for 20 and 40 meters. Forward gain on 20 meters, 8 db.; on 40 meters, 5.0 db.; front-to-back on 20 meters, 25 db.; on 40 meters, 20 db.; maximum element length, 54' 8"; turning radius, 29'; boom length, 20'. Antenna weight (with Tilting Head), 150 lbs. Just one coaxial feed-line is needed. 52 ohm, RG-8/U is recommended.

Model TA-20-40 . . . . Amateur Net, $337.50

"PORTABLE" 3 BAND ANTENNA - TOTE-TENNA

Rated to 300 watts. Collapsible, portable ½ wave-length antenna for 10, 15 and 20 meter bands. Supplied with L network tuning unit for best performance everywhere. Sturdy bracket fits most windows, holds Tote-Tenna securely. No ground or radials required. Superb engineering and craftsmanship.

Model TT-31 . . . . Net, $80.00

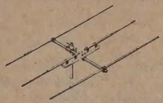
(Carrying Case and SWR Bridge available optional accessories.)

Mosley

COMMUNICATION ANTENNAS

Mosley

"POWER-MASTER" BEAM ANTENNAS



"Power-Master" Antennas are full sized arrays, each designed for a single band, 10, 15, or 20 meter. All are 100% rust-proof, stainless steel hardware, high impact polystyrene insulators with aluminum elements and boom. "Power-Master" is fed with 52 ohm coax.

Forward gain - 8.9 db., front-to-back - 28 db., SWR - 1.1/1, maximum element length - 18' 7", boom - 12' x 1¼" OD x .058, turning radius - 11' 1", wind load - 69 lbs.

Model A-310 . . . . Net, $37.50

Forward gain - 8.9 db., front-to-back - 28 db., SWR - 1.1/1, maximum element length - 23' 4", boom - 12' x 1¼" OD x .058, turning radius - 13' 2", wind load - 87 lbs.

Model A-315 . . . . Net, $42.50

Forward gain - 8.9 db., front-to-back - 25 db., SWR - 1.1/1, maximum element length - 35' 4", boom - 14' x 1½" OD x .125, turning radius - 18' 9", wind load - 200 lbs.

Model A-320 . . . . Net, $77.25

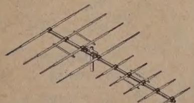
VHF "POWER-MASTER" ANTENNAS

14 element, 2 meter beam. Forward gain - 15 db., front-to-back - 20 db., SWR - 1.1, maximum element length 3' 5", boom - 1¼" x .058" x 12', turning radius - 6' 5", wind load 37 lbs., assembled weight - 11½ lbs. element sections are 5/8" OD and ½" OD establishing an extremely low ratio of length-to-diameter.

Model A-142 . . . . Net, $48.75

5 element, 6 meter beam. Forward gain - 11 db., front-to-back - 20 db., SWR - 1.1, maximum element length - 9' 8¾", boom - 1¼" x .058" x 12', turning radius - 8' 5", wind load - 38 lbs. assembled weight - 11½ lbs. "Power-Master" VHF Antennas combine superlative performance with the most rugged construction to be found in any VHF antenna for amateur use!

Model A-56 . . . . Net, $41.95



5 element, 2 meter beam and 4 element, 6 meter beam. Forward gain - (2M) 11.4 db., (6M) 9.6 db., front-to-back - (2M) 11.5 db., (6M) 16.3 db., SWR - (2 and 6M) 1.1, maximum element length - (2M) 3' 5", (6M) 8', boom - 1½" x .125" x 14', turning radius - 8' 9", wind load - 50 lbs., assembled weight - 20 lbs. 100% rust proof.

Model A-2N6 . . . . Net, $67.05

STACKING KITS

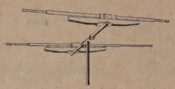
Stacking Kit for A-142, vertical or horizontal.

Model SK-2 . . . . Net, $23.75

Stacking Kit for A-56, vertical or horizontal.

Model SK-6 . . . . Net, $32.75

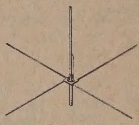
"VEST-POCKET" ANTENNA



2 element, 40 meter "Vest-Pocket" beam with 5 db. forward gain. Front-to-back, 19 db., SWR; 1.1/1, boom, 15'; maximum element length, 36'; turning radius, 19½'. Assembled weight, 68 lbs.

Model VPA40-2 . . . . Net, $74.95

GROUND PLANE VERTICALS



Rugged, heavy-duty ground plane antennas for 2, 6 and 10 meters. Antennas require no additional radials, attaches securely to 1¼" ID pipe mast. No guying needed above base mount. VB-1 base mount supplied.

Model V-144-GP (2 meter) . . . Net, $26.95

Model V-52-GP (6 meter) . . . . Net, $32.50

Model V-28-GP (10 meter) . . . Net, $34.95

TRAP DIPOLES

Resonates at 40 and 80 meters. ½ wavelength on each band. Rated to 1 KW. Antenna length, 114' 11". Ideal where a bi-directional pattern is desired. Antenna weight, 7 lbs.

Model TD-2 . . . . Net, $35.75

Will operate on 10, 15 and 20 meters. Rated to 300 watts AM or SSB. Overall wire length of 24 feet. ½ electrical wavelength on each of three bands. Antenna weight, 1¾ lbs.

Model TD-3 Jr. . . . . Net, $12.50

DIPOLE LOADING COILS

Coils are space-wound with plated No. 12 copper wire and are rated to 1 KW.

Type 40-D . . . . Net, $7.95

Type 75/80-D . . . . Net, $7.95

MAST PLATE ADAPTER KIT

Mast Plate Adapter for 2" OD Mast complete with Aluminum Angle and hardware.

Model AK-60 . . . . Net, $4.55

CITIZENS BAND ANTENNAS

DELUXE LINE

3 element beam for best point-to-point communication. 9.3 db. gain. Use the A-311 on each end to develope 80 watts ERP. Less mast, coax line and rotor.

Model A-311 . . . . Net, $37.50

Coaxial ground plane vertical antenna. 100% rust and corrosion proof. Can be mounted on tower, pole or chimney mount. Excellent base station antenna.

Model CA-27 . . . . Net, $34.95

CITIZENS BAND ANTENNAS

DELUXE LINE

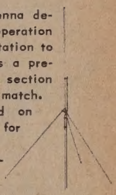
Cardioid Vertical Antenna provides a cardioid shaped radiation pattern with gain over an angle of 180 degrees. The gain in the direction of maximum signal is 3 db. Gain at plus or minus 90 degrees from the axis of the main beam is unity or 0 db. while the front-to-back ratio is 15 db. The cardioid vertical is ideal for mobile services operating along city or state borders, shorelines, or back-to-back with other services.

Model VGR-27 . . . . Net, $43.65

Ground Plane Vertical is ideal as base station antenna. 360 degree pattern and vertical polarization for effective communication with mobiles. High impact polystyrene base with internal coax fitting. Complete with guy lines, less coax line.

Model V-27-GP . . . . Net, $34.95

STANDARD LINE



Vertical ground plane antenna designed for high efficiency operation as point-to-point or base station to mobile units. Incorporates a precision engineered matching section to insure perfect 52 ohm match. Antenna may be mounted on high tower, mast or pole for maximum communication coverage. Packaged antenna may be mailed via parcel post.

Model LC-27-GP . . . . Net, $19.95

A 57" telescoping three section disguise antenna. Designed to be mounted on front fender of vehicle. Complete with coax matching system and M-1200 connector.

Model LC-57-A . . . . Net, $14.95

Chrome plated 4 section disguise antenna that telescopes from 100 inches to 39 inches. Designed to be mounted on rear fender. Use standard mobile whip mount, not supplied.

Model LC-100 . . . . Net, $8.50

A 57" three section telescoping vertical antenna, designed for mounting on transceiver, window or desk. Mounting is achieved by means of a large suction cup at the antenna base. Loading coil is enclosed in a molded plastic cover. Complete with coax and M-1200 connector.

Model LC-27-V . . . . Net, $7.00

An 88" loaded dipole (rabbit ears) antenna designed for portable or indoor use. Loading coil provides a perfect 52 ohm match and is enclosed in attractive plastic cover. Complete with 12' of RG-58/U coax and M-1200 connector.

Model LC-88-D . . . . Net, $9.75

102" stainless steel vertical whip antenna designed for high efficiency mobile operation. Antenna may be mounted on bumper or rear fender. Base has 3/8" threaded stud to fit any standard mobile base mount.

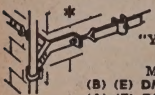
Model V-102-SS . . . . Net, $6.50

Net

South River THE COMPLETE QUALITY LINE OF ANTENNA MOUNTING ACCESSORIES

CHIMNEY MOUNTS

U.S. Pat. #2482575, Can. Pat. #463261

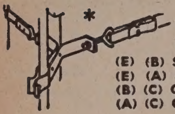


"Y" TYPE HOT DIP GALV. STEEL

MODEL	LIST
(B) (E) DM-36	$3.75
(A) (E) DM-36-ST	5.25
(B) (C) "Y" Special	2.95
(A) (C) "Y" ST Special	3.75

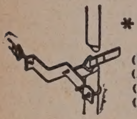
COMPLETELY ALL STAINLESSS

(A) ST-DM	7.65



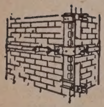
SNAP-IN TYPE

MODEL	LIST
(E) (B) SN-50	$3.30
(E) (A) SN-50-ST	4.30
(B) (C) CM-20	2.95
(A) (C) CM-20-ST	3.75



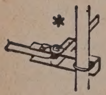
"Z" TYPE

MODEL	LIST
(B) (C) ZM	$2.25
(A) (C) ZM-ST	3.50
(B) (C) ZM-2	2.15
(A) (C) ZM-2-ST	2.75



ONE PIECE TYPE

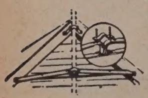
MODEL	LIST
(E) (A) (One Strap) UM-1-ST	$6.65



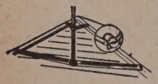
RATCHET TYPE

MODEL	LIST
(B) RT	$4.25
(A) RT-ST	5.25

EAVE MOUNTS

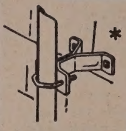


MODEL	LIST
EM-1	$5.30



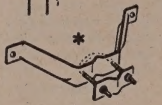
MODEL	LIST
30" EM-30	$4.35
48" EM-48	6.10
60" EM-60	7.65

WALL BRACKETS

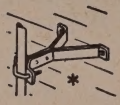


"U" BOLT TYPE

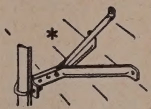
MODEL	LIST
3" Alum. WB-3	$2.15



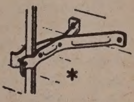
MODEL	LIST
3" NT-3	$1.35
4" NT-4	1.50



MODEL	LIST
6" WB-6	$2.20

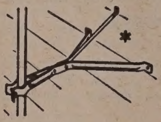


MODEL	LIST
9" WB-9	$3.20
12" WB-12	4.45
15" WB-15	5.15
18" WB-18	5.80
24" WB-24	7.35

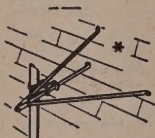


SNAP-IN TYPE

MODEL	LIST
6" SN-6	$2.20

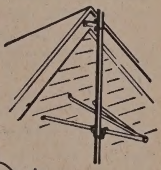


MODEL	LIST
9" SN-9	$3.20
12" SN-12	4.45
15" SN-15	5.15
18" SN-18	5.80
24" SN-24	7.35



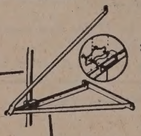
ADJUSTABLE

MODEL	LIST
18" Alum. WB-18A	$7.55



MODEL	LIST
Combination WB-3-18A	$5.40

All Aluminum



MODEL	LIST
ST-18A	$9.05
Assembled	
ADJ-18	6.60
Unassembled	

ALL STEEL

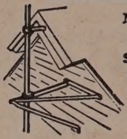
CODE:

* TWO TO A SET

(A) Stainless Steel Banding
(B) Galv. Steel Banding
(C) Economy Model
(D) Not Illustrated
(E) With Kwik Klip
(F) U.S. Pat. # 2734708
(G) Fits Masts Up To 1½"
(H) Fits Masts Up To 2"

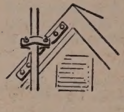
Complete descriptions and list of South River Products available in latest catalog. Write for your copy.

WALL BRACKETS



MODEL	LIST
Combination Assembled	
ST-3-18A	$5.65
Combination Unassembled	
ADJ-3-18	4.95

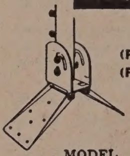
ALL STEEL



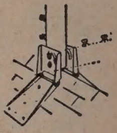
HEAVY SWIVEL GROUND UP TYPE

MODEL	LIST
GU-3	$5.85 pr.
(Fits Masts Up To 3⅜" O.D.)	
GU-7	$3.50 pr.
Fits Masts up to 2⅝" O.D.	

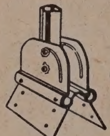
ROOF MOUNTS



MODEL	LIST
(F) (G) PFM-1	$3.60
(F) (H) PFM-1-LM	4.45

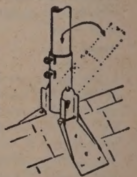


MODEL	LIST
(F) (G) PFM-30	$3.15
(F) (H) PFM-30-LM	4.10

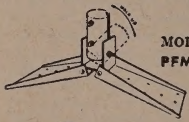


MODEL	LIST
(F) (G) PFM-2	$6.70

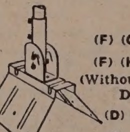
All Aluminum



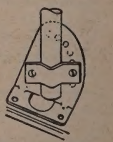
MODEL	LIST
(G) PFM-90	$2.10
(H) PFM-90-LM	3.05
(C)(D)(G) SPF-9	1.75
(C)(D)(H) SPF-9-LM	2.30



MODEL	LIST
PFM-XL	$5.60
(Fits Masts Up to 2¼" O. D.)	



MODEL	LIST
(F) (G) PM-10	$4.60
(F) (H) PM-10-LM	5.30
(Without Patented Walk-Up Drop-Lock Feature)	
(D) (G) PM-12	2.80
(D) (H) PM-12-LM	3.50

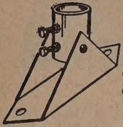


MODEL	LIST
(G) UR-1	$.55
(G)(D) UR-2 Slotted	.55
UR-3 Slotted—with U-Bolt & Saddle	.65

SOUTH RIVER METAL PRODUCTS CO., INC., South River, New Jersey

South River THE COMPLETE QUALITY LINE OF ANTENNA MOUNTING ACCESSORIES

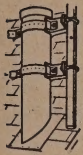
ROOF MOUNTS



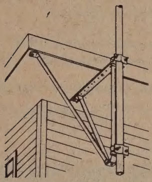
MODEL	LIST
(G) RM-80	$1.20
(H) RM-80-LM	2.20
(C) (G) SRM-8	.90
(C) (H) SRM-8-LM	1.40
(D) RM-XL*	3.40

*(Fits Masts Up To 2¼" O.D.)

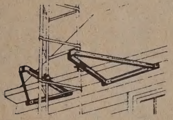
PIPE MOUNT



MODEL	LIST
(B) P-1	$2.85
(A) P-1-ST	3.20
(D) P-2 Clamp Type	$2.30

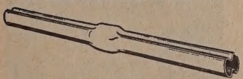


Under-Eave Mount Model #UE-1 $6.10 ea

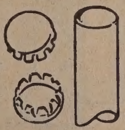


Tower Support Model TS-1 $8.35 pr.

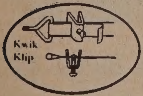
ACCESSORIES



Mast Coupler MC $.95



Mast Plug MP .20

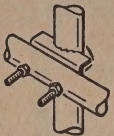


KWIK KLIP

MODEL	LIST
KK	$.25

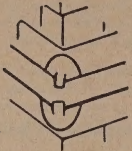
Complete descriptions and list of South River Products available in latest catalog. Write for your copy.

ACCESSORIES



MODEL	LIST
"U" Bolt & Saddle UBS	$ .35

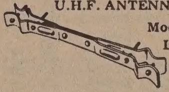
CORNER GUARD



MODEL	LIST
CG	$.49

STRAP CLAMPS

MODEL	LIST
(C)-Q Galv. Steel	$ .07
(C)-QS Stainless Steel	.15

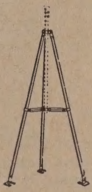


U.H.F. ANTENNA MAST ADAPTERS

Model UHB-15

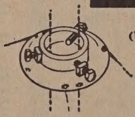
List $1.75

BANTAM TOWERS



MODEL	LIST
BT-5	$ 7.15
BT-10	10.00

GUY RINGS



(Universal Type Fits Masts up to 2")
Model GR-1
List $1.55

MODEL	LIST
1¼" MASTS GR-5	$ .20
1⅜" MASTS GR-6	.30
1½" MASTS GR-7	.30
(D) Guy Ring Support RS-5 (For 1¼" Masts)	.25

RATCHET GUY WIRE TIGHTENER

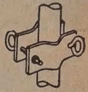
Model GW-RT
List $ .70

GROUND RODS

MODEL	LIST
(D) 4 Ft. GND-4 CP	$1.05
(D) 6 Ft. GND-6 CP	1.55
(D) Gnd. Rod Clamp GRC-2	.17

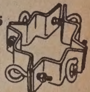
GUY WIRE CLAMPS

(G) Model GC-1 List $ .38



(G) Model GC-2
List $ .41

(H) Model GC-3
List $ .55



Model GC-4
List $ .75
(For Masts Up to 3")

ALUMINUM MAST TUBING

ALLOY: 6063 T832

NATURAL SILVER TYPE

WALL THICKNESSES—.042", .050", .054", .056"

LENGTHS: 5', 6', 7½', 10'

GOLDEN ANODIZED TYPE

WALL THICKNESSES—.042", .050"

LENGTHS: 5', 10'

ALUMINUM GUY WIRE

ALCLAD, STRANDED—#500 lb. TEST

7 STRAND 17 GAUGE

REGULAR, STRANDED—#400 lb. TEST

7 STRAND 18 GAUGE

50' INTER-CONNECTED COILS
100' INTER-CONNECTED COILS
1000' CONTINUOUS COILS

ALUMINUM GROUND WIRE

=8 E.C. Grade (Dead Soft)

50' INTER-CONNECTED COILS
100' INTER-CONNECTED COILS
1000' CONTINUOUS COILS

REPLACEMENT BANDING KITS

A	12 Ft. Straps	$1.80
AT	10 Ft. Straps	1.45
C	12 Ft. S.S. Straps	3.05
CT	10 Ft. S.S. Straps	2.60
XLG	18 Ft. Straps	2.45
XLST	18 Ft. S.S. Straps	4.45

SOUTH RIVER SUPERLIGHT MAGNESIUM LADDERS

Magnesium: 1/3 Lighter than Aluminum, Strongest Metal Lb. for Lb. in existence.

EXTENSION LADDERS

Size	Weight	List Price
40'	57 Lbs.	$136.00
36'	51 "	122.40
32'	46 "	108.80
28'	32 "	84.00
24'	28 "	72.00
20'	23 "	60.00
Rubber Safety Feet		4.00 pr.

STRAIGHT LADDERS

Size	Weight	List Price
20'	22 Lbs.	$56.00
16'	18 "	44.80
14'	15 "	39.20
12'	13 "	33.60
10'	11 "	28.00
Rubber Safety Feet		pr. 4.00
Roof Hooks		pr. 3.65

STEPLADDERS

Size	Weight	List Price
8'	16 Lbs.	39.50
6'	12 "	28.00
4'	9 "	21.50
26" Jr.	5 "	9.98

These ladders furnished immediately from complete warehouse stocks in South River, N. J.

SOUTH RIVER METAL PRODUCTS CO., INC., South River, New Jersey

KTV Towers

formerly KUEHNE

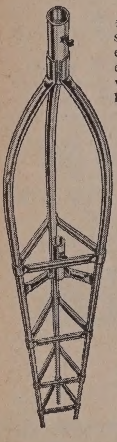
and communications equipment

2 GREAT PACKAGES

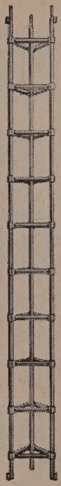
40 ft. Tower *Includes:* 1 #710-K; 1 #816-K; 2 #818-K tower sections and all connecting hardware. Shipping wt. 126 lbs. Order concrete base or roof mount separately.

50 ft. Tower *Includes:* 1 #710-K; 1 #816-K; 2 #818-K and 1 #820-K tower sections; all connecting hardware. Shipping wt. 164 lbs. Order concrete base or roof mount separately.

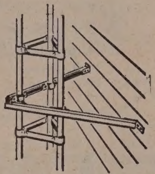
also available in 10, 20 and 30 ft. packages



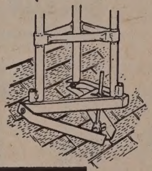
#710-K *Top Section.* Equipped with 21″ spaced mast socket rings to take 1½″ to 2½″ dia. mast. Threaded external receptacle securely welded to each ring gives extra bearing for 2″ x ½″ set screw. Hi-tensile bolts, washers, hex nuts and set screws furnished. Over-all length 10 ft. Wt. 28 lbs.



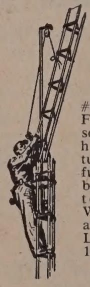
#820-K *Straight Section.* Used as bottom of free-standing 50 ft. tower and in other applications. Legs of 16 ga. cold rolled steel triangularly spaced on 10⅞″ centers. Gird-around cross ties spaced at 12″ intervals. Over-all length 10 ft. Complete with hardware 38 lbs. #818-K, same quality, but cross ties are spaced at 15″ intervals. Wt. 34 lbs. #816-K, Cross ties spaced 20″ apart. Wt. 30 lbs.



#864-H *Wall or Roof Bracket.* Adjustable to 20 inches.

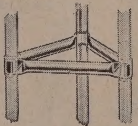


#863-H *Roof Mount.* Assures a strong, accurately vertical installation of one or more tower sections. Adjusts up to 45° roof pitch. Takes full advantage of KTV's lateral load support. Wt. 8 lbs.



#852-J *"Gin Pole".* For easy tower assembly. Has 1¼″ heavy-duty steel tubing with powerful strap-steel grab brackets. Fits all tower sections. With forged ring and iron pulley. Length 12 ft. Wt. 18 lbs.

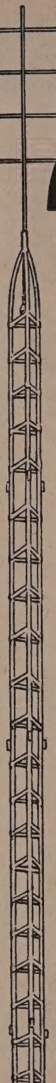
Gird-Around Cross Ties



Bigger, safer, stronger. Actually *grip around* vertical tubing. Take all outward strain. The tower itself takes none.

#862-H. Concrete base mount. The recommended installation.
#857-F. Mast 10 ft. x 1¼″ O.D.
#859-F. Mast 14 ft. x 1¼″ O.D.
#865-H. Rotor post brackets—adjustable.
#866-H. Tower mast bushing. 1¼″ I.D. 1½″ O.D.
#867-H. Base plate for drive-in base.

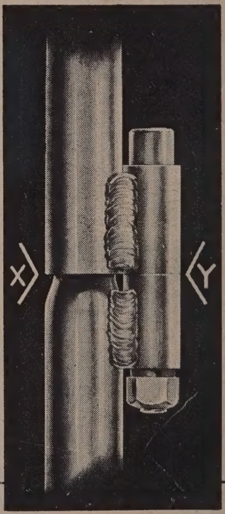
Engineering available for special towers for radiation and special antennas.



COMMERCIAL and HAM TOWERS AVAILABLE TO 160 FEET

A TOWER OF STRENGTH

- *Safe in gales up to 80 mph without ugly, hazardous guy wires.*
- *Free-standing to 50 feet high.*
- *No rusting, ripping or weakening holes . . . safest by far!*
- *Big, husky, steel gird-around ties for extra strength.*
- *Exclusive lateral load bearers take all strain off joints.*
- *Easy installation and dismantling on roof or ground.*
- *Free - drainage joints prevent trapped moisture and corrosion.*
- *Electro-plated with durable zinc for permanent high-luster finish*



Exclusive! LATERAL LOAD BEARERS

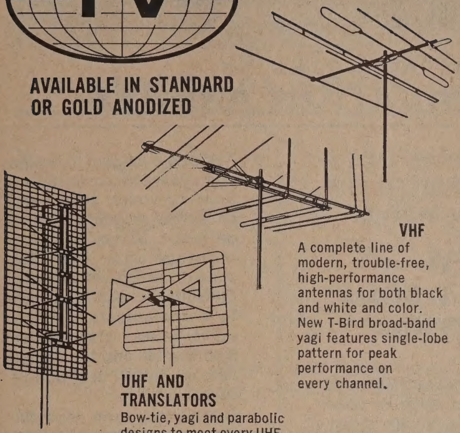
No dangerous rust. Arrow (X) shows open joint section. Assures free drainage and ventilation, less corrosion. * * * *No hazardous holes.* Arrow (Y) shows lateral load bearers lifetime welded to side of each section leg with twin 1⅛″ fillets. Sections are bolted vertically. Bear 100% of the load. No load on joints. No horizontal bolts to tear through. Nothing safer. Only KTV has it!

KTV Tower and Communications Equipment Company

Sullivan, Illinois

TV

AVAILABLE IN STANDARD OR GOLD ANODIZED

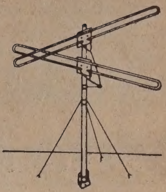


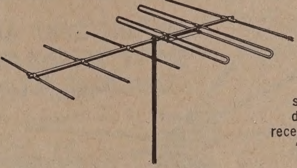
VHF
A complete line of modern, trouble-free, high-performance antennas for both black and white and color. New T-Bird broad-band yagi features single-lobe pattern for peak performance on every channel.

UHF AND TRANSLATORS
Bow-tie, yagi and parabolic designs to meet every UHF reception requirement.

FM

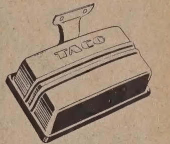
AVAILABLE IN STANDARD OR GOLD ANODIZED



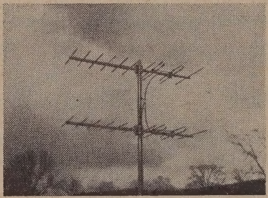


FM antennas include: uni-directional, high-gain yagis for fringe areas; bi-directional antennas for in-between-stations reception; and omni-directional antennas for 360° reception. Also, antenna kits for "do-it-yourself" enthusiasts.

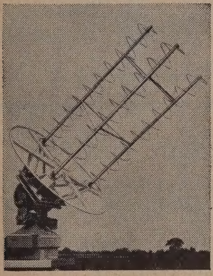
MULTI-SET COUPLERS
Multi-set couplers for indoor or outdoor installations. Models for 2, 3, or 4-set installations. High-efficiency coupling with maximum isolation.



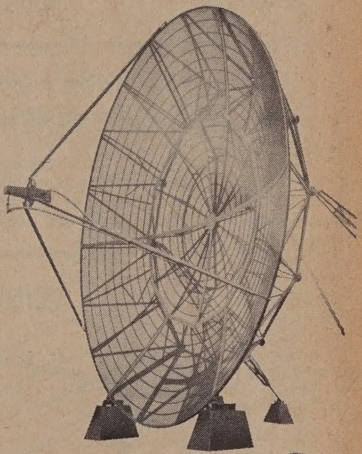
Defense and Industrial



RUGGEDIZED YAGIS—All-welded, heavy aluminum construction. From 30 MCS to 500 MCS. Single and stacked arrays.

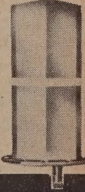


TELEMETERING — Helical arrays. Circular polarized on manual, fixed or electromechanical remote control mounts.

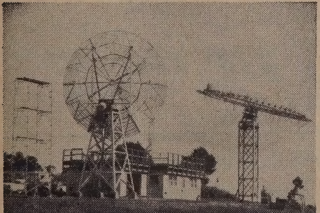


PARABOLIC ANTENNAS—From 4′ to 60′ parabolic antennas. 4′ to 10′ available in either spun or mesh. All types of mounts. Feed systems available to meet specific requirements.

TRACKING ANTENNA SYSTEMS—Complete tracking systems including support structure, antenna and feed. Remote control and indication or can be servo controlled. 19′ diameter illustrated. Sizes to 28′ diameter.



AIRBORNE ANTENNAS
Communications band airborne antennas.



ANTENNA ENGINEERING—Taco offers complete engineering and design service for all antenna and antenna system needs. Facilities include advanced 3000′ test range for "free-space" developmental investigations.

WHEN IT COMES TO ANTENNAS COME TO

TACO

TECHNICAL APPLIANCE CORP., SHERBURNE, N. Y.

ANTENNAS SINCE 1921

telrex LABORATORIES

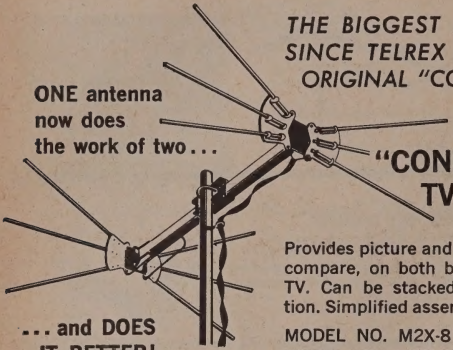
Communication and TV Antennas

ASBURY PARK 25, NEW JERSEY, U.S.A.

DESIGNERS AND MANUFACTURERS OF
TV, FM AND COMMUNICATION ARRAYS

THE BIGGEST ADVANCE IN TV SINCE TELREX INTRODUCED THE ORIGINAL "CONICAL-V-BEAM"

ONE antenna now does the work of two . . .



. . . and DOES IT BETTER!

NEW "CONICAL-V-BEAM" TV ANTENNA

Provides picture and sound brilliance beyond compare, on both black and white or color TV. Can be stacked for deep-fringe reception. Simplified assembly speeds installation.

MODEL NO. M2X-8 . . . .**$12.50**
MODEL NO. M2X-12 . . . . **13.50**

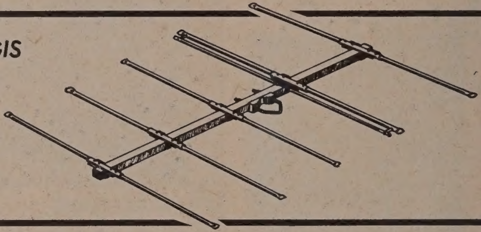
Telrex is equipped to design and supply to our specifications or yours, broadband or single frequency, fixed or rotary arrays for communications, FM, TV, scatter-propagation, etc. Consultants and suppliers to communication firms, universities, propagation laboratories and the Armed Forces. Install a TELREX system.

There's long term dependability, scientific leadership, world-wide respected performance, plus quality of materials too!

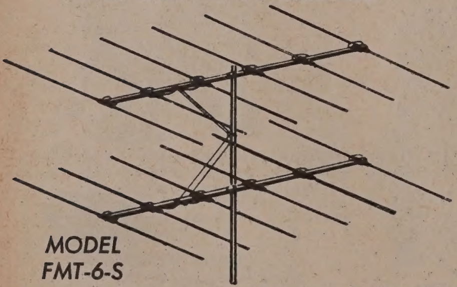
CUSTOM-BUILT, SINGLE CHANNEL YAGIS

Extra Heavy-Duty TELREX YAGI

Rugged, custom-built, 10-db gain, broadband 5-element Yagi array. Designed and precision-tuned for a single channel of customer's choice. Mounted on 1¼" square cross arm.



FM and HI-FI SERIES



MODEL FMT-6-S

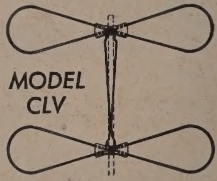
MODEL NO.	UNITS IN STD. CARTON	SHIP WT. LBS.	LIST PRICE
FMT-3	1	4	$ 9.03
FMT-3-S	1	8	20.92
FMT-6	1	8	17.75
FMT-6-S	1	15	38.31
FM-2X*	1	4	9.05
FM-4X*	1	8.5	19.30

*Conical-V-Beam

Broad-band gain and impedance characteristics make these beams ideal where extremely high fidelity, high-sensitivity antennas are required. All models of this series provide an excellent match to a 300 ohm characteristic impedance line (common TV lead).

"CLOVER-V-BEAM" SERIES

Requires no rotator to pick up signal from front or back. Transposition bar stacking gives vertically narrow, noise-free reception lobes. Tough closed loops yield lightly in high winds, but have no tendency to snap off.



MODEL CLV

MODEL NO.	UNITS IN STD. CARTON	SHIP WT. LBS.	LIST PRICE
CLV E-Z-Rig Clover	4	5	$7.95

Special TV and Communication Arrays

Constructed of rugged, lightweight aluminum, with exclusive Telrex features such as taper-swaged elements, "Cycolac" element supports, etc. Specially built for community-system installations, communications (broadband or single frequency) fixed or rotary, point-to-point, FM, TV-relaying, scatter-propagation, etc.

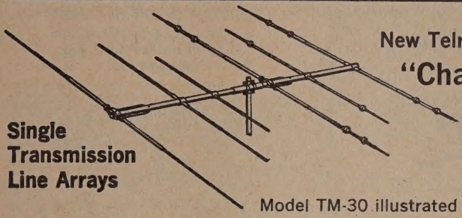
ANTENNAS SINCE 1921

Telrex LABORATORIES

Communication and TV Antennas

ASBURY PARK 25, NEW JERSEY, U.S.A.

DESIGNERS AND MANUFACTURERS OF
COMMERCIAL SERVICE "BEAMED-POWER" ARRAYS



Single Transmission Line Arrays

New Telrex

"Challenger"

Model TC-88 "Tri-Band"

$99.75

Model TM-30 illustrated

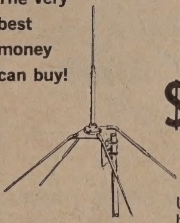
26 pounds of educated aluminum—Telrex "Tri-Band" is World Renowned for performance, excellence and value.

Model TC-99	**$159.50**
Model TM-30	**$328.00**
Model DP-3 (10-15-20 Meter Dipole)	**$38.50**
Model DP-4 (10-15-20-40 Meter Dipole)	**$175.00**

2, 6, 10, Citizens Band, 15 and 20 meter Ground Plane

Antennas

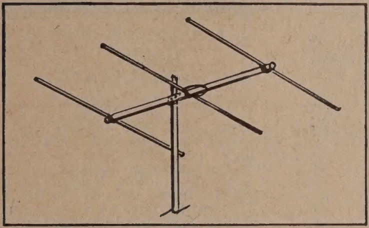
The very best money can buy!



MODEL GP-2M

$7.25

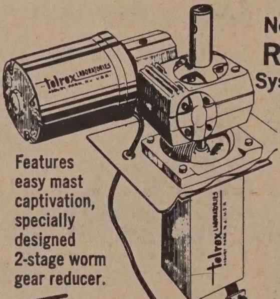
Unity gain, broad-band ground-plane omni-directional pattern antennas.



Model 2M-3C $6.95

2 Meter Arrays

Telrex offers 12 models in the 2-meter band. Prices range from $6.95 to $115.00.

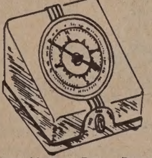


Features easy mast captivation, specially designed 2-stage worm gear reducer.

New Telrex

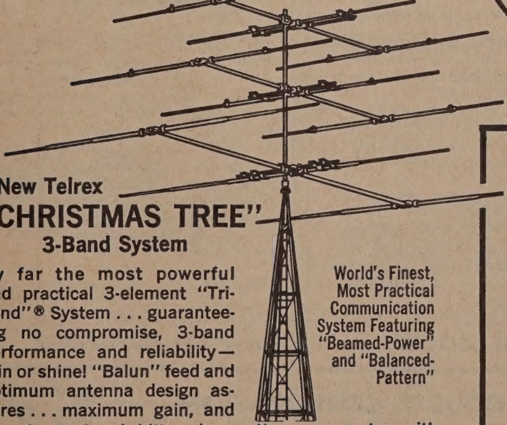
ROTATOR/INDICATOR

System Model 175-RIS $198.50



Designed to out-perform and outlast any other beam rotator in its class. Will hold and rotate beams in winds up to 110 mph. Control Housing is Telrex quality thru-out. Black japanned aluminum housing. Tri-colored azimuth rose and reciprocal readings. Has selsyn indication and limit of rotation circuitry.

Also available—Extra Heavy Duty Rotator Models



New Telrex

"CHRISTMAS TREE"

3-Band System

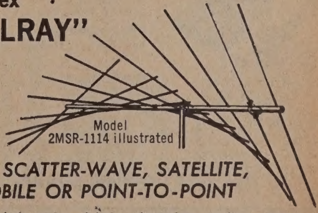
By far the most powerful and practical 3-element "Tri-band"® System . . . guaranteeing no compromise, 3-band performance and reliability—rain or shine! "Balun" feed and optimum antenna design assures . . . maximum gain, and impedance bandwidth, plus pattern symmetry with minimum TVI, BCI and harmonic radiation qualities not possible with so-called "Tri-banders".

World's Finest, Most Practical Communication System Featuring "Beamed-Power" and "Balanced-Pattern"

New Telrex

"SPIRALRAY"

$19.50



Model 2MSR-1114 illustrated

FOR SCATTER-WAVE, SATELLITE, MOBILE OR POINT-TO-POINT

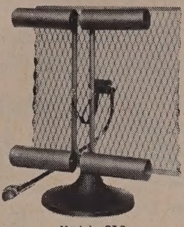
Extremely high-gain, high signal-to-noise, practically no fade, all radiation planes — horizontal, vertical or oblique! 50, 108 and 144 megacycle models available.

All prices FOB Asbury Park, New Jersey, subject to change without notice

TV ANTENNAS — SERVICE AIDS

TRICRAFT UHF INDOOR ANTENNA

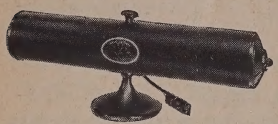
Consists of a two element aluminum array with a plane reflector. Measures only 12 inches from side to side. Has plastic base. Conveniently placed atop TV receivers. Covers all 70 UHF bands and provides excellent impedance match over the band. Packed individually. Wt. 2 lbs. each.



Model 210

MODEL 210 Dealer's Net $5.32

TRICRAFT UHF-VHF INDOOR ANTENNA



"Performance never before achieved." Here's why:

- Electronically adjusted
- "Only" pretuned frequency indoor antenna
- Turn switch to channel and antenna is electronically tuned to station
- Signal gain never before achieved
- Two-toned mahogany leatherette cover blends with any TV set
- Consumer tested and approved, wt 4½ lbs. ea.

MODEL 600 Dealer's Net $8.60

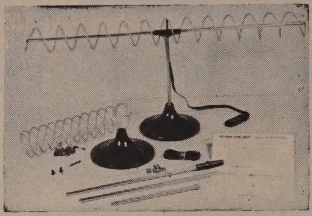
TRICRAFT FILAMENT CONTINUITY CHECKER

Model SM-101

- Quickly locates bad tubes in series-sets.
- Tests continuity of parts and appliances
- Easy to use – no warm-up or switching.
- No guessing — positive indication.
- Safe — Test current less than 1/1000 amp.
- Pocket size

Model SM-101 Dealer's Net $2.95

TRICRAFT INDOOR ANTENNA



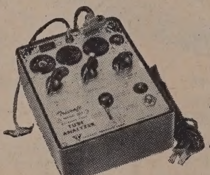
Model T-11 in Kit Form
Gleaming Gold Spiral and Dipoles

• Best indoor performance • Highly directional characteristics reject noise and ghosts • No dangling, unsightly wires • No dust catcher • Simple to orient on both high or low bands • Sturdy construction, wt. 1½ lbs. each.

MODEL T-11 Dealer's Net $4.39

(Licensed by Hi-Lo TV Antenna Corp. U. S. Pat. No. 2,495,579; Canadian Pats. 1951)

TRICRAFT TUBE CHECKER



Model 200

- Entirely NEW circuit
- Tests ALL tubes
- Quick and accurate
- Fits in tube Caddy

A Precision Instrument with the following features:

1. Tests tubes better, faster and more thoroughly than instruments costing many times more.

2. Compact and rugged enough to take it day in and day out in the service kit.

3. Completely and thoroughly checks all standard octal, loctal, 7 and 9 pin miniature tubes including
150 mil type for grid emission, gas, shorts, opens, microphonics and filament continuity. (Also picture tubes.)

4. All elements checked independently; no elements are tied together during test.

5. **Obsolete proof;** no circut changes necessary to check new tubes as they are developed.

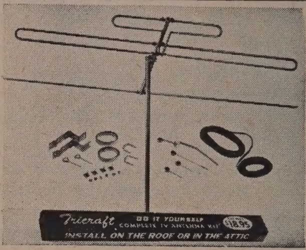
MODEL 200 Dealer's Net $23.95

Pat. Applied for

TOP TV RECEPTION to 100 MILES!

TRICRAFT IN-LINE No. 2000M

Available factory assembled with complete installation kit and chimney mount.



for Black & White or COLOR

TRICRAFT
Do It Yourself ANTENNA KITS

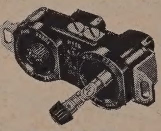
Outdoor or indoor installation for
TOP TV RECEPTION

● Completely pre-assembled, instantly installed ● All-channel, high gain, directional ● None better made, top quality and construction ● ⅜" Aircraft aluminum tubing ● 1" extra strong cross arm ● Well matched in all-channels ● Directs the signal to your set.

TRICRAFT "PACKAGED" ANTENNA KITS ARE COMPLETE, READY FOR INSTALLATION

MODEL 2000M Dealer's Net $5.95

FUSE-O-LET DUPLEX OUTLET



For Maximum SAFETY
For Positive PROTECTION
In HOME and INDUSTRY

Model FL-101

FUSE-O-LET saves time and money because it prevents costly down-time and expensive burn-outs on test lines, control circuits, motorized equipment and other critical industrial installations. Eliminates fire hazard, prevents overloaded outlets, protects hidden wiring. Manufactured of finest materials including phosphorous-bronze contacts, comes individually boxed with two 6 amp fuses. Available with any standard ¼" x 1¼", 250 volt fuses. 15 amps or less. Fits all standard outlet boxes. Complete with two fuses Underwriters Laboratories Appr. Patented.

Dealer's Net ....$.72

Waxing, Varnishing and Impregnating of Electrical Components

PRODUCTION and MANUFACTURING FACILITIES for CUSTOM MADE PRODUCTS!

Tricraft
PRODUCTS CORPORATION
Chicago 13, Illinois
Division of HI-LO Manufacturing Corp.

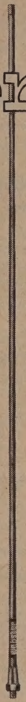
Webster MANUFACTURING

CITIZENS BAND ANTENNAS • STAINLESS STEEL WHIPS • BAND SPANNER AMATEUR ANTENNA • MARINE ANTENNAS • ANTENNA MOUNTS • MARINE ELECTRONIC EQUIPMENT

All Webster products are built to highest standards—are rugged, dependable . . . fully treated to withstand shock, vibration, moisture and corrosion.

49er

TOP LOADED CITIZENS BAND ANTENNA



Only 49″ in length . . . the finest top-loaded Citizens Band vehicular antenna. High quality fiberglass column features molded-in inductor . . . encapsulated top loading coil. Antenna operates efficiently on all channels . . . is easily adjusted for minimum SWR by pruning coil turns

Column tapers from ¼″ at top to ⅜″ at bottom. Base fitting is threaded standard ⅜-24. "Forty Niner" . . . sleek . . . handsome . . . highly effective!

Sila-flex FIBER GLASS

STAINLESS STEEL WHIPS

Precision ground from the finest grade of stainless 17-7 ph alloy, formulated specifically for mobile whip applications. Highly flexible, withstands bending without taking permanent set . . . will not work-harden or snap when striking overhead obstructions. Available in lengths 36″ to 103″.

WHIP SPECIFICATIONS:

Diameter at base 0.200″. Diameter at corona ball: 0.100″. Corona ball diameter: $\frac{5}{16}$″.

Base fittings available:

Steel, plated: ⅜-24 (M), ⅜-18 (F) threads. Brass, chrome: ⅜-24 (M) thread.

Other types on special order.

Fiberglass-covered whips also available. *Information on request.*

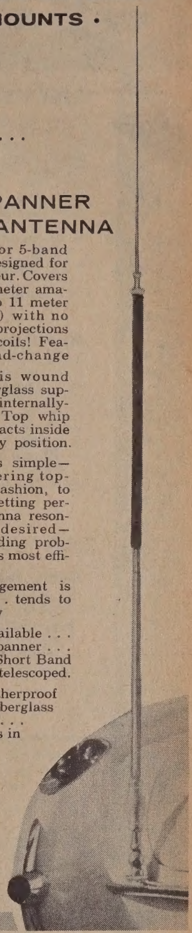
ANTENNA MOUNTINGS

MODEL B "BALL TYPE"

heavy duty universal ball mount has insulated base, 3-point mounting. Antenna is locked at desired position by hardened Allen-head screw.

MODEL SH SPRING —Heavy duty cadmium plated spring has hexagonal end caps for easy fastening. Threading is ⅜-24 male and female at opposite ends which are connected by internal flexible conductor.

BAND SPANNER MOBILE ANTENNA



One antenna for 5-band operation . . . designed for the mobile amateur. Covers 75-40-20-15-10 meter amateur bands (also 11 meter Citizens Band) with no external taps or projections . . . no plug-in coils! Features quick band-change

Loading coil is wound directly on fiberglass support column, has internally-exposed turns. Top whip is movable, contacts inside winding at any position.

Band change is simple—raising or lowering top-whip, plunger fashion, to pre-calibrated setting permits exact antenna resonance for band desired—minimizes loading problems . . . assures most efficient operation.

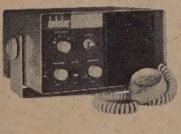
Contact arrangement is self-cleaning . . . tends to hold whip firmly

Two models available . . . Regular Band Spanner . . . 63″ telescoped Short Band Spanner . . . 39″ telescoped.

Features—Weatherproof . . . reinforced fiberglass support column . . . Top whip pushes in completely for storage or low door clearance. Epoxy sealed coil section . . . *All parts individually replaceable . . .*

FOUR-ELEVEN

MARINE 2-WAY RADIO FOR 27 mc CITIZENS BAND SERVICE



Compact, self-contained—easily installed in any type of boat or vehicle—car, plane, truck—and on shore. Ship-grip mount permits quick, postive lock-in and rapid release when not in use. Features full crystal-controlled transmitter and receiver . . . four selectable channels . . . superhet receiver . . . automatic noise limiter and "squelch".

Complete with microphone and transmitter/receiver crystals for one channel. Built-in power supply operates on 12V DC/115V AC.

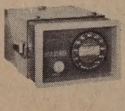
WEBSTER MANUFACTURING

WEBSTER DEPTH SOUNDERS

For small outboards and light inboards

Locate fish . . . detect underwater objects . . . observe interesting formations . . . determine bottom conditions . . . find depth of water under boat . . . use for navigation . . .

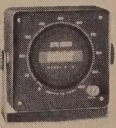
S-4 . . .



It's packaged, simple to install . . . furnished with ship-grip mounting for quick, positive lock-in and rapid release when not in use.

S-4 operates from boat's battery, steps up voltage for "power-type" operation . . . for stronger sonic pulses . . . brighter depth readings. Step-up method makes available alternating current for operation of constant speed, clock-type scanning motor. 0-100 foot calibration is accurate . . . depth readings reliable!

S-12 . . .



Similar to S-4 in general characteristics . . . calibrated to 100 feet. S-12 stresses an overall de luxe design. Scale is large full-view for easy reading. Gimbal-type mounting allows equipment to be tilted for best viewing angle. Unit can also be removed from cradle when not in use.

TRANSOM MOUNTED TRANSDUCER

Unique transducer furnished with both sounders—mounts on boat's transom . . . eliminates need for drilling holes in hull . . . simplifies installation. Connects to indicator unit with 20′ flexible shielded cable. (Supplied.)

SOUTH SAN FRANCISCO, CALIFORNIA

w a r d

Highest Quality AUTO ANTENNAS

FRONT MOUNTS

LOKMATIC MODEL L-1000

Triple lock top mount. Fits all cars, including '60 — '61 models. Fits any hole 7/8" to 1¼". Installed in seconds by one man from the top — Water proof — Highest "Q" ever.

- 3 section to 56" from 19½".
- Triple chrome plated brass tubing.
- Adjusts to 43° LokMatic mount.
- 54" low loss Elektran lead cable.

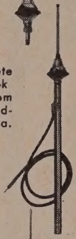
12 cartons 12 lbs., 1 lb. ea.

DISAPPEARING MODEL D-2000

Collapses to only 6½" — complete installation from the top and Lok Matic mount. Fits any hole from 7/8" to 1¼". A really major advance in disappearing antenna.

- 3 section.
- Extends to 52" from 6½".
- 54" low loss Elektran lead cable.

12 carton — 24 lbs.



MODEL FM-100

The first practical FM Auto Antenna in Life-Lasting Fiberglass®.

- Rattle free "8" ball mount.
- Pre-cut at factory to 31" for finest FM reception.

12 carton: 11 lbs.

NEW SUPER "8" MODEL TCF-4

Extra heavy. Rugged 4 section antenna. "8" Ball mount. Installed in minutes, by one man, from the outside.

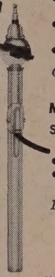
- 4 sections, to 57" from 18".
- Triple Chrome plated brass tubing.
- Adjust to 35° "8" ball mount.
- 54" low loss Elektran lead cable.

12-carton: 13 lbs., 1 lb. ea.

MODEL M-182-D

The only disappearing antenna specifically designed for Foreign, Sports and American Compact cars.

- 3 section disappearing mount.
- Extends to 20½" from 1".
- No brackets needed — LokMatic mount.
- 48" low loss Elektron lead cable.

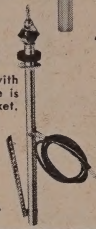


DELUXE PHANTOM COMPLETE DISAPPEARING MODEL DCF-3C

Collapses to 1". Smart, sleek, with flame tip. Aluminum shield tube is water-sealed. Mounting bracket. Waterseal grommet.

- 3 sections to 45" from 1".
- Triple chrome plated brass tubing.
- 54" low loss Elektran lead cable.

12 carton: 15 lbs., 1¼ lbs. ea.



FIBERGLASS MODEL TGF-1

Chrome Fiberglass: Life - lasting Fiberglass® not merely painted with color, but impregnated. 16 carton: 6 lbs. Duraramic: Six colors — White, blue, green, yellow, tan, red. Cannot fade, rust, wear off; 6 carton: 6 lbs. Model TGF-1 Chrome. Model TGF-1 Color (specify)

- Single section 38" long.
- 4 inner-conductor wires.
- Will bend almost double, flex back.
- 54" low loss Elektran lead cable.
- "8" ball mount.

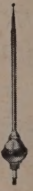
6 carton: 6 lbs.

MODEL M-171

Short 3 section for Sports and Foreign Cars

- Extends to 38" from 15".
- Adjusts to 35° — "8" ball mount.

12 carton: 24 lbs.



"8" BALL MODEL TCF-3C

The ageless "8" Ball, rattle-proof, always modern. Installed in minutes by one man, from the outside.

- 3 sections, to 56" from 22".
- Triple chrome plated brass tubing.
- Adjusts to 35°. "8" ball mounting.
- 54" low loss Elektran lead cable.

12 carton: 12 lbs. 14 ozs. ea.

REAR MOUNTS

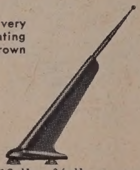
SPARKLE MODEL TFL-1

Here's rear-fin styling that's the very latest! Deck or fender. Flat mounting pad and contour pad for high-crown fenders. Colorful display carton.

- 3 sections, to 27" from 9".
- 18" Elektron lead cable with built-in capacitors.

12 carton: 16½ lbs., 1⅓ lbs. ea.

Dummy model TFD-1:
Same as TFL-1 except no lead cable. Will not receive. *12-carton: 12 lbs., ¾ lb. ea.*



MIDGET "8" BALL MODEL TCT-2

Live short twins. Rear fender or deck. Same fine Ward Quality.

- 3 sections, to 24" from 11½".
- Triple chrome plated brass tubing.
- Adjusts to 35° "8" ball mount.
- Two 54" low loss Elektran lead cables.
- 15' lead extension with built-in capacitors.
- "T" connector and 5 clips.

6 twins to carton 13¼ lbs., Twin set 2 lbs.

SIDE MOUNTS

SKY QUEEN MODEL SC-6

Clean, simple styling. Two chrome capped stanchions assure sturdy mounting. Trouble-free, rugged and rattle-proof. Adaptable to foreign cars.

- 3 sections, to 56" from 25"
- Triple chrome plated brass tubing.
- 36" low loss Elektran lead cable.

12-carton: 12¾ lbs., 1 lb. ea.

LONG RANGER MODEL SC-8

Extra length for extra pull in low-signal areas. Ideal for over-the-road truck equipment. Rattle-proof. Adaptable to foreign cars.

- 4 sections, to 100" from 39".
- Triple chrome plated brass tubing.
- 36" low loss Elektran lead cable.
- Sturdy 2 stanchion mount with chrome caps.

12-carton: 21 lbs., 1½ lbs. ea.

CONTINENTAL FLEX ANGLE MODEL CF-6

The only antenna that fits the Volkswagon. Adaptable to other foreign cars. Flexible adjustment. Locks vertically.

- 3 sections, to 56" from 22".
- Triple chrome plated brass tubing.
- 36" low loss Elektran lead cable

12 carton: 15 lbs., 1 lb. 7 oz. each

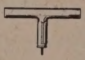
ACCESSORIES

REPLACEMENT MAST

3-section telescopic. Just slip on and tighten over stub of original mast with plated screws provided. Triple chrome plated brass tubing.

MODEL TCFR-1 extends to 57" from 24" — ½ lb.

Individual packed in cardboard tube — shipped bulk.



"T" CONNECTOR MODEL C-50

To connect two lead cables and lead extensions of Twin Rear mounts. One 3-way connector and 5 clips. *12 on display card — 1 lb.*

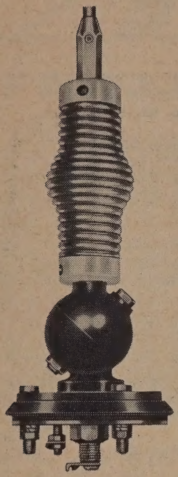
REPLACEMENT LEADS

Part No. 15-289	36"	bulk packed
Part No. 15-291	48"	bulk packed
Part No. 15-290	54"	bulk packed

COMMUNICATION ANTENNAS by ward

for every mobile frequency and application

CITIZENS BAND KIT, BASE, MAST & SPRING COMBINATION



Here is a mast made from the highest grade stainless steel available for antenna masts. 17-7 P.H. Exceptionally high strength and corrosion resistant. Heavy duty performance assured. Secured to shock mounting spring that provides real "give" while maintaining verticle mast position under wind load — Mounted on a strong light, but rugged swivel base.

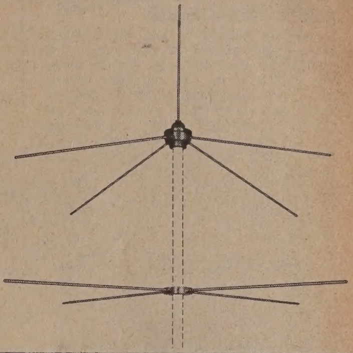
Citizens Band — special combination ideal for citizens band use. Base WCA 310. Mast WCA 323B cut to 102". Spring WCA 3 A. Available with chrome plated spring if specified.

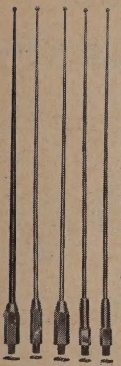
WARD GROUND PLANE ANTENNAS are general purpose, non-directional and vertically polarized, fixed-station antennas. For any frequency in 144-174 mc. range; will handle up to 3 kw of power. Good impedance, minimum VSWR. Radiate equal power in all horizontal directions. Built-in lightning arrester; weather-protected with cable terminating in mounting mast. Supplementary rods available to lower vertical radiation angle.

WCA-A94 for 144-152 mc.
WCA-B94 for 152-164 mc.
WCA-94 for 164-174 mc.
WCA-95 for lowering angle of radiation
(Ring and 4 ground rods)

ADAPTERS

WCA-96 for use with RG-58/U and RG-8/U cables
WCA-97 for use with RG-17/U cables, takes 1¼" IPS
VSWR: less than 1.5:1; 52 ohms impedance. Vertical polarized. 300 watts maximum.





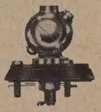
HEAVY DUTY MASTS

Finest stainless steel: heavy-duty performance. 84½" mast bends to bring tip and base 30" apart without distortion. All base studs ⅜-24 threads. All taper ground with ball tip. WCA-320 series — 60" long, choice of adapters: Chrome press fit, cadmium plated press fit; ⅝" hex steel, cadmium plated with set screws; ½" hex stainless steel with set screws.

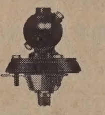
WCA-321 series — 72", same choices.
WCA-322 series — 84", same choices.
WCA-323 series — 96", same choices.
WCA-324 series — Fiberglass in all 4 lengths.

NEW HEAVY DUTY DIE CAST MOBILE BASES

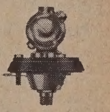
WCA-310—Universal swivel base. Plated & painted parts. Stainless steel mounting hardware.



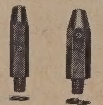
WCA-312 — Chrome plated swivel base w/ stainless steel mounting hardware.



WCA-313 — Coaxial type. New rugged metal backup plate and shell is one unit. Connector mounted in the shell is PL-258 which accepts a PL-259.



WCA-315 — Same as WCA-313 except base is chrome plated. Mast Extension. Heavy chrome plated brass tubing with ⅜-24 thread at both ends. 3 lengths: WCA-330 in 12" or 24" or 36"



Adapters have ⅜-24 thread for use on any standard Ward mast. Lock washer and set screws included.
WCA-89-357 Stainless; ½" hex.
WCA-89-358 cadmium plated; ⅜" hex.

Spring protect car and mast. Shock mounting "gives" under impact. Normal vertical.
WCA-3A is cadmium plated with lock washers.
WCA-3AL is extra heavy cadmium plated with lock washers.
WCA-301 Deluxe has stainless steel spring and mounts.

DISGUISE ANTENNAS

Look and mount like ordinary car antennas, with Ward "8" ball mount. The secret is in the lead: stub load type for 30-50 mcs.; standard leads for 144-174 mcs. WCAB-71 has triple chrome plated brass tubing and stainless steel tip rod. Looks like 3 section car antenna, but length fixed at 55½". (Permanent at telescopic joints.) Has heavy mounting brackets.

WCA-235 same but with 70" mast.
WCA-143 same but tapered stainless steel mast.
WCA-248 looks like 3 section, "8" ball mount.
WCA-249 55½" tapered stainless steel, "8" ball mount.

LEADS FOR DISGUISE ANTENNAS

Available in various lengths with either RG-8/U or RG-58A/U cables. Stub type loading is employed for 30-50 mc. operations to compensate for the short length of the antenna mast. Regular coaxial cable leads are used for 144-174 mc. operation.

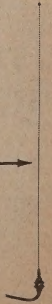
WALKIE TALKIE MODEL WCA-254

Expressly for 2-way radio. Greatest operating range, clearest reception. 19" whip rod fits any adapter which accepts PL-259 connector.

ROOF TOP ANTENNAS

Three models with varing megacycle ranges. All mount from outside; only one ⅜" hole required. 12' cable. Weather proof, positive ground. Specify for fleets, police, taxi, fire, etc.

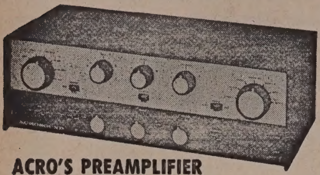
- WCA-250 — 144-174 mc.
- WCA-251 — 450-470 mc.
- WCA-A250 — 108-174 mc.



WARD PRODUCTS CORPORATION • AMSTERDAM, NEW YORK

ACRO PRODUCTS COMPANY

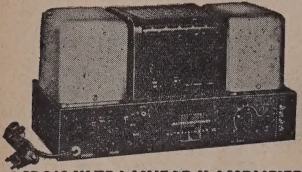
MANUFACTURERS OF THE WORLD FAMOUS ACROSOUND TRANSFORMERS & AMPLIFIERS



ACRO'S PREAMPLIFIER

A new all feedback preamplifier with low noise, 2 MV referred to phono input, high gain, 60 DB phono and tape, and low distortion, 0.15% IM for 1.5V out. Extra features include individual bass and treble controls, rumble and scratch filters, phase switch, third channel output, light matrix, and exclusive Mic. Dub switch. Supplied with two low noise 7199 pentode/triode, two 7247 dual triode tubes.

Modestly priced in kit form at just	$69.50
Factory Wired	$114.50
Self powered kit	$79.50
Factory Wired	$129.50
Internal power supply kit	$10.00



ACRO'S ULTRA LINEAR II AMPLIFIER

This famous 60 watt basic amplifier has long been a favorite of discriminating audiophiles. Acro perfected Ultra-Linear circuitry has been combined with a unique feedback system to provide an amplifier with unusually low distortion, superior feedback stability, and finest transient performance. Construction time is only two hours. Supplied with two EL-34 output tubes, one 12AX7, one 12AU7, and GZ34

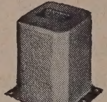
(assembly time—approx. 2 hours)

Complete Kit	$79.50
*Patent pending	
Factory Wired	$109.50

ACRO'S STEREO 20-20 AMPLIFIER

A two channel stereo amplifier which provides a full 18 watts in each channel, or a total of 36 watts of low distortion stereo in your listening room. Distortion is only 1.5% IM at 18 watts per channel, 0.5% at 16 watts. Excellent square-wave and transient performance. Supplied with four EL-84/6BQ5 output tubes, two 12AX7 driver tubes. Finest performance and lowest price for a dual amplifier.

Complete Kit	$69.50
Factory Wired	$99.50



Case Type "A" furnished in silver grey hammerloid finish. 10-inch color coded wire leads are brought out through case bottom. Case mounts with base flange. Size—3⅝ x 3¼ x 4¼ high.

Case Type "B" furnished in silver grey hammerloid finish. 10-inch color coded wire leads are brought out through case bottom. Case has provision for either top or bottom mounting. Size — 4 x 4⅝ x 5⅜ high.

MODEL	IMPEDANCES*	POWER RATING	FREQUENCY RESPONSE	CASE TYPE	WEIGHT	NET PRICE	APPLICATION
TO-230	3000 plate-to-plate 4, 8, 16 secondary	20 watts— 20 cps to 20 kc 40 watts— 30 cps to 15 kc	±1 db 10 cps to 40 kc	A	7 lbs.	$14.50	For use with 6B4's or 2A3's fixed bias pp par. 6L6's, etc.
TO-250	5000 plate-to-plate 4, 8, 16 secondary	10 watts— 20 cps to 20 kc 20 watts— 30 cps to 15 kc	±1 db 10 cps to 40 kc	A	6 lbs.	11.75	For use with 6B4's or 2A3's self bias, 6L6's, class A, etc.
TO-270	10,000 plate-to-plate 4, 8, 16 secondary	10 watts— 20 cps to 20 kc 20 watts— 30 cps to 15 kc	±1 db 10 cps to 40 kc	A	6 lbs.	11.75	For use with 6V6's, 6K6's, etc.
TO-280	9000 plate-to-plate 4, 8, 16 secondary	20 watts— 20 cps to 20 kc 40 watts— 30 cps to 15 kc	±1 db 10 cps to 40 kc	A	7 lbs.	14.50	For use with 6L6's, class AB1
TO-290	12,000 plate-to-plate 4, 8, 16 secondary	20 watts— 20 cps to 20 kc 40 watts— 30 cps to 15 kc	±1 db 10 cps to 40 kc	A	7 lbs.	15.75	For use with triode connected 807's or 5881's in Williamson type circuit
TO-300	6600 plate-to-plate 4, 8, 16 secondary	20 watts— 20 cps to 30 kc 40 watts— 30 cps to 20 kc	±1 db 10 cps to 100 kc	A	7 lbs.	24.75	For Ultra-Linear operation of KT-66's, 807's, 5881's, 1614's, 6L6's. Ultra-Linear conversion of Williamson type circuits
TO-310	8000 plate-to-plate 4, 8, 16 secondary	10 watts— 20 cps to 30 kc 20 watts— 30 cps to 20 kc	±1 db 10 cps to 100 kc	A	6 lbs.	18.75	For Ultra-Linear operation of 6V6's or EL-84's
TO-320	3500 plate-to-plate 4, 8, 16 secondary	10 watts— 20 cps to 30 kc 20 watts— 30 cps to 20 kc	±1 db 10 cps to 100 kc	A	6 lbs.	18.75	For Ultra-Linear operation of 6Y6's
TO-330	3800 plate-to-plate 4, 8, 16 secondary	50 watts— 20 cps to 30 kc 100 watts— 30 cps to 20 kc	±1 db 10 cps to 100 kc	B	14 lbs.	39.75	For push pull Ultra-Linear 6550's, EL-34's, 6CA7's or for push pull parallel operation of KT-66's, 807's, etc.
TO-340	5000 plate-to-plate 4, 8, 16 secondary	50 watts— 20 cps to 30 kc 100 watts— 30 cps to 20 kc	±1 db 10 cps to 100 kc	B	14 lbs.	39.75	For push pull Ultra-Linear 6550's KT-88's, in self bias operation.
TO-350	6600 plate-to-plate 4, 8, 16 secondary	100 watts— 20 cps to 20 kc	±1 db 7 cps to 70 kc	B	14 lbs.	49.50	For Ultra-Linear operation of 6146 tubes using tertiary winding for screen connection.

POWER TRANSFORMERS

MODEL	VOLTAGES	USE	NET PRICE
TP-520	285-0-285 - 175 ma, 6.3V - 5a, 5V - 2a	For 6Y6 Amplifiers	$ 9.75
TP-550	825-290-0-100-290-825, 6.3V - 6a, 5V 6a, 5V - 2a	For 6146 Amplifiers	33.75

* All models available with additional line winding (125 and 500 ohms) at extra cost of $6.00 net for models with numbers up to TO-320 and $10.00 net for models TO-330 and TO-350. Models with line winding are designated by model numbers ending in "5." For example, Model TO-300 with additional line winding is specified as TO-305. All power transformers supplied in gray hammertone end bells with upright mounting.

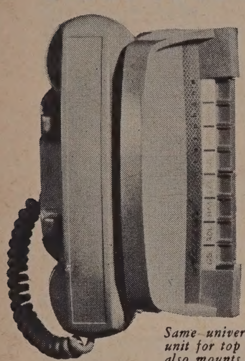
ACRO PRODUCTS COMPANY • PHILADELPHIA, PA.

High Fidelity Output Transformers for every application — Available through Leading Distributors

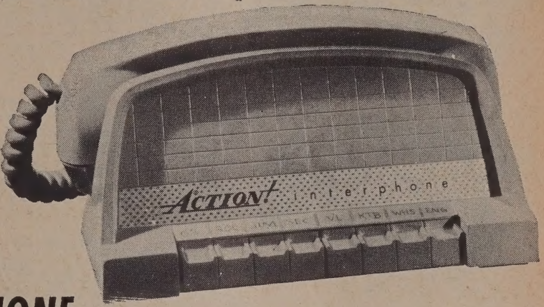
ACTION!®

PRIVATE INTERPHONE SYSTEMS

Newest design in intercommunication, combines the privacy and dignity of telephones with the convenience of two way loudspeakers and paging stations, linked together in one versatile system. Answers the requirements — in services, capacity, and cost — of 90% of the businesses, factories, and professional offices.

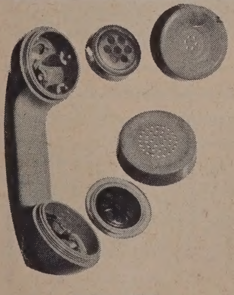


Same universal phone unit for top of desk also mounts on side of desk or wall.



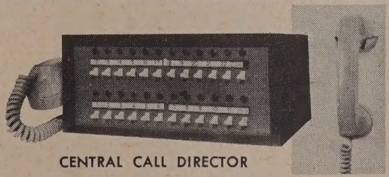
ACTION! INTERPHONE

Serves 2 to 9 stations, with regular telephone-quality performance. Direct push-button signalling. Available with one or two conversation channels and B-Z-lite to indicate busy lines. Every Interphone is a master station, can originate calls to every other station. Simplest do-it-yourself installations: only a screwdriver needed — no soldered connections.



HAND SETS

Designed to accommodate all standard microphone and receiver units manufactured by Western Electric, Conn. Telephone, and Yankee Telecom Labs. Available with push-button switch, bar, or butterfly switch in handle. *Microphones*: standard carbon capsule equivalent WECo F-1 and T-1 for flat response (300-4000 cps). *Receivers*: standard magnetic, equivalent WECo HA-1, U-1 and CTE 3163. Impedance 128 ohms (also available with higher impedances).



CENTRAL CALL DIRECTOR

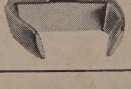
Compact switchboard for motels, schools, dormitories, YMCAs, etc. Provides direct communications to main office where connection can be arranged for other phones in the system.

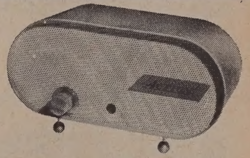
RETRAX CORDS

Retractable cords are available in all lengths and colors, from 2 to 5 conductors, with spade terminals or untrimmed.

CUP HANGER

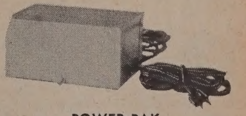
Handset hanger with hook switch for panel mounting. Available with a variety of spring combinations.





VOICE-COM SPEAKERS & PAGING

Two-way loudspeakers can be connected on the same system with Interphones, or tied into any paging system together with horns and amplifiers.



POWER-PAK

3-tap power supply 8-16-24 volts; provides ringing voltage 12 to 17 and talking 3½ to 5 v.d.c. Also 24 volt filtered full wave d.c. for loudspeaking units and 24 volts for B-Z-lites, chimes, clocks, etc.

ACTION! SYSTEMS COMPANY • Meriden, Conn.

BOGEN
the sound way

NEW M SERIES FLEX-PAK® PUBLIC ADDRESS AMPLIFIERS AND VERSATILE PREAMPLIFIERS

Presenting Bogen's exciting new "M" series PA amplifiers, the deluxe MX60 and MX30, and the superb M60 and M330. Features of the deluxe "MX" models: master gain control.—Built-in Remote Gain-Control Circuit allows changes in gain from distances up to 2,000 feet.—Plus all the other features listed below. **Features of the superb "M" models:** Constant voltage output taps simplify calculations for speaker matching transformers—Power stage screen regulation for higher output, greater efficiency.—Special filters to improve speech clarity.—Equalized phono input for all cartridges.—Separate bass and treble controls.—Plug-in sockets for low impedance transformers.—Quick maintenance; four thumbscrews remove cage, no tools needed.—Broadcast-type (Cannon XL Series) microphone connectors. Pencil-in, erase-out identification strips for all channels. Sturdy leather carrying handles.—Variable level markers permit resetting of controls to previously determined levels.—A host of accessories for completely flexible operation.—Handsome, compact design, finished in silver, gray and black.

MX30-MX60

NEW MX60, DELUXE 60-WATT PA AMPLIFIER

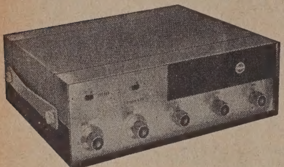
With master gain control . . . built-in remote gain-control circuit . . . four microphone channels (one converts to phono) . . . exclusive variable level markers.. **Power output:** 60 watts at less than 1% distortion. **Power consumption:** 270 watts. **Frequency response:** ± 2 db, 35 to 20,000 cycles. **Gain:** microphone: 125 db; tuner: 85 db; magnetic phono: 115 db. **Hum:** (below rated output): microphone: —60 db. **Output impedance:** 4, 8, 16 and 83 ohms, balanced 25-volt line, 70-volt line. **Tubes:** total of ten. 3-GZ34, 2-7027A, 4-12AX7, 1-7247. **Tone controls:** treble (10 kc): +10 db to —10 db; bass (50c): +10 db to —10 db. **Overall dimensions:** 16¼" wide, 13" deep, 5⅜" high. **Shipping weight:** 37 lbs.

List Price..**$290.00 (Zone 2: $293.75)**

NEW MX30, DELUXE 30-WATT PA AMPLIFIER

With master gain control . . . built-in remote gain control circuit . . . four microphone channels (one converts to phono) . . . exclusive variable level markers. **Power output:** 30 watts at less than 2% distortion. **Power consumption:** 150 watts. **Frequency response:** ± 2 db. 35 to 20,000 cycles. **Gain:** microphone: 120 db; tuner: 80 db; crystal phono: 80 db; magnetic phono: 115 db. **Hum:** (below rated output): microphone: —60 db. **Output impedance:** 4, 8, 16 and 163 ohms, balanced 25-volt line 70-volt line. **Tubes:** total of eight, 1-GZ34, 2-6L6GC, 4-12AX7, 1-7247. **Tone controls:** treble (10 kc): + 10 db to —10 db; bass (60c): + 10 db to —10 db. **Overall dimensions:** 16¼" wide, 13" deep, 5⅜" high. **Shipping weight:** 31 lbs.

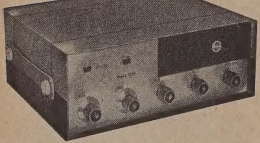
List Price..**$225.00 (Zone 2: $228.08)**


M60

NEW M60, SUPERB 60-WATT PA AMPLIFIER

With exclusive variable level markers . . . three microphone channels (one converts to phone) . . . speech filters. **Power output:** 60 watts at less than 1% distortion. **Power consumption:** 270 watts. **Frequency response:** ± 2 db, 35 to 20,000 cycles. **Gain microphone:** 125 db; tuner: 80 db; crystal phono: 80 db; magnetic phono: 115 db. **Hum:** (below rated output): microphone: —50 db. **Output impedance:** 4, 8, 16 and 83 ohms, balanced 25-volt line, 70-volt line. **Tubes:** total of nine. 3-GZ34, 2-7027A, 3-12AX7, 1-7247. **Overall dimensions:** 16¼" wide, 13" deep, 5⅜" high. **Shipping weight:** 37 lbs.

List Price..**$231.25 (Zone 2: $235.00)**

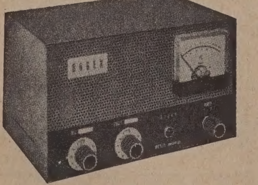

M330

NEW M330, SUPERB 30-WATT PA AMPLIFIER

With exclusive variable level markers . . . three microphone channels (one converts to phono) . . . speech filters. **Power output:** 30 watts at less than 2% distortion. **Power consumption:** 150 watts. **Frequency response:** ± 2 db, 35 to 20,000 cycles. **Gain:** microphone: 120 db; tuner: 80 db; crystal phono: 80 db; magnetic phono: 115 db. **Hum:** (below rated output): microphone: —60 db. **Output impedance:** 4, 8, 16 and 163 ohms, balanced 25-volt line, 70-volt line. **Tubes:** total of seven. 1-GZ34, 2-6L6GC, 3-12AX7, 1-7247. **Overall dimensions:** 14½" wide, 13" deep, 5⅜" high. **Shipping weight:** 29 lbs.

List Price .... **$187.50 (Zone 2: $190.42)**

VERSATILE BOGEN PREAMPLIFIERS

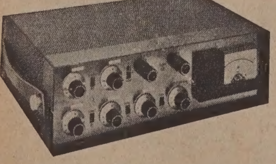


RP-2 . . . LOW-NOISE PROGRAM PREAMPLIFIER

Designed for use at remote pickup points. Contains separate input channels for one microphone and one phonograph. Separate volume controls for each channel permit mixing of inputs. The output is designed to feed either a booster amplifier or a low impedance line separately or simultaneously. A bass cut-off switch provides speech clarity. Enclosure with VU meter (as illustrated) is available—see below. **Power consumption:** 20 watts, 117 volts ac, 60 cycles. **Gain: microphone:** 76 db, phono: 35 db. **Sensitivity: microphone:** 3.5 mv., phono: 0.4 v. **Bass cut:** 20 db. **Output impedance:** high impedance: cathode follower driven; minimum recommended lead resistance—10,000 ohms. Low impedance: 600 ohms (50 and 200 ohms). **Input impedance:** high impedance ½ megohm, convertible to low impedance by use of plug-in transformers for 50, 150-250 or 600 ohms. **Pilot light:** #47. **Tubes:** total 4—2-6SF5, 1-6J5, 1-6X5GT. **Dimensions:** 11" w. x 5¼" h. x 7⅜" d. (excluding knobs). With cage,, height is 6½"

RP-2 (cage optional extra) List Price ....**$90.00 (Zone 2: $91.95)**

CAGVU2 cage with meter. List Price..**$31.25 (Zone 2: $32.00)**



NEW MXM MIXER-PREAMPLIFIER

Higher gain—outstanding sensitivity—excellent signal-to-noise ratio—high output at low distortion—extremely low hum level. The MXM is self-powered , accommodates five microphones, or four microphones and a tuner or phonograph. Each channel is regulated by a separate gain control (a master gain control is also provided). Features: individual speech filters for each channel, output level meter, sockets for plug-in, low impedance transformers, feedback-type, distortion-free tone controls, and new variable level markers which permit instant resetting of controls to previously determined levels. May be remote controlled with SR2 and SR4 remote controllers . . . **Output:** +18 dbm @ less than 1% dist. **Power consumption:** 27 watts. **Frequency response:** ± 2 db, 20 to 20,000 cycles. **Input sensitivity:** high imp.: 4 mv. Low imp.: 0.4 mv. MAG: 4 mv; XTAL: 0.2v; AUX: O.5v. **Hum:** (below rated output): microphone: —60 db. **Output impedance:** high imp.: (cathode follower): —600 ohms with T161 or T165B (broadcast quality) accessory plug-in transformers. **Tubes** total 9. 4-EF86, 2-12AX7, 1-6CG7, 1-6BF6, 1-6X4. **Tone controls:** treble (10 kc): +12 db to —12 db; bass (60c); +12 db to —12 db. **Overall dimensions:** 16¼" wide, 13" deep, 5⅜ high. **Shipping wt.:** 21 lbs.

List Price.. **$237.50 (Zone 2: $239.58)**

BP BOGEN-PRESTO PARAMUS, N.J. A DIVISION OF THE SIEGLER CORP.

ALL prices and specifications subject to change without notice

BOGEN
the sound way

AMPLIFIERS - BOOSTER AMPLIFIERS AND NEW POWERFUL MOBILE 25-WATT TRANSISTOR AMPLIFIER

K1630Y

K1630Y PHONO-TOP 30-WATT AMPLIFIER

Features a three-speed manual phono-top complete with tone arm and Ronette turn-over cartridge. Other features include: Controlled positive feedback; universal operation from 6- or 12-volt DC or 117-volt AC; one phono and two microphone channels. **Power Output:** 30 watts at less than 2% distortion. **Peak Power:** 45 watts. **Frequency Response:** ± 2 db, 20 to 20,000 cps. **Gain:** Microphone, 125 db; Crystal Phono, 85 db. **Hum:** (below rated output) Microphone, —60 db; Phono, —70 db. **Output Impedance:** 4, 8, 16 and 163 ohms, balanced 25-volt line, 70-volt line. **Tubes:** (8) 2-6AV5GA; 2—6AX5GT; 1-12AX7; 1—6AV6; 1-6CG7; 1-6U8. **Overall Dimensions:** 15¼″ wide, 10″ deep, 10¾″ high. **Shipping Weight:** 35 lbs.

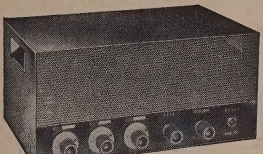
Bogen Model K1630Y Phono-Top Amplifier—List Price......$252.50 (Zone 2: $258.75)
Bogen Model K1630 Amplifier—Amplifier only, less phono-top. **Overall Dimensions:** 15¼″ wide, 10″ deep, 8¾″ high. **Shipping Weight:** 30 lbs. List Price......$225.00 (Zone 2: $230.05)

K130

K130 ECONOMICAL 30-WATT AMPLIFIER

With separate bass and treble controls, constant voltage output taps and socket for plug-in, low-impedance transformers. Erasable identification strips. One microphone input. **Power Output:** 30 watts at less than 2% distortion. **Peak Power:** 45 watts **Frequency Response:** ± 2 db, 20 to 20,000 cps. **Gain:** Microphone, 120 db; Phono 80 db. **Hum:** (below rated output) Microphone, —60 db; Phono, —70 db. **Output Impedances:** 4, 8, 16 and 163 ohms, balanced 25-volt line, 70-volt line. **Tubes:** (8) 2-6AV5GA, 2-5Y3GT; 1-6CG7; 1-6U8; 1-12AX7; 1-6AV6. **Overall Dimensions:** 14¼″ wide, 8¾″ deep, 6¾″ high (K130Y: 10¾″ high). **Shipping Weight:** K130, 30 lbs.; K130Y, 35 lbs.

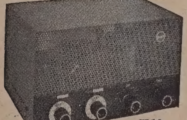
Bogen Model K130 Amplifier—List Price......$135.00 (Zone 2: $139.95)
Bogen Model K130Y Phono-Top Amplifier—Model K130 Amplifier with three-speed manual phono top, tone arm and Ronette turnover cartridge. List Price......$161.50 (Zone 2: $167.60)


K15

K15 ECONOMICAL 15-WATT AMPLIFIER

With separate bass and treble controls, constant voltage output taps, sockets for plug-in, low impedance transformers. Two microphone channels. **Power Output:** 15 watts at less than 3% distortion. **Peak Power:** 25 watts. **Frequency Response:** ± 2 db. 20 to 20,000 cps. **Gain:** Microphone, 125 db; Phono, 82 db. **Hum:** (below rated output) Microphone, —55 db; Phono, —70 db. **Output Impedance:** 4, 8, 16, 42 and 326 ohms, balanced 25-volt line, 70-volt line. **Tubes:** (6) 2-12AX7; 1-6AV6; 2-6L6GB; 1-6BW4/EZ80. **Overall dimensions:** 14¼″ wide, 8¾″ deep, 6¾″ high (K15Y: 10¾″ high). **Shipping Weight:** K15, 21 lbs.; K15Y, 26 lbs.

Bogen Model K15 Amplifier—List Price......$115.00 (Zone 2: $118.45)
Bogen Model K15Y Phono-Top Amplifier—Model K15 Amplifier with three-speed manual phono top, tone arm and Ronette turnover cartridge. List Price......$146.50 (Zone 2: $151.10)

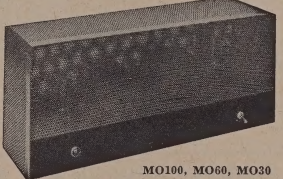

K10

K10 ECONOMICAL 10-WATT AMPLIFIER

With six-position SelecTone tone control, constant voltage output taps, socket for plug-in, low impedance transformers. One microphone input. **Power Output:** 10 watts at less than 3% distortion. **Peak Power:** 15 watts. **Frequency Response:** ± 2 db, 20 to 20,000 cps. **Gain:** Microphone, 110 db; Phono, 72 db. **Hum:** (below rated output) Microphone, —55 db; Phono, —65 db. **Tone Control:** SelecTone—Natural, Mellow, Bass, Deep Bass, Brilliant, Crisp. **Output Impedances:** 4, 8, 16 and 500 ohms, 70-volt line. **Tubes:** (5) 2-6AQ5; 1-6BW4/EZ80; 1-12AX7; 1-6AU6. **Overall Dimensions:** 11″ wide, 7½″ deep, 6⅛″ high. **Shipping Weight:** 15 lbs.

Bogen Model K10 Amplifier—List Price......$82.50 (Zone 2: $84.95)

POWER PACKED BOOSTER AMPLIFIERS


MO100, MO60, MO30

NEW MO SERIES BOOSTER AMPLIFIERS

Bogen's new MO series booster amplifiers embody the most advanced developments in design and techniques of construction. They are ideal for sound systems in industrial plants, airports, stadia, shipyards . . . wherever undistorted high power is required. Note their exceptionally wide-range response characteristics. An input signal of just 2 volts or less will drive any of the boosters to rated output. The MXM and RP-2, described on another page, are ideal preamplifiers for these boosters. Built-in provision for paralleling several MO series power amplifiers to multiply power output.

MO100, 100-WATT BOOSTER AMPLIFIER

Provision for balanced low impedance line input . . . provision for remote control of standby operation. INDUSTRIAL RATING can be used as 100-watt source of continuous power between 50 and 20 KC (with distortion below 2%). **Power output:** 100 watts at less than 1% distortion. **Power consumption:** 300 watts. **Frequency response:** ± 2 db, 35 to 70,000 cycles. **Input:** (1) high impedance: .1 megohm. With low impedance transformer (T161): 500 ohms. **Sensitivity:** high impedance: 2 volt; low impedance (with T161 transformer): 0.5 volts. **Hum:** (below rated output): —80 db. **Output impedance:** 1.6, 6.25 and 49 ohms, balanced 25-volt line, 70-volt-115-volt. **Tubes:** Total 6. 2-GZ34, 1-EZ81, 2-6550, 1-6C4. **Overall dimensions:** 17¼″ wide, 9″ deep, 7¾″ high. **Shipping weight:** 35 lbs. List Price......$215.75 (Zone 2: $218.83)

MO60, 60 WATT BOOSTER AMPLIFIER

Provision for balanced low impedance line input . . . provision for remote control of standby operation. **Power output:** 60 watts at less than 1% distortion. **Power consumption:** 260 watts. **Frequency response:** ± 2 db, 35 to 20,000 cycles. **Input:** high impedance .1 megohm. With low impedance transformer (T161): 500 ohms. **Sensitivity:** high impedance: 2 volts; low impedance (with T161 transformer): 0.5 volts. **Hum:** (below rated output): —80 db. **Output impedance:** 4, 8, 16, and 82 ohms, balanced 25-volt line, 70-volt line. **Tubes:** total 7. 3-GZ34, 2-7027A, 1-12AX7, 1-6C4. **Overall dimensions:** 17¼″ wide, 6½″ deep, 7¾″ high. **Shipping weight:** 23 lbs. List Price......$167.50 (Zone 2: $169.83)

MO30, 30-WATT BOOSTER AMPLIFIER

Provision for balanced low impedance line input. **Power Output:** 30 watts at less than 2% distortion. **Power Consumption:** 150 watts. **Frequency Response:** ± 2 db, 35 to 20,000 cycles. **Input:** (1) high impedance: .1 megohm. With low impedance transformer (T161): 500 ohms. **Sensitivity:** high impedance: 2.0 volt, low impedance (with T161 transformer): 0.5 volts. **hum:** (below rated output): —80 db. **Output Impedance:** 4, 8, 16 and 163 ohms, balanced 25-volt line, 70-volt line. **Tubes:** total 5. 1-GZ34, 2-6L6GC, 1-12AX7, 1-6C4. **Overall dimensions:** 17¼″ wide, 6½″ deep, 7¾″ high. **Shipping weight:** 21 lbs. List......$119.88 (Zone 2: $121.97)

BT 25 MOBILE P.A. AMPLIFIER

BT25

A product of Bogen research . . . the BT25 is the first commercially available fully transistorized public address amplifier offering 25 watts of power from a 12-volt battery. So versatile it will serve scores of P.A. applications, the amplifier is so small it will fit in the glove compartment of your car.

The BT25 is perfect for use in cars, trucks and busses for regular public address or emergency use. Its hefty 25 watts of power make it ideal for fire department or police use, for disaster work and civil disturbances. It is also recommended for ships, carnivals, electioneering . . . wherever a small, high-powered, reliable P.A. amplifier is needed. Bogen's unique fully transistorized circuitry provides maximum power with minimum battery drain. When operated from a 12-volt battery, the drain is approximately 3 amperes at full output—85% lower than comparable vacuum tube amplifiers. When operated from a 6-volt battery, current drain is only 1.4 amperes at full output. The inputs of the BT25 are individually controllable, permitting mixing. A transistorized circuit insures ruggedness and long, trouble-free service not possible with conventional amplifiers (Bogen guarantees the BT25 for a full year). There are no tubes to burn out, no vibrators to replace. It is completely hum-free.

BT25 Mobile P.A. Amplifier
List: $120.00 (Zone 2: $120.90)

BOGEN-PRESTO PARAMUS, N.J.
A Division of the Siegler Corp.

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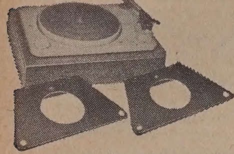
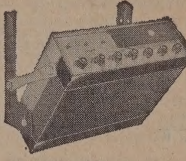
FLEX-PAK® ACCESSORIES FOR BOGEN P. A. AMPLIFIERS


(A)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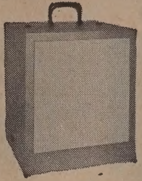
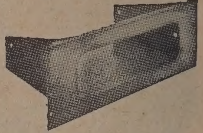
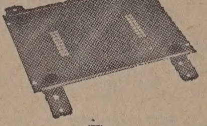

(C)

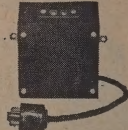

(D)

(E)


(F)

(G)

(H)


(J)

(A) M AND MX SERIES PHONO TOPS come in kits consisting of phono top, mounting brackets and all necessary hardware. Two types are available. Both are easily installed without tools and can be ordered with the amplifier or at any subsequent time. **Standard Kits** include 3-speed manual phono tops complete with tone arm and Ronette turnover cartridge. Model LPA-3, for M330 . . . List Price: **$42.25** (Zone 2: **$43.00**). Model LPB-3 for MX60, M60 and MXM same price as LPA3. **DeLuxe Kits** include 4-speed vibration-isolated, manual phono top with variable speed control, tone arm and Ronette turnover cartridge. Model LPA-4, for M330 . . . List Price: **$69.00** (Zone 2: **$69.75**). Model LPB-4, for MX60, MX30, M60 and MXM: same price as LPA-4. For K series phono tops, see page 4.

(B) WALL-MOUNTING KITS. Keep your equipment ready when you need it, yet safely, neatly out of the way when not in use. Bogen wall-mounting kits can be used with M and MX amplifiers and the MXM. You can set your equipment flat against the wall when idle or at any angle for operation. Model LWM wall-mounting kit, complete with all hardware, mounting template and instructions . . . List Price: **$15.00** (Zone 2: **$15.45**).

(C) CARRYING CASES AND SPEAKERS. Carrying cases for portable systems are available with or without speakers. With speakers installed, each half of the split case acts as a baffle. Cases with speakers include 25′ cables with plugs. **For M330, K130 and K15:** Model LK12S, with two Bogen L123 speakers . . . List Price: **$77.50** (Zone 2: **$81.65**) and model LK12, case only . . . List Price: **$41.25** (Zone 2: **$41.55**). **For M330Y, K130Y and K15Y:** Model LKP12S, with two Bogen L123 speakers . . . List Price: **$84.00** (Zone 2: **$88.50**) and Model LKP12 case only . . . List Price: **$46.75** (Zone 2: **$50.40**). **For K10:** Model CK10S, with two Bogen L121 speakers . . . List Price: **$75.90** (Zone 2: **$78.75**) and Model CK10 case only . . . List Price: **$45.40** (Zone 2: **$45.90**). Sizes: LK12, 16½″ x 19½″ x 15½″; LKP12, 16½″ x 21¾″ x 15½″.

(D) RACK PANEL MOUNTING KITS. Choose either factory mounting or kits for rack installations. **For factory mounting** (on 19″ x 7″ panels for M, MX and K models, 19″ x 8¾″ panels for MO models) add suffix "-R" to amplifier model number, and add $25.00 to list price of M and MX amplifiers and $24.25 to list price of K amplifiers. **Kits contain** pre-cut and pre-drilled panel, hardware and mounting brackets . . . List Price for M and MX amplifiers: **$19.50** (Zone 2: **$21.00**). List price for K amplifiers: **$14.85** (Zone 2: **$16.60**). **Note: When ordering kits specify the model number of the amplifier that is to be mounted.**

(E) CONTROL GUARD LOCKING PLATE. Tampering fingers will never disturb your advance settings when you protect them with the Control-Guard Locking Plate. Set them and forget them. Model LK-1, for M330 . . . List Price: **$7.75** (Zone 2: **$8.05**). Model LK-2, for MX60, MX30, M60 and L0M . . . List Price: **$8.00** (Zone 2: **$8.30**). Model LK-3, for M330 when used on LWM wall mounting . . . List Price: **$10.50** (Zone 2: **$10.95**). Model LK-4, for MX60, MX30, M60 and MXM when used on LWM all mounting . . . List Price: **$11.00** (Zone 2: **$11.45**).

(F) MOBILE AMPLIFIER SHOCK BASE. Model SV3, a spring-loaded shock-isolating base for operating K1630 and K1630Y amplifiers in a car or truck . . . List price: **$13.75** (Zone 2: **$14.45**).

(G) REMOTE CONTROLLERS Two and four channel remote control units broaden the flexibility of the deluxe amplifiers, allow you to mix and fade channels, and make frequent changes in gain, even from distances up to 2,000 feet, without sacrificing power or signal quality. List Prices: two channel SR2 **$11.25** (Zone 2: **$11.55**), four channel SR4 **$16.50** (Zone 2: **$16.95**).

(H) PLUG-IN TRANSFORMERS. Bogen microphone and line transformers have been especially designed for plug-in use with Bogen amplifiers. List Prices for microphone input transformers: Model T155 (200 ohms) **$15.65** (Zone 2: **$17.35**), Model T156 (500 ohms) **$21.25** (Zone 2: **$21.40**) Model T157 (50 ohms) **$18.75** (Zone 2: **$18.90**). List Prices for line transformers: Model T161 (500 ohms) **$16.25** (Zone 2: **$16.40**). Model T165B broadcast-type (500 ohms) **$20.00** (Zone 2: **$20.15**).

(J) STANDBY CONTROLLER, Model KR6, plugs into MO100 and MO60, lengthens amplifier life, reduces high voltage power consumption . . . List Price: **$30.00** (Zone 2: **$30.45**).

MICROPHONE CONNECTOR — Model CON-1, for all Bogen amplifiers . . . List Price: **$1.98**.

COMPLETE INDOOR, OUTDOOR AND PORTABLE PA SYSTEMS

OUTDOOR SYSTEMS

Bogen System Number	Amplifier	Mikes ‡	Speakers	List Price Zone 1	List Price Zone 2
MX60X	**MX60**	F	3-Bogen-University LH trumpets w/3-SAHF	**$615.44**	**$636.04**
MX30X	**MX30**	F	2-Bogen-Univ. LH trumpets w/2-SAHF drivers	**467.11**	**483.61**
M60X	**M60**	F	3-Bogen-Univ. PH trumpets w/3-MA25 drivers	**496.79**	**515.29**
M330X	**M330**	C	2-Bogen-Univ. PH trumpets w/2-MA25 drivers	**355.76**	**367.61**
M330YX	**M330†**	C	Same as M330X	**398.26**	**410.11**
K130X	**K130**	C	1-Bogen-Univ. PH trumpet w/1-MA25 driver	**241.03**	**252.93**
K130YX	**K130Y**	C	Same as K130X	**267.28**	**277.53**
K15X	**K15**	C	1-Bogen-Univ. MLC	**216.25**	**226.15**
K10X	**K10**	E	1-Bogen-Univ. MLC	**175.00**	**181.45**
K1630YX	**K1630Y**	E	1-Bogen-Univ. PH trumpet w/1-MA25 driver	**349.78**	**360.68**

PORTABLE SYSTEMS

M330C	**M330**	C	2-Bogen L123**	**$308.75**	**$319.40**
M330YC	**M330†**	C	2-Bogen L123††	**351.90**	**363.25**
K130C	**K130**	C	2-Bogen L123††	**256.25**	**266.90**
K130YC	**K130Y**	C	2-Bogen L123††	**289.40**	**300.90**
K15C	**K15**	C	2-Bogen L123**	**236.25**	**246.25**
K15YC	**K15Y**	C	2-Bogen L123**	**274.40**	**285.25**
K10C	**K10**	D	2-Bogen L121##	**185.75**	**192.20**

INDOOR SYSTEMS

Bogen System Number	Amplifier	Mikes ‡	Speakers	List Price Zone 1	List Price Zone 2
MX60F	**MX60**	A	6-Bogen WS12-T16*	**$593.65**	**$615.35**
MX30F	**MX30**	A	3-Bogen WS12-T16*	**421.00**	**434.35**
M60F	**M60**	A	6-Bogen WS12-T16*	**534.90**	**554.95**
M330F	**M330**	B	3-Bogen WS12-T16*	**353.00**	**363.65**
M330YF	**M330†**	B	3-Bogen WS12-T16*	**392.50**	**403.85**
K130F	**K130**	C	3-Bogen WS12-T16*	**286.50**	**297.15**
K130YF	**K130Y**	C	3-Bogen WS12-T16*	**313.00**	**323.65**
K15F	**K15**	C	2-Bogen L123 12″ #	**215.65**	**225.65**
K15YF	**K15Y**	C	2-Bogen L123 12″ #	**247.15**	**257.15**
K10F	**K10**	D	2-Bogen L121 10″§	**154.15**	**160.65**
K1630YF	**K1630Y**	E	3-Bogen WS12-T16*	**392.50**	**404.15**

‡See Mike Table below. *Includes Bogen L123 12″ speaker. T16 matching transformer, WA12 baffle. †Plus LPA-3 3-speed manual phono top. #With 2-WA12 baffles. §With 2-BA12 baffles. **In LK12 carrying case with 2-25′ cables, plugs. ††In LKP12 carrying case with 2-25′ cables, plugs. ##In CK10 carrying case with 2-25′ cables, plugs.

‡MICROPHONES

A: Bogen-Shure 55S with 18′ cable, XL3-11 connector. **B:** Bogen-EV630 with 18′ cable, XL3-11 connector. **C:** Bogen-Shure 430 with 15′ cable XL3-11 connector. **D:** Bogen-EV927 with 10′ cable, stand, XL3-11 connector. **E:** Bogen-Shure 420 with 20′ cable, CON-1 connector. **F:** Bogen-Shure 535 with 18′ cable, XL3-11 connector.

BOGEN-PRESTO PARAMUS, N.J. A DIVISION OF THE SIEGLER CORP.

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BOGEN
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PORTABLE TRANSCRIPTION AND RECORD PLAYERS HIGH POWER INTERCOM-PAGING SYSTEM

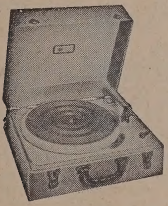
Two New Portable Phonoplayer- P.A. Combinations Feature Continuously Variable Record Speed Control plus 20 and 40 watt Peak Power Amplifiers

Models VP20 and VP40. These outstanding new portable phonoplayer—P.A. combinations are complete, self-contained, high fidelity phonographs with several important functional features. Especially suitable for square dancing, swimming instruction, calisthenics, and other group and school activities, continuously-variable-record-speed-control permits the record tempo to be adjusted to suit the tempo of any activity. The range is from 29 to 86rpm. And there are 'click' positions for normal playing of 16, 33⅓, 45 and 78rpm records. This variable speed adjustment also permits the pitch of any selection to be tuned to the pitch of any musical selection. Another unique feature is the automatic cueing device which automatically raises and lowers the tone arm at any desired position on the record, insuring the gentlest possible contact between stylus and record groove. The turntables are driven by heavy-duty 4-pole induction motors to insure constant speed, once selected, with no detectable rumble, wow or flutter. Turntables will handle discs up to 16 inches in diameter and are supplied with adapters for 'large-hole' 45rpm records. Both models feature inputs for two microphones and tuner to permit use as P.A. and radio amplifiers, also scratch filters, individual bass and treble controls, convenience outlets for auxiliary equipment, and special outputs for use with new speaker-amplifier monitoring package designed for square-dance callers. The VP20 and VP40 are as distinctive for their attractive, modern styling as they are for their versatile utility.

Model VP20 (illustrated) delivers 20 watts of peak power, and is housed in a single portable case with removable cover which serves as the speaker baffle. A heavy-duty 12-inch P.M. loudspeaker is supplied, and 25 feet of speaker cable.

Model VP40 (not shown) with 40 watts peak power is supplied with two heavy-duty 12-inch loudspeakers, and is housed in two matched cases. One contains the phonoplayer and electronic equipment, and the other—a split case—has one loudspeaker in each separable section, and is provided with 25 feet of cable for each speaker.

Model VP20 with G.E. dual-sapphire variable reluctance cartridge ---------- **$184.20 (Zone 2: $190.95)**
Model VP40 with G.E. dual-sapphire variable reluctance cartridge ---------- **$269.50 (Zone 2: $276.60)**



Model 1004 shown

1004 and 9003 PLUG-IN RECORD PLAYERS

Model 1004 portable transcription player. Deluxe 4-speed record and transcription player in a sturdy, easy-to-carry, leatherette-covered wood carrying case. Uses same 4-speed record player as VP 17 above, 95-125 volts, 60 cps, AC. Dimensions: 15¾" x 13¾" x 7". Carrying weight: 21 lbs. Ready to plug into amplifier, or radio or television set with phono plug.

1004 Transcription Player
List price: **$97.50*** (Zone 2: **$101.40***)

Model 9003 portable record player. Budget priced portable three-speed record player for your PA system. Constant speed rim-drive motor for reliable service. Plays records up to 12". Complete with crystal turnover cartridge. In same case as 1004, 110 volts, 60 cycles, AC. Dimensions: 15¾" x 13¾" x 7". Carrying weight: 12 lbs.

9003 Record Player
List price: **$48.62** (Zone 2: **$51.32***)

HIGH POWER INTERCOM-PAGING SYSTEM

SA40 shown with IA10 annunciator pedestal

SPECIFICATIONS—MODELS SA10-40

POWER OUTPUT: 10 watts

TUBES: Total 4: 2—6SJ7, 1—6L6GA, 1—5Y3GT.

POWER CONSUMPTION: 70 watts, 117 volts, 50-60 cycles AC.

DIMENSIONS: 13¼" wide, 9" high, 10¼" deep.

SHIPPING WEIGHT: SA10: 31 lbs., SA20: 33 lbs., SA30: 35 lbs., SA40: 37 lbs.

SPECIFICATIONS—MODELS IA10-40

DIMENSIONS: IA10, IA20: 13¼" wide, 2½" high, 10¼" deep.
IA30, IA40: 13¼" wide, 5" high, 10¼" deep.

SHIPPING WEIGHT: IA10: 10 lbs., IA20: 12 lbs., IA30: 23 lbs., IA40: 25 lbs.

SA Series—In daily use in thousands of industrial plants, schools, automotive dealer and service shops; hospitals and department stores, the SA series is an ideal combination of selective paging and high power intercommunication. The ten-watt amplifier, incorporated in the SA master station, has provision for connection of an external phonograph and radio tuner, effecting a most economical overall sound consolette. There is also provision for adding an external booster amplifier.

Upon installation, the SA master station may be set permanently for privacy or non-privacy operation. In privacy operation, no remote may be listened into unless desired.

	List Price	
SA10 — Capacity up to 10 remotes, with tubes	$194.88	(Zone 2: $200.05)
SA20 — Capacity up to 20 remotes, with tubes	228.00	(Zone 2: 233.50)
SA30 — Capacity up to 30 remotes, with tubes	257.25	(Zone 2: 263.10)
SA40 — Capacity up to 40 remotes, with tubes	287.25	(Zone 2: 293.45)
IA10 — Annunciator Pedestal Base for SA10	81.65	(Zone 2: 83.30)
IA20 — Annunciator Pedestal Base for SA20	123.40	(Zone 2: 125.35)
IA30 — Annunciator Pedestal Base for SA30	179.00	(Zone 2: 182.75)
IA40 — Annunciator Pedestal Base for SA40	220.75	(Zone 2: 224.85)
JU — Junction box (use 1 for each 10 remotes)	8.36	(Zone 2: 8.66)
1401S — Two-conductor twisted #20 stranded speaker cable (per 100′)	5.25	(Zone 2: 5.63)
1102P — Two-conductor SHIELDED #20 twisted and overall plastic-insulated speaker cable (per 100′)	7.50	(Zone 2: 7.95)
132PW — Same as 1102P with weatherproof covering for use where cable is partially exposed to weather (not waterproof) (per 100′)	10.25	(Zone 2: 10.70)

INSTALLATION: NORMAL OPERATION (NON-PRIVACY): One SHIELDED twisted pair to each remote. FOR VERBAL CALL INITIATION OR PRIVACY OPERATION: One UNSHIELDED twisted pair to each remote plus one SHIELDED twisted pair common to all remotes. FOR ANNUNCIATORS: One additional twisted UNSHIELDED pair to each remote. As alternate annunciator wiring a single wire may be run to each remote using the shield of either the program pair or the privacy pair for the return.

BP BOGEN-PRESTO PARAMUS, N. J. A DIVISION OF THE SIEGLER CORP.

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BOGEN
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P. A. AMPLIFIERS AND MIXER

CHA75A

CHA75A 75-WATT AMPLIFIER

A high-power public address amplifier that gives astonishing value. Features wide-range response; one phono and two mike inputs; individual controls for each microphone and for treble, bass and phono; advanced push-pull output circuit; exclusive Controlled Positive Feedback circuit; power stage screen voltage regulation for increased power output; fixed bias on power stage control grids; plug-in connector for speaker line; decorator styling. **Power Output:** 75 watts. **Response:** ± 2 db, 20-20,000 cps. **Inputs:** Two microphone, one phono. **Gain:** Microphone, 120 db; **Phono,** 85 db. **Hum and Noise:** Fundamental, —70 db below rated output. Microphone —55 db and Phono —70 db below rated output. Tone Controls: Bass: ±13 db to —10 db at 60 cps; Treble +5 db to —12 db at 10,000 cps. **Output Impedances:** 4, 8, 16 and 65 ohms: 70-volt and balanced 25-volt line. **Tubes:** (9) 2-7027A, 2-12AX7, 1-7247, 1-6AV6, 3-GZ34. **Power:** 117 volts, 60 cps. **Power Consumption:** 270 watts at full signal. **Dimensions:** 17¼″ wide, 12″ deep, 6½″ high. **Shipping Weight:** 34 lbs. **Challenger Model CHA75A Amplifier**—With tubes and cage. List Price............ **$175.00 (Zone 2: $179.73)**

CHA33

CHA33 33-WATT AMPLIFIER

Features wide-range response; two microphone inputs; individual controls for each microphone and for treble, bass and phono; separate boost/cut bass and treble tone controls; advanced design push-pull output circuit with negative feedback; rugged construction; plug-in connectors for speaker line; 70-volt line; decorator styling. **Power Output:** 33 watts. **Response:** ± 2 db. 30-15,000 cps. **Inputs:** Two microphone, one phono. **Gain:** Microphone, 120 db; Phono, 83 db. **Hum and Noise:** Fundamental, —75 db below rated output; Microphone —55 db and Phono —75 db below rated output. **Tone Controls:** Bass + 12 db to —12 db at 60 cps; **Treble** + 5 db to —17 db at 10,000 cps. **Output Impedances:** 4, 8, 16 and 150 ohms; 70-volt line. **Tubes:** (7) 2-6L6GB; 2-5Y3GT; 2-12AX7; 1-6AV6. **Power:** 117 volts, 60 cps. **Power Consumption:** 135 watts at full signal. **Dimensions:** CHA33 14⅛″ wide, 8½″ deep, 6½″ high; CHA33Y, 14⅛″ wide, 8½″ deep, 10¾″ high. **Shipping Weight:** CHA33, 22 lbs.; CHA33Y, 25 lbs.

Challenger Model CHA33 Amplifier—With tubes and cage. List Price............**$115.00 (Zone 2: $117.97)**

Challenger Model CHA33Y Phono-Top Amplifier—With built-in three-speed phono top, Ronette turnover cartridge, tubes and cage. List Price............**$146.50 (Zone 2: $149.80)**

CHA620Y

CHA620Y 20-WATT UNIVERSAL MOBILE AMPLIFIER

Operates on 117 volts AC, 12 or 6 volts DC. Wide-range response, individual controls for microphone, treble, bass and phono. Separate boost/cut bass and treble controls; advanced design push-pull output circuit with negative feedback; built-in inverter provides 117 volts AC, 60 cps power to built-in or external phono for battery operation; rugged construction; plug-in connectors for speaker line; 70-volt line; decorator styling. **Power Output:** 20 watts. **Response:** ±2 db, 30 to 15,000 cps. **Inputs:** One microphone, one phono. **Gain:** Microphone, 120 db; Phono, 76 db. **Hum and Noise:** Fundamental —75 db below rated output; Microphone —55 db and Phono —75 db below rated output. **Tone Controls:** Bass +12 db to —12 db at 60 cps; Treble, + 8 db to —12 db at 10,000 cps. **Output Impedance,** 4, 8, 16 and 245 ohms; 70-volt line. **Tubes:** (5) 2-6V6GT; 1-6AX5GT; 2-12AX7. **Power:** 117 volts 60 cps, 6 or 12 volts DC. **Power Consumption:** (at full signal), 80 watts at 117 volts; 88 watts with phono at 6 or 12 volts DC. **Dimensions:** CHA620, 15¼″ wide, 10″ deep, 8½″ high; CHA620Y, 15¼″ wide, 10″ deep, 10¾″ high. **Shipping Weight:** CHA620, 25 lbs.; CHA620Y, 30 lbs. AC and DC cable supplied.

Challenger Model CHA620 Amplifier—With tubes and cage. List Price............**$175.00 (Zone 2: $177.97)**

Challenger Model CHA620Y Amplifier With Phono Top—With tubes, cage, AC and DC cable, built-in three-speed phono top, Ronette turnover cartridge............List **$200.00 (Zone 2: $203.30)**

CHA20

CHA20 20-WATT AMPLIFIER

Wide-range response; individual controls for microphone, treble, bass and phono; separate boost/cut bass and treble controls; advanced design push-pull output circuit with negative feedback; rugged construction; plug-in connectors for speaker line; 70 volt line; decorator styling. **Power Output:** 20 watts. **Response:** ±2 db. 30 to 15,000 cps. **Inputs:** One microphone, one phono. **Gain:** Microphone, 120 db; Phono, 76 db. **Hum and Noise:** Fundamental, —75 db below rated output; Microphone, —55 db and Phono, —75 db below rated output. **Output Impedance:** 4, 8, 16 and 245 ohms; 70-volt line. **Tone Controls:** Bass, + 12 db to —12 db at 60 cps; Treble, + 8 db to —12 db at 10,000 cps. **Tubes:** (5) 2-6V6GT; 1-6AX5GT; 2-12AX7. **Power:** 117 v., 60 cps. Power Consumption: 80 watts at full signal. **Dimensions:** CHA20, 14⅛″ wide, 8½″ deep, 6½″ high; CHA20Y, 14⅛″ wide, 8½″ deep 10¾″ high. **Shipping Weight:** CHA20, 20 lbs.; CHA20Y, 23 lbs.

Challenger Model CHA20 Amplifier—With tubes and cage. List Price............**$91.00 (Zone 2: $93.20)**

Challenger Model CHA20Y Amplifier with Phono Top—With tubes, cage, built-in three-speed phono top, Ronette turnover cartridge. List Price............**$122.50 (Zone 2: $125.03)**

CHA10

CHA10 10-WATT AMPLIFIER

A champion for low-power applications. Wide-range response; SELECTONE for quick, easy tonal adjustment; individual controls for microphone, phono and tone; advanced negative feedback circuit; rugged construction; plug-in connectors, decorator styling. **Power Output:** 10 watts. **Response:** ±2 db, 30 to 15,000 cps.**Inputs:** One microphone, one phono. **Gain:** Microphone, 115 db; **Phono,** 76 db. **Hum and Noise:** Fundamental, —70 db, and Phono, —70 db below rated output. **Output Impedances:** 4, 8 and 16 ohms: **Tone Control:** SelecTone—Deep Bass, Mellow, Crisp, Brilliant. **Tubes:** (4) 1-6L6GB: 1-6AU6; 1-6AV6; 1-6AX5GT. **Power:** 117 volts, 60 cps. **Power Consumption:** 70 watts at full signal. **Dimensions:** 11″ wide, 7½″ deep, 5¾″ high; with cage, 6⅛″ high. **Shipping Weight:** 10 lbs.; with cage, 12½ lbs.

Challenger Model CHA10 Amplifier—With tubes, less cage. List Price............**$61.50 (Zone 2: $62.60)**

Challenger Model CAG10—Cage for CHA10 Amplifier. List Price............**$6.50 (Zone 2: $7.05)**

ACCESSORIES

RACK PANEL MOUNTING KITS

For CHA75 Amplifier—19 ″ x 8¾″. With all hardware. Gray metallustre finish.
List Price:......**$14.90** Zone 2:......**$16.25**

For CHA33, CHA20 and CHA10 Amplifiers—19″ x 7″. With all hardware. Gray metallustre finish.
List Price......**$14.90** Zone 2:......**$16.25**

PHONO TOPS

Phonograph tops are available with Models CHA33, CHA620 and CHA20 amplifiers as described on facing page. They must be ordered at the same time as the amplifier (add "Y" to Model No.). The phono top consists of a high quality three-speed phono with a Ronette turnover cartridge installed.

SHOCK-MOUNTING BASE

A spring-loaded, shock isolating base for operating Models CHA620 and CHA620Y amplifiers in a car or truck.

Bogen Model SV-3—List Price $13.75
Zone 2: **14.45**

MX6

MIXER-PRE-AMPLIFIER

Self-powered, provides four microphone and two radio-phono inputs; any four can be used at once for noiseless mixing and fading. **Output:** 6 volts. **Response:** 50-15,000 cps, ±2 db. **Gain:** Mike, 59 db; Phono, 30 db. **Hum Level:** —70 db below 6 volt input. **Output Impedance:** Less than 1000 ohms (cathode follower). **Controls:** Two mike volume, two mike or phono volume, On-Off. **Tubes:** 2-12AX7; 1-12AT7. **Size:** 8″ x 4¾″ x 6″½. **Power:** 10 w, 117 v, 60 cps. Shipping Weight, 6 lbs.

Bogen Model MX6—List Price............**$65.00**
Zone 2:........ **65.33**

BOGEN-PRESTO PARAMUS, N.J. A DIVISION OF THE SIEGLER CORP.

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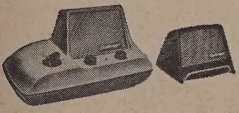
BOGEN
the sound way

Challenger BY BOGEN
SOUND SYSTEMS — INTERCOMS

COMPLETE INDOOR, OUTDOOR AND PORTABLE PUBLIC ADDRESS SYSTEMS

Challenger System No.	Type of System	Uses Amplifier Model	Uses Microphone Model	Uses Speakers, Baffles, Horns, Drivers	List Price	
					Zone 1	Zone 2
CHA75AB	75-watt Indoor	CHA75A	Bogen—E-V Model 927 crystal microphone, stand, 10′ cable, MCIF connector.	Four 12″ Alnico V PM speakers, each with 25′ cable and plug mounted in 12″ hand-finished walnut wall baffles.	$321.40	$336.40
CHA75AT	75-watt Outdoor	CHA75A	Bogen—E-V Model 927 crystal microphone with stand, 10′ cable and MC1F connector.	Three University PH trumpets with MA25 driver units. (Additional trumpets and driver, **List $58.50. Zone 2: $61.20**).	385.98	396.98
CHA33P	33-watt Portable	CHA33	Bogen—E-V Model 927 crystal microphone with stand, 10″ cable and MC1F connector.	Two 12″ Alnico V PM speakers, each with 25′ cable and plug mounted in split, portable baffle which also carries the amplifier.	218.15	227.50
CHA33YP	Phono	CHA33Y	Same as CHA33P.	Same as CHA33P, except larger carrying case.	256.15	266.00
CHA33B	33-watt Indoor	CHA33	Bogen—E-V Model 927 crystal microphone, stand, 10″ cable, MCIF connector.	Two 12″ Alnico V PM speakers, each with 25′ cable and plug, mounted in 12″ hand-finished walnut wall baffles.	201.63	207.57
CHA33YB	Phono	CHA33Y	Same as CHA33B.	Same as CHA33B.	230.93	237.00
CHA33T	33-watt Outdoor	CHA33	Bogen—E-V Model 927 crystal microphone with stand, 10′ cable, MC1F connector.	One University PH trumpet with MA25 driver unit. (Additional trumpets with driver. **List Price $58.50. Zone 2: $61.20**).	206.98	212.15
CHA33YT	Phono	CHA33Y	Same as CHA33T.	Same as CHA33T.	233.15	241.50
CHA620T	20-watt Universal	CHA620	Bogen—E-V Model 927 crystal microphone with stand, 10′ cable and MC1F connector.	One University PH trumpet with MA25 driver unit. (Additional trumpets with driver. **List Price $58.50. Zone 2: $61.20**).	261.65	269.50
CHA620YT	Phono	CHA620Y	Same as CHA620T.	Same as CHA620T.	286.65	295.00
CHA20P	20-watt Portable	CHA20	Bogen—E-V Model 927 crystal microphone with stand, 10′ cable and MC1F connector.	Two 12″ Alnico V PM speakers, each with 25′ cable and plug, mounted in split portable baffle which also carries amplifier.	194.15	202.50
CHA20YP	Phono	CHA20Y	Same as CHA20P.	Same as CHA20P except larger carrying case.	232.15	241.00
CHA20B	20-watt Indoor	CHA20	Bogen—E-V Model 927 crystal microphone with stand, 10′ cable and MC1F connector.	Two 12″ Alnico V PM speakers, each with 25′ cable and plug, mounted in hand-finished walnut wall baffles.	172.78	177.62
CHA20YB	Phono	CHA20Y	Same as CHA20B.	Same as CHA20B.	210.15	218.00
CHA10S	10-watt 1-spkr. Portable	CHA10	Bogen—E-V Model 927 crystal microphone with stand, 10′ cable and MC1F connector.	One 8″ Alnico PM speaker mounted in portable carrying case.	150.65	155.35
CHA10P	10-watt 2-spkr. Portable	CHA10	Bogen—E-V Model 927 crystal microphone with stand, 10′ cable and MC1F connector.	Two 10″ Alnico PM speakers, each with 25′ cable and plug, mounted in split portable carrying case.	163.00	169.00

Bogen Challenger Series Intercoms Now Feature Multiple-Master/Multiple-Remote Intermix Systems



The new Challenger Intercom line brings a versatility never before available at such moderate cost. With the addition of two new intermix units to the line, it is now possible to plan a system that will meet virtually any set of requirements, in offices, plants, stockrooms, and even in the home, whether they be single-master/multiple-remote systems, multiple-master systems, or multiple-master/multiple-remote systems. And you can now also use a remote capable of selecting and initiating calls to any one of six masters. Bogen Challenger intercom units are as distinguished for their trim, modern styling as they are for their functional versatility. Ruggedly built, they have already proved their reliability in providing trouble-free, day-in-day-out performance.

Model CHX12 Intermix Master Station is equipped with a 12-position selector switch, and can be used with up to twelve other stations consisting of CHX12 masters and CHXR or CHR remotes in any combination desired.

Model CHXR Intermix Remote Station is equipped with a 6-position selector switch and can select and initiate calls to anyone of six CHX12 masters. It is designed for use in multiple-master/multiple-remote systems in conjunction with CHX12 masters.

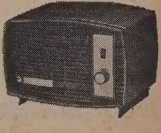
Model CHM12A Master Station is equipped with an 11-position station selector switch and can be used with up to eleven other CHM12A masters or eleven CHR remotes.

Model CHM6A Master Station is identical to the CHM12A, but designed for use in 6-station systems with up to five other CHM6A masters or five CHR remotes.

Model CHR Remote Station is designed to receive and respond to calls from CHM6A, CHM12A and CHX12 masters, and can initiate calls to any one master.

	List Prices
CHX12	$63.00 (zone 2: $63.85)
CHXR	17.50 (zone 2: 17.85)
CHM6A	45.95 (zone 2: 46.75)
CHM12A	49.95 (zone 2: 50.75)
CHR	12.95 (zone 2: 13.50)

CHALLENGER TWOSOME SPECIAL LOW-COST 2-STATION SYSTEM FOR HOME OR OFFICE



Easy to install, easy to operate, the Challenger Twosome brings effective intercom service into homes and small offices at a cost that is well-nigh irresistible. Master unit has two controls: 'talk-to-listen' and 'volume'. Remote also has two controls: 'talk-to-listen' and 'privacy'. With 'privacy' control in 'off' position, remote can initiate calls to master without operating 'talk-to-listen' switch—ideal for nursery and other surveillance requirements. Master and Remote are sold as a pair, supplied with 50 feet of interconnecting cable.

Model CHS2 Twosome ---(complete) list price **$44.95** (zone 2: **$46.05**)

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BOGEN
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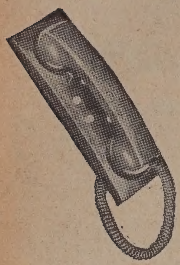
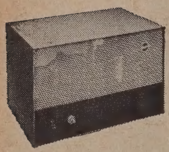
INTERCOMS AND TELEPHONES

BOGEN TQ PHONE SYSTEMS

Feature High Level Intercom and Paging in Addition to Inter-Phone Communication





Basically, a TQ phone system enables you to reach anyone you need—instantly—without interfering with the regular, outside telephone service. You press a selection-button to reach the person you want. Or you may press several buttons for a conference call. No one in your vicinity can hear what is said to you from the other end.

With the Bogen TQ Series phones, you can plan a system with as few as 2 stations. Or you can plan one with up to 7 stations or up to 13 stations. And you can include paging as well as high level intercom through as many as 5 remote-area loudspeakers.

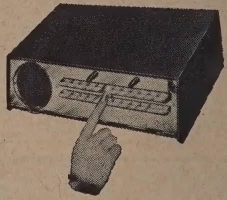
The new functional flexibility of the Bogen phone line meets most of the intercommunication needs arising in industrial plants and in other office and commercial applications.

Planning a Bogen TQ system is as simple as assembling building blocks. You start with the TQ phones—modern instruments, trim and attractively styled in grey plastic. They are designed for use on a desk, counter—or wall mounted.

You can add a TRA Phone-Page Adapter to any TQ-6 or TQ-12 phone system, and extend the versatility of the system through a PA loudspeaker system. Or, you can add the PRS-5 multi-mix Power Adapter and combine the system with a PA Amplifier and up to 5 remote area loudspeakers to provide two important functions in addition to phone intercommunication: (1) high level intercom between any TQ phone and any remote area loudspeaker—replies from vicinity of loudspeaker not requiring use of 'talk-back' switch, and (2) simultaneous paging through all remote area loudspeakers from any TQ phone.

	LIST PRICES	
TQ-12 Phone (for systems up to 13 stations)	each $29.95	Zone 2: 30.35
TQ-6 Phones (for systems up to 7 stations)	each 27.95	Zone 2: 28.35
TQ-1 Phones (for 2-station systems)	per pair 49.95	Zone 2: 50.80
PRS-1 Power Supply for Phone Systems	30.00	Zone 2: 30.30
TRA Phone-Page Adapter	40.00	Zone 2: 40.33
PRS-5 Multi-Mix Power Adapter (with built-in relay for one remote area loudspeaker)	147.37	Zone 2: 148.25
RY-1 Plug-in Relay (one required for each additional loudspeaker)	each 17.75	Zone 2: 17.91

NEW DELUXE ALL-TRANSISTOR BOGEN INTERCOM SERIES TIX and TIS



The many recognized advantages of advanced transistor circuitry will soon be available in the new deluxe Bogen intercom line scheduled for early fall deliveries in 1960. Working prototypes in operation up to the time this catalog went to press reveal many desirable qualities—compactness, extremely low power consumption, freedom from any trace of hum, trouble-free performance without maintenance, and complete elimination of need for tube replacements.

Even the low silhouette styling has captured the spirit of the modern efficiently attractive business office. Even the backs (which face visitors) are finished, free from labels, medallions or other markings. And every worthwhile feature has been included to enhance the versatility of these units.

The TIX Series will consist of two master models: the TIX-11 for systems with up to 11 stations, and the TIX-24 for systems with up to 24 stations. These systems may be all-master . . . single-master/multiple-remote . . . or multiple-master/multiple-remote. TIX stations will be available in satin finished walnut and in vinyl covered steel enclosures.

Among the features included in the TIX master units are: chime and light call signals—conference operation—45-ohm output for long-line applications—optional 'all-call' for paging—and optional use of phone handsets (in remotes as well as masters) for additional privacy.

Two remote stations will be available: The RIX-6 and RIX-1. The RIX-6 has a Master Station Selector Knob with 6 positions and can initiate calls to any of 6 Masters, in addition to being able to receive and respond to calls from all masters. It is ideal for use in multiple-master/multiple-remote systems. The RIX-1 is identical to the RIX-6, except that it can initiate calls to only one master, and is designed for use in single-master/multiple-remote systems.

SPECIAL ACCESSORIES FOR TIX SERIES:

PRS-11 and **PRS-24** Power Supplies for up to 11 and 24 station systems respectively.

ACP-1 All-Call Adapter which permits any master to page all master and remote stations simultaneously.

JB11 and **JB24** Junction Boxes for 11 and 24 station all-master systems.

The TIS Series will consist of two master models: the TIS-11 for systems with up to 11 stations, and the TIS-24 for systems with up to 24 stations. These systems may be all-master . . . single-master/multiple-remote . . . or multiple-master/multiple-remote. TIS stations will be available in vinyl covered steel enclosures. Wood cabinets are optional.

Among the features in the TIS Master Units are: 45 ohm output for long-line applications—optional phone handsets (in remotes as well as masters) for additional privacy—and discrete 'busy' signal. A power supply is built into each master, and no external power supply is required.

Two remote stations will be available. The RIS-6 is for use in multiple-master/multiple-remote systems to receive and respond to calls from all masters, and with a 6-position selector knob to initiate calls to any of 6 masters. The RIS-1 is intended for single-master/multiple-remote systems, and is identical to the RIS-6, except that it can initiate calls to only one master.

ACCESSORIES FOR TIX AND TIS SERIES

F3A Outdoor Remote Station weather-proof design—flush-mount panel.

RIX-TQ Phone Handset for use with TIX and RIX stations where greater privacy is desired. Raising phone from cradle automatically cuts out intercom speaker.

TIX and TIS Prices on Request.

BP BOGEN-PRESTO PARAMUS, N.J. A DIVISION OF THE SIEGLER CORP.

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23 Years of Quality Leadership

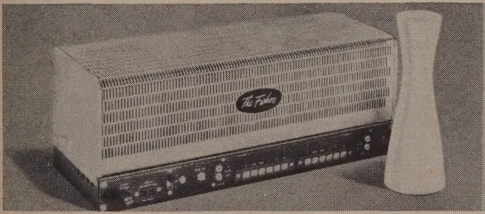
THE FISHER

THE FISHER 800
60-Watt Stereo FM-AM Receiver
Twice as sensitive as any competitive receiver — at least 50% *more powerful!* 1 microvolt per 20 db quieting. 24 controls. Center Channel Volume. 60 watts free of audible hum, noise and distortion! **$429.50**

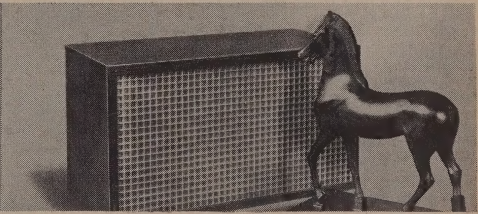
THE FISHER 600
40-Watt Stereo FM-AM Receiver
The nation-wide best-seller—acclaimed by *High Fidelity* magazine! 1.8 microvolt sensitivity for 20 db quieting. Noise-free AM. 22 controls. 40 watts pure audio power. Center Channel output. 22 tubes. **$369.50**

THE FISHER FM-100
Golden Cascode Stereo FM Tuner
"100% noise and distortion-free audio from our FISHER FM-100"—*Station WSCR, Scranton, Pa.* Unexcelled 0.75 microvolt sensitivity for 20 db quieting! *Four* wide-band IF stages. Muting switch. **$169.50**

THE FISHER X-202
50-Watt Stereo Control/Amplifier
World's most powerful! 50 watts of distortion-free Music Power. 27 controls. Center Channel Volume Control. Stereo Dimension Control. Remote Control and Record-Monitor facilities. 16 inputs. **$229.50**



THE FISHER SA-300
60-Watt Stereo Power Amplifier
HiFi Stereo Review called it "The aristocrat of stereo power amplifiers!" Hum and noise less than 0.00001 part of rated output. Harmonic distortion less than 0.1% at rated output. Center Channel output. **$179.50**



THE FISHER XP-1
Free-Piston Three-Way Speaker System
Provides high compliance *plus* high efficiency—magnet assembly 92% *more efficient* than the best conventional ring magnet! 12" woofer, 5" mid-range, 3" free-edge tweeter. 30 to 18,000 cps. **$129.50**

Prices Slightly Higher in the Far West • Component Cabinets Are Optional

WRITE TODAY FOR COMPLETE TECHNICAL SPECIFICATIONS

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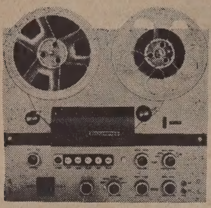
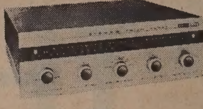
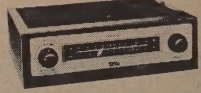


RP100

1007



ST96



HFT90, -92, -94

NEW, ALL-TRANSISTOR (16) STEREO TAPE DECK

Provides stereo/mono ¼ track erase, record, and playback; also ½ track stereo/mono playback. Separate record and playback heads and independent record electronics and playback electronics to permit simultaneous stereo playback from tape while recording (monitor). Dual meters for stereo recording. Sound-on-sound recording without changing connections. Separate line and mic (dynamic) mixing level controls in each channel. Tape transport is trouble-free, precision constructed, and supremely rugged. (Only 3 moving links.) Employs heavy-duty hysteresis synchronous capstan motor with heavy precision fly-wheel essential for unvaryingly accurate speed regardless of normal line and load variation. Also, two 4-pole reel motors with positive electro-dynamic braking. Completely electrical push-button control of the transport; solenoid operated pinch roller and tape lifters to provide feather-touch push-button control. Tape lifters remove tape from heads during fast winding to minimize head wear. Precision tape guides eliminate tape weave. Electro-dynamic hold back tension on supply reel, plus mechanical filter for minimum flutter and wow. Transport will handle the thinnest tape without stretching. Convenient sweep loading, top-of-deck speed shift control, and digital counter. No rubber idlers to develop "flats" or mechanical brakes to wear out or go out of adjustment. Deck can be mounted horizontally or vertically.

Speeds: 7½ and 3¾ ips. **Maximum Reel Size:** 7 inches. **Rewind and Fast Forward Time:** 1200 ft. in less than 1 minute. **Flutter and Wow:** 0.2% at 7½ ips, 0.25% at 3¾ ips. **Frequency Response:** 30 to 17,000 cps at 7½ ips, 40 to 15,000 cps at 3¾ ips. **Signal-to-Noise Ratio:** 53 db or better with signal recorded 12 db below saturation at 7½ ips. **Timing Accuracy:** 0.3%. **Dimensions:** 15¼" wide x 13⅜" front-to-back x 7" deep.

Model RP100W completely assembled, wired, and tested, with 3 heads, stereo record, and stereo playback preamplifiers. $395.00

Model RP100W semikit; includes transport completely assembled and tested, with 3 heads; control electronics, stereo record, and stereo play back preamplifiers in kit form. $289.95

STEREO CHANGER/PLAYER WITH TWIN STYLUS STEREO CARTRIDGE

1007D: 0.7 mil diamond, 3 mil sapphire dual styli—$59.75; 1007S: 0.7 mil and 3 mil sapphire dual styli—$49.75; includes F.E.T. MB-1 Metal Base $3.95. WM-1 Wood Mounting Board $2.40.

4 speed, all record sizes, automatic changer and auto/manual player. Extremely smooth, low distortion, stereo crystal cartridge (absolutely moisture-proof) designed **integrally** with extra-long tonearm to eliminate mid-range resonances. Supplied with dual RC magnetic input adaptor yielding ultra-smooth response. Cartridge snaps in and out of tonearm without tools; instantly replaceable twin stylus. Stylus force 4½ grams is optimum for low record wear without groove flutter distortion occuring universally at lower forces. No hum, turntable attractions, or acoustic feedback problems. "Elevator-action" changer spindle eliminates grinding, center-hole enlargement, or edge chipping. Four intermediate compound idlers, one for each speed, provides high speed accuracy constant with load. Precision cam-wheel controlled, entirely jam-proof changer mechanism of startling simplicity and durability.

Rumble: 62 db below 10cm/sec recording level (45° tracking) from 50-150 cps. **Speeds:** 78, 45, 33⅓ and 16⅔ rpm. **Cartridge Output:** 0.4v (5cm/sec) to high level input; 10 mv (5cm/sec) through supplied RC magnadaptor to magnetic cartridge input. **Frequency Response:** 20-16,000 cps; ±1½ db 20-10,000 cps. **Speed Variation:** maximum ±0.25%. **Compact Size:** 10¾" x 13".

NEW FM-AM STEREO TUNER ST96

KIT: $89.95 **WIRED: $129.95**

Superb, advanced design FM-AM stereo tuner with brilliant, new decorator styling. Features a prewired, pre-aligned FM front end completely shielded in a die-cast housing, and prewired and pre-aligned FM and AM IF strips. Exclusive precision **"eye-tronic"®** traveling tuning indicators contract into an "exclamation point" at the exact center of each broadcast channel. FM section features include switched AFC, AGC, stabilized low limiting threshold for excellent performance from weaker signals, and broad-band ratio detector for improved capture ratio and easier tuning. AM section features include tuned RF stage, switched "broad" and "narrow" band-pass, high Q 10kc whistle filter, and built-in ferrite loop antenna. Both sections have slide-rule dials with effortless fly-wheel tuning, very low inter-station noise, high output at low impedance.

FM Secion: Sensitivity: 1.5 μv for 20 db quieting; Selectivity: 250kc IF bandwidth (6db down). Frequency Response: 20-15,000 cps ±1 db. Image Rejection: 40db. Hum Level: 60db down. Drift: less than 2 parts in 10,000 from cold start. Tuning Range: 87.5-108.5 mc. Output Level: 2.5v for 100% mod. **AM Section:** Sensitivity: 3μv for 1.0v average output at 20db S/N ratio. Selectivity: overall IF bandwidth of 18kc at "broad bandwidth" 9 kc at "narrow bandwidth", 6db down. Frequency Response: 20-9,000 cps on "wide bandwidth", 20-4500 cps on "narrow bandwidth". Image Rejection: 60 db. Hum Level: 60db down. Drift: negligible. Tuning Range: 540 to 1650kc. Output level: 1.0v average. Size 15⅞" wide x 5" high by 14" deep.

FM TUNER HFT90

KIT, less cover	**$39.95***
WIRED, less cover	**$65.95***
Cover	**$ 3.95***

* Includes F.E.T.

"Drift absolutely absent; audio quality excellent; novel tuning quite effective."—ELECTRONICS ILLUSTRATED. **"One of the best buys you can get in high fidelity kits."—AUDIOCRAFT Kit Report.** Newly-designed, extremely sensitive, low-noise "front end", supplied in a cast housing completely pre-wired, pre-aligned, ready to use. Employs temperature-compensated components and advanced circuitry to completely eliminate need for AFC. Drift less than 2 parts in 10,000 from cold start. Radiation suppressed far below FCC standards. Also features exclusive pre-wired precision **eye-tronic®** traveling tuning eye. Sensitivity, unapproached among FM tuner kits, of 1.5 uv for 20 db quieting**. Input 300 ohms, IF bandwidth 260 kc, detector Peak separation at 600 kc. Freq. resp. 20-20,000 cps ±1db. Audio output 1 V for 10 uv input with 75 kc deviation. Hum 60 db below 1 V. Cathode follower and multiplex outputs. Flywheel slide-rule tuning, AGC, stabilized low limiting threshold for excellent performance from weaker signals, broad-band ratio detector for improved capture ratio and easier tuning, full-wave rectifier and heavy filtering, very low distortion. Uses 1-ECC85/6AQ8, 3-6AU6, 1-6AL5, 1-6C4, 1-DM70, 1-6X4. Flexible "low silhouette" design adaptable to any panel thickness for console installation; optional cabinet. HWD: 3⅝" x 12" x 8¼". Operates from 110-125 VAC, 60 cps line.

**Typical unit, measured with Marconi TF 955A/2 FM-AM signal generator.

AM TUNER HFT94

KIT: $39.95 **Wired: $65.95**

Includes Cover & F.E.T.

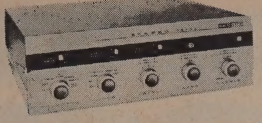
A newly designed basic high fidelity AM tuner that affords matchless stereo reproduction when used with the widely acclaimed HFT-90 FM tuner. It features a choice of "hi-fi" wide bandpass to 14 kc or narrow bandpass to 7 kc for weaker, distant stations. Excellent signal to noise ratio with very little signal. High selectivity and sensitivity attained with the aid of tuned RF stage and built-in ferrite loop antenna. High output with low distortion and low output impedance. Very little inter-station noise. No alignment or test instruments required as RF and IF coils are carefully pre-aligned. Features include precision **eye-tronic®** tuning with the DM-70 traveling eye indicator, slide-rule dial, fly-wheel tuning. Auxiliary recording output and volume controls.

FM/AM TUNER HFT92

KIT: $59.95 **WIRED: $94.95**

Includes Metal Cover and F.E.T.

Combines the renowned HFT90 High Fidelity FM Tuner with excellent AM tuning facilities. (The HFT92 is not a stereo FM-AM tuner, since it does not receive FM and AM simultaneously) Exclusive precision **eye-tronic®** tuning is achieved for both FM and AM sections. The HFT92 also features an FM-Multiplex output for future FM stereo reception with adapter. The full-wave rectifier and heavy filtering provides a stable, dependable power supply. Important performance characteristics include: stabilized low limiting threshold for excellent performance from weaker signals, a broad-band ratio detector for improved capture ratio and easier tuning, slide-rule dial, effortless fly-wheel tuning, low interstation noise, front panel volume control, and on-off switch. The superbly convenient, and extremely rugged mechanical construction features a single horizontal chassis for proper component layout and separation to insure long component life and stability. A simplified dial cord arrangement is an additional important construction aid. Flexible design permits easy console installation of the HFT92 with different thicknesses of panel.



ST70, -40

NEW INTEGRATED STEREO 70-WATT CONTROL AMPLIFIER ST70

KIT: $94.95 **WIRED: $144.95**

Deluxe, all-out engineering and brilliant new decorator styling at extremely reasonable cost. Consists of two 35-watt amplifiers and a complete stereophonic high fidelity control center on one chassis. Switched sets of stereo inputs include two mag. phono (one for turntable and one for changer), tape head, preamplified tape, FM-AM stereo tuners, FM-FM Multiplex, and Auxiliary. Clutch concentric level controls with balance check switch and loudness/level switch. Concentric bass and treble tone controls. Other controls are six-position stereo-mono mode selector, separate level and balance, tape speed, tape monitor, scratch, and rumble. 4, 8, and 16 ohm speaker connections, third channel speaker connection.
IM Disortion: 2% at 40 watts **Harmonic Distortion:** ½% at 70 watts. **Frequency Response:** ±½ db 20-20,000 cps.

NEW INTEGRATED 40-WATT CONTROL AMPLIFIER ST40

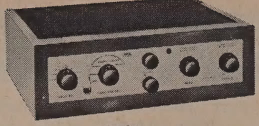
KIT: $79.95 **WIRED: $124.95**

Superb, quality-first engineering and brilliant, new decorator styling at moderate cost makes this unit a truly outsanding value. Consists of two 20-watt amplifiers and a complete stereophonic high fidelity control center on one chassis. Switched sets of stereo inputs include two mag. phono (one for turntable and one for changer), tape head, preamplified tape, FM-AM stereo tuners, FM-FM Multiplex, and Auxiliary. Separate level and balance controls with balance check switch and loudness/level switch. Concentric bass and treble tone controls. Other controls are six-position stereo/mono mode selector, tape monitor, scratch and rumble. 4, 8, and 16 ohm speaker output, third channel speaker connection.
IM Distortion: 2% at 40 watts. **Harmonic Distortion:** ½% at 40 watts. **Frequency Response:** ±½ db at 20-20,000 cps.

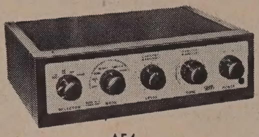
STEREO DUAL AMP-PREAMP HF81

KIT: $69.95 **WIRED: $109.95**

Selects, amplifies and controls any stereo source —tape, discs, broadcasts—and feeds it thru self-contained dual 14W amplifiers to a pair of speakers. Monophonically: 28 watts for your speakers; complete stereo preamplifier. "Service Selector" switch permits you to drive both internal power amplifiers of the HF 81 from one of the preamp-control sections while the other preamp-control section is left free to drive an existing external amplifier. Ganged level controls, separate focus (balance) control, independent full-range bass and treble controls for each channel. Identical Williamson type, push-pull EL84 power amplifiers with high quality output transformers. Attractive "low silhouette" construction permits you to dispense with cabinetry if desired.
Output Power: 28 watts (two 14 watt channels) continuous; 56 watts peak. **IM Distortion (60 & 6000 cps at 4:1):** 2% at 28 watts (14 watts each channel); 0.5% at 10 watts (5 watts each channel). **Frequency Response:** 2W (1W each channel) ±0.5db 10 cps to 100 kc. **Harmonic Distortion:** 16W (8W each channel) less than 1% from 30 cps to 10 kc; 20W (10W each channel) less than 1% from 40 cps to 10 kc; 28W (14W each channel) less than 1% from 50 cps to 5 kc. **Sensitivity (input for 14W):** mag. phono—4mv; tape head—2 mv; mic.—6mv; tuners, auxiliaries—0.5V. **Hum & Noise Level (below 14W):** mag. phono—60 db; tape head—51 db; mic—57 db; tuners, auxiliaries—75 db. **Tone Control Range:** ± 15 db at 50 c and 10 kc. **Speaker Connections:** 4, 8, and 16 ohms. **Tubes:** 4-ECC83/12AX7, 2-ECC82/12AU7, 4-EL84, 2-EZ81. **Size** 15" wide, 4¾" high, 10½" deep. **Weight:** 24 lbs.



HF81



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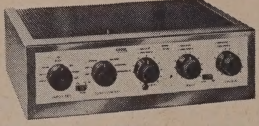


HF85

STEREO DUAL AMP-PREAMP AF4

KIT: $38.95 **Wired: $64.95**

Provides clean 4W per channel or 8W total output. Inputs for ceramic/crystal stereo pick-ups, AM-FM stereo, FM-multi stereo. 6-position stereo/mono selector. Clutch-concentric level & tone controls. Use with a pair of HFS-5 Speaker Systems for good quality, low-cost stereo.

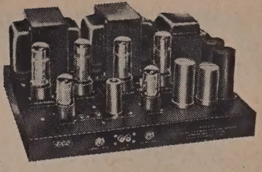
STEREO DUAL PREAMP HF85

KIT: $39.95 **WIRED: $64.95**

Offers practically every control and switching facility anyone could want in a physical design adaptable to any type of installation. With it, you can select, preamplify and control accurately, any stereophonic source—tape, discs or broadcasts. Extremely low distortion, bordering on the unmeasurable (even at high output levels), precludes any degradation of quality from the best modern program sources. Self-powered, utilizing a full-wave rectifier tube power supply. Works in conjunction with any two high quality power amplifiers, such as the EICO HF14, HF22, HF30, HF35, HF50 and HF60. Separate low level input in each channel for mag. phono, tape head, and microphone. Separate high level inputs for AM tuner, FM tuner, and FM Multiplex. Also two auxiliary A inputs (one in each channel) and two auxiliary B inputs (one in each channel). Independent level controls that may be operated together with built-in clutch. Independent full-range bass and treble tone controls in each channel, may be operated together with built-in clutch.

Switch permits hearing each stereo channel individually, also use of unit for stereo or monophonic play. Stereo channels may be reversed. On monophonic record playback, channels are mixed for rumble cancellation. 30 db feedback amplifier pair reduces tone control distortion to unmeasurable levels in each section. Low impedance output to tape recorder, useful on all inputs. New "low-silhouette" construction matches EICO tuner. Very attractive when placed on a shelf or out in the open, yet permits easy console installation with full shielding and adaptability to any panel thickness.

Frequency response: ±0.3 db 5-200,000 cps at any level up to 3V RMS out. **Sensitivity (input for 2V RMS output at 1000 cps):** Mag. Phono—1 mv; Microphone—1 mv; Tape-head—0.5 mv; High Level Inputs—0.17V. **Hum Noise:** Mag. Phono—60 db; Microphone—60db; Tape Head—50 db; High level inputs—75 db. **IM Distortion (60 and 7000 cps at 4:1):** 0.04% at 2 V out. **Harmonic Distortion (20-20,000 cps):** 0.1% at 3V RMS out; 0.15% at 5V RMS out. **Tone Control Range:** At 10kc: 15 db boost, 15 db cut; At 50 cps: 15 db boost, 15 db cut. **Equalization:** Phono-RIAA; Tape Head-NARTB for 15 ips, 7½ ips, 3¾ ips. **Tape Output Impedance:** 1400 ohms. **Tube Complement:** 5—12AX7/ECC83, 1-6X4. **Size** 3⅝" high, 12" wide, 8¼" deep.



HF89

WE70, -71

100-WATT STEREO DUAL POWER AMPLIFIER HF89

KIT: $99.50 **WIRED: $139.50**

Represents the utmost in audio quality. Each power amplifier is conservatively rated at 50 watts and employs the thoroughly proven cathode-coupled phase inverter-driven circuit, preceded by a direct coupled voltage amplifier. Ultra-linear connected, fixed-biased, push-pull EL34's are used in the output stage and provision is made for both bias and dc balance adjustments. The very low impedance characteristics of silicon diode rectifiers gives the common power supply for the two amplifiers very good regulation. As a result, signal conditions in one amplifier have negligible effects on the operating conditions of the other amplifier. Surgistor limits starting surge currents, insuring long life for the silicon diode rectifiers, electrolytics, and tubes. High circuit and component quality result in less feedback required to achieve the very low distortion figures, so that the HF89 has excellent stability margin.
Output Power: 100 watts (two 50-watt amplifiers) continuous, 200 watts peak. **IM Distortion:** (60 & 7000 cps at 4:1): 0.5% at 100 watts. **Harmonic Distortion:** Less than 0.25% from 30 to 15,000 cps and less than 1% from 20 to 20,000 cps within 1 db of 100 watts. **Frequency Response:** ±0.5 db 5 cps—100 Kc. **Rise Time:** 2.5 μsec. **Square-wave Response:** Essentially undistorted to 20,000 cps. **Inverse Feedback:** 18 db. **Stability Margin:** 13 db. **Damping Factor:** above 12, 20 cps to 20 kc. **Channel separation:** 60 db. **Sensitivity:** 0.55V for full output. **Hum:** Better than 90 db below full output. **Controls:** Level Ch. 1, Level Ch. 2, "Service Selector" switch, ON-OFF switch. **Speaker Connections:** 4, 8, and 16 ohms. **Tubes:** 1—ECC83/12AX7, 2—6SN7GTB, 4—EL34, 2—silicon diode rectifiers (power), 1—selenium rectifier (bias); surgister protected for long life. **Power Source:** 117V, 60 cps. **Power Consumption:** 215 watts at no signal, 270 watts at 100 watts out. **Size:** (HWD) 6" x 15" x 11". **Weight:** 40 lbs.

FURNITURE WOOD CABINETS WE70, WE71 FOR YOUR EICO HI-FI COMPONENTS

Adds the rich, warm beauty of fine furniture wood to your decor. Slips right over the metal cabinets of your EICO components in seconds. **WE70** (for HF85, HF65, HF12 HFT90, HFT92, HFT94, AF-4) In unfinished birch, **$8.95.** In walnut or mahogany, **$12.50.**

WE71C (for HF81, HF32) In unfinished birch, **$9.95.** In walnut or mahogany, **$13.95.**

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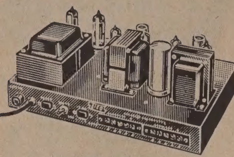


HF87, -86

HIGH FIDELITY STEREOPHONIC 70-WATT DUAL POWER AMPLIFIER HF87

KIT: $74.95 **Wired: $114.95**

An unsurpassed high fidelity stereophonic 70 watt dual power amplifier providing superb stereo reproduction. Design determined by quality considerations only, without compromise. Highest quality circuit design utilizing the EICO proven cathode-coupled phase inverter-driven circuit with preceding direct-coupled voltage amplifier and an output stage of ultra-linear connected, self-biased, push-pull EL-34's. Output transformers are the finest and costliest in the field. A low impedance silicon diode power supply exhibits very good regulation minimizing the effect of signal conditions in one amplifier on the operating conditions of the other amplifier. Stability margins as great as the feedback employed. Service selector switching determines the choice of operating the unit as either a stereophonic dual pre-amplifier providing 35 watts a channel or a monophonic 70-watt amplifier. Level controls are provided in each channel.

Output Power: 70 watts (two 35 watt amplifiers) continuous. 140 watts peak. **IM Distortion:** (60 & 7000 cps at 4:1) 1% at 70 watts. **Harmonic Distortion:** Less than 1% from 20 to 20,000 cps within 1 db of 70 watts. **Frequency Response:** ±0.5 db 5 cps — 100 kc. **Rise time:** 3 microseconds. **Square-wave response:** Essentially undistorted to 20,000 cps. **Inverse Feedback:** 17 db. **Stability Margin:** 17 db. **Damping Factor:** above 11, 20 cps to 20 kc. **Channel Separation:** 55 db. **Sensitivity:** 0.38V. for full output. **Hum:** Better than 90 db below full output. **Speaker Connections:** 4, 8, 16 and 32 ohms. **Tubes:** 1-ECC83/12AX7, 2-6SN7GTB, 4-EL34, 2 silicon diode rectifiers protected by surgistor. **Size:** 15" x 11" x 6". **Shipping weight:** 32 lbs. Matching cover E-7, $3.95.

HIGH FIDELITY STEREOPHONIC 28-WATT DUAL POWER AMPLIFIER HF86

KIT: $43.95 **Wired: $47.95**

Attains flawless stereo performance at medium power levels. For use with the top quality HF-85 stereo preamplifier or other self-powered stereo preamplifier. Excellent stability and transient response. Each of the two amplifiers is rated at 14 watts and employs Williamson-type circuitry with self-biased, push-pull EL 84s. The amplifier utilizes for the first time the new 12DW7 developed exclusively to meet EICO's exacting "hi-fi" design requirements. The 12DW7 provides significantly better performance characteristics in the Williamson type circuit. The amplifiers may also be operated in parallel to deliver 28 watts for monophonic use. Features include switching to provide a common input to both amplifiers and level control of each input.

Output Power: 28 watts (two 14 watt amplifiers) continuous, 56 watts peak. **IM Distortion** (60 & 7000 cps at 4:1): 1.5% at 28 watts (14 w. each) 0.5% at 10 watts (5 w. each), 0.3% at 4 watts (2 w. each). **Harmonic Distortion:** 16 watts (8 w. each) less than 1% from 30c to 15 kc; 28 watts (14 w. each) less than 2% from 40 c to 15 KC and 1% from 50 c to 7 kc. **Frequency response:** 2 watts (1 w. each) ±0.5 db 10 c to 100 kc. **Transient Response:** Excellent square wave reproduction (4 usec rise time); negligible ringing, rapid settling on 10 kc square wave. **Inverse Feedback:** 20 db. **Stability Margin:** 15 db. **Speaker Connections:** 4, 8, 16 and 32 ohms. **Sensitivity:** 1.15 V for 14 w. output. **Hum:** 90 db below rated output. **Tubes:** 2-12DW7, 4-EL84, 2-EZ81. **Size:** HWD — 5" x 13½" x 9". **Shipping Weight:** 16 lbs.

20-WATT ULTRA-LINEAR WILLIAMSON-TYPE AMPLIFIER HF20

COMPLETE with Preamplifier, Equalizer & Control Section

KIT: $49.95 **WIRED: $79.95**

A low-cost complete-facility amplifier of the highest quality. **Rated Power Output:** 20 w (34 w peak). **IM Distortion (60 & 6000 cps at 4:1) at rated power:** 1.3%. **Frequency Response (20W):** ±0.5 db 20-20,000 cps; ±1.5 db 10-40,000 cps. 8½" x 15" x 10". 24 lbs. Matching cover **Model E-1, $4.50.**

50-WATT ULTRA-LINEAR AMPLIFIER HF52

with Preamplifier, Equalizer & Control Section

KIT: $69.95 **WIRED: $109.95**

The HF52 combines the superb HF50 Ultra-Linear Power Amplifier with full-facility front-end for maximum flexibility. **Output Power:** 50W cont.; 100W peak. **IM Distortion** (60 & 6000 cps at 4:1): below 1% at 50W; ½% at 20W. **Frequency Response:** 50W: ±0.5 db 15 cps — 60 kc; ±1.5 db 15 cps — 100 kc; ±0.1 db 20 cps — 30 kc at any level from 1 mw to 50 watts. Size: HWD: 8½" x 15" x 10". Matching cover **Model E-1, $4.50.**

30-WATT AMPLIFIER HF32

KIT: $57.95 **WIRED: $89.95**

Complete with preamplifier, equalizer and control section, the HF32 is an excellent complete-facility amplifier in the attractive "low silhouette" design. **Output Power:** 30W continuous, 47W peak. **IM Distortion** (60 cps & 7 kc @ 4:1): 2% @ 30W; 1% @ 20W; 0.5% @ 10W. **Total Harmonic Distortion:** below 1% 20-20,000 cps within 1 db of 30W. **Frequency Response:** 30W: ±0.5 db 15 cps — 50 kc; ±1.5 db 15 cps — 100 kc; ±0.1 db 15-30,000 cps at any level from 1 mw to 30W; no peaking or raggedness outside audio range. Size: 15" wide, 4¾" high, 10½" deep.

12-WATT WILLIAMSON TYPE AMPLIFIER HF12

with Preamplifier, Equalizer & Control Section

KIT: $34.95 **WIRED: $57.95**

Complete with Metal Cover

Compact, beautifully packaged & styled. Provides complete "front-end" facilities and true high fidelity performance. **Output Power:** 12 w cont., 25 w pk. **IM Dist.** (60 & 6000 cps @ 4:1); 1.3% @ 12 w; 0.55% @ 6 w; 0.3% @ 4 w. **Freq. Resp.:** 1 w: ±0.5 db 12 cps — 75 kc; 12 w: ±0.5 db 25 cps — 20 kc. **Harmonic Dist. 20 cps:** 2% @ 4.5 w; ½% @ 2.5 w; **30 cps:** 2% @ 11 w; ½% @ 6 w; **40 cps:** 1% @ 12 w; ½% @ 9 w; **2000 cps:** ½% @ 12 w; **10 kc:** 1% @ 10 w; ½% @ 4 w.

MONAURAL PREAMPLIFIERS

(stack 2 for STEREO)

HF65A: KIT: $29.95 **WIRED: $44.95**

with Power Supply

HF65: KIT: $33.95 **WIRED: $49.95**

MONAURAL POWER AMPLIFIERS

(use 2 for STEREO)

60-Watt Ultra-Linear Power Amplifier HF60 with Acro TO-330 Output Transformer

KIT: $72.95 **WIRED: $99.95**

(Matching cover E2: $4.50)

35-Watt Power Amplifier HF35

KIT: $47.95 **WIRED: $72.95**

(Matching cover E2: $4.50)

30-Watt Power Amplifier HF30

KIT: $39.95 **WIRED: $62.95**

22-Watt Power Amplifier HF22

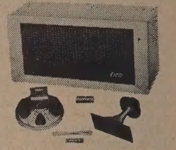
KIT: $38.95 **WIRED: $61.95**

14-Watt Power Amplifier HF14

KIT: $23.50 **WIRED: $41.50**

HFS3, -4

HFS5



HFS1

3-WAY SPEAKER SYSTEM SEMIKITS HFS3 AND HFS4

Each complete with factory-constructed enclosure. Easy to assemble—no gluing necessary.

HFS3 (includes cone tweeter):

	SEMIKIT	WIRED
In unfinished birch	72.50	$84.50
In walnut or mahogany	$87.50	$99.50

HFS4 (includes horn tweeter):

	SEMIKIT	WIRED
In unfinished birch	$83.50	$96.50
In walnut or mahogany	$98.50	$112.50

Another EICO first in high fidelity — unusually pure and full reproduction of very deep bass frequencies with normal efficiency in a ducted-port enclosure of only 2¼ cubic feet! Both the HFS3 and HFS4 include a specially designed, bellows-suspension, full-inch excursion Jensen 12" woofer (22 cps res.) and a Jensen 8" mid-range speaker with high internal damping cone for smooth response. A Jensen 3½" cone tweeter is supplied in the HFS3 for those who prefer a softer, more delicate quality in the highs; a Jensen compression-driver horn tweeter is supplied in the HFS4 for those who want more brilliance and greater projection in the highs. (In all other respects, the HFS3 and HFS4 are identical.) Both speaker systems have a system Q of ½ for flattest frequency and best transient responses. Frequency response is essentially uniform (±5 db) 45-14,000 cps. 16 ohms impedance. HWD: 26⅜" x 13⅞" x 14⅝".

2-WAY SPEAKER SYSTEM SEMIKIT HFS5

Complete with factory-constructed enclosure. Easy to assemble—no gluing necessary.

	SEMIKIT	WIRED
In unfinished birch	$47.50	$56.50
In walnut or mahogany	$59.50	$69.50

New techniques in loudspeaker engineering developed by EICO enable this bookshelf-size, 1¼ cubic foot ducted-port enclosure to provide remarkably clean, deep, smooth bass with good efficiency. The HFS5 includes a specially-designed, bellows-suspension ⅝" excursion Jensen 8" woofer (45 cps res.) and a Jensen 3½" closed back tweeter of exceptional quality. The Q of the HFS5 system is ½ so that the speaker is critically damped when used with any modern amplifier of normal damping factor (7-20). Critical damping gives the smoothest possible frequency response and the best transient response. Frequency response is essentially uniform (±5 db) from 52 to 14,000 cps. 16 ohm impedance. HWD: 24" x 12½" x 10".

2-WAY SPEAKER SYSTEM HFS1

Complete with factory-built cabinet

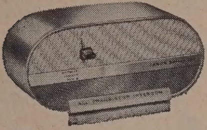
SEMIKIT: $39.95 **WIRED: $47.95**

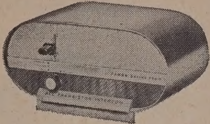
Cabinet expertly constructed, furniture-quality, tuned-bass-reflex, acoustically engineered by Jensen for the woofer supplied. All visible surfaces smooth-sanded, clear-grained birch hardwood. Heavy-duty 8" Jensen woofer: High energy ½-lb. Alnico 5 DP magnet. Response engineered for smooth cross-over to tweeter at 1800 cps. Jensen tweeter: Compression-driver loaded by cast aluminum Hypex* horn. Small, precisely controlled and loaded diaphragm is free of "breakup" and the accompanying excessive peaks and dips in the frequency response.

*T.M. reg. Jensen Mfg. Co.

FANON ALL TRANSISTOR INTERCOMS

A new concept in intercommunication with new styling and outstanding performance. Features: Four transistors with push-pull output stage. Thermally compensated circuit. Instant operation—no warm up time. Battery used only when talking. Heavy-duty Listen-Talk switch. 13 ohm speaker impedance. 2 watt output. No hum — no shock hazard. Battery life many months with normal use. Grey, tan, black, ivory or in brushed brass.


150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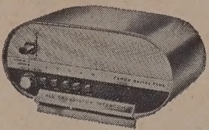
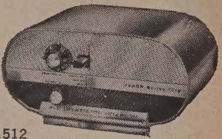

1506


1512

1500—$59.95. Deluxe 2-station system with 50 ft. cable. Sensitive amplifier picks up slightest sounds. Remote has "dictate" position for baby-sitting. Ideal for the home and office. Additional remote may be added. Weight 8 lbs.

150—$15.95. Remote station with call switch for private or non-private operation. Weight 2 lbs.

151—$13.45. Remote station for non-private use only. (Less call switch.) Weight 2 lbs.

156—$22.75. Remote station with 6 position station selector switch. Weight 2 lbs.

1506—$59.95. A six station master for use in INTERMIXED, ALL MASTER or MASTER-REMOTE installations. Weight 4 lbs.

1512—$64.95. A twelve station master for use in INTERMIXED, ALL MASTER or MASTER-REMOTE installations. Weight 4 lbs.

PSA—$29.95. A 115v. AC transformer power supply for optional use. One PSA can be used for up to four master stations. Weight 4 lbs.

BPA—$1.50. Cable adaptor to connect PSA to any master.

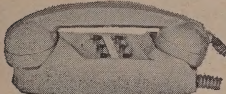
NOTE: All intercoms are less battery. Use Eveready #276 or equivalent.

TELEPHONE SYSTEMS

FANON FONE

A complete line of telephone intercommunication equipment, designed to meet the needs of any installation for the home, office, factory and institution.

COMMON TALKING—SELECTIVE RINGING


8506

8520

Modern styling in high impact plastic in grey and ivory. AC or battery powered. Suitable for desk or wall mounting. Coiled cord. Common talk-line.

8520—Complete 2 station system consisting of 2 telephones (8501). 50 ft. four conductor cable and battery wall bracket. $72.50.

8501—Single button phone used in conjunction with any multi-station phone. $34.95.

8503—A four-station capacity phone with 3 buzzer buttons. **$36.25.**

8506—A seven-station capacity phone with 6 buzzer buttons. **$38.75.**

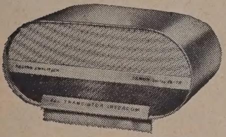
8510—An eleven-station capacity phone with 10 buzzer buttons. **$42.50.**

PSA—115v. AC power supply. Only one required per system. **$29.95.**

Paging Amplifiers for use with "85" telephones:

PA-RC—A 3 tube paging amplifier used with any of above phones. Single volume control. Relay operated. On only when talking. Can answer calls without using a switch. Plugs into 115v. source. **$64.95**

PA-TR—A 4 transistor paging amplifier used with any of above phones. Separate controls for incoming and outgoing volumes. Phono jack to connect paging horn. Relay operated. On only when talking. Can answer calls without using a switch. **$89.50.**


PA-TR

SELECTIVE TALKING—SELECTIVE RINGING

Deluxe, precision-made telephones that permit as many separate simultaneous conversations as there are pairs of telephones in an all-master system. Conference calls possible. Up to 10 master phones or 1 master with 10 subs per installation. Supplied with junction cable and terminal box. Available only in grey.

1010—Master dial telephone **$74.95.**

101—Sub station telephone **$47.50.**

PSA—115v. AC power supply for above phone. Only one required per system. **$29.95.**

1010

101

PRIVATE AUTOMATIC EXCHANGES—P.A.X.

FANON-FONE automatic switchboards are designed for every application. Features: Busy signal, complete privacy, priority lines, paging facilities. Simple installation—economical to operate. Self contained power supply.

FAS-101—Ten line capacity switchboard with one trunk.

FAS-102—Ten line capacity switchboard with two trunks.

FAS-162—Sixteen line capacity switchboard with two trunks.

FAS-304—Thirty line capacity switchboard with four trunks.

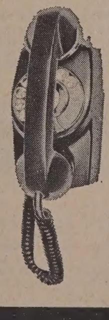
FAS-506—Fifty line capacity switchboard with six trunks.

Larger switchboards also available.

FA-42—Deluxe, modern styled automatic dial phone, used with switchboards. Available in black or colors at slight additional cost.

FA-43—Deluxe, modern styled automatic dial phone for wall mounting.

FA-42


FA-43

All prices shown are list. Add 5% west of the Rockies.
For complete details, wiring information, etc., write to the factory.

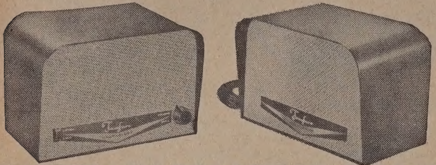
Prices on PAX equipment quoted upon request.

FANON ELECTRONIC INDUSTRIES, INC NEWARK 12, NEW JERSEY
Warehouses in Los Angeles, San Francisco, Seattle and Toronto

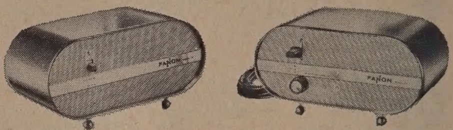
FANON INTERCOMS

The complete intercom line styled for the modern office and home at economy prices.

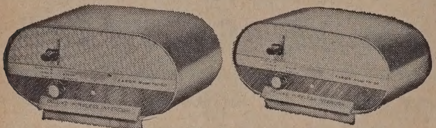
The complete line uses the same proven circuit and components: Three tubes — 12AU6, 50C5 and 35W4. • 3½" Alnico V speaker • Neon pilot light • Press-to-talk switch with long lasting "Coil-Spring" return • AC or DC • Remotes may be private or non-private • 2½ watt output • 20 watt power consumption • Dimensions: 8" x 4" x 4" • Decorator colors in Grey and Tan. (Black, Ivory or Brushed Brass, extra.)



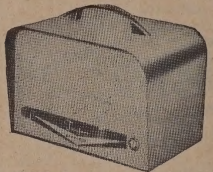
TAL, INTERCOM — $19.95. Economy, 2 station system, with 50 ft. cable. Remote is always open — no switch to operate. Smartly styled, metal cabinets — ideal for baby sitting and the home. Ready to operate — nothing more to buy. Weight: 6 lbs. Extra remote TR may be added: $7.95.



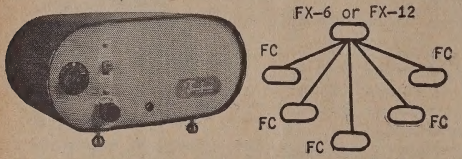
FX-2, TWIN — $29.95. Ultra-sensitive 2-station system with 50 ft. cable. Powerful amplifier picks up slightest noise. Three way Dictate-Talk-Listen switch. Remote has TALK-LISTEN switch to permit originating calls to master: Use it anywhere — home or business. Extra remote. FS, may be added: $12.50. Weight: 6 lbs.



FW-50, Deluxe WIRELESS — $89.50. A complete 2 station system ready to operate. No wires — no installation — just plug into any AC or DC outlet. Four tubes plus silicon rectifier amplifier. Three way Talk-Listen-Dictate switch. In brushed brass cabinets. Weight: 9 lbs. Model FW-51, additional single station for above, may be added, $44.75.



RB-1, BABY-COM — $19.95. A one-station, wire-less radio intercom. No installation, no wires required — merely plugs in to any AC or DC outlet and voice is heard through any radio (even car or battery radios). Ideally suited as a portable baby-sitter. Extremely sensitive, can be heard 300 ft. away. Blue or pink cabinets. Weight: 4 lbs.



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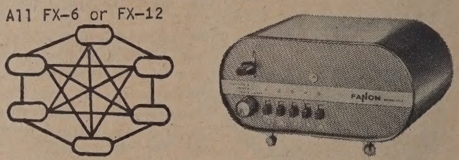
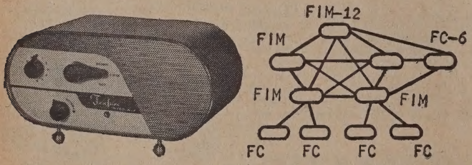
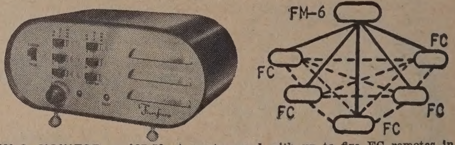


FX-12, MANAGER — $37.50. A dual purpose master for use with up to ten FC remotes, in a MASTER-TO-REMOTE system, or up to eleven masters in ALL MASTER system. Twelve position rotary selector switch with "All-Call" and "Standby". Dictate-Talk-Listen switch. Five private conversations may be held in an all master system. Weight: 4 lbs.

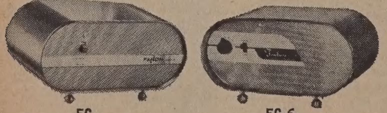
FX-6, EXECUTIVE—$34.95. A dual purpose master, for use with up to five FC remotes in a MASTER-TO-REMOTE system, or up to six masters in an ALL MASTER system. Five individual station selector switches. Dictate-Talk-Listen switch. In all master systems, 3 private conversations or conference of all stations may be held. Weight: 4 lbs.



FIM-12, INTERMIX — $44.95. A deluxe twelve station intermix master which can be used in any combination of masters and/or remotes. Master has 3 position Talk-Listen-Dictate switch. Use in conjunction with two types of remotes: FC-6 which can selectively call any one of six masters, and FC which can call only one master. Weight: 4 lbs.



FM-6, MONITOR — $37.50. A master used with up to five FC remotes in a MASTER-TO-REMOTE system. "Switch-board" feature provides direct remote-to-remote conversations. Master can monitor any or all remotes. Master can "set-up" remotes to monitor other remotes. Remotes can originate calls to master and to other remotes. Busy-light flashes during conversations. Weight: 4 lbs.



FC FC-6

FC, REMOTE — **$13.25.** Used in conjunction with FX-6, FX-12, FM-6, FIM-12.

FC-6, REMOTE — **$19.95.** (Far Left) Six station selective remote used with FIM-12 only.

All prices shown are list. Add 5% west of the Rockies.

For detailed information, on any model, write to the factory for free catalogs.

For cable requirements, write to the factory.

ACCESSORIES

YT—Wall bracket for any master **$1.50**
YF—Wall bracket for any remote **$1.50**
FA-30—Isolation transformer **$12.50**
PH-5—Paging horn **$26.95**
TB-9—Nine terminal junction box **$5.95**
TB-18—Eighteen terminal junction box **$7.50**

FANON ELECTRONIC INDUSTRIES, INC NEWARK 12, NEW JERSEY
Warehouses in Los Angeles, San Francisco, Seattle and Toronto

FANON MUSI-TALK®

Flush-mounting radio-intercom systems, for the home, office, school and industry.

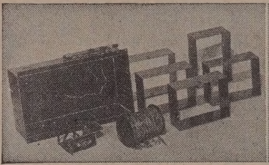
There are two **MUSI-TALK** systems — namely system MT (with radio), and MTL (less radio). For easier handling and greater economy the **MUSI-TALK** systems are packaged in kit-form, as follows:

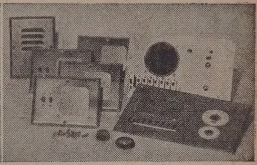
IK, (Installation Kit) — Consists of 1 master plaster box, 5 remote plaster boxes, 200 ft. of wire and hardware. This installation kit is used in conjunction with either the EK or EKL electronic kits. List, $34.95

EK, (Electronic Kit) — Consists of 1 MC Master Control, (with radio), 4 BC Indoor Remotes, 1 BD Door Remote and hardware. List, $115.00

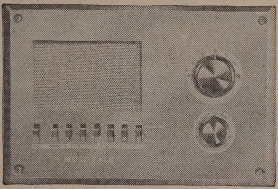
EKL, (Electronic Kit) — Consists of 1 MCL Master Control, (less radio), 4 BC Indoor Remotes, 1 BD Door Remote and hardware. List, $85.00

Any of the kits may be purchased separately. If complete kits are not desired, individual component parts may be purchased. (Listed below.)


INSTALLATION KIT — IK

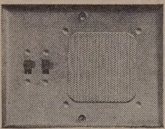

ELECTRONIC KIT — EK or EKL

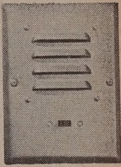
Complete Musi-Talk system MT, consists of one EK and one IK.	List, $149.95
Complete Musi-Talk system MTL, consists of one EKL and one IK.	List, $119.95


MC — MASTER CONTROL

MC, MASTER CONTROL — A six tube, six-station master from which you may converse with any or all remotes. The master can "set-up" two or more remotes for **direct communication** with one another. "Monitor" feature enables master and remotes to eavesdrop any other locations. Powerful printed circuit radio can be "piped" to as many rooms as desired. Simultaneous radio and intercom operation is featured. Stylish satin copper panel is 11" x 7¾". List, $89.95. Rough-in dimensions: 5½" x 10¼" x 3½".

MCL, MASTER CONTROL — Has all the intercom features listed above, less the radio. A phono input jack enables you to plug in any external music source for complete music distribution. List, $59.95

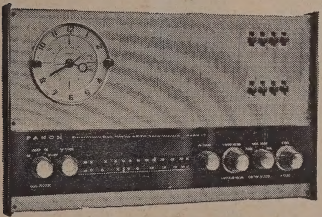

BC — REMOTE


BD — REMOTE

BC, INDOOR REMOTE—Four indoor remotes provide instant 2-way conversation among themselves and the master, as well as radio-music throughout the home. Remotes can originate calls to the master, or to other remotes. Remotes may also "monitor" any other locations. Talk-Listen switch and Privacy switch. Satin copper panel is 6¼" x 4¾". List. $11.25

BD, DOOR REMOTE—Has weatherproof rubber gasket and "weatherized" speaker to withstand all types of weather. Door remote can originate calls to the master and any indoor remote. Enables you to answer the door from within the house and to "pipe" music to the porch or patio. Copper finish panel 6¾" x 4¾". List, $9.95

FM-AM STEREOPHONIC HIGH FIDELITY RADIO INTERCOM


MARK IV

MODEL MARK IV—The master unit is powered by a precision engineered amplifier consisting of 10 tubes, two silicon rectifiers and 2 germanium diodes.

The master control may be used with up to seven remote stations as a monophonic FM-AM radio and intercom system.

The master unit may be used with the companion unit, MARK V, and the remote stations to provide an FM-AM **stereo** intercom system.

Both radio programs and recordings, monophonic or stereo, can be directed to any of the remote stations.

The clock can be set to turn-on only the radio part of the unit at any pre-determined time, so that the use of the intercom is not lost during the time that the radio is off.

Provision is also made to enable the clock-timer to turn-on an external appliance, at a pre-determined time.

Listening to the radio and monitoring a remote station can be accomplished simultaneously, by setting the Function Selector switch.

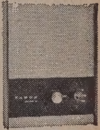
Conversation between two remote stations may be accomplished by pre-setting the corresponding station selector switches to "on".

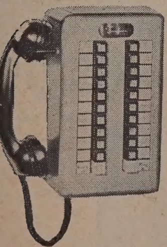
MODEL MARK III—Same as MARK IV, but without clock-timer.

MODEL MARK V—Companion amplifier, when used in conjunction with the MARK IV, will provide complete dual-channel stereophonic phonograph reproduction, FM-AM stereo broadcasts and FM-FM multiplex stereophonic broadcasts. (Not ill.)

MODEL MARK II—Indoor remote station with independent volume control and talk-listen switch with "privacy" position. Also available with phono-input jack.

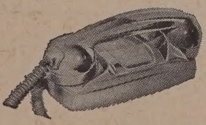
MODEL MARK I—Door remote station with talk-listen switch. Weather-proof construction.


MARK II


FTS-20

20 STATION SYSTEM, WITH SWITCHBOARD — IDEAL FOR BOWLING ALLEYS, MOTELS, HOSPITALS, AND SCHOOLS

FTS-20—A 20 line manual exchange which features selective ringing and a selective talking circuit—assures complete privacy. Each of the twenty push-buttons on the switchboard have busy-lamps as well as a buzzer (which may be shut-off). Stations call switchboard by lifting receiver. The switchboard may arrange for conferences between two or more substations, although only one private conversation may take place at a time. Size of FTS-20: 10½ x 9½ x 3¾" deep. Simple installation requires only 2 wires from each phone to switchboard. For more extensive installations, one FTS-20 switchboard may be ganged with one or two XT-22 extension boards to provide for a total of 42 stations or 64 stations.

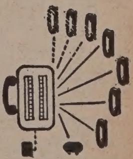


FTS-20	List Price $299.95
XT-22	List Price $274.95

PS-20—Transformer operated power supply. One required per installation. List Price $124.95.

8500—Extension phone for desk or wall use, molded in high impact polystyrene, with convenient coiled cord. List Price $39.95.

SW-85—Selector switch used with each 8500 telephone when two FTS-20's are used. $5.00



System can be expanded to 42 or 64 intercom stations.

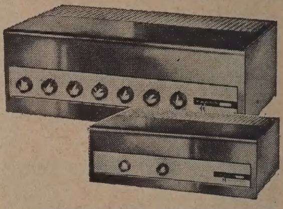
FANON ELECTRONIC INDUSTRIES, INC
NEWARK 12, NEW JERSEY
Warehouses in Los Angeles, San Francisco, Seattle and Toronto

FANON

PA AMPLIFIERS AND SYSTEMS

Featuring a wide-range of low distortion amplifiers for continuous-duty operation. All FANON units incorporate point-to-point wired circuits and are handsomely styled with concealed tamper-proof output and input connectors. No screws to remove or special tools are required for quick easy maintenance. All FANON equipment is available for high or low impedance operation. Regulation: 70 volt line, no load-full load, 3 db at 1 kc. All amplifiers and boosters suitable for rack mounting. UL and CSA approved.

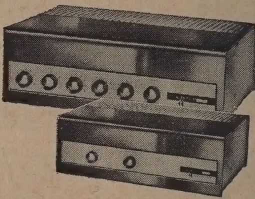
MODEL 3370—70 WATT AMPLIFIER



A dramatic new concept in high-power amplifier design that defies comparison in its class. Push-pull output circuit with negative feed-back and fixed bias circuit on the power output stage. **Inputs:** 4 microphone, 2 phono (fadar control). 1 mic. input converts for phono magnetic cartridge. Seven controls are provided; 4 mic. volume, 1 phono-radio fader, bass, treble with AC switch, 2 hum-buck adj., 1 bias adj., 1 slide switch for mag. cartridge input. **Power Output** rated at 70 watts at less than 4% distortion—**Peak Output** 100 watts. **Frequency Response:** 20-20kc ±1 db. **Gain:** 130 db mic. —95 db phono. **Hum and Noise:** Fundamental —75 db. mic. —58 db. phono —70 db. **Tone Control:** Bass (at 50 cps) boost is 17 db and cut is 14 db. Treble (at 15kc) boost is 14 db and cut 15 db. **Output impedance:** 4, 8, 16 ohms and 70 volts. **Input Impedance:** 0.5 megohms convertible to low imp. for 50 ohms unbal. or 200 ohms bal. **Input Sensitivity:** Microphone 4 millivolts (mag. low imp. 0.5 mv) — phono 0.3 volts. **Power Consumption:** 200 watts at 117v AC 60 cycle. **Tubes:** 2-12AX7, 1-6AV6, 1-7199, 1-5AR4, 2-6CA7, 1-CA4, 1 silicon rect. Special Fanon "Circuitry-sentry" output tube overload fuse feature optional. **Dimensions:** 18⅝" w x 11⅛" d x 6¾" h. Shipping wt: 32 lbs. $174.95.

MODEL 3070—70 watt BOOSTER AMPLIFIER; similar to above less microphone and tone controls; single high impedance input (sensitivity ½ volt input at full output). Volume and on-off controls.

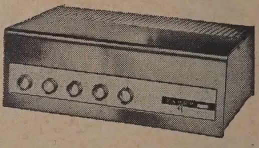
MODEL 3345—45 WATT AMPLIFIER



Here's a high powered audio amplifier that meets the most exacting standards. This compact, quality-engineered unit has the advanced push-pull circuit with negative feed-back and fixed bias circuit on the power output stage. **Inputs:** 3 microphone, 2 phono (fader control). 1 mic. input converts for phono magnetic cartridge. Its 6 controls provide 3 mic. volume (1 mag mic.), 1 phono-radio fader, bass, treble with AC switch, 2 hum-buck adj., 1 bias adj., 1 slide switch for magnetic cartridge input. **Power Output** rated at 45 watts at less than 3.5% distortion. **Peak Output:** 52 watts. **Frequency Response:** 2-20kc, ±1 db. **Gain:** 127 db mic., 92 db phono. **Hum and Noise:** Fundamental —75 db., microphone —58 db, phono —69 db. **Tone Control:** Bass (at 50 cps) boost is 17 db and cut is 14 db; Treble (at 15kc) boost is 14 db and cut is 15 db. **Output Impedance:** 4, 8, 16 ohms and 70 volts. **Impedance:** .5 megohms convertible to low imp for 50 ohms unbal. or 200 ohms bal. **Input Sensitivity:** Microphone 4 millivolts (mag. low imp. 0.5 mv), phono 0.3 volts. **Power Consumption:** 130 watts at 117v AC 60 cycle. **Tubes:** 2-12AX7, 1-7199, 2-616GC, 1-5AR-4 and 1 silicon rect. Special Fanon "Circuitry-sentry" output tube overload fuse feature optional. **Dimensions:** 17⅛" w x 11⅛" d x 6¼" h. **Shipping wt.:** 26 lbs. $139.95.

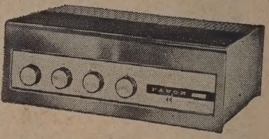
MODEL 3045—45 watt BOOSTER AMPLIFIER; similar to above less microphone and tone controls; single high impedance input (sensitivity ½ volt input at full output). Volume and on-off controls.

MODEL 3335—35 WATT AMPLIFIER



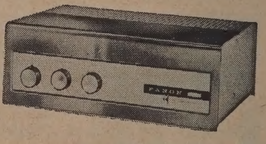
Dynamically styled medium-high power unit featuring the same advanced circuitry found in the FANON 70 and 45 watt amplifiers. Push-pull output with negative feed-back for improved stability. **Inputs:** 2 microphone, 2 phono (fader control) 1 mic. input converts for phono magnetic cartridge. 5 controls include 2 mic. volume, 1 phono-radio fader, bass, treble with AC switch, 1 hum-buck adj., 1 bias adj., 1 slide switch for magnetic cartridge input. **Power Output** rated at 35 watts at less than 4% distortion. **Peak Output:** 40 watts. **Frequency Response:** 20-20kc, ±1 db. **Gain:** 125 db mic., 90 db phono. **Hum and Noise:** Fundamental —78 db, microphone —58 db, phono —70 db. **Tone Control:** Bass (at 50 cps) boost is 17 db and cut 16 db; Treble (at 15kc) boost is 13.5 db and cut 12.3 db. **Output Impedance:** 4, 8, 16 ohms and 70 volts. **Input Impedance:** 0.5 megohms convertible to low imp for 50 ohms unbal. or 200 ohms bal. **Input Sensitivity:** Microphone 3 millivolts (mag. low imp. 0.5mv), 2.5 volts. **Power Consumption:** 115 watts at 117v AC 60 cycle. **Tubes:** 2-12AX7, 1-6AV6, 1-5AR4, 2-616GC, 1 selenium rect. Special Fanon "Circuit-sentry" output overload fuse feature optional. **Dimensions:** 17⅛" w x 11⅛" d x 6¼" h. **Shipping wt.:** 24 lbs. $114.95.

MODEL 3320—20 WATT AMPLIFIER



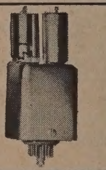
Ruggedly constructed advanced design amplifier ideally suited for medium power applications. Same push-pull negative feedback circuit found in higher power FANON amplifiers. Continuous heavy-duty performance dependability. **Inputs:** 2 microphone, 2 phono (fader control) 4 controls provide 2 mic. volume, 1 phono-radio fader, 1 bias adj., 1 tone with AC switch. **Power Output:** 20 watts with less than 5% distortion. **Peak Output:** 25 watts. **Frequency Response:** 20-20kc, ±1 db. **Gain:** 123 db mic., 88 db phono. **Hum and Noise:** —78db, microphone —57db, phono —72db. **Tone Control:** Treble cut (2500 cps) 3 db, (10,000 cps) 12db. **Output Impedance:** 4, 8, 16 ohms and 70 volts. **Input Impedance:** 0.5 millivolts, phono 0.32 volts. **Power Consumption:** 70 watts at 117v AC 60 cycle. **Tubes:** 2-12AX7, 2-7189A, megohms convertible to low imp for 50 ohms unbal. or 200 ohms bal. **Input Sensitivity:** Microphone 3 1-6CA4, and 1 selenium rectifier. Not available with "Circuit-sentry" overload feature. **Dimensions:** 13½" w x 10¼" d x 5¼" h. **Shipping wt.:** 14 lbs. $92.50.

MODEL 3310—10 WATT AMPLIFIER



A new concept in engineering design for limited power output amplifiers. Economically priced high gain unit for continuous service in music, PA, or paging. Compactly constructed the FANON 3310 has 1 microphone, 2 phono (fader control) inputs. 3 controls; one mic. volume, one phono-radio fader and a tone with AC switch. **Power Output:** 10 watts at less than 5% distortion. **Peak Output:** 14 watts (music waveform rating). **Frequency Response:** 30-20kc ±2 db. **Gain:** 120 db mic., 85 db phono. **Hum and Noise: Fundamental** —75 db. microphone —56 db, phono —70 db. **Tone control:** Treble cut (2500 cps) 3 db, (10kc) 12 db. **Output Impedance:** 4, 8, 16 ohms and 70 volts. **Input Impedance:** 0.5 megohms convertible to low imp for 50 ohms unbal. or 200 ohms bal. **Input Sensitivity:** Microphone 4 millivolts, phono 0.3 volts. **Power Consumption:** 60 watts at 117v AC 60 cycle. **Tubes:** 1-12AX7, 1-6V4, 1-616GC. Not available with Fanon "Circuit-sentry" overload feature. **Dimensions:** 13½" w x 10¼" d x 5¼" h. **Shipping wt.:** 13½ lbs. $69.95.

MODEL CS-33—"CIRCUIT-SENTRY" OVERLOAD PROTECTION CIRCUIT



Optional "electronic fuse" circuit that protects the output tubes, against possible shorts in the speaker line. This exclusive FANON assembly consists of tubes 6FM8, 6AU6 and associated circuitry—merely plugs into socket provided on chassis. In case of intermittent short, "fuse circuit" will lock into protective condition. After fault is cleared, normal condition is restored without any adjustments being required. Patents Applied For. Used with 3335, 3345 and 3370 Amplifiers. $29.95.

All prices shown are list. Add 5% West of the Rockies. For complete details, write to the factory. Specifications and prices subject to change without notice.

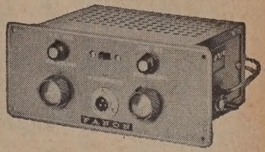
FANON ELECTRONIC INDUSTRIES, INC
NEWARK 12, NEW JERSEY
Warehouses in Los Angeles, San Francisco, Seattle and Toronto

FANON

PA AMPLIFIERS AND SYSTEMS

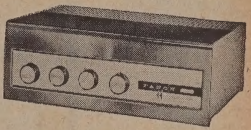
Versatile, fully-transistorized mobile amplifiers ideally suited for continuous duty by Civil Defense, police, fire and other civic organizations where compact quality audio power is required. Their design and performance is unexcelled for every portable PA operation for carnivals, sporting events, yachting, buses and general mobile application.

MODEL 3510—10 WATT MOBILE AMPLIFIER



Exceptionally compact transistorized mobile amplifier where audio power requirements are limited. Only 9″ wide for dash board mounting. Operates on standard 12 volt system and includes cigarette lighter connector and battery cable with in-line fuse. **Inputs:** 2 microphone, 1 phono. **Outputs:** 2 terminal strips with speaker selector switch. The 3510's controls include a mic. volume, phono volume, power "on-off" switch, mic.-aux selector switch, and speaker selector switch. **Power Output:** 10 watts at 5% distortion. **Frequency Response:** 150-10kc ±1 db. **Gain:** 85 db microphone, 55 db phono. **Hum and Noise:** 55 db below rated output. **Output Impedance:** 4, 8 ohms. **Input Impedance:** Microphone 3000 ohms, phono 0.2 meg. **Input sensitivity:** Microphone 3 millivolts at full output. Phono 0.1 volts at full output. **Power Consumption:** No signal input 5 watts; Max signal output 18 watts. **Transistors:** 2-0C19, 1-0C71, 1-0C76. **Dimensions:** 9″ w x 6″ d x 3¾″ h. **Shipping wt.:** 4½ lbs. $119.95.

MODEL 3525—25 WATT MOBILE AMPLIFIER



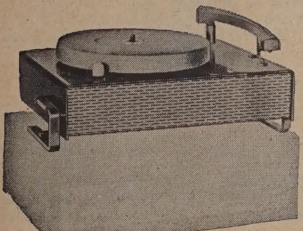
A medium-high power transistorized amplifier designed to give maximum efficiency and dependable mobile service. Compactly styled with tamper-proof input and output connectors, the 3525 utilizes conservatively-rated transistors that operate at low temperature under continuous duty. **Inputs:** 1 microphone, 1 phono (12 volt). **Outputs:** 2 speaker jacks with means of selecting different impedance outputs. 4 controls include 1 mic. volume, 1 phono volume, 1 tone, 1 power "on-off" switch. **Power Output:** 25 watts at less than 5% distortion. **Frequency Response:** 80-15kc ± 1 db. **Gain:** 100 db microphone, 80 db phono. **Hum and Noise:** Fundamental —85 db, microphone —55 db. **Output Impedance:** 4, 8, 16 ohms. **Input Impedance:** Microphone 1500 ohms, phono 0.5 meg. **Input Sensitivity:** Microphone 0.5 vm at 1500 ohms, phono 0.5 volts at 0.5 meg. **Power Consumption:** No signal input 8.5 watts, Max. signal output 38 watts. **Transistors:** 2-2N669, 1-3577, 2-N406, 1-2N408. **Dimensions:** 13½″ w x 10¼″ d x 5¼″ h. **Shipping wt.:** 12 lbs. $149.95.

MODEL IT-33—LOW IMPEDANCE TRANSFORMER

Microphone input transformer for matching low impedance microphone to high impedance input. Connections for input impedance of 200 ohms balanced and 50 ohms unbalanced. Designed to plug in directly to the mike input jack. Contains high permeability magnetic alloy steel shield. Adjustable for minimum hum. $37.50.

Low impedance transformer cable connector. Amphenol #80-MC2M.
High impedance microphone input cable connector. Amphenol #75-MC1F.

FANON P. A. SYSTEM ACCESSORIES & MEGAPHONES



Model 3600 PHONO TURNTABLE

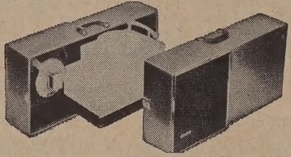
Phonograph attachment that may be used with all "33" series AC amplifiers. Easily mounts on top of amplifiers with 2 thumb screws or can be used separately. Four speed motor. Quality ceramic cartridge with dual stylus. 12″ x 9¼″ x 4½″. Ship wt.: 10 lbs. $37.50.

Model 3612 PHONO TURNTABLE (12 volt)

Same as above but with four speed 12 volt motor for use with 3508 and 3525. $49.95.

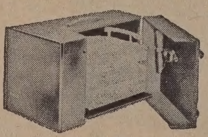
Model 3604 AUTOMATIC 4 SPEED CHANGER

VM changer with base for use with "33" series PA amplifiers. $62.50.



Model S2
PORTABLE PA SYSTEM CASE (Dual speakers)

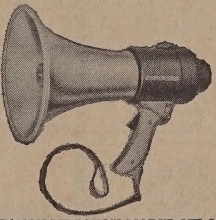
Handsome split carrying case with two 12″ speakers, each with 25′ connecting cable. Quality microphone and cable included. Accommodates FANON amplifier models 3320, 3335, 3345 plus the model 3600 turntable. Durable fashion fabric covering. Size: 31″ x 15″ x 15″. $84.95.



Model S1
PORTABLE PA SYSTEM CASE (Single speaker)

Durable, compact carrying case with one 12″ speaker and 25′ connecting cable. Quality microphone and cable included. Accommodates FANON model 3310 or 3320 amplifiers and 3600 turntable. Durable fabric. 23″ x 15″ x 15″. $49.95.

All prices shown are list. Add 5% West of the Rockies. For complete details on speakers, microphones, stands, drivers, baffles, etc., write to the factory.



FANON MEGAVOX MODEL MV-8
Transistorized Megaphone

Fully portable lightweight megaphone with 600 yard range. Indispensable for police, fire, CD, industry communication. Lightweight aluminum, baked enamel finish, waterproof microphone, carrying strap. No connecting cables or power supply required. Pistol grip trigger and volume control.

Power Output: 5 watts-10 watts peak. **Amplifier:** 1-0C72, 2-2N242 transistors in push-pull class B. **Current:** Eight 1½V flashlight batteries "C" size with life of 10 hours continuous average. **Weight:** 4.6 lbs. **Size:** 9″ x 14″. $99.95.

MEGAVOX MODEL MV-1

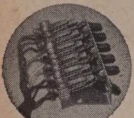
Popular and compact, this megaphone has range of approx. 300 yds. Powered by 4 "D" size flashlight cells. Separate "low" and "high" volume switches. Over 6 hours continuous operation. **Weight:** 3¼ lbs. **Size:** 6½″ x 12½″. $39.95.

FANON ELECTRONIC INDUSTRIES, INC NEWARK 12, NEW JERSEY
Warehouses in Los Angeles, San Francisco, Seattle and Toronto

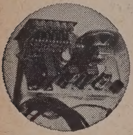
LOGE ELECTRONICS, INC. • KWIK-KALL® INTERCOMS

THESE EXCLUSIVE FEATURES ASSURE LOGE QUALITY

PATENTED SELECTOR SWITCH ASSEMBLY
Feather-touch keys provide maximum ease of operation. Patented construction permits instant access for adjustment or minor part replacement.

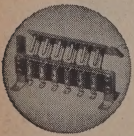


MASTER CHASSIS
Removable in one minute for service (no extension wires required)...all units AC only (no AC-DC circuits are used).

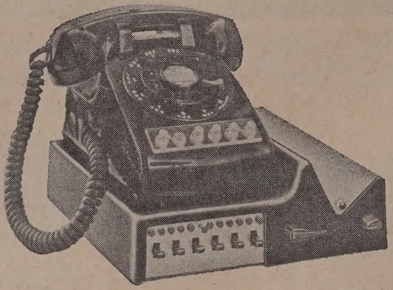


VISUAL ANNUNCIATORS
On all models. Plunger is activated into position by in-coming call... acts as memo message if call is not answered.

JUNCTION-TYPE TERMINAL CONNECTIONS
Permits quick installation and interconnection between masters and remotes. Plug-in male and female terminals allow rapid removal for servicing or future expansion.



KWIK-KALL EXECUTIVE



Model L-512-AB

The Kwik-Kall Executive is designed for the executive . . . to keep his desk neat and efficient and occupies a little more space than the telephone itself. Its compactness permits not only two-way conversation with as many as a total of 12 stations, but serves as a telephone stand as well.

Choice of 5 colors to match your telephone — Black, green, beige, white and gray — L-506 (black) **$147.50** — other colors **$15.00** extra

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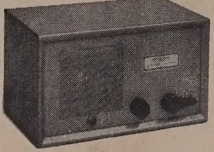
KWIK-KALL JUNIOR INTERCOMS



$\$79^{50}$

List Price

MODEL L-100-P System including L-100 Junior Master, one JR-3-45 remote speaker, and 50 ft of cable.

PR-50 Paging Speaker

$\$14^{50}$

List Price

JR-3-45 Remote Speaker

$\$9^{00}$

List Price

Low cost versatile intercoms for smaller installations

- **2, 4, 6 AND 12-STATION UNITS** ideal for smaller offices and plants, or for interconnection with Loge Kwik-Kall Senior Masters. Compatible with all Loge remote station speakers and paging speakers.
- **STURDY METAL CASE** with hammertone finish assures rugged construction. Patented switch assembly and other Loge exclusive features. Small, compact, powerful.
- **AVAILABLE IN DESK OR WALL MODELS.** Junior master units can be ordered singly or in the L-100-P complete master-and-remote packaged system.

Revolutionary 1-pair wire system for secret 2-way intercom

KWIK-KALL "NOR" INTERCOMS

$\$229^{50}$

List Price

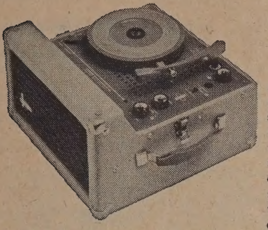
MODEL L-406A-NOR 6-station master with annunciators, telephone, handset, and chime signal.

- **SECRET INTERCOM** with absolute privacy between any two master stations, yet but a single pair of wires is needed. Conference calls are possible with only desired stations connected. Equipped with telephone handset as well as talk-back.
- **AUDIBLE AND VISIBLE ANNUNCIATORS.** Each call announced by chime or buzzer, and also by plunger signal which acts as memo message until answered.
- **PAGING KEY AVAILABLE** at small additional cost. Power is automatically quadrupled with use of paging key.
- **UNLIMITED INTERCONNECTIONS.** Standard master units available with 6, 12, 18, 24, and 36 stations. Larger units available on special order. In solid walnut cabinet with exclusive Loge construction features. 4-station Junior "NOR" master available in metal cabinet. All units can be interconnected with Loge remote stations and paging speakers. Installations of NOR units can be made up to 10,000 feet with No. 22 wire.
- **ZERO LEVEL** with dual amplification. Can be installed within telephone cable pairs on private or government-owned telephone systems.

LOGE ELECTRONICS, INC. **Los Angeles, California**
Successor to J. M. Loge Sound Engineers

NEWCOMB | PORTABLE PHONOGRAPHS AND RADIOS

NEW MODEL R-124V

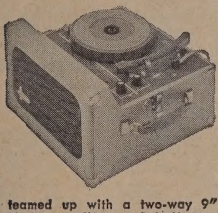


4 SPEED, VARIABLE SPEED, HI-FIDELITY PHONOGRAPH

A rare combination of ruggedness and high fidelity sound, the Newcomb R-124V is built with a host of features that make it the outstanding value among portable phonographs: New four speed, variable speed motor; big two-way, 9″ oval, dual cone speaker; new Bi-Coupled ® 10 watt peak output system; pilot light; "Power Point" type plug-in ceramic high fidelity cartridge; rubber record mat and "Twist-up" 45 center spindle; jack for external speaker, headphones, or Newcomb Headphone Listening Center Accessory; idler release interlocked with separate motor switch; spring-suspension feet, Hideaway cord compartment; new ultra wide range tone control; compensated volume control; Tempo Control that smoothly varies speed as much as 20%. Crackproof plywood case, glue-block reinforced, covered in washable gray fabrikoid. Transformer powered. U.L. approved. DIMENSIONS: 8¼″ x 14¾″ x 14¾″; weight 20 pounds. POWER CONSUMPTION: 55 watts, 117 volts, 60 cycles A.C. LIST: $129.50. Plus excise tax.

MODEL R-124 FIXED SPEED, except for the absence of Tempo Control, is identical to the R-124V. LIST: $104.35. Plus excise tax.

NEW MODEL R12-C4

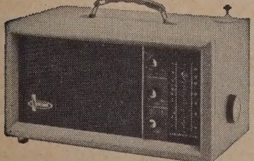


4 SPEED, FIXED SPEED HI-FIDELITY PHONOGRAPH

The Newcomb Model R12-C4 is a transformer powered, 8 watts peak utility model that offers safety, dependability, and high performance at low cost. New enhanced tone and volume range improves realism. It has an 8 watt inverse feedback controlled output system teamed up with a two-way 9″ oval, dual cone speaker. The R12-C4 has a "Power Point" type plug-in ceramic high fidelity cartridge, idler release position, rubber record mat and "Twist-up" 45 center spindle, pilot light, spring suspension feet, crackproof plywood case covered in washable gray fabrikoid. U.L. approved. DIMENSIONS: 8¼″ x 14⅛″ x 14⅛″; weight 19 pounds. POWER CONSUMPTION: 55 watts, 117 volts, 60 cycles a.c. LIST: $93.75. Plus excise tax.

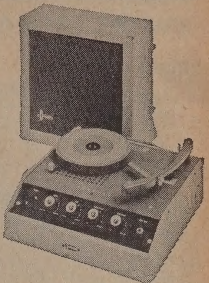
NEW MODEL AFM-1500 FM & AM

HI-FI A.C. RADIO



Never before has such all-around excellence, high power, superb sound been built into a table model radio. The Newcomb AFM-1500 has a tuning section with the sensitivity, selectivity, and stability heretofore reserved for high fidelity tuner components costing more than this complete radio set. It has a.f.c., a 15 watt peak push-pull amplifier coupled with a 20 watt 9″ oval, dual cone speaker capable of making full use of amplifier power. The Newcomb AFM-1500 has a pull-up, telescoping rotating FM antenna, built in "Hi-Q" ferrite rod AM antenna, tuning eye, lighted lucite sliderule type dial with reference scale and Conelrad markings, reference AM and FM pilot lights, wide ranging tone control of new design, large tuning knob, compensated volume control, external antenna terminals, jack for external speaker, headphones, or Newcomb Headphone Listening Center Accessory, jack for external amplifier, public address system, or tape recorder. Neat power cord stowage on back. U.L. approved. DIMENSIONS: 16¾″ x 9¾″ x 8⅝″; weight 20¼ pounds: POWER CONSUMPTION: 70 watts, 117 volts, 60 cycles a.c. LIST: $199.50. Plus excise tax.

NEW MODEL R-164V

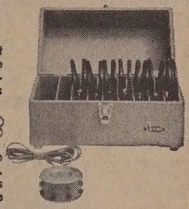


4 SPEED, VARIABLE SPEED HI-FI, MEDIUM POWER, PORTABLE COMBINATION TRANSCRIPTION PLAYER-P.A. SYSTEM

This is a versatile, portable sound system of advanced design that will play any record size up to 17¼ masters. It has the new four speed, variable speed Newcomb motor. The R-164V has a big 12″ round, dual cone high fidelity loudspeaker with 25 foot cord and the new Bi-Coupled ® 10 watt peak output system. Speaker enclosure forms case lid. Jeweled pilot light and lighted operating panel, "Power Point" type plug-in ceramic high fidelity cartridge, rubber record mat and "Twist-up" 45 center spindle. Microphone input jack. Mixing volume controls. Bass tone control does not affect voice. Separate treble control. Output jack for speaker, headphones or Newcomb Headphone Listening Center Accessory. The R-164V has a long tone arm of cast metal, protective drop pad, Hideaway power cord, 4 speed settings — 78, 45, 33⅓, and 16⅔ r.p.m.; tempo control which smoothly varies speed as much as 20%; pickup stop post; pick up lock screw; separate motor power switch that automatically retracts idler. Crackproof plywood case covered in washable gray fabrikoid. Transformer powered. U.L. approved. DIMENSIONS: 11″ x 15½″ x 15½″; weight 25 pounds. POWER CONSUMPTION: 55 watts, 117 volts, 60 cycles a.c. LIST: $159.95.

MODEL R-164 FIXED SPEED, except for the absence of Tempo Control, is identical to the R-164V. LIST: $139.95.

NEW HEADPHONE LISTENING CENTER



New Headphone Listening Center Kit is designed for library use, language study, group-within-a-group listening. The 8A Adapter simply plugs in the speaker outlet jack on any Newcomb Phonograph, Radio or Transcription Player (except the R12-C4) shown in this catalog. From one to eight pairs of phones can then be connected to the adapter.

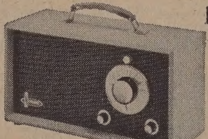
MODEL LC8A Complete Listening Center Kit, includes Adapter, 8 pairs of headphones, plywood compartmented case covered with gray fabrikoid to match Newcomb equipment. LIST: $89.60.

MODEL 8A Listening Center Adapter only, provides outlets for 8 pairs of headphones. LIST: $22.50.

MODEL HDP sturdy, sensitive, double headphones with 6′ cord, pin jacks, give excellent reproduction. Colored bright red and black to identify them as public property. LIST EACH: $5.95.

NEW MODEL AM-500 AM ONLY

HI-FIDELITY A.C. RADIO



A high performance, handsome, safe, rugged, economical continuous duty table model AM radio, the Newcomb AM-500 has a powerful 5 watt peak inverse feedback amplifier and big 8″ oval cone loudspeaker with special tweeter cone for improved distribution and high frequency response. It has a built-in "Hi-Q" antenna and terminals for external antenna. A lighted index illuminates the dial and serves as a pilot light. Dial of satin finished aluminum has large numerals and Conelrad markings. Large tuning knob drives the dial directly through planetary vernier — no strings. Jack for external speaker, headphones, or Newcomb Headphone Listening Center Accessory. Jack for external amplifier, public address system, or tape recorder. When latter is used, the amplifier-speaker system of the AM-500 becomes a fully controllable power monitor. Neat power cord storage. Crackproof plywood case covered in washable gray fabrikoid. Transformer powered. U.L. approved. DIMENSIONS: 6½″ x 8″ x 15½″; weight 10 pounds. POWER CONSUMPTION: 40 watts, 117 volts, 60 cycles a.c. LIST: $73.50. Plus excise tax.

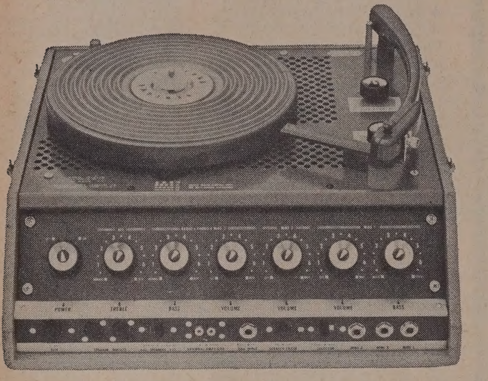
Specifications and Prices subject to change without notice. All parts used in Newcomb Equipment are made in U.S.A. All Newcomb Equipment Approved by Underwriters Laboratories.

NEWCOMB AUDIO PRODUCTS CO. • HOLLYWOOD 38, CALIFORNIA

NEWCOMB

TR SERIES HIGH POWER PORTABLE COMBINATION TRANSCRIPTION PLAYER/P.A. SYSTEMS

NEW DESIGNS! NEW MOTORS! NEW OUTPUT SYSTEMS! NEW REPRODUCERS!



New, American-Made 4 Speed Variable Speed Motor delivers full starting torque at any speed setting; no warm-up required. The motor is remarkably stable under all conditions of use, and requires no more attention than conventional fixed speed motors. No flutter producing friction discs or cone drives used.

Plays All Sizes of records up to 17¼″ masters.

New Amplifiers are engineered for optimum performance with the particular types of speakers used with the different models to greatly improve acoustic output.

Sturdy Crackproof Plywood Case is glue-blocked for additional strength, covered with washable scratch-resistant fabrikoid in a very pleasing shade of warm gray.

Metal Corners greatly extend life of case. Non-scratch feet are spring-floated to prevent needle skip from bumps and jars.

Loudspeakers Are Protected by a kickproof, perforated metal grill.

Straps for Hanging speakers from wall provided with all standard split-case speakers. Back of speaker in most models is protected by an armored basket. 25 foot cord is provided with all speakers.

New Hideaway Cord Compartment. Power cord is coiled and tucked into compartment built into side of the case.

Readily Accessible. The top deck lifts for instant access to tubes and motor. **Bottom Plate Removes** for complete access to wiring.

Clear Plastic Card Holder for name of owner, room, instructor, building, or "home base".

New Sta-Kleen ® Rubber Mat has deep grooves that swallow up dust and grime, protects records, is clamped on. Easily cleaned.

Heavy Turntable — 10″, 2 pounds — for flywheel stability, minimum wow.

Unbreakable Pop-Up 45 Spindle of nylon.

Dual-Lighted Neon Speed-O-Scope ® permits precise speed setting.

Sturdy, Full-Size Carrying Handle and handhold for assistant.

New Ceramic Cartridge on TR-1625 and TR-1640 series models is dual sapphire styli, high fidelity, plug-in, "power point" type, thoroughly proven for durability, dependability, fidelity.

GE Magnetic Cartridge, twist needle type with individually replaceable microgroove and standard sapphire styli; necessary preamplifier built in.

Drop Pad, rubber covered, protects stylus and cartridge.

Long, One Piece, Cast Metal Pickup Arm lifts to vertical position for inspection.

Rugged Stop Post prevents putting arm in wrong position.

Stylus Pressure Adjustment for 78's or LP's.

Separate Motor Power Switch automatically retracts idler.

Tempo Control varies speed from + 5% to — 15% of any standard setting.

Positive Lock Screw holds arm securely during transportation.

Two Jeweled Pilot Lights.

Dual Lighted Panel angled for most convenient operation.

Full Through Ventilation, louvers in bottom plate, holes in deck.

"All", Channel Output Jack to external amplifier permits monitoring entire output with M-9 Monitor.

Speaker Impedance Selector matches amplifier impedance to number of speakers being used.

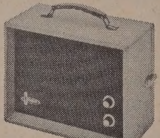
Auxiliary Input Jack for signal from radio, tape machine, or stereo channel.

"Phono" Output Jack delivers only phono signal to external amplifier or Newcomb Model M-9 Amplified Music Monitor.

Transformer Powered, Safe, completely isolated from the power mains. All units have UL approval.

Positive Humidity Protection is given output transformers by cellulose acetate or mylar insulation.

AMPLIFIED MONITOR & ACCESSORY SPEAKERS



Model M-9 Amplified Music Monitor

includes a 10 watt amplifier and 9″ oval, dual cone speaker. Has its own tone and volume controls. When connected to "Phono" output jack of any Newcomb transcription player, you monitor recorded music without feedback squeal, without confusion with own voice. Will monitor both voice and music if plugged into "All" output jack. Plywood case with handle covered with gray washable fabrikoid. 10 pounds. 13¼″ x 10⅛″ x 7″. LIST $104.50.

SINGLE SPEAKERS IN CASE
16¾″ x 16¼″ x 13¼″

Model S-112 Extended range, 12″, 30 watt, dual cone speaker. Additional speaker for TR-1625 or TR-1625M. 25′ cable. 8 ohms. 14½ pounds. LIST $65.85.

Model S-112H Heavy Duty, extended range, 12″, 50 watt speaker. Additional speaker for TR-1640. 25′ cable. 8 ohms. 14¾ pounds. LIST $75.00.

Model S-112HF Two-way, 50 watt, reproducer. 12″ woofer, crossover filter, 3½″ tweeter. Additional speaker for TR-1640M-HF. 25′ cable. 8 ohms. 15 pounds. LIST $89.25.

PORTABLE REFLEX REPRODUCERS
18½″ x 24″ x 12½″

Model R-112 Reflex enclosure with 12″ extended range, 30 watt, dual cone speaker. Additional speaker for TR-1625MR. 25′ cable. 8 ohms. 23 pounds. LIST $96.75.

Model R-112HF Reflex enclosure with two-way, 50 watt speaker system — 12″ woofer, crossover filter, 3½″ tweeter. Additional reproducer for TR-1640M-HFR or wherever high efficiency, high fidelity, and high power handling capacity are desired. 25′ cable. 8 ohms. 23¼ pounds. LIST $133.00.

2 SPEAKERS IN SPLIT CASE
16¾″ x 16¼″ x 13⅛″

Model S-212E Two 12″ extended range, 30 watt, 8 ohm, dual cone speakers, each with 25′ cord. 21 pounds. LIST $96.75.

Model S-212HE Two 12″ extended range, 50 watt, 8 ohm speakers (as used in TR-1640 models), each with 25′ cord. 21½ pounds. LIST $116.50.

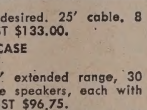
Model S-212HFE Two, two-way, 50 watt, 8 ohm speaker systems — 12″ woofer, crossover filter, 3½″ tweeter (as used in TR-1640MHF models) in each half case — each with 25′ cord. 23 pounds. LIST $133.00.

Model S-212XE Split case assembly containing two super efficiency, 60 watt, 8 ohm speakers with large, aluminum-domed, 2″ voice coils and integral tweeter cones, each with 25′ cord, especially for use with the TR-1656M-X2. 25 pounds. All above are wired with sockets as extension speakers. LIST $166.00.

DIMENSIONS OF NEWCOMB TR PLAYERS:

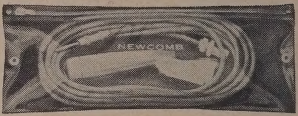
Single speaker TR players form a single case with the speaker case used as the lid. They measure 16¾″ x 16¼″ x 13¼″. Multiple speaker models snap together to form two or three cases — audio unit with lid and speakers in split cases back to back. Audio units, closed, measure 16¾″ x 16¼″ x 8½″. Dimensions of speaker assemblies are given above.

NEWCOMB ACRA-SET Model A-1



A precision-made tone arm lifter and record cueing accessory, Acra-Set lowers stylus to record with unprecedented gentleness. You simply twist the knob. Lifting arm has 100-division scale and traveling stop with pointer. Template and cue sheets supplied. Specify Newcomb model. LIST $18.75.

MICROPHONES AND ASSOCIATED EQUIPMENT



Model MS-23 Accessory Bag of heavy plastic, zippered, for microphones, etc., can be attached inside lid of speaker case. LIST (bag only) $2.95.

Model N-30 Crystal Microphone with lavalier cord, stand adapter, switch, and shielded plug. LIST $19.95.

Model N-30D Desk Mounting for N-30 only. LIST $2.65.

Model N-36 Dynamic Professional Quality Microphone is the perfectionist's choice with any TR system, especially intended for use with TR-1640M and TR-1656M series models. Supplied with shielded cord and plug and on-off switch. LIST $75.00.

Model N-23 Dynamic Microphone of very high quality with switch and shielded plug, recommended for general purpose use with all TR series systems. LIST $59.50.

Model N-3766 Stand, a professional class, extremely stable, collapsible stand, beautifully finished in brushed chrome, extending from 37″ to 66″ for use with any standard microphone. LIST $30.00.

Model PP-61 Stereo Conversion Pickup Cartridge, plug-in type, for any TR series player equipped with stereo output jack and plug-in ceramic cartridge. LIST: $6.95.

Model WC-64 Connecting Cable, four feet long with plugs for connecting two TR ceramic models together for stereo. LIST: $6.95.

Specifications and Prices subject to change without notice. All parts used in Newcomb Equipment are made in U.S.A. All Newcomb Equipment Approved by Underwriters Laboratories.

NEWCOMB AUDIO PRODUCTS CO. • HOLLYWOOD 38, CALIFORNIA

NEWCOMB

TR SERIES HIGH POWER PORTABLE COMBINATION TRANSCRIPTION PLAYER/P.A. SYSTEMS

CERAMIC MODELS

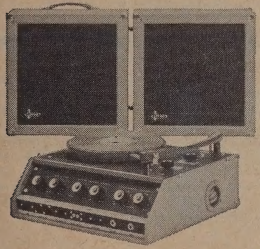
TR-1625 SERIES

25 WATTS PEAK

Successor to the widely used TR16, the Newcomb TR-1625 is capable of doing more jobs better. Four speed, variable speed model with "Power Point" type, dual sapphire styli, high fidelity pick-up. It has a treble tone control, a bass control that does not affect mike, phono volume mixer, mike volume mixer, scratch filter switch, voice filter switch, dual pilot lights and lighted control panel, lift-up motor board access to tubes and motor. Pick-up lock nut, stop post, drop pad. Hideaway cord compartment. Crackproof plywood case, glue blocked, covered with gray washable fabrikoid. Output jacks for stereo, for 2 speakers, and for monitoring "Phono" only or "All" using Newcomb M-9.

MODEL TR-1625 is in a single, split case with one 12″ dual cone, 30 watt speaker. Weight 35 lbs. LIST $209.00.

MODEL TR-1625-2 is in two cases with two 12″ dual cone, 30 watt speakers. Weight 50 lbs. LIST: $259.00.



TR-1640 SERIES

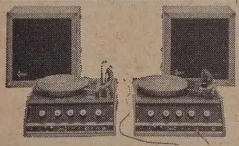
40 WATTS PEAK

A completely new system with plenty of power to drive four loudspeakers, TR-1640 models are excellent choices for gyms, athletic fields, auditoriums. Start with a single speaker, or two speaker model; add additional speakers at any time. Provided with a treble tone control for all channels, separate bass for phono, separate bass for mike, phono volume mixer, mike volume mixer, scratch filter switch. Two pilot lights. Lighted operating panel. Crackproof plywood case, fabrikoid covered. Easy access to tubes and wiring. Spring suspension feet. Hideaway cord compartment.

MODEL TR-1640 is in a single split case with one 12″, 50 watt loudspeaker. Weight 36 lbs. LIST $254.95.

MODEL TR-1640-2 is in two cases with two 12″, 50 watt speakers. Weight 51½ lbs. LIST $314.50.

MODEL TR-1640-4 is in three cases with two 12″, 50 watt speakers and two 12″, 30 watt extension speakers. Weight 72½ lbs. LIST $394.00.



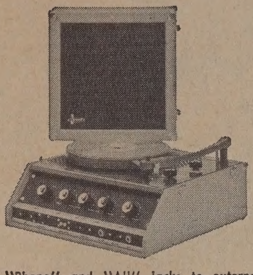
USE TWO CERAMIC MODELS FOR STEREO

Ceramic models have stereo jacks. The standard monophonic ceramic cartridge is replaced with a stereo cartridge. A patch cord is run from the stereo jack on the first player to the "Auxiliary" input jack on the second. Thus, while having a perfectly balanced, fully controllable stereo reproducer, you still have two complete, individual players for other assignments.

And if you wish to use stereophonic tape, connect the two outputs of the Newcomb Model SM-310 professional stereo tape machine to the auxiliary inputs of any two Newcomb TR Series players to provide two powerful, matched reproduction channels complete with tone controls.

Specifications and Prices subject to change without notice. All parts used in Newcomb Equipment are made in U.S.A. All Newcomb Equipment Approved by Underwriters Laboratories.

MAGNETIC MODELS



TR-1625M SERIES

25 WATTS PEAK

When music reproduction is a major consideration, a Newcomb TR player equipped with a magnetic cartridge is the answer. The TR-1625M is furnished with a GE variable reluctance, twist needle cartridge with sapphire styli and necessary preamplifier built in. The 4 speed, variable speed motor is a new 4 pole, deluxe unit for minimum rumble. Pilot lights; lighted panel, crackproof plywood case, 2 speaker output jacks; "Phono" and "All" jacks to external amplifier or Newcomb M-9 Monitor. Input jacks for auxiliary equipment and microphone.

MODEL TR-1625M is in a single, split case with one 12″ dual cone, 30 watt speaker. Weight 36 lbs. LIST $231.95.

MODEL TR-1625MR is in two cases with a single 12″ dual cone, 30 watt speaker in a portable bass reflex enclosure. Weight 53 lbs. LIST $281.50.

MODEL TR-1625M-2 is in two cases with two 12″ dual cone, 30 watt speakers. Weight 51 lbs. LIST $281.50.

TR-1640M SERIES

40 WATTS PEAK

A more powerful music model with ultra-linear amplifier output system, the TR-1640M systems have the GE cartridge with built in preamp. The phono circuit is convertible to a second mike channel by merely flipping the selector switch. New 4 speed motor is the deluxe, 4 pole unit. As on all TR models a dual lighted neon strobe permits precise speed setting for accurate pitch reproduction. Same output jacks as TR-1625M.

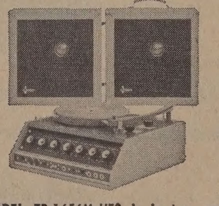
MODEL TR-1640M-HF is a single case model with a two-way speaker system including a 12″, 50 watt woofer, crossover, and separate 3½″ tweeter. Weight 36½ lbs. LIST $307.50.

MODEL TR-1640M-HF2 is a two case system with two, two-way, 50 watt speaker systems. Weight 54 lbs. LIST $366.00.

MODEL TR-1640M-HF4 is a three case system with two, two-way 50 watt speaker system and two 12″ dual cone, 30 watt extension speakers. Weight 75½ lbs. LIST $464.50.

MODEL TR-1640M-HFR is in two cases with one two-way 50 watt speaker system in a bass reflex enclosure. Weight 54 lbs. LIST $366.00.

MODEL TR-1640M-HFR2 is in three cases with two, two-way 40 watt speaker systems in reflex enclosures. Weight 77 lbs. LIST $499.00.



TR-1656M SERIES

56 WATTS PEAK

Phenomenal output is achieved in these fully integrated systems. Phono channel converts to third microphone channel. First mike channel has separate bass attenuating control for voice clarity. Second mike channel is flat. The phono tone controls affect the third mike channel.

MODEL TR-1656M-HF2 is in two cases with two, two-way 50 watt speaker systems including a 12″, 50 watt woofer, crossover, separate 3½″ tweeter. Weight 57 lbs. LIST $432.00.

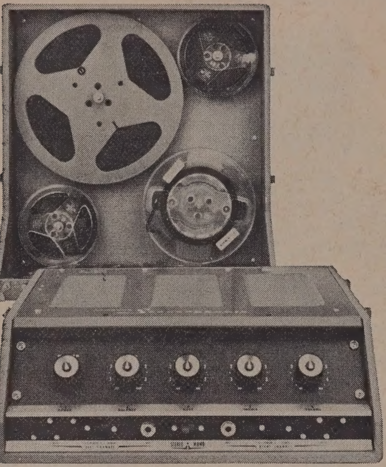
MODEL TR-1656M-HF4 is in three cases with four, two-way 50 watt speaker systems. Weight 80 lbs. LIST $565.00.

MODEL TR-1656M-X2 is in two cases with two 12″, 60 watt, super-efficient, dual cone speaker. Weight 59 lbs. LIST $467.00.

MODEL TR-1656M-X4 is in three cases with four 12″, 60 watt speakers. Weight 84 lbs. LIST $632.00.

NEWCOMB AUDIO PRODUCTS CO. • HOLLYWOOD 38, CALIFORNIA

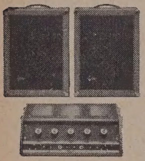
NEWCOMB | PORTABLE STEREO AMPLIFIER-REPRODUCER SYSTEMS



MODEL SA-80 2 CHANNEL POWER AMPLIFIER WITH TONE, VOLUME, AND BALANCE CONTROLS

The Newcomb SA-80 is a two-channel, stereo/monaural, portable, power amplifier designed especially for use with either the Newcomb SM-310-4 or Newcomb SM-310 Tape Recorder. The amplifier puts out 40 watts peak per channel, a total of 80 watts peak. The controls are conveniently grouped on a slanted operating panel that is brightly illuminated by two pilot lights. Controls are ganged. They consist of a bass boost and attenuation control, treble boost and attenuation, volume control, and a balance control that can be used to equalize outputs of the two channels if necessary. There is an input jack for each channel, a stereo-monaural selector switch, output impedance selectors, and two-speaker sockets for each channel. The case is crack-proof, warp proof, glue-blocked plywood covered with gray, washable, scratch-resistant fabrikoid. Control panel is cinnamon brown . . . a handsome, easy-to-live-with color scheme. The removable cover carries tape reels of all sizes up to and including 10½″. A plastic zippered bag for miscellaneous cords is included. The a.c. power cord is conveniently stowed in a hideaway compartment on the side of the case.

SPECIFICATIONS: Peak power per channel—40 watts. Input signal required per channel for full output—.47 volts. Frequency response—20-20,000 cycles ± 1 db. Distortion per channel at 20 watts r.m.s.—less than 1%. Hum below—65 db. Output impedances per channel—16, 8, 4 ohms. Dimensions —8½″ x 16¾″ x 16⅜″. Wt. 32 lbs. PROFESSIONAL NET: $199.50.

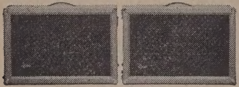


SYSTEM SA-80-J2 consists of one SA-80 Power Amplifier and two Model J-200 Reproducers. Three cases. Weight of complete system—71 pounds. PROFESSIONAL NET: **$368.40.**

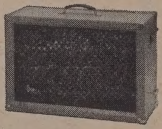
SYSTEM SA-80-C2 consists of one SA-80 Power Amplifier and two Model C-100 Reproducers. Three cases. Weight of complete system —71 pounds. PROFESSIONAL NET: $368.40.

THE MODEL J-200 REPRODUCER is a two-way speaker system—with tweeter level control—enclosed in a highly compact, portable case that uses the latest techniques to provide response previously associated only with large, bulky reproducers. Their conversion efficiency is such that, when a pair is used with the SA-80, they will provide full range, high fidelity reproduction and excellent coverage in school music rooms, small auditoriums, homes, and in most general business and professional applications. Case is plywood, covered with gray fabrikoid to match the SA-80, with hideaway power cord compartment. Corners are protected with metal; grill is perforated metal. Size of each J-200—14¾″ x 20″ x 10¼″. Weight—19½ pounds. PROFESSIONAL NET: $79.50.

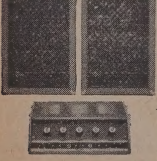
THE MODEL C-100 REPRODUCER is identical in dimensions, appearance, and weight to the J-200. However, in the C-100 over-all high efficiency with compactness and light weight has been the leading objective. It performs with quality that compares with—and frequently surpasses—much larger speakers. Provides greater audience coverage than the J-200 or K-400 reproducers but not as much as the L-300. PROFESSIONAL NET: $79.50.



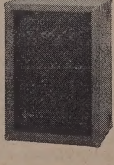
SYSTEM SA-80-L2 is made up of one SA-80 Power Amplifier and two Model L-300 Reproducers. Three cases. Weight of complete system—90 pounds. PROFESSIONAL NET: $448.40



THE MODEL L-300 REPRODUCER is a two-way, three-driver loudspeaker system in an open-back case. It is designed for those who want a system capable of covering large audiences and auditoriums with outstanding reproduction quality and yet be reasonably portable. To accomplish this objective each L-300 contains two 12″ woofers, a horn-loaded tweeter with volume control, and a complete crossover network. Case is plywood, covered with gray fabrikoid to match the SA-80. Corners are protected with metal; grill is perforated metal. Size of each L-300 is 17⅛″ x 26⅛″ x 9¼″. Weight—29 pounds.
PROFESSIONAL NET: $119.50



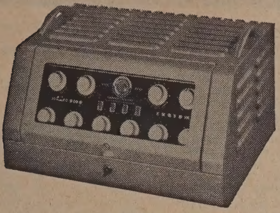
SYSTEM SA-80-K2 includes one SA-80 Power Amplifier and two K-400 Reproducers. Three cases. Weight of complete system—102 pounds. PROFESSIONAL NET: **$468.40.**



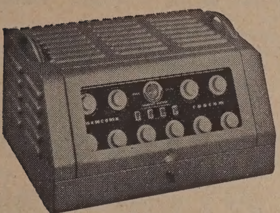
THE MODEL K-400 REPRODUCER is a three-way loudspeaker system developed for those who seek the very best possible reproduction that can be provided by translating advanced engineering concepts into portable form . . . and yet do not need the tremendous conversion efficiency of the L-300. The performance of the K-400 from 25 through 15,000 cycles rivals that of the best "permanent" reproducers of far greater bulk, size, weight, and cost. Case is plywood, covered with gray fabrikoid, has hideaway power cord compartment. Corners are metal-protected; grill is perforated metal. Size of each K-400—16⅞″ x 23½″ x 10¼″. Weight—35 pounds.
PROFESSIONAL NET: $129.50.

NEWCOMB AUDIO PRODUCTS CO. • HOLLYWOOD 38, CALIFORNIA

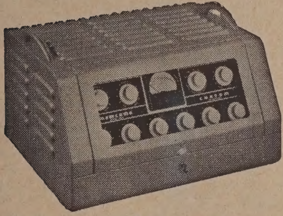
NEWCOMB | AMPLIFIERS • CUSTOM SERIES (K)



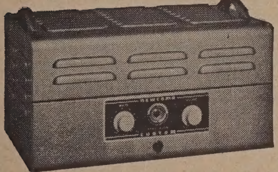
KX-25



KX-50



KX-6A



K-50B

Without equal at any price. The best examples why the name Newcomb is so revered by Engineers and Owners alike. Will improve any system. A must when using the new 2-way wide range speakers. Check these important features and specifications.

- 20-20,000 cycles ± 1 db
- Less than 3% distortion
- 90% of rating at less than 1%
- Full power any output tap
- Audio bandwidth selectors
- Hum and noise level — 80 db.
- Remote control provision — all inputs
- U/L Approved
- Continuous duty — longer life parts
- Key locked control cover
- Sensitive volume and overload indicators
- Wired for plug-in input transformers

Full audio power, 50 to 5000 cycles (region of all major power requirements) within ± ¼ db. less than 5% distortion. Separate tone controls for Bass and Treble Boost or Attenuation of advanced design for better curve shape, greater range. Feedback controlled, 2 stage mike pre-amplifiers. Hum balancing control, all models but booster. Linear mixer frequency response. All but Pre-Amplifier have output impedance of 4, 8, 16, 250, 500 ohms, PLUS a 70 volt "constant voltage" tap, with convenient, simple, impedance selector. Multistage inverse feedback. Large, heavy duty power and output transformers thoroughly impregnated against moisture. Rear connections avoid unsightly wires, simplify rack installation. A. C. convenience outlet in rear, all models except booster. CABINETS: Heavy gauge welded steel beautifully styled. FINISH: Silver Grey Hammertone Baked Enamel. PANELS: Etched metal, illuminated. KNOBS: Round, large, skirted type, for easy operation. Additional specifications given under specific model numbers.

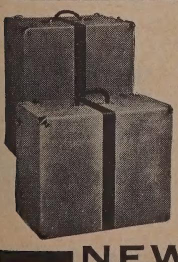
KX-25: 25 watts power output design center, rating, 30 watts max. at less than 3% distortion any output tap. PEAK POWER: 40 watts design center, 48 watts max. INPUTS (6): 5 mike (2 meg.), gain 123 db; 1 phono either Magnetic input gain 99 db based on 27000 ohm input, bass equalization +10 db or Crystal input ½ meg. gain 90 db. REMOTE CONTROL: Use RC-6 remote control unit. BASS TONE CONTROL: Range — 16 to +25 db. TREBLE TONE CONTROL: Range —30 to +20 db. HUM: —80 db controls off, —75 db crystal phono. —65 db mike and magnetic pickup inputs (Referred to rated output). CONTROLS (15): 5 mike, 1 phono, 1 bass, 1 treble, 4 bandwidth, 1 master, 1 volume indicator (all under keylocked control cover) A.C. power switch. TUBES (15): 6-6SC7, 2-6J5, 1-6J7, 1-6SQ7, 1-6SN7, 2-6L6G, 1-6AF6G, 1-5U4G. POWER CONSUMPTION: 135 watts, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9⅜" x 17¾" x 14¾" WEIGHT: 38½ lbs. LIST: (with tubes) **$456.92.** Use Cannon XL3-11 type microphone connectors.

KX-50: 50 watts power output design center rating, 60 watts max. at less than 3% distortion any output tap. PEAK POWER: 80 watts design center, 90 watts, max. BOOSTER COUPLING JACK for connecting K50B Boosters for 100 watts or more. All other characteristics identical with KX-25 except gains, which are all 3 db higher than KX-25. TUBES (18): 6-6SC7, 2-6J5, 1-6SQ7, 1-6J7, 1-6SN7, 4-6L6G, 1-6AF6G, 2-5U4G. POWER CONSUMPTION: 235 watts, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9⅜" x 17¾" x 14¾", WEIGHT: 46 lbs. **LIST:** (with tubes) **$532.03.** Use Cannon XL3-11 type microphone connectors.

KX-6A: A 6 channel mixer pre-amplifier designed to feed broadcast lines or boosters for finest quality. OUTPUT: +31 VU, less than 3% distortion, +30 VU at less than 1%. Has built in power supply and genuine VU meter with meter range extension switch. INPUTS: for 5 mikes (2 meg.) gain 97 db and 1 phono either crystal (½ meg.) gain 64 db or magnetic (27,000 ohms) gain 73 db. Use RC-6 Unit for remote control. Includes Master Volume Control and same fine Dual Tone Controls and Audio Bandwidth Selectors as in KX-25 and KX-50. BASS TONE CONTROL: Range —16 to +25 db. TREBLE TONE CONTROL: Range —30 to +20 db. HUM: —80 db controls off, —80 db crystal —75 db mike and magnetic. CONTROLS (12): 5 mike, 1 phono, 1 bass, 1 treble, 1 master, 1 four position bandwidth (all under key locked cover), 1 A.C. power switch, 1 VU meter range switch (in rear). TUBES (12): 6-6SC7, 4-6J5, 1-6J7, 1-6X5. POWER CONSUMPTION 35 WATTS, 117 volts 60 cycles A.C. MAX. Input 129 volts. DIMENSIONS: 9⅜" x 17¾" x 14¾". WEIGHT: 30 lbs. LIST: (with tubes) **$400.29.** Use Cannon XL3-11 type microphone connectors.

K50B: Booster Amplifier. Performance, power and output impedance same as KX-50 with but one input of ½ meg. impedance, gain 71 db. Provision for plug-in bridging or low impedance transformer. Built for continuous duty with long life parts, separate plate, and filament power transformers, individually fused, permits dependable plate power switching. Includes volume and overload indicators as in KX-50. Ample multistage feedback to minimize effects of speaker load variations. Etched metal panel. TUBES (10): 1-6SJ7, 1-6SN7, 1-6SQ7, 5-6L6G, 1-6AF6G, 2-5U4G, POWER CONSUMPTION: 230 watts 117 volts 60 cycles. 129 volts max. DIMENSIONS: 9⅜" x 17¾" x 12¼". WEIGHT: 41 lbs. LIST: (with tubes) **$225.00. PLUG KIT: $2.50.**

NEWCOMB | PORTABLE SYSTEMS • CUSTOM SERIES (K)



KX-2512X: Portable system with KX-25 amplifier and two heavy duty, extremely efficient speakers, each with 50′ cable. System is carried in two cases: Model KA for the amplifier, size 19" x 11¾" x 16⅞"; Model K-212X for two speakers, size 18½" x 12½" x 22½". Speakers face inside for maximum protection when split case is closed. Mikes and mountings not included as requirements vary. LIST: (less mikes and stands) **$645.57.**

KA: Amplifier case fits all model K amplifiers. LIST: **$35.00.**

KX-25R12X: Portable system identical to KX-2512X but with each speaker mounted in an individual portable reflex baffle. Model KR-112X, for utmost tone quality. Speaker cases size, 18½" x 12½" x 24½". Mikes and mountings not included as requirements vary. LIST: (less mikes and stands) **$716.82.**

All Prices and Specifications Subject to Change Without Notice.

NEWCOMB AUDIO PRODUCTS CO. • HOLLYWOOD 38, CALIFORNIA

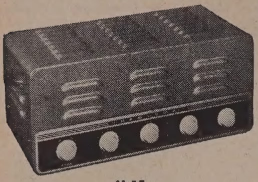
NEWCOMB

AMPLIFIERS • DELUXE SERIES
PORTABLE SYSTEMS

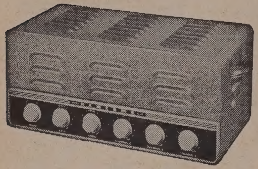
For Performance, Dependability and Value check these features and specifications:

- 20-20,000 cycles ± 2 db
- Full Power any output tap
- Less than 5% distortion
- 90% of rated power at less than 2%
- Remote Control provision — all mikes
- U/L Approved
- Continuous duty—longer life parts
- Wired for plug-in input transformers

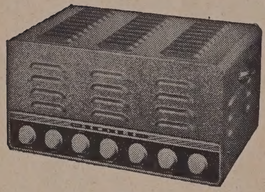
Full Audio Power, 50 to 5000 cycles (region of all major power requirements) within ± ½ db. less than 5% distortion. Individual boost and attenuate type bass and treble tone control in new distortion free circuit. Linear mixer frequency response. All models but pre-amplifier have output impedances of 4, 8, 16, 250, and 500 ohms PLUS a 70 volt "constant voltage" tap, with easily-operated impedance selector. Multi-stage inverse feedback. Large heavy duty power and output transformers thoroughly impregnated against moisture. Rear connections avoid unsightly wires, simplify rack installations. A. C. convenience outlet in rear, all models except boosters. CABINETS: Heavy gauge welded steel beautifully styled in modern functional simplicity that endures. FINISH: Silver Grey Hammertone Baked Enamel. PANEL: Etched metal, illuminated. KNOBS: Large, round, skirted type, for ease of operation. Additional specifications under specific model numbers.


H-15

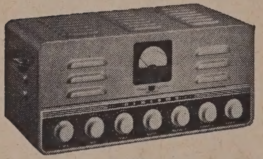
H-15: 17 watts power output design center rating, 20 watts max. at less than 5% distortion, **any output tap.** PEAK POWER: 26 watts design center, 31 watts max. INPUTS (3): 2 mike (2 meg.), gain 120 db; 1 phonograph (½ meg.), gain 80 db. BASE TONE CONTROL: Range −16 to +14 db. TREBLE TONE CONTROL: −34 to +13 db. HUM: −72 db phono input, −62 db mike inputs (referred to rated output). CONTROLS (5): 1 mike-phono, 1 mike, 1 bass, 1 treble, 1 A.C. power switch. REMOTE CONTROL: Use RC-2 remote control unit. TUBES (7): 2-6SF5, 1-6SJ7, 1-6SN7, 2-6L6G, 1-5Z4. POWER CONSUMPTION: 85 watts, 117 volts 60 cycles. A.C. Max. input 129 volts. DIMENSIONS: 8¼" x 19" x 10⅛". WEIGHT: 20 lbs. LIST: (with tubes) $183.59. Use Cannon XL3-11 type microphone connectors.


H-25

H-25: 25 watts power output design rating, 30 watts max. at less than 5% distortion, **any output tap.** PEAK POWER: 40 watts design center, 48 watts maximum. INPUTS (4): 3 mike (2 meg.), gain 124 db; 1 phonograph (½ meg.), gain 80 db. BASS TONE CONTROL: −18 to +15 db. TREBLE TONE CONTROL: Range −27 to +10 db. HUM: −72 db phono input, −62 db mike inputs (referred to rated output). CONTROLS (6): 2 mike, 1-mike-phono, 1 bass, 1 treble, 1 A.C. power switch. REMOTE CONTROL: Use RC-3 remote control unit. TUBES (8): 3-6SF5, 1-6SJ7, 1-6SN7, 2-6L6G, 1-5U6G. POWER CONSUMPTION: 125 watts, 117 volts, 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 8½" x 19" x 10⅛". WEIGHT: 24 lbs. **LIST:** (with tubes) **$215.03.** Use Cannon XL3-11 type microphone.


H-50

H-50: 50 watts power output design center rating, 60 watts max. at less than 5% distortion, **any output tap.** PEAK POWER: 80 watts design center, 90 watts max. INPUTS (5): 4 mike (2 meg.), gain 124 db. 1 phono (½ meg.), gain 81 db. BOOSTER COUPLING JACK for connecting H-25B or H-50B Boosters for 75 to 100 watts or more. BASS TONE CONTROL: Range −21 to +16 db. TREBLE-TONE CONTROL: Range −27 to +10 db. HUM: −72 db phono input, −62 db mike inputs (referred to rated output). CONTROLS (7): 3 mike, 1 mike-phono, 1 bass, 1 treble, 1 A.C. power switch. REMOTE CONTROL: Use RC-4 remote control. TUBES (12): 4-6SF5, 1-6SJ7, 1-6SN7, 4-6L6G, 2-5U4G. POWER CONSUMPTION: 225 watts, 117 volts, 60 cycles A.C. Max Input 129 volts. DIMENSIONS: 9¼" x 19" x 12½". WEIGHT: 37 lbs. **LIST:** (with tubes) **$285.60.** Use Cannon XL3-11 type


H-4VU

H-4VU: Mixer Pre-Amp. with built-in power supply. Extremely low hum. Suitable for feeding telephone lines or booster amplifiers such as the H-25B or H-50B. Output +22 db at less than 5% distortion. +21 db at less than 2%. INPUTS for three mikes (2 meg.), gain 90 db, 1 phono (½ meg.), gain 51 db. HUM: Better than, −80 db from phono input or −75 db, mike inputs. Use RC-3 Unit for remote control. Includes master control and genuine VU meter with meter range extension switch. BASS TONE CONTROL: Range −16 to +14 db. TREBLE TONE CONTROL: Range −27 to +13 db. TUBES (7): 3-6SF5, 1-6SJ7, 1-6SN7, 1-6J5, 1-6X5, POWER CONSUMPTION: 30 watts, 117 volts, 60 cycles A.C. Max Input 129 volts. DIMENSIONS: 8½" x 19" x 10⅛". WEIGHT: 17½ lbs. **LIST:** (with tubes) **$228.44. Without UV meter $182.94.** Use Cannon XL3-11 type microphone connectors.

H-25B

H-25B: Booster Amplifier — Performance Power and Output Impedances same as H-25 with but one input of ½ meg. impedance, gain 68 db. Provision for plug-in bridging or low impedance transformer. Etched metal panel with pilot light, A.C. power switch and volume control. Ideal for use with H-4 Pre-amplifier. Built for long life. TUBES (5): 1-6SJ7, 1-6J5, 2-6L6G, 1-5U4G POWER CONSUMPTION: 120 watts, 117 volts. 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 8⅛" x 19" x 10⅛". WEIGHT: 22 lbs. LIST: (with tubes) **$149.50. PLUG KIT: $1.69.**

H-50B: Booster Amplifier — Performance, Power and Output Impedances are same as H-50 with but one input of ½ meg. impedance, gain 71 db. Provision for plug-in bridging or low impedance transformer. Etched metal panel with pilot light, A.C. switch and volume control. Built for long life. Ideal for use with H-4 Pre-Amp. TUBES (8): 1-6SJ7, 1-6J5, 4-6L6G, 2-5U4G. POWER CONSUMPTION: 220 watts, 117 volts, 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9¼" x 19" x 12½". WEIGHT: 33½ lbs. LIST: (with tubes) **$189.50. PLUG KIT: $1.69.**

NEWCOMB DELUXE PORTABLE SYSTEMS

H-50B

H-1512R: Portable system with H-15 amp. and two 12" speakers, each with 25' cable, in split case Model EH-212R, size 11⅛" x 20½" x 21", covered in washable fabricoid. Kickproof metal grills protect speakers. Mikes and mountings not included as requirements vary. LIST: (less mikes and stands) **$283.09.**

H-2512R: Portable system with H-25 amp. and two 12" speakers, each with 25' cable in split case, Model EH-212R. Size, 20½" x 11⅛" x 21". Mikes and mountings not included as requirements vary. LIST: (less mikes and stands) **$314.53.**

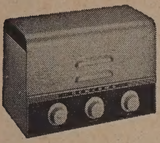
All Prices and Specifications Subject to Change Without Notice.

NEWCOMB AUDIO PRODUCTS CO. • HOLLYWOOD 38, CALIFORNIA

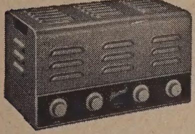
NEWCOMB

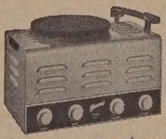
AMPLIFIERS • SPECIAL SERIES (E)

The same fine workmanship and materials as the incomparable KX- and H-Series. Designed to lead the low-price field. For performance, dependability and economy the E-Series is today's best combination of high quality and low cost. All models U/L Approved.



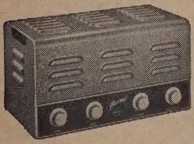
E-10A: Delivers 10 watts from push-pull 6V6 tubes. Separate mike and phono controls. Multistage inverse feedback circuit. POWER OUTPUT: 10 watts at less than 5%. FREQUENCY RESPONSE: 40 to 15,000 cycles ± 2 db. INPUTS: (2) 1 mike (2 meg.) gain 116 db. Wired for plug-in input transformers. 1 phono (½ meg.) gain 77 db. TONE CONTROL: Range 0 to —24 db. OUTPUT IMPEDANCES: 4, 8, 16 and 500 (70 Volt Tap) ohms to octal socket. TUBES: (5) 1-6SC7, 1-6SJ7, 2-6V6GT, 1-6X5GT. FINISH: Silvergrey hammertone baked enamel. PANEL: Genuine etched enamel. POWER CONSUMPTION: 60 watts at 117 volts, 60 cycles A.C. SIZE: 5¾" x 10⅜" x 6¾". WEIGHT: 9½ lbs. Less cover, 7½ lbs. LIST: (with tubes, without cover) $69.50. Cover $7.21. PLUG KIT: $1.71.

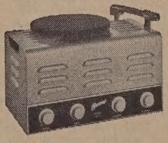




E-17P3: A conservative 17 watt model with 3 speed phono. Separate bass and treble controls, phono bass boost, multi-stage inverse feed-back circuit. Input controls for mike and phono. POWER OUTPUT: 17 watts at less than 5%. FREQUENCY RESPONSE: ± 2 db. 40 to 15,000 cycles. INPUTS: 1 mike (2 meg.) gain 115 db, Wired for plug-in input transformers. 1 phono (½ meg.) gain 77 db. OUTPUT IMPEDANCES: 4, 8, 16, 290 (70 Volt Tap) and 500 ohms. TUBES: (5) 1-12AX7, 1-6SJ7, 2-6L6G, 1-5V4G. FINISH: Silvergrey hammertone baked enamel. PANEL: Etched metal, lighted. POWER CONSUMPTION: 75 watts at 117 volts, 60 cycles A.C. SIZE: 8⅜" x 14⅛" x 8". WEIGHT: 15½ lbs. LIST: (with tubes) $151.55. PLUG KIT: $2.28.

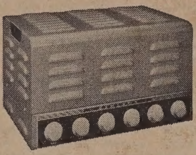
E-17: A 17 watt amplifier without 3 speed phono. Otherwise identical to model E-17P3. LIST: (with tubes and cover) $107.50. PLUG KIT: $2.28.

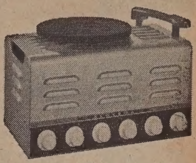




E-25: A dependable, full 25 watts with inputs for 2 mikes and 1 phono, separate bass and treble controls, phono bass boost, multi-stage inverse feedback circuit. POWER OUTPUT: 25 watts at less than 5%. FREQUENCY RESPONSE: ± 2 db. 40 to 15,000 cycles. INPUTS: (3) 2 mike (2 meg.) gain 117 db, Wired for plug-in input transformers. 1 phono (½ meg.) gain 77 db. OUTPUT IMPEDANCES: 4, 8, 16, 196 (70 Volt Tap) and 500 ohms. TUBES: (6) 1-12AX7, 1-6SC7, 1-6J5, 2-6L6G, 1-5V4G. FINISH: Silvergrey hammertone baked enamel. PANEL: Etched metal, lighted. POWER CONSUMPTION: 90 watts, 117 volts, 60 cycles A.C. SIZE: 8⅜" x 14⅛" x 8". WEIGHT: 18¼ lbs. LIST: (with tubes and cover) $139.50. PLUG KIT: $3.24.

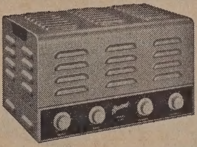
E-25P3: A 25 watt amplifier with 3 speed phono. Otherwise identical to model E-25. LIST: (with tubes) $183.18. PLUG KIT: $3.24.



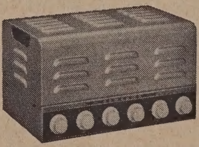


E-254P3: A highly versatile, yet economical 4 channel, 25 watt amplifier with 3 speed phono. FEATURES: High gain, inputs for 3 mikes and 1 phono, separate bass and treble tone controls, phono bass boost, multi-stage inverse feedback circuit. Pickup is high-grade turnover crystal. POWER OUTPUT: 25 watts at less than 5% distortion. FREQUENCY RESPONSE: ± 2 db, 40 to 15,000 cycles. 3 MIKE INPUTS: 2 meg., gain 123 db. Wired for plug-in input transformers. PHONO INPUT: ½ meg., gain 83 db. OUTPUT IMPEDANCES: 4, 8, 16, 196 (70 Volt Tap) and 500 ohms. TUBES: (8) 3-6SF5, 1-6SJ7, 1-6SN7, 2-6L6G, 1-5V4G, FINISH: Silvergrey hammertone baked enamel. PANEL: Etched metal illuminated. CONTROLS: 3 mike, 1 phono, 1 bass, 1 treble and power switch. POWER CONSUMPTION: 105 watts at 117 volts, 60 cycles A.C. SIZE: 8⅜" x 14⅛" x 8". WEIGHT: 18¼ lbs. LIST: (with tubes) $213.18. PLUG KIT: $3.90.

E-254: A 25 watt amplifier without 3 speed phono. Otherwise identical to model E-254P3. LIST: (with tubes and cover) $169.50. PLUG KIT: $3.90.



E-50: A distortion-free, conservatively rated 50 watts using push-pull parallel 6L6 tubes and multi-stage inverse feedback circuit. Has inputs for 2 mikes, 1 phono, separate bass and treble controls, phono bass boost. Same as E-25 except as follows: POWER OUTPUT: 50 watts at less than 5%. Mike gain 120 db, Wired for plug-in input transformer Phono gain 79 db. OUTPUT IMPEDANCES: 4, 8, 16, 98 (70 Volt Tap) and 250 ohms. TUBES: (9) 1-6SJ7, 1-12AX7, 1-6J5, 4-6L6G, 2-5V4G. POWER CONSUMPTION: 170 watts at 117 volts, 60 cycles A.C. SIZE: 11¼" x 14¾" x 8½". WEIGHT: 29 lbs. LIST: (with tubes and cover) $196.50. PLUG KIT: $3.24.



E-504: A 4 channel 50 watt amplifier featuring; high gain, inputs for 3 mikes and 1 phono, separate bass and treble tone controls, phono bass boost, multi-stage inverse feedback, push pull parallel output system for lowest distortion at all power levels. POWER OUTPUT: 50 watts at less than 5% distortion. FREQUENCY RESPONSE: ± 2 db, 40 to 15,000 cycles. THREE MIKE INPUTS: 2 meg., gain 126 db. Wired for plug-in input transformers. PHONO INPUT: ½ meg., gain 86 db. OUTPUT IMPEDANCES: 4, 8, 16, 98 (70 Volt Tap) and 250 ohms. TUBES: (11) 3-6SF5, 1-6SJ7, 1-6SN7, 4-6L6G, 2-5V4G. FINISH: Silvergrey hammertone baked enamel. PANEL: Etched metal, illuminated. CONTROLS: 3 mike, 1 phono, 1 bass, 1 treble and power switch. POWER CONSUMPTION: 180 watts, 117 volts, 60 cycles A.C. SIZE 11¼" x 14¾" x 8½". WEIGHT: 30 lbs. LIST: (with tubes and cover) $239.50. PLUG KIT: $3.90.

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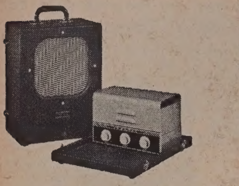
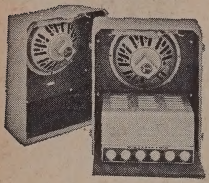
NEWCOMB AUDIO PRODUCTS CO. • HOLLYWOOD 38, CALIFORNIA

NEWCOMB | PORTABLE AMPLIFIERS (E) SERIES



E-1010S: A 10 watt basic portable consisting of one E-10 amplifier with plugs and one E-110S case assembly with efficient 10" P.M. speaker protected by a kick-proof metal grill. Speaker cable 25'. Overall size: 12¼x15¾x8¾".

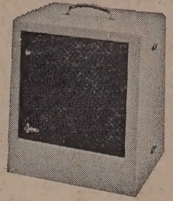
Weight: 19 lbs. LIST: (less mike and stand) **$126.82.**



E-1712R: A 17 watt dual speaker portable system consisting of one E-212R split speaker and amplifier case assembly with two 12" high quality P.M. speakers, each with 25' cable, protected by kick-proof grills, and one E-17 amplifier with plugs. Size: 11⅛ x 20½ x 21". Weight: 40 lbs. LIST: (less mike and stand) **$209.28.**

E-2512R: A 25 watt dual speaker portable system with model E-25 amplifier. Weight 42½ lbs. LIST: (less mikes and stands) **$242.24.**

E-25412R: A 25 watt dual speaker portable system consisting of one E-212R split case assembly with two 12" P.M. speakers each with 25' cable, and model E-254 four channel amplifier. LIST: (less mikes and stands) **$272.90.**



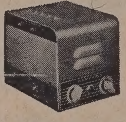
E-17P312R: A 17 watt dual speaker portable system with 3 speed phono. Consists of model E-17P3 amplifier in E-212R split case assembly. LIST: (less mike and stand) **$252.96.**

E-25P312R: A 25 watt dual speaker portable system with 3 speed phono. Model E-25P3 amplifier in E-212R split case assembly. LIST: (less mikes and stands) **$285.92.**

E-254P312R: A 25 watt dual speaker portable system with 3 speed phono. Same as E-25412R but with 3 speed phono top amplifier model E-254P3. LIST: (less mikes and stands) **$316.58.**

ALL NEWCOMB
tuners, amplifiers, phonographs
and sound systems are
U/L APPROVED

NEWCOMB | MOBILE AMPLIFIERS (E) SERIES



E-10M: A 10 watt mobile amplifier. For use on 6 V.D.C. or 117 V.60 cycles A.C. Features push-pull beam power output tubes with inverse feedback for low distortion, standby, battery saver switch, new freedom from vibrator hash, special mounting for easy removal of chassis, inputs for mike and phono, sturdy Jones connectors for battery and A.C. cables. POWER OUTPUT: 10 watts at less than 5%. FREQUENCY RESPONSE: ± 2 db. 50 to 15,000 cycles. INPUTS: Mike (2 meg.) gain 115 db. phono (1½ meg.) gain 75 db. OUTPUT IMPEDANCES: 4, 8, 16 ohms. TUBES: (5) 1-6SC7, 1-6SF5, 2-6V6GT, 1-6X5GT, POWER CONSUMPTION: 60 watts. 117 volts, 8 amps. at 6 V.D.C. FINISH: Silvergrey hammertone baked enamel. PANEL: Etched metal with pilot lamy. SIZE 6⅛x6⅜x8¼". WEIGHT: 9¾ lbs. LIST: (with tubes) **$99.75.** Plug Kit **$1.39.**

All Newcomb equipment U/L approved. Prices and specifications subject to change without notice.

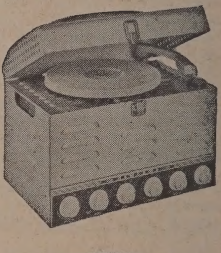
No matter what price level . . .

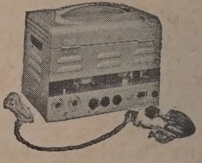
if it's a NEWCOMB,

it's DEPENDABLE!

Sound installations vary greatly in their needs of complexity as well as requirements of cost. Yet, one important feature is required of all —dependability. No matter how complex, or how simple and inexpensive your needs may be . . . you can enjoy utmost dependability by insisting on a Newcomb amplifier for your sound system. No product bears the name Newcomb unless it is inherently dependable, no matter on what price level you find it. Under the Newcomb name there is only one standard for quality . . . *the best!* Newcomb amplifiers vary in their complexity, but never in dependability. Quality of parts, materials or workmanship are never sacrificed here to gain lower price. Lower cost of one Newcomb model as compared to another is always entirely the result of greater simplicity.

12-VOLT



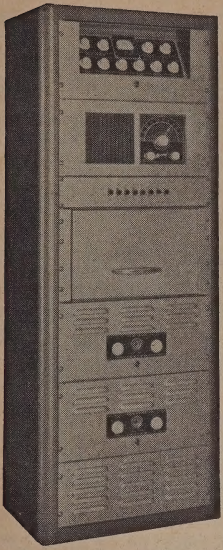


Newly developed E-253M Series Newcomb Amplifier designed for use anywhere. Ultra modern 25 watt unit available in several styles with and without turntable (see below). May be used on either 12-volt storage battery or 117 volt 60 cycle AC power source with equal effectiveness. Consumes as much as 20% less battery current, weighs up to 30% less. Separate bass and treble tone controls; two microphone channels each with the new standard broadcast type connectors and convertible to low impedance with Newcomb humless plug-in input transformers; high gain separate phono channel for ceramic pickups; extra input for tape; standby switch to reduce idle battery consumption more than 70%; new freedom from vibrator hash; heat resistant ceramic pickup and turret type motor in 3-speed phono top; completely U/L Approved.

POWER OUTPUT: 25 watts at less than 3% total harmonic distortion, peak power 40 watts. FREQUENCY RESPONSE: 30 — 20,000 cycles ± 2 db. HUM LEVEL: 70 db below 25 watts. INPUTS: Two mike (2 meg.) gain 122 db; one phono (2 meg.) gain 90 db; and one tape (2 meg.) gain 90 db. Mike inputs convertible to low impedance using Newcomb plug-in transformers. CONTROLS: One stand-by switch, one power switch and treble tone control, one bass tone, one phono, two microphone, one phono motor control (on phono top models), and one hum balance control. OUTPUT IMPEDANCE: 4, 8, 16, and 500 ohms and a 70 volt tap to impedance selector and two output sockets. POWER CONSUMPTION: On 117 volts 60 cycles AC, 100 watts. On 12 volts DC, 8.85 amps (with phono top, 10.3 amps.). Stand-by current less than 3 amps. SIZE: 14⅛x9½x8" high (with cover (height 10¼"). TUBES: 1-12AX7, 1-12AU6, 2-6L6G, 2-6X5GT, 1-12AV7, E-253M — plain top model, list price **$214.50.** (Weight, 24 lbs.). E-253M3 — 3-speed phono-top model, list price **$249.50.** (Weight, 28¼ lbs.). PC — Protective turntable cover with "king-sized" handle for use on Model E-253M3 only, list price **$15.00.** (Weight, 2¾ lbs.). Above prices include both battery and AC power cables.

NEWCOMB AUDIO PRODUCTS CO. • HOLLYWOOD 38, CALIFORNIA

NEWCOMB | RACK AND PANEL ASSEMBLIES



Any standard Newcomb amplifier may be obtained panel mounted on special order in 19″ x 8¾″ panels, thus giving the custom designer a wide choice of equipment to meet any need.

MODEL 595-19 CABINET: (illustrated) Supplies a demand for a beautifully finished housing that is fully in keeping with the Newcomb tradition and reputation for quality. Panel space is 56″. Design accepts standard 19″ wide panels. Mounting holes are RMA standard 1¼″ and ½″ spacings. Panel mounting holes are tapped in ⅛″ stock. Fully ventilated rear door provides easy accessibility. Entire cabinet is a complete welded assembly ready for use as you receive it. Finish is dark grey hammertone. Provision is made in the rear for nine ½″ conduits. Included is a removable terminal strip mounting plate located near conduit inlets. OVERALL DIMENSIONS: 59½″ x 23″ wide x 16″ deep. SHIPPING WEIGHT: 92 lbs. LIST: $189.50.

MODEL 385-19 CABINET: Provides 35″ of panel space for standard 19″ panels. OVERALL DIMENSIONS: 38½″ x 23″ wide x 16″ deep. SHIPPING WEIGHT: 72 lbs. LIST: $149.50.

In addition to the panel mounted amplifiers Newcomb also provides a wide selection of other equipment designed for custom rack installations.

MODEL 1050-C PHONOGRAPH CHANGER PANEL is a practical solution to mounting a phono changer in cabinet 595-19. Ball bearing drawer with wood motor board is adaptable for mounting most popular changers. Panel size 19″ x 10½″. All panels are finished in silver-grey hammertone baked enamel. MODEL E2-525 PRE-AMPLIFIER answers the need for a simple, dependable but economical pre-amp for rack use. MODEL TB2-525 INTERCOM AMPLIFIER has built-in power supply, speaker, talk-listen switch and separate talk and listen volume controls.

MODEL B-100-875 AM RADIO is the Newcomb B-100 radio mounted on an 8¾″ panel. (See listing page B-7.) MODEL 700-MP MONITOR is available for installation of any 6″ speaker. LEVER KEY PANELS are provided for use with CRL keys, 3½″ deep with slots for 6, 8, 10 or 12 keys. LOUVERED PANELS for additional ventilation and BLANK PANELS are made in assorted sizes.

SPECIAL PANELS are made to order to fit special equipment. Templates or suitable drawings must accompany order for any special sheet metal work. Full details of Newcomb rack and panel equipment available on request.

NEWCOMB | ACCESSORIES FOR Ⓗ AND Ⓚ SERIES

REMOTE CONTROLS

For mixing and fading all H Series mike inputs. With K Series amplifiers all mikes and phono may be controlled. Up to 2000 feet of cable may be used. No inductive pickup.

RC-2 for H-15 amp. Requires ordinary 3 wire cable, 2¾″ x 6″ x 2⅛″. WEIGHT: 1 lb. LIST: (less cable) $10.50.

RC-3 for H-25 or H-4 amps. Requires ordinary 4 wire cable. 2¾″ x 6″ x 2⅛″. WEIGHT: 1 lb. LIST: (less cable) $15.50.

RC-4 for H-50 amp. Requires ordinary 5 wire cable. 2¾″ x 7⅝″ x 2⅛″. WEIGHT: 1¼ lbs. LIST: (less cable) $19.50.

RC-6 for KX-25, KX-50, KX-6 amps. Requires ordinary 7 wire cable. 2¾″ x 11¼″ x 2⅛″. WEIGHT: 2 lbs. LIST: (less cable) $27.50.

PLUG-IN TRANSFORMERS

TR-91: Features sextuple alloy and copper shielding for quiet operation right in amp. proper. Alloy core and specially designed windings for extended frequency response from 20 to 20,000 cycles. Plug base for easy installation. For use between 30-50 or 200-250 ohm mikes and grid. WEIGHT: 1¼ lbs. LIST: $32.50.

TR-92: Input impedance 5,000 ohms to grid for bridging a 500-600 ohm line. When plugged into sockets on K50B, H50B, H25B it converts for use as bridging amps. WEIGHT: 1¼ lbs. LIST: $29.50.

TR-100: Identical to TR-91 but for use between 125-150 or 500-600 ohm mikes and grid. LIST: $32.50.

All prices and specifications subject to change without notice.

COMPLETE BID SPECIFICATIONS AVAILABLE

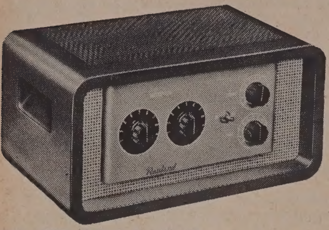
Available from Newcomb are complete bid specifications for public address amplifiers, phonographs, transcription players, and radios. A must for schools, states, or federal governments as well as commercial institutions requiring specifications to be shown. These Newcomb bid specifications spell out the proper details and may be included directly on prints or purchase orders.

All Newcomb equipment approved by Underwriters Laboratory.

NEWCOMB AUDIO PRODUCTS CO. • HOLLYWOOD 38, CALIFORNIA

Rauland RAULAND-BORG CORPORATION

PORTABLE AMPLIFIERS

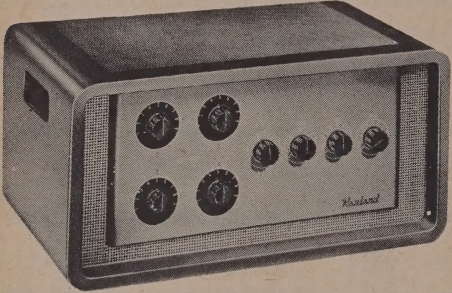


MODEL 1932. Widely used for church, auditorium, gymnasium or general paging. 32 watt output. 3 microphone inputs, 2 phono inputs controlled by dual fader, for smooth fading from one to the other while both are playing. Separate bass and treble tone controls. #1933 remote control permits remote mixing of the 3 microphones.
Finish dark green hammerloid described above. ....List Price **$189.50**

SPECIFICATIONS
Power Output: 32 watts, at 5% or less total harmonic distortion, measured at 100, 400 and 5000 cycles. 64 watts peak output.

Gain: Microphone 128 db (2 Meg.), 115 db (100,000 ohms), 115 db (150 ohm input). Phono 82 db (½ Meg. input). Voltage required for rated output: High impedance input .005 volt, Low impedance .0002; Phono .3 volt.

Frequency Response: ± 1 db, 30 to 20,000 cps. Tubes (10): 3-6SQ7; 3-6SC7; 2-6L6; 1-5U4GB; 1-6X5GT. Controls: (7): 3 Microphone; 1 Phone; 1 Treble; 1 Bass; 1 Power Switch. Inputs: 3 Microphones, 2 Meg. or 150 ohms; 2 Phono, ½ Meg. Output Impedances: 4, 8, 16, 166, (70 volts), 250,000 ohms. Power Consumption: 140 watts; 117-130 volts, 60 cycles. Hum and Noise Level: 73 db below rated power output (Unweighted). Dimensions: 18½" x 13" x 9½" high.



MODEL 1961. This 60 watt Booster Amplifier was designed to use with amplifiers like the 1960 above, to increase total power to 120 watts, or as many boosters as required may be used to multiply the audio output. Thus, a large system may be built up at low cost because necessary inputs and controls are on the 1960, and additional Boosters add power only in the most economical manner.

Each 1961 must be used with an individual group of speakers. Ventilated metal cabinet is finished in dark green hammerloid. .... List Price **$199.50**

SPECIFICATIONS

Power Output: 60 watts.

Gain: 77 db at 500,000 ohm input.

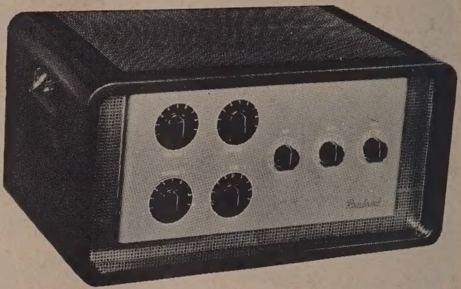
Frequency Response: ± 1 db from 35-15,000 cycles. Distortions: Less than 5% total Harmonic distortion at 100, 400, 5000 cycles. Noise Level: at least 77 db below rated output. Input impedance: 500,000 ohms. Output impedance: 4, 8, 80 (70 volts), 250, 500 ohms. Tubes: 1-6SL7GT; 1-6SN7GTA; 2-6L6; 2-5U4GB; 2-5Y3GT. Power Required: 155 watts, 120 volts, 50 cycle AC. Controls: Volume control, AC switch. Dimensions: 15¾" x 11¼" x 8½" high.

MODEL 1916. 16 watt output, a rugged, all purpose amplifier, 2 high impedance microphone inputs electronically mixed with one auxiliary input. Tone control. Finish is dark green hammerloid, strikingly attractive metallic bronze control panel in perforated aluminum front. List Price **$129.50**

SPECIFICATIONS
Power Output: 16 watts, at 5% or less total harmonic distortion, measured at 100, 400 and 5000 cycles. 32 watts peak output.

Gain: Microphone 130 db (2 Meg.), 117 db (100,000 ohms) 117 db (150 ohms); Phono 85 db (½ Meg.). Voltage required for rated output: High Impedance input .0015, Low Impedance .0001; Phono .1 volt.

Frequency Response: ± 1 db, 40 to 20,000 cps. Tubes (8): 2-6SJ7; 2-6SC7; 2-6V6GT; 1-6SQ7; 1-5Y3GT. Controls (5): 2 Microphone; 1 Phono; 1 Tone; 1 Power Switch. Inputs: 2 Microphones, 2 Meg. or 150 ohms; 1 Phono, ½ Meg. Output Impedances: 4, 8, 16, 250, 333 (70 volts), 500 ohms. Power Consumption: 80 watts; 117-130 volts 60 cycles. Hum and Noise Level: 70 db below rated power output (unweighted). Dimensions: 13½" x 8" x 7" high.

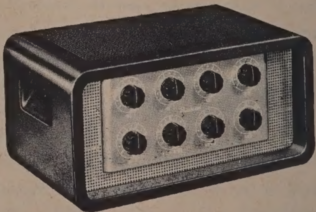


MODEL 1960. The famous and popular Rauland Bi-Power (biased power) heavy duty 60 watt Amplifier. 4 microphone inputs have separate controls, 2 phonograph inputs controlled by dual fader, all 6 inputs may be mixed electronically. 3 of the microphone inputs may be mixed remotely with the 1933 remote control. Separate bass and treble controls. The 1951 60 watt booster may be used with this amplifier for additional power. Beautiful dark green hammerloid finish described above. ....List Price **$249.50**

SPECIFICATIONS
Power Output: 60 watts, 5% or less total harmonic distortion, measured at 100, 400 and 5000 cycles, 120 watts peak power.

Gain: Microphone 130 db (2 Meg.) 117 db (100,000 ohms), 115 db (150 ohm input); Phono 83 db (½ Meg. input). Voltage required for rated output; High Impedance input .005 volt, Low Impedance .0004; Phono .5 volt.

Frequency Response: ± 1 db 35 to 15,000 cps. Tubes (15: 5-6SQ7; 2-6SC7; 2-6SN7GTA; 2-6L6; 2-5U4G; 2-5Y3GT. Controls (8): 4 Microphone; 1 dual phono fader; 1 Bass; 1 Treble; 1 Power Switch. Inputs: 4 Microphones, 2 Meg. or 150 ohms; 2 Phono, ½ Meg. Output Impedances: 4, 8, 80 (70 volts), 250, 500 ohms. Power Consumption: 200 watts, 117-130 volts, 60 cycles. Noise Level: 70 db below rated power output (unweighted). Dimensions: 18½" x 13" x 9½" high.



MODEL 1904. Self contained mixer and pre amplifier, with unusually flat frequency response. Mixes 4 inputs, either microphones or high impedance pickup, and feeds the program to main amplifying equipment. May be used at amplifier location or for remote control of auditorium programs, etc. The 1904 has unusual flexibility, with master gain control, individual control for each of 3 microphones, microphone-phono control, separate bass and treble controls.
Ideal for use with 1961 Booster or similar power stages. Attractive dark green hammerloid cabinet, two tone control panel. ....List Price **$222.50**

SPECIFICATIONS
Output: 300 m.w. at 2% distortion measured at 100, 400, 5000 cycles (150/600 ohms).

Gain: Microphones: 109 db (2 Meg.) 96 db (100,000 ohm), 96 db (150 ohm): Phono: 73 db (½ Meg.) Voltage required for rated output: High Impedance .002 volts; Low Impedance .0001 volts. Phono .08 volts.

Frequency Response: ± 1 db, 20-20,000 cycles. Output Impedance: 150/600 ohms. Noise Level: Microphone: 47 db below rated output (unweighted) Phono: 60 db below rated output. Master Control: 15 db variation, and complete cut off. Controls: Master gain control, 3 microphone gain controls, 1 Micro-Phono control separate bass and treble controls, AC switch and on-off switch (to operate remote amplifying equipment). Bass control attenuation 12 db at 40 C.P.S. Treble control attenuation 18 db at 15 K.C. Tubes: 4-6SQ7, 2-6SC7,

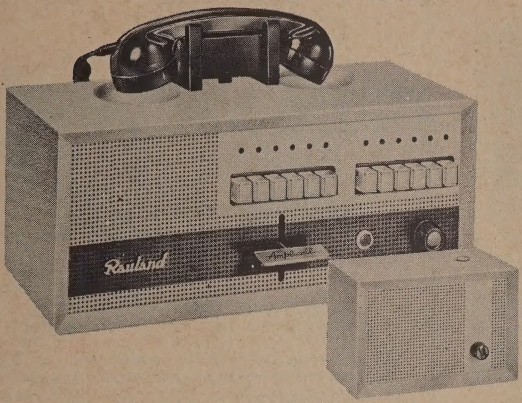
Rauland

RAULAND-BORG CORPORATION

Chicago 18, Ill.

AMPLICALL-INTERCOM SYSTEMS

4400 SERIES AMPLICALL MASTER STATIONS



This Master announces incoming calls by pleasing chime tone instead of voice and registers calls by lights. Operation of the annunciator is automatic, depressing the selector key to answer a call turns off the light above that key. The 4400 series is similar in operation to the 5400 Amplicall but provides the added advantage of light annunciation and chime call. One or two 4400 Masters may be used in a 5400 system to provide light annunciator service for key executives.

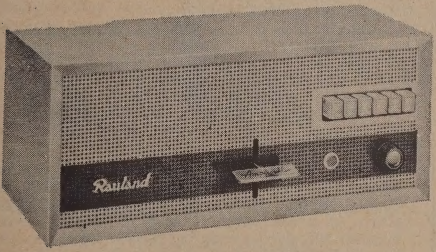
The 4400 Master is ideal for use with a large number of speaker stations for busy operations that require registration or "storing" of calls. It is available in 6 or 12 station capacity and the X4018 base adder unit permits expansion up to 30 stations.

Not more than 3 — 4400 Masters should be combined in the same system because of the large number of wires required in Master to Master service. Detailed wiring information for this type circuit, on request.

	ORDERING INFORMATION	List Price
4406A	Master, 6 keys	$154.50
4406AH	Master, 6 keys, handset	199.50
4412	Master, 12 keys	187.50
4412AH	Master, 12 Keys, handset	232.50
X4018	Base Adder unit, 18 keys	177.77
4400S	Remote, desk type	19.00
4403S	Remote, desk type, 3 call switches	24.50

(Junction Boxes and cable listed with 5400 series)

5300 SERIES AMPLICALL INDUSTRIAL INTERCOM & PAGING SYSTEM



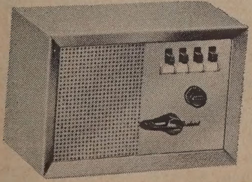
HIGH POWER INDUSTRIAL INTERCOM & PAGING SYSTEM

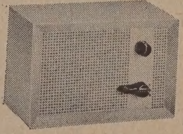
The Amplicall 5300 Series Master is available in 6, 12, or 24 station capacity. It is furnished with a rugged 30 watt amplifier, and is ideal for use in warehouse or industry, or whereever large or noisy areas must be covered. Its power permits calling all stations simultaneously, or operation of several reentrant horns, etc.

Like all Amplicall Masters the 5300 is plug-in type with six foot connecting cable for easy servicing. Remotes may be 5400S, or the 2300 and 2664D with the 2302S call switch.

	ORDERING INFORMATION	List Price
5306	Master, 6 key, 30 watt amplifier	$199.75
5312	Master, 12 key, 30 watt Amplifier	222.00
5324	Master, 24 key, 30 watt Amlifier	254.60
BA30	30 watt Amplifier, separately	91.75
5400S	Remote, desk type, call switch, vol. cont.	21.00
2300	Remote, 2 way, 8", 45 ohm	26.95
2664D	Horn, 45 ohm	35.80

(Junction Boxes and Cable listed with 5400 series)



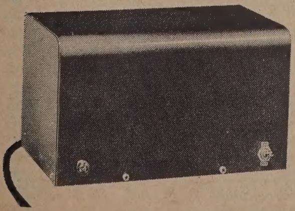


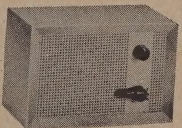
5104 FOUR STATION MASTER ECONOMY AMPLICALL SYSTEM

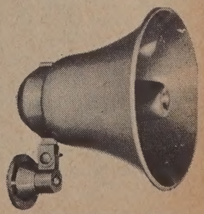
ECONOMY AMPLICALL SYSTEM TWO STATIONS..List $79.90

The 5104 is a Master with 4 station capacity. Finish is simulated leather, two tone "office gray" Sharonart steel cabinet. With a 5400S speaker station this makes an economical intercom system. As many as 3 additional remotes may be added at $21.00 each. Both Master and speaker are 8" x 4½" x 5¼" high. For 117 VAC-DC.

ACCESSORIES



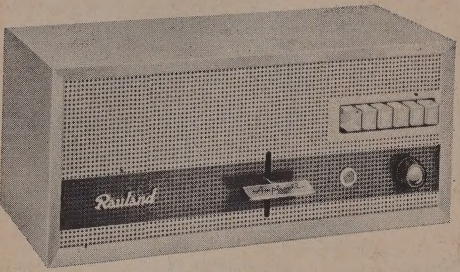




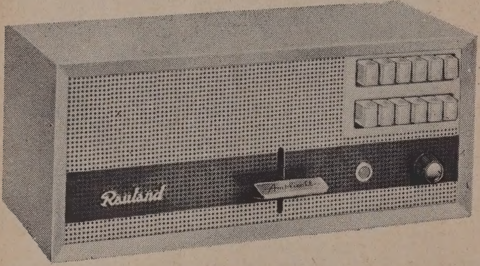
Rauland

RAULAND-BORG CORPORATION

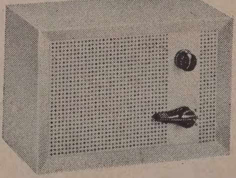
AMPLICALL-INTERCOM SYSTEMS 5400 SERIES



This famous AMPLICALL is a most versatile and flexible intercom system. One Master is used for any combination of Master or speaker stations. It is housed in a modern steel cabinet in rich "office gray" simulated leather finish. Features include 5" speaker-microphone, increased output, special de-basing tone control, switch contacts of solid silver alloy for trouble-free long life, positive busy signal. Masters are plug-in type with 6′ cable, fitting JB116 or JB117 Junction Box.

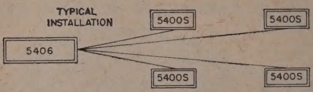


5400 Series Masters are available with 6, 12 or 24 keys, with or without telephone handset. Dimensions are 15¼" wide, 6¾" high, 7" deep. Designed for balanced line operation, 117 Volt AC only.

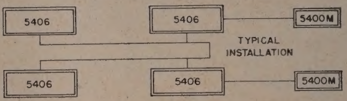


Desk type remote station is 8" wide, 5¼" high, 4½" deep in matching finish. 5400S has call switch and volume control.

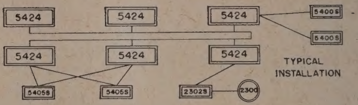
ONE MASTER PROVIDES ANY SERVICE



One 5400 Master is used for two way conversation with up to 24 remote speaker stations. Remotes may answer remotely and may originate calls. Remotes with call switches may talk with each other with T/L switch when connected by the Master station. Remotes may answer a call from the Master without operating switch. Master uses T/L lever on all conversations even when using telephone handset. Use 5400S Remote station, or a 2664D horn and 2302S call switch for noisy areas.



5400 Masters are used for Master to Master service and each Master may have connections to 5400M Remotes. Offers selective privacy and option of chime call instead of voice. Master uses one push button to select "private" or "remote answering" for his location. Masters require CH5 chime, and R54A relay for "remote answering" operation. Remotes may answer their Master, cannot originate call. For remote answering, the calling Master operates the T/L lever. Master can answer call from handset without operating T/L lever.
Remotes may be 5400M, 2664D.



This shows the flexibility of the 5400 Masters, operating in any combination of Masters and Remotes. Remotes may call up to 5 Masters, Masters may listen in on Remotes. Masters have privacy, one or more Masters may select non-private operations, to answer calls remotely without operating T/L lever. Conversations of handset type Master with other Masters or Remotes require use of T/L lever. Several Masters may talk in conference. Remote stations may answer from a distance, and may orginate calls. SW55 originates to up to 5 Masters.

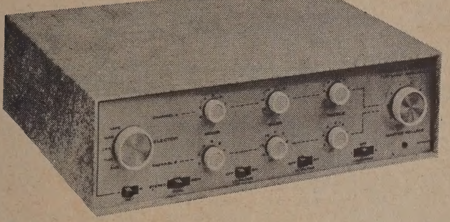
	ORDERING INFORMATION	List Price
5406A	Master, 6 key	$119.50
5406AH	Master, 6 key, handset	164.50
5412A	Master, 12 key	136.50
5412AH	Master, 12 key, handset	181.50
5424A	Master, 24 key	170.50
5424AH	Master, 24 key, handset	215.50
5400M	Speaker Station, desk type	17.50
5400S	Speaker Station, desk type, call sw. Vol. Cont.	21.00
5405S	Speaker Station, desk type, 5 pos. selector	40.45
2664D	Horn, 45 ohm, Voice Coil	35.80
JB1116	Junction Box, 4 octal, for 5406 and 5412	4.40
JB1117	Junction Box, 8 octal, for 5424	6.60
CH5	Chime, for 5400 Remote Answering	15.55
R54A	Relay, for 5400 Remote Answering	23.50
1171A	1 pair twisted cable, Vinyl cover	2.43C
1172A	2 pair twisted cable, Vinyl cover	5.64C
1173A	3 pair twisted cable, Vinyl cover	8.33C
1174A	6 pair twisted cable, plus ground	14.22C
1175A	12 pair twisted cable, plus ground	26.45C
1176A	24 pair twisted cable, plus ground	43.30C

Rauland

RAULAND-BORG CORPORATION

Chicago 18, Ill.

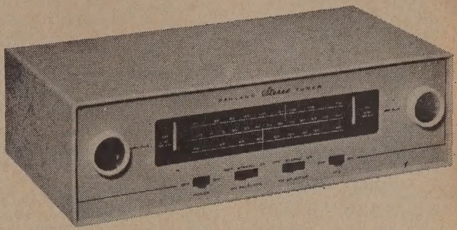
RAULAND HIGH-FIDELITY AMPLIFIERS & TUNERS



MODEL HF1530. 30 watt "In Line" stereo amplifier, truly an outstanding unit. Created to the highest standards of custom engineering and craftsmanship, this amplifier should satisfy the really discriminating listener who demands ALL the music. Definitely the ideal choice as the heart of a supreme stereo Hi-Fidelity music system. Beautifully styled in Moroccan White and Desert Gold.

30 watts output; 15 watts per channel for Stereo; 15 watts per channel for Dual Monaural; 30 watts combined for Monaural; 60 watts peak power. Individual channel bass, treble and mixer-balance controls (professional control for the true custom tuned system. Two equal loudness contour compensation selections, plus off position (low frequency boost only, or both high and low frequency boost). Complete control from front panel; magnetic and ceramic phono may be simultaneously connected and front-panel-selected, as well as tape head, tuner and auxiliary. Channel reversing switch. Two tape output jacks. Ten inputs for monaural operation. Direct current on preamp filaments for lowest possible hum. Five pairs of inputs for dual monaural and stereo operation. Two AC convenience outlets for associated equipment (controlled by the master volume switch). Rumble and scratch filters.

List Price **$117.50**



MODEL HF200 STEREO FM-AM TUNER

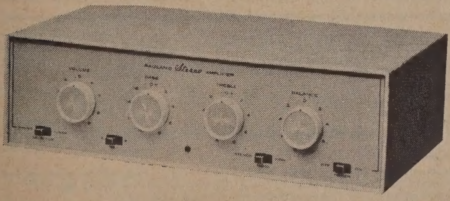
Brilliantly engineered for thrilling FM-AM Stereo broadcast reception and FM or AM reception separately. Separate precision tuning for AM and FM. Separate output controls. TWO great tuners in one compact case. Very attractive in Moroccan White and Desert Gold.

Separate counterweighted flywheel tuning controls. Five outputs: two FM, two AM, and one multiplex. Edgelighted glass sliderule dial with logging scale. Capacity-coupled FM line cord antenna. "Visi-Beam" visual tuning indicator on FM and AM. Automatic frequency control.

FM Circuits: Low-noise front end consisting of grounded grid, cathode-fed RF amplifier, and low noise grid-fed triode mixer, followed by wideband IF stages. Armstrong circuit with pentode limiter wideband phase discriminator, automatic frequency control, and cathode-ray tuning indicator. Sensitivity: 2.5 microvolts for 20 db quieting. Output: Approximately .7 volts for any input over 10 microvolts. Hum and Noise: 40 db below full output. Frequency Response: ±1 db, 20-20,000 cps.

AM Circuits: Pentagrid converter, wideband IF stage with high purveyance diode detector with quick-action AVC. High pick-up sensitivity through use of a high-Q ferrite loopstick; has separate cathode ray tuning indicator. Sensitivity: 10 microvolts for 20 db signal-to-noise ratio. Output: Approximately .7 volts for typical input. Hum and Noise: 40 db below full output.

List Price **$117.50**

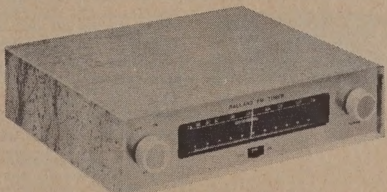


MODEL HF1021. TOP VALUE 20 WATT STEREO AMPLIFIER

This is an amplifier of exceptional quality with complete versatility and outstanding full-bodied Stereo reroduction. It has 10 watts output per channel for Stereo, 20 watts combined for Monaural, will handle 40 watts peak power. It embodies excellent craftsmanship with advanced Rauland circuitry, delivers enduring Stereo listening pleasure at modest cost. Distinctive styling in Moroccan White and Desert Gold.

Separate (ganged) channel bass and treble control and single balance control. Channel reversing switch. Six inputs for Monaural operation. Three pairs of inputs for stereo operation. Two AC convenience outlets for associated equipment (controlled by the master power switch). Front panel input selector switch. Separate on-off power switch. Custom mounting possible without special accessories.

List Price **$94.50**



MODEL HF100. ECONOMY FM HIGH-FIDELITY TUNER

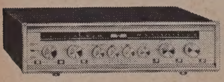
With exceptional selectivity, sensitivity, gain and output the Model HF100 FM Tuner offers performance and styling far beyond its price. Housed in an attractively styled steel cabinet, finished in Moroccan White with handsome Desert Gold escutcheon. It is extremely compact, measuring only 2⅜" x 9¾" x 7¾".

Efficient Automatic Frequency Control. Counterweighted tuning control for precise tuning. Edge-lighted glass sliderule dial with FM and logging scale. Two audio outputs included, one jack and one cable. Incorporates multiplex jack. "Visi-Beam" visual tuning indicator. Capacity-coupled FM line cord antenna.

List Price **$64.50**

SHERWOOD TUNERS · AMPLIFIERS

MOST HONORED OF THEM ALL

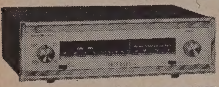


S-7000

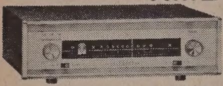
24+24 WATT FM/AM STEREO RECEIVER. A triumph in engineering, combining in one unit the famed performance of Sherwood's FM and AM tuner circuitry along with two 24 watt amplifiers, two complete phono preamplifiers and stereo control amplifiers. In spite of the compact size, 16¼ x 14 x 4½ inches high, the S-7000 features two "acro-beam" tuning eyes for FM and AM, two balanced flywheel tuning knobs, friction-locked stereo bass and treble controls, ganged loudness control, phono level control, stereo balance control, stereo function and input-selector switch. Six slide switches control scratch and rumble filters, FM AFC, AM bandwidth, phase reverse, and tape monitor. Inputs are provided for tape playback, tape monitor, phono, FM multiplex, and two auxiliary. Outputs are for recording and FM multiplex adapter.

General Specifications—Power Output: Stereo 24 + 24 watts (50 watts music power) at 1½% IM distortion. Frequency Response: 20-20,000 cps. ± 1 db @ 24 watts. Hum and Noise: phono input, 60 db below 24 watts. DC filament supply. Typical Sensitivity: FM: 0.95µv for 20 db quieting; IHFM Sensitivity: 1.8 µv for —30 db noise and distortion below 100% FM; AM: 2 µv @ 60% mod. for 0.5v output, 6 db S/N; Typical Selectivity: FM: 195 kc @ —6 db; AM (wide) 15 kc @ —6 db, (narrow) 5 kc @ —6 db; FM discriminator; 750 kc peak-to-peak. 22 tubes plus 4 rectifiers and 2 diodes. Power Consumption: 150 watts. Shipping Weight: 32 lbs (with case).

S-7000S (less case) Fair Trade Net....................**$299.50**
S-7000D brown leatherette case: Fair Trade Net....................**$307.00**



S-3000 III



S-2000 II

S-2200

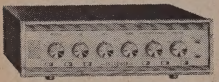
Sherwood is best known for its outstanding FM tuners, the first ever to achieve 0.95µv sensitivity. All three models, **S-3000 III FM/MX STEREO, S-2000 II FM/AM,** and **S-2200 FM/AM/MX STEREO** feature:

FM Interchannel Hush, a new noise-muting system which automatically eliminates noisy "hash" between FM channels to make FM tuning easier than ever, **FM Automatic Frequency Control** (AFC), which connects electronically by 90% any mistuning of an FM station thereby simplifying accurate tuning of FM stations, velvet flywheel tuning, and single or dual tuning eyes.

In addition, Models S-2200 and S-3000 III also feature self-contained provision for FM multiplex adapters complete with all necessary stereo controls. S-3000 III Specifications same as S-2200 FM specifications. Additional new feature is FM "Corrective" Inverse Feedback circuitry which reduces distortion caused by FM station overmodulation and improves quality of long-distance reception.

General Specifications—Typical Sensitivity: FM: 0.95 µv for 20 db quieting; 1.8 µv for 30 db quieting; IHFM Sensitivity; 1.8 µv for —30 db noise and distortion below 100% FM; AM—2 µv @ 60% mod. for 0.5v output, 6 db S/N; Typical Selectivity: FM—195 kc @ —6 db; AM—(wide) 15 kc @-6 db,(narrow) 5 kc @ —6 db; FM Discriminator: 600 kc peak-to-peak; Frequency Response: FM 20-20,000 cps ± ½ db, AM—(wide) 20-7,500 cps @ —6 db; Distortion: FM—less than 1/3% IM @ 100% mod. Hum and Noise Level: FM —60 db below 100% mod., AM—55 db below 100% mod.; FM Drift: ± 2 kc w/AFC; AFC Correction: 20 db; Audio Output: 2.0 volts output @ 100% FM; Tuning indicators: 2 EM84 light-bar tuning eyes; Tube Complement: 14 plus rectifier; Power Consumption: 65 watts, 110-120v, 50-60 cps; Dimensions 14 x 12½ x 4 in. high. Shipping Weight: 20 lbs.

S-2200 Fair Trade Price—chassis less case*....................**$179.50**
S-3000 III Fair Trade Price—chassis less case*....................**$105.50**
S-2000 II Specifications same as S-2200 without simulcast FM-AM Stereo reception feature. Fair Trade Price—chassis less case*....................**$145.50**



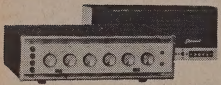
S-5000 II

The Sherwood "Top Rated" **S-5000 II STEREO DUAL AMPLIFIER-PREAMPLIFIER** offers the maximum flexibility in stereo and monophonic operation.

General Specifications—Base and treble controls have friction type dual knobs to adjust one channel separately from the other or together. Power Output: Stereo, 36+36 watts (80 watts IHFM music power). Frequency Response: 20-20,000 cps ± ½ db at 36 watts. IM Distortion: 1½% at rated output. Hum and Noise: phono input, 60 db below rated output. DC filament supply. Sensitivity: Radio, 0.25 volt; phono, 2½ mv. Inputs: Phono (RIAA); tapehead (NAB) and 6 high-level. 2 cathode follower recording outputs. Controls include: 2 db./octave scratch and rumble filters and presence rise switch. Tubes: 4—7591, 6—12AX7/ECC83, 2 silicon and 1 selenium rectifier. Power Required: 110 watts; fused. Size: 14" x 14" x 4". Shipping Weight: 29 lbs.

S-5000 II Fair Trade Price—chassis less case*....................**$199.50**
S-5500 Same as S-5000 II except 24+24 watts, no presence rise feature....................**$149.50**

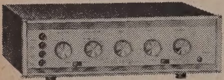
S-360



S-4400

The Model **S-4400** is designed for conversion of monophonic hi-fi to stereo and use with Model **S-360,** basic 36 watt power amplifier to provide 36+36 watt stereo where installation space is limited by a narrow bookshelf, since only the 10½-inch S-4400 need be accessible for operation. The Model S-4400 features the identical controls, front panel, and dual preamplifiers offered in the S-5000 II described above. However, a single 36-watt basic power amplifier is offered instead of the two 36-watt amplifiers included in the S-5000 II. Connection of the S-4400 with any monophonic basic amplifier (such as the S-360) or monophonic amplifier-preamplifier (such as the Sherwood S-1000 II) completes a stereophonic dual preamplifier-amplifier featuring one unified control panel. Specifications same as S-5000 II. Size: 14" x 10½" x 4". Shipping Weight: 24 lbs.

S-4400—Fair Trade Price—chassis less case*....................**$159.50**
S-360 Fair Trade Price—(case $6.00 additional)....................**$ 59.50**



S-1000 II

The famous Sherwood "Music Center" monophonic amplifier-preamplifier is now available with power output of either 60 watts (Model **S-1060**) or 36 watts (Model **S-1000 II**). This amplifier design is recognized for providing the many features and flexibility appreciated by the high-fidelity expert, yet offering the utmost im simplicity of operation. Either model can be converted at any time to a stereo system by the addition of the companion Model S-4400.

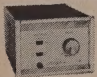
General Specifications, S-1000 II—same as one channel of S-5000 II. Nine tubes. Size: 14" x 10½" x 4" high. Shipping Weight: 24 lbs.

S-1000 II Fair Trade Price—chassis less case*....................**$109.50**
S-1060 Same basic specifications as S-1000 II but with 60 watt rating instead of 36 watts. Fair Trade Price chassis less case*....................**$129.50**

*Add $3.00 West of Rockies—see below for case prices.

ONE-YEAR WARRANTY—Every Sherwood product is covered by a full one-year warranty against defects in material and workmanship. Tubes carry the standard EIA 90-day warranty.
CASES are available in several colors of Flextone or leatherette as illustrated above.

"A"—Brown Flextone or **"B"**—Black Flextone case....................**$5.00**
"C"—Mahogany Gold-tooled "Classic" Leatherette case....................**10.00**
"J"—Black, **"T"**—Tan, or **"W"**—White Gold-tooled "Contemporary" Leatherette case......**15.00**



Series **SMX** and **AMX FM MULTIPLEX WIDE-BAND ADAPTERS.** The Sherwood FM multiplex adapters enable reception of any of the various Stereo multiplex programs now being transmitted experimentally over FM stations.

SWMX Wide-Band adapter, with sub-carrier operated muting, plug-in filter, Crosby Sum/Difference without case....................**$60.50**
S4MX-S (as above but narrow band for 41 kc sub-carrier) without case....................**$60.50**
S6MX-S (narrow band 67 kc sub-carrier) without case **$60.50**
AWMX, A4MX, A6MX same as **SWMX, S4MX, S6MX** but plug-in type without power supply for use in S-2200 or S-3000 III tuner....................**$54.50**
Units supplied with brown or black Flextone case at $4.00 additional. West of Rockies, add $1.00 to all prices.

CROSSOVER NETWORKS — The Sherwood line of crossover networks feature performance precise enough for the finest 2, 3 or 4-way high-fidelity speaker system at a cost within the reach of the budget-wary experimenter. All networks feature 12 db/octave attenuation.

Model	Crossover Frequency	Speaker Application	Dimensions	Shipping Weight	Net Price
SFX35	300, 5000 cps	3-way	4½x10x4½	5 lbs.	$19.50
SX36	3500 cps	2-way	4x5x3	1¼ lbs.	6.50
SX8	800 cps	2-way	4x7½x3	2 lbs.	15.50
SX55	500, 5000 cps	3-way	4½x10x4½	4 lbs.	18.50

Request technical data sheet showing other models.

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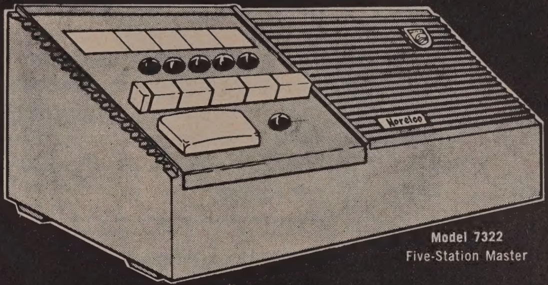
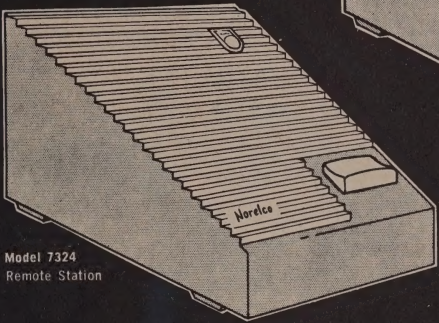
Norelco®
'IN PERSON' INTERCOM



Model 7322
Five-Station Master



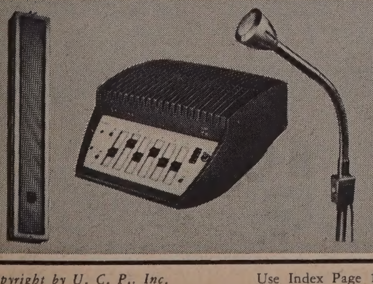
Model 7324
Remote Station

NEW "BIG-SPEAKER" SPEECH QUALITY
NEW EASY-OPERATING FLEXIBILITY
NEW LOW-COST INSTALLATION

NOW...from the internationally renowned firm of Philips of the Netherlands...comes the new line of NORELCO 'In Person' INTERCOM SYSTEMS! Now...the quality, the engineering integrity, that made sound engineers choose Philips commercial sound equipment for the La Scala Opera House in Milan, Italy, the Wembley Stadium in England, NATO Headquarters in Paris... is at last available in multiple-station intercom systems for offices, factories, homes, schools, farms—wherever good sound and dependable person-to-person communication is required.

• Completely transistorized, battery operated, free of hum and instantly ready to use • Permits communication between Master Station and up to **20** Remote Stations (with Master Extensions) • Provides 'in person' realism by utilizing, for the first time, high quality 5" speakers • Simple, low-cost installation—ordinary two-conductor lamp cord can be used (instead of costly shielded cable) • Audible and Visual call signals • Talk-Listen, Private and Non-Private operation • Warning Lamp Interruption Signal • Works on six 1½ volt "D" batteries

MODEL	LIST
Model 7322 Five-Station Master	**$67.50**
Model 7324 Remote Station	**$13.50**
Model 7329 Five-Station Extension	**$37.35**
Model 7329/15 Fifteen-Station Extension	**$66.60**
Model 7328 AC Power Supply	**$34.00**



WRITE NORELCO for detailed illustrated literature on the new 'IN PERSON' INTERCOM and on modern COMMERCIAL SOUND EQUIPMENT: 'Floodlight of Sound' Speaker Columns, STUDIO QUALITY Rack and Panel AMPLIFIERS, REVERBERATION EQUIPMENT, MICROPHONES and accessories—**complete** systems for every Public Address purpose and commercial sound application.

NORTH AMERICAN PHILIPS CO., INC.
High Fidelity Products Division
Commercial Sound Dept., Hicksville, L. I., N. Y.

SOUND EQUIPMENT

by STROMBERG-CARLSON

A DIVISION OF GENERAL DYNAMICS CORPORATION

SIGNET SOUND

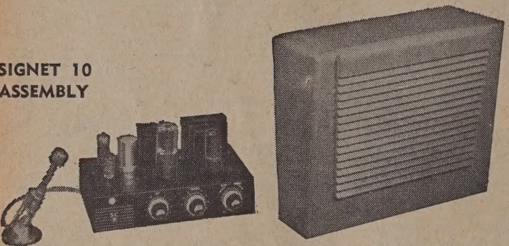
NEW, LOW-COST, COMPLETE . . . THE MOST FLEXIBLE

Signet Sound Systems are designed and engineered by Stromberg-Carlson to provide economical sound reinforcement for many simplified applications in business and industry. These systems are complete, ready-to-use packages that offer tremendous flexibility, easy installation, and excellent fidelity.

SIGNET COMPONENT ASSEMBLIES

A FEW OF THE MANY POSSIBLE SYSTEMS:

SIGNET 10 ASSEMBLY



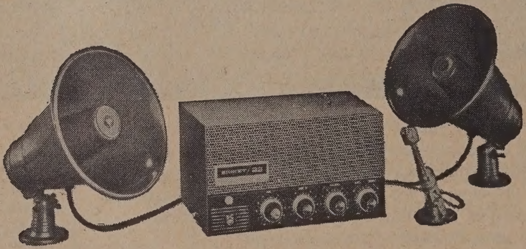
Budget-priced system for many applications. A few examples: restaurants. stores, meeting rooms, taverns, offices, warehouses. Unbeatable in its price range.

Typical Indoor System:

● Signet 10 Ten-Watt Amplifier.	**LIST PRICE: $61.50** without top cover
● MCX-55 Crystal Microphone.	**LIST PRICE: $15.95**
● MS-42 Microphone Stand.	**LIST PRICE: $6.50**
● RH-28D Speaker Housing.	**LIST PRICE: $10.00**
● RC-27* 8″ Speaker.	**LIST PRICE: $8.00**

* Four speakers may be used without line-matching transformers; up to 20 speakers with line-matching transformers.

SIGNET 22 ASSEMBLY



A perfect matching of high-quality components for any number of applications. A few of many possibilities include: freight docks, amusement parks, parking lots, gymnasiums, garages, bus terminals, railroad stations.

Typical Outdoor System:

● Signet 22 Twenty-two Watt Amplifier.	**LIST PRICE: $90.00**
● MCX-55 Crystal Microphone.	**LIST PRICE: $15.95**
● MS-42 Microphone Stand.	**LIST PRICE: $6.50**
● RS-14* Re-entrant Speakers with built-in driver units	**LIST PRICE: $34.50**

* Four speakers may be used without line-matching transformers; up to 40 speakers with line-matching transformers.

"There is nothing finer than a Stromberg-Carlson"

STROMBERG-CARLSON
A DIVISION OF **GENERAL DYNAMICS**

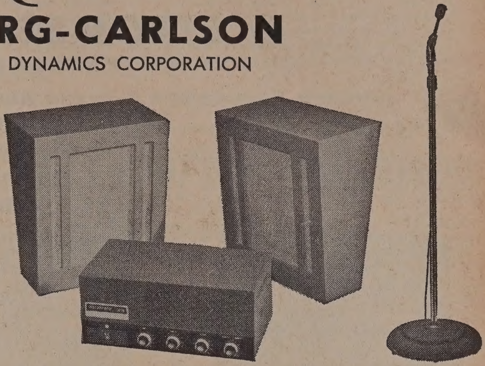
S-C STROMBERG-CARLSON

ELECTRONICS CENTER
ROCHESTER, N. Y.

SOUND EQUIPMENT

by STROMBERG-CARLSON

A DIVISION OF GENERAL DYNAMICS CORPORATION



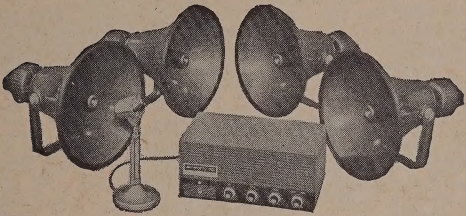
SIGNET 33 ASSEMBLY

Full fidelity performance, with superior audio reproduction. A few of many applications: industrial plants, hotels, motels, hospitals, auditoriums, Field Houses, Churches.

Typical Indoor System:

● Signet 33 Thirty-three Watt Amplifier.	LIST PRICE: $110.00
● MD-56 CS Dynamic Microphone.	LIST PRICE: $41.00
● MS-12 Floor Stand.	LIST PRICE: $13.50
● RH-54 Speaker Housings.	LIST PRICE: $19.50
● RC-58* 12" Speakers.	LIST PRICE: $14.00

* Four speakers may be used without line-matching transformers; up to 60 speakers with line-matching transformers.



SIGNET 70 ASSEMBLY

Practically unlimited applications, with power to spare for all situations. A few examples: stadiums, playgrounds, race tracks, athletic fields, schools, auditoriums, factories, airports.

Typical Outdoor System:

● Signet 70 Seventy-Watt Amplifier.	LIST PRICE: $170.00
● MD-30C Dynamic Microphone.	LIST PRICE: $60.00
● RP-27* Re-entrant Horn with RD-24 Driver Units.	LIST PRICE: $28.90 (RP-27) $28.50 (RD-24)

* Handles up to 25 horns with RD-21 Driver Units with built-in line-matching transformers.

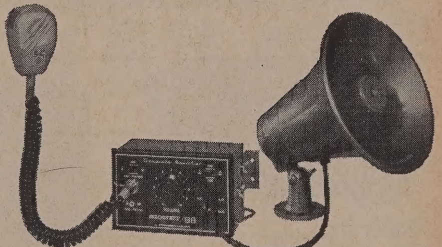
SIGNET MOBILE ASSEMBLY

Truly mobile-portable system which provides superb coverage over a wide area in countless applications. For example: police, civil defense, sports events, tour guides, field days, etc.

System Features:

● Transistorized SAM 88 8-Watt Amplifier.	LIST PRICE: $112.00
● MD-61 Dynamic Microphone.	LIST PRICE: $34.00
● RS-14* Re-entrant Speaker with built-in driver unit.	LIST PRICE: $34.50

* Additional RS-14 Speakers may be used.



MICROPHONES

MODEL MD-61 DYNAMIC

Close-talking, medium impedance, hand-held type. Designed for clear, natural voice reproduction. Ideal for mobile or portable use. Complete with coiled cord and connector. **LIST PRICE: $34.00**

MODEL MCX-55 CRYSTAL

Small and inconspicuous, only 4¼" high. Rugged high-impedance crystal element. Mounts on standard floor, banquet or desk stand. **LIST PRICE: $15.95**

MODEL MD-56CS DYNAMIC

Ideal for sound reinforcement and public address applications. The positive-action on-off switch is of the shorting type. Omni-directional pick-up characteristic at low frequencies; directional at high frequencies. **LIST PRICE: $41.00**

"There is nothing finer than a Stromberg-Carlson"

STROMBERG-CARLSON
A DIVISION OF **GENERAL DYNAMICS**

ELECTRONICS CENTER
ROCHESTER, N. Y.

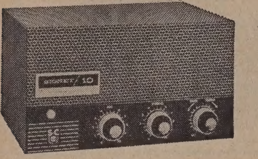
SOUND EQUIPMENT

by STROMBERG-CARLSON

A DIVISION OF GENERAL DYNAMICS CORPORATION

SIGNET AMPLIFIERS

Audio perfection depends on careful selection of the right amplifier for the specific job. The wide selection, plus unsurpassed flexibility, quality, dependability and economy of Signet Amplifiers, assures the finest in audio.



SIGNET 10

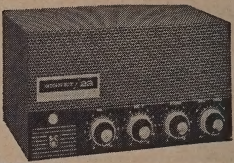
(illustrated with optional top cover)

POWER OUTPUT: Rated 10 watts, peak 19.6 watts. RESPONSE: 30 to 20,000 cps ±2 db. REGULATION: 3.0 db at 1 kc. INPUTS: 1 microphone, 1 phono-radio. GAIN: 115 db microphone, 77 db phono-radio. INPUT SENSITIVITY: Microphone 8 millivolts for rated output. Phono-radio 0.4 volts for rated output. HUM AND NOISE: Fundamental — 75 db, microphone — 50 db, phono-radio — 75 db. TONE CONTROL: Continuously variable, provides 18 db attenuation at 10 kc. OUTPUT IMPEDANCES: 4, 8 ohms, 25 volt line. POWER CONSUMPTION: 60 watts at 120 volts, 60 cps. TUBES: 1-6AV6, 1-6AU6, 1-6L6GB, 1-5Y3GT. SHIPPING WEIGHT: 12 lbs. 8 oz. DIMENSIONS: 11¼"W, 8"D, 6"H.

LIST PRICE: $61.50
(without top cover)

SIGNET 70

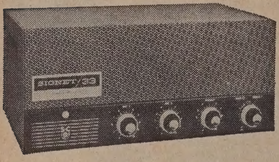
POWER OUTPUT: Rated 70 watts, peak 138 watts. RESPONSE: 20 to 20,000 cps ±2 db. REGULATION: 3 db at 1 kc. INPUTS: 2 microphones (2 meg. input impedance); 1 phono-radio (0.5 meg. input impedance). GAIN: 127.6 db microphone, 85.9 db phono-radio. INPUT SENSITIVITY: Microphone 6 millivolts for rated output. Phono-radio 0.35 volts for rated output. HUM AND NOISE: Fundamental —75 db, microphone —55 db, phono-radio —70 db. TONE CONTROL: Separate continuously variable bass and treble controls. Bass Control — 15 db boost at 50 cps; 14 db cut at 50 cps. Treble Control — 13 db boost at 10 kc; 16 db cut at 10 kc. OUTPUT IMPEDANCES: 4, 8, 16 ohms, 70 volt line. POWER CONSUMPTION: 180 watts at 120 volts, 60 cps. TUBES: 1-7025, 1-12AX7, 1-6U8, 2-6550, 1-5U4GB, 1-5Y3GT. SHIPPING WEIGHT: 31 lbs. DIMENSIONS: 16½"W, 10"D, 8"H. **LIST PRICE: $170.00**



SIGNET 22

POWER OUTPUT: Rated 22 watts, peak 40 watts. RESPONSE: 30 to 20,000 cps ±2 db. REGULATION: 3.0 db at 1 kc. INPUTS: 2 microphone (2 meg. input impedance), 1 phono-radio (0.5 meg. input impedance). GAIN: 122.5 db microphone, 80 db phono-radio. INPUT SENSITIVITY: Microphone 7 millivolts for rated output. Phono-radio 0.35 volts for rated output. HUM AND NOISE: Fundamental —75 db, microphone —55 db, phono-radio —70 db. TONE CONTROL: Continuously variable, provides 15 db attenuation at 10 kc. OUTPUT IMPEDANCES: 4, 8, 16 ohms, 70 volt line. POWER CONSUMPTION: 75 watts at 120 volts, 60 cps. TUBES: 1-7025, 1-12AX7/ECC83, 2-6BQ5/EL84, 1-5Y3GT. SHIPPING WEIGHT: 13 lbs. 8 oz. DIMENSIONS: 11¼"W, 8"D, 6"H.

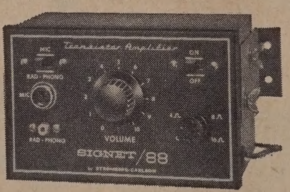
LIST PRICE: $90.00



SIGNET 33

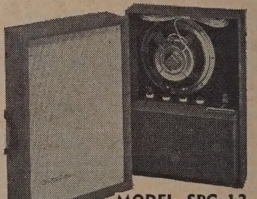
POWER OUTPUT: Rated 33 watts, peak 64.5. RESPONSE: 30 to 20,000 cps ±2 db. REGULATION: 2.5 db at 1 kc. INPUTS: 2 microphone (2 meg. input impedance); 1 phono-radio (0.5 meg. input impedance). GAIN: 122.5 db microphone, 80 db phono-radio. INPUT SENSITIVITY: Microphone 7 millivolts for rated output; Phono-radio 0.35 volts for rated output. HUM AND NOISE: Fundamental — 75 db, microphone — 55 db, phono-radio — 70 db. TONE CONTROL: Separate continuously variable bass and treble controls. Bass control — 13 db boost at 50 cps; 15 db cut at 50 cps. Treble control — 13 db boost at 10 kc; 18 db cut at 10 kc. OUTPUT IMPEDANCES: 4, 8, 16 ohms, 70 volt line. POWER CONSUMPTION: 120 watts at 120 volts, 60 cps. TUBES: 1-7025, 1-12AX7, 1-6U8, 2-6L6GB, 1-5U4GB. SHIPPING WEIGHT: 24 lbs. DIMENSIONS: 16½"W, 10"D, 8"H.

LIST PRICE: $110.00



SAM-88 MOBILE

POWER OUTPUT: 8 watts, less than 5% distortion. RESPONSE: 100 to 10,000 cps ±3 db. INPUTS: 1 microphone, medium impedance (150-600 ohms); 1 phono, high impedance (500,000 ohms). GAIN: 97 db. NOISE LEVEL: 65 db below rated output. CONTROLS: On-off Switch, microphone-phono selector switch, gain control. OUTPUT IMPEDANCES: 4, 8, 16 ohms. POWER SUPPLY: 12 volts car battery or dry battery pack, current drain 0.15 amperes standby. 0.3 amperes speech, 0.5 amperes music. Power leads, 3 feet, identified for polarity; positive lead has in-line fuse. TRANSISTORS: 1-2N214, 2-2N226, 2-2N257. MOUNTING: "L" brackets furnished for fastening to bulkheads. WEIGHT: 3 lbs. DIMENSIONS: 6⅝"W, 4⅛"H, 3⅛"D. **LIST PRICE: $112.00**



MODEL SPC-12 PORTABLE CASE

Includes 2 high-quality 12" speakers in split portable baffles which double as a carrying case for amplifier. Mounts Signet 22 or 33. Includes 25 feet of cable for each speaker. 18"W x 24½"H x 11½"D.

LIST PRICE: $84.00

Model PR-5 Phono Table

This three-speed record player is available for the Signet 10, 22, Signet 33 and Signet 70 Amplifiers.

LIST PRICE: $35.00

"There is nothing finer than a Stromberg-Carlson"

STROMBERG-CARLSON
A DIVISION OF **GENERAL DYNAMICS**

S-C STROMBERG-CARLSON

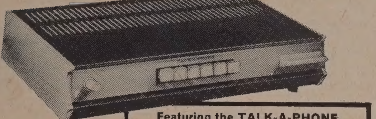
ELECTRONICS CENTER
ROCHESTER, N. Y.

NEW TALK-A-PHONE WIRELESS AND HOME INTERCOM SYSTEMS

TWO NEW WIRELESS SYSTEMS

Two NEW, high-quality wireless intercoms, featuring the exclusive TALK-A-PHONE "SONIC GATE" circuit. Provides dependable communication where permanent, wired systems are not practical. Ideal for use in offices, factories, stores, homes, apartments, nurseries, farms, etc. Distinctively styled cabinets combine the look and feel of fine grained leather with the strength and rigidity of steel. Beautifully finished in charcoal gray with brushed chrome side panels. Each station has a translucent indicator which illuminates when "On." All stations must be connected to outlets on the **same electric company service transformer.** Built-in Ground Adapter provides greater sensitivity where electrical wiring is routed over long paths. U.L. Approved.

NEW TALK-A-PHONE 6-STATION SELECTIVE WIRELESS* SYSTEM

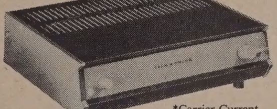


Featuring the TALK-A-PHONE "SONIC-GATE".

Your Voice Goes Through . . . Noise and Hum are Screened Out . . .

The Sonic Gate circuit effectively suppresses line noises and hum by 30 db while system is in actual operation, as well as when in Stand-By position.

- **No Installation**
- **No Wiring**
- **No Cables**
- **Just Plug-in and Talk**



*Carrier Current

- **3 Separate 2-Way Conversations Simultaneously with 6 Master Stations**
- **Selective Paging with Reply**

Provides selective communication. Each Master is equipped with a 6-channel selector; can converse with any other station selectively; can receive calls on any channel Master elects to use. As many as 3 separate conversations may be held simultaneously, with 6 Masters. Masters can talk with any station in system; can also set up conferences.

Wireless Staff Stations are for use where calls need not be originated, but where reply must be made. They are available for operation on any single channel desired—to match that of Master. They also can be used to receive Paging Calls from any Selective Wireless Master in the system . . . use as many Wireless Staffs as needed (all Staffs must operate on same channel for this purpose). Two or more Wireless Staffs on the same channel will function as a 2-Station System (without Master); they can originate calls and reply to each other.

Start a system with any number of Masters and Staffs. Where up to 6 stations are used, each on a separate channel, Master can converse selectively with any channel. If more than 6 stations are used, channels must be *shared*; stations on same channel will receive all calls to that channel. To change location, merely pick up unit and move . . . no rewiring or new installation is necessary. All stations are equipped with the original TALK-A-PHONE UNI-TRANS feature, which permits continuous one-way transmission for periods when you wish to dictate or "listen-in."

T-LCM-8806. 6-Station Selective Wireless Master. Complete, with tubes and instructions, ready to use. Operates on 110-120 volts, AC or DC. Size 14"wx8¾"dx3⅛h. Shipping weight, 12½ lbs.
List Price Per Station $136.00.......................Net **79.50**

Wireless Staff Stations. Receive and reply on a single channel only.

T-LCS-801 Channel 1
T-LCS-802 Channel 2
T-LCS-803 Channel 3
T-LCS-804 Channel 4
T-LCS-805 Channel 5
T-LCS-806 Channel 6

Complete with tubes and instructions, ready to use. Operates on 110-120 volts, AC or DC. Size, 10½"wx8¾"dx3⅛"h. Shipping weight, 7 lbs.
List Price Per Station $77.00.......................Net **45.00**

NEW TALK-A-PHONE 2-STATION WIRELESS* SYSTEM

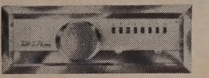
A complete system of 2 stations, ready to use. Simply place each unit where desired, plug each into nearest electrical outlet, and talk! Add more stations anytime. All stations will receive any messages transmitted from any point. Move units anywhere, plug into electrical outlet and use—no re-wiring or new installation necessary. The original TALK-A-PHONE UNI-TRANS is built in—provides continouous one-way transmission; ideal for dictation, or listening-in on baby. 110-120 V. AC-DC. Size, 10½"wx8¾"dx3⅛"h.

T-LC-33. Complete with tubes and instructions. Weight 16 lbs. List Price Per System $138.00...Net **79.90**

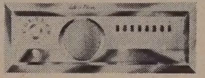
T-LC-17. Additional Single Station. Weight 8 lbs. List Price Each $69.00.......................Net **39.95**

CRADLEPHONE—Optional for all units above. Add H to model No. when ordering.
List Price per Station add $59.95.......................Net add **$35.00**

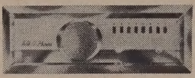
NEW TALK-A-PHONE All-Transistor HOME INTERCOM-RADIO SYSTEMS



HI-9



HI-9R HI-29R



HI-8

HI-2

HI-1

HI-SM

Housing Assembly shown on Unit

This new TALK-A-PHONE Intercom System saves the housewife and home-owner miles of tiresome steps, hours of time . . . Makes home life easier, more comfortable and more enjoyable . . .

LISTEN-IN ON BABY, CHILDREN OR SICK ROOM . . . from any room in the house, day or night • ANSWER OUTSIDE DOORS FROM ANY ROOM . . . in any part of the house—without opening doors to strangers • TALK FROM ROOM TO ROOM . . . back and forth, upstairs or downstairs, any time, day or night • YOUR FAVORITE RADIO PROGRAMS . . . follow you throughout the house with the flick of a switch.

TALK-A-PHONE All-Transistor Home Intercom units are beautifully finished in gold, polished and satin silver tones. All Masters and Staff Stations are designed for flush mounting; or with optional Housing Assembly HI-SM, these stations can be mounted on walls, cabinets, or set on tables, shelves, etc. Plaster Ring included for 14$\frac{1}{16}$"w, 4⅜"h, 3½"d wall opening. Master front panel size: 15¼"w, 5¼"h. Sub-Stations are designed for flush mounting only, do not need Plaster Ring. Requires 2" square wall opening, 2" deep. Front Panel size: 3⅝"w, 5⅜"h. Stations do not plug into electrical outlet. Operates from Battery or HI-PS Power Supply Unit. Total capacity: 8 stations including Central Master. With full instructions.

CENTRAL MASTER STATIONS. Only one used per system. Contains the All-Transistor Amplifier (and radio when built-in). Place in any room. Master can call and converse with any other station (or stations) in system; can listen-in to any Station that user makes "non-private". If system has Model HI-9R Central Master (built-in radio), the Master, Staff and any Indoor Sub can listen to standard AM radio broadcasts. "Additional" Masters can be used in rooms where it is desired to listen to AM radio programs different from those tuned in at Central Master.

HI-9 Central Master Station. Without radio, less battery.
List Price, Each, $99.50.......................Net Each **58.00**

HI-9R Central Master Station. With built-in radio. Less battery.
List Price, Each, $154.00.......................Net Each **89.50**

HI-29R Additional Master Station. With built-in radio. Less battery.
List Price, Each, $154.00.......................Net Each **89.50**

HI-8 STAFF STATION. Use as needed to call and converse with one or more Staff, Master or Sub-Stations. Can be switched to "private" or "non-private" operation as desired. When "non-private", as in baby or sick room use, another Staff or Master can listen in. Staff can listen to standard AM radio programs of HI-9R Central Master.
List Price Each $54.00.......................Net Each **31.50**

HI-SM HOUSING ASSEMBLY. For enclosing any Master or Staff Station, to permit mounting on walls or cabinets, or placing on tables, shelves, etc.
List Price Each $19.00.......................Net Each **11.00**

HI-2 INDOOR SUB-STATION. Use as many as needed, within system's capacity. Can receive and reply to calls from any Master or Staff. Can be switched from "private" to "non-private" operation to permit any Master or Staff to listen-in . . . Ideal for baby or sick room. Can listen to standard AM radio programs of HI-9R Central Master.
List Price Each $27.50.......................Net Each **15.95**

HI-1 OUTDOOR SUB-STATION. For front and rear entrance applications. Complete with push-button for connection to regular house chime, bell or buzzer. Has illuminated nameplate. When caller rings bells, any Master or Staff may reply and converse with caller. Caller operates no controls.
List Price Each $27.50.......................Net Each **15.95**

HI-JB JUNCTION BOX. For connecting Masters and Staffs under method #2 of cable needs. List Price Each $7.00.......................Net Each **4.00**

BATTERY. Use any 9-volt dry battery, such as ignition or telephone battery; or six standard #6 dry cells in series—available from local sources. *Note: When battery is used, power supply is not required.*

HI-PS POWER SUPPLY UNIT. One required per system (only when battery is not used). Plugs into any 110-120 volt, 60 cycle AC electrical outlet in basement, attic, etc.
List Price Each $27.50.......................Net Each **15.95**

HOW TO DETERMINE CABLE NEEDS

Masters and Staff Stations. Use #6226 cable in one of 2 ways: (1) Measure from 1st unit to 2nd unit only; from 2nd unit to 3rd unit only, etc., until last unit is reached—then total. Cable between last and 1st unit not needed. (2) Place a Common Junction Box (Model HI-JB) in attic, basement, closet, etc. Measure from each Master and Staff to Junction Box and total.

Indoor and Outdoor Sub-Stations: Connect to nearest Master or Staff only. Use #6206 cable for Indoor Sub; #6202 cable for Outdoor Sub.

Battery or Power Supply Unit: Connect with #6202 cable to Master Stations only.

CABLE. For indoor or outdoor use.

Type No.	No. Pairs	Approx. O.D.	LIST, Per Ft.	NET, Per Ft.
6226	13	½"	.47¢	28¢
6206	3	¼"	.14¢	8½¢
6202	1	⅛"	.06¢	3½¢

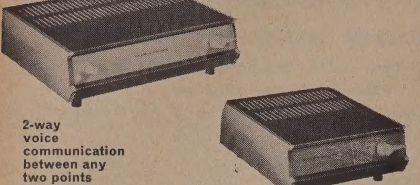
ARCHITECTS AND CONTRACTORS — HI-PR Plaster Rings. For Masters and Staffs, also available separately. (Sub-Stations do not use Plaster Ring). Approx. Size: 14-1/16" W x 4⅜" H x 3½" D. List Price Each $2.50.......................Net Each **1.45**

All Prices Slightly Higher West of Rockies
All Prices and Specifications Subject to Change Without Notice.
Manufactured under exclusive TALK-A-PHONE Patents

TALK-A-PHONE CO.
CHICAGO 25, ILLINOIS

NEW TALK-A-PHONE DELUXE INTERCOM SYSTEMS

Quality intercommunication systems designed for the Office, Business, Plant, House, Farm, Professional Man, or any other private or commercial application. A flick-of-a-finger gives you instant and direct two-way conversation between any two points—anywhere. Masters have translucent indicator which illuminates when system is "on." In cabinets that combine the look and feel of fine grained leather with the strength and rigidity of steel. Beautifully finished in charcoal gray and brushed chrome. Resists industrial liquids and atmospheres. Size: Masters, 10½"w x 8¾"d x 3⅛"h.; Subs, 7½"w x 8¾"d x 2⅞"h. U.L. Approved.



2-way voice communication between any two points

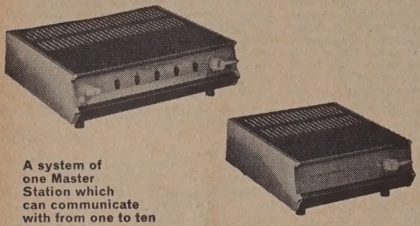
TALK-A-PHONE 2-STATION SYSTEM

T-LC-2 A complete, high-quality intercommunication system. Includes a Master Station, a Sub-Station and 50 feet of interconnecting cable. Additional cable available for distances up to 2000 feet. Easy to install and operate. Master and Sub-Station can originate calls to each other and carry on a 2-way conversation. Sub-Stations can be used "privately" or "non-privately". When "private", Master cannot listen-in on Sub-Station; yet Sub can answer and originate calls. When "non-private", persons at Sub-Station can answer calls at a distance without operating controls, as well as originate calls. Master is equipped with a translucent indicator, illuminated by permanent-type bulb, to show when system is "on". Rugged, high-gain amplifier is built to withstand continuous use and to require a minimum of maintenance. Adjustable Volume. Only Master plugs into electrical outlet, 110-120 volts, AC or DC. Master in deluxe cabinet finish, Sub-Station cabinet is of same style and color, but is in grained, baked enamel finish. U.L. Approved.

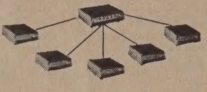
Model T-LC-2 2-Station System complete with tubes, easy-to-follow instructions, and 50 feet of cable. Wt. 13 lbs.
List Price complete $62.00.....Net complete **36.00**

No. 5303 (3-conductor) Cable. For use where additional lengths are required between the Master and the Sub-Station.
List Price per foot 5c...........Net per foot **.03**

Optional Wall Mounting Brackets for Model T-LC-2 Sub-Station are available. See description below.



A system of one Master Station which can communicate with from one to ten Sub-Stations. Subs can call Master, but not each other.



TALK-A-PHONE MASTER SELECTIVE SYSTEMS

T-LM A new system consisting of one Master Station and from one to ten Sub-Stations. Master Station can talk and listen to any one Sub-Station, several Sub-Stations or with all Subs simultaneously. Sub-Stations do not communicate with each other. Only the Master Station plugs into an electrical outlet. You may start with only one Master and one or two Sub-Stations and then add later when necessary. Installation of system has optional feature whereby Sub-Stations can be connected "Privately," or "non-privately" and still originate calls to the Master under either application. Once a conversation has been initiated with a "non-private" system, persons at Sub-Stations need operate no controls and can reply from a distance. When the system is connected "privately," Master unit cannot "listen in" on Sub-Stations. However, they can reply when called, and also originate calls to the Master. Operates universally on 110-120 volts, AC-DC. U.L.

T-AC The T-AC-5406 and T-AC-5411 Master Stations operate as above with the added feature of 10 times volume output. A desirable feature for large or noisy areas. For 110-120 volts, AC only.

Use only one Master in each System.

Optional Wall Mounting Brackets for Models T-LR-3 and T-LR-3M are available. See description below.

Model T-LM-5 Master Selective Station for 5 Sub-Stations, complete with tubes and easy-to-follow instructions. Wt. 8 lbs.
List Price each $59.95.............Net each **34.95**

Model T-LM-10 Master Selective Station for 10 Sub-Stations, complete with tubes and easy-to-follow instructions. Wt. 8 lbs.
List Price each $75 00.............Net each **44.00**

Model T-AC-5406 Master Station. 5 substation capacity. High Volume Output. Wt. 8 lbs. List Price each $75.00.........Net each **44.00**

Model T-AC-5411 Master Station. 10 substation capacity. High Volume Output. Wt. 8 lbs. List Price each $89.95.........Net each **52.50**

Model T-LR-3 Sub-Station (in same deluxe finish as Masters) for use with any of above Masters. Wt 6 lbs.
List Price each $27.50.............Net each **15.95**

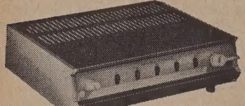
Model T-LR-3M Sub-Station (in cabinet of same style, color and size as above, but in grained, baked enamel finish) for use with any of abcve Masters. Wt. 6 lbs.
List Price each $21.00.............Net each **11.95**

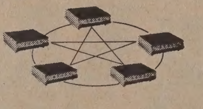
Model T-HP-3 Hi-Power Staff Station for wall mounting. Charcoal Gray metal case. Wt. 8 lbs. List Price each $28.00....Net each **16.50**

Model T-C-20 Nine-Inch Weatherproof Re-Entrant Horn. Charcoal Gray color. Wt. 5 lbs. List Price each $44.95.........Net each **26.50**

T-S-100 Wall Switch for origination of call through T-C-20 or T-HP-3.
List Price each $6.00..............Net each **3.50**

No. 5303 (3-conductor) Cable for connecting Sub-Station to Master.
List Price per foot 5c..........Net per foot **.03**





A system of up to ten Master Stations. Each station can call and communicate with any other.

TALK-A-PHONE SUPER SELECTIVE SYSTEMS

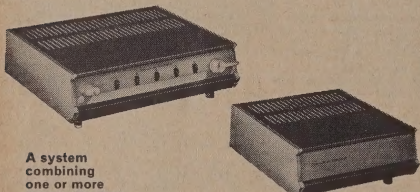
T-LS A new system of all Master Stations. Any Station can call any other Station in system. Several completely private 2-way conversations are possible at same time. A versatile, low cost intercom system offering exteme flexibility, meeting many requirements in industry, offices, homes, etc. Any Station can call and carry on a conversation with any other Station or Stations in the system with absolute "privacy." Have a visitor in your office and your mind is at ease that no one can eavesdrop on your conversation. Stations can be located even 1000 feet apart. Variable volume, adjustable at each unit, controls incoming voice. You can start with two or three masters, and then add later as required. Operates universally on 110-120 volts, AC-DC. U.L. Approved.

Model T-LS-5 Super Selective Station for five Masters, complete with tubes and easy-to-follow instructions. Wt. 8 lbs.
List Price each $59.95.............Net each **34.95**

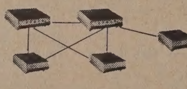
Model T-LS-10 Super Selective Station for ten Masters, complete with tubes and easy-to-follow instructions. Wt. 8 lbs.
List Price each $75.00.............Net each **44.00**

No. 5506 (6-conductor) Cable for connecting T-LS-5 Masters.
List Price per foot 13c.........Net per foot **.07½**

No. 9911 (11-conductor) Cable for connecting T-LS-10 Masters.
List Price per foot 24c.........Net per foot **.14**



A system combining one or more Master Stations with one or more Sub-Stations up to a combined total of ten. Masters call any station. Subs reply but cannot originate calls.



TALK-A-PHONE COMBINATION SYSTEMS

T-CL For the more flexible type of communication system requiring the operation of more than one Master Station, along with Sub-Stations which need not originate calls. Personnel can answer incoming calls even though they are 25 to 40 feet from their unit. Master Stations may talk to each other and to all Sub-Stations in the system selectively; or you can have one or more Sub-Stations which are exclusive to only one Master Station (as illustrated in the diagram at left). Master Stations have the option of making themselves "private" or "non private" at will. You can begin with two stations (at least one must be a Master) and add other units as required. Model T-CL-5 Master Station has a total inter-connecting capacity of five stations, including Masters and Sub-Stations; while Model T-CL-10 Master Station has a total capacity of ten stations. Sub-Stations are not plugged into electric current. U.L. Approved. 110-120 volts. AC-DC.

Optional Wall Mounting Brackets for Models T-LR-2 and T-LR-2M are available. See description below.

Model T-CL-5 Combination Master for five station use, complete with tubes and easy-to-follow instructions. Wt. 8 lbs.
List Price each $72.00.............Net each **42.00**

Model T-CL-10 Combination Master for ten station use, complete with tubes and easy-to-follow instructions. Wt. 8 lbs.
List Price each $87.00.............Net each **51.00**

Model T-LR-2 Sub-Station (in same deluxe finish as Masters) for use with any of above Masters. Wt. 6 lbs.
List Price each $27.50.............Net each **15.95**

Model T-LR-2M Sub-Station (in cabinet of same style, color and size as above, but in grained, baked enamel finish) for use with any of above Masters. Wt. 6 lbs.
List Price each $21.00.............Net each **11.95**

Model T-HP-3 Hi-Power Sub-Station for wall mounting in charcoal gray metal case. Wt. 8 lbs. List Price each $28.00...Net each **16.50**

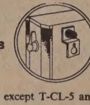
Model T-C-20 Nine-inch weatherproof re-entrant horn. Charcoal gray color.
List Price each $44.95.............Net each **26.50**

No. 6210 (5 pair) Cable for interconnecting T-CL-5 Masters.
List Price per foot 24c.........Net per foot **.14**

No. 6226 (13 pair) Cable for interconnecting T-CL-10 Masters.
List Price per foot 47c.........Net per foot **.28**

No. 6902 (2-conductor) Cable for connecting Sub-Station to T-CL-5 or T-CL-10.
List Price per foot 3½c........Net per foot **.02**

A



B

A. CRADLEPHONE—Optional for units above except T-CL-5 and T-CL-10. Add "H" to Model No. when ordering.
List Price Per Station, add $59.95... ....Net, add **35.00**

B. WALL MOUNTING BRACKETS—Optional accessory for use with TALK-A-PHONE Models T-LR-3, T-LR-3M, T-LR-2, T-LR-2M, T-C-41, T-C-41M, T-C-42, T-C-42M, and T-LC-2 Sub-Station to enable mounting on wall, side of desk, etc. One pair required per station. Permits mounting with front panel upward, downward or sideward.

Model T-W1 Mounting Brackets, per pair. List Price $1.25 ......Net **.75**

HOW TO DETERMINE CABLE REQUIREMENTS

For **Master Selective Systems** measure from each Sub-Station to the Master and order total. For **Super Selective Systems**—measure from first Master to second Master only, from second Master to third Master only, etc., and total. Cable between first and last Master not necessary. For **Combination Systems**—Master cable; measure from first Master to second Master only, from second Master to third Master only, etc., and total; Sub-Station cable; measure from each Sub-Station to nearest Master only.

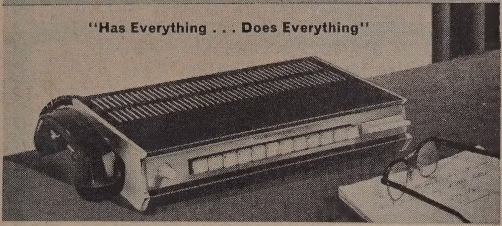
All Prices Slightly Higher West of Rockies—

All Prices and Specifications Subject to Change Without Notice.

Manufactured under exclusive TALK-A-PHONE Patents

See following pages for more TALK-A-PHONE Intercom Systems

THE ALL-NEW, ALL-TRANSISTOR TALK-A-PHONE "CHIEF" AND "CHIEF REDI-POWER" INTERCOMMUNICATION SYSTEMS


"Has Everything . . . Does Everything"

One Model Meets Every Requirement

Setting a new standard in quality, design and performance, the new TALK-A-PHONE "CHIEF" and "CHIEF REDI-POWER" meets every intercom need of office, factory, institution, or any other commercial or private application. "CHIEF" Master Stations of 6, 12, 20, 30, 40 or 50 station capacity can be intermixed with "CHIEF REDI-POWER" Masters of different capacities, together with Staff Stations and Horns within the same system in any desired combination. Masters can talk with any other Master or Staff . . . page . . . and can utilize other optional equipment shown as well. Staffs can answer any Master and can originate calls to one Master, or to two Masters selectively.

ONLY THE TALK-A-PHONE "CHIEF" AND "CHIEF REDI-POWER" GIVE YOU ALL THESE FEATURES

- **DISTINCTIVELY STYLED**—Less than 3-inches high. In cabinets that combine the look and feel of fine-grained leather with the strength and rigidity of steel. Attractively finished in charcoal gray and brushed chrome.
- **"PRIVATE" OR "NON-PRIVATE" MASTERS AND STAFFS**—Exclusive Dynasonic Design enables stations to perform "privately" (so no one can listen-in), or "non-privately" (for reply without use of controls). The same station can be "private" to one or more Masters and "non-private" to others, and retain full communication facilities.
- **INCOMING CALL CHIME**—A standard feature of Masters. Indicates that your station is being called. Caller talks, you reply.
- **MONITORING SIGNAL**—A standard feature of Masters and Staffs. Visually indicates to a "non-private" station that it is being monitored.
- **BUSY SIGNAL**—A standard feature of Masters and Staffs. Visually indicates when station you call is "busy." All units have facility to override "busy signal" for important calls.
- **DYNASONIC SELECTOR**—An exclusive TALK-A-PHONE feature that permits intermixing of stations and variation of performance. Add to system at anytime without discarding original equipment.
- **MULTI-MAGIC STATION SELECTOR**—A patented, exclusive TALK-A-PHONE feature that enables selection of up to 30 stations with only 12 push buttons . . . 40 and 50 stations with 14 push buttons . . . in the same attractive cabinet style and size.
- **UNI-TRANS DICTATION CONTROL**—No need to operate or hold down controls when one-way transmission is desired or when Cradle Phone is used.
- **EXTERNAL RELAY CONTROL**—A standard built-in feature of Masters. Enables Master to activate external relays for operating siren, gong, light, etc. For use in extremely high noise level areas to signal personnel, who can then communicate with caller from Master in quieter location or in sound booth.
- **RECIPROCAL POWER SUPPLY**—Each Master operates on 110-120 volts, AC only, and should be plugged-in. Where no electrical outlet is available, up to 30% of the Masters in the system can operate without being plugged-in.
- **NOISE-FREE VOICE RANGE POWER**—The rugged, all-transistor high-gain amplifier provides unsurpassed clarity and naturalness of tone. The exclusive, patented TALK-A-PHONE circuit enables performance without noise, hum or distortion when used with TALK-A-PHONE cable.
- **HI-POWER STAFF STATIONS AND HORNS**—For use with any TALK-A-PHONE Master where exceptionally high volume at Staff locations is needed. Ideal for paging speakers. T-HP-3 provides more than twice the volume of universal Staff; T-C-20 provides about 4 times greater volume . . . more with REDI-POWER Masters.
- **WALL SWITCH**—Combine with TALK-A-PHONE Horn or Hi-Power Staff to add origination-of-call feature.
- **"LD" LONG DISTANCE**—(optional accessory on "CHIEF" Masters). For use over cable lines of 2,000 ft., 5,000 ft., 10,000 ft. or more without loss of volume. Functions only between Masters with LD . . . not between an LD Master and Staff. Built-in at factory at additional cost.
- **CRADLE PHONE**—(optional accessory on Masters or Staffs). Has live microphone. Provides listening privacy and greater speaking convenience. Diminishes background noises in noisy areas. Eliminates use of controls in conversation between Masters. Cuts off incoming voice from loudspeaker when in use.
- **RIGHT-OF-WAY RELAY**—(optional accessory). Use with "CHIEF REDI-POWER" Masters to page any group of stations with a single button. Paged stations can also be used for intercommunication. RW-10 capacity, 10 stations. For greater capacity use more RW-10's. Connects to one Master, other Masters also utilize facilities.
- **POWER PAGING BOOSTER**—(Optional accessory). Use with "CHIEF" Masters to page a group of speakers with a single button. 30 watts output. Requires its own paging speakers (as T-C-20, T-HP-3). Provides paging facility only . . . paged stations cannot reply or originate calls through paging speakers. Connects to one Master, other Masters can also utilize facilities.

All "CHIEF" and "CHIEF REDI-POWER" Master Stations come complete with junction box and built-in power supply attached by 6' flexible cable. Master size: 14"w, 3⅛"h, 8¾"d. For 110-120 volts, AC only. U.L. Approved.

T-C-4906 Master 6 station capacity. Wt. 13 lbs.
List Price Per Station $136.00............................Net **79.50**

T-C-4912 Master 12 station capacity. Wt. 14 lbs.
List Price Per Station $154.00............................Net **89.80**

T-C-4920 Master 20 station capacity. Wt. 17 lbs.
List Price Per Station $184.00............................Net **107.40**

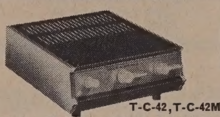
T-C-4930 Master 30 station capacity. Wt. 20 lbs.
List Price Per Station $214.00............................Net **125.00**

T-C-4940 Master 40 station capacity. Wt. 23 lbs.
List Price Per Station $244.00............................Net **142.60**

T-C-4950 Master 50 station capacity. Wt. 26 lbs.
List Price Per Station $274.00............................Net **160.20**

TALK-A-PHONE ALL-TRANSISTOR "CHIEF REDI-POWER" MASTERS These units have all the operational features of the "CHIEF," plus the additional feature of built-in extra power (up to 20 watts) for use when and as needed. Provides additional volume for calling many stations at once, or noisy locations singly. Needs no separate power booster, which would eliminate return speech. Return speech is received at normal room volume. REDI-POWER Masters have a self-compensating amount of volume, whether you call 2, 10 or 20 stations simultaneously. Each station receives its pre-determined volume with no division of output as you call more stations at once. Use REDI-POWER Masters with "CHIEF" Masters and Staffs in same system. Add RW-10 and REDI-POWER Masters can page any group of stations with a single selector button. Paged stations can also be used for intercommunication. Operates on 110-120 volts, AC only. U.L. Approved.

T-C-RP-5912 Redi-Power Master 12 station capacity. Wt. 18 lbs.
List Price Per Station $235.00............................Net **138.00**
T-C-RP-5920 Redi-Power Master 20 station capacity. Wt. 21 lbs.
List Price Per Station $265.00............................Net **155.00**


T-C-42, T-C-42M

T-C-41, T-C-41M

TALK-A-PHONE "CHIEF" UNIVERSAL STAFF STATIONS For use with any "CHIEF" or "CHIEF REDI-POWER" Master. Like Masters, Staff Stations can be connected "privately" or "non-privately", and can originate calls. When "non-private", calls can be answered at a distance from Staff without using controls. Persons at "non-private" Staffs may reply to all Masters in the system (whether directly connected to them or not) and can originate calls to one Master or two Masters, depending upon Staff's capacity. Connected "privately" no one can listen-in to Staff, but any Master can call. "Private" Staffs can originate calls and reply to one or two Masters. Each Staff has "busy signal" and "monitoring signal" features. Staffs do not connect to an electrical outlet . . . are distinctively styled in modern cabinets that combine the look and feel of fine grained leather with the strength and rigidity of steel. Attractively finished in charcoal gray and brushed chrome. Size: 7½"w x 8¾"d x 2⅞"h.

T-C-41. Staff Station for origination-of-call to one Master. Wt. 8 lbs.
List Price, Each $36.50............................Net **21.50**
T-C-41M. Same operation as T-C-41 and in cabinet of same style, color and size, but in grained baked enamel finish. Wt. 8 lbs. List Price, Each $29.95..........Net **17.50**
T-C-42. Staff Station for origination-of-call to two Masters. Wt. 8 lbs.
List Price, Each $45.00............................Net **26.50**
T-C-42M. Same operation as T-C-42 and in cabinet of same style, color and size, but in grained baked enamel finish. Wt. 8 lbs. List Price, Each $38.50..........Net **22.50**
T-HP-3. Hi-Power Sub-Station for wall mounting in charcoal gray metal case. Wt. 8 lbs.
List Price, Each $28.00............................Net **16.50**
T-C-20. Nine-inch weatherproof re-entrant horn. List Price, Each $44.95 . . Net **26.50**

Optional Wall Mounting Brackets for Models T-C-41, T-C-41M, T-C-42 and T-C-42M are available. See description on preceding page.

Optional Equipment

Cradle Phone Available on all Models. Add "H" to Model No. when ordering.
List Price, Each—add $59.95............................Net add **35.00**
LD—Long Distance Feature Available on "Chief," Master Stations. Add "LD" to Model No. when ordering. List Price, Each—add $20.00..........Net add **11.75**
T-S-101 Wall Switch For origination of call to one Master through T-C-20, or T-HP-3 in Chief systems. List Price, Each $11.95............................Net **6.95**
T-S-102 Wall Switch For origination of call to two Masters through T-C-20, or T-HP-3 in Chief systems. List Price, Each $19.95............................Net **11.70**
T-RW-10 Right-of-Way Relay. List Price, Each $63.00............................Net **37.00**
T-HP-30 Power Booster. List Price, Each $138.00............................Net **81.00**

Cable (For Indoor and Outdoor Use)

6206 Cable for connecting T-C-41, T-C-42, T-HP-3, T-C-20 with origination of call.
List Price per Ft. 14c............................Net per Ft. **8½c**
6214 Cable for inter-connecting T-C-4906 Masters. List Price per Ft. 24c. Net per Ft. **14c**
6226 Cable for inter-connecting T-C-4912, T-C-4920, T-C-4930, T-C-4940, T-C-4950, T-C-RP-5912 and T-C-RP-5920 Masters. List Price per Ft. 47c......Net per Ft. **28c**
6902 Cable for connecting T-HP-3, T-C-20 without origination of call.
List Price per Ft. 3½c............................Net per Ft. **2c**

How to Determine Cable Requirements. To inter-connect Master Stations, measure from first Master to second Master only, from second to third Master only, etc., until the last unit in the system is reached, and total. For T-C-4920 and T-C-RP-5920, use two lengths of 6226 Cable; and for T-C-4930 use three lengths of 6226 Cable, etc. To connect T-C-41, T-C-20, T-C-42 or T-HP-3 Staff Stations, measure from Staff Station to the one Master to which Staff Station originates calls. To connect the T-C-42 Staff Station measure a separate length of cable from Staff Station to each Master Station to which Staff originates calls (for each T-C-41 or T-C-42, follow same procedure).

All Prices Slightly Higher West of Rockies

All Prices and Specifications Subject to Change Without Notice.

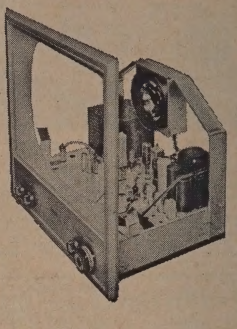
Manufactured under exclusive TALK-A-PHONE Patents

New AUTOMATION IN INTERCOM

The TALK-A-PHONE SUPER CHIEF System offers you fully automatic performance. No longer is it necessary to manually operate a Talk-Listen Control during conversation; yet you have "private" and "selective" communication. Your own voice automatically operates the Talk-Listen Control for you. The SUPER CHIEF features many other exclusive TALK-A-PHONE achievements in intercommunication engineering. Write today for details.

TECH-MASTER CUSTOM-QUALITY TELEVISION

Model 2430 B-Gold Medal Video Master—The World Famous Unexcelled 630 Circuit That Ushered In TV—Now At Its Up-to-the-Minute Best



TECH-MASTER presents a custom quality, consistently dependable receiver combining time-proven circuitry with advanced engineering. This 28 tube chassis delivers flawless video response, crisp clear pictures with full tonal gradations, synchronized tuning of audio and video signals, efficient amplifications offers full-bodied sound.

FEATURES: Full power transformer, completely hand wired. High-gain tuner; exclusive synchro-lock circuit employs 4 tube AFC system with 3 stage noise clipping sync amplifier circuit unsurpassed for stability and drift free operation; 5 microvolt sensitivity; excellent interlace characteristics; 4 Mc Band Width; adjacent channel traps; 2 stage audio amplifier; direct coupled keyed automatic gain control; 3 stage sync chain incorporating high transconductance noise-limiting sync amplifier; synchronized audio and video circuit; 4 stage video I.F.; anti-blooming circuit; phono input with front panel switch; complete front panel controls for individual adjustments of brightness, horizontal and vertical hold, volume, contrast, channel selector, fine tuning, AC on-off control switch; easily accessible controls on rear of chassis for permanent adjustment during installation; latest model tuner . . . easily adapted to UHF without tools; hi-sweep auto transformer system for outstanding picure brilliance; time-honored basic 630 circuit with a 28 tube complement.

TECHNICAL DATA		Video IF Amplifier	4 Stage
Video IF carrier Freq.	45.75 Mc	Video Amplifier	2 Stage
Band Width of Video IF	4Mc	Overall gain of Video Amplifier	40 Times
Sound IF Carrier	41.25Mc	Sound IF Amplifier	2 Stage
Band Width of Sound Detector	350KC	Audio Amplifier	2 Stage
Adjacent Channel Trap (sound)	47.25	Audio Output	5 Watts
Beat-suppressor trap	4.5Mc	Power Consumption	330 Watts
Video Sensitivity (for 20 Volts peak to Peak at Kinescope Grid)	5 Microvolts	·Tuner Input Impedance	300 Ohms

TUBE COMPLEMENT		6AQ5	Audio Output	6AQ5	2nd Video	6AC7	Hor. Osc. Control
6BN4	R.F. Amp.	6CB6	1st Pix IF	6C4	Sync. Ampl., Hor.	6K6	Hor. Osc.
6CG8	Mixer Osc.	6CB6	2nd Pix IF	6C4	Sync. Ampl., Vert.	6J5	Hor. Discharge
6AU6	AGC Control	6CB6	3rd Pix IF	6BF6	2nd Sync. Ampl. & AGC Clamp	6CD6	Hor. Output
6AU6	1st Sound IF	6CB6	4th Pix IF			1B3	H.V. Rectifier
6AU6	2nd Sound IF	6AL5	Pix 2nd Detector & D.C. Restorer	6DE7	Vert. Output.,Vert. Osc. & Discharge	6W4	Reaction Scanning
6AL5	Ratio Detector					2-5U4	Low Voltage Rectifiers
6AT6	1st Audio	6AU6	1st Video	6AL5	Hor. Sync. Disc.		

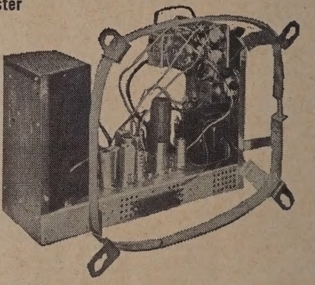
Model 2430B—for 90° tubes, with knobs; 12" speaker; mtg. brackets and hardware........Net Price **$219.50**

Model 2430-10—for 110° Pix tubes with accessories as above. ....Net Price **$229.50**

P-21—21" Panel Assembly with glass & mask .... **$ 27.50**

P24—24" Panel Assembly with glass & mask .... **$ 32.50**

Constellation "60" Chassis . . . Model 6015 Built by Tech-Master



A star performer for conventional cabinet or built-in installation. AC transformer powered model, not commercially mass-produced, but hand crafted with the same care as our higher priced receivers. Super sensitive for fringe or troublesome areas, this Tv receiver operates efficiently with any standard indoor antenna in normal signal area. 15 tubes, 2 silicons, 3 diodes, power-packed circuit delivers bright, sharp, rock steady picture and clean, undistorted static-free sound.

FEATURES:

• 117V 60 cycles 170 watts input • Keyed automatic gain control • 3 stage—staggered—tuned IF • Auto-transformer high voltage system • 18 to 20 KV anode voltage • High Wattage audio output stage • Easily adaptable to top, side, or front tuning and adjustment of controls • Horizontal oscillator and locking controls • 130Vpp video output fully compensated stage for crisp, clear picture • Bright spot eliminator circuit—removes bright spot when set is turned off • Chassis measures only 6" x 17" x 1¾" for compact cabinetry • Wired for low-voltage electrostatic focus kinescopes • For 110° to 114° deflection picture tubes from 17" to 27". Can be used with 90° deflection tubes with minor changes • Adjustable noise cancellation circuit • Fully D.C. coupled video amplifier stage • Weight—21 lbs. • Complete with mtg. hardware, knobs and speaker, with all tubes but less PIX tube.

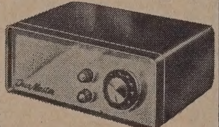
MODEL 6015 ....**$144.50**

TUBE COMPLEMENT:

6CY5 RF Amplifier
6AT8 RF Oscillator and converter
2—6BZ6 1st, 2nd, IF Amplifier
6CB6 3rd IF Amplifier
12BY7 Video Amplifier
6U8 4.5 mc Amplifier, Sync splitter
6DT6 Sound detector
6BQ5 Audio output
6BU8 noise cancellation, sync separator, keyed AGC
6DE7 Vertical oscillator, vertical output
6CG7 Horizontal oscillator
6DQ6 Horizontal output
6AX4 Damper
1K3 H. V. Rectifier
2 Silicon rectifiers for low voltage supply
2 Diodes horizontal phase detector
1 Diode Video detector

MODEL 23A—TECH-MASTER'S DUO MASTER TV PLUG-IN TUNER.

A Super Sensitive Black & White or Color TV Remote Control System



An Ideal self-contained remote-control system for all TV sets. Just plug a single, thin coaxial lead into your TV receiver and you can select your station, fine-tune both picture and sound, and adjust picture intensity . . . right from your armchair, from up to 50 feet from the set. There is a separate loudspeaker in the handsomely styled DUO-MASTER cabinet . . . or you can use the speaker in your TV set or hi-fi system . . . or any extension speaker . . . or plug headphones right into the DUO-MASTER for private listening.

FEATURES: 3 IF stages; 2 audio stages; jacks with low impedance connections for external amplifier or tape recorder take-off; a complete television sound receiver.

Positive or negative going video signal output.

TUBES: 9 plus rectifier; separate audio detector; Improved color response thru isolation circuit design.

SIZE: 12½" x 8" x 6"; **WGT.:** 15 lbs. Net Price........**$79.50**

MEMOTAPE MODEL NO. TC-5

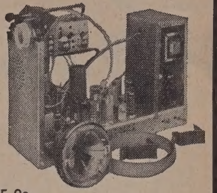
TRANSISTOR TAPE RECORDER . . . As Handy As a Box Camera. Size 7¼" x 4½" x 2⅝" all metal case. Weight: 2½ lbs. Battery operated, built in speaker. 3¾ inch per second speed. Dual track recording and playback. Fast rewind. Built-in remote control operation for recording and playback. 5 transistors—push/pull output. Supplied with complete set of batteries, roll of tape and takeup reel, microphone, earphone, and earphone adapter for listening with both ears. Highly versatile and sensitive tape recorder of many uses.

MEMOTAPE MODEL NO. TC-5....$99.50

TECH-MASTER corporation—Brooklyn 1, New York

TECH-MASTER QUALITY KITS AND COMPONENTS

New Tech-Master TV Kit   Nusonic TV Craft Kit



The most up-to-date TV kit, with the latest improvements in tubes and circuitry. Ideal for student work or home project. This kit not only provides excellent training in television, but builds into a first-class, top quality modern receiver that anyone would be proud to own. Coils are preadjusted and tuned at the factory. Quality components, carefully selected and packed by personnel experienced in the TV-kit field, insure satisfaction. Step-by-step instructions with pictorial and schematic diagrams are easy to follow—leave nothing to the imagination. Sockets, terminal strips and connectors riveted on chassis.

FEATURES:

• Advanced and improved, super-selective, 12-channel tuner • Full power transformer for safe cold chassis operation • Operates new low-voltage electrostatic-focus kinescope (17″ to 27″—including 19″ and 23″ sizes)—110° to 114° deflection • 18 to 20 KV anode voltage • High-efficiency circuit-sensitivity of 9uv at 20V peak-to-peak • High power audio output • Three-stage stagger-tuned IF using high-gain bi-filar coils. • Keyed Automatic gain control • Adjustable noise cancellation circuit • Bright spot eliminator circuit—removes bright spot when set is turned off • Ceramic core horizontal output transformer with beam power amplifier • 6 x 17 x 1¾ chassis size • Weight 21 lbs.

MODEL 1560 .... **PRICE $99.95**

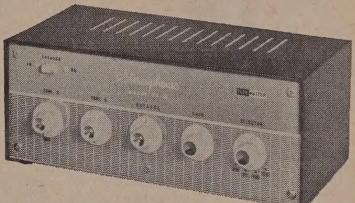
TUBE COMPLEMENT:

6CY5 RF Amplifier; 6AT8 RF Oscillator and converter; 2—6BZ6 1st, 2nd IF Amplifier; 6CB6 3rd IF Amplifier; 12BY7 Video Amplifier; 6U8 4.5 mc Amplifier, Sync Splitter; 6DT6 Sound detector; 6BQ5 Audio output; 6BU8 Noise cancellation, sync separator, keyed AGC; 6DE7 Vertical oscillator, vertical output; 6CG7 Horizontal oscillator; 6DQ6 Horizontal output; 6AX4 Damper; 1K3 H.V. rectifier; 2 Silicon rectifiers for low voltage supply; 2 Diodes horizontal phase detector; 1 Diode Video detector.

QUANTITY PURCHASES—TV kits and wired chassis available for schools, export (in all voltages) and other special applications. Quotations and specifications supplied on request.

PA 39—A Most Versatile 14 Watt Stereo Amplifier and Preamplifier.

Ideal for 90% of All Hi-Fi Stereo Layouts



This highly adaptable system is as elegant to the eye as the ear . . . beautiful blue and white front panel with blue-gray case (also in gold and sun tan panel with walnut case.) Two channels of faithful audio faultlessly designed, skillfully produced. TECH-MASTER'S diversified background and experience make the low price possible. Servicemen recommend it for its ease of installation. The simple sandwich type panel-mount eliminates unnecessary fuss and cost.

FEATURES:

Completely hand wired, dual channel, crystal or ceramic phono and tuner inputs; ganged gain control; balance control, two separate tone controls; monaural-stereo switch; speaker reversing switch; transformer power supply for complete line isolation.

TUBES: 2-EL 84, 12AX7, EZ80   **DIM:** 10⅝″ W x 5⅜″ D x 4$\frac{5}{16}$″ H

PA 39 Blue & White .... **NET PRICE $49.50**

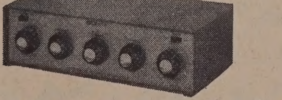
PA 39G Two Tone Gold .... **NET PRICE $49.50**

PA 39 + For Magnetic Cartridge—Uses Hum Free 2 Transistor Preamplifier .... **NET PRICE $69.50**

P3 39G + For Magnetic Cartridge—Uses Hum Free 2 Transistor Preamplifier .... **NET PRICE $69.50**

MODEL P41—TRANSISTOR STEREO PREAMPLIFIER EQUALIZER.

Straight DC Operation—No Hum—Cool Operation—Free From Microphonics.



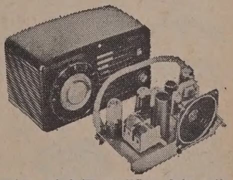
Separate bass and treble controls for each channel plus common gain and balancing controls. 6 Hi-impedance inputs; 4 equalized Lo-impedance inputs. Takes both low and high output cartridges without external transformer. 4 outputs for amplifier and tape. Amplifier control switch. With cabinet, less battery.

SIZE: 3″ H x 9″ W x 5½″ D.

WGT. 4 lbs.

NET PRICE **$59.50**

DELUXE AC-DC SUPERHET RADIO KIT



MODEL 3B5-K—Complete with modern, handsome Bakelite cabinet (10″ x 5½″ x 5½″), station selector and control knobs. Tunes AM broadcasts from 550-1720 KC. Super-sensitive, high gain circuit for best reception. Built-in loop antenna. Automatic volume control circuit eliminates blasting or fading.

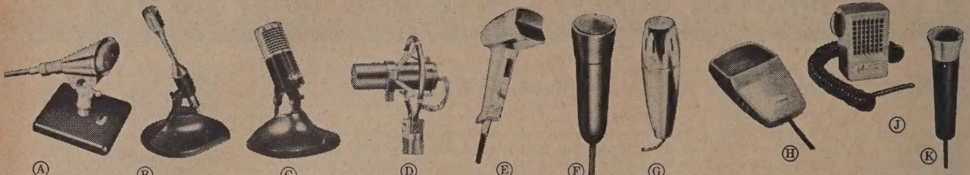
TUBES: 12SA7, 12SK7, 12SQ7, 50L6 and 25Z5 rectifier. Schematic and pictorial diagram with clear assembly instructions supplied for simple assembly.

POWER: 115-125 V, 50/60 cy. or D.C. Wgt.: 6 lbs.

NET PRICE (less wire & solder) **$19.95**

TECH-MASTER corporation—Brooklyn 1, New York

AMERICAN MICROPHONES AND ACCESSORIES



(A) MODEL D 10 PA-GENERAL PURPOSE OMNI DIRECTIONAL MICROPHONE—Frequency response is 50 to 15,000 cps. Impedance low 150 ohms and high 40,000 ohms. Mylar diaphragm. "Slide lock mount" for quick removal from stand.
List Price **$29.50**

(B) MODEL D 22 DYNAMIC OMNI-DIRECTIONAL—Variable impedance — low and high. Frequency response from 50-12,000 cps. Impedance from 50 to 40,000 ohms.
List Price **$99.50**

MODEL D 33 VARIABLE IMPEDANCE—LOW AND MEDIUM—Impedance from 50 to 250 ohms.
List Price **$130.00**

(C) DR 330 DYNAMIC AND RIBBON CARIOID—Variable low-medium impedance—variable polar pattern. Frequency response 40 to 15,000 cps.
List Price **$250.00**

R 331 RIBBON—BI-DIRECTIONAL.
List Price **$140.00**

DR 332 DYNAMIC AND RIBBON CARDIOID.
List Price **$162.50**

(D) D 44 DYNAMIC—OMNI-DIRECTIONAL — Low 50 ohm impedance. Frequency response from 50-15,000 cps.
List Price **235.00**
With wind screen, D44/WS2 **272.50**

(E) MODEL D 11 HAND HELD OMNI-DIRECTIONAL DYNAMIC—Frequency response 50 to 12,000 cps. Impedance 150 and 40,000 ohms.
List Price **$36.00**

(F) LAVALIER MICROPHONE D 12 OMNI-DIRECTIONAL—Frequency response 70 to 12,000 cps. Impedance — low 150 ohms, high 40,000 ohms.
List Price **$59.50**

(G) 204 SERIES PUBLIC ADDRESS AND GENERAL PURPOSE MICROPHONES—Low or high impedance.

D204 DYNAMIC TYPES	List **$17.00—$24.30**
B204 CERAMIC TYPES	List **$16.00—$17.30**
X204 CRYSTAL TYPES	List **$16.00—$18.30**

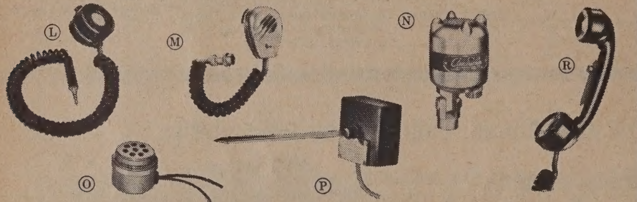
(H) TAPE RECORDER MICROPHONES

X203 CRYSTAL TYPES	List **$ 8.35—$ 9.65**
B203 CERAMIC TYPES	List **$11.50—$12.80**

(J) CITIZENS BAND TRANSCEIVER MICROPHONE—Frequency response 40 to 8,000 cps. Exclusive "Slide-Lock" switch.

208 CERAMIC SERIES	List **$10.60—$13.95**
208 CRYSTAL SERIES	List **$10.60—$13.95**

(K) X 206 SERIES PORTABLE CRYSTAL — ALL-PURPOSE MICROPHONE—Frequency response 40 to 12,000 cps. High impedance.
List **$7.95—9.25**
B206 (Ceramic)
List **$7.95—$9.25**



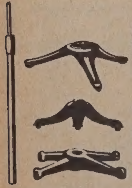
(L) 504 SERIES MOBILE MICROPHONES — Frequency response 300-3,000 cps. Impedance 40 ohms.
Lis **$31.00—$38.00**

(M) 501 SERIES MOBILE DYNAMIC MICROPHONES—Frequency response 300 to 3000 cps.

D 501 — Low Impedance	List **$25.50—$34.00**
D 501 — High Impedance	List **$29.50—$34.00**
CARBON MICROPHONE—501 A—Low Impedance	List **$24.50—$33.00**

(N) D4 SERIES OMNI-DIRECTIONAL DYNAMIC MICROPHONES—Frequency response 50 to 8,000 cps.

D4 low impedance.	List **$28.00—$31.00**
D4T high impedance.	List **$31.00—$35.50**



FL3, FH3 and SS-1-M FLOOR STANDS — Extends to six feet. Positive-lock control, leather cushioned.

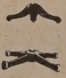
FL3	List **$28.50**
FH3	List **$28.50**
SS-1-M	List **$39.50**

(O) D801 MINIATURE DYNAMIC MICROPHONE—Frequency response 250 to 6,000 cps. Low impedance.
List **$14.25**

(P) VP-1 CRYSTAL VIBRATION PICK-UP—High impedance. A sensitive probe type pickup used to "listen" to mechanical vibrations.
List **$39.95**

(R) H602 SERIES DYNAMIC HAND SETS—Impedance 35 ohms.
List **$25.80—$31.75**

HB3 & BH-1-M STUDIO BOOM STAND—Extends to 6 feet. Dual leather positive-lock controls. 180° angle adjustment. Silent, positive fingertip control.



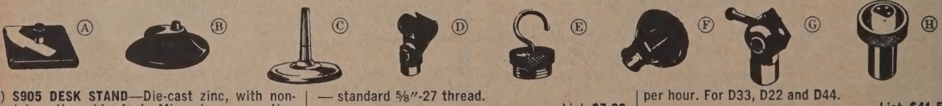
HB-3	List **$38.00**
BH-1-M	List **$49.50**

COIL CORDS — Replacement cords for C501, D501, C504 and H600 series microphones.
List **$6.50—$11.80**

B3-M BOOM ASSEMBLY—For mounting on any floor stand equipped with standard ⅝"-27 thread mounting.
List **$23.00**

American Microphone
MICROPHONES

SEND FOR American Microphone's complete new illustrated Catalog FR-61-P. Free!



(A) S905 DESK STAND—Die-cast zinc, with non-scratch anti-rumble feet. Microphone mounting — standard ⅝"-27 thread.
List **$5.50**

(B) ND-1-M DESK STAND — Exclusive American "cut-away" design permits use of microphone in vertical position.
Microphone mounting—standard ⅝"-27 thread.
List **$12.80**

(C) DD-1-M DESK STAND—Microphone mounting — standard ⅝"-27 thread.
List **$7.60**

(D) S-902 STAND ADAPTER—Floor stand type. ⅝"-27 thread for use with 204 microphone series.
List **$4.50**

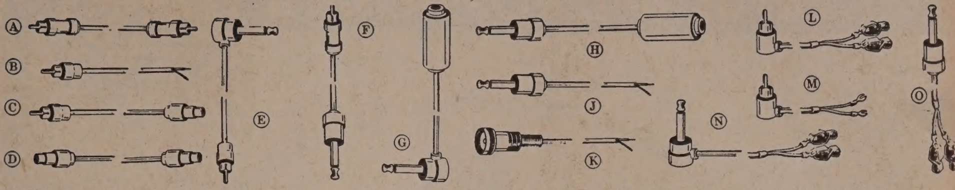
(E) SE-1 SUSPENSION EYE—Swivel eye, for suspending microphone. Microphone mounting — standard ⅝"-27 thread.
List **$2.40**

(F) WS2 WIND SCREEN—Exclusive American design offers efficiency in winds up to 35 miles per hour. For D33, D22 and D44.
List **$41.50**

(G) M904 "SLIDE-LOCK" STAND FITTING — For quickly and easily removing microphone from stand ⅝"-27 thread on swivel and slide locking assembly.
List **$7.60**

(H) AP-1-F STAND FITTING FOR D44 MICROPHONE—Female connector to macth male termination of microphone. Supplied with ring-lock ferrule.
List **$11.50**

AMERICAN MICROPHONE ACCESSORIES



(A) SHIELDED CABLE, PHONO PIN PLUGS ON BOTH ENDS

37-400	Length 18″	List $1.00
37-402	Length 36″	List $1.25
37-404	Length 72″	List $1.50
37-406	Length 144″	List $2.00

(B) SHIELDED CABLE, PHONO PIN PLUG ON ONE END, OTHER END STRIPPED AND TINNED

37-412	Length 18″	List $ .90
37-414	Length 36″	List $1.00
37-416	Length 72″	List $1.25
37-418	Length 144″	List $1.75

(C) SHIELDED CABLE, PHONO PIN PLUG ON ONE END, AND PHONO PIN JACK ON OTHER END

37-424	Length 18″	List $1.25
37-426	Length 36″	List $1.35
37-428	Length 72″	List $1.75
37-430	Length 144″	List $2.25

(D) SHIELDED CABLE, PHONO PIN JACKS ON BOTH ENDS

37-434	Length 18″	List $1.55
37-436	Length 36″	List $1.80
37-438	Length 72″	List $2.25

(E) SHIELDED CABLE, 72″ LONG, PHONO PIN PLUG ON ONE END, 90° PHONE PLUG ON OTHER

37-442	List $2.00

(F) SHIELDED CABLE, 72″ LONG, PHONO PIN PLUG ON ONE END, STANDARD PHONE PLUG ON OTHER

37-444	List $2.00

(G) SHIELDED CABLE, 10′ LONG 90° PHONE PLUG ON ONE END, PHONE JACK ON OTHER

37-446	List $5.00

(H) SHIELDED CABLE, 10′ LONG, STANDARD PHONE PLUG ON ONE END, PHONE JACK ON OTHER END

37-448	List $5.00

(J) SHIELDED CABLE, 72″ LONG, PHONE PLUG ON ONE END, OTHER END STRIPPED AND TINNED

37-450	List $1.90

(K) SHIELDED CABLE, 10′ LONG, MIKE CONNECTOR ON ONE END, OTHER END STRIPPED AND TINNED

37-452	List $2.70

(L) TWO CONDUCTOR CABLE, 10′ LONG, WITH ALLIGATOR CLIPS ON ONE END AND 90° PHONO PIN PLUG ON OTHER END

37-456	List $2.25

(M) TWO CONDUCTOR CABLE, 10′ LONG, WITH SPADE LUGS ON ONE END AND 90° PHONO PIN PLUG ON OTHER END

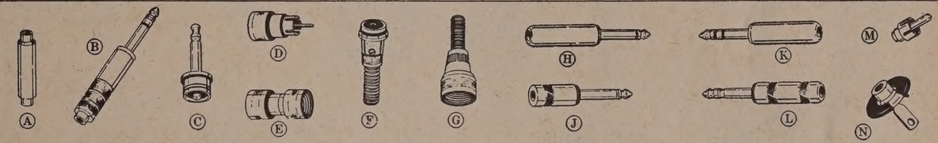
37-458	List $1.85

(N) TWO CONDUCTOR CABLE, 10′ LONG, WITH ALLIGATOR CLIPS ON ONE END AND 90° PHONE PLUG ON OTHER END

37-460	List $2.40

(O) TWO CONDUCTOR CABLE, 10′ LONG, WITH STANDARD PHONE PLUG ON ONE END AND ALLIGATOR CLIPS ON OTHER END

37-462	List $2.40



(A) ADAPTER, PHONO PIN JACK, FOR CONNECTING TWO PHONO PIN PLUGS TOGETHER.

37-470	List $1.00

(B) ADAPTER, PHONO PIN PLUG TO STANDARD PHONE PLUG

37-472	List $1.95

(C) ADAPTER, FEMALE MIKE CONNECTOR TO STANDARD PHONE PLUG

37-474	List $ .45

(D) ADAPTER, MIKE CONNECTOR TO PHONO PIN PLUG

37-476	List $1.00

(E) CONNECTOR FOR TWO MALE MIKE CONNECTORS

37-478	List $1.00

(F) MIKE CONNECTOR, SINGLE CONTACT, MALE

37-480	List $ .50

(G) MIKE CONNECTOR, SINGLE CONTACT, FEMALE

37-482	List $ .70

(H) STANDARD PHONE PLUG, 2 CONTACT, PLASTIC HANDLE

37-484	List $ .80

(J) STANDARD PHONE PLUG, 2 CONTACT, "STUBBY" METAL HANDLE (SHIELDED)

37-486	List $1.00

(K) PHONE PLUG, 3 CONTACT, PLASTIC HANDLE

37-488	List $1.50

(L) PHONE PLUG, 3 CONTACT, METAL HANDLE (SHIELDED)

37-490	List $1.50

(M) PHONO PIN PLUGS, PACKAGE OF 4

37-492	List $ .55

(N) PHONO PIN JACKS, PACKAGE OF 3

37-494	List $ .55

PHONO CARTRIDGES

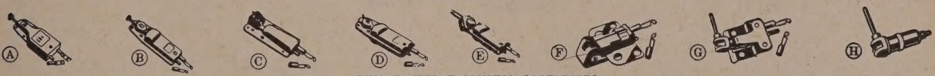


Illustration	Osmium Needle Model No.	Osmium Needle List Price	Sapphire Needle Model No.	Sapphire Needle List Price	Output Level Std.	Output Level Mg.	Response To	Needle Pressure	Needle Data Std.	Needle Data Mg.	Speed Application
					SINGLE NEEDLE CRYSTAL CARTRDIGES						
A	CR1(1)	3.90			3.0 Volts		8,000 cps	1¼ oz.	None Supplied(1)		78 RPM
A	CR2(1)	3.90			1.5 Volts		7,000 cps	1⅛ oz.	None Supplied(1)		78 RPM
B	CR3(1)	3.90			3.0 Volts		8,000 cps	1¼ oz.	None Supplied(1)		78 RPM
C	X105B	6.50	X105C	7.00		1.0 Volt	15,000 cps	6 Grams	1 Mil Point		45-33⅓ RPM
C	X106B	6.50			1.2 Volts		7,000 cps	8 Grams	3 Mil Point		78 RPM
C	X107B	6.50	X107C	7.00	1.2 Volts	1.0 Volt	15,000 cps	8 Grams	2 Mil Point		78-45-33⅓ RPM
B	X108(2)	5.50			6.0 Volts	4.0 Volts	8,000 cps	12 Grams	None Supplied(2)		78-45-33⅓ RPM
A	X109(2)	4.95			4.0 Volts	3.0 Volts	5,000 cps	12 Grams	None Supplied(2)		78-45-33⅓ RPM
D	X111B	6.50	X111C	7.00		4.0 Volts	6,000 cps	10 Grams	1 Mil Point		45-33⅓ RPM
D	X112B	6.50	X112C	7.00	6.0 Volts	4.0 Volts	6,000 cps	10 Grams	2 Mil Point		78-45-33⅓ RPM
D	X113B	6.50			6.0 Volts		5,000 cps	10 Grams	3 Mil Point		78 RPM
					TURNOVER CRYSTAL CARTRIDGES						
E	X101B	8.00	X101BC(3)	8.50	6.0 Volts	4.0 Volts	7,000 cps	10 Grams	3 Mil Point	1 Mil Point	78-45-33⅓ RPM
					SINGLE NEEDLE CERAMIC CARTRIDGES						
F	B101B	6.50	B101C	7.00		1.0 Volt	12,000 cps	8 Grams	1 Mil Point		45-33⅓ RPM
F	B102B	6.50	B102C	7.00	1.2 Volts	1.0 Volt	12,000 cps	8 Grams	2 Mil Point		78-45-33⅓ RPM
F	B103B	6.50			1.2 Volts		7,000 cps	8 Grams	3 Mil Point		78 RPM
					TURNOVER CERAMIC CARTRIDGES						
G			B110C(4)	7.00	1.2 Volts	1.0 Volt	12,000 cps	8 Grams	3 Mil Point	1 Mil Point	78-45-33⅓ RPM
H			B810C(5)	6.00	1.2 Volts	1.0 Volt	12,000 cps	8 Grams	3 Mil Point	1 Mil Point	78-45-33⅓ RPM
H			B811C(5)	6.00	1.2 Volts	1.0 Volt	12,000 cps	8 Grams	1 Mil Point	1 Mil Point	33⅓ RPM

NOTES:
(1) No needle supplied. Best operation is obtained with offset type needle.
(2) No needle supplied. Permo #B310, Jensen #J752 or Equal recommended.
(3) Sapphire needle supplied on LP side only. Osmium needle supplied on 78 RPM side.
(4) Includes mounting bracket.
(5) Replacement "throwaway" element for B110C cartridge.

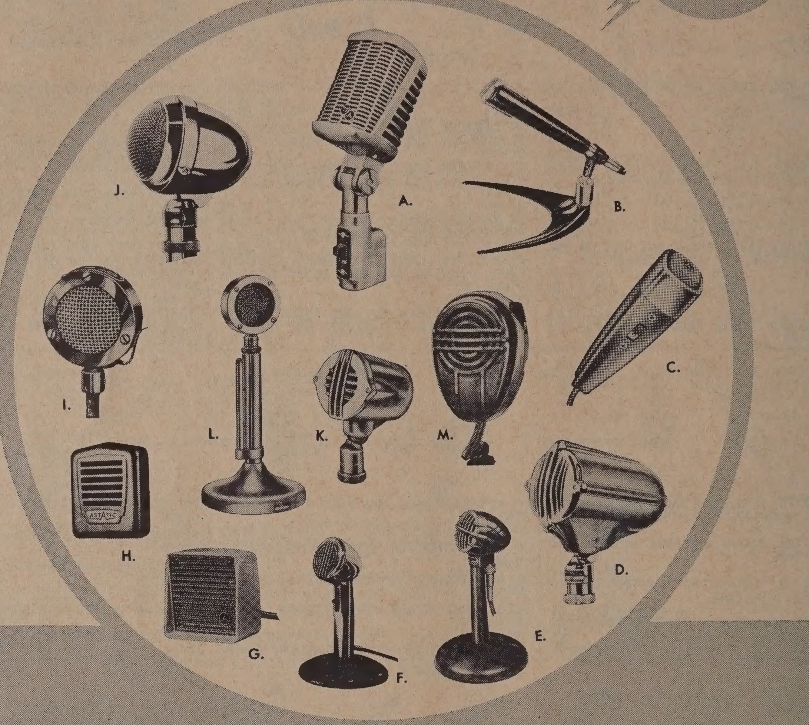
STEREO TONE ARM ADAPTER

Merely add to present tone arm wires. Connect old output wire to one amplifier and connect new output wire to second amplifier. Ultra Flexible wires used in tone arm leads to insure no difficulty in tracking records. Wires shielded and insulated to prevent "Hum-Loops" and shock.

37-396	Adapter with 36″ Output Cable	List $2.15
37-398	Adapter with 72″ Output Cable	List $2.50

ASTATIC MICROPHONES

THE ASTATIC CORPORATION
CONNEAUT, OHIO



PROFESSIONAL PRECISION DYNAMIC MICROPHONES FOR SOUND STAGE—TAPE RECORDING—TV AND BROADCAST

(FIGURE B.)

Strikingly styled, superior performance. Omnidirectional, widest range, pop and blast proof Mylar diaphragm. Pressure cast body. Complete with lavalier assembly, swivel adaptor and 20 feet of two-conductor shielded cable.

MODEL 788: Excellent for tape recording, orchestras and PA. Dual impedance 150 ohms and high. High output —55 db, Frequency Response 60-13,000 cps. Built in on-off switch. Finish—satin black body, satin gold trim. List Price—$79.50. Shipping weight—12 oz.

MODEL 888: Designed for wide applications; sound stage, tape recording, TV and broadcast. High output —56 db, Frequency Response 50-15,000 cps, multi-impedance selection. Finish—black body with chrome trim. List Price—$110.00. Shipping weight—1½ lbs.

MODEL 988: Extended range (40-20,000 cps) professional microphone for TV broadcast, group pickup. High output —57 db, Frequency Response 40-20,000 cps, multi-impedance selection 50-150-250 ohms. Finish—satin black body with satin gold trim. List Price—$150.00.

CARDIOID DYNAMIC MICROPHONES FOR PUBLIC ADDRESS AND INDUSTRIAL APPLICATIONS, RECORDING, TV AND BROADCAST

(FIGURE A.)

MODEL 77: THE MOST POSITIVE ANTI-FEEDBACK MICROPHONE EVER BUILT. A high fidelity unidirectional dynamic cardioid microphone. New advanced styling. Front to back pickup, differential of 18 db. Cartridge is suspended in rubber-like material, no need for external shock mount. Built-in impedance selector switch. Low impedance 30 to 50 ohms, Medium 150 to 250 ohms, High 40,000 ohms. Output —52 db. Frequency Response 30-15,000 cps all models. Satin chrome or gold finish.

MODEL 77—Complete with on-off switch, with provision for locking in on position. List—$82.50. Shipping weight 2 lbs. 14 oz.

MODEL 77L—Head only for mounting on Astatic G Stand. List—$72.50. Shipping weight 1 lb. 14 oz.

MODEL G77—Includes Astatic G Stand. List—$97.45. Shipping weight 3 lbs. 10 oz.

MODEL 77 (Gold)—List Price $92.50.
MODEL 77L (Gold)—List Price $82.50.

MINIATURIZED PROFESSIONAL QUALITY MICROPHONES FOR PUBLIC ADDRESS, COMMUNICATIONS, RECORDING, STUDIO AND INDUSTRIAL APPLICATIONS

(FIGURE C.)

DYNAMIC MODELS 335H AND 335L: Exceptionally uniform response from 60-12,000 cps, both models. High Impedance (335H) and Low Impedance (335L)—30-50 ohms. Output 335H, —56 db; 335L, —57 db. Die-cast housing in TV grey finish, with chrome cap and grille. 8 feet single-conductor cable. Complete with lavalier and stand adaptor with ⅝"-27 thread. Shipping wt. 1¼ lbs. List Prices $22.50 (335L) and $26.50 (335H).

CERAMIC MODEL 333: Exceptionally uniform response from 30-10,000 cps, High Impedance. Output —58 db. Die-cast housing in black finish with black grille and chrome cap.

ASTATIC MICROPHONES

8 feet single-conductor cable. Complete with lavalier and stand adaptor with ⅝"-27 thread. Shipping wt. 1¼ lbs. List Price $17.90.

CRYSTAL MODEL 332: Exceptionally uniform response from 30-15,000 cps, High Impedance. Output —54 db. Die-cast housing in satin chrome with chrome cap and black grille. 8 feet single-conductor cable. Complete with lavalier and stand adaptor with ⅝"-27 thread. Shipping wt. 1¼ lbs. List Price $17.90.

CERAMIC MODEL 331: A voice range unit for communications applications, paging and 27 megacycle citizens' band use. Has built-in momentary-on, spring-return switch. Die-cast black housing and grille with chrome cap. Complete with hang-up bracket. Output —56 db. Frequency range 300-5,000 cps. High Impedance. Cable provides for audio and relay connections. Shipping wt. 1 lb. List Price $17.90.

FOR SSB—AMATEUR—AM—PAGING AND INDUSTRIAL USE

FIG. L—Model D-104, D-104C: "The Premier"—The Radio Amateur's first choice. Balanced performance for maximum intelligibility throughout the voice range. Machine brass parts. Bright chrome finish. 5 feet of single-conductor cable.

MODEL D-104—High output crystal —46 db, Frequency Range 30-7500 cps. List Price—$31.00. Shipping weight—1¾ lbs. MODEL D-104C—with ceramic element, Output —51 db, Frequency Range 30-7500 cps. List Price—$31.00. Shipping weight 1¾ lbs.

MODEL GD-104—Complete with Astatic G Stand, List Price—$51.20. Shipping weight 3¾ lbs. MODEL GD-104C —Complete with Astatic G Stand, List Price—$51.20, Shipping weight 3¾ lbs.

FIG. K—MODEL 10C, 10D: The tailored response, the higher talk power makes these microphones ideal for SSB and AM transmitter use. Also ideal for industrial paging, semi-directional. Pressure-cast body. MODEL 10C—contains ceramic element which is immune to temperature and humidity. Finish Opalescent Grey. Output —52 db, Frequency Range 300-3000 cps. MODEL 10D—contains dynamic unit. Finish Bright Chrome. Output —52 db, Frequency Range 300-3000 cps. MODELS G10C and G10D same as above except complete with G Stand.

List Prices 10C $29.70. Shipping weight 1 lb. 4 oz.; 10D $39.70, Shipping weight 1 lb. 10 oz.; G10C $49.90, Shipping weight 2 lbs. 12 oz.; G10D $59.90. Shipping weight 3 lbs. 2 oz.

MODEL 331—FIG. C (See description under heading "MINIATURIZED PROFESSIONAL QUALITY MICROPHONES . . .")

MOBILE AND COMMUNICATIONS MICROPHONES

FIG. M—MODEL 10M5A: "The Communicator"—Popular rugged carbon microphone, light weight, high sensitivity. Built-in RF filter. Ideal for portable or mobile communication such as police, fire department, taxi. Heavy-duty thumb switch. Pressure-cast housing. Finish opalescent grey. 5 feet of self-coiling cable, includes anti-rattle hang-up bracket. Power level 2 db above 6 MW. List Price—$29.50. Shipping weight 1 lb. 3 oz.

TAPE RECORDING MICROPHONES

FIG. H—MODELS 301 AND 302: "The Gold Standard" —Unique modern styling, superior performance, wide range, high output makes this microphone ideal for tape recording use. Pressure-cast housing, finish in metallic gold. Hinge in back recesses in and out making it a versatile microphone for hand or desk.

MODEL 301—Ceramic, Output —53 db, Frequency Range 30-10,000. List Price—$11.50, Shipping weight 1 lb.

MODEL 302—Crystal, Output —48 db, Frequency Range 30-10,000. List Price—$12.50, Shipping weight 1 lb.

FIG. G—Low cost, high output, wide range, superior performance. MODEL 150—(Crystal) Grey plastic body, aluminum anodized grille. Output level —44 db. (1 volt/dyne/cm²). Output impedance high (1-5 megohms). Frequency response range 30-10,000 cps. 5-ft. extra flexible single-conductor shielded cable. List Price—$6.50.

MODEL 151—(Ceramic) Plastic grey body, black metal grille. Output level —48 db (1 volt/dyne/cm²). Output impedance high (1-5 megohms). Frequency response range 30-8,000 cps. 5-ft. extra flexible single-conductor shielded cable.

DIMENSIONS: 2-3/16" square x 1-1/4" deep.

NET WEIGHT: 3 ounces. List Price—$6.50.

NOTE: PROFESSIONAL RECORDISTS WILL BE INTERESTED IN ASTATIC MODELS SUCH AS THE 330 SERIES, 77 AND 788.

ALL-PURPOSE CRYSTAL MICROPHONES

FIG. F—MODEL 200: "Velvet Voice"—All-purpose, low-cost, hand-held, desk-floor stand. Crystal high impedance microphone. Pressure-cast gold finish housing, chrome grille. Complete with 8 feet of cable. MODEL 200—wide range, Output —50 db, Frequency Range 30-10,000 cps. MODEL 200-S—wide range with switch. MODEL 241-S rising characteristics with switch, Output —50 db, Frequency Range—rising characteristics, from 1500 to 5500 cps.

MODEL 200—List Price—$19.50, Shipping weight 2 lbs.

MODEL 200S AND 241S—List Price—$21.50, Shipping weight 2 lbs.

FIG. J—MODEL T-3: "The Pioneer"—Industry Standard. High output —52 db, Frequency Range 30-10,000 cps. Tilting head provides for semi or nondirectional pickup. Pressure-cast housing. Finish bright chrome body and grille. 10 feet of single-conductor cable. MODEL GT-3 includes Astatic G Stand.

MODEL T-3—List Price—$29.30, Shipping weight 2 lbs.

MODEL GT-3—List Price—$49.50.

FIG. E—JT-30 Crystal, JT-30C Ceramic: "The Spokesman" —High quality, low cost, specially designed for PA recording and communications. Pressure-cast body and base. Finish—opalescent grey, chrome grille. MODEL JT-30—Crystal, 8 feet of cable. Output —49 db, Frequency Range 30-10,000. MODEL JT-30C—Ceramic, 5 feet of cable. Output —54 db, Frequency Range 30-10,000 cps.

MODEL JT-30—List Price—$18.40, Shipping weight 1 lb.

MODEL JT-30C—List Price—$18.90, Shipping weight 2½ lbs.

MODEL JT-30F (Same as JT-30 except head only, without handle and base.) List Price $15.90, Shipping weight 1-1/5 lbs.

MODEL JT-30CF (Same as JT-30C except head only, without handle and base.) List Price—$16.40, Shipping weight 1-1/5 lbs.

FIG. I—MODEL L-1—"The Lecturer"—Small and efficient — High-Quality — Inconspicuous crystal microphone. Spring clip for attachment to speaker's coat lapel or other garment. Precision-built, wide-range performance. Wire mesh front and rear grilles. Black melamine finish. 15-ft. small-diameter single-conductor shielded cable. High impedance. Output —62 db. Range 30-10,000 cps. List Price—$27.35.

ALL DIRECTIONAL DYNAMICS

FIG. D—MODEL DN-50, DN-HZ: "The Commentator" Famous Astatic dynamic microphones for communication and general purpose use. Rugged construction, tilting head. Pressure-cast body. Opalescent grey finish with bright chrome grille. MODEL DN-50—Low impedance, Output —51 db, Frequency Range 50-10,000. 10 feet of two-conductor shielded cable. MODEL DN-HZ—High impedance. Output —52 db, Frequency Range 50-10,000 cps. 10 feet of single-conductor shielded cable.

MODEL DN-50—List Price—$33.50, Shipping weight 2 lbs.

MODEL DN-HZ—List Price—$39.70, Shipping weight 2½ lbs.

MODEL GDN-50—Low impedance with Astatic G Stand. List Price—$52.70, Shipping weight 3 lbs.

MODEL GDN-HZ—High impedance with Astatic G Stand. List Price—$59.90, Shipping weight 3 lbs. 8 oz.

MODEL UGDN-50—Low impedance with Astatic UG Stand (balanced line). List Price—$56.00, Shipping weight 3 lbs. 8 oz.

COMPLETE LINE OF STANDS AND REPLACEMENT CARTRIDGES AVAILABLE

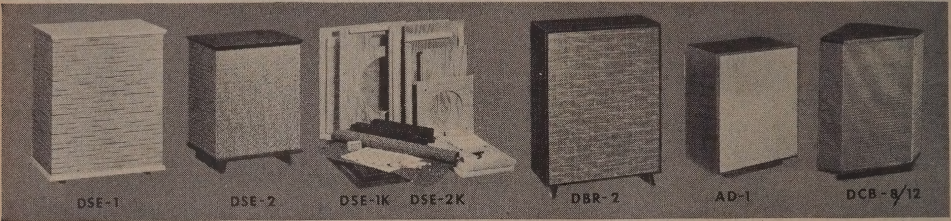
ASTATIC PHONO CARTRIDGES

Astatic manufactures THE WORLD'S MOST COMPLETE LINE OF PHONOGRAPH PICKUP CARTRIDGES FOR BOTH ORIGINAL EQUIPMENT MANUFACTURERS AND DISTRIBUTORS. Astatic is the pioneer of the pickup cartridge industry, and has maintained its number one position for OVER A QUARTER OF A CENTURY through constant research and product development for business and industry.

ASTATIC PHONO NEEDLES

The Astatic Phonograph Needle Line, in addition to unsurpassed quality, is more complete in variety of types than all other lines combined.

Argos PRODUCTS COMPANY *Craftsmanship in Cabinets* NEW HI-FI CABINETS, BAFFLES, TUBE CADDIES



The Californian . . . DE LUXE HI-FI CABINETS

Panelyte top is most durable wood-grained surface known. Solid walnut wood trim (dark or bleached). New Argos "ducted port" design with Tuning Tube to match any speaker. Fiberglas acoustic padding.

DSE-1—The Californian (Factory-built). Takes 15" or 12" woofer and tweeter or coax speaker. Size 24" W. x 29" H. x 15" D. Ship. wt. 43 lbs. Blonde or Walnut, same price. Net $49.95

DSE-2—The Californian Jr. (Factory-built) Takes 12" or 8" woofer and tweeter or coax speaker. Size 19½" W. x 23⅜" H. x 13½" D. Ship. wt. 30 lbs. Blonde or Walnut. Net $39.95

The Californian cabinets described at left are also available in pre-finished kits. All parts are pre-cut. Entire top and bottom sections finished.

DSE-1K—The Californian (Kit). Will take 15" or 12" woofer and tweeter or coax speaker. Size 24" W. x 29" H. x 15" D. Ship wt. 41 lbs. Blonde or Walnut, same price. Net $39.95

DSE-2K—The Californian Jr. (Kit). Will take 12" or 8" woofer and tweeter or coax speaker. Size 19½" W. x 23⅜" H. x 13½" D. Ship. wt. 28 lbs. Blonde or Walnut, same price......................Net $29.95

MODERATELY PRICED SPEAKER ENCLOSURES

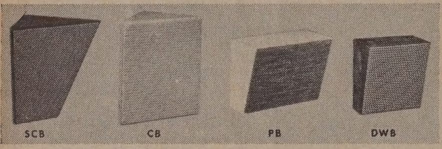
All three units below use Argos "ducted port" design and Tuning Tube to match any speaker. Fiberglas acoustic lining. Scuff-resistant pyroxylin fabric. Tweeter port cover, all hardware and speaker reducing ring.

New "Forward Front" permits slim size with same 4.3 cu. ft. vol. Can be used upright as shown or on side (Base is shipped unattached). Takes either 15" or 12" woofer and separate tweeter or a coax speaker. Size 23" W. x 30" H. x 15" D. Ship wt. 43 lbs. DBR-2A—Blonde or Walnut. Net $36.50

Equal in fine tonal qualities to cabinets costing up to twice the price. Ideal height for use as lamp table. Takes either 12" or 8" woofer and separate tweeter or a coax speaker. Size 19¼" W. x 23⅜" H. x 13½" D. Ship wt. 31 lbs..

AD-1—Blonde or Walnut. Net $24.95

Better tone than any comparable cabinet because of (1) "ducted port" design and (2) corner location. Use on wall or floor. Takes either 12" or 8" woofer and separate tweeter or a coax speaker. Size 22½" W. x 25" H. x 14⅜" D. Wt. 22 lbs. DCB-8/12. —Blonde or Walnut. Net $22.50



SCB—SLANTING CORNER BAFFLE. Forward Front gives 22% more internal vol. Bass reflex. Walnut or blonde pyroxylin.

CB—CORNER BAFFLE. Forward Front gives 19% more internal vol. Bass reflex. Walnut or Blonde pyroxylin.

PB—NEW PRESTIGE BAFFLES. Greater width improves appearance. Almost twice internal vol. for small extra cost. Walnut or Blonde pyroxylin.

DWB—DELUXE WALL BAFFLES in genuine birch, either modern (dark) walnut or platinum (light) finish. Forward Front.

WB—REGULAR WALL BAFFLES now with Forward Front. Like DWB only new "woodgrain" pyroxylin, walnut or blonde.

R-8/12 REDUCING RING for mounting 8" speaker in any 12" cabinet. All hardware. Ship. Wt. 1 lb. Net $1.20.

R-12/15 REDUCING RING. Same only 12-15" size. Ship. wt. 1 lb. Net $1.65.

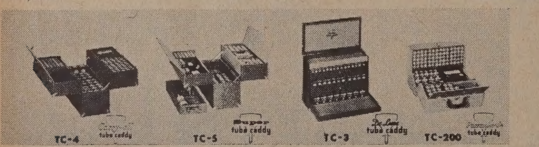
BAFFLES ONLY — NO SPEAKER

Model	Speaker Size	Width, Height Depth, In.	Cubic Inches	Ship. Wt. Lbs.	Net Each
SCB-8C	8	17¾ x 15 x 9½	680	6	7.90
SCB-12C	12	21 x 20¼ x 10½	1240	8	10.95
CB-8C	8	14 x 12¼ x 6½	525	4½	7.40
CB-12C	12	20 x 18 x 9	1520	8½	10.50
PB-8	8	14 x 10⅜ x 7	690	4	5.25
PB-12	12	18¼ x 13¾ x 9	1580	6½	7.80
DWB-8A	8	9⅜ x 10½ x 6½	400	5½*	6.00
DWB-12A	12	13¼ x 14¼ x 9	1180	9 *	8.40
WB-4/5C	4/5	6¼ x 6⅛ x 4	100	2 *	2.80
WB-6C	6	7⅞ x 8½ x 5	210	3 *	3.40
WB-6/9C	6 x 9	9¾ x 10½ x 6½	400	5 *	4.05
WB-8C	8	9¾ x 10½ x 6½	400	5 *	4.05
WB-10C	10	11⅞ x 12⅜ x 7¾	800	6½*	4.80
WB-12C	12	13⅝ x 14 x 9⅛	1180	8½*	5.55

* Shipping wt. of 2 in carton

SAME BAFFLES WITH SPEAKER INSTALLED

SCB-8AS	8"	15 W. Spkr.	4.64 oz. mag.	Wt. 8½ lbs.	Net 13.65
SCB-12AS	12"	18 W. Spkr.	6.8 oz. mag.	Wt. 12½ lbs.	Net 19.20
WB-8CS	8"	15 W. Spkr.	4.64 oz. mag.	Wt. 5½ lbs.	Net 9.90
WB-12CS	12"	18 W. Spkr.	6.8 oz. mag.	Wt. 8½ lbs.	Net 14.50



CARRY-ALL TUBE CADDY*

"Break-away" design gives gives quick access. Holds up to 262 tubes, plus tools, meter. 21" w. x 15" h. x 8" d. Ship. Wt. 12 lbs.

TC-4—Net Each........**$15.95**

NEW PACEMAKER CADDY*

TC-100. Similar to above, priced for economical buyer. Same size, wt.

Net. **$12.35**

TUBE CADDY* JUNIOR

TC-2A. Like TC-4, smaller. 143 tubes, tools. 15¾" w. x 12½" h. x 8" d. Wt. 9 lbs. Net **$10.50**

NEW SUPER TUBE CADDY*

Carries ⅓ more, gets more jobs done on the spot. Separate tool tray. 3300 cu. in. vol. Size 24" w. x 16½" h. x 8½" d. Ship. Wt. 19 lbs.

TC-5—Net Each **$21.95**

DELUXE TUBE CADDY*

Convenient tool tray (2⅛" deep). Holds up to 225 tubes. Slip-out hinges. 18" w. x 14½" h. x 9¼" d. Ship. Wt. 14½ lbs.

TC-3—Net Each **$16.95**

NEW PACEMAKER JR.

New small size, folding model, economically priced. Holds up to 143 tubes, tools. Size 15¾" w. x 12½" h. x 8" d. Ship. Wt. 9½ lbs.

TC-200—Net Each $8.95

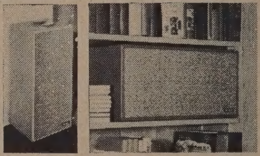
SOUND CADDY® WITH TWO SPEAKERS

Sturdily built for long service. Has 12-in., heavy-duty, 18-watt PA speakers (6.8 oz. mag.). Accommodates most amplifiers with turntable, up to 30 watts.

Size: 17¾" w. x 13⅛" d. x 22" h. Shipping Wt. 29 lbs.

Type SC-2CS — Net $36.00.

Type SC-2C — Same less speakers. Shipping Weight 20 lbs. Net $21.55



NEW ENCLOSURE WITH TWO SPEAKERS

Hi-fi at its beautiful best in small space. Luxurious selected hardwood—¾" thick. 8" high-fidelity woofer and high dispersion tweeter wired in crossover network. 8-ohm input. Argos ducted port design. Essentially flat 80 to 15,000 cycles. Honey blonde or autumn walnut. Size 24" w. x 11" h. x 10½" d.

TSE-2A—Ship. wt. 21 lbs..... Net $39.95

TSE-2AS—Enclosure only. Wt. 19 lbs. Net $26.50

TSE-1S—Similar to above in appearance, but pyroxylin covered. 8" woofer, tweeter and crossover network. Flat 100—13,000 cycles. 24 x 11 x 10½ in.

TSE-1S—Ship. wt. 19 lbs. Net $24.95

TSE-1—Enclosure only. Wt. 17 lbs. Net $16.50

***Registered TM of Argos Co. All prices slightly higher West of Rockies.**

ATLAS SOUND CORP.

ATLAS "FULL GRIP—VELVET ACTION" MICROPHONE STANDS

NO SLIPPING — NO RATTLE — NO NOISE — NO SCRATCHING — NO WEAR

The "Full Grip" clutch is standard on all models—it offers an extended length clutch body, permitting a secure, full hand grip. The clutch mechanism of all "Velvet Action" stands is inner-lined with a wear-proof bakelite locking collet which grips without jamming, slipping or sudden dropping. All chrome plated surfaces are carefully polished prior to plating to assure a uniform "Super-Chrome" wear resistant, lifetime finish. All threads on tube assemblies are individually inspected to assure a perfect fit when assembled to the base castings. All bases are functionally designed to offer maximum stability for a given base weight. The maximum base mass is located at the outer periphery of the casting where the concentrated weight is most effective. All bases include self leveling, shock absorbing base pads, plus three additional "anti-tip" points located between the base pads. All models terminate with a ⅝″-27 thread at the microphone end.

MS-10C Economy model suitable for most applications where a low cost stand is required. Offers adequate base stability for average weight microphone.

MS-12C Similar to above but increased base weight offers an added advantage. Flat design of base is modern in appearance and is finished in a dark gun metal shrivel finish. Equipped with base pads to absorb shock.

MS-11C Full chrome design. Entire stand base and upright tube assembly completely finished in "Super-Chrome." Excellent for use where fine appearance is a requirement. An excellent choice for use with full chrome plated microphones. Equipped with base pads.

MS-4 Three section telescoping microphone stand permitting a wide variation of adjustment. Can be adjusted from 26 inches to 61 inches in height. Excellent for use in schools, etc. where it is necessary to adjust the stand over a wide range of height adjustment. Minimum collapsed length offers convenience in transportation.

MS-20 DeLuxe model. Maximum stability suitable for use with heavy, expensive microphones. Large oversize tube assembly, ⅞″ diameter telescoping tube, 1⅛″ diameter base tube, base diameter 12 inches. Oversize clutch assembly assures secure locking adjustment. Top adaptor included for ⅝″-27 microphones.

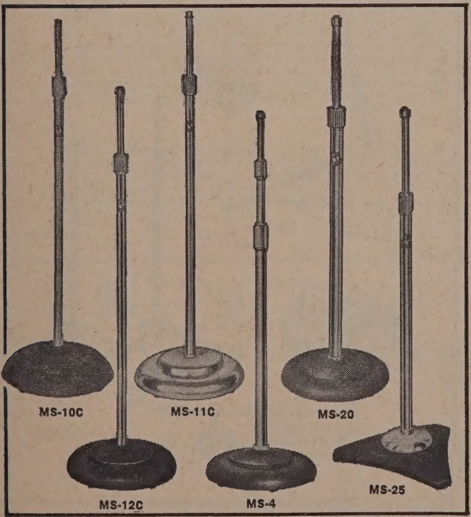
MS-25 Professional Microphone Stand. The ultimate in microphone stands. Features the "Safety Air Lock Cushion." This sensational feature prevents any accidental or sudden slippage of the telescoping section. If the clutch mechanism is accidently released the stand cannot suddenly crash down—thus prevents damage to the microphone from severe mechanical shock. The telescoping section is at all times "cushioned on air" and the controlled escapement of air will only permit a slow smooth and quiet collapse of the stand. Base finished in a combination of chrome and shrivel. Heavy duty tube assembly, 1⅛″ and ⅞″ combination—⅝″-27 top adaptor.

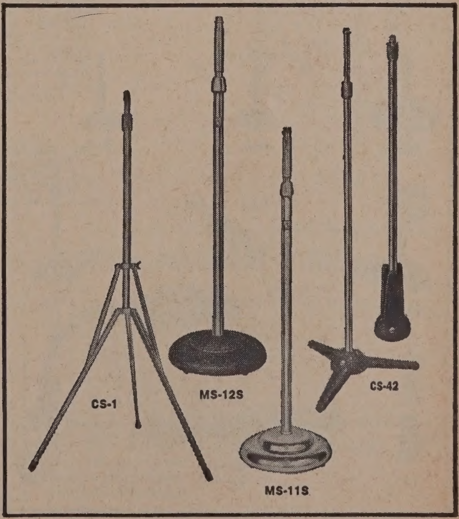
MS-11S - MS-12S Automatic "Sleeve Action" models. A fully automatic means of adjusting the height of the stand. A slight downward pressure on the "Sleeve Action" control permits the telescoping section to be lowered—cannot change its position without a deliberate pressure on the actuating sleeve control. Two models full chrome base or shrivel finish.

CS-1 Fully collapsible, portable stand quick and simple to set up. Collapsible to a minimum overall length of 23 inches.

CS-42 Collapsible base stand. All the advantages of portable type stand without the loss of stability inherent in cast iron base types. When legs are extened they are securely locked in position. Upright tube assembly full chrome, base finished in grey shrivel, base pads provided. **Packed: One complete stand to a single shipping carton.**

Model	Weight	Base Finish	Tube Finish	Height Adj.	Base Dia.	List Price
MS-10C	10 lbs.	Grey Shrivel	Full Chrome	35″ to 64″	10 inches	$ 9.75
MS-12C	12 lbs.	Grey Shrivel	Full Chrome	35″ to 65″	10 inches	$10.50
MS-11C	13 lbs.	Full Chrome	Full Chrome	35″ to 65″	10 inches	$13.00
MS-4	11 lbs.	Grey Shrivel	Full Chrome	26″ to 61″	10 inches	$14.75
MS-20	15 lbs.	Grey Shrivel	Full Chrome	37″ to 66″	12 inches	$16.00
MS-25	22 lbs.	Chrome & Grey	Full Chrome	37″ to 66″	17 inches	$26.00
MS-11S	13 lbs.	Full Chrome	Full Chrome	35″ to 65″	10 inches	$23.50
MS-12S	12 lbs.	Grey Shrivel	Full Chrome	35″ to 65″	10 inches	$21.00
CS-1	5 lbs.	Chrome & Cad	Full Chrome	23″ to 62″	collapsible	$18.00
CS-42	9 lbs.	Grey Shrivel	Full Chrome	34″ to 62″	16 inches	$12.50





ATLAS SOUND CORP.

ATLAS MICROPHONE DESK STANDS AND ACCESSORIES

DS-4 Offers a "New Look" in microphone desk stand design. Highly polished molded phenolic base is light beige in color which harmonizes with the superchrome upright tube. The smooth base will not scratch or mar table tops. An excellent accessory for use with tape recorders. Its smooth contours and light weight permits it to be stored within the carrying case without fear of damage to other accessories. Upright tube can be easily removed from base. Base diameter 4", height of tube 4", thread size ⅝"-27, Shipping Weight ½ lb. .... **List Price $2.50**

DS-5 General Purpose Non Adjustable Desk Stand. Base is of cast iron finished in gun metal shrivel finish. Stable base is equipped with pads to prevent damage to desk or table tops. Base diameter 6", tube height 4" chrome finish. Shipping Weight 2 lbs. .... **List Price $3.00**

DS-7 Same as above but equipped with upright adjustable from 8 to 13 inches. Equipped with standard "Velvet Action" clutch adjustment. Thread size at microphone end ⅝"-27. Shipping Weight 3 lbs. ...... **List Price $5.00**

DS-10 "Stream Liner" Desk Stand. Features "Rear Cable Exit." For use with all types of microphones. Mike cable is concealed under center section of chrome trim and directed out at rear of base; results in added stability and improved appearance. Unnecessary to unsolder any cable plugs or connectors. Constructed of precision die castings, finish gun metal grey, bright chrome trim. Rubber bumpers prevent damage, ⅝"-27 thread. Shipping Weight 1½ lbs. .... **List Price $5.00**

TS-6 Adjustable Banquet Stand with "Velvet Action" adjustment from 14½ to 26 inches. All parts including base finished in full super-chrome, base diameter 8 inches. Shipping Weight 6 lbs. .... **List Price $9.00**

SW-1 Gyromatic Swivel permits microphone to be adjusted to any angle, up, down, around. Locks in any position by a turn of the locking knob. Can be attached to any floor or desk stand. All parts die cast finished in chrome, length 4½ in. ⅝"-27 male and female threads ......**List Price $4.50**

SO-1 "Snap On" Microphone Attachment. A quick, simple and safe means of attaching any microphone to any floor stand. Eliminates the need of threading the microphone on and off the stand. A two-section "Snap On" ball bearing spring sleeve attachment permits the microphone to be attached or removed instantaneously. One section is attached to the microphone and one section permanently fastened to the stand. An excellent device for use where the microphone must be occasionally removed from the stand as often occurs in sports announcing, floor show use, etc. All parts are of brass, carefully machined, and finished in "super-chrome" plating ....**List Price $2.75**

SB-1 Dispatcher and Switchboard Mike Support. Designed for use in supporting a microphone over conventional types of telephone switch boards. However, there are many other useful applications for a stand of this type, such as a desk support, dispatcher's office, dais, banquet table, etc.

The 12 inch long, flexible, chrome plated "goose neck" arm is mounted on a spring loaded swivel so that the microphone can be swung aside when not in use. A feed thru hole is located at the mike end of the "goose neck" so that the mike cable can be concealed within the flexible arm. The cable enters under the base at the rear end of the "goose neck" resulting in a neat and workmanlike installation.

The heavy, functionally designed, base casting is rear loaded so that the base will not tip forward. The base weight is 13 lbs. and measures 9" x 6½". The finish is grey shrivel. Rubber bumpers fastened to the base prevents "skidding" and protects against damage to fine furniture finishes. Shipping Weight 13 lbs. "goose neck" threaded ⅝"-27. **List Price $14.00**

GN "Goose Necks" Can be attached to any microphone stand or fixture; ends have ⅝"-27 male and female threads—all finished in bright chrome, model numeral indicates over all length of "goose neck" in inches. List Price.. **GN-6 $2.00, GN-13 $2.75, GN-19 $4.00**

BC-1 Bracket Clamp. A multitude of useful applications. Can be used with a boom arm, goose neck, etc.... Chrome tube 6" long. Clamp can be removed and top flange screwed or bolted in position. ⅝"-27 thread, **List Price $3.50**

CH-1 Cable Hanger. An extremely handy device that should be part of every microphone stand. Fits all tubes from ⅞" to 1¼" diameter. The mike cable can be quickly coiled and looped over the cable hanger when moving, storing or transporting the mike and stand. Can be attaced or removed from the stand in a moment by removing one screw. A proven necessity on all stands as indicated by its use in all broadcast and recording studios. All parts finished in polished chromium ....**List Price $2.50**

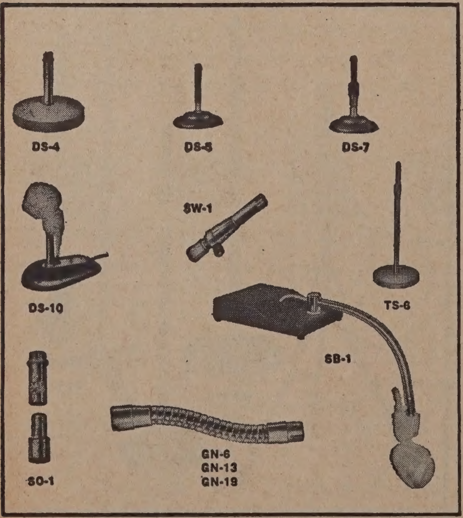
NS-1 "The Chesty" Neck Supported Mike Holder—fulfills every practical requirement for a microphone chest support. Permits a quick and simple "three way" adjustment. Mike is always in a suitably "close talking" position reducing acoustic feedback problems caused by excessive spacing between mike and speaker's mouth. Wide comfortable chest support prevents rolling due to sudden movement. Flexible goose neck quickly removed if desired for use as hand held mike. Entire assembly can be placed on table top and used as conventional desk stand. Cool and lightweight weighing only 6 oz. ....**List Price $5.00**

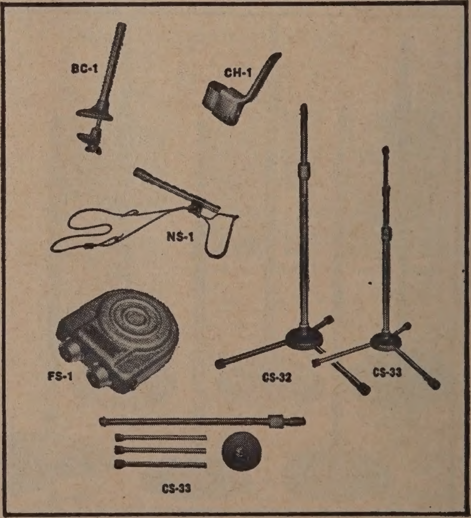
FS-1 Microphone Foot Switch—for use with all high or low impedance mikes having single ended inputs. Shielded, grounded, noise free. Designed primarily for foot operation—its small size and neat appearance also permits it to be used as a hand operated switch on top of a table or switch board. Switch is a long life shielded micro-switch of a "press to open" circuit type. When switch is depressed the short is removed from the mike circuit and the mike becomes operative. Male type screw connector permits single insertion between the mike and amplifier input. Switch can be easily rewired internally for "press to close" circuit application. Measures 2½" x 3" ....**List Price $12.00**

CS Type Demountable Microphone Floor Stands—with full grip—"Velvet Action," fully collapsible—quick and simple "Come Apart" base design. This new and revolutionary design in microphone stands is ideal for fixed as well as portable applications. Excellent for use when it is desired to contain the stand within the amplifier or speaker carrying case. The stability of the assembled stand is equal to many types employing heavy cast iron base construction. The base legs are easily removed to permit minimum size, lightweight transportation. The spring lock leg-holding mechanism of this ingenious design offers a quick and simple "Come Apart" feature. No tools or screw fastenings are required to hold the base assembly together. No small parts to become lost. The self-leveling legs are chrome plated, tipped with skid-proof rubber shock absorbent bumpers—eliminates vibrational conductivity ... protects polished floor surfaces against damage.

Model	Finish	Height Adj.	Shipping Weight	List Price
CS-32	Full Chrome	36" to 64"	5 lbs.	$11.50
CS-33	Full Chrome	26" to 64"	4 lbs.	$13.50

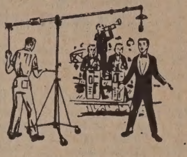
Each stand is individually packed complete in a single carton.
Model CS33 can be collapsed to a total length of only 22½".





ATLAS SOUND CORP.

ATLAS BOOM STANDS — ADAPTORS



Atlas Booms have a wide variety of applications, and models are available to meet every possible need. The BS-37 "Porto-Boom" is generally used with film or television cameras. The BS-36 and BS-36W "Professional" are designed for use in recording and radio-broadcast studios—and for special application on band stands, etc. The BB-1 "Baby Boom" is used where only a small amount of overhang is required—over desks and musical instruments, for example.

All models are carefully designed and constructed for noise-free, smooth, "Velvet-Action" adjustment. They can be permanently locked into position at the most suitable mike location.

Atlas Sound Booms clearly reveal engineering know-how based on a thorough knowledge of industry's requirements.

BS-36 Professional Boom Stand with "Safety Air Lock Cushion" offers all the advantages of "Floating Action" plus a secure and dependable locking adjustment. All moving parts are "Velvet Smooth" in operation. The "Safety Air Lock Cushion" built into the vertical section prevents any accidental or sudden slippage of the upright section. The vertical section cannot suddenly crash down for it is "Cushioned on Air" and the controlled escapement of air will permit only a slow smooth and quiet collapse of the upright section. A gyromatic swivel joint is provided at the microphone end of the boom, so that the mike will always hang in proper position. The base casting is equipped with shock absorbent, chrome plated, "domes of silence." These base pads permit the base to glide over floor surfaces with a minimum of friction—also absorb floor vibrations that might otherwise be transmitted to the microphone.

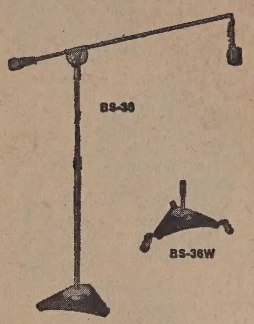
Specifications: Boom length 62″ (an additional 31″ extension may be added if a light weight mike is used). Adjustable vertical extension from 48″ to 72″. Base diameter at floor contact points 17″. All tubular sections super-chrome plated. Modernistic base finished in polished chrome and gun metal. Snap on hangers furnished for holding mike cable to boom. Shipping weight 36 lbs. .... List Price $63.00

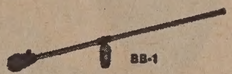
BS-36W Mobile Model. This model is identical to the BS-36 except for the base. This mobile model is supplied with a DeLuxe base having ball bearing swivel casters of hard rubber composition. These large size casters permit the entire stand to be wheeled to various positions in the studio. Shipping weight 40 lbs. ....List Price $73.00

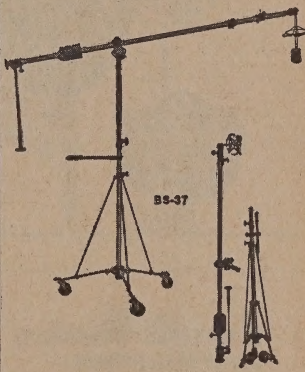
BB-1 Baby Boom Attachment. An extremely versatile device that can be attached to any type of floor stand as well as with various accessories. All swivel parts are precision die castings resulting in smooth operation and secure positioning. Length of boom 31″—Chrome plated ⅝″-27 thread. Shipping weight 3½ lbs. ....List Price $7.50

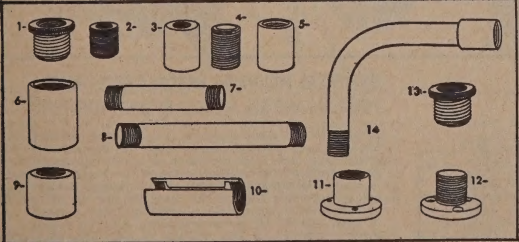
BS-37 Porto Boom. "Quiet as a Cat on Velvet" designed for most exacting studio application, TV studio, sound motion picture application, etc., ideal for portable "on location" service. All controls are noise free velvet smooth in action—balanced for finger tip operation. Fully collapsible down to dimensions permitting its transportation in all automobiles. Can be knocked down and reassembled in a few moments—without tools. The telescopic upright is securely locked in position with a large brake shoe type clutch assembly. A piston type air check prevents any accidental collapse of the upright. Dual control microphone "gunning device" is supplied for rotating the mike through a 360° arc. Noise free universal mike suspension can be adjusted for various weight mikes. Automatically positions mike regardless of boom angle. Many extra features too numerous for individual description. Detailed description sheet available.

Specifications: Upright retracted 5¼′ extended 9′. Boom retracted 7′ extended 18′. All castings aircraft aluminum. All tubular sections aluminum processed in "alumilite" to prevent corrosion. Counter weight cast iron with bronze locking mechanism. Base casters 4″ swivel type. Base spread 42″ on radius. Mike end terminated ⅝″-27. Other size adaptors available. Shipping weight 73 lbs. ....List Price $625.00







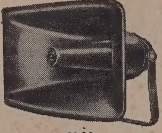


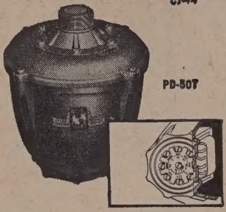
MICROPHONE ADAPTOR AND FITTINGS

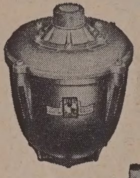
Model	Description	List
AD- 1	⅝″-27 female to ½″ pipe thread male (RCA Adaptor)	$ .85
AD- 2	⅛″ pipe female to ⅝″-27 male	.60
AD- 3	⅛″ pipe female to ⅝″-27 female	.60
AD- 4	¾″ long, ⅝″-27 male running thread	.30
AD- 5	⅝″-27 female to ⅝″-27 female, coupling	.60
AD- 6	⅞″-27 female to ⅞″-27 female, coupling	1.00
AD- 7	3″ long tube ⅝″-27 male each end	.65
AD- 8	6″ long tube ⅝″-27 male each end	.75
AD- 9	⅞″-27 female to ⅝″-27 female	.70
AD-10	⅝″-24 female to ⅝″-27 female (W. E. Adaptor)	1.20
AD-11	Flange, ⅝″-27 female. Base Diameter 1¼″	.70
AD-12	Flange, ⅝″-27 male. Base holes on ⅞″ mounting centers	.70
AD-13	⅞″-27 male to ⅝″-27 female	.85
AD-14	Right angle bent tube: ⅝″-27 male and female each end	1.50

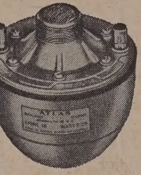
Note: Thread sizes specified as ⅛″ pipe is I.P.S.
(Electrical fitting) Measures Approx. ⅜″ dia.
All adaptors chrome plated.

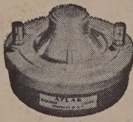
ATLAS SOUND CORP.


CJ-44


PD-50T


PD-5VT


PD-5VH


PD-4V

ATLAS SUPER POWER DRIVERS—COBRA JECTOR

MODEL CJ-44 ALL PURPOSE WIDE ANGLE PROJECTOR—COMPLETE WITH SUPER POWER DRIVER—POLYESTER FIBRE GLASS CONSTRUCTION.

All weather speaker with "Acousti-Matched" built in driver unit. The projector and reproducer is a single package, matched design resulting in maximum conversion efficiency. (Power input in watts versus sound pressure output). The CJ-44 controlled response has been carefully restricted within frequency limits most useful in P.A. and high level music reproduction. As a result, speaker output energy is not wasted in the reproduction of frequencies that do not contribute to efficient performance ....List Price $72.50

Input Power (cont.)	30 watts
Power Equalized Response*	60 watts
Input Impedance	16 ohms
Response	150-9000 cps
Dispersion	90° x 60°
Dimensions—Bell	23" x 13"
Overall length	19"
Weight	16 lbs. net 19 lbs. shipping

*Input range limited to frequencies above horn cut off.

SUPER POWER—SUPER EFFICIENT—DRIVER UNITS

The new PD series driver units are the result of years of constant research and development. They can be expected to offer a "lifetime" of satisfaction under full power application and where the ultimate in frequency response, conversion efficiency and trouble-free reliable service is demanded. Specify the PD-50T for the "tough spots."

PD-50T The last word in advanced design. Offers an absolute maximum of efficiency at super power inputs. The only driver to use where a maximum of dependable sound energy is required. Equipped with a large multi-match, built in, line matching transformer.

PD-50 Same as above but less line matching transformer.

PD-5VT An oversized driver unit complete with universal line matching transformer. Primary calibrated for variable impedance circuits as well as for constant voltage systems. Convenient terminals for input connections located at base of rear housing.

PD-5VH The standard of the industry. Offers that extra margin of efficiency due to the oversized magnetic circuit—double sealed against all weather conditions. One piece full phenolic diaphragm, self aligning—easily serviced in the field.

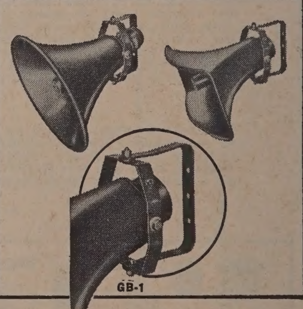
PD-4V For all applications—low in cost, high in performance. Highly efficient "Alnico V Plus" magnetic structure, reliable, tailored response.

SPECIFICATIONS	PD-50T	PD-5VT	PD-5VH	PD-4V
Power (continuous)*	50 watts	30 watts	30 watts	25 watts
Power (equalized response)†	100 watts	60 watts	60 watts	50 watts
Voice Coil Impedance	16 ohms	16 ohms	16 ohms	16 ohms
Sound Intensity#	135 db	130 db	130 db	127 db
Frequency Response (cps)	70-10,000	80-10,000	80-10,000	75-7,000
Transformer Imp. Ohms	100, 165, 250 500, 1000, 2000	165, 250, 500 1000, 2000	———	———
Trans. Power Taps, Watts 70 Volt Line	50, 30, 20, 10 5, 2.5	30, 20, 10 5, 2.5	———	———
Shipping Weight	8 lbs.	7 lbs.	5 lbs.	4 lbs.
List Price	$57.50	$47.50	$35.00	$27.50

PD-50 Same as PD-50T Less Transformer $47.50

* Integrated speech and music full range. † Input range limited to frequencies above horn cut off. # Measured 4 ft. on axis, 6 ft. air column with integrated full power input.

DR-54
DR-42
DR-32


GB-1

DR PROJECTORS—NONRESONANT STURDY WEATHER-PROOF

Atlas DR projectors are the result of many years of acoustic research. This costly engineering and elaborate tooling has resulted in projectors that are without acoustical or mechanical equal. All acoustical sound paths are clean and uniform without steps or pockets to disturb the normal function of the horn. These critical design features eliminate conditions of turbulence, frequency cancellation and resultant signal distortion. All models are equipped with a heavy duty "U" bracket. This bracket is securely fastened to a main body casting which will not fail when subjected to extreme conditions of stress, strain and vibration.

SPECIFICATIONS	DR-54	DR-42	DR-32
Air Column	4½ ft.	3½ ft.	2½ ft.
Low Frequency	115 cps	140 cps	190 cps
Bell Diameter	26 inches	21 inches	15 inches
Length (less driver)	19 inches	16 inches	14 inches
Shipping Weight	23 lbs.	14 lbs.	10 lbs.
List Price	$46.50	$34.00	$28.75

UNIVERSAL MOUNTING BRACKET ACCESSORY FOR CJ-44 AND ALL MODELS OF DR PROJECTORS

MODEL GB-1 This useful accessory is easily and quickly attached to all Atlas projectors using "U" type bracket mounting. It permits the speaker to be quickly adjusted in both a horizontal and vertical plane and securely locked in position for the most effective sound coverage. Average adjustment limits 160° on the horizontal and 65° on a vertical direction. Constructed of bonderized steel, finished in baked enamel, all hardware supplied. Shipping weight 3 lbs. ....List Price $5.00

ATLAS SOUND CORP.

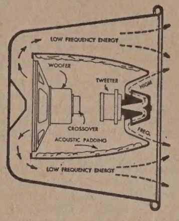
ATLAS "COAX-PROJECTOR" — SUPPORT STANDS

Now . . . Hi-Fi P.A. for voice and music — all-weather — compact — high efficiency — rugged — portable — fine appearance. For industrials: wired music systems, paging, amusement parks. For the home: on the patio, in the garden or playroom. Excellent for use with outdoor stereo systems.

MODEL WT-6 "Two Way" system, not a compromise. Two individual drivers, two individual horns with built in electronic crossover filter. All weather high efficiency—indoor and outdoor use. Perfect for all applications where Hi Fi is a must. A weatherproof cone type driver having a six inch throat reproduces the low frequencies. An individual pressure type driver reproduces the high frequencies. Both drivers are loaded with separate horns which minimize acoustic phase distortion and intermodulation effects. The rugged steel "U" type bracket is fully adjustable for all applications. All metal parts are finished in a new modern shade of beige which harmonizes with most interiors as well as with outdoor surroundings. The leading edge of the main flare is mechanically protected and acoustically damped with a light brown plastic beading which offers a fine and attractive contrast to the overall finish of the speaker. All finishes are high temperature baked enamel. All metal parts chemically processed prior to finishing. List Price $57.50

WT-6 SPECIFICATIONS	
Power	15 Watts (cont.)
Frequency	100-15,000 cps
Impedance	8 ohms
Dispersion	120° average
Sound Level*	118 db
Crossover	1,000 cps prox.
Bell opening	15 inches
Overall depth	12 inches
Ship weight	16 lbs.

*Measured at 4 ft., 800 to 1300 cps sweep at rated power.



MODEL W-6 Single driver unit, economy model, for speech and music, identical in size, general appearance and construction to the WT-6 Coax-Projector. However, the W-6 is not equipped with an individual high frequency driver unit and horn. The response range of the W-6 is adequate for applications where good musical reproduction is desired but where the ultimate in high frequency response is not required. The W-6 is excellent for a wide variety of applications such as juke box extension speakers, industrial music systems and outdoor installations of all types ....List Price $42.50

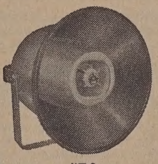
W-6 SPECIFICATIONS	
Power	15 Watts (cont.)
Frequency	100-8,000 cps
Impedance	8 ohms
Dispersion	120° prox.
Dimensions	Same as WT-6
Shipping weight	14 lbs.

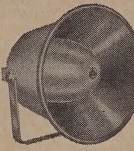
MODEL T-11 All purpose line matching transformer. Wide range of impedance taps also calibrated in power steps. Easily attached to WT-6 or W-6. Full description in another section of catalog ....List Price $9.25

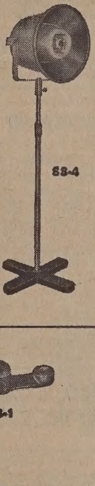
MODEL SS-4 An extremely useful loudspeaker stand for permanent and rental installations. Can be used with all types of speakers of medium weight and size such as WT-6, W-6, etc. An "Easy Off" top fitting is supplied so that the speaker can be attached or removed instantly. Cast iron base offers adequate stability and requires a minimum of floor space. The upright is full chrome steel tubing and in contrast to the beige shrivel base finish results in a stand of fine appearance. The stand extends over 6 ft. in height, which is suitable for most applications. Shipping weight 20 lbs. ....List Price $19.50

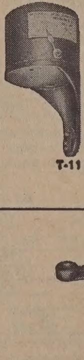
MODEL RC-6 Radial driver unit projector. The advantage of 360° coverage often permits the use of one speaker where a number of directional speakers would be required to obtain smooth and uniform sound coverage. The nonresonant construction with dual rubber dampening rings assures clean reproduction even at high power. The RC-6 has an acoustic lenght of four ft., low frequency cut off 150 cycles, diameter 25 inches, over all height 22 inches (including bracket). Finished in gun metal grey. Shipping weight 22 lbs. Supplied less driver unit. See individual description of various model driver units that are available ....List Price $50.00

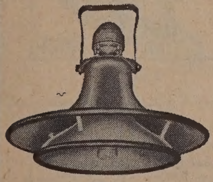
MODEL SS-2 Heavy duty all purpose speaker support stand. The base stability due to the wide surface spread offers adequate support for heavy speakers and under adverse wind conditions. All parts are of steel properly plated and paint finished. The vertical adjustment includes a "double lock" device providing an extra margin of safety against accidental release. The SS-2 is rugged and will support several hundred pounds. Equipped with an "Easy Off" top adaptor to facilitate removal or attachment of speaker. Height extension 5 to 10 feet. Shipping weight 29 lbs. ....List Price $40.00


WT-6


W-6

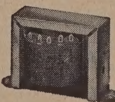

SS-4


T-11


RC-6

SS-2

T-15


T-16

PS-1

H2U

MODEL T-15 50 watt transformer with weatherproof housing. For use with CJ-44 and all high power driver units. Universal mounting strap permitting various types of mounting to all kinds of speakers. Specifications: Primary: 100, 165, 200, 250, 500, 1000 and 2000 ohms or based on a 70 volt line the equivalent power in watts of 50, 30, 25, 20, 10, 5 and 2.5. Secondary: 4, 8, and 16 ohms. Shipping weight 3 lbs. ....List Price $16.50

MODEL T-16 50 watt transformer only as supplied with T-15. List Price $8.50

MODEL PS-1 Pipe stanchion fitting for all speakers using "U" type mounting brackets. Adapts all brackets to standard ¾" pipe fitting. Holes located to match holes in "U" brackets. All mounting bolts supplied ....List Price $2.00

MODEL H2U Two unit one projector adaptor is recommended when it is found necessary to obtain the greatest possible power output from a single projector. This device permits the use of two driver units with any type or size projector, either radial or straight directional. Construction: Accurately machined aluminum casting. All threads 1⅜"-18 ....List Price $11.00

ATLAS SOUND CORP.

ATLAS PAGING AND TALK BACK SPEAKERS

All New Designs of HU and CJ type speakers are now equipped with the versatile "Versalock" mounting bracket. This new rigid, rugged and reliable bracket is completely adjustable on both a horizontal and vertical plane: Efficient: these speakers are especially efficient in the voice frequency range and provide the extra "punch" that overrides high level background noise. Talk Back: designed to offer a maximum of efficiency in talk back application. The peaked characteristics within the voice frequencies further add to the sensitivity of the speaker as a pickup device. All HU type speakers are constructed of aluminum. All parts are chemically processed prior to final finish in gun metal grey, high gloss, high temperature baked enamel. The CJ type speaker horns are constructed of nonresonant indestructible fiber glass. All models are 100% weatherproof under all climatic conditions.

HU-12N Small in size and low in cost. Excellent for low power paging and talk back systems where limited coverage is required. Ideal as a cone speaker replacement for many inadequate low power inter-com systems. Offers three times the sound level of a small cone type speaker at a given power input. Equipped with the versatile "Versalock" mounting bracket permiting "pin point" directivity adjustment.

HU-15N The "work horse" of paging speakers. By far, the most popular all purpose trouble free speaker of its type and size. Double sealed against weather conditions existing in all climates. Its response is excellent for voice fréquencies and offers natural voice reproduction free from peaks that often cause acoustic feed back and poor intelligibility. "Versalock" bracket standard equipment.

HU-24N Very similar to the model HU-15N except that the air column is extended to improve the low frequency response and overall efficiency. Excellent for paging and talk back system that are also required to reproduce music in industrial and amusement locations. Equipped with "Versalock" bracket.

CJ-14N High efficiency speaker having a one piece outer horn constructed of fiber glass. The rectangular design of the horn opening results in a sound dispersion pattern having a wide horizontal beam, 100% weatherproof. Equipped with "Versalock."

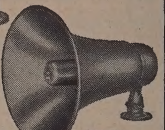
CJ-30N A wide angle speaker of fiber glass construction that confines maximum power to a horizontal plane. The one piece horn completely covers all working parts of the driver unit assuring trouble free service in all climates. The exclusive "Versalock" bracket offers mounting facilities never before available on any speaker.

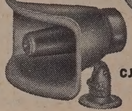
TP-15N Two way paging speaker offers economical bi-directional sound coverage. Universal mounting permits dual horns to be faced downwards or outwards from a wall surface at a 10° angle. A good choice for long corridors where one driver can do the work of two. Saves on installation costs.

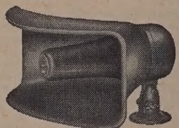
TP-24N Same as above but equipped with over-sized horns offering lower frequency response and added efficiency. 100% weatherproof.

DU-12 The new DéCor Projector combines the intelligibility, directivity and high efficiency of a driver type projector with modern high styling that will harmonize with the most ultra modern décor. Finished in natural brushed satin aluminum. Two way adjustable bracket has a feed thru for connections. All wiring and line matching transformer concealed under canopy. All mounting hardware included for new and existing type installations.

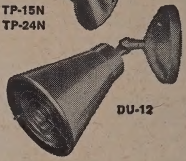
HU-12N


HU-15N
HU-24N


CJ-14N


CJ-30N

TP-15N
TP-24N


DU-12

HLE-1-42
HLE-2-42

HLE-1-30
HLE-2-30

EXPLOSION-PROOF HIGH-EFFICIENCY SPEAKERS

APPROVED BY UNDERWRITERS LABORATORIES FOR USE IN HAZARDOUS LOCATIONS WHERE EXPLOSIVE ATMOSPHERES EXIST.

Highly efficient due to exclusive design of explosion barrier.

Class 1 speakers for use in atmospheres containing ethyl ether, cyclopropane, gasoline, naphtha, benzine, butane, acetone, lacquer, natural gas, etc.

Class 2 can be used in Class 1 conditions as well as in atmospheres containing dust of magnesium, coal, coke, flour, starch, grain, etc.

HLE-30 type speaker preferred where space limitations exist; excellent for paging and talk back applications.

HLE-42 type somewhat more efficient due to larger horn size—where maximum coverage is required.

SPECIFICATIONS	HLE (1 or 2) 30	HLE (1 or 2) 42
POWER INPUT	30 watts	30 watts
VOICE COIL IMPEDANCE	16 ohms*	16 ohms*
FREQ. RESPONSE	300 to 10,000 cps	150 to 10,000 cps
OVERALL LENGTH	17½ inches	25 inches
BELL OPENING	14 in. x 6 in.	21 inch diameter
CABLE ENTRANCE	½" conduit	½" conduit
SHIPPING WEIGHT	22 lbs.	29 lbs.
LIST PRICE	HLE-1-30 $115.00 HLE-2-30 $142.50	HLE-1-42 $130.00 HLE-2-42 $157.50

*Also available with 45 ohm V.C. add $1.50 to list price.

T-16 line matching transformer—space and mounting facilities available within explosion-proof housing for transformer. For details see description of T-16 in another section of catalog.

Model	HU-12N	HU-15N	HU-24N	CJ-14N	CJ-30N	TP-15N	TP-24N	DU-12
POWER*	7.5 w	25 w	25 w	7.5 w	25 w	25 w	25 w	7.5 w
IMPEDANCE†	8 ohm	8 ohm	8 ohm	8 ohm	8 ohm	8 ohm	8 ohm	8 ohm
FREQUENCY C.P.S.	350-10,000	250-10,000	200-10,000	400-10,000	250-10,000	250-10,000	200-10,000	400-10,000
LENGTH OVERALL	7¼ in.	8¾ in.	12 in.	8 in.	11¼ in.	16½ in.	23 in.	14 in.
BELL DIAMETER	7½ in.	9¾ in.	11¼ in.	9½" x 5½"	14" x 6"	9¾ in.	11¼ in.	7 in.
SOUND LEVEL#	115 db	123 db	124 db	115 db	120 db	120 db each horn	121 db each horn	114 db
DISPERSION	120°	100°	85°	120° x 60°	120° x 60°	100° each horn	85° each horn	110°
SHIP. WEIGHT	3½ lbs.	6 lbs.	6 lbs.	3½ lbs.	7 lbs.	7½ lbs.	8 lbs.	4 lbs.
LIST PRICE	$27.00	$33.50	$37.25	$30.00	$41.00	$52.00	$57.50	$33.00

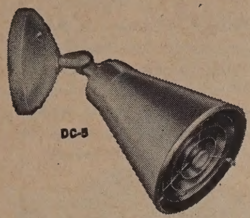
Note: Add $1.00 to list of all models if 45 ohm impedance is required

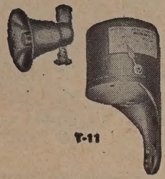
#Measured at 4 ft. on axis rated power

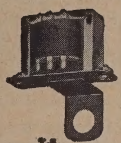
*Input range limited to frequencies above horn cut off

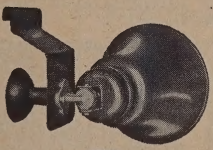
† All models available in 45 ohms—add 45 ohms after model No. (Example: HU-15N-45)

ATLAS SOUND CORP.


DC-5


T-11


T-5


WM-1

HR-3

ATLAS TRANSFORMERS—BAFFLES—ACCESSORIES

NEW MODEL DC-5 CONE SPEAKER TYPE "DECOR" PROJCETOR

The new DC-5 fills the long-felt need for a speaker with two desirable features: The small size and fine appearance necessary for the most discriminating applications; and pleasing low level reproduction of both voice and music.

Both of these features, along with many others, are incorporated in the design of the DC-5. The modern, straight-line, lighting fixture contours and the brushed natural aluminum finish are acceptable anywhere. The DC-5 is not obviously a loudspeaker; it does not offend or clash with surroundings, but blends into the background styling in an unobtrusive manner.

The DC-5 is designed around a high quality five-inch cone speaker, and is enclosed in a semidirectional housing. The effective low frequency response, as a result of the cone type reproducer, adds naturalness to voice frequencies and a pleasant timbre to low level musical reproduction.

The semidirectional horn and complete directional control of the mounting bracket permits the sound coverage to be confined to the required service area. It is therefore an excellent speaker for use in churches, funeral homes, hotel lobbies, restaurants and all reasonably quiet areas where appearance and ease of installation must be carefully considered. The DC-5 is semiweatherproof, and will resist dampness and humidity, but is not recommended for completely unsheltered outdoor application.

The "positive lock" bracket permits the speaker to be easily directed either horizontally or vertically. Connections feed thru the bracket, and all wiring, transformers, etc., are concealed behind the canopy. The canopy is equipped with an adaptor strap for an electrical outlet box or for direct mounting on a wall or ceiling surface. All parts are finished in brushed, natural aluminum, followed with a clear lacquer protective coating.

DC-5 SPECIFICATIONS	
Power (cont.)	6 watts
Impedance	8 ohms
Response	120-7000 cps
Overall length	14 inches
Bell Dia.	7 inches
Shipping Weight	3 lbs.
List Price	$22.00

MODEL T-11 Transformer housing and bracket is completely weatherproof and may be easily attached to any model HU, CJ or TP type speaker. The transformer accordingly becomes part of the speaker assembly. It can be pre-wired to the speaker with the entire speaker and transformer assembly installed in position as a single pre-wired unit. Power reminder: The T-11 is equipped with a novel power input scale and pointer. The pointer is set in accordance with the power input connections to the transformer primary. A ready reference for any speaker power changes that may be required in final, overall system adjustments. Transformer is varnish impregnated and equipped with properly marked soldering lugs. Specifications: Primary: 45, 325, 500, 1000, 2000, 4000 and 8000 ohms—or based on 70 volt line: 15, 10, 7½, 5, 2.5, 1.25, .65 watts. Secondary 4, 8 and 16 ohms ....List Price $9.25

MODEL T-5 Transformer is especially designed for use with the DU-12 and DC-5 DéCor speakers. The transformer is equipped with a bracket so that it may be easily mounted under the speaker mounting canopy without difficulty. The T-5 is a small but high efficiency transformer that will not introduce a serious insertion loss. Specifications: Primary: 670, 1000, 2000, 4000, 8000 and 16,000 ohms—or based on a 70 volt line: 7.5, 5, 2.5, 1.25, .62 and .31 watts. Secondary 8 ohms ....List Price $5.00

MODEL WM-1 Car Window Speaker Support. This bracket can be quickly and safely attached to practically any car or truck window without the use of tools. It will not cause damage to the paint finish, window glass or adjustment mechanism.

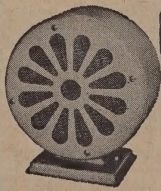
The WM-1 bracket will adequately support speaker models such as the HU-15N, HU-12N and CJ-14N. The bracket does not rely on the rubber suction cup for secure attachment. The bracket has a rubberized cork lined channel that slips over the top of the window glass. Raising the window locks it tightly against the top window slot.

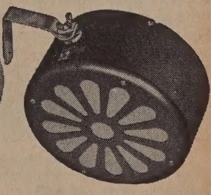
Neat in appearance and quickly converts any car into a mobile sound vehicle. All hardware supplied for attaching speaker to the WM-1, constructed for sheet steel, finished in grey enamel ....List Price $5.00

MODEL HR-3 The new Atlas Super-Tweeter is the latest development in a versatile high frequency reproducer. A super efficient tweeter which now goes "over the top" in response—with a silky smoothness, a wide angle distribution pattern and a complete freedom from distortion. All parts comprising acoustic path constructed of "precision controlled" die castings. Each diaphragm checked for weight and compliance in order to assure functional uniformity in production.

HR-3 SPECIFICATIONS	
Response	2000-17,500 cps
Impedance	12-16 ohms
Power	35 watts (prox.) program capacity
Width (front)	7½ inches
Height (front)	3 inches
Depth overall	6½ inches
Cabinet opening	6" x 2"
Shipping Weight	3 lbs.
List Price	$27.50

MODEL TW-9 "Armor Plate" construction truly describes the material used in the fabrication of the new Atlas speaker enclosure. The resultant strength and weight plus internal acoustic treatment, provides an enclosure free from resonance and mechanical vibration. Every consideration has been given to the design to make for ease of installation under the wide variety of mounting conditions occurring in both new and existing construction. The TW-9 is a "two way" baffle especially suited for use in corridors and other locations where sound is to be distributed bi-directionally—can be mounted on either wall or ceiling surfaces. A universal mounting plate is furnished to facilitate mounting on plain flat wall surfaces or on various types of standard electrical outlet boxes—chemically treated against corrosion prior to a final finish in a new modern shade of beige enamel. This neutral color harmonizes with most interior locations. The grill openings are protected and decorated with a plastic woven cloth. All speaker mounting hardware and wall fastenings are included. Overall size: diameter of housing 9 inches, depth 5 inches, base measures 6 in. x 5 in.—will accommodate any type of 8" cone. Shipping weight 4 lbs. ....List Price $13.00


TW-9


TW-8

MODEL TW-8 "Two way" is a very popular 8" cone speaker enclosure having a wide range of applications—will accommodate any type of 8" cone. Baffle utilizes front and back wave of cone speaker for coverage in long corridors or central locations. Constructed of steel, phosphate treated prior to a finish in neutral grey enamel. Grill openings protected with grey flock coated screens. A universal "quick mount" bracket is included which permits orientation to almost any angle. All speaker mounting hardware included. Overall diameter 9 inches, depth 5 inches. Shipping weight 3½ lbs. ....List Price $10.00

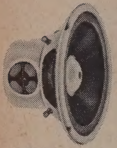
AUDAX DIVISION OF

REK-O-KUT COMPANY

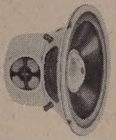
PARAFLEX SPEAKERS BY AUDAX

MODEL A-60M

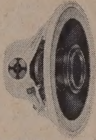
Featuring Patented Paraflex Foam Suspension. The rim of the cone is joined to the basket by means of a foam compound ring which provides the Audax speaker with 100% greater cone excursion than speakers utilizing conventional corrugated rim mountings. As a result, there is more "bottom" bass, and flatness of output is maintained to extremely low frequencies. Bass is realistic without boom or hang-over, and distortion is reduced to a minimum. Realism is particularly noted in the Audax speaker's ability to handle transients or sudden impulses and percussion sounds.



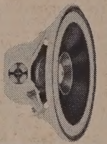
MODEL A-80D



MODEL A-100D

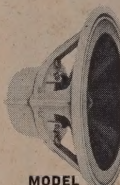


MODEL A-120X



MODEL A-120D

MODEL A-120W



MODEL A-180W

MODEL A-35-T 3" TWEETER

SPECIFICATIONS — AUDAX PARAFLEX SPEAKERS

MODEL	CLASS	RESPONSE C.P.S.	POWER WATTS	RESONANCE FREE AIR	GAP FLUX DENS. (GAUSS)	SIZE	SHIPPING WT. LBS.	NET PRICE
A-60-M	6" Mid-Range	300- 6,000	25 W.		12,000	6⅛x3¼	4	$35.00
A-80-D	8" Full Range	55-13,000	20 W.	55-60 CPS	11,500	8⅛x4	4¾	29.95*
A-100-D	10" Full Range	45-13,000	20 W.	48-52 CPS	11,500	10⅛x5	5½	34.95*
A-12-D	12" Full Range	40-12,000	20 W.	45-50 CPS	11,500	12⅛x6¾	6½	39.95*
A-120-X	12" Co-Axial	35-17,000	25 W.	35-40 CPS	12,500	12⅛x7	12	59.95
A-120-D	12" Full Range	35-14,000	25 W.	35-40 CPS	12,500	12⅛x7	11	44.95
A-120-W	12" Woofer	35- 5,000	25 W.	35-40 CPS	12,500	12⅛x7	11	42.95
A-180-W	18" Woofer	10- 1,500	35 W.	19-22 CPS	16,000	18¼x10	58	150.00
A-35-T	3½" Cone Type Tweeter	3,000-18,000	25 W.			3½x3½x3½	2	9.95

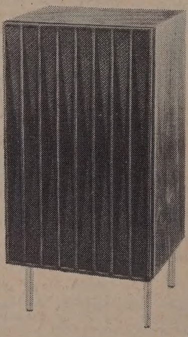
Note: A.C. Impedance of all models standardized at 8 ohms at 400 cps.

AUDAX SPEAKER SYSTEMS

AUDAX SPEAKER SYSTEMS In these incomparable systems, Audax Paraflex speakers are housed in completely new type of enclosures reflecting both engineering and style advancements achieved by no other units today! The enclosure operates on a new principle wherein the speakers are located symmetrically on either side of a ducted-slot. The bass output is aided by this mutually loaded slot. The configuration of the slot is such as to present air viscosity to the rear pressures, resulting in damping and suppression of resonance peaks. This method of venting results in smart, clean bass without a trace of boom or unnatural heaviness. These enclosures are specifically designed to bring out the depth and striking realism of the Paraflex high-compliance speaker units. Patent has been applied for. **Impedance: 8 ohms.**

Each enclosure can be fitted with easily attachable chrome satin legs, available from Audax. Model #CA-LC legs. $7.95.

AUDAX PATIO SPEAKER The CA-60P is a true 2-way system with three separate speakers, (2 woofers and a tweeter) . . . for genuine high fidelity reproduction indoors and out. Audax CA-60P comes completely covered in durable, weather-proof vinyl. Speaker cones are specially treated to be resistant to most outdoor conditions. Includes convenient 25-ft. cable, self-concealed when not in use. Sturdy, built-in handle carries speaker with ease. Volume Control at back of speaker permits adjustment of sound to desired level at location, without going to the amplifier.



Model CA-100V (CA-100H with horizontal grille) $139.95 net

BOOKSHELF SPEAKER SYSTEM CA-60

- The Model CA-60 is the newcomer of the Audax line. It is truly a bookshelf type because it measures only 9 x 10 x 18. In a compact speaker enclosure we have achieved a quality of sound consistent with good looks that is truly amazing.
- Size for size we guarantee more clean bass than any structure of its dimensions and price. The CA-60 employs 2 high compliance 6" woofers and cone type tweeter with built-in high pass filter. The conversion efficiency is excellent and this speaker will deliver more than enough sound for any average living room with as little as 5 watts amplifier power.

Model CA-60 $59.95 net

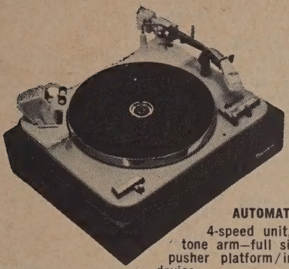
All systems in hand rubbed oiled mahogany, finished on 4 sides except CA-60P.

MODEL	CLASS	RESPONSE C.P.S.	POWER WATTS	CONTENTS	SIZE	SHIPPING WT. LBS.	NET PRICE
CA-60	Complete System	70-17,000	20 W.	Two 6" Woofers—One Tweeter	9x10x18	15 lbs.	59.95
CA-60P	Portable Patio System	70-17,000	20 W.	Two 6" Woofers—One Tweeter	9½x11x18	15 lbs.	49.95
CA-80	Complete System	40-17,000	30 W.	Two 8" Woofers—One Tweeter	12x12x24	31 lbs.	99.95
CA-100	Complete System	30-20,000	40 W.	Two 10" Woofers—Two Tweeters	12x15x25	39 lbs.	139.95

Garrard

World's finest record players

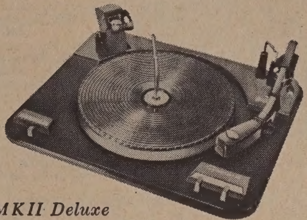
ALL GARRARD RECORD PLAYERS ARE WIRED FOR STEREO AND MONAURAL RECORDS



The Laboratory Series

AUTOMATIC TURNTABLES TYPE A

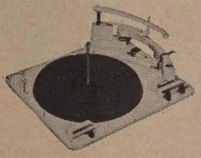
4-speed unit, dynamically balanced tone arm—full size cast turntable with pusher platform/interchangeable spindle device.



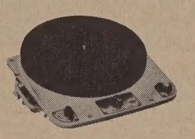
Model 88 MKII Deluxe

MANUAL/AUTOMATIC RECORD CHANGER

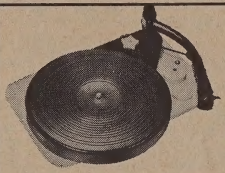
a new tone arm—an improved motor.



RC-210 "Dauntless"—Deluxe 4-Speed Auto-Manual — Intermix Changer, less cartridge, 100/130 volts, 60 cycles A.C. (50 cycle available).



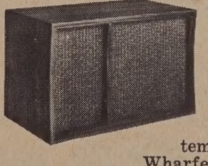
Model 301—"Professional" Transcription Turntable, 100/300, 200/250 volts, 60 cycles A.C. (50 cycle pulley available).



Model Tmk II—"Crest" 4-Speed Manual Player, less cartridge, 100/130 volts, 60 cycles A.C. (50 cycle pulley available).

Model 4HF Deluxe 4-speed manual transcription player. 12" heavy-duty turntable, variable + or — speed adjustment. Professional tone arm with plug-in universal shell.

ALL GARRARD AUTOMATIC RECORD CHANGERS AND MANUAL PLAYERS ARE AVAILABLE WITH ELECTRO VOICE, G.E., PICKERING AND SHURE STEREO CARTRIDGES (ALSO AVAILABLE WITH G.E. MONAURAL CARTRIDGES). ACCESSORIES AVAILABLE: MOUNTING BOARDS, BASES, CARRYING CASES AND STYLUS PRESSURE GAUGE.



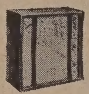
Wharfedale '60

by G. A. Briggs... the first shelf-size speaker system incorporating the sand-filled principle!

A full-range speaker system with the rich, non-strident Wharfedale sound... the speakers matched and critically tuned to a craftsman's cabinet... ¾" genuine hardwood throughout.

WHARFEDALE

W50 FULL RANGE TWO-WAY SPEAKER SYSTEM



WHARFEDALE

W70 FULL RANGE THREE-WAY SPEAKER SYSTEM

Designed and built under the direction of G. A. Briggs.

SPEAKERS

Super 3-3" treble speaker.
Super 8/FS/AL-8" full range (also for use as tweeter).
W10/FSB—10" full range.
Super 12/FS/AL—12" full range.
Co-axial 12—12" full range dual concentric speaker.
W12/FS — 12" low frequency driver.
W15/FS — 15" low frequency driver.
1000 cycle crossover.
3000 cycle crossover.
3 way crossover (800 & 500 cycles).

READY TO PLAY SYSTEMS

SFB/3 Custom 3-way system, sand filled baffle.

SFB 3 Deluxe 3-way system, sand filled baffle.

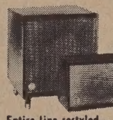
W/AF/1 — Acoustic-filter 2-Speaker system with 10" woofer.

W/AF/2 — Acoustic-filter 2-Speaker system with 12" woofer.

C-500 "Briggs" 3-way corner system.

C-500 Deluxe "Briggs" 3-way corner system deluxe style.

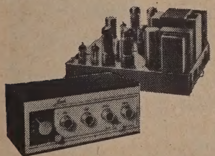
WS/2 Full range 2 speaker system.



Built to RJ Patented Design Principles

Entire line restyled—

RJ/8—Single shelf model for 8" speaker. 11" H x 10" D x 23½" L.
RJ/12-S—Double shelf model for 12" speaker. 24" H x 10" D x 21" L.
RJ/12-F—Floor model for 12" speaker. Tapered legs with brass ferrules. 20" H x 16" D x 20" L.
RJ/15 — Floor model for 15" speaker. Tapered legs with brass ferrules. 20" H x 16" D x 20" L.
RJ/Super 8—RJ/8 enclosure with Wharfedale Super 8/FS/AL installed.
Available in unfinished Birch Hardwood and in Mahogany, Walnut or Blonde RJ custom finishes.

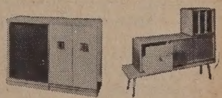


LEAK STEREO MODELS

"Point One Stereo" Preamplifier.
"Stereo 50" Amplifier, 25 watts per channel.
"Stereo 20" Amplifier, 12 watts per channel.

LEAK MONAURAL MODELS

Varislope III Preamplifier.
TL/50 PLUS—0.1% dist. at 50 watts.
TL/25 PLUS—0.1% dist. at 25 watts.
TL/12 PLUS—0.1% dist. at 12 watts.
NEW! Trough Line II FM Tuner.
ONLY LEAK KEEPS HARMONIC DISTORTION DOWN TO 0.1% AT FULL RATED POWER.



RIVER EDGE CUSTOMIZED CABINETS AND DO-IT-YOURSELF KITS

Equipment and loud-speaker cabinets, crafted of fine woods, meticulously finished: made to hold components of all manufacturers.

BRITISH INDUSTRIES CORPORATION - PORT WASHINGTON, N. Y.

Cletron Hi-Fi Speakers

CATHEDRAL SERIES HIGH-FIDELITY SPEAKERS

C-4FT

C-12PC

TWEETERS

MODEL C-46CT (1000-20,000 CPS)

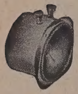
New high register adder — Highest Quality. Ideal for use with any high fidelity system to assure pure high frequency tones with accurate reproduction of 1000 to 20,000 cps. Axial sensitivity is 98 db ± 3 db. Matched to 16 ohms.
Cletron Model C-46CT Tweeter—Audiophile Net **$7.50**

MODEL C-4FT (1800-18,500 CPS)

An excellent 4" tweeter with a range of 1,800-18,500 cps, ± 5 db. May be used with capacitive or inductive crossover. Heavy 3.16 oz. Alnico V magnet; 9/16" aluminum form voice coil. Power handling, 10 watts. Impedance, 8 ohms.
Cletron Model C-4FT Tweeter—Audiophile Net **$6.50**

MODEL C-4CT (1800-12,500 CPS)

Identical to Model C-4FT except: Has 1.47 oz. Alnico V magnet; power handling, 8 watts.
Cletron Model C-4CT Tweeter—Audiophile Net **$5.60**


C-3CT

C-8JC

MODEL C-3CT (1800-18,500 CPS)

A 3" tweeter for multiple speaker installations with series-parallel voice coil connections and where two tweeters are used. May also be used as a single tweeter. Range, 1,800-18,500 cps. ± 5 db. Has 1.47 oz. Alnico V magnet; 9/16" aluminum form voice coil. Power handling, 6 watts. Impedance, 8 ohms. **Cletron Model C-3CT Tweeter**—Audiophile Net........ **$4.75**

MODEL C-3CT4 (1800-18,500 CPS)

For use where two tweeters are used in series and connected to 8-ohm network. Same as C-3CT except: Range, 1,800-12,500 cps, ± 5db; 4 ohm voice coil; power handling, 4 watts.
Cletron Model C-3CT4 Tweeter—Audiophile Net **$5.30**

FULL SCALE-WIDE RANGES WITH HIGH FREQUENCY DIFFUSERS

C-12NR

C-12RW

MODEL C-12NR (30-16,000 CPS)

Ideal for use in back-loaded enclosure with or without tweeter unit. Finest double cone 12" speaker with a range of 30-16,000 cps. Air resonance, 30 cps. Has 16 oz. Alnico V magnet (12,500 guass); 2" aluminum form voice coil. Power handling, 25 watts. Impedance, 8 ohms. Overall depth, 7".
Cletron Model C-12NR—With high frequency diffuser. Audiophile Net........ **$33.30**

MODEL C-8NR (60-12,500 CPS)

Mid-range double cone 8" speaker for use in multiple speaker systems with high power requirements or as a single speaker where excellent mid-range reproduction is required. Range, 60-12,500 cps, ± 5 db. Air resonance, 65 cps. Has 16 oz. Alnico V magnet (12,500 gauss); 2" aluminum form voice coil. Power handling. 16 watts. Impedance, 8 ohms. Overall depth, 5".
Cletron Model C-8NR With high frequency diffuser. Audiophile Net **$27.00**

C-8FR

MODEL C-8FR (65-16,000 CPS)

Popular in high fidelity applications of moderate power or as a perfect speaker for excellent public address applications. A double cone 8" speaker with a range of 65-16,000 cps. ± 5 db. Air resonance, 70 cps. 3.16 oz. Alnico V magnet (9,500 gauss); 3/4" aluminum form voice coil. Power handling, 8 watts. Impedance, 8 ohms. Overall depth. 3¾".
Cletron Model C-8FR——With frequency diffuser. Audiophile Net........ **$15.00**

CM12PW

MODEL C-8MFR (1000-6000 CPS)

Ned solid basket mid-range has high compliance characteristics. Mates with any system. Solid basket eliminates interaction when mounted in same cavity as woofer. Axial sensitivity of 95 db (±5 db). Aluminum voice coil form handles power up to 12 watts. Impedance, 8 ohms. **Cletron Model C-8MFR Midrange**—Audiophile Net **$13.20**

COAXIAL HIGH-LOW DUETS WITH BUILT-IN CROSSOVERS

C-8NR

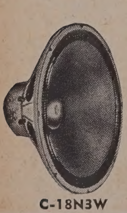
MODEL C-12PC (35-18,500 CPS)

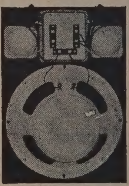
A 12" coaxial speaker with a range of 35-18,500 cps, ± 5 db. Woofer has extra heavy 21 oz. Alnico V magnet around 2" aluminum form voice coil; 25 watts power handling. Tweeter is C-4CT. Air resonance, 35 cps. Impedance, 8 ohms. Overall depth, 7".
Cletron Model C-12PC——With built-in crossover. Audiophile Net **$53.50**

MODEL C-8JC (60-12,500 CPS))

Frequency range, 60-12,500 cps, ± 5 db. The 8" woofer has a 6.8 oz. Alnico V magnet, 1" aluminum form voice coil. The C-3AT, 3" tweeter, has a 9/16" voice coil and a .68 oz. Alnico V magnet. Air resonance, 65 cps. Power handling, 8 watts. Impedance, 8 ohms. Overall depth, 5". **Cletron Model C-8JC**—With built-in crossover. Audiophile Net **$18.00**

WOOFERS


C-18N3W


C-1233

MODEL C-12RW (16-4000 CPS)

Most efficient 12" bass speaker available. Flex-Edge cone permits full 1" excursion at 16 cps with only 4 watts input. A 6½ lb. ceramic Indox magnet structure for over one million Maxwell lines. High compliance for organ or drum tonal response. Aluminum voice coil operates efficiently at 5 watts; peaks at 35 watts, 25 watts continuous program. Efficiency cuts out before 4000 cps. Ideal for folded horn or infinite baffles. Matched to 16 ohms.
Cletron Model C-12RW Flex-Edge Woofer—Audiophile Net **$59.00**

MODEL C-12RDW DUAL WOOFER FOR STEREO

Same features as C-12RW above, but has bifilar winding on voice coil for dual channel use. Assures in-phase balance from both amplifiers. Permits smaller second baffle without loss of bass response on second channel.
Cletron Model C-12RDW Flex-Edge Dual Woofer—Audiophile Net **$64.00**

MODEL C-12PW (30-5000 CPS)

A 12" speaker with a range of 30-5,000 cps, ± 5 db. Has 21 oz. Alnico V magnet, 2" aluminum form voice coil. Air resonance, 35 cps. Power handling, 25 watts. Impedance, 8 ohms. Overall depth, 7". **Cletron Model C-12PW Woofer**—Audiophile Net........ **$50.50**

NEW, 18-INCH WOOFER (20-4000 cps)

MODEL C-18N3W

The absolute ultimate in a quality woofer. Complete Cletron attention to every aspect of engineering detail assures the richest true-bass possible.

This speaker is specifically designed to handle those difficult sound applications such as large, open areas where tremendous volume and high power is required.

An extra-long voice coil is built within an extra large 6-inch spider to assure complete freedom of linear cone movement without loading. Heavy cast aluminum construction eliminates basket resonance. 11-lb. 'Alnico V' magnetic structure. Free air resonance is 20 cps. Matching impedance is 8 ohms. Handles 75 watts. Has the necessary, accurately controlled distortion required to reproduce the deepest of chords . . . a unique engineering achievement that further enhances the listenable richness of this new Cletron masterpiece.
Cletron Model C-18N3W Woofer—Audiophile Net **$180**

WOOFER-TWEETER COMBINATION WITH SOUNDING BOARD AND CROSSOVER NETWORK

MODEL C-1233 (30-18,500 CPS)

The crossover in C-1233 functions at 1,800 cps and "crosses over" at the rate of 12 db per octave. Designed for either wall installation on 16" joist centers, installation in a back-loaded enclosure or for conversion of an older console to high fidelity sound. Consists of one 12" woofer with a 21 oz. Alnico V magnet and 2" voice coil, two 3" tweeters with 1.47 oz. Alnico V magnets and 9/16" voice coils, and a completely shielded L-C crossover network, all mounted on a plywood mounting board 16" x 20" with a depth of 7" from the front of the baffle to the back of the speakers. Frequency range, 30-18,500 cps. Air resonance, 35 cps. Power rating, 35 watts. Impedance, 16 ohms.
Cletron Model C-1233 —Audiophile Net **$60.00**

Cletron Stereo Kits, Speakers

CATHEDRAL HIGH FIDELITY KITS
MODEL C-33812 MATCHED SET

Features the Cletron 12″ Flex-Edge woofer with ceramic Indox magnet for over one million Maxwell lines. May be used in either stereophonic or monophonic sound systems. The new development Flex-Edge cone is specifically designed for easier linear movement and has an unusually heavy body to prevent break-up of bass mid-tones common to other woofers. High compliance, 16 cps to 4000 cps. Full one-inch excursion of cone, with aluminum voice coil form, at 16 cps with only four watts input. Handles 25 watts continuously and 35 watts peak power. Operates efficiently at only five watts. Efficiently cuts out before 4000 cps. Kit includes Model C-8MFR mid-range speaker for 1000-6000 cps, with an axial sensitivity of 95 db (± 5 db). Has aluminum form voice coil. Features solid basket construction, eliminating the interaction effect when used in the same cavity as the woofer. Upper range is accommodated by the use of two Model C-3CT quality three-inch tweeters with a range of 1800-18,500 cps, completing the audio spectrum. Tweeters are designed primarily for multiple speaker systems where two tweeters are used. L-C network Model C-1220 matched for perfect operation has remote control for fine-tuning the mid-range output to suit individual tastes.

Cletron Model C-33812 Matched Set—Audiophile Net ______ **$98.00**

"QUARTET" ENCLOSURE KIT

A complete component, prefabricated unit matched to and including the Model C-33812 speaker set described above. All parts cut to shape and unfinished for easy construction. Furnished complete with all components, including grille cloth, for quick assembly. **Size:** 26″h. x 36″w. x 18″d. (Height includes 2″ mounting base).
"Quartet" Enclosure and Matched Speaker Set—Unfinished. Audiophile Net ______ **$158.00**

L-C NETWORKS

MODEL C-800 HIGH PASS FILTER

Designed to divide audio between woofer and tweeter in two-speaker system. Matches 8, 16 ohms. Capacity, 30 watts. Frequency range, 2000-20,000 cps for tweeter. Self-contained. Protects tweeter from damage. **Size:** 4¾″ x 2½″ x 1¼″d.
Cletron Model C-800 High-Pass Filter—Audiophile Net ______ **$7.50**

MODEL C-1200 TWO-WAY L-C NETWORK

Designed for two-speaker system and matches 8 and 16 ohms. Eight ohms crossover is 2000 cps; 16 ohms crossover is 1500 cps. Has 12 db. per octave attenuation. Handles up to 50 watts. Gold anodized case, 5″ x 5½″ x 2¾″.
Cletron Model C-1200 Two-Way L-C Network—Audiophile Net ______ **$17.00**

MODEL C-1220 THREE-WAY NETWORK

Matching 8 and 16 ohm impedance with "L" pad remote control for fine tuning of mid-range output. **Crossover:** Bass, 15-1500 cps; mid-range, 500-5000 cps; tweeter, 2000 cps (12 db per octave). Insertion loss is less than 1 db. Power handling up to 50 watts. Gold anodized case, 5″ x 5½″ x 2¾″.
Cletron Model C-1220 Three-Way Network—Audiophile Net ______ **$21.50**

SPECIAL SERIES HI-FI SPEAKERS

8-INCH COAX (60-15,000 CPS)

Efficient size. Specifically designed for economy minded music lovers. Includes 3″ tweeter and built-in crossover. 8 watts; 8 ohms; crossover 1800 cps; 4⅝″ deep.
Model SS-8EC ______ User's Net **$12.50**

6 x 9-INCH WIDE RANGE (60-18,000 CPS)

Features a Cletron break through in cone construction. Only Cletron provides this unusual range, quality and tone balance in a 6 x 9 speaker. Rated 10 watts. Overall depth 4 1/16″.
Model SS-69JW (8 ohm) or **SS-69JW4** (4 ohm) ______ User's Net **$13.35**

12-INCH WIDE RANGE (40-15,000 CPS))

One of the most popular speaker types available today. Big cone area woofer and a separate, centered diffuser for the highs. 10 watts. 8 ohms. 6¼″ deep. Ideal for bass reflex mounting.
Model SS-12JW ______ User's Net **$18.25**

8-INCH WIDE RANGE (60-15,000 CPS)

Cletron has improved this type of dual-cone construction to the finest degree of perfection in tone balance throughout the popular audio range. 10 watts. 8 ohms. 4⅜″ deep. Ideal for bass reflex mounting.
Model SS-8JW ______ User's Net **$13.75**

DRIVE-IN SPEAKERS

Rugged, modern, lightweight cast aluminum models complete with hanger, volume control, 2-conductor cable and all weather 4-inch speaker. Complete units or cones only. Quantity prices available at your request.

HEAVY DUTY INTERCOM SPEAKERS

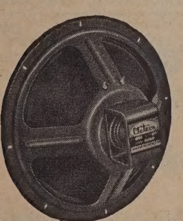
Cast aluminum Model 21 (4″ x 6″ x 2½″) available with or without hanger. Model 21D (6″ x 7⅜″ x 3⅛″) designed for wall mounting. Available as 13 ohm or 45 ohm for receive and/or transmit. Either cabinet model includes Cletron famous 4″ all weather speaker.

$9.30 Dealer Net

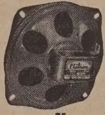
AUTOMOBILE REAR SEAT SPEAKER KIT

Stereo effect in your car! Popular, universal designs. Complete for quick and easy trouble-free installation. Fit almost every car. Now, you can please both front seat and rear seat passengers. Full power 'Alnico V' magnetic structure. Handsome, high lustre protective grille incorporates a new baffle principle for improved dispersion of sound. Complete kit includes mounting template and easy to follow instructions.
6″ x 9″ speaker; Model 24 Kit ______ Dealer's Net **$5.10**
6″ x 9″ dual-cone, heavier magnet Hi-Fi Speaker; Model 34 Dealer's Net **$6,50**
(5″ x 7″ speaker kits also available and priced proportionately lower.)

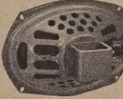
REPLACEMENT AND AUTO SPEAKERS



12″
(PM-12LR)



5″
(PM-5A)



PM OVAL SPEAKERS

Size In.	Cletron No.	Magnet Wt. Oz.	V.C. Size	Watts	Mtg. Hole C't'rs In.	Depth In.	Dealer Net
3 x 5	PM-3x5C	1.47	5/16″	2-4	2 9/16 x 3 9/16	2 7/32	$3.06
2 x 10	PM-210*	1.47	9/16″	2-4	7 41/64 x 2 7/32	2 23/32	4.14
4 x 6	●PM-46A	.68	9/16″	2-4	3⅝ x 4⅝	2 7/32	2.97
4 x 6	●PM-46B	1.00	9/16″	2-4	3⅝ v 4⅝	2 7/32	3.06
4 x 6	●PM-46C	1.47	9/16″	2-4	3⅝ x 4⅝	2 7/32	3.27
5 x 7	PM-57	.68	9/16″	2-4	4 11/32 x 4 11/32	2 7/32	3.09
4 x 8	☐PM-48C	1.47	9/16″	2-4	5 35/64 x 3 7/64	2 7/32	3.54
5 x 7	●PM-57B	1.00	9/16″	2-4	4 11/32 x 4 11/32	2 7/32	3.54
5 x 7	●PM-57C	1.47	9/16″	2-4	4 11/32 x 4 11/32	2⅞	3.75
5 x 7	PM-57E	2.15	¾″	4-9	4 11/32 x 4 11/32	3¼	4.47
5 x 7	PM-57FC	3.16	¾″	4-9	4 11/32 x 4 11/32	3¼	5.19
6 x 9	‡PM-6920	1.73	1″	4-9	4⅝ x 6 9/16	3	5.26
6 x 9	‡PM-6921	1.73	1″	4-9	4⅝ x 6 9/16	3	5.78
6 x 9	*PM-6922	2.15	1″	4-9	4⅝ x 6 9/16	2¼	6.80
6 x 9	PM-6923	1.73	1″	4-9	4⅝ x 6 9/16	3	5.04
6 x 9	PM-69DC	1.00	9/16″	4-9	4⅝ x 6 9/16	3 3/32	4.15
6 x 9	PM-69D	1.47	¾″	4-9	4⅝ x 6 9/16	3¼	4.05
6 x 9	PM-69E	2.15	¾″	4-9	4⅝ x 6 9/16	3	
6 x 9	PM-69FC	3.16	¾″	4-9	4⅝ x 6 9/16	3 3/16	5.37
6 x 9	PM-69EI	2.15	¾″	4-9	4⅝ x 6 9/16	2⅛	5.70
6 x 9	PM-6912	1.73	1″	4-9	4⅝ x 6 9/16	3	5.01
6 x 9	PM-6914	1.73	1″	4-9	4⅝ x 6 9/16	3	5.01
6 x 9	PM-69	1.00	9/16″	4-9	4⅝ x 6 9/16	3 3/32	3.42

‡Replacement for Am Motors.
*Motor Structure inverted.
☐Replacement for Lark.
● Includes bracket and tapped holes for mounting.

STANDARD PM SPEAKERS

Size In.	Cletron No.	Magnet Wt. Oz.	V.C. Size		Mtg. Hole C't'rs In.	Depth In.	Dealer Net
2¾	PM-2P2*	.65	9/16″	250 mv	....	1⅛	$2.88
3½	●PM-3A	.68	9/16″	2-4	2 13/16 x 2 13/16	1 23/32	2.37
4	●PM-4A	.68	9/16″	2-4	3 5/16 x 3 5/16	1⅞	2.34
4	PM-4P2	.73	9/16″	2-4	3 5/16 x 3 5/16	1⅝	2.37
4	PM-4	.67	9/16″	2-4	3 5/16 x 3 5/16	1⅞	2.04
4	●PM-4B	1.00	9/16″	2-4	3 5/16 x 3 5/16	2 1/16	2.49
4	●PM-4C	1.47	9/16″	2-4	3 5/16 x 3 5/16	2 1/16	2.70
4	●PM-5A	.68	9/16″	2-4	3 5/16 x 3 5/16	2 5/32	2.52
5	●PM-5B	1.00	9/16″	2-4	3 5/16 x 3 5/16	2 11/32	2.73
5	●PM-5C	-.47	9/16″	2-4	3 5/16 x 3 5/16	2 11/32	2.94
5	PM-5	.68	9/16″	2-4	3 5/16 x 3 5/16	2 5/32	2.19
5¼	PM-5CA	1.47	9/16″	2-4	4 x 4	2 15/32	3.06
6	PM-6	.68	9/16″	2-4	4⅜ x 4⅜	2 9/16	2.64
6	PM-6B	1.00	9/16″	2-4	4⅜ x 4⅜	2 9/16	3.09
6	●PM-6C	1.47	9/16″	2-4	4⅜ x 4⅜	2 23/32	3.27
6	PM-6E	2.15	¾″	4-9	4⅜ x 4⅜	2 15/16	3.54
6	PM-6F	3.16	¾″	4-9	4⅜ x 4⅜	3	4.14
7	PM-7EA	2.15	¾″	4-9	4¼ x 5¾	3¼	4.80
7	PM-7FA	3.16	1″	4-9	4¼ x 5¾	3 5/16	5.04
8	PM-8	.68	9/16″	2-4	5 7/16 x 5 7/16	3	3.21
8	PM-8D	1.47	¾″	4-9	5 7/16 x 5 7/16	3	4.29
8	PM-8F	2.15	¾″	4-9	5 7/16 x 5 7/16	3 3/16	4.71
8	PM-8EA	2.15	¾″	4-9	5 7/16 x 5 7/16	3⅜	4.71
10	PM-10E	2.15	¾″	4-9	6 13/16 x 6 13/16	4	5.70
10	PM-10G	3.16	1″	6-12	6 13/16 x 6 13/16	4⅛	6.33
10	PM-10	1.00	¾″	4-9	6 13/16 x 6 13/16	3⅛	4.29
12	PM-12	1.47	¾″	5-10	8¼ x 8¼	4⅝	6.60
12	PM-12G	3.16	1″	6-12	8¼ x 8¼	4⅞	8.70
12	PM-12H	4.64	1″	6-12	8¼ x 8¼	5 3/16	9.60

NOTE: Voice coil impedance, 3.2 ohms. *Or, 9 46/64″x2 23/32″. PM-57FC and PM-69FC have Hi-Fi diffuser type dual cones. PM-6914 is a replacement for Ford. PM-6912 is a replacement for Delco. PM-69EI has an inverted motor structure to reduce its depth. ‡20 ohm center tapped voice coil.

8	PM-8FR	3.16	¾″	4-9	5 7/16 x 5 7/16	3½	$ 5.46
8	PM-8JM	6.80	1″	6-12	5 7/16 x 5 7/16	4	8.01
10	PM-10JR	6.80	1″	6-12	6 13/16 x 6 13/16	4¾	9.00
12	PM-12JR	6.80	1″	6-12	8¼ x 8¼	7	10.20
12	PM-LR	10.00	1¼″	12-20	8¼ x 8¼	5 7/16	11.88
12	PM-12CR	6.80	1″	6-12	8¼ x 8¼	7¾	16.62
15	PM-15CR	6.80	1″	6-12	10¼ x 10¼	8	21.60

Note. Voice coil impedance, 8 ohms. PM-12CR is a coaxial with separate 4-inch tweeter and crossover network built in. PM-15CR is a coaxial with separate 5-inch tweeter and crossover network built in.

HEADPHONES By C. F. CANNON CO.

THE "CHIEF"

Cannon-Ball Bakelite Headset

A high quality headset of durable molded black plastic. Attractive in appearance, it is a sensitive and practical phone for every headset use. Inside terminals. Diameter of diaphragm is 2 1/16″. Double coils, two in each receiver. Alnico permanent magnets. Supplied with vinyl plastic covered headband with permanent adjustment and no removable parts. Cotton covered cord, 4½ ft. long.

CC-2—2000 ohms D.C.	List $4.00
CC-3—3000 ohms D.C.	List 4.25
CC-5—5000 ohms D.C.	List 5.75
CC-11—11 ohms D.C.	List 4.00

BRANDES "SUPERIOR"

Matched Tone Headset

A rugged headset, millions of which are in use all over the world. Large size diaphragms of 2⅛″ diameter assure efficient performance. Outside terminals, with polished aluminum cases and bakelite caps. Double coils, two in each receiver. Chrome steel magnets. Steel headband with permanent adjusment. 4½ ft. cotton covered cord.

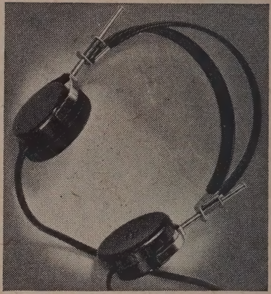
BS-2—2000 ohms D.C.	List $4.15

BRANDES "ADMIRAL"

Matched Tone Headset

The Brandes "Admiral" is of the same general construction as the Brandes Superior, but has terminals on the inside.

BA-2—2000 ohms D.C.	List $4.15
BA-3—3000 ohms D.C.	List 4.65
BA-5—5000 ohms D.C.	List 6.00



CANNON-BALL ALNICO MAGNETIC No. 25

A New Headset of Unusual Quality, Efficiency and Durability, powered by Alnico V magnets.

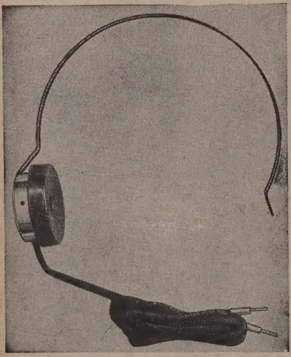
The headband is covered by attractive black extruded vinylite and provides utmost wearing comfort. Limits turn of phone to prevent twisting of cord. Cap and case of molded plastic. Large size diaphragm 2⅛″. Equipped with sanitary moisture-resistant plastic cord with riveted crotch piece.

AM-25-2	List $6.50
AM-25-3	List 7.00
AM-25-5	List 8.50

ALNICO MAGNETIC No. 15

A new, small size, extra sensitive double headset, light in weight. Diameter of diaphragm 1⅞″. Molded cap and case. Steel adjustable headband. 4½ ft. cord.

AM-15-2	List $3.50
AM-15-3	List 3.75



CANNON-BALL "ALNICO"

Single Headphone

Equal in clarity and volume to most double headsets, efficient and attractive. Permits listening while being addressed by others. Concealed terminals. Diaphragm 1⅞″. Bakelite case and caps. Alnico magnet, double coils. 4½ ft. cord. Spring steel headband permanently attached.

AM-15-1—1000 ohms D.C.	List $2.00

THE "MASTER"

Cannon-Ball Headset

Used extensively in hospitals and other institutions as well as for general purposes, and is especially recommended for institutions. Inside terminals Aluminum cases with black bakelite caps. Spring steel adjustable headband with no removable parts. Diaphragm 2 1/16″ diameter. Double coils. Chrome steel magnets. 4½ ft. cotton-covered cord.

MC-2—2000 ohms D.C.	List $4.15
MC-3—3000 ohms D.C.	List 4.50
MC-5—5000 ohms D.C.	List 5.75

CANNON-BALL "EMPIRE"

Lightweight Headset

A low-priced light-weight headset with large magnet and double coils. Reproduces with clarity and good volume. Diameter of diaphragm is 1⅞″. Polished aluminum cases with bakelite caps. Steel adjustable headband. 4½ ft. cord. Inside terminal connections.

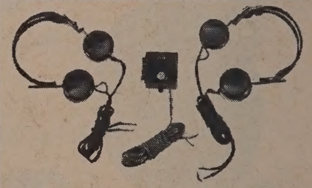
EC-2—2000 ohms D.C.	List $3.65
EC-3—3000 ohms D.C.	List 3.90

THE "DIXIE"

Cannon-Ball Headset

The "Dixie" is of the same general construction as the "Master" headset except that the terminals are on the outside. Bakelite case Alnico magnets.

CD-2—2000 ohms D.C.	List $3.75
CD-3—3000 ohms D.C.	List 4.00



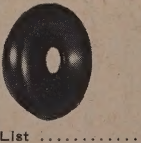
CANNON-BALL HEARING AID FOR TELEVISION

Provides private listening without disturbing others. Excellent for persons hard of hearing. Can be attached to any television set and permits listening to phones alone, speaker alone, or both together.

FOR TELEVISION

Kit complete with 15 foot cord, phone volume control and two sets of phones	List $16.50
With one headset	List 12.50

MOLDED RUBBER CUSHIONS



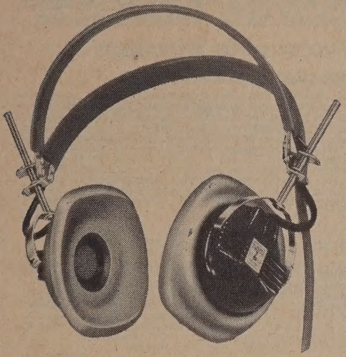
Fit standard size headsets. Molded-in air chamber provides maximum wearing comfort.

List	per pair $1.00

Phones can be supplied with any resistance required or with variations to meet special requirements. Sanitary plastic covered cords available for institutional use. Write for special quotation.

Clevite-Brush Headphones

The Standard of Fidelity



. . . for commercial and amateur listening

Clevite-Brush crystal phones possess wider range response with more uniform output. They furnish smooth, air-tight fit for excellent bass response. The Bimorph® crystal drive element is of such high impedance that line or circuit characteristics are not affected when monitored by Clevite-Brush phones. Light-weight, rugged, shock-proof construction is standard. All models are available with special cords for binaural listening.

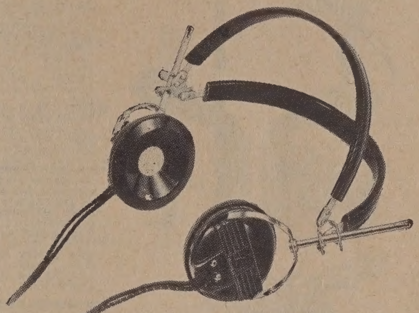
HIGH FIDELITY—The completely redesigned model BA-220 headphone comes complete with ear cushions for improved frequency response and greater listening comfort. The BA-220 has exceptionally flat response out to 10,000 cycles. It combines the quality performance of the model BA-206 with the convenience and flexibility required of a high fidelity instrument. A simple plug change permits stereophonic or monophonic listening.

BA-220 . . . . . Double . . . . . $44.95 List
Net Wt. 8 oz. Shipping Wt. 2 lbs.

BRUSH BINAURAL HEADPHONES

All Brush headphones are available with special cords for binaural applications. These feature the same high quality performance provided by all Brush headphones.

1. **BA-206 B $39.25**
2. **BA-205 B $35.75**
3. **BA-200 B $24.50**



Model BA-206 headphones are designed for listening to stereophonic or monophonic phonograph records, tape recordings or FM broadcasts. Their high impedance and negligible power requirements allow monitoring without any effects on associated equipment. The special "Metalseal" crystal elements provide maximum protection against excessive humidity.

BA-206 . . . . Double . . . . $37.25 List
Net Wt. 8 oz. Shipping Wt. 2 lbs.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

EXTENDED RANGE

For use where extended frequency response is of paramount importance. (100 to 8,000 cps.) Especially suited to monitoring, sound measurement, audiometry, and similar applications. Impedance over 75,000 ohms at any frequency within audio range. Headset complete with 5′ cord and headband.

BA-205 . . . . : $33.75 List
Net Wt. 6 oz. Shipping Wt. 2 lbs.

GENERAL PURPOSE

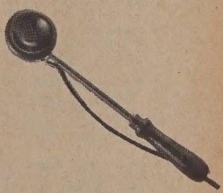
For laboratory, studio and skilled amateur home use. Wide range response (100 to 5,000 cps.) High impedance; high sensitivity, ideal for multiple installations. Headset complete with 5′ cord and adjustable headband.

BA-200 . . . . $22.50 List
Net Wt. 6 oz. Shipping Wt. 2 lbs.

SINGLE PHONE

Particularly adapted to individual or group hearing aid and radio applications. Light-weight, good ear seal, and comfortable to wear. Spring steel headband with soft rubber cushion to eliminate slipping. Single phone complete with 5′ cord and headband.

BA-201 . . . . $14.95 List
Net Wt. 3 oz. Shipping Wt. 1 lb.



LORGNETTE PHONE

Designed for use in group hearing aid sound systems installed in churches, concert halls, theatres and auditoriums. Attractively finished in satin black. Light-weight easy to handle, and complete with 5′ cord and lorgnette handle.

BA-202 . . . . $18.75 List
Net Wt. 5 oz. Shipping Wt. 1 lb.

CLEVITE ELECTRONIC COMPONENTS
Cleveland 14, Ohio

DIVISION OF
CLEVITE
CORPORATION

Electro-Voice BC-TV-RECORDING MICROPHONES

BROADCAST—TV—RECORDING DYNAMICS

NEW CARDILINE UNIDIRECTIONAL MICROPHONE

Model 642—A highly directional dynamic microphone combining the best characteristics of cardioid and distributed front-opening designs. Essentially cardioid unidirectional up to 500 cps; highly directional over balance of range. Offers wider range, higher level and directivity than ever before achieved in one unit of its type. Working distance is 2 to 3 (or more) times that of conventional types. Excellent for boom use with Model 356 shock mount. Minimum mechanical shock transfer and wind noise interference. Response: Flat from 30 to 10,000 cps or choice of 5 or 10 db low frequency reduction steps by screwdriver adjustment. Impedance: 50, 150 and 250 ohms, externally adjustable. Output level: −48 db. Cast aluminum case with abrasion-proof Nicaloy finish. Supplied with Cannon UA-3-14 connector, 20′ 3-conductor shielded broadcast cable and UA-3-11 Cannon connector. Length 17⅞″; max. diameter 3 3/16″. Net Weight, 3 lbs., 4 oz. List Price.................................**$390.00**

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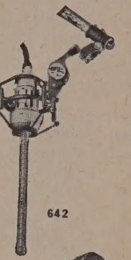
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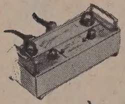

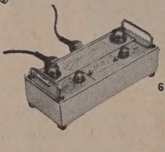
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CARDIOID UNIDIRECTIONAL MICROPHONES

Model 666 Super Cardioid—Uses Variable-D principle for high discrimination against sounds from back. High mechanical shock resistance. Adds one octave of uniform HF response over that of conventional broadcast cardioids. Permits close talking without bass accentuation. Working distance increased by 1.7:1 over pressure microphones. Single moving element is exclusive, rugged Acoustalloy diaphragm. Response: 30-16,000 cps. Output: −58 db. Internal connector pin impedance change. Wired for 150 ohms, taps at 50 and 250 ohms. TV-gray finished aluminum cast case. Built-in Cannon UA-3 connector. Clamp-on stand mount with ⅝″-27 thread and ½″ pipe thread adapter, 20′ cable. Length 7¾″; diameter 1¾″. Net Weight, 11 oz.
List Price...**$255.00**

Model 666R Rising Response Cardioid—Like Model 666, but with response which rises 4½ db from 100 to 2,000 cps, reducing pickup of low frequency reverberations, room "rumble" and prop noise. Particularly suited to boom use. Output: −55 db.
List Price...**$255.00**

Model 667 Variable Response Cardioid—For wide-range reproduction under a variety of acoustic conditions. Combines the excellent cardioid operation of Model 666 with an inline transistor preamplifier with bass, treble and presence controls; provides 40 distinct response characteristics. Maximum output level: 50 ohms, −30 db; 150 ohms, −32 db; 250 ohms, −33 db. Response: 35-16,000 cps. Other specifications and accessories like Model 666. Preamp noise level: −123 db, referred to input. Controls: Bass (4 positions: +3 db, flat, −5 db, −9 db at 100 cps); treble (5 positions: +9 db, +6 db, +3 db, flat, −6 db at 10 kc); Gain (4-position); Power On-Off switch. Mercury battery supplied. Steel case, brushed chrome finish. Supplied with 50′ cable, UA-3-11 and UA-3-12 connectors; 20′ cable with UA-3-11 connector. Hardwood carrying case. Size: 9″ long, 3⅞″ wide, 3 11/16″ high. Net Weight, 3¼ lbs.
List Price...**$600.00**

Model 665 Cardioid—Similar in design and function to the Model 666, but for less exacting applications. Uniform response 50-14,000 cps. Recessed switch provides 50 or 250 ohms. Pressure-cast zinc case. Nonreflecting gray finish. Diameter, 1⅞″, length 7 3/16″. 18′ cable. Net Weight, 1 lb. 10 oz. List Price....................**$150.00**

Model 6098 Transistor Line Amplifier—Increases dynamic range of any E-V low impedance mike. Lowers system noise. See Model 667 for data. List.......**$269.00**

OMNIDIRECTIONAL MICROPHONES

Model 655C Slim-Trim TV Dynamic—Frequency response 40-20,000 cps. Output level −55 db. Has widest range response of any microphone commercially available. Used in many laboratories as test standard. Excellent level affords high signal-to-thermal noise ratio. Can be used on stand, in hand or on boom. Easily concealed in studio props. Acoustalloy diaphragm. Pop-proof grille. Impedance 50, 150 and 250 ohms. Impedance easily changed at internal terminal board. Cannon UA-3 connector. Clamp-on stand mount included with ⅝″-27 thread and ½″ pipe thread adapter. Size: 10½″ long w/o connector, 1 dia. 20′ cable. Net Wt., 7 oz. List...**$200.00**

Model 654 Slim-Trim Broadcast Dynamic—Frequency Response 50-16,000 cps. Output level −55 db. Recessed selector provides 50 or 250 ohms. Built-in Cannon XL-3 connector. Acoustalloy diaphragm. ⅝″-27 thread. 18′ cable. 10″ long with stud, 1″ dia. Net Weight, 16 oz. TV gray enamel. List Price....................**$100.00**

Model 646 Lavalier Dynamic—For chest, desk or hand use. Neck cord and support clips supplied. Response 50-15,000 cps; output level −55 db. Matches all low impedances. Omnidirectional. Acoustalloy diaphragm. Built-in connector. Gray enamel. 30′ cable, 7 1/16″ x 1″ dia. Net Weight, less cable, 7 oz. List Price........**$147.50**

Model 649A Miniature Lavalier—Smallest dynamic lavalier—weighs only 2 oz. without cable: 3 11/16″ long x ¾″ diameter. Ideal for programming where unobtrusive or concealed microphone placement is desirable. The 649A may be hidden in corsages, under the lapel or tie, behind a book—almost anywhere. Frequency response 60-12,000 cps. Output: −60 db. Nondirectional. Matches all low impedance. 30′ shielded cable. Aluminum case finished in TV gray. Complete with neck cord assembly and belt clip.
List Price...**$105.00**

Model 635 Broadcast Dynamic—Compact, rugged, versatile. Omnidirectional. Response, 60-13,000 cps. Output level −55 db. 50-250 ohms impedance selector. Head tilts through 90° arc. Cannon XL-3 connector. ⅝″-27 thread; size 2″ x 6¼″. Satin chrome finish. 18′ cable. Net Weight, 1 lb. List Price..............**$82.00**

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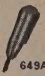
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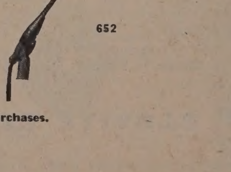
652

NEW "THIN-TRIM" DYNAMIC MICROPHONES

Model 652—A unique new design for an almost invisible dynamic microphone. The microphone is mounted on the end of the semirigid tube bringing the moving coil element closer to the user for full range, pop free response. The unobtrustive and attractive contour makes it ideal for use in television, broadcasting, recording lectures and other applications where the microphone should be inconspicuous. Breath and wind filter is an integral part of the microphone. Two clear plastic baffles provided to give either 8 db or 5 db boost in the brilliance range of 5,000 cps for added articulation. The microphone without the baffles gives a smooth response of from 80 to 8,000 cps. The Model 652 is mounted on a 3/16″ steel tube and finished in nonreflecting Nicaloy. Output level −60 db. Matches all low impedances. Furnished with 3-conductor shielded 20′ cable. Model 300 stand coupler. Length of microphone 25″. Weight, 11 oz. List Price..**$120.00**

Model 652A—Same as Model 652 except 15″ long. List Price...........**$120.00**

All E-V microphones except crystals are eligible for FCDA purchases.

Electro-Voice GENERAL PURPOSE MICROPHONES

UNIDIRECTIONAL LINE MICROPHONE

Model 644 Sound Spot—Another Electro-Voice revolutionary development, the Sound Spot Model 644 is a combination cardioid and distributed front opening, making it the most directional microphone ever. The Model 644 has the farthest front pickup, or better than 2.5 times the working distance of pressure types. Work close or far away without change of frequency response.

Cancellation from the rear and sides exceeds 20 db giving practically complete rejection of unwanted sound. This feature gives the most rejection of random noise in any microphone commercially available. Reverberation and feedback are vastly lower than any other microphone, allowing much greater leeway in loudspeaker placement.

The effective front acceptance angle is 45° each side of center giving best isolation of individual performers. The Model 644 is 9 db better on the reduction of wind noise and has far less response to shock than all other microphones.

Frequency response is smooth from 40 to 12,000 cps. High output: −53 db. Dual high and low impedance selected by changing one tap on MC4M cable connector. The case is high-pressure diecast zinc with ¾" aluminum tube. Rear diameter $2\frac{5}{16}$", length 16". Cable is 18'. Weight, 2 lbs. 9 oz. List Price.................**$110.00**

644

CARDIOID UNIDIRECTIONAL MICROPHONES

Model 664 Cardioid Dynamic—Similar to Model 666 in function, but designed specifically for PA. Cardioid pattern at all frequencies. Permits close talking without "booming" or bass accentuation. Provides better discrimination against unwanted sound. Less feedback than any cardioid PA microphone built. Blast filter minimizes wind effect. Acoustalloy diaphragm shielded from dust and magnetic particles. Response 40-15,000 cps. Output −55 db, On-Off switch. 150-ohm and high impedance. Impedance changed by moving one wire in MC4 cable connector. Pressure-cast case. Chrome finish. 18' cable. Size $7\frac{3}{16}$" long, less stand coupler, 1⅞" diameter. Net Weight, 1 lb. 10 oz. List Price...**$85.00**

Model 664G—Gold finish. List Price...............................**$90.00**

636

664

OMNIDIRECTIONAL MICROPHONES

Model 636 "Slimair" Dynamic—Exceptionally fine for PA, recording and general use. Response 60-13,000 cps, output −58 db. Pop-proof head. Wide pickup range. On-Off switch. Satin chrome finish. Tiltable head. Built-in MC-4 connector. ⅝"-27 thread. Hi-Z or Lo-Z by changing one wire in connector. 18' cable. 10¼" long including stud, 1⅛" max. diameter. List Price...............................**$72.50**

Model 636G—Gold finish. List Price...............................**$77.50**

Model 630 High Fidelity, High-Output Dynamic—Famous for quality at low cost. Response 60-11,000 cps; output level −55 db. Unaffected by heat or humidity. Acoustalloy diaphragm. Tiltable head. Built-in MC-3 connector. On-Off switch. Satin chrome finish. Available in Hi-Z or 150 (matches 50-250 ohms). Lo-Z balanced to ground. Size: 2" x 6¼" 18' cable. Net Weight, 1 lb. List Price..........**$52.50**

Model 647 PA Lavalier Dynamic—Small, rugged; for chest, desk or hand use. With neck cord, support clips and 18' cable. Response: 60-10,000 cps. Output level: −55 db. Impedance Hi-Z or Lo-Z easily changed at internal terminal board. Acoustalloy diaphragm. Built-in connector. Gray enamel finish. 5" long, 1" dia. Net Weight, less cable, 6 oz. List Price...**$82.50**

Model 623 Slim Dynamic—Ideal for PA, recording and general use. Use on stand or in hand. Omnidirectional. Response 60-12,000 cps; output level −56 db. Hi- or Lo-Z by changing one wire in connector. Pressure cast; satin chrome finish. Tiltable head. On-Off switch. Built-in MC-4 connector. ⅝"-27 thread. 7½" x $1\frac{5}{16}$". 18' cable. Net Weight, 15 oz. List Price...**$57.00**

Model 611 "Mercury" Dynamic—Traditional styling, fine performance for general sound pickup. Response 50-9000 cps; output level −55 db. Nondirectional. Acoustalloy diaphragm. Tiltable head. On-Off Switch. Built-in MC-3 connector. ⅝"-27 thread. Satin chrome finish. Available in Hi-Z or 150 (matches 50-250 ohms). Lo-Z balanced to ground. 2⅜" x 3⅛" x 6¼" inc. stud. 18' cable. Net Weight 1¼ lbs. List Price...**$45.00**

Model 624 Dynamic Lavalier—Most economical dynamic lavalier on the market. For chest or hand use. Supplied with neck cord, support clip and 18' cable. Satin chrome finish. Wire mesh head acoustically treated for wind and moisture protection. Output −56 db, response 100-7,000 cps. Hi-Z or 150 ohm, not balanced to ground. $3\frac{5}{32}$" x $1\frac{7}{32}$". Cable has integral strain relief. Net Weight, 14 oz. List Price............**$42.50**

Model 605 Durable Dynamic—For dependable, general purpose use. Response 65-8000 cps. Output level: −56 db. Nondirectional, becoming directive at higher frequencies. Acoustalloy diaphragm. Head at 22° fixed tilt. Built-in MC-1 connector. Satin chrome. Choice of Lo-Z (matches 50-250 ohms) or Hi-Z. Low impedance not balanced to ground. 3¼" x 2½" x 2" dia. Net Weight, 12 oz. With 18' cable. List Price...**$32.50**

Model 615 "Century" Dynamic—Incomparable for paging, home recording, amateur, or any low-cost applications. Can be used in hand, on table, on stand, or overhead. Nondirectional. Acoustalloy diaphragm. Withstands extreme temperature, humidity, corrosion and shock. Response: 80-8000 cps. Output: −55 db. Lo-Z (matches 50-250 ohms) or Hi-Z. Lo-Z not balanced to ground. 5' cable. Pressure cast case, satin chrome. Rugged, lightweight. Size 3" x $2\frac{3}{16}$" x 1". With ⅝"-27 thread stand adapter. AC-DC insulated. List Price......................................**$25.50**

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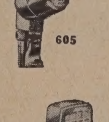
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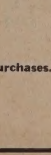
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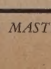
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All E-V microphones except crystals are eligible for FCDA purchases.

Electro-Voice MICROPHONES

CRYSTAL AND CERAMIC MICROPHONES

Model 951 Cardioid Crystal—Uses same new Variable D principle as E-V's BC-TV cardioids to obtain uniform directivity at all frequencies, high discrimination against unwanted sound. The 951 is an excellent wide-range, all-purpose PA microphone for a great variety of acoustic conditions, and especially useful where background noise and reverberation are a problem. Response 50-11,000 cps. Output −60 db. Hi-Z. On-Off switch. Pressure-cast case, satin chrome finish. 18′ cable, MC-1 connector. 5⅜″ l. (excluding stud), 1¾″ dia. overall. Net wt., less cable, 1¼ lbs. List. **$49.50**

Model 911 "Mercury" Crystal—Same smart design and fine performance as Model 611. Response 50-9000 cps. Output −50 db. Metal Seal Crystal. MC-1 connector Hi-Z. 18′ cable. Net Weight 1½ lbs. List Price.......... **$32.50**

Model 926 Slim Crystal—Level and response ideal for general purpose use. Response 60-8000 cps; output level −60 db. Hi-Z. Pressure cast case, satin chrome finish. Tiltable head. ⅝″-27 thread. 6¾″ x 1⁵⁄₁₆″. 18′ cable with integral strain relief. Net Weight 11 oz. List Price.................. **$29.50**

Model 920 "Spherex" Crystal—All-direction pick-up. Response 60-7000 cps; output level −50 db. Strong wire-mesh head acoustically treated for wind and moisture protection. High capacity, moisture sealed crystal. Hi-Z. Satin chrome. ⅝″-27 thread. Diam. 2¼″. 18′ cable. Net Weight 8 oz. List. **$27.50**

Model 924 Lavalier Crystal—Unique crystal lavalier for chest or hand use. Supplied with neck cord, support clips and 18′ cable. Satin chrome finish. Wire mesh head acoustically treated for wind and moisture protection. Output −60 db. Response 60-8000 cps. Hi-Z. 3⁵⁄₃₂″ x 1⁷⁄₃₂″. Cable has integral strain relief. Net Weight 8 oz. List Price... **$20.00**

Model 729 Ceramic Cardioid—The Model 729 is the lowest priced cardioid ever built. Random noise, reverberation and feedback reduced by a factor of 67%. Front pickup range nearly double that of pressure microphones. For public address, call and paging systems, home recorders, especially stereo, and general communications. Discriminating against sound from the rear makes the 729 excellent for amateur radio VOX operation. Tailored for single sideband. Output: −60 db. Response: 60 to 8,000 cps. High impedance only. Available with or without "on-off" switch. Metalustre gray front with medium gray back. Attractive desk stand and floor stand supplied. Net weight, less cable and stand, 9 oz. List Price.................. **$24.50**

Model 729S—With switch. List Price.................. **$26.50**

Model 727 Slim Ceramic—A new approach to the design of ceramic microphones for PA, recording and general use; similar in appearance to Model 729. Withstands extremes of temperature and humidity. Response 60-8000 cps. Output −55 db. High impedance only. 5′ cable. Available with or without "on-off" switch. Metalustre gray front with medium gray back. Size: 7¾″ x 1⅜″ x 1½″. Supplied with attractive desk stand and floor stand coupler. Net Weight less cable, stand, 9 oz. List Price.. **$18.00**

Model 727S—With switch. List Price.................. **$20.00**

Model 715 "Century" Ceramic—Use in any position—in hand, on table, on stand or overhead. Ceramic element. 60-7000 cps output −55 db. Hi-Z. 5′ cable. Non-directional. Satin chrome finish. Rugged, lightweight. 3″ x 2³⁄₁₆″ x 1″. With ⅝″-27 adapter. AC-DC insulated. 6 oz List Price.................. **$13.00**

Model 715S—With switch. List Price.................. **$15.00**

Model 715SR—With SPST switch for relay operation in mobile use. Lsit Price.................. **$17.50**

Model 718 Ceramic—An improved replacement for home recording microphones. 5′ cable includes a molded-on phono plug, with adapter, to match all late model home recorders. Improved high-level (−55 db) ceramic element resists damage from temperature, humidity extremes. Response: 60 to 6000 cps. 3⁹⁄₁₆″ x 1¾″ x 1¹³⁄₁₆″. Net Weight 8 oz. List Price.................. **$12.00**

Model 712 Ceramic—Low cost ceramic microphone. Fits need of low cost PA, home recording, paging and general use. Handheld. Moisture sealed ceramic. Response 70-7000 cps. High output −55 db. Hi-Z. Attractive gray Styron case. Size 3″ x 2¼″ x 1⅜″. 5′ cable. Net Weight 4 oz. List Price........ **$7.50**

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DIFFERENTIAL AND SPECIAL PURPOSE MICROPHONES

622SKK

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648 on 448

600D

Model 622SKK Dynamic Handset—For paging, intercom and communications. Sturdy bakelite, 150-ohm magnetic receiver with response 200-4000 cps. Switch closes mike and relay circuit. Response: 100-5000 cps. Output level: −55 db. Impedance: 250 ohms. 6′ 5-conductor coiled cord. List Price. **$78.00**

Model 622TRSKK—With 2-stage transistor amplifier. List Price.... **$94.50**

Model 625SKK Dynamic Differential Handset Microphone—Noise-cancelling microphone designed for use where background noise is at high level. Similar to Model 622SKK. Supplied with five-conductor, unshielded cable. DPST switch will handle relay or remote control and turn on mike. Press button to talk. Size: 8½″ x 3″ x 2⅝″. Net Weight, 1½ lbs. List Price........... **$85.00**

Model 625TRSKK—With 2-stage transistor amplifier. FAA type certificate 3R42-2. List Price......... **$122.50**

Model 606 Differential Dynamic—Close talking, noise cancelling. Accepts sounds of close origin (¼″) and rejects sounds of distant origin. Response: 100 to 5,000 cps. Output at ¼″: −55 db. Acoustalloy diaphragm. ⅝″-27 thread. Built-in MC-1 connector. Satin Chrome. 2″ x 3¼″ x 2½″ including stud. LoZ (matches 50-250 ohms) or Hi-Z. Low impedance not balanced to ground. 18′ cable. List Price.................. **$52.50**

Model 600D Dynamic Mobile-Mike—Lightweight, hand-held, extra-rugged. Output −55 db. Press-to-talk switch. Acoustalloy diaphragm. 2⅜″ x 2″ x 4″. 50-250 ohms or Hi-Z. 1′ retracted coiled cord. 6′ extended. Net Weight less cable 8 oz. List Price.............. **$47.50**

Model 210KK Carbon—Similar to Model 600D but single-button carbon. Output −50 db. Press-to-talk switch. 6′ coiled cord. List Price...... **$35.00**

Model 602—A noise-cancelling dynamic microphone for use in areas of heavy background noise. It accepts sounds of close origin (¼″) and rejects sounds of a distant origin. Output level: −55 db, 100-7,000 cps. Press-to-talk switch, Acoustalloy diaphragm, 1′ retracted coiled cord, 6′ extended. Available in Hi-Z or balanced line, 50 or 250 ohm. Weight, less cable, 8 oz. List Price.... **$57.50**

Model 205KK Differential Carbon—Close-talking, noise-cancelling, single button carbon. For private aircraft and emergency communications. Blastproof, waterproof, shock resistant. Output at ¼″: −50 db. Black phenolic case. Press-to talk switch. Mounting bracket. 6′ coiled cord. Size: 2¼″ x 2¼″ x 4″. Net wieght less cable, 8 oz. List... **$45.00**

Model 205KKP—Same, with PJ-068 plug. List Price............ **$49.75**

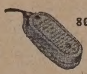
Model 205STCKK—FAA Type approved certificate No. 1040 with coiled cord. Designed for commercial aircraft. List Price.................. **$56.50**

Model 205STCKKP—Same as above with PJ-068 plug. List Price. . **$61.25**

Model 648 Intercom Microphone—Extremely versatile paging, intercom, or PA mike. Response: 50-10,000 cps. Output −58 db. Choice of Lo-Z (matches 50-250 ohms) or high impedance. Omnidirectional. Acoustalloy diaphragm. Non-reflecting gray. Less Cable. Size: 6¹⁄₁₆″ x 1″ (including ⅝″-27 thread adapter). Net Weight (with adapter), 8½ oz. List Price.................................... **$56.00**

All E-V microphones except crystals are eligible for FCDA purchases.

Electro-Voice MICROPHONES AND ACCESSORIES


805

600TR

602TR

SPECIAL PURPOSE AND DIFFERENTIAL MICROPHONES

Model 805 Contact—For guitar, banjo, other stringed instruments. Hi-Z. Sealed crystal. Chrome finish. 15′ cable. List Price.......................... **$20.00**

Model 600TR Microphone—Has compact, two-stage transistor amplifier built into case. Complete circuit including transistor, transformers, and associated equipment. Coiled cord, four-wire lead, press-to-talk switch may also actuate relay to control transmitter. Same sensitivity as carbon mike without change in auxiliary equipment. Output: −23 db. Amplifier power gain approximately 34 db. Size: 2¼″ x 2″ x 4″. Black phenolic case with mounting bracket, 6′ cable. Net Weight less cable, 13 oz. FAA type certificate 3R42-1. List Price...................................... **$82.50**

Model 602TR Microphone—Similar in type and appearance to Model 600TR, but designed for close-talking, noise-cancelling work. Speech is clear, crisp, distinct. May be used to replace carbon microphone with no change in auxiliary equipment. Net Weight less cable 13 oz. FAA type certificate 3R42-1. List Price......... **$93.00**

MICROPHONE ACCESSORIES

Model 356 Suspension Shock Mount—For use with Model 642 on boom or floor stand. Excellent isolation. List. **$50.00**

Model 366 Suspension Shock Mount—Extremely light. Designed for use with 666 microphone. Installs without tools. Pigtail cable connection with UA-3 connectors provides cable loop isolating boom shock noises. For any microphone with 1″ diameter. List........ **$40.00**

Model 345 Shock Mount—Dual-type external shock mount prevents reproduction of external shocks and stand vibrations. Permits tilting microphone head. ⅝″-27 thread. Easily attached or removed. Satin chrome. 1½″ x 3⅞″. Net Weight, 10 oz. List Price..... **$15.00**

Model 346 Shock Mount—Designed specifically for use with Model 666 microphone. Similar in every feature to Model 345, but constructed for 11 oz. microphone List Price....... **$15.00**

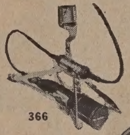
Model 300 Detachable Microphone Clamp—Light weight adapter fits any 1″ cylindrical microphone. Positive stand mounting. Installs easily with finger-operated clamp. Rubber insert prevents slippage. ½″ pipe thread adapter for ⅝″-27. List Price.......... **$10.00**

Model 524 Wind Screen—Designed specifically for use with Model 666 microphone. Minimizes wind effect on boom operation or when used outdoors. Made of Acoustifoam rubber. Net Weight, 2 oz. List Price............... **$8.00**

Model 335 Blast Filter—Acoustically treated, scientifically curved grille stops wind and breath blasts. Does not affect frequency response. Easily fits over head of E-V Models 630, 635, and 605 mikes. Satin chrome finish. List Price. **$5.50**

Model 448 Swivel Boom Mount—Designed specifically for use with Model 648 microphone. Holds mike 11⅞″ off mounting surface. 62° elbow bend. MC-2M connector. Satin chrome finish. Extends 4″ below mounting surface, 2½″ diam. mounting base. Net Weight, 1 lb. 5 oz. List Price.............. **$24.00**

Model 502A Matching Transformer—Designed for use in series with mike line. Transformer windings have low distributed capacity and are amply shielded against inductive hum by a shield inside pressure cast case. Designed for 50, 150, 250 and 500 ohms—to Hi-Z. Broadcast fidelity response 40-20.000 cps ±1 db. MC-4 input connector. 2⅞″ x $1\frac{15}{16}$″ diameter. List Price.... **$17.50**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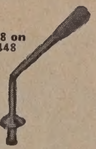
524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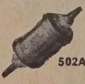
502A

MICROPHONE STANDS

Model 415 Reclining Desk Stand—Mounts 615, 715, 715-S at 15° tilt. Satin chrome. Size: 2⅝″ x 2¾″ x 1″. Net Weight, 4 oz. List Price....... **$1.75**

Model 416 Stand—For semipermanent mounting of 646, 647 microphones. Black rubber. Size 3⅛″ diameter, 1″ high. Net Weight, 2 oz. List Price........ **$5.00**

Model 418 Desk Stand—Use with microphones using small-type stud such as Models 611, 623, 630, 635, 636, 911, and 951. Die cast base. Gray finish.
List Price.................. **$10.00**
Model 418-S—With switch... **$15.00**

Model 419 Desk Stand—Similar to Model 418 but for use with microphones using large-type stud such as Models 644, 654, 664 and 665.
List Price.................. **$10.00**
Model 419-S—With switch... **$15.00**

Model 420 Desk Stand—Heavy cast iron stand finished in TV gray. Specifically designed for use with E-V 666, 655C, 646 or microphones with 1″ diameter. Clamp attachment for mounting 1″ cylindrical mikes, without tools. Base holds mike in position when subjected to ordinary strain. Net Weight, 3 lbs.
List Price.................... **$20.00**

Model 423-A Desk Stand—Sturdy smartly styled, round die-cast base, 5⅛″ diameter. Rests firmly on rubber base buttons. Rich satin chrome. ⅝″-27 thread. Choice of 3″ or 5″ matching stem riser. Net Wt. 1 lb. List... **$5.00**

Model 428 Touch-To-Talk Stand—Fits standard ⅝″-27 thread. Lever-type switch for relay operation or microphone On-Off—closes or opens instantly or locks in "talk" position. Satin chrome; gray plastic switch lever with locking button. 7″ x 5⅛″ base diameter. Net Weight, 1¾ lbs.
DPDT. List Price........... **$17.50**

Model 425 Deluxe Floor Stand—Button at top gives one-hand height control from 37″ to 66″. Locks automatically on release. Shaft can be rotated without any adjustment device. Locking-type adjustable legs permit stand to be placed flush against wall. Modern, die-cast base. Three-leg spread 17″. Net Weight, 7½ lbs. List Price........... **$30.00**

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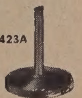
666 on 420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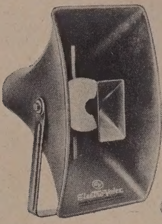
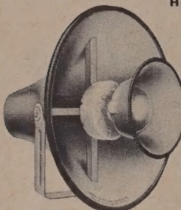
All E-V microphones except crystals are eligible for FCDA purchases.

Electro-Voice PUBLIC ADDRESS HORNS AND DRIVERS


FC100

HC1000

HD1000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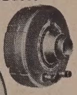
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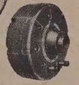
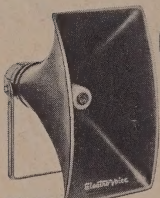

DC40 DC50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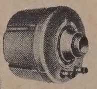
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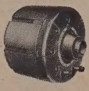
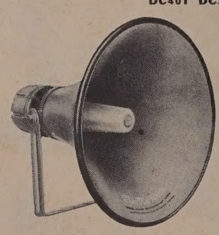

DC40T DC50T


AR150

COMPOUND DIFFRACTION PROJECTOR

Model 848—Combines FC100 Compound Diffraction Horn plus DC30 Compound Driver for finest wide-angle sound, lowest distortion, highest sound quality of any projector. Specifications: Frequency response, 150-10,000 cps; impedance, 16 ohms; dispersion, 90° x 120°; power handling capacity, 30 watts; sound pressure level, 117 db; dimensions, 10½" x 20½" x 20"; Net Weight, 13½ lbs.; Shpg. Wt., 15 lbs. Complete—List Price. **$82.50**

Model 848-45—With 45-ohm voice coil. List Price........................ **$84.00**

PROJECTOR HORNS

Completely new designs assure finest performance with Electro-Voice projector horns. Two basic types from which to choose . . . compound and reentrant.

Exclusive compound horns permit widest range at lowest distortion, plus complete directional control of both highs and lows. Best wide-angle coverage with exclusive diffraction horns means better sound through entire coverage area for uniform coverage. Concentrating compound horn provides highest efficiency at lowest distortion. Natural voice and music reproduction result in higher intelligibility without annoying peaks.

Model FC100—Similar to the famous CDP, the FC100 provides two diffraction horns for uniform wide-angle coverage. Frequency response is not compromised since both horns are ideally designed to handle a specific portion of the range. Compound horn reduces distortion far below any other projector design. Flexible coverage control provided by individual adjustment of each horn, or concentrating high-frequency horn (HC1000) can be substituted for small diffraction horn. Large horn is of fiberglass with Mesa Tan finish molded in. Use any E-V convertible driver. Specifications: Low-frequency horn—cut-off, 100 cps; taper, 100 cps; air column length, 58"; sound distribution, 90° x 120°. High frequency sound distribution, 90° x 120°; crossover, 1,000 cps. Mouth size, 10½" x 20½", depth (less driver), 20". Net Wt. (less driver), 10¾ lbs. Shpg. Wt.. 12¾ lbs. List. **$50.00**

Model AC100—Concentrating version of CDP. Has all of the quality advantages of FC100, except utilizes round horns for most concentrated coverage with greatest efficiency. Retains compound design for lowest distortion—widest range. Diffraction high-frequency horn (HD1000) can be substituted for concentrating horn for flexible coverage control. Use any E-V convertible driver. Specifications: Low-frequency horn—cut-off, 100 cps; taper, 100 cps; air column length, 58"; sound distribution, 80°. High-frequency sound distribution, 30°; crossover, 1,000 cps. Diameter, 21"; depth (less driver), 21"; Net Wt. (less driver), 11 lbs. 6 oz. Shpg. Wt., 13½ lbs. List Price........................ **$47.00**

Model HD1000—Diffraction horn for converting AC100 to wide-angle (60° x 120°) coverage above 1,000 cps. Shipping Weight, 1½ lbs. List Price..................... **$6.00**

Model HC1000—Concentrating horn for converting FC100 to concentrated (30°) coverage above 1,000 cps. Shipping Weight, 4 lbs. List Price........................ **$10.00**

New reentrant horns provide wider range than ever before at lowest cost. Unique E-V ring reflector design provides better balanced highs than possible with conventional exponential designs, by reducing high frequency losses often encountered in reentrant horns. Smoother response plus added useful range increases intelligibility and adds to more natural sound. Rugged aluminum die cast mounting plate plus precision die cast reentrant tubes assure long-lasting performance. Heavy spun aluminum round bell or fiberglass rectangular horn provides either concentrated coverage or medium angle coverage. Electro-Voice Reentrant Horns accept any standard driver with 1⅜"-18 threads.

Model FR150—Reentrant Horn. Medium-angle low-cost rectangular horn provides good coverage at low cost. Virtually indestructible fiberglass horn has Mesa Tan color molded in. Adjustable mounting angle allows best coverage. Can be stacked for multiple speaker applications. Ideal for car-top installation or wherever low silhouette is needed, and where bass response cannot be sacrificed. Accepts Electro-Voice convertible drivers or any standard driver with 1⅜"-18 thread. Specifications: Low-frequency cut-off, 150 cps; taper, 150 cps; air column length, 45"; sound distribution, 70° x 100°; mouth size, 10½" x 20½"; depth (less driver), 21"; Net Wt. (less driver), 9½ lbs. Shpg. Wt., 12 lbs. List. **$39.00**

Model AR150—Reentrant Horn. Round concentrating horn for maximum penetration at lowest cost. E-V ring reflector plus precision new exponential design contributes to widest range yet achieved from this horn type. Smoother curve results in high intelligibility, and remarkably natural voice and music quality. Rubber-edge damping ring eliminates resonances. High-efficiency design allows more useful volume from driver over entire range. Accepts Electro-Voice Convertible drivers or any standard driver with 1⅜"-18 thread. Specifications: Low-frequency horn—cut-off, 150 cps; taper, 150 cps; air column length, 41"; sound distribution, 85°; diameter, 21"; depth (less driver), 17". Net Weight (less driver), 6½ lbs. Shipping Weight, 8 lbs. List Price.............. **$34.00**

VERSATILE CONVERTIBLE DRIVERS

Now, for the first time, here are drivers that can be used interchangeably in compound or reentrant horns. Used on either type of horn, the new Electro-Voice Convertible Drivers feature highest efficiency available. Increased power handling plus extra increased efficiency make the 40 and 50-watt drivers uniquely useful where high power at minimum cost is essential. The high efficiency of all E-V Convertible Drivers is achieved without resorting to "peaked" response which may increase loudness, but does reduce intelligibility. The smooth response of these drivers insures most natural reproduction of voice and music for more satisfying quality with vastly reduced feedback problems and greatly increased tonal range. Double flux ceramic magnets provide long-lasting high efficiency in entirely new low-loss magnetic circuits. Edgewise-wound ribbon voice coils give 18% more energy.

The drivers are rugged and weatherproof; conversion to either reentrant or compound use can be made instantly in the field. Voice coils are also field replaceable, thus reducing repair costs to a minimum. E-V Convertible Drivers are available with 16 or 45-ohm voice coils or with built-in 70.7-volt line constant voltage transformers. This entirely new design concept gives better performance at minimum cost, making E-V Drivers your best buy.

		DC30A	**DC30T**	**DC40**	**DC40T**	**DC50**	**DC50T**
Frequency Response††		150-10,000	150-10,000	140-11,000	140-11,000	140-11,000	140-11,000
Program Power Capacity		30	30	40	40	50	50
Sound Pressure Level†	FC100 Compound Horn	117 db	117 db	120 db	120 db	124 db	124 db
	AR150 Reentrant Horn	126 db	126 db	129 db	129 db	133 db	133 db
Voice Coil Impedance		16**	16	16**	16	16**	16
Transformer Impedances, Ohms		....	167, 333, 1000, 2000	....	125, 250, 500, 1000	....	100, 143, 200, 500
Transformer Power Taps, Watts		....	30, 15, 5, 2.5	....	40, 20, 10, 5	....	50, 35, 25, 10
Dimensions (overall)		5½" dia. 3" l.	5½"dia.5½"l.	6¼"dia.4¼"l.	6¼" dia. 6" l.	6¼"dia.4¼"l.	6¼" dia. 6" l.
List Price		**$31.00**	**$41.00**	**$40.00**	**$52.50**	**$52.50**	**$63.50**

†Measured at 4' on-axis with full rated power from 750–1250 cps. ††Measured on-axis with FC100 horn.
**Available with 45-ohm voice coil at $1.50 list additional.

All E-V public address speakers are eligible for FCDA purchases.

Electro-Voice PA SPEAKERS AND ACCESSORIES

PAGING SPEAKERS

Effective paging systems require not only efficient loudspeakers, but also natural sound quality free from peaks that cause listening fatigue and acoustic feedback. No better speakers for clear natural voice paging are available than the new Electro-Voice Model 844 and the improved Model 847 CDP.

Model 844—Low-cost paging speaker for medium-angle sound distribution. Features smoothest response in its class with better lows to provide natural, pleasing paging without feedback. Handles twice the power—30 watts—to reduce costs. Rugged diecast horn plus field-replaceable voice coil keeps service costs at a minimum. Precision manufacturing assures long-lasting reliability under the toughest conditions.

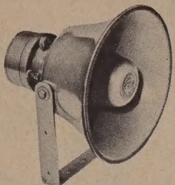
Specifications: Frequency response, 250-13,000 cps; power handling capacity, 30 watts; nominal impedance, 8 ohms; dispersion, 90°; EIA sensitivity rating, 51 db; sound pressure level, 120 db; dimensions, 9⅞" diameter x 8 3/16" deep; Net Weight, 5 lbs. 10 oz.; Shipping Weight, 8½ lbs. List Price.......... **$36.50**

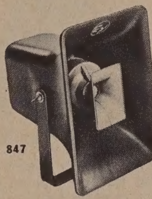
Model 844-45—Same as standard 844, but with 45-ohm voice coil for simple installation in intercom systems. List Price.......... **$38.00**

Model 847—Utilizing the famous CDP Principle—this newly improved wide-angle speaker provides higher articulation without annoying "peaked" response over a uniform 120° x 90° area. Extremely low distortion results from the use of TWO diffraction horns—each covering only half of the voice range. 25-watt power handling capacity means more volume from fewer speakers. Fiberglass horn has Mesa Tan color molded in.

Specifications: Frequency response, 250-10,000 cps; power handling capacity, 25 watts; sound pressure level, 114 db; dispersion, 90° x 120°; impedance, 16 ohms; dimensions, 11¾" x 7¾" x 10 7/16"; Net Weight, 8 lbs.; Shipping Weight, 10 lbs. List Price.. **$51.00**

Model 847-45—Same as standard 847, but with 45-ohm voice coil for simple installation in intercom systems. List Price.......... **$52.50**


844


847

HI-FI OUTDOOR WEATHERPROOF SPEAKERS

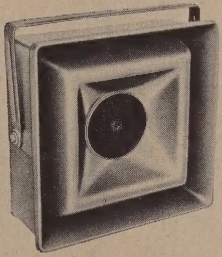
Musicaster speaker system provides true high fidelity performance in a compact, portable system. Sturdy aluminum diecast housing protects weatherproof cone speaker and extends bass response through back-loaded folded horn. Dual Radax cone radiates smooth useful highs through 120° angle. Can be mounted anywhere or used as portable speaker. Provision for mounting 70.7-volt line transformer inside. Ideal for square dances, school auditoriums, clubs, outdoor hi-fi or anywhere that music and voice must be reproduced with maximum clarity.

Specifications: Frequency response, 60-13,000 cps; nominal impedance, 8 ohms; dispersion, 120°; power handling capacity, 30 watts program; sound pressure level, 110 db; dimensions, 21½" x 21½" x 8½"; Net Weight, 31 lbs.; Shipping Weight, 34 lbs. List Price. **$90.00**

Musicaster II—Same fine performance as Musicaster above, except has added brilliance and wider coverage from RE36 Very-High-Frequency Range Extender. Smooth response to 18,000 cps. Complete with crossover. Net Weight, 33 lbs. Shipping Weight, 36 lbs. List Price.......... **$125.00**

Model MB-1—Surface mounting bracket allows mounting of any Musicaster flat against wall for neat unobtrusive installation. Replace standard "U" bracket. Shipping Weight, 1 lb. List Price.......... **$4.50**

Musicaster



TRANSFORMERS AND ACCESSORIES

Model TH—Transformer Housing. Provides neat weatherproof mounting of any E-V transformer. Mount vertically or horizontally on any flat surface or on horn bracket. Exclusive wattage indicator tells power setting at a glance. No soldering required with E-V transformers. Size: 4" h., 5" w., 3½" d. Net Weight, 1 lb. 11 oz. Shipping Weight, 2½ lbs. List Price.......... **$8.50**

Model TR5—5-watt 70.7-volt line transformer. Primary impedance taps 1000, 2000, 4000, 8000 ohms; 5, 2.5, 1.25 and .675-watt line power taps. 4, 8 and 16 ohms secondary impedances Accepts solderless terminals in TH housing. Frequency response ±2 db, 35-20,000 cps. Insertion loss 0.8 db. Overall dimensions 2" x 1 11/16" x 1⅜". Mounting hole centers, 1¾". Shipping Weight, 1 lb. List Price.......... **$5.00**

Model TR15—Same as TR5 except 15-watt capacity with primary impedances of 333, 500, 1000, 2000 ohms and 15, 10, 5, 2.5-watt line power taps. Overall dimensions 1¾" h., 2⅞" w., 2 5/16" d. Mounting hole centers, 2⅜". Shipping Weight, 1½ lbs. List Price. **$6.00**

Model TR30—Same as TR5 except 30-watt capacity with primary impedances of 167, 250, 500, 1000 ohms and 30, 20, 10 and 5-watt line power taps. Overall dimensions 1¾" h., 2⅞" w., 2 5/16" d. Mounting hole centers, 2⅜". Shipping Weight, 1½ lbs. List Price. **$7.00**

Model TR50—Same as TR5 except 50-watt capacity with primary impedances of 100, 125, 200, 333, ohms and 50, 40, 25 and 15-watt line power taps. Overall dimensions 2¼" h., 2 5/16" w., 2¼" d. Mounting hole centers, 2⅜". Shipping Weight, 2 lbs. List Price. **$9.00**

Model AP-1—Pipe stand adapter for mounting any E-V speaker "U" bracket to standard ½" pipe. Shipping Weight, 1 lb. List Price.......... **$2.50**

Model AD-1—Driver adapter allows use of E-V Convertible Driver on horns with 1 7/16"-16 thread (W.E.—RCA) for improved performance. Shpg. Wt., 1 lb. List Price.... **$3.00**

Model AD-2—Horn adapter allows use of E-V reentrant horns with drivers having 1 7/16"-16 thread (W.E.—RCA) for improved performance. Shpg. Wt., 1 lb. List Price.... **$3.00**

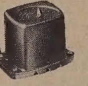
Model RA-1—Radial Adapter instantly converts FC100 horn or 848 projector to "radial" applications. Superior to typical "360°" projectors. Diffraction horns give better spread and adapter reflects sound off-axis, to eliminate hot spot. No tools required. Extends 2½" in front of FC100 horn with DC30A. Shpg. Wt., 1 lb. List Price.......... **$6.00**

Model RE35—Range Extender mounts on 848 or FC100 to improve response and dispersion of highs. 30-watt capacity Response 3500-18,000 cps. 16 ohms impedance. Complete with crossover, mounting bracket. Shipping Weight, 4½ lbs. List Price...... **$40.00**

Model RE36—Range Extender Kit. Converts Musicaster to Musicaster II. Includes driver, bezel, crossover and wiring harness. Shipping Weight, 4½ lbs List Price. **$37.50**

Model 879—Joining Kit for two or more 848, FR150 or FC100 horns in multiple array. One kit required for each junction of two horns. Shpg. Wt., 1 lb. List Price.... **$2.75**

MB-1


TH

AP-1

Diaphragm Replacement Kits allow easy field maintenance or conversion of E-V Drivers.

DRIVER	8 Ohm	16 Ohm	45 Ohm
828 or DC30	....	8923	8427
844 (DS30)	8410	....	8421
DC30A/DC30T	....	8577	8617
DC40/DC40T	....	8573	8618
DC50/DC50T	....	8574	8619
List Price	**$10.50**	**$10.50**	**$12.00**

RA-1

RE35

Note: Sound Pressure Level is measured at 4' on-axis with full rated power from 750 to 1250 cps.

All E-V public address speakers are eligible for FCDA purchases.

NEUMANN

NEUMANN

U-47 (U-48) Microphone System

This microphone has become the standard of the American recording, broadcasting and film industries, and is the only condenser microphone in its price range featuring an electronically switchable directional characteristic.

Complete microphone system consists of microphone, power supply (type NG), inter-connect cable (type UC-3), with Z-37 full elastic suspension, AC power cable, U. S. fuse holder, pilot light, power connector, and XLR output receptacle with mating cable connector.

Field Pattern:
U-47 System Switchable non-directional—cardioid
U-48 System Switchable bi-directional—cardioid

NEUMANN

KM-54a/KM-53a

The KM-54a is a super cardioid miniature microphone that has been designed with tv and film in mind. This ⅞″ diameter by 5″ long, 3½ ounce marvel, when mounted in the Z-38 full elastic suspension, can be aimed at the sound and provide more than 25db rejection of extraneous sounds in the studio.

The KM-53a is identical in size but omni-directional in pattern. It is recommended for the recording of pop-orchestra and jazz sessions where close-up technique is employed.

Complete microphone system consists of microphone, power supply (type NKM), inter-connect cable (type KC-1) with Z-38 full elastic suspension, A. C. power cable, U. S. fuse holder, pilot light, power connector, and XLR output receptacle, with mating cable connector.

COMPLETE TECHNICAL SPECIFICATIONS WILL BE PROMPTLY FURNISHED UPON PROFESSIONAL REQUEST.

NEUMANN

KM-56 Miniature Condenser Microphone System

This miniature condenser microphone is one of the latest to join the precision Neumann line. Its quality is in every way similar to the U-47 series, but dimensions are amazingly miniaturized.

Complete microphone system consists of microphone, power supply (type NKM), inter-connect cable (type KC-1), with Z-38 full elastic suspension, A. C. power cable, U. S. fuse holder, pilot light, power connector, and XLR output receptacle, with mating cable connector.

NEUMANN

M-49b Continuously Electronically Variable Directional Pattern Microphone System

This microphone permits remote control of the directional characteristic. A smooth, continuous fader-control selects any of the basic directional patterns (non-directional, bi-directional, and cardioid) and any intermediate pattern. Wide frequency response with extremely low distortion — 0.6% 40-15 kc up to 110 db absolute.

Complete microphone system consists of microphone, power supply (type NN-48), inter-connect cable (type C-26), A.C. power cable, XLR output connector, and MZ-49 swivel mounting harness.

GOTHAM AUDIO CORPORATION

NEW YORK 36, N. Y.

BEYER

BEYER DT-48 Dynamic Peak-Performance Headphones

A hand-built, high-fidelity transducer used in critical evaluation of recorded and transmitted sound, yet in a reasonable price class. Frequency range: 30-15,000 cycles, down no more than 7 db at 15 kc, and perfectly flat at 30 cycles. Comfortable exchangeable foam rubber pads and separate cords for each ear for stereo application. Impedance: 5 ohms each side; input voltage required: 0.1 volt; peak power demand: 0.4 watt; weight: 12½ ozs.

BEYER M-100 Moving Coil Dynamic Microphone

Wind screen available to completely eliminate "pops" and "wind rushing" noises when used for close talking or outdoor pickup.

The M-100 represents the latest achievement in the field of quality dynamic studio microphones. Its miniature size follows the present day trend toward more compact, unobtrusive transducers. It is impervious to temperature and humidity.

Directional characteristic:
Omnidirectional

Frequency response:
50-16,000 cps ± 2.5 db

Overall response:
20-20,000 cps

Impedance: 50/200 ohms

Sensitivity:
0.100 mv/microbar

Dimensions: 4¾" x ⅞"

Weight: 4.5 ozs.

BEYER M-160 Dynamic Ribbon Microphone (Ultra-directional)

An ultra-directional characteristic has now become possible in a ribbon microphone. The warm, transparent classical ribbon quality—in a miniaturized form, with response approaching near theoretical limits through miniaturization of the vibrating system. Close tolerances in manufacture assure uniformity of characteristic between microphones, permitting paired use for Stereo.

Directional characteristic:
Ultra-directional

Rejection ratio: 20 db

Frequency response:
50-16,000 cps ± 2.5 db

Overall response:
20-20,000 cps

Impedance: 50/200 ohms

Sensitivity:
0.060 mv/microbar

Dimensions: 1½" x 6"

Weight: 6 ozs.

M-100 and M-160 microphones are plug-in and are supplied with mating receptacle and swivel microphone stand adapter coupling for ⅝-27 thread. Velvet-lined jeweler's cases protect the units when not in use.

BEYER M-61b Ultra-directional Dynamic Microphone

The ideal microphone for theater and night club sound systems, recording, and remote broadcasting, as well as conference and musical recording for the advanced audiophile. Its ultra-directional characteristic discriminates against random, unwanted sound and permits higher non-feedback output levels from public address systems.

Directional characteristic:
Ultra-directional

Rejection ratio: 17 db

Frequency response:
50-15,000 cps

Impedance: 50/200 ohms
(high impedance on special order)

Sensitivity:
0.200 mv/microbar

Dimensions: 1¾" x 4¾"

Weight: 6.5 ozs.

GOTHAM AUDIO CORPORATION

NEW YORK 36, N. Y.

ITT
DISTRIBUTOR PRODUCTS DIVISION
A WORLD OF PRODUCTS
FOR A WORLD OF PROGRESS
HIGHPASS FILTER

ITT HIGH-FIDELITY SPEAKERS

All the latest achievements of the stereophonic hi-fi era have been incorporated into this sensational new speaker line. Built in our Standard Elektrik Lorenz manufacturing facility in Germany by precision craftsmen long known for their advances in sound techniques.

S-888 Spacious sound with real economy from Lorenz. The S-888 has enormous flexibility. Can be used alone as a wide-range speaker or in groups—as the low end of a 2-way system, or as a mid-range speaker in a 3-way system. Dual cones provide thrilling broad sound response. Cast aluminum girder frame. Tropicalized.

SPECIFICATIONS: Frequency response: 30 to 14,500 cps. Power rating: 18 watts peak. Impedance: 8 ohms. Overall diam.: 8½″. Mounting opening: 7¼″. Overall depth: 4″.

S-1288 Dual cones for extended frequency range. Twin voice coils with impedances of 4, 8 or 16 ohms, enabling you to select the impedance you require—your assurance this speaker can be used with any stereo or monaural amplifier today or that will ever be built. Fully tropicalized for finest operation in any climate. Non-resonant cast aluminum girder constructed frame.

SPECIFICATIONS: Frequency response: 18 to 15,000 cps. Power rating: 30 watts peak. Magnet assembly weight: 61.5 oz. Impedance: 4, 8 or 16 ohms. Overall diam.: 12¼″. Mounting opening: 10⅝″. Overall depth 10⅝″.

S-1288 II Brilliant full-range biaxial by Lorenz for the most critical connoisseur. The S-1288 II consists of the S-1288 plus twin tweeters on rigid metal bracket and high pass crossover. Specially designed for maximum internal resonance damping and transient response. A complete "system" in one convenient unit.

SPECIFICATIONS: Frequency response: 18 to 18,000 cps. Power rating: 35 watts peak. Dual cones and twin voice coils with impedances of 4, 8 or 16 ohms. Overall diam.: 12¼″. Mounting opening: 10⅝″. Overall depth 10⅝″.

S-388 Armored horn-type 2½″ tweeter with plastic cone for efficient 120-degree high-frequency sound dispersion. New ferrite magnet, hermetically sealed. Fully tropicalized. The perfect mate for 12″ or 8″ speakers . . . or may be used to extend the range in any system.

SPECIFICATIONS: Frequency response: 2,000 to 18,000 cps. Power rating: 2 watt peak. Impedance: 5.5 ohms. Outside diam.: 2½″. Mounting opening: 2⅛″.

HP-1 HIGH PASS CROSSOVER Crosses over at 2,000 cps. at 3 db per octave—feeds highs to tweeters, lows to woofer. Extends speaker system range to limit of audibility. For use with 2-way system, or 3-way in conjunction with mid-range crossover.

SPECIFICATIONS: Mounting dimensions (square base): 1½″ between hole centers. Overall height: 2¾″.

Consult your local authorized industrial ITT distributor.

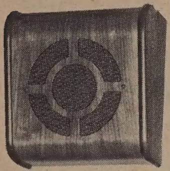
ITT
DISTRIBUTOR PRODUCTS DIVISION
INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION

J. W. DAVIS CO.

Watterson SPEAKER BAFFLES

*Americas Most Complete Line

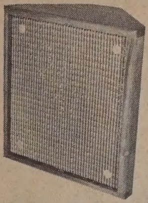
DELUXE



Model	Speaker Size	List	Net
6-5	6'' or 5''	$7.50	$4.50
8	8''	9.88	5.93
12	12''	13.75	8.25

Walnut or Natural Blond

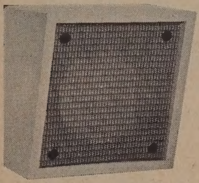
CORNER



Model	Speaker Size	List	Net
C-8	8''	$17.37	$10.42
C-12	12''	23.75	14.25

Walnut or Natural Blond

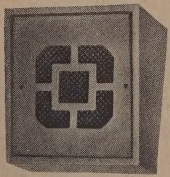
MODERN



Model	Speaker Size	List	Net
80	8''	$9.88	$5.93
120	12''	13.12	7.87

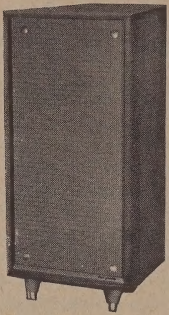
Mahogany or Blond Lacquer

STANDARD



Model	Speaker Size	List	Net
8E	8''	$8.75	$5.25
12E	12''	12.37	7.42

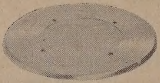
Brown Hammertone, Natural Blond,
or Blond Lacquer



MODEL HF-85

Model	Speaker Size	List	Net
HF-85	8'' & 5''	....	$28.95
HF-85S	8'' & 5'' installed	....	46.50

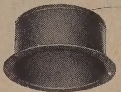
Walnut, Blond, Maple, Charcoal

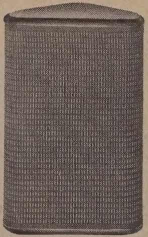


MODEL SA-18

ALUMINUM CEILING BAFFLE
FOR 8'' SPEAKER

SA-18
PROTECTIVE ENCLOSURE





MODEL C-800

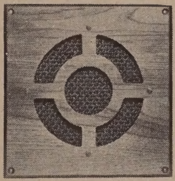
CORNER HORN BAFFLE
FOR 8'' SPEAKER

List	Net
$16.87	$10.12

Walnut or Natural Blond

Since 1933 **J. W. DAVIS & CO.** DALLAS, TEXAS

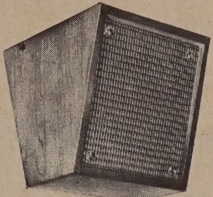
WOOD PLATE



Model	Speaker Size	List	Net
P6	6''	$3.75	$2.25
P8	8''	4.63	2.78
P12	12''	5.87	3.52

Walnut, Mahogany, or Blond

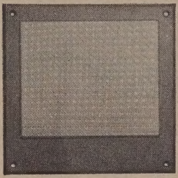
CORRIDOR



Model	Speaker Size	List	Net
CR-88	one 8''	$14.63	$8.78

Walnut or Natural Blond

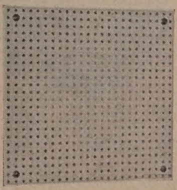
METAL PLATE



Model	Speaker Size	List	Net
MP-68	6'' or 8''	7.00	4.20

White, Gray, Brown, Beige, Blond

ACOUSTICAL TILE



Model	Speaker Size	List	Net
AC-6	6''	$6.25	$3.75
AC-8	8''	6.25	3.75

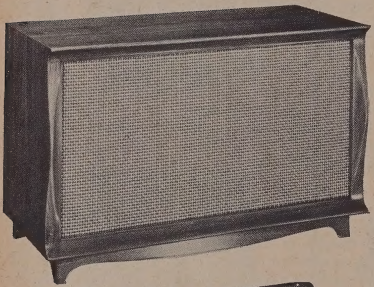
Dull White

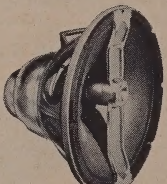
Jensen

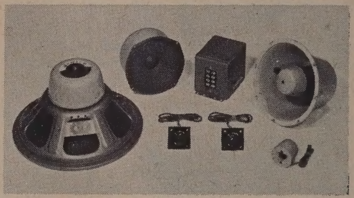
HI-FI SPEAKERS... REPRODUCERS... ENCLOSURES

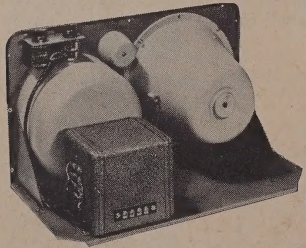
for MONOPHONIC... for STEREOPHONIC SOUND

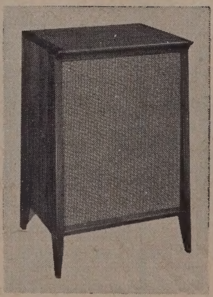
For all your hi-fi speaker needs, whatever the application, choose Jensen, the world's most extensive high fidelity loudspeaker line. Whether it be unitary, 2-way or 3-way assemblies, you'll find the greatest selection and price range in Jensen's Unax, Duax, 3-element, coaxial or Triaxial* (the only true 3-way) loudspeakers . . . for the do-it-yourselfer, there is a wide choice of speaker kits without equal in every price class . . . Jensen complete reproducers incorporate the extreme bass capability of the new amazing "Flexair*" woofer in combination with up-to-the-minute advances in midchannel and super-tweeter design and engineering . . . and they all incorporate the newest high-fashion "Flair Line" living-wise furniture . . . for stereo, the sensational Jensen "Stereo Director*" *that sends the sound to you.* For monophonic . . . for stereophonic sound—Jensen is *the* speaker line for you!

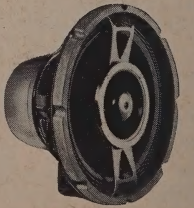










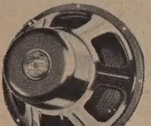


Complete speaker information is yours upon request—write for Jensen's newest High Fidelity Catalog—
Jensen Manufacturing Co.,
6601 S. Laramie Ave., Chicago 38, Illinois

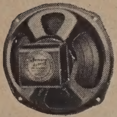
*T.M., Patents applied for.

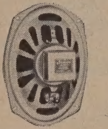
Jensen Concert & Viking Speakers

P314-T


P12-N

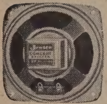
P10-S

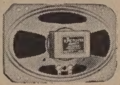

P8-R


P69-V

P57-U

P275-Y


P4-W


P46-W

JENSEN CONCERT SERIES SPEAKERS

CONCERT SERIES PM SPEAKERS

Nom. Size, Inches	Jensen No.	Mag. Wt.,* Oz.	Voice Coil			Dimensions, Inches			List Price
			Imp., Ohms	Power Watts	Dia., In.	H. & W.	Depth	Baffle Opening	
2¾	P275-Y	0.65	16	0.15	9/16	2¾	1.1	2⅜	$ 4.75
3	P3-W	1.00	3.2	3.5	9/16	3	1 15/16	2⅝	4.75
3½	P35-W	1.00	3.2	4.0	9/16	3½	2	3⅛	4.35
4	P4-W	1.00	3.2	4.5	9/16	4 3/16	2¼	3½	4.25
4	P4-WV	1.00	45	4.5	9/16	4 3/16	2¼	3½	4.50
4	P4-V	1.47	3.2	5.0	9/16	4 3/16	2¼	3½	4.70
4 x 6	P46-W	1.00	3.2	4.5	9/16	4¼ x 6⅛	2 5/16	3 11/16 x 5 11/16	5.15
4 x 6	P46-V	1.47	3.2	5.0	9/16	4¼ x 6⅛	2 5/16	3 11/16 x 5 11/16	5.50
5	P5-W	1.00	3.2	5.0	9/16	4¾	2 5/16	4	4.45
5	P5-WV	1.00	45	5.0	9/16	4¾	2 5/16	4	4.65
5	P5-V	1.47	3.2	5.5	9/16	4¾	2 5/16	4	4.85
5	P5-T	3.16	3.2	6.0	¾	4¾	2 11/16	4	7.20
5¼	P525-W	1.00	3.2	5.5	9/16	5¼	2 9/16	4½	4.65
5¼	P525-V	1.47	3.2	6.0	9/16	5¼	2 9/16	4½	5.05
5 x 7	P57-W	1.0	3.2	5.5	9/16	5 x 7¼	2⅞	4¼ x 6½	5.40
5 x 7	P57-V	1.47	3.2	6.0	9/16	5 x 7¼	2⅞	4¼ x 6½	5.80
6	P6-W	1.0	3.2	6.0	9/16	6⅛	2¾	5¼	4.80
6	P6-V	1.47	3.2	6.5	9/16	6⅛	2¾	5¼	5.45
6	P6-T	3.16	3.2	7.5	¾	6⅛	3 3/16	5¼	7.80
6 x 9	P69-W	1.0	3.2	7.0	9/16	6⅜ x 9⅛	3 5/16	5¼ x 8⅛	6.40
6 x 9	P69-V	1.47	3.2	7.5	9/16	6⅜ x 9⅛	3 5/16	5¼ x 8⅛	7.00
7	P7-V	1.47	3.2	7.0	¾	7	3⅛	6⅜	7.00
8	P8-U	1.73†	3.2	9.0	1	7 11/16	3	6¾	7.20
8	P8-UV	1.73†	45	9.0	1	7 11/16	3	6¾	7.50
8	P8-T	2.5‡	3.2	10.0	1	7 11/16	3 5/16	6¾	8.40
8	P8-S	4.64	8	11.0	1	7 11/16	3 13/16	6¾	10.35
8	P8-R	6.8	8	12.0	1	7 11/16	4	6¾	12.50
10	P10-T	2.5‡	3.2	11.0	1	10⅛	5¼	8¾	10.75
10	P10-S	4.64	8	12.0	1	10⅛	5¼	8¾	13.50
12	P12-T	2.5‡	3.2	12.0	1	12⅛	6 1/16	10½	11.50
12	P12-S	4.64	8	13.0	1	12⅛	6 1/16	10½	14.75
12	P12-R	6.8	8	14.0	1	12⅛	6 1/16	10½	16.00
12	P12-P	14.6	8	18.0	1½	12⅛	6 7/16	10½	33.60
12	P12-N	27.0	8	20.0	1½	12 1/16	7	10½	52.50
14 x 3	P314-T	3.16	3.2	7.5	¾	3½ x 14 3/16	3⅛	2¾ x 13 3/16	12.75
15	P15-R	6.8	3.2	18.0	1	15⅛	8	13¼	28.50
15	P15-P	14.6	8	20.0	1½	15⅛	8	13¼	45.25
15	P15-N	27.0	8	25.0	1½	15⅛	8	13¼	61.50

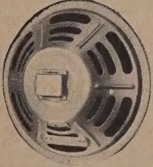
*All Magnets DP Alnico 5. All 10″, 12″ and 15″ speakers equipped with magnet covers. ‡Performance equivalent to EIA 3.16 oz. †Performance equivalent to EIA 2.15 oz.

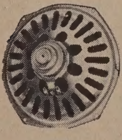
CONCERT SERIES SPECIAL OVAL GROUP FOR AUTO USE

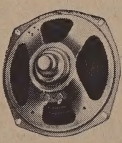
Nom. Size, Inches	Jensen No.	Mag. Wt.,* Oz.	Voice Coil			Dimensions, Inches			List Price
			Imp., Ohms	Power Watts	Dia., In.	H. & W.	Depth	Baffle Opening	
5 x 7	P57-U	1.73†	3.2	8.0	1	5 x 7¼	2½	4¼ x 6½	$6.75
5 x 7	P57-TX§	2.5‡	3.2	9.0	1	5 x 7¼	2 13/16	4¼ x 6½	8.35
6 x 9	P69-U	1.73†	3.2	9 0	1	6⅜ x 9⅛	3⅛	5¼ x 8⅛	7.90
6 x 9	P69-TX§	2.5‡	3.2	1 .0	1	6⅜ x 9⅛	3 5/16	5¼ x 8⅛	9.00

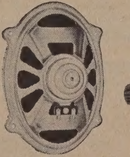
§High Fidelity Model. *All Magnets DP Alnico 5. †Performance Equivalent to EIA 2.15 oz. ‡Performance Equivalent to EIA 3.16 oz.

JENSEN VIKING SERIES REPLACEMENT SPEAKERS


12J10, 10J10


7J9


8J9


57J9

525K7

46K7

35K7

Nom. Size, In.	Jensen No.	Mag. Wt., Oz.†	Pwr., Watts	V.C. Dia. In.#	Dimensions, Inches			List Price
					H. & W.	Depth	Baffle Opening	
3	3K7	.68	3.0	9/16	3	1 7/16	2⅝	$3.80
3½	35K7	.68	3.5	9/16	3½	1 9/16	3⅛	3.50
4	4K7	.68	4.0	9/16	4⅛	1¾	3½	3.50
4 x 6	46K7	.68	4.0	9/16	4⅛ x 6⅛	1 13/16	3 11/16 x 5 11/16	4.55
5	5K7	.68	4.5	9/16	5	1 15/16	4	4.00
5¼	525K7	.68	5.0	9/16	5¼	2⅛	4¼	4.10
5 x 7	57J9	1.47	6.0	¾	5 x 7¼	2 9/16	4¼ x 6¼	5.40

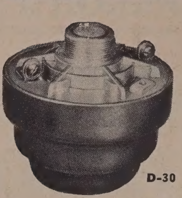
Nom. Size, In.	Jensen No.	Mag. Wt., Oz.†	Pwr., Watts	V.C. Dia. In.#	Dimensions, Inches			List Price
					H. & W.	Depth	Baffle Opening	
6	6K7	.68	5.5	9/16	6 1/16	2 5/16	5¼	$4.35
6 x 9	69J9	1.47	7.5	¾	6⅜ x 9⅛	2 15/16	5¼ x 8⅛	6.40
7	7J9	1.47	7.0	¾	7	2 15/16	6⅜	6.40
8	8J9	1.47	8.0	¾	7 11/16	2 15/16	6¾	6.40
10	10J10	1.73	10.0	1	10⅛	3⅞	8¾	9.00
12	12J10	1.73	11.0	1	12⅛	4½	10½	10.50

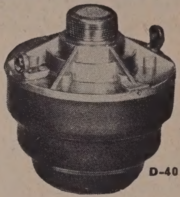
#3.2 ohm voice coils. †Alnico 5 magnets.

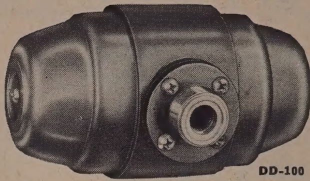
Use Index Page 1 for Quick, Easy Location of ALL Products

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

Jensen Professional Series


D-30


D-40


DD-100

NEW HYPEX* LIFETIME DRIVER UNITS

The new Jensen Hypex* Lifetime Driver Units have many new features which contribute to increased performance and reliability. Frequency range is based on achieving substantially higher conversion efficiency, higher power ratings and improved reliability over comparable units previously available, while affording good fidelity in the reproduction of speech and music. Lower cutoff frequency is somewhat below those of the horns with which they will be used; the specifications show the maximum upper limiting frequencies, but response has been shaped to give emphasis to the 3-5 kc region, which is extremely important in high efficiency sound projection. As a result of these design choices and special research on ruggedization, the D-30 can be rated at 30 watts speech and music, D-40 at 40 watts, and a **Lifetime Guarantee extended against failure under normal conditions of use!**

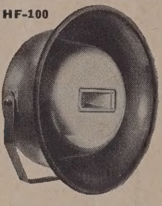
The DD-100 100-watt Superpower Driver Unit, similarly guaranteed, is the first double acting integrated sound chamber driver unit ever to be offered; it is also the first 100 watt unit available, achieving a higher power input rating to a single projector or an array, than has ever been possible before.

Magnetic structures are the most efficient that research has been able to develop, yielding the highest magnetic energy from the generous sized Alnico V magnets which scientific proportioning of magnet material and soft iron structure can provide. Specially shaped reinforced plastic diaphragms combine ruggedness with excellent acoustic properties and freedom from "breakup". Voice Coils are varnish wound, baked and aged on treated, heat and moisture resistant bobbins, resulting in a rigid assembly that is indestructible in normal service. Beryllium copper leads are indefinitely fatigue-resistant. Models D-40 and DD-100 have precision self-centering moving system assemblies which are added insurance for dependability under severe operating conditions. External leads connect to heavy binder screw terminals; added reliability for wiring is provided by strain reliefs on all units. All units are threaded 1 3/8″-18.

SPECIFICATIONS

Model	Power Rating†	Impedance	Frequency Range	Length	Diameter	Weight, lbs. Net	Weight, lbs. Shpg.	List Price
D-30	30 w.	16 ohms	75-7,000 cps	4 1/16″	4 1/2″	3 1/4	3 1/2	**$27.50**
D-40	40 w.	16 ohms	75-10,000 cps	4 9/16″	4 1/2″	4	4 1/4	**36.00**
DD-100	100 w.	8/32 ohms	75-10,000 cps	5 5/16″	8 1/2″	7 1/2	8	**96.50**

†Integrated speech and music program material. For sine wave or siren signal input, reduce ratings one-half. Ratings apply only for frequencies above horn cutoff.


HF-100

VH-91A

VR-11

JENSEN COMPLETE HYPEX* PROJECTORS

HF-100 WEATHERPROOF TWO-WAY HIGH FIDELITY PROJECTOR

Here is a real high fidelity projector for use indoors or out, under all weather conditions. Consists of a heavy duty 8″ "woofer" feeding a folded horn plus a horn-loaded compression driver "tweeter". Low frequency unit feeds horn by a combination of direct radiation and phase-inversion bass reflex ports for superior efficiency in the low frequency region. The high frequency horn has a 90° fold and is mounted so that the driver unit is at the top, thus providing self-draining and making it impossible for rain, sleet or snow to reach the driver unit.

Horn outer section is spun aluminum with baked enamel finish. Central enclosure is glass fibre reinforced polyester in matching natural molded Modern Tan finish. Sturdy "U" mounting bracket is fully adjustable and positive locking.

SPECIFICATIONS: HF-100 PROJECTOR

Type: Coaxial assembly of separate low and high frequency units.
Frequency Range: 70 to 15,000 cycles.
Power Rating: 25 watts.
Impedance: 16 ohms.
Rated Coverage Angle: 120°.
Overall Diameter: 24 3/8″.
Overall Depth: 11 3/8″.
Net Weight: 23 lbs.
Shipping Weight: 30 lbs.
HF-100—List Price **$129.50.**

Jensen VH-91A and VR-11 Hypex* projectors are the most compact in the line and their use is indicated where speech reproduction is the only important consideration and where size or cost are controlling factors. Designed for maximum efficiency in the upper frequency range, these units provide excellent penetration of noise. Small in size, they can also be located near areas of extreme noise. Magnetic structures are highly efficient, using Alnico V magnets in ample soft iron structures. Corrosion-resisting finishes and materials such as plastic cloth base diaphragms insure long life under outdoor and industrial atmospheric conditions. For further protection driver units are completely enclosed inside the rigid outer shell.

MODEL VH-91A HYPEX* PROJECTOR

Equipped with new universal mounting bracket for adjustment in any direction and secure locking with a single wing nut. Extremely rigid vibration-proof clamping allows three hole flange mounting on flat surface, single hole mounting with 1/4″ lag or machine screw through center, or mounting on top of standard 1/2″ pipe

MODEL VR-11 HYPEX* RADIAL PROJECTOR

For application requiring 360° coverage in horizontal plane, such as low ceiling industrial areas. Equipped with sturdy eye-bolt for clamping or suspension from above.

SPECIFICATIONS

Model	Power Rating	Impedance	L-F Range	Mouth Dia. Over All	Over All Lgth.	Air Column Path Lgth.	Rated Coverage Angle	Net Wt. Lbs.	Shpg. Wt. Lbs.	List Price
VH-91A	15	8	300	8 7/8″	7 5/8″	16″	100°	3 1/8	3 3/4	**$35.80**
VR-11	15	8	280	11″	10 3/8″	18″	360°	4	5	**49.00**

BV-1 BLAST VALVE

The BV-1 Blast Valve is an accessory device for protecting the driver unit from high pressures due to explosive forces. Valve is the same as used in Jensen military blastproof loudspeakers. Under the positive blast pressure phase, the valve moves inward to seal off the driver unit from the horn throat. On the negative phase the valve moves outward, again effecting a seal. With the valve in neutral position, attenuation of sound is negligible. Screws between horn and driver unit. Overall diameter 3″. Fits all Jensen driver units and horns.

Net weight, 1/2 lb. Shipping Weight, 3/4 lb.
BV-1—List Price **$15.00.**

*T. M. Reg. Jensen Mfg. Co.

78X-58A

Jensen Professional Series

H-150

H-200

H-240

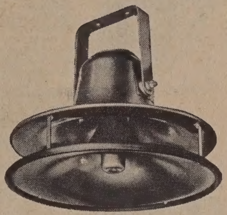
NEW JENSEN HYPEX* PROJECTOR HORNS

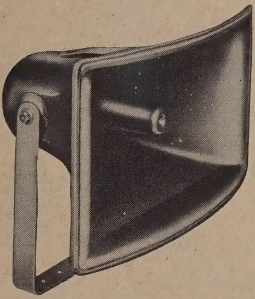
These new projector horns are acoustically coordinated in design for best performance with Hypex* Driver Units D-30, D-40 and DD-100, any one of which may be used on any of the horns. The horn expansion formula is the hyperbolic exponential (U. S. Patent 2,338,262) providing low frequency reproduction superior to that obtained with conventional horns of the same mouth size. Horns (with the exception of RT-20) are spun aluminum with weather-resistant baked tan enamel finish. Horns are threaded 1⅜"-18 and may be used with any driver units with this thread. Sturdy steel mounting "U" brackets allow horn to point in any desired direction; horn locks in desired position by means of new positive action trunnion clutches.

(See separate description and specifications on RT-20 Rectangular Horn).

Specifications	H-150 (15")	H-200 (20")	H-240 (24")	R-242 (20" Radial)
Mouth diameter, over all	15¾"	20¾"	25¼"	20½"
Length, over all (less driver)	12"	14 7/16"	20 9/16"	14½"
Air column length	31"	41"	59"	40"
Low frequency cutoff	200 cycles	150 cycles	120 cycles	140 cycles
Rated coverage angle	95°	85°	75°	360°
Net weight (less driver)	6 lbs.	8½ lbs.	12¾ lbs.	10½ lbs.
Shipping weight	7¾ lbs.	12¾ lbs.	19¾ lbs.	14½ lbs.
List price	**$29.00**	**$34.50**	**$46.75**	**$47.00**

*T.M. Reg. Jensen Mfg. Co.


R-242

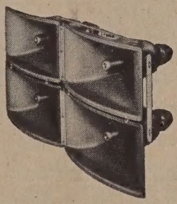


MODEL RT-20 RECTANGULAR HORN

These versatile new horns may be used in a variety of ways to provide projector systems of almost any desired directional characteristics and total power rating. They may be used singly just as round horns are used and in such cases, the rectangular shape is frequently an advantage in appearance, minimizing obstruction to vision, and facilitating mounting.

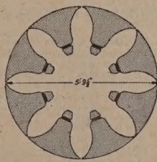
RT-20 Horns are designed so that they may be stacked in plane or circular arrays. Eight units, each with a geometric sector angle of 45 degrees, form a complete circle with a diameter of 5' 9½", giving 360° horizontal coverage. Fewer units are used where less than 360° coverage is required as indicated below:

Number of Units	Horizontal Coverage Angle
1	80°
2	125°
3	170°
4	215°
5	260°
6	305°
8	360°



Horns may be "double decked," which will concentrate the sound in a narrower angle in the vertical plane. A stack two units high will give a vertical coverage angle of approximately 30 degrees; at the same time, there is a gain in sound pressure on the axis of 2.5 db, due to the restricted angle of radiation.

The horn is molded of high impact strength glass fibre reinforced polyester. Natural molded finish in Modern Tan color.



SPECIFICATIONS—RT-20

Mouth Size: 25" wide by 12½" high.
Horn Length, overall, less driver: 16 5/16".

Air Column length: 41".

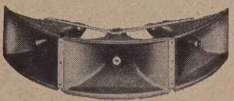
Low Frequency cutoff: 140 cycles.

Rated Coverage angle: 80° horizontal. (See data for arrays).

Net Weight, less driver unit: 10¾ lbs.

Shipping Weight: 15 lbs.

RT-20—Horn only. List Price **$46.50**



ACCESSORIES

MA-1 PIPE ADAPTER

A sturdy malleable iron casting which bolts to the "U" bracket of Hypex* Projector Horns and provides ¾" pipe thread for pipe mast mounting. Baked tan enamel finish.
Net weight: ¾ lb.
Shipping Weight: 1 lb.
MA-1—List Price **$2.30.**

MA-3 STACKING HARDWARE

Complete set of hardware for joining two RT-20 horns side by side.
Net weight: 2¼ lbs.
Shipping Weight: 2¾ lbs.
MA-3—List Price **$5.30.**

MA-4 STACKING HARDWARE

Complete set of hardware for joining two RT-20 horns double decked.
Net weight: 1½ lbs.
Shipping Weight: 2 lbs.
MA-4—List Price **$4.60.**

Jensen Professional Series

JENSEN SPEECH MASTER LOUDSPEAKERS

AP-10

AR-1

RK-61

P5-VC

JENSEN Speech Master loudspeakers are specialized units designed for applications where highly intelligible speech reproduction is a prime requisite. Good basic design and sturdiness of construction as well as pleasing appearance and functional styling are outstanding features of these units. All loudspeakers in this group use high efficiency direct radiator driver units of the permanent magnet type.

MODEL AP-10 SPEECH MASTER

Attractively styled desk type unit. Heavy cast base with felt pad. Specially designed for superior intelligibility in the presence of static and acoustic background noise. Excellent "talk-back" characteristics. Driver Unit, a sturdy 5" speaker, fully enclosed with protective front screen. Mounting facility for ½" x ½" transformer (inside cover) locking tilt adjustment. Power rating, 5 watts maximum speech signal. 36" rubber cable. 6¾" H.; 5⅛" D.; 5" W. Modern Tan finish. Shipping Weight 5¼ lbs.

ST-590. 3-4 ohms. List Price............**$22.00**

ST-591. 45-50 ohms. List Price.......... **23.00**

MODEL AR-10 SPEECH MASTER PROJECTOR

Specially designed for intercom and paging systems. Reentrant horn directs sound and adds speech range efficiency. Used in factories, warehouses, garages, etc. Sturdy P5-VC driver shielded from direct exposure. ½" x ½" transformer fits in cover. Power rating 6 watts. 22" rubber cord. 10" dia. Gray hammer finish. Shipping Weight 6½ lbs.

ST-643. 3-4 ohms. List Price............**$25.50**

ST-644. 45-50 ohms. List Price.......... **26.50**

MODEL RK-61 "CORRIDOR" SPEECH MASTER

Designed for two-direction sound in corridor or office. Heavy steel case perforated on both sides for high quality speech coverage in both directions protected heavy duty 6" loudspeaker driver unit. Sturdy mounting bracket welded to case provides flexibility in installation. Standard ¾" conduit (not supplied) can be used. 24" heavy SJ cable for connections. Transformers up to ⅝" x ⅝" mount on speaker frame inside case. Excellent "talk-back" characteristics. Quality on music is also acceptable for many areas. Power rating 8 watts. Case diameter 8"; thickness 3¼"; overall distance from wall 9¼". Modern Tan finish.

ST-850. 3-4 ohms. List Price............**$15.00**

MODEL P5-VC SPEAKER

This loudspeaker is offered for installation in radio communications, intercom and paging equipment. May be panel mounted, wall mounted or installed in a small case as required with excellent results. Provides the performance of the AP-10 Speech Master in your equipment. Power rating, 5 watts. Depth, 2 7/16"; OD, 5"; baffle opening 4"; Shipping Weight 1 lb.

ST-916. 3-4 ohms. List Price **$5.30**

JENSEN PROFESSIONAL SERIES TRANSFORMERS

MODEL W-1 WEATHERPROOF TRANSFORMER CASE

Thoroughly weatherproof for permanent outdoor installations for maximum protection to transformers. Designed for upright mounting on U-bracket of Jensen Types H, RT and R Hypex* horns or on pipe by means of clamp. Also suitable for screw mounting to side wall or other flat surface. Accommodates transformers of standard nominal core sizes of 1 x 1, ⅞ x ⅞, ¾ x ¾ and ⅝ x ⅝ with maximum transformer height of 4". Cable entry holes provide for up to four Type SJ cables. Cast aluminum base and spun aluminum cover with bayonet locking. Rich tan baked enamel finish. Complete with transformer mounting and clamp hardware. Net weight 1 lb., shipping weight 1¼ lbs. List **$10.50.**

*T.M. Reg. Jensen Mfg. Co.

TYPE ZC "CONSTANT VOLTAGE" TYPE TRANSFORMERS

These transformers are designs especially for the distribution systems commonly referred to as 70-volt constant voltage systems. They are designed to draw a predetermined amount of power from a 70-volt line as indicated in the tables. All are mountable in W-1 Weatherproof Transformer Case except ZC-3514, as noted.

Models ZC-100, ZC-200, ZC-300, and ZC-400 are equipped with adjustable terminal board with handy pin jack adjustment for the desired input power. Heavy duty screw terminals are provided for speaker and line connection. Completely impregnated and dip processed for operation in outdoor and industrial atmospheres.

Models ZC-3514 and ZC-3515 are similar except color coded pigtail leads replace the terminal board. Non-weatherproof, recommended for indoor and less severe locations.

Model No.	Nominal Core Size	Input Watts‡	Input Imped., Ohms	Sec. Imped., Ohms	Mtg. Ctrs.	List Price
ZC-100	1" x 1"	30 15 7½	167 333 667	4/8/16	3⅛"	**$11.50**
ZC-200	1" x 1"	25 10 5	200 500 1000	4/8/16	3⅛"	**13.00**
ZC-300	⅞" x ⅞"	20 10 5	250 500 1000	4/8/16	3⅛"	**9.65**
ZC-400	⅝" x ⅝"	5 2½ 1¼	1000 2000 4000	4/8/16	2⅜"	**7.00**

Response characteristics:
Type ZC-200: plus or minus 1 db, 30-15,000 cycles.
Type ZC-100, ZC-300, ZC-400:
plus or minus 2 db, 70-10,000 cycles

Model No.	Nominal Core Size	Input Watts‡	Input Imped., Ohms	Sec. Imped., Ohms	Mtg. Ctrs.	List Price
ZC-3514*	1" x 1¼"	16 8 4 2	313 625 1,250 2,500	3/16	2"x2⅛"	**$13.00**
ZC-3515	⅝" x ⅝"	4 2 1 ½ ¼ ⅛	1,250 2,500 5,000 10,000 20,000 40,000	8	2⅜"	**4.75**

Response Characteristics: plus or minus 1 db 30-15,000 cycles.

*Not mountable in W-1 Case.

‡Marked VA (volt-amperes) on terminals.

ADJUSTABLE IMPEDANCE TRANSFORMERS

The Type ZY adjustable impedance transformers have long been popular for use on 500-ohm line systems. Equipped with sturdy terminal board with pin jack adjustment of impedance. Type ZL transformers are similar except for solder lug terminals for impedance adjustment and pig-tail secondary leads. Vacuum wax impregnated for general purpose applications. Can be installed in Model W-1 Weatherproof Transformer Case.

Model No.	Nom. Core Size, In.	Power Rating, Watts	Input Imped., Ohms	Sec. Imped., Ohms	Mtg. Ctrs.	List Price
ZY-2005	1x1	25	500/1000/1500/2000	8	3⅛"	$11.85
ZY-2003	⅞x⅞	16		8	3⅛"	9.92
ZY-2002	¾x¾	10		8	2 13/16"	8.25
ZY-4004	¾x¾	10		4	2 13/16"	8.25
ZY-4005	⅝x⅝	6½		8	2⅜"	6.15
ZY-4002	⅝x⅝	6½		4	2⅜"	6.15

Response characteristics:
Plus or minus 2 db, 70-10,000 cycles.

TYPE "Z" TRANSFORMERS

Model Z-3422 is a high fidelity autotransformer for interconnecting 4, 8 or 16 ohm circuits. Model Z-3345 is particularly designed to properly match 8 ohm loudspeakers and projectors to 45-50 ohm intercommunication systems. Vacuum wax impregnated and mountable in Model W-1 Weatherproof Transformer Case.

Model No.	Nom. Core Size, In.	Power Rating, Watts	Input Imped., Ohms	Sec. Imped., Ohms	Mtg. Ctrs.	List Price
ZL-2022	⅝x⅝	6½	500/1000/1500/2000	8	2⅜"	$ 4.65
ZL-2021	½x½	3½		4	2"	3.75
Z-3422	1x1	25	4/8/16	......	3⅛"	8.58
Z-3345	⅝x⅝	6½	45-50	8	2⅜"	3.25

Response characteristics:
Types ZL-2021, ZL-2022 and Z-3345:
Plus or minus 2 db, 70-10,000 cycles.
Type Z-3422: plus or minus 1 db, 30-15,000 cycles.

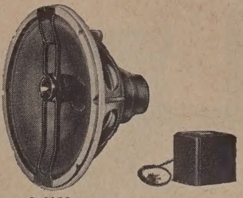
Jensen Professional Series

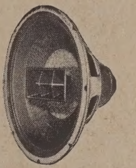
TWO-WAY AND THREE-WAY UNITARY HIGH FIDELITY LOUDSPEAKERS

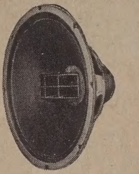
These outstanding unitary two-way and three-way loudspeakers have been especially designed for institutional, industrial and commercial sound systems where high fidelity music and realistic voice reproduction are essential. They may be mounted in proscenium arch or underneath a canopy; flush or in small enclosures on walls; in large or small cabinets. In enclosures they may stand on floor or be suspended overhead for large audience coverage. In wide angle coverage of entire frequency range and in sound quality, they are markedly superior to projector type speakers. Ideal for school rooms, auditoriums, arenas and the like.

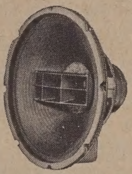
Moving systems and other parts have been moisture-proofed so that they are highly satisfactory for protected outdoor service where not directly exposed to rain, sleet, or snow. Durable finishes and materials are used throughout. Construction is rugged to insure trouble-free performance indefinitely. Terminals are provided for insertion of fixed or adjustable pads if desired (not furnished—see control listings) in the "tweeter" circuits. All units have full dividing networks (mounted on housing in H-525C and H-225C). Input terminals are screwdriver type. Housing finish is baked tan enamel; horns, etc., at the front of the units are finished in black enamel for minimum visibility through grille cloth. All units are thoroughly dustproofed.

These units incorporate Alnico 5 magnets in highly efficient conservatively designed magnetic structures. Table shows loudness efficiency relative to Model H-225C.


G-615C


H-535C


H-525C


H-225C

G-615C 15" THREE-WAY LOUDSPEAKER

The TRIAXIAL*, a unitary three-way loudspeaker, has three electrically and acoustically independent speaker elements, each handling a portion of the frequency range. Separate three-way 600 and 4000 cycle crossover network with provision for easily adding m-f and h-f balance controls (not supplied—see separate listing). Heavy duty curvilinear l-f diaphragm and compression horn-type m-f and h-f units in exclusive Jensen design. Excellent damping and high conversion efficiency. Power rating 40 watts, impedance 16 ohms. Recommended baffle opening 13¼" dia.; OD 15⅜"; depth 10¼"; net weight 29 lbs.; shipping weight 48 lbs.
Model G-615C—
List Price **$350.00;**
*T. M. Reg. Jensen Mfg. Co.

H-535C 15" TWO-WAY LOUDSPEAKER

An outstanding unitary loudspeaker of the coaxial type. Employs a heavy duty low frequency unit with heavy magnet to handle the range below 2000 cycles, with high conversion efficiency and good damping. High frequency range is reproduced by an efficient multicell horn-loaded compression driver unit. Excellent high frequency distribution. Separate plug-connected 2000 cycle crossover network with provision for adding h-f balance pad (not furnished—see separate listing). Impedance 16 ohms. Power rating, 30 watts. Recommended baffle opening 13¼" dia.; OD 15⅛"; depth 9"; net weight 17 lbs.; shipping weight, 25 lbs.
Model H-535C—
List Price **$192.00;**

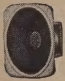
H-525C 15" TWO-WAY LOUDSPEAKER

A coaxial unitary two-way loudspeaker like Model H-535C above, except built-in crossover network and lighter magnetic structures on l-f and h-f units. Power rating 25 watts, impedance 16 ohms. Recommended baffle opening 13¼" dia.; OD 15⅛"; depth 8½"; net weight 10½ lbs.; shipping weight 16 lbs.
Model H-525C—
List Price **$112.50;**

H-225C 12" TWO-WAY LOUDSPEAKER

A coaxial unitary two-way loudspeaker like Model H-525C above, except 12-inch l-f unit. Power rating 27 watts, impedance 16 ohms. Recommended baffle opening 10½" dia.; OD 12⅛"; depth 7⅝"; net weight 9 lbs.; shipping weight 13 lbs.
Model H-225C—
List Price **$81.50;**

Model No.	Relative Efficiency
G-615C	+5 db
H-535C	+3 db
H-525C	+1 db
H-225C	0 db


P-4VC

P-5TC

P-8PC

P-8RC

P-12RC

P-12-NC

EXTENDED RANGE HIGH FIDELITY LOUDSPEAKERS

Here is a complete line of loudspeakers of latest designs especially for commercial and general purpose applications, all field tested for the exacting and rigorous requirements of professional service. There is a loudspeaker for every need—ruggedly dependable units which have enjoyed the position of "world's quality standard" for many years in the professional field.

These heavy duty loudspeakers are of the extended range high fidelity type with performance suitable for applications where two-way and three-way speakers are not needed. High efficiency is assured with carefully designed magnetic structures using Alnico 5 magnets and ample soft iron circuits. Moisture-resistant cones and other materials contribute to long life expectancy. The units are especially suitable for protected outdoor locations not directly exposed to rain, sleet and snow, as well as for indoor use.

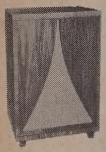
Extended h-f range insures excellent music reproduction. The l-f range will depend on the enclosure size and design. Commonly used in small enclosures or ceiling baffles. Models P8-SC and P12-SC are practically standard in the industry for interior low level music distribution systems.

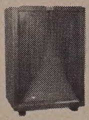
Sizes from 4" to 15" offer the best performance possible in each size and cost class. Choices as to efficiency and power ratings are available in some sizes. Relative loudness efficiency is shown in the table referred to the P4-VC. A speaker with relative loudness efficiency of +3 db will be noticeably louder than the P4-VC for the same power; only one-half the power will be required to be equally as loud as the P4-VC.

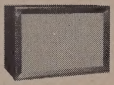
Nominal Size	Model No.	Power Rating Watts	Magnet Wt., Oz., Alnico 5	Relative Loudness Efficiency	Im-ped., Ohms	V. C. Dia. Inches	Baffle Cutout Dia., In.	Overall Dia. Inches	Depth Inches	Ship. Wt., Lbs.	List Price
15"	**P15-NC**	25	27	+7½ db	8	1½	13¼	15⅛	7	10	**$59.50**
12"	**P12-NC**	18	27	+7 db	8	1½	10½	12¹⁄₁₆	6	8¼	**51.00**
12"	**P12-RC**	12	6.8	+4½ db	8	1	10½	12⅛	5⁹⁄₁₆	6	**16.65**
12"	**P12-SC**	10	4.64	+3½ db	8	1	10½	12⅛	5¼	6	**15.20**
10"	**P10-SC**	9½	4.64	+3½ db	8	1	8¾	10⅛	4⅝	4	**13.75**
8"	**P8-PC**	10	14.6	+5 db	8	1½	6¾	8⅛	4	5½	**31.80**
8"	**P8-RC**	9	6.8	+2½ db	8	1	6¾	8⅛	4	3	**14.80**
8"	**P8-SC**	8	4.64	+1½ db	8	1	6¾	8⅛	3⅞	3	**12.70**
6"	**P6-TC**	6	3.16	+1½ db	4	¾	5¼	6¹¹⁄₁₆	3³⁄₁₆	2	**8.50**
5"	**P5-TC**	5	3.16	+1½ db	4	¾	4	5	2¹¹⁄₁₆	2	**8.15**
4"	**P4-VC**	4	1.47	0 db	4	⁹⁄₁₆	3½	5	2³⁄₁₆	1½	**5.25**

Karlson Stereosonic SPEAKER ENCLOSURES, SYSTEMS & KITS

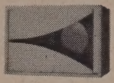
NONE BETTER

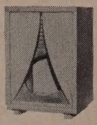

15-WX
Karlson
Front


12-MX
Mahogany


8-WX
Walnut

KR-5
Rocket
Speaker


8-BSC-K
Basic
Unfinished


12-U
Unfinished
Deluxe

15WXG
Full
Grille

GENERAL DESCRIPTION

The Karlson enclosures are designed and perfected to meet the requirements for the latest and most advanced stereosonic techniques. They provide highly effective acoustic transformers improving the bass, transient response, dispersion, dynamic range, and definition far beyond the ordinary capacities of your speaker. They have consistently outclassed all other approaches in their ability to satisfy the most discriminating. As a result they are without a doubt the most highly recommended loudspeaker enclosures available at any price. Unexcelled for stereo use. Will outperform systems many times their size.

RELATIVE SIZES AND APPLICATIONS

KARLSON '15'—Enclosures for 15" Speakers

33" high, 22½" wide, 18" deep, wt. 80 lbs.
This is the outstanding choice of the real experts. Better bass than even a horn 30 feet long with a 12½ foot mouth diameter—PLUS—unexcelled tonal definition and wide area presentation makes this the finest enclosure available at any price. Use for finest home and professional stereo and monophonic high fidelity systems. Excellent for electronic organs, musical instruments, theatres, studio monitors, music festivals and wherever the very best is required.

KARLSON '12'—Enclosures for 12" Speakers

24¾" high, 16¾" wide, 13¾" deep, wt. 44 lbs.
This enclosure is ideal for those who want the biggest and best stereo sound available in a compact system. Its dynamic range in bass is only slightly less than the Karlson '15' and certainly much greater than mammoth systems costing many times more. Very efficient, doesn't need super power amplifiers for good bass. Suitable for almost all types of installation, including built-ins due to their small size.

KARLSON '8'—Enclosures for 8" Speakers

17¼", wide 11¾", high 10" deep, wt. 14 lbs.
These very small enclosures will actually fit in the average bookshelf, and will give a quality of reproduction and extended bass totally beyond the normal capabilities of a one cubic foot enclosure. Especially good for the small apartment, den or playroom or as an addition to your larger system. May be built into other cabinetry or used as a portable system as well. Provides professional quality at competitive prices.

SPECIFICATIONS AND FEATURES

All Karlson enclosures employ the basically new Karlson acoustic transducer (Pat. nos. 2,816,619 and 2,896,736) for greatly extended bass, ultra-uniform wide angle dispersion for all speakers in excess of 120°, and highly improved transient response, efficiency, dynamic range and signal definition. Cone break up and distortion is practically eliminated. Amplifier loading is resistive giving excellent control. Dynamic range in bass varies with size, with the larger units quite capable of filling the largest auditoriums with sound. High frequency response only limited by tweeter used. No tuning required with any speaker.

All enclosures may be mounted either vertically or on side with suitable loose footing provided for the Karlson '15' and '12' enclosures.

SELECTING A SPEAKER

The Karlson enclosures are designed for use with the finest extended range, coaxial, and triaxial speakers. Works best with high compliance speakers having a good linear suspension, strong magnets and smooth very extended tweeters. Separate tweeters may be mounted in the larger enclosures. Mechanical resonance not critical, no tuning is required.

MODELS AVAILABLE

FINISHED ASSEMBLED: Select wood veneers in mahogany (MX), walnut (WX), and blonde oak (BX). Standard taper front for 15" and 12" models, full grille on special order at 5% additional charge. Full grille only on 8" models.

15-MX, 15-BX, 15-WX	ea.	$129.00
12-MX, 12-BX, 12-WX	ea.	99.60
8-MX, 8-BX, 8-WX	ea.	42.60

DELUXE UNFINISHED ASSEMBLED: Birch veneer exteriors footings and front mouldings included.

15-U Karlson "15" Unfinished	ea.	$87.00
12-U Karlson "12" Unfinished	ea.	66.00
8-U Karlson "8" Unfinished	ea.	26.70

BASIC UNFINISHED ASSEMBLED: Finest quality, high density particle board, no footing or moulding, finishable.

15-BSC-U Basic Karlson '15'	ea.	$66.00
12-BSC-U Basic Karlson '12'	ea.	49.50
8-BSC-U Basic Karlson '8'	ea.	21.00

DELUXE KITS: Birch veneer exteriors, footing and mouldings included.

15-K Karlson '15' Kit	ea.	$57.00
12-K Karlson '12' Kit	ea.	42.00
8-K Karlson '8' Kit	ea.	18.60

BASIC KITS: Finest quality, high density particle board, no footing or front mouldings.

15-BSC-K Karlson '15' Basic Kit	ea.	$45.00
12-BSC-K Karlson '12' Basic Kit	ea.	33.00
8-BSC-K Karlson '8' Basic Kit	ea.	15.00

IDEAL FOR
PUBLIC ADDRESS
AND MUSIC
SYSTEMS

THE KARLSON ROCKET SPEAKER SYSTEM

This miniature speaker system can fill a large room with its clean powerful sound or whisper soft background music with perfect fidelity. The patented wide angle sound is ideal for stereo and all applications where the same quality of sound is desired in all parts of the listening area. Unique and decorative styling permits mounting anywhere; upright on furniture and inverted on walls, pillars, and ceilings.

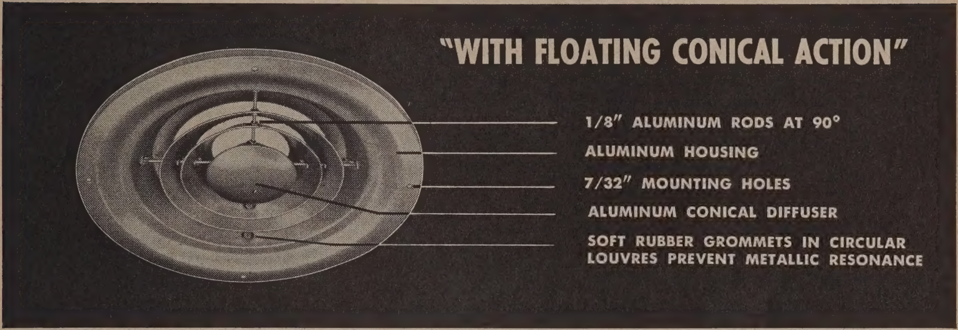
SPECIFICATIONS: Freq. response 80 to 15,000 cps, cap. 4 watts, eff. 20%, imp. 8 ohms, dispersion 140° hor. 80° vert., spec. 5" speaker, size—15½" high, 7" sq. at base, wt. 3 lbs., finish-chameleon ivory for all decors. Directions included.

Karlson Rocket speaker system
Mod. No. KR-5 .... $19.50

KARLSON ASSOCIATES INC. • West Hempstead, New York

LOWELL STL SERIES

New Low Ceiling Type Baffles


"WITH FLOATING CONICAL ACTION"
1/8" ALUMINUM RODS AT 90°
ALUMINUM HOUSING
7/32" MOUNTING HOLES
ALUMINUM CONICAL DIFFUSER
SOFT RUBBER GROMMETS IN CIRCULAR LOUVRES PREVENT METALLIC RESONANCE

Patented in U.S.A. and Canada

Model No.	Speaker Size	Will Mount to
STL-6	6"	CP8, XCP8, PR8
STL-7	7"	STP8, XSTP8, XSTPR8
STL-8	8"	STP8, XSTP8, XSTPR8
STL-10	10"	STP1012, XSTP1012, XSTPR12
STL-12	12"	STP1012, XSTP1012, XSTPR12

These new, unusual additions to the Lowell line of speaker baffles are top quality heavy 18 gauge spun aluminum in a buffed satin finish. Designing assures controlled 360° dispersion of undistorted sound. Echo and feedback are at the minimum. Louvres and conical diffuser "float" on very small soft rubber grommets. Baffles are coated with clear lacquer which also serves as prime coat for on-the-job painting. Wide choice of colored lacquer finishes available on request.

Shipped complete with hardware and instructions for mounting to Lowell Protective Speaker Enclosures illustrated.

From architecture to acoustics, Lowell STL series meets every requirement — in ultra-modern design . . . for even, undistorted low-level sound distribution throughout 360°. Recommended baffle placement is usually 25' from center to axis. Where straight line placement is impossible, triangulating the baffles in the ceiling is highly effective.

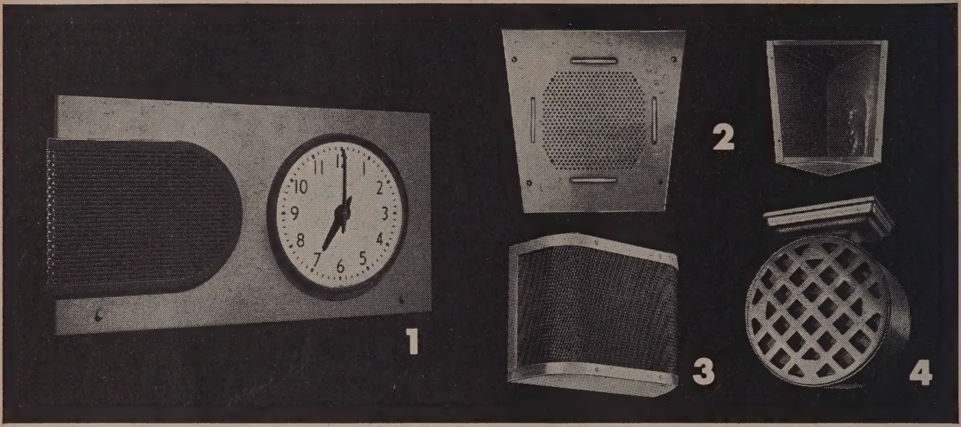
STP SERIES

XSTP SERIES

XSTPR SERIES

HEARD EVERYWHERE
Lowell MANUFACTURING COMPANY

LOWELL SPECIAL APPLICATIONS



1. LOWELL SC SERIES

Designed as a single unit clock and speaker system, the LOWELL Model SC-100 simplifies installation and maintenance. Fire alarm and civil defense warning equipment may also be incorporated in this unit.

Both the clock and speaker are mounted to the front panel. The front panel is hinged at the top, providing quick access to the interior of the unit without disassembling.

LOWELL model SC-100 will mount a variety of standard classroom clocks smaller than 12 inch sizes. Please order 12 inch size special.

Shipped complete with all mounting hardware. Colors are contrasting light and dark grey.

2. MODEL RJA is ideal for classrooms, restaurants, offices and as an extension speaker for juke box installations. The standard finish is satin aluminum with a clear lacquer coating. The 18 gauge steel protective enclosure is heavily undercoated and affords ample space for transformers and controls.

3. THE 'DRAMATONE' BASS REFLEX WALL BAFFLE

Especially designed for installations where a modern trend is desired. Beautiful plastic grille cloth mounted directly in back to conceal the loudspeaker. Baffle operates with a bass reflex principle. Interior completely lined with jute to prevent metallic resonance.

4. HEAVY-DUTY PENAL INSTITUTIONAL BAFFLE

Bi-directional type mounts to any standard single or double electrical outlet box. Tamper-proof machine screws, which fasten the baffle together, cannot be removed without a special screwdriver. Rugged construction withstands severe punishment. Both speaker face plates are covered from behind with perforated metal to prevent sharp objects from piercing the speaker cone.

The entire baffle is prime coated and finished in silver grey hammertone.

Order screwdriver with 6-32 and 8-32 tip.

SPECIFICATIONS

Model SC-100 front panel is 25¾" x 13" x 1", made of 18 gauge steel painted light gray. The speaker grille is made of 22 gauge steel painted dark gray. The protective enclosure is 24" x 12" x 3", made of 18 gauge steel painted with zinc chromate to prevent rust and undercoated to prevent resonance. It contains twelve ½", ¾", 1" and 1½" conduit knockouts.

MODEL RJA

The grille is .040 satin aluminum with clear lacquer coating; measures $12\frac{13}{16}$" across top-edge, 9⅜" across bottom edge. When grille is mounted to enclosure the entire assembly has approx. 10° forward slant. Specify speaker size when ordering (RJA-6, RJA-7, RJA-8).

'DRAMATONE' BASS REFLEX WALL BAFFLE

DIMENSIONS: 13¾" x 5⅝" depth x 9¾" height.

MODELS: DD6-A
DD7-A
DD8-A

PENAL INSTITUTIONAL BAFFLE

MODELS	SPEAKER SIZE
BRLK-5	5"
BRLK-6	6"
BRLK-7	7"
BRLK-8	8"

Model RLK series is very similar to Model BRLK with the exception that these models do not have a cradle base. Mount to ceiling or wall or standard electrical outlet boxes.

MODELS	SPEAKER SIZE
RLK-5	5"
RLK-6	6"
RLK-7	7"
RLK-8	8"

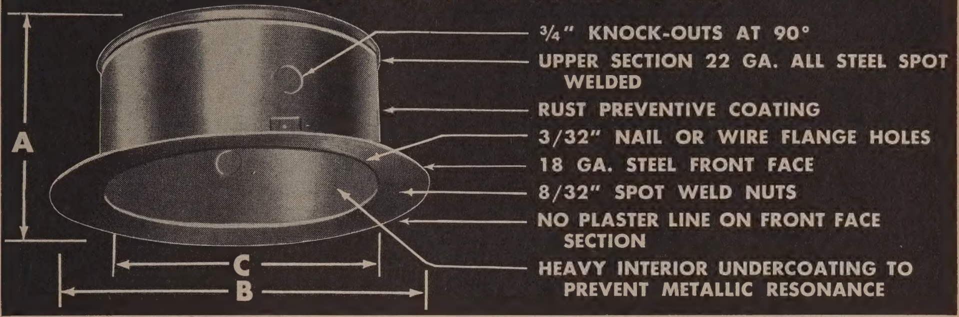
NOTE: Order only by model numbers.

HEARD EVERYWHERE
Lowell ®
MANUFACTURING COMPANY

LOWELL XCP SERIES

Back Cover Protective Speaker Enclosure

EXISTING CONSTRUCTION


¾" KNOCK-OUTS AT 90°
UPPER SECTION 22 GA. ALL STEEL SPOT WELDED
RUST PREVENTIVE COATING
3/32" NAIL OR WIRE FLANGE HOLES
18 GA. STEEL FRONT FACE
8/32" SPOT WELD NUTS
NO PLASTER LINE ON FRONT FACE SECTION
HEAVY INTERIOR UNDERCOATING TO PREVENT METALLIC RESONANCE
A
C
B

Model	A	B	C	Speaker Size Accommodation
XCP6	4"	10¼"	7⅜"	6"
XCP8	2½"	11¾"	8½"	8"
XCP8	4¼"	11¾"	8½"	8"
XCP8	7"	11¾"	8½"	8"
XCP8	10"	11¾"	8½"	8"
XCP1012	7"	16"	12⅜"	10" & 12"
XCP15	10¾"	21¼"	14⅝"	15"
XSTP8	7"	13¾"	12½"	8"
XSTP1012	10"	17½"	14½"	10" & 12"

USES: Designed for quick labor-saving wall or ceiling installation of sound systems in EXISTING CONSTRUCTION, ready for plastering.

DESCRIPTION: All-steel, spot-welded construction of heavy 22 ga. metal complete with plaster ring attached. ½" and ¾" knockouts at 90°. Rust preventive coating on exterior. Very heavy undercoating on interior to prevent metallic resonance. Sufficient speaker back pressure relief assures high speaker efficiency. Excellent for high fidelity installations. Complete mounting hardware and mounting instructions furnished to meet problems of various types of installations.

Note: Special overall depths (where space in walls and ceilings allow) and additional "loading" may be ordered at slightly higher price.

IMPORTANT: When mounting back enclosures in wall or ceiling for slip fit, cut hole to following size in diameter as per model ordered and nail to lath:

Model XCP6—7¼" dia.
Model XCP8—8⅝" dia.
Model XCP1012—12⅝" dia.
Model XCP15—14¾" dia.
Model XSTP8—12⅝" dia.
Model XSTP1012—14⅝" dia.

FOR SUSPENDED CEILINGS:
Mount XCP Series back enclosures to Model SS24 or 48 Steel Support Channels for positive strength.

FEATURES: Protects speaker cone from fire, falling mortar and dust. Prevents rodents from damaging speaker cone. Easily serviced without damage to wall or ceiling. Installation time reduced.

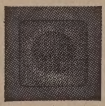
Speaker Baffles That Will Mount to XCP Series Protective Speaker Enclosures:

Enclosure Model No.	Speaker Baffle Model No.
XCP6	AL6-A, RS5-A, RS6-A,
XCP8	AL7-A, AL8-A, RS7-A, RS8-A, CE, JG8, M-8 PS8, STL6
XSTP1012	AL10-A, AL12-A, RS10-A, RS812-M, AL812-M, RS12-A, JG12
XCP15	AL15, RS15-A
XSTP8	STL8
XCP1012	STL10 STL12

AL SERIES

RS SERIES

JG SERIES



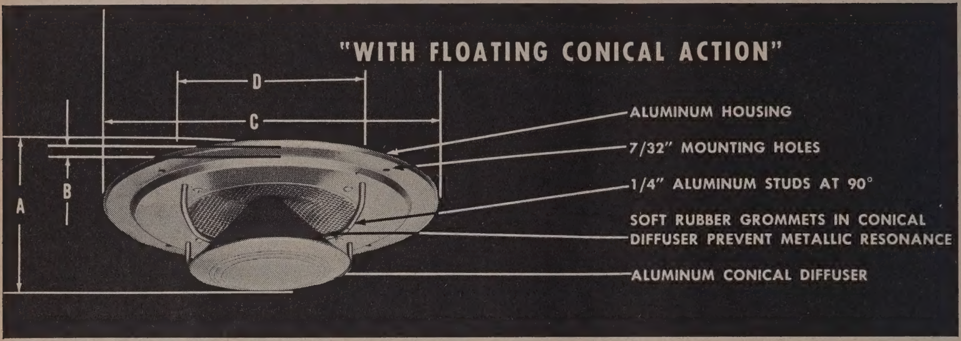
M SERIES

PS8 BLOCK PAN

HEARD EVERYWHERE
Lowell MANUFACTURING COMPANY

LOWELL AL SERIES

Flush Mounting Low Ceiling Baffles


"WITH FLOATING CONICAL ACTION"
D
C
A
B
ALUMINUM HOUSING
7/32" MOUNTING HOLES
1/4" ALUMINUM STUDS AT 90°
SOFT RUBBER GROMMETS IN CONICAL DIFFUSER PREVENT METALLIC RESONANCE
ALUMINUM CONICAL DIFFUSER

Patented in U.S.A. and Canada

Speaker Baffle Model	Size Speaker Accommodated	Mount to Speaker Enclosure Models	Dimensions A	B	C	D	Baffle Flange	No. of Flange Mtg. Holes	Dia. of Required Hole in Ceiling	Weight (lbs.) Net	Shpg.	No. per Shipping Carton
AL6-A	6"	CP6, XCP6, PR6 PS	2½"	½"	10¾"	5¼"	1"	4	7"	½	¾	12
AL7-A	7"	CP8, XCP8, PR8 PS	2½"	½"	12⅝"	5¼"	1"	4	8½"	¾	1	15
AL8-A	8"	CP8, XCP8, PR8 PS	2½"	½"	12⅝"	6⅜"	1"	4	8½"	¾	1	15
AL10-A	10"	CP1012, XCP1012 PR10	3"	½"	16⅞"	8½"	1"	4	13"	1	1½	6
AL12-A	12"	PR12, CP1012, XCP1012	3"	½"	16⅞"	10⅜"	1"	4	13"	1	1½	6
AL15-A	15"	PR15, XCP15 CP15	5"	2"	21¾"	13"	1¾"	8	15½"	3	3½	1
AL812-M	8"	PR12, CP1012 XCP1012	2½"	½"	16⅞"	6¼"	2"	4	8½"	¾	1	6

Top quality, heavy gauge satin finished spun aluminum. Assures controlled 360° diffusion of undistorted "ear-level" sound with minimum of echo and feedback. Conical diffuser "floats" on soft rubber grommets forming a press fit to aluminum support studs which thread to speaker housing ring. Clear lacquer coating also serves as prime coat for on-the-job painting. Wide choice of colored lacquer finishes available on request. Shipped complete with hardware for mounting to Lowell Protective Speaker Enclosures illustrated.

360° Coverage Low "Ear-Level" Sound

Even undistorted sound. Recommended baffle placement 25' from center of axis. Where straight line placement is impossible, triangulating baffle in ceiling is highly effective.

CP SERIES

XCP SERIES

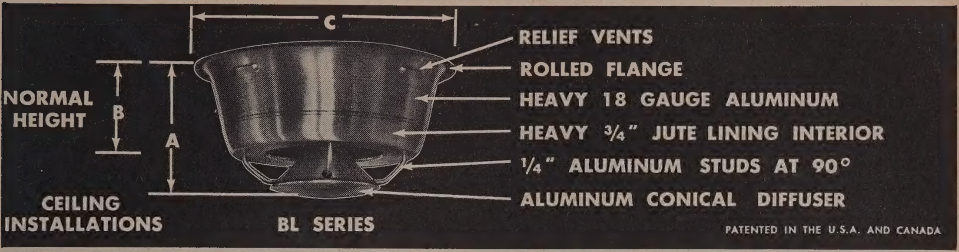
PR SERIES

PS BLOCK PAN

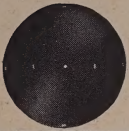
HEARD EVERYWHERE
Lowell MANUFACTURING COMPANY

SURFACE MOUNTING CEILING BAFFLES

"WITH FLOATING CONICAL ACTION"



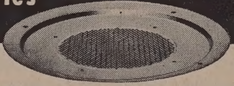
Model No.	Speaker Size	A	B	C	Will Mount To
BL6-A	6"	7¼"	4¼"	12 9/16"	PL6
BL7-A	7"	8⅛"	5"	14¾"	PL7
BL8-A	8"	8⅛"	5"	14¾"	PL8
BL10-A	10"	9¼"	6¾"	18⅝"	PL10
BL12-A	12"	9¼"	6¾"	18⅝"	PL12



PL Series Steel Discs for mounting BL Series to concrete ceilings. Heavy 18 gauge steel. All holes punched for standard electrical outlet boxes.

GENERAL INFORMATION: Designed for surface mounting constructed of heavy gauge aluminum. Accurately engineered for normal ceiling sound reinforcement. Perfect speaker cone loading holds feed-back to minimum. Exclusive "Floating Conical Action" assures controlled 360° sound coverage. High frequency diffuser supported to housing by four ¼" aluminum studs and threaded on one end mounted to housing. Press fit to diffuser through soft rubber grommets prevents metallic resonance. Recommended placement of baffles under normal ceiling heights is 25' off center of axis in straight line placement. All models finished in brushed satin and coated with colorless lacquer. Acts as excellent base coat or primer for on-the-job painting. All models available in colored lacquers at slightly higher price. Complete information on request.

TYPE RS recessed wall type directional speaker baffles



TYPE RS RECESSED WALL TYPE DIRECTIONAL SPEAKER BAFFLES:

Excellent speaker trim for modern installations. Especially recommended for Dress Shops, Department Stores, Night Clubs. Provides concealment of speaker. Easily installed.

DESCRIPTION: Made of aluminum with ½" mounting flange. Standard finish — satin-aluminum. Improved one-piece construction. Four screws are supplied to mount speaker. Mounts to LOWELL TYPE CP or XCP enclosures where speakers must be protected. The RS7-a, RS8-a, RS10-a and RS12-a are now one-piece construction.

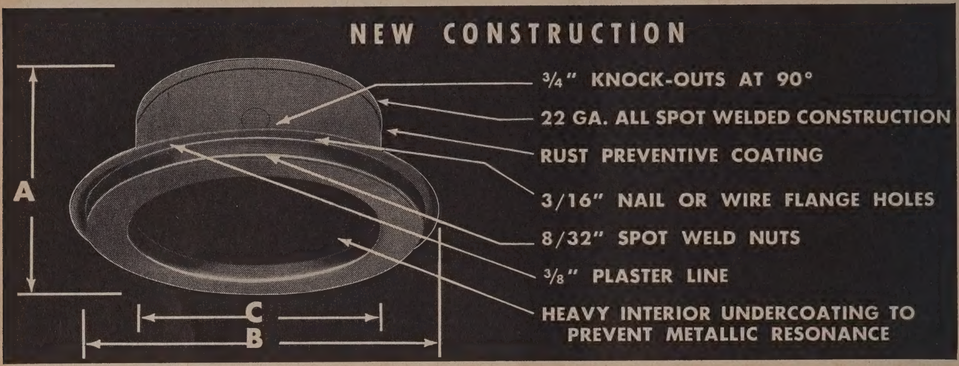
Model No.	Speaker Size	Dimensions	Wall Hole Size
RS4-A	4"	7½" dia. x 7/16" depth	5" dia.
RS5-A	5"	10¾" dia. x 7/16" depth	7" dia.
RS6-A	6"	10¾" dia. x 7/16" depth	7" dia.
*RS7-A	7"	12⅝" dia. x 7/16" depth	8½" dia.
RS812-M	8"	16⅞" dia. x 1/2" depth	8½" dia.
RS8-A	8"	12⅝" dia. x 1/2" depth	8½" dia.
RS8-A (1½" deep)	8"	12⅝" dia. x 1½" depth	8½" dia.
RS10-A	10"	16⅞" dia. x 1/2" depth	12½" dia.
RS12-A	12"	16⅞" dia. x 1/2" depth	12½" dia.
RS15-A	15"	21¾" dia. x 3" depth	17" dia.

* For RCA 7" Accordian Speaker. Information on colored lacquer furnished on request for both models.

HEARD EVERYWHERE
Lowell MANUFACTURING COMPANY

LOWELL CP SERIES

Back Cover Protective Speaker Enclosure


NEW CONSTRUCTION
¾" KNOCK-OUTS AT 90°
22 GA. ALL SPOT WELDED CONSTRUCTION
RUST PREVENTIVE COATING
3/16" NAIL OR WIRE FLANGE HOLES
8/32" SPOT WELD NUTS
⅜" PLASTER LINE
HEAVY INTERIOR UNDERCOATING TO PREVENT METALLIC RESONANCE
A
C
B

Model	A	B	C	Speaker Size Accommodation
CP6	4"	11¼"	7"	6"
CP8	2½"	13⅛"	8½"	8"
CP8	4½"	13⅛"	8½"	8"
CP8	7"	13⅛"	8½"	8"
CP8	10"	13⅛"	8½"	8"
CP8	12"	13⅛"	8½"	8"
CP1012	7"	17⅛"	12½"	10" & 12"
CP15	11"	21½"	14⅝"	15"
STP8	7"	14⅞"	12⅜"	8"
STP1012	10"	18⅞"	14¾"	10" x 12"

USES: Designed for quick, labor-saving wall or ceiling installation of sound systems in NEW CONSTRUCTIONS, ready for plastering.

DESCRIPTION: All-steel, spot-welded construction of heavy 22 ga. metal complete with plaster ring attached. ¾" and ½" knock-outs at 90°. Rust preventive coating on exterior. Very heavy undercoating on interior to prevent metallic resonance. Sufficient speaker back pressure relief assures high speaker efficiency. Excellent for high fidelity installations. Complete with mounting hardware and mounting instructions to meet problems of various types of installation.

Note: Special overall depths (where space in walls and ceilings allow) and additional "loadings" may be ordered at slightly higher price. Available with removable cylinder and stationary front plaster ring in adjustable face models—DCP series.

IMPORTANT: When mounting back enclosures in wall or ceiling for slip fit, cut hole to following size in diameter as per model ordered and nail to lath.

Model CP6—7" dia.
Model CP8—8½" dia.
Model CP1012—12½" dia.
Model CP15—14¾" dia.
Model STP8—12½" dia.
Model STP1012—14½" dia.

FOR SUSPENDED CEILINGS:

Mount CP Series back enclosures to Model SS 24 or 48 Steel Support Channels for positive strength.

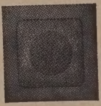
FEATURES: Protects speaker cone from fire, falling mortar and dust. Prevents rodents from damaging speaker cone. Easily serviced without damage to wall or ceiling. Reduces installation time.

Speaker Baffles That Will Mount to CP Series Protective Speaker Enclosures:

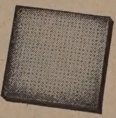
Enclosure Model No.	Speaker Baffle Model No.
CP6	AL6-A, RS5-A, RS6-A
CP8	AL7-A, AL8-A, RS7-A, RS8-A, JG8, M-8, PS8, STL6
CP1012	AL10-A, AL12-A, RS10-A, RS12-A, JG12, RS812-M, AM812-M
CP15	AL15, RS15-A
CTP8	STL8
STP1012	STL10, STL12

AL SERIES

RS SERIES ● JG SERIES



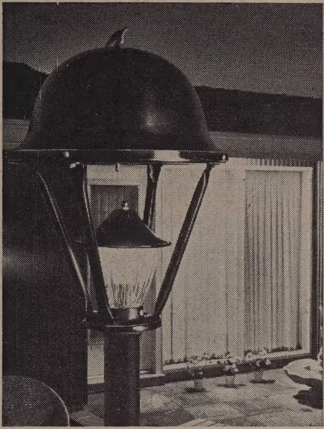
M SERIES



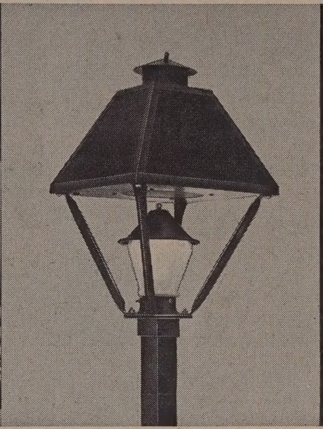
PS8 BLOCK PAN

LOWELL PB SERIES

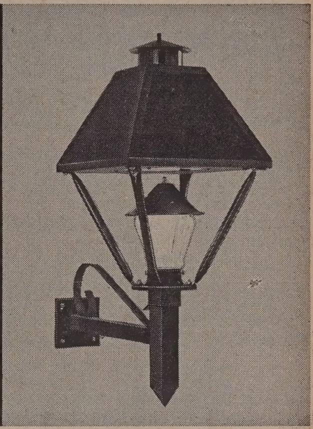
Hifilite Patio Baffles



MODEL PBA



MODEL PBG



MODEL PBW

Hi-Fi Sound and Outdoor Light Are Combined In These Beautiful, All-Weather Fixtures.

Hilfilites are perfect companions to modern outdoor life. Ideal for both residential and commercial applications. Choice of styles and mountings to harmonize with modern, colonial or Early American settings.

The Lowell Model PBA HIFILITE Baffle is constructed of heavy gauge spun aluminum. Upper dome section of the baffle is completely lined with heavy ¾″ jute and waterproofed. At the top of the dome, a beautiful, decorative cast gold eagle adds to the lamp post version of this baffle. The lower section of baffle is a modified version of the Lowell STL baffle. The unit is supported by a heavy 8′ iron pipe, 2″ in diameter. Four ½″ steel tubes support the baffle and provide concealment for speaker wires.

Colors: Midnight black or gold.

The Lowell Model PBW and Model PBG are generally the same as the round HIFILITE models described above. They are available in the square styles pictured here, and the round model shown above. Performance is the same as the popular PBA HIFILITE.

Top section is undercoated to prevent metallic resonance and vented to aid low frequency speaker response. A fine mesh screen protects the speaker cone. Four ½″ steel rods support the baffle and provide concealment for speaker wires.

MODELS:

PBA-8 With Pipe and Lite (For 8″ Speaker) Complete Unit
PBA-7 With Pipe and Lite (For 7″ Speaker) Complete Unit
PBC-8 With Pipe Only (For 8″ Speaker) No Lite
PBC-7 With Pipe Only (For 7″ Speaker) No Lite
PBF-8 With Lite Only (For 8″ Speaker) No Pipe
PBF-7 With Lite Only (For 7″ Speaker) No Pipe
PB-8 With Top Section Only (No Pipe or Lite) For 8″ Speaker
PB-7 With Top Section Only (No Pipe or Lite) For 7″ Speaker
PBG With 2″ Square Pipe and Lite (For 8″ Speaker) Complete Unit
PBW With Wall Mounting Bracket and Lite (For 8″ Speaker) Complete Unit

NOTE: Lamp fixture is not wired. Speakers and light bulbs not included. Please order only by model numbers.

HEARD EVERYWHERE
Lowell MANUFACTURING COMPANY

MURDOCK HEADPHONES

P-23 Aviation Headphone

C.A.A.T.C. 1200

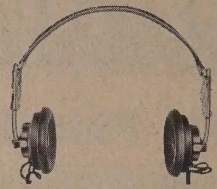
Specifications:

Receivers: "Solid-Built" type. Best quality Alnico magnets. Moulded bakelite coil forms impregnated to resist moisture. Moulded bakelite case and cap. Standard impedance 600 ohms. Lightweight sponge rubber cushions.

Headband: All metal parts stainless steel and passivated to prevent corrosion. Headband and earphones are easily adjusted by cleverly designed guide and plate.

Cord: Phones connected within band, making a single cord to instrument panel. Standard set has 5 foot plastic-covered tinsel cord with phone plug attached.

LIST $12.00



No. 131 "CW" *Designed for Code Communication*

Specifications:

Receivers: Same "Solid-Built" construction as P-23. Standard impedance 10,000 ohms. Equipped with wafer-thin rubber cushions.

Headband: Double stainless steel bands with plastic covering. Stainless steel guides and yokes permit adjustment on vertical and horizontal planes.

Cord: Six foot Y type plastic-covered tinsel cord with phone plug attached.

LIST $12.00

No. 112 Lightweight Headphone

Lightness and scientific fit of these headphones make them comfortable to wear for a considerable length of time.

Specifications:

Receivers: "Solid-Built" one-twelve type with Alnico magnet. Standard set has 10,000 ohms impedance. Standard concealed terminals.

Headband: Easy operating controls permit adjustment of the earphones. Bands are 1/4" stainless steel.

Cord: Six foot Y type plastic-covered tinsel cord with pin tips.

No. 112 LIST $5.50
No. 116 Single LIST $3.50

No. 111 Institutional Headphone

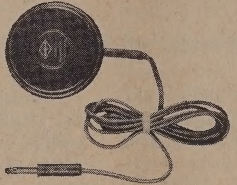
Specifications:

Receivers: "Solid-Built" one-eleven type. Magnets are fine quality chrome steel. Moulded black bakelite case and cap. Standard set has 10,000 ohms impedance. Standard concealed terminals.

Headband: Stainless steel bands covered with plastic. Guides and yokes are solid brass, nickel plated.

Cord: Six foot Y type plastic-covered tinsel cord with pin tips.

LIST $8.50



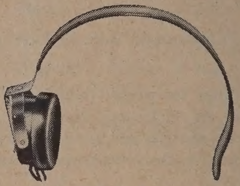
Magnetic Underpillow Speaker

Specifications:

Speaker: Rugged, durable bakelite case in walnut or gray finish. 3½" diameter. Alnico V magnet.

Cord: Six foot plastic extension cord and phone plug. Mounting jack supplied with switch in jack. Available in impedances from 5 ohms to 10,000 ohms or higher.

LIST $10.95



No. 115 Laboratory Headphone

Specifications:

Receiver: "Solid-Built" one-eleven type.

Headband: Special one-fifteen. Yoke is spring brass, nickel plated. Covered with fine quality plastic.

Cord: Five foot single type, plastic-covered tinsel with pin tip.

LIST $5.50

HEADSET impedances are available up to 17,000 ohms. Cotton-covered or other special cords and special terminals are available to meet individual requirements.
Write today for complete information and FREE CATALOG.

THE MURDOCK CORPORATION • Chelsea, Mass.

ACOUSTONE*

WORLD'S FINEST LINE ACOUSTIC GRILLE CLOTH

OFFERS YOU THE ULTIMATE IN SOUND TRANSMISSION

ACOUSTONE
World's Finest Line Acoustic Grille Cloth
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HI-FI AUDIO
ACOUSTONE
World's Finest Line Acoustic Grille Cloth

- ***Sparkling New Decorator Designs***
- ***Only U.S. Lab Tested Grille Cloth***
- ***Easily Installed. Extremely durable***

Ideal for speaker enclosures, decorative room dividers, cafe curtains, wall panels, table mats.

Acoustone is durable. Will not sag, scuff or fade under hard use.

Colorful "pic-a-pat" catalog, sample patterns from which to choose.

Immediately available from your favorite Acoustone supplier. Priced right in package or in bulk yardage.

"FAMOUS 50" — SELECTED PATTERNS — IN STOCK! IMMEDIATE DELIVERY!

(Carefully chosen each year from 5000 designs for decorator needs)

PATTERN	DESCRIPTION	LIST PRICE
#211	Mahogany with Ivory Thrds.	$5.60
#212	Mahog. with Beige Thrds.	5.60
#213	Mahog. with Gold Ray. Thrds.	5.60
#214	Mahog. with Copper Ray. Thrds.	5.60
#321	Walnut with Gold & Wht. Thrds.	5.60
#450	Solid Black	5.60
#452A	Charcoal with Grey Thrds.	5.60
#511	Blonde with Brown Thrds.	5.60
#611	Solid White	5.60
#625	Grey with Black Thrds.	5.60
#811	Tan with Bronze Thrds.	5.60
#812	Tan with White Threads	5.60
#1218	Beige & Wht. with Blk. Thrds.	5.60
#5112	Tan/Brown with Maroon Thrds.	5.60
#215M	Mah/Beige with Met. Gold Thrds.	6.75
#412M	Wht. & Blk. with Met. Silver Thrds.	6.75
#413M	Wht. & Blk. with Met. Gold Thrds.	6.75
#512M	Bge. & Bronze with Met. Gold Thrds.	6.75
#515M	Bld. & Blk. with Met. Gold Thrds.	6.75
#616M	Wht. & Blk. with Met. Gold Thrds.	6.75
#617M	Solid Wht. with Met. Gold Thrds.	6.75
#711M	Bge. & Bronze & Wht. Uphol. Yarn	6.75
#804BM	Bge. Straw with Met. Gold Thrds.	6.75
#813	Beige with Beige Straw	6.75
#857	Beige with Beige Straw	6.75
#1214M	Brn. & Bge. with Met. Gold Thrds.	8.75
#103	Silver with Blk. & Wht. Cobweb	8.50
#119	Wht./Brown Woven Cane	8.50
#253	Tan/Brown with Silver Metal Thrds.	8.50
#290B	Mah. with Brn. & Wht. Uph. Yarn	8.50
#300	Mah. with Gold Metal Cobweb	8.50
#453	Black with Gold Metal Cobweb	8.50
#454	Charcoal with Silv. Met. Cobweb	8.50
#560B	Bld. with Brn. & Wht. Uph. Yarn	8.50
#618	White with Gold Metal Cobweb	8.50
#619	Wht. with Blk./Gold Met. Cobweb	8.50
#805	Beige with Wht./Brown Pagoda	8.50
#814BM	Bge. with Wht. & Met. Gold Thrds.	8.50
#1011	Solid Gold	8.50
#1012	Solid Silver	8.50
#1802	Woven Cane-Brown/Tan	8.50
#1803	Woven Cane-Walnut/Tan/Gold	8.50
#1804	Woven Cane-Brown/Tan/Cocoa	8.50
#1809	Woven Cane-Walnut/Tan	8.50
#1824	Tan/Blk. Bamboo Weave	8.50
#1826A	Woven Cane-Brown/Tan/Wht.	8.50
#2016	Tan/Brown Gold Metallic Box	8.50
#2025	Tan/Brown Cane with Metal	8.50
#3881	Tan/Brown Novelty Cane	8.50
#7104	Tan/White Metal	8.50

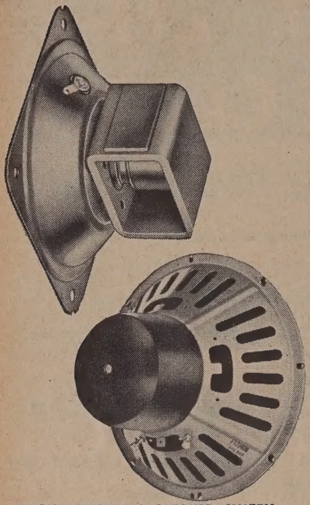
**Engineered for Sound-Designed for Beauty*

NEWCASTLE FABRICS CORP.

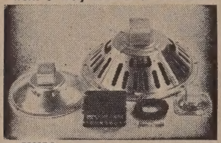
BROOKLYN 11, N. Y.

OXFORD Speakers—

HIGH FIDELITY—Tempo Series



HIGH FIDELITY 3 SPEAKER SYSTEM
with 3 way crossover network



Kit No. 3W20
3 way—3 element network with nominal crossover frequencies of 600 cycles and 5000 cycles: Attenuation rate of approximately 6 db per octave on either side of crossover frequencies and insertion loss of approximately 1db.

3 WAY SYSTEM

Item	Model No.	Ship. Wt.	Audiophile Net
3 WAY SYSTEM Complete less cabinet	3W20	14 lbs.	$39.00

RESPONSE: of system is substantially flat from 35 cycles to 15,000 cycles, when used in acoustically matched cabinets.
INPUT IMPEDANCE: 8 ohm output
POWER HANDLING: 20 watts peak (of program material) is recommended. Oxford Bass Reflex Cabinets available in red mahogany, cherry, walnut, and blonde oak.

CROSSOVER NETWORK (Available separately)	OXN-31	3 lbs.	12.30

OXFORD
COMPONENTS
DIVISION OF
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ELECTRIC
CORPORATION

OXFORD TWEETERS

Model No.	Size	Alnico V Mag. Wt. Oz.	V.C. Size	Power Handling Capacity in Watts	Frequency Response in C.P.S.	Resonance in C.P.S.	Audiophile Net
T3C208	3"	1.47	9/16"	2-4	1800-15,000	—	$4.35
T5C208	5"	1.47	9/16"	2-4	1100-15,000	—	5.10
CH26E16	2x6"	2.15	9/16"	2-0	2000-20,000	—	12.60

FULL RANGE SPEAKERS

F8J408	8"	6.80	1"	15	50-13,000	85	$14.97
F12J408	12"	6.80	1"	15	50-12,000	75	19.50
F12L608	12"	14.00	1½"	25	40-10,000	70	29.95

OXFORD WOOFERS

W12K508	12"	10.0	1¼"	15	4,000 roll off	50	$23.70
W12J616	12"	6.8	1½"	20	4,500 roll off	30	17.70
W12M608	12"	20.0	1½"	25	3,000 roll off	45	34.50
W15M608	15"	20.0	1½"	25	2,000 roll off	40	39.00

COAXIAL SPEAKERS

C8J408	8"	6.8	1"	8	50-15,000	75	$21.00
CO12JB	12"	6.8	1"	15	—	—	32.50
C12J408	12"	6.8	1"	15	40-15,000	75	25.50
C15L608	15"	14.0	1½"	25	30-15,000	50	43.50

EXTENDED RANGE SPEAKERS

Model No.	Size	Mag. Wt. in Oz.	V.C. Size	Watts	List Price
HF8JB	8"	6.8	1"	10	$16.50
HF10JB	10"	6.8	1"	10	18.95
HF12JB	12"	6.8	1"	10	22.50
HF12LN	12"	14.00	1½"	25	36.75
HF15LN	15"	14.00	1½"	25	44.95

OXFORD COMPONENTS, division of Oxford Electric Corp., **Chicago 6, Illinois**
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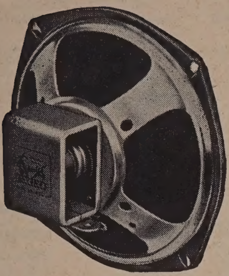
OXFORD Speakers—



SPACE-SAVER "H" Series SPEAKERS

SIZE	MODEL NUMBER	MAG. SIZE OZ.	SUGG. LIST
2½" Square	H2A	.68	$4.15
3½" Square	H3A	.68	4.05
4" Square	H4A	.68	4.10
5" Round	H5A	.68	4.30
4" x 6" Rectangular	H46A	.68	4.85

PERMANENT MAGNET SPEAKERS AUTO REPLACEMENT SPEAKERS* 3.2 ohm

SIZE	MODEL NUMBER	MAG. SIZE OZ.	SUGG. LIST
5" Pin Cushion	5PCM-20	1.47	$5.35
5¼" Pin Cushion	52BM-21	1.00	4.70
5½"x7½" Elliptical	5575FS-9	3.16	9.25
6" Pin Cushion	6EV-46	2.15	7.00
7" Pin Cushion	7CV-2	1.47	6.60
4"x6" Rectangular	46CM-31	1.47	5.35
5"x7" Elliptical	57AM-1	.68	5.60
5"x7" Elliptical	57CV-2	1.47	7.00
5"x7" Elliptical	57EV-10	2.15	7.75
6"x9" Elliptical	69AM-1	.68	6.45
6"x9" Elliptical	69CV-5	1.47	7.85
6"x9" Elliptical	69EV-11	2.15	8.60
6"x9" Elliptical	69E4WS	2.15	8.95
6"x9" Elliptical	69FS-6	3.16	9.35

Each and every OXFORD Speaker is backed by over thirty years of manufacturing experience, and production and engineering facilities which are unequalled anywhere in the world. Now, seven separate and complete factories produce Oxford Speakers for original equipment and replacement applications for hundreds and hundreds of leading manufacturers and electronics parts distributors.

All Oxford Speakers are made to meet the most rigid specifications and include only Alnico V Permanent Magnets.

OXFORD COMPONENTS
DIVISION OF
OXFORD ELECTRIC CORPORATION

PERMANENT MAGNET SPEAKERS STANDARD REPLACEMENT LINE 3.2 ohm

SIZE	MODEL NUMBER	MAG. SIZE OZ.	SUGG. LIST
2" Square	2AMS	.68	$3.75
2" Square	2BMS	1.00	4.25
2" Square	2CMS	1.47	4.75
3" Square	3AMS	.68	3.75
3" Square	3BMS	1.00	4.40
3" Square	3CMS	1.47	4.75
4" Square	4AMS	.68	4.00
4" Square	4BMS	1.00	4.25
4" Square	4CMS	1.47	4.60
5" Round	5AMS	.68	4.25
5" Round	5BMS	1.00	4.50
5" Round	5CMS	1.47	4.85
5" Round	5ECS	2.15	6.05
5" Pin Cushion	5PAMS	.68	4.35
5" Pin Cushion	5PBMS	1.00	4.60
5" Pin Cushion	5PCMS	1.47	5.00
5¼" Pin Cushion	52AMS	.68	4.35
5¼" Pin Cushion	52BMS	1.00	4.60
5¼" Pin Cushion	52CMS	1.47	5.00
5¼" Square	55CMS	1.47	5.25
6" Pin Cushion	6AMS	.68	4.85
6" Pin Cushion	6BMS	1.00	5.10
6" Pin Cushion	6CMS	1.47	5.50
6" Pin Cushion	6CVS	1.47	5.75
6" Pin Cushion	6EVS	2.15	6.90
6" Pin Cushion	6FOS	3.16	8.15
7" Pin Cushion	7CVS	1.47	6.50
7" Pin Cushion	7EVS	2.15	7.10
7" Pin Cushion	7FOS	3.16	8.00
7½" Pin Cushion	82CVS	1.47	7.25
7½" Pin Cushion	82EVS	2.15	7.50
8" Round	8CMS	1.47	6.85
8" Round	8CVS	1.47	7.10
8" Round	8EVS	2.15	7.35
8" Round	8FOS	3.16	8.50
8" Round	8HBS	4.64	12.20
8" Round	8JBS	6.80	14.10
10" Round	10CVS	1.47	8.75
10" Round	10EVS	2.15	9.50
10" Round	10FOS	3.16	10.50
10" Round	10HBS	4.64	13.85
10" Round	10JBS	6.80	15.60
12" Round	12CVS	1.47	9.75
12" Round	12EVS	2.15	10.50
12" Round	12FOS	3.16	11.50
12" Round	12HBS	4.64	15.00
12" Round	12JBS	6.80	17.00
15" Round	15JBS	6.80	26.20
4"x6" Elliptical	46AMS	.68	4.50
4"x6" Elliptical	46BMS	1.00	4.75
4"x6" Elliptical	46CMS	1.47	5.25
5"x7" Elliptical	57AMS	.68	5.40
5"x7" Elliptical	57BMS	1.00	5.85
5"x7" Elliptical	57CMS	1.47	6.50
5"x7" Elliptical	57EVS	2.15	7.70
5"x7" Elliptical	*57EV-11	2.15	8.25
5"x7" Elliptical	57FOS	3.16	8.75
6"x9" Elliptical	69AMS	.68	6.35
6"x9" Elliptical	69BMS	1.00	6.60
6"x9" Elliptical	69CMS	1.47	7.00
6"x9" Elliptical	69CVS	1.47	7.10
6"x9" Elliptical	69EVS	2.15	7.85
6"x9" Elliptical	*69EV-16	2.15	9.10
6"x9" Elliptical	69FOS	3.16	9.25

*Includes High Fidelity Dual Cone

RECTANGULAR SPEAKERS

SIZE	MODEL NUMBER	MAG. SIZE OZ.	SUGG. LIST
2x10"	2510CMS	1.47	$10.00

TRANSISTOR SPEAKERS—12 OHM

SIZE	MODEL NUMBER	MAG. SIZE OZ.	SUGG. LIST
2¾" Round	27AAT-S12	.45	$4.70
2¾" Round	27AT-S12	.68	4.90

OXFORD COMPONENTS, division of Oxford Electric Corp., **Chicago 6, Illinois**

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OXFORD Speakers—

PUBLIC ADDRESS SPEAKERS 8 ohm

SIZE	MODEL NUMBER	MAG. SIZE OZ.	SUGG. LIST
8″ Round	8CMS-7	1.47	$7.35
8″ Round	8EVS-7	2.15	7.85
8″ Round	8FOS-7	3.16	9.00
8″ Round	8HBS-7	4.64	12.70
8″ Round	TC8HB	4.64	14.25
8″ Round	8JBS-7	6.80	14.60
10″ Round	10EVS-7	2.15	10.00
10″ Round	10FOS-7	3.16	11.00
10″ Round	10HBS-7	4.64	14.35
10″ Round	10JBS-7	6.80	16.10
12″ Round	12CVS-7	1.47	10.25
12″ Round	12EVS-7	2.15	11.00
12″ Round	12FOS-7	3.16	12.00
12″ Round	12HBS-7	4.64	15.50
12″ Round	TC12HB	4.64	17.50
12″ Round	12JBS-7	6.80	17.50
15″ Round	15JBS-7	6.80	27.60

*Moisture Resistant Cone

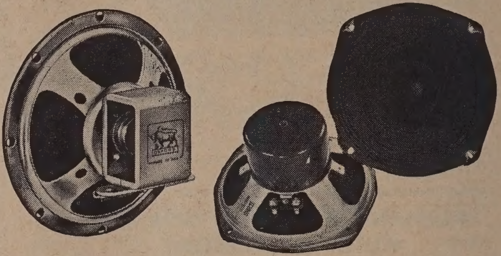
LINE TO VOICE COIL TRANSFORMERS

	Part No.	Ohms Pri.	Impd. Sec.	Audio Watts	Mtg. Cntrs.	H	W	D	Sug. List
25 VOLT	4L25V	125	4/8	5	2	1 7/16	2 7/16	1¾	$4.10
		250		2.5					
		500		1.25					
		1000		.62					
		2000		.31					
	5L25V	62.5	4/8/16	10	2⅜	1 11/16	2 13/16	1⅝	4.45
		125		5					
		250		2.5					
		500		1.25					
		1000		.62					
	6L25V	35	4/8/16	18	2⅜	2⅜	2 15/16	1⅞	5.90
		70		9					
		140		4.5					
		280		2.25					
		560		1.12					
		1120		.56					
70.7 VOLT	4L70V	1000	4/8	5	2	1 7/16	2 7/16	1¾	$4.60
		2000		2.5					
		4000		1.25					
		8000		.62					
		16000		.31					
	5L70V	500	4/8/16	10	2⅜	1 11/16	2 13/16	1⅝	4.45
		1000		5					
		2000		2.5					
		4000		1.25					
		8000		.62					
	6L70V	275	4/8/16	18	2⅜	2⅜	2 15/16	1⅞	5.45
		550		9					
		1100		4.5					
		2200		2.25					
		4400		1.12					
		8800		.56					

INTERCOM SPEAKERS 45 ohm

SIZE	MODEL NUMBER	MAG. SIZE OZ.	SUGG. LIST
2″ Square	2AM-S45	.68	$4.25
2″ Square	2BM-S45	1.00	4.25
2″ Square	2CM-S45	1.47	4.85
3″ Square	3AM-S45	.68	3.90
3″ Square	3BM-S45	1.00	4.75
3″ Square	*3BM-S45W	1.00	4.95
3″ Square	3CM-S45	1.47	4.90
4″ Square	4BM-S45	1.00	5.00
4″ Square	*4BM-S45W	1.00	5.20
4″ Square	4CM-S45	1.47	5.25
5″ Round	5BM-S45	1.00	5.25
5″ Round	*5BM-S45W	1.00	5.40
5″ Round	5CM-S45	1.47	5.35
8″ Round	8EV-S45	2.15	8.35
8″ Round	8HB-S45	4.64	12.70
8″ Round	8JB-S45	6.80	14.75
2½″x10″ Rect.	2510CM-S45	1.47	10.50

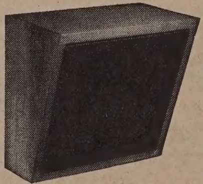
*Also Weatherproofed



ALL-WEATHER SPEAKERS 3.2 ohm

SIZE	MODEL NUMBER	MAG. SIZE OZ.	SUGG. LIST
3″ Square	3CM-SW	1.47	$5.25
4″ Square	4AM-65	.68	4.70
4″ Square	4BM-SW	1.00	5.00
4″ Square	4CM-27	1.47	5.75
4″ Square	4CM-SW	1.47	5.25
5″ Round	5BA-3	.68	4.45
5″ Round	5CM-SW	1.47	5.50
5″ Round	5CM-51	1.47	5.35
6″ Pin Cushion	6CM-SW	1.47	6.15
8″ Round	*8HB-15A	4.64	12.25
4″x6″ Rectangular	46CM-SW	1.47	5.95
2½″x10″ Rect.	2510CM-SW	1.47	10.80

*8 ohm



SPEAKER BAFFLES

MODEL NO.	SIZE & DESCRIPTION	SUGG. LIST
8TP	8″ Metal Grille & Trim Plate 12″ OD	5.85
8WB	8″ Tapered Front Wall Baffle 10½″ x 6¼″ x 3⅝″	13.50
12WB	12″ Tapered Front Wall Baffle 14″ x 8¾″ x 4⅝″	20.00
8PR	8″ Metal Plaster Ring 11″ OD	3.50
8RB	8″ Ceiling Baffle, Complete	8.75
8CB	8″ Tapered Front Corner Baffle 16″ x 15½″ x 7″	15.00

OXFORD
COMPONENTS
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CORPORATION

OXFORD SPEAKERS and ACCESSORIES are Preferred for Original Sound Equipment . . . Proven for Replacement in Sound Installations.

OXFORD COMPONENTS, division of Oxford Electric Corp., Chicago 6, Illinois

IN CANADA: ATLAS RADIO CORP., LTD., TORONTO • EXPORT: ROBURN AGENCIES, NEW YORK CITY

OXFORD REAR DECK SPEAKER KITS and ACCESSORIES

Super Deluxe Hi-Fi Line

2.15 Oz. Alnico V Magnet

PART NUMBER		SUGGESTED LIST
TE57S	Chrome	$12.50
TE57S	Grey	11.60
TE69S	Chrome	13.50
TE69S	Grey	13.00

Economy Hi-Fi Line

.68 Oz. Alnico V Magnet

PART NUMBER		SUGGESTED LIST
TA57S	Chrome	$10.45
TA575	Grey	9.95
TA69S	Chrome	12.45
TA69S	Grey	11.95

Grille Assemblies

PART NUMBER		SUGGESTED LIST
G57	Chrome	$2.05
G57	Grey	1.50
G69	Chrome	2.20
G69	Grey	1.65

Complete Kits Less Switch Accessory

FULL RANGE CONE

PART NUMBER		SUGGESTED LIST
C57	Chrome	8.40
C57	Grey	7.80
C69	Chrome	9.40
C69	Grey	8.85
A57	Chrome	7.50
A57	Grey	7.00
A69	Chrome	8.50
A69	Grey	8.00

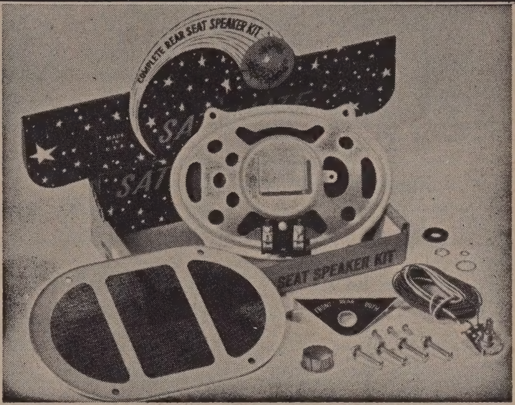
HI-FI TWIN CONE

PART NUMBER		SUGGESTED LIST
TE57	Chrome	9.40
TE57	Grey	8.90
TE69	Chrome	10.35
TE69	Grey	9.80
TA57	Chrome	8.50
TA57	Grey	8.00
TA69	Chrome	9.50
TA69	Grey	9.00

Three Way Switches	W15C (with wire)	2.45
	WO15C (switch only)	1.70
Fader Controls	W15M (with wire)	3.40
	WO15M (control only)	2.70
Enclosures	CPO57	5.85
	CPO69	6.00

All Oxford Speakers are made to meet the most rigid specifications and include only Alnico V Permanent Magnets.

OXFORD COMPONENTS
division of
OXFORD ELECTRIC CORPORATION



READY FOR INSTALLATION

***OXFORD REAR SEAT SPEAKER KITS** are ready for easy installation*

Each kit includes a wiring harness which will simplify installation.

In most cases there is no need of splicing wires or soldering, since the connections are either of a plug in or snap in type.

The Oxford speakers included in these kits are equipped with spring type terminals for ease in wiring. In all cases detailed instructions are included.

All Speaker Kits are attractively packaged in Display Cartons.

Grilles are available in Chrome finish or Grey baked enamel.

Oxford Economy Line

.68 Oz. Alnico V Magnet

PART NUMBER		SUGGESTED LIST
A57S	Chrome	$ 9.25
A57S	Grey	8.70
A69S	Chrome	10.20
A69S	Grey	9.70

Oxford Deluxe Line

1.47 Oz. Alnico V Magnet

PART NUMBER		SUGGESTED LIST
C57S	Chrome	$10.55
C57S	Grey	10.00
C69S	Chrome	11.50
C69S	Grey	11.05

Custom Universal Kits

.68 Oz. Alnico V Full Range Cone

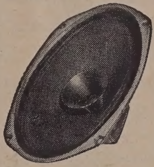
A57S	Grey	10.00
A57S	Chrome	10.75
A69S	Grey	11.50
A69S	Chrome	12.50

Satellite Leader Kit—Complete

57R	Chrome	6.10
69R	Chrome	7.35

Satellite Hi-Fi Leader Kit

T57R	Chrome	8.35
T69R	Chrome	9.35



Dual Cone Speakers

Dual Cone High Fidelity Auto Replacement Speakers

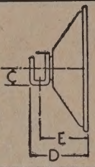
Size	Model No.	Mag. Size Oz.	Sugg. List
5"x7" Elliptical	57AM-2	.68	$6.15
5"x7" Elliptical	57CV-3	1.47	7.55
5"x7" Elliptical	57EV-11	2.15	8.25
6"x9" Elliptical	69AM-2	.68	6.95
6"x9" Elliptical	69CV-19	1.47	8.35
6"x9" Elliptical	69EV-16	2.15	9.10

OXFORD COMPONENTS, division of Oxford Electric Corp., Chicago 6, Illinois

IN CANADA: ATLAS RADIO CORP., LTD., TORONTO • EXPORT: ROBURN AGENCIES, NEW YORK CITY

QUAM *Adjust-a-Cone®* SPEAKERS

These speakers are engineered and manufactured solely for replacement, public address, high fidelity and outdoor applications. EIA standard dimensions. Fully dust-proofed. Baked aluminum enamel finish. EIA service guarantee. QUAM UNIVERSAL MOUNTING BRACKET comes with all 3½" to 6½" speakers and may be attached to any two of the FOUR threaded mounting holes in the U-shaped pot. Any Quam speaker can be supplied with voice coil impedances other than those listed for an additional $1.00 list.



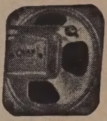


Fig. A

Fig. B

Fig. C

Fig. D

QUAM ADJUST-A-CONE® SUSPENSION

This patented QUAM feature is your added assurance of trouble-free operation. In other speakers the spider is cemented in place with no means of accurate adjustment. The Adjust-a-Cone suspension permits precision centering of the voice coil as a final production operation.

QUAM U-SHAPED COIL POT

Another QUAM exclusive, this patented U-shaped coil pot construction, used throughout the QUAM replacement line, provides an unbroken flux path of sufficient cross-section to carry the full energy of the magnetic field.

REPLACEMENT SPEAKERS

Voice coil impedance 3.2 ohms ± 10%

ED — Electro Dynamic Speakers ***PM — Permanent Magnet Speakers***

TYPE	MODEL No.	SIZE	FIGURE	FIELD	POWER HANDLING WATTS	DIMENSIONS IN INCHES C	D	E	SHIP WT., LBS.	PRICE LIST
PM	22A06Z8**•	2¼"	J	.62 oz. Alnico V	.25	19/32	1-7/64	—	1/4	$ 4.75
	22A06Z100**•	2¼"	J	.62 oz. Alnico V	.25	19/32	1-7/64	—	1/4	5.25
PM	25A07•	2½"	A	.65 oz. Alnico V	2	11/16	1-1/4	7/8	1/4	4.00
PM	27A06Z12**•	2¾"	J	.62 oz. Alnico V	.25	19/32	1-1/16	—	1/4	4.70
ED	d3E45‡•	3½"	A	450 Ohms	2.5	1-1/4	1-51/64	1-1/4	3/4	6.25
PM	3A05*•	3½"	I	.55 oz. Alnico V	2	7/16	1-13/32	—	1/4	3.15
	3A07*•	3½"	A	.65 oz. Alnico V	2.5	3/4	1-33/64	1-7/64	1/2	4.00
	35A05•*§	3"x5"	L	.55 oz. Alnico V	2	7/16	1-21/32	—	1-1/2	4.20
ED	4E45‡	4"	A	450 Ohms	3	1-1/4	2	1-7/16	1	6.25
	4E62#‡	4"	A	55-65 Ohms	3	1-1/4	2-5/16	1-5/8	1	6.25
PM	4A05*•	4"	I	.55 oz. Alnico V	2.5	7/16	1-13/32	—	1/4	3.25
	4A07*	4"	A	.65 oz. Alnico V	3	3/4	1-23/32	1-5/16	1/2	4.30
	4A07R*★	4"	B	.65 oz. Alnico V	3	3/4	1-23/32	1-5/16	1/2	4.30
	4A1	4"	A	1.0 oz. Alnico V	3	1	2-3/16	1-9/16	3/4	4.60
	4A1R★	4"	B	1.0 oz. Alnico V	3	1	2-3/16	1-9/16	3/4	4.60
	4A15	4"	A	1.47 oz. Alnico V	3	1	2-3/16	1-9/16	3/4	5.05
ED	d46E45‡	4"x6"	E	450 Ohms	3.5	1-5/64	2-15/64	1-5/8	1-1/4	7.25
	d46E90#‡	4"x6"	E	85-95 Ohms	3.5	1-5/64	2-15/64	1-5/8	1-1/4	7.25
PM	46A07*	4"x6"	E	.65 oz. Alnico V	3.5	3/4	1-15/16	1-27/64	3/4	4.75
	46A1	4"x6"	E	1.0 oz. Alnico V	3.5	1	2-1/4	1-9/16	1	5.10
	46A15	4"x6"	E	1.47 oz. Alnico V	3.5	1	2-1/4	1-9/16	1	5.50
PM	48A2*•	4"x8"	K	1.4 oz. Alnico V	4.5	7/8	2-3/16	—	1	7.95
ED	5E45‡	5"	C	450 Ohms	3.5	1-1/4	2-1/8	1-19/32	1	6.50
	5E10	5"	C	1000 Ohms	3.5	1-1/4	2-1/8	1-19/32	1	6.50
	5E62#‡	5"	C	55-65 Ohms	3.5	1-1/4	2-7/16	1-19/32	1-1/4	6.50
	5E90#‡	5"	C	85-95 Ohms	3.5	1-1/4	2-7/16	1-19/32	1-1/4	6.50
PM	5A05*•§	5"	I	.55 oz. Alnico V	3	7/16	1-11/16	—	1-1/2	3.50
	5A07*	5"	C	.65 oz. Alnico V	3.5	3/4	1-7/8	1-7/16	3/4	4.50
	5A07R*★	5"	B	.65 oz. Alnico V	3.5	3/4	1-7/8	1-7/16	3/4	4.50
	5A1	5"	C	1.0 oz. Alnico V	3.5	1	2-5/16	1-11/16	1	4.85
	5A1R★	5"	B	1.0 oz. Alnico V	3.5	1	2-5/16	1-11/16	1	4.85
	5A15	5"	C	1.47 oz. Alnico V	3.5	1	2-5/16	1-11/16	1	5.25
	5A15R★	5"	B	1.47 oz. Alnico V	3.5	1	2-5/16	1-11/16	1	5.25
ED	52E50#‡	5¼"	C	45-55 Ohms	4	1-1/4	2-17/32	1-27/32	1-1/2	7.00
	52E90#‡	5¼"	C	85-95 Ohms	4	1-1/4	2-17/32	1-27/32	1-1/4	7.00
PM	52A1	5¼"	C	1.0 oz. Alnico V	4	1	2-25/64	1-25/32	1	4.95
	52A1SQ¶	5¼"	A	1.0 oz. Alnico V	4	1	2-25/64	1-25/32	1	4.95
	52A21	5¼"	C	2.15 oz. Alnico V	4	1-1/8	2-21/32	1-25/32	1-1/4	6.05
	52A21SQ¶	5¼"	A	2.15 oz. Alnico V	4	1-1/8	2-21/32	1-25/32	1-1/4	6.05
ED	d57E45‡	5"x7"	D	450 Ohms	5	1-1/4	2-13/16	2-9/64	1-1/2	8.25
	d57E62#‡	5"x7"	D	55-65 Ohms	5	1-1/4	2-13/16	2-9/64	1-1/2	8.25
PM	57A1	5"x7"	D	1.0 oz. Alnico V	5	1	2-11/16	2-5/64	1	5.75
	57A15	5"x7"	D	1.47 oz. Alnico V	5	1	2-11/16	2-5/64	1	6.10
	57A21	5"x7"	D	2.15 oz. Alnico V	5	1-1/8	2-61/64	2-13/64	1-1/4	6.75
ED	d6EV6	6½"	C	6 Volt	5	1-1/4	2-23/32	2-1/32	1-1/2	$ 7.50
	6E45‡	6½"	C	450 Ohms	5	1-1/4	2-23/32	2-1/32	1-1/2	7.50
	6E10	6½"	C	1000 Ohms	5	1-1/4	2-23/32	2-1/32	1-1/2	7.50
	d6E18	6½"	C	1800 Ohms	5	1-1/4	2-23/32	2-1/32	1-1/2	7.50
	6E62#‡	6½"	C	55-65 Ohms	5	1-1/4	2-23/32	2-1/32	1-1/2	7.50
	6E90#‡	6½"	C	85-95 Ohms	5	1-1/4	2-23/32	2-1/32	1-1/2	7.50
PM	6A1	6½"	C	1.0 oz. Alnico V	5	1	2-5/8	2	1	5.30
	6A1R★	6½"	B	1.0 oz. Alnico V	5	1	2-5/8	2	1	5.30
	6A15	6½"	C	1.47 oz. Alnico V	5	1	2-5/8	2	1	5.75
	6A15R★	6½"	B	1.47 oz. Alnico V	5	1	2-5/8	2	1	5.75
	6A21	6½"	C	2.15 oz. Alnico V	5	1-1/8	2-7/8	2-1/8	1-1/4	6.45
	6A31	6½"	C	3.16 oz. Alnico V	6	1-3/8	3-11/64	2-9/32	1-3/4	7.60
ED	69A1*•	6"x9"	F	1.0 oz. Alnico V	6	7/8	2-3/4	—	1-1/4	6.40
	69EV6	6"x9"	D	6 Volt	8	1-31/64	3-1/2	—	2	8.50
	d69E10	6"x9"	D	1000 Ohms	8	1-31/64	3-1/2	—	2	8.50
PM	69A2*	6"x9"	D	1.4 oz. Alnico V	8	7/8	2-15/16	—	1-1/2	7.50
	69A3	6"x9"	D	3.2 oz. Alnico V	10	1-1/4	3-5/16	—	2	9.20

TV speaker. ‡ With hum bucking coils. * Very shallow unit. ★ Round basket. † Rotated pot. ¶ Square basket. • No Adjust-a-Cone suspension. § No mtg. bracket or threaded holes in pot. ** Impedance of 22A0628 is 8 ohms, 22A06Z100 is 100 ohms, 27A06Z12 is 12 ohms. d Will be discontinued when current stocks are depleted

QUAM *Adjusta-Cone®* SPEAKERS

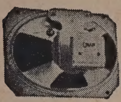


Fig. E

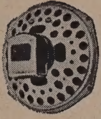


Fig. F

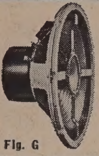


Fig. G

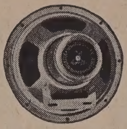


Fig. H

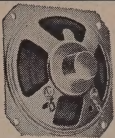


Fig. I

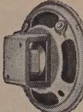


Fig. J

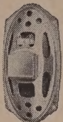


Fig. K

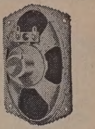


Fig. L

Replacement Speakers (Cont'd) Voice coil impedance 3.2 ohms ± 10%

TYPE	MODEL No.	SIZE	FIGURE	FIELD	POWER HANDLING WATTS	DIMENSIONS IN INCHES C	D	E	SHIP WT., LBS.	LIST PRICE
ED	d7EV6	7"	F	6 Volt	7	1-9/32	2-3/4	—	2	8.50
	d7EV6A†	7"	F	6 Volt	7	1-9/32	2-3/4	—	2	8.50
PM	7A21*	7"	F	1.4 oz. Alnico V	6	7/8	2-31/32	—	1	7.25
	7A31	7"	F	3.16 oz. Alnico V	9	1-1/4	3-1/32	—	1-3/4	8.75
ED	d8EV6	8"	C	6 Volt	7	1-1/4	3-9/32	—	1-3/4	8.50
	8E10	8"	C	1000 Ohms	7	1-1/4	3-9/32	—	1-1/2	8.50
	d8E18	8"	C	1800 Ohms	7	1-1/4	3-9/32	—	1-3/4	8.50
	d8E50#‡	8"	C	45-55 Ohms	7	1-1/4	3-9/32	—	1-3/4	8.50
	8E90#‡	8"	C	85-95 Ohms	7	1-1/4	3-9/32	—	1-1/2	8.50
PM	8A21	8"	C	2.15 oz. Alnico V	7	1-1/8	3-13/32	—	1-1/2	7.75
	8A31	8"	C	3.16 oz. Alnico V	9	1-3/8	3-21/32	—	2	9.00
ED	d10E60‡	10"	B	600 Ohms	10	1-3/4	5-1/16	—	4	14.00
	d10E10‡	10"	B	1000 Ohms	10	1-3/4	5-1/16	—	4	14.00
	d10E65#‡	10"	B	60-70 Ohms	10	1-3/4	5-1/16	—	4	14.00
	d10E90#‡	10"	B	85-95 Ohms	10	1-3/4	5-1/16	—	4	14.00
PM	10A31	10"	B	3.16 oz. Alnico V	9	1-3/8	4-1/2	—	2-3/4	11.50
	10A4A	10"	B	4.64 oz. Alnico V	10	1-3/8	4-1/2	—	3-1/4	12.95
	10A6A	10"	B	6.8 oz. Alnico V	12	1-7/16	4-5/8	—	3-1/2	14.50
ED	d12E60‡	12"	B	600 Ohms	12	1-3/4	5-5/8	—	5	16.00
	12E10‡	12"	B	1000 Ohms	12	1-3/4	5-5/8	—	5	16.00
	d12E15‡	12"	B	1500 Ohms	12	1-3/4	5-5/8	—	5	16.00
	d12E90#‡	12"	B	85-95 Ohms	12	1-3/4	5-5/8	—	5	16.00
PM	12A31	12"	B	3.16 oz. Alnico V	10	1-1/4	4-19/32	—	3-3/4	11.95
	12A4A	12"	B	4.64 oz. Alnico V	12	1-3/8	5-1/8	—	4	14.25
	12A6A	12"	B	6.8 oz. Alnico V	14	1-7/16	5-1/4	—	4-1/2	15.95

OUTDOOR SPEAKERS Voice coil impedance 3.2 ohms ± 10%

These Quam speakers have the new exclusive Humi-Gard Cone of plastic impregnated natural fiber fabric that outlasts ordinary moisture-proofed cones 3 to 1, yet has the response of an untreated paper cone. Resists sand and dirt abrasion. Air gap surfaces cadmium plated and enameled. Quantity quotations on request.

All Quam speakers are available weather-proofed for an additional 70c list. When ordering weather-proofed speakers use part numbers appearing in this catalog and add suffix "OT" to part number. (Humi-Gard Cone available only on 3½", 4", 5", and 6½" speakers.)

TYPE	MODEL No.	SIZE	FIGURE	FIELD	POWER HANDLING WATTS	C	D	E	SHIP WT., LBS.	LIST PRICE
PM	3A07 OT*•	3½"	A	.65 oz. Alnico V	2.5	3/4	1-19/32	1-3/16	1/2	$ 4.00
	4A1 OT	4"	A	1.0 oz. Alnico V	3	1	2-3/16	1-9/16	3/4	4.65
	5A15 OT	5"	C	1.47 oz. Alnico V	3.5	1	2-5/16	1-11/16	1	5.35
	6A15 OT	6"	C	1.47 oz. Alnico V	5	1	2-5/8	2	1	6.00

PUBLIC ADDRESS SPEAKERS Voice coil impedance 8 ohms

TYPE	MODEL No.	SIZE	FIGURE	FIELD	POWER HANDLING WATTS	C	D	E	SHIP WT., LBS.	LIST PRICE
PM	★8A21PA	8"	C	2.15 oz. Alnico V	8	1-3/8	3-9/16	—	2	$ 8.20
	★8A31PA	8"	C	3.16 oz. Alnico V	10	1-3/8	3-9/16	—	2-1/4	9.50
	8A4PA	8"	B	4.64 oz. Alnico V	12	1-3/8	3-3/4	—	2-3/4	11.00
	8A6PA	8"	B	6.8 oz. Alnico V	12	1-7/16	3-7/8	—	3-1/4	13.00
PM	10A31PA	10"	B	3.16 oz. Alnico V	12	1-3/8	4-13/32	—	2-3/4	11.50
	10A4PA	10"	B	4.64 oz. Alnico V	14	1-3/8	4-1/2	—	3-1/4	12.95
	10A6PA	10"	B	6.8 oz. Alnico V	14	1-7/16	4-5/8	—	3-1/2	14.50
	10A10PA	10"	B	10 oz. Alnico V	20	1-3/8	4-21/64	—	3-3/4	18.00
PM	12A31PA	12"	B	3.16 oz. Alnico V	12	1-3/8	5	—	3-3/4	11.95
	12A4PA	12"	B	4.64 oz. Alnico V	15	1-3/8	5-1/8	—	4	14.25
	12A6PA	12"	B	6.8 oz. Alnico V	15	1-7/16	5-1/4	—	4-1/2	15.95
	12A10PA	12"	B	10 oz. Alnico V	25	1-3/8	4-15/16	—	4-1/4	19.95

HIGH IMPEDANCE SPEAKERS Voice coil impedance 45 ohms ± 10%

Speakers with voice coil impedances other than those listed are supplied at an increase of $1.00 list. Those catalogued are most frequently used but any other model can be supplied with special voice coil impedance.

TYPE	MODEL No.	SIZE	FIGURE	FIELD	POWER HANDLING WATTS	C	D	E	SHIP WT., LBS.	LIST PRICE
PM	3A07Z45*•	3½"	A	.65 oz. Alnico V	2.5	3/4	1-19/32	1-3/16	1/2	$ 4.25
	4A07Z45*	4"	A	.65 oz. Alnico V	3.0	3/4	1-23/32	1-5/16	1/2	4.55
	4A1Z45	4"	A	1.0 oz. Alnico V	3.0	1	2-3/16	1-9/16	3/4	4.85
	5A07Z45*	5"	C	.65 oz. Alnico V	3.5	3/4	1-7/8	1-7/16	3/4	4.75
	5A1Z45	5"	C	1.0 oz. Alnico V	3.5	1	2-5/16	1-11/16	1	5.10

HIGH FIDELITY SPEAKERS

TYPE	MODEL No.	SIZE	FIGURE	SPEAKER TYPE	FREQUENCY RESPONSE CPS	Pwr Hndlg Watts	V.C. Impedance	Shippg Wt. Lbs.	LIST PRICE
PM	15A10CO	15"	G	Coaxial, 2000cps. Xover	25-15,000	20	8	8	$52.50
	12A6CO	12"	G	Coaxial, 2000cps. Xover	50-15,000	14	8	6-1/2	34.50
	8A4CO	8"	G	Coaxial, 2000cps. Xover	50-15,000	10	8	2-3/4	22.95
	12A10X	12"	H	Extended range	50-12,000	15	8	4-3/4	26.00
	10A10X	10"	H	Extended range	50-12,000	12	8	4-1/8	24.00
	8A10X	8"	H	Extended range	60-12,000	10	8	3-1/4	20.00
	15A10L	15"	H	Low frequency woofer	25-5,000	10	8	7	35.00
	12A10L	12"	H	Low frequency woofer	50-5,000	10	8	4-3/4	26.00
	5A15T	3"	B	High frequency tweeter	2,000-15,000	10	14	1	6.50
	3A15T	3"	A	High frequency tweeter	2,000-15,000	10	14	3/4	5.75
	CO2-50			Crossover Unit for use with 5A15T, 3A15T				1/2	2.00

TV speaker. ‡ Equipped with hum bucking coils. * Very shallow construction. ★ Round basket ¶ Square basket † Rotated pot.
d Will be discontinued when current stocks are depleted • without Adjust-a-Cone suspension. § No mounting bracket or threaded holes in pot.

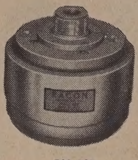
RACON ACOUSTICAL EXCELLENCE

SINCE 1922

STRAIGHT EXPONENTIAL TRUMPETS • COBRA-TYPE HORN
DRIVER UNITS • TWEETERS • CROSSOVER NETWORKS
RE-ENTRANT TRUMPETS • RADIAL HORNS & SPEAKERS

New Waterproof Permanent Magnet Driver Units

PM 609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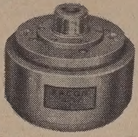
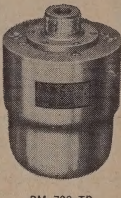

PM 615


PM 708 TR

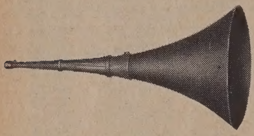
These four units employ Alnico V magnets and Armco magnetic iron throughout. All soft steel parts are doubly plated to prevent corrosion. An automatic electromagnetic cut-out switch is used in the magnetizing process, assuring maximum flux density in the gap and high uniformity. Units are individually measured for flux density. Each unit is tested with special equipment for power handling capacity as well as a 350-volt ground test.

Long life plastic diaphgrams and formers are supplied. Voice coil leads are non-fatiguing beryllium copper, insuring lifetime performance. All units are completely waterproof, yet permit ready replacement of diaphragm where needed.

Model No.	Weight Net	Ship.	Flux Density per sq. cm.	Frequency Range	Imp.	Diam.	Ht.	Thread	Capacity (watts) Peak	Oper.	Code	List Price
PM-623	6.5 lbs.	7 lbs.	15,500 gausses	80-7000	15	5″	5″	1⅜″-18	65	35	**RETIX**	**$52.50**
PM-615	6.5 lbs.	7 lbs.	13,500 gausses	90-7000	15	5″	4½″	1⅜″-18	60	30	**RETIN**	**42.50**
PM-609	4 lbs.	4.5 lbs.	12,000 gausses	90-7000	15	4″	3¼″	1⅜″-18	60	30	**RETEG**	**31.50**
PM-708TR*	6 lbs.	6.5 lbs.	11,000 gausses	90-7000	15	4½″	5½″	1⅜″-18	60	30	**RETOY**	**51.50**

***NOTE:** Contains built-in 25-watt line matching transformer, primary tapped at 500, 1000, 1500, 2000; secondary; 8 and 15 ohms.

STRAIGHT EXPONENTIAL TRUMPETS



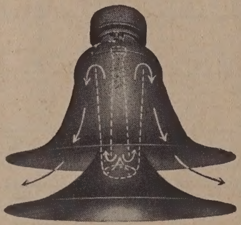
Output from any straight trumpet is approximately 2 DB higher than corresponding re-entrant type because it lacks the attenuation inherent in all re-entrant horns. **"Stormproof"** Trumpets are made of non-vibratory **RACON ACOUSTIC CLOTH.** Weather-treated for indoor or outdoor use. **"All Aluminum"** Trumpets are made of heavy gauge aluminum spinnings with rolled beaded edge and cast aluminum throat sections. **"Unbreakable"** Trumpets are made of heavy gauge aluminum spinnings reinforced and damped with Patented **RACON ACOUSTIC MATERIAL.**

Model No.	Air Column (length)	Units Required	Cut-off (cycles)	Distribution Angle	Bell Diam.	Material	Ship. Weight	Code	List Price
***ST-415A**	6′	1	115	45°	30″	Unbreakable	37 lb.	**REGON**	**$200.00**
****ST-414A**	6′	1	115	45°	30″	Stormproof	39 lb.	**RIDER**	**170.00**
***ST-417A**	6′	1	115	45°	30″	All Aluminum	35 lb.	**RHINO**	**170.00**
****ST-412A**	4½′	1	145	50°	25″	Stormproof	34 lb.	**RACEY**	**100.00**
***ST-413A**	4½′	1	145	50°	25″	All Aluminum	27 lb.	**RIANT**	**100.00**
****ST-411A**	3½′	1	195	50°	22″	Stormproof	28 lb.	**RENEW**	**55.00**
****ST-251A**	2′	1	250	55°	12″	Stormproof	6 lb.	**RISAT**	**21.00**
****ST-251B**	2′	1	250	55°	12″	All Aluminum	5 lb.	**RIMAD**	**20.00**

*Delivery, 4 weeks. **Delivery, 1-2 weeks. **NOTE:** Models with 2, 4 and 8 unit throats available. Prices on request.

Re-Entrant Trumpets and Radial Horns

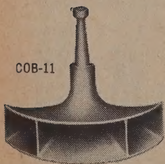
RE-35 RE-50 RE-60


SR-35R

Racon re-entrant horns and speakers incorporate exponential design throughout, for maximum efficiency. Castings and spinnings are aluminum, "U" bracket mounting (ratchet swivel type on request). Thread 1⅜″-18. (1-7/16″-16 on request). Model SR-35R is of the 360° radial type.

Model No.	Acoustic Length	Bell Diam.	Over-all Length	Cut-off (cycles)	Distrib. Angle	Ship Wt. lb.	Code	List Price
RE-60	6′	26″	28″	112	45°	21	**REMOL**	**$78.75**
RE-50	4½′	25¼″	23½″	140	50°	19	**REMOY**	**65.00**
RE-35	3½′	19″	16¼″	175	55°	12½	**REMOX**	**42.00**
RE-35E	3½′	10″	16″	175	55°	12½	**REMOE**	**40.00**
RE-25	2½′	13½″	11″	225	60°	9	**REMOD**	**32.00**

COBRA TYPE HORN


COB-11

Dimensions:
17⅝″ H, 22¼″ W, 13⅜″ D
Net Wt.: 14 lbs.
Shipping Wt.: 19 lbs.
Code: ROBON
List Price: $88.00
Cut-off: 250 cycles
Dispersion: 120° H, 40° V
***Thread:** 1⅜″–18
*1$\frac{7}{16}$″–16 on request

The RACON COB-11 "cobra" type horn is designed for public address systems requiring high clarity reproduction with maximum concentration of sound in a horizontal plane. It is of "straight" horn design and exponentially flared for maximum transfer of energy. The low cutoff of 250 cycles results in crisp, highly articulate quality without a trace of boominess. The horn consists of a heavy two-piece non-vibratory aluminum casting and is provided with a two-section serrated mounting bracket. Finish is baked gray hammertone over a zinc chromate primer.

COMPLETE LINE OF HI FREQUENCY TWEETERS AND FILTER NETWORKS, ALSO REPLACEMENT PARTS. CATALOGUE ON REQUEST.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

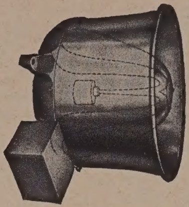
RACON SINCE 1922 ACOUSTICAL EXCELLENCE

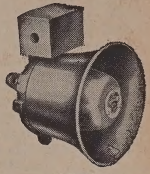
DOUBLE RE-ENTRANT MARINE SPEAKERS
RE-ENTRANT PAGING SPEAKERS

DOUBLE RE-ENTRANT MARINE SPEAKERS

The Models MR-30M, MG-21J, MG-21B and MN-15B marine speakers are designed primarily to meet the vigorous sound system requirements aboard ship.

The driver unit and connecting leads are all enclosed, resulting in a completely waterproof speaker. Heavy aluminum spinnings are used throughout and back base is a husky, non-corrosive aluminum casting. A baked chromatic undercoat plus an outside lacquer finish is assurance of lasting service under severe conditions of humidity and temperature. Designed for three-legged flush rear mounting. All models provided with cast aluminum transformer housing. "U" Brackets for mounting for all models supplied on request at slight additional cost.


MR-30M


MG-21B
MG-21J
MN-15B

Model No.	Frequency Range	Distribution Angle	Bell Diam.	Capacity (watts) Oper.	Peak	Imp.	No. Driver Units	Over-all Length	Ship. Wt. lb.	Code	List Price
MR-30-M	250-6000	50°	14"	30	60	15	1	10"	29¼	**REDIX**	**$192.50**
MR-32M	250-6000	50°	14"	60	120	8	2	18½"	43	**REDIT**	**282.50**
MG-21J	350-5000	55°	9½"	30	60	15	1	6¾"	13¾	**RASOM**	**85.00**
MG-21-B	350-6000	55°	9½"	25	50	15*	1	6¾"	9¼	**RASOB**	**74.00**
MN-15B	450-6000	65°	6¼"	25	50	15*	1	4¾"	6¼	**REDUP**	**65.00**
MN-15C	(same as MN-15B, but less "U" bracket)									**REDUT**	**61.50**
MN-15D	(same as MN-15B, but less "U" bracket and less transformer box)									**REDUZ**	**55.00**

***8 ohms on request at same price. Four or 45 ohm 1.00 list additional.**

RE-ENTRANT PAGING SPEAKERS

RE-15 RE-12

DW-9R

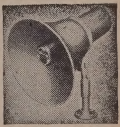
These weatherproof re-entrant paging speakers are capable of high intelligibility in locations where high noise levels prevail. Construction is non-vibratory throughout and consists of heavy aluminum spinnings and castings. Voice coils are designed to provide a high degree of efficiency when these speakers are also used as microphones in "talk-back" systems. Ideal for replacing conventional cone speakers. RE-12 and RE-15 provided with heavy cast aluminum ratchet bracket. DW-9R is supplied with flange for flush mounting. SR-12R and SR-15R are of the 360° radial type.

Model No.	Frequency Range	Distribution Angle	Operating Capacity	Imp.	Bell Diam.	Over-all Length	Ship. Wt. lb.	Code	List Price
RE-15	350- 8,500	60°	25 watts	*15 ohms	9"	9¾"	6	**REMAC**	**$41.50**
RE-12	450-10,000	65°	10 watts	*15 ohms	7"	6½"	3¼	**REMAB**	**32.50**
DW-9R	750-10,000	70°	10 watts	*15 ohms	5"	2½"	2	**REDOX**	**44.00**
SR-12R	450-10,000	360°	10 watts	*15 ohms	9"	9"	4	**RADAB**	**36.25**
SR-15R	350- 8,000	360°	25 watts	*15 ohms	12"	12"	7	**RADAS**	**45.00**

***8 ohms on request at same price. Four or 45 ohm 1.00 list additional.**

NEW PAGING AND TALK-BACK SPEAKERS

RE-20 — Model RE-20 has a nominal rating of 25 watts and incorporates a varnish vacuum impregnated transformer provided with a removable weatherproof aluminum spinning. Primary impedances are 625, 1250, 2500 and 5000 ohms and the secondary is tapped at 4, 8, and 16 ohms. By connecting directly to and between these terminals, the resulting impedances of 310, 625, 1250, 2500, 3650, 5000, 7300, 10,000, 14,500 and 29,000 ohms are equivalent to 16, 8, 4, 2, 1.3, 1.0, 0.7, 0.5, 0.34 and 0.17 watts respectively when connected across a 70 volt line. Weatherproof construction throughout.


MODEL RE-20, RE-11

RE-11 — Similar to the RE-20, but has a higher cutoff and a nominal rating of 10 watts. The built-in 10 watt transformer has primary impedances of 500, 1000, 1500 and 2000 ohms and a secondary tapped at 8 and 15 ohms.

RE-18 — This is the economical answer to all paging and "talk-back" applications where low to medium power levels are necessary and where "specs" do not call for line transformers. Bell and back cover are integrally spun of aluminum to assure weatherproof performance of the 10 watt driver unit. Complete with adjustable "U" bracket.

SPECIFICATIONS

MODEL NO.	**RE-20**	**RE-11**	**RE-18**
Power	25 W.	10 W.	10 W.
Range (cps.)	350-8,500	450-10,000	350-10,000
Dist. Angle	60°	65°	60°
V C Imp.	†8 ohms	†15 ohms	#15 ohms
***Sensitivity**	107.5 db.	104 db.	104 db.
Bell Dia.	9"	7"	9"
Length	12.5"	9.75"	9.25"
Weight (net)	7 lbs.	4 lbs.	3 lbs.
Weight (ship.)	9 lbs.	5.5 lbs.	3.5 lbs.
Code	**REMAY**	**REMAN**	**REMAT**
List Price	$60.00	$46.50	$38.50

*4 ft., 1 watt input, warble signal 1,200-2,000 cps.
#8 ohm available at same price. 4 and 45 ohm $1.00 list additional.
†Built-in transformer. See text.

MODEL RE-18

from the RYE SOUND group of precision products

RYE SOUND CORP.
Mamaroneck, New York

lightweight headsets

Complete with phone, cord and plug assembly.

These Rye Sound headsets meet the requirements of comfortable under-the-chin use and provide binaural (two-ear) hearing for maximum intelligibility. Attractive, lightweight, comfortable and completely hygienic.

RYE STEREOSOUND

The finest way to listen to stereo equipment. Provides maximum listening intelligibility. Excellent separation of signal for balanced output to each ear. Complete with two earphones molded in, two plugs and two cords.

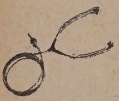
Model D270, STEREOSOUND 120 ohms	Model D273, STEREOSOUND 500 ohms	Model D276, STEREOSOUND 300 ohms
Model D271, STEREOSOUND 1000 ohms	Model D274, STEREOSOUND 50 ohms	Model D277, STEREOSOUND 4000 ohms
Model D272, STEREOSOUND 2000 ohms	Model D275, STEREOSOUND 15 ohms	Model D278, STEREOSOUND 8000 ohms

RYE STETHOSOUND

Durable headphone incorporates two magnetic earphones feeding sound directly into both ears for superior intelligibility. Complete with earphones, cord and plug. Changeable plastic foam eartips for hygienic purposes. Available with impedances from 15 to 8000 ohms.

Model D260, STETHOSOUND 120 ohms	Model D263 STETHOSOUND 500 ohms	Model D266, STETHOSOUND 300 ohms
Model D261 STETHOSOUND 1000 ohms	Model D-264 STETHOSOUND 50 ohms	Model D267 STETHOSOUND 4000 ohms
Model D262 STETHOSOUND 2000 ohms	Model D265 STETHOSOUND 15 ohms	Model D268 STETHOSOUND 8000 ohms

RYE STETHOPLUG



Lightweight headsets includes a special Rye Sound earphone speakers inside the jack plug. Reproduces the sound at the side of the equipment then through acoustical tubing; thus the only thing the operator has to wear is an ultra-light clip equipment with damping filters for superior intelligibility. Advantages are lightest weight for operators, less exposure to damage by dropping, no cord, no breakage or knots. Headset has changeable eartips for hygienic reasons. Headset weights only .4 ounces. Available in impedances from 15 to 2000 ohms. Available with standard phone plug only.

Model D280 STETHOPLUG 120 ohms	Model D284 STETHOPLUG 50 ohms
Model D283 STETHOPLUG 500 ohms	Model D285 STETHOPLUG 15 ohms

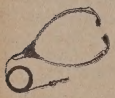
Model D356—STETHOLOOP

Lightweight headset made of strong attractively colored semi-elastic material. Spring action of tubing assures perfect fit for anyone and the eartips can be changed for hygienic reasons. Provision for a single snap-on phone at one side at the top of the thin tube so that the sound goes straight into one ear and through the tube into the other. Special diaphragm equalizes sound pressure at the two ears, reduces harmonic distortion — assuring the greatest maximum intelligibility.

Model D356S STEREOLOOP

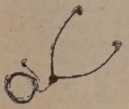
Same as the D356 except has provision for 2 snap-on ear phones, one at each ear, for true stereophonic reproduction.

Model D355 STETHOSCOPE, FEATHERWEIGHT



Advanced design, lightweight headset of plastic tubing with adjustable pivot fork assembly. Fits comfortably under the chin. Earphone easily attached to stethoscope by means of press-stud. Removable eartips for hygienic purposes.

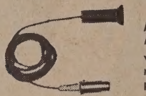
Model D358 STETHOSCOPE, ULTRA-FEATHERWEIGHT



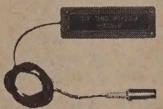
Same as model D355 except pivot fork assembly replaced by semi-flexible tubing and can be adjusted comfortably to operator's ears. Eartips include built-in nylon-foam damping filters.

For recording telephone conversations

Induction telephone pickup coil picks up voices for recording from both sides of the phone with no tapping of wires, or special telephone circuits required. Specify plug and circuitry.

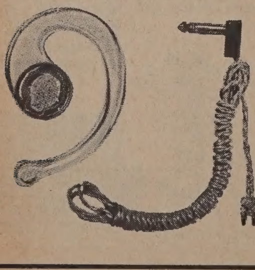


Model D374 (round)
Made in U.S.A.
with suction cup for mounting shielded type phones



Model D372 (flat)
fits under base of cradle or upright phone.

POLYETHYLENE EAR CLIP



Soft, polyethylene ear clip for holding earphone firmly in place. Adaptable for left or right ear.

EARPHONE ASSEMBLIES FOR SET DISTRIBUTORS

DELUXE LINE made by American & European craftsmen. Each earset packed in a plastic box, labeled by code and type each box contains one super quality MAGNETIC receiver with plastic earloop for use on either ear, and one cord and plug.

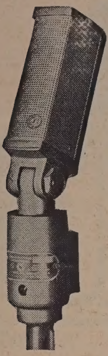
R-31	Regency
R-32	RCA (except T1)
R-32A	RCA T1
R-34	Motorola (except 6x28, 7x25, 8x26, X12, L13, L14)
R-34A	Motorola 6x28, 7x25, 7x25, 8x26, X12, L12, L13, L14
R-35	Admiral
R-36	Magavox
R-37	Philco (except T5)
R-37A	Philco T5
R-38	Bulova
R-39	Roland
R-40	Travler
R-41	Westinghouse
R-42	Emerson
R-43	General Electric
R-44	DeWald
R-46	Revere 400
R-47	Arvin
R-48	Sylvania
R-49	Hoffman Solar
R-50	Zenith

ECONOMY LINE manufactured in Japan by RYE SOUND with right angle miniature plug.
A50—15 ohm impedance A50-A—2000 ohm impedance

SHURE

STUDIO MICROPHONES

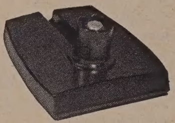
UNI-DIRECTIONAL RIBBON MICROPHONE



Model "333"
Studio Uni-Ron

Here is the dependable "333," a truly fine and rugged microphone created for discriminating users with the most exacting professional requirements. Here, indeed, is a major advance in microphone development and design! This small, ultra-cardioid "333" is highly recommended for motion-picture studios, TV studios, radio stations, professional recording, and all other uses where quality requirements are of the highest. Here is performance never before achieved in such a small and slender microphone! Here is ruggedness and reliability! Here is matchless beauty and striking design to appeal to users who demand the finest! The "333" is ultra-cardioid, uni-directional—reduces the pickup of random noise energy by 73%——prevents the pickup of moving props, scuffling feet and moving "dollies," so common when conventional broadcast microphones are used. Following are the features that make the "333" Studio so outstanding in performance, so dependable in operation: (1) patented, world-famous "Uniphase" system; (2) a true ultra-cardioid pickup pattern; (3) horn-loaded ribbon transducer provides extended smooth response, production uniformity guaranteed to plus or minus 2½ db, 30-15,000 c.p.s.; (4) multi-impedance switch; (5) voice-music switch; (6) anti-"Pff" filter screen; (7) Shure self-adjusting "lifetime" swivel; (8) high output; (9) sturdy, one-piece metal case; (10) vibration-isolation unit mounted in live rubber; (11) Cannon XL connector. All these important features, plus the striking design of the Studio "333," make it ideal for critical studio applications that call for the highest possible broadcast quality, small size and matchless beauty——plus the ability to withstand the rough work-a-day handling by the sound crew. The "333" has two-tone "Baked Bronze" non-reflecting finish. Head dimensions: Width, 1 1/8"; height, 3 9/16"; depth, 1 3/4".

IMPEDANCE TABLE	OUTPUT LEVEL
Low—50 ohms	60 db below 1 Milliwatt per 10 microbar signal
Medium—150 ohms	59 db below 1 Milliwatt per 10 microbar signal
High-Medium—250 ohms	



Model S33
Broadcast
Desk Stand
For use with Models 300, 333, 525, 535 and 556S
List Price $15.00

MODEL	LIST PRICE
"333"	$250.00

OMNI-DIRECTIONAL DYNAMIC MICROPHONE

Model "525"
Studio Slendyne

The new Studio "525" is an exceptionally fine probe microphone of broadcast quality. It features: (1) frequency response 40-15,000 c.p.s., production uniformity guaranteed to plus or minus 2½ db; (2) a moving-coil mounted in a highly efficient magnetic structure; "Alnico V" magnet; (3) multi-impedance switch; (4) high output; (5) long life "Duracoustic" diaphragm——specially designed to withstand moisture, heat, cold and physical shock. The "525" is furnished with a 20 ft., two-conductor, rubber-covered, shielded cable with Cannon XL-3-11 connector attached; swivel adapter; adjustable lavalier assembly (cord and clip), and a belt clip assembly. The "525" Studio has a non-reflecting "Baked Bronze" finish——which makes it blend into the background, giving the spotlight to the performer. Body diameter, 1"; length, 8 17/32".

IMPEDANCE TABLE	OUTPUT LEVEL
50 ohms	61 db below 1 Milliwatt per 10 microbar signal
150 ohms	
250 ohms	

Model S33
Broadcast
Desk Stand
List Price: $15.00

MODEL	LIST PRICE
"525"	$200.00

BI-DIRECTIONAL GRADIENT[1] MICROPHONE

Model "300"
Studio Gradient[1]

This rugged, high fidelity, multi-impedance microphone is widely used for television, radio broadcasting, professional recording and high-fidelity uses. The "300" reduces reverberation and the pickup of random noise by 66%. The "300" combines the best features of conventional velocity microphones with advanced acoustic design—including an anti-"PFF" filter screen. Its bi-directional polar pattern is effective over a broad frequency range. It provides sound pickup at the front and rear of the microphone, but greatly reduces pickup at the sides. One of the outstanding features of the "300" is the fact that the microphone can be placed at a 73% greater distance from the performer than is possible with omni-directional microphones! The "300" has a non-reflecting "Baked Bronze" finish, so it blends into the background, gives the spotlight to the performer. The "300" has a readily accessible Voice-Music switch, vibration-isolation unit mounted in live rubber, and a multi-impedance switch, providing low medium and high impedance. Extended response, production uniformity guaranteed to plus or minus 2½ db, 40-15,000 c.p.s. Furnished with a 20-foot two-conductor, rubber-covered, shielded cable with Cannon XL-3-11 connector attached.

IMPEDANCE TABLE	OUTPUT LEVEL
L—35-50 ohms	59 db below 1 Milliwatt per 10 microbar signal
M—150-250 ohms	60 db below 1 Milliwatt per 10 microbar signal
H—High	57 db below 1 volt per microbar

Model S33
Broadcast
Desk Stand
List Price: $15.00

MODEL	LIST PRICE
"300"	$150.00

See Pages 228-231 for additional Shure Products.

SHURE

GENERAL PURPOSE MICROPHONES

OMNI-DIRECTIONAL DYNAMIC MICROPHONES

The versatile Slendyne 535 is a moving-coil dynamic microphone built to provide wide range reproduction of music and voice. Actually five microphones in one . . . can be used for indoor or outdoor applications: (1) in the hand, (2) on a floor stand, (3) on a desk stand, (4) hung around the neck on a lavalier cord. Add to this an on-off switch adapter and dual-impedance switch and you have the most completely versatile fine quality probe ever developed. Frequency response is 60 to 13,500 c.p.s. Ideal for high quality public address, theater-type sound systems, and all recording applications where an omni-directional microphone is desired. Ruggedly built to withstand hard usage. Unaffected by temperature and humidity variations. The 18-foot, high quality, shielded, two-conductor cable is supplied with a microphone plug equivalent to the Amphenol 91-MC3M plug. Finished in rich satin chrome. A self-adjusting swivel adapter is supplied with the microphone, and permits it to be tilted from 90° from vertical to horizontal, making it possible to tilt the microphone at the source of sound. Also includes on-off switch adapter.

The Model 530 Slendyne is the deluxe broadcast Slendyne, finished in an attractive black and gold anodized finish. It has a frequency range of 50 to 15,000 c.p.s., and is furnished with a 20-foot, high quality, two-conductor shielded cable with a Cannon XL-3-11 cable connector. Furnished with swivel adaptor, deluxe lavalier cord and belt clip, on-off switch adaptor.

LAVALIER ASSEMBLY Model A28L for use with Slendyne model 535.

MODEL A28L ____________________ LIST PRICE $4.50

Model "535"
Slendyne

MODEL	IMPEDANCE TABLE	OUTPUT LEVEL
"535"	L—50-250 ohms	61 db below 1 Milliwatt per 10 microbar signal
	H—High	61 db below 1 volt per microbar
"530"	L—50-250 ohms	61 db below 1 Milliwatt per 10 microbar signal
	H—High	61 db below 1 volt per microbar

MODEL	LIST PRICE
"535"	$72.50
"530"	$110.00

Model "530"
Broadcast Slendyne

BI-DIRECTIONAL GRADIENT[1] MICROPHONE

This rugged high fidelity multi-impedance microphone features a frequency response of 50 to 12,000 cps — will reproduce voice and music in a clear, natural tonal quality, which makes it ideal for use in auditoriums, night clubs, schools and churches. Provides unusual freedom of motion on the platform — making it possible for the user to stand at a 73% greater distance from the microphone than with omni-directional microphones. Bi-directional "Fig. 8" pickup pattern extends over a broad frequency range — and it permits the sound system to be operated at a level almost 6 db higher than is possible with non-directional (omni-directional) microphones! Picks up voices and music from front to back — is "dead" at the sides, reduces reverberation and the pickup of random noises by 66%. It is "PFF"-proof — filters out the "PFF"-type noises often heard over conventional microphones. Dimensions: height 6"; width $1\frac{7}{16}$"; depth $1\frac{3}{32}$". The "315" is furnished with an 18-foot, high quality, two conductor, shielded cable, supplied with the equivalent of the Amphenol 91-MC3M plug.

IMPEDANCE TABLE	OUTPUT LEVEL
L—35-50 ohms	59 db below 1 Milliwatt per 10 microbar signal
M—150-250 ohms	60 db below 1 Milliwatt per 10 microbar signal
H—High	57 db below 1 volt per microbar

MODEL	LIST PRICE
"315"	$89.50

Model "315"
Gradient

UNI-DIRECTIONAL RIBBON MICROPHONE

Similar to "333" studio microphones, the 330 "UNI-RON" Microphone has been designed to meet the exacting requirements of professional tape recording and highest quality indoor public-address systems where highest quality is essential, yet cost is a factor. Supercardioid pickup pattern reduces pickup of undesired random noise energy by 73%! Smooth, peak-free response from 30 to 15,000 cps. The Professional "Uni-Ron" is equipped with multi-impedance (50, 150 and 250 ohms) switch, life-time swivel, and special vibration-isolation shock mount, as well as Cannon XL-3-11 cable connector and 20 ft. 2-conductor shielded broadcast-type cable. Finished in beautiful satin-chrome with natural anodized aluminum grille.

IMPEDANCE TABLE	OUTPUT LEVEL
L — 50 ohms	59 db below 1 milliwatt per 10 microbars
M — 150 ohms	57 db below 1 milliwatt per 10 microbars
H — 250 ohms	58 db below 1 milliwatt per 10 microbars

MODEL	List Price
"330"	$120.00

Model "330"
"Professional Uni-Ron"

See Pages 228-231 for additional Shure Products.

SHURE

GENERAL PURPOSE MICROPHONES

Model "545"
Unidyne III

The Shure Model 545 "Unidyne III" is a new addition to the famed family of Unidyne microphones. This striking-looking, compact, slender, uni-directional, moving-coil microphone features wide-range reproduction of voice and music and flexibility of uses as a hand or stand microphone. The 545 is ideal for installations where it is desired to keep microphone size and weight to a minimum and still retain maximum operating efficiency. Recommended for dependable use in fine quality P.A. systems, tape recording, fixed-station communications, etc. Provides highly satisfactory operation under adverse acoustic conditions — reduces or eliminates problems due to feedback and background noise pickup. Permits placement at a distance from the performer 75% greater than possible with omni-directional microphones. The 545 "Unidyne III" is rugged — will operate for years without deviation from its original standards.

TYPE: Dynamic. FREQUENCY RESPONSE: 50-15,000 cps. POLAR PATTERN: Cardioid (Uniform with frequency, symmetrical about axis). MAGNETIC CIRCUIT: uses Alnico V magnet. CASE: Die cast zinc and "Armo-Dur". FINISH: Satin chrome and black. CABLE CONNECTOR: Equivalent to Amphenol MC4M plug. CABLE: 18 ft., 3 conductor shielded. STAND THREAD: ⅝" — 27 thread. DIMENSIONS: Length — $5\frac{13}{16}$", Diam. — $1\frac{15}{64}$". NET WEIGHT: 6/10 lb., Shipping Weight 2⅞ lbs. FURNISHED ACCESSORIES: A25 type swivel adapter. OPTIONAL ACCESSORIES: A86A cable type transformer, S33B desk stands.

IMPEDANCE TABLE	OUTPUT LEVEL
L — 50-250 ohms	LOW: —57 db. (Odb = 1 milliwatt per 10 microbars)
H — High	HIGH: —55 db. (Odb = 1 volt per microbar)

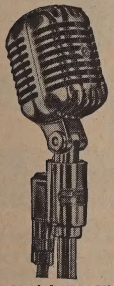
MODEL	LIST PRICE
545	$85.00

UNI-DIRECTIONAL DYNAMIC MICROPHONES

Model "55S"
Unidyne

The Unidynes are the largest selling microphones throughout the world — used consistently by famed celebrities for those important events where the faithfulness of sound reproduction is critical. A sturdy construction provides immunity of the moving-coil system to abnormal atmospheric conditions and severe mechanical shock. Model 55S is highly recommended for fine qquality public address, theater-stage sound systems, recording and remote broadcasting, and low-gain tape recording. It is also the field-proved standard for fixed station use in the police, fire, transportation, forestry and commercial services. Smooth frequency response from 50 to 15,000 cps. Furnished with an 18-foot cable and plug assembly.

Model 556S is specially constructed and tested to meet the requirements of the broadcast and television studio, and is held within close tolerances in frequency response and directivity. It is a moving-coil type microphone with a frequency range of 40 to 15,000 cps, production uniformity guaranteed to plus or minus 2½ db. As a further precaution against mechanical vibration pickup, the 556S is provided with an additional isolation unit, of live rubber construction in combination with the stand connector and a built-in high quality cable connector. Furnished with a 20-foot, high quality, shielded, 2-conductor cable with Cannon plug attached. Both the 55S and the 556S feature the world-renowned patented "Uniphase" network system.



Model "556S"
Broadcast

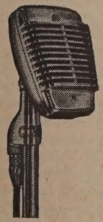
IMPEDANCE TABLE	OUTPUT LEVEL
L—35-50 ohms	54 db below 1 Milliwatt per 10 microbar signal
M—150-250 ohms	55 db below 1 Milliwatt per 10 microbar signal
H—High	57 db below 1 volt per microbar

MODEL	LIST PRICE
556S	$135.00
55S	$ 83.00

MULTI-IMPEDANCE HIGH OUTPUT DYNAMIC

The "Sonodyne" is ideal for all general purposes, including public address, wire and tape recording, and similar applications. Ideal high-quality, moderately-priced replacement for the conventional microphone supplied with tape recorders. The wide range frequency response is 60 to 10,000 cps. This rugged microphone is of the pressure type, with conventional semi-directional characteristics, and it may be used for close-talking without undue low frequency emphasis. Multi-impedance, — for low, medium and high impedance. Has built-in receptacle and a 15-foot, two-conductor shielded cable with microphone plug attached. Satin chrome finish.

Model "51" **List Price 49.50**



Model "51"
"Sonodyne"

Multi-Impedance
Switch on Models
"55S", "556S", "51"
"300", "315"

IMPEDANCE TABLE	OUTPUT LEVEL
L—35-50 ohms	53.0 db below 1 Milliwatt for 10 microbar signal
M—150-250 ohms	52.5 db below 1 Milliwatt for 10 microbar signal
H—High	52.0 db below 1 volt per microbar

See Pages 228-231 for additional Shure Products.

SHURE GENERAL PURPOSE MICROPHONES

"COMMANDO" ALL-PURPOSE MICROPHONES

The new Commando series represents a significant achievement in providing quality performance at nominal cost. These dramatic looking, rugged microphones can be used indoors or outdoors. Models 415 and 430 provide practical versatility of operation. They can be held in the hand, set on a floor stand or on a desk stand — can be inserted or withdrawn from the stand in a second, without the use of any tools. Model 420 is of more compact design and is intended primarily for use as a lavalier microphone. It is readily detachable from its lavalier clip for use as a hand held unit. Coupled with this versatility of usage, the Commandos are ideal for general-purpose applications where both voice and music reproduction are of critical importance. Commandos can be used for tape recording in the home; theater-restaurant public address systems; lecturing; paging and dispatching systems; interview-type shows; outdoor public address systems for carnivals, picnic and special events.

All three units are ruggedly constructed of attractive, non-reflecting gray, impact resistant polystyrene. The lower part of Models 415 and 430 are of die cast zinc with a satin chrome finish.

The Commandos are omni-directional units with a frequency response of 60-10,000 cps. They are controlled magnetic units and are unaffected by extremes of temperature and humidity. Models 420 and 430 are equipped with readily changeable pin jacks for a choice of two impedances (L — 150 to 250 ohms and H — High), without soldering.

Model 430 includes on-off switch, dual-impedance feature and Amphenol MC2M cable conductor. Furnished with 15 Ft. of 2-conductor shielded cable, black Model A25-type swivel adapter and switch locking plate for keeping switch in "on" position. List Price: **$38.50**

Model 420 includes dual impedance feature and lavalier cord and clip assembly. Furnished with 20 ft. of non-detachable 2-conductor shielded cable. List Price: **$30.00**

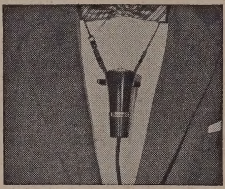
Model 415 includes black Model A25-type swivel adapter and 7 ft. of non-detachable single-conductor shielded cable. High impedance only. List Price: **$27.50**

S38B Desk Stand for use with Models 415 and 430. List Price: **$4.50**

Model 430 in the Hand

Model 430 on Floor Stand

IMPEDANCE	OUTPUT LEVEL
150-250	—54 db below 1 volt per microbar
HIGH	—55 db below 1 milliwatt per 10 microbars



Lavalier Model 420

Model 430 on S38 Desk Stand

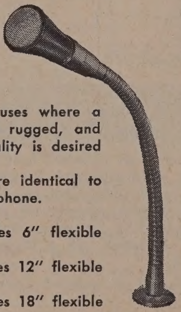
Model 415 in the Hand

425 SERIES "COMMANDO"

Designed for faithful voice and music reproduction. Ideal for recording on tape, wire or disc, fixed or mobile public address systems, *language laboratory systems,* intercommunications systems, amateur communications and similar uses where a flexible arm is required. The 425 is rugged, and recommended for use where high quality is desired at low cost.

Electrical specifications for the 425 are identical to those for the 420 "Commando" microphone.

LIST PRICE: Model 425 — $30.00
- Model 425-G6 — $33.00. Includes 6" flexible gooseneck and mounting flange.
- Model 425-G12 — $33.75. Includes 12" flexible gooseneck and mounting flange.
- Model 425-G18 — $35.00. Includes 18" flexible gooseneck and mounting flange.



Model 425 Flexible Gooseneck Mounting

CASE: Impact resistant polystyrene — brass.
FINISH: Bright Chrome and non-reflecting gray.
CABLE: 7 ft., 2-conductor, non-detachable, shielded.
DIMENSIONS: Length $3\frac{11}{16}$", diameter 1¾".
OPTIONAL ACCESSORIES: Model A86A Cable Type Transformer.
Model A25 Swivel Adapter.

CABLE TYPE TRANSFORMER

Model A86A

Model A86A is a high-quality, cable-type transformer which makes it convenient to run a long microphone line from a low impedance microphone to a high impedance amplifier. It is housed in a compact, sturdy and magnetically-shielded case. Connection terminals are easily accessible, and compression fittings crimp the microphone and amplifier inputs. The A86A matches 35-50 ohm and 150-250 ohm microphones to high impedance amplifier inputs. This type of system usually solves the problem of excessive high frequency loss and objectionable hum pickup when long lengths of microphone cable are necessary. The A86A offers additional versatility when used in conjunction with Shure Models 51, 55S, 556S, 300, 315, 330, 333, 525, 530 and 535 Dynamic and Ribbon Microphones. And in addition to these the Model A86A may be used in specialized applications which require high impedance to low impedance circuit connections. The transformer is finished in an attractive two-tone gray and is furnished with a 2-foot cable. Frequency response: 20 to 20,000 c.p.s., plus or minus 1 db.

Model —A86A List Price: **$17.50**

See Pages 228-231 for additional Shure Products.

SHURE CRYSTAL MICROPHONES

THE VERSATILE "SLIM-X" ALL-PURPOSE MICROPHONE

FOR:

- Low Cost P. A. Systems
- Home Recording
- Hams
- General Purpose

In Cradle On S38 Desk Stand

On S38 Desk Stand (With A25 Swivel)

In Cradle On Floor Stand

In the Hand

The "777" Slim-X Microphones are rugged little microphones weighing only 6 ounces! They are designed for good-quality voice and music reproduction. Their versatility and "hand-ability" make them ideal for use by lecturers, announcers, instructors, and Hams; for audience participation shows; carnivals; panel and quiz shows; and use with home-recorders. When mounted on either cradle or swivel, the "777" can be removed in a flash (no tools necessary)—simply by lifting it out of the holder. This makes it an ideal "walk-around" hand-held microphone.

TECHNICAL INFORMATION: Smooth frequency response—60 to 10,000 c.p.s.; Moisture-proof "Metal Seal" crystal for long operating life; high impedance; 7 ft. single-conductor cable, disconnect type. Dimensions: (Microphone only) Length, 4½"; Diameter, 1". Finish: Rich satin chrome overall.

Note: All Models are furnished with Lavalier Cord, for suspension of microphone around neck.

"SLIM-X" ASSEMBLIES

MODEL 777A includes 777 Microphone; A-25 Swivel Adaptor; S-38 Desk Stand; Lavalier Cord.
Model: 777A List Price: $33.00

MODEL 777SA includes 777S Microphone; A-25 Swivel Adaptor; S-38 Desk Stand; Lavalier Cord.
Model: 777SA List Price: $35.00

ACCESSORIES FOR "777"

MODEL S-38 STAND is a heavy die-cast base. Includes metal screw machine stud for connecting microphone adaptor to stand base.
Model: S-38 List Price: $4.50

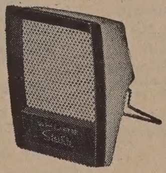
MODEL A-25 SWIVEL ADAPTOR features a long-life, high-quality swivel connector. Is lined with a long-life nylon sleeve—for noise-free and scratch-free insertion and removal of microphone.
Model: A-25 List Price: $5.50

Model	Output	List Price
777	62 db below 1 volt per microbar	$25.00
777A		$33.00
777S With Switch		$27.00
777SA With Switch		$35.00

"MONOPLEX"

The only Super-Cardioid Crystal Microphone made—far superior to conventional Crystal Microphones! Excellent for high-quality public address, communications, recording, and similar applications. The 737A operates under adverse conditions of background noise and reverberation—where a conventional microphone would be practically useless! Reduces pickup of random sound by 73%! Moisture-proof "Metal Seal" crystal for long operating life. Case pivots at rear, can be pointed toward desired sound or upwards for horizontal plane pickup. Has 15 ft. shielded cable. Rich satin chrome finish. High impedance.

MODEL	OUTPUT	LIST PRICE
737A	53 db below 1 volt per microbar	$46.00



Model 215 and 715

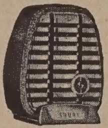
"STARLITE"

—Beautifully designed. Excellent for voice and music. Extremely low price and good quality make them a "natural" for home recording, intercom systems and inexpensive P.A. systems. Can be held in the hand, or used on a desk by simply releasing a built-in retractable stand. Semi-directional, high impedance; impact resistant polystyrene cases.

Model 215, a *ceramic unit*, has a response from 50-8000 cps; Model 715, a *crystal unit*, has a response range from 50-10,000 cps. Both supplied with 5 ft. fabric covered single conductor shielded cable.

MODEL	OUTPUT	LIST PRICE
215 Ceramic	56.5 db below 1 volt per microbar	$8.00
715 Crystal	50 db below 1 volt per microbar	$8.00

THE "REX"



Model 710A and 710S

Model 707A

A natural for "Hams" and low-cost public address system. A rugged unit designed for high speech intelligibility. Broad "tip-proof" table top base, with floor stand adapter. Die cast case. Frequency response 60 to 9,000 c.p.s. 5 ft. shielded cable. Burgundy-red metallic finish. Only 2⅔" wide, 3¼" high, 1⅛" thick. High impedance.

MODEL	OUTPUT	LIST PRICE
710A	50 db below 1 volt per microbar	$12.00
710S (with switch)	50 db below 1 volt per microbar	$14.00

MODEL 707A

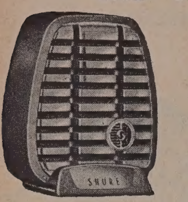
Ideal for low-cost P.A. systems, amateur 'phone transmitters and similar applications. Good quality at low cost. Has typical semi-directional pickup. 7 ft. shielded cable. High impedance. Pearl Gray case, satin chrome finish on front grille. Diam. 2⅜". (Use with Shure Model S34B or S36A Desk Stands.)

MODEL	OUTPUT	LIST PRICE
707A	50 db below 1 volt per microbar	$19.50

See Pages 228-231 for additional Shure Products.

SHURE CONTROLLED MAGNETIC MICROPHONES

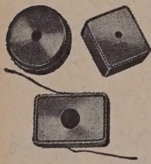
THE "HERCULES"



The "Hercules" is a hand-held unit, ideal for general purpose use in tropical countries and in all coastal areas where heat and humidity are a problem. The "510" provides the ruggedness, clear reproduction and high output for public address, communications and recording where high speech intelligibility is vital. It is recommended for Announcing; Mobile Public Address Systems; Communications; Home Recording, and High Quality Intercommunication. The Hercules can be used either Indoors or Outdoors, fits snugly in the hand, sits firmly on a desk. High impedance. Frequency response 100 to 7000 c.p.s. Furnished with 7 ft. shielded cable. Green metallic finish. Diecast case. Furnished with stand adapter. Dimensions: 2 2/3" wide, 3 1/4" high, 1 1/2" thick. Model 510 Series designed to be used with S34B or S36A Desk Stands. (See page D-7)

MODEL	OUTPUT LEVEL	IMPEDANCE	LIST PRICE
510C	52.5 db below 1 volt per microbar	HIGH	$17.00
510S (with switch)	52.5 db below 1 volt per microbar	HIGH	$19.00

MINIATURE MICROPHONES



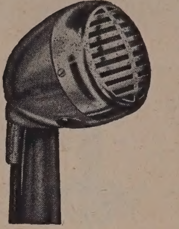
Small microphones specially designed for use in vacuum-tube devices such as small, compact amplifiers, transmitters, dictating equipment—wherever size and weight are important factors. They also are highly recommended for use in small transistor-type devices. They are immune to varying conditions of heat and humidity.

Model MC11
(Circular)
Impedance: 1,000 ohms
Frequency Response:
400 to 3,000 cps
Output Level:
—75 db (0 db - 1 volt per microbar)
Dimensions:
Dia. 1 1/64",
thickness 25/64"
List Price: $12.50

Model MC20
(Rectanglar)
Impedance: 1,100 ohms
Frequency Response:
400 to 4,500 cps
Output Level:
—75 db (0 db - 1 volt per microbar)
Dimensions:
width 10/16",
thickness 5/16",
length 15/16"
List Price: $14.00

Model MC30
(Rectangular)
Impedance: 1,850 ohms
Frequency Response:
400 to 3,500 cps
Output Level:
—76 db (0 db - 1 volt per microbar)
Dimensions:
width .5",
length .5",
thickness .265"
List Price: $20.00

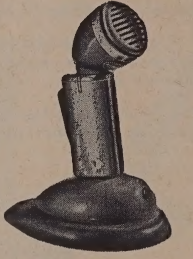
THE "GREEN BULLET"



The "Green Bullet" is designed to provide quality music and speech reproduction at moderate cost. It is practically immune to the effects of high temperatures and humidity. It features: high output, good response, high Impedance without the need of a transformer. The "Green Bullet" has a beautiful modern metallic green finish with a plated grille. Frequency response is 100 to 7000 c.p.s. Furnished with 7 ft. single-conductor shielded cable. High Impedance. The "Green Bullet" is highly recommended for those public address systems where low cost is a must, good reproduction is essential and ruggedness is a necessity. Model 520 series designed to be used with Shure Model S34B or S36A Desk Stands. (See page D-7)

MODEL	OUTPUT LEVEL	IMPEDANCE	LIST PRICE
520	52.5 db below 1 volt per microbar	HIGH	$22.50
520B	51 db below 1 milliwatt per 10 microbars	150-250 ohms	$22.50

THE "DISPATCHER"



MODEL 520SL

This new Controlled Magnetic unit is designed to handle the most severe field requirements of paging and dispatching systems. The unit is supplied with 7 feet of 2-conductor shielded cable, and is wired to operate both microphone and relay circuits. The "Dispatcher" is ideal for police, taxi-cab, railroad, airport, bus, truck, and all emergency communications work where dependability is vital. Large grip-bar assures positive contact.

(NOTE: Complete assembly furnished as illustrated.)

MODEL	OUTPUT LEVEL	IMPEDANCE	LIST PRICE
520SL	52.5 db below 1 volt per microbar	High	$45.00

THE "TEN-FOUR" — WITH HIGH-IMPACT "ARMO-DUR" CASE

The new Shure "Ten-Four" is a development of a similar controlled magnetic unit originally housed in microphones used by the Armed Forces. Especially recommended where long lines are used, and a rugged hand-held microphone is needed. Ideal for outdoor public address (sports arenas, athletic fields), mobile communications, ham, audience participation shows, etc. The "Ten-Four" is designed for high speech intelligibility. Easy to use, fits snugly in the palm of the hand. Has heavy-duty double-pole, single-throw, leaf-type switch for push-to-talk operation. Phosphor-bronze blades and silver contacts for maximum operating life. Model 405B is furnished with 5 ft. four-conductor shielded cable. Model 405C is furnished with 5 ft. three-conductor shielded cable. Model 405K is the replacement for General Electric Model EMI0A and is furnished with Amphenol MC4M connector and 5½ ft. coiled 3-conductor (1-conductor shielded) cable. 405KB has same cable and plug as 405K. Frequency response is 200 to 8,000 cps. Sh. wt. 1 lb.

MODEL	OUTPUT LEVEL	IMPEDANCE	LIST PRICE
405B	50.0 db below 1 milliwatt per 10 microbar signal	150-250 ohms	$32.00
405C	50.5 db below 1 volt per microbar	High	$32.00
405K*	50.5 db below 1 volt per microbar	High	$37.50
405KB	50.0 db below 1 milliwatt per 10 microbar signal	150-250 ohms	$37.50

* Replacement for General Electric EMIOA.

405 SERIES

See Pages 228-231 for additional Shure Products.

SHURE COMMUNICATIONS MICROPHONES

MODEL "100" SERIES CARBON MICROPHONES

Used around the world for police, taxi, bus, truck, and commercial applications — *more than all other makes combined!* Rugged unit with clear, crisp voice response and high output. Heavy duty switch for push-to-talk performance. Furnished with bracket for wall mounting, plus coiled-cord cable. Adopted as standard microphone by G.E., Link, Motorola, R.C.A. and others for 2-way radio communications equipment. Output level: 5db below 1 volt for 100 microbar speech signal.

REPLACEMENT CHART

MANUFACTURERS MODELS	REPLACEMENT MODEL
CB10, CB10B, CB10C, CB10D, CB15, CB15D,	**101C**
CB10E	**101E**
CB12, CB12A, CB12C, CB12D	**102C**
CB12E	**102E**
CB15F	**103**

Model	Cable	Switch Arrangement	List Price
101C	Standard Coiled Cord 11" retracted; 5' extended	Two Wire Relay Switch normally open. (No microphone switch)	**$30.00**
101E	Tinsel Coiled Cord 11" retracted; 5' extended with Amphenol MC4M Connector		**$33.00**
102C	Standard Coiled Cord 11" retracted; 5' extended	Relay normally open. Microphone switch normally open.	**$30.00**
102E	Tinsel Coiled Cord 11" retracted; 5' extended with spade lugs		**$33.00**
103	Standard Coiled Cord 11" retracted; 5' extended with Amphenol MC4M Connector	Two Wire Relay Switch normally open. (No microphone switch)	**$31.00**

"TEN-FOUR" TRANSISTOR-AMPLIFIER FOR CARBON MICROPHONE REPLACEMENT

Model 405T is the perfect improvement-replacement for carbon microphones. A self-contained transistor amplifier, powered by the carbon microphone circuit, does not require an additional power source. Provides unusual speech clarity and freedom from ageing under severe vibration conditions. Same size and appearance as "100" series microphones. Output level 1 db below 1 millivolt per 100 microbars.

Model 405T List Price $48.50

MICROPHONE REPLACEMENT CARTRIDGES

REPLACEMENT CARTRIDGE — MODEL R10

Rugged microphone cartridge replacement for "CB", "100", and "120" Series Carbon Microphones. Furnished with necessary mounting hardware and complete installation instructions.

Model R10 **List Price $8.50**

Model 99A149 is the replacement cartridge for cartridges used in microphone models: CB20, CB21, CB50 and 115.

Model 99A149 **List Price $8.50**

CRYSTAL CARTRIDGE — MODEL R7

Model R7 Crystal Microphone. Available for service installation as a replacement for the cartridges in the Shure Crystal Microphones of the 707A and 708A Series, and other microphones of similar design. High output — 48 db below 1 volt per microbar. Supplied with rubber mounting rings and installation instructions.

Model R7 **List Price $8.25**

SLIM-X MICROPHONE CARTRIDGE

The Model 99A186 replacement cartridge assembly for the 777 Series Slim-X Microphones. Crystal element metal-sealed for long life under adverse conditions of heat and humidity. Requires only one solder connection.

Model 99A186 **List Price $10.00**

CONTROLLED MAGNETIC CARTRIDGE — MODEL R5

Direct replacement for cartridges used in the following Shure microphone models: 510C, 510MD, 510S, 520, 520SL, 505C, 505K, 405C and 405K. Also ideal for replacement of crystal cartridges in Shure cases of the Model 707A and 708A Series, where heat and humidity are a problem. Supplied with rubber mounting ring.

Model R5 **List Price $11.00**

LOW IMPEDANCE CARTRIDGE — MODEL R5B

Model R5B is the replacement cartridge for cartridges used in microphone models 505B, 505T, 405B, 405T, 510SLB, 520SLB, and 520B. Model R5B is physically identical to Model R5; but low impedance (150 to 250 ohms). Can be used in any R5 applications which require a low impedance cartridge.

Model R5B **List Price $11.00**

MODEL R5T CONVERSION KIT

Model R5T is a conversion kit containing a controlled magnetic cartridge and transistor amplifier. Designed to convert carbon microphones into improved controlled magnetic transistorized microphones. Conversion takes only a matter of minutes—and all that is necessary is a screwdriver, a long-nose plier and a soldering iron.

SPECIFICATIONS:

Controlled magnetic with transistor amplifier. 200 to 4,000 cps, semi-directional. Output Level: l db loaded with 500 ohms (0 db — 1 milliwatt per 100 microbars). List Price: $25.00.

SWITCHES AND ACCESSORIES

COILED CORD SETS

Tinsel Coiled Cord with trimmed and tinned leads and Amphenol MC4M connector attached (3 conductor shielded) for use with General Electric EM10A and 505K microphones.
Model: C10C List Price $12.00

Standard Copper Coiled Cord with trimmed and tinned leads. Used in "CB" and "100" Series Microphones.
Model: C15C List Price: $6.25

Tinsel Coiled Cord with Amphenol MC4M Connector for use with General Electric equipment.
Model: C16C List Price: $9.50

Tinsel Coiled Cord with spade lugs for use in Motorola equipment.
Model: C17C List Price: $7.75

Standard Coiled Cord with Amphenol MC4M Connector for use with Motorola equipment.
Model: C18C List Price: $9.50

Tinsel Coiled Cord with Amphenol MC4M Connector for use with Motorola equipment.
Model: C19C List Price: $9.50

TAKE-APART STAND

Model S34B

Model S34B. Handy low-cost stand for desk or hand use. One twist of handle locks it securely in base for use as a table stand, or releases handle for use in hand. Metal base, wood handle.

Model: S34B **List Price: $4.50**

"GRIP-TO-TALK SLIDE-TO-LOCK" SWITCH

Heavy-Duty Switch withstands the most severe field requirements of paging and dispatching systems. Ideal for Police, Taxi-Cab, Railroad, Airport, Bus, Truck, and all emergency communications work. Can be used with Shure connector-type crystal, dynamic and carbon microphones of any impedance. Fits handily on Shure S36A Desk Stand. Rich satin chrome finish.

Model: A88A **List Price: $12.50**

Model A88A

ON-OFF PRESS-TO-TALK SWITCHES

Model A83B. Rotary-type "On-Off" switch. Quickly attached to any cable-connector type Shure microphone.
Model: A83B **List Price: $11.00**
Model A34B. Momentary Press-to-Talk "On-Off" switch.
Model: A84B **List Price: $11.00**
Model A85C. Momentary Press-to-Talk Relay-Type Switch.
Model: A85C **List Price: $11.50**

MODERN DESK STAND

Model S36A. Streamlined Desk Mount fits all Shure connector-type microphones. Adapter provided for mounting other type microphones. Ideal for use with A88A switch.

Model: S36A **List Price: $6.50**

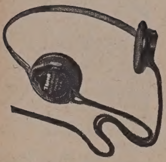
Model S36A

See Pages 228-231 for additional Shure Products.

—TRIMM—

HEADSETS AND ACCESSORIES

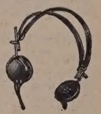
FEATHERWEIGHT



The original light weight headset. Extensively used by amateurs, dx listeners, commercial operators, etc. Bakelite shell and cap; 6 ft. water-resistant cord, concealed terminals; choice of variety of headbands. Weight 4½ oz. Available in all standard ohmages.

AMATEUR SPECIAL — 24,000 Ohm Impedance

No. 106—Double headset, single metal-band headband (as pictured above) 5M ohms d.c. resistance	**$11.00**
No. 107—Double, fabric covered double wire band headband (as pictured at right) 5M ohms d.c. resistance	**$11.00**



STANDARD — Specify Ohmage in Ordering

Standard Featherweight headsets available in 4, 152, 2M and 4M ohms d.c. resistance — (Impedance approx. 5 times d.c. resistance)—

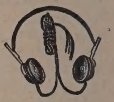
No. 100—Double headset, single metal band headband (as pictured above)	**$11.00**
No. 104—Double, fabric covered double wire band headband (as pictured to right)	**$11.00**

PROFESSIONAL

The original TRIMM headset, and the choice of countless users. Watch case bi-polar design. Cap and shell of molded bakelite. Tinsel conductor, braided cord, 5 ft. long, enclosed terminals. Adjustable vinyl plastic covered wire headband. Recommended for general radio communication, electronic testing applications, etc. Standard resistances for double headsets 4, 78, 2M, 3M, and 4M ohms d.c. (Impedance approx. 7 times resistance.)

No. 70—Double (4M ohms furnished if not specified)	**$5.80**
No. 72—Single (2M ohms max.)	**3.30**
No. 76—Single (2M ohms max.) 4 ft. cord. Has eyelet attached to unit to permit hanging on hook. No headband supplied. Used on intercom systems, etc.	**3.30**

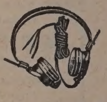
ACME



The superior low-cost, light weight headset. Used on crystal sets, educational electronic kits, Geiger counters, etc. Cap and shell of molded bakelite. Cord, 4½ ft. long; double headsets, braided cord sets, single earphones, flexible vinyl covered cord, concealed terminals. Several headband styles. Specify ohmage.

No. 24 —Double, 2M ohms, vinyl covered headband	**$4.20**
No. 24 —Double, 4M ohms, vinyl covered headband	**4.35**
No. 24-5—Double, 4 ohms, vinyl covered headband	**4.10**
No. 24-8—Double, 4 ohms, vinyl covered headband & No. 511 plug attached	**5.00**
No. 25 —Double, 2M ohms, metal headband (as pictured)	**3.60**
No. 25 —Double, 4M ohms, metal headband	**3.90**
No. 25-5—Double, 4 ohms, metal headband	**3.50**
No. 27 —Single, 1M ohms, metal headband	**2.15**
No. 27 —Single, 2M ohms, metal headband	**2.35**
No. 27-5—Single, 2 ohms, metal headband	**2.10**
No. 27-8—Single, 2 ohms, metal headband & No. 511 plug attached	**3.00**

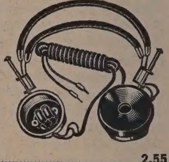
DEPENDABLE



When a high grade headset is desired, but price must be considered, choose the Dependable. Used by institutions, on general radio applications, etc. Bi-polar construction, bakelite cap and shell. Forged magnet. Tinsel conductor braided cord, 5 ft. long, concealed terminals. Vinyl covered wire headband, adjustable.

No. 65 —Double, 2M ohms	**$4.80**
No. 65-5—Double, 4 ohms	**4.80**
No. 67 —Single, 1M ohm	**3.00**
No. 65-3—Double, 2M ohms, similar to No. 65 except uses special 6 ft. plastic covered cord No. 890. Designed especially for use on institutional radio systems as cord can be washed, etc.	**5.75**

REX



The lowest cost TRIMM bi-polar headset. Bakelite shell and cap. Cord 4½ ft. long; double headsets braided, single earphones vinyl covered, concealed terminals. Adjustable headband. Specify ohmage.

No. 30 —Double 2M ohms	**$4.35**
No. 30 —Double 3M ohms	**4.70**
No. 30-5—Double 4 ohms	**4.35**
No. 32 —Single 1M ohms	**2.55**
No. 32 —Single 1½M Ohms	**2.75**
No. 32-5—Single 2 ohms	**2.55**

COMMERCIAL

Extremely light weight yet one of the most rugged headsets built. Originally developed for marine and aircraft service. Recommended for heavy duty commercial radio service, amateur radio, etc. High impact bakelite cap and shell. Cord, 6 ft. long, tinsel, plus rubber insulation, plus high grade mercerized cotton outer braid, enclosed terminals. No. 156 and 157 have 501 plug attached, others without plug. No. 151 and 152 have off-the-shoulder cords. Rubber covered headband.

No. 156—Double (600 ohms impedance)..	**$15.00**
No. 157—Double (17M ohms impedance)..	**15.00**
No. 158—Double (600 ohms impedance)..	**13.50**
No. 159—Double (17M ohms impedance)..	**13.50**
No. 151—Double (specify ohmage). Headband similar to type used on No. 100	**12.10**
No. 152—Double (specify ohmage). Headband fabric covered wire type similar to type used on No. 104	**12.10**

EAR CUSHIONS

Provide the user with maximum comfort in wearing headsets, also exclude outside disturbing noises if present. All prices per pair.

No. 654 —Sponge rubber, fits TRIMM Featherweight, Commercial, Acme, Rex, and "E" types	**$ 1.60**
No. 655 —Solid rubber, military type MC-162A. Fits TRIMM "S" and Permoflux headsets, military type ANB-H-1 units	**3.00**
No. 656 —Sponge rubber face, solid rubber back, military type MX-41/AR. Fits same types as No. 655 but recommended as being better choice	**4.20**
No. 658 —Chamois donut type cushion, military type NAF 48490-1. Fits same types as No. 655	**8.50**
No. 658-2—Same general design as No. 658 but fits Brush type A headset....	**11.00**
No. 660—Sponge rubber. Fits TRIMM Dependable, Professional, "K", "W", Army-Navy, Brush Type A, and Brush Type BA headsets.	**2.50**

Ohmages given are d.c. resistance unless specifically indicated as impedance which is about 4—7 times the d.c. resistance.

ARMY-NAVY

Built for severe use. Design has been accepted standard in years past. Bakelite cap, metal shell. Rubber covered headband. Waterproof cord. Available in two impedances.

No. 28—Double, 112 ohms d.c.— 600 ohms impedance	**$20.00**
No. 29—Double, 2200 ohms d.c.— 20M ohms impedance	**20.00**

See Facing Page for TRIMM hearing aid equipment and other headsets and accessories.

See pages 762, 763 for listing of TRIMM Plugs, Jacks, Patch Cords, and Jack Panels.

For complete listing see Trimm General Catalog.

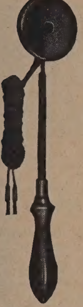
Prices subject to change without notice.

—TRIMM—

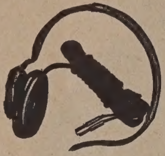
HEADSETS AND ACCESSORIES

GROUP HEARING AID COMPONENTS

Single Earphones



The most widely used single earphones for group hearing aid systems in churches, theatres, mortuaries, etc. are of the TRIMM Featherweight type. Available with either lorgnette handles, or with single headbands. Standard ohmages: 76, d.c. For use with low (up to 50 ohms), medium (200-500 ohms), and high lines (large installations on high impedance lines) respectively. Require phone plug such as TRIMM No. 512 for use with Outlet Boxes described below.



No. 110—Headband type (specify ohmage)	**$8.00**
No. 120—Lorgnette type (specify ohmage)	**9.10**

OUTLET BOXES and CONTROLS

Boxes No. 460 and 461 are recommended for the majority of installations, combines volume control and jack in one unit. Box has all rounded corners and edges. No. 460 has brown hammertone finish, No. 461 glossy ivory for improved visibility in theatres. Standard ohmages: 1000 ohms for low impedance lines, 10,000 for high. Other ohmages available, i.e. 500M ohms for crystal earphones, at slightly higher cost.

A large variety of variations of basic box and volume controls, switches, jacks, etc. available to order for centralized radio systems.

No. 460—Outlet Box (specify ohmage)	**$5.50**
No. 461—Outlet Box (specify ohmage)	**5.50**
No. 477—Outlet Box, dual jacks, no control, brown finish	**3.85**
No. 478—Outlet Box, dual jacks, no control, ivory finish	**3.85**
No. 484—Outlet Box, single jack, no control, brown finish	**3.30**
No. 485—Outlet Box, single jack, no control, ivory finish	**3.30**

FLAT NON-PROTRUDING PLUG

TRIMM No. 512 provides a compact, non-protruding design widely used in group hearing aid installations. Bakelite body practically non-breakable. Fits standard jacks. Cord pin tips held by set screws.

No. 512 —Black	**$0.87**
No. 512-1—Red	**0.87**
No. 512-2—Black with hook for hanging headset	**1.32**

"S" HEADSET

Designed particularly for broadcast stations and other high fidelity applications. Response is substantially flat through all essential frequencies.

Shell and cap of molded plastic, Alnico V magnet, floating diaphragm with controlled compliance provide uniform response unaffected by temperature. Units usually provided with TRIMM No. 656 ear cushions, but other types available. Headband leather covered double band with mounting for unit providing restricted rotation to prevent cord snarl.

Available for military applications in modified form under various code numbers such as HS-33A, etc.

No. 35—Double Headset, 8,600 or 4,000 ohms impedance, two conductor off-the-shoulder type flexible neoprene cord terminated with TRIMM No. 501 plug	**$28.00**

STEREO HEADSETS

All TRIMM headsets can be supplied with special cords for stereo reception. Below are the most commonly produced types.

No. 35-14—Stereo Headset, 4,300, or 2,000 ohms impedance per unit, split circuit three conductor off-the-shoulder type braided cord terminated with with TRIMM No. 508 plug (0.206" dia.)	**$32.00**
No. 50-14—Stereo Headset, 4, 300, 1M or 6M ohms impedance per unit, split circuit three conductor Y-shaped braided cord terminated with No. 508 plug (0.206" dia.)	**26.00**
No. 70-14—Professional Series, with No. 513 plug attached.	**10.50**
No. 187 —Commercial Series, with No. 509 plug attached.	**19.80**

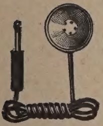
"L" HEADSET

Intended especially for high quality communications systems requiring extended frequency range. Embodies a new electro-magnetic design. Lightweight, and more comfortable wearing than most high grade headsets.

Floating diaphragm provides response unaffected by temperature. Available in 8 ohms, 600 ohms, 2M, and 12M ohms impedance per headset; (one half this per unit for binaural types).

No. 50 Double Headset, (Specify ohmage), with nylon braided, waterproof Y-shaped cord and No. 501 plug attached	**$22.00**
No. 50-5 Double Headset, Military version, equivalent to No. 49985A.	**$28.00**

PILLOW-PHONE

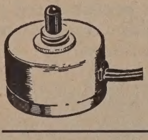


Designed for use as a miniature speaker for under pillow use at home, in hospitals, etc. Very thin disc shaped, 2" dia. x 27/64" thick. Sealed unit is entirely moisture-proof and tamper-proof. Face of stainless steel, back of molded high impact bakelite. Flexible rubber cord, 6 ft. long, is anchored to unit under terminal cover plate that cannot be readily removed by user. Normally furnished with standard TRIMM No. 501 plug, but other types available. May be cleaned in disinfecting solutions. Supplied in 8, 300, and 2000 ohms impedance.

No. 85 — (Specify ohmage)	**$11.00**

CONTACT FACTORY FOR HEADSET ACCESSORIES AND REPLACEMENT PARTS.

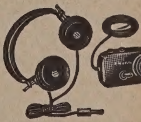
"STOP-IT" COMMERCIAL TRIMMER



Permits user to turn off audio signal of TV or radio set without getting up from chair, giving listener freedom to choke off unwanted commercials. Other uses that suggest themselves are to suppress loudspeaker when phone rings, etc.

No. 639—"STOP-IT" (Illustrated at left) consists of housing containing switch to which is attached 20 ft. cord ready to install in accordance with instructions with each unit	**$3.40**

HEADSET KITS for TV and RADIO



Kits described provide simple means of attaching headset or extension speaker to TV or radio sets. Consists of one of several types of headsets and a small outlet box with attached 15 ft. cord. Box has remote on-off switch for loudspeaker and volume control for headset. Two jacks provided for multiple listening.

No. 631 —Outlet Box only	**$ 7.15**
No. 632 —Kit—Outlet Box plus one double Acme headset and plug	**12.15**
No. 632-1—Kit—Outlet Box plus one single Acme earphone and plus	**10.35**
No. 633 —Kit—Outlet Box plus one double Dependable headset and plug	**12.75**
No. 634 —Kit—Outlet Box plus one double Featherweight headset and plug	**18.95**
No. 635 —Kit—Outlet Box plus one single Commercial earphone and plug. Recommended for hard of hearing	**15.10**
No. 637 —Kit—Outlet Box plus one Pillow-Phone and plug	**16.90**

See General Catalog for added information on "STOP-IT" and Headset Attachment Kits.

Protected under Patent No. 2523802

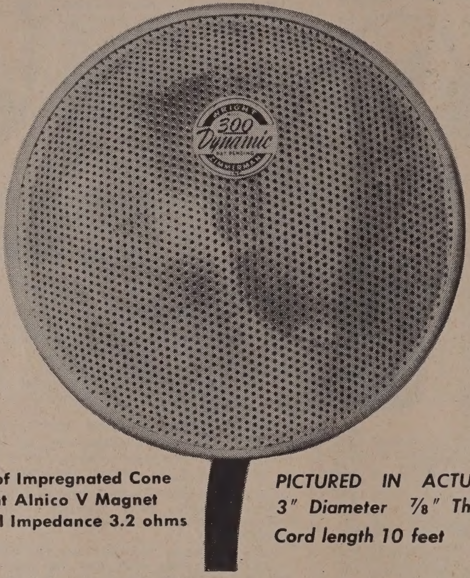
MODEL 300

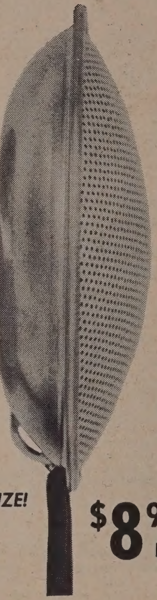
DYNAMIC PILLOW SPEAKER and MICROPHONE

ORIGINATED AND PATENTED BY

Wright-Zimmerman Inc.

NEW BRIGHTON, MINN.


300 Dynamic



Waterproof Impregnated Cone
Permanent Alnico V Magnet
Voice Coil Impedance 3.2 ohms

PICTURED IN ACTUAL SIZE!
3″ Diameter 7/8″ Thick
Cord length 10 feet

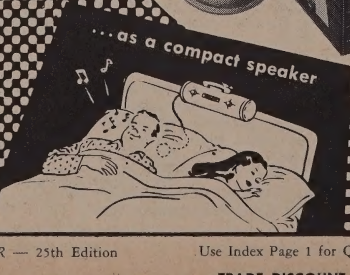
$8.95 list

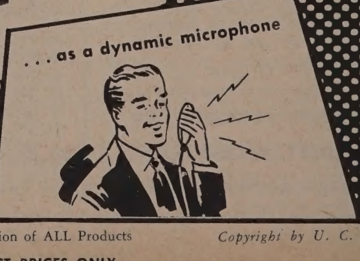
A compact speaker-microphone with a thousand uses.

The Wright-Zimmerman Model 300 Dynamic Reproducer is virtually indestructible, attractively styled and light as a feather. Ideal for personalized pillow speaker use with excellent tone, and as a dynamic microphone requiring only 2 stages of amplification.

DYNAMIC
PILLOW SPEAKER and MICROPHONE

ATTRACTIVELY AND INDIVIDUALLY PACKAGED


. . . as a compact speaker

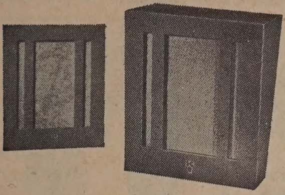

. . . as a dynamic microphone

SOUND EQUIPMENT

by STROMBERG-CARLSON

A DIVISION OF GENERAL DYNAMICS CORPORATION

SIGNET SPEAKER HOUSINGS



Models RH-34 and RH-54

Rugged tilt-type wall mounting cabinets in Desert Sand finish. 7½ degree tilt on each side. RH-34 designed for 8" speaker. RH-54 designed for 12" speaker. RH-34 easily converts to two-way use by addition of RA-8 Back Panel

LIST PRICE: RH-34 $12.00
RH-54 $19.50

Model RH-28D

Modern plastic housing for 8" cone speakers. Molded in solid Desert Sand color. Will withstand extreme abuse without breakage. Designed with sloping front and horizontal louvres. Bracket available for wall mounting. **LIST PRICE: $10.00**

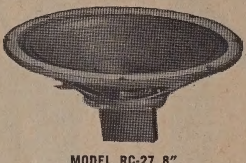
DRIVERS

Model RD-24. INPUT CAPACITY: 25 watts. FREQUENCY RANGE: 85-6,500 cps. VOICE COIL: 16 ohms. **LIST PRICE: $28.50**

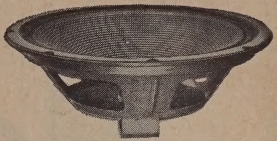
Model RD-21: INPUT CAPACITY: 30 watts. FREQUENCY RANGE: 80-10,000 cps. VOICE COIL: 16 ohms. Built-in transformer. **LIST PRICE: $47.50**

Model RD-23: INPUT CAPACITY: 30 watts. FREQUENCY RANGE: 80-10,000 cps. VOICE COIL: 16 ohms. **LIST PRICE: $36.00**

SIGNET CONE SPEAKERS



MODEL RC-27 8"
PERMANENT MAGNET SPEAKER



MODEL RC-58 12"
PERMANENT MAGNET SPEAKER

Both speakers employ high-efficiency Alnico V magnets, aluminum voice coil forms and one-piece ribbed molded diaphragm cones. **Model RC-27:** FREQUENCY RESPONSE: 55-13,000 cps; POWER RATING: 10 watts (program); CONE RESONANCE: 105 cps; FLUX DENSITY: 8,000 gauss; VOICE COIL IMPEDANCE: 8 ohms; SENSITIVITY: 88 db; SIZE: 8⅛"dia., 3½" deep; WEIGHT: 2 lbs. **LIST PRICE: $8.00**

Model RC-58: FREQUENCY RESPONSE: 55-13,000 cps; POWER RATING: 16 watts (program); CONE RESONANCE: 80 cps; FLUX DENSITY: 8,500 gauss; VOICE COIL IMPEDANCE: 8 ohms; SENSITIVITY: 85 db; SIZE: 12⅛" dia., 4¾" deep; WEIGHT: 2½ lbs. **LIST PRICE: $14.00**

COMPLETE RE-ENTRANT SPEAKERS

Ideal for paging and intercommunication under adverse weather conditions and in high-noise areas.

Model RS-14

Re-entrant, with built-in driver. Effective in noisy locations. Suitable also for outdoor installation.

LIST PRICE: $34.50

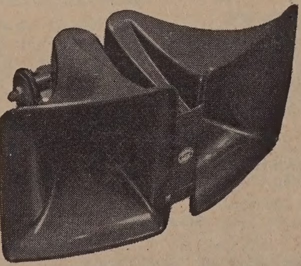
Model RS-5 & RS-6

Small re-entrant speakers with built-in driver units. For paging, etc. Ideal for loading platforms and exposed locations.

LIST PRICES: RS-5 $28.35
RS-6 $29.65

Model	Size	Air Col. Equiv.	Input Capacity	Voice Coil Impedance	Freq. Response	Distribution Angle	Mounting	Weight	Finish
RS-5	Bell 6" Length 7"	14"	5 watts	8 ohms	400-13,000 cps	120°	Ratchet Bracket	3½ lbs.	Gray
RS-6	Bell 6" Length 7"	14"	5 watts	45 ohms	400-13,000 cps	120°	Ratchet Bracket	3½ lbs.	Gray
RS-14	Bell 9" Length 9"	18"	15 watts	8 ohms	300-13,000 cps	90°	Ratchet Bracket	5 lbs.	Glacier Gray

SIGNET RE-ENTRANT HORNS



The Signet Line includes models of various sizes, distribution angles and low-frequency cutoffs.

Model RP-48. 9¼" x 18½" mouth. **LIST PRICE: $40.25**

Model RP-27. Bell 15½", Length 12⅛". **LIST PRICE: $28.90**

Model RP-34. Bell 20", Length 16¼". **LIST PRICE: $34.15**

Model RP-40. Bell 24¾", Length 19½". **LIST PRICE: $47.00**

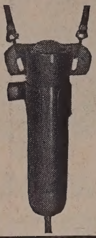
Model RP-44. Bell 25½", Length 19". **LIST PRICE: $46.75**

"There is nothing finer than a Stromberg-Carlson"

STROMBERG-CARLSON
A DIVISION OF **GENERAL DYNAMICS**

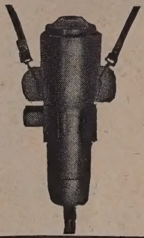
ELECTRONICS CENTER
ROCHESTER, N. Y.

TURNER BROADCAST & TV MICROPHONES



Model 58

Model 210A



Model 220A

Model 98

Model 57

Smooth, high-level response at a reasonable price makes the model 57 the best buy on the market. Hinged coupler with ⅝", 27 thread. Dynaflex diaphragm. Satin black finish. Quick disconnect Cannon XL-4 connector, 20 ft. three conductor, shielded cable. Response, 50-15,000 cps. Level, —55 db. Impedance, wired for selection of high or 150 ohm. (Model 57A wired for selection of 50 or 200 ohm only. Same price.) Matching BL-6 stand available.

List Price ________ $75.00

List Price (with on-off slide switch) S-57 ____ $75.00

MODEL 58 DYNAMIC

High performing, compact, miniature lavalier-type. Hides discreetly behind necktie or handkerchief. May be concealed in table decorations or props. Support clip and neck cord are furnished. Non-directional sensitivity. Turner Dynaflex diaphragm. Neutral grey finish. Wired for high or low (150 ohm) impedance. 25 ft. three-conductor, shielded cable. Response 50-13,000 cps. Level, —57 db. (Model 58A wired for selection of 50 or 200 ohm. Same price.) Model G-4 desk stand and G-10 floor stand adapter available.

List Price ________ $57.00

MODEL 210A

For motion picture studio, broadcast and hi-fidelity recording users, the new Turner 210A is designed to satisfy the most exacting professional requirements. Low impedances only. Response, 40-20,000 cps. Level: 50 ohm, —86 db.; 200 ohm, —80 db.

List Price ________ $125.00

MODEL 220A

Turner has put fidelity performance and utility foremost in the 220A. Its great sensitivity and wide response make it an incomparable lavalier microphone. Response, 60-20,000 cps. Level: 50 ohm, —90 db.; 200 ohm, —84 db.

List Price ________ $125.00

MODEL 98 CARDIOID

Combines modern, compact design with excellent directional characteristics. These characteristics make it live to sounds originating in front of it, dead to sounds from the rear. This feature reduces unwanted audience noises, mechanical equipment noises, and background noise from ventilating, heating or air conditioning equipment. In P.A. work it eliminates acoustical feedback. Truly outstanding performance for very little cost. Single dynamic element construction. Includes 20 ft. cable. Response, 65-11,000 cps. Front-to-back ratio, 20 db. Level, —52 db. Matching G-7 stand available.

List Price (Light grey) ___ $59.50

List Price (Satin chrome) $69.50

For on-off switch models, specify S-98 and add $4.00 to above prices.

Model 51

MODEL 51 DYNAMIC

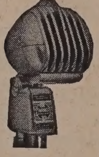
High output interior and advanced circuit design for ultra wide range high fidelity. No closely associated auxiliary equipment needed. Hinged coupler with ⅝", 27 thread mounting for quick disconnect. Finished in umber grey. 12 ft. balanced line cable. Response, 50-15,000 cps. Level, —55 db. at high impedance. Specify high impedance or low (wired for selection of 50 or 200 ohm.) Matching G-6 stand available.

List Price ________ $72.50

TURNER GENERAL PURPOSE MICROPHONES

Model 200

Model 95



Model 33

Model 124

MODEL 200 SERIES

With Turner engineered accessories, the new 200 quickly switches from hand to stand, desk or lavalier mike. Gives you the versatility for broadcast, TV, P.A., recording or intercom. Available as crystal: response, 60-10,000 cps.; level, —51 db. As dynamic: response, 60-13,000 cps.; level, —53 db. As ceramic: response, 60-10,000 cps.; level, —60 db.

List Prices:

Crystal, 201X with desk stand, 202X with floor stand adapter, 203X with lavalier ________ $28.00

Crystal, 204X complete with all accessories: desk stand, stand adapter and lavalier assembly ________ $30.00

Dynamic, 201D with desk stand. 202D with floor stand adapter, 203D with lavalier ________ $41.00

Dynamic, 204D complete with all accessories: desk stand, stand adapter and lavalier assembly ________ $47.50

Ceramic, 201C with desk stand. 202C with floor stand adapter. 203C with lavalier ________ $30.00

Ceramic, 204C complete with all accessories: desk stand, stand adapter and lavalier assembly ________ $32.00

MODEL 95D DYNAMIC

Beautiful styling, good performance, and attractive price make this a popular P.A. mike. High impedance. Wired single ended (single-conductor, shielded 20 ft. cable). 50 and 200 ohm models wired for balanced line (two-conductor, shielded 20 ft. cable). Response, 100-10,000 cps.; level, —58 db.

List Price ________ $37.50

List Price (with on-off switch) S-95D ________ $41.00

Replacement Cartridge No. 194-1, List Price _$19.00

MODEL 33X CRYSTAL

High output over wide frequency range gives fine reproduction. Head tilts 90°. Satin chrome finish. ⅝", 27 thread coupler mounting. 20 ft. removable cable set. Moisture-sealed crystal. Response, 60-9,000 cps.; level, —52 db.

MODEL 33D DYNAMIC

Same general design as 33X, but with dynamic interior. 50 ohm, 200 ohm or high impedance. Complete with 20 ft. removable cable. High impedance wired single ended. Low impedances balanced line (two-conductor, shielded). Response, 100-9,000 cps. Level, —54 db. at high impedance.

MODEL 124 DYNAMIC

A slender, modern mike which sells for much less than other mikes of comparable quality. Impressive performance makes the Turner 124 an excellent buy for broadcast, recording, or P.A. work. Spring-clip stand adapter permits instant conversion to hand use. Response, 50 to 13,000 cps. Level, —58 db. 12 ft. cable. For impedance specify 50, 200 ohm or high. Gunmetal grey finish, chrome trim. Matching G-8 stand available ________ $42.00

Model 33X List Price ____ $27.50

List Price (with on-off slide switch) S-33X ________ $30.00

Model 33X Replacement Cartridge No. 2B, List ________ $ 8.00

Model 33D List Price ________ $35.00

List Price (with on-off slide switch) S-33D ________ $37.50

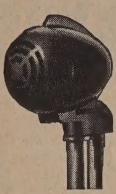
Replacement Cartridge No. 13C, List Price ________ $11.00

(Use Index Page 1 for Quick, Easy Location of ALL Products)

TRADE DISCOUNT APPLIES TO LIST PRICE ONLY

TURNER GENERAL PURPOSE MICROPHONES

Model 22

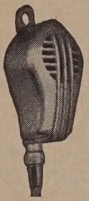


Model BX-BD

Model 141

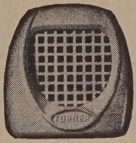
Model 808-807

Model U9S



Model 9D

Model 80
Model C-4 Stand



Model 908-907

MODEL 22X CRYSTAL

Popular P.A. and amateur radio model. Head tilts 90°. 20 ft. removable cable set. Satin chrome finish ⅝", 27 thread coupler mounting. Humidity protected crystal in mechanical shockproof mounting. Response, 60-9,000 cps. Level, —52 db. Also available as ceramic microphone at same price. Specify Model 22C.

List Price $29.50

List Price (with on-off switch) S-22X $32.50

Model 22X, Replacement Cartridge No. 2B, List Price $8.00

Model 22C, Replacement Cartridge No. 2BC, List Price $8.00

MODEL 22D DYNAMIC

Dynamic version of 22X. 50 ohm, 200 ohm, or high impedance. High impedance wired single ended (20 ft. single-conductor, shielded cable). Low impedance wired for balanced line (two-conductor, shielded cable). Response, 100-9,000 cps. Level, —54 db. at high impedance.

List Price $40.00

List Price (with on-off slide switch) S-22D $42.50

Replacement Cartridge No. 6, List Price $11.00

MODEL U9S DYNAMIC

Sturdy all-purpose mike with multi-impedance transformer. Select 50, 200, 500 ohms or high impedance with built-in switch. Unaffected by heat, cold, or humidity. Adjustable saddle with ⅝", 27 thread coupler, gunmetal metaluster finish. Three-pin polarized locking connector. 20 ft. balanced line low-capacity cable. Reponse, 80-9,000 cps. Level, —52 db. at high impedance.

List Price $53.00

Replacement Cartridge No. 9, List Price $12.50

MODEL BX CRYSTAL

Low-cost crystal microphone. Attractive streamlined case with brown metaluster finish, ⅝", 27 thread mounting. 7 ft. single-conductor attached cable. Response, 60-7,000 cps. Level, —48 db.

List Price $11.75

Replacement Cartridge No. 21A, List Price $6.50

MODEL BD DYNAMIC

Same appearance and finish as BX. High output dynamic interior. Complete with 7 ft. single-conductor attached cable. High impedance wired single ended; low impedances balanced line (two-conductor shielded) 50 ohm, 200 ohm or high impedance. Response, 100-6,000 cps. Level, —52 db. at high impedance.

List Price $21.00

REPLACEMENT CARTRIDGE No. 13C, List Price $11.00

MODEL 9D DYNAMIC

Rugged, handy microphone. Balanced for hand. Has hook for hanging. ⅝", 27 thread stand mounting. Die cast zinc alloy case, satin chrome finish. Standard model equipped with on-off slide switch. Wide choice of interiors and switch arrangements (write for details). Response, 150-7,000 cps. Level, —52 db. at high impedance.

List Price $32.50

Replacement Cartridge No. 13C, List Price $11.00

MODEL 141 CRYSTAL

Highest output small microphone on the market. Easily adapts to hand, stand or lavalier use for P.A. and intercom systems, tape recording or demonstration work. Response, 60-10,000 cps. Level, —52 db. 6 ft. single conductor shielded cable. Light grey case.

List Price $13.50

MODEL 80 CRYSTAL

Small, inconspicuous satin chrome plated mike. Slender, compact and graceful. Can be adapted for stand or hand use. Total weight, 5 oz. Equipped with 7 ft. attached single conductor shielded cable. Response, 80-7,000 cps. Level, —54 db.

List Price $15.95

Replacement Cartridge No. 23, List Price $8.00

C-4 Stand $6.50

MODEL 808 CRYSTAL AND 807 CERAMIC

Die cast alloy case finished in baked-on grey enamel. 3-7/16" high x 2⅜" wide x 1-11/32" thick. ⅝", 27 thread adapter for stand mounting. 6 ft. attached fabric-covered cable. Response, 60-8,500 cps. Level, —45 db. (With ceramic interior, same price). Response, 80-7,000 cps. Level, —57 db. Specify model 807.

List Price $10.85

List Price (with on-off slide switch) S-808 $12.85

MODEL 908 CRYSTAL

A new Turner microphone with high sensitivity for tape recorder use. Priced to meet modest budgets. Durable polystyrene case, designed for hand or desk use, weighted to avoid tipping. Response, 60-8,500 cps. Level, —45 db. (Microphone also available with ceramic interior at the same price. Same response. Level, —55 db. Specify model 907.)

List Price $8.00

THE TURNER MICROPHONE CO.

Cedar Rapids, Iowa

TURNER MICROPHONES FOR SOUND PERFORMANCE

(Use Index Page 1 for Quick, Easy Location of ALL Products)

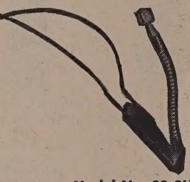
TRADE DISCOUNT APPLIES TO LIST PRICE ONLY

TURNER SPECIALTY MICROPHONES AND STANDS

Model SR-90D
Model SR-90R
Model SR-90T

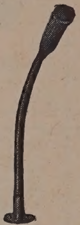
Model No. L-100

300 Series Model



Model No. 82-3H

Model 132



Model 580

Model 142

MODEL SR-90R CARBON

Ideal hand-held mikes for mobile communications. Clear voice reproduction. Designed to fit hand comfortably with switch in normal grip. Zinc alloy case in permanent satin chrome. Furnished with hook for hanging and bracket for wall or dash mounting. Standard model SR-90R Carbon. Response, 200-4,000 cps. Level, —38 db. 11", retracted, unshielded Koiled Kord.

List Price, SR-90R ____ $26.50

Replacement Cartridge No. 33, List Price ____ $8.00

MODEL SR-90D DYNAMIC

Response, 200-10,000 cps. Level, —48 db. at high impedance. 11" (retracted) shielded Koiled Kord.

List Price, SR-90D ____ $42.50

Replacement Cartridge No. 13C, List Price ____ $11.00

MODEL SR-90T

Transistor preamplifier and dynamic interior make this microphone a perfect replacement for all carbon microphones now used in mobile communications equipment. No extras needed. Plugs right in.

List Price ____ $60.00

MODEL L-100 CRYSTAL

Excellent speech reproduction characteristics, chest sounds damped out. Grey plastic case. Strong rubber-padded clip adjusts to any desired position. 20 ft. single-conductor shielded cable. Response, 50-10,000 cps. Level, —52 db.

List Price ____ $12.50

Replacement Cartridge No. 26, List Price ____ $6.50

300 SERIES MICROPHONES

Slender, beautifully designed black plastic microphones. Effectively perform as P.A., recording, or intercom microphone. Ideal for stereophonic recording. Models 304C and 304X are furnished with: desk stand, lavalier assembly, and stand adapter. Quickly switch from hand to stand, desk or lavalier in seconds. 300C and 300X furnished without accessories. Frequency response for all four microphones is 60-10,000 cps. Output level on the 300C and 304C Ceramics is —60 db.; on the 300X and 304X Crystal, —54 db.

300C, 300X, List Price ____ $11.50

304C, 304X, List Price ____ $16.50

MODEL 132 DYNAMIC

A new mike for applications calling for a minimum size dynamic on the Turner Third Hand. Model 95 head permanently installed on gooseneck, with transformer concealed in breastplate. 20 ft. cable. Available in high impedance, 200 ohm, or 50 ohm models. Response, 100-10,000 cps. Level, —58 db.

List Price, mounted on Turner Third Hand ____ $42.50

MODEL 82-3H CRYSTAL

Tiny Model 80 microphone head. Permanently installed on Turner "Third Hand." Attached 20 ft. single-conductor, shielded cable permits freedom of movement.

List Price ____ $22.75

Third Hand alone ____ $5.00

MODEL 580 DYNAMIC

Designed for use in language labs. Chrome finish and gooseneck. Cable runs through gooseneck and is completely concealed. End plug screwed directly into gooseneck. Response, 60-13,000 cps.; level, —60 db. Hi and 150 ohm combination.

List Price ____ $57.00

MODEL 142 DYNAMIC

Here's the first lavalier dynamic in its field to be list-priced under $50. Tops in economy and performance. Response, 70-12,000 cps. Level, —59 db. Impedance, two models: high 150 ohm; and 50/200 ohm.

List Price, complete with lavalier assembly ____ $45.00

#G-14 matching stand, List Price ____ $4.50

TURNER MICROPHONE STANDS

Model	Finish	Upright	List Price	Style
C-2	Chrome	1"	$ 5.50	C-3
C-3	Chrome	4¾"	5.50	C-3
C-4	Chrome	—	6.50	C-4
C-5	Chrome	2⅝"	5.50	C-3
*C-7	Chrome	None	9.50	BL-6
B-3	Brown	4¾"	4.50	C-3
G-3	Gunmetal	4¾"	4.50	C-3
G-4	Grey	Clip	5.75	C-4
*G-6	Grey	None	7.50	BL-6
*G-7	Light Grey	None	8.00	G-7
*G-8	Gunmetal	None	8.00	G-7
G-10	Grey	Clip	4.50	Not Shown
G-12	Chrome	35"-65"	15.00	Floor Stand
G-14	Grey	—	4.50	C-4
BL-5	Black	2⅝"	4.50	C-3
*BL-6	Black	None	7.50	BL-6
144	Light Grey	Clip	4.50	Not Shown

*Shock-mount base.

TURNER MICROPHONES FOR SOUND PERFORMANCE

THE TURNER MICROPHONE COMPANY

Cedar Rapids, Iowa

IN CANADA:
Canadian Marconi Co., Toronto, Ontario and branches
EXPORT:
Ad Auriema, Inc., 85 Broad Street, New York 4, N. Y.

THE NEW TURNER MODEL 250

TURNER MODEL 250

Handsome all chrome finish on the deluxe model 250 dynamic mike with exclusive triple-switching action: push-to-talk. Lever-Lock, and lift switch. Will do any and all dispatching or P.A. work. Wired to operate both mike and relay circuits at a touch, no gripping necessary. Single unit die-cast case. Just the mike for police, taxi stands, railroad, and control towers. Complete with 20 foot three-conductor (one shielded) cable. Response, 60-10,000 cps. Output level, —52 db. Hi impedance.

List Price ________ $49.50

TURNER MODEL 251

Same as model 250 except for 150 ohms impedance, 20 ft. four-conductor (2 shielded) cable.

List Price ________ $49.50

TURNER MODEL 252

Low cost, dispatcher-type dynamic microphone. Same as model 250 except gray Hammertone finish and without lift switch. Seven foot three-conductor (one shielded) cable. Output level, —52 db.; response, 60-10,000 cps.

List Price ________ $36.50

TURNER MODEL 253

Same as model 252 except low impedance (150 ohms). Four-conductor (two shielded) seven foot cable.

List Price ________ $36.50

TURNER MODEL 254

Crystal mike with same style and finish as model 252. Has touch-bar on-off switch and Lever-Lock on-off switch. Extreme versatility at low cost. Excellent for amateur communications. Output level, —48 db. Response, 60-8,000 cps. Complete with seven foot single-conductor shielded cable.

List Price ________ $23.50

TURNER MODEL 255

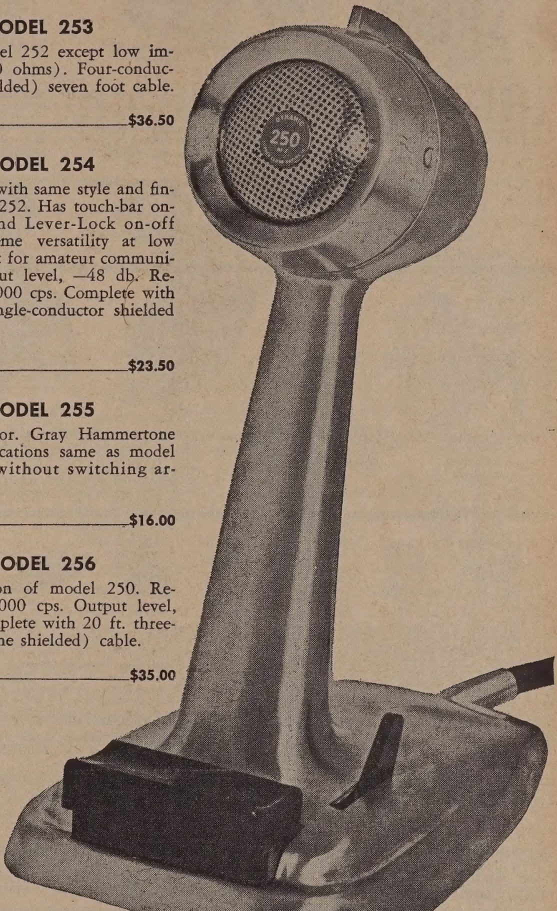
Crystal interior. Gray Hammertone finish. Specifications same as model 254 except without switching arrangements.

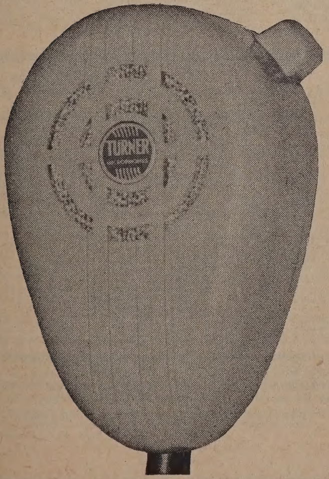
List Price ________ $16.00

TURNER MODEL 256

Crystal version of model 250. Response, 60-8,000 cps. Output level, —48 db. Complete with 20 ft. three-conductor (one shielded) cable.

List Price ________ $35.00





THE NEW TURNER MODEL 350 MOBILE MICROPHONE

New, low-cost hand-held microphones with momentary on-off switch. Extra tough plastic case for years of service. Complete with hanger button and standard dash bracket for easy mounting. All models equipped with 11″ retracted, five foot extended, plastic-jacketed, coiled cord. Ideal for citizen's band, amateur use, mobile rigs and paging. All models wired for relay operation.

	350X	350C	350R
Type	crystal	ceramic	carbon
Response	60-8,500	80-7,000	200-4,000
Output Level	—48 db	—54 db	—38 db
LIST PRICE	**$16.80**	**$16.80**	**$19.00**

See the fourth page of Turner listings for other Turner mobile microphones.

(Use Index Page 1 for Quick, Easy Location of ALL Products)

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

DRIVERS, TRUMPETS AND ACCESSORIES

University's new, deluxe ID Drivers supplement the standard line, making it easier than ever to fulfill every requirement of power, performance and price. All offer unusually wide response, all are weatherproof, all feature breakdown-proof mechanisms. New, exclusive acrylic finish of the ID series gives added protection.

STANDARD DRIVERS

Ideal for low-cost medium power speech and music systems. Wide range, high efficiency.

MODEL ID-20
20 WATTS

MODEL MA-25
25 WATTS

Recommended for use wherever maximum speech intelligibility is essential; or to preserve "balance" when used with high cut-off frequency trumpets.

MODEL ID-30
30 WATTS

MODEL SA-HF
30 WATTS

Designed to fulfill critical P.A. and industrial requirements. Provide extra punch needed to cut through heavy noise.

MODEL ID-40
40 WATTS

MODEL SA-30
30 WATTS

Same performance as SA-HF and ID-40, respectively, but with built-in matching transformers for connection to high impedance lines or "constant voltage" systems.

MODEL ID-40T
40 WATTS

MODEL PA-HF
50 WATTS

For applications requiring greatest power handling capacity, maximum sensitivity, widest frequency response, plus rugged lifetime construction.

MODEL ID-60
60 WATTS

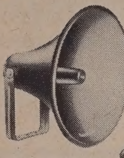
MODEL PA-50
50 WATTS

"Deluxe" units with extended high and low frequency ranges. Highest continuous duty conversion efficiency. Built-in multi-match transformer.

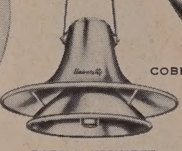
MODEL ID-60T
60 WATTS

DELUXE DRIVERS

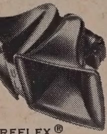
TRUMPETS



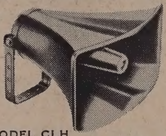
DIRECTIONAL TRUMPET



RADIAL TRUMPET



COBREFLEX®



MODEL CLH

DIRECTIONAL MODELS GH, LH, PH, SMH For maximum penetration of distance and noise. Reflex construction assures maximum conversion efficiency, full weather protection.

RADIAL MODELS RLH, RPH, RSH For uniform 360° overhead sound distribution from a single projector. Fewer speakers needed to cover high-ceiling factories, hangars, church interiors, etc.

WIDE ANGLE COBREFLEX† Outstanding feature is pair of folded exponential horns having twin air columns in a single assembly. "Dual Exponential Flare" design results in very smooth radiation pattern and high efficiency. Rugged construction. Use singly or in clusters.

WIDE ANGLE MODEL CLH† Longest air column length and wide-angle bell designed for maximum low frequency response. Omni-directional mounting bracket permits speaker to be rotated horizontally and vertically for optimum projection . . . tune out reverberation, dead spots. Perfect for multi-speaker cluster arrays. Can be "stacked" in any configuration.

MODEL L30-1 CLH Horn Stacking Kit For clamping bell rims together in any desired configuration. Each kit clamps two horns. Shpg. wt., 6 oz. $1.65 list.

ACCESSORIES

CTR

PB-1

5433

5434

2YC

PMA

RTA

WEA

SPA

ST

SB

MODEL CTR TRANSFORMER/JUNCTION HOUSING Die-cast aluminum. Weatherproof. Houses models 5433, 5434, or other transformers up to 2⅝" x 2⅞" x 2⅛". Adjustable slotted adapter mounts transformers with centers 1½" to 2⅞". Junction box for speaker lines. Bar strap for mounting to "U" brackets. Screws to wall. Also holds University paging speakers. Shpg. wt., 2 lbs. $8.80 list.

MODEL PB-1 TRANSFORMER HOUSING Weatherproof. For MIL-A, CMIL-A, IB-A and CIB-A paging speakers. Use Model 5434 transformer, or other type with 2" mounting center and 1 15/16" h. x 1⅝" w. maximum dimensions. Shpg. wt., 1 lb. $4.13 list.

MODEL 5433 TRANSFORMER 30 watt capacity. Use with MA-25, SA-HF, or to feed a number of smaller paging speakers. Primary impedance: 45/165/200/250/500/1000/2000 ohms. Secondary impedance: 4/8/16 ohms. 70 v. line power taps: 30/25/20/10/5/2.5 watts. Dimensions: 1$^{15}/_{16}$" x 2$^{5}/_{16}$" x 1¾". Mtg. hole centers: 2⅜". Shpg. wt., 1 lb. $7.70 list.

MODEL 5434 TRANSFORMER 15 watt capacity. Primary impedance: 45/325/500/1000/2000/4000/8000 ohms. Secondary impedance: 4/8/16 ohms. 70 v. line power taps: 15/10/5/2.5/1.25/.65 watts. Dimensions: 1⅝" x 1$^{15}/_{16}$" x 1⅜". Mtg. hole centers: 2". Fits CTR and PB-1. Shpg. wt., ¾ lb. $6.60 list.

2YC CONNECTOR Allows use of two driver units on a single radial, directional, or wide-angle trumpet. Shpg. wt., 1 lb. $13.20 list.

PMA ADAPTER Fits ½" IPS threaded pipe to any "U" mtg. bracket. Shpg. wt., ¾ lb. $2.20 list.

RTA ADAPTER Fits University trumpets to Western Electric and RCA drivers having 1-7/16-16 threads. Shpg. wt., ½ lb. $3.30 list.

WEA ADAPTER Fits University drivers to Western Electric and RCA trumpets having 1-7/16-16 threads. Shpg. wt., ½ lb. $2.75 list.

SPA ADAPTER Replaces standard triangular base used on all University CR and MM-2 paging speakers for mounting to ½" threaded IPS pipe. Shpg. wt., ½ lb. $1.93 list.

MODEL ST Transformer/Junction Box Adapter. Fits MM-2, MM-2L, MM-2L50. Weatherproofed. For bulkhead, wall, ceiling mounting. Houses transformers up to 2¼" x 2¼" x 2¾", with 2" and 2⅜" mounting centers. Used as terminal or junction box. Shpg. wt., 1 lb. $13.75 list.

MODEL SB Bulkhead Mounting Adapter. Fits MM-2, MM-2L, MM-2L50, MM-2F. 3 mounting holes 120° apart on 5$^{13}/_{16}$" mounting circle diameter. For flush-fit mounting onto bulkhead, wall, ceiling. Shpg. wt., 1 lb. $3.30 list.

HORN MODEL	LOW FREQUENCY CUT-OFF	SOUND DISTRIBUTION	AIR COLUMN LENGTH	HORN LENGTH	BELL DIA.	SHIP. WT.	LIST PRICE
GH	85 cps	65°	6½ ft.	28"	31"	22 lbs.	$75.60
LH	120 cps	75°	4½ ft.	19"	25¾"	16½ lbs.	$46.73
PH	150 cps	85°	3½ ft.	15¾"	20⅜"	11¾ lbs.	$34.13
SMH	200 cps	95°	2½ ft.	12"	16¼"	8 lbs.	$28.88
RLH	120 cps	360°	5 ft.	18½"	28⅛"	25 lbs.	$59.00
RPH	140 cps	360°	4 ft.	13¾"	25⅛"	19 lbs.	$47.00
RSH	180 cps	360°	3 ft.	11"	19"	13 lbs.	$41.00
COBREFLEX†	200 cps	120° x 60°	2½ ft.	18½" x 9¼"	10¼"	10¼ lbs.	$40.25
CLH†	120 cps	120° x 60°	4½ ft.	21½" x 11½"	20"	15 lbs.	$46.50

DRIVER MODEL	FREQUENCY RESPONSE	POWER RATING (Cont. Duty)		VOICE COIL IMPEDANCE	DIMENSIONS (Overall)	SHIP. WT.	LIST PRICE
		FULL RANGE	*ADJUSTED RANGE				
ID-20	120-6500 cps	20 watts	35 watts	16 ohms	4¼" dia. 3" d.	3 lbs.	$25.00
ID-30	85-7500 cps	30 watts	50 watts	16 ohms	4⅛" dia. 3¾" d.	3¾ lbs.	$31.50
ID-40	80-12,000 cps	40 watts	60 watts	16 ohms	4½" dia. 4⅞" d.	4½ lbs.	$39.50
ID-40T	80-12,000 cps	40 watts	60 watts	16 ohms	5" dia. 6¼" d.	5¼ lbs.	$52.75
ID-60	70-12,000 cps	60 watts	100 watts	16 ohms	4$^{11}/_{16}$" dia. 5" d.	5¾ lbs.	$52.75
ID-60T	70-12,000 cps	60 watts	100 watts	16 ohms	6¾" dia. 6¾" d.	6¼ lbs.	$63.25
MA-25	85-6500 cps	25 watts	50 watts	16 ohms	4⅛" dia. 3¾" d.	3¾ lbs.	$28.50
SA-HF	80-10,000 cps	30 watts	60 watts	16 ohms	4½" dia. 4⅞" d.	4½ lbs.	$36.00
SA-30	80-10,000 cps	30 watts	60 watts	16 ohms	5" dia. 6¼" d.	5¼ lbs.	$47.50
PA-HF	70-10,000 cps	50 watts	100 watts	16 ohms	4$^{11}/_{16}$" dia. 5" d.	5¾ lbs.	$47.50
PA-50	70-10,000 cps	50 watts	100 watts	16 ohms	6¾" dia. 6¾" d.	6¼ lbs.	$57.50

*When input program response limited to above low frequency cut-off of trumpet used.

†*Patented.*

Transformer impedances: 1D-40T—45/122/250/500/1000/2000 ohms. ID-60T—16/80/165/250/500/1000/2000 ohms. 70 V. line power taps: ID-40T—40/20/10/5/2.5 watts. ID-60T—60/30/20/10/5/2.5 watts. SA-30—45/165/250/500/1000/2000 ohms. PA-50—16/100/165/250/500/1000/2000 ohms. 70 V. line power taps: SA-30—30/20/10/5/2.5 watts. PA-50—50/30/20/10/5/2.5 watts.

NOTE: Low frequency limit based on capability of driver unit. If horn cut-off is higher than rated low frequency limit of driver, horn will be determining factor.

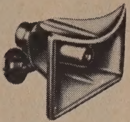
West Coast Prices Slightly Higher

PAGING, TALK-BACK, MULTI-DUTY

University

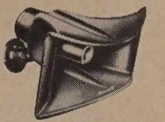
PAGING, TALK-BACK

MODEL MIL-A New version of the MIL, with higher power capacity (7.5 watts continuous duty) and improved lower frequency response. High conversion efficiency for perfect operation in low power systems. OLB*



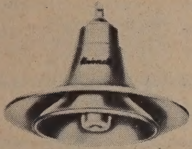
MODEL CMIL-A Similar to CIB-A, but for use in lower power operations where excessive sound would be wasted. Offers high efficiency, maximum intelligibility. OLB*

MODEL IB-A New version of world's most widely used medium power speaker. 25 watts continuous duty power capacity. Lower frequency response improved to 250 cps. High efficiency, special rising frequency characteristic. OLB*

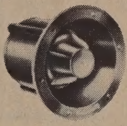


MODEL CIB-A Exclusive University wide-angle horn for uniform sound pattern with optimum vertical dispersion. Ideal for wide area coverage where ambient noise level not excessive. Design minimizes feedback problems. OLB*

PAGING, TALK-BACK

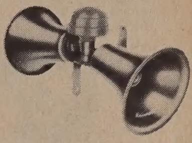


MODEL IBR Small radial speaker with built-in driver. Economical solution where total number of speakers must be kept to a minimum but where wide coverage is required.



MODEL MIS† Compact reflex speaker designed for flange or flush mounting in cabinets, walls, etc. Ideal replacement for less efficient cone speakers. Tropicalized and weatherproof.

MODEL CR Big power in a small package. Built-in driver with heavy duty 2″ voice coil. High intelligibility in noisy areas. Frequency response ideal for music reproduction.



MODEL 2WP Bi-directional paging projector covers two opposite areas effectively, efficiently with one driver. (Takes any University driver except ID-60T). Supplied less driver.

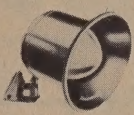
*Exclusive swivel mounting OMNI-LOK BRACKET; also fastens to ½″ pipe without additional fixture. Patented

†Patented

MULTI-DUTY

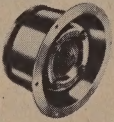
...for completely reliable operation under conditions of steam, dampness, shock, dust, chemicals, etc.

MODEL MM-2 Power capacity and frequency response ideal for clear, noise-cutting reception. Screws permit removal from front to expose diaphragm for cleaning. Serrated swivel mounting bracket.



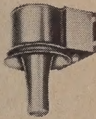
MODEL MM-2L Like MM-2, but with higher power capacity and extended low frequency response. Good for music or speech. Swivel mounting bracket mounts directly on CTR watertight transformer housing.

MODEL MM-2L50 Highest power speaker in MM series. Particularly well suited for specialized system use, such as high power electronic sirens and other electronic warning devices.



MODEL Like MM-2, but for flush mounting in walls, ceilings, bulkheads, dashboards, etc. Drains automatically. Weatherproofing gasket. Six mounting holes on 6⅝″ circle diameter.

MODEL MM-2TC Complete speaker, using cast aluminum combination bell and weatherproof housing with space for a line matching transformer and/or volume control which can be mounted right into position. For bulkhead, wall, or ceiling mounting. MM-2TC-T comes wired with multi-impedance transformer and pad attenuator.



MODEL MSR All die-cast reflexed air column speaker with radial deflector for 360° horizontal dispersion. Hermetically sealed driver easily removed. Provisions for line matching transformer and volume control. Wall/ceiling bulkhead mounting. MSR-T comes wired with multi-impedance transformer and pad.

MODEL	FREQUENCY RESPONSE	POWER RATING (Cont. Duty)		IMPEDANCE	DISPERSION	**SOUND PRESSURE LEVEL	†SENSITIVITY AS MICROPHONE	‡SERIES CAP. FOR ADJUSTED RANGE	DIMENSIONS	SHIPPING WEIGHT	LIST PRICE
		FULL RANGE	*ADJUSTED RANGE								
IB-A	250-13,000 cps	25 watts	50 watts	4, 8, 45 ohms	90°	123 db	—26 DBM		10¼″ dia. 9″ deep	4 lbs.	8Ω—$34.50 4,45Ω—$36.00
CIB-A	250-13,000 cps	25 watts	50 watts	4, 8, 45 ohms	120° x 60°	123 db	—22 DBM		7⅜″ hi. 14″ wide 12″ deep	5½ lbs.	8Ω—$46.00 4,45Ω—$47.65
MIL-A	350-13,000 cps	7.5 watts	15 watts	4, 8, 45 ohms	120°	115 db	—23 DBM		7 13⁄16″ dia. 6⅞″ deep	3¼ lbs.	8Ω—$28.35 4,45Ω—$29.66
CMIL-A	350-13,000 cps	7.5 watts	15 watts	4, 8, 45 ohms	120° x 60°	115 db	—20 DBM		6¼″ hi. 9½″ wide 8½″ deep	4 lbs.	8Ω—$32.73 4,45Ω—$34.10
MIS	500-13,000 cps	5 watts	10 watts	4, 8, 45 ohms	150°	111 db	—22 DBM		5½″ o.d. 4 7⁄16″ deep 6 holes on 4⅞″ mtg. dia.	3½ lbs.	8Ω—$29.40 4,45Ω—$30.71
CR	250-8000 cps	20 watts	40 watts	16 ohms	90°	119 db	—22 DBM		11½″ dia. 11½″ deep	8¾ lbs.	$45.00
IBR	300-10,000 cps	15 watts	30 watts	4, 8, 45 ohms	360°	106 db	—32 DBM		13″ dia. 10¼″ deep	5¼ lbs.	8Ω—$48.83 4,45Ω—$50.40
2WP	350 cps horn cut-off	Depends upon driver used		Depends upon driver used	120° each horn	Depends upon driver used	Depends upon driver used		8½″ dia. each bell 20½″ long	4 lbs.	$29.40
MM-2	350-10,000 cps	25 watts	50 watts	16 ohms	150°	117 db		11 mfd	6″ o.d. 5″ deep	5¼ lbs.	$53.35
MM-2L	250-10,000 cps	25 watts	50 watts	16 ohms	120°	120 db		14 mfd	6 13⁄16″ o.d. 6⅞″ deep	6¾ lbs.	$59.95
MM-2L50	250-10,000 cps	50 watts	100 watts	16 ohms	120°	123 db		14 mfd	6 13⁄16″ o.d. 6⅞″ deep	7¾ lbs.	$74.88
MM-2F	350-10,000 cps	25 watts	50 watts	16 ohms	150°	117 db		11 mfd	7¼″ o.d. 3¾″ deep	5¼ lbs.	$53.35
MM-2TC	350-10,000 cps	25 watts	50 watts	16 ohms	120°	117 db		11 mfd	10″ high 6 7⁄16″ w. 4 7⁄16″ deep	MM-2TC—8½ lbs. MM-2TC-T—10¼ lbs.	MM-2TC—$79.75 MM-2TC-T—$94.60
MSR	250-10,000 cps	25 watts	50 watts	16 ohms	360°	114 db		14 mfd	10¾″ hi. 7¾″ w. 8¼″ deep	MSR—10 lbs. MSR-T—10½ lbs.	MSR—$79.75 MSR-T—$94.60

*Input program response above speaker low frequency cut-off.

**Sound pressure readings taken at 4 ft. with "Full Range" power input. Reduce by 6 db each time distance is doubled. Reduce by 3 db each time power input is halved; increase by 3 db when power input is doubled.

†DBM re 10 dynes/cm²

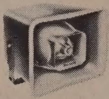
‡Assumes use of 16 ohm input.

Note: all MM speakers are patented.

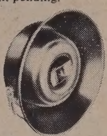
West Coast Prices Slightly Higher

WEATHERPROOF

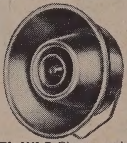
LC SERIES WEATHERPROOF HIGH FIDELITY . . . each is a genuine dual range, with separately driven woofer and tweeter. Exceptionally efficient. Baffled chamber and front loaded folded horn provide optimum loading and clean bass.



MODEL MLC Ideal for coverage of moderate-size areas or crowds—or for sound reinforcement where smooth, clean, wide-range musical reproduction and even distribution are important. Fiberglas reinforced polyester housing. 2000 cps crossover. Patent pending.

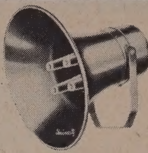


MODEL BLC Sets a new standard for voice and music reproduction. Light in weight, shallow in depth, easy to handle. May be used in place of public address trumpet/driver units except where maximum penetration is required. All metal construction. 2000 cps crossover.

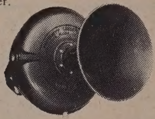


MODEL WLC Finest outdoor system made. For over a decade has brought full range high fidelity sound to auditoriums, concert halls, parades, stadiums, over the world. Achieves full bass response down to 50 cps. All metal construction. 1000 cps crossover.

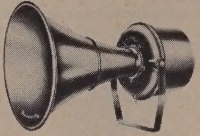
SUPERPOWER



SUPERPOWER MODEL 4A4 Versatile, powerful, compact. Use with any University drivers except PA-50 or ID-60T, according to capacity, response and impedance needed. Four individually reflexed center assemblies united in acoustically correct mixing chamber. Single bell combines entire output, assuring maximum penetration and reserve power.



SUPERPOWER MODEL B-6P‡ Takes 6 drivers of the ID-30, ID-40, ID-60, MA-25, SA-HF or PA-HF types. Amazingly compact, high-power counterpart of Model B-12P. Designed for similar installations requiring superpower speakers in smallest size: military, carillons, civil defense, etc. Drivers screw into mixing chamber. Separate bell assembly attaches to mixing chamber.



SUPERPOWER MODEL B-12P‡ Takes 12 drivers of the ID-30, ID-40, ID-60, MA-25, SA-HF or PA-HF types. Fantastic power range and reserve power. Drivers screw into patented mixing chamber of heavy cast aluminum. Separate bell assembly easily attaches to mixing chamber. Spun aluminum coverall protects drivers and connections. Use for military, civil defense, church towers, stadiums, etc.

‡Patented

PORTABLE POWRPAGE®

MODEL PP-1T Fully transistorized 25 watt amplifier. Low distortion, high stability in all operating conditions. Rugged dynamic microphone has controlled response curve. Press-to-talk switch. Auxiliary input jack. Talk/listen switch for highly directional, sensitive listening. Uses lantern batteries. Shpg. wt. (less batteries), 11 lbs. $283.25 list.

MODEL PP-1 Non-transistorized version of PP-1T. Similar in operation. Shpg. wt., 8 lbs. $104.50 list.

MODEL PP-2T Lightweight hand-held package. 3-transistor, temperature stabilized circuit delivers 5 watts (10 watts peak). Adjustable gain. Acoustic feedback suppression system allows indoor use without howling. Low standby current. Uses 6 penlight cells or 10 RM601R mercury cells. Shpg. wt. (less batteries) 5 lbs. $166.58 list.

MODEL PP-2 Non-transistorized version of PP-2T. Similar in operation. Shpg. wt., 5⅛ lbs. $82.50 list.

EXPLOSION-PROOF

MODELS 7101, 7102 UL approved for 100% safe systems where flammable liquids, gases, dust, etc., are present. Shipped assembled with built-in line matching transformer to comply with govt. safety regulations. Required conduit entrance provided as part of driver housing casting. 7101 for Class I, Groups C & D; 7102, same plus Class II, Groups E, F, G.

UNDER-WATER

MODEL MM-2FUW Completely waterproof. Can be left submerged indefinitely. Stainless steel cover for special mylar diaphragm. Silicone treated gaskets. Fully guaranteed for one year. For flush mounting. (Model MM-2UW for bracket mounting.) Shpg. wt., 6¼ lbs. $74.25 list.

MODEL		FREQUENCY RESPONSE	POWER RATING (Cont. Duty)		DISPERSION	**SOUND PRESSURE LEVEL	IMPEDANCE	DIMENSIONS		SHIPPING WEIGHT	LIST PRICE
			FULL RANGE	*ADJUSTED RANGE				DIAMETER (overall)	DEPTH (overall)		
MLC		150-15,000 cps	15 watts		120°	117 db	8 ohms	12¾″ x 9⅛″	10⅝″	10 lbs.	$57.50
BLC		70-15,000 cps	25 watts		120°	119 db	8 ohms	22¾″	9¼″	21 lbs.	$89.50
WLC		50-15,000 cps	30 watts		90°	120 db	8 ohms	33½″	20″	72 lbs.	$250.00
7101 and 7102†		200-10,000 cps	30 watts	60 watts	95°	7101 122 db 7102 110 db	16 ohms	15¾″	19″	23¾ lbs.	7101—$137.50 7102—$165.00
4A4 When Used With 4 Drivers of Types	ID-30	120- 7,500 cps	120 watts	200 watts	80°	129 db	4, 16, 64	30¾″	28⅞″	49 lbs. less drivers	$125.00 less drivers
	ID-40	120-12,000 cps	160 watts	240 watts		132 db	4, 16, 64				
	ID-40T	120-12,000 cps	160 watts	240 watts		132 db	wide variation				
	ID-60	120-12,000 cps	240 watts	400 watts		136 db	4, 16, 64				
	MA-25	120- 6,500 cps	100 watts	200 watts		128 db	4, 16, 64				
	SA-HF	120-10,000 cps	120 watts	240 watts		131 db	4, 16, 64				
	SA-30	120-10,000 cps	120 watts	240 watts		131 db	wide variation				
	PA-HF	120-10,000 cps	200 watts	400 watts		135 db	4, 16, 64				
B-6P When Used With 6 Drivers of Types	ID-30	200- 7,500 cps	180 watts	300 watts	100°	134 db	2.7, 10.7, 24, 96 ohms	12½″	21⅜″	55 lbs. less drivers	$321.25 less drivers
	ID-40	200-12,000 cps	240 watts	360 watts		137 db					
	ID-60	200-12,000 cps	360 watts	600 watts		141 db					
	MA-25	200- 6,500 cps	150 watts	300 watts		133 db					
	SA-HF	200-10,000 cps	180 watts	300 watts		136 db					
	PA-HF	200-10,000 cps	300 watts	600 watts		140 db					
B-12P When Used With 12 Drivers of Types	ID-30	100- 7,500 cps	360 watts	600 watts	80°	137 db	1.3, 5.3, 12, 21.3, 48, 192 ohms	31½″	47″	60 lbs. less drivers	$395.00 less drivers
	ID-40	100-12,000 cps	480 watts	720 watts		140 db					
	ID-60	100-12,000 cps	720 watts	1200 watts		144 db					
	MA-25	100- 6,500 cps	300 watts	600 watts		136 db					
	SA-HF	100-10,000 cps	360 watts	720 watts		139 db					
	PA-HF	100-10,000 cps	600 watts	1200 watts		143 db					

*Input program response limited to above 200 cps for 7101, 7102 and B-6P; above 100 cps for B-12P, and above 120 cps for 4A4.

**Sound Pressure taken at 4 ft., 750-1250 cps with 1 cps sweep with "full range" power input. Reduce by 6 db each time distance is doubled: reduce by 3 db each time power input is halved.

†Transformer impedances, 7101 and 7102: 45/165/200/250/500/1000/2000 ohms. 70 V. line power taps, 7101 and 7102: 30/25/20/10/5/2.5 watts.

West Coast Prices Slightly Higher

Use Index Page 1 for Quick, Easy Location of ALL Products

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

University®

HIGH FIDELITY SPEAKERS AND SYSTEMS

CONDENSED LISTING

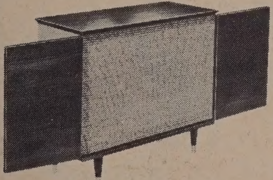
SYSTEMS

MEDALLION XII 12" 3-WAY SYSTEM University's newest and most dramatic concept in styling and performance. Unique "Select-a-Style"® grilles snap on to convert the Medallion to either Contemporary, Swedish Modern, Italian Provincial, French Provincial, or Colonial styles. Ideal for decorators. High efficiency enclosure design operates with amplifier of 10 clean watts upwards.

RRL-12 12" SYSTEM Ultra-compact high compliance unit features smooth, full-range performance from 35 cps to beyond audibility. Features sensational Sphericon Super Tweeter.

RRL-8 8" SYSTEM (not shown) Amazing performance for its diminutive size. Newly engineered 8" high compliance woofer produces bass down to below 40 cps.

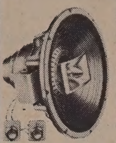
Each finished on all four sides for use as highboy or lowboy. "RRL" is a trademark.



TMS-2 TRIMENSIONAL® STEREO SYSTEM Completely integrated single cabinet stereo system, only 30" wide. New "Trimensional" principle of obtaining separation achieves balanced stereo anywhere in the room. Available in contemporary and Early American models. Patent pending.

SERIES 200 PREMIER WIDE-RANGE SPEAKERS

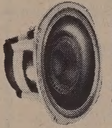
Hand-built at every stage, these all-new speakers offer many outstanding design features that achieve the finest high fidelity sound, even in smallest enclosures.



MODEL 315-C SUPER 15" 3-WAY DIFFAXIAL Theatre-type woofer cone features high excursion dual-spider piston and low-resonance bass down to 25 cps. Diffusicone mid-range and heavy duty H-600/T-50 tweeter extend response to inaudibility. 50 watts* rating. Shpg. wt., 34½ lbs. $156.00 net.

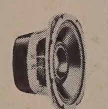
MODEL 312 12" 3-WAY DIFFAXIAL Acclaimed as greatest advance in speaker design for many years. Award-winning diecast basket. Patented Diffusicone mid-range. Coaxially mounted Sphericon Super Tweeter. Built-in network and adjustable brilliance control. Response: 28-40,000 cps. 35 watts* rating. Shpg. wt., 10¼ lbs. $73.00 net.

MODEL 6201 12" COAXIAL New improved version of the most popular top quality speaker ever made. Heavy duty woofer with cloth surround cone for extended bass, and superb, new compression type tweeter. Built-in network with adjustable brilliance control. Response: 28-18,500 cps. 35 watts* rating. Shpg. wt.. 9 lbs., 8 oz. $57.75 net.



DIFFUSICONE-12 12" DIFFAXIAL Low-cost 2-way 12" full range speaker with dual horn-loading at cone apex that extends mid-range and treble response to 15,000 cps. Bass response to 28 cps. 35 watts* rating. Shpg. wt., 8 lbs., 10 oz. $39.75 net.

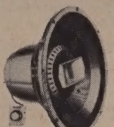
MODEL 308 8" 3-WAY DIFFAXIAL Designed specifically for quality installations where space is restricted. Special 8" woofer has extra-large voice coil for excellent bass response. Response: 30-17,000 cps. 35 watts* rating. Shpg. wt., 7 lbs. $42.00 net.



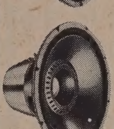
DIFFUSICONE-8 8" EXTENDED RANGE Low-cost 2-way 8" speaker highly suitable for smaller space installations. Dual horn-loaded radial projector similar to Diffusicone-12. Response: 30-15,000 cps. 35 watts* rating. Shpg. wt., 4 lbs. $28.00 net.

SERIES 100 WIDE-RANGE SPEAKERS

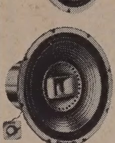
Engineered to the highest specifications from the finest materials available, these moderately priced speakers offer the top values in the high fidelity field.



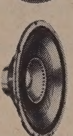
MODEL UC-153 15" 3-WAY DIFFAXIAL Features high efficiency tweeter and deluxe, multi-element Diffusicone mid-range. Response from below 30 cps to inaudibility. 30 watts* rating. Shpg. wt., 12 lbs. $83.00 net.



MODEL UC-152 15" 2-WAY DIFFAXIAL Patented Diffusicone element provides dual horn loading at apex of cone to extend mid and high frequency response. Response from below 30 to 14,000 cps. 30 watts* rating. Shpg. wt., 8¼ lbs. $45.00 net.

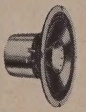


MODEL UC-123 12" 3-WAY DIFFAXIAL Patented Diffusicone element. UXT-5 super-tweeter with "reciprocating flare" horn. Crosses over at 1000 cps mechanically, 5000 cps electrically. Response: below 45 cps to 17,500 cps. 25 watts* rating. Shpg. wt., 9 lbs. $66.50 net.

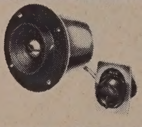


MODEL UC-122 12" 2-WAY DIFFAXIAL Coaxial horn loading at apex of cone extends mid and high frequency response. Uni-sectional Diffusicone element provides 1000 cps mechanical crossover and uniform wide-angle dispersion. Response: 45-13,000 cps. 25 watts* rating. Shpg. wt., 5¼ lbs. $35.50 net.

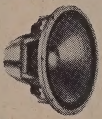
MODEL UC-121 12" EXTENDED RANGE Only 4" deep, perfect for wall, flush ceiling and other limited space installations. Highly efficient, needs only fraction of power required for ordinary 12" speakers. Response: 45-10,000 cps. 30 watts* rating. Shpg. wt., 5¼ lbs. $28.00 net.



MODEL UC-82 8" WIDE-RANGE Especially designed for small cabinet stereo applications. Ideal for later addition of one University dual voice coil woofer to extend combined bass range of both channels. All-Alnico 5 magnet. Response: 45-14,000 cps. 25 watts* rating. Shpg. wt., 3½ lbs. $16.95 net.



MODEL T202 SPHERICON® SUPER TWEETER Frequency response of 3,000-40,000 cps (= 2 db to 22,000 cps). New concept, with special domed phenolic diaphragm and spherical diffractor results in virtually linear response—with *true* musical quality—superior to finest electrostatics. Matches any system—especially high compliance—without sacrificing bass efficiency. Dispersion: 120°. Nominal impedance: 8 ohms. (Use with any 4-16 ohm speaker.) 4⅝" dia., 4" d. Built-in network and adjustable control. Shpg. wt., 3 lbs. $24.95 net. (Design patented. Patent pending.)



WOOFERS

TWEETERS

NETWORKS

WRITE FOR COMPLETE HIGH FIDELITY CATALOG ...containing full information on all University products: systems, enclosures, kits, high compliance and high efficiency woofers, mid-range speakers, horn-loaded tweeters, compression drivers and accessory networks. Desk H-4, University Loudspeakers, Inc., 80 So. Kensico Ave., White Plains, N. Y.

MODEL	WOOFER	MID-RANGE	TWEETER	NETWORK	SIZE: H x W x D	Shpg. Wt.	Mahogany	Blond	Walnut	Limed Oak	Oiled Walnut	Fruitwood	Unfinished
TMS-2	C-12HC	2 spec. 8"	2 compr. wide-angle	Dual 3-Way	Contemp'y: 25 x 30 x 12½	92 lbs.	258.00	263.00	263.00	—	269.00	—	—
					Early Amer.: 24¾ x 30 x 13½		—	—	—	—	—	279.95	—
MEDALLION XII	12" high compliance	Spec. 8" mid-range	Sphericon	3-Way	24 x 17 x 12½	40 lbs.	System, less grille: in walnut, oiled walnut, fruitwood, or mahogany, $139.95. Grilles: contemporary, $9.95; period, $14.95. Base: $14.95.						
RRL-12	12" high compliance	3½" direct radiator	Sphericon	6 db per octave	25 x 15⅝ x 12½	38½ lbs.	119.95	—	123.95	123.95	125.95	—	114.95
RRL-8	8" high compliance	3½" direct radiators (2)		6 db per octave	22¼ x 12¼ x 10⁵⁄₁₆	28 lbs.	99.50	—	102.50	102.50	105.50	—	95.50

Note: all prices user net

*Integrated program. All 8-16 ohms. "Diffaxial" is a registered trademark.

West Coast Prices Slightly Higher

PROFESSIONAL MICROPHONES FOR

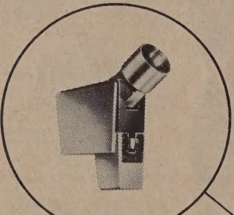
University's revolutionary new microphone line stands without peer as the answer to every professional sound requirement . . . from the most exacting broadcasting standards to the sound distributor's demand for the ultimate in quality, ruggedness and dependability . . . and offers, in addition, countless advantages with its unique modular flexibility.

FEATURES OF THE NEW BROADCAST STANDARD SERIES

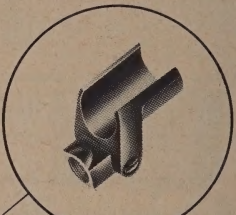
- Taste-setting styling reflects classic solidity with uncluttered trim lines, totally adaptable to every environment. Finished in smart jet black and chrome satin (with special non-reflective finishes available for telecasting applications. Also, gold finishes).
- Most advanced die-casting construction techniques contribute to their superior internal engineering—as well as external finish—for durable operation under the most severe applications.
- Exclusive "Unilar" diaphragm assures extremely wide frequency response, virtually distortion-free performance. Rugged generating element is indestructible in normal use, unaffected by extremes of temperature and climate.
- Impedance matching simplicity. Press-on connectors built in to *every* accessory eliminate any need for tools, soldering, or rewiring.
- Broadcast standard microphones feature unique internal shock-mounting. Internal elements are housed in inner aluminum case and float in vibration-free polystyrene foam insulators.

MODULAR FLEXIBILITY

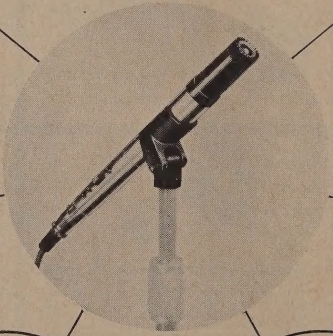
. . . gives you total interchangeability between all microphones and accessories. Lets you obtain for the first time, the *exact* microphone you want without compromising quality to meet a price, or to pay for features not needed at the time. Does away with excessive and costly inventories . . . permits user to add suitable accessories as microphone requirements change.

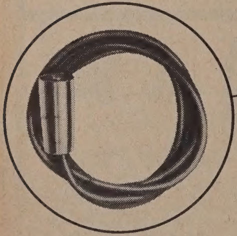


MODEL SSP10
Stand adapter
w/switch with receptacle
for cannon plug
4" x 1¼"; Shpg. wt., ½ lb.
List price: $18.50.

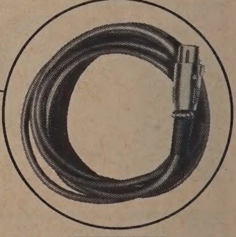


MODEL SA10
Slide-on stand adapter
3" x 1½"
Shpg. wt., ¼ lb.
List price: $7.00.

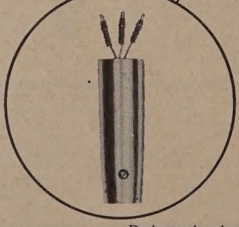




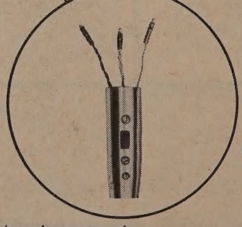
MODEL CC10
Cable adapter
w/18' cable; 4" x 1¼"
Shpg. wt., 1¼ lbs.
List price: $10.00.



MODEL CA10
Cannon plug and cable
with push/action
latch-lock and 18' cable.
Shpg. wt., 1¼ lbs.
List price: $10.00.



MODEL PA10
Cannon plug adapter
3⅛" x 1"
Shpg. wt., ¼ lb.
List price: $10.50.



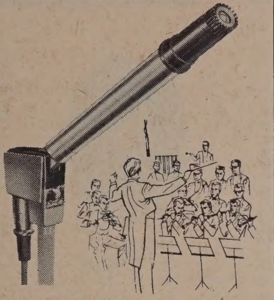
MODEL SP10
Cannon plug adapter
w/switch; 3⅛" x 1"
Shpg. wt., ¼ lb.
List price: $11.50.

Desk stand and other accessories to be announced.

West Coast Prices Slightly Higher

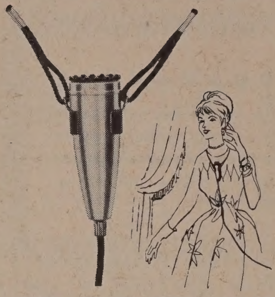
BROADCASTING, RECORDING, GENERAL PURPOSE

A NEW BROADCAST STANDARD OF PERFORMANCE



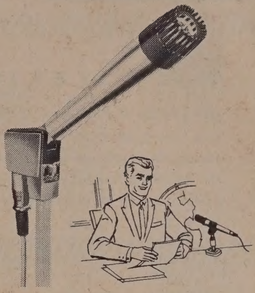
MODEL 402S: OMNI-DIRECTIONAL DYNAMIC (SHOCK MOUNTED) Professional flexibility and styling in broadcasting, telecasting and recordings—group pickup, orchestras, public address, interviews, indoors or out. An all-around microphone with outstanding response and performance under the severest conditions. Unique, exclusive shock mounting: set in an aluminum inner cone, the internal elements float in polystyrene foam insulators. Impedance (two low, one high) can be selected with simple plug-in rapidity.

Type: Omni-directional, shock-mounted, dynamic microphone.
Frequency Response: 40-20,000 cps.
Impedance: 30/50; 150/250; 20,000 ohms.
Output Level: —55 db.
Hum Reference: —120 db./.001 gauss.
Dimensions: 8¾″ long, 1 3/32″ o.d.
Shipping Weight: ¾ lb.
List Price: $79.50 (Microphone only).



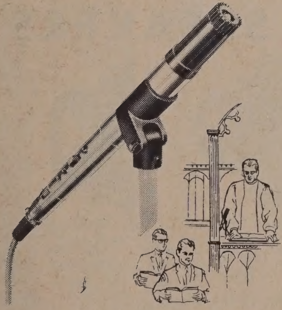
MODEL 403L: TELEVISION LAVALIER Smallest of the Series 400 microphones, equipped with 25 foot cable and neck clip, this smartly-styled lavalier microphone is ideal for broadcasting, telecasting and in professional recording applications where finest quality reproduction together with unobtrusiveness is required.

Type: Omni-directional dynamic, small lavalier.
Frequency Response: 50-18,000 cps.
Impedance: 30/50; 150/250; 20,000 ohms.
Output Level: —55 db.
Hum Reference: —120 db./.001 gauss.
Dimensions: 3½″ long, 1 1/16″ o.d.
Shipping Weight: 1 lb.
List Price: $87.50



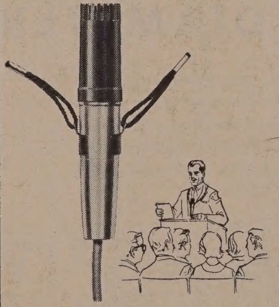
MODEL 502S: CARDIOID DYNAMIC (SHOCK MOUNTED) Here's the answer to wide-range reproduction under diverse acoustic conditions. Eliminates undesirable background noise; superb anti-feedback characteristic; amazing "aimed sound" pickup pattern; and overall excellence of response for discriminating professional applications. Exclusive shock-mounting keeps internal elements floating, vibration-free, in polystyrene foam insulators.

Type: Cardioid, dynamic, shock-mounted.
Frequency Response: 30-16,000 cps.
Impedance: 30/50; 150/250; 20,000 ohms.
Output Level: —54 db.
Hum Reference: —120 db.
Dimensions: 7¼″ long, 1¾″ o.d.
Shipping Weight: 1¼ lbs.
List Price: $145.00 (Microphone only).



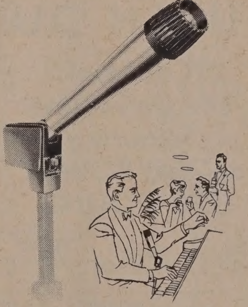
MODEL 401: OMNI-DIRECTIONAL DYNAMIC Versatility of application makes this an ideal general purpose microphone. Its wide-range reproduction of music and voice suits every professional sound system application: night club, church, school, commercial and industrial PA, and the like.

Type: Omnidirectional dynamic.
Frequency Response: 40-20,000 cps.
Impedance: 30/50; 150/250; 20,000 ohms.
Output Level: —55 db.
Hum Reference: —120 db./.001 gauss.
Dimensions: 6⅜″ long, 1 3/32″ o.d.
Shipping Weight: ¾ lb.
List Price: $72.50 (Microphone only).



MODEL 404L: BROADCAST LAVALIER Incorporating every feature of the large omnidirectional microphones — including the Unilar diaphragm—this lavalier is fitted with 25 feet of cable, neck cord and neck clips, and has built-in adjustment for two low and one high impedance connections. Though diminutive in size, the quality, exceptional performance and ruggedness of the 404L meet the highest requirements of the professional soundman.

Type: Omni-directional dynamic, large lavalier.
Frequency Response: 50-20,000 cps.
Impedance: 30/50; 150/250; 20,000 ohms.
Output Level: —55 db.
Hum Reference: —120 db./.001 gauss.
Dimensions: 4¼″ long, 1 3/32″ o.d.
Shipping Weight: ¾ lb.
List Price: $95.00



MODEL 501: CARDIOID DYNAMIC Ultra-high discrimination against unwanted sound virtually eliminates background noise. Its heart-shaped pattern is achieved acoustically, and together with the rugged, dynamic generating element results in a high order of dependability with no sacrifice in quality. Performers can work a greater distance away from the 501 due to its excellent directional characteristics... or ultra-close without "booming" or bass attenuation.

Type: Cardioid, dynamic.
Frequency Response: 35-15,000 cps.
Impedance: 30/50; 150/250; 20,000 ohms.
Output Level: —54 db.
Hum Reference: —120 db./.001 gauss.
Dimensions: 5 9/32″ long, 1½″ o.d.
Shipping Weight: 1 lb.
List Price: $125.00 (Microphone only).

West Coast Prices Slightly Higher

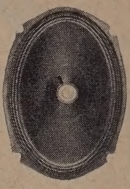
utah

LIFETIME SPEAKERS

Guaranteed in writing for the lifetime of the owner!

THE LIFETIME GUARANTEE

Utah Radio & Electronic Corp. agrees to replace this loudspeaker due to *any performance failure* at any time during the lifetime of the owner *at no charge* except return postage to Huntington, Indiana. No handling, inspection, labor, materials or service charge will be made if repair or replacement is required.



MODEL NO.
LT69F

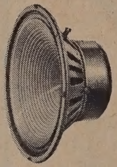
UTAH LIFETIME SPEAKERS

MODEL NO.	SIZE AND DESCRIPTION	MAGNET WEIGHT (OZ.)	V.C. DIA. (IN.)	V.C. IMP. (OHMS)	PEAK AUDIO (WATTS)	OUTSIDE DIM. (IN.)	DEPTH (IN.)	MTG. DIA. (IN.)	SHIP. WEIGHT (LBS.)	LIST PRICE
LT4C	4″ Square	1.5	⅝	3-4	5	4³⁄₃₂	1⅞	4¹¹⁄₁₆	¾	$5.50
LT5C	5″ Pincushion	1.5	⅝	3-4	5	4⅝	2³⁄₃₂	4¹¹⁄₁₆	1	5.75
LT6C	6″ Pincushion	1.5	⅝	3-4	6	6¹⁄₁₆	2⁷⁄₁₆	6³⁄₃₂	1	6.50
LT8K	8″ Round	8.0	1⅛	3-4	15	8³⁄₃₂	3¼	7¹¹⁄₁₆	3¼	13.85
LT12K	12″ Round	8.0	1⅛	3-4	15	12³⁄₃₂	4²¹⁄₃₂	11⁹⁄₁₆	5¾	16.85
LT46C	4 x 6 Oval	1.5	⅝	3-4	5	4³⁄₃₂ x 6³⁄₃₂	2¹⁄₃₂	3¾ x 4⅝	¾	5.95
LT57C	5 x 7 Oval	1.5	⅝	3-4	6	5 x 7¼	2²¹⁄₃₂	6⁵⁄₃₂	1	6.75
LT69F	6 x 9 Oval	3.2	¾	3-4	6	6⅜ x 9⅜	3⁵⁄₃₂	4⅝ x 6⁹⁄₁₆	1¾	10.50

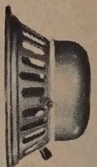
UTAH DUAL DIAMETER SPEAKERS

Co-Axial Uni-Drive Line featuring MORE POWER PER POUND

Single speaker with two perfectly matched and balanced cones provides exacting full range reproduction of unsurpassed tonal quality, plus a bonus of reserve power.



MODEL NO. D12P



MODEL NO. D8LA

MODEL NO.	SIZE AND DESCRIPTION	MAGNET WEIGHT (OZ.)	V.C. DIA. (IN.)	V.C. IMP. (OHMS)	PEAK AUDIO (WATTS)	FREQUENCY RESPONSE (CPS)	OUTSIDE DIM. (IN.)	DEPTH (IN.)	MTG. DIA. (IN.)	SHIPPING WEIGHT (LBS.)	LIST PRICE
D8J	8″ Full Range	6.8	1	8	12	45/15,000	8³⁄₃₂	4	7¹¹⁄₁₆	3½	$17.50
D8K	8″ Full Range	8.0	1⅛	8	20	40/15,500	8³⁄₃₂	4	7¹¹⁄₁₆	3¾	21.20
D8LA	8″ Full Range	10.0	1¼	8	20	40/16,000	8³⁄₃₂	4	7¹¹⁄₁₆	4	24.95
D8M	8″ Full Range	1 Lb.	1⅜	8	20	35/15,000	8³⁄₃₂	4¾	7¹¹⁄₁₆	4½	29.25
D8P	8″ Full Range	21.5	1½	8	20	35/13,000	8³⁄₃₂	4¾	7¹¹⁄₁₆	5	35.25
D12J	12″ Full Range	6.8	1	8	15	35/15,000	12³⁄₃₂	5½	11⁹⁄₁₆	6	19.95
D12K	12″ Full Range	8.0	1⅛	8	20	30/15,500	12³⁄₃₂	5½	11⁹⁄₁₆	6¼	24.20
D12LA	12″ Full Range	10.0	1¼	8	20	30/16,000	12³⁄₃₂	5½	11⁹⁄₁₆	6½	29.95
D12M	12″ Full Range	1 Lb.	1⅜	8	25	30/15,000	12³⁄₃₂	6⁵⁄₃₂	11⁹⁄₁₆	7	36.25
D12P	12″ Full Range	21.5	1½	8	30	30/14,000	12³⁄₃₂	6⁵⁄₃₂	11⁹⁄₁₆	7½	40.75
D15P	15″ Full Range	21.5	1½	8	35	25/12,000	15⅛	8	14⁹⁄₁₆	9½	44.50
D69J	6 x 9″ Full Range	6.8	1	8	12	60/16,000	6⅜ x 9⅜	3⁷⁄₃₂	4⅝ x 6⁹⁄₁₆	2½	16.95

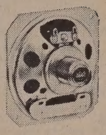
All models except D8J, D12J, D69J, and D12K now feature new improved cloth skiver rolls for utmost smoothness in full range frequency response because the cone enjoys perfect freedom of balanced suspension.

utah

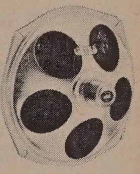
MICRO-GAP SPEAKERS

Recognized Replacement Standard of the Industry

MODEL NUMBER	SIZE & DESCRIPTION	MAGNET WEIGHT (OZ.)	V.C. DIA. (IN.)	V.C. IMP. (OHMS)	PEAK AUDIO (WATTS)	OUTSIDE DIM. (IN.)	DEPTH (IN.)	MTG. DIA. (IN.)	SHIPPING WEIGHT (LBS.)	LIST PRICE
SP25A	2½″ Square	.68	⁹⁄₁₆	3–4	2	2½	1¹⁵⁄₁₆	2²⁹⁄₃₂	¼	$3.95
SP27A	2¾″ Round	.68	⁹⁄₁₆	12–16	2	2¾	1¼	—	¼	4.30
SP3A	3″ Square	.68	⁹⁄₁₆	3–4	3	3	1¹⁵⁄₃₂	3²⁹⁄₆₄	½	3.90
*SP35A	3½″ Square	.75	⅝	3–4	3	3¹⁵⁄₃₂	1²¹⁄₃₂	3³¹⁄₃₂	¾	3.95
*SP35B	3½″ Square	1.00	⅝	3–4	3	3¹⁵⁄₃₂	1²⁷⁄₃₂	3³¹⁄₃₂	¾	4.35
SP4Y	4″ Square	.55	⁹⁄₁₆	3–4	4	4³⁄₃₂	1⁹⁄₁₆	4¹¹⁄₁₆	½	2.95
SPL4A	4″ Square	.68	⁹⁄₁₆	3–4	4	4³⁄₃₂	1²¹⁄₃₂	4¹¹⁄₁₆	½	3.35
*SP4A	4″ Square	.75	⅝	3–4	4	4³⁄₃₂	1¹¹⁄₁₆	4¹¹⁄₁₆	¾	3.95
*SP4B	4″ Square	1.00	⅝	3–4	4	4³⁄₃₂	1²⁷⁄₃₂	4¹¹⁄₁₆	1	4.35
*SP4D	4″ Square	1.47	¾	3–4	5	4³⁄₃₂	1⅞	4¹¹⁄₁₆	1	4.45
SP5Y	5″ P.C.	.55	⁹⁄₁₆	3–4	4	4⅝	1¾	4¹¹⁄₁₆	½	3.50
SPL5A	5″ P.C.	.68	⁹⁄₁₆	3–4	4	4⅝	1⅞	4¹¹⁄₁₆	½	3.80
SPR5A	5″ Round	.75	⅝	3–4	4	5	1⅞	4¹¹⁄₁₆	¾	3.90
*SP5A	5″ P.C.	.75	⅝	3–4	4	4⅝	1⅞	4¹¹⁄₁₆	¾	4.10
*SP5B	5″ P.C.	1.00	⅝	3–4	4	4⅝	2¹⁄₁₆	4¹¹⁄₁₆	1	4.45
*SP5D	5″ P.C.	1.47	¾	3–4	5	4⅝	2³⁄₃₂	4¹¹⁄₁₆	1	4.60
SP52B	5¼″ P.C.	1.0	¾	3–4	5	5⁵⁄₁₆	1¹⁵⁄₁₆	5½	¾	4.75
SP52F	5¼″ P.C.	3.16	¾	3–4	5	5⁵⁄₁₆	2¼	5½	¾	5.90
SPR6A	6″ Round	.75	⅝	3–4	4	6½	2⁹⁄₃₂	6³⁄₃₂	¾	4.75
*SP6B	6″ P.C.	1.0	¾	3–4	5	6¹⁄₁₆	2¼	6³⁄₃₂	¾	4.90
*SP6D	6″ P.C.	1.47	¾	3–4	6	6¹⁄₁₆	2¹⁵⁄₃₂	6³⁄₃₂	1	5.40
*SP6FL	6″ P.C.	3.16	¾	3–4	8	6¹⁄₁₆	2⁹⁄₁₆	6³⁄₃₂	1½	6.85
SP7B	7″ P.C.	1.0	¾	3–4	6	7	2⅝	4¼x5¾	1¼	5.45
SP8B	7½″ P.C.	1.0	¾	3–4	5	7½	2¹³⁄₁₆	7¹¹⁄₁₆	1¼	6.45
*SP8D	7½″ P.C.	1.47	¾	3–4	6	7½	2¹⁵⁄₁₆	7¹¹⁄₁₆	1½	6.95
*SP8D-8	7½″ P.C.	1.47	¾	8	6	7½	2¹⁵⁄₁₆	7¹¹⁄₁₆	1½	7.25
*SP8E	7½″ P.C.	2.15	1	3–4	8	7½	2²⁹⁄₃₂	7¹¹⁄₁₆	1½	7.25
*SP8F-8	7½″ P.C.	3.16	¾	8	8	7½	3¹⁄₁₆	7¹¹⁄₁₆	1¾	8.75
†SP8NF	7½″ P.C.	3.16	¾	3–4	8	7½	2¹⁄₃₂	7¹¹⁄₁₆	1¾	9.70
*SP8G	8″ Round	3.16	1	3–4	10	8³⁄₃₂	3⁷⁄₃₂	7¹¹⁄₁₆	2	8.50
*SP8J	8″ Round	6.8	1	3–4	10	8³⁄₃₂	4¹⁄₁₆	7¹¹⁄₁₆	3¼	11.30
*SP8J-8	8″ Round	6.8	1	8	12	8³⁄₃₂	4¹⁄₁₆	7¹¹⁄₁₆	3¼	11.70
*SP8J-16	8″ Round	6.8	1	16	14	8³⁄₃₂	4¹⁄₁₆	7¹¹⁄₁₆	3¼	12.25
*SP10D	10″ P.C.	1.47	¾	3–4	6	9¹⁹⁄₃₂	4⅜	9⅝	2	8.75
*SP10G	10″ Round	3.16	1	3–4	10	10³⁄₃₂	4	9⅝	2½	10.50
*SP12D	12″ Round	1.47	¾	3–4	6	12³⁄₁₆	5²⁷⁄₃₂	11⁹⁄₁₆	3½	10.00
*SP12G	12″ Round	3.16	1	3–4	10	12³⁄₁₆	4⅝	11⁹⁄₁₆	4	12.50
*SP12J	12″ Round	6.8	1	3–4	12	12³⁄₁₆	6⁵⁄₃₂	11⁹⁄₁₆	4¾	14.55
*SP12J-8	12″ Round	6.8	1	8	14	12³⁄₁₆	6⁵⁄₃₂	11⁹⁄₁₆	4¾	14.90
*SP12J-16	12″ Round	6.8	1	16	16	12³⁄₁₆	6⁵⁄₃₂	11⁹⁄₁₆	4¾	15.45
SP53Y	5 x 3 Oval	.55	⁹⁄₁₆	3–4	3	3¹⁄₃₂x5¹⁄₃₂	1⅝	2⁹⁄₁₆x3⁹⁄₁₆	½	3.95
SP46Y	4 x 6 Oval	.55	⁹⁄₁₆	3–4	3	4³⁄₃₂x6³⁄₃₂	1¹¹⁄₁₆	3¾ x4⅝	½	3.95
SP46A	4 x 6 Oval	.75	⅝	3–4	4	4³⁄₃₂x6³⁄₃₂	1¹³⁄₁₆	3¾x4⅝	½	4.50
SP46B	4 x 6 Oval	1.00	⅝	3–4	4	4³⁄₃₂x6³⁄₃₂	2.0	3¾x4⅝	¾	5.00
SP46D	4 x 6 Oval	1.47	¾	3–4	4	4³⁄₃₂x6³⁄₃₂	2¹⁄₃₂	3¾x4⅝	¾	5.20
SP48C	4 x 8 Oval	1.5	⅝	3–4	4	4x8	2³⁄₁₆	3³⁄₁₆x5¹¹⁄₁₆	¾	6.95
SP57Y	5 x 7 Oval	.55	⁹⁄₁₆	3–4	3	5x7¼	2¹¹⁄₃₂	6⁵⁄₃₂	¾	4.50
SP57A	5 x 7 Oval	.75	⅝	3–4	4	5x7¼	2⁷⁄₁₆	6⁵⁄₃₂	¾	4.95
SP57B	5 x 7 Oval	1.00	¾	3–4	4	5x7¼	2⁷⁄₁₆	6⁵⁄₃₂	1	5.25
SP57D	5 x 7 Oval	1.47	¾	3–4	4	5x7¼	2¹¹⁄₁₆	6⁵⁄₃₂	1	5.75
SP57E	5 x 7 Oval	2.15	1	3–4	8	5x7¼	2⅝	6⁵⁄₃₂	1¼	6.75
SP69A	6 x 9 Oval	.75	⅝	3–4	4	6⅜x9⁵⁄₁₆	2²³⁄₃₂	4⅝x6⁹⁄₁₆	1	6.50
SP69B	6 x 9 Oval	1.00	¾	3–4	4	6⅜x9⁵⁄₁₆	2⅞	4⅝x6⁹⁄₁₆	1¼	6.75
SP69D	6 x 9 Oval	1.47	¾	3–4	6	6⅜x9⁵⁄₁₆	3.0	4⅝x6⁹⁄₁₆	1¼	7.40
SP69D-8	6 x 9 Oval	1.47	¾	8	6	6⅜x9⁵⁄₁₆	3.0	4⅝x6⁹⁄₁₆	1¼	7.80
SP69D-20	6 x 9 Oval	1.47	¾	20 C.T.	6	6⅜x9⁵⁄₁₆	3.0	4⅝x6⁹⁄₁₆	1¼	8.90
†SP69NF	6 x 9 Oval	3.16	¾	3–4	8	6⅜x9⅜	2¹⁄₁₆	4⅝x6⁹⁄₁₆	2	9.90
SP69E	6 x 9 Oval	2.15	1	3–4	8	6⅜x9⅜	3⅛	4⅝x6⁹⁄₁₆	1¾	7.75
SP69G	6 x 9 Oval	3.16	1	3–4	10	6⅜x9⅜	3¹¹⁄₃₂	4⅝x6⁹⁄₁₆	2	9.40
SP69J	6 x 9 Oval	6.8	1	3–4	10	6⅜x9⅜	3⁷⁄₁₆	4⅝x6⁹⁄₁₆	3	10.95
SP2510C	2½ x 10 Oval	1.5	⅝	3–4	3	2¹¹⁄₁₆x10	2³⁄₃₂	9²³⁄₃₂	1	7.45

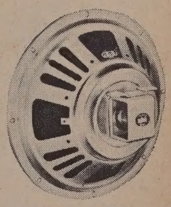


MODEL NO. SP4A
(SQUARE)



MODEL NO. SP8D
P.C. (PIN CUSHION)

MODEL NO. SP69G
(OVAL)



MODEL NO. SP12J
(ROUND)

*Models indicated have transformer mounting brackets, or facilities.
†Inverted construction.

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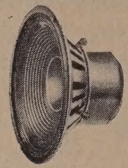
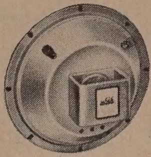
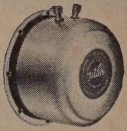
FABULOUS G SPEAKERS

Hi-Fi/Stereo Quality Moderately Priced


MODEL NO. G12K


MODEL NO. GM8J


MODEL NO. GT5FN

MODEL NUMBER	SIZE AND DESCRIPTION	MAGNET WEIGHT (OZ.)	V.C. DIA. (IN.)	V.C. IMP. (OHMS)	PEAK AUDIO (WATTS)	FREQUENCY RESPONSE (CPS)	OUTSIDE DIM. (IN.)	DEPTH (IN.)	MTG. DIA. (IN.)	SHIPPING WEIGHT (LBS.)	LIST PRICE
*GT26C	2 x 6″ Tweeter	1.47	⅝	8	20	2,500/16,000	2¼ x 6¼	2⅛	1⅞ x 4¾	1	$6.90
GT5F	5″ Tweeter	3.16	¾	8	30	3,000/19,500	5	2²⁵⁄₃₂	4¹¹⁄₁₆	1¼	8.75
GT5FN	5″ Tweeter w/Crossover	3.16	¾	8	30	3,000/19,500	5	2¹⁵⁄₁₆	4¹¹⁄₁₆	1½	12.95
GM6F	6″ Mid-Range	3.16	¾	8	8	1,500/7,000	6½	3⁹⁄₁₆	6³⁄₃₂	2¾	12.60
G8J	8″ Extended Range	6.8	1	8	12	50/14,000	8³⁄₃₂	4¹⁄₃₂	7¹¹⁄₁₆	3	13.80
GM8J	8″ Mid-Range	6.8	1	8	25 w/ Crossover	600/13,500	8³⁄₃₂	4¹⁄₃₂	7¹¹⁄₁₆	3	13.80
GMT8J	8″ Mid-Range Tweeter	6.8	1	8	25 w/ Crossover	130/20,000	8³⁄₃₂	4¹³⁄₁₆	7¹¹⁄₁₆	3	17.95
*G8K	8″ Extended Range	8.0	1⅛	8	20	45/10,000	8³⁄₃₂	4¹³⁄₁₆	7¹¹⁄₁₆	3¼	17.50
G12J	12″ Extended Range	6.8	1	8	15	40/13,000	12³⁄₃₂	5⁷⁄₁₆	11⁹⁄₁₆	5	17.30
*G12K	12″ Extended Range	8.0	1⅛	8	20	40/9,000	12³⁄₃₂	6¹⁷⁄₃₂	11⁹⁄₁₆	5¼	21.95
G12P	12″ Low-Mid Range	21.5	1½	8	30	35/8,000	12³⁄₃₂	6¹⁷⁄₃₂	11⁹⁄₁₆	7¾	39.50
*G12R	12″ Woofer	2 Lb.	2	8	35	25/5,500	12³⁄₃₂	6⁵⁄₃₂	11⁹⁄₁₆	10	52.25
G15P	15″ Low-Mid Range	21.5	1½	8	35	30/8,000	15⅛	8	14⁹⁄₁₆	10½	44.25
G15R	15″ Woofer	2 Lb.	2	8	40	20/5,000	15⅛	8	14⁹⁄₁₆	12¼	56.75
†*G12J26	12″ Co-Ax	6.8	1	8	15	35/17,500	12³⁄₃₂	6¾	11⁹⁄₁₆	6½	38.75
G12P5	12″ Co-Ax	21.5	1½	8	30	35/19,500	12³⁄₃₂	6¾	14⁹⁄₁₆	9½	57.50
G15P5	15″ Co-Ax	21.5	1½	8	35	30/19,500	15⅛	8¼	14⁹⁄₁₆	12¼	65.00

† Improved model of G12J3.
* New Models.

UTAH CONTINENTAL SPEAKERS

Our Finest Hi-Fi and Stereo Line

MODEL NO.	SIZE AND DESCRIPTION	MAGNET WEIGHT (OZ.)	V.C. DIA. (IN.)	V.C. IMP. (OHMS)	PEAK AUDIO (WATTS)	FREQUENCY RESPONSE (CPS)	OUTSIDE DIM. (IN.)	DEPTH (IN.)	MTG. DIA. (IN.)	SHIPPING WEIGHT (LBS.)	LIST PRICE
CT5FN	5″ Tweeter	3.16	¾	16	40	3,500/20,000	5	3¼	4¹¹⁄₁₆	3¼	$16.25
CM6J	6″ Mid-Range	6.8	1	16	15	600/6,000	6½	4	6³⁄₃₂	3¾	24.50
CM8L	8″ Mid-Range	10.0	1¼	16	20	500/5,000	8³⁄₃₂	4³⁄₁₆	7¹¹⁄₁₆	4½	37.95
C8R	8″ Woofer	2 Lb.	2	16	25	20/8,000	8³⁄₃₂	4¾	7¹¹⁄₁₆	8	53.95
*C8RD	8″ Woofer (Dual V.C.)	2 Lb.	2	16 Series	25	20/3,000	8³⁄₃₂	4¾	7¹¹⁄₁₆	8	59.50
C12P	12″ Woofer	21.5	1½	16	25	25/8,000	12³⁄₃₂	6⁵⁄₃₂	11⁹⁄₁₆	7½	51.50
C12R	12″ Woofer	2 Lb.	2	16	30	20/7,500	12³⁄₃₂	6⁵⁄₃₂	11⁹⁄₁₆	10½	58.95
C12RD	12″ Woofer (Dual V.C.)	2 Lb.	2	16 Series	30	20/2,500	12³⁄₃₂	6⁵⁄₃₂	11⁹⁄₁₆	10½	65.00
C15R	15″ Woofer	2 Lb.	2	16	40	20/5,000	15⅛	8	14⁹⁄₁₆	13	66.75

* New model.

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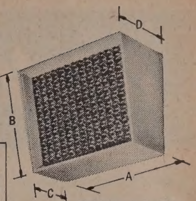
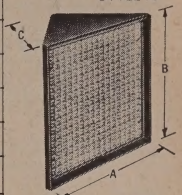
CUSTOM BAFFLES

The Finest Baffles
Made . . . Anywhere



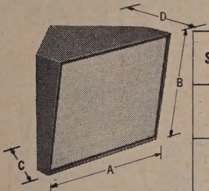
MODEL NO. PO8
STYLE A



MODEL NO. CPM8
STYLE B

STYLE	SIZE	MODELS			A	B	C	D	LIST PRICE
		MAHOGANY	OAK	WALNUT					
'A'	8″	PM8	PO8	PW8	12	9½	4 7/16	6⅛	$10.50
	12″	PM12	PO12	PW12	17	13½	6⅜	8¾	14.95
'B'	8″	CPM8	CPO8	CPW8	15½	15½	8⅛	—	12.95
	12″	CPM12	CPO12	CPW12	17½	17½	9¼	—	17.25
'C'	8″ & 5″	SC102-M	SC102-O	SC102-W	20	10	10 3/16	—	24.90
Matching Backs for Style 'A' Baffles	8″	AM8	AO8	AW8	Mounting Hardware Included				1.75
	12″	AM12	AO12	AW12					2.25

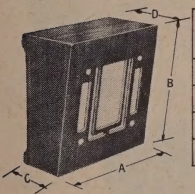
UTAH DELUXE & STANDARD BAFFLES



MODEL NO. CDW8
Style C

DELUXE BAFFLES

STYLE	SIZE	MODELS			A	B	C	D	LIST PRICE
		MAHOGANY	BLONDE	WALNUT					
'A'	8″	DM8	DB8	DW8	12	9½	4 5/16	6	$10.25
	12″	DM12	DB12	DW12	17	13½	5 7/16	8 5/16	15.10
'B'	8″	DCM8	DCB8	DCW8	15½	14	7¾	8⅛	12.85
	12″	DCM12	DCB12	DCW12	19½	17⅞	12	10¼	17.25
'C'	8″	CDM8	CDB8	CDW8	12	9½	6⅞	8⅞	12.35



MODEL
NO. MB8

STANDARD BAFFLES (FLAT WALL)

SIZE	MODELS		A	B	C	D	LIST PRICE
	MAHOGANY	BLONDE					
6″	MB6	BB6	8¼	9⅜	2 15/16	4⅝	$ 5.95
8″	MB8	BB8	9¾	10 15/16	3⅞	5 13/16	7.50
10″	MB10	BB10	11⅜	12½	4 11/16	6 13/16	8.95
12″	MB12	BB12	13⅞	14⅞	5 11/16	8 5/16	11.50

STANDARD BAFFLES (CORNER)

8″	SCM8	SCB8	9¾	10 15/16	5¾	7¾	9.20

UTAH PUBLIC ADDRESS SPEAKERS

MODEL NO.	SIZE & DESCRIPTION	MAGNET WEIGHT (OZ.)	V.C. DIA. (IN.)	V.C. IMP. (OHMS)	PEAK AUDIO WATTS	FREQUENCY RESPONSE (CPS)	OUTSIDE DIM. (IN.)	DEPTH (IN.)	MTG. DIA. (IN.)	SHIP. WT. (LBS.)	LIST PRICE
PA6D	6″	1.47	¾	8	6	90/8500	6½	2 15/32	6⅛	1½	$ 5.95
PA6F	6″	3.16	¾	8	6	80/9000	6½	2 9/16	6⅛	1½	7.50
PA8D	8″	1.47	¾	8	8	50/12,000	7½	2 15/16	7 11/16	1¾	8.10
PA8F	8″	3.16	¾	8	8	40/15,000	7½	3 1/16	7 11/16	1¾	10.50
†PA8NF	8″	3.16	¾	8	8	40/15,000	7½	2 1/16	7 11/16	1¾	11.25
‡PA8FI	8″	3.16	¾	45	8	40/15,000	7½	3 1/16	7 11/16	1¾	11.50
*PA8J	8″	6.8	1	8	10	50/15,000	8 3/32	3⅛	7 11/16	3	13.80
PA8M	8″	14.7	1¼	8	20	50/7000	8 3/32	4¾	7 11/16	4	25.95
*PA10J	10″	6.8	1	8	12	40/12,500	10 3/32	3¾	9⅝	3¾	14.95
*PA12J	12″	6.8	1	8	15	30/15,000	12 3/32	4 9/16	11 9/16	5	17.30
PA12M	12″	14.7	1¼	8	25	45/6500	12 3/32	5	11 9/16	6	33.50

MODEL NO. PA8NF

*Featuring high-efficiency Barium Ferrite Magnetic Structure
†New Magni-Magic 8″ Inverted Speaker
‡Weatherproofed

READY-TO-USE SPEAKER and BAFFLE COMBINATIONS

DUAL DIAMETER DE LUXE MODELS all feature inverted 8″ speakers. Allows minimum depth. Blends into any decor. In system *A, B or C. 8 ohms power handling 5 watts. Blonde, Mahogany, or Walnut. All solderless connections.

DELUXE . . . OUR FINEST

SIZE	MODELS			LIST PRICE
	MAHOGANY	BLONDE	WALNUT	
8″ Thin Line Wall Baffle	DM8-A DM8-B DM8-C	DB8-A DB8-B DB8-C	DW8-A DW8-B CW8-C	$26.00 22.90 14.90
8″ Matching Corner	CDM8-A CDM8-B CDM8-C	CDB8-A CDB8-B CDB8-C	CDW8-A CDW8-B CDW8-C	29.20 25.60 19.90

NEW ECONOMY BAFFLE MODELS are *now available* with speakers mounted in all sizes: 4-5″, 6″, 8″, 12″, 8″ corner and 12″ corner. Finished in new leather-like neutral colors, Blonde/Beige and Mahogany/Walnut. Features "C" System.*

ECONOMY . . . SENSIBLY PRICED

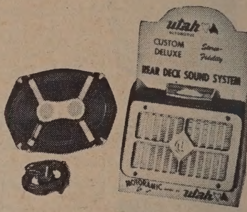
SIZE	MODELS		LIST PRICE
	MAHOGANY	BLONDE	
4″ & 5″ 6″ 8″	SM45-C SM6-C SM8-C	SB45-C SB6-C SB8-C	$ 6.90 8.20 10.55
12″ 8″ Corner 12″ Corner	SM12-C CM8-C CM12-C	SB12-C CB8-C CB12-C	15.80 10.55 16.35

UTAH AUTOMOTIVE REAR DECK SYSTEMS

"RF" CUSTOM SERIES

MODEL NO.	SIZE AND DESCRIPTION	MAGNET WEIGHT (OZ.)	V.C. DIA. (IN.)	V.C. IMP. (OHMS)	PEAK AUDIO (WATTS)	SHIPPING WEIGHT (LBS.)	LIST PRICE
*RF57C	5 x 7″	1.47	⅝	6.4	5	2	$11.85
*RF69C	6 x 9″	1.47	⅝	6.4	6	2¼	12.85
RF69E	6 x 9″	2.15	1	6.4	8	2¼	13.50
*RF69J	6 x 9″	6.8	1	6.4	10	2¾	18.50
RFD69E	6 x 9″ Dual Co-Axial	2.15	1	6.4	8	3	20.70

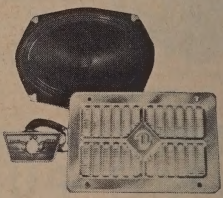
* New Dual-Diameter Kits



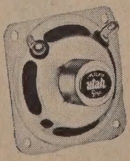
MODEL NO. RFD69E

"DUO" DELUXE SERIES

MODEL NO.	SIZE AND DESCRIPTION	MAGNET WEIGHT (OZ.)	V.C. DIA. (IN.)	V.C. IMP. (OHMS)	PEAK AUDIO (WATTS)	SHIPPING WEIGHT (LBS.)	LIST PRICE
R57A	5 x 7″	.68	9/16	6.4	4	1	$ 7.35
R57B	5 x 7″	1.00	¾	6.4	4	1	7.70
R57DC	5 x 7″ Co-Axial	1.47	¾	6.4	5	1¼	9.75
R69A	6 x 9″	.75	⅝	6.4	5	1¼	8.55
R69D	6 x 9″	1.47	¾	6.4	6	1½	9.40
R69DC	6 x 9″ Co-Axial	1.47	¾	6.4	6	1½	10.25



UTAH INTER-COMMUNICATION SPEAKERS



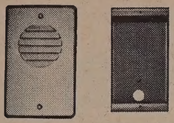
MODEL NO. SP25AI

MODEL NO.	SIZE AND DESCRIPTION	MAGNET WEIGHT (OZ.)	V.C. DIA. (IN.)	V.C. IMP. (OHMS)	PEAK AUDIO (WATTS)	OUTSIDE DIM. (IN.)	DEPTH (IN.)	MTG. DIA. (IN.)	SHIP. WEIGHT (LBS.)	LIST PRICE
*SP25AI	2½″ Sq.	.68	9/16	45	3	2 17/32	1¼	2 29/32	½	$4.00
SP35AI	3½″ Sq.	.68	⅝	45	4	3 15/32	1⅝	3 31/32	¾	3.95
SP4AI	4″ Sq.	.68	⅝	45	4	4 3/32	1 11/16	4 11/16	¾	3.95
SP5AI	5″ P.C.	.68	⅝	45	4	4⅝	2 3/32	4 11/16	¾	4.10

*New Model

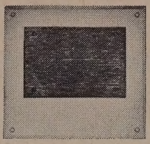
CEILING (and Flush Wall) BAFFLES

Striking Modern Design
Styled for Every Application

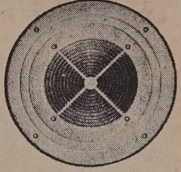


MS3 ME3
3½″ for indoor or outdoor intercom.

MS5 MS8
MS12
One-piece, no-rattle construction. Built-in sound dispersion.



MS5D MS6D
MS8D
"Decor" Deluxe Grilles ideal for wall mounting.



PEBBLE ALUMINUM
MR8P, MR12P

(All Speaker and Baffle Mounting Hardware Furnished)

MODEL NO.	SPEAKER SIZE—DESCRIPTION	MATERIAL	FINISH	SIZE (INCHES)	LIST PRICE
BAFFLES					
MS3	3½″ Grille	Steel	Gold	4 x 6½	$ 3.50
MS5	4-5″ Square	Steel	Eggshell White	8 x 8	3.25
MS5D	4-5″ Sq. Decor	Steel	Eggshell White & Gold	8 x 8	4.75
MS6D	6″, 5 x 7″ Sq. Decor	Steel	Eggshell White & Gold	10½ x 9½	6.50
MR8S	8″ Round	Aluminum	Satin	12¾ Dia.	5.30
MR8P	8″ Round	Aluminum	Pebble	12¾ Dia.	5.50
MR8	8″ Round	Steel	Eggshell White	12¾ Dia.	5.45
MS8	8″ Square	Steel	Eggshell White	10½ x 10½	5.25
MS8D	8″ Sq. Decor	Steel	Eggshell White & Gold	11 x 11½	7.50
MR12S	12″ Round	Aluminum	Satin	16½ Dia.	8.25
MR12P	12″ Round	Aluminum	Pebble	16½ Dia.	8.50
MS12	12″ Square	Steel	Eggshell White	14 x 14	8.25
PLASTER RINGS (see illustrations on page 15)					
PR45	For MS5—MS5D	Steel	Grey	8¾ x 8¾	1.55
PR6	For MS6D	Steel	Grey	9¾ x 8¾	2.25
PR8	For MR8S, MR8P, MR8, MS8	Steel	Grey	8½ x 8½	2.65
PR8D	For MS8D	Steel	Grey	9½ x 10	2.65
PR12	For MR12S, MR12P, MS12	Steel	Grey	12½ x 12½	3.75
BAFFLE HOUSINGS (see illustrations on page 15)					
ME3	For MS3	Steel	Grey	3 x 5½ x 2	2.65
ME45	For MS5, MS5D	Steel	Grey	8¾ x 8¾ x 5	5.60
ME6	For MS6D	Steel	Grey	9¾ x 8¾ x 5	6.75
ME8	For MS8, MS8D, MR8S, MR8P, MR8	Steel	Grey	8½ x 8½ x 5	8.25
ME12	For MR12S, MR12P, MS12	Steel	Grey	12½ x 12½ x 7	10.25
WOOD FLUSH WALL OR CEILING BAFFLE (not illustrated)					
FW8	8″ Square	Decor	Gold Trimmed	8⅞ x 9⅞″	4.40

UTAH EXCLUSIVE SPEAKERS for AIRCRAFT

Supplier to leading Aircraft Manufacturers . . . after Rugged Competitive Tests

MODEL NUMBER	SIZE & DESCRIPTION	MAGNET WEIGHT (OZ.)	V.C. DIA. (IN.)	V.C. IMP. (OHMS)	PEAK AUDIO WATTS	OUTSIDE DIM. (IN.)	DEPTH (IN.)	MTG. DIA. (IN.)	SHIPPING WEIGHT (LBS.)	LIST PRICE
A5FI	5″ P.C.	3.16	¾	45	9	4⅝	2 7/32	4 11/16	1¼	$7.75
A5C13	5″ P.C.	1.47	⅝	30	5	4⅝	2 1/32	4 11/16	1	6.95
A5C73	5″ P.C.	1.47	⅝	3.2	4	4⅝	2 1/32	4 11/16	1	7.35

ALLIANCE PHONOMOTORS

THE ALLIANCE MANUFACTURING CO., INC. • ALLIANCE, OHIO

FOR HI-FI AND STEREOPHONIC

Phonomotors

Three and four speed phonomotors for record players 16, 33 1/3, 45 and 78 RPM records

Single speed 78 RPM phonomotors

General Purpose Motors

The Model JS Alliance Sub-fractional Motors are mass produced with minor variations to meet the demands of specific jobs which require a highly efficient miniature power plant. It can be used as the vital power source on all kinds of electrical and mechanical devices for electronic, electric, radio and time controls,. TV and radio tuners, turntable drives for phonographs and Hi-Fi, valve and heating controls, animated displays, coin operated mechanisms, switches, signals, business machines, and other special uses. These motors are equipped with oilless bronze bearings for continuous duty. They can be furnished with or without internal fans and for clockwise or counter-clockwise rotation.

The specifications shown can be varied within limits to meet your design requirements. This would include such things as corrosive resistant finish, water resistant (impregnated coil), threaded or stepped shaft, and variation of the mounting arrangement.

ALLIANCE SINGLE SPEED
78 RPM PHONOMOTOR MODEL JP

Available in 45 and 33 1/3 RPM on customer order only

MODEL JP — Deluxe Alliance Single speed phonomotor — 78 RPM

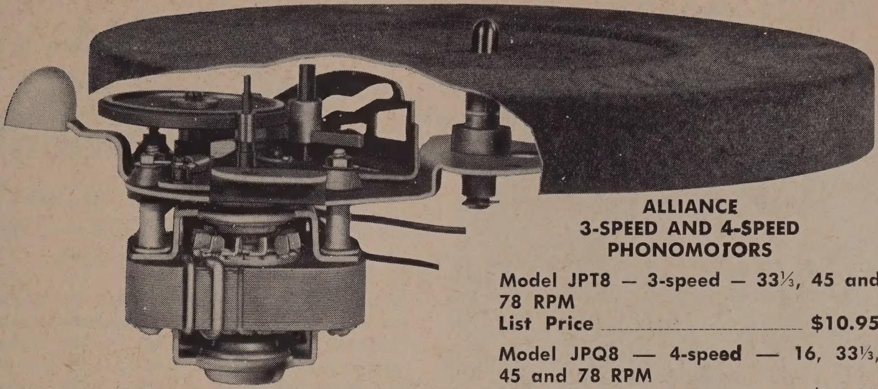
List Price **$6.80**

Model JP — The most economical player motor on the market. Available with 6½" and 8" turntable diameters. Same basic motor as used on JPT and JPQ models. Same mounting cutout as three and four speed units. Turntables available in choice of colors. Also available with motor winding for use in series with Z5L6 vacuum tube filament. Scintered metal tip on turntable spindle revolves with record.

THE ALLIANCE MANUFACTURING COMPANY, INC., ALLIANCE, OHIO

ALLIANCE PHONOMOTORS

FOR HI-FI AND STEREOPHONIC



ALLIANCE
3-SPEED AND 4-SPEED
PHONOMOTORS

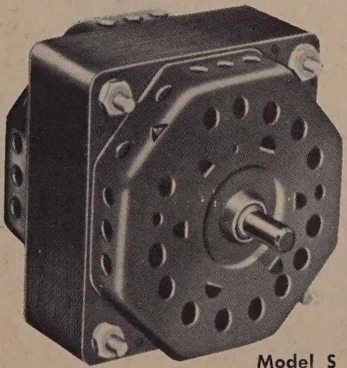
Model JPT8 — 3-speed — 33⅓, 45 and 78 RPM	
List Price	**$10.95**
Model JPQ8 — 4-speed — 16, 33⅓, 45 and 78 RPM	
List Price	**$11.86**

THREE AND FOUR SPEED PHONOMOTORS

THE LARGEST SELLING PHONOMOTORS IN THE WORLD

MODEL JPT — A completely new design. Retains all of the features of original model, which became the standard of the industry, with many added improvements. Adequate reserve power in motor. Elimination of stepped pulley reduces possibility of wow and rumble. Added neutral position on shifter lever removes drive shaft from contact with rubber tire when instrument is not in use. Attractive plastic knob on shifter lever available in color. TURNTABLES AVAILABLE IN CHOICE OF COLORS. Furnished with plastic 45 RPM center disc. Can be furnished with winding for operation in series with 25 L6 tube filament if desired. Furnished with speed indicator escutcheon plate. Same mounting plate cut-out as single speed 78 RPM unit illustrated, thus providing greater versatility for manufacturers of phonograph equipment.

The model JPT provides unimpaired performance at all speeds. Single lever shifts and indexes speeds with freer movement. Electronic dynamically balanced rotor. Vibration-proof mountings. Minimum rumble and hum. Unexcelled speed regulation. Designed to meet U. L. requirements. Occupies minimum space. Millions have been sold.



Model S

MODEL S

This motor was specifically designed for transcription type turntables, stereo tape, stereo disc, and Hi-Fi applications. For further information on this motor, please contact:

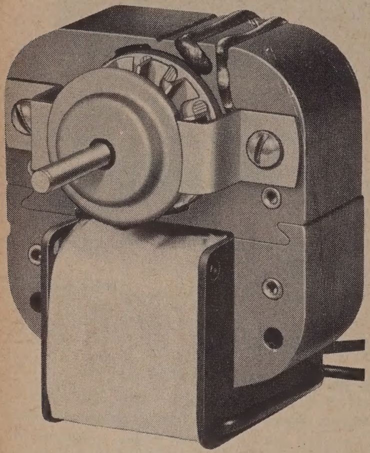
The Alliance Manufacturing Company, Inc.
Alliance, Ohio
Component Division — Plant #1

THE ALLIANCE MANUFACTURING COMPANY, INC., ALLIANCE, OHIO

ALLIANCE MOTORS

MODEL JS MOTOR—

This new model is an extremely versatile motor of high efficiency and compact design. In reality JS is a "big brother."



Model JS

SPECIFICATIONS

SPECIFICATION NO.	JS0300	JS0600	JS0750	JS0800	JS1100	JS1200
Stack Thickness	0.350	0.600	0.750	0.850	1.100	1.250
Voltage	117	117	117	117	117	117
Frequency	60	60	60	60	60	60
Locked Amps—Cold	0.30	0.71	0.88	0.92	0.93	1.0
Locked Watts—Cold	15	35	45	50	55	62
Starting Torque—Cold Oz. In.	0.66	1.75	2.35	2.70	2.95	3.20
Idle Amps—Hot	0.25	0.54	0.65	0.67	0.60	0.70
Idle Watts—Hot	11	22	28	30	30	40
Idle RPM—Hot	3350	3470	3475	3475	3500	3500
Full Load Amps	0.26	0.57	0.70	0.76	0.72	0.82
Full Load Watts	13	29	38	42	44	53
Full Load Torque Oz. In.	0.75	2.70	3.60	4.20	5.10	5.30
Full Load RPM	2900	2900	2900	2900	2900	2900
Full Load HP	0.002	0.008	0.010	0.012	0.015	0.015
"A" Dimension (Internal Fans)	1 23/32	1 31/32	2 1/8	2 7/32	2 15/32	2 5/8
"A" Dimension (No Fans)	1 9/16	1 13/16	1 15/32	2 1/16	2 5/16	2 15/32
Weight	12 oz.	1 lb. 2 oz.	1 lb. 6 oz.	1 lb. 8 oz.	1 lb. 13 oz.	2 lb. 1 oz.
Duty	Cont.	Cont.	Cont.	Cont.	Cont.	Cont.

117 volts 60 cycles, continuous open rating with 65° centigrade temperature rise. Motor can be supplied with internal fans for mechanical duty. Mounting hole 1⅞" center.

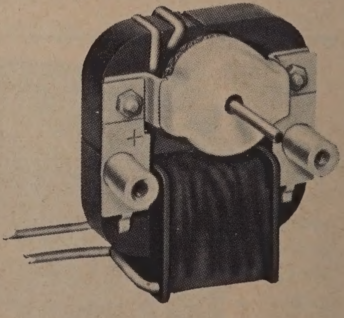
Prices vary with stack thickness

JSO500

SPECIFICATIONS

Dual Bearing Long Life

Stack Thickness inches	0.500
Voltage	115
Frequency — CPS	60
Locked Amps — Hot	0.170
Locked Watts — Hot	10
Starting Torque, Hot — oz. in.	0.70
Idle Amps — Hot	0.150
Idle Watts — Hot	7.8
Full Load Torque — oz. in.	0.5
Full Load RPM	2500
Full Load HP	0.0012
Weight	1 lb. 1 oz.
Duty	Continuous



Model JSO500

THE ALLIANCE MANUFACTURING COMPANY, INC., ALLIANCE, OHIO

ALLIANCE MOTORS

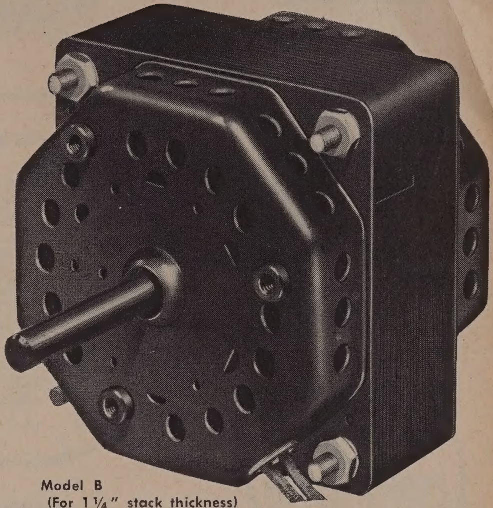
GENERAL TYPES FOR SMALL LOADS

MODEL B Shaded Pole Induction Motor

FOR HI FIDELITY PLAYERS FANS — RECORDERS — HEATERS and OTHER DEVICES

Model B is a 4-pole shaded pole induction motor, especially adapted for such devices as fans, unit heaters, blowers, air circulators, disc, tape and wire recorders. Comes in three standard lamination stack thicknesses. The range of power is from 1/100 h.p. up to 1/25 h.p. Where necessary the motor can be supplied completely enclosed.

Important advantages for Model B are economy of operation, low induced hum, low magnetic field, cool running, flexible power range and compactness. A real Hi-Fi power plant.



Model B
(For 1¼" stack thickness)
List Price $15.10

SPECIFICATIONS

MECHANICAL

3⅜" square, with length of 2⅛" over the end bracket for the 1¼" stack. 5/16" diameter shaft.

Porous bronze, oil-less type, self aligning bearings — amply proportioned, with large oil reserves.

Semi-open or fully enclosed construction. Can be supplied with oil tubes if required.

Four No. 10-32 bolts equally spaced for end mounting or motor can be supplied with mounting bushings on end covers.

¾", 1¼" and 1¾" lamination stacks depending on rating required.

Max. weight — approx. 5.6 lbs. for largest stack thickness.

Single Phase, 4-pole, shaded pole induction motor with squirrel cage rotor.

Approx. 1/25 h.p. for fans — approx. 1/40 h.p. for mechanical loads without external cooling. Entire power range runs from 1/100 h.p. to 1/25 h.p. for semi-enclosed construction.

Starting torque approx. 40% of torque at full load rating. 1550 r.p.m. full load speed.

A. C. only — 115 volts, 60 cycles. Clockwise or counter clockwise rotation — not reversible. Can be wound for 50 cycles and other voltages.

Internal cooling fans on each end.

FOR DETAILED INFORMATION . . . CATALOG SHEETS
OR ADVICE ON SPECIAL PROBLEMS WRITE THE FACTORY

THE ALLIANCE MANUFACTURING COMPANY
Division of Consolidated Electronics Industries Corp.
ALLIANCE, OHIO

THERE'S AN **irish** TAPE FOR EVERY RECORDING REQUIREMENT

Whatever the application—professional sound recording...broadcasting...hi-fi in the home...school or office use...science and industry—there is an **irish** tape that meets every requirement in quality, dependability and value.

the **irish** BRAND FERRO-SHEEN *process*

A mirror smooth surface tape
An exclusive **irish** development
The *ferro-sheen* process offers *five* major benefits over conventional magnetic tapes

1. ULTIMATE IN HIGH FREQUENCY RESPONSE. Due to intimacy of contact between tape and heads, frequency response is ultimate in first play. Conventional tapes must be "worn-in" by usage to approach *ferro-sheen* performance.

2. MINIMUM HEAD WEAR. The mirror smooth surface of **irish** tape reduces head wear considerably below that of ordinary rough surface tapes.

3. FREEDOM FROM HEAD CONTAMINATION. **irish** tape has the most homogeneously bonded oxide of any magnetic tape. NO external lubricant is needed as ample lubricant is built into the oxide. This right combination of the right ingredients reduces oxide and lubricant build-up on heads to an absolute minimum.

4. LOWEST MODULATION NOISE. The ultra smooth *ferro-sheen* magnetic surface of **irish** tape assures significantly lower modulation noise.

5. MINIMUM DROP-OUTS. The remarkable *ferro-sheen* process produces a superior tape with maximum freedom from drop-outs.

irish *ferro-sheen* tape is the *best engineered* tape in the world.

irish
PROFESSIONAL RECORDING
irish
irish

211
GREEN BAND

The only premium-quality high-fidelity tape at the standard price. "*Ferro-sheen* processed" 1½-mil acetate. Meets the highest professional standards and all EIA and NAB specifications. Compatible with existing standard bias settings. Superior frequency response characteristics.

Length (feet)	Reel Size	Price
150	3"	.75
300	4"	1.40
600	5" or 5¾"	2.25
850	5¾"	2.85
1200	7"	3.50
2400	10½"	9.45

irish
LONG PLAY
irish

601
LONG PLAY
(Mylar)*

A premium-quality *ferro-sheen* process tape with 50% more playing time than standard tape on any given reel size. Made on 1-mil Mylar* polyester film base for longer storage life plus outstanding strength and tear resistance. Meets highest professional recording standards. Superior frequency response characteristics.

Length (feet)	Reel Size	Price
225	3"	1.00
450	4"	2.00
900	5" or 5¾"	3.60
1150	5¾"	4.95
1800	7"	6.20
3600	10½"	14.70

irish
irish
irish

602
LONG PLAY
(Acetate)

50% more playing time than standard tape on any given reel size. Same audio quality as #601—slightly lower in price, has slightly lower tensile strength than 1½-mil acetate. Most pre-recorded tapes are duplicated on this 1-mil acetate film. Made by the *ferro-sheen* process. Guaranteed splice-free.

Length (feet)	Reel Size	Price
225	3"	.90
450	4"	1.80
900	5" or 5¾"	3.50
1150	5¾"	4.25
1800	7"	5.50
3600	10½"	12.20

irish
HIGH FIDELITY RECORDING TAPE
Double Play
irish
irish

724
DOUBLE PLAY

Twice the length of standard tape. Twice the strength of conventional thin tapes. Made by the *ferro-sheen* process on specially strengthened ½-mil Mylar* base. Greatly increased tensile strength (6 lbs.) eliminates necessity for gentle handling. Superior frequency response.

Length (feet)	Reel Size	Price
300	3"	1.60
600	4"	2.90
1200	5" or 5¾"	5.45
1650	5¾"	7.25
2400	7"	9.50
4800	10½"	22.00

irish
SOUND PLATE
irish

irish GENERAL PURPOSE RECORDING TAPE
irish
irish

220
SOUND PLATE

The super-tough special-purpose premium tape pioneered by ORR Industries. Made by the *ferro-sheen* process on 1½-mil Mylar* polyester base. Virtually indestructible, with outstanding resistance to stretching, tearing and breaking. Unaffected by extremes of temperature and humidity, even in tropical or arctic climates. Used for tape masters and other applications requiring permanence.

Length (feet)	Reel Size	Price
600	5″ or 5¾″	2.65
1200	7″	4.25
2400	10½″	10.40

195
BROWN BAND

Budget-priced "name brand" quality tape backed by the famous **irish** guarantee. 1½-mil cellulose acetate base. Frequency response characteristics superior to all other budget priced tapes. Guaranteed splice-free. Widely used in homes, schools, churches — wherever a good inexpensive tape is needed.

Length (feet)	Reel Size	Price
600	5″ or 5¾″	1.75
850	5¾″	2.35
1200	7″	2.95

irish
irish
RECORDING TAPE
GREEN BAND
irish
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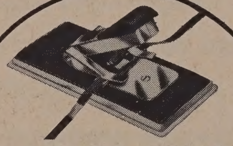


SP-3 TAPE SPLICER

The Model SP-3 tape splicer is of a thoroughly tested, trouble-free design, enabling expert or novice to make professional splices in a matter of seconds, without scissors or razor blades. It uses as little as ¼ inch of splicing tape per splice and leaves the finished splice entirely free of adhesive at the edges. The base is removable, and the splicer may be conveniently mounted on the recorder. **$8.85**

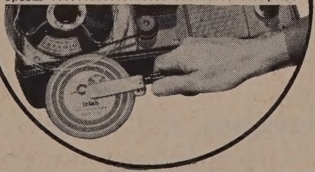
TAPE CORRESPONDENCE PACK

A multiple packet of 5 individually-packaged 3″ reels, each in its convenient mailing carton. Choice of Green Band (150 feet per reel) or Long Play Mylar* (225 feet per reel).

Description	Five Reels	Price
TC 211	750′	3.75
TC 601	1125′	5.00

#TSB-1
RECORDER STROBOSCOPE

Checks recorder speeds to split second. Low friction clock-type bearings. Accurately calibrated, scaled and ruled. A precision instrument to determine if your recorder is operating at its correct speeds $4.95



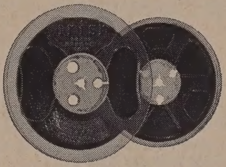
irish BRAND TAPE REELS

The 7″ **irish** tape reel provides 28 square inches of indexing area (7 sq. in. on each of 4 large flanges). These 4 smooth areas permit use of china crayon or other suitable means to identify program material directly on reel.

The new improved 1960 model reels have been strengthened and reinforced to further eliminate warping.

irish tape reels are easy to thread — they have the largest access to the threading eye of any reel on the market.

	Price
3″ plastic reel, with box	.25
4″ plastic reel, with box	.55
5″ and 5¾″ plastic reel with box	.65
7″ plastic reel, with box	.75
10½″ fiberglass reel, NAB hub, (boxed)	3.80
10½″ aluminum reel, NAB hub, (boxed)	4.70



5-3/4″ EMPTY REELS

All **irish** recording tapes are available on a new, improved 5¾″ reel as well as on the industry's standard 5″ reels. The special 5¾″ reel has the advantage of a large professional hub which equalizes tension and improves tape timing, an extra-large opening to the threading eye, and 24 square inches of smooth flange area for easy write-on indexing.

NEW FLUTTER-FREE REEL

Extra-large professional hub gives more consistent tape speed, less wow and flutter.

5″ reel with 3″ hub (boxed)	.75
7″ reel with 4″ hub (boxed)	.85

#141 SPLICING TAPE

½″ x 100″ long	.40

#151 LEADER/DIVIDER TAPE

¼″ x 150 feet long	1.00

ORR INDUSTRIES, INC.

EXPORT:
Morhan Exporting Corp., New York, N. Y.
CANADA:
Atlas Radio Corp., Ltd., Toronto, Ontario

*DU PONT'S REGISTERED TRADEMARK

PRESTO

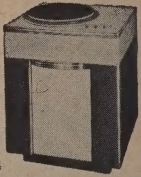
PROFESSIONAL TAPE AND DISC EQUIPMENT

For more than 25 years Presto has been a name synonymous with the finest professional recording and playback equipment. Presto is, in fact, the oldest manufacturer of both tape and disc equipment. The unique skills and experience which Presto has acquired over these many years is reflected in the performance and in the outstanding quality of the many Presto components available today, and widely used wherever the highest standards for sound reproduction prevail.

6N

66H

S1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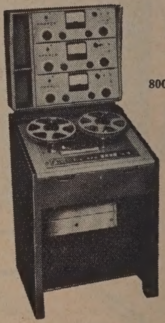
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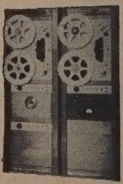

PB-17C

MODEL 6N—3-SPEED DISC RECORDER

Designed for high quality recordings, and for fixed and portable applications. Standard equipment includes: spiral feedscrew, vertical damper, time scale and lateral reproducer arm. Entire overhead mechanism is removable. **Mechanical Noise:** 40 db below average program level. **Feedscrew Pitches Available** (specify): 96, 112, 120, 136 or 224. **Speed Regulation:** instantaneous 0.25%; overall 0.5%. **Dimensions** (in carrying case): 20¼″ x 20″ x 15″. **Weight** (in carrying case) 82 lbs.

6N-S Disc Recorder Chassis with 1 standard feedscrew ---------- $1245.00

6N-M Disc Recorder Chassis with 1 microgroove feedscrew ---------- $1245.00

6N-SM Disc Recorder Chassis with 2 feedscrews—standard and microgroove ---------- $1321.50

Carrying Case for 6N Series Recorders ---------- $105.00

Model 1D—CUTTING HEAD

Frequency Response: 50-12,000 cps.

Impedance (specify): 500 or 15 ohms. Supplied with crossover network ---------- $269.00

MODEL 66H—2-SPEED DISC RECORDER

A high quality, gear-driven unit, ideal for broadcast and recording studios. Dual motor, direct gear drive provides perfect program timing. Requires minimum maintenance. Uses Model 1D cutting head.

Mdoel 66-H Disc Recorder (33⅓ and 45 rpm) -- $1930.50

Model TA-6 78 rpm Adapter ---------- $214.50

Model A-93 RECORDING AMPLIFIER

Input Impedance: 50, 200 or 500 ohm line, or 15,000 ohms, bridging

Output Impedance: 8, 15, 250 or 500 ohms. **Power Gain:** line input, 83 db; bridging input, 68 db. **Rated Output:** 30 watts. **Harmonic Distortion:** less than 0.3%. **I.M. Distortion:** less than 1%. **Signal-to-Noise Ratio:** better than 55 db at normal recording levels: **Frequency Response:** 20-17,000 cps ± 1 db.

Model A-93 Recording Amplifier ---------- $420.00

MODEL S1—STEREO CUTTING HEAD

A Westrex-licensed cutter with virtually, unmeasurable distortion—absolutely stable from 30 to 20,000 cps. Fits all Presto and other professional recording lathes. Price and Specifications on Request.

SERIES 64—TRANSCRIPTION TURNTABLES

Embodies the same reliable drive mechanism as used in Model 66-H recorder. Each speed is independently driven by a separate hysteresis-synchronous motor for optimum accuracy and speed regulation.

Model 64A (33⅓ and 78 rpm)
Model 64B (33⅓ and 45 rpm)
Model TA-1 (45 rpm adapter)
Model TA-5 (78 rpm adapter)
} Prices on Request

SERIES 800—PROFESSIONAL TAPE RECORDERS

A bold new design concept in tape recorders that retains the traditional high quality of Presto equipment and adds to it a versatility that results in greater efficiency and economy than has ever before been available.

All series 800 recorders accept standard tape reels and core winds up to 10½″, and operate at 7½ and 15 ips or 3¾ and 7½ ips. Speed accuracy is ±3 seconds/30 minutes. Flutter: less than 0.07% at 15 ips, and less than 0.15% at 7½ ips. The A908 amplifier has less than 1% total harmonic distortion at +20 dbm, from 25 to 20,000 cps.

Model 800 is a basic, high quality, ¼″ monophonic recorder which can be easily converted to stereo in a matter of minutes by simply replacing the head assembly and adding another A908 amplifier.

Model 825 is a ¼″ recorder which is quickly and readily convertible to accept ½″ tapes by merely interchanging the recording heads and adding another A908 amplifier.

Model 850 is a full convertible recorder. It is equipped with 3 stacked A908 amplifiers and can be changed from ½″ to ¼″ operation (or vice versa) in a matter of a few minutes. Only a screwdriver is required to change the head assemblies.

All series 800 Recorders are available in portable cases as well as in consoles.
Prices and Specifications on Request.

MODEL PB-17C—TAPE REPRODUCER

A high quality, dual track tape reproducer designed to provide a continuous background music source in plants, stores, and wired music service organizations. Operates at 3¾ ips (7½″ optional). Uses 14″ diameter reels for 8 hours playback time with automatic repeat. Ruggedly built. Requires minimum maintenance.

Model PB-17C Tape Reproducer (less amplifier and console) ---------- $785.50

Model A-909 Preamplifier ---------- $132.00

Model CC-7 Console (as shown) ---------- $201.25

BOGEN-PRESTO PARAMUS, N. J. A DIVISION OF THE SIEGLER CORP.

All prices and Specifications Subject to change without notice.

audiodiscs®

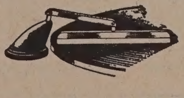
For truly fine recording and reproduction

For more than a decade, Audiodiscs have consistently maintained their position of eminent leadership in every field of instantaneous disc recording.

A superior lacquer coating, applied to the mirror-smooth aluminum base by a patented process, gives these outstanding advantages: maximum uniformity of coating, permanent resistance to humidity, longer stylus life, freedom from audible background scratch, long playback life, brilliant frequency response, and freedom from deterioration with age.

Type		Diameter	List Price per Disc	Box Contains
RED LABEL Audiodiscs for professional use. Exceed the most exacting demands for highest quality professional recordings. The finest discs obtainable. Aluminum base. Double sided. Embossed labels.		7″*	$1.40	25
		8″	1.10	
		10″	1.55	
		12″	2.55	
		16″	4.60	
SINGLE FACE RED LABEL Audiodiscs. Same quality as double sided Red Label Audiodiscs, listed above.		12″	2.00	25
		16″	3.70	
YELLOW LABEL Audiodiscs for general use. High uniform quality. The popular choice for all general purpose recording. Aluminum base. Double sided. Yellow paper labels.		7″*	1.19	25
		8″	.93	
		10″	1.24	
		12″	2.00	
		16″	3.70	
REFERENCE LABEL Audiodiscs. Provide maximum economy for test cuts, filing, reference recordings, auditions and equipment adjustments. Aluminum base. Double sided. White paper labels.		10″	1.05	25
		12″	1.55	
		16″	2.77	
BLUE LABEL Audiodiscs for amateur use. Same high quality lacquer as professional discs, but on thinner aluminum base. Ideal for schools, homes, and general amateur use. Double sided. Blue paper labels.		6½″	.50	50
		8″	.70	
		10″	1.00	
MASTER Audiodiscs. The outstanding choice of professional recordists for use where pressings are to be made. Give fine results with either silvering or gold sputterings. Aluminum base. Double sided or single face.	Double Sided	10″	2.50	25
		12″	3.20	
		13¼″	4.05	
		16″	5.95	
		17¼″	6.95	
	Single Face	10″	2.00	25
		12″	2.50	
		13¼″	2.95	
		16″	4.70	
		17¼″	5.10	

*Standard 45 rpm disc with 1½″ center hole. Center-hole adapters included for recording on conventional turntable.



AUDIODISC CHIP-CHASER

A simple but perfect solution to the thread removal problem in recording. The felt-lined wiper blade is set on the disc before starting the recording. The Chip-Chaser automatically and infallibly brushes the thread toward the center, winding it up on the overhead post or drive pins, as the case may be.

List Price { for 16″ turntables $8.95
{ for 12″ turntables $7.90

audiopoints®

microscopically matched
recording and playback
styli

The complete line of Audiopoints covers the full range of recording and playback needs—for professional as well as general use. Audiopoints are made by skilled craftsmen, and conveniently packaged in cards, boxes or envelopes.

RECORDING AUDIOPOINTS

audiopoints
RECORDING

SAPPHIRE No. 14—long recognized as the finest recording stylus made. Short or long dural shank, 87° included angle.
List Price—$8.25
(Resharpening cost—$3.75)

SAPPHIRE No. 20—especially designed for professional microgroove recording. Short or long dural shank.
List Price—$8.25
(Resharpening cost—$3.75)

SAPPHIRE No. 202—a high-quality professional stylus. Short or long brass shank.
List Price—$6.60
(Resharpening cost—$3.25)

STELLITE No. 34—a favorite with many professional and non-professional users. Short or long shank. 87° included angle.
List Price $2.50
(Resharpening cost—$1.40)

DIAMOND LAPPED STEEL No. 50—most practical and economical stylus for non-professional use.
List Price—3 for $1.75

PLAYBACK AUDIOPOINTS

audiopoints
PLAYBACK

SAPPHIRE No. 113—meets the requirements of the most critical professional recordists. Straight dural shank.
List Price—$4.50
(Resharpening cost—$2.00)

SAPPHIRE No. 123—for professional use with microgroove recordings.
List Price—$2.00

"RED CIRCLE" SAPPHIRE No. 103—for professional use with instantaneous recordings or vinyl transcriptions. Straight dural shank.
List Price—$2.00

"RED CIRCLE" SAPPHIRE No. 303—same as No. 103, except with bent dural shank. Ideal for phonograph records.
List Price—$2.00

RESHARPENING SERVICE

Established years ago, our Resharpening Service materially reduces the over-all cost of using sapphire and stellite Audiopoints. Each resharpened point is disc-tested. Special cards and envelopes are available for returning Audiopoints for resharpening.

THE COMPLETE LINE OF PROFESSIONAL QUALITY audiotape

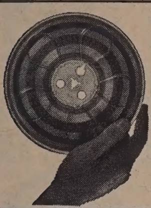
Description	Type No.*	Length	Reel†	List Price
PLASTIC-BASE AUDIOTAPE on 1½-mil cellulose acetate meets the most exacting requirements of the professional, educational and home recordist at minimum cost. Known the world over for matchless performance and consistent uniform quality.	151	150 ft.	3" Plastic	$ 0.70
	351	300 ft.	4" Plastic	1.35
	651	600 ft.	5" Plastic	2.25
	1251	1200 ft.	7" Plastic	3.50
	2551H	2500 ft.	NARTB Hub	8.50
	2551R	2500 ft.	10½" Aluminum Reel	10.90
	‡2551FS	2500 ft.	10½" Fiberglass (RETMA)	10.90
	5051H	5000 ft.	NARTB Hub	17.00
	5051R	5000 ft.	14" Aluminum Reel	22.10
audiotape Mylar **AUDIOTAPE ON 1½-MIL MYLAR®** — a premium-quality professional tape with maximum mechanical strength and immunity to heat and humidity. Will not dry out or embrittle with age. ®Du Pont Trade Mark	671	600 ft.	5" Plastic	2.65
	1271	1200 ft.	7" Plastic	4.25
	2571H	2500 ft.	NARTB Hub	8.30
	2571R	2500 ft.	10½" Aluminum Reel	11.20
	‡2571FS	2500 ft.	10½" Fiberglass (RETMA)	11.20
	5071H	5000 ft.	NARTB Hub	16.65
	5071R	5000 ft.	14" Aluminum Reel	24.50
LR audiotape **"LR" (Longer Recording) AUDIOTAPE ON 1-MIL "MYLAR"** — 50% more recording time per reel. Strong, superdurable polyester film base assures trouble-free operation even under extreme heat and humidity.	261	225 ft.	3" Plastic in Self-Mailer Pkg.	1.00
	961	900 ft.	5" Plastic	3.60
	1861	1800 ft.	7" Plastic	6.20
	3661H	3600 ft.	NARTB Hub	12.00
	3661R	3600 ft.	10½" Aluminum Reel	14.40
	‡3661FS	3600 ft.	10½" Fiberglass (RETMA)	14.40
	7261H	7200 ft.	NARTB Hub	24.00
	7261R	7200 ft.	14" Aluminum Reel	30.00
LR audiotape **PLASTIC-BASE "LR" AUDIOTAPE** provides 50% more recording time on low-cost 1-mil cellulose acetate base, affording maximum economy where high strength is not required.	941	900 ft.	5" Plastic	3.50
	1841	1800 ft.	7" Plastic	5.50
	3641H	3600 ft.	NARTB Hub	10.00
	3641R	3600 ft.	10½" Aluminum Reel	12.85
	‡3641FS	3600 ft.	10½" Fiberglass (RETMA)	12.85
	7241H	7200 ft.	NARTB Hub	20.00
	7241R	7200 ft.	14" Aluminum Reel	26.00
SUPER-THIN audiotape **SUPER-THIN AUDIOTAPE** on ½-mil "Mylar" gives twice as much recording time per reel as standard plastic-base tape. For long-play applications where tape tension is not excessive.	1231	1200 ft.	5" Plastic	3.50
	2431	2400 ft.	7" Plastic	6.50
SUPER-THIN audiotape on TEMPERED "Mylar" **SUPER-THIN AUDIOTAPE ON TEMPERED "MYLAR"** gives twice as much recording time per reel as conventional tape and is **twice as strong** as other double-length tapes. Will not stretch or break on any tape recorder — will not dry out or embrittle with age.	331T	300 ft.	3" Plastic In Self Mailer Pkg.	1.60
	1231T	1200 ft.	5" Plastic	5.45
	2431T	2400 ft.	7" Plastic	9.50
	4831T-R	4800 ft.	10½" Aluminum Reel	22.00
	‡4831T-FS	4800 ft.	10½" Fiberglass (RETMA)	22.00
Master audiotape **MASTER LOW PRINT-THROUGH AUDIOTAPE** on plastic base — reduces print-through (magnetic echo) by 8 db. The finest, professional-quality recording tape. Base material, 1½-mil acetate. Maximum fidelity, uniformity, frequency response and freedom from noise and distortion.	651-M	600 ft.	5" Plastic	2.75
	1251-M	1200 ft.	7" Plastic	4.30
	2551H-M	2500 ft.	NARTB Hub	9.80
	2551R-M	2500 ft.	10½" Aluminum Reel	12.50
	‡2551FS-M	2500 ft.	10½" Fiberglass (RETMA)	12.50
	5051H-M	5000 ft.	NARTB Hub	19.55
	5051R-M	5000 ft.	14" Aluminum Reel	26.00
Master audiotape **MASTER LOW PRINT-THROUGH AUDIOTAPE** on 1½-mil "Mylar"—print-through (magnetic echo) is reduced by 8 db. A super durable tape that meets the highest standards of performance. Withstands extreme temperatures and is virtually immune to humidity. Has maximum life under any conditions.	671-M	600 ft.	5" Plastic	3.20
	1271-M	1200 ft.	7" Plastic	5.10
	2571H-M	2500 ft.	NARTB Hub	10.00
	2571R-M	2500 ft.	10½" Aluminum Reel	13.50
	‡2571FS-M	2500 ft.	10½" Fiberglass (RETMA)	13.50

Miscellaneous audiotape Items

TRADE MARK

SNAP-LOAD CARTRIDGE
audiotape
MAGNETIC RECORDING TAPE

Item	Type No.	Description	List Price
AUDIOTAPE IN THE SNAP-LOAD CARTRIDGE on 1-mil "Mylar" Strong super-durable polyester film base Audiotape in new cartridge that has two hubs enclosed in dust-resistant plastic magazine for easy handling and lading. Series 60.	C560	560 ft. in twin-hub, snap-load cartridges.	$4.50



COLORED PLASTIC-BASE AUDIOTAPE on 1½-mil cellulose acetate (in same box as above with label for color). Green and blue colored Audiotape, in conjunction with the standard red-brown tape, provide instant visual identification of recorded selections spliced into a single reel (as shown) — permit fast and easy color cueing and color coding. Eliminate need for identifying leaders between selections.

Green	Blue	Length	Reel	List Price
151G	151B	150 ft.	3" Plastic	$ 0.70
351G	351B	300 ft.	4" Plastic	1.35
651G	651B	600 ft.	5" Plastic	2.25
1251G	1251B	1200 ft.	7" plastic	3.50
2551HG	2551HB	2500 ft.	NARTB Hub	8.50
2551RG	2551RB	2500 ft.	10½" Aluminum Reel	10.90
‡2551FSG	‡251FSB	2500 ft.	10½" Fiberglass (RETMA)	10.90
5051HG	5051HB	5000 ft.	NARTB Hub	17.00
5051RG	5051RB	5000 ft.	14" Aluminum Reel	22.10

EMPTY AUDIO REELS IN INDIVIDUAL BOXES

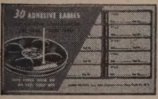
Item	Type No.	Description	List Price
Standard Reels	3PB	3" Plastic Reel in Box	.25
	4PB	4" Plastic Reel in Box	.45
	5PB	5" Plastic Reel in Box	.60
	7PB	7" Plastic Reel in Box	.75
	10RB	10½" Aluminum Reel in Box	4.00
	10FS	10½" Fiberglass (RETMA) in Box	4.00
	14RB	14" Aluminum Reel in Box	7.40
	10H	NARTB Metal Hub	.70
Colored Plastic Reels	5PBR 5PBY 5PBG 5PBB	Red Yellow Green Blue — 5" Plastic Reel in Box	.60
	7PBR 7PBY 7PBG 7PBB	Red Yellow Green Blue — 7" Plastic Reel in Box	.75

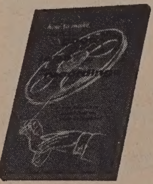
*Type Numbers listed cover red oxide wound on reel with OXIDE IN. For tape wound with Oxide Out, change last digit of Type No. from "1" to "0."

†COLORED PLASTIC REELS. Audiotape on 5" and 7" plastic reels can be supplied on colored reels at no increase in price when ordered in lots of 30 reels or more of any one color. To designate color of reel (Red, Yellow, Green or Blue) add letters "RR" and "YR," "GR," or "BR" to Type No. Listed.

‡"FS" in Type No. indicate Fiberglass reel with solid hub and 5/16" center hole.

Audio Accessories

Item	Type No.	List Price
AUDIO HEAD DEMAGNETIZER Removes all permanent magnetism from recording and reproducing heads in a matter of seconds. Includes 7-foot cord and is individually boxed.	100	10.00
ECHORASER Simple device for removing print-through from recorded tape. Kit contains one base and two Echorasers—**red** for removing weak print-through, **black** for removing strong print-through.	500	12.50
ADHESIVE REEL LABELS  Provide positive identification of your tapes, right on the reel. Simply press to apply, pull off to remove. Envelope of 30, 2" x ½" labels.	30AL	.20
AUDIO HEAD ALIGNMENT TAPE Pre-recorded at 2,000, 10,000 and 15,000 cps (15"/sec.) with precisely correct head alignment. Each box contains 300 ft. on a 4" reel and instructions.	200	10.00

Item	Type No.	List Price
AUDIO RECORDING HEAD CLEANER Especially formulated for use on recording heads. Contains silicone solvent. Superior to carbon tetrachloride. One-ounce bottle with brush.	1HC	.65
AUDIO SELF-TIMING LEADER TAPE A strong, durable leader tape of white "Mylar" material with spaced markings to permit accurate rate time of leader intervals. Each box contains 100 feet, ¼" wide.	3L	.55
 *how to make* **GOOD TAPE RECORDINGS** This completely new handbook of tape recording contains up-to-the-minute information of interest and practical value to **every tape recordist.** Profusely illustrated with photographs, charts and diagrams prepared especially for this book, it contains 150 pages of valuable information on all phases of modern tape recording.	Clothbound 25C	 2.50
	Paperbound 15P	 1.50

Type EP AUDIOTAPE, extra precision magnetic recording tape for telemetering, electronic computers and other specialized applications, is also available. Ask for bulletin on EP AUDIOTAPE.
AUDIOFILM on 35mm, 17½mm and 16mm base, and AUDIO MAGNETIC DISCS are also available. Ask for information.

audiotex®

HI-FI ACCESSORIES

AUDIOTEX MFG. CO., DIV. of G-C TEXTRON, INC.
ROCKFORD, ILL. • LOS ANGELES 18, CALIFORNIA

PHONO ACCESSORIES

RECORD BRUSH

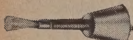
Camel hair brush clips on tone arm; sweeps grooves while record is playing. Adjustable swivel permits use with any record player.

CAT NO. 30-000..............................List: $.75

ATOMIC STAT-ELIM

Anti-static dust eliminator drains static charge by ionizing air surface of record. Contains mildly radio-active element; lightweight holder attaches to tone arm.

CAT NO. 30-002..............................List: $3.95



STYLUS BRUSH

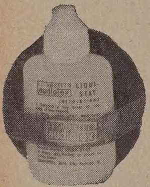
Automatically cleans stylus each time tone arm is moved from rest position. Self-adhesive bottom attaches to turntable; adjustable to any height.

CAT NO. 30-004..............................List: $1.65

STATI-KLEER

Spray-type static eliminator comes in 12 oz. aerosol can. Eliminates dust-attracting static electricity.

CAT. NO. 30-008..............................List: $1.79



RECOR-DE-STAT

Squeeze bottle of anti-static detergent with velvet pad applicator. Long velvet fibers reach bottom of record grooves. Anti-static detergent cleans records; leaves dust-repelling film.

CAT NO. 30-010..............................List: $2.00

DUST BUG

Four-in-One Record Cleaner & Static Eliminator

Applies cleaning fluid, brushes dirt from grooves, picks up loosened dirt, eliminates static charge automatically while record is playing. Anti-static cleaning fluid included.

CAT. NO. 30-014 (changer model)..............................List: $7.90
CAT. NO. 30-012 (player model)..............................List: $9.60
CAT. NO. 30-016 (fluid refill)..............................List: $2.00
CAT. NO. 30-018 (plush pad replacement)..............................List $1.40

45-RPM RECORD ADAPTOR

Plastic adaptor slips over standard spindle to play any 45 RPM disc.

CAT. NO. 30-034..............................List: $.25

DISK-O-KLEEN

Silicone treated record cleaning cloth eliminates static charge Specially woven velvet material has extra length nap to reach bottom of grooves.

CAT. NO. 30-022..............................List: $1.25

KLEEN-O-RECORD

Triple action cloth, Anti-Static Record Cleaning Cloth, silicone impregnated, which cleans, lubricates and de-staticizes records. Long lasting.

CAT. NO 30-024..............................List: $.75

RECORD SAVERS

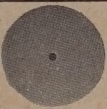
Heavy-duty polyethelene envelopes protect records when not in use.

CAT NO.	SIZE	LIST
30-062	For 12″ records. Pkg. of 5..............................	$.49

45-RPM RECORD INSERTS

Plastic snap-in inserts adapt large hole 7″ records for play on 3 speed changers. Spring-like construction holds insert firmly in place.

CAT NO. 30-030 (Pkg. of 6)..............List: $.30



TURNTABLE RECORD CUSHIONS

Thick plastic sponge cushions eliminate record slip, reduce magnetic pull, prolong record life.

CAT. NO. 30-040 (10″)..............................List: $1.25
CAT. NO. 30-042 (12″)..............................List: $1.65

TURNTABLE RUBBER MAT KIT

Heavy rubber mat fits any 12″ turntable. Has tapered ridges 7″, 10″, and 12″ in diameter. Supports any size record by its blank outside rim, keeping grooves from touching. Strobe disc and 45 RPM adaptor included.

CAT. NO. 30-044..............................List: $4.25

PHONO COVERS

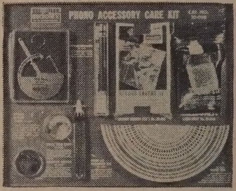
Heavy duty embossed vinyl covers for turntables and changers.

CAT. NO.	SIZE & USE	LIST PRICE
30-048	13¼″ x 12½″ x 8″ For Webcor, V-M, Garrard RC-121, Mirracord, etc.	$2.50
30-050	17″ x 15″ x 8½″ For Garrard RC-88, RC-98, 4HF; Glaser-Steers, Thorens Changer, Pickering..........	2.50
30-052	17½″ x 16½″ x 8½″ For many phono & transcription players such as: Gray, Rek-O-Kut Metzner	3.00
30-054	2½″ x 16″ x 8½″ For many phono & transcription players such as: Gray, Rek-O-Kut, Metzner	3.00

TONE ARM LIFT

Provides precise control of tone arm. Made of spring metal, plastic coated; attaches to tone arm.

CAT. NO. 30-066..............................List: $.75



PHONO ACCESSORY KIT

Complete phono and record care kit contains record brush, recor-de-stat, 12″ record savers, tone arm lift, stylus microscope, stylus weight gauge, strobe disc, and phono and recorder oil.

CAT. NO. 30-098 List: $9.95

AUDIOTESTER TEST RECORD

12″ plastic LP has stereo tests on Side 1; mono on Side 2. Side 1: metronome balance, pickup alignment, channel separation, frequency response, RIAA equalization, turntable rumble. Side 2: stylus wear, frequency response, RIAA equalization, IM distortion, turntable rumble, tone arm resonance.

CAT. NO. 30-200 .... List: $4.98

STYLUS MICROSCOPE

Optical instrument for checking stylus wear. Has adjustable focus and magnifying power of 50. Complete with pen-type pocket clip.

CAT NO. 30-218 .... List: $2.50

PHONO LEVEL

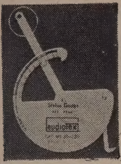
Bubble-type gauge for precise measurement of phonograph level. Accurate to better than 1°.

CAT NO. 30-224 .... List: $2.50

audiotex HI-FI ACCESSORIES

AUDIOTEX MFG. CO., DIV. of G-C TEXTRON, INC.
ROCKFORD, ILL. • LOS ANGELES 18, CALIFORNIA

PHONO ACCESSORIES (Continued)

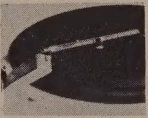


STYLUS WEIGHT GAUGE

Measures force needed to lift tone arm from record. Calibrated in bands with an expanded scale at low force. Accurately gauges correct stylus pressure.

CAT. NO. 30-220 .... **List: $2.80**

DECI-GRAM STYLUS PRESSURE GAUGE



Precisely calibrated, 1 to 10 gram pressure gauge measures stylus pressure within ½ gram. The sturdy DECI-GRAM is built to close tolerances to give you years of accurate service. Use it often . . . your records will last longer, sound better.

CAT. NO. 30-222.............................**List: $1.65**

PHONO LEVEL KIT

Includes bubble-type phono level and four adjustable feet for balancing of any phonograph or turntable.

CAT NO. 30-226 ...... **List: $3.25**

STROBE DISC

New design shows not only correct speed but also ± 2% and ± 4% deviations.

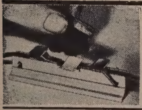
CAT. NO. 30-228 (Cardboard) .... **List: $ .55**
CAT. NO. 30-230 (Plastic).. **List: $1.65**

PHONO SPEED TEST KIT

Complete outfit for checking turntable speed. Includes plastic scrobe disc and handy neon lamp.

CAT. NO. 30-232 .... **List: $2.90**

TAPE ACCESSORIES



TAPE SPLICER — EZE SPLICE MODEL

For fixing broken tape and editing. Provides easy-to-repair mitre cut.

CAT. NO. 30-100 .... **List: $2.75**

TAPE SPLICER—PROFESSIONAL MODEL

Easy to use, precise cutter/splicer with pair of curved cutting blades. Leaves tape edges free of adhesive. For use with any ¼" tape.

CAT. NO. 30-104...................**List: $9.95**

SPLICING TAPE

For use with any tape splicer. Special cold setting, non-flowing adhesive on Mylar base. 100" spool, ½" width. Enough for 200 splices.

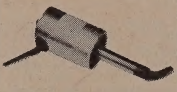
CAT. NO. 30-110 .... **List: $.50**

TAPERASER

Removes all traces of signal and noise from audio tapes and 16 or 35 mm magnetic sound film. Powerful erase action (to —52 db) lowers residual noise level below that of some virgin tape. Erases tape on reels up to 10½" in diam. Complete operation takes only 30 seconds.

CAT. NO. 30-114 .... **List: $33.00**

HEAD-DEMAG TAPE HEAD DEMAGNETIZER



Safely removes all trace of magnetism from recording heads. Curved, flat tip is plastic-covered — can't scratch or damage. Reaches most heads with cover left on; on-off switch eliminates unplugging when device is not in use.

CAT. NO. 30-112.......................**List: $9.95**

TAPE END CLIPS

Stops straying tape ends. Reusable plastic clip, works with any reel.

CAT. NO. 30-116 (Pkg. of 18)........**List: $.60**

REEL-NEAT TAPE CLIPS

Works on full or partially full reels. Keep tape neatly wound for convenience in storage. Snap-on clips, fit any reel, full or partially empty. Made of non-magnetic stainless steel. Fits snugly on wheel—does not interfere with placing reel back into storage carton. Package of 5.

CAT. NO. 30-130 .... **List: $1.25/Pkg.**

TAPE AND RECORD LABELS

36 pressure-sensitive ½" x 2" labels provide handy index to the music library. Space for title, date, and number.

CAT. NO. 30-118 .... **List: $.55**

TAPE CUEING LABELS

Color coded, pressure-sensitive numbered tabs for marking selections anywhere on a tape. Package contains five sheets, six tabs to a sheet, and includes identification labels for the reel or box.

CAT. NO. 30-120 .... **List: $1.65**

TAPE THREADING LEADER

For easy threading of tape on reel. 24" Mylar leaders with pressure sensitive adhesive. A small foam rubber ball at one end drops into hub of take-up reel. On fast rewind, the ball releases without damaging tape.

CAT. NO. 30-122 (Pkg. of 10)...........**List: $1.40**

LUBRICANT
CLEANER

KLEEN-LUBE

Two-bottle kit for cleaning and lubricating tape heads. Cleaner dissolves dirt and grease. Lubricating fluid contains silicone in solvent base; leaves light silicone film to reduce friction, eliminate tape squeal.

CAT. NO. 30-124 .... **List: $1.95**

KLEEN-TAPE

100' of specially impregnated cloth tape on 5" reel for cleaning tape heads. "Plays" through any standard tape recorder in less than 2 minutes.

CAT. NO. 30-126.. **List: $2.95**

HI-FI ACCESSORIES

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AUDIOTEX MFG. CO., DIV. of G-C TEXTRON, INC.
ROCKFORD, ILL. • LOS ANGELES 18, CALIFORNIA

TAPE ACCESSORIES (Continued)

TAPE RECORDER ACCESSORY KIT

Complete set of essentials for proper care and operation of tape recorders. Contains "EZE-Splice" tape splicer, roll of splicing tape, package of tape labels, box of tape end clips, package of tape starting leaders, reel of Kleen-Tape and Vial of Phono and Recorder Oil.

CAT. NO. 30-148.................... **List: $9.95**

TELEPHONE PICK-UP

Records both sides of a telephone conversation — suction cup attaches to any phone. Plugs into tape recorder.

CAT. NO. 30-150
(plug not included)................ **List: $5.95**

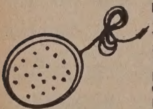
CAT. NO. 30-152
(with standard phone plug).... **List: $6.95**

AUDIOTESTER TAPE

STEREO AND MONOPHONIC AUDIOTESTER

For checking performance of stereo and mono tape machines and associated equipment. Tests include head alignment, resonance, frequency response, NAB equalization, intermodulation, flutter, metronome balance, and distortion. 7.5 ips tape comes with detailed instruction.

CAT. NO. 30-206 (Standard tolerance) .... **List: $6.50**
CAT. NO. 30-208 (Precise tolerance) .... **List: $8.25**
CAT. NO. 30-210 (4 track test tape)................................ **List: $6.50**



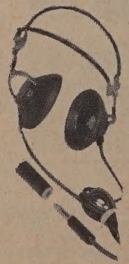
PILLOW SPEAKER

Personal Instrument for Private Listening. For use with transistor radios or across voice coil leads of any speaker. Electromagnetic element for maximum sensitivity and widest possible tone range. For private listening, without disturbing others. Comes with cord and miniature phone plug to fit transistor radios.

CAT. NO. 30-160.... .... **List: $4.95**

MISCELLANEOUS HI FI ACCESSORIES

PROFESSIONAL HEADPHONES



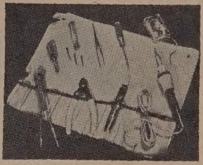
High quality instruments for stereo and monophonic play. Frequency range 50-15,000 cps. Moving coil elements contain dual 16 ohm voice coils and lightweight plastic diaphragms. Supplied with connecting cable and plugs. Impedance: 16/16 ohms (stereo) or 8 ohms (mono).

CAT. NO. 30-158............. **List $49.00**

MINIATURE EARPHONE

For private listening to radios, TV, and hi-fi. Electro-dynamic type with frequency range 50-4000 cps. Lightweight metal clip holds phone to either ear.

CAT. NO. 30-154 (15 ohm)..... **List: $4.50**
CAT. NO. 30-156 (2000 ohm).. **List: $4.50**



CAT. NO. 30-244

List: $16.50

ENGINEER'S HI-FI SERVICE TOOL KIT

Special tools for the audiophile or professional for repair, installation and adjustment of hi-fi and music equipment. Heavy duty plastic pouch contains miniature-tip soldering iron; precision tweezer; neolite circuit tester; phono & recorder oil; set of jeweler's screwdrivers; Phillips screwdriver; miniature screw holding screwdriver ("Minihold"); wire stripper and cutter, and a package of solder.

ALL-PURPOSE TEST METER

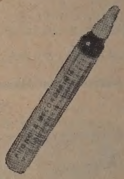
True pocket size, rugged mechanical multi-purpose circuit tester. Ideal for servicemen, technicians, hobbyists, students, etc. 9 voltage ranges from 6 to 600 V., AC and DC; three resistance ranges to 200 megohms; three DC current ranges; also direct reading capacity, inductance and decibel ranges; sensitivity; 6000 0/V, DC; 2700 0/V AC.

CAT. NO. 30-240 .... **List: $24.95**

PHONO AND RECORDER OIL

Specially compounded non-gumming oil in handy plastic drop-by-drop applicator. Contains rust inhibitor.

CAT. NO. 30-250 .... **List: $.65**



SPEAKER CONE WEATHERPROOFING

Special silicone compound weatherproofs speakers for outdoor use. 8 oz. in aerosol-type spray can; enough to protect several speakers.

CAT. NO. 30-252 .... **List: $2.50**

FM INDOOR ANTENNA

Folded Dipole for local or strong signal locations. Comes ready to install with 6' lead wire and spade lugs.

CAT. NO. 30-270 .... **List: $2.10**

VIBRATION PADS

Resilient pads made of foam plastic and sponge rubber. Laminations reduce rumble, minimize feedback, and protect cabinets. Four available sizes to fit wide variety of units.

CAT. NO.	SIZE	LIST
30-162	6"x12"	$0.90
30-164	9"x12"	1.25
30-166	12"x12"	1.60
30-168	13"x16"	2.25

HI FI DECALS

Jumbo assortment of attractive labels. Includes identification tabs for controls, cabinets, chassis parts and remote control devices.

CAT. NO. 30-314 .... **List: $1.50**

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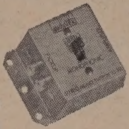
HI-FI ACCESSORIES

AUDIOTEX MFG. CO., DIV. of G-C TEXTRON, INC.
ROCKFORD, ILL. • LOS ANGELES 18, CALIFORNIA

MISCELLANEOUS HI FI ACCESSORIES (Continued)

STEREO/MONOPHONIC SWITCHBOX



Parallels two stereo channels for noise-free play of monophonic records with stereo cartridge. Two-position switch for stereo or mono play. 3 ft. shielded cables with male phono plugs included.

CAT. NO. 30-290 (surface mounting) List: $4.85

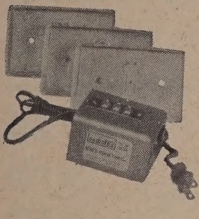
CAT. NO. 30-292 (panel mounting) List: $5.25

DUO JACK SWITCH BOX

Connects two units such as tuner and record player or tape machine to single input. Automatically switches signals. Contains two inputs that accept phono jacks and 18″ output cable with phono plug.

CAT. NO. 30-294 (surface mounting) ....List: $3.00
CAT. NO. 30-296 (panel mounting) ....List: $3.75

REMOTE POWER CONTROL



Operates like a light switch; provides remote control of electrical equipment at any location, with any number of switches. Contains low voltage signal power supply and relay switch. Remote switches fit standard electrical outlet box or may be built into a cabinet. Uses 3 conductor low voltage wire. 10 amp at 117.5 volt capacity.

CAT. NO. 30-300 (includes 3 switches) .... List: $23.00
CAT. NO. 30-302 (with 3 pilot light switches) .... List: $28.00
CAT. NO. 30-304 (additional switches without pilot light) .... List: $2.25

POWEROFF

Shuts-off power to automatic record changers when last record has been played. Automatic shut-off may be switched to manual control. Complete with line cord and two receptacles.

CAT. NO. 30-310 (for changers drawing 30-45 watts) ....List: $11.95
CAT. NO. 30-312 (for changers drawing 15-30 watts) ....List: $11.95

HI FI KNOBS

Attractive plastic knobs with silver or gold ring inserts. Standard ¼″ brass insert bushing with set screw — fits any shaft configuration.

CAT. NO.	COLOR	SIZE	LIST
30-320	Black/gold	1″ x13/16″	$.50
30-322	Grey/silver	1″ x13/16″	.50
30-324	Ivory/gold	1″ x13/16″	.50
30-326	Black/gold	1 5/16″x13/16″	.55
30-328	Grey/silver	1 5/16″x13/16″	.55
30-330	Ivory/gold	1 5/16″x13/16″	.55
30-332	Black/gold	1½″x⅞″	.65
30-334	Grey/silver	1½″x⅞″	.65
30-336	Ivory/gold	1½″x⅞″	.65

DRAWER SLIDES

For mounting record players, tape machines or other equipment in storage walls or cabinets. Support up to 50 lbs.; fit any drawer up to 17″ long. Nylon rollers provide smooth operation.

CAT. NO. 30-350 (one pair) .... List: $3.30
CAT. NO. 30-348 (Ball bearing slides)................ List: $5.00/pr.

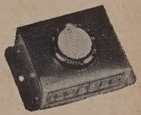
ACOUSTIC PADDING

Spun fiberglass eliminates standing sound waves, reduces reverberation inside speaker cabinets. May be used for any application to control or absorb sound.

CAT. NO. 30-356 (24″x60″x1″) ....List: $ 2.25

CAT. NO. 30-358 (Roll 24″x150′x1″)........List: $50.50 (48c lin. ft.)

SPEAKER SELECTOR SWITCH



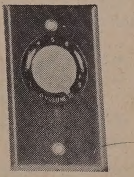
Dial switch provides control of 1 to 3 speakers anywhere in the house. Finished in attractive brush lacquered solid brass. Terminals on rear.

CAT. NO. 30-360
(surface mounting or free standing)
List: $5.50

CAT. NO. 30-362
(wall plate type) .... List: $3.50

CAT. NO. 30-388
(Stereophonic speaker selector Wall plate type)
List: $4.95

SPEAKER VOLUME CONTROLS



Terminal-type controls for mounting on standard electrical wall plates. Also fit standard conduit box or may be mounted in any panel or cabinet. 10 watt power capacity (20 watt peak); "L" pad design.

CAT. NO.		List
WALL PLATE TYPE		
30-364	(for 8 ohm speakers)	$4.95
30-366	(for 16 ohm speakers)	$4.95
30-368	(for 8 ohm speakers with output jack for plug-in of extension speaker)	$5.25
30-370	(for 16 ohm speaker with jack as above)	$5.25
30-372	(for two 8 ohm speakers)	$8.50
30-374	(for two 16 ohm speakers)	$8.50

SURFACE MOUNTING (in self-contained box)

30-376	(speaker volume control 8 ohm)	$ 7.00
30-378	(speaker volume control 16 ohm)	$ 7.00
30-380	(dual stereo speaker 8 ohm)	$10.50
30-382	(dual stereo speaker 14 ohm)	$10.50

CABINET TYPE

30-384	(speaker volume control 8 ohm)	$ 3.50
30-386	(speaker volume control 16 ohm)	$ 3.50

"T" PAD, PANEL MOUNTING

30-390 (8 ohm, 25 watt peak audio) $6.75
30-392 (16 ohm, 25 watt peak audio) $6.75

SOLDERLESS PHONO PIN PLUGS

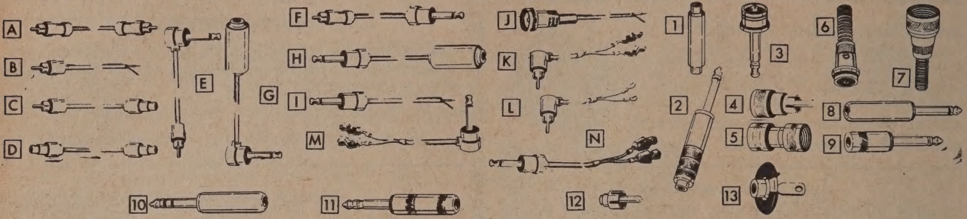
Completely new design requires only stripping of cable inserting in plastic shell and assembly with two screws. Right angle style.

CAT. NO. 30-530..................................List $.90 pk/2 grey plugs
CAT. NO. 30-532..................................List: $.90 pk/2 black plugs

audiotex HI-FI ACCESSORIES

AUDIOTEX MFG. CO., DIV. of G-C TEXTRON, INC.
ROCKFORD, ILL. • LOS ANGELES 18, CALIFORNIA

CONNECTING CABLES, ADAPTORS, PLUGS AND JACKS A full assortment of Interconnecting Cables, Adaptors and connectors for connecting Hi-Fi sets. Cables come in a variety of lengths for any application.



SHIELDED CABLES

Phono Pin Plugs on both ends.

A CAT. NO.	LENGTH	LIST
30-400	18″	$1.00
30-402	36″	1.25
30-404	72″	1.50
30-406	144″	2.00

Phono Pin Plug on one end, other end stripped and tinned.

B CAT. NO.	LENGTH	LIST
30-412	18″	$ .90
30-414	36″	1.00
30-416	72″	1.25
30-418	144″	1.75

Phono Pin Plug on one end; Phono Pin Jack on other end.

C CAT. NO.	LENGTH	LIST
30-424	18″	$1.25
30-426	36″	1.35
30-428	72″	1.75
30-430	144″	2.25

Phono Pin Jacks on both ends.

D CAT. NO.	LENGTH	LIST
30-434	18″	$1.55
30-436	36″	1.80
30-438	72″	2.25

Phono Pin Plug on one end, 90° Phone Plug on other.
E CAT. NO. 30-442 (72″) List: $2.00

Phono Pin Plug on one end, Std. Phone Plug on other.
F CAT. NO. 30-444 (72″) List: $2.00

90° Phone Plug on one end, Phone Jack on other.
G CAT. NO. 30-446 (10′) List: $5.00

Std. Phone Plug on one end, Phone Jack on other end.
H CAT NO. 30-448 (10′) List: $5.00

Phone Plug on one end, other end stripped and tinned.
I CAT. NO. 30-450 (6′) List: $1.90

Mike Connector on one end, other end stripped and tinned.
J CAT. NO. 30-452 (10′) List: $2.70
30-464 (8′) 2.80
30-466 (15′) 3.90

TWO-CONDUCTOR CABLES

Alligator Clips on one end; 90° Phono Pin Plug on other end.
K CAT. NO. 30-456 (10′) List: $2.25

Spade Lugs on one end; 90° Phono Pin Plug on other end.
L CAT. NO. 30-458 (10′) List: $1.85

Alligator Clips on one end; 90° Phono Plug on other end.
M CAT. NO. 30-460 (10′) List: $2.40

Standard Phone Plug on one end; Alligator Clips on other end.
N CAT. NO. 30-462 (10′) List: $2.40

ADAPTORS

Phono Pin Jack, for connecting two Phono Pin Plugs.
1 CAT. NO. 30-470 List: $1.00

Phono Pin Plug to Standard Phone Plug
2 CAT. NO. 30-472 List: $1.95

Female Mike Connector to Standard Phone Plug.
3 CAT. NO. 30-474 List: $ .45

Mike Connector to Phono Pin Plug.
4 CAT. NO. 30-476 List: $1.00
30-500 Phono Pin Plug to 2 Phono Jacks 1.75
30-502 (3 phono pin jacks) 1.75
30-504 (2 pin jacks) 1.90
30-506 Phone Plug to 2 Mike Connector 1.90

MISCELLANEOUS

Connector for two Male Mike Connectors.
5 CAT NO. 30-478 List: $1.00

Mike Connector, Single Contact, Male.
6 CAT. NO. 30-480 List: $ .50

Mike Connector, Single Contact, Female.
7 CAT. NO. 30-482 $ .70

Three Mike Connectors
CAT. NO. 30-508 List: $1.65

Standard Phone Plug, 2 Contact, Plastic handle.
8 CAT. NO. 30-484 List: $ .75

Standard Phone Plug, 2 Contact, "Stubby" Metal handle (shielded).
9 CAT. NO. 30-486 List: $1.00

Phone Plug, 3 Contact, Plastic handle.
10 CAT. NO. 30-488 List: $1.20

Phone Plug, 3 Contact, Metal handle (shielded).
11 CAT. NO. 30-490 List: $1.40

Phono Pin Plugs, Package of 4.
12 CAT. NO. 30-492 List: $ .55

Phono Pin Jacks, Package of 3.
13 CAT. NO. 30-494 List: $ .55

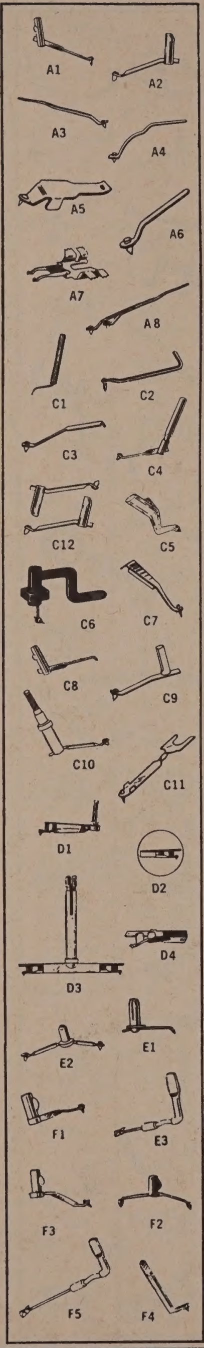
Phono Pin Plug with Removable Shielded Handle.
CAT. NO. 30-534 List: $1.00 (pkg./2)

Phono Pin Jack, Package of 2
CAT. NO. 30-536 List: $1.20

Speaker Wires. 22 Ga, 2 Conn for connecting loud spkr.
CAT. NO. 30-550 (20′) Speaker Wire List: $ .70
30-552 (40′) Speaker Wire 1.25

CLEVITE Walco REPLACEMENT NEEDLE GUIDE

PRICE	WALCO NO.	FIG.	CARTRIDGE
FOR ADMIRAL CARTRIDGES			
2.50	**W-2MGS**	A1	409A301
	W-2MGD*	A1	
2.50	**W-5AGS**	A2	409A16
	W-5AGD*	A2	
2.50	**W-21S**	A3	409A13-1, 409A14, 409A15-1, 409A15-2
	W-21D*	A3	
2.50	**W-21MGS**	A3	
	W-21MGD*	A3	
2.50	**W-21AGS**	A3	
	W-21AGD*	A3	
2.50	**W-30S**	A4	98A54-1, 409A11, 409A13, 409A13-2, 409A300, 409B19-9
	W-30D*	A4	
2.50	**W-30MGS**	A4	
	W-30MGD*	A4	
2.50	**W-30AGS**	A4	
	W-30AGD*	A4	
2.50	**W-32AGS**	A5	409A17
	W-32AGD*	A5	
2.50	**W-34S**	A6	409B19-8
	W-34D*	A6	
2.50	**W-34MGS**	A6	
	W-34MGD*	A6	
3.50	**W-35TPS**	A7	409B20
4.25	**W-35TPS-1†**	A7	
	W-35DS	A7	
	W-35TPD*	A7	
FOR ASTATIC CARTRIDGES			
1.50	**W-1A**	C1	LT-1M, LT-2M, LT-3M
1.50	**W-1MGA**	C1	
2.50	**W-2S**	A1	403-J, CAC-D, CAC-AG, CQ-AG, CAC-78, CQ-78, CAC-78X, CAC-78-W CAC-1, QT, CQ, CAC-X, LQD, LQD-1, LQD-1B
	W-2D*	A1	
2.50	**W-2MGS**	A1	
	W-2MGD*	A1	
2.50	**W-2AGS**	A1	
	W-2AGD*	A1	
2.50	**W-3S**	C2	51-2, 53-1, 53-2, 53-3, 59-1, 59-2, 59-3, GC-1-AG, 402-M, GC, GC-AG, GC-78
	W-3D*	C2	
2.50	**W-3MGS**	C2	
	W-3MGD*	C2	
2.50	**W-3AGS**	C2	
	W-3AGD*	C2	
2.50	**W-4S**	C3	U, U-78
	W-4D*	C3	
2.50	**W-4MGS**	C3	
	W-4MGD*	C3	
2.50	**W-5S**	A2	10L3(JorM), 11L3(JorM), 90-TB, 90-TJB, 90-TS, 90-TJS, AC, AC-C ACR, AC-AG, AC-C-AG, AC-78, AC-C-78, ACD, ACD-C, ACD-1, ACD-C1,
	W-5D*	A2	
2.50	**W-5MGS**	A2	
	W-5MGD*	A2	
2.50	**W-5AGS**	A2	
	W-5AGD*	A2	
5.00 pr.	**W-5S-H**	C12	MD-1, MD-3, MD-5, MD-6
	W-5D-H*	C12	
5.00 pr.	**W-5MGS-H**	C12	
	W-5MGD-H*	C12	
2.50	**W-6S**	C4	LT-3DM, LT-4DM, LT-4D-1M, LT-4-M, LT-4-AG, LT-4-78
	W-6D*	C4	
2.50	**W-6MGS**	C4	
	W-6MGD*	C4	
2.50	**W-6AGS**	C4	
	W-6AGD*	C4	
2.50	**W-7S**	C5	Nylon1J, Nylon1M
3.50	**W-8TPS**	C6	55-T, GCD
4.25	**W-8TPS-1†**	C6	
	W-8DS	C6	
	W-8TPD*	C6	
2.50	**W-19S**	C7	MD-1, MD-3, MD-5, MD-6
	W-19D*	C7	
2.50	**W-19MGS**	C7	
	W-19MGD*	C7	
1.50	**W-25A**	C8	14L3-M, 15L3-M, 14L3-AG-M, 15L3-AG-M, 14L3-78-M, 15L3-78-M, 14L3-DM, 14L3-DMB, 15L3-DM, 15L3-DMB
1.50	**W-25MGA**	C8	
1.50	**W-25AGA**	C8	
2.50	**W-30S**	A4	PT
	W-30D*	A4	
3.50	**W-38TPS**	C6	·57-T
4.25	**W-38TPS-1†**	C6	
	W-38DS	C6	57-T
	W-38TPD	C6	
2.50	**W-39S**	C9	12L3-M, 62-1M, 64-TMS, 66-1M, 68-1M, 66-2M, 68-2M, 66-3M, 68-3M, 66-TMS, 66-TMY, 66-TMB, 68-TMS, 68-TMY, 68-TMB, 94-TB, 94-TMB, 405, 406
	W-39D*	C9	
2.50	**W-39MGS**	C9	
	W-39MGD*	C9	
2.50	**W-39AGS**	C9	
	W-39AGD*	C9	
2.50	**W-42MGS**	C10	408, 410
	W-42MGD*	C10	
2.50	**W-64S**	C11	310-2, 310-T, 310-TB, 310-TS, 414-1, 420-TS, 422-TS, 424-TS
	W-64D	C11	
2.50	**W-64MGS**	C11	
	W-64MGD	C11	
2.50	**W-64AGS**	C11	
	W-64AGD	C11	



PRICE	WALCO NO.	FIG.	CARTRIDGE
FOR ELECTRO-VOICE CARTRIDGES			
2.50	**W-21S**	A3	14, 14S, 14S4, 20, 22, 34, 34S, 44, 44S, 46, 46T, 47, 74, 74S, 13, 33, 33-2, 33-3, 33-4, 33B, 33-S, 33-S2, 33-S4E, 43, 43-S, 73, 10, 12, 12S, L-12, M-12, 20, 22, 32, 32-5, 42, 42-S, 46, 46-T, 47, 72, 82, 82D, 82DM, 82S, 82SM, 84, 84D, 84DM, 84S, 84SM, 85D, 85DM.
	W-21D*	A3	
2.50	**W-21MGS**	A3	
	W-21MGD*	A3	
2.50	**W-21AGS**	A3	
	W-21AGD*	A3	
3.50	**W-22TPS**	A 8	16-TT, 16-0 26
	W-22DS	A 8	
	W-22TPD	A 8	
FOR GENERAL ELECTRIC CARTRIDGES			
3.50	**W-67S**	D1	RPX-040, RPX-041, RPX-042, RPX-046, RPX-061, RPX-063, 9D
	W-67D	D1	
3.50	**W-67MGS**	D1	
	W-67MGD	D1	
3.50	**W-67Tr**	D1	
	W-67TrD	D1	
3.50	**W-68S**	D2	RPX-050A
	W-68D	D2	
3.50	**W-68MGS**	D2	
	W-68MGD	D2	
3.50	**W-68Tr**	D2	
	W-68TrD	D2	
5.95	**W-68TPS**	D3	RPX-050A, RPX-052A, RPX-053A, RPX-047, RPX051, RPX-052, RPX-053, 12D, UXP-111 Head
5.95	**W-68TPTrS**	D3	
6.95	**W-68TPS-1†**	D3	
	W-68DS	D3	
	W-68TPD	D3	
	W-68TPTrD	D3	
	W-68TPD-1†	D3	
3.50	**W-69S**	D4	4G-052, 053, 4G-061, 063
	W-69D	D4	4G-050, 040, 041
3.50	**W-69MGS**	D4	VR II
	W-69MGD	D4	
FOR MAGNAVOX CARTRIDGES			
2.50	**W-2S**	A1	560052
	W-2D*	A1	
5.95	**W-33TPS**	A7	560207-1
6.95	**W-33TPS-1†**	A7	
	W-33DS	A7	
	W-33TPD	A7	
3.50	**W-35TPS**	A7	560188-2
4.25	**W-35TPS-1†**	A7	
	W-35DS	A7	
	W-35TPD	A7	
1.50	**W-50A**	E1	560101
2.50	**W-51TPA**	E2	560133, 560170
3.50	**W-52TPS**	E2	560151 Series
	W-52DS	E2	
	W-52TPD*	E2	
2.50	**W-64S**	C11	560176
	W-64D*	C11	
2.50	**W-64MGS**	C11	
	W-64MGD*	C11	
3.50	**W-75TPS**	E3	560161
	W-75DS	E3	
	W-75TPD	E3	
4.25	**W-75TPS-1†**	E3	
	W-75TPD-1†	E3	
FOR PHILCO CARTRIDGES			
1.50	**W-30A**	A4	35-2671-1
2.50	**W-30S**	A4	
2.50	**W-45MGS**	F1	35-2682, 45-1609, 45-1612, 76-4053
	W-45MGD*	F1	
3.50	**W-46TPS**	F2	425-0009, 425-0014, 45-9785, 45-9612, 76-4649
	W-46DS	F2	
	W-46TPD*	F2	
2.50	**W-47MGS**	F3	45-9792
	W-47MGD	F3	
2.50	**W-48S**	F4	45-1844, 76-1622, 76-1622-1
	W-48D	F4	
2.50	**W-64S**	C11	
	W-64D	C11	
2.50	**W-64MGS**	C11	325-8014
	W-64MGD	C11	325-8021
2.50	**W-64AGS**	C11	
	W-64AGD	C11	
3.50	**W-75TPS**	E3	325-8018
	W-75DS	E3	
	W-75TPD	E3	
4.25	**W-75TPS-1†**	E3	
	W-75TPD-1†	E3	
4.00	**W-77TPS**	F5	325-8016
	W-77DS	F5	
	W-77TPD	F5	
4.25	**W-77TPS-1†**	F5	
	W-77TPD-1†	F5	

CLEVITE Walco REPLACEMENT NEEDLE GUIDE

FOR RCA CARTRIDGES

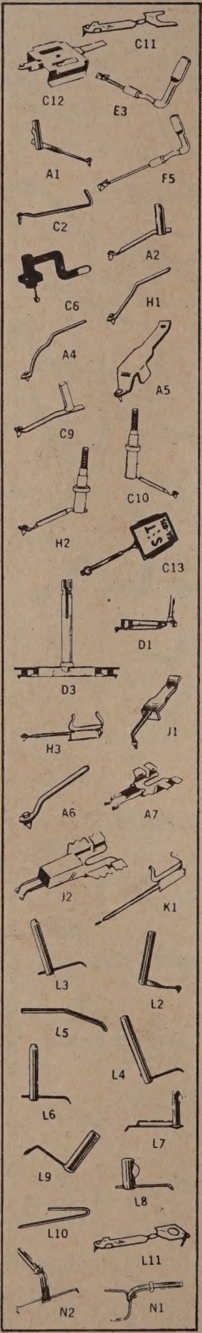
PRICE	WALCO NO.	FIG.	CARTRIDGE
2.50	W-2S	A1	73839
	W-2D*	A1	
2.50	W-3MGS	C2	74984, 76297
	W-3MGD*	C2	
2.50	W-5S	A2	76257 (988370-2), 101955
	W-5D*	A2	
2.50	W-5MGS	A2	
	W-5MGD*	A2	
3.50	W-8TPS	C6	100329
4.25	W-8TPS-1†	C6	
	W-8DS	C6	
	W-8TPD*	C6	
2.50	W-29S	H1	75044
	W-29D*	H1	
2.50	W-29MGS	H1	
	W-29MGD*	H1	
2.50	W-30MGS	A4	76257 (988370-1)
	W-30MGD*	A4	
2.50	W-32S	A5	78478, 162A001
	W-32D	A5	
2.50	W-32MGS	A5	
	W-32MGD	A5	
2.50	W-39S	C9	102321 101316
	W-39D*	C9	
2.50	W-39MGS	C9	
	W-39MGD*	C9	
2.50	W-39AGS	C9	
	W-39AGD*	C9	
2.50	W-42S	C10	9890, 9953, 38453, 38598, 39550, 39851, 39919, 70332, 70338, 70338-A, 70339, 72551, 75976, 74067, 74625, 76318
	W-42D*	C10	
2.50	W-42MGS	C10	
	W-42MGD*	C10	
2.50	W-44S	H2	75475, 75575, 77779
	W-44D*	H2	
2.50	W-44MGS	H2	
	W-44MGD*	H2	
3.50	W-67MGS	D1	74466
	W-67MGD	D1	
5.95	W-68TPS	D3	78634, SPC-1, M1-12110, SPC-2, M1-12112
6.95	W-68TPS-1†	D3	
	W-68DS	D3	
	W-68TPD	D3	
	W-68TPD-1†	D3	
3.50	W-75TPS	E3	79807, 100653
4.25	W-75TPS-1†	E3	
	W-75DS	E3	
	W-75TPD	E3	
	W-75TPD-1†	E3	
2.50	W-76S	H3	79791
	W-76D	H3	
2.50	W-76MGS	H3	
	W-76MGD	H3	
2.50	W-76AGS	H3	
	W-76AGD	H3	
4.00	W-77TPS	F5	103422
4.25	W-77TPS-1†	F5	
	W-77DS	F5	
	W-77TPD	F5	
	W-77TPD-1†	F5	

FOR RONETTE CARTRIDGES

PRICE	WALCO NO.	FIG.	CARTRIDGE
2.50	W-64S	C11	DT60-P, DT60-OV, DT60-T, DT60-US, RA-284P, RA-284-OV, RA-284-T, RA-284-US, TO-284-P, TO-284-OV, TO-284-T, TO-284-US
	W-64D*	C11	
2.50	W-64MGS	C11	
	W-64MGD*	C11	
2.50	W-64AGS	C11	
	W-64AGD	C11	
	W-59D	C12	TX-88A
	W-59MGD	C12	
3.00	W-104S	C13	B-40, BF-40
3.00	W-104MGS	C13	
	W-104MGD	C13	

FOR SHURE CARTRIDGES

PRICE	WALCO NO.	FIG.	CARTRIDGE
2.50	W-29S	H1	P72, P72A, P72AF, P72AFV, P72T, P72V, P76, P76A, P76AF, P76AFT, P76AT, P76F, P76T, P76AV, P76V, P77, P77A, P77AT, P77AV, P77T, P77V, P79, P79AF, P79T, PC72V, W22A, W22AB, W22ABT, WC24. WC24-T
	W-29D*	H1	
2.50	W-29MGS	H1	
	W-29MGD*	H1	
2.50	W-30S	A4	P73, P73A, P73AR, P73R, P75, P75A, P80, P37, P37A P37C, P37CA, P71, P71A, P71B, P71C, P71CA, P81, P81A, P81AD, P81C, P81CA, P81D, P81E, P30, P30B, P30C, P30D, P30E, P30G, P30HS, P30S, P30W, P35, PC30, PN30, PN30S, PN31S, P35S, P70, P70A, P85, PC30, PN30, PN30S, PN31S, W21A, W21AR, W21E, W21F, W26A, W26B, W66A, W66B, W23A, W23B, W60A, W60B, W60HS, W60PN, W61B, W65B, WC60B, W68
	W-30D*	A4	
2.50	W-30MGS	A4	
	W-30MGD*	A4	
2.50	W-30AGS	A4	
	W-30AGD*	A4	



FOR SHURE CARTRIDGES (Continued)

PRICE	WALCO NO.	FIG.	CARTRIDGE
2.50	W-31S	J1	PC9, PC10, PC11 PS20, P31ADH, PC40, PC41, PC40T, PC40C-T, PC41-T, WC22AB-T, W31AR, WC31AR, WC33B, W36B, WC36B
	W-31D*	J1	
2.50	W-31MGS	J1	
	W-31MGD*	J1	
2.50	W-31AGS	J1	
	W-31AGD*	J1	
2.50	W-32S	A5	PC12, PC13, PC14, WC32
	W-32D*	A5	
2.50	W-32MGS	A5	
	W-32MGD*	A5	
2.50	W-32AGS	A5	
	W-32AGD*	A5	
5.95	W-33TPS	A7	
6.95	W-33TPS-1†	A7	ML44(SS)
	W-33DS	A7	ML44(DS)
	W-33TPD	A7	ML44(DD)
2.50	W-34S	A6	PC42AD
	W-34D*	A6	
2.50	W-34MGS	A6	
	W-34MGD*	A6	
3.50	W-35TPS	A7	PC2 Series, PC3 Series, PC4 Series, PC5 Series, WC10, WC10D
4.25	W-35TPS-1†	A7	
	W-35DS	A7	
	W-35TPD	A7	
5.95	W-41TPS	J2	PC-6, WC-6
	W-41DS	J2	PC-7

FOR SONOTONE CARTRIDGES

PRICE	WALCO NO.	FIG.	CARTRIDGE
2.50	W-3S	C2	7590-1S, 7590-LB-1S, 7590-2M, 7590-2S, 7590-LB-2M, 7590-LB-2S, 7590-3S, 7590-LB-3S
	W-3D*	C2	
2.50	W-3MGS	C2	
	W-3MGD*	C2	
2.50	W-3AGS	C2	
	W-3AGD*	C2	
3.50	W-75TPS	E3	2T-D, 2T-S, 2T-SD, 2T-LB-D. 2T-LB-S, 2T-LB-SD, 9980-S, 9980-SD, 9980-D
4.25	W-75TPS-1†	E3	
	W-75DS	E3	
	W-75TPD	E3	
	W-75TPD-1†	E3	
2.50	W-76S	H3	IP-1S, IP-1D, IP-LB-1S, IP-LB-1D, IP-2S, IP-LB-2S, IP-3S, IP-3D, IP-LB-3S, IP-LB-3D
	W-76D	H3	
2.50	W-76MGS	H3	
	W-76MGD	H3	
2.50	W-76AGS	H3	
	W-76AGD	H3	
4.00	W-77TPS	F5	3-T, 3-TSD, 3-TDD
4.25	W-77TPS-1†	F5	
	W-77DS	F5	
	W-77TPD	F5	
	W-77TPD-1†	F5	
2.50	W-78S	K1	3P-1, 3P-3
	W-78D	K1	
2.50	W-78MGS	K1	
	W-78MGD	K1	
2.50	W-78AGS	K1	
	W-78AGD	K1	

FOR WEBSTER-CHICAGO CARTRIDGES

PRICE	WALCO NO.	FIG.	CARTRIDGE
2.50	W-60TPA	N1	ZIP247, ZIP404, ZIP403
2.50	W-63TPA	N2	U-42, U-47

FOR WEBSTER ELECTRIC CARTRIDGES

PRICE	WALCO NO.	FIG.	CARTRIDGE
2.50	W-10S	L2	A1, A1-8,A7, A7-1, A7-5, A7-8, A8, A10
	W-10D	L2	
2.50	W-10MGS	L2	
	W-10MGD	L2	
1.50	W-11A	L3	A1M, A1M1, A2M, A5M, A6M, A7M, A8M, A10M, AB1M, AX
1.50	W-11MGA	L3	
1.50	W-16A	L4	F15, F15-1, F16, F16-1, F16-2, F18, F18-1, F19, F19-1
1.50	W-17A	L4	
1.50	W-16MGA	L4	
1.50	W-17MGS	L4	
1.50	W-23A	L5	G1M, GX,
1.50	W-23MGA	L5	G2M, G4M,
1.50	W-23AGA	L5	G3M, G6M
2.50	W-26S	L6	F20, F-21, FX
2.50	W-26MGS	L6	
	W-26D*	L6	
	W-26MGD*	L6	
1.50	W-27MGA	L7	B1M, BX
1.50	W-28A	L8	AG1M, AG7M,
1.50	W-28MGA	L8	AG1, AG7
2.50	W-30S	A4	F10, F11, F11-1
	W-30D	A4	
2.50	W-30MGS	A4	
	W-30MGD	A4	
1.50	W-36A	L9	RG Series
1.50	W-36MGA	L9	
1.50	W-40MGA	L10	P1-2, P2-1, UX
1.50	W-40AGA	L10	
	W-65D*	L11	A100, A103, A160, B202, A200, A250, A260
2.50	W-65S	L11	
	W-65MGD*	L11	
2.50	W-65MGS	L11	
	W-65AGD*	L11	
2.50	W-65AGS	L11	

CLEVITE Walco REPLACEMENT NEEDLE GUIDE

PRICE	WALCO NO.	FIG.	CARTRIDGE
FOR FOREIGN CARTRIDGES			
2.50	**W-61S**	M11	Vaco — T45, S45
2.50	**W-61MGS**	M11	
2.50	**W-61AGS**	M11	
	W-61D	M11	
	W-61MGD	M11	
	W-61AGD	M11	
	W-85DS	M12	Telefunken — TTSA
	W-86DS	M13	Bang & Olufsen — Fentone B & O 350R Std., B & O 72R Std.
	W-87MGD	M14	Professional — B & O A Special
	W-88D	M15	Elac Miratwin MST-2A, 2D
	W-88MGD	M15	
	W-89D	M16	Perpetuum-Ebner P-7000
	W-89MGD	M16	
3.00	**W-90S**	M1	ACOS GP29
	W-90D	M1	
3.00	**W-90MGS**	M1	
	W-90MGD	M1	
3.00	**W-91MGS**	M2	Recoton Goldring "500"
	W-91MGD	M2	
4.00	**W-93TPS**	M4	Perpetuum-Ebner PE-8 and PE-10
	W-93DS	M4	
	W-93TPD	M4	
3.00	**W-94S**	M5	Philips AG3013
	W-94D	M5	
3.00	**W-94MGS**	M5	
	W-94MGD	M5	
4.00	**W-95TPS**	M6	Dual
	W-95DS	M6	
	W-95TPD	M6	
3.00	**W-96S**	M7	ACOS 37-1
	W-96D	M7	
3.00	**W-96MGS**	M7	
	W-96MGD	M7	
3.00	**W-97S**	M8	ACOS HGP59
	W-97D	M8	
3.00	**W-97MGS**	M8	
	W-97MGD	M8	
4.00	**W-98TPS**	M9	Perpetuum-Ebner P-12/RG
	W-98DS	M9	
	W-98TPD	M9	
3.00	**W-99S**	M10	Garrard GC-2
	W-99D	M10	
3.00	**W-99MGS**	M10	
	W-99MGD	M10	

PRICE	WALCO NO.	FIG.	CARTRIDGE
FOR STEREO CARTRIDGES			
3.00	**W-113STS**	S1	ASTATIC 74-TS, 70TS
3.00	**W-113MGS**		
3.00	**W-113S**		
	W-113STD		
	W-113MGD		
	W-113D		

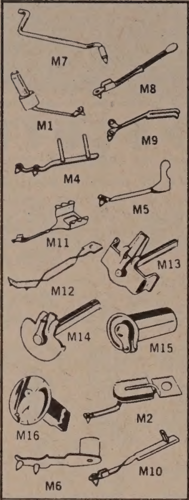
CODE

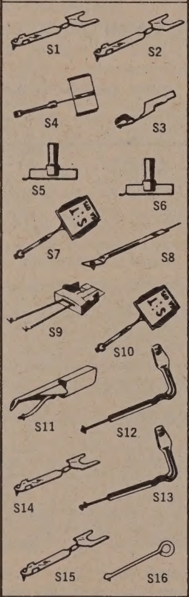
Clevite "Walco" needle numbers indicate shape. Letters following these numbers indicate the needle's tip material and record speed for which needle is intended.

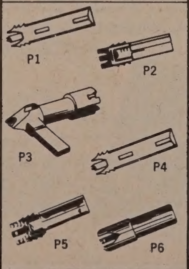
A — Osmium alloy tip for 78 rpm
S — Sapphire tip for 78 rpm
D — Diamond tip for 78 rpm
AGA — All-groove alloy tip for all speeds
AGS — All-groove sapphire tip for all speeds
AGD — All-groove diamond tip for all speeds
MGA — Microgroove alloy tip for 33⅓ & 45 rpm
MGS — Microgroove sapphire tip for 33⅓ & 45 rpm
MGD — Microgroove diamond tip for 33⅓ & 45 rpm
Tr — Transcription sapphire (.0025″)
TrD — Transcription diamond (.0025″)
TPTrS — Twin-point combination of Tr and MGS
TPTrD — Twin-point combination of TrD and MGD
TPA — Twin-point alloy needle (comb. of A & MGA)
TPS — Twin-point sapphire needle (comb. of S & MGS)
TPD — Twin-point diamond needle (comb. of D & MGD)
DS — Twin-point needle (combination of S & MGD)
AS — Twin-point needle (combination of A and MGS)
-H — Two identical needles for Markel Changer
STS — Stereo Sapphire, 0.7 mil
STSS — Twin-point sapphire, 0.7 mil stereo and 3 mil 78 rpm
STD — Stereo Diamond, 0.7 mil
STDS — Twin-point needle, 0.7 mil diamond stereo and 3 mil sapphire 78 rpm
STSS-1 — Twin-point sapphire, 0.7 mil stereo and 1 mil 33⅓ and 45 rpm
STDS-1 — Twin-point needle, 0.7 mil diamond stereo and 1 mil sapphire 33⅓ and 45 rpm
STDD-1 — Twin-point diamond, 0.7 mil stereo and 1 mil 33⅓ and 45 rpm

*AVAILABLE WITH ALLOY TIP †TWO 1 MIL TIPS
ALL SAPPHIRE TIPS ARE PRECISION SYNTHESIZED

CLEVITE 'WALCO' East Orange, N. J.







PRICE	WALCO NO.	FIG.	CARTRIDGE
FOR STEREO CARTRIDGES (Continued)			
3.00	**W-106STS**	S2	BSR BSR-TC 85
	W-106STD		
3.00	**W-110STS**	S3	COLUMBIA SC-1
	W-110STD		
3.00	**W-101STS**	S4	ELECTRO-VOICE 21 26
3.00	**W-102S**		
3.00	**W-102MGS**		
	W-101STD		
	W-102MGD		
3.00	**W-111STS**	S5	GENERAL ELECTRIC GC-7
	W-111STD		
3.00	**W-116STS**	S6	GENERAL ELECTRIC VR-22
	W-116STD		
3.00	**W-104STS**	S7	PERPETUUM-EBNER PE-90M PE-90N
3.00	**W-104S**		
3.00	**W-104MGS**		
	W-104STD		
	W-104MGD		
3.00	**W-105STS**	S8	RCA 106771
	W-105STD		
3.00	**W-105S**		
3.00	**W-105MGS**		
	W-105MGD		
3.50	**W-117STSS**	S9	RCA
3.50	**W-117STSS-1**		
	W-117STDS		
	W-117STDS-1		
3.00	**W-104STS**	S10	RONETTE B-40 SINGLE . . . BF-40 TURNOVER SEREO OV TURNOVER STEREO 1V1 TURNOVER STEREO T–1
3.00	**W-104S**		
3.00	**W-104MGS**		
	W-104STD		
	W-104MGD		
	W-118-STD	S11	SHURE M-7
3.50	**W-103STSS**	S12	SONOTONE 8-T
3.50	**W-103STSS-1**		
	W-103STDS		
	W-103STDS-1		
	W-103STDD-1		
3.50	**W-107STSS**	S13	SONOTONE 8-TA
3.50	**W-107STSS-1**		
	W-107STDS		
	W-107STDS-1		
	W-107STDD-1		
3.00	**W-108STS**	S14	VACO ST-100
	W-108STD		
3.00	**W-108S**		
3.00	**W-108MGS**		
	W-108MGD		
3.00	**W-112STS**	S15	VACO ST-20, ST-40
3.00	**W-112MGS**		
3.00	**W-112S**		
	W-112STD		
	W-112MGD		
	W-112D		
3.00	**W-109STS**	S16	WEBSTER ELECTRIC SC-1 (NEW)
	W-109STD		
3.00	**W-109S**		
3.00	**W-109MGS**		
	W-109MGD		

PLUG-IN CARTRIDGES (Stereophonic)

	CARTRIDGE	WALCO MODEL NO.	LIST PRICE	FIG.
ASTATIC	13-TX	**W-204STDS**		P1
ELECTRO-VOICE	66, 66D	**W-203STDS**		P2
SONOTONE	10-T	**W-206-STSS**	5.95	P3
		W-206-STSS-1	5.95	
		W-206-STDS		
		W-206-STDS-1		

PLUG-IN CARTRIDGES (Monophonic)

	CARTRIDGE	WALCO MODEL NO.	LIST PRICE	FIG.
ASTATIC	89TX	**W-205DS**		P4
ELECTRO-VOICE				
Replacement for Electro-Voice Power Point Model 56 (1 mil & 3 mil synthesized Sapphire Tips)		**W-201TPS**	3.95	P5
Replacement for Electro-Voice Power Point Models 51 & 56 (2-1 mil synthesized Sapphire Tips)		**W-201TPS-1**	3.95	
Replacement for Electro-Voice Power Point Model 56 (1 mil Diamond and 3 mil synthesized Sapphire Tips)		**W-201DS**		
Replacement for Electro-Voice Power Point Model 76 and Webcor Ceramic Cartridge-Needle Assembly (1 mil & 3 mil synthesized Sapphire Tips)		**W-202TPS**	4.25	P6
Replacement for Electro-Voice Power Point Model 76 and Webcor Ceramic Cartridge-Needle Assembly (1 mil Diamond and 3 mil synthesized Sapphire Tips)		**W-202DS**		

Capps

CAPPS & CO., inc.
valley stream, n.y.

CAPPSCUTTERS

Patent No. 2187512 and 2530284

CAPPS CUTTERS are the finest examples of precision hand craftsmanship available in this country today. Each one is made by a series of hand shaping and polishing operations on delicate facets so small that they can be covered by a human hair. Each is individually disc tested to assure the highest possible recording standards. PRODUCTION TOLERANCES: Included angle-Plus 7, minus 3 degrees: Radius, plus or minus .0003: Burnishing facet, plus or minus .00025 (measured at radius tip): Noise meter reading of minus 55db or better at an 8" record diameter.

Cat. No.	Duty	Shank	Shank Matl.	Included Angle (degrees)	Radius (Mils)	List Price	Resharpening List Price
SAPPHIRE CUTTERS							
780S	For general course pitch work 78 and LP.	Short	Dural	87	1.5	$8.25	$3.75
780L	"	Long	Dural	87	1.5	8.25	3.75
702S	"	Short	Dural	70	2.0	8.25	3.75
702L	"	Long	Dural	70	2.0	8.25	3.75
330S	Routine microgroove	Short	Dural	87	0.5 to 1.0	8.25	3.75
330L	"	Long	Dural	87	0.5 to 1.0	8.25	3.75
B2S	Utility stylus	Short	Brass	87	to 1.0	6.60	3.25
B2L	"	Long	Brass	87	to 1.0	6.60	3.25
STELLITE CUTTERS							
871S	Harder than steel—softer than sapphire	Short	Brass or Dural	87	to 1.0	2.50	1.40
871L	"	Long	Brass or Dural	87	to 1.0	2.50	1.40

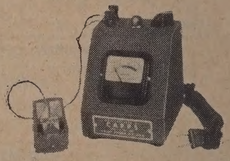
CUSTOM MADE AND SPECIAL DESIGN STYLI AVAILABLE (MRS, ANM and FEATHER EDGE)

Eccentric styli, Advance balls, Shaving knives, Wax points, Embossing styli, Replaceable Sapphire reproducing needles, Cartridge assemblies with Sapphire points.

CAPPS RESHARPENING SERVICE

Most CAPPS MADE styli can be resharpened upwards of five times depending on whether they are simply dull or badly chipped (Thermo styli cannot be resharpened this many times because of the wiring which limits the available area of sapphire.) CAPPS "RESHARPS" are given the same exacting care and attention as CAPPS new styli and are returned to the sender promptly.

HOT STYLUS UNIT



The CAPPS HOT STYLUS UNIT is used for applying heat to disk recording styli, softening the disk material at the point of contact thereby producing smoother more accurate grooves. This results in a substantial reduction in surface noise, especially at the inner diameter and minimizes the mechanical load on the cutting head increasing its efficiency and frequency response.

When ordering specify make and model number of cutter head and stylus requirements.

Model No.		
CU-I	Supplied without stylus	$60.00 net
CU-IR	Supplied with regular duty stylus, LP or 78	66.50 net
CU-IC	Supplied with custom made stylus to customer's specification	70.50 net

MICROPHONES

CONDENSER MICROPHONES

CR BB

CM 2030A
CM 2250A
CM 2011A

CAPPS CONDENSER MICROPHONES are acoustically faithful, distortion free, omnidirectional, blast proofed, and have a smooth frequency response from 20 to 20,000 c.p.s. Their excellent transient response make them ideal for those who must have the ultimate in acoustical transmission. They are complete with preamplifier, power supply and cable.

CM 2001 "PROFESSIONAL." The lowest priced condenser microphone available. Combines all of the features above with low cost achieved through mass production. Available for high impedance input (Grid Input). A boon to high fidelity enthusiasts.

CM 2001	Net Price $150.00*

CAPPS "STUDIO" Condenser Microphones are completely equipped with Cannon Connectors and swivel head.

CM 2030A—30 Ohms	Net Price $225.00*
CM 2250A—250 Ohms	Net Price $225.00*
CM 2011A—Hi Imp. (Mic Input)	Net Price $225.00*

CRYSTAL MICROPHONE WITH CONTROLLABLE *BASS BOOST*

(Patent Pending)

Designed to compensate for frequency response deficiencies inherent in many tape recorder and p.a. systems, this microphone has a control knob which causes the acoustic chamber of this microphone to increase the bass response of the microphone up to 12 db from 50 to 150 c.p.s. with smooth rise and roll off below peak boost. Smooth frequency response 20-12,000 c.p.s. Output level —55 db re 1V/dyne/CM². Omnidirectional. ⅝"-27 thread for stand mounting or lay flat for desk use. Supplied with 15' of shielded microphone cable.

CR BB	List Price $36.00

DUOTONE COMPANY, INC.

KEYPORT, N. J.

IN CANADA: CHARLES W. POINTON, LTD., TORONTO

MOST COMPLETE SINGLE SOURCE FOR PHONO REPLACEMENT NEEDLES AND ACCESSORIES

ACCESSORIES

SELECTO-BRUSH 2 ACCESSORIES IN 1

Spring-action band selector settles needles in record groove with feather touch, then swings up; anti-static record brush sweeps out record grooves ahead of needle.

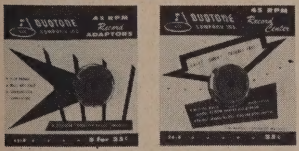
Packed 12 to card
List — Only 98¢ ea.

DUOTONE ELECTRO-WIPE CLOTH

Amazing anti-static dust cloth that renews itself in chemical action by dampening. Secret in initial impregnating with charge-breaking formula. Individually packed in polyethylene bag. 12 in display box. SPECIAL "RACK-PACK".

List — $1.00 ea.

DUOTONE 45 RPM ADAPTORS



2 models for spindle or manually operated machines. Carded 5 to blister pack. **List — 25¢. Also 24 pack display card. List—$6.00**

ACOS REPLACEMENT TONE ARMS

Complete with pre-mounted turnover cartridge. (Britain's finest.) Sturdy, lightweight construction; excellent tracking. For all phonos. Choice: GP 65-3 (hi-output), GP 65-1 (med. output). Individually boxed with instructions.

FOAM RUBBER TURNTABLE CUSHION

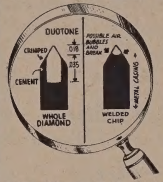
For rumble-free stereo. Protects record at same time it absorbs all mechanical noises. Individually packed in polyethylene bag.

List: 10"—$1.00; 12"—$1.50

NEEDLES

DIAMOND, SAPPHIRE, OSMIUM NEEDLES FOR ALL CARTRIDGES — FROM THE MAKERS OF THE FIRST COMMERCIAL DIAMOND NEEDLE

FEATURING SALES AIDS



The diamond needle that never risks loss of its tip . . . because it guarantees a deep-set whole diamond every time instead of a welded-on chip.

THE WHOLE DIAMOND

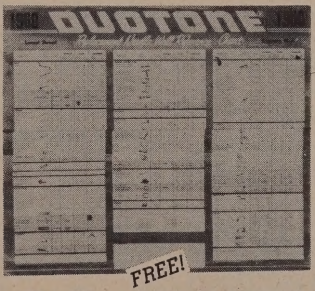
MONOPHONIC & STEREO CATALOG

FREE!

48 pages on needles & accessories. Cross-indexed. Illustrations alone give full information.

A COMPLETE COUNTER ENCYCLOPEDIA

WALL REFERENCE CHART



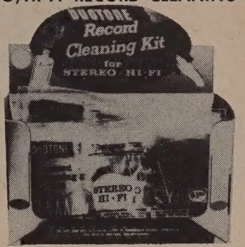
21" x 32" . . . **Easy to see replacement numbers.**

INSTRUCTION BOOKLETS FOR DEALER IMPRINT

How to select and buy a diamond needle; How to identify any needle for replacement; How to physically replace all needles. For dealer give-aways!

ACCESSORIES

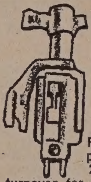
STEREO/HI-FI RECORD CLEANING KIT



2 scientifically designed cleaning pads with pile sized to thoroughly sweep record grooves. And 1.25 oz. non-breakable squeeze bottle of Anti-Static detergent. Packaged in colorful polyethylene bag, punched with hole for rack display.

CATALOG #54 List — $1.50

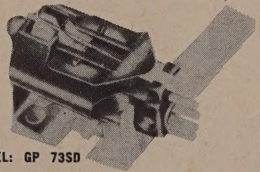
MONOPHONIC CARTRIDGE



MODELS: GP 65-1, GP 65-3

The 65-1 model is a 2 sapphire medium output turnover for hi-fi. Output: 1 volt. Freq. Resp. 50-12.000 c/s. Tracking press: 8-10 gr. The 65-3 is a 2 sapphire high output turnover for low gain amplifiers and portables. Output: 3 volts F. R.—50-9,000 c/s. Tracking press: 8-10 gr. Both models compatible for monoplayback of stereo records.

STEREOPHONIC CARTRIDGE

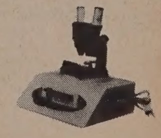


MODEL: GP 73SD

(7 mil diamond, 3 mil sapphire)

F. R.—40-15,000 c/s Output: 0.7 volts Channel separation: 25db. @ 1 kc. Compliance 4 x 10—6 cm/dyne. Tracking Force: 2-4 gr.

EXCLUSIVE DUOTONE NEEDLE TEST CENTER



A powerful sales getter. High-power stereoscopic microscope shows the wear on customer's needle and need for replacement. Customer sees the wear in 3 dimensions. Brings heavy in-store traffic. Worth wt. in gold.

SCOTCH
BRAND
Magnetic Tape
Professional Quality
Popular Price

STOCK NO.	DESCRIPTION	REEL	LIST PRICE
*111-1.5	¼″ x 150′	3″	$ .70
111-3	¼″ x 300′	4″	1.35
111-6	¼″ x 600′	5″	2.25
111-12	¼″ x 1200′	7″	3.50
111-24H	¼″ x 2400′	HUB	8.50
111-24R	¼″ x 2400′	10½″	10.90
*102-6	¼″ x 600′	5″	2.65
102-12	¼″ x 1200′	7″	4.25
102-24H	¼″ x 2400′	HUB	8.80
102-24R	¼″ x 2400′	10½″	11.20
*120-3	¼″ x 300′	4″	1.75
120-6	¼″ x 600′	5″	3.50
120-12	¼″ x 1200′	7″	5.50
120-24H	¼″ x 2400′	HUB	10.00
120-24R	¼″ x 2400′	10½″	12.85
†190-9	¼″ x 900′	5″	3.50
190-18	¼″ x 1800′	7″	5.50
190-36H	¼″ x 3600′	HUB	10.00
190-36R	¼″ x 3600′	10½″	12.85
†150-2.25	¼″ x 225′	3″	1.00
150-9	¼″ x 900′	5″	3.60
150-18	¼″ x 1800′	7″	6.20
150-36H	¼″ x 3600′	HUB	12.00
150-36R	¼″ x 3600′	10½″	14.40
*131-12	¼″ x 1200′	7″	4.40
131-24H	¼″ x 2400′	HUB	10.00
131-24R	¼″ x 2400′	10½″	12.40
*138-12	¼″ x 1200′	7″	5.10
138-24H	¼″ x 2400′	HUB	11.10
138-24R	¼″ x 2400′	10½″	13.50
200-3	¼″ x 300′	3″	1.60
200-12	¼″ x 1200′	5″	5.45
200-24	¼″ x 2400′	7″	9.50
200-48RPS	¼″ x 4800′	10½″	22.00
311-6	¼″ x 600′	5″	2.40
311-12	¼″ x 1200′	7″	3.75

ACCESSORIES

41-½S	½″ x 150″	.39
41-7/32L	7/32″ x 66′	.57
41-½L	½″ x 66′	.76
41-¾L	¾″ x 66′	1.01
43P-1.5	¼″ x 150′	.90

EMPTY REELS AND BOXES

RB3	3″	.25
RB4	4″	.55
RB5	5″	.65
RB7	7″	.75

**Also available 4800′ on hub or 14″ reel.*
†Also available 7200′ on hub or 14″ reel.

1. No. 111. All Purpose. Plastic backing. Flawless sound reproduction at low cost. Recommended for all general recording needs. International standard of the recording industry.

2. No. 102. All Purpose. Polyester backing. Coated on weather-balanced, super tough 1½ mil PE backing. Flawless recording characteristics similar to No. 111. Ideal for long term storage of your valuable, irreplaceable recordings.

3. No. 120. High Output. Plastic backing. Enjoy music with greater dynamic range, freedom from distortion on signal peaks and 133% more output for brilliant sound reproduction. A must for hi-fi fans.

4. No. 190. Extra Play. Plastic backing. 50% more tape on a standard size reel—as much recording time as 1½ reels of standard tape. Brilliant sound from new high-potency oxide.

5. No. 150. Extra Play. Polyester backing. Made for use in extremes of temperature and humidity. Ideal for all-weather outdoor recording. 50% extra playing time. Superpotent oxide produces uniform response, crisper tones.

6. No. 131. Low Print. Plastic backing. Reduces print-through to a point below noise level on most professional machines . . . 6 db lower print level than conventional tapes. Has excellent recording characteristics.

7. No. 138. Low Print. Same magnetic and recording characteristics as No. 131—but has tough polyester backing.

8. No. 200. Double Length. Tensilized polyester backing. The original no-break, no-stretch tape that plays twice as long. You get as much recording time as with two reels of conventional tape.

9. No. 311. TENZAR Backing. Designed especially for rugged use applications requiring frequent repeat, continuous play and constant handling. No. 311 is extra tough, tear-resistant, stretch-resistant and non-drying. "End-Of-Reel Tape Clip" packed with every reel, holds tape end securely in handling, storage and shipment. Available on clear, red, blue, green and yellow transparent reels.

10. No. 41. Splicing Tape. Has a special white thermosetting adhesive that is guaranteed not to ooze. Makes splices that actually strengthen with age. No. 41-½S (½ x 150″) available in handy metal dispenser on blister-pac display card. Other sizes supplied individually boxed.

11. No. 43P. Leader and Timing Tape. (1/4″ x 150′). For tape lead-ins, cueing, exact timing, identification between recorded selections. Available on convenient, self-dispensing display card.

MINNESOTA MINING AND MANUFACTURING COMPANY
. . . WHERE RESEARCH IS THE KEY TO TOMORROW

MICROTRAN company, inc., VALLEY STREAM, N. Y.

PRECISION HI-FI ACCESSORIES

MICROTRAN
OUTPUT

multi speaker matching and level adjusting transformer—model HM-80

This precision transformer has been designed for the Audiophile who is modifying or enlarging his sound system by the addition of auxiliary speakers, equalizers, cross-over networks, etc.

Permits these system changes to be made without unbalancing the present Hi-Fi Audio System by maintaining required impedance matches and power levels.

Power: 50 watts. Peak power 100 watts.

Frequency Response: 15 to 30,000 cycles.

Impedance Range:
  Amplifier or Crossover Network: 16, 8, 4 Ω
  1 to 3 speaker system (in any combination): 16, 8, 4 Ω.

Power Level Adjusting Range: 3 db steps

Guide Chart: Easy to follow hookup chart provided.

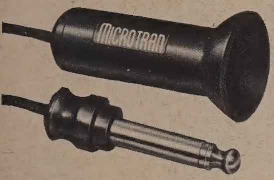
Size: 3½" x 3 3/16" x 4 5/16" high.

Mounting Centers: 2¾" x 3⅞".

Finish: Baked Enamel.

Weight: 4.0 lbs.

User Net: $13.05



telephone pick-up coil — model HP-61

For transcribing telephone conversations with recorder or making messages audible on amplifier. May also be used as probe for locating sources of hum.

Equalized Level: Local and distant conversations recorded with more constant signal level than base mounted units.

Suction Cup: Mounting on telephone receiver.

Universal Model: One unit suitable for all types of telephones.

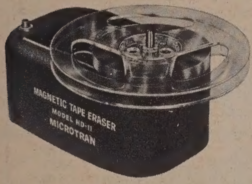
Plug-in Use: Supplied with 68" shielded cable, terminated with standard phone plug for mike input of recorder or amplifier.

Finish: Optical Black.

Compact: Size only ⅝" diameter x 2" long.

Weight: 1½ ounces.

User Net: $4.77



magnetic tape eraser — model HD-11

A bulk tape demagnetizer that develops a high intensity magnetic field. Erases recorded signals and noise from magnetic tape without rewinding. Saves unnecessary wear on heads and tape. Noise level reduced below level of standard erase heads. Restores tape to like new condition or better.

Spindle Mounting of reel permits rapid thorough coverage without missed spots.

Reel Size Range: 5", 7", 10½". Spindle removable for use with other reel sizes.

Adapter Hub: Available on order for use with 10½" reels. Model HD-11-AD

User Net: $23.38

Universal Use: May also be used for demagnetizing record—playback—erase heads, watches and other metal objects.

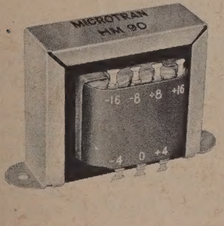
Rating: 117 volts AC, 5 amps.

Finish: Baked Enamel.

Size: 3" x 5" x 8".

Weight: 8½ lbs.

A MUST FOR STEREO RECORDING
Most stereo recorders do not provide facilities for pre-erasing both tracks.



stereo matrixing transformer—model HM-90

This precision transformer has been designed for the Audiophile who wishes to convert his Monaural system to Stereo or who wishes to modify or enlarge his Stereo sound system. Provides for the use of "Left" and "Right" amplifiers to provide "Sum" (mono) and "Difference" (stereo) speaker outputs.

Permits these changes to be made and still maintain matched impedances, required polarities, and desired power levels.

Two of these transformers (one for each channel) used with "Left" and "Right" amplifiers enables virtually any kind of stereo system to be built with simple components, without the necessity for complicated electronic circuits.

Power: 30 watts. Peak Power 100 watts.

Frequency Response (Power): 40 to 20,000 cycles.

Impedance Range:
  +16, +8, +4, 0, −4, −8, −16 ohms
  (Minus sign refers to reversed polarity.)

Insertion Loss: Less than 1 db. in most hookups. When used on +4Ω and in −4Ω out Taps, 3 db

Simple Connections: Easy to follow instructions show connections to be made to numbered solder lugs for each type of stereo system.

Finish: Vacuum Varnish impregnation.

Size: 3¾" x 2½" x 2 5/16" hi; 3⅛" Mtg. ctrs.

Weight: 2 lbs.

User Net: $6.33

VARIABLE INDUCTANCE
Universal Substitution Kit
$4.75

UNIVERSAL COIL KIT — MODEL 200K

Saves valuable service and development time . . . minimizes inventory problems, eliminates difficulty in obtaining hard-to-get replacements.

For Video Peaking . . . IF Circuits. Eight coils cover a range from 1 to 590 uh.

Q-Max impregnation.

Extra terminal for tiepoint convenience.

Spring clip mounting: designed for 5/16" chassis hole.

Full data enclosed on L min., L max., Q's, R, C distrib., Freq. self-res.

Single Coil Replacements Available

Coils	L. Min.	L. Max.
#200-1	1	2.7 uh
#220-2	2.4	7.6 uh
#200-3	6.6	20.0 uh
#200-4	16.0	55.0 uh
#200-5	33	110 uh
#200-6	74	225 uh
#200-7	100	310 uh
#200-8	200	590 uh

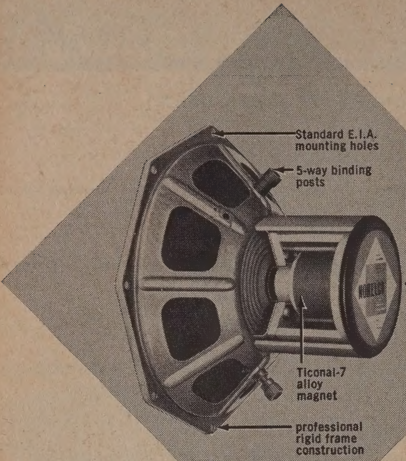
INDIVIDUAL CALIBRATION CHARTS permit approximate adjustment to required inductance value without test equipment. Individually packaged in 8 labeled plastic containers.

Complete Kit Model 200K. Shipping weight per kit: 6 oz.

from the audio research center of the world

Norelco®

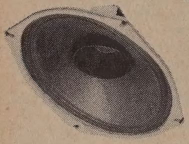
HIGH FIDELITY COMPONENTS


Standard E.I.A. mounting holes
5-way binding posts
Ticonal-7 alloy magnet
professional rigid frame construction

T-7 LOUDSPEAKERS

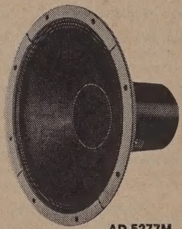
featuring
the revolutionary
TICONAL VIII
voice-coil magnets
(30% more powerful than alnico V)

Truly among the world's most efficient loudspeakers, NORELCO T-7 units provide sound of **professional** calibre at **all** listening levels—and with less power (and subsequently, less distortion), than all other speakers of their type. Ticonal-7 steel alloy makes the big difference in efficiency; NORELCO-designed dual-cones and magnet systems let you **hear** the difference—unexaggerated bass and transient response, topped by clean, beautifully transparent high frequency reproduction. Listen to the sound—**then** examine the price tag. Only Philips of the Netherlands, the audio research center of the world, could have guild-crafted these speakers to give you the 'cleanest sound around' at such moderate cost.



AD-2690M

AD-4877M



AD-5277M

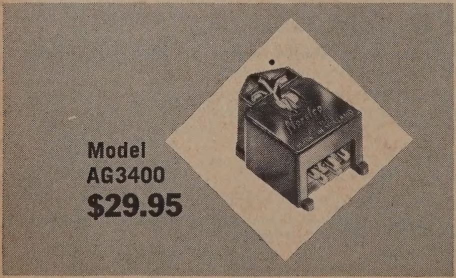
Model	Size	Power (watts) Continuous	Peak	Efficiency at 400 cps	Total Flux (Maxwells)	Frequency Response	Audiophile Net
AD-5277M	12"	20	30	14%	134,000	35-18,000	$59.50
AD-4277M	12"	20	30	7%	98,000	35-18,000	39.00
AD-4877M	8"	6	10	10%	58,300	50-20,000	26.00
AD-3877M	8"	6	10	6%	26,200	75-19,000	9.90
AD-3690M	6x9"	6	9	5.5%	26,200	70-18,000	6.20
AD-2690M	6x9"	6	9	2.5%	15,200	70-16,000	4.95
AD-3500M	5"	3	5	4%	26,200	30-19,000	4.95

Model AG1024 $39.50

NORELCO STEREO/MONO AUTOMATIC RECORD CHANGER and SEMI-MATIC TURNTABLE

Rugged, reliable, versatile—that's the NORELCO AG1024! Fewer moving parts bring you turntable quality, **plus** all the advantages of absolutely dependable automatic changer operation! Plays 7", 10" and 12" records interchangeably. Four speeds. Accepts most stereo and mono cartridges. Manual 'turntable' operation with single records (with automatic stop at the end). Heavy cast, dynamically balanced turntable, powered by rugged, shaded motor (free of rumble and hum). DIMENSIONS: 13 11/16" x 11 7/8" x 4 7/8" above, and 2 7/8" below motor board. WEIGHT: 12 pounds.

Wood Base (Blonde, Mahogany, or Walnut): $4.95
45 rpm Automatic Spindle: 2.95



Model AG3400 $29.95

NORELCO MAGNETO-DYNAMIC STEREO CARTRIDGE with .7 mil diamond stylus

The world's "most bountiful" stereo pickup! High vertical compliance for highest fidelity and longer record life. High output, too (unlike most stereo cartridges), reducing hum and noise to virtual **inaudibility** due to the proportionately lower gain demanded of your preamplifier. Low dynamic mass (2 mg), and stylus pressure—as little as 3 grams! Distortion—inaudible at all listening levels. Uniform response, 50 to 18 kc.

Norelco® 'CONTINENTAL' TAPE RECORDERS

developed and guild-crafted by Philips of the Netherlands

Whether you are a music lover, a recordist or a high fidelity enthusiast, we are confident that you will find one of the justly famous Norelco 'Continental' family of professional quality tape recorders ideally suited to your specific recording requirements.

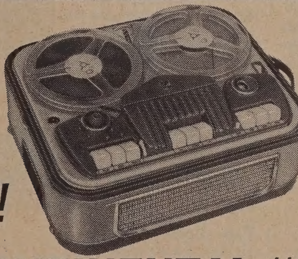
THE CONTINENTAL "400"

4-TRACK STEREO RECORD-PLAYBACK 4-TRACK MONO RECORD-PLAYBACK

Model EL3536 $399.50

◆ fully self-contained with unique dynamic stereo microphone, plus **two** speakers (one in the removable cover for perfect stereo separation), dual hi-fi preamps, recording and playback amplifiers ◆ fully compatible with conventional pre-recorded magnetic tapes ◆ self-contained phono/P.A. system ◆ mixing facilites ◆ 'sound on sound' trick switch ◆ interlocking pause button ◆ can also play through external hi-fi amplifier

SPECIFICATIONS: Three Speeds—7½, 3¾, and 1⅞ ips; **Tracks**—stereo 2 (dual); monophonic 4; **Heads**—stacked; **Frequency Response**—at 7½ ips, 50—18,000 cps; at 3¾ ips, 60—14,000 cps; at 1⅞ ips, 60—7,000 cps; **Signal-to-Noise Ratio**—46 db or better; **Wow and Flutter**—Less than .3% at 3¾ ips; **Modulation Indicator**—Magic Eye (Type EM84); **Program Indicator**—Built-in, 4-digit adjustable; **Pause Button**—instantaneous with locking device; **Fast Forward and Reverse**—Less than 2 minutes for 1200 ft. of tape; **Automatic Stop**—At ends of tape (with metalized strips); **Audio Facilities**—Self-contained, including dual hi-fi preamps, recording and playback amplifiers, balance control and Norelco wide-range loudspeakers; **Inputs**—(1) for stereo microphone; (2) for stereo phono or tuners; **Outputs**—(2) for extension speakers; (2) for external amplifiers; (1) for stereo headphones; **Microphone**—Stereophonic (dual elements); **Special Controls**—Two-channel volume, tone and balance; **Switches:** (1) 'sound on sound'; (1) 2-position for combining both stereo channels to single speaker output; (1) 4-position selector (channels 1 and 4, 2 and 3, stereo and P.A.); **Tube Complement**—EF86 (2), ECC83 (3), EL84 (2) EM84 (1); **Line Voltage**—117 volts at 60 cycles; **Power Consumption**—100 watts; **Dimensions**—18½" x 15½" x 8½"; **Weight**—43 pounds.



Model EL3542 $269.50

NEW!

THE CONTINENTAL "300"

4-TRACK STEREO PLAYBACK 4-TRACK MONO RECORD-PLAYBACK

◆ plays all 4-track stereo pre-recorded tapes ◆ records and plays back on all 4 tracks monophonically ◆ mixing facilities, to record speech and music in sequence or simultaneously ◆ footswitch available ◆ self-contained phono/P.A. amplifier and speaker system ◆ trick button for recording over previously recorded sound, without erasure (unusual sound effects provide that professional touch!) ◆ interlocking pause button ◆ headphone monitoring ◆ stereo head output for playback through your own stereo preamplifier

SPECIFICATIONS: Three Speeds—7½, 3¾, and 1⅞ ips; **Tracks**—stereo 2 (dual); Mono 4; **Heads**—Stacked; **Frequency Response**—at 7½ ips, 50 to 16,000 cps; at 3¾ ips, 60 to 13,000 cps; at 1⅞ ips, 60 to 6,500 cps; **Wow and Flutter**—0.15% at 7½ ips, 0.2% at 3¾ ips, 0.35% at 1⅞ ips; **Modulation Indicator**—Magic Eye (Type EM81); **Loudspeaker** — Integrated, heavy magnet, 5" wide-range; **Fast Forward and Reverse**—Less than 2 minutes for 1200 ft. of tape; **Automatic Stop**—At ends of tape (with metalized strips); **Program Indicator** — Built-in, 4-digit adjustable; **Inputs**—(1) radio/phono; (1) microphone (with mixing facilities); **Outputs**—(2) stereo head; (1) for external speaker without controls (1) for headphone monitoring recording circuit; **Microphone** — High-impedance dynamic; **Tubes** — EF86 (1), ECC83 (1), ECL82 (1), EM81 (1), EZ80 (1); **Line Voltage**—117 volts AC at 60 cycles; **Power Consumption** — 80 watts; **Dimensions** — 15¾" x 13" x 6¾"; **Weight**—30 pounds.

NEW!

THE CONTINENTAL "200"

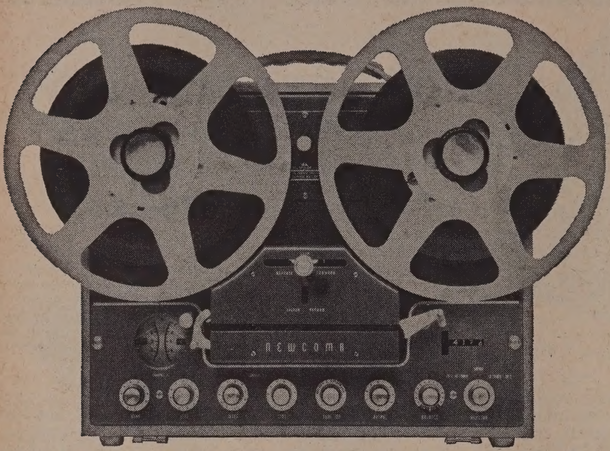
Model EL3541 $179.50

Low-Cost 4-Track Stereo Playback and Mono Record-Playback

The top value, single-speed (7½ ips) recorder, available today! Frequency response 50 to 14,000 cps. Stereo head output for playback through external stereo preamplifier. 'Sound on sound' trick button. Interlocking pause button. Mixing facilities. Footswitch available. Self-contained, including microphone and wide-range Norelco speaker. Also suitable for use as a phono/P.A. system.

NEWCOMB | PROFESSIONAL STEREOPHONIC TAPE RECORD/PLAYBACK MACHINES

STEREO TAPE RECORDERS
CYBERNETICALLY ENGINEERED FOR INTUITIVE OPERATION



Cybernetically engineered for intuitive operation, the Newcomb Model SM-310 is the simplest machine to operate you have ever used. Easiest on tape. Transport control is centered in a single lever "joy stick" that gives fluid smooth, positive, effortless tape handling. Records or plays back magnetic tape either stereophonically or monophonically. Plays or records either. or both channels in same direction. Operates vertically or horizontally, takes 3" to 10½" reels, has two tape speeds — 7½" or 3¾" ips, die cast aluminum spindles, oversize brakes designed to last for life of machine, separate mixing controls — mike and "line" — for each channel. Two lighted recording level meters, protected against overload, arranged pointer-to-pointer for ready comparison, straight line tape loading, automatic shut-off switch, four digit counter to pinpoint desired position, without repeating, on any size reel; head cover removable for easy editing. All pre-amplification needed for recording and playback. Monitor through Brush binaural headphones while recording. Cathode follower outputs.

SPECIFICATIONS

HEADS	In line record-playback heads; separate half-track erase heads.
FLUTTER	Less than .2% on 7½ ips; less than .25% on 3¾ ips.
SIGNAL-TO-NOISE RATIO	Better than 50 db on 7½ ips; better than 45 db on 3¾ ips.
RESPONSE	At 7½ ips, ± 2 db 30-15,000 cps; at 3¾ ips, ± 3 db 40-10,000 cps (based on standard 111 tape.)
EQUALIZATION	NARTB standard.
OUTPUT	Average, approximately 1.3 volts from cathode follower, each channel.
BIAS OSCILLATOR	Push-pull balanced Colpitts for reliability and low distortion.
MAXIMUM PLAYING TIME	In excess of 8 hours at 3¾ ips, half-track monaural (4800' tape on 10½" reel); in excess of 4 hours at 3¾ ips, two track stereo. At 7½ ips the above times will be halved.
REWIND SPEED	Approximately 2 minutes for 3600 feet.
INPUT JACKS	(4) Two high level inputs and two microphone inputs (wired for use with Newcomb Humfree Plug-in Transformers for conversion of mike inputs to low impedance).
OUTPUT JACKS	(3) One for each stereo channel and one monitor.
DIMENSIONS	12¾" x 16¾" x 9½".
WEIGHT	34 pounds.
POWER REQUIREMENTS	90 watts, 117 volts, 60 cycles a.c.

PROFESSIONAL NET: $499.50

QUARTER-TRACK
Model SM-310-4
HALF-TRACK
Model SM-310

FEATURES:

Records or plays back magnetic tape either stereophonically or monophonically.

Operates vertically or horizontally.

Takes from 3" to 10½" reels.

Has two tape speeds — 7½ or 3¾ inches per second.

Push-push speed change with automatic compensation for 3¾" speed.

No-stretch, extraordinarily gentle tape handling.

Interlocked separate record function switch requires premeditated, two-hand operation, prevents accidental erasure.

Powerful single motor is fully synchronous, cool running, precision built for continuous dependable operation and accuracy of speed.

Die cast aluminum spindles.

Equipped to handle NAB hubs.

Oversize brakes are designed to last for life of machine.

Straight line tape loading.

Dual acting tape tensioning device keeps tape always under control even with the larger reels.

Automatic shut-off switch.

Four digit counter.

Head cover removable for easy editing.

Positive erase provided by low distortion, balanced Colpitts double triode erase oscillator.

Ganged volume control for outputs.

Balance control, when needed, balances playback level between channels.

Choice of low or high impedance microphone inputs by means of Newcomb Humfree plug-in transformers.

Microphone input sockets take Cannon XLR-3-12C male connectors.

Specifications and Prices subject to change without notice. All parts used in Newcomb Equipment are made in U.S.A. All Newcomb Equipment Approved by Underwriters Laboratories.

NEWCOMB AUDIO PRODUCTS CO. • HOLLYWOOD 38, CALIFORNIA

Nortronics®

TAPE RECORDING COMPONENTS

Magnetic Tape Heads

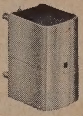
TLB — 4-Track stereo R/P heads, laminated cores, 0.1 mil gap. TLB-2 is high imp. (0.8 HY) for general purpose replacement and conversion. TLB-4 is low imp. (0.09 HY) for transistor circuits or recording only. TLB-7R is medium imp. (0.3 HY) and with 0.25 mil gap for recording only. Net $21.60

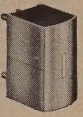
TLA — 2-Track stereo R/P heads, laminated cores, 0.16 mil gap. TLA-3 is high imp. (0.7 HY) for most applications. TLA-5 is low imp. (0.1 HY) for transistor circuits and record-only applications. Net $23.80

SLA — ½-Track monophonic R/P heads, identical to TLA models. SLA-3 is high imp. general purpose. SLA-5 is low imp. Net $16.40

SLS — ½-Track monophonic head, solid core. SLS-1 is high imp. (0.9 HY). SLS-3 is medium imp. (0.35 HY). Net $8.10

SLF — Full-Track monophonic R/P head, laminated core, 0.16 mil gap. Coils may be connected for low or high impedance (0.25/1.0 HY). Net $33.70



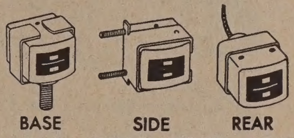


SE-50 — 4-Track stereo erase head. SE-50-1 is high imp. (115 V. 60 KC). SE-50-4 is medium imp. (35 V. 60 KC). Net $12.50

SE-100 — 2-Track stereo erase head. SE-100-2 is high imp. (115 V. 60 KC). SE-100-4 is medium imp. (35 V. 60 KC). Net $12.50

ME-100 — ½-Track monophonic erase head. ME-100-2 is high imp. (115 V. 60 KC). ME-100-4 is medium imp. (35 V. 60 KC). Net $7.50

ME-250 — Full-Track erase head. High impedance (115 V. 60 KC). Net $12.50



AVAILABLE MOUNTING STYLES

Equipment

RA-100 RECORDING AMPLIFIER

Supplies power to recording and erase heads. Has inputs for microphone, phono pickup or tape head. Includes VU-meter, adjustable bias and record currents to match almost any head. Recording only, not playback. 60 KC bias frequency. Net $57.50

PL-100 PLAYBACK AMPLIFIER

Provides 3 watts output to speaker. Inputs for tape head, phono cartridge, or tuner. Variable equilization for magnetic head. Net $46.50

SW-80 SELECTOR SWITCH

Use with two RA-100's for stereo and 2-track or 4-track monophonic record and play. Has five pushbuttons, and rear panel phono jacks for connections to record and play amplifiers and to erase and R/P heads. Brass panel matches RA-100 and PL-100 amplifiers. Net $25.50

T-60 OSCILLATOR TRANSFORMERS

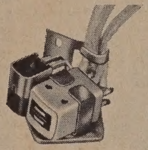
Bias oscillator transformers, have Ferroxcube core for high efficiency. Furnishes bias and erase power. Type T-60E includes circuit diagram using 12AU7 tube — 60 KC. Net $4.50

Type T-60T is for transistor circuits and is high and low impedance — 60 KC. Includes circuit diagram. Net $6.25

FURTHER INFORMATION

Further information, including circuit applications, about Nortronics Tape Recording Heads and Accessories is available upon request.

Stereo Conversion Kits



Convert your own tape equipment to 4-track stereo playback or stereo playback/record with these new stereo conversion kits. All kits come complete with hardware and instructions.

WOLLENSAK-REVERE

WR-35 — 4-Track Conversion Kit for all Revere and Wollensak 2-Track Stereo tape recorders. Includes TLB-2, 4-Track Stereo replacement head, and HS-1 Head Shifter which permits playing of 2-Track Stereo tapes also. Retains monophonic record/play ability. Net $25.50

WR-40 — 4-Track Conversion Kit for all Revere and Wollensak Monophonic recorders. Includes TLB-2 4-Track Stereo head, monophonic erase head, connecting cables, all mounted for ready replacement. Has Head Shifter for 4-Track and 2-Track playback. Net $32.50

WR-45 — 4-Track Stereo Record/Play Conversion Kit for all Revere and Wollensak recorders. Includes SE-50 Stereo Erase Head, TLB-2 Record Head, Head Shifter, all mounted and ready for installation. Requires additional recording amplifier (RA-100) for stereo recording. Net $37.50

WR-50 — Combination 4-Track Stereo Record/Play Set, including WR-45 Conversion Kit, RA-100 Recording Amplifier, and accessories. Net $93.00

PENTRON

P-6 — Kit for converting all Pentron Monophonic and Stereo machines to 4-track Stereo playback and Monophonic record. Net $29.70

VM

V-6 — Kit for converting all VM recorders to 4-Track Stereo Playback and Monophonic record. Net $25.50

WEBCOR

W-6 — WEBCOR 4-Track Stereo Conversion Kit. Converts Monophonic and 2-Track Stereo machines to 4-Track Stereo. Has head shifter for both 2-Track and 4-Track tapes. All 2800, 2900, and 2000 series (except 2020). Net $36.00

CONVERSION CHART

→ If your tape recorder is not covered by the above kits, write for our free stereo conversion chart which will aid you in converting your machine.

Nortronics®

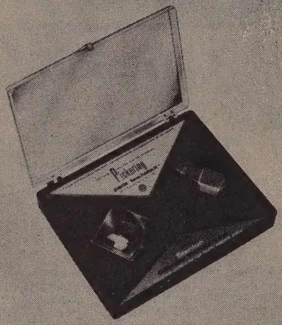
THE NORTRONICS COMPANY, INC.

MINNEAPOLIS 4, MINNESOTA

Now... a **complete line** of **patented** Stanton Stereo Fluxvalves*. Here is responsible performance in four superb models... **for all who can hear the difference.** From a gentle pianissimo to a resounding crescendo — every movement of the stylus reflects a **quality touch** possessed only by the Stanton Stereo Fluxvalve.

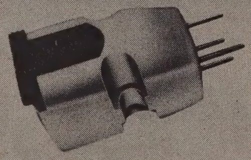
Collectors Series: Model 380

Stanton Calibration Standard: Model 381



STANTON Calibration Standard Group

Model 381E



StereoPlayer Series: Stereo 90

COLLECTORS SERIES 380 CARTRIDGE

for the discriminating record collector. This pickup utilizes the exclusive "V-Guard" easily replaceable stylus assembly; hermetically sealed and fully encapsulated in precious mu-metal for a lifetime of trouble-free and hum-free performance. Completely compatible for all records, stereophonic or monophonic. Miniature design, fits all pickup arms, manual or automatic.

SPECIFICATIONS: Frequency Response — ± 2 db, 20-15 KC • Output— 15 millivolts per channel • Channel Separation — 35 db • Tracking Force — A type — 2-5 grams; C type — 4-7 grams • Weight — 12 grams

Audiophile net prices includes Diamond stylus, installation instructions and mounting hardware...

Model 380A — Manual Arm Type	$34.50
Model 380C — Changer Type	29.85

Replacement Styli:

Model D-3807C	— .0007″	Radius Diamond	— red "V-Guard"	15.00
Model D-3807A	— .0007″	Radius Diamond	— yellow "V-Guard"	19.65
Model D-3810C	— .001″	Radius Diamond	— white "V-Guard"	15.00
Model D-3810A	— .001″	Radius Diamond	— light gray "V-Guard"	19.65
Model D-3827	— .0027″	Radius Diamond	— dark blue "V-Guard"	15.00
Model S-3827	— .0027″	Radius Sapphire	— aqua "V-Guard"	7.50

* U.S. Patent No. 2,917,590

CALIBRATION STANDARD MODEL 381 CARTRIDGE

for recording channel calibration, radio stations and record evaluation by engineers and critics. The Model 381 is an ultra linear professional pickup and provides precise record measurement data. Available in low impedance models: 250 ohms; 500/600 ohms; and the standard high impedance model 47,000 — 100,000 ohms.

SPECIFICATIONS: Frequency Response — ± 1 db, 20-10,000 cycles
± 2 db, 10 KC to 15 KC
Output — 10 millivolts per channel • Channel Separation — 35 db • Tracking Force — 2-3 grams • Weight — 12 grams

Audiophile net prices includes Diamond stylus, installation instructions and mounting hardware:

Model 381A — for use only in high quality manual tone arms	48.00
Model 381E — includes Model 381A Cartridge with two additional styli: .001″ radius diamond for reproduction of mono LP's. .0027″ radius sapphire for reproduction of 78's	60.00

Model D-3807C	— .0007″	Radius Diamond	— red "V-Guard"	15.00
Model D-3807A	— .0007″	Radius Diamond	— yellow "V-Guard"	19.65
Model D-3810C	— .001″	Radius Diamond	— white "V-Guard"	15.00
Model D-3810A	— .001″	Radius Diamond	— light gray "V-Guard"	19.65
Model D-3827	— .0027″	Radius Diamond	— dark blue "V-Guard"	15.00
Model S-3827	— .0027″	Radius Sapphire	— aqua "V-Guard"	7.50

* U.S. Patent No. 2,917,590

STEREO "90" CARTRIDGE

a fine magnetic stereo pickup for the audiophile. For installation in automatic record changers, or manual players. Contains the easily replaceable "T-Guard" stylus assembly. Push-pull circuit, hum bucking coils, magnetic type.

SPECIFICATIONS: Frequency Response — smooth 30-15 KC • Output— 8 millivolts per channel • Channel Separation — 20 db • Tracking Force — 4-6 grams • Weight — 9 grams

Audiophile net prices, including Diamond stylus, installation instructions and mounting hardware	$16.50
Replacement Stylus: Model D-9007 — .0007″ radius diamond — charcoal gray "T-Guard"	9.90

* U.S. Patent No. 2,917,590

FLUXVALVE, "T-GUARD", "V-GUARD", COLLECTORS SERIES, CALIBRATION STANDARD, STEREO "90" ARE TRADEMARKS USED TO DENOTE THE QUALITY OF PICKERING & CO. INC. PRODUCTS.

FOR THOSE WHO CAN HEAR THE DIFFERENCE

Pickering

PICKERING & CO., INC., PLAINVIEW, NEW YORK

EXPORT: AD. AURIEMA, INC. • NEW YORK/CANADA: CHARLES W. POINTON LTD. • REXDALE, ONTARIO

MODEL 198 UNIPOISE

an integrated arm and cartridge combining the highly awarded** Unipoise Arm and the new Model 380A Collectors Series Cartridge. In the design and manufacture of the UNIPOISE tone arm, Pickering and Co. has achieved the highest standards of engineering and craftsmanship. A precision instrument, the UNIPOISE employs a single friction-free pivot bearing for almost-infinite freedom to trace precisely the delicate more-difficult-to-track groove of stereo records. The complete assembly — tone arm and pickup — is only a fraction of the weight of conventional tone arms. Introduced for conventional records only a short time ago, the UNIPOISE was originally designed to make precise and reproducible record measurements in calibrating recording channels and record masters . . . an exclusive feature that is tailor-made and ideally suited for the new and exciting stereo records. This advanced mechanical design and functional styling combine to provide the finest phonograph reproducer ever made . . . for all micro-groove records . . . monophonic and stereophonic! For use with all high quality transcription turntables its practical size permits installation into areas only slightly larger than that required for record changers . . . it will mount on a motorboard measuring only 15½" x 15½". Simple unimount installation, employs a single thumbscrew and bolt. Exclusive arm rest with soft sable brush to keep the stylus tip free of dust at all times. Convenient stylus force adjustment.

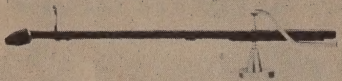
SPECIFICATIONS: Frequency Response — ± 2 db, 20-15KC • Output — 15 millivolts per channel • Channel Separation — 35 db • Tracking Force — 2-5 grams • Weight — 6 Oz. Less Base

Audiophile net price, including D-3807A stylus, installation instructions and mounting hardware **$54.00**

May use any of the styli listed with the 380

**Brussels Fair; Milano Fair; American Society of Industrial Designers

*U.S. Patent No. 2,917,590



UNIPOISE Arm with integrated

Stereo Fluxvalve Pickup

Mk II CARTRIDGE

a professional pickup outstanding for quality control. The choice of the leading recording companies throughout the United States for quality control of record masters and pressings. Designed for installation in all tone arms and record changers with standard ½" mounting centers. It is a fully compatible pickup which will reproduce all microgroove records, both monophonic and stereophonic. Traditional Pickering design quality assures the finest performance. This pickup contains the easily replaceable "T-Guard" stylus assembly.

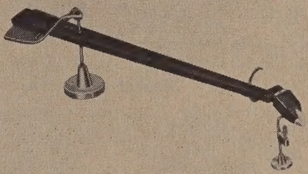
SPECIFICATIONS: Frequency Response — ±2 db, 20-15KC • Output — 10 millivolts per channel • Channel Separation — 20-25 db • Tracking Force — Mk II A—2-5 grams • Mk II C—4-7 grams • Weight—9 grams

Audiophile net price, including Diamond stylus, installation instructions and mounting hardware . . . Model Mk II A — Manual Arm Type **$26.40**
Model Mk II C — Changer Type **24.00**

Replacement Styli:

Model D-3707C	— .0007" Radius Diamond	— red "T-Guard"	**12.00**
Model D-3707A	— .0007" Radius Diamond	— yellow "T-Guard"	**14.40**
Model D-3710C	— .001" Radius Diamond	— white "T-Guard"	**12.00**
Model D-3710A	— .001" Radius Diamond	— light gray "T-Guard"	**14.40**
Model D-3727	— .0027" Radius Diamond	— dark blue "T-Guard"	**12.00**
Model S-3727	— .0027" Radius Sapphire	— aqua "T-Guard"	**7.50**

*U.S. Patent No. 2,917,590



Pro-Standard Series: MK II

STANTON STEREO KableKit

NEW! Low cost stereo cable assembly for converting automatic changers and manual tone arms. Prefabricated insulated and fully shielded harness assembly with all plugs and connector clips soldered . . . ready for instant installation! No soldering required for normal installation. Harness length 4 feet, comes complete with cable retention clips.

Model 604 Stereo KableKit for four wire systems.......... $3.98

*U.S. Patent No. 2,917,590

FOR CONVERTING CHANGERS

FOR CONVERTING MANUAL TONE ARMS

Stanton
MODEL 604
STEREO KABLEKIT

KableKit Model 604

UNIPOISE, FLUXVALVE, KABLEKIT AND MK II ARE TRADEMARKS USED TO DENOTE THE QUALITY OF PICKERING & CO. INC. PRODUCTS

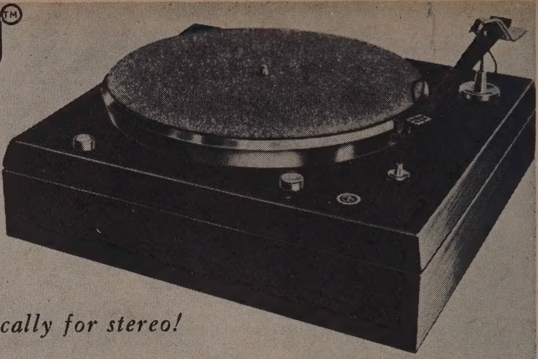
FOR THOSE WHO CAN HEAR THE DIFFERENCE

Pickering

PICKERING & CO., INC., PLAINVIEW, NEW YORK

EXPORT: AD. AURIEMA, INC. • NEW YORK/CANADA: CHARLES W. POINTON LTD. • REXDALE, ONTARIO

The Gyropoise 800™ airborne Stereotable™



The first really new idea in turntable design in 75 years...specifically for stereo!

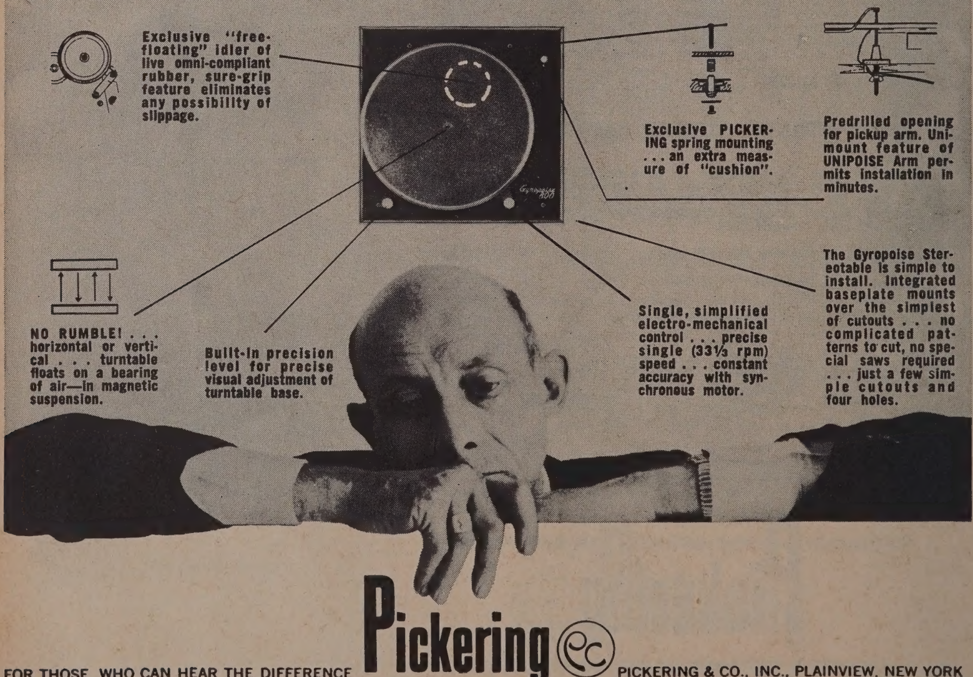
With conventional LP records, rumble, a form of distortion caused by mechanical vibration in a turntable mechanism, is a minor problem. The motion of a conventional stylus is lateral and a conventional cartridge is designed to generate a signal voltage only when activated by lateral motion without responding to any vertical movement of the stylus. With the stereo cartridge the motion of the stylus is complex . . . it is lateral, vertical and a combination of both lateral and vertical, depending upon the recorded material. Therefore, vertical vibration is a serious problem when playing stereo records . . . this vibration is picked up by the cartridge and is heard as a distortion that sounds exactly as the name implies — rumble!

Vertical rumble — regarded by engineers as a major handicap in stereo record reproduction — is not a problem with the Gyropoise 800 Stereotable. Only the Gyropoise revolves with precise accuracy in magnetic suspension, on a bearing-of-air — void of stiff mechanical linkage inherent in conventional turntables.

Designed specifically for microgroove records . . . monophonic and stereophonic . . . the **Gyropoise 800 Stereotable** is single speed at 33⅓ rpm and employs a built-in precision leveling adjustment with indicator. The Stereotable which embodies a unique magnetic suspension, is an exclusive invention of Pickering & Company (patents are pending and all rights are reserved). Vertical period of spring suspension is below 5 cps; compound vertical rumble attenuation is 12 db per octave below resonance. Weight: 9 lbs. chassis only; 13 lbs. with complete base. Measures 13½" x 13½" — 1⅝" above and 3" below the 5/32" thick base plate. Overall dimensions on complete base: 14¾" x 14¾" x 5⅜" high.

Model 800C Gyropoise Stereotable, chassis only —	**$66.00**
Model 800CB Complete Base (available in blond, mahogany, or walnut) —	**15.00**

GYROPOISE AND STEREOTABLE ARE TRADE MARKS USED TO DENOTE THE QUALITY OF PICKERING & CO. INVENTIONS



Exclusive "free-floating" idler of live omni-compliant rubber, sure-grip feature eliminates any possibility of slippage.

Exclusive PICKERING spring mounting . . . an extra measure of "cushion".

Predrilled opening for pickup arm. Unimount feature of UNIPOISE Arm permits installation in minutes.

The Gyropoise Stereotable is simple to install. Integrated baseplate mounts over the simplest of cutouts . . . no complicated patterns to cut, no special saws required . . . just a few simple cutouts and four holes.

NO RUMBLE! . . . horizontal or vertical . . . turntable floats on a bearing of air—in magnetic suspension.

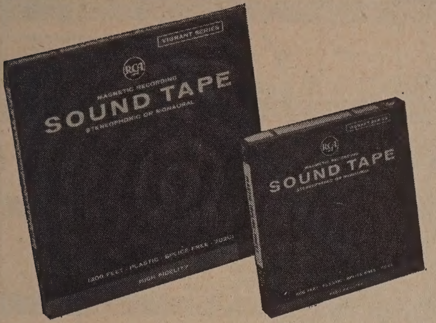
Built-in precision level for precise visual adjustment of turntable base.

Single, simplified electro-mechanical control . . . precise single (33⅓ rpm) speed . . . constant accuracy with synchronous motor.

FOR THOSE WHO CAN HEAR THE DIFFERENCE **Pickering** PICKERING & CO., INC., PLAINVIEW, NEW YORK

EXPORT: AD. AURIEMA, INC., 85 BROAD ST. • NEW YORK/CANADA: CHARLES W. POINTON LTD. • 66 RACINE ROAD, REXDALE, ONTARIO

RCA MAGNETIC SOUND TAPE



ACETATE (PLASTIC) BASE

Tape Length (feet)	Description	Reel Diameter (inches)	RCA Type	List Price* (Optional) per reel
1.5-mil Professional Grade				
150	Standard Reel	3	262C1	**0.70**
600	Standard Reel	5	284C1	**2.25**
1200	Standard Reel	7	285C1	**3.50**
2400	NAB Hub	—	265C1	**8.50**
2400	NAB Metal Reel	10½	266C1	**10.90**
2400	NAB Plastic Reel	10½	267C1	**10.90**
2400	EIA Plastic Reel	10½	268C1	**10.90**

MYLAR† (POLYESTER) BASE

Tape Length (feet)	Description	Reel Diameter (inches)	RCA Type	List Price* (Optional) per reel
0.5-mil Extra-Long Play				
1200	Load-Easy Reel	5	252C1	**4.55**
2400	Load-Easy Reel	7	257C1	**7.85**
1.0-mil Long Play				
225	Standard Reel	3	263C1	**1.00**
900	Load-Easy Reel	5	253C1	**3.60**
1800	Load-Easy Reel	7	258C1	**6.20**
3600	NAB Metal Hub	—	276C1	**12.00**
3600	NAB Metal Reel	10½	277C1	**14.40**
3600	NAB Plastic Reel	10½	279C1	**14.40**
3600	EIA Plastic Reel	10½	278C1	**14.40**
1.5-mil Professional Grade				
600	Load-Easy Reel	5	254C1	**4.10**
1200	Load-Easy Reel	7	259C1	**6.65**
2400	NAB Metal Hub	—	280C1	**12.10**
2400	NAB Metal Reel	10½	281C1	**14.50**
2400	NAB Plastic Reel	10½	283C1	**14.50**
2400	EIA Plastic Reel	10½	282C1	**14.50**

SOUND TAPE
SOUND TAPE

NAB reels have 3″ center holes; EIA reels have 5/16″ center holes.
†Du Pont Registered Trade Mark
*Prices higher in Alaska and Hawaii.
Prices shown do not include any state or local sales and similar taxes.
All prices are subject to change or withdrawal without notice.

SOUND TAPE

ACETATE (PLASTIC) BASE

Tape Length (feet)	Description	Reel Diameter (inches)	RCA Type	List Price* (Optional) per reel
1.0 mil Long Play				
900	Load-Easy Reel	5	250C1	**3.50**
1800	Load-Easy Reel	7	255C1	**5.50**
3600	NAB Hub	—	269C1	**10.00**
3600	NAB Metal Reel	10½	270C1	**12.85**
3600	NAB Plastic Reel	10½	272C1	**12.85**
3600	EIA Plastic Reel	10½	271C1	**12.85**

MYLAR† (POLYESTER) BASE

Tape Length (feet)	Description	Reel Diameter (inches)	RCA Type	List Price* (Optional) per reel
Snap-Load Cartridge				
560	Snap-Load Cartridge	—	264C1	**4.50**
Tensilized Extra-Long Play				
1200	Load-Easy Reel	5	260C1	**4.75**
2400	Load-Easy Reel	7	261C1	**8.75**
4800	NAB Metal Reel	10½	273C1	**20.50**
4800	NAB Plastic Reel	10½	275C1	**20.50**
4800	EIA Plastic Reel	10½	274C1	**20.50**

TAPE ACCESSORIES

RCA Type	Description	List Price* each (Optional)
501C1	5-Reel Tape Chest for 5″ Reels	**1.28**
502C1	5-Reel Tape Chest for 7″ Reels	**1.40**
503C1	5″ Load-Easy Reel with Box	**.65**
504C1	7″ Load-Easy Reel with Box	**.75**
505C1	Leader & Timing Tape	**.85**
506C1	5″ Standard Reel with Box	**.65**
507C1	7″ Standard Reel with Box	**.75**
508C1	5″ Empty Box	**.20**
509C1	7″ Empty Box	**.20**
510C1	Empty Box for Snap-Load Cartridge	**.20**
STSD-4	Deluxe Tape Slicer	**11.50**

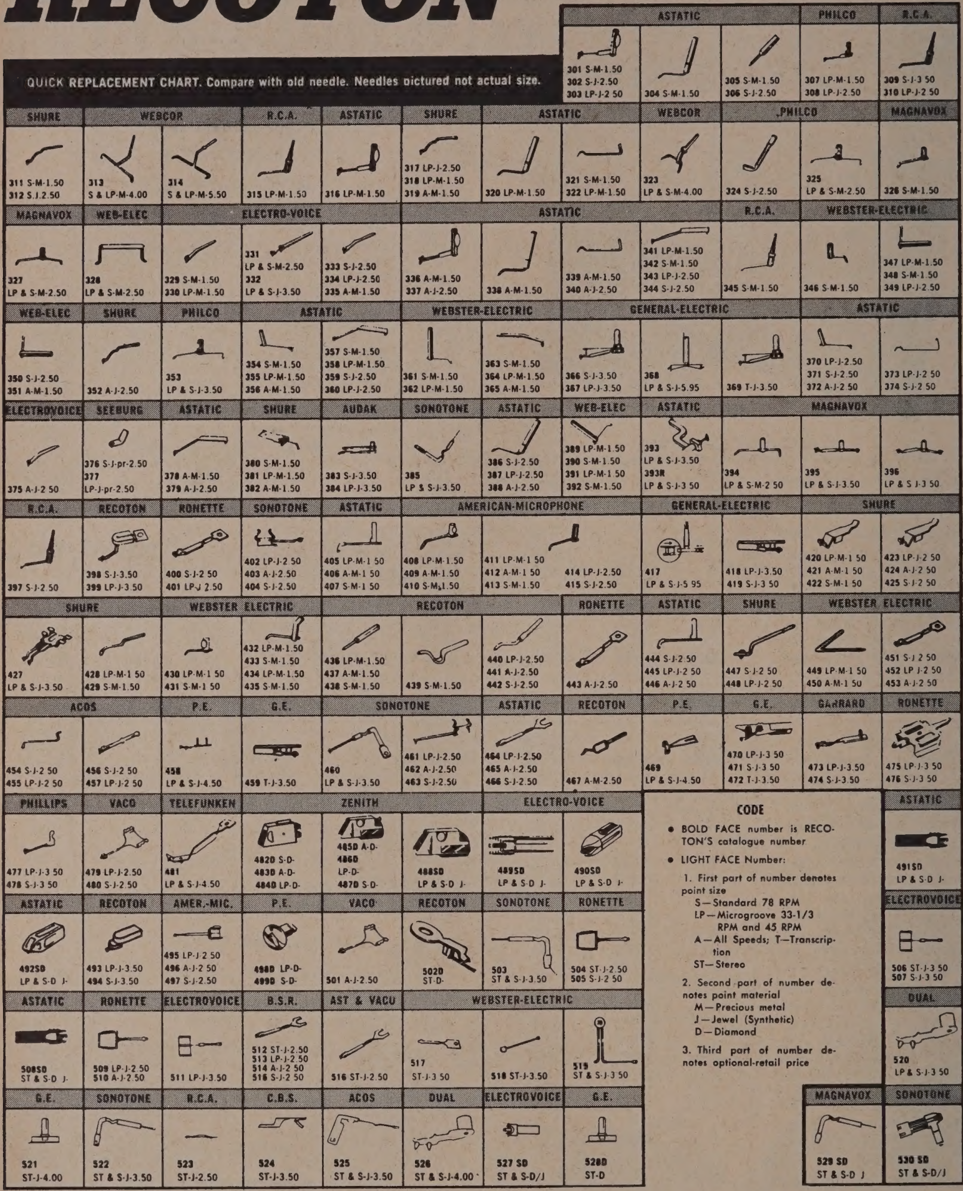
VIBRANT SERIES

ACETATE (PLASTIC) BASE

Tape Length (feet)	Description	Reel Diameter (inches)	RCA Type	List Price* (Optional) per reel
900	1.0 Mil x ¼″	5	703C1	**2.50**
1800	1.0 Mil x ¼″	7	704C1	**4.25**
600	1.5 Mil x ¼″	5	701C1	**1.75**
1200	1.5 Mil x ¼″	7	702C1	**2.95**

RECOTON® REPLACEMENT PHONEEDLES®

QUICK REPLACEMENT CHART. Compare with old needle. Needles pictured not actual size.



							ASTATIC			**PHILCO**	**R.C.A.**
							301 S-M-1.50 **302** S-J-2.50 **303** LP-J-2 50	**304** S-M-1.50	**305** S-M-1.50 **306** S-J-2.50	**307** LP-M-1.50 **308** LP-J-2.50	**309** S-J-3 50 **310** LP-J-2 50
SHURE	**WEBCOR**		**R.C.A.**	**ASTATIC**	**SHURE**	**ASTATIC**		**WEBCOR**	**PHILCO**		**MAGNAVOX**
311 S-M-1.50 **312** S.J.2.50	**313** S & LP-M-4.00	**314** S & LP-M-5.50	**315** LP-M-1.50	**316** LP-M-1.50	**317** LP-J-2.50 **318** LP-M-1.50 **319** A-M-1.50	**320** LP-M-1.50	**321** S-M-1.50 **322** LP-M-1.50	**323** LP & S-M-4.00	**324** S-J-2.50	**325** LP & S-M-2.50	**326** S-M-1.50
MAGNAVOX	**WEB-ELEC**	**ELECTRO-VOICE**			**ASTATIC**				**R.C.A.**	**WEBSTER-ELECTRIC**	
327 LP & S-M-2.50	**328** LP & S-M-2.50	**329** S-M-1.50 **330** LP-M-1.50	**331** LP & S-M-2.50 **332** LP & S-J-3.50	**333** S-J-2.50 **334** LP-J-2.50 **335** A-M-1.50	**336** A-M-1.50 **337** A-J-2.50	**338** A-M-1.50	**339** A-M-1.50 **340** A-J-2.50	**341** LP-M-1.50 **342** S-M-1.50 **343** LP-J-2.50 **344** S-J-2.50	**345** S-M-1.50	**346** S-M-1.50	**347** LP-M-1.50 **348** S-M-1.50 **349** LP-J-2.50
WEB-ELEC	**SHURE**	**PHILCO**	**ASTATIC**		**WEBSTER-ELECTRIC**		**GENERAL-ELECTRIC**			**ASTATIC**	
350 S-J-2.50 **351** A-M-1.50	**352** A-J-2.50	**353** LP & S-J-3.50	**354** S-M-1.50 **355** LP-M-1.50 **356** A-M-1.50	**357** S-M-1.50 **358** LP-M-1.50 **359** S-J-2.50 **360** LP-J-2.50	**361** S-M-1.50 **362** LP-M-1.50	**363** S-M-1.50 **364** LP-M-1.50 **365** A-M-1.50	**366** S-J-3.50 **367** LP-J-3.50	**368** LP & S-J-5.95	**369** T-J-3.50	**370** LP-J-2.50 **371** S-J-2.50 **372** A-J-2.50	**373** LP-J-2 50 **374** S-J-2 50
ELECTROVOICE	**SEEBURG**	**ASTATIC**	**SHURE**	**AUDAK**	**SONOTONE**	**ASTATIC**	**WEB-ELEC**	**ASTATIC**	**MAGNAVOX**		
375 A-J-2 50	**376** S-J-pr-2.50 **377** LP-J-pr-2.50	**378** A-M-1.50 **379** A-J-2.50	**380** S-M-1.50 **381** LP-M-1.50 **382** A-M-1.50	**383** S-J-3.50 **384** LP-J-3.50	**385** LP & S-J-3.50	**386** S-J-2.50 **387** LP-J-2.50 **388** A-J-2.50	**389** LP-M-1.50 **390** S-M-1.50 **391** LP-M-1 50 **392** S-M-1.50	**393** LP & S-J-3.50 **393R** LP & S-J-3 50	**394** LP & S-M-2 50	**395** LP & S-J-3.50	**396** LP & S J-3 50
R.C.A.	**RECOTON**	**RONETTE**	**SONOTONE**	**ASTATIC**	**AMERICAN-MICROPHONE**			**GENERAL-ELECTRIC**		**SHURE**	
397 S-J-2.50	**398** S-J-3.50 **399** LP-J-3.50	**400** S-J-2 50 **401** LP-J 2.50	**402** LP-J-2 50 **403** A-J-2.50 **404** S-J-2.50	**405** LP-M-1 50 **406** A-M-1 50 **407** S-M-1 50	**408** LP-M-1.50 **409** A-M-1.50 **410** S-M-1.50	**411** LP-M-1 50 **412** A-M-1 50 **413** S-M-1.50	**414** LP-J-2.50 **415** S-J-2.50	**417** LP & S-J-5 95	**418** LP-J-3.50 **419** S-J-3 50	**420** LP-M-1 50 **421** A-M-1 50 **422** S-M-1 50	**423** LP-J-2 50 **424** A-J-2 50 **425** S-J-2 50
SHURE		**WEBSTER ELECTRIC**		**RECOTON**			**RONETTE**	**ASTATIC**	**SHURE**	**WEBSTER ELECTRIC**	
427 LP & S-J-3.50	**428** LP-M-1 50 **429** S-M-1.50	**430** LP-M-1 50 **431** S-M-1 50	**432** LP-M-1.50 **433** S-M-1.50 **434** LP-M-1.50 **435** S-M-1.50	**436** LP-M-1.50 **437** A-M-1.50 **438** S-M-1.50	**439** S-M-1.50	**440** LP-J-2.50 **441** A-J-2.50 **442** S-J-2.50	**443** A-J-2.50	**444** S-J-2.50 **445** LP-J-2 50 **446** A-J-2 50	**447** S-J-2 50 **448** LP-J-2 50	**449** LP-M-1 50 **450** A-M-1 50	**451** S-J 2 50 **452** LP J-2 50 **453** A-J-2 50
ACOS		**P.E.**	**G.E.**	**SONOTONE**		**ASTATIC**	**RECOTON**	**P.E.**	**G.E.**	**GARRARD**	**RONETTE**
454 S-J-2 50 **455** LP-J-2 50	**456** S-J-2 50 **457** LP-J-2 50	**458** LP & S-J-4.50	**459** T-J-3.50	**460** LP & S-J-3.50	**461** LP-J-2.50 **462** A-J-2.50 **463** S-J-2.50	**464** LP-J-2.50 **465** A-J-2.50 **466** S-J-2.50	**467** A-M-2.50	**469** LP & S-J-4.50	**470** LP-J-3 50 **471** S-J-3 50 **472** T-J-3.50	**473** LP-J-3.50 **474** S-J-3.50	**475** LP-J-3 50 **476** S-J-3 50
PHILLIPS	**VACO**	**TELEFUNKEN**	**ZENITH**			**ELECTRO-VOICE**					**ASTATIC**
477 LP-J-3 50 **478** S-J-3 50	**479** LP-J-2.50 **480** S-J-2.50	**481** LP & S-J-4.50	**482D** S-D- **483D** A-D- **484D** LP-D-	**485D** A-D- **486D** LP-D- **487D** S-D-	**488SD** LP & S-D J-	**489SD** LP & S-D J-	**490SD** LP & S-D J-				**491SD** LP & S-D J-
ASTATIC	**RECOTON**	**AMER.-MIC.**	**P.E.**	**VACO**	**RECOTON**	**SONOTONE**	**RONETTE**				**ELECTROVOICE**
492SD LP & S-D J-	**493** LP-J-3.50 **494** S-J-3.50	**495** LP-J-2 50 **496** A-J-2 50 **497** S-J-2.50	**498D** LP-D- **499D** S-D-	**501** A-J-2.50	**502D** ST-D-	**503** ST & S-J-3.50	**504** ST-J-2.50 **505** S-J-2 50				**506** ST-J-3 50 **507** S-J-3 50
ASTATIC	**RONETTE**	**ELECTROVOICE**	**B.S.R.**	**AST & VACU**	**WEBSTER-ELECTRIC**						**DUAL**
508SD ST & S-D J-	**509** LP-J-2.50 **510** A-J-2.50	**511** LP-J-3.50	**512** ST-J-2.50 **513** LP-J-2.50 **514** A-J-2 50 **516** S-J-2 50	**516** ST-J-2.50	**517** ST-J-3 50	**518** ST-J-3.50	**519** ST & S-J-3 50				**520** LP & S-J-3 50
G.E.	**SONOTONE**	**R.C.A.**	**C.B.S.**	**ACOS**	**DUAL**	**ELECTROVOICE**	**G.E.**			**MAGNAVOX**	**SONOTONE**
521 ST-J-4.00	**522** ST & S-J-3.50	**523** ST-J-2.50	**524** ST-J-3.50	**525** ST & S-J-3.50	**526** ST & S-J-4.00	**527 SD** ST & S-D/J	**528D** ST-D			**529 SD** ST & S-D J	**530 SD** ST & S-D/J

CODE

- BOLD FACE number is RECOTON'S catalogue number
- LIGHT FACE Number:

1. First part of number denotes point size
   - S—Standard 78 RPM
   - LP—Microgroove 33-1/3 RPM and 45 RPM
   - A—All Speeds; T—Transcription
   - ST—Stereo
2. Second part of number denotes point material
   - M—Precious metal
   - J—Jewel (Synthetic)
   - D—Diamond
3. Third part of number denotes optional-retail price

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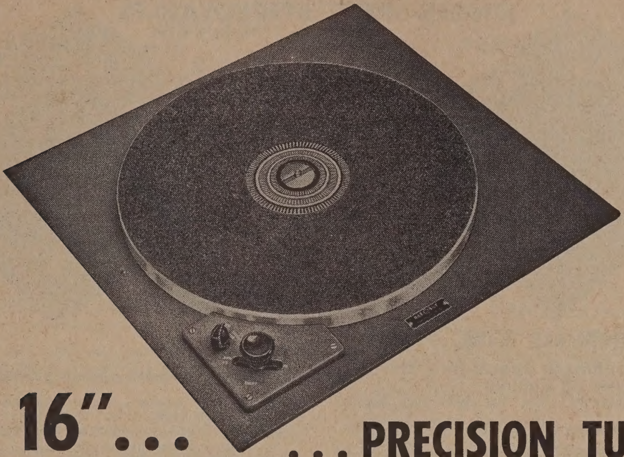
FOR STANDARD PHONEEDLES, PHONO ACCESSORIES and other RECOTON PRODUCTS write for 9th Edition RECOTON REFERENCE GUIDE to

RECOTON CORPORATION

Long Island 4, N. Y.

REK-O-KUT COMPANY

Manufacturers of Fine Recording and Playback Equipment, and Specialized Sound Systems.



16"... ...PRECISION TURNTABLE

The MODEL B-16H *3 Speeds*

Offers the broadcaster and recording studio the finest professional performance at the lowest cost. The turntable itself is precision lathe-turned, non-magnetic, cast aluminum – and with an extra-heavy rim for effective balanced flywheel action. Turntable diameter is standardized at 15¾ inches to allow a ⅛-inch overhang for cueing. It is internally rim-driven by means of neoprene compound idlers. All inter-moving parts are hardened and ground to a micro finish. Rotates on a single-ball pivot which takes the entire thrust of the turntable shaft.

Extremely low distortion has been achieved through effective acoustical damping – through special attention to motor bearings, motor suspension, idler design, concentricity of pulleys and all the other elements essential to smoothness, quiet and overall quality of performance. Rumble, wow and flutter and speed regulation are well within NARTB standards. Requiring no more than routine maintenance, all parts are readily and easily accessible.

SPECIFICATIONS:

SPEEDS: 33⅓, 45 and 78 rpm.

SPEED SELECTION: Mastermatic, self-locking, instantaneous shift. Engages either idler without stopping turntable or removing disc.

STARTING: From standing start to operating speed —
at 78 rpm .... ¾ turn
at 33⅓ and 45 rpm .... ¼ turn

MOTOR: Self-lubricating, CUSTOM-BUILT HYSTERESIS SYNCHRONOUS.

NOISE LEVEL: 50 db below average recording level.

45 RPM HUB: Built-in—retractable—requires no external adapter.

STROBE DISC: Permanently affixed—permits instantaneous checking of all speeds.

CHASSIS DECK: Radial-ribbed aluminum casting. Designed for flush mounting in rectangular cut-out. PRE-DRILLED: for ready mounting of Rek-O-Kut Turntable Arm Model S-160.

DIMENSIONS: 18¾" x 20". Fits existing consoles and cabinets with slight modification.

CLEARANCE REQUIRED: Above Deck—1½". Below Deck—6½".

FINISH: .... Wrinkle gray.

SHIPPING WEIGHT: .... 34 pounds

NET PRICE **$250.00***

CONSOLE CABINET

for B-16H & other REK-O-KUT Turntables

Designed to accommodate the B-16H Turntable without the use of either screws or bolts. Floats on felt. Has 2 storage compartments and piano-hinged doors with flush ring-latches. Includes built-in electrical outlet and adjustable leveling domes. Metallic gray finish. Dimensions: 33" high x 22" wide x 20½" deep.

MODEL C-7B NET PRICE........ **$125.00***
Shipping weight: 65 lbs.

Identical to C-7B but with the addition of a ¾" motor board to accommodate various REK-O-KUT turntables.

MODEL C-7BT NET PRICE........ **$140.00***
Shipping weight: 70 lbs.

NOTE: All Rek-O-Kut Turntables are supplied for 110-120 volt, 60-cycle AC operation. Available in other voltages and frequencies at additional cost.

***All prices slightly higher West of Rockies.**

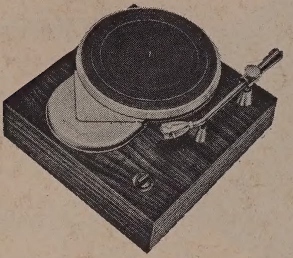
The policy of Rek-O-Kut Co., Inc., is one of continual improvement in design and manufacture. Hence, we reserve the right to change specifications and design without notice.

REK-O-KUT COMPANY

THE HYSTERESIS LINE OF STEREOTABLES

SINGLE-SPEED STEREOTABLES

NET PRICE . . . **$49.95***



TURNTABLE KITS

Model K-33H—Single Speed Belt Drive

Furnished only in kit form.

ASSEMBLY TIME: Approximately 30 minutes with simple tools. Mounting template supplied.
NOISE LEVEL: 52 db below average recording level.
WOW & FLUTTER: 0.18%.
MOTOR: High efficiency HYSTERESIS SYNCHRONOUS motor built to Rek-O-Kut specifications. Sealed lifetime lubrication.
SPEED: 33⅓ RPM.
BELT: Special endless belt made to Rek-O-Kut specifications with variable adjustment for fixed optimum tension.
MINIMUM DIMENSIONS FOR CABINET INSTALLATION WITH REK-O-KUT TONEARM: 17¾" x 17⅜"; Height above Deck 3"; Height below Deck 4".
TURNTABLE: Solid Cast Aluminum Lathe Turned. Designed for easy disc handling.
FINISH: Silvertone Aluminum.
SHIPPING WEIGHT: 13 lbs.
MODEL K-33, AS K-33H, BUT WITH 4-POLE MOTOR..........................NET $39.95*
SHIPPING WEIGHT: 15 lbs.

NET PRICE . . . **$69.95***

Model N33H—Single Speed Belt Drive

NOISE LEVEL: 53 db below average recording level.
WOW & FLUTTER: 0.15%.
MOTOR: High efficiency HYSTERESIS SYNCHRONOUS motor built to Rek-O-Kut specifications. Sealed lifetime lubrication.
CHASSIS DECK: 15¾" x 15¾" Aluminum.
SPEED: 33⅓ RPM.
BELT: Special endless belt made to Rek-O-Kut specifications with variable adjustment for fixed optimum tension.
MINIMUM DIMENSIONS FOR CABINET INSTALLATION WITH REK-O-KUT TONEARM: 17⅜" x 17⅝"; Height above Deck 3"; Height below Deck 4".
TURNTABLE: Solid Cast Aluminum Lathe Turned. Designed for easy disc handling.
PILOT LIGHT: Jewelled neon light acts as "on/off" indicator.
FINISH: Decorator Grey and Two-tone Aluminum.
SHIPPING WEIGHT: 20 lbs.

THREE-SPEED STEREOTABLES

NET PRICE . . . **$139.95***

Model B-12H 3 Speeds

The aristocrat of the STEREOTABLE Series. As a record reproducing device, it represents the cloest approach to perfection ever attained.

SPECIFICATIONS:

NOISE LEVEL: 57 db below average recording level.
WOW & FLUTTER: 0.12%.
MOTOR: Custom-built HYSTERESIS SYNCHRONOUS MOTOR.
SPEEDS: 33⅓, 45 and 78 rpm.
SPEED SELECTION: Single selector knob. Idler is disengaged in "off" position. "Off" positions adjacent to each speed permit turntable to be shut off without passing through other speeds.
45 RPM HUB: Built-in.
PILOT LIGHT: Jewelled neon light acts as "on/off" indicator.
MINIMUM DIMENSIONS FOR CABINET INSTALLATION WITH REK-O-KUT TONEARM: 17¾" wide x 16" deep; Height above Deck 3"; Height below Deck 6¼".
TURNTABLE: Solid Cast Aluminum Lathe Turned. Designed for easy disc handling.
FINISH: Silvertone Aluminum.
SHIPPING WEIGHT: 19 lbs.

NET PRICE . . . **$99.95***

Model B-12GH 3 Speeds

All specifications are identical to the B-12H with the following exceptions:
NOISE LEVEL: 53 db below average recording level.
WOW & FLUTTER: 0.13%.
MOTOR: High efficiency HYSTERESIS SYNCHRONOUS motor built to Rek-O-Kut specifications. Sealed lifetime lubrication.
MINIMUM DIMENSIONS FOR CABINET INSTALLATION WITH REK-O-KUT TONEARM: 17¾" wide x 16" deep; Height above Deck 3"; Height below deck 4¾".
SHIPPING WEIGHT: 18 lbs.

Model B-12—3 Speeds

All specifications are identical to the B-12H with the following exceptions:
NOISE LEVEL: 50 db below average recording level.
MOTOR: Induction—4-pole built to REK-O-KUT specifications.
SHIPPING WEIGHT: 18 lbs.

NET PRICE . . . **$84.95***

The policy of Rek-O-Kut Co., Inc., is one of continual improvement in design and manufacture.
Hence, we reserve the right to change specifications and design without notice.

REK-O-KUT COMPANY

THE HYSTERESIS LINE OF STEREOTABLES

TWO-SPEED STEREOTABLES

NET PRICE . . .
$59.95*

Model L-34: 33⅓ & 45 rpm
Model L-37: 33⅓ & 78 rpm

SPECIFICATIONS:

NOISE LEVEL: 49 db below average recording level.
WOW & FLUTTER: 0.18%.
MOTOR: Induction—4-pole—built to Rek-O-Kut specifications.
SPEEDS: Model L-34—33⅓ and 45 rpm; Model L-37—33⅓ and 78 rpm.
SPEED SELECTION: Slide shift with intermediate "off." Locks in either speed position.
45 RPM HUB: Built-in on L-34 only.
MINIMUM DIMENSIONS FOR CABINET INSTALLATION WITH REK-O-KUT TONEARM: 16½" wide x 16¼" deep; Height above Deck 3"; Height below Deck 4½".
TURNTABLE: Solid Cast Aluminum Lathe Turned. Designed for easy disc handling.
FINISH: Silvertone Aluminum.
SHIPPING WEIGHT: 14 pounds.

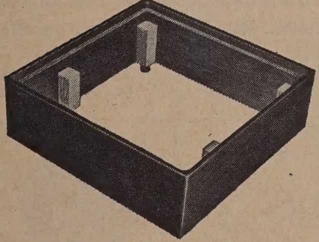
NET PRICE . . .
$79.95*

Model L-34H: 33⅓ & 45 rpm
Model L-37H: 33⅓ & 78 rpm

SPECIFICATIONS:

NOISE LEVEL: 50 db below average recording level.
WOW & FLUTTER: 0.13%.
MOTOR: High efficiency HYSTERESIS SYNCHRONOUS Motor built to Rek-O-Kut specifications. Sealed lifetime lubrication.
SPEEDS: Model L-34H—33⅓ and 45 rpm; Model L-37H—33⅓ and 78 rpm.
SPEED SELECTION: Slide shift with intermediate "off." Locks in either speed position.
45 RPM HUB: Built-in on L-34H only.
MINIMUM DIMENSIONS FOR CABINET INSTALLATION WITH REK-O-KUT TONEARM: 16½" wide x 16¼" deep; Height above Deck 3"; Height below Deck 4½".
TURNTABLE: Solid Cast Aluminum Lathe Turned.
FINISH: Silvertone Aluminum.
SHIPPING WEIGHT: 15 pounds.

STEREOTABLE BASES



Model BW

UNIVERSAL BASES (Wt.: 8 lbs.)

Model	Accommodates Turntable Model	Description	Net Price	Zone 2 Net Price
BK	"K" series turntables	One piece Walnut	$14.95	$15.25
BL	"L" series turntables	One piece Walnut	14.95	15.25
BW	B-12; B-12GH; N-33H	Solid American Walnut	19.95	21.25
BWH	For B-12H only	Solid American Walnut	21.95	23.50
BU	B-12; B-12H and B-12GH	Unfinished	10.95	12.25
LU	"L" series turntables	Unfin. (One pc.—incl. motor board)	8.95	10.20
KU	"K" series turntables"	Unfin. (One pc.—incl. motor board)	8.95	10.20
		BASE ADAPTOR STRIP		
MB-1	B-12; B-12H and B-12GH	Unfinished	2.95	3.25
MB-2	B-12; B-12H and B-12GH	Solid American Walnut	3.95	4.25
NOTE: Model N-33H Turntable requires NO motor board				
		ROLL-OUT PLATFORM		
ROP-12	ALL MODELS	Stained Plywood	7.95	8.75
		16" EXTENSION		
X-16	Permits mounting of REK-O-KUT S-160, 16" Tonearm on ALL MODEL BASES		6.95	7.75
X-16A	As X-16, but for REK-O-KUT S-260, 16" Tonearm		6.95	7.75

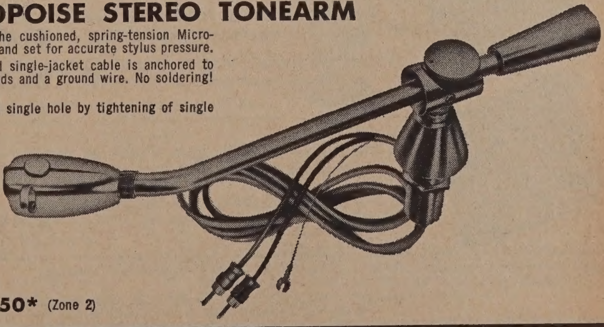
MICROPOISE STEREO TONEARM

MICROPOISE DYNAMIC BALANCE CONTROL: By dialing the cushioned, spring-tension Microscope Balance Control, the arm is dynamically balanced and set for accurate stylus pressure.

PERMANENTLY ATTACHED PLUG-IN CABLE: Fully shielded single-jacket cable is anchored to the arm—includes two color-coded plug-in leads, 2 shields and a ground wire. No soldering! No hum problem! Fast, correct installation assured!

FAST SINGLE-HOLE MOUNTING: Arm base mounts through single hole by tightening of single locknut.

- Acoustically isolated counterweight.
- Exclusive precision low friction Silicone damped horizontal bearing — eliminates horizontal oscillation.
- Exclusive gimbal assembly incorporates individual double sets of 5 ball, 1 mm. bearings—provides freest lateral and vertical motion and assures perfect tracking.



NET PRICE

MODEL S-220, 12" arm...**$29.95***
MODEL S-260, 16" arm...**$34.95*** (Zone 1): **$35.50*** (Zone 2)

REK-O-KUT COMPANY

$695.00* net complete

NEW IMPERIAL II

Compact — portable — virtually a complete professional recording studio! Newly designed and engineered—incorporating many exclusive operating features for improved disc recording. The Imperial II is housed in two separate portable cases. Model DR contains the professional recording turntable, precision overhead recording lathe and playback tonearm. The other case houses the new Rek-O-Kut R8B professional recording amplifier.

RECORDING AMPLIFIER UNIT

R8B AMPLIFIER SPECIFICATIONS

OUTPUT: 20 watts.
RESPONSE: ±2db from 20 to 20,000 cps at full output.
HARMONIC DISTORTION: .3% @ 1,000 cps at full output.
INTERMODULATION DISTORTION: .8% at full output.
HUM LEVEL: (below rated output) Tape—60db; Mike—64db; Phone—61db.
4 INPUTS: Microphone, tape and phono-mixing, plus tuner (high level).
CONTROLS: Phono, microphone and tape level, master volume, bass (±22db @ 50 cps), treble (±20db @ 15 kc), playback-recording switch, power switch.
RECORDING LEVEL INDICATION: Damped volume unit type meter with special calibrated scale.
OUTPUTS: Speaker and cutter (16, 8 and 4 ohms). Monitor (for use with high impedance headphones), pre-amp (2,000 ohms).
TUBES: 2—6973; 1—6AN8.
TRANSISTORS: 3—2N408; 5—2N406.
RECTIFIERS: 1N2071 Silicon.
PREAMPLIFIER SECTIONS: Completely transistorized.
POWER REQUIREMENTS: 115 watts, 117 VAC, 50-60 cps.
VINYL COVERED CARRYING CASES with storage lid and handle.

Size:	Weight:
Height: 7"	R8B Amplifier: 25 lbs.
Depth: 10"	Recorder: 45 lbs.
Length: 20½"	

PRICES: IMPERIAL II COMPLETE ....net **$695.00***
Disc Recorder, less amplifier
MODEL DR ....net **$475.00***
Case for Model DR Disc Recorder
MODEL C-DR ....net **$ 50.00***
Recording Amplifier
MODEL R8B (can be rack mounted)........net **$225.00***
Case for R8B Amplifier
MODEL C-B ....net **$ 25.00***

ACCESSORIES AVAILABLE:
Portable dual speaker set
MODEL SPK-44 ....net **$ 79.95***
Also available are headphones and microphones.

IMPERIAL II SPECIFICATIONS

RECORD CUTTER AND PLAYBACK UNIT

MOTOR: Custom built Hysteresis Synchronous motor fitted with lamitax drive pulley. Suspended in shock mounts to prevent transmission of motor vibration.

RECORDING AREA: Records from 6" up to 13¼" masters.

SPEEDS: Simple, finger-tip speed control. Records at both 33⅓ and 78 R.P.M. Includes Idler and Adapter for 45 R.P.M. recordings.

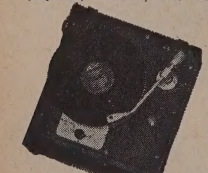
OVERHEAD RECORDING LATHE: Model M-12S Lathe. **HAND CRANK** for run-in and run-off spiral grooves. **PROVISION FOR INTERCHANGING LEADSCREWS** for Standard and Microgroove. Equipped with standard 120 line leadscrew. **LIFTOMATIC SAFETY CAM** prevents double cutting and stylus damage. Automatically raises cutter as center of disc is approached. **CALIBRATED SCALE FOR TIMING.**

RECORDING HEAD: Model RH-5 response from 30-13,000 cycles.

PLAYBACK ARM: Model S-120 for records up to 13¼"—with dual-sapphire magnetic cartridge.

RECORD PLAYERS

These record players are designed to operate into any amplifier or for dubbing records onto tape or disc. May be used with radio, TV receiver, sound projector, recorder, etc. Models with magnetic cartridges require pre-amplifiers. Mounted in sturdy plywood, leatherette-covered case with detachable covers.



P-34C with 2-speed L-34 (33-45) Turntable and S-120 Arm with dual sapphire styli ceramic cartridge. NET PRICE........**$124.95***

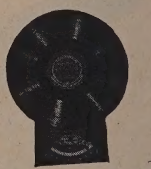
P-37C with 2-speed L-37 (33-78) Turntable and S-120 Arm with dual sapphire styli ceramic cartridge. NET PRICE........**$124.95***

P-34M with 2-speed L-34 (33-45) Turntable and S-120 Arm with dual sapphire styli magnetic cartridge. NET PRICE........**$129.95***

P-37M with 2-speed L-37 (33-78) Turntable and S-120 Arm with dual sapphire styli magnetic cartridge. NET PRICE........**$129.95***

P-VC with Variable Speed CVS-12 Turntable and S-120 Arm with dual sapphire styli ceramic cartridge. NET PRICE........**$139.95***

P-VM with Variable Speed CVS-12 Turntable and S-120 Arm with dual sapphire styli magnetic cartridge. NET PRICE........**$144.95***



VARIABLE-SPEED TURNTABLE CVS-12

The CVS-12 permits continuous speed variation from 25 rpm to 100 rpm without resetting or stopping the record. It can therefore be used with 33⅓, 45 and 78 rpm records, and permits them to be slowed down to ⅓ normal tempo or speeded up to as much as 300%. It is standard equipment with the P-VC and P-VM players.

NET PRICE........**$89.95***

NOTE: This turntable operates at either 50 or 60 cycles. At 50 cycles speed can be varied from 20 rpm to 85 rpm.

Shipping Weight: 15 lbs.

NOTE: All Rek-O-Kut Players and Turntables are supplied for 110-120 volts, 60-cycle AC operation. Available for other voltages and frequencies at additional cost.

***All prices slightly higher west of Rockies.**

The policy of Rek-O-Kut Co., Inc., is one of continual improvement in design and manufacture. Hence, we reserve the right to change specifications and design without notice.

REK-O-KUT COMPANY

THE ALL-NEW *Rhythmaster* $349.95* net complete

The ideal multi-speed indoor-outdoor portable phonograph for tempo control in a variety of teaching applications! Patented continuously variable-speed drive lets you increase or decrease speed and tempo, as nedeed. Wide application: teaching dance, physical therapy, education and calisthenics, teaching rhythmic concepts in lower grades, teaching typing, etc. 3 fine instruments in 1! A full-range high fidelity phonograph—a P.A. system with full tone controls—a high fidelity radio (when used with AM-FM tuner).

SPECIFICATIONS

TURNTABLE: 12″ solid, cast aluminum, "Normalized" to relieve internal stresses. Machined to aviation tolerances.

MOTOR: Induction-type 4-pole; dynamically balanced, built to Rek-O-Kut specifications.

TURNTABLE SHAFT: Steel, hardened and ground. Super-finished with self-lubricating spiral oil groove.

TURNTABLE SHAFT WELL: Machined from special nickel-iron alloy casting. Steel ball vertical thrust bearing for minimum friction.

TURNTABLE DRIVE: Permits playing speed to be continuously varied from 25 to 100 rpm, without resetting selector knob or stopping turntable. This is accomplished by use of Rek-O-Kut's exclusive patented "Varicone" drive. Motor operates at full torque regardless of speed setting at 50 or 60 cycles.

SPEED SELECTOR DIAL MARKINGS: 50 and 60 cycles, plus an extra reference calibration scale.

AMPLIFIER:
Power Output: 20 watts @ 1000 cps.
Frequency response: ±2 db from 20 cps to 20,000 cps.
Mike Gain: 99 db (for use with Hi impedance Dynamic Mike).
Phono Gain: 94 db (for use with G.E. Cartridge VR-11 or equiv.).
Tuner Gain: 59 db.
Pre-Amplifier Output: For use with external amplifiers.
Tubes:
2—6973, 1—6AN8, 6—2N680 (transistors).
1N2071 (Silicon rectifiers).
Power Supply: 117 volts 140 watts 60 cps.

HARMONIC DISTORTION:
.3% at 1,000 cps measured from tuner input.

INTERMODULATION DISTORTION:
1.5% from tuner input for 20W peak output.

NOISE LEVEL:
Tuner input 73 db below 350 mv. input.
Phone input 62 db below 10 mv. input.
Mike input 54 db below 5 mv. input.

CONTROLS:
a) Common tuner—phono volume control. } Mixing
b) Separate microphone volume control. } type
c) Bass control: at 50 cps ±20 db.
Treble control: at 15 KC ±22 db.

OUTPUT IMPEDANCES: 4, 8 and 16 ohms.

SPEAKER:
Two 10″ PM—heavy duty, built to Rek-O-Kut specifications. Alnico V magnets.

PICKUP ARM:
Rek-O-Kut Precision Arm, Ball bearing pivots, with arm rest lock and dual G.E. magnetic cartridge.

CASE:
Sturdy plywood covered with scuff-proof and washable Vinyl.
Dimensions:
A. Amplifier Turntable Case: 22¾″ L. x 16½″ W. x 9½″ deep. Weight: 42 Lbs.
B. Speaker Case: 23″ L. x 16½″ W. x 12″ deep. Weight: 20 Lbs.

LEADSCREWS FOR OVERHEAD LATHES

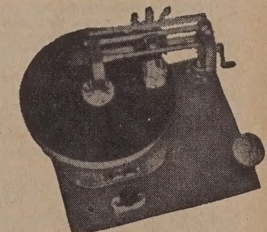
Lines/inch	Model M-5S	Net Price
120	MS-120	$39.95
150	MS-150	39.95
210	MS-210	49.95
216	——	——
240	MS-240	49.95
270	MS-270	49.95

Lines/inch	Model M-12S	Net Price
120	M12S-120	$35.95
150	M12S-150	35.95
210	M12S-210	44.95
216	——	——
240	M12S-240	44.95
270	M12S-270	44.95

Lines/inch	Model M-12	Net Price
120	M12-120	$19.95
150	——	——
210	——	——
216	M12-216	29.95
240	M12-240	29.95
270	——	——

Leadscrews of 210 lines/inch or more = microgroove.

MODEL TR-43H 2 SPEED (33-78) 12″ RECORDING TURNTABLE With Accessory Idler for 45 rpm Speed



Design and construction of the Model TR-43H is similar to the Rek-O-Kut 16″ professional recording tables. The Model M-12S Overhead Recording mcehanism is mounted to the chassis in a few moments.

CHASSIS: Cast ribbed aluminum drilled to accommodate the M-12S Lathe.

IDLERS: Neoprene compound for maximum traction.

OILING: Shafts and bearings are self-oiling. Require infrequent lubrication.

SPEEDS: Instantaneous speed shift engages either 78 or 33⅓ rpm idlers.

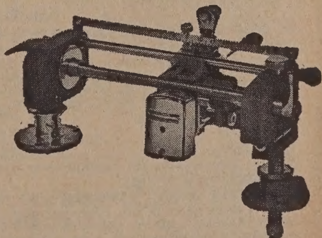
FINISH: Gray wrinkle.

DIMENSIONS: Front to back 16½″; width 16″; height above motor board 1⅜″; depth below motor board 5″.

SHIPPING WEIGHT: 20 lbs.

NET PRICE:
$149.95*
(Less Lathe & Cutter)

MODEL M-12S 12″ OVERHEAD LATHE



This professional lathe is designed to very exacting specifications and features the following:

- Interchangeable Leadscrews.
- Hand-crank for run-in and run-off Spiral Grooves.
- Timing Scale.
- Accommodate Standard Cutting Heads.
- Depth of Cut Adjustment.

LIFT-O-MATIC: Automatically lifts cutter from disc as it approaches end of lead-screw.

Designed for instantaneous replacement of the M-12.
Supplied with 120-line leadscrew

MODEL M-12S less cutter **NET PRICE...... $150.00***

MODEL RH-5 CUTTER..................$115 NET

For use with Rek-O-Kut overhead lathes. Designed for vertical mounting—can be fitted to standard lathe brackets other than Rek-O-Kut.

SPECIFICATIONS

Impedance: 8-15-500 ohms. **Sensitivity:** Approximately 1.8 watts at 1000 cycles for 6.3 cm/sec peak recorded velocity. **Frequency Response:** ±2 db from 1000 to over 13,000 cycles. From 1000 down to 30 cycles. Built-in attenuation per R.I.A.A curve within 2 db. **Distortion:** 1.2% at 1000 cps. **Mounting:** Universal mounting for most lathes. 1⅛″ between mounting holes of cutter. **Stylus:** Short shank steel or sapphire ⅝″ overall stylus length. (Stylus not supplied.)

***All prices slightly higher West of Rockies.**

The policy of Rek-O-Kut Co., Inc., is one of continual improvement in design and manufacture. Hence, we reserve the right to change specifications and design without notice.

Gibson Girl®

ROBINS

Gibson Girl®

ROBINS INDUSTRIES CORP. FLUSHING 54, N. Y.

GIBSON GIRL® TAPE SPLICERS & ACCESSORIES

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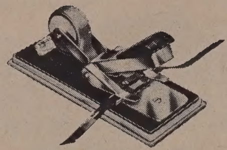

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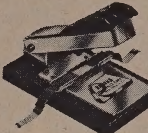

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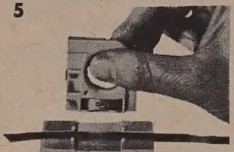

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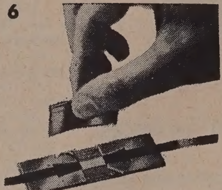

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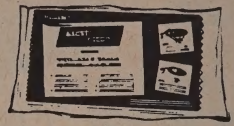

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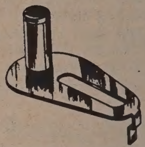


Robins Gibson Girl® Tape Splicers are the accepted standard of the professional and industrial users of recording tape. They have gained this reputation because of their ease and reliability of operation, high standards of workmanship. They are the only splicers which actually cut a diagonal lap joint in the tape and trim the splicing tape and tape edges with an indented trim cut, making **"THE SPLICE WITH THE GIBSON GIRL® SHAPE".**

The slight "waists" formed in the tape prevent adhesive from contacting critical parts of the recording mechanism and prevent layer to layer adhesion. Adhesive deposited on tape guides, etc. is a frequent cause of wow, flutter, and erratic performance.

Gibson Girl® Tape Splicers are Available in Six Models.

GIBSON GIRL® "TS4A" • SERIES MAKES PROFESSIONAL SPLICES IN SECONDS!

*New! With Replaceable Cutter Cartridge
The "TS" series splicers have cutter cartridges which house 3 long-life blades. The cartridge has two operating positions, miter cut and trimming cut. These are selected by moving the knob back and forth.

1. GIBSON GIRL® DELUXE—Our finest, a complete splicing unit. Has hinged padded fingers to hold tape in position. Splicer plus roll of Robins Splicing Tape mounted in an integral tape dispenser. Supplied with clear plastic dust cover.
Cat. #TS4A-DLX. List $11.50

2. GIBSON GIRL® STANDARD—Our basic, moderately priced professional model, same as the TS4A-DLX except without tape dispenser or splicing tape. Supplied with clear plastic dust cover.
Cat. #TS4A-STD. List $8.50

3. GIBSON GIRL® JUNIOR — Low cost, small and compact. This is a handy carrying size model. Similar to TS4A-STD except tape is held in tape guide by friction.
Cat. #TS4A-JR. LIST $6.50

4. GIBSON GIRL® INDUSTRIAL TAPE SPLICERS — For computer, TV industrial and special purpose tapes up to 2" wide. Gibson Girl® Industrial Tape Splicers have all of the features of the TS4A-STD. They are ruggedly constructed for industrial use, mounted on a heavy cast base. Precise blade centering adjustment. Long life blades easily replaceable.
For ¼" tapes. **Cat. #TS-250. Net $55.00**
For ½" tapes. **Cat. #TS-500. Net $55.00**
For 1" tapes. **Cat. #TS-1000. Net $55.00**
Custom Built Splicers For Special Tapes and Applications Available—Send for Quotation.

5. GIBSON GIRL® "SEMI-PRO"—This hand held splicer consists of three parts, a tape alignment guide, a cutting unit which has a diagonal cutter on one side and Gibson Girl® cutters on the other side, and a blade cover to protect the blades, designed for semi-professional use.
Cat. #SP-4. List $3.50

6. GIBSON GIRL® "HOBBYIST"—A simple inexpensive tape splicer consisting of a tape and blade guide and a unique curved blade. It is designed to produce uniform **Gibson Girl®** type splices for hobbyists who require its services less frequently.
Cat. #H-4. List $1.75

7. ROBINS RECORDING HEAD CLEANER — A fast, efficient solvent for cleaning recording heads. In brush applicator bottle.
Cat. #HC-2. List $1.00

8. JOCKEY CLOTH FOR TAPES—Revitalizes tapes. Reduces head wear. Reduces tape wear. Eliminates "grime distortion". Reduces tape squeal and chatter. Cleans, lubricates and protects by depositing a microscopic film of Silicone on the tape.
Cat. #JCT-2. List $1.00

SPLICING TAPES

9. ROBINS SPLICING TAPE—(New formula white) Specifically made for splicing recording tape. Tackiness, thickness, strength and cold flow are carefully controlled. Individually packed in crystal clear plastic container.
¼" x 100" Mylar (New Formula white) **Cat. #ST-234. List $.40**
½" x 100" Mylar (New Formula white) **Cat. #ST-500. List $.50**
¾" x 100" Mylar (New Formula white) **Cat. #ST-750. List $.60**

10. TAPE STORAGE CANS — For safe storage of recording tapes. Reduces tape "ageing". Helps prevent accidental tape erasure. Ribs on cans nest for stacking.
Cat. #TC-5 (for 5" reels). List $.55
Cat. #TC-7 (for 7" reels). List $.75

11. ROBINS TAPE THREADER—The perfect solution to an old nuisance! No more awkward fumbling. Just place tape against the reel, slip on your threader to hold it in place, turn the crank and presto!—you're ready to use your recorder.
Cat. #TT-1. List $1.00

REEL LABELS—SELF-STICK ADHESIVE. (not illust.) Write on with pencil, pen, ball point, etc. Names can be typed on labels prior to removal from sheet. For Tape Reels, Parts, Record Service Calls, 1001 other uses.
Cat. #SL-30 (30 Labels). List $.45

***GIBSON GIRL® TAPE SPLICERS—U.S. PAT. No. 2,778,420 PATS. PENDING**
***T.M. REG. U.S. PAT. OFF.**

Gibson Girl®

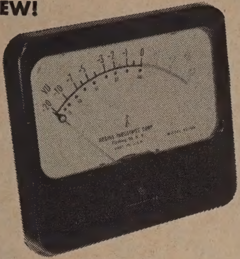
ROBINS

Gibson Girl®

ROBINS INDUSTRIES CORP. FLUSHING 54, N. Y.

FOR MORE FUN & BETTER TAPE CARE

NEW!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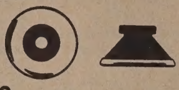
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LISTED BY UNDERWRITERS LABORATORIES, INC.

TAPE-KARE
New!
TAPE-KARE
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4

ACCESSORY KIT
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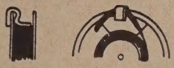
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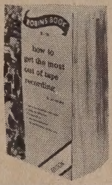

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1. NEW! ROBINS VU METER—No more "guess work" with level control. Prevents overmodulation (overloading) prevents recording on too low a level, etc. Specifications: 4½" VU Meter, 2 color scale; Modulation calibrations, 0-100%; VU calibrations −20 to +3; Dual impedance inputs. (Use with low or high impedance circuits). Sensitivity 200 Micro amps (basic movement). O VU operation: Shunts for 1.2 or 12 V; Mounts in 2¾" diameter hole; Depth 1½". **Cat. #VU-100. List $22.00**

2. NEW! REEL HOLDERS FOR TAPE RECORDERS—Prevents wobbling, holds reels in place regardless of position of recorder. **Cat. #RH-2 (pair). List $.85**

3. MAGNETIC BULK TAPE ERASER — Listed by Underwriters Laboratories, Inc. Removes completely, recorded and unwanted signals. Provides superior de-magnetizing of tape by reducing background noise levels of tapes from 3 to 6 db below normal erase head levels. Assures distortion-free tape—makes old tapes with accumulated background noise perform like new. Eliminates wear and tear of recording heads. Easy to operate for tape up to ½" wide. Accepts any reel up to 10½". 110-120 volts, 50-60 cycle AC. **Cat. #ME-99. List $33.00**

4. HEAD DEMAGNETIZER—Listed by Underwriters Laboratories, Inc. For Tape Recording Heads. Removes permanent magnetization. Improves signal-to-noise ratio. Reduces noise level. Reduces Harmonic distortion when caused by head magnetization. Has an extended pole piece designed for easy access to the recording heads of most tape recorders. Contact of the demagnetizer pole piece with the pole tips of the recording head causes the head to be saturated by an alternating magnetic field. Gradual removal of the head from this saturating field neutralizes any residual permanent (DC) magnetism. 110-120 volts, 60 cycle. **Cat. #HD-6. List $10.00**

5. TAPE KARE KIT—Preserves valuable tapes and protects tape recorders. Contains: Robins Recording Head Cleaner. Jockey Cloth for cleaning tapes. **Cat. #TK-2. List $2.00**

6. GIBSON GIRL® ACCESSORY KITS—Everything You Need for Better Tape Recording and Editing. This kit contains the famous Gibson Girl® Tape Splicer, Splicing Tape, Tape Threader, Head Cleaner, Tape Cleaning Cloth, Tape Clips, Reel Labels and Tape Editing Book. For Professional Results! For More Pleasure! For Better Recordings! A Perfect Hi-Fi Gift!

With Gibson Girl® Standard Splicer. **Cat. #TK-4STD. List $12.00**

*With Gibson Girl® Junior Splicer. **Cat. #TK-4JR. List $10.00**

*With Gibson Girl® Hobbyist Splicer. **Cat. #TK-4H. List $ 3.50**

7. REPLACEMENT REELS—Sturdy 7" virgin styrene reels. With write-on surfaces and tape log index. **Cat. #TR-70. List $.75**

8. TAPE CLIPS—Keeps tapes from unwinding from full or half empty reels. As important to the tape recordist as the diaper pin is to the baby nurse. 1. With full reel of tape, snap clip on one edge of reel flange with the long foot in, or— 2. With half empty reel, fold end of tape around edge of reel flange and place clip over tape. Lies flat in box. **Cat. #TC-12 (pkg. of 12). List $.40**

ROBINS BOOKS

9. HOW TO GET THE MOST OUT OF TAPE RECORDING—(stereo edition) 128 pp. fully illust. Covers every aspect of tape recorder for the hobbyist and the professional. Tells you how to get the most out of your tape recorder, or if you don't have one, what to look for when purchasing one. **Cat. #TE-128. List $1.00**

***TAPE EDITING AND SPLICING** — For the Professional and Amateur tape recordist by N. M. Haynes. 24 pp., illust. An authoritative work on the subject by an outstanding author. Contains a great deal of information which is not readily available elsewhere. **Cat #TE-24. List $.35**

***TELEVISION TAPE RECORDING**—by George B. Goodall (48 pp., illust.) A semi-technical book on methods and techniques in the amazing new field of Video tape recording, just published. **Cat. #TE-48. List $1.00**

NEW!

DD-6-1

NEW!

DD-11M

NEW!

DD-10RP

Ask your distributor about ROBINS display deals. Eleven (11) different displays ideal for merchandising more than 300 fast-selling Robins accessories are available from your distributor. These items are "peg-packaged" for use on any type of peg board display. Each display deal including a fine selection of items attractively packaged.

Three popular display deals are illustrated at left.

*not illust.

TRADE DISCOUNT APPLIES TO *LIST* PRICES ONLY.

Gibson Girl® **ROBINS** Gibson Girl®

ROBINS INDUSTRIES CORP. FLUSHING 54, N. Y.

PATCH CORDS (molded cable assemblies) FOR HI-FI • STEREO • PA

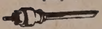
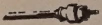
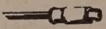
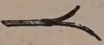
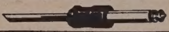
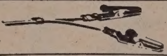
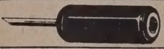
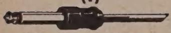
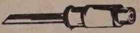
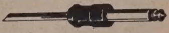
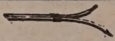
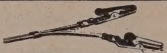
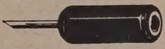
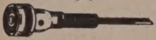
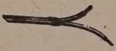
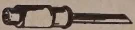
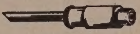
Precision engineered molded connecting cables in a complete variety of combinations to fit every possible need in hi-fi, stereo and pa systems for connection of amplifiers, pre-amplifiers, mixers, record changers, recorders, speakers, speaker extensions, tuners and musical instruments.

NEW!

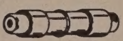
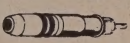
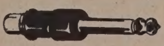
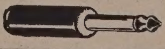
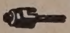
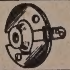
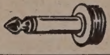
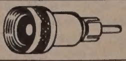
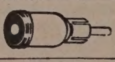
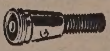
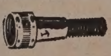
***FM INDOOR ANTENNA (folded dipole)**—Eliminates need for outdoor antenna in most locations. A big improvement over "built-in" antennas. Easily concealed under a rug or back of cabinet. "Peg-packaged". **Cat. #FMA-1. List $2.00**

***ROBINS 72" LINE CORD.** Heavy insulation (SPT-2), with molded AC plug. White. **Cat. #LC-72. List $.55**

*(Not illust.)

				TYPE	LENGTH (Inches)	LIST PRICE
				(all Grey shielded cable unless otherwise shown)		
(M)  **phono plug** TO	(M)		**phono plug**	MM	18	1.00
				MM	36	1.25
				MM	72	1.50
				MM	120	2.00
	(F)		**phono extension jack**	MF	18	1.25
				MF	36	1.50
				MF	72	1.75
				MF	120	2.25
	(S)		**stripped and tinned ends**	MS	18	1.00
				MS	36	1.00
				MS	72	1.25
				MS	120	1.75
	(T)		**phone plug**	MT	72	2.00
				MT	120	2.50
	(C)		**alligator clips**	MC	120 (grey parallel cable)	2.25
	(J)		**phone jack**	MJ	72	2.50
(T)  **phone plug** TO	(F)		**phono jack**	TF	72	2.50
	(T)		**phone plug**	TT	72	2.00
				TT	120	2.50
	(S)		**stripped and tinned ends**	TS	72	2.00
				TS	120	2.50
	(C)		**alligator clips**	TC	72	2.00
				TC	120 (grey parallel cable)	2.50
	(J)		**phone jack**	TJ	120	4.00
(B)  **microphone connector** TO	(S)		**stripped and tinned ends**	BS	120	2.75
(F)  **phono jack** TO	(F)		**phono jack**	FF	72	2.25

ADAPTORS

FF-1		Phono Plug coupler, mates with Phono plug at each end. Grey colored plastic: completely shielded.	**1.00**
JM-1		Adapter, 2-Conductor Phone Jack Input to Phono Plug Output.	**2.00**
FT-1		Phone plug output with phono jack input. Attractive grey colored molded housing, completely shielded.	**1.50**
T-1		Phone Plug	**.75**
M-1		Phono Plug (Pkg. of 4)	**.50**
F-1		Phono Jack (Pkg. of 3)	**.50**
TD-1		Male Microphone input to Phone Plug Output	**.75**
BP-1		Adapter, Phono Plug on end with Female Microphone Connector at other end.	**1.00**
DP-1		Adapter, Phono Plug one end with Male Microphone Connector at other end.	**1.25**
D-1		Male Microphone Connector	**.50**
B-1		Female Microphone Connector	**.75**

MADE IN THE U.S.A.

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ROBINS INDUSTRIES CORP. FLUSHING 54, N. Y.

"EXTRA-PLEASURE" PHONOGRAPH AIDS

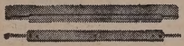
NEW!

STROBE & LIGHT KIT

3.

NEW!

4.



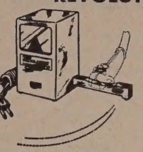
6.

NEW!

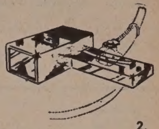
$5.00
ENGINEERED SOUND
STEREO & MONOPHONIC

5.

REVOLUTIONARY NEW!



1.

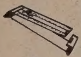


2.

SYL-A-SCOPE STYLUS INSPECTORS

7.

8.



9.

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19.

ROBINS MICROSCOPE

20.

REVOLUTIONARY NEW! ROBINS SYL-A-SCOPE STYLUS INSPECTORS

Save your precious records from being gouged by a worn or damaged styli. Insure better reproduction with this simplified version of the optical comparator used throughout industry for examining minute parts; shows a tremendously enlarged illuminated silhouette image of the stylus on a ground glass screen. The **SYL-A-SCOPE** is also an invaluable aid in the machine shop and laboratory for inspecting the shape of small pointed objects such as tiny drills. May be easily calibrated to show sizes. Two models available.

Simply place the **SYL-A-SCOPE** on the turntable, put stylus point in orifice and view enlarged image on screen. So simple that anyone can use it without removing cartridge from equipment.

1. **ROBINS SYL-A-SCOPE,** battery operated. A "must" item for every serious record collector. High quality optical system enclosed in attractive, completely tooled high-impact plastic case 5½" x 3½" x 1¼". Complete with on-off switch and bulb (Uses 2 penlight batteries) **Cat. #SG-33** (less batteries). **List $6.75.**

2. **ROBINS SYL-A-SCOPE,** Operates on 110-120 volt 60 cycle. A professional version of the above. Designed for studios, dealer and laboratory use. Better optical system giving higher power enlargement. Finished metal housing complete with on-off switch, line cord, 7" x 5¼" x 3⅞". **Cat. #SG-66. List $19.95.**

3. **NEW! STROBE & LIGHT KIT.** This easy-to-read strobe is precision-engineered to furnish listeners with the easiest and surest way of determining the speed of their record player. Important because the turntable's speed affects the pitch of the music. Used simply by placing strobe disc on turntable and shining strobe light on the disc according to directions accompanying each kit. Indicates clearly whether turntable is too slow, too fast, or irregular. **Cat. #ESK-5. List $1.50.**

CHANGER COVERS

Transparent plastic covers to fit many models. Listed here are a few.

4. **NEW CHANGER COVERS!** Rigid, collapsible and easy to set up. Helps to keep changer dust free.

Cat. #CC-6	12" x 15½" x 5"	White	**List $6.95**
Cat. #CC-7	12" x 15½" x 5"	Brown	**List $6.95**
Cat. #CC-8	12" x 15½" x 5"	Clear	**List $6.95**
RECORD CHANGER COVERS:			
***Cat. #CC-1**	12" x 13½" x 8"	Webcor, V-M, Miracord 200, Dual, Garrard "T" etc.	**List $1.75**
***Cat. #CC-2**	13½" x 15" x 8"	Garrard RC80, 121, Thorens 134, 184, etc.	**List $1.75**
***Cat. #CC-5**	17" x 15" x 8¾"	Garrard RC-88, 98, 4HF, Glaser-Steers GS-77, Pickering, etc.	**List $1.75**
TURNTABLE COVERS:			
***Cat. #CC-3**	22" x 16½" x 9"	Fairchild, Rek-O-Kut, Garrard, etc.	**List $2.25**
***Cat. #CC-4**	17½" x 17½" x 8½"	Rek-O-Kut, L34, N33, Grey, Thorens TD-124 Metzner, Etc.	**List $2.25**

FOUR "ENGINEERED SOUND" RECORD KARE KITS

5. **DELUXE ENGINEERED SOUND RECORD KARE KIT**—Contains: Stylus Pressure Gauge SG-1, Hobbyist Stylus Microscope MX-40, Turntable Level TL-1, Jockey Record Cleaning Cloth JC-1, KleeNeeDle NB-1, Record Brush RB-75, Tone Arm Lift TA-1. **Cat. #ESK-3. List $5.00.**

***PROFESSIONAL ENGINEERED SOUND RECORD KARE KIT** — Contains: Stylus Microscope MX-40, Turntable Level TL-1, Stylus Pressure Gauge SG-1, **Cat. #ESK-2. List $3.00.**

***HOBBYIST ENGINEERED SOUND RECORD KARE KIT**—Contains: Stylus Pressure Gauge SG-1, Turntable Level TL-1. **Cat. #ESK-1. List $2.00.**

***ENGINEERED SOUND TURNTABLE LEVELING KIT**—Consists of: 4 adjustable rubber feet, mounts; Level. **Cat. #ESK-4. List $3.50.**

6. **ALUMINUM COMPONENT SLIDES**—Attractive easy-to-install, aluminum drawer slides for record players or other equipment. Has a load capacity of 30 lbs., length is 13" and maximum extension 14". **Cat. #CS-1311. List $4.00.**

7. **FIBERGLASS ACOUSTIC INSULATION**—For lining speaker cabinets, record changers, tape decks, etc. 36" x 36" x 1" thick. Reduces high and medium frequency reverberations and standing waves in speaker cabinets and enclosures. **Cat. #AM-90. List $2.25.**

8. **PHONO-CUSHION**—Polyester foam mat fits most changers and players. Cushions record fall, reduces motor rumble, reduces magnetic pull of pickup, eliminates record slip, covers worn tables. In attractive colors. **Cat. #PC-10 (10") List $1.15. Cat #PC-12 (12") List $1.50.**

9. **STYLUS PRESSURE GAUGE**—Measures stylus pressure accurately from 2 to 30 grams. **Cat. #SG-1. List $1.00.**

10. **TURNTABLE LEVEL**—Spirit level in attractive gold anodized aluminum case, sits easily on any turntable. **Cat. #TL-1. List $1.20.**

11. **ISOLATION PAD**—Scientifically designed for use under all Record Changer Bases made of dielectric foam. Can be used for Tape Recorders, T-V Chassis, etc. **Cat.#IP-16 (16½" x 13½") List $2.00.**

12. **JOCKEY CLOTH FOR RECORDS**—Anti-static Record cleaning cloth cleans, lubricates and eliminates static charges which attract dust. **Cat. #JC-1. List $1.00.**

13. **KleeNeeDle**—Automatic Changer Needle Brush. Automatically keeps needle clean by removing "dust blob" each time tone arm passes over brush. Adjustable height fits most record changers. Pressure sensitive adhesive for mounting. **Cat. #NB-1. List $1.40.**

ROBINS CHEMICALS

14. **TAPE AND PHONO DRIVE OIL**—Highly refined lubricant formulated especially for rotating and moving parts of tape and phono drives. Inhibits rust and oxidation. 2 oz. **Cat.#RC-2-33. List $.75**

***NON-SLIP FOR TAPE AND PHONO DRIVES**—Stops slippage of idler wheels, pulley belts and cords. Fast drying, stable and penetrating material dries to a tack-free yet non-slip surface, 2 oz. **Cat. #RC-2-56. List $1.00.**

15. **RECORD BRUSH**—A fine haired brush that clips on tone arm and gently sweeps dust from record as it rotates. **Cat. #RB-75. List $.75.**

16. **TONE ARM LIFT**—Clips on tone arm to provide a convenient finger lift. Eliminates fumbling. Reduces record scratching. **Cat. #TA-1. List $.35.**

17. **RECORD SPIDERS (PLASTIC) FOR 45 RPM RECORDS**—Clips into record to reduce hole diameter for fit on standard record spindle. Pkg of 5. **Cat. #RA-45. List $.25.**

18. **ATOMIC JEWEL**—Anti-static device keeps records dust free reducing record needle wear. Clips on arm. **Cat. #SE-900. List $4.00.**

19. **STROBE-DISC**—Easiest and simplest way to check turntable speed and assure its accuracy. **Cat. #SD-1. List $.35.**

20. **HOBBYIST STYLUS MICROSCOPE**—Direct reading microscope with precision plastic lens. **Cat. #MX-40. List $1.50.**

***NEW! 45 RPM METAL ADAPTERS**—Easy to use, clips into record. 5 adapters. **Cat. #RA-45M. List $.30.**

***NEW!—ROUND TURNTABLE LEVEL**—4-way. Levels your turntable for top performance, prevents record and needle wear. A must for stereo output balance. **Cat. #TL-2R. List $2.50.**

***RECORD & ALBUM RACKS**—For neat, safe storage.

Holds 48 7" records	**Cat. #RR-7**	**List $1.00**
Holds 40 12" records	**Cat. #RR-10**	**List $1.35**
Holds 25 12" albums	**Cat. #RR-12**	**List $1.35**

***PROFESSIONAL STYLUS MICROSCOPE**—Check stylus wear and protect against damage to records. **Cat. #MX-1. List $2.50.**

***SPINDLE ADAPTER FOR 45 RPM RECORDS**—Enlarges standard spindle diameter to take 45 RPM records. Top is tapered for ease in stacking records. **Cat. #SA-45. List $.25.**

***DISCLOSURES**—Virgin polyethylene envelopes for record storage, round bottom, extra long—Protects records from dust, grime, lint, etc. **Cat. #E-12** (12 inch.—pkg of 10) **List $1.00.**

ALL ITEMS MADE IN THE U.S.A. *Not Illustrated.

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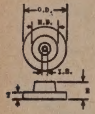
ROBINS INDUSTRIES CORP. FLUSHING 54, N. Y.

GENUINE ROBINS REPLACEMENT PARTS FOR TAPE AND PHONO DRIVES

Genuine **ROBINS** Phono and Recorder Drive Replacement Parts to fill 95% of your replacement part calls.

Each part comes individually packaged, containing clear and complete replacement data to help you best serve your customer's needs. This unique, attractive, fact-filled, package will UP your replacement part sales!

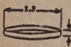
SEND FOR LATEST REPLACEMENT GUIDE RRP-3—50 cents list



RUBBER TIRED IDLER WHEELS

(Approx. Dimensions)

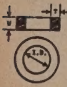
Part No.	O.D.	I.D.	H.	T.	H.D.	Main Use*	List Price
			(*Also used on other machines)				
R430	2½	7/32	25/32	¼	½	Recordio	1.65
R432	2	7/32	7/16	¼	7/16	V-M	1.00
R433	2	3/16	⅜	3/16	5/16	V-M	1.10
R434	2	N.A.	11/16 (Stud)	¼	3/16 (Stud)	V-M	1.20
R436	2⅛	¼	¼	3/16	9/16 (Tapped)	Webcor	2.00
R438	2⅛	3/16	½	⅛	⅝	Webcor	1.75
R439	2	3/16	5/16	⅛	5/16	Webcor	1.50
R440	2⅛	3/16	5/16	⅛	9/16	Webcor	1.75
R441	2⅛	3/16	½	3/16	9/16	Webcor	2.50
R442-1	2	7/64	13/32	5/32	5/16 Gear	Glaser Steers	1.50
R443	1½	3/16	⅜	3/16	5/16	Webcor	1.00
R444	2	¼	⅜	3/16	9/16	Garrard	2.75
R448	2	3/16	5/16	⅛	½	Collaro	2.75
R449	2½	5/32	⅝	⅛	⅜	Collaro	2.75
R452	1 9/16	7/32	½	¼	½	V-M	1.00
R479	2¼	11/64	9/16	⅛	9/16	Garrard	2.50
R480	2⅝	3/32 (Stud)	15/16 (Stud)	¼	9/16	Garrard	3.25
R480-1	3 3/16	5/32	⅜	⅛	⅝ Tapped	Collaro	3.50
R481	2⅛	9/16	⅞	¼	15/16	Webcor	3.00
R483	2	3/16	⅜	3/16	9/16	Pentron	1.75
R485	1¾	3/16	13/32	5/32	13/32	V-M	1.25
R491	2½	5/32	⅜	⅛	⅝	Collaro	2.50
R492-2	1 15/16	9/16	⅞	¼	15/16	Webcor	2.75
R492-3	1 9/16	5/32	9/32	3/32	⅜	Monarch	1.30
R544	2	3/16	7/16	¼	9/16	Telectro	2.70



FABRIC DRIVE BELTS

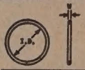
I.P.—Inside perimeter or double inside flat length.

Part No.	I.P.	A.	Main Use*	List Price
	Approx.		(*Also used on other machines)	
R409-2	17	5/16	Pentron	2.65
R409-3	12¼	5/16	Pentron	2.65
R409-4	12 13/32	3/16	V-M	2.75
R409-5	17	3/16	Webcor	2.75
R547	11½	¼	Telectro	1.25
R548	12¼	¼	Telectro	1.75
R549	9¾	¼	Telectro	1.75
R550	10¼	¼	Telectro	1.75
R551	7¼	¼	Telectro	1.75



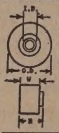
FLAT RUBBER BELTS & TIRES

Part No.	I.D.	W.	T.	Main Use*	List Price
		Approx.		(*Also used on other machines)	
R412	⅜	⅜	1/16	Garrard	.25/PR.
R413	7/64	¼	3/64	Webcor	.30/PR.
R414	⅝	¼	1/32	V-M	.28/PR.
R415	¾	¼	3/64	Garrard'	.25/PR.
R421	1⅛	⅛	3/16	Mirachord	.70
R503	4	¼	1/16	Ampex	2.55



"O" RING DRIVE BELTS

Part No.	I.D.	W.	Main Use*	List Price
	Approx.		(*Also used on other machines)	
R410-6	2	⅛	V-M	.60
R410-7	2⅜	⅛	W.G.	.70
R410-8	2¾	⅛	Pentron	.70
R410-10	3¼	⅛	Recordio	.80
R410-12	3¾	⅛	V-M	.80
R410-14	4½	⅛	Revere	1.50
R410-15	5	⅛	Webcor	1.50
R410-20	6½	⅛	Recordio	2.50
R410-21	6¾	⅛	Webcor	2.50
R410-50	3½	1/16	Webcor	.90
R410-51	3½	1/16	Viking	1.65
R410-52	1⅞	⅛	Webcor	1.30
R410-53	2½	⅛	Revere	.70
R410-54	4 7/16	⅛	Webcor	1.00
R474	3⅛	⅛	Crestwood	.85
R528	3⅞	⅛	Ampex	1.25
R529	3⅛	1/16	Ampex	1.00
R531	2⅞	⅛	Ampex	1.00
R532	4⅛	⅛	Ampex	1.00
R540	4¼	⅛	Telectro	1.75



RUBBER TIRED PRESSURE ROLLERS

(Approx. Dimensions)

Part No.	O.D.	I.D.	W.	H.	Main Use*	List Price
			(*Also used on other machines)			
R455	⅞	¼	½	⅝	Webcor	2.30
R457	¾	7/32	½	27/32	Recordio	2.50
R458	¾	7/32	½	½	V-M	1.65
R482	15/16	¼	⅜	½	Webcor	1.75
R488	1⅛	¼	⅝	11/16	Pentron	2.00
R543	1 1/16	¼	7/16	9/16	Telectro	2.25

MISCELLANEOUS (Not Illustrated)

Part No.	Description	Main Use*	Mfg. Pt. No.	List Price
		(*Also used on other machines)		
R411	Rubber Bumper	V-M	2580	.40
R419	Ind. Finger Cushion	Webcor	24PO48	.30
R441-1	Idler and Belt Drive	V-M	15774	4.90
R442-2	Clutch Idler	Glaser Steers	13005-2	6.30
R442-3	Clutch Idler	Glaser Steers	13005-1	5.90
R445	Idler w. b/b	Garrard	50441	2.75
R446	Idler w. b/b	Garrard	50873	2.75
R447	Double Idler	V-M	74077	1.25
R453	Double Idler	V-M	7435	3.05
R456	Double Idler	V-M	9032	3.05
R460	Motor Pulley	V-M	3139	1.30
R461	Motor Pulley	V-M	3140	1.25
R462	Motor Pulley	V-M	3141	1.25
R466	Motor Pulley	V-M	3484	1.35
R467	Motor Pulley	V-M	3483	1.35
R468	Motor Pulley	V-M	3482	1.35
R470	Motor Pulley	V-M	5375	1.30
R471	Motor Pulley	V-M	5374	1.25
R472	Motor Pulley	V-M	5373	1.25
R486	Double Idler	V-M	5731	3.05
R489	Idler & Clutch Plate	Pentron	964-B-59	1.10
R492-1	Double Idler	Webcor	11X1607	2.25
R499-1	Motor Mtg. Grommets	——	——	.80

Gibson Girl® **ROBINS** Gibson Girl®

ROBINS INDUSTRIES CORP FLUSHING 54, N. Y.

ROBINS $\frac{M}{M}$ EXACT REPLACEMENT AND CONVERSION $\frac{M}{M}$ RECORDING AND ERASE HEADS

- **REPLACE WORN HEADS** • **UPGRADE OLD EQUIPMENT** • **CONVERT TO STEREO** • **BUILD SPECIAL EQUIPMENT**

WRITE FOR LATEST CONVERSION DATA BOOK RMM-2. LIST $.50

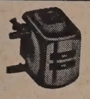


Fig. 1

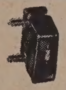


Fig. 2

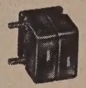
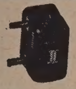


Fig. 3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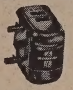


Fig. 5

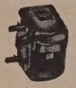
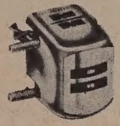


Fig. 6


ROBINS M/M 5Q17 (¼ track)

Replacements for Obsolete Michigan Magnetics Heads

Part No.	Robins M/M Replacement
2120	3L20
08Q8	5Q17
2L35	3L20
2M40	3L20
3F20.L	3F20-101
3FM20	3FM20-108
3M20A	3L20
5B20	7B17
5L20	7L17
5L20U	7L17U
5Q8	5Q17
5Q08	5Q17
8BE30	9QE3
9L20S	7L17
10L17	7L17
10L17B	7L17
10L17S	7L17
10L20S	7L17
10L70	7L17
10M70A	7L17

Robins M/M Replacements for Shure Heads

Shure Model #	M/M Replacement
Recording Heads	
817	3L20
TE-2, TE-11 C	7EM12A
TE-2C	40EM12
TR-16	7L17
TR-16A	3L20
TR-21C, TR-26	7L17
TR-35	3FM20-108

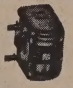


Fig. 7

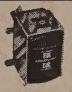


Fig. 8

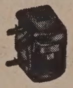


Fig. 9

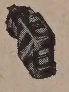


Fig. 11

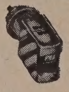


Fig. 12

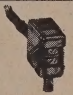


Fig. 13

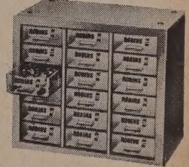
SPECIFICATIONS — R/P HEADS

PART No.	TYPE	TAPE SPEED (IPS)	IMPED. (1 kc)	REC. LEVEL (below sat) (db)	AUDIO CURRENT (ma)a	BIAS CURRENT (m.a.)	BIAS FREQ. (kc)	PLAY LEVEL (1kc) (mv)	PLAY LEVEL (10kc) (bel. 1kc level)	INDUCT. (nom.) (h)	FIG. No.	LIST PRICE
7B17	½ tr. Stereo	7.5	5150	−12	.023	1.0	80	2.15	−11	.75	5	27.00
5B20LS	½ tr. Stereo	7.5	3520	−12	.026	1.2	80	1.8	−13	.5	8	27.00
10B20LS	½ tr. Stereo	7.5	7034	−12	.02	1.0	80	2.5	−13	1.0	8	27.00
3F20-101	½ tr. Stereo	7.5	2000	−12	.043	1.0	62	1.8	−13	.3	11	31.00
3F20-105	½ tr. Stereo	7.5	2000	−12	.043	1.0	62	1.8	−13	.3	13	31.00
3FM20-104	½ tr. Mono	7.5	2000	−12	.043	1.0	62	1.8	−13	.3	12	16.00
3FM20-108	½ tr. Mono	7.5	2000	−12	.043	1.0	62	1.8	−13	.3	12	16.00
3L20	½ tr. Mono	7.5	2460	−12	.03	1.25	50	1.64	−13	.35	9	14.00
7L17	½ tr. Mono	7.5	5150	−12	.023	1.0	80	2.15	−11	.75	6	14.00
7L17U	Same as 7L17 except mounts opposite side											
5Q17	¼ tr. Stereo	7.5	3340	−12	.025	.5	80	1.9	− 8.0	.5	1	30.00
5Q17-105	¼ tr. Stereo	Identical to 5Q17 (above) except mounting lugs on 5Q17-105 on opposite side.										

NOTE: All series L (single track), B (two track) and Q (four track) are electrically and mechanically interchangeable for easy stereo conversion.
9QE3 erase head is ¼ track replacement for 5S1 and 5SS1 heads.

SPECIFICATIONS — ERASE HEADS

PART No.	TYPE (ERASE)	TAPE SPEED	IMPED. @ ERASE FREQ.	ERASE FREQ. (kc)	ERASE CURRENT	ERASURE (DB) (200 cy. Sat.)	INDUCT (Nom.) (mh)	FIG. No.	LIST PRICE
7EM12A	½ tr. Mono	7.5	2,200	80	30	50	5.4	4	11.00
40EM12	½ tr. Mono	7.5	10,000	52	10	50	40.0	4	11.00
9QE3	¼ tr. Stereo	7.5	2,500	75	12.5	60	9		14.00
5S1	½ tr. Mono	7.5	1,750	62	17	55	5	2	11.00
5SS1	½ tr. Stereo	7.5	1,750	62	17	55	5	3	15.00


Kit #DD-6-1. List $309.00.

A COMPLETE KIT containing 1 ea. of 16 of the above ROBINS M/M heads. This popular assortment, ideal for laboratories and service organizations includes **FREE** 9″ x 10″ x 6″ cabinet (illust.) and replacement data.

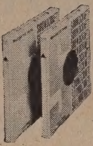
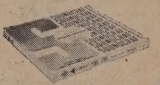
MADE IN THE U.S.A.

REEVES
SOUNDCRAFT CORP.

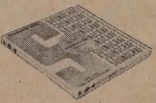
MAGNETIC RECORDING TAPES
AND TAPE RECORDING
ACCESSORIES

N. Y., N. Y. • Danbury, Conn. • Chicago, Ill. • Los Angeles, Calif. • Toronto, Can.

SOUNDCRAFT **MYLAR* BASE** RECORDING TAPES

Description	Code	Length	Reel	Std. Pkg.	Sug. Con. Net
Soundcraft **LIFETIME®** Recording Tape 1½ Mil **"MYLAR"** Base LIFETIME tape of "Mylar" has the strength to withstand the roughest usage, the dimensional stability to insure accurate timing in motion picture and radio work. New and exclusive SOUNDCRAFT plasticizer-free oxide improves uniformity of output, increases sensitivity of high frequencies and will never chip or flake. 	L-1§	150′	3″	10	**$ .75**
	L-6	600′	5″	10	**2.65**
	L-12	1200′	7″	10	**4.25**
	L-24RM¶	2400′	10½″	5	**11.20**
	L-24RF†	2400′	10½″	5	**10.40**
	L-24RF3‡	2400′	10½″	5	**10.40**
	L-24H	2400′	Hub	5	**8.30**
	L-48R	4800′	14″	1	**24.50**
	L-48H	4800′	Hub	1	**16.60**
Soundcraft **PLUS-50®** Recording Tape 1 Mil **"MYLAR"** Base PLUS-50® tape of "Mylar" offers the best combination of long play with tape strength. It has the durability of LIFETIME® but is somewhat less rugged because of its thinner base. It is stronger however, than the strongest acetate tapes. PLUS-50 also has Soundcraft's exclusive oxide coating insuring top-quality recording characteristics. 	PL-2§	225′	3″	10	**.95**
	PL-9	900′	5″	10	**3.40**
	PL-12	1200′	5¾″	10	**4.65**
	PL-18	1800′	7″	10	**5.80**
	PL-36RF†	3600′	10½″	5	**13.75**
	PL-36RF3‡	3600′	10½″	5	**13.75**
	PL-36RM¶	3600′	10½″	5	**13.75**
	PL-36H	3600′	10½″	5	**11.25**
	PL-72R	7200′	14″	1	**28.10**
	PL-72H	7200′	Hub	1	**22.50**
Soundcraft **PLUS-100®** Recording Tape ½ Mil **"MYLAR"** Base This fine tape requires careful handling, but rewards the user with extra long play—double the length of standard play tapes. Because of its "Mylar" base and plasticizer-free oxide, PLUS-100 is impervious to changes in temperature and humidity. In the hands of the experienced recording enthusiast, PLUS-100 is the ultimate in double length tapes. 	XP-12	1200′	5″	10	**3.50**
	XP-18	1800′	5¾″	10	**5.00**
	XP-24	2400′	7″	10	**6.50**
	XP-48RM¶	4800′	10½″	5	**16.80**
	XP-48RF†	4800′	10½″	5	**16.80**
	XP-48RF3‡	4800′	10½″	5	**16.80**
	XP-48H	4800′	Hub	5	**15.50**
Soundcraft **PLUS-100X** Recording Tape ½ Mil Tensilized **"MYLAR"** Base Stretch resistant PLUS-100X uses a newly developed process to make the base ultra-thin and super-strong. One of the finest double-play tapes available. 	XP-12X	1200′	5″	10	**5.45**
	XP-18X	1800′	5¾″	10	**7.48**
	XP-24X	2400′	7″	10	**9.50**
	XP-48XRM¶	4800′	10½″	5	**22.80**
	XP-48XRF	4800′	10½″	5	**22.00**
	XP-48XRF3‡	4800′	10½″	5	**22.00**
	XP-48XH	4800′	Hub	5	**19.50**

SOUNDCRAFT **ACETATE BASE** RECORDING TAPES

Soundcraft **"STANDARD"** Recording Tape 1½ Mil **"ACETATE"** Base The versatility and moderate cost of the "STANDARD" have made it the workhorse of the SOUNDCRAFT line and the standard for many applications in business, schools, government and professional work. 	S-1§	150′	3″	10	**$ .65**
	S-3	300′	4″	10	**1.25**
	S-6	600′	5″	10	**2.10**
	S-12	1200′	7″	10	**3.50**
	S-24RF†	2400′	10½″	5	**8.50**
	S-24RF3‡	2400′	10½″	5	**8.50**
	S-24RM¶	2400′	10½″	5	**8.50**
Soundcraft **"STANDARD-50"** Recording Tape 1 Mil **"ACETATE"** Base "STANDARD-50" is the long play companion to "RED DIAMOND" and "PROFESSIONAL." Its 1 mil acetate base gives the recordist 50% more recording time on the same size reel. "STANDARD-50" has been engineered to reproduce professional sound with wide frequency response, high signal-to-noise ratio and low distortion. 	S5-9	900′	5″	10	**3.29**
	S5-12	1200′	5¾″	10	**4.23**
	S5-18	1800′	7″	10	**5.17**
	S5-36H	3600′	Hub	5	**9.38**
	S5-36RF3‡	3600′	10½″	5	**12.04**
	S5-36RF†	3600′	10½″	5	**12.04**
	S5-36RM¶	3600′	10½″	5	**12.04**
	S5-72R	7200′	14″	1	**24.40**
	S5-72H	7200′	Hub	1	**18.75**
Soundcraft **"PROFESSIONAL"** Recording Tape 1½ Mil **"ACETATE"** Base This tape, specifically engineered for professional use, carries this unmatched guarantee: Uniformity at 1000 cps, as tested on Ampex #307, is ±¼ db in a reel and ±⅜ db from reel to reel. Minimum response at 10,000 cps is guaranteed within 1 db of response at 1000 cps. Because of its uniformity, this tape is highly popular for all professional inter-splicing and tape duplicating applications. 	P-12	1200′	7″	10	**4.40**
	P-24RM¶	2400′	10½″	5	**10.25**
	P-24RF†	2400′	10½″	5	**10.25**
	P-24RF3‡	2400′	10½″	5	**10.25**
	P-24H	2400′	Hub	5	**8.00**
	P-48R	4800′	14″	1	**20.75**
	P-48H	4800′	Hub	1	**12.50**

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* DuPont's Registered Trade Mark for its Polyester Film
§ All 3″ Reels come packaged 10 to an attractive display carton
¶ Metal Reel
® Registered Soundcraft Trademark
† Fiberglass Reel (5⁄16″ center opening)
‡ Fiberglass Reel (3″ center opening)

RE TANDBERG

PELHAM, NEW YORK

SERIES 6 STEREO TAPE DECK

3 SPEED ● 4 TRACK

The Tandberg 6 Stereophonic Recorder/Reproducer provides full facilities for home, education, business, broadcast and professional tape recording use. Exhibiting a wide range of frequency response with high and low input, it incorporates 3 separate heads, each precisely gapped for record, playback and erase. 4 separate pre-amplifiers are built-in; 2 each for record & playback. Also features military type print circuitry, D.C. tube heating, low noise precision resistors, and a Hysteresis "Pabst" motor. May be incorporated into present hi-fi systems or is a complete portable stereo recorder. Operates via 5 push-button controls with remote control circuitry built-in and accessory foot pedal optional. The unique pause control permits no slur, no click start or stop pick-up for record or playback. Also provides Sound-on-Sound Simultaneous record or playback, direct monitor, echo effects and full 4 track stereo and monaural record or playback. Available in a hand rubbed cabinet with gun metal gray top panel and chrome trimmed black knobs. Measures 16" L x 12" W x 6" H. Total weight, 25 lbs.; with luggage carry case, 31 lbs.

BASIC SPECIFICATIONS . . . Playback Outputs — 1.5 V. cathode follower output.

FREQUENCY RESPONSE — 7½ ips ±2DB, 30 to 16000 c. 3¾ ips ±2DB, 40 to 11000 c., 1⅞ ips ±2DB, 50 to 5500 c.

WOW & FLUTTER—.1% RMS 7½ ips, .2% RMS 3¾ ips, .25% RMS 1⅞ ips.

FOUR TRACK STACKED PLAYBACK HEAD — Gap Width . . . .00012"

FOUR TRACK STACKED RECORD HEAD — Gap Width . . . .00052"

CROSS TALK REJECTION — 60DB

POWER REQUIREMENTS — 110 to 245 V., 60 c, 65 w. Substitute 60 c. pulley with 50 c. pulley for 50 c. operation.

LIST PRICE	$498.00
Foot Pedal	$ 18.00
Carry Case	$ 24.00

High Quality Grampian Disc Cutterheads & DP4 Microphone

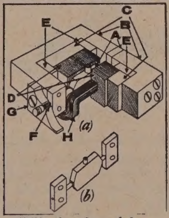
Grampian Feedback Cutterhead — Type B 1/D

The Grampian B 1/D Feedback Cutterhead, made in London, England is an improved version of the well-known BBC system. This superb cutterhead embodies an internal feedback winding which reduces distortion, flattens frequency response, and stabilizes operation over long periods of time and widely varying environmental conditions. Because it is damped through use of silicone damping fluid (Dow-Corning 200) with a leak-proof seal, temperature and age will not affect it, thus assuring constant performance.

Quality Construction

The Cutter is of the iron vane, balanced armature type. Simplicity of construction makes it a rugged device; there are no springs nor balances to get out of adjustment. A cutaway view is included to show the essential parts of the head.

The ends of the armature "A" (shown separately in the cutaway view) are clamped between two U-shaped steel yokes "B", within which lie two Ticonal magnets "C" and the laminated pole-pieces "D", with their brass clamping blocks "E". The metal at the bottom of the slots at either end of the armature is shaped to form torsion bars which support the active center portion of the armature in the gap between the pole pieces. To avoid trouble with non-axial deflections, these torsion bars are made as short as possible, consistent with reasonable stress at maximum excursion. Through the center of one of the torsion bars passes the long plain shank of the cutter clamping screw "F"; the thread is carried in an external block "G". The shank has a high torsional compliance so that the presence of the clamping screw does not add appreciably to the mechanical impedance of the armature. The coil "H" lies in the slots in the faces of the pole-pieces, and within the main winding is a second coil which connects to the cathodes of the second stage of a recording amplifier to provide negative feedback. The method of damping the mechanical resonance of the armature (around 10 KC) is to introduce a Silicone Damping Fluid into the air gaps between the armature "A" and the pole-pieces "D". Silicone is unique in that it alone has the property of maintaining a constant viscosity over a wide temperature variation and length of service. Tests conducted with the cutter proved that the change in level covering a temperature range of 60°F. to 110°F. is no more than 1 db. Heating up of the drive coil, as well as heat transmission from a Thermo-Stylus assembly, had little or no effect. The head will fit any standard lathe and is lightweight to reduce cutter bounce (marbleized effect on discs). The front plate cover is tapped to accommodate an adapter for use with heated stylus (sold as necessary) and the chuck fits standard short-shank styli.



Technical Data

Frequency Response—30 cycles to 15,000 ± 2 db. Down no more than 4 db at 20 cycles and 20,000 cycles.

Total RMS Harmonic Distortion—Below 1% at 1000 cycles measured at 7 cm/sec. peak recorded velocity (NARTB standard level).

Matching Impedance—16 ohms.

D.C. Resistance—Main winding 3.7 ohms. Feedback winding 23 ohms.

Inductance—Main winding 1.65 MH.

Turns Ratio—Main winding to Feedback winding 2:5 to 1.

*Audio Power Required—At 1000 cycles to record 7 cm/per sec. (2⅝ inches/sec.) peak recorded velocity (NARTB Standard Level)—1.26 watts or ±31 dbm.

Stability—Change in level less than 1 db from 60°F. to 110°F.

Stylus—Standard short shank ⅝ inches long.

Damping—Dow-Corning Silicone Fluid.

Mounting—Universal mounting for all lathes. Cover Plate tapped for mounting Fairchild Hot Thermo-Stylus.

*Frequency response measured with PFB-150WA Amplifier, balanced FM Modulator, and Buckman-Meyer Light Pattern.

LIST PRICE of Type B 1/D Feedback Cutterhead	$350.00

Grampian Feedback Cutter System

The Grampian B 1/D cutterhead is incorporated in the Grampian Feedback Recording System which produces the highest quality disc recordings known to date. Complete in every detail of equalization, pre-emphasis, and level correction for all three speeds, this unique system comes ready for instant mounting, turn-on, and operation without the necessity of recalibration, experimentation, etc. To operate the system requires only the sound source on one end and the lathe on the other. Write for more information.

LIST PRICE Complete System	$1,265.00

Grampian DP4 Dynamic Microphone

LIST PRICE	$49.50

Grampian Magnetic Cutterhead — Type C (Non-feedback)

Grampian Type C cutterheads are a development from our feedback cutterhead and have similar mechanical and electrical constants but are operated from a single winding. They may be used in conjunction with any high grade power amplifier.

Quality Construction

The cutterheads are of the balanced armature type, the resonant frequency of the armature being about 9 Kc. This high resonance is achieved by using an armature of pivotless design, the usual pivots being replaced by hollow torsion bars. Since the resonance is so high, the frequency response is fairly flat between 500 c/s to 4,000 c/s, thus making the sensitivity independent of acetate loading, especially when using "hot" stylus technique. The main resonance of the system is damped by the use of Silicone fluid. Contrary to rubber or plastic damping materials, Silicone fluid remains virtually unaffected by changes of temperature.

The price paid for the advantages of the high resonance condition is the increase in the stiffness of the system thus requiring more power to drive it. However, present day techniques make it relatively simple to achieve high power outputs from audio amplifiers with low distortion, and it is recommended that the cutterhead be used in conjunction with an amplifier capable of providing at least 25W output at low distortion.

While normal recording levels may be obtained with an input of 6 watts approx., a much higher peak power is required to deal with transient sounds and the rising frequency response necessary with present day recording characteristics.

An average peak level of 7 volts is required for normal 78 r.p.m. recordings and 3-4 volts for L.P. recordings. Grampian non-feedback cutterheads are available for vertical or horizontal mounting.

TECHNICAL DATA

SENSITIVITY—3 volts input for 1 cm/sec. at 78 R.P.M.

IMPEDANCE—15 ohms at 1000 c/s.

FREQUENCY RESPONSE—± 3 db — 50 c/s to 10 Kc. — 6 db at 20 Kc.

DISTORTION—2% at 1000 c/s.

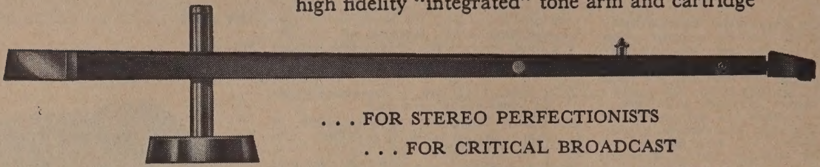
WEIGHT—6½ ozs.

STYLUS HOLE—0.064" or 0.625" as required.

LIST PRICE	$225.00

...the incomparable Shure studio Stereo Dynetic

high fidelity "integrated" tone arm and cartridge



. . . FOR STEREO PERFECTIONISTS
. . . FOR CRITICAL BROADCAST AND RECORDING APPLICATIONS

The overwhelming first choice of perfectionists who appreciate the full importance of "integrated" tone-arm and cartridge to optimum stereo performance. *Tracks at incredibly light 1½-2½ grams—with unparalleled fidelity . . .* absolutely minimizes record wear, and CANNOT scratch records! We urge you to make listening tests of this unit before buying any stereo cartridge or arm—you'll hear the difference.

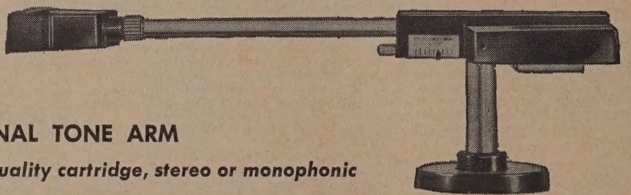
The Studio Stereo Dynetic has a special advantage for those music lovers who like to "index". The cartridge stylus is placed far in front, making it extremely easy for you to position the stylus on the exact spot of the record you want to play.

Still another feature of the Studio Stereo Dynetic is the fact that the stylus can be changed in the home without tools—within ten seconds.

SPECIFICATIONS	STEREOPHONIC M216; M212	MONOPHONIC M16; M12
Tracking Force	1½-2½ grams	1-2 grams
Frequency Response	20-20,000 cps± 2½ db	20-20,000± 2 db
Channel Separation	over 20 db at 1000 cps	*
Sensitivity: Output at 1000 cps	4.5 mv per channel (On Westrex /4 Test Record)	14 mv for 10 cms/sec
Recommended load impedance	50,000 ohms	10,000 ohms
Compliance: (Vertical, *Lateral)	9×10^{-6} cms/dyne	8×10^{-6} cms/dyne
Inductance	400 millihenrys	130 millihenrys
D.C. Resistance	600 ohms	180 ohms
Needle tip Mass	1.3 milligrams	1.25 milligrams
Stylus	.0007" diamond	.0007" diamond

* Applies to stereo units only.

Model M216—Studio Stereo Dynetic for records up to 16" including M21 cartridge with .0007" Diamond Stylus Audiophile Net: $89.50
Model M212—Studio Stereo Dynetic for records up to 12" including M21 cartridge with .0007" Diamond Stylus Audiophile Net: $89.50
Model M21—Studio Stereo Dynetic Cartridge with .0007" Diamond Stylus. Audiophile Net: $49.50
Model N21—Replacement Stereophonic stylus assembly for Model M21, M216, M212; .0007" Diamond tip. Audiophile Net: $24.75
Model A30C—Stereo Cable Assembly for connecting M212 or M216 to preamplifier and amplifiers. Assures maximum performance and greatest ease of installation. Audiophile Net: $ 1.95
Model A29R—Adapter Plate for use with Model M12 or M212 for mounting purposes with the Rek-O-Kut turntable. Audiophile Net $ 2.40



the new
SHURE PROFESSIONAL TONE ARM
for use with any quality cartridge, stereo or monophonic

The Shure M232 (and M236) Professional Tone Arm is a new, premium-quality independent tone arm that accepts practically all cartridges (Stereo and Monophonic and permits their maximum potential performance characteristics to be utilized. Features precision ball bearings at all pivot points, plug-in head with positive-alignment lock, variable height adjustment. Pays for itself in reduced record wear and damage. Ingeniously simple and unprecedented combination of adjustments gives instant, positive, VISUAL control over balance (without altering overall arm length), tracking force (0—8 grams), and overhang. Floats the needle over the record . . . smoothly — without "drag" — without "skip" — without unnecessary (and ruinous) force. Furnished with cable having plug on each end to simplify and speed up installation (eliminates soldering).

SPECIFICATIONS: MODELS M232 — M236 PROFESSIONAL TONE ARMS

NET PRICE: TONE ARM M232, for 12" records ________ $29.95
TONE ARM M236, for 16" records ________ $31.95
Model A23H extra Plug-In Head ________ $ 2.40

FURNISHED ACCESSORIES: Arm rest, mounting template, mounting hardware, 4 ft. cable assembly.

DIMENSIONS: M232 — $12\frac{11}{16}$" long
M236 — 14½" long

NET WEIGHT:	M232	M236
	1 lb.	1⅛ lbs.

NOTE: WHEN REPLACING STYLUS, use only genuine Shure replacement stylus with the certification, "Precision Made by Shure." Inferior imitations can seriously downgrade the performance of the cartridge.

See Pages 157-163 for additional Shure Products.

WORLD ACCLAIMED SHURE Stereo Dynetic

COMPATIBLE PHONGRAPH CARTRIDGES

. . . for full dimensional realism with record changers or transcription arms

Painstakingly tested, proved, perfected—these superb Shure Stereo Dynetic moving-magnet cartridges are designed specifically to satisfy the critical ear of the most discriminating music lover . . . the most exacting audiophile. They separate disc stereo sound channels with incisive clarity. They are singularly smooth throughout the normally audible spectrum . . . and they are superior to other separate stereo cartridges in the re-creation of clean lows, true-to-performance mid-ranges and brilliant highs. Completely compatible!

The M3D Stereo Professional Dynetic is the premium stereo phono cartridge. It reflects quality control of a high order, based on critical tolerances in all performance characteristics.

The M7D Stereo Custom Dynetic is designed for the economy-conscious consumer who wants a quality Stereo Phono Cartridge at moderate cost. The M8D Stereo Standard Dynetic Phono Cartridge. High quality, low cost stereo phono cartridge designed primarily for use with record changers.

PROFESSIONAL

Stereo Dynetic

Model M3D

SPECIFICATIONS

Channel Separation: More than 20db at 1000 cps.
Frequency Response: 20 to 15,000 cps (±3db).
Output Voltage: 5 mv per channel at 1000 cps.
Recommended Load Impedance: 50,000 ohms.
Compliance: Vertical, Lateral 4.0x10-⁶ centimeters per dyne.
Tracking Force: 3 to 6 grams
Inductance: 400 millihenrys.
D. C. Resistance: 400 ohms.
Terminals: 4 terminals. Adaptable to 3 terminal arms.
MOUNTING: Standard ½" centers.
STYLUS: .0007" diamond stylus.

Model M3D Professional Stereo Dynetic cartridge . . . including .0007" Diamond Stylus. Audiophile Net: $45.00
Model N3D Stereo Stylus assembly for M3D, including .0007" Diamond. Audiophile Net: $22.50

CUSTOM

Stereo Dynetic

Model M7D

SPECIFICATIONS

Channel Separation: More than 20db at 1000 cps.
Frequency Response: 20 to 15,000 cps.
Output Voltage: 5 mv per channel at 1000 cps.
Recommended Load Impedance: 47,000 ohms.
Compliance: Vertical, Lateral 3.5x10-⁶ centimeters per dyne.
Tracking Force: 4 to 7 grams.
Inductance: 400 millihenrys.
D. C. Resistance: 400 ohms.
Terminals: 4 terminals. Adaptable to 3 terminal arms.
MOUNTING: Standard ½" and 7⁄16" centers.
STYLUS: .0007" diamond stylus.

Model M7D Custom Stereo Dynetic cartridge . . . including .0007" diamond stylus. Audiophile Net: $24.00
Model N7D Stereo Stylus assembly for M7D, including .0007" diamond. Audiophile Net: $12.00

STANDARD

Stereo Dynetic

Model M8D

SPECIFICATIONS

Channel Sep.: More than 20 db at 1000 cps.
Frequency Response: 30 to 15,000 cps.
Output Voltage: 5 mv / channel at 1000 cps.
Recommended Load Imp.: 47,000 ohms.
Compliance: Vertical, Lateral 3.0 x 10-⁶ centimeters per dyne.
Tracking Force: 5 to 8 grams.
Inductance: 400 millihenrys.
D.C. Resistance: 400 ohms.
Terminals: 4 Adaptable to 3 term. arms.
Mounting: Standard ½ and 7/16" centers.
Stylus: .0007" diamond stylus.
Model M8D Standard Stereo Dynetic Cartridge including .0007" stylus. Audiophile Net: $16.50
Model N8D Stereo Stylus Assembly for M8D including .0007" stylus.. Audiophile Net: $8.25

LABORATORY STANDARD

Stereo Dynetic

CARTRIDGE

Model M3LS

The M3LS Stereo Cartridge is an individually selected and tested laboratory standard M3D Stereo Professional Dynetic Phono Cartradge. Each M3LS, its corresponding box, individual response curve and specifications are serially numbered.

The M3LS is especially suited for:

(1) Laboratory measurements.
(2) Cross-checking & calibration of associated high fidelity components.
(3) Checking master recordings.

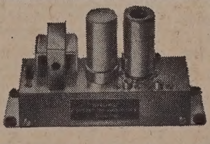
Each cartridge carries a 3-year guarantee (not including needle wear or damage to needle from abuse or mishandling).

SPECIFICATIONS FOR MODEL M3LS (Based on Westrex 713, 714 Record):
CHANNEL SEPARATION: 23 db minimum at 1 KC.; 15 db minimum at 10 KC.
CHANNEL TO CHANNEL BALANCE: 1.5 db maximum (1 KC on monaural record).
FREQUENCY RESPONSE: 30 to 15,000 cps ± 2 db.
OUTPUT VOLTAGE: 5 mv ± 2 db per channel at 1,000 cps.
RECOMMENDED LOAD IMPEDANCE: 47,000 ohms.
COMPLIANCE: 4.4 x 10-⁶ centimeters per dyne minimum; 7.3 x 10-⁶ centimeters per dyne maximum at 80°F.
TRACKING FORCE: 3 to 6 grams.
INDUCTANCE: 400 millihenrys.
DC RESISTANCE: 400 ohms.
TERMINALS: 4 terminals. Adaptable to 3 terminal arms.
MOUNTING: Standard ½" centers.
STYLUS: .0007" diamond stylus.
NET PRICE: Model M3LS — $75.00
Model N3LS Replacement Stylus — $25.00
(NOTE: M3LS must be returned to Shure factory for installation of replacement stylus. At this time, new calibration curve and specifications will be issued as part of replacement stylus charge.)

NEW BROADCAST STEREO EQUALIZER

Compensates output of stereo and monophonic magnetic cartridges for flat (RIAA) and roll-off responses, when used with inputs designed for low impedance microphones.

SPECIFICATIONS:
FREQUENCY RESPONSE DEVIATION (with all Shure Stereo Cartridges): 30 to 20,000 cps ± 1 db. 30 DB CHANNEL SEPARATION: 30 to 20,000 cps. LOW OUTPUT IMPEDANCE: 250 ohms. Provision for 125 & 500 ohms. CIRCUIT: 9-terminal network — 3-terminal input, 4-terminal balance output with two convenient Shield terminals for unbalanced output. INSERTION LOSS: Approximately 28 db. (varies with frequency and impedance). FURNISHED ACCESSORIES: Supplied with escutcheon, mounting bolts, L-shaped mounting bracket, and long control shafts for mounting through varying panel thicknesses up to 1½ inches. DIMENSIONS: 7⅜" x 3½" x 3" overall. 5½" x 3½" x 3" excluding control shafts. NET WEIGHT: 1-4/10 lbs. NET PRICE: $60.00



NEW STEREO LINE PRE-AMPLIFIER

High quality, low noise, stereo line pre-amplifier providing additional gain for use with magnetic stereo phono cartridges and microphones. Additional gain also can be provided from tape recorder outputs on standard pre-amplifier to improve quality of recording. Provides flat output response from 30 to 80,000 cps ± ½ db. Low output impedance permits use of longer cable lengths (up to 50 feet) without loss of gain or deterioration in response when used with magnetic phono cartridges, microphones, etc.

SPECIFICATIONS:
GAIN: 17 db or 7 to 1 (5 mv. input gives 35 mv. output). Circuit change information provided to give one-third and two-thirds output. IMPEDANCE: Input — 47,000 ohms. — Output — 5,000 ohms. HUM & NOISE: 64 db below rated output. DIMENSIONS: 5⅞" x 2⅛" x 3⅜". NET WEIGHT: 2 lbs. NET PRICE: $19.95

See Pages 157-163 for additional Shure Products.

SHURE CRYSTAL and CERAMIC PICKUP CARTRIDGES

Fine Groove Cartridges For 33⅓, 45 RPM Records

MODEL NO.	ILLUS-TRATION	TYPE	LIST PRICE	OUTPUT LEVEL	MIN. NEEDLE FORCE	RESPONSE TO	NET WEIGHT	SHURE NEEDLE NO.
WC20 #	Fig. C	Ceramic	$ 9.50	.58V	2½-3 grams	12,000 cps	2¼ grams	A20S
W21F*	Fig. B	Crystal	8.90	1.5V	6 grams	10,000 cps	4½ grams	A63MG
W31AR	Fig. A	Crystal	7.50	2.1V	7 grams	7,500 cps	5½ grams	A53MG

"Twin-Lever" Cartridges For 33⅓, 45 And 78 RPM Records

MODEL NO.	ILLUS-TRATION	TYPE	LIST PRICE	OUTPUT LEVEL		MIN. NEEDLE FORCE	RESPONSE TO	NET WEIGHT	SHURE NEEDLE NO.
				MG.	STD.				
WC6 §	Fig. H	Ceramic	$14.50	.5V	.7V	4-6 grams	15,000 cps	7 grams	A6S
WC6TM▲ Top Mount	Fig. R	Ceramic	$14.50	.5V	.7V	4-6 grams	15,000 cps	7 grams	A6S
W9 ♭	Fig. J	Crystal	9.50	3.5V	5.0V	11 grams	10,000 cps	7 grams	A9
WC10 §	Fig. H	Ceramic	9.50	.78V	1.0V	7 grams	12,000 cps	7 grams	A10S
WC10D §	Fig. H	Ceramic	34.00	.78V	1.0V	7 grams	12,000 cps	7 grams	A10DS

Turnover Cartridges For 33⅓, 45, And 78 RPM Records

MODEL NO.	ILLUS-TRATION	TYPE	LIST PRICE	OUTPUT LEVEL		MIN. NEEDLE FORCE	RESPONSE TO	NET WEIGHT	SHURE NEEDLE NO.	
				MG.	STD.				MG.	STD.
W22	Fig. D	Crystal	$ 9.50	1.2V	1.4V	8 grams	10,000 cps	4½ grams	A65MG	A61A
W22-T	Fig. E	Crystal	10.00	1.2V	1.4V	8 grams	10,000 cps	12½ grams	A65MG	A61A
WC24	Fig. F	Ceramic	8.75	0.6V	0.6V	8 grams	7,000 cps	4½ grams	A53MG	A52A
WC24-T	Fig. G	Ceramic	9.25	0.6V	0.6V	8 grams	7,000 cps	12½ grams	A53MG	A52A
WC25	Fig. K	Ceramic	9.50	.65V	.7V	8 grams	7,000 cps	6 grams	A65MG	A61A
W72 †§	Fig. L	Crystal	8.50	3V	4V	10-15 grams	5,000 cps	7 grams	A69A	A70A

All Purpose Single Needle Cartridges For 33⅓, 45, 78 RPM Records

MODEL NO.	ILLUS-TRATION	TYPE	LIST PRICE	OUTPUT LEVEL		MIN. NEEDLE FORCE	RESPONSE TO	NET WEIGHT	SHURE NEEDLE NO.
				MG.	STD.				
W26	Fig. B	Crystal	$ 6.50	.87V	1.0V	8 grams	8,000 cps	4½ grams	A67U
WC38	Fig. A	Ceramic	7.50	.9V	.92V	9 grams	10,000 cps	5½ grams	A58U
W66B	Fig. O	Crystal	7.00	2.0V	2.3V	8 grams	4,500 cps	12 grams	A66U
W70	Fig. P	Crystal	4.95	3.0V	3.8V	10-15 grams	5,000 cps	16 grams	A77U

Standard Cartridges For 78 RPM Records

MODEL NO.	ILLUS-TRATION	TYPE	LIST PRICE	OUTPUT LEVEL	MIN. NEEDLE FORCE	RESPONSE TO	NET WEIGHT	SHURE NEEDLE NO.
W56N **	Fig. N	Crystal	$10.00	4.3V	1 oz.	10,000 cps	12 grams	A68D
W68 †	Fig. O	Crystal	7.50	1.6V	1 oz.	4,500 cps	Dual Wt. 25 grams or 12 grams	A62A
W78 ‡	Fig. M	Crystal	5.55	4.0V or 2.0V	1 oz.	6,000 cps	Dual Wt. 25 grams or 12 grams	None

*With .453 Mount for Oak Changer.

**Cutter-Cartridge for Wilcox-Gay "Recordette." Equipped with bifurcated needle.

†Dual-Weight Cartridge. With weight-slug, net weight 25 grams. Without weight-slug, net weight 12 grams.

‡Dual-Weight Cartridge. Has same weight-slug as Model W68, with same net weight differential. In addition, Model W78 has capacitor, furnished as accessory. Without capacitor, output is 4.0 volts. With capacitor, output is 2.0 volts.

§Not a turnover type. Needles are set into tracking position by ingenious "Twin Lever" needle shift system.

#For Columbia 16⅔ Highway Hi-Fi Records.

♭Model W9 has Capacitor furnished as accessory. Without Capacitor output is as shown above. With Capacitor output is 1.7 volts for 33⅓, 45 RPM; 2.5 volts for 78 RPM.

†§Model W72 has a slip-on Capacitor furnished as an accessory. With the Capacitor, output is 2 volts for 78 RPM, 1.5 volts for 33⅓, 45 RPM. Without the Capacitor, output is 4 volts for 78 RPM, 3 volts for 33⅓, 45 RPM.

Δ Top mounting for Magnavox cartridge replacement.

Note: For replacement information, write for free Replacement Manual No. RM-59.

See Pages 157-163 for additional Shure Products.

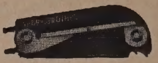


Fig. A

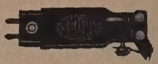


Fig. B

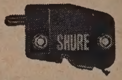


Fig. C

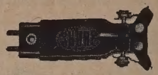


Fig. D

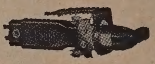


Fig. E

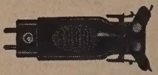


Fig. F

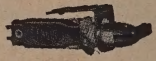
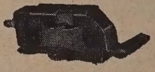


Fig. G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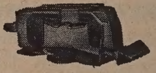


Fig. J

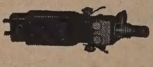


Fig. K

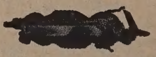
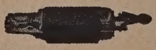


Fig. L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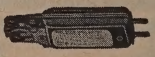
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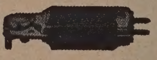
Fig. O

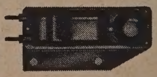
Fig. P

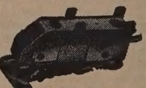
Fig. R

SHURE MAGNETIC RECORDING HEADS

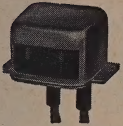

Fig. A
Record-Playback-Erase

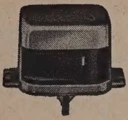

Fig. B
Record-Playback

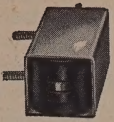

Fig. C
Record-Playback Also Erase

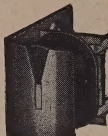

Fig. D
Erase Only

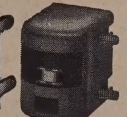

Fig. E
Record-Playback-Erase

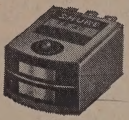

Fig. F
Stereo Record-Playback

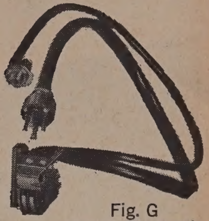

Fig. G
Stereo Playback Monaural Record Erase

TECHNICAL DATA—MAGNETIC TAPE AND WIRE RECORDING HEADS

Model	Recording Speed	Bias & Erase Frequency	Std Recording Level	Operating Bias Current	Erase* Current	Impedance Erase Coil	Impedance Record-Playback Coil
815 (Fig. A)	3.75″ per sec 7.5″ per sec 3.75″ per sec	25KC 50KC DC	.05 ma .05 ma .095 ma	1.25 ma 1.5 ma .35 ma	27 ma 30 ma 25 ma	750 ohm at 25KC 1300 ohm at 50KC 12 ohm	1450 ohm at 1000 cps 1450 ohm at 1000 cps 180 ohm
815H (Fig. A)	3.75″ per sec 3.75″ per sec	25KC DC	.03 ma .056 ma	.72 ma .24 ma	27 ma 25 ma	750 ohm at 25KC 12 ohm	5800 ohm at 1000 cps 556 ohm
816 (Fig. B)	3.75″ per sec 3.75″ per sec	25KC DC	.03 ma .07 ma	.80 ma .26 ma			5500 ohm at 1000 cps 556 ohm
817 (Fig. C)	3 75″ per sec 3.75″ per sec	25KC DC	.06 ma .175 ma	3.6 ma .42 ma			1860 ohm at 1000 cps 180 ohm
TE2-J (Fig. C) Without case	3.75″ per sec 3.75″ per sec 3.75″ per sec	25KC 50KC DC			30 ma 35 ma 25 ma	750 ohm at 25KC 1300 ohm at 50KC 12 ohm	
TE11C-J (Fig. D)	7.5″ per sec 7.5″ per sec 7.5″ per sec	50KC 75KC 100KC			25 ma 26 ma 26 ma	1700 ohm at 50KC 2250 ohm at 75KC 2670 ohm at 100KC	
TR21C-J (Fig. E)	7.5″ per sec	75KC	.040 ma	1.0 ma			4000 ohm at 1000 cps
TR40-J (Fig. F)	7.5″ per sec	75KC	.05 ma	.6 ma			4000 ohm at 1000 cps
TK41-J (Fig. G) Upper Channel	7.5″ per sec	65KC	.08 ma	1.25 ma			1150 ohm at 1000 cps
Lower Channel	7.5″ per sec						3300 ohm at 1000 cps
Erase	7.5″ per sec	65KC			50 ma	2100 ohm at 65KC	

*Erase current chosen for 50 db Erasure of Saturated 400 C.P.S. Recording.

Recording Medium—Minnesota Mining & Mfg. Co., Tape No. 111
Pressure Pad Force (Area—.025 sq. in.) Two Ounces.

RECORDING HEAD DIMENSIONS

Models 815, 815H (Fig. A) & 816 (Fig. B) Width 1.240″ Depth 1.031″ Height .695″	Model TE2-J (Fig. C) Width .516″ Depth .830″ Height .715″	Model TR21C-J (Fig. E) Width .600″ Depth .821″ Height .775″
Model 817 (Fig. C) Width .552 Depth .830″ Height .765″	Model TE11C-J (Fig. D) Width .366″ Depth .641″ Height .468″	Model TR40-J (Fig. F) Width .633″ Depth .875″ Height .469″

NUMERICAL LIST OF SHURE TAPE HEADS USED IN ORIGINAL EQUIPMENT

Model	ILLUSTR.	LIST PR.	DESCRIPTION	OPERATING DATA
812	Not Shown	$20.00	Wire Recording Head.	Not Shown
815	Fig. A	15.00	Upper track recording. Low impedance record-playback coil.	See 815
815H	Fig. A	15.00	Upper track recording. High impedance record-playback coil.	See 815H
816	Fig. B	12.00	Upper track recording. High impedance record-playback coil.	See 816
817	Fig. C	9.00	.093″ record track width. Low impedance record-playback coil.	See 817
TE2-J	Fig. C	7.00	Erase head .116″ erase track width.	See TE2-J
TE11C-J	Fig. D	12.00	Erase head .132″ erase track width.	See TE11C-J
TK41-J	Fig. G	57.50	Stereo Head Kit to convert magnetic tape recorder to sterephonic playback and monaural recording. For Revere Models T-10, T-11, TR-20, T-700, T-700D, TR-800, TR-800D, T-900, TR-1000, T-1100, TR-1200, T-70,000. For Wollensak Model T-1500.	See TK41-J
TR5B-J	Fig. A	17.00	Upper track recording with 14-inch completely insulated leads. Cinch plug attached.	See 815*
TR5N-J	Fig. A	16.00	Special Shield. Special Leads. Special Plug.	See 815*
TR5Z-2J	Fig. A	18.50	Upper track recording. High impedance record-playback coil.	See 815H
TR8-J	Fig. B	12.00	Lower track recording. Low impedance record-playback coil.	Not Shown
TR16-J	Fig. C	9.00	.093″ record track width. High impedance record-playback coil.	Not Shown
TR21C-J	Fig. E	14.00	.093″ record track width. Record-playback coil.	See TR21C-J
TR26-J	Fig. C	11.00	.093″ record track width (¼ mil gap). High impedance record-playback coil.	Not Shown
TR40-J	Fig. F	35.00	Sterephonic record/playback head. Two tracks .074″ width (0.2 mil gap).	See TR40-J

*Operating data only. 815 does not replace

See Pages 157-163 for additional Shure Products.

The greatest beauty of Thorens famous quality... *you can afford it!*

No need to hesitate, you *can* afford Thorens famous quality. You *can* have music as it's meant to be heard. You *can* relax with Thorens *unique* one year guarantee. There's a Thorens model that fits handily into any budget.

Whether you know a lot or a little about high-fidelity equipment, you'll particularly enjoy the courteous and knowledgeable way a Thorens franchised dealer *earns* your confidence. Each Thorens dealer is carefully selected for knowledge, ability and integrity. They'll make buying *your* Thorens almost as much fun as owning it. Shop around this page for a few of the outstanding features and then stop in and *see* all of them for yourself. O.5

Guaranteed for one full year. Sold only through carefully selected franchised dealers.

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SPRING-POWERED SHAVERS • LIGHTERS

New Hyde Park, N.Y.

MATCHLESS!

TD-124. All four speeds. Plays any record. Easy-to-use lighted strobe sets exact speed for best musical reproduction. Completely silent. Many more exclusive features... only $99.95 net.

MORE ECONOMICAL!

TD-134. The finest 4-speed manual turntable you can buy. Includes tone arm. Elimination of semi-automatic feature saves you another $15. You can also save up to $30 on the tone arm. Look at TD-134 ... only $59.95 net.

TD-184
TD-124
TD-134
TDK-101

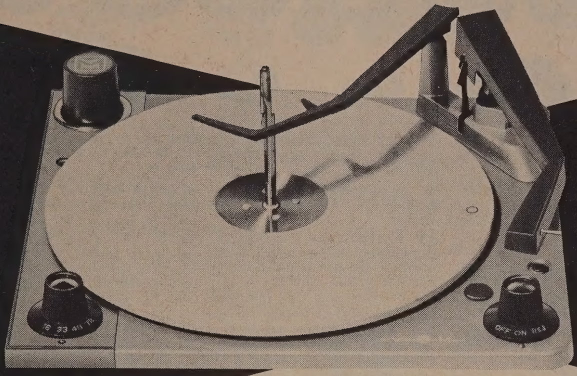
MARVELOUS!

TD-184. Includes tone arm and simple dialing system that lets you select records and start turntable. All 4 speeds. Save $20 on turntable, up to $30 on tone arm. Look at TD-184 ... only $75.00 net.

MOST ECONOMICAL!

TDK-101. You can assemble this Thorens turntable yourself. The superb quality of the components makes all your work worthwhile. Look at Thorens TDK-101 ... only $47.50 net.

PROFESSIONAL COMPONENTS from . . . V-M



The Deluxe 'stere-o-matic'® Record Changer!

— combines true transcription turntable fidelity with automatic changer convenience

AGAIN an exclusive "FIRST" from V-M!

Model 1586 with high impact plastic base *includes stereo cartridge and diamond needle!* $56.00* List

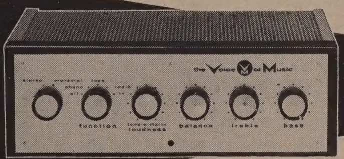
This revolutionary new record changer is a perfect expression of V-M's professional engineering. Transcription-Turntable characteristics make the Deluxe 'Stere-O-Matic'® the finest instrument on the market.

- **NEW** AUTOMATIC MANUAL-PLAY feature returns tone arm to rest post automatically after single-record play!
- **NEW** PROFESSIONALLY MASSIVE 11″ TRANSCRIPTION-TYPE TURNTABLE affords perfect balance, practically eliminates microphonic tendencies.
- **NEW** EXTRA LONG DYNAMICALLY BALANCED NON-RESONANT TONE ARM WITH FINGER LIFT reduces the possibility of having uneven needle pressure on the walls of the record groove; affords easy, precise placement of tone arm.
- **NEW** MICRO-PRECISION TURNTABLE BEARING SYSTEM for closer running clearance of oilite bearings plus an almost frictionless TEFLON thrust bearing.
- **NEW** V-M STYLING pleases everyone with its sparkling, functional appeal.

Model 1571, with DIAMOND CARTRIDGE, is Model 1586 less base **$50.00*** List

Model 1572 (4-pole motor and plug-in head for magnetic cartridges) **$50.00*** List

Model 1587 (Model 1572 on high impact plastic base.) **$56.00*** List



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Stock and Sell These Other Professional V-M Components

PRECISION-BUILT AC STEREO AMPLIFIER with built-in preamplifier and integrated controls. Dual-channel, push-pull output of 28 watts (peak); 14 watts each channel. Complete input panel with stereo inputs for RADIO, PHONO, or TAPE, and a monophonic input for TV. Stereo output sockets for tape recorder. Completely compatible for use in custom installations. V-M MODEL 1404 — **$89.95*** List

DELUXE FM-AM TUNER provides unlimited versatility in radio entertainment. Tuning knobs for all standard broadcasting frequencies and for selecting FM with or without Automatic Frequency Control, AM, or FM Multiplex with adaptor. V-M MODEL 1405 — **$99.95*** List

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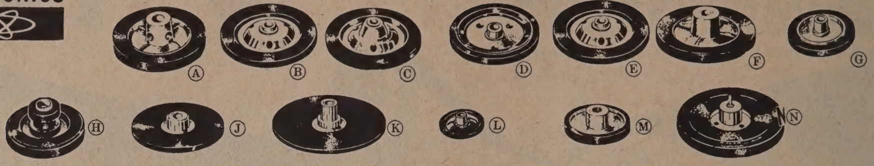
V-M CORPORATION • BENTON HARBOR, MICHIGAN • World Famous for the Finest in Record Changers, Phonographs and Tape Recorders

Walsco ELECTRONICS

PHONO DRIVES



(A) IDLER WHEEL—2⅛″ O.D. With Hub. Used on Webcor Wire Recorders.
Cat. No. 1436 List $2.00

(B) IDLER WHEEL—2⅛″ O.D. With bushing. Used on GE, Motorola, Philco, Webcor. Similar to Item No. 1440 but has .160″ tire thickness.
Cat. No. 1437 List $1.75

(C) IDLER WHEEL—2⅛″ O.D. With bushing. Used on Columbia, GE, Motorola, Webcor.
Cat. No. 1438 List **$1.75**

(D) IDLER WHEEL—2″ O.D. With bushing. For use on Webcor. Model 1134, 1136, 1151, 1121-1.
Cat. No. 1439 List **$1.50**

(E) IDLER WHEEL—2⅛″ O.D. Comes with bushing. Similar to Item No. 1437 but has .140″ tire thickness at the outer edge. Use on Webcor Model 1135 record changer.
Cat. No. 1440 List **$1.75**

(F) IDLER WHEEL—2⅛″ O.D. Used on most Webcor tape recorders.
Cat. No. 1441 List **$2.50**

(G) IDLER WHEEL—1½″ O.D. With bushing. For use with Philco & Webcor.
Cat. No. 1443 List **$1.00**

(H) MOLDED IDLER WHEEL — RCA 45 RPM. For use with RCA Series RP168 & RP190.
Cat. No. 1447 List **$1.25**

(J) IDLER WHEEL—2″ O.D. For use with Collaro record changers in the 520 Series.
Cat. No. 1448 List **$2.75**

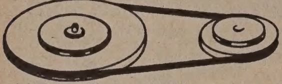
(K) IDLER WHEEL—2½″ O.D. For use with all Collaro record changers in the 54 and 530 Series.
Cat. No. 1449 List **$2.75**

(L) IDLER WHEEL—1″ O.D. For use with Crescent. In Models of 550 Series.
Cat. No. 1450 List **$1.50**

(M) IDLER WHEEL—1⁹⁄₁₆″ O.D. For use with VM Models 920 and 990, and Silvertone record changers.
Cat. No. 1452 List **$1.00**

(N) IDLER WHEEL—2⅝″ O.D. For use on Garrard Model 301 Transcription Turntable only, Manufacturer's Part No. 51858.
Cat. No. 1480 List **$2.95**

RECORDER DRIVE BELTS
ROUND BLACK RUBBER DRIVES



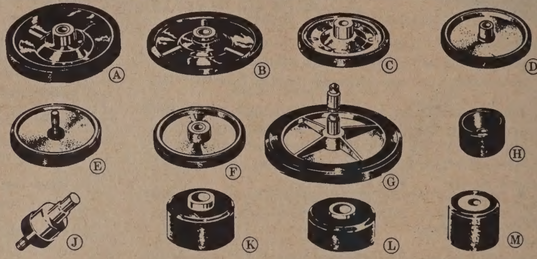
Precision ground to exacting tolerances for positive, non-slipping drive action. Will eliminate "wow" and "rumble".

Cat. No.	Insd. Circum.	Thickness	Used On	List
1410-06	6.2″	.139″	Model VM-700, 701, 710, 711, 714 Tape Recorders	**$ .60**
1410-07	7.4″	.139″	RCA SRT 301, 401, 402, 403, Wilcox-Gay 3A10, 3A11	**.70**
1410-08	8.6″	.139″	Pentron, Crestwood & other tape recorders	**.70**
1410-10	10.6″	.139″	Crescent and other tape recorders	**.80**
1410-12	12.0″	.093″	Ampro and most Revere recorders	**.80**
1410-14	14.5″	.139″	Most Revere Recorders	**1.50**
1410-15	15.3″	.139″	Webcor Tape Recorders	**1.50**
1410-18	18.1″	.139″	Ampro Tape Recorders	**2.00**
1410-20	20.4″	.139″	Ampro Tape Recorders	**2.50**
1410-21	21.1″	.139″	Ampro, Gen. Ind., Webcor & other Tape Recorders	**2.50**
1410-50	10.75″	.085″	Webcor & Revere	**.90**
1410-51	11.3″	.063″	Viking Tape Recorders	**1.65**
	5.8″	.139″	Replaces Belts on	
1410-52	4.3″	.139″	Webcor 11 x 1736 pkg.	**1.30**
1410-53	6.5″	.210″	Revere Tape Recorders	**.70**
1474	9.8″	.139″	Crestwood Tape Recorders	**.85**

Made of a tough, durable, specially treated fabric, to give years of service. Gives smooth, silent, non-slip action.

Cat. No.	Width	Inside Circum.	Used On	List
1409-02	⁵⁄₁₆″	17″	Pentron Tape Recorders	**2.65**
1409-03	⁵⁄₁₆″	12¼″	Pentron, Crescent & other Tape Recorders	**2.65**
1409-04	⁵⁄₁₆″	12¹³⁄₃₂″	VM 700, 701, 710, 711, 714 Tape Recorders	**2.75**
1409-05	³⁄₁₆″	17″	Webcor Tape Recorders	**2.75**

CAPSTAN PRESSURE ROLLER—1″ O.D. For use on many Pentron tape recorders.
Cat. No. 1488 List **$2.00**



CLUTCH PLATE For use on Pentron Tape Recorders only.
Cat. No. 1489 List **$1.10**

(A) IDLER WHEEL—2½″ O.D. With bushing. Use on Gen. Ind., Seeburg, and other record players.
Cat. No. 1430 List **$1.65**

(B) IDLER WHEEL—2½″ O.D. Used on Webcor Model 110 record players. Replaces Manufacturer's Part No. 45P1530.
Cat. No. 1431 List **1.65**

(C) IDLER WHEEL—2″ O.D. Use on Admiral, Columbia, Crescent, GE, Motorola, Philco, RCA, Seeburg, Silvertone and VM.
Cat. No. 1432 Bushing I.D.—.215 List **$1.00**
1487 Bushing I.D.—.183
Used on older
Silvertone, etc. List **$1.40**

(D) IDLER WHEEL—2″ O.D. With bushing. Use on VM and GE.
Cat. No. 1433 List **$1.10**

(E) IDLER WHEEL—2″ O.D. With Shaft. Use on Admiral, Crescent, Motorola, Philco, RCA, Seeburg, Silvertone and VM.
Cat. No. 1434 List **$1.20**

(F) IDLER WHEEL—2″ O.D. With bushing. Use on Milwaukee Stamping, Philco, Zenith and Westinghouse.
Cat. No. 1435 List **$1.10**

(G) DRIVE WHEEL—3″ O.D. For use on Zenith Cobramatic Changers. Replaces Manufacturer's Part Nos. S-16922 and S-21754, which are inter-changeable.
Cat. No. 1473 List **$4.25**

(H) DRIVE WHEEL—1″ O.D. For use on Crescent changers of the 550 series.
Cat. No. 1451 List **$1.55**

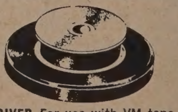
(J) 3-STEP DRIVE SLEEVE Used on Webcor Model 135, 136 and other late record changers.
Cat. No. 1469 List **$1.60**

(K) PRESSURE ROLLER—⅞″ O.D. For use with certain Webcor tape recorders.
Cat. No. 1455 List **$2.30**

(L) PRESSURE ROLLER—⅞″ O.D. For use on certain Webcor tape recorders, 220 series and 2614, 2615.
Cat. No. 1482 List **$1.75**

(M) PRESSURE ROLLER—¾″ O.D. For use with VM Model 700, 701, 710, 711, 714 tape recorders.
Cat. No. 1458 List **$1.65**

PRESSURE ROLLER—¾″ O.D. For certain RCA & Wilcox-Gay tape recorders.
Cat. No. 1457 List **$2.50**



TAKE-UP DRIVER For use with VM tape recorder Model 700.
Cat. No. 1484 List **$4.00**

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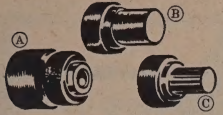
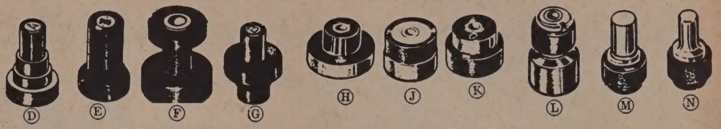
Walsco ELECTRONICS PHONO DRIVES





(A) Cat. No. 1460/1470 78 RPM List **$1.30**

(B) Cat. No. 1461/1471 45 RPM List **$1.25**

(C) Cat. No. 1462/1472 33⅓ RPM List **$1.25**

1460, 1461 and 1462 are a Turret Drive group that is used on Crescent, GE, Motorola, RCA, VM and other record changers.

The 1470 series is used on RCA, VM and other record changers.

NOTE: Drives No. 1460, 1461 and 1462 are the same as No. 1470, 1471 and 1472 except that the 1460 series is approximately $\frac{1}{64}$″ larger in rubber diameter than the 1470 series. If model number of changes or manufacturer's part number is not known, use 1460 series. For most purposes, these two series are interchangeable.

(D) 33 RPM PULLEY—½″ O.D. Used on RCA, R.P.-205/190 series motors replaces Mfg.'s Part No. 102941.
Cat. No. 1495-01 List **$1.25**

(E) 45 RPM PULLEY—½″ O.D. Used on RCA, R.P.-205/190 series motors. Replaces Mfg.'s Part No. 102942.
Cat. No. 1495-02 List **$1.25**

(F) 78 RPM PULLEY—½″ O.D. Used on RCA, R.P.-205/190 series motors. Replaces Mfg.'s Part No. 102943.
Cat. No. 1495-03 List **$1.30**

(G) 16 RPM PULLEY—$\frac{9}{16}$″ O.D. Used on RCA, R.P.-205/190 series motors. Replaces Mfg.'s Part No. 102944.
Cat. No. 1495-04 List **$1.30**

(H) Cat. No. 1463 78 RPM List **$2.50**
Standard Pack: 12

(J) Cat. No. 1464 45 RPM List **$2.50**
Standard Pack: 6

(K) Cat. No. 1465 33⅓ RPM
Standard Pack: 6
List **$2.50**

Above 3 items are turret drives for GE and Webcor record changers.

(L) Cat. No. 1466 78 RPM List **$1.35**
(M) Cat. No. 1467 45 RPM List **$1.35**
(N) Cat. No. 1468 33⅓ RPM List **$1.35**

For use on Crescent, Motorola, VM, RCA and other record changers.

(A) IDLER WHEEL—1$\frac{11}{32}$″ O.D. This is a molded rubber wheel for use on RCA Series RP-199 record changers.
Cat. No. 1454 List **$1.95**

(B) IDLER WHEEL—1″ O.D. For use with all Zenith Cobra-Matic record changers.
Cat. No. 1459 List **$2.95**

(C) CAPSTAN IDLER—1¾″ O.D. For use with VM tape recorders in the 700 series.
Cat. No. 1485 List **$1.25**

(D) IDLER WHEEL—2″ O.D. Used on certain Eicor Tape Recorders and Silvertone Record Changers.
Cat. No. 1475 List **$1.85**

(E) IDLER WHEEL—2″ O.D. For use with certain Pentron Tape Recorders.
Cat. No. 1483 List **$1.75**

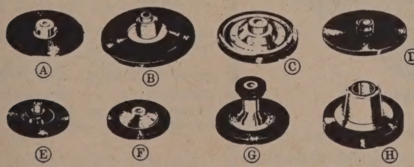
(F) IDLER PULLEY—1⅝″ O.D. This is a molded rubber wheel for use on VM Record Changers in 1200 series. Also used on other types.
Cat. No. 1453 List **$3.05**

(G) IDLER PULLEY—$\frac{15}{16}$″ O.D. A molder rubber wheel for use with VM Record Changers in the 1200 series having 4-pole motors.
Cat. No. 1456 List **$3.05**

(H) IDLER PULLEY—1⅝″ O.D. This is a molded rubber wheel for use on certain VM record changers.
Cat. No. 1486 List **$3.05**

(J) INTER WHEEL—2″ O.D. For use with Garrard Model RC-80 Record Changers.
Cat. No. 1444 List **$2.75**

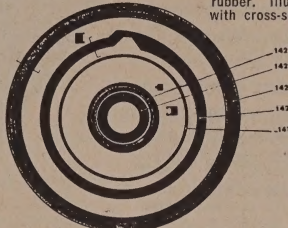
(K) INTER WHEEL—2″ O.D. Has a ball-bearing hub cap. For use with Garrard T & TA record players.
Cat. No. 1445 List **$2.50**

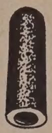


WALSCO TIRES & BELTS

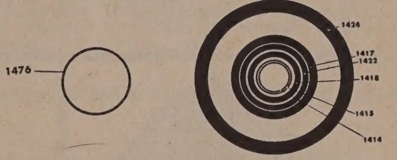
Cat. No.	I.D.	Wall Thickness	Length	Used on	List
1414	⅝″	$\frac{1}{32}$″	¼″	Admiral, GE, VM	$ .28 per pair
1415	$\frac{21}{32}$″	$\frac{1}{32}$″	¼″	Garrard, GE, Philco	.25 per pair
1416	2¾″	$\frac{1}{16}$″	$\frac{3}{16}$″	Zenith	.30 each
1417	1½″	$\frac{5}{32}$″	$\frac{3}{16}$″	Admiral, Garrard	.25 each
1418	⅞″	⅛″	$\frac{3}{16}$″	Genl. Ind., Wilcox-Gray	.20 each
1422	1$\frac{7}{32}$″	⅛″	$\frac{3}{16}$″	Genl. Ind.	.20 each
1424	2⅞″	¼″	¼″	Admiral, Crescent, RCA	.55 each
1476	$\frac{15}{16}$″	$\frac{1}{32}$″	¼″	Admiral	.30 per pair

BELTS & CAM TIRES — Special Shapes. These belts and tires are made of highest quality abrasion-resistant neoprene rubber. Illustrations are actual size with cross-sections shown on tires.





INDEX FINGER CUSHION
Used on Webcor 100, 121, 1124 series. Also on Webcor 110 and 114 series.
Cat. No. 1419
List **$ .30** pr.

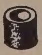


BELTS AND CAM TIRES

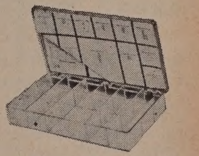
Cat. No.	I.D.	Used On	List
1421	1$\frac{5}{32}$″	Miracord	$ .70
1423	$\frac{11}{16}$″	RCA	.25
1426	4½″	GE & RCA	1.10
1429	3¼″	RCA Cam	1.10

RUBBER BUMPERS—Used on VM Record Changers.
Cat. No. 1411
List **$ .40** pr.

WALSCO RECORD ARM SLEEVE — For Garrard. Protects record arm and reduces vibration. Resilient, long-lasting neoprene rubber. (2 required).
Cat. No. 1412
List **$ .25** pr.



WALSCO VELOCITY TRIP — For Webcor, precision-molded to manufacturers specifications.
Cat. No. 1413
List **$ .30** pr.



PHONO DRIVE INVENTORY CASE — The Walsco Phono Inventory Case enables dealers to give better service to their customers by providing space for 90% of all Phono Drive Replacement needs. Combination loading chart and Manufacturer's Cross Reference chart.
Cat. No. 1403 List **$2.50**

WALSCO PHONO HARDWARE KIT — Kit contains over 60 parts, including phono jacks and plugs, assorted screws, spacers and springs, in transparent plastic box.
Cat. No. 1497 List **$2.75**

TOP PERFORMERS...

1961 Webcor Stereo-Diskchangers!

Series 1031

Webcor Imperial Hi-Fi Stereo-Diskchanger

Golden beige and brown

Webcor's finest—plays all 4 speeds, stereo and standard records. 10″ and 12″ 33 rpm records may be intermixed in any sequence. Has jam-proof mechanism—anti-rumble ribs—heavy 9″ rubber matted turntable—automatic shut-off—top-of-arm stylus pressure adjustment—positive manual control.

Model 1031-1—Sonotone Stereo ceramic turnover cartridge. .7 mil Diamond tip for Stereo and standard microgroove records. 3 mil Sapphire tip for 78 rpm records. 4-pole, 4-coil motor. Output: .4 volts per channel at 1,000 cycles.

Model 1031-21—Same as model 1031-1 except has Shure Stereo magnetic cartridge. Output: 10 millivolts per channel at 1,000 cycles. Dual channel pre-amplifier required.

Model 1031-27—Two plug-in heads accommodate most stereo cartridges. ⅞″ spacing to rear of mounting holes and ½″ in front of mounting holes. 1″ wiring on pins for easy cartridge hook-up. 4-pole, 4-coil motor. Minimum Mounting Board Dimensions: 13½″ deep x $14\frac{11}{16}$″ wide x 9½″ high.

Series 1041

Webcor Custom Hi-Fi Stereo-Diskchanger

Golden beige and brown

Budget-price Stereo-Diskchanger has most exclusive Webcor features: anti-rumble ribs—automatic shut-off and positive manual control.

Model TR-1041-1—Astatic ceramic Stereo Cartridge with turnover stylii. .7 mil Diamond tip for Stereo and standard microgroove records. 3 mil Sapphire tip for 78 rpm records.
Output: .4 volts per channel at 1,000 cycles.

Model TR-1041-21—GE Stereo magnetic cartridge with .7 mil Diamond tip. 4-pole motor.
Output: 10 milivolts per channel at 1,000 cycles.

Model TR-1041-27—Two plug-in heads that accommodate most cartridges. 1″ wiring on pins for cartridge hookup. ½″ mounting centers. ⅞″ spacing to rear, ½″ spacing in front of mounting holes.

Series 1042

Webcor Custom Plug-in Hi-Fi Stereo-Diskchanger

Golden beige and brown

Same as Model 1041—except it is mounted on a handsome base pan, and is ready to plug into any amplifier-speaker system equipped with phono input jacks.

Model TS-1042-1—Same as model 1041-1 except diskchanger is mounted on attractive metal base pan. AC lead is 72″ outside pan.

Model TS-1042-21—Same as model 1041-21 except mounted on attractive metal base pan and AC lead is 72″ outside pan.

Dimensions: 14¾″ wide, 13¼″ deep, 9½″ high.

Economy Models

Model 1041-50

Model 1041-50 has Ceramic Cartridge with .7 mil Sapphire tip for microgroove records, and 3 mil Sapphire tip for 78 RPM records.

Model 1041-51

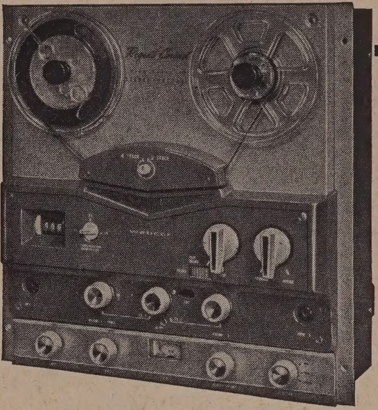
Ceramic Cartridge with .7 mil Diamond tip for microgroove records, and 3 mil Sapphire tip for 78 RPM records.

45 RPM record inserts not included with-50 or-51.

Installation: 2 fono cables with 2 pin plugs. AC cord and plug. Pick up and AC leads 36″ from clamp. Templates. Operates on 110-120 volts, 60 cycles AC.

WEBCOR, INC., Chicago 39, Illinois

2 New Webcor Stereo Components!



Stereofonic High Fidelity
WEBCOR TAPE DECK
Regent Coronet Model 2150

Here is the eagerly awaited tape deck version of the top-rated recorder in the Webcor line. The Regent Coronet is loaded with professional features, yet priced for home use. Records 4 and 2 track stereo tapes—plays back 2 and 4 track stereo tapes—records monaurally on all 4 tracks—in all three speeds. May be installed vertically or horizontally—a versatile, durable heart of the home sound system.

Audiophile Net: $219.95

Frequency Response: Normal voice frequency at 1⅞ IPS; 50 to 7KC ± 2DB at 3¾ IPS; 40 to 14KC ± 3DB at 7½ IPS.

Two Pre-amplifiers: Pre-amplifiers built-in for each channel. Cathode follower output for each Channel. Output from "O" level recording—2 volts.

Wow and Flutter: 0.2% at 7½ inches per second.

Signal to Noise Ratio: Better than 50 DB per channel.

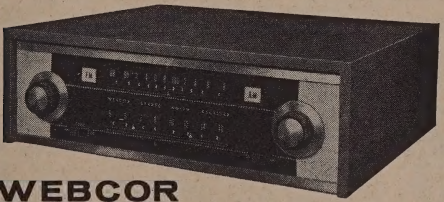
Tubes: 6 tubes including dual selenium rectifier; DC filaments—1st and 2nd stages.

Power Requirements: 117 volts; 60 cycles AC; 90 watts.

Dimensions: 7½" high x 15" wide x 15" deep.

Shipping Weight: 26 lbs.

SPECIAL FEATURES: Two or four track Stereo record and playback. 4 pole, heavy duty electronically balanced motor. Three speeds. Belt driven tape transport. Professional type editing key. Record safety lock. Automatic shut-off of amplifier, and recorder mechanism. VU meter indicates correct recording level for each channel. Monitor-Volume control. Numerical type tape counter. Individual volume controls. "Dual-gang" Bass and Treble controls. Function switch. 2 Microphone Inputs. Hi-Level Input jacks. Ch. 1 and Ch. 2. Ext. Amp. and Ext. Speaker Output jacks.



WEBCOR
AM-FM STEREO TUNER
Model 304-1

Webcor's first entry in the stereo tuner field is a precision-engineered instrument of advanced functional design. Pulls in sharply defined signals on AM and FM, and prevents FM station drift with AFC. A flip of the switch brings in the living sound of stereo simulcasts.

Audiophile Net: W 304-1 $109.95
Audiophile Net: N 304-1 $99.95

FM SPECIFICATIONS: 3½ μV for 20 DB quieting.

Selectivity—200 KC, 3 DB down.

Negligible FM drift with Automatic Frequency Control.

Antenna input—300 ohms.

Hum noise—60 DB below 100% modulation.

Frequency response—20 CPS—20,000 CPS ± 1 DB.

FM circuitry: Pentode RF amp.; triode mixer; 2—I F amplifiers; 1 Limiter; Balanced Ratio Detector.

AM SPECIFICATIONS: Sensitivity — 10 μV for 20 DB signal to noise terminal input; Selectivity—6 DB down at 11.5 KC; Built-in Ferrite rod antenna; provision for external antenna.

Power Requirements: 117 volts; 60 cycles AC; 45 watts.

Tubes: 9 tubes, 2 silicon rectifiers, 1 germanium diode.

Controls: Separate AM and FM tuning knobs. On-Off switch. FM, FM-AM Stereo, AM selector switch. Push control for AFC defeat.

Colors: Walnut, W 304-1; Neutral, N 304-1.

Dimensions: 14¼" wide x 12¼" deep x 4⅜" high.

Shipping Weight: 17 lbs.

WEBCOR IS BUILT.....with an ear to the future

See it!... Hear it!... To Believe it!... The Finest in Sound with

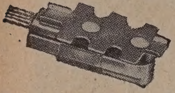
WEATHERS STEREO-HIGH FIDELITY SYSTEMS

MC-1 Stereo Pickup System

Features the StereoRamic caltridge and the MicroTouch Tonearm fully assembled. Hardware and instructions are supplied for mounting the pickup on any manual turntable. Leads plug directly into the magnetic phono input of all preamplifiers.
Audiophile Net: $55.95 with Diamond; $48.25 with Sapphire.

MT-5 Tonearm

Specifications:
Arm Bearing System: Viscous Damping
Tracking Force Easily adjusted 1 to 8 grams
Finish..............Ebony with gold trim
Over-all Length ....13 inches
Pivot to Stylus Tip Length..........9¾"
Recommended Overhang................½"
Audiophile Net: $38.50



StereoRamic Cartridge C-501

Here's an entirely new development in ceramics designed for use in changers and other tonearms. Outperforms even the finest magnetic pickups.

Specifications:
Frequency Response
20-20,000 cps, ±4 db
Compliance 10 x 10^{-6} cm/dyne
Dynamic Moving Mass 1.0 milligram
Tracking Force
1-2 grams—Professional arms
2-6 grams—changers and other type arms
Stylus 0.7 mil diamond or sapphire
Separation 25 db
Signal-to-noise Ratio—60 db
Output per channel 15 mv. into Magnetic Phono Input 7 cm/sec

Audiophile Net:
C-501-D....................................Diamond $17.50
C-501-S....................................Sapphire $ 9.75

Harmony Stereo Speaker

A radically new principle in speaker design. Combines the ultimate in sound reproduction with economy of space. Specifically designed for stereo, the Harmony provides unusually smooth, natural sound from 70 to 15,000 cps. Can be used in pairs or singly as an additional stereo speaker.
Size 3⅝ x 9⁷⁄₃₂ x 11
Audiophile Net:

SE-50—Single	$29.75	SE-55—Bass	69.50
Pair	59.50	SE-60—Trio	119.50

ML-1 Synchronous Turntable

The world's first light-weight turntable utilizing all the advantages of lightness and eliminating the disadvantages of weight and mass. Constructed of aluminum, it is suspended on the quietest, most friction-free bearing yet devised. Requires so little torque, an extremely small 12 pole synchronous motor drives it at constant speed regardless of line or load variation.

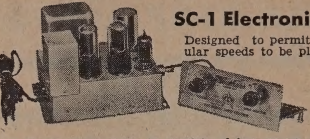
Specifications:

Turntable Speed
33⅓ rpm only (4 speeds optional with SC-1 Electronic Speed Control)
16⅜" x
15⅜" x 2½"

Finish ....Ebony and gold
Rumble ....—70 db (NARTB)
Flutter 0.1%
Wow 0.15%
Audiophile Net $59.95
Without Base $49.95

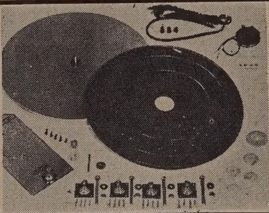
K-601 StereoRamic Record Player

Completely assembled, ready to plug into an existing audio system. Its 2.0 gram tracking force and 20-20,000 cps flat response provide superior performance with all types of stereo records, both on the market and under development. Includes Weathers StereoRamic Cartridge with either a sapphire or diamond stylus, ML-1 manual Turntable with Discushion float, ebony base in a smooth satin finish with gold anodized turntable and mounting plate.
Audiophile Net:
K-601-D Diamond Stylus $119.50
K-601-S Sapphire Stylus 111.75



SC-1 Electronic Speed Control

Designed to permit records of all four popular speeds to be played on the ML-1 turntable. The Speed Control is a transistor oscillator and a vacuum tube power amplifier. The oscillator section is 5-3/4" x 2-1/4" x 4" and can be mounted directly in the turntable base. It consists of four coarse adjustments, corresponding to the 16-2/3, 33-1/3, 45 and 78 rpm speeds, and a vernier adjustment for continuous fine tuning. By using electronic techniques to vary the turntable's speed, all noise and backlash associated with mechanical linkage are eliminated. Available fully assembled or in kit form.
Audiophile Net
Fully assembled with its own 6-watt amplifier____________________$74.50
KSC-1—In kit form with its own 6-watt amplifier; contains all parts and instructions for wiring and installation____________ 49.50



KL-1 Turntable Kit

For the "Do-it-yourself" audiophile, this kit is identical with the ML-1 Synchronous Turntable without the motor board and base, and can be assembled with only pliers and a screwdriver. No soldering is necessary.
Audiophile Net $34.50
P-808 Motor Mounting Board & Plastic Foam Base 5.95

P-675 Stylus Gauge

A simple and accurate instrument which allows measurements up to 10 grams. Used for periodic checking of stylus pressure to insure better performance and longer life from stereo records.

Audiophile Net $2.00

P-684 Discushion

A new concept in record mats, designed to protect delicate record surfaces from scratches and contamination. Graduated height ridges permit the record to be suspended by the blank outer rim with no part of the playing surface touching any supporting area.—Audiophile Net_____$3.95

PRICE LIST

Stereo Equipment

C-501-D	Stereo-Ramic Cartridge with diamond stylus	17.50
C-501-S	StereoRamic Cartridge with sapphire stylus	9.75
K-601-D	Record Player fully assembled with ML-1 Turntable, MT-5 Tonearm and C-501-D Cartridge	119.50
K-601-S	Same as above with C-501-S Cartridge	111.75
MC-1-D	Complete StereoRamic Pickup System with MT-5 Tonearm and C-501-D and leads	55.95
MC-1-S	Same as above with C-501-S with leads	48.25
ML-1-WB	Synchromatic Drive Turntable with Base	59.95
ML-1-LB	Same as above — less Base	49.95
MT-5	Tonearm wired for StereoRamic Cartridge	38.50
SC-1	Electronic Speed Control with 6-watt amplifier	74.50

Kits

KL-1	Turntable Kit without Base or Platform	34.50
KSC-1	Electronic Speed Control Kit with 6-watt amplifier	49.50

Replacements and Accessories

		Audiophile Net
P-606	StereoRamic Sapphire Stylus	4.50
P-607	StereoRamic Diamond Stylus	12.75
P-675	Stylus Force Gauge (1-10 grams)	2.00
P-680	Viscous-damped Pivot Assembly	15.00
P-681	Viscous Damping Fluid for Tonearm	1.95
P-682	Bearing Lubricant for ML-1 Turntable	1.95
P-684	12" Turntable Pad — "Discushion"	3.95
P-685	Turntable "Coverlet"	2.50
P-800	Replacement Motor	12.00
P-801	Replacement Motor Drive Wheel	.60
P-802	Aluminum Platter	9.00
P-803	Spring Assemblies (each)	.90
P-804	Base with Switch	12.00
P-805	Tempered Steel Spindle	1.50
P-806	Aluminum Seismic Platform (gold only) Motor Mounting Plate	12.00
P-807	Mercury Vial for Off-On Turntable Switch	1.50
P-808	Mounting Board for KL-1	5.95

Stereo Speakers

SE-50	"HARMONY" Speaker: Single Cordova and Ebony	29.75
SE-55	Hide Away Bass	69.50
SE-60	"HARMONY" Trio Cordova and Ebony	119.50
XE-10A	R. C. Crossover Network	15.00
SE-75	"FIESTA" Speaker: Blonde	62.50
	Mahogany ___ 59.95 Walnut	59.95
SE-100	"DECORATOR" Speaker: Blonde	139.00
	Walnut ___ 135.00 Mahogany	135.00

All prices subject to change without notice.
Prices slightly higher West Made in U.S.A.

WEATHERS INDUSTRIES

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1. **Manufacturer's Catalog Numbers and Page Numbers.**
2. **The Year and Edition of This MASTER.**

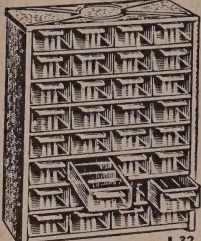
This will avoid confusion and expedite delivery.

Thank you!

The
Radio-Electronic
MASTER

Akro-Mils Parts Cabinets

J SERIES CABINETS WITH JD-1 DRAWER


J-32

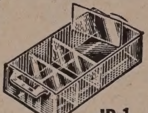
DRAWERS: 2¾" w. x 1 7/16" d. x 5⅞" l.

Welded steel cabinet stands, stacks or hangs on wall. Can be integrated into standard shelving setups. JD-1 crystal-clear, spill-proof drawers. All cabinets, 6" d. Models J-32 and J-48, 12½" w.; J-64, J-96 and J-128, 25⅛" w.

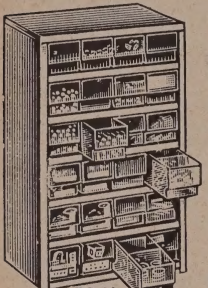
A-M Model	Drawers*	Size, H., In.	Wt., Lbs.	Net Each
J-128	128	30½	50	$52.98
J-96	96	22½	38	41.98
J-64	64	15¼	24	23.98
J-48	48	22½	18	18.98
J-32	32	15¼	12½	11.98

*Includes 1 long and 3 short dividers with every 4 drawers and index labels.

Akro-Mils Model JD-1 Drawer—Molded from crystal-clear styrene. Infinite flexibility of crosswise compartments; divides into three lengthwise compartments. Measure scale on bottom for visual inventory. Net Each.............. **25c**
JD-S—Pkg. 50 crosswise dividers. **$1.25**
IL—Pkg. 25 lengthwise dividers. . **1.25**


JD-1

RS SERIES CABINETS


RS-24

DRAWERS: 2⅞" w. x 2¾" d. x 10¾" l.

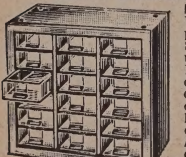
All-steel frame; baked-on hammertone silver gray finish. Lifetime-guaranteed transparent plastic drawers have safety catch to prevent spilling. Molded in full length drawer runners. Removable dividers allow four different compartment sizes. Cabinets can stand on any flat surface, be stacked, or hung from wall. Labels supplied for quick and easy indexing. Allow perfect storage and inventory of electronic parts, etc.

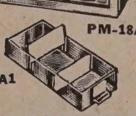
A-M Model	Drawers	Size*, H., In.	Wt., Lbs.	Net Each
RS-32	32	28½	28½	$37.00
RS-24	24	21½	22	27.00
RS-16	16	14½	16	18.50
RS-12	12	11	12½	13.50
RS-8	8	7½	9	9.25

*All cabinets 13 5/16" w. x 11⅛" d.

Akro-Mils Model RP-1 Plastic Drawer—Removable dividers allow for creation of four different compartment sizes in a single drawer. Stop tab at rear. Net Each **70c**
12 Drawers, Net Each. . . . **65c** 48 Drawers, Net Each . . . **60c**

"NIFTY KNICKNACK" STEEL CABINETS


PM-18A


A1

DRAWERS: 2¾" w. x 1¼" d. x 5¾" l. With A1 Drawers. For storing small parts where they are quickly accessible. Strong welded steel cabinet can be used singly, stacked or hung on wall. Durable molded one-piece plastic drawers with removable metal dividers. Can be divided into two or three compartments. Complete with index labels and one divider per drawer. All cabinets 6" deep.

Akro-Mils Model PM-18A—18 drawers. 10" w. x 9 1/16" h. Shipping Weight, 6 lbs. Net Each..... **$5.98**

Akro-Mils Model PM-24A—24 drawers. 13 1/16" w. x 9 1/16" h. Shipping Wt., 7 lbs. Net Each............ **$7.98**

Akro-Mils Model PM-36A—36 drawers. 10" w. x 18⅛" h. Shipping Weight, 11 lbs. Net Each.......... **$11.98**

Akro-Mils Model PM-48A—48 drawers. 13 1/16" w. x 18⅛" h. Shipping Weight, 14 lbs. Net Each **$15.98**

AT—Package of 25 steel dividers for A1 plastic drawer. Net **62c**

"NIFTY KNICKNACK" PLASTIC CABINET

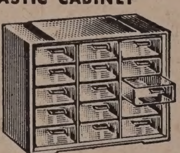
DRAWERS: 2¾" w. x 1¼" d. x 5¾" l. With PM-1 Drawers. Handy small parts cabinet with breakproof styrene cabinet. Cabinets can be used singly or stacked. Available in beige or ebony finish. All cabinets are 6¼" deep. Clear plastic drawers have plastic dividers so they can be divided into an infinite number or size compartments.

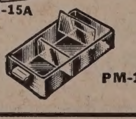
Akro-Mils Model PM-9A—9 drawers. 10" w. x 5" h. Shipping Weight, 2¼ lbs. Net Each.................. **$2.98**

Akro-Mils Model PM-15A—15 drawers. 10" w. x 7½" h. Shipping Weight, 3½ lbs. Net Each. **$4.98**

Akro-Mils Model PM-21A—21 drawers. 10" w. x 10⅜" h. Shipping Weight, 5½ lbs. Net Each........... **$6.98**

PM-DY—Package of 25 plastic dividers for PM-1 drawers. Net...... **50c**

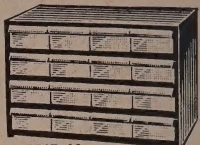

PM-15A


PM-1

M4 SERIES CABINETS

DRAWERS: 4" w. x 2" d. x 11" l.
PERFECT FOR STORING RESISTORS

Furnished with M4 drawers. Best yet for electronic parts storage. Clear plastic drawers come with adjustable dividers for lengthwise and/or crosswise compartmentalization; divide drawers into 12 or less equal or odd sized sections. Dividers and index labels for front of drawers provided.

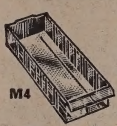

M4B-16

M4B SERIES CABINETS

A-M Model	No. of Drawers	Size, Inches W. x D. x H.	Wt., Lbs.	Net Each
M4B-8	8	17⅞ x 11 1/16 x 6 5/16	10¾	$10.98
M4B-12	12	17⅞ x 11 1/16 x 9	14	15.98
M4B-16	16	17⅞ x 11 1/16 x 11¾	17¼	20.98
M4B-24	24	17⅞ x 11 1/16 x 17 3/16	24½	31.98
M4B-32	32	17⅞ x 11 1/16 x 22⅝	36	41.98
M4B-40	40	17⅞ x 11 1/16 x 28	47	52.98

M4A SERIES CABINETS

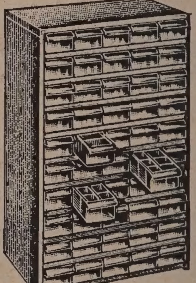
A-M Model	No. of Drawers	Size, Inches W. x D. x H.	Wt., Lbs.	Net Each
M4A-9	9	13¾ x 11 1/16 x 9	11	$12.50
M4A-12	12	13¾ x 11 1/16 x 11¾	14	15.98
M4A-18	18	13¾ x 11 1/16 x 17 3/16	19	24.98
M4A-24	24	13¾ x 11 1/16 x 22⅝	25	31.98
M4A-30	.30	13¾ x 11 1/16 x 28	35	39.98


M4

Akro-Mils Model M4 Plastic Drawers—Molded of durable one-piece plastic with full width pull handle and stop tab at rear. Full length runners for easy movement. Press-on front labels, plus inside label slots. Removable dividers lock in place in grooves. Each drawer can be divided into from 2 to 12 equal-size compartments or many odd-sized compartments. 4" x 11" x 2". Net Each..... .... **65c**
12 Drawers. Net Each...... ....**60c**
48 Drawers. Net Each **55c**
Akro-Mils Model MLD Lengthwise Dividers—Net Pkg. 10. **$1.00**
Akro-Mils Model M4D Full-Width Dividers—Net Pkg. 25. **1.00**
Akro-Mils Model M4S Half-Width Dividers—Net Pkg. 25. **.70**

M3 SERIES CABINETS

DRAWERS: 3" w. x 2" d. x 11" l. Furnished with M3 drawers. Provide unusual flexibility for small parts storage. Sturdy welded steel can be used individually, stacked in any desired combination, hung from wall, or integrated into standard 36" shelving set-ups with 7" to 28" between shelves. Durable, one-piece clear plastic drawers have full width pull handle at front and stop tab at rear to prevent accidental spillage. Full length runners add strength and make sliding easy. Press-on labels, plus inside label slots for simple indexing. Removable metal dividers lock into grooves. Drawers can be divided into 2—12 equal size compartments.


M3C-50

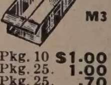
M3C SERIES CABINETS

A-M Model	No. of Drawers	Size, Inches W. x D. x H.	Wt., Lbs.	Net Each
M3C-10	10	17¼ x 11 1/16 x 6 5/16	11	$11.50
M3C-15	15	17¼ x 11 1/16 x 9	14	17.00
M3C-20	20	17¼ x 11 1/16 x 11¾	18	22.50
M3C-30	30	17¼ x 11 1/16 x 17 3/16	26	33.50
M3C-40	40	17¼ x 11 1/16 x 22⅝	34	44.50
M3C-50	50	17¼ x 11 1/16 x 28	38½	56.50

M3B SERIES CABINETS

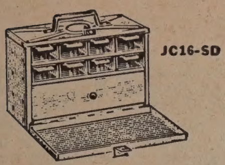
A-M Model	No. of Drawers	Size, Inches W. x D. x H.	Wt., Lbs.	Net Each
M3B-12	12	14 1/16 x 11 1/16 x 9	12½	$12.98
M3B-16	16	14 1/16 x 11 1/16 x 11¾	15¾	17.98
M3B-24	24	14 1/16 x 11 1/16 x 17 3/16	22¼	25.98
M3B-32	32	14 1/16 x 11 1/16 x 22⅝	37¼	35.98
M3B-40	40	14 1/16 x 11 1/16 x 28	43	42.98

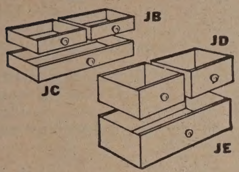
Akro-Mils Model M3 Plastic Drawer—Molded of durable one-piece clear plastic with full width pull handle at front and stop tab at rear to prevent accidental spillage. Press-on front labels, plus inside label slots. Full length runners. Adjustable metal dividers lock into grooves. Divide into 2—12 compartments. 3" x 11" x 2". Net Each **60c**
12 Drawers. Net Each.................. **55c**
48 Drawers. Net Each.................. **50c**
Akro-Mils Model MLD Lengthwise Dividers—Net Pkg. 10 **$1.00**
Akro-Mils Model M3D Full-Width Dividers—Net Pkg. 25. **1.00**
Akro-Mils Model M3S Half-Width Dividers—Net Pkg. 25. **.70**

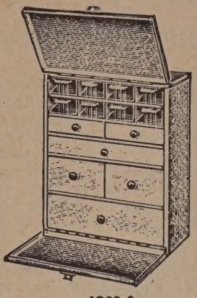

M3

Akro-Mils Parts Cabinets

J SERIES PORTABLE CABINETS







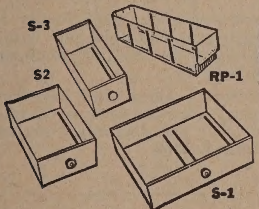
Take these cabinets right to the place where you need them. Welded all-steel cabinet will carry 100 lb. load safely. Locking front doors serve as handy tray. Solid steel back has four keyholes for safe hanging and easy removal Combines small, clear JD-1 plastic drawers with movable dividers for small components storage and sturdy seamless steel drawers for tools and heavy parts. All models are 12½″ wide x 6½″ deep.

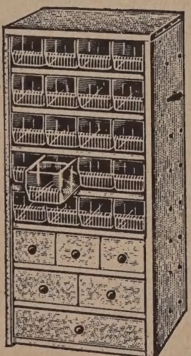
A-M Model	Drawers					Ht., In.	Wt., Lbs.	Net Each
	JD-1	JB	JC	JD	JE			
JC16-SD	8	....	....	....	1	8⅛	8½	$ 6.98
JC32-6	8	2	1	2	1	15¼	14	15.48
JC32-SD	24	....	....	....	1	15¼	13¾	14.98
JC32	32	....	....	....	...	15¼	13¾	14.98

DRAWER DIMENSIONS FOR COMBINATION AND PORTABLE CABINETS

A-M Model	Size, Inches Wide x Deep x High	Material
JB	5¾ x 5⅞ x 1 7/16	Steel
JC	11½ x 5⅞ x 1 7/16	Steel
JD	5¾ x 5⅞ x 3⅛	Steel
JE	11½ x 5⅞ x 3⅛	Steel
JD-1	2¾ x 5⅞ x 1 7/16	Plastic

RS SERIES COMBINATION





Store tools and parts in one convenient place. Welded steel cabinets can be used singly, stacked, hung on wall or integrated into standard shelving. All cabinets 13 15/16″ w. x 11⅛″ d.

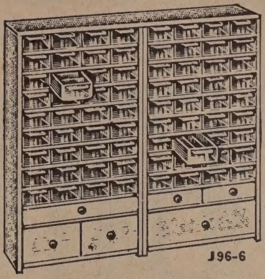
Seamless Steel Drawers

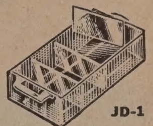
A-M No.	H. x W. x D.
S1	2¾″ x 12″ x 11″
S2	2¾″ x 6″ x 11″
S3	2¾″ x 4″ x 11″

RP-1 Plastic Drawers: For small parts storage. With three plastic dividers; can be divided into four compartments. 2⅞″ w. x 10¾″ d. x 2¾″ h. Shipped with full set of index labels for use on drawer fronts and three dividers for each RP-1 Plastic Drawer.

A-M Model	Cab. Ht.	Drawers				Wt., Lbs.	Net Each
		RP-1	S-1	S-2	S-3		
RS32-6	28⅛″	20	1	2	3	31	$37.00
RS24-6	21½″	12	1	2	3	25	27.00
RS16-6	14½″	4	1	2	3	19	18.50
RS32-11	28⅛″	12	1	4	6	35	37.00
RS24-11	21½″	4	1	4	6	29	27.00

J SERIES COMBINATION





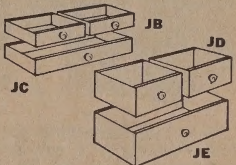
Combination tool chest and parts cabinet permits storing together what you use together. JD-1 plastic drawers for small parts storage; sturdy, seamless steel drawers for heavy tools and large parts. Drawer front labels provide easy indexing. Welded steel cabinets can be used singly, stacked or hung on wall. All cabinets, 6″ deep.

A-M Model	Drawers					Cabinet, In. H. x W.	Wt., Lbs.	Net Each
	JD-1	JB	JC	JD	JE			
J128-12	80	4	2	4	2	30½ x 25⅛	52	$54.98
J96-6	72	2	1	2	1	22½ x 25⅛	38¼	42.98
J64-6	40	2	1	2	1	15¼ x 25⅛	25	24.98
J48-6	24	2	1	2	1	22½ x 12½	18½	19.98
J32-6	8	2	1	2	1	15¼ x 12½	12¾	12.48

DRAWERS

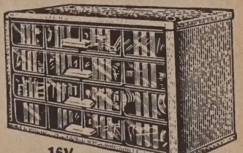
All are 5⅞″ d.

A-M Model	Size, In. W. x H.	Material
JB	5¾ x 1 7/16	Steel
JC	11½ x 1 7/16	Steel
JD	5¾ x 3⅛	Steel
JE	11½ x 3⅛	Steel
JD-1	2¾ x 1 7/16	Plastic



"E-Z FIND" FULL-VUE CABINETS

Crystal-clear drawers, **four to a section,**—all one strong piece; lengthwise and crosswise dividers. Can be stacked on top of each other or hung on wall. Press-on labels included.*



Akro-Mils Model 12V—12 drawers, 36 compartments. 5¾″ x 12½″ x 6″. Shipping Weight, 5 lbs. Net Each........... **$3.98**

Akro-Mils Model 16V—16 drawers, 48 compartments. 7½″ x 12½″ x 6″. Shipping Wt., 6 lbs. Net Each. **$4.78**

Akro-Mils Model 24V—24 drawers, 72 compartments. 10½″ x 12½″ x 6″. Shipping Weight, 8 lbs. Net Each.. .. . **$7.00**

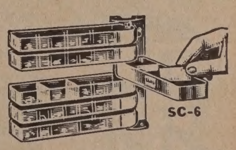
Akro-Mils Model 32V—32 drawers, 96 compartments. 14″ x 12½″ x 6″. Shipping Weight, 11 lbs. Net Each............... **$9.00**

Akro-Mils Model 48V—48 drawers, 144 compartments. 20″ x 12½″ x 6″. Shipping Weight, 13½ lbs. Net Each **$13.00**

*With every 4 drawers 1 long and 3 short dividers are furnished.

"SWING-BIN®" CABINETS

Efficiently stores dozens of small items. Bins swing out for access. Clear plastic drawers are 2½″ x 9½″ x 1 1/16″ deep. Pedestal base (SP) or Bolt-Down (SC) types. Removable bin dividers. Bins easily removed for cleaning



A-M Model	Drawers		Net Each
	No.	Height	
SC-6	6	8¼″	$ 2.98
SC-12	12	16″	4.98
SC-18	18	23⅝″	7.98
SC-24	24	31″	9.98

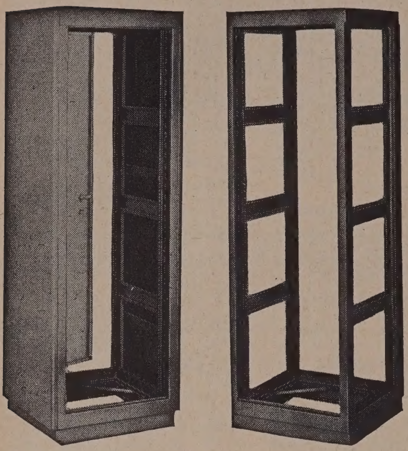
PEDESTAL BASE MODELS

A-M Model	Drawers		Net Each
	No.	Height	
SP-6	6	8¾″	$3.98
SP-9	9	12⅛″	4.98
SP-12	12	15½″	6.48

SPACE DOES NOT PERMIT LISTING ALL AVAILABLE MODELS OR CABINETS. COMPLETE AKRO-MILS CATALOGS AVAILABLE UPON REQUEST.

SERIES SIXTY

UPRIGHT CABINET RACKS



We have been searching for the answers to the problems arising from new developments in the field of electronics. These call for advance design and it was necessary for us to move into the science of ergonomics to fill the demand of this field. Ergonomics is the science of designing objects with particular reference to the needs and physical characteristics of their users. This has been known as human engineering. We have had to go even a step further in this field by designing enclosures that not only care for human needs, but for the physical needs of the components that will find their way to usefulness while housed in the new Bud Series Sixty Cabinet Racks.

While intricacies of design often add to confusion, the opposite has been the case in this creation. Not only is the Series Sixty the most practical cabinet rack developed for either a single piece of equipment or a large instrumentation system, but it is also extremely economical for the user. The units are shipped completely assembled and ready for immediate use.

The basic frame is welded into a solid unit composed of 14 gauge cold rolled steel channels. The sides have "U" braces with perforated channels to which vertical adjustable mounting rails are fastened. In addition to a normal panel mounting, these rails are designed to support other types of equipment such as brackets, shelves, slides, etc. This eliminates any necessity of drilling holes in the sides of the cabinet rack or destroying the fine symmetry of appearance.

The sides and rear door are made of 16 gauge steel. The door may be mounted to open from left or from the right. A six inch wide vertical channel is welded to the door as a strengthening device preventing excessive vibration or whip.

Two pairs of panel mounting rails are standard equipment and they are fully adjustable. Panels may be mounted in the front and the rear at the same time. The front rails are drilled and tapped 10-32 W.E. spacing. The rear rails are drilled adhering to universal spacing.

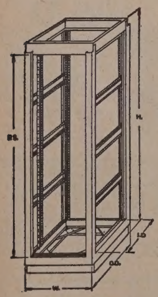
All Series Sixty enclosures may be quickly combined with each other to create units of any desired width as shown in our Add-A-Rack series. In addition, such accessories as desk tops, turrets, drawers, slides, sloping panel supports and front door may be easily installed. See them in the Bud section of this catalog.

WE CANNOT TOO GREATLY EMPHASIZE THE FACT THAT THE FURNISHING OF THESE ENCLOSURES COMPLETELY ASSEMBLED AND READY FOR USE ELIMINATES ALL CHANCES OF ERROR IN ORDERING OF MULTIPLE COMPONENTS AND THE TIME AND COST OF COMPLETING THE ASSEMBLY.

The standard finishes are smooth baked enamel over a prime finish, a choice of two tone grey or two tone blue is available. Please designate by the suffix "SG" if grey is required, or "SB" if blue is required.

Standard Bud relay rack panels are available for the Series Sixty racks in light gray and light blue. When ordering panels please add suffix "SG" for gray and "SB" for blue. See Bud page 10.

Regularly furnished with plain sides, plain rear door and solid top. Accessories such as plain or louvred doors, plain or louvred sides and perforated top are available. See Bud Bulletin S-6060.



Cat. No.	Height	Width	Outside Depth	Clear Inside Depth	Panel Space	Top Opening	Wgt. Lbs.	Net
60-2300	29⅝"	24 1/16"	22"	20¼"	21"	18½"x17"	126	$106.30
60-2301	40⅛"	24 1/16"	22"	20¼"	31½"	18½"x17"	156	131.45
60-2302	50⅝"	24 1/16"	22"	20¼"	42"	18½"x17"	176	146.05
60-2303	61⅛"	24 1/16"	22"	20¼"	52½"	18½"x17"	192	166.25
60-2304	69⅞"	24 1/16"	22"	20¼"	61¼"	18½"x17"	208	180.25
60-2305	78⅝"	24 1/16"	22"	20¼"	70"	18½"x17"	224	200.00
60-2306	87⅜"	24 1/16"	22"	20¼"	78¾"	18½"x17"	240	218.65
60-2307	29⅝"	24 1/16"	25½"	23¾"	21"	18½"x20½"	156	125.50
60-2308	40⅛"	24 1/16"	25½"	23¾"	31½"	18½"x20½"	176	151.20
60-2309	50⅝"	24 1/16"	25½"	23¾"	42"	18½"x20½"	192	168.00
60-2310	61⅛"	24 1/16"	25½"	23¾"	52½"	18½"x20½"	208	186.50
60-2311	69⅞"	24 1/16"	25½"	23¾"	61¼"	18½"x20½"	224	207.30
60-2312	78⅝"	24 1/16"	25½"	23¾"	70"	18½"x20½"	241	230.30
60-2313	87⅜"	24 1/16"	25½"	23¾"	78¾"	18½"x20½"	267	251.35

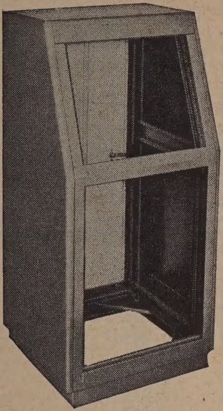
Please specify color desired by adding suffix "SG" for gray or "SB" for blue.

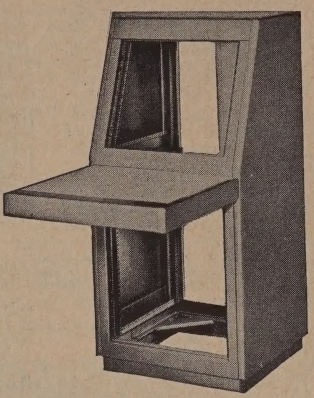
Prices subject to change without notice. Only a few of many BUD Products are shown. Write for complete catalog.

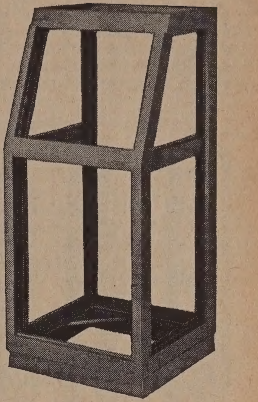
BUD RADIO PAGE 1

SERIES SIXTY

INCLINED PANEL CABINET RACKS







The Series Sixty Inclined Cabinet Racks have the same basic design features as the Series Sixty Upright units. Nothing is sacrificed to provide strength and convenience while cost is kept to a minimum.

Three standard sizes are available.

THESE INCLINED PANEL CABINET RACKS ARE FURNISHED COMPLETELY ASSEMBLED AND READY FOR USE ELIMINATING THE POSSIBILITY OF ERROR IN ORDERING MULTIPLE COMPONENTS AND LOSS OF TIME AND MONEY IN COMPLETING THE ASSEMBLY.

Three sets of panel mounting rails are furnished and are adjustable from front to rear at both vertical and inclined sections. THIS IS THE ONLY CABINET RACK WITH ADJUSTABLE PANEL MOUNTING RAILS IN THE INCLINED SECTION. Panels may be installed in both front and rear. Front rails are drilled and tapped 10-32 W.E. spacing. The rear rails are drilled to conform with universal spacing. The basic frame is welded into a solid unit composed of 14 gauge cold rolled steel channels. The sides have "U" braces with perforated channels to which vertical adjustable mounting rails are fastened. In addition to a normal panel mounting, these rails are designed to support other types of equipment such as brackets, shelves, slides, etc. This eliminates any necessity of drilling holes in the sides of the cabinet rack or destroying the fine symmetry of appearance.

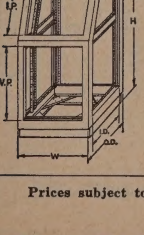
The sides and rear door are made of 16 gauge steel. The door may be mounted to open from left or from the right. A six inch wide vertical channel is welded to the door as a strengthening device preventing excessive vibration or whip.

The inclined portion is slanted at 20° off vertical for comfortable viewing of instrumentation.

The overall design of this series is such that any enclosure can be combined with one or more upright or inclined panel units in our Add-A-Rack system to create a rigid, homogeneous battery. Such accessories as turrets, drawers, desk tops, slides, sloping panel supports and front doors can be quickly installed and are found in the Bud Section in this same catalog.

These units are furnished in two tone grey and two tone blue. The sides, top and bottom section are in dark grey or dark blue smooth enamel. Doors are furnished in a light tone of the same finish. When ordering these units, please specify by use of suffix "SG" for the gray and "SB" for blue.

Standard Bud relay rack panels are available for the Series Sixty racks in light gray and light blue. When ordering panels please add suffix "SG" for gray and "SB" for blue. See Bud page 10.



Regularly furnished with plain sides, plain rear door and solid top. Accessories such as plain or louvred front doors, plain or louvred rear doors, plain or louvred sides and perforated top are available. See Bud Bulletin S-6060.

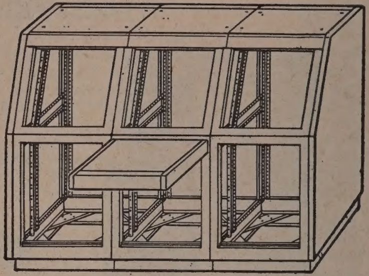
Cat. No.	Height	Width	Outside Depth	Clear Inside Depth	Inclined Panel Space	Vertical Panel Space	Top Opening	Wgt. Lbs.	Net
60-2330	50⅝"	24¹⁄₁₆"	22"	20¼"	10½"	29¾"	11¾"x18½"	160	$165.25
60-2331	50⅝"	24¹⁄₁₆"	22"	20¼"	15¾"	24½"	10"x18½"	160	175.15
60-2332	50⅝"	24¹⁄₁₆"	22"	20¼"	17½"	22¾"	9⅜"x18½"	160	175.15

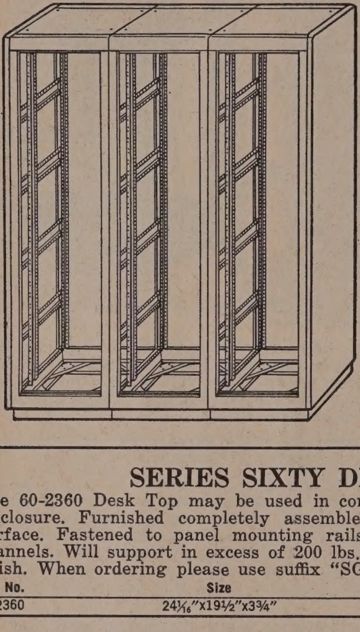
Prices subject to change without notice. Only a few of many BUD Products are shown. Write for complete catalog.

SERIES SIXTY

ADD-A-RACK SERIES

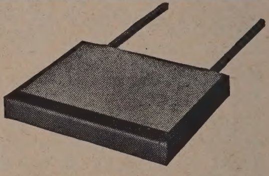
When it is desirable to join any of the Series Sixty enclosures in a bank of two or more, use the Add-A-Rack system. Each Add-A-Rack assembly consists of a frame, top, bottom, rear door and cowlings. Thus, with one complete unit and several Add-A-Rack assemblies, any desired number of racks may be combined to attain the optimum width.





Catalog Number	Used to add an Identical size unit to	Weight Lbs.	Net
60-2500	60-2300	100	$ 86.10
60-2501	60-2301	121	104.75
60-2502	60-2302	125	114.70
60-2503	60-2303	140	125.30
60-2504	60-2304	148	140.00
60-2505	60-2305	156	156.00
60-2506	60-2306	164	167.35
60-2507	60-2307	127	100.00
60-2508	60-2308	136	117.25
60-2509	60-2309	144	128.00
60-2510	60-2310	149	139.60
60-2511	60-2311	155	156.10
60-2512	60-2312	163	174.00
60-2513	60-2313	180	192.50
60-2530	60-2330	124	132.90
60-2531	60-2331	124	142.10
60-2532	60-2332	124	142.10

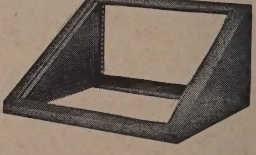
SERIES SIXTY DESK TOP



The 60-2360 Desk Top may be used in connection with any Sixty Series Enclosure. Furnished completely assembled with wood grained formica surface. Fastened to panel mounting rails by means of two pre-drilled channels. Will support in excess of 200 lbs. Choice of blue or gray enamel finish. When ordering please use suffix "SG" for gray and "SB" for blue.

Cat. No.	Size	Weight	Net
60-2360	24 1/16"x19½"x3¾"	22 lbs.	$36.05

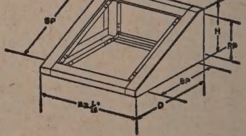
SERIES SIXTY TURRETS



Series Sixty turrets are fabricated from 16 gauge steel. They are designed so that any one of three sides may be attached to a Series Sixty upright rack or they may be placed upon any horizontal surface. Thus several convenient viewing angles may be obtained. Will accommodate standard 19" panels.

All panel mounting rails are in adherance with universal spacing. Sides may be quickly removed when a series of interconnecting turrets is desired. Choice of two colors. Please specify "SG" for dark gray or "SB" for dark blue. Standard Bud panels for these turrets are available in light gray and light blue. When ordering please add suffix "SG" for gray or "SB" for blue.

Cat. No.	Width	D Depth	H Height	SP Sloping Panel Space	BP Bottom Panel Space	RP Rear Panel Space	Wgt. Lbs.	Net
60-2364	22 1/16"	17⅞"	12 5/16"	17½"	14"	8¾"	13¼	$39.05
60-2365	22 1/16"	14⅜"	10 3/16"	12¼"	10½"	7"	11½	32.55
60-2366	22 1/16"	20 13/16"	14⅜"	21"	17½"	10½"	18½	41.00

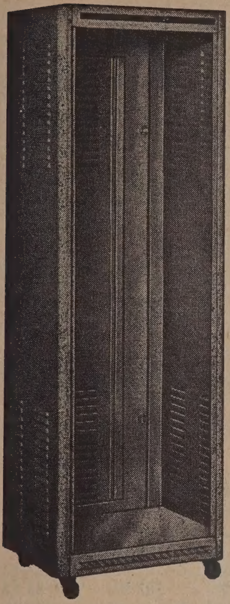


Standard Bud panels for these turrets are available in light gray and light blue. When ordering add suffix "SG" for gray or "SB" for blue.

Prices subject to change without notice. Only a few of many BUD Products are shown. Write for complete catalog.

RELAY RACKS

DELUXE RELAY RACKS



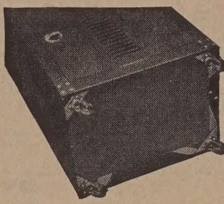
These relay racks are made of 16 gauge steel with 7/64" gauge panel mounting supports. The panel mounting supports are recessed so that no edges of the panel will be exposed.

The two sides and the door are well louvered to provide adequate ventilation. The door is hung on sturdy, loose joint hinges; it is held closed by two attractive aluminum die cast plunger type snap action catches. A streamlined appearance is achieved by the use of rounded corners and red lined chrome trim. This relay rack is shipped knocked down and complete with all necessary hardware for assembly. All standard 19" panels will fit these racks. Overall width is 22". Depth 17⅛". Inside clearance depth in back of panels 16⅛". Clearance thru rear door 17⅜". Clearance across panel mounting rails 17¾". Panel rails tapped 10/32 with W. E. spacing.

A SPECIAL FEATURE IS THE USE OF FOUR STURDY SUPPORTS IN THE BOTTOM, SO THAT CASTERS CAN BE FASTENED DIRECTLY TO THE BASE, THEREBY ACHIEVING READY MOBILITY.
Bud RC-7756 casters will fit this unit. The casters are not included in the price of the cabinet. CR-2072, CR-2073, CR-2071 and CR-2074 are the same as the racks described above except that the clear inside depth is 21". CR-2072, CR-2073, CR-2071 and CR-2074 units are available in grey hammertone finish only.

Black or grey wrinkle finish 10% extra cost.

On the CR-1771, CR-1772, CR-1773, and CR-1774 the units are available in the three standard finishes. Specify by suffix letter "B" for black wrinkle finish; by suffix "G" for grey wrinkle finish and by suffix "HG" for light grey hammertone finish.

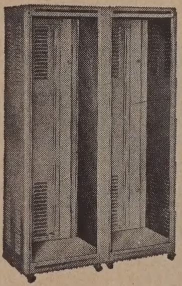


Catalog No.	Overall Height	Panel Space	Shipping Weight	Net
CR-1774	42-1/16"	36¾"	90 lbs.	$ 45.17
CR-1771	47-5/16"	42"	95 lbs.	51.10
CR-1772	66-9/16"	61¼"	116 lbs.	63.96
CR-1773	82-5/16"	77"	137 lbs.	76.57
CR-2071	47-5/16"	42"	98 lbs.	71.40
CR-2072	66-9/16"	61¼"	150 lbs.	89.35
CR-2073	82-5/16"	77"	175 lbs.	106.13
CR-2074	42-1/16"	36¾"	91 lbs.	63.10

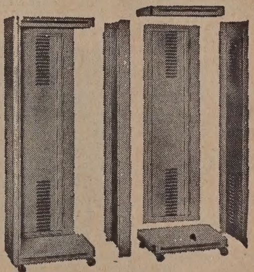
ADD-A-RACK SERIES

It always has been necessary to buy special racks without louvres on one side to obtain maximum interior space with minimum of floor space. Now, you no longer need to buy an entire new cabinet when you want additional space. When multiple rack units are required, we not only offer additional racks at a lower cost, but provide a sturdier, better looking assembly. Only Add-A-Rack series can accomplish this savings.

Illustration A shows the two Add-A-Rack cabinets assembled together. Illustration B shows the unique and ingenious method of adding a unit to your present equipment. Instead of buying an entirely new outfit, you purchase, as a unit, four parts: 1. The door, 2. the top, 3. the bottom, 4. an Add-A-Rack Coupling Unit. The right or left side of your present relay rack is removed and replaced by the Add-A-Rack Coupling Unit. Next, the top and bottom are fastened into place. The side taken from the first rack is then fastened onto the second rack. Place the additional door into position and you now have two racks, properly and efficiently coupled together. In the same simple way, more racks can be added at any time. Every one will be in a continuous one piece assembly.



A



B

Catalog No.	Used to Add-A-Rack to	Shipping Weight	Net
AR-1778	CR-1774	75 lbs.	$ 44.34
AR-1775	CR-1771	77 lbs.	49.01
AR-1776	CR-1772	100 lbs.	69.96
AR-1777	CR-1773	127 lbs.	74.90
AR-2276*	CR-2072	140 lbs.	85.17
AR-2277*	CR-2073	160 lbs.	103.75
AR-2278*	CR-2074	77 lbs.	60.15
AR-2275*	CR-2071	83 lbs.	68.06

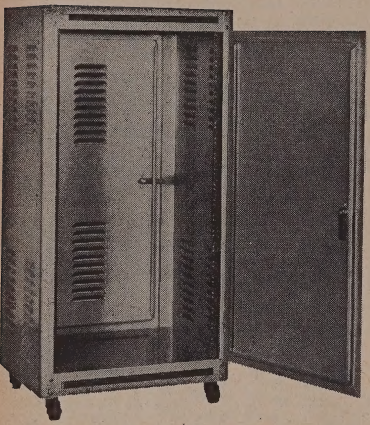
If black wrinkle finish is desired, use suffix letter "B". If grey wrinkle finish is desired, use suffix "G". If light grey hammered finish is desired, use suffix "HG".

*Grey hammertone only. Add 10% for black wrinkle or grey wrinkle.

Prices subject to change without notice. Only a few of many BUD Products are shown. Write for complete catalog.

RACKS

SUPER DELUXE 2 DOOR RACKS



This relay rack is an entirely new model that consists of a relay rack made of 16 gauge steel with 7/64″ gauge panel mounting supports. The panel mounting supports are recessed so that no edges of the panel will be exposed. IN ADDITION, THEY ARE ADJUSTABLE FROM FRONT TO BACK IN VARIOUS STOPPING POINTS. THIS ENABLES YOU TO USE THE SPACE IN FRONT AND BEHIND THE PANEL TO ANY DEGREE THAT YOU MAY FIND NECESSARY. Overall width is 22″. Depth 17⅛″. Inside clearance depth in back of panels 16⅛″. Clearance thru rear door 17⅜″. Clearance across panel mounting rails 17¾″. Panel rails tapped 10/32 with W. E. spacing. Clearance behind panels is 15″ to 9″ in increments of 1 inch.

These racks are fitted with both front and rear doors. The louvred rear door is to cover any of the equipment behind the panel and at the same time provide easy accessibility to it. The front door, flush with front of rack, is to provide a means of concealing dials, knobs, etc., that may be in front of the panel.

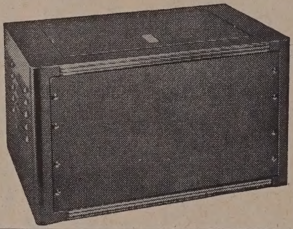
The exclusive Bud feature of supports on the bottom so the casters may be fixed directly to the base, eliminating the need and expense of dollies, is also present in this series of racks.

Bud RC-7756 casters will fit these units. The casters are not included in the price of the cabinet.

If black wrinkle finish is desired, use suffix letter "B." If grey wrinkle finish is desired, use suffix letter "G." If light grey hammered finish is desired, use suffix "HG."

Catalog No.	Overall Height	Panel Space	Shipping Weight	Net
CR-2174	42-1/16″	36¾″ x 19″	102 lbs.	$ 64.13
CR-2171	47-5/16″	42″ x 19″	117 lbs.	72.65
CR-2172	66-9/16″	61¼″ x 19″	151 lbs.	93.77
CR-2173	82-5/16″	77″ x 19″	183 lbs.	112.56

DELUXE CABINET RACKS



Catalog No.	Overall Height	Panel Space	Shipping Weight	Net
CR-1726A	8-25/32″	7″	25 lbs.	$15.28
CR-1741A	10-9/16″	8¾″	28 lbs.	16.70
CR-1740A	12-5/16″	10½″	30 lbs.	19.12
CR-1742A	14-1/16″	12¼″	32 lbs.	20.12
CR-1739A	15-13/16″	14″	34 lbs.	21.96
CR-1743A*	19-5/16″	17½	38 lbs.	26.22
CR-1727A*	22-13/16″	21″	39½ lbs.	28.06
CR-1744A″	28-1/16″	26¼″	47½ lbs.	30.14
CR-1728A*	33-5/16″	31½	52 lbs.	31.98
CR-1745A*	36-13/16″	35″	60 lbs.	33.65

* These sizes have top and rear doors.

Specify a suffix "B" when black wrinkle is desired, the suffix "G" when grey wrinkle is desired, or the suffix "HG" when light grey hammered is desired.

FURNISHED WITH FULL SIZED ALUMINUM RELAY RACK PANEL AT NO EXTRA COST.

These cabinet racks are so made that a professional appearance is given. They are ideal for commercial broadcasters, for sound equipment or test equipment.

The five larger sizes have a hinged rear door, while the smaller sizes have the welded panel in the rear.

No other manufacturer has the wide variety of sizes that are included in the Bud line of deluxe cabinet racks.

Adequate ventilation is assured by means of louvered sides and a 2½″ opening in the bottom of the back, which extends the entire width of the cabinet. "No scratch" extended metal feet are embossed on the bottom to minimize marring of the table top or any other equipment that this is placed on.

Combination handle and catch fits flush with top of cabinet. All exposed parts are chrome plated.

Overall Depth	14¾″
Overall Width	22″
Clear Inside Depth	14″
Top Door Opening	10½″ x 15-⅜″

Prices subject to change without notice. Only a few of many BUD Products are shown. Write for complete catalog.

BUD RADIO PAGE 5

PRESTIGE RELAY RACKS

Beautiful and practical housings for permanent or mobile instrumentation

NOW WITH ADJUSTABLE PANEL MOUNTING RAILS WHICH CAN BE MOVED FROM FRONT TO BACK IN ONE INCH INCREMENTS.

A standard Prestige Relay Rack consists of the framework, top, bottom, two ball cornered sides and a ball cornered door. Shipped knocked-down with necessary assembly hardware.

Interior servicing is easily accomplished without tearing down rack since sides are attached to frame by means of tongue and slot arrangement at bottom and two screws at top, thus sides are quickly removed.

Drilled and tapped panel mounting rails on all four vertical members of the frame. Standard 19" panels can, if desired, be mounted on all four sides of the rack.

Doors may be mounted to open either from left or right side. Extra doors may be purchased so that doors may be placed on any of four sides.

Panel rails will support 200 lbs. suspended between rails at any vertical position.

Bottom will support 500 lbs.

The base is slotted to accept ball cornered side panels on any of the four sides of the rack.

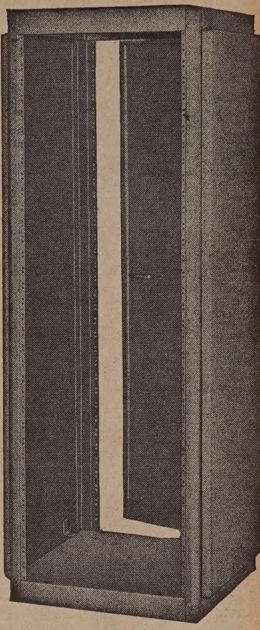
Clearance of ball cornered door and side panels is sufficient to permit their installation over panels without damage to knobs or instrument controls.

Casters may be attached to base to achieve mobility if desired. Base is so designed that casters are recessed and do not detract from appearance of rack.

Knockout holes are provided in the sides of the rack so that two or more may be joined together in series.

Racks will accommodate Bud SD-1717 Sliding Drawer Assembly (shown on Bud Page 9), Bud Console Drawer CD-2210 (Shown on Bud Page 9) or "Prestige" Supporting Angles (shown on Bud Page 7).

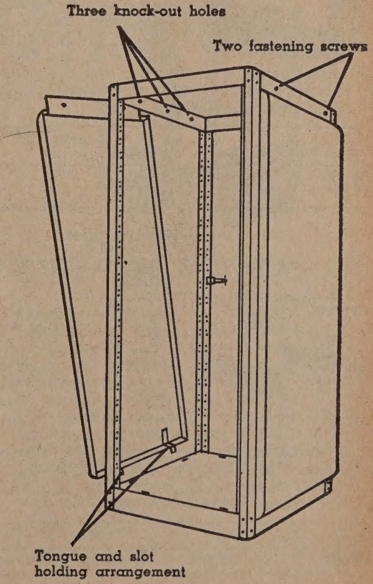
Finished in grey hammertone.



PRESTIGE CABINET RACKS

Cat. No.	Panel Space	Height	Weight	Net
CR-2280	61-1/4"	66-9/16"	104 lbs.	$108.35
CR-2281	66-1/2"	71-13/16"	115 lbs.	115.55
CR-2282	77"	82-5/16"	132 lbs.	129.75

Inside clearance	21-1/8" x 21-1/8"
Overall depth without door	22"
Overall depth with door	23-1/16"
Overall width without side panels	22"
Overall width with side panels	24-1/8"



BALL CORNER DOORS

Cat. No.	Weight	Net
DR-2290 for CR-2280 Rack	22 lbs.	$13.50
DR-2291 for CR-2281 Rack	25 lbs.	14.40
DR-2292 for CR-2282 Rack	30 lbs.	16.20

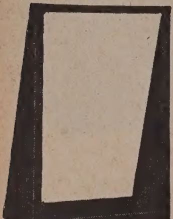
CABINET RACKS—RELAY RACKS

CHASSIS MOUNTING BRACKETS

Mounting brackets are essential to insure proper support of chassis. Mounting flange is 1" wide with 2 mounting holes. These brackets are formed of heavy gauge steel cut away at the bottom to provide chassis clearance so that the chassis can be mounted flush against the panel. Finished in black enamel only. Chassis mounting bracket Nos. MB-450 and MB-451 are designed for a chassis height of 4". These units are sold in pairs only.

Catalog No.	Height	Depth	Actual Weight	Net
MB-458	6½"	8"	1¼ lbs.	$1.09 pr.
MB-448	6½"	10"	1¾ lbs.	1.35 pr.
MB-459	6½"	11"	2 lbs.	1.50 pr.
MB-449	6½"	12"	2 lbs.	1.75 pr.
MB-460	6½"	13"	2½ lbs.	1.69 pr.
MB-450	8½"	10"	2¼ lbs.	1.97 pr.
MB-451	8½"	13"	3 lbs.	2.09 pr.

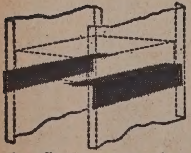
DESK TYPE RELAY RACKS



These racks are perfect for table mounting of low and medium powered transmitters, public address systems and other electronic instruments. The rack has a strong chassis for mounting heavy components. These units are shipped knocked down with necessary hardware and are easy to assemble. Depth 12". Panel holes tapped 10/32 with W.E. spacing. Standard 19" wide panels can be used and the panels are set in recess so that no edges are exposed. Black wrinkle or light grey hammertone finish.

Catalog No.	Panel Space	Height	Actual Wt. Lbs.	Net
RR-1248	21" x 19"	24"	15	$ 9.10
RR-1249	28" x 19"	31"	17	11.19

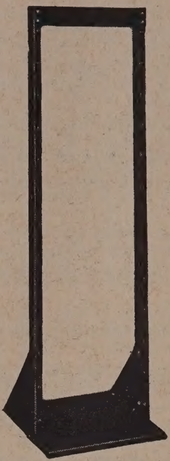
"PRESTIGE" SUPPORTING ANGLES



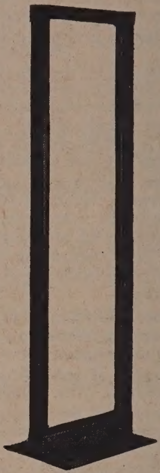
Designed for attaching to rails of Console Pedestal or Prestige Relay Racks. No drilling is required. Slotted to provide infinite vertical adjustment or leveling. Extend entirely from front to rear to accept full size chassis. Strong enough to support the heaviest power supplies. Finish is black enamel. Drawing illustrates the manner in which the chassis will be supported by the angles. Sold in pairs only.

Cat. No.	Size	Weight	Net
CE-2219	21"x3"x3"	7½ lbs.	$3.00 per pair

TELEPHONE TYPE RELAY RACKS



RR-1263 RR-1363
RR-1264 RR-1364
RR-1366



RR-1265

Catalog Nos. RR-1263, RR-1264, RR-1363, RR-1364 & RR-1366 are made of 7/64" steel channels, three inches deep, with cross bars of the same thickness. The design of the base has been improved to incorporate a chassis type bottom, together with the usual side angles, making this rack exceptionally strong and stable.

Holes are provided in the base to accommodate Bud RC-7756 casters. Base is 20" x 22". Clearance between uprights 17⅞". Panel mounting rails tapped 10/32 with W. E. spacing. Finish black wrinkle or light grey hammertone.

The RR-1265 is a heavy duty rack, suitable for broadcast stations and other commercial installations, where it is desired that exceptionally sturdy construction be utilized. The usual manner of installation is to bolt this unit to the floor.

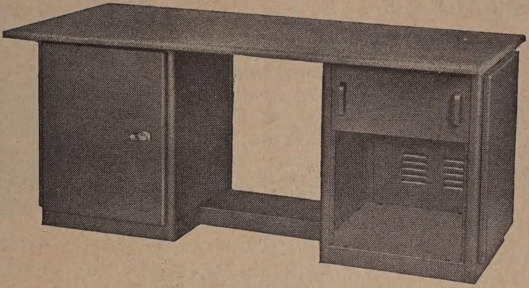
To emphasize the heavy duty construction, it is necessary to realize that the base is made of two angles 3½" x 5" x ¼", 20⅝" long. The channels are 72" long and made of 3" x 1⅝" x 3/16" steel plate. The two supporting cross bars are made of ⅛" x 2-3/32" steel angles. Base is 13" x 20⅝". Panel holes are tapped 12-24 with W.E. spacing. Finish black wrinkle only.

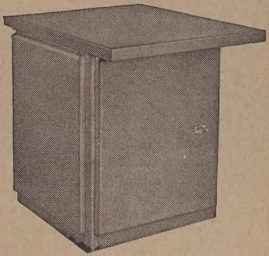
Any of the panel chassis shown on Bud Page 10 or the standard relay rack panels shown on Bud Pages 9 and 10 can be used with these racks.

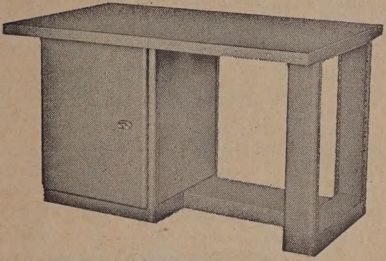
Catalog No.	Height	Panel Space	Shipping Weight lbs.	Net
RR-1263	35-39/64"	31½"	35	$21.71
RR-1363	40-55/64"	36¾"	37	21.96
RR-1264	70-39/64"	66½"	46	24.80
RR-1364	75-55"64"	71¾"	47	25.13
RR-1366	81-7/64"	77"	48	29.98
RR-1265	72-1/4"	66½"	94	54.78

Prices subject to change without notice. Only a few of many BUD Products are shown. Write for complete catalog.

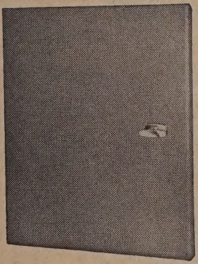
CONSOLE ASSEMBLY







A new concept in versatility and utility whereby a number of individual units may be combined to provide housings for electrical or electronic components or instruments. They are also highly adaptable for control and testing centers. On this and the following page are illustrated and described the various components which are assembled to create the complete consoles shown above.

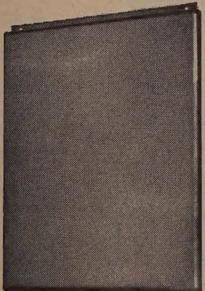


BALL CORNERED DOOR

Hinge and locking arrangement is such that door may be installed to open from the right or left side of either pedestal and have sufficient clearance for knobs and dials.

Cat. No.	Size	Weight	Net
CD-2220	25 1/16"x20¼"x1 1/16"	12 lbs.	$10.95

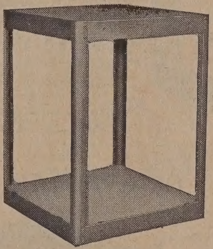
BALL CORNERED SIDE



Can be used to enclose any side of either pedestal and greatly enhance the appearance. They are attached by means of a tongue and slot arrangement at the bottom and two screws at the top; thus they are quickly removable from the exterior of pedestal for service or inspection of the interior of the pedestal. They provide sufficient clearance to be installed over knobs and dials.

Cat. No.	Size	Weight	Net
CK-2217	25 1/16"x20¼"x1 1/16"	11 lbs.	$8.95

PEDESTAL



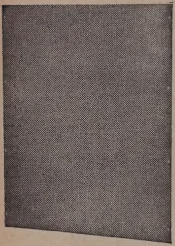
Consists of top, bottom and 4 panel mounting channels drilled and tapped to accept standard 19" panels on each of four sides. The bottom is slotted on four sides so that ball cornered sides may be installed on any of four sides. Three knock-out holes are provided on each of two sides for use in assembling pedestals in series, attaching foot rest or mounting top. Bottoms have recessed mounting brackets for hidden caster attachment. Channels will support 200 pounds suspended between them while bottom will support 500 pounds. Shipped knock-down with necessary hardware.

Cat. No.	Size	Weight	Net
CP-2200	22"x22"x29 13/16"	35 lbs.	$36.00

Prices subject to change without notice. Only a few of many BUD Products are shown. Write for complete catalog.

BUD RADIO PAGE 8

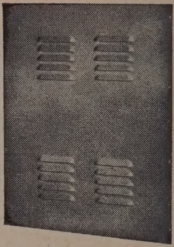
CONSOLE ASSEMBLY



PANELS

Full sized panels may be used to enclose the openings on any side of either pedestal. They are available either solid or louvred. The louvred panels can be positioned with the louvres pointed down or up.

Cat. No.	Type	Size	Weight	Net
CP-2215	Plain	24 15/32″x19	9 lbs.	$5.26
CP-2216	Louvred	24 15/32″x19	9 lbs.	6.00



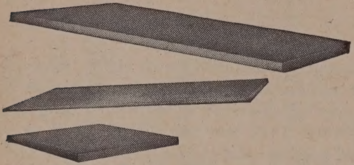


TABLE TOPS

Made of 16 gauge steel. Available in 3 sizes. Have scratch resistant finish. The tops are adjustable front-to-back in three positions to allow for required overhang in front or rear. They are attached to the pedestals by means of brackets welded to underside of top.

Cat. No.	Size	Weight	Net
CT-2205	25″x30″x1 1/16″	15 lbs.	$22.00
CT-2206	52″x30″x1 1/16″	29 lbs.	26.00
CT-2207	69″x30″x1 1/16″	38 lbs.	32.10

END PEDESTAL

May be used as a housing or as a support. Panel mounting rails are drilled and tapped for mounting panels on each of two sides. Full size solid or louvered panels, ball cornered doors or sides may be easily installed. Bases have hidden caster mounting supports. Used when CT-2206 Table Top is required. This eliminates the need for a second CP-2200 Pedestal.

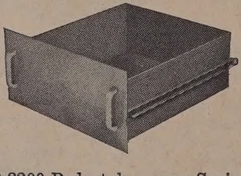
Cat. No.	Size	Weight	Net
CF-2202	16⅝″x5″x19¼″	18 lbs.	$18.95

FOOT REST

Joins two pedestals or one pedestal and one end pedestal depending on the size top used. Can be adjusted in two positions front to back.

Cat. No.	Size	Weight	Net
CF-2201	22″x10″x2⅝″	7 lbs.	$3.85

CONSOLE DRAWER

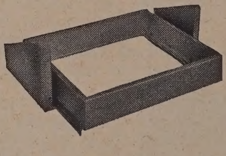


Fits into CP-2200 Pedestal or any Series Sixty cabinet rack. Slides on nylon rollers. Capable of supporting heavy loads. Drawer extends to full length. Easily removable slides fasten to mounting channels. Stops prevent drawer from falling out.

Cat. No.	Size (Inside)	Weight	Net
CD-2210	16⅝″x6¾″x19¼″	23 lbs.	$32.00
60-2368	16⅝″x6¾″x19¼″	23 lbs.	32.05

CD-2210 in gray hammertone only. 60-2368 available in light gray or light blue enamel. Please specify when ordering.

SLIDING DRAWER ASSEMBLY



Fits standard Bud racks or consoles. Slide rail fastens securely to chassis. Operates on ball bearings. Stop prevents drawer from falling out. All aluminum construction. Will support up to 50 lbs. Plate available for fastening to bottom or top of drawer.

Cat. No.	Weight	Net
SD-1717 Drawer	5 lbs.	$11.43
TP-1718 Plate	1½ lbs.	2.56

Prices subject to change without notice. Only a few of many BUD Products are shown. Write for complete catalog.

PANELS

STANDARD RELAY RACK PANELS

These panels are available in either steel or aluminum. The steel panels are made of high grade steel ⅛″ thick. Aluminum panels are standard at ⅛″ thick aluminum. All panels are 19″ wide. Aluminum panels 3/16″ thick are available at a 60% increase in cost over the standard ⅛″ panel.

For the first time, we are offering light grey hammered finish panels at no extra charge. Be sure to specify by use of suffix "B" for black wrinkle finish, suffix "G" for grey wrinkle finish or suffix "HG" for light grey hammered finish. Add "SG" for grey enamel or "SB" for blue enamel when used with Series Sixty.

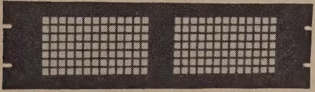
STEEL

Catalog No.	Height	Actual Weight lbs.	Net	Catalog No.	Height	Actual Weight lbs.	Net
PS-1250	1¾″	1¼	$ .84	PS-1256	12¼″	8¼	$2.42
PS-1251	3½″	2¼	1.08	PS-1257	14″	9½	2.84
PS-1252	5¼″	3¼	1.25	PS-1258	15¾″	10¾	3.09
PS-1253	7″	4½	1.42	PS-1259	17½″	11¾	3.51
PS-1254	8¾″	6	1.75	PS-1260	19¼″	13	3.84
PS-1255	10½″	7	2.09	PS-1261	21″	14¼	4.26

ALUMINUM

Catalog No.	Height	Actual Weight lbs.	Net	Catalog No.	Height	Actual Weight lbs.	Net
PA-1101	1¾″	¼	$1.09	PA-1107	12¼″	2¾	$4.09
PA-1102	3½″	¾	1.42	PA-1108	14″	3	4.76
PA-1103	5¼″	1	1.92	PA-1109	15¾″	3½	5.34
PA-1104	7″	1¾	2.42	PA-1110	17½″	4	5.85
PA-1105	8¾″	2	2.84	PA-1111	19¼″	4¼	6.43
PA-1106	10½″	2½	3.59	PA-1112	21″	5	7.01

VENTILATING GRILL PANELS

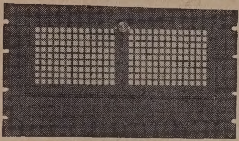


These panels are made of ⅛″ thick steel. The grill is stamped into the panel itself and is recommended for use where additional ventilation is desirable. All panels are 19″ long and are furnished in black or grey wrinkle finish or light grey hammered finish. Please specify by proper suffix the color desired.

Catalog No.	Height	Grill Size	Actual Weight	Net
PS-808	5¼″	3⅜″ x 13¹³⁄₃₂″	2½ lbs.	$3.26
PS-809	7″	4⅞″ x 13¹³⁄₃₂″	3½ lbs.	3.54
PS-810	8¾″	3⅜″ x 13¹³⁄₃₂″*	5 lbs.	4.26
PS-811	10½″	5⅞″ x 13¹³⁄₃₂″*	5¾ lbs.	4.51
PS-812	12¼″	7⅜″ x 13¹³⁄₃₂″*	6¼ lbs.	4.84

* Allows 3½″ space for chassis mounting.

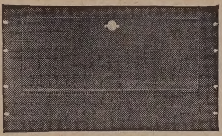
VENTILATED DOOR RACK PANELS



The Bud Ventilated Door Rack Panel has a generous perforated area in the door providing adequate ventilation for adjacent units. Distance from hinged side of opening to bottom 3½″. Distance from lock side of opening to top 1″. The panels are 19″ long and are available in either black or grey wrinkle finish or light grey hammered finish. OF SPECIAL INTEREST TO THE USER IS THE NEWLY DESIGNED IMPROVED LOCK ON THIS PANEL. THE LOCK IS A PLUNGER TYPE THAT MAKES CERTAIN IT IS EASY TO OPEN THE DOOR.

Catalog No.	Height	Door Opening	Actual Weight	Net
PS-814	10½″	15⅜″ x 6″	6 lbs.	$7.52
PS-815	12¼″	15⅜″ x 7½″	7 lbs.	8.27

METAL DOOR RACK PANELS



When accessibility to component parts on the chassis is a vital point, this panel is extremely useful. The panels are available in either grey or black wrinkle finish or light grey hammered finish. Please be certain that you specify, by use of the proper suffix, for color when ordering. Panels are made of ⅛″ sheet steel. Distance from hinged side of opening to bottom 3½″. Distance from lock side of opening to top 1″.

Catalog No.	Height	Door Opening	Actual Weight	Net
PS-615	10½″	15⅜″ x 6″	7¼ lbs.	$6.08
PS-616	12¼″	15⅜″ x 7½″	8¼ lbs.	7.52

NEW PANEL CHASSIS

This new series of panel mounting chassis is for professional type installations primarily. Made of .062″ aluminum. The front flange has standard notching suitable for mounting to a rack.

Catalog No.	Width	Depth	Height	Net
CB-1370	19″	5⁹⁄₃₂″	1¾″	$2.30
CB-1371	19″	5⁹⁄₃₂″	3½″	2.59
CB-1372	19″	5⁹⁄₃₂″	5¼″	2.84
CB-1373	19″	5⁹⁄₃₂″	7″	3.26
CB-1374	19″	5⁹⁄₃₂″	8¾″	3.76
CB-1375	19″	5⁹⁄₃₂″	10½″	4.43
CB-1376	19″	5⁹⁄₃₂″	12¼″	4.84
CB-1377	19″	5⁹⁄₃₂″	14″	5.34

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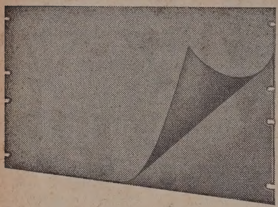
CONSOLES — BLOWER

"SURFACE SHIELD" ALUMINUM PANELS



Now . . . naturally bright aluminum panels with blemish-free mill finish.

Each panel is covered on both sides with sturdy self-stick paper to protect against damage. The paper provides an excellent surface for indicating size and position of drilling or milling. These operations may then be done while the paper is still in place thus minimizing the possibility of surface damage and elimination or surface soil. Paper is not removed until the panel is ready for installation.

Panels available in both 1/8″ and 3/16″ thicknesses, have standard notching and are 19″ wide. Individually wrapped in heavy Kraft-backed cellulose wadding for protection in shipment or storage.

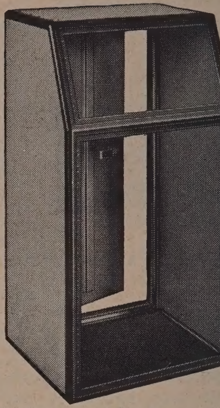
1/8″ PANELS

Cat. No.	Ht.	Wt.	Net
SFA-1831	1¾″	¼ lb.	$ .97
SFA-1832	3½″	¾ lb.	1.34
SFA-1833	5¼″	1 lb.	1.80
SFA-1834	7″	1¾ lbs.	2.21
SFA-1835	8¾″	2 lbs.	2.66
SFA-1836	10½″	2½ lbs.	3.34
SFA-1837	12¼″	2¾ lbs.	3.85
SFA-1838	14″	3 lbs.	4.45
SFA-1839	15¾″	3½ lbs.	4.97
SFA-1840	17½″	4 lbs.	5.47
SFA-1841	19¼″	4¼ lbs.	5.99
SFA-1842	21″	5 lbs.	6.50

3/16″ PANELS

Cat. No.	Ht.	Wt.	Net
SFA-3161	1¾″	¼ lb.	$ 1.79
SFA-3162	3½″	¾ lb.	2.36
SFA-3163	5¼″	1 lb.	3.17
SFA-3164	7″	1¾ lbs.	3.91
SFA-3165	8¾″	2 lbs.	4.68
SFA-3166	10½″	2½ lbs.	5.90
SFA-3167	12¼″	2¾ lbs.	6.80
SFA-3168	14″	3 lbs.	7.85
SFA-3169	15¾″	3½ lbs.	8.76
SFA-3170	17½″	4 lbs.	9.67
SFA-3171	19¼″	4¼ lbs.	10.57
SFA-3172	21″	5 lbs.	11.48

IMPERIAL Inclined Panel CONSOLE

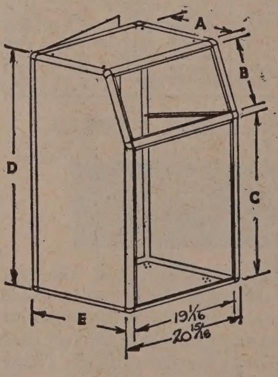


The most graceful of all consoles. Structural members are sturdy aluminum extrusions and all joints are ball-cornered aluminum castings. The inclined panel is set at a 22½° angle for comfortable viewing.

Complete assembly includes framework, top, bottom and two sides. Also included is a reinforced door with concealed hinges and flush mounted latch. The cast brass heavy duty hinges are specifically designed to enable components, blowers, etc. to be mounted on the rear door.

All parts of this console are made from aluminum to give strength while keeping the weight factor in mind. Extrusions which comprise the framework for the top, inclined panel area and front are drilled and tapped to accept standard rack panels. Casters may be attached to the bottom. Standard Bud aluminum panels may be used to enclose the front and inclined panel spaces.

Light grey hammertone sides, top, bottom and back. Black framework.



This console is fabricated from BUD IMLOK extrusions and aluminum sheets. Top and bottom are ⅛″. Sides: .050. Top: .062.

Cat. No.	A	B	C	D	E	Weight in lbs.	Net
BI-1828	12 5/16″	10 9/16″	28 1/16″	40 11/16″	18 5/8″	34 lbs.	$155.00
BI-2228	15 13/16″	10 9/16″	28 1/16″	40 11/16″	22 1/8″	36 lbs.	170.00
BI-2419	10 9/16″	17 9/16″	24 9/16″	43 21/32″	19 17/32″	38 lbs.	190.00
BI-2421	12 5/16″	17 9/16″	24 9/16″	43 21/32″	21 9/32″	40 lbs.	200.00

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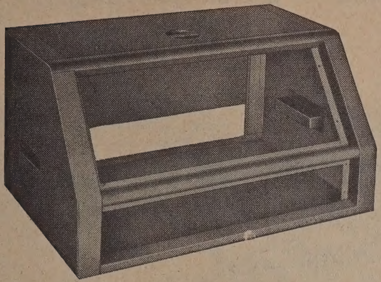
BUD RADIO PAGE 11

"PRESTIGE" CABINETS

SLOPING PANEL "PRESTIGE" CABINETS



Ventilated top.

Full top opening — With recessed Handle for easy lift.

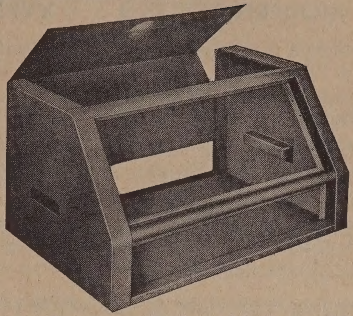
Shielded handles in sides.

Uses standard 19″ relay rack panels.

Top panel swept-back for easy viewing.

Rear opening for easy cable or control access.

Panel trim bar removable permitting installation or removal of panels that have chassis attached.



Cover can be screw fastened into position to minimize tampering with contents of cabinet.

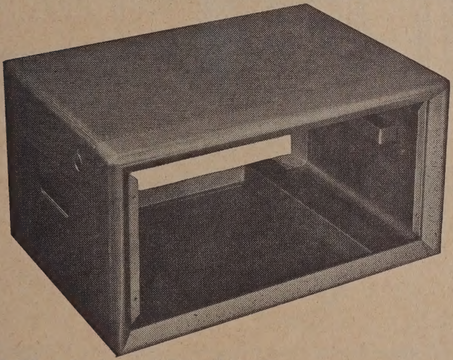
Grey hammertone finish.

Rear Opening is 2½″ x 18″ Panel recess is 1¼″

Top depth is 9″ Overall width is 22″

Catalog No.	Overall Height	Panel Space	Overall Depth	Ship. Wgt.	Net
C-1555	11⅞″	3½″ Vertical plus 7″ Sloping	14⅜″	22 lbs.	**$36.00**
C-1556	13¼″	3½″ Vertical plus 8¾″ Sloping	15⅛″	25 lbs.	**$38.65**
C-1557	14¾″	3½″ Vertical plus 10½″ Sloping	16⅛″	28 lbs.	**$41.45**

STANDARD "PRESTIGE" CABINETS



Solid or perforated hinged cover.

Finger holes assure easy cover lifting. Cover closes tightly by means of pressure fasteners.

Two supporting rails furnished. Can be moved laterally to accommodate any width chassis or mounting platform.

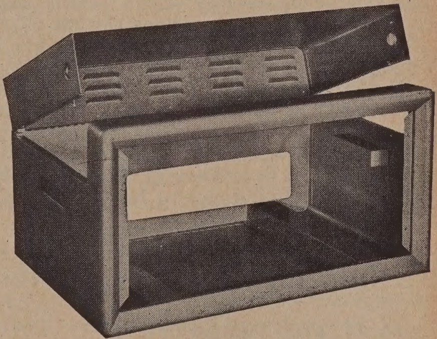
Ventilation is obtained through rear cabinet opening and louvres in rear of cover.

Carrying is accomplished by means of two recessed, safety shielded handle slots.

Rear opening for easy cable or control access.

Bottom has embossed feet to prevent scratching of surface upon which cabinet may rest.

Uses standard 19″ panels.



Made of 16 gauge steel. Grey hammertone finish only.

Overall width: 21-9/16″; overall depth: 14-7/8″; clear inside depth: 13-7/8″; rear opening: 18″ x 3″; cover opening: 21-9/16″ x 12-3/4″.

Cat. No.	Cover	Over-All Height	Panel Space	Ship. Wgt.	Net
C-1440	Solid	9½″	7″	21 lbs.	**$28.22**
C-1441	Solid	11¼″	8¾″	23 lbs.	**30.06**
C-1442	Solid	13″	10½″	25 lbs.	**32.82**
C-1550	Perforated	9½″	7″	20 lbs.	**30.56**
C-1551	Perforated	11¼″	8¾″	22 lbs.	**32.73**
C-1552	Perforated	13″	10½″	24 lbs.	**35.57**

Prices subject to change without notice. Only a few of many BUD Products are shown. Write for complete catalog.

"PRESTIGE" VERSA-CABINETS

MODERN STYLING . . . VERSATILE USAGE . . . QUICK ACCESSIBILITY

A standard Prestige Versa-Cabinet consists of the framework, two ball cornered sides, perforated metal back, solid bottom plate and two supporting channels.

The front, back, top, bottom may be quickly removed for access to interior for easy servicing.

Standard 19" panels may be attached to the top, bottom, front or back of cabinet to provide complete closure.

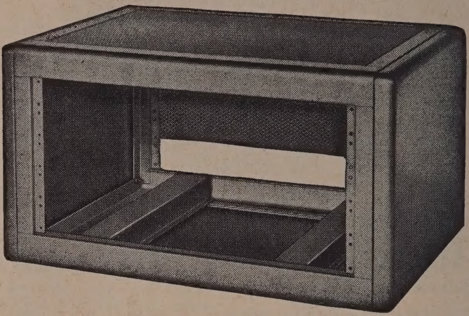
An opening is provided across bottom of back for cable leads, controls or knobs. Size of opening is 1-3/4" x 19". Bud Steel Panel PS-1250 (shown on Bud Page 10) or Aluminum Panel PA-1101 (shown on Bud Page 10) may be used to close opening if desired. Perforated back may be removed and a standard steel or aluminum panel may be used to close back opening entirely.

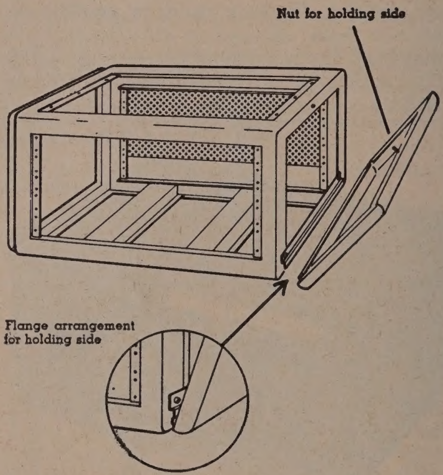
Sides are attached by means of holding flanges on the bottom of the frame and nut at top.

Handles may be fastened to sides. When the unit is carried by handles, the design of the flange mounting distributes the weight properly for safe carrying. Flange design eliminates possibility of sides becoming accidently detached while equipment is being carried. Cabinets may be fastened side-to-side in batteries of two or more or may be stacked one on another. Proper provision is made for fastening cabinets together either vertically or horizontally by means of four holes on each side and four holes in top and bottom of frame.

Four rubber feet are regularly supplied to prevent marring of the surface upon which cabinet may be placed.

Finished in grey hammertone.





"PRESTIGE" VERSA-CABINETS

Cat. No.	Panel Space	Height	Weight	Net
PC-1700	5¼"	8¾"	24 lbs.	$27.25
PC-1701	7"	10½"	27 lbs.	28.92
PC-1702	8¾"	12¼"	30 lbs.	30.75
PC-1703	10½"	14"	33 lbs.	33.50
PC-1704	12¼"	15¾"	36 lbs.	35.25

Clear inside width	22-1/4"
Overall width	23-3/16"
Clear inside depth	15"
Overall depth	15-25/32"

PERFORATED STEEL TOP PANEL

Cat. No.	Size	Weight	Net
PC-1710	12-1/4" x 19"	2-1/2 lbs.	$2.70

ACCESSORIES

Solid Steel Top Panel	PS-1256HG	Bud Pg. 10
Solid Aluminum Top Panel	PA-1107HG	Bud Pg. 10
Top Panel w. Solid Door	PS-616HG	Bud Pg. 10
Top Panel w. Ventilated Door	PS-815HG	Bud Pg. 10

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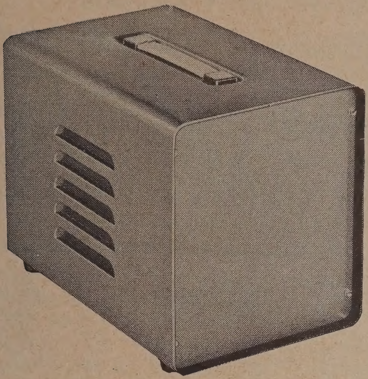
BUD RADIO PAGE 13

PORTACABS - CABINET RACKS



PORTACABS

CUSTOM APPEARANCE AND QUALITY ACHIEVED IN STANDARD PRODUCTION MODELS

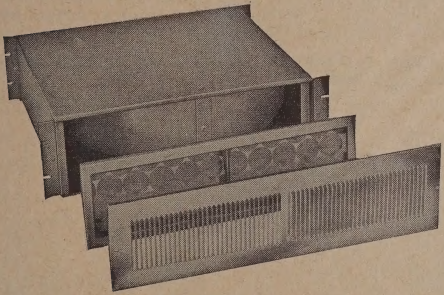
These attractive and versatile cabinets are desirable as housings for instrumentation requiring highly stylized appearance. The body is of one piece .050 aluminum with contoured corners. Panel is .062 aluminum.

Flexible recessed handle permits easy portability as well as vertical stacking. Well louvred for adequate ventilation. Since louvres point inward, side-to-side placement of cabinets is possible without space loss. Welded back has opening.

Aluminum front panel is recessed ½". The perimeter of the panel follows the contour of the body. Four detachable rubber feet furnished. Gray hammer-tone finish only.

Cat. No.	Depth	Width	Height	Recommended BUD Chassis	Opening Rear	Louvres per Side	Weight in lbs.	Net
WA-1540	8"	6⅛"	8"	AC-402 5" x 7" x 2"	2" x 4½"	1 set	2½	$ 9.20
WA-1541	12"	8⅛"	9"	AC-407 7" x 11" x 2"	2" x 6½"	2 sets	3	12.00
WA-1542	8"	10⅛"	8"	AC-406 7" x 9" x 2"	2" x 8½"	1 set	3½	10.65
WA-1543	18"	11⅛"	11"	AC-416 10" x 17" x 3"	2" x 9½"	3 sets	4½	13.50
WA-1544	18"	14⅛"	12"	AC-420 13" x 17" x 3"	2" x 12½"	3 sets	5½	15.50

TRANS-AIRE BLOWER



Ideal for use where excessive heat is generated by equipment in an enclosed rack, cabinet or console. It brings in fresh air or exhausts heated air.

The Trans-aire Blower performs better, occupies less space and is the lowest priced unit of equal capacity and performance.

FEATURES:

1. Can be used as an exhaust or intake blower depending upon mounting position. Air always flows in the direction of the arrows.
2. Operates on 110 V., 60 cycle current. Delivers either 550 or 250 cfm. air displacement at 0° static pressure. Two-speed 1/10 h.p. motor. Oilite bearings with oil impregnated felt wicks.
3. Oil impregnated, fiber glass disposable filter. Filter can be changed without removing unit from cabinet.
4. Motor is rubber mounted to reduce vibration. Operating noise factor reduced to minimum.
5. Thermal overload protection to prevent overheating. Automatic re-set.
6. May be mounted to rails of standard cabinet or rack. Use of Bud Chassis Supporting angles SA-1349, SA-1350 or CE-2219 is recommended when blower is mounted in rack or cabinet.
7. Unit will operate in any position — vertical or horizontal.
8. Requires only 5¼" panel space. Over-all depth—14½". Over-all width—17".

Cat. No.		Weight	Net
B-25	Blower	25 lbs.	$53.35
BF-26	Replacement Filter	1 lb.	1.50

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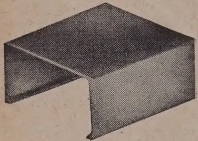
CHASSIS — BOXES

OPEN END CHASSIS

These are primarily intended to be used with the various styles and sizes of Bud Metal Cabinets. These chassis are ideal for any type of small built-up units such as record amplifier, code oscillator, etc. From this you can see that there is a wide variety of applications. The U-shaped construction is used with ends folded over ⅜" for additional strength. Made from aluminum (.040) natural finish.

Cat. No.	Depth	Width	Height	Fits Cab No.	Net
CB-38	7"	6"	2"	C-1584	$1.00
CB-30	5"	7"	1½"		.97
CB-41	7"	7"	1½"	C-973	1.24
CB-39	7"	8"	2"	C-1585	1.17
CB-996	5½"	9"	1½"	C-993	1.09
CB-976	7½"	9"	1½"	C-999, C-1481	1.40
CB-40	7"	10"	2"	C-1586	1.37
CB-997	7"	11"	1½"	C-994, C-1482	1.30
CB-998	7"	13"	1½"	C-995, C-1483	1.59

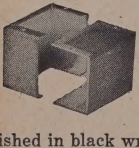


MINIATURE ALUMINUM CHASSIS

These small, open end aluminum chassis are the answer for miniature tube applications or sub-assemblies. They are made of hard aluminum with ¼" flanges on the bottom allowing the chassis to be fastened down, or allowing a bottom plate to be attached. They are extremely useful for a wide variety of applications such as small receivers, narrow band FM adapters or any place where the space is limited.

Cat No.	Depth	Width	Height	Fits Cabinet No.	Net
CB-1623	2⅝"	2¾"	1¼"	C-1784	$ .38
CB-1624	1¾"	3⅛"	1"	CU-883	.42
CB-1625	3¼"	4½"	2"	C-1788	.48
CB-1626	2¾"	4⅛"	1"	CU-728	.45
CB-1627	3¾"	4⅛"	1½"	CU-729	.45
CB-1628	3"	6⅛"	1¼"	C-1785	.53
CB-1629	5¾"	4⅞"	1½"	CU-1098	.57
CB-1617	4"	3⅛"	1"	C-1602	.41
CB-1618	4"	4⅛"	1"	C-1603	.50
CB-1619	4"	5⅛"	1"	C-1604	.53
CB-1620	4"	6⅛"	1"	C-1605	.55

HANDY BOXES

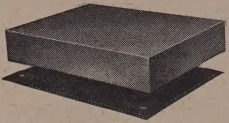


The design of the Handy Box permits a large number of small components to be easily wired or serviced. The cover is held by four self tapping screws. Made from 22 gauge steel and is furnished in black wrinkle finish only.

Catalog No.	Height	Length	Width	Actual Weight lbs.	Net
HB-1621	2¼"	4¼"	1½"	½	$1.15
HB-1622	2"	4"	2¾"	½	1.17

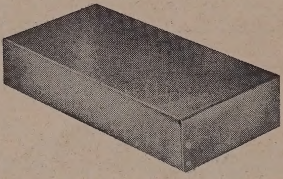
HEAVY DUTY CHASSIS

(Furnished with Bottom Plate)



These chassis, made of 16 gauge steel, are designed for applications requiring unusual sturdiness and where large weights are involved. The bottom plates for these chassis are furnished at no extra charge. Available in either black wrinkle finish or electro-zinc plate. All chassis are 17" wide.

Black Wrinkle Cat. No.	Zinc Plated Cat. No.	Depth	Height	Net Black Wrinkle	Net Zinc Plated
CB-1758	CB-1765	8"	3"	$4.26	$4.76
CB-1760	CB-1767	11"	3"	4.34	4.84
CB-1761	CB-1768	13"	2"	4.84	5.34
CB-1762	CB-1769	13"	3"	4.93	5.43
CB-1763	CB-1770	13"	4"	5.26	5.85



ALUMINUM CHASSIS

The construction and design of these chassis are exactly the same as that of our steel chassis bases. The aluminum chassis are welded on Government approved spot welders that are the same as those used in the welding of aluminum aircraft parts. As a result, you can depend on Bud Aluminum Chassis to do a perfect job and to stand up under all conditions.

Please note that the gauges shown in the table are aluminum gauges.

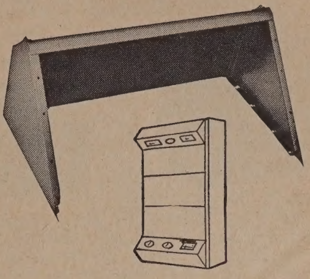
Catalog Number	Depth	Width	Height	Gauge	Net
AC-430	4"	6"	3"	18	$1.34
AC-431	4"	6"	2"	18	1.10
AC-432	4"	17"	3"	16	2.33
AC-402	5"	7"	2"	18	1.17
AC-429	5"	7"	3"	16	1.42
AC-403	5"	9½"	2"	18	1.24
AC-421	5"	9½"	3"	18	1.60
AC-404	5"	10"	3"	18	1.63
AC-422	5"	13"	3"	18	1.84
AC-433	6"	17"	3"	16	2.67
AC-405	7"	7"	2"	18	1.35
AC-406	7"	9"	2"	18	1.46
AC-407	7"	11"	2"	18	1.58
AC-408	7"	12"	3"	18	2.00
AC-409	7"	13"	2"	18	1.67
AC-411	7"	15"	3"	16	2.67
AC-423	7"	17"	3"	16	2.75
AC-424	8"	12"	3"	16	2.42
AC-425	8"	17"	2"	16	2.51
AC-412	8"	17"	3"	16	2.84
AC-413	10"	12"	3"	16	2.67
AC-414	10"	14"	3"	16	2.84
AC-415*	10"	17"	2"	16	2.68
AC-416*	10"	17"	3"	16	3.17
AC-426*	11"	17"	2"	14	3.42
AC-417*	11"	17"	3"	14	3.97
AC-418*	12"	17"	3"	14	4.08
AC-419*	13"	17"	2"	14	3.51
AC-420*	13"	17"	3"	14	4.26
AC-427*	10"	17"	4"	14	4.51
AC-428*	13"	17"	4"	14	5.26

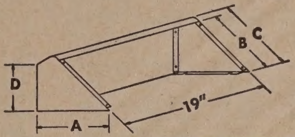
* Indicates chassis punched to accommodate Chassis Mounting Brackets.

Prices subject to change without notice. Only a few of many BUD Products are shown. Write for complete catalog.

PANEL SUPPORTS-MINIBOXES

DUAL-VIEW PANEL SUPPORTS



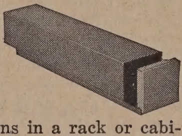


Designed for installation on a rack where an oblique view of an instrument panel is desired. ENGINEERED SO THAT THE ENTIRE ASSEMBLY OCCUPIES NO MORE SPACE THAN THE SIZE OF THE SUPPORTED PANEL. For instance, IP-1120 supports a 7" panel and requires only 7" of rack panel space while the IP-1121 supports a 10½" panel and requires only 10½" of rack panel space. An additional feature is the panel support cover which can be removed for easy servicing or installation of instruments.

The Dual-View Panel Support is made of heavy gauge steel. It has attractive contoured edges. Furnished knocked-down with necessary assembly hardware. No panel furnished. Bud panels to fit these supports are PS-1253 (steel) and PA-1104 (aluminum) for IP-1120. PS-1255 (steel) and PA-1106 (aluminum) for IP-1121. Choice of Gray Wrinkle, Black Wrinkle or Gray Hammertone finish. Please specify when ordering.

Cat. No.	Supports Panel	Requires Panel Space	A	B	C	D	Weight in lbs.	Net
IP-1120	7" x 19"	7" x 19"	7"	7"	8-1/16"	4½"	3½	$ 4.15
IP-1121	10½" x 19"	10½" x 19"	10½"	10½"	11-9/16"	6"	6¾	5.80

MINISLIDES



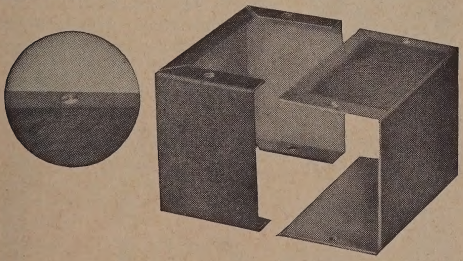
Ideal for housing components or assemblies where easy access to internally mounted parts is important. Can be mounted in a number of positions in a rack or cabinet. Accessibly is achieved by removing the sliding cover.

The design of the Minislide Box provides adequate shielding as well as protection from dust. There is an infinite variety of uses for this versatile housing in the electronic field. Fabricated of .050 aluminum.

Furnished in light gray hammertone or natural aluminum. Fastening is by means of four self-tapping screws which are included.

Gray Hammertone		Natural					Wt.
Cat. No.	Net	Cat. No.	Net	Length	Width	Height	lbs.
MS-2150	$3.75	MS-3050	$2.85	13"	3⅛"	2⅝"	1
MS-2151	4.30	MS-3051	3.50	13"	5⅛"	2⅝"	1½
MS-2152	4.15	MS-3052	3.35	17"	3⅛"	2⅝"	1¼

MINIBOXES with SELECTIVE FASTENING



For the first time—a minibox with both snap-lock and screw-type fastening at no extra charge.

A multipurpose aluminum box for use in the fields of communications and electronics. The design permits the installation of more components than is possible in other conventionally designed boxes of the same size.

Two-piece construction, each piece forming three sides. The two sections are held together by the engagement of four circular projections into four matching holes.

A unique mechanical principle enables these projections to be easily and quickly knocked out if screw type assembly is desired.

Flanges assure proper shielding. Four self-tapping screws furnished. Smaller sizes made of .040 aluminum. Larger sizes made of .051 aluminum. Available in natural finish or light gray hammertone.

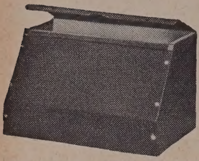
Grey Hammertone		Natural Aluminum					Weight
Cat. No.	Net	Cat. No.	Net	Length	Height	Width	in lbs
CU-2100A	$.74	CU-3000A	$.59	2¾"	2⅛"	1⅝"	¼
CU-2101A	.76	CU-3001A	.61	3¼"	2⅛"	1⅝"	¼
CU-2102A	.80	CU-3002A	.64	4"	2⅛"	1⅝"	¼
CU-2103A	.90	CU-3003A	.72	4"	2¼"	2¼"	¼
CU-2104A	.95	CU-3004A	.76	5"	2 "	2¼"	¼
CU-2105A	1.20	CU-3005A	.96	5"	4"	3"	½
CU-2106A	1.02	CU-3006A	.82	5¼"	3"	2⅛"	¼
CU-2107A	1.50	CU-3007A	1.20	6"	5"	4"	¾
CU-2108A	1.65	CU-3008A	1.32	7"	5"	3"	¾
CU-2109A	2.10	CU-3009A	1.68	8"	6"	3½"	1
CU-2110A	2.35	CU-3010A	1.88	10"	6"	3½"	1¼
CU-2111A	3.20	CU-3011A	2.56	12"	7"	4"	1¾
CU-2112A	3.20	CU-3012A	2.56	17"	3"	4"	2¼
CU-2113A	1.20	CU-3013A	.96	10"	2"	1⅝"	½
CU-2114A	1.55	CU-3014A	1.24	12"	2½"	2¼"	¾
CU-2115A	.92	CU-3015A	.74	4"	2"	2¾"	¼
CU-2116A	.92	CU-3016A	.74	4¼"	2¼"	1½"	¼
CU-2117A	.78	CU-3017A	.62	3¼"	2⅛"	1⅛"	¼

Prices subject to change without notice. Only a few of many BUD Products are shown. Write for complete catalog.

(Use Index Page 1 for Quick, Easy Location of ALL Products)

CABINETS — CASES

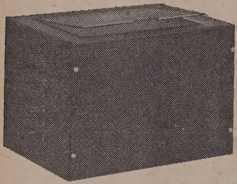
SLOPING PANEL CABINETS



The entire front panel of this cabinet is removable if so desired. THIS CABINET IS ALSO PROVIDED WITH A HINGED TOP FOR EASY ACCESSIBILITY TO TUBES AND OTHER PARTS THAT ARE MOUNTED ON THE CHASSIS, WITHOUT NECESSITATING REMOVAL OF THE FRONT PANEL. Finished in black wrinkle enamel or light grey hammertone. Specify with suffix B for black, HG for grey hammertone.

Catalog Number	Height	Width	Depth	Fits Chassis	Net
C-1584	6½″	7-1/16″	7 5/16″	7″ x 6″ x 2″	$3.30
C-1585	6½″	9-1/16″	7 5/16″	7″ x 8″ x 2″	3.75
C-1586	6½″	11-1/16″	7 5/16″	7″ x 10″ x 2″	4.34
C-1587	8″	8-1/16″	8″	7″ x 7″ x 2″	4.51
C-1588	8″	10-1/16″	8″	7″ x 9″ x 2″	5.01
C-1892	8″	13-1/16″	8½″	8″ x 12″ x 2½″	5.95
C-1893	10″	18-1/16″	10½″	10″ x 17″ x 3″	7.85
C-1894	8″	14-1/16″	8″	7″ x 13″ x 2″	5.34
C-1896	9″	18-1/16″	8⅛″	7″ x 17″ x 3″	7.68

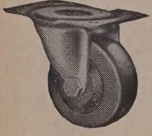
INSTRUMENT & RECEIVER CABINETS



Each cabinet has an evenly recessed hinge cover with convenient finger lift. The panel in the front of the cabinet is readily attached with self tapping screws. No opening in rear. Louvers provide satisfactory ventilation. For chassis to fit these cabinets, see the open end chassis listed on Bud Page 15. Finished in black wrinkle enamel only.

Cat. No.	Height	Width	Depth	Net
C-973	7″	8″	8″	$4.18
C-993	7″	10″	8″	4.84
C-994	7″	12″	8″	5.01
C-995	7″	14″	8″	5.26
C-1190	8″	16″	8″	7.60
C-975	9″	15″	11″	9.19
C-999	12″	18″	12″	9.92

TRUCK CASTERS

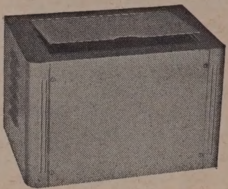


RC-7756 Heavy duty type
RC-7757 Light duty type
RC-7758 For Series 60 cabinets

Ball bearing wheels are hard tread composition.

Cat. No.	Height	Weight (Set of 4)	Net (Each)
RC-7756	2⅝″	1¾ lbs.	$ .90
RC-7757	2″	1 lb.	.40
RC-7758	3″	6 lbs.	2.17

STREAMLINED CABINETS



Ideal cabinets for electrical or electronic devices not requiring excessive depth. They have recessed hinged cover with convenient finger lift. Panels fit flush with the embossed, rounded corner fronts. All components built into these cabinets are easily accessible.

Bud Open End Chassis are recommended for use in these cabinets.

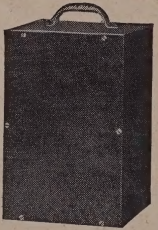
Overall height is 8″ and overall depth is 8¼″. 3½″ high opening is provided across the back for cables or rear controls. Louvred sides provide ample ventilation.

Available in black wrinkle, gray wrinkle or gray hammertone finish. Please specify when ordering. The sizes shown in the table below replace BUD NUMBERS: C-1730, C-1731, C-1746, C-1747, C-1748, C-1781, C-1782, C-1783, C-1789, C-1790, C-1791, C-1792.

Cat. No.	Width	Panel Sp.	Top Opening	Wt.	Net
CD-1480	10½″	8″ x 8″	5⅝″ x 7⅞″	5¾ lbs.	$ 5.90
CD-1481	12½″	8″ x 10″	5⅝″ x 9⅛″	6 lbs.	6.01
CD-1482	14½″	8″ x 12″	5⅝″ x 11⅛″	6½ lbs.	6.31
CD-1483	16½″	8″ x 14″	5⅝″ x 13⅛″	7 lbs.	6.77
CD-1484	18½″	8″ x 16″	5⅝″ x 15⅞″	7¾ lbs.	7.36
CD-1485*	20⅝″	12″ x 18″	10½″ x 15½″	15 lbs.	14.95

*Has ½″ vertical chrome strip fastened to corners and is available in grey wrinkle finish only. Note that panel space is 12″ x 18″ and depth is 12″.

CARRYING CASES



These carrying cases have many uses. An easy grip handle is fastened to the top. Front and back panels are removable. Welded construction assures maximum strength where needed, and this unit is also available in aluminum to provide minimum weight where required. Prefix "CC" represents steel. Available in black wrinkle or light grey hammertone finish. Prefix "ACC" represents aluminum. Available with natural finish or light grey hammertone.

STEEL (Black Wrinkle or Grey Hammertone)

Cat. No.	Depth	Width	Height	Net
CC-1095	5″	6″	9″	$3.01
CC-1091	5″	9″	6″	3.01
CC-1096	6″	7″	12″	4.18
CC-1092	6″	12″	7″	4.18
CC-1097	7″	7¾″	15″	4.68
CC-1100	8″	10″	10″	4.84
CC-1093	7″	15″	9″	5.85

ALUMINUM (Natural Finish or Grey Hammertone)

Cat. No.	Depth	Width	Height	Net Natural	Grey
ACC-2095	5″	6″	9″	$3.09	$3.51
ACC-2091	5″	9″	6″	3.09	3.51
ACC-2096	6″	7″	12″	4.50	5.09
ACC-2092	6″	12″	7″	4.50	5.09

Prices subject to change without notice. Only a few of many BUD Products are shown. Write for complete catalog.

CHASSIS - PLATES - BRACKETS

STEEL CHASSIS

These Chassis are made from one piece of steel. All corners are reinforced and spot welded. The four sides are folded at the bottom for additional strength. This also permits a bottom plate to be attached if desired. As shown in table below, chassis are available in either black wrinkle finish or electro-zinc plated.

STEEL

Black Wrinkle Cat No.	Zinc Plated Cat. No.	Depth	Width	Height	Gauge	Net Black Wrinkle	Net Zinc Plated
CB-628	CB-629	5″	7″	2″	22	$1.07	$1.30
CB-644	CB-645	5″	9½″	2½″	22	1.37	1.67
CB-788	CB-776	5″	9½″	1½″	22	1.20	1.69
CB-604	CB-605	5″	10″	3″	22	1.27	1.84
CB-755	CB-756	6″	14″	3″	20	1.75	2.05
CB-789	CB-1191	7″	7″	2″	20	1.20	1.50
CB-790	CB-1192	7″	9″	2″	22	1.40	1.59
CB-791	CB-1193	7″	11″	2″	20	1.45	1.67
CB-792	CB-793	7″	12″	3″	20	1.57	2.05
CB-646	CB-1194	7″	13″	2″	20	1.54	1.92
CB-647	CB-1198	5″	13½″	2½″	20	1.77	2.17
CB-649	CB-1189	7″	15″	3″	20	2.00	2.40
CB-665	CB-666	8½″	15″	3″	20	2.24	2.71
CB-1068	CB-1066	4″	17″	3″	20	1.80	2.14
CB-648	CB-1199	7″	17″	2½″	20	1.99	2.37
CB-757	CB-758	7″	17″	3″	20	2.15	2.59
CB-701	CB-702	8″	10″	2½″	20	1.72	2.02
CB-703	CB-704	8″	12″	2½″	20	1.75	2.24
CB-759	CB-760	8″	12″	3″	20	1.85	2.34
CB-650	CB-774	8″	17″	2″	20	1.70	2.34
CB-651*	CB-775	8″	17″	3″	20	2.05	2.62
CB-652	CB-1195	10″	12″	3″	20	1.89	2.25
CB-653	CB-779	10″	14″	3″	20	2.04	2.44
CB-654*	CB-769	10″	17″	2″	20	2.00	2.39
CB-636*	CB-637	10″	17″	3″	20	2.00	2.84
CB-655*	CB-1196	10″	17″	3″	18	2.54	3.05
CB-656	CB-1197	10″	23″	3″	18	2.86	3.42
CB-657*	CB-770	11″	17″	2″	18	2.35	2.81
CB-658*	CB-771	11″	17″	3″	18	2.77	3.49
CB-663*	CB-661	12″	17″	2″	18	2.44	3.09
CB-664*	CB-662	12″	17″	3″	18	2.91	3.67
CB-659*	CB-772	13″	17″	2″	18	2.91	3.72
CB-660*	CB-773	13″	17″	3″	18	3.41	4.07
CB-640*	CB-641	10″	17″	4″	18	2.92	3.51
CB-642*	CB-643	13″	17″	4″	18	3.92	4.68
CB-625	CB-626	13″	17″	5″	18	4.93	5.93
CB-623	CB-624	10″	17″	5″	18	4.51	5.34

* Indicates chassis punched to accommodate Chassis Mounting Brackets.

CHASSIS BOTTOM PLATES

Steel and Aluminum

These bottom plates make excellent dust covers and protect all wiring and component parts of the chassis. Each plate has four formed bosses to prevent sharp edges from scratching a table top or other surface. Those numbers prefaced by "BP" are steel bottom plates, supplied in black wrinkle finish or electro-zinc plated finish. Those bottom plates prefaced by "BPA" are made of aluminum and have an etched finish.

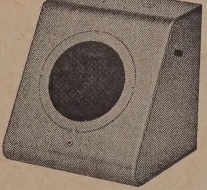
STEEL

Black Wrinkle Cat. No.	Zinc Plated Cat. No.	Fits Chassis	Net Black Wrinkle	Net Zinc Plated
BP-705	BP-706	5″ x 7″	$ .57	$ .69
BP-680	BP-667	5″ x 9½″	.62	.75
BP-536	BP-538	5″ x 10″	.67	.73
BP-681	BP-668	7″ x 7″	.92	.97
BP-682	BP-669	7″ x 9″	.94	.99
BP-683	BP-670	7″ x 11″	.95	1.07
BP-537	BP-539	7″ x 12″	.99	1.12
BP-684	BP-671	7″ x 13″	1.02	1.20
BP-685	BP-672	5″ x 13½″	.84	1.00
BP-1069	BP-1067	4″ x 17″	.84	1.07
BP-686	BP-673	7″ x 17″	.90	1.37
BP-707	BP-708	8″ x 10″	.92	1.05
BP-709	BP-710	8″ x 12″	1.06	1.34
BP-687	BP-674	8″ x 17″	.95	1.54
BP-688	BP-675	10″ x 12″	.95	1.57
BP-517	BP-514	10″ x 14″	1.25	1.33
BP-689	BP-676	10″ x 17″	1.20	1.60
BP-690	BP-677	11″ x 17″	1.20	1.60
BP-691	BP-678	12″ x 17″	1.27	1.87
BP-692	BP-679	13″ x 17″	1.47	2.24

ALUMINUM

BPA-1589	5″ x 7″	$ .74
BPA-1590	5″ x 9½″	.75
BPA-1591	5″ x 10″	.75
BPA-1592	7″ x 7″	.77
BPA-1593	7″ x 9″	.80
BPA-1594	7″ x 11″	.90
BPA-1595	7″ x 12″	.97
BPA-1596	7″ x 13″	1.14
BPA-1597	10″ x 17″	1.52
BPA-1598	13″ x 17″	2.07

UNIVERSAL METER CASE



A new meter case that can accommodate either a 2″ or 3″ meter.

Center hole is punched for 2″ meter and has an easily removed knock-out ring which increases size of hole to fit 3″ meter.

One piece, detachable sides and back fastened to body of case with 2 self tapping screws permits easy installation and servicing of meter. Meter installation is reduced to fraction of former time required.

Two 3/8″ knock-out holes in top for installation of feed-through insulators if required. They may also be used for mounting of switches, volume controls, etc.

Size: 4¼″ high x 4″ wide x 4″ deep.

Available in steel or aluminum. Gray hammertone finish only.

Catalog Number	Replaces Numbers	Meter Size	Wt.	Net
CM 1935 Steel	CM 1241, CM 1242 CM 1965, CM 1966	2″ or 3″	1 lb.	$1.22
CMA 1936 Aluminum	CMA 2065, CMA 2066	2″ or 3″	¾ lb.	1.47

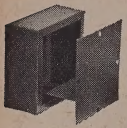
Prices subject to change without notice. Only a few of many BUD Products are shown. Write for complete catalog.

BUD RADIO PAGE 18

CABINETS

MINIATURE UTILITY CABINETS

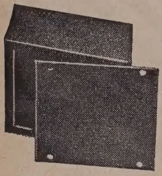
(With Attached Chassis)



A long sought for item has been a small cabinet with a chassis attached to the front panel. This is indispensable for building electronic devices using miniature tubes or transistors. Front and rear panels are removable and fastened with self tapping screws that permit easy accessibility. Finished in black wrinkle enamel.

Cat. No.	Height	Width	Depth	CHASSIS SIZE			Net
C-1793	4″	4″	2″	1″	3⅛″	1⅞″	1.34
C-1794	4″	5″	3″	1″	4⅛″	2⅞″	1.48
C-1795	5″	4″	3″	1¼″	3⅛″	2⅞″	1.62
C-1796	6″	5″	4″	1¾″	4⅛″	3⅞″	1.70
C-1797	5″	6″	4″	1¼″	5⅛″	3⅞″	1.92
C-1798	6″	6″	6″	1¾″	4⅞″	5⅞″	2.17

UTILITY CABINETS



A large number of sizes available makes this line useful for all types of electronic equipment. These cabinets have two removable panels for easy accessibility. Units prefixed by CU are made from cold rolled steel and are finished in black wrinkle or light grey hammertone. Those prefixed by AU are made from high grade sheet aluminum and have natural finish or light grey hammertone.

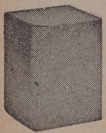
STEEL (Black Wrinkle or Grey Hammertone)

Cat. No.	Depth	Width	Height	Net
CU-883	2″	4″	4″	$1.09
CU-728	3″	5″	4″	1.22
CU-729	4″	5″	6″	1.38
CU-1098	6″	6″	6″	2.09
CU-1099	5″	6″	9″	2.34
CU-879	7″	8″	10″	3.34
CU-1124	6″	7″	12″	3.29
CU-880	8″	10″	10″	4.01
CU-881	8″	11″	12″	4.34
CU-882	7″	9″	15″	4.51

ALUMINUM (Natural or Grey Hammertone)

Cat. No.	Depth	Width	Height	Net Natural	Grey
AU-1083	2″	4″	4″	$1.29	$1.50
AU-1028	3″	5″	4″	1.37	1.67
AU-1029	4″	5″	6″	1.50	1.84
AU-1039	6″	6″	6″	2.17	2.42
AU-1040	5″	6″	9″	2.51	2.84

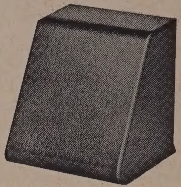
STREAMLINED MULTIPURPOSE CABINET

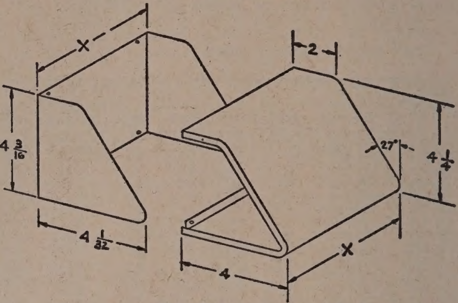


A handsome streamlined metal cabinet, finished in grey wrinkel enamel only. The back of the cabinet is completely open for ventilation purposes.

Cat. No.	Height	Width	Depth	Use Chassis No.	Net
C-1787	4½″	5½″	3½″	CB-1625	1.70
C-1788	6½″	5½″	3½″	CB-1625	1.75

UNIVERSAL SLOPING PANEL CABINETS





Versatile, streamlined housings with two viewing angles.

FEATURES

One piece, detachable back and bottom fastened to body with two self tapping screws permits easy access for mounting and servicing components.

Fully enclosed and shielded. The opportunity for dust, dirt and moisture entering cabinet is minimized. No danger from exposed wiring.

Components may be mounted on back, bottom, sides or front and still be easily accessible for service or replacement.

Will accommodate a Bud Miniature Aluminum Chassis shown on Bud Page 15.

Available in steel or aluminum. Gray hammertone finish only.

STEEL

Cat. No.	Width (X)	Weight	Net
C 1606	4″	¾ lb.	$1.45
C 1607	5″	¾ lb.	1.55
C 1608	6″	1⅛ lb.	1.65
C 1609	7″	1⅛ lb.	1.90

ALUMINUM

Cat. No.	Width (X)	Weight	Net
AC 1610	4″	½ lb.	$1.68
AC 1611	5″	½ lb.	1.75
AC 1612	6″	¾ lb.	1.90
AC 1613	7″	¾ lb.	2.10

Prices subject to change without notice. Only a few of many BUD Products are shown. Write for complete catalog.

BUD RADIO PAGE 19

HANDLES

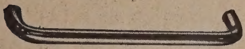
Bud handles are fabricated from steel, brass or cast aluminum. Their durable, attractive finish will provide long wear. The material and finish specifications for each handle is described below. They have unlimited applications in the electronic, electrical, and many other fields. Packaged in pairs only. Necessary mounting hardware is furnished. Bud handles are designed for rugged applications and are far superior to handles of similar appearance. Illustrated below is a typical handle of each style available.

H-9100 Made from 1″x¼″ solid brass. 4″x½″ mounting centers. 1″ hand clearance. Chrome plated. Hardware: (4) 6-32x½″ screws. **$3.96 pr.**

H-9101 Same as H-9100 except has 8″x½″ mounting centers. **$6.15 pr.**

H-9102 Made from ⅝″x¼″ solid brass. 4″ mounting centers. 1″ hand clearance. Chrome plated. Hardware: (2) 6-32x½″ screws. **$3.15 pr.**

H-9103 Same as H-9102 except has 6″ mounting centers. **$3.60 pr.**



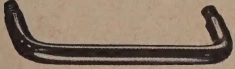
H-9110 Made from ⅜″ steel rod. Angular formed. 6″ mounting centers. 1¼″ hand clearance. Chrome plated. Hardware: (2) 10-32x½″ screws. **$2.79 pr.**

H-9111 Made from ⅜″ steel rod. 4″ mounting centers. 15/16″ hand clearance. Chrome plated. Hardware: (2) 10-32x½″ screws. **$1.50 pr.**

H-9112 Same as H-9111 except has 6″ mounting centers. **$1.89 pr.**

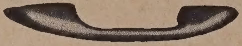
H-9113 Same as H-9111 except has 8″ mounting centers. **$2.10 pr.**

H-9114 Made from ½″ steel rod. 8″ mounting centers. 1½″ hand clearance. Chrome plated. Hardware; (2) ¼-28x½″ screws. **$3.51 pr.**



H-9115 Made from ⅜″ steel rod. 4″ mounting centers. 15/16″ hand clearance. Chrome plated. Hardware: (2) ¼-28 nuts. **$2.40 pr.**

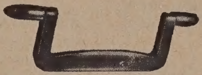
H-9116 Same as H-9115 except has 6″ mounting centers. **$3.00 pr.**



H-9120 Made from die-cast aluminum. 4⅜″ inside mounting centers. 5⅜″ outside mounting centers. 1″ hand clearance. Silver anodized. Hardware: (4) 6-32x½″ screws. **$3.51 pr.**

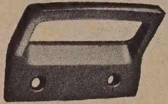
H-9121 Same as H-9120 except is chrome plated. **$4.95 pr.**

H-9123 Similar to H-9120 except has 4½″ mounting centers, 1″ hand clearance. Hardware: (2) 10-32x½″ screws. **$2.61 pr.**



H-9122 Made from die-cast aluminum. Hinged on ¼″ steel pins with 2 hinge blocks. 6½″ inside mounting centers. 7¼″ mounting centers. 1½″ hand clearance. Silver anodized. Hardware: (4) 10-32x⅜″ screws. **$5.94 pr.**

H-9130 Made from die-cast aluminum. 3″ mounting centers. Silver anodized. Hardware: (2) 10-32x ⅜″ screws. **$5.25 pr.**



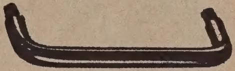
H-9131 Made from die-cast aluminum. 2¼″ mounting centers. Size 4″x2⅞″. Silver anodized. Hardware: (2) ¼-28x¾″ raised counter-sunk screws and nuts. **$3.90 pr.**

H-9140 Made from die-cast aluminum. 3½″ mounting centers. ¾″ hand clearance. Silver anodized. Hardware: (2) 10-32x½″ screws. **$2.34 pr.**

H-9150 Made from die-cast aluminum. 4″x⅝″ mounting centers. 1¼″ hand clearance. Silver anodized. Hardware: (4) 10-32x½″ screws. **$3.15 pr.**

H-9151 Made from die-cast aluminum. 5 5/32″x⅝″ mounting centers. 1⅜″ hand clearance. Silver anodized. Hardware: (4) 10-32x½″ screws. **$5.10 pr.**

H-9152 Similar to H-9151. 3⅞″ mounting centers. 1⅛″ hand clearance. Silver anodized. Hardware: (2) 10-32x⅜″ screws. **$4.14 pr.**



H-9160 Made from ⅜″ steel rod. 3½″ mounting centers. 1 11/16″ hand clearance. Chrome plated. (2) ¼-28 hex nuts. **$2.70 pr.**

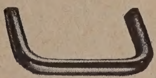
H-9161 Same as H-9160 except with 4¼″ mounting screws. **$3.15 pr.**

H-9162 Same as H-9160 except with 7″ mounting centers. **$3.24 pr.**

H-9163 Same as H-9160 except with 8″ mounting centers. **$3.51 pr.**

H-9164 Same as H-9160 except with 10½″ mounting centers. **$3.96 pr.**

H-9165 Same as H-9160 except with 14¼″ mounting centers. **$4.35 pr.**



H-9166 Made from ¼″ brass rod. 1 29/32″ mounting centers. 1″ hand clearance. Chrome plated. Hardware: (2) 6-32x½″ screws. **$1.20 pr.**

H-9168 Same as H-9166 except with 3″ mounting centers. **$1.35 pr.**

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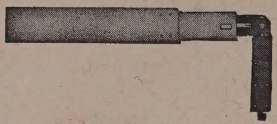
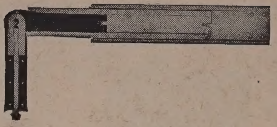
BUD RADIO PAGE 20

CHASSIS SLIDES





The quality of a slide assembly is determined by the efficiency of operation under difficult conditions. The new Bud line of quality ball bearing slides is designed to give the highest possible serviceability under the aforementioned conditions.

It pays to buy a top quality precision slide to assure smoothest operation and long life over a period of repeated movements of the slide mechanism. Actually, money is saved when breakdown time of equipment is reduced by your ability to quickly withdraw the operating mechanism from an enclosure by means of a thoroughly dependable slide assembly.

All of the Bud slides shown are specifically designed to allow withdrawal of a full 17" wide chassis when this is housed in a standard 19" panel space relay rack or cabinet. All slides are drilled to accommodate either a panel rail bracket or direct slide rail mounting. Mounting brackets and necessary hardware for mounting to standard relay racks are furnished at no extra charge.

Investigation of the mechanisms used will immediately show the Bud slides to provide the most flexible methods of moving equipment of all types from enclosures to access areas where maintenance can be easily affected. In those described below as "quick detach" models, immediate change of instrumentation or other equipment can be made directly at the point of use with an infinitesimal delay in exchange.

You will note that the Bud line is divided into two types. The "SI" line is for industrial or military uses where exceptional use requirements or adherence to Mil specifications is necessary. The "SC" line is specifically designed for those commercial applications where top quality and performance is required, but Mil specs are not a consideration.

"SC" SERIES*

SC-4312, SC-4316, SC-4320 Full ball bearing slides. Inner members do not disconnect or tilt. Aluminum extrusions used on these slides are made of 2014T6 per QQ-A-261. Precision broached for smooth, flawless operation.

SC-4412, SC-4416, SC-4420 Same type as SC-4312 except outer track is full ball bearing and inner track is dry lubricated friction type. Has quick detach facility and locks in the extended position.

SC-4512, SC-4516, SC-4520 Full ball bearing, quick detach, tilting type slides with a lock performing when in extended position. These units permit the chassis to be tilted 90° above and 90° below horizontal position in 45° increments.

*Load ratings on this series are conservative and a plus factor of at least 2 to 1 can be expected when used under normal conditions.

"SI" SERIES**

This series slide channels are aluminum extrusions made from 7075T6 per QQ-A-277 to afford the greatest possible strength. All component parts such as locking devices, stop pins, etc. are made from 302 stainless steel per Mil-S-5059A. The ball bearings are 440 stainless steel per QQ-S-763. All aluminum parts are anodized per Mil-A-8625A and stainless steel parts passivated per Mil-S-5002. The lubricant used is hi-low temperature grease per Mil-G-3278. SI-4212, SI-4216, SI-4220. Full ball bearing slides. SI-4012, SI-4016, SI-4020. Outer track is full ball bearing and inner track is dry lubricated friction type. Have quick disconnect feature and lock in extended position.

SI-4112, SI-4116, SI-4120. Same as SI-4012 except with quick disconnect and locking features, but in addition has tilting action which permits chassis to be tilted 90° above and 90° below horizontal position in 45° increments.

**Load rating on this series is most conservative and a plus factor or at least 3 to 1 can be expected under normal conditions.

	Height	Length	Travel	Load Cap	Net per pr.
SC-4312	2"	12"	24"	150 lb.	**$27.15**
SC-4316	2"	16"	32"	110 lb.	**29.10**
SC-4320	2"	20"	40"	95 lb.	**31.80**
SC-4412	2"	12"	24"	150 lb.	**39.30**
SC-4416	2"	16"	32"	110 lb.	**42.15**
SC-4420	2"	20"	40"	95 lb.	**44.10**
SC-4512	3½"	12"	24"	275 lb.	**56.25**
SC-4516	3½"	16"	32"	215 lb.	**60.90**
SC-4520	3½"	20"	20"	180 lb.	**64.65**
SI-4212	3½"	12"	24"	275 lb.	**41.25**
SI-4216	3½"	16"	32"	225 lb.	**45.00**
SI-4220	3½"	20"	40"	180 lb.	**48.75**
SI-4012	3½"	12"	24"	275 lb.	**48.75**
SI-4016	3½"	16"	32"	225 lb.	**53.40**
SI-4020	3½"	20"	40"	180 lb.	**59.10**
SI-4112	3½"	12"	24"	275 lb.	**64.65**
SI-4116	3½"	16"	32"	225 lb.	**69.30**
SI-4120	3½"	20"	40"	180 lb.	**72.15**

Prices subject to change without notice. Only a few of many BUD Products are shown. Write for complete catalog.

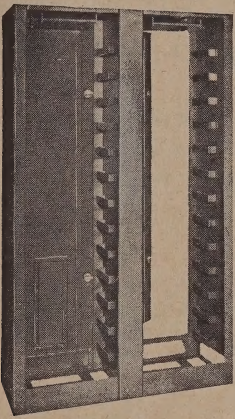
SPECIAL SHEET METAL FABRICATION

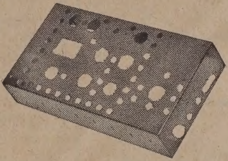
Bud Radio, through its Metal Products Division, offers greatly increased facilities for the production of special sheet metal items. New machinery has been added, departments have been modernized and streamlined, and new methods have been developed.

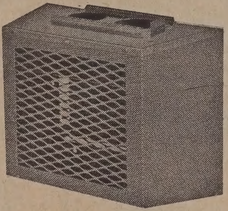
We make over four hundred different sheet metal products as stock items, which are illustrated elsewhere in this section. Often a slight change in one of our standard items will eliminate the necessity of special tools and dies, thereby reducing costs greatly. Since we produce thousands of sheet metal products, every month, for ourselves and for leading firms throughout the country, we are able to effect economies in production which mean lower prices and faster delivery. Our expanded facilities, expert workmanship, years of experience and manufacturing "know how" assure high quality products. In addition, our Engineering Staff is always available for consultation and advice. We suggest that you send us your blueprints for estimate or consult your nearest Bud Distributor.

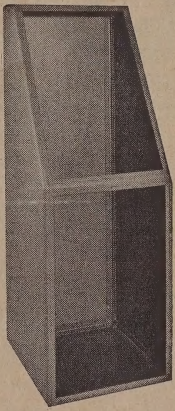
Whether the quantity be one, ten, one hundred, one thousand or many thousands, we are interested in the opportunity to be of service to you.

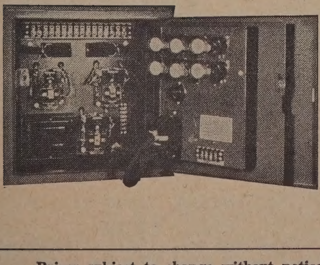
Illustrated on this page are a few examples of specially fabricated sheet metal products.

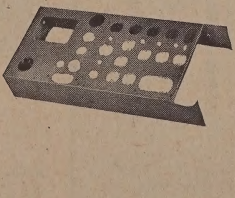


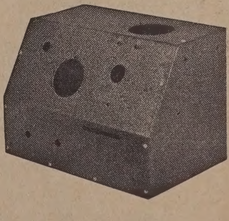












CALIFORNIA *Chassis* COMPANY

CABINET RACKS

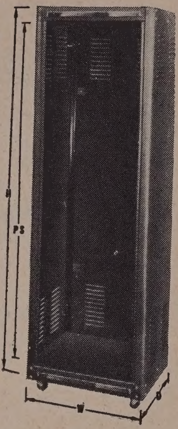
These racks are made entirely of 16 gauge steel except for the heavy steel panel supports. They have universal spacing, the holes being tapped for 10/32″ screws. Panels fit into a recess so that the edges do not show. Mounting plate on bottom of rack permits casters to be fastened directly to base for easy mobility. Casters are not included in price of rack but may be ordered separately. No. TC-10.

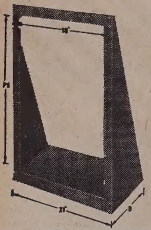
All standard 19″ panels RETMA, Western Electric or Amateur will fit these racks.

Double rows of louvres side and rear give ample ventilation.

Finish is black wrinkle, gray wrinkle or silver hammertone. Black will be furnished unless specified otherwise.

CAT. NO.	PANEL SPACE	HEIGHT	WIDTH	DEPTH	DEPTH INSIDE CLEAR.	SHIP. WT. LBS.
CR-36	36¾	42	22	17	15½	90
CR-42	42	47¼	22	17	15½	96
CR-61	61¼	66½	22	17	15½	120
CR-77	77	82¼	22	17	15½	145
CRD-36	36¾	42	22	24	22½	99
CRD-42	42	47¼	22	24	22½	105
CRD-61	61¼	66½	22	24	22½	133
CRD-77	77	82¼	22	24	22½	160





DOR SERIES

This open rack is made of 16 gauge steel. It is useful where the larger, heavier floor model is not necessary.

Mounting holes are on universal centers tapped 10/32″.

Cat. No.	Panel Space	Overall Height	Width	Depth	Ship. Wt.
DOR-21	21 x 19	25	21	12	18
DOR-28	28 x 19	32	21	12	19

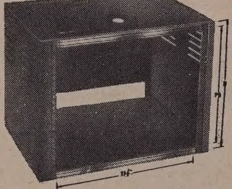
DESK CABINET RACKS

This solid welded, rounded front, deluxe desk cabinet has a professional look as well as being a sturdy utility unit. Embossed feet are on all sizes to reduce marring.

Cabinets have universal punching, accommodating W. E.; RETMA; or Amateur notched panels. Unit is made from 16 ga. steel, hav niga 2″ opening on bottom rear for ventilation in addition to side louvers.

The five smaller models have solid welded backs. The five larger models have a removable hinged rear door.

All models clear 14½″ inside depth — Outside width is 21½″. Black wrinkle is standard. If gray wrinkle or gray hammertone is desired please specify. No additional charge.

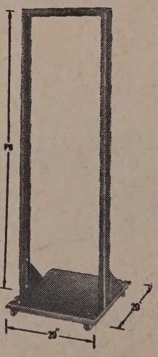


CATALOG NO.	PANEL SPACE	HEIGHT	SHPG. WT.
DCR-7	7	8¹⁵⁄₁₆	25
DCR-8	8¾	10¹¹⁄₁₆	27
DCR-10	10½	12⁷⁄₁₆	29
DCR-12	12¼	14³⁄₁₆	31
DCR-14	14	15¹⁵⁄₁₆	33
DCR-17	17½	19⁷⁄₁₆	37
DCR-21	21	22¹⁵⁄₁₆	39
DCR-26	26¼	28³⁄₁₆	47
DCR-31	31½	33⁷⁄₁₆	51
DCR-35	35	36¹⁵⁄₁₆	58

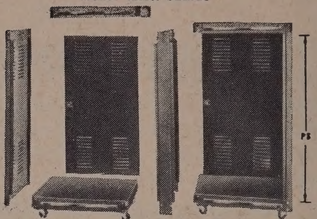
OR SERIES

These open racks are constructed so the uppermost panel mounts at the top of the ⅛″ steel upright. There is no loss of space at the top. Rack uprights are punched with universal spacing and tapped 10/32″. Two brackets of ⅛″ steel bind the uprights and a chassis like base into one solid unit.

CATALOG NO.	PANEL SPACE	OVERALL HEIGHT	SHPG. WT.
OR-31	31½	32¾	27
OR-36	36¾	38	28
OR-42	42	43¼	30
OR-61	61¼	62½	37
OR-66	66½	67¾	39
OR-71	71¾	73	41
OR-77	77	78¼	42



MULTI RACK SERIES



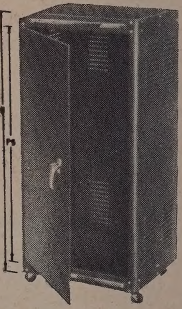
With this unit and a standard rack of the same size one can make a multiple rack or a series of connected racks. Each unit consists of a door, top, bottom, and a multi-rack connecting unit. This must have the same panel space as the unit it is to be used with. All hardware except casters is furnished. Colors are black rwinkle, gray wrinkle or gray hammertone.

CATALOG NO.	PANEL SPACE	FITS RACK	SHPG. WT.
MR-36	36¾	CR-36	75
MR-42	42	CR-42	80
MR-61	61¼	CR-61	100
MR-77	77	CR-77	118

FRONT DOOR RACKS

This deluxe rack series has, in addition to the rear door, a front door which completely encloses the panels. Rack strips may be moved towards the rear of the rack to allow space for meters, switches, etc. Rack strips are punched with universal spacing, and tapped 10/32″. Casters, TC-10, fit to base of rack, but are not included in price. Finish is black wrinkle (B), Graw wrinkle (G), or gray hammertone (GH). Black wrinkle shipped if no color is specified.

CATALOG NO.	HEIGHT	PANEL SPACE	SHPG. WT.
FDR-36	42	36¾	102
FDR-42	47¼	42	118
FDR-61	66½	61¼	152



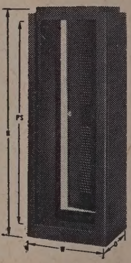
SOLID WELDED RACKS

These neat all welded solid racks are constructed entirely of 16 gauge steel.

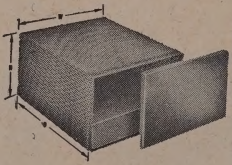
Panel mounting strips are ⅛″ steel punched to accept all standard panels and tapped for 10-32 screws.

Panel mounting screws are concealed by swinging rounded corner trims. These can be removed but normally are pulled forward and swung out to give access to the panel mounting screws. This eliminates usual assembly and disassembly problems encountered. Entire bottom of the unit is flush with the floor.

Below rear door are three ⅞″ diameter knockouts to accept ½″ conduit.



Cat. No.	Panel Space	H	W	D	Depth Inside Clear.	Open. Rear Clear.	Wt
WSR-42	42	50⅜	23¹³⁄₁₆	18¹¹⁄₁₆	17⅛	19⅝	138
WSR-61	61¼	69⅝	23¹³⁄₁₆	18¹¹⁄₁₆	17⅛	19⅝	150



LOW TEMPERATURE CABINETS

This cabinet made of perforated metal with 3/32 holes on 3/16 centers, solves most thermal problems. It is a real space saver, the chassis being almost the size of the cabinet.

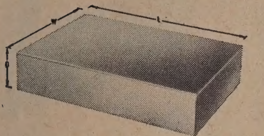
Chassis is .063 aluminum and bolts to the rear panel which is welded to the perforated screen. Rear steel panel has rectangular hole in it to allow access to connectors in chassis. Front panel has no screws but is held on by control knobs mounted in chassis.

Chassis and front are one piece when unit is complete and can be easily removed yet cabinet chassis and front panel are solidly held together.

Catalog Number	Cabinet Size H	W	D	Front Panel	Chassis Size	Hole in Rear Panel
LTC-463	4½	x 7³⁄₁₆x	9³⁄₁₆	4½x 7¼	6¹⁵⁄₁₆x 8¹⁵⁄₁₆x1½	⅞x4
LTC-464	4½	x 9³⁄₁₆x	7³⁄₁₆	4½x 9³⁄₁₆	8¹⁵⁄₁₆x 6¹⁵⁄₁₆x1½	⅞x5
LTC-469	5¹¹⁄₁₆x	8¾ x	11³⁄₁₆	5⅝x 8¾	8 ⁷⁄₁₆x10¹⁵⁄₁₆x2	1½x5
LTC-470	5¹¹⁄₁₆x	11³⁄₁₆x	8¹¹⁄₁₆	5⅝x11³⁄₁₆	10¹⁵⁄₁₆x 8 ⁷⁄₁₆x2	1½x6

CALIFORNIA CHASSIS CO. — Lynwood, California

CALIFORNIA *Chassis* COMPANY



STANDARD ALUMINUM CHASSIS—All chassis are stamped and formed from one piece of material. All four corners welded and sides flanged to accommodate bottom plates.

Aluminum	W	L	D	Gauge	App. Wt.
A-134	2½ x	4½ x	1	18	¼
A-135	3½ x	4½ x	1	18	¼
A-136	3½ x	5½ x	1	18	¼
A-137	4 x	6 x	1½	18	¼
A-155	4 x	6 x	2	18	¼
A-149	4 x	6 x	3	18	¼
A-138	4 x	5 x	2	18	⅜
A-121	5½ x	5½ x	1	18	¼
A-101	5 x	7 x	2	18	⅜
A-150	5 x	7 x	3	18	⅜
A-147	4 x	8 x	2	18	⅜
A-119	4½ x	8 x	1½	18	⅜
A-122	5 x	9 x	1½	18	⅜
A-102	5 x	9½ x	2½	18	⅜
A-120	6 x	8 x	2	18	¾
A-103	5 x	10 x	3	18	½
A-104	7 x	7 x	2	18	½
A-105	7 x	9 x	2	18	¾
A-113	7 x	11 x	2	18	¾
A-106	8 x	10 x	2½	18	1

Aluminum	W	L	D	Gauge	App. Wt.
A-106	6	x 14	x 3	18	1
A-114	7	x 13	x 2	18	¾
A-139	5	x 13	x 3	18	¾
A-107	8	x 12	x 2½	18	1
A-117	7	x 12	x 3	18	1
A-124	8	x 12	x 3	18	1
A-124	10	x 12	x 3	18	1¼
A-129	12	x 12	x 3	18	1½
A-115	10	x 14	x 3	18	1¼
A-130	7	x 15	x 3	18	1¼
A-125	9	x 15	x 3	18	1½
A-118	4	x 17	x 3	18	1
A-145	6	x 17	x 3	18	1¼
A-144	7	x 17	x 2	18	1
A-152	7	x 17	x 3	18	1½
A-109	8	x 17	x 2	18	1½
A-116	8	x 17	x 3	16	1½
A-140	10	x 17	x 2	16	2¼
A-110	10	x 17	x 3	16	2½
A-153	10	x 17	x 4	16	3

Aluminum	W	L	D	Gauge	App. Wt.
A-141	10	x 17	x 5	14	3¼
A-146	11	x 17	x 2	16	1½
A-128	11	x 17	x 3	14	2½
A-127	12	x 17	x 2	14	2¼
A-123	12	x 17	x 3	14	2½
A-126	13	x 17	x 2	14	2½
A-111	13	x 17	x 3	14	2¾
A-112	13	x 17	x 4	14	3¼
A-142	13	x 17	x 5	14	3½
A-133	14	x 17	x 3	14	3¼
A-131	15	x 17	x 4	14	3¾
A-148	15	x 17	x 6	14	4
A-132	10	x 23	x 3	16	2½
A-154	17	x 17	x 3	16	2½
A-143	17	x 17	x 4	14	4¼

ENTIRE LINE OF CHASSIS DUPLICATED IN STEEL.

USE PREFACE "C" INSTEAD OF "A" FOR PLATED STEEL CHASSIS.

Special chassis made regardless of quantity using a set up charge of $3.60 plus cost of next larger chassis. Unless specified, all aluminum chassis are etched finish.

CHASSIS BOTTOM PLATES

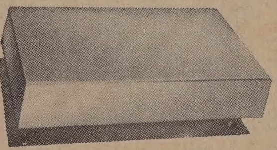
CATALOG NO.	SIZE	ALUM. WEIGHT	STEEL WEIGHT
BP-134	2½x 4½	1 oz.	2 oz.
BP-135	3½x 4½	2 oz.	¼ lb.
BP-136	3½x 5½	2 oz.	¼ lb.
BP-137	4 x 6	2 oz.	¼ lb.
BP-138	4 x 5	2 oz.	¼ lb.
BP-147	4 x 8	¼ lb.	½ lb.
BP-121	5½x 5½	2 oz.	½ lb.
BP-101	5 x 7	2 oz.	¼ lb.
BP-119	4½x 8	¼ lb.	½ lb.
BP-122	5 x 9	¼ lb.	½ lb.
BP-102	5 x 9½	¼ lb.	½ lb.
BP-120	6 x 8	¼ lb.	½ lb.
BP-151	6 x14	½ lb.	1¼ lb.
BP-103	5 x10	¼ lb.	½ lb
BP-104	7 x 7	¼ lb.	½ lb.

CATALOG NO.	SIZE	ALUM. WEIGHT	STEEL WEIGHT
BP-105	7 x 9	¼ lb.	¾ lb.
BP-113	7 x11	½ lb.	1 lb.
BP-106	8 x10	¼ lt.	¾ lb.
BP-139	5 x13	¼ lb.	½ lb.
BP-114	7 x13	½ lb.	1 lb.
BP-107	8 x12	¾ lb.	1¼ lb.
BP-117	7 x12	½ lb.	1 lb.
BP-108	10 x12	¾ lb.	1½ lb.
BP-129	12 x12	¾ lb.	1½ lb.
BP-115	10 x14	¾ lb.	2 lb.
BP-130	7 x15	½ lb.	1 lb.
BP-125	9 x15	¾ lb.	1½ lb.
BP-118	4 x17	½ lb.	1 lb.
BP-145	6 x17	½ lb.	1 lb.
BP-144	7 x17	½ lb.	1 lb.
BP-109	8 x17	½ lb.	1¾ lb.
BP-110	10 x17	¾ lb.	2½ lb.
BP-128	11 x17	1 lb.	2 lb.
BP-123	12 x17	1¼ l.b	3 lb.
BP-111	13 x17	1½ lb.	3¼ lb.
BP-133	14 x17	1½ lb.	3½ lb.
BP-131	15 x17	1½ lb.	3½ lb.
BP-143	17 x17	2 lb.	5 lb.
BP-132	10 x23	1½ lb.	3¼ lb.

Steel bottom plates may be supplied in either zinc plate or black enamel — aluminum is caustic etched.

Actual size of BP is ⅛" under chassis size which is shown. This allows 1/16" of set back when attached to bottom of chassis.

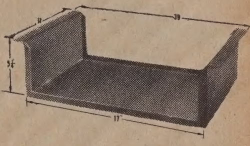
HEAVY DUTY CHASSIS
16 GAUGE STEEL



HD-109	6¾#	8x17x2
HD-116	7½	8x17x3
HD-110	8½	10x17x3
HD-146	8	11x17x2
HD-128	10	11x17x3
HD-126	9½	13x17x2
HD-111	11½	13x17x3
HD-112	12	13x17x4

Bottom Plates Included

PANEL CHASSIS

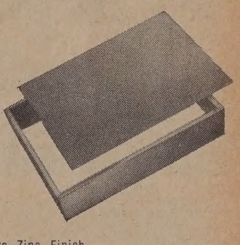


CAT. NO.	HEIGHT	WEIGHT
PC-110	1¾	2 #
PC-111	3½	2¾
PC-112	5¼	4
PC-113	7	4½
PC-114	8¾	5¾
PC-115	10½	6¾
PC-116	12¼	7½
PC-117	14	8½

Larger Sizes On Request

These are constructed so the sharp rib corner is cut to a 45° angle protecting the user's wrist. 16 gauge zinc steel is standard. 14 gauge etched aluminum on request at no added cost.

REMOVABLE TOP CHASSIS



Cat. No.	Weight	Dimensions
RT-1	5¼#	10x17x3
RT-2	7	13x17x3
RT-3	6½	10x17x4
RT-4	9	13x17x4

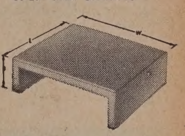
Experimenters and the radio amateur when designing, will find it economical to use this type chassis, as the tops and bottoms may be easily replaced or discarded. Steel-Electro Zinc Only.

TOPS ONLY
FOR REMOVABLE TOP CHASSIS

Cat. No.	Weight	Dimensions
T-1	3#	10x17
T-2	4	13x17

Made From 16 Gauge Steel — Electro Zinc Finish

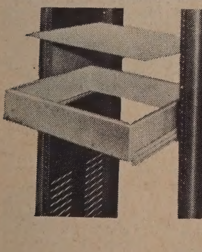
OPEN END CHASSIS



Cat. No.	Weight	W L D
EC-1	1 #	7 x 6x2
EC-2	¾	5 x 7x1½
EC-3	1	5½x 9x1½
EC-4	1¼	7½x 9x1½
EC-5	1½	7 x13x1½
EC-6	2¼	7¾x15x2
EC-7	1	7 x 8x2
EC-8	1¼	7 x10x2

These chassis are ideal for any type ot unit which is built-up, such as a record changer. Steel — Electro Zinc Only

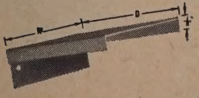
SLIDING DRAWER CHASSIS



The drawer chassis is used where there is a need to pull out the chassis without disconnecting it from the rack. Chassis rolls in and out on ball bearings in a formed channel. When assembled it forms a rigid unit which will fit any 19" rack. Brackets are ⅛" Aluminum. Chassis and top plate are 14 gauge aluminum. Finish, except for slide rail assembly, is gray hammertone.

Cat. No.	Chassis Size	Brk. H	Wt.
SD-399	16¾x14x3	6½"	6½#

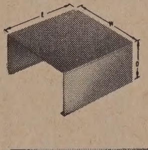
PLATFORM CHASSIS



These steel platforms are useful as variable level chassis simply by fastening to any side of a carrying case, utility box, etc. They may also be used as shields. Black enamel finish.

CD-260	4¾	5½	CAB-4	1#
CD-261	4¾	4½	CAB-5	¾
CD-262	5¾	5½	CAB-7 & CC-282	1

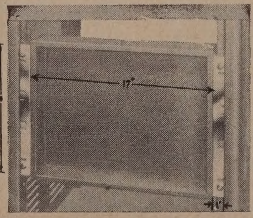
MINIATURE ALUMINUM CHASSIS



These are small open end chassis for use where space is limited.

Catalog No.	Width	Length	Depth	Approx. Shpg. Wt.
MA-210	2⅝	2¾	1¼	¼#
MA-211	1¾	3⅛	1	¼
MA-212	3¼	4½	2	¼
MA-213	2¾	4⅛	1	¼
MA-214	3¾	4⅛	1½	¼
MA-215	3	6⅛	1¼	¼

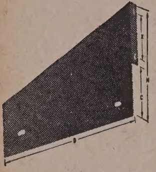
CHASSIS FLANGES



These 1" chassis flanges will convert any 17" chassis to a 19" panel rack chassis. Made of 16 gauge Zinc plated steel.

Catalog No.	Height	Shpg. Wt.
CF-12	5¼	½#
CF-13	7	½
CF-14	8¾	1
CF-15	10½	1
CF-16	12¼	1
CF-17	14	1

CALIFORNIA *Chassis* COMPANY



CHASSIS MOUNTING BRACKETS

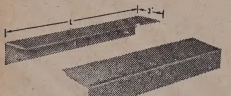
To assure the proper support for a chassis a sturdy mounting bracket it uted. Flange is ⅝″ inside dimension. Elongated hole 3/16″ x 11/32″ is centered in flange "X" shows the distance between flange holes. Finished in Zinc plated "C" or Wrinkle "W" may be had at additional cost of 15%.

Black Enamel	Height	x	Depth	Clearance	Wt.
E-58B	6½	2½	8	3 1/16	1¼
E-57B	6½	2½	9	3 1/16	1½
E-48B	6½	2½	10	3 1/16	1¾
E-59B	6½	2½	11	3 1/16	1¾
E-49B	6½	2½	12	3 1/16	1¾
E-60B	6½	2½	13	3 1/16	2
E-50B	8½	3½	10	4 1/16	2½
E-51B	8½	3½	13	4 1/16	3
E-52B	12	7	15	4 1/16	4½
E-53B	14	8	17	5 1/16	5¾

TRIANGULAR MOUNTING BRACKETS

Cat. No.	Height	Dimensions
MB-55	½	5x5
MB-77	1½	7x7
MB-99	1¾	9x9

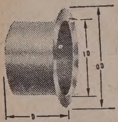
Steel — Black Enamel Only



CHASSIS SUPPORT ANGLES

These angles when bolted to the sides of a cabinet will support a heavy chassis unit. They are made of ⅛″ thick steel and are finished in black enamel only.

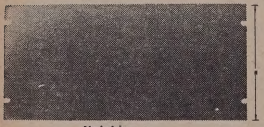
Cat. No.	Length	Width	Shpg. Lbs. Wt.
CA-12	12	3	3
CA-14	14½	3	4



METER SHIELD

This shield is made of spun aluminum. It will fit over the meter and effectively stops most interference. Furnished with no holes and in natural finish only.

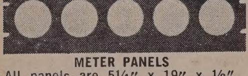
Catalog Number	L	I.D.	O.D.	Meter Size
MSA-2	2-3/16	2-1/32	2⅞	2
MSA-3	2	2-25/32	3¾	3



RELAY RACK PANELS

Regular panels are made from ⅛″ steel or aluminum material. Aluminum is 1100 H 14. Notching is either Western Electric (WE) or Amateur (A). Finish Black or Gray Wrinkle or Silver Gray Hammertone. Aluminum is standard and will be sent unless steel is specified. Panels in any material will be furnished 24″ wide instead of 19″ wide at twice the cost.

Notching					
Western Electric	Amateur	Height	Width	Wt. Alum.	Wt. Steel
PW-10	PA-10	1¾	19	½	1¼
PW-11	PA-11	3½	19	¾	2¼
PW-12	PA-12	5¼	19	1¼	4
PW-13	PA-13	7	19	1½	4¾
PW-14	PA-14	8¾	19	2	6
PW-15	PA-15	10½	19	2½	6¾
PW-16	PA-16	12¼	19	3	8¾
PW-17	PA-17	14	19	3½	9¾
PW-18	PA-18	15¾	19	4	10¾
PW-19	PA-19	17½	19	4½	12
PW-20	PA-20	19¼	19	5	13
PW-21	PA-21	21	19	5½	15¾
PW-22	PA-22	24½	19	6	18½
PW-23		26¼	19	7	20¼



METER PANELS

All panels are 5¼″ x 19″ x ⅛″ steel or aluminum, black or grey wrinkle — designed to handle either 2″ or 3″ meters. All units Western Electric notch.

ALUMINUM

Cat. No.	Wt.	No. Holes	Dia.
MPA-52	1¼	5	2 3/16
MPA-52	1¼	5	2 3/16
MPA-33	1⅛	3	2 13/16
MPA-53	1	5	2 13/16

STEEL

Cat. No.	Wt.	No. Holes	Dia.
MPS-32	3	3	2 3/16
MPS-52	2¾	5	2 3/16
MPS-33	3½	3	2 13/16
MPS-53	3	5	2 13/16

Small holes are for 2″ meters, larger holes are for 3″ meters.

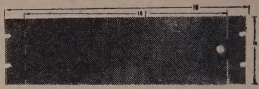
HARD ALUMINUM PANELS

Cat. No.	Height	Width	Wt.
PWHA-10	1¾	19	½
PWHA-11	3½	19	¾
PWHA-12	5¼	19	1¼
PWHA-13	7	19	1½
PWHA-14	8¾	19	2½
PWHA-15	10½	19	2½
PWHA-16	12¼	19	3
PWHA-17	14	19	3½
PWHA-18	15¾	19	4
PWHA-19	17½	19	4½
PWHA-20	19¼	19	5
PWHA-21	21	19	5½
PWHA-22	24½	19	6
PWHA-23	26¼	19	7

These ⅛″ panels are recommended for high quality work. They are 2024T3 aluminum. Notching is Western Electric, but Amateur on request at no added cost. We also carry a complete line of 3/16″ or .188 panels. These are all 2024T3.

SIDE HINGED PANELS

Cat. No.	Height	Wt.
SH-12	5¼	4¼
SH-13	7	5½
SH-14	8¾	6¾
SH-15	10½	7¼
SH-16	12¼	8¾



FRONT HINGED DOOR PANEL

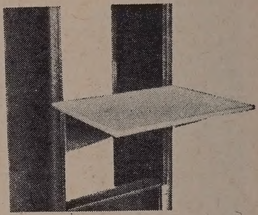
This door gives access to the chassis top. It is free moving and has a substantial catch. Made of ⅛″ steel. Please specify finish.

Cat. No.	Height	Door
FH-430	10½	6 x15⅜
FH-432	12¼	7½x15⅜

EXTERIOR RACK SHELVES

The exterior shelf replaces a panel when a shelf is needed. Unit is composed of a 16 gauge steel shelf with seam welded front corners and two supporting ⅛″ steel brackets. All hardware included.

Cat No.	Shelf Size	Wt.
ER-416	16x22	12
ER-420	20x22	15



INTERIOR RACK SHELVES

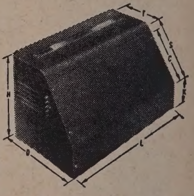
These 16 gauge steel shelves may be supported in the rack by chassis support angles CA-12 or CA-14. They are used to form a strong shelf for modulator units, power supplies etc. Finish black enamel.

Cat. No.	Size	Shpg. Wt.
RS-512	12x19	5½
RS-515	15x19	6½

SLOPING FRONT CABINETS

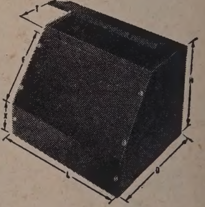
These deluxe all purpose steel cabinets are designed for wide use in the electronic field. Front and top corners are rounded, sides have stainless steel ventilators. Embossed feet to prevent scratching. Gray wrinkle finish.

Catalog No.	D	H	L	T	X	S	C	Use This Chassis
SFC-42	8	8	8	4¼	2¾	6	5¼	C-104
SFC-44	8	8	10	4¼	2¾	6	5¼	C-105
SFC-46	8	8	14	4¼	2¾	6	5¼	C-114
SFC-48	12	12	18	6	3⅛	10⅜	9½	C-110



HINGED TOP SLOPING CABINET

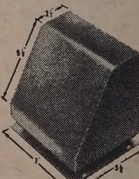
This cabinet provides for a complete opening of top and front. Bottom has embossed feet. Rear has opening for connectors. Black wrinkle or Gray hammertone finishes.



ENCLOSED METER CABINET

Enclosed Meter Cabinet bottom is open. Bottom plate with embossed feet and four sheet metal screws included. Gray wrinkle unless other color specified. Available in black wrinkle, silver gray hammertone at no additional cost. Steel or Aluminum.

Catalog No. EMC-2



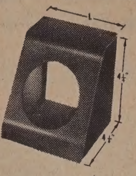
CALIFORNIA CHASSIS CO. — Lynwood, California

CALIFORNIA *Chassis* COMPANY

METER CABINETS

Meter Size		Aluminum Cat. No.			Wt. Lbs.
2″	4 ″	MC-2	½	SMC-2	1½
3″	4 ″	MC-3	½	SMC-3	1½
No Holes	4 ″	MC-4	½	SMC-4	1½
2″	4 ″	MC-6*	½	SMC-6*	1½
3″	4 ″	MC-7*	½	SMC-7*	1½
No Holes	7½″	MC-8	¾	SMC-8	2¼
3″	6 ″	HAC-MC-7*	¾	SMC-8	2¼

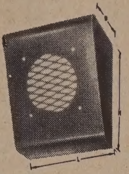
* Indicates it has two ½″ holes on ¾″ centers a top of cabinet for insulators. 2″ meter hole is 2³⁄₁₆″. 3″ meter hole is 2¹³⁄₁₆″.



WALL SPEAKER CASES

These all metal cases have keyslotted holes on the rear for easy mounting. They are also provided with embossed feet on one side. Finish is gray hammertone for ease of cleaning.

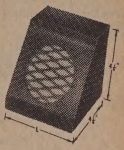
Catalog No.	Speaker Size	Hole Size	H	L	D	Wt.
WS-304	4	3½	7½	6½	4¼	1¾
WS-305	5	4	½7	6½	4¼	1¾
WS-306	6	4¾	9½	8	5⅝	3
WS-308	8	6½	11½	9½	7	4
WS-310	10	8½	13½	11½	8¼	5
WS-312	12	10½	15½	13½	9¾	6



MINIATURE SPEAKER CABINETS

These small meter cabinets are like the MC series except the meter hole is covered by an expanded metal shield. Furnished in steel only. Black wrinkle standard.

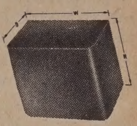
Catalog No.	Length	Meter Size	Wt. Lbs.
MS-261	4″	2″	¾
MS-262	4″	3″	¾

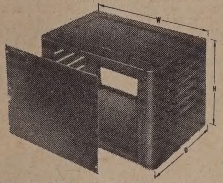


STREAMLINED MINIATURE CABINETS

This miniature steel cabinet has a radiussed face. The base has four embossed feet. There rear is open except for a ¼″ flange down two sides. This gives rigidity as well as a place to attach a back cover. Gray wrinkle standard.

Catalog No.	H	W	D	Wt.
SM-271	4½	5½	3½	1 #
SM-272	6½	5½	3½	1½

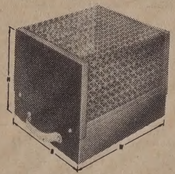


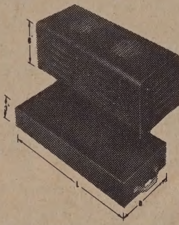


DELUXE AMPLIFIER FOUNDATION

This foundation is used where the chassis must be covered and appearance is important. Material is steel, finish is black wrinkle. Gray hammertone at no extra cost. Use suffix B or GH.

Cat. No.	Length	Depth	Wt.
DA-420	10	5	4½
DA-421	12	7	5
DA-422	17	7	8
DA-423	17	10	9





STREAMLINED INSTRUMENT CABINET

Miniature aluminum chassis MA series are usually used with this cabinet. Black wrinkle is standard.

Catalog No.	Panel Space	Height	Width	Depth	Wt.
SC-31	8x 8	8	10½	8¼	5¾
SC-32	8x10	8	12½	8¼	6
SC-33	8x12	8	14½	8¼	6½
SC-34	8x14	8	16½	8¼	7
SC-35	8x16	8	18½	8¼	7¾
SC-36	12x18	12	20½	12	15

AMPLIFIER FOUNDATIONS

These consist of a chassis and perforated metal cover. They have ample ventilation. Handles are included in each package. Black wrinkle standard.

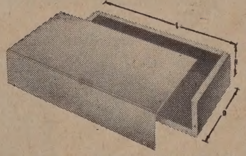
Catalog No.	Height	Width	Depth	Chassis Height	Shpg. Wt.
AF-240*	6	7⅜	5⅛	2	2
AF-241	8 ⁵⁄₁₆	9⅝	5⅛	2½	3
AF-242	8 ⁵⁄₁₆	13⅝	5⅛	2½	4⅜
AF-243	8 ⁵⁄₁₆	17⅛	7⅛	2½	6
AF-244	8¹³⁄₁₆	17⅛	10⅛	3	8

* Has one handle only — at top.

UTILITY BOX — REMOVABLE COVER

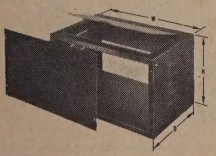
This model allows complete accessibility to the interior of the unit. All work may be completed before cover is installed.

Cat. No.	D L H	Covers Only
HA-10	3x 4 x1½	HAC-10
HA-11	4x 5 x2	HAC-11
HA-12	4x 8 x2	HAC-12
HA-13	5x 9½x2½	HAC-13
HA-14	6x12 x2½	HAC-14
HA 15	7x15 x2½	HAC-15



INSTRUMENT CABINETS

This cabinet has a hinged access door on top and removable front cover. The elimination of the rounded corners gives more inside room. The rear has a 3½″ opening for ventilation plus louvers at each end. The open end chassis, E.C. series, is usually used with these cabinets. Black wrinkle only.

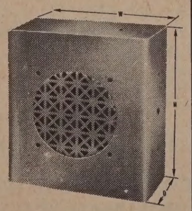


Cat. No.	H	W	D	Ship. Wt.
HTC-342	7	8	8	5
HTC-343	7	10	8	5½
HTC-344	7	12	8	5¾
HTC-345	7	14	8	6
HTC-346	8	16	8	7
HTC-347	9	15	11	8
HTC-348	12	18	12	14½

UNIVERSAL SPEAKER HOUSING—This versatile unit can be screwed to the wall or mounted directly to an outlet box. If greater adjustability is desired a yoke or "U" shaped speaker bracket, one of the USHB series, can be used.

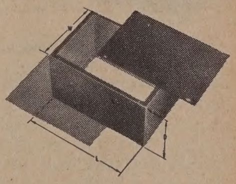
Speaker openings face front and back for bilateral sound projection. This makes them very adaptable for use in halls or auditoriums. Being of steel they do not weather and are easy to clean. Interior is coated with a sound deadening material. Finish is silver gray hammertone.

Cat. No.	Speak. Size	H	L	D	Wt.
USH-534	4 or 5	7¼	6¾	3½	2½
USH-535	5 or 6	8¼	7½	4	2¾
USH-536	6 or 8	10¹⁄₁₆	9½	5	4½
USH-540	10 or 12	15	13½	7⁷⁄₃₂	9



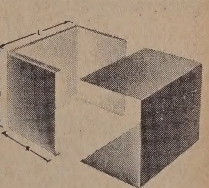
METAL UTILITY CABINETS

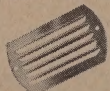
Catalog No.	Wt. Stl.	D	W	L	Wt. Alm.
CAB-1	¾	2″	4″	4″	⅜
CAB-2	1	3″	5″	4″	½
CAB-3	1½	4″	5″	6″	¾
CAB-4	2½	6″	6″	6″	1
CAB-5	3¼	5″	6″	9″	1¼
CAB-6	4¾	7″	8″	10″	2
CAB-7	5	6″	7″	12″	2
CAB-8	6	8″	10″	10″	2½
CAB-9	7	8″	11″	12″	2¾
CAB-10	7	7″	9″	15″	2¾



MINIATURE CABINETS

Aluminum Gray Hammertone Cat. No.	Etched Aluminum Cat. No.	L H W
M-51	M-81	2¾x2⅛x1⅝
M-52	M-82	2¾x2⅛x2¾
M-53	M-83	3¼x2⅛x1⅛
M-54	M-84	3¼x2⅛x1⅝
M-55	M-85	4 x2⅛x1⅝
M-56	M-86	4 x2¼x2¼
M-57	M-87	4 x2 x2¾
M-58	M-88	4¼x2¼x1½
M-59	M-89	5 x2¼x2¼
M-60	M-90	5 x4 x3
M-61	M-91	5¼x3 x2⅛
M-62	M-92	6 x5 x4
M-63	M-93	7 x5 x3
M-64	M-94	8 x6 x3½
M-65	M-95	10 x2 x1⅝
M-66	M-96	10 x6 x3½
M-67	M-97	12 x2½x2¼
M-68	M-98	12 x7 x4
M-69	M-99	17 x5 x4





CHROME VENTILATING LOUVERS

These are made of stainless steel with a high polish finish. They fit our sloping face cabinets but can be adopted to any unit. They fit behind a 2x4⅜ rectangular hole and mount on 4-27/32 centers. Sold pair with screws.

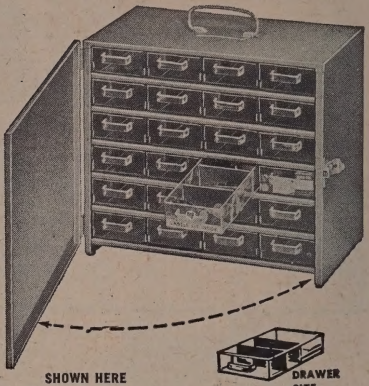
Catalog No. TRM-40

CALIFORNIA CHASSIS CO. — Lynwood, California

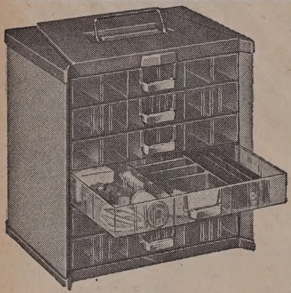
NOW... you CAN take it with you...
IN PORTABLE JIFFY CABINETS

Jiffy TOTER Series: Sturdy metal frames and door gray baked enamel. Crystal clear "see thru" drawers have dividers furnished to make 3 bins in each. Labels fit inside drawers at front. Rubber tip feet. Back punched for wall hanging. 4 sizes.

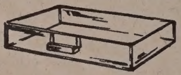
Order Stock No.	Drawers	Compart-ments	Cabinets Overall High	Wide	Deep	Weight	List Price
DH-16	16	48	7¾″	13″	6½″	6¼ lbs.	$ 7.00
DH-20	20	60	9¼″	13″	6½″	7¼ lbs.	8.35
DH-24	24	72	11″	13″	6½″	8½ lbs.	9.25
DH-32	32	96	14¼″	13″	6½″	11¾ lbs.	12.25


SHOWN HERE STOCK NO. DH-24

DRAWER SIZE 5¾ x 2⅞ x 1¼

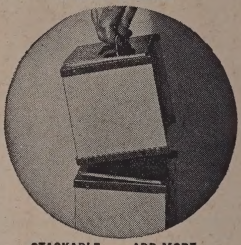

SHOWN HERE STOCK NO. TD-18. TRIAD AND TRIPLEX CABINETS ARE 6⁹⁄₁₆″ DEEP, 9¾″ WIDE OVERALL

Jiffy TRIAD Series: Steel sides and back of Light Gray; high impact plastic tops, bottom of Dark Gray. 50% of drawers are "OPEN" style for larger items such as pliers, hand tools, etc.


DRAWER SIZE 8½ x 5¾ x 1¼

← 50% of drawers have 3 permanent bins with short and long dividers furnished to make 3 compartments in each bin. 4 sizes available.

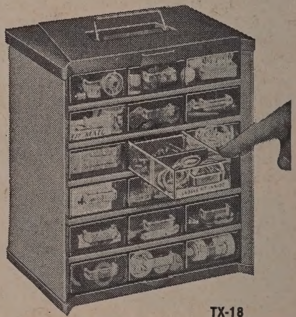
DRAWERS TILT BACKWARD TO AVOID SPILLING

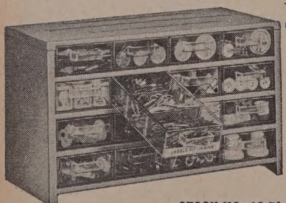

STACKABLE . . . ADD MORE UNITS AS DESIRED

Order Stock No.	Drawers	Cabinet Height	Weight	List Price
TD-12	4	6½″	3¾ lb.	$4.00
TD-18	6	9¼″	4¾ lb.	5.00
TD-24	8	12″	5¾ lb.	6.00
TD-36	12	17½″	8 lb.	8.00

Similar construction in the **Jiffy TRIPLEX Series . . . .** except drawers are ALL "Toter" style (also as the "Utility" style drawers below)

Order Stock No.	Drawers	Cabinet Height	Weight	List Price
TX-12	12	7½″	4 lb.	$4.50
TX-15	15	9″	4½ lb.	5.25
TX-18	18	10½″	6 lb.	6.00
TX-21	21	12¼″	6¾ lb.	6.75
TX-24	24	13¾″	7½ lb.	7.50
TX-30	30	17″	9¼ lb.	9.00


TX-18


STOCK NO. 12-PL

Jiffy UTILITY Series: Similar construction as TOTER Series above only without doors or carrying handle.

Order Stock No.	Drawers	Compart-ments	Cabinet Height	Weight	List Price
12-PL	12	36	5¾″	5¼ lb.	$ 5.00
16-PL	16	48	7⅜″	5¾ lb.	6.00
20-PL	20	60	9″	7½ lb.	7.25
24-PL	24	72	10½″	8½ lb.	8.00
32-PL	32	96	13¾″	10½ lb.	11.00
48-PL	48	144	20¼″	16 lb.	15.75

CAMPRO PRODUCTS, Inc.
CANTON 1, OHIO

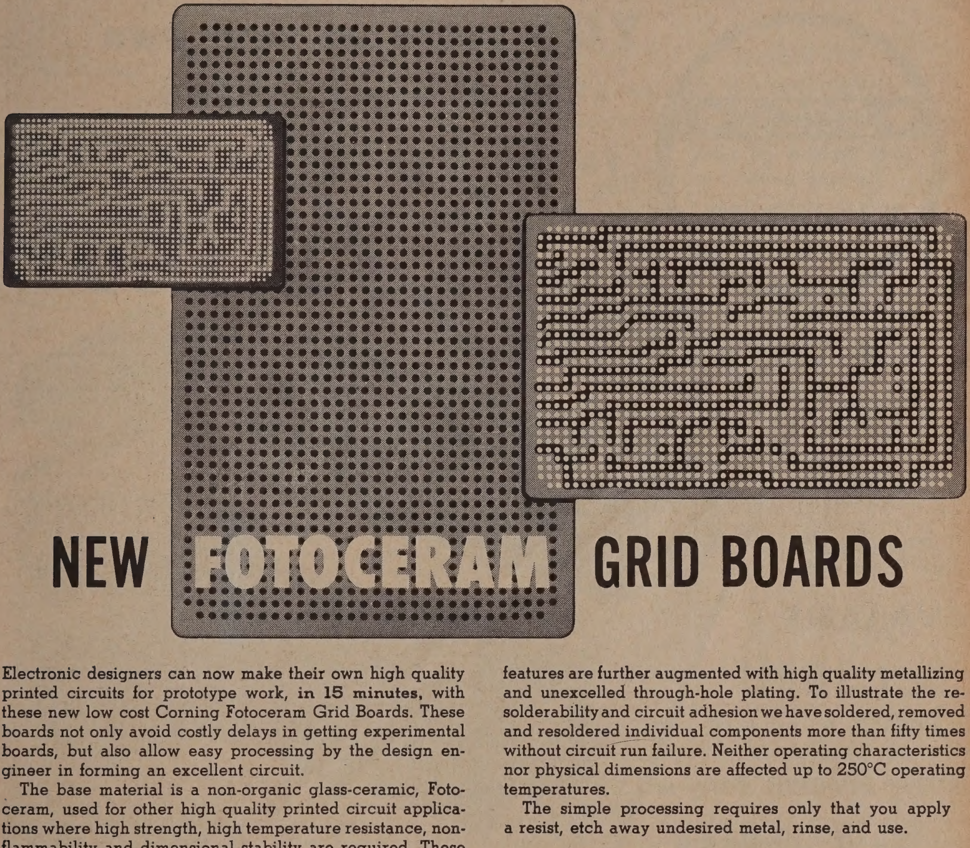
THE ORIGINATORS OF SMALL PARTS STORAGE CABINETS.
WRITE OR PHONE FOR ELECTRONIC PARTS JOBBER
OR SOURCE OF SUPPLY NEAREST YOU.

ELECTRONIC DISTRIBUTOR DIVISION

ERIE RESISTOR CORPORATION — ERIE, PA.

National Distributors of Corning Glass Works Electronic Components

CORNING FOTOCERAM PRINTED CIRCUIT GRID BOARDS



Electronic designers can now make their own high quality printed circuits for prototype work, in **15 minutes**, with these new low cost Corning Fotoceram Grid Boards. These boards not only avoid costly delays in getting experimental boards, but also allow easy processing by the design engineer in forming an excellent circuit.

The base material is a non-organic glass-ceramic, Fotoceram, used for other high quality printed circuit applications where high strength, high temperature resistance, nonflammability and dimensional stability are required. These features are further augmented with high quality metallizing and unexcelled through-hole plating. To illustrate the resolderability and circuit adhesion we have soldered, removed and resoldered individual components more than fifty times without circuit run failure. Neither operating characteristics nor physical dimensions are affected up to 250°C operating temperatures.

The simple processing requires only that you apply a resist, etch away undesired metal, rinse, and use.

CHARACTERISTICS

MATERIAL	Corning Fotoceram, completely copper clad before processing. Copper plated over base electroless copper—**no adhesives used.**
PROTECTIVE COATING	Water dip lacquer applied to prevent copper oxidation before processing.
GRID PATTERN	Standard component mounting holes on 0.1″ centers. Hole diameters are 0.052″±.005″.

STANDARD SIZES	Designations	Dimensions
	3″x5″	(3.1″x 5.2″x.062″)
	6″x8″	(6.2″x 8.2″x.062″)
	9″x12″	(9.2″x 12.2″x.062″)

GRID BOARD TAPE KIT

Corning chemical resistant vinyl tape for use with Fotoceram Printed Circuit Grid Boards in laying out circuitry and retaining through-hole plating is available as an accessory kit. Contains ten 9″ x ⅛″ strips and 45 3/16″-diameter circles.

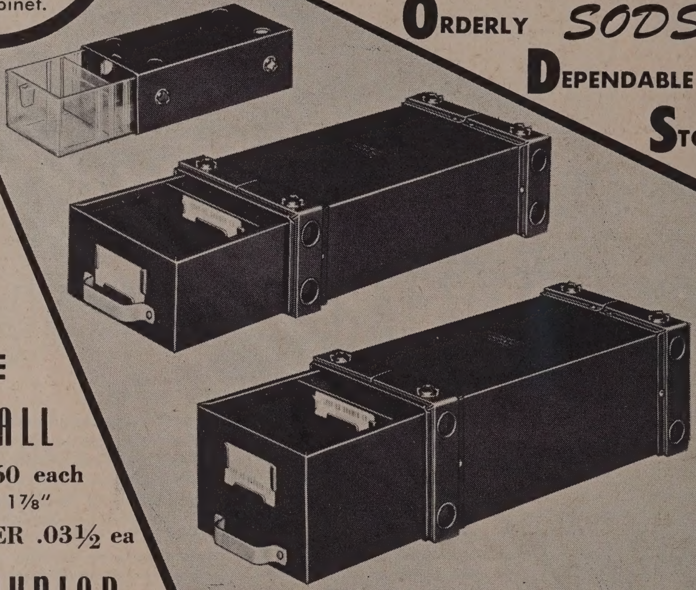
HAKE PRODUCTS, INC.

CINCINNATI 30, OHIO

YOU make up your own Small Parts Cabinet to fit YOUR NEEDS with SODS

SYSTEMATIC
ORDERLY
DEPENDABLE
STORAGE

The sturdy, steel shells of *SODS* snap together on sides, top and bottom, with duplicate shells to form a strong metal cabinet.



3 SIZES OF *SODS* AVAILABLE

No. 1 SMALL

SODS **$ .60 each**
6 1/16″ x 3⅛″ x 1⅞″
No. 1D DIVIDER .03½ ea

No. 2 JUNIOR

SODS **. . $3.00 each**
11¾″ x 5⅛″ x 2½″
inside measurement.
No. 2D DIVIDER .13½ each

No. 3 SENIOR

SODS **. . $3.30 each**
11¾″ x 5⅛″ x 3½″
inside measurement.
No. 3D DIVIDER .15 each

ONE DIVIDER INCLUDED IN PRICE OF EACH OF ABOVE DRAWERS. PRICES NET.

- **MODERN** Light weight, functional in design.
- **EFFICIENT** Parts are quickly, easily located.
- **PRACTICAL** You build to suit your needs.
- **SELECTIVE** You have a choice of three sizes.
- **ECONOMICAL** You buy only what you actually need.
- **CONVENIENT** When you need more room.
- **SO SIMPLE** Just add more *SODS*

SODS unique construction is patented—U. S. Pats. #2,482,174 and #2,569,236; they snap together on sides, top and bottom joining one drawer cabinet to another—buttons that *hold tight*, yet pry apart easily for rearrangement.

L M B® Box Chassis

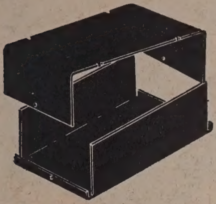
The Engineered Precision Line with Interlocking and Flangelocking Construction

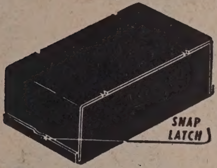
Here is the answer to box chassis needs, for the laboratory, manufacturer, experimenter, or builder. The following L. M. B. Boxes are available from stock in either interlocking (screw fastened) or snap latch. All screw fastenings are drilled and tapped. Self tapping screws are not used. Available colors include natural aluminum, gray or brown hammertone, and black crackle. When ordering specify style and color.

Aluminum used in all LMB products is aircraft quality specifications type 3003-H 14.

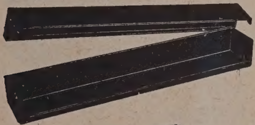
All prices quoted are dealer net. Manufacturers Special Discounts on Application.

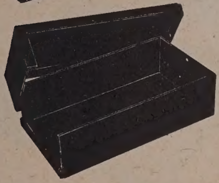
Interlocking



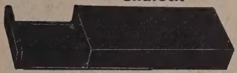


Flangelocking

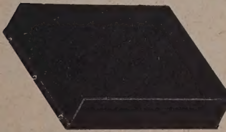




Endlock



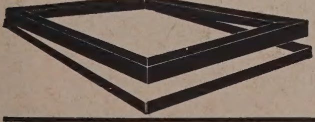
SLIDE COVER



SHIELDED CHASSIS

PRINTED CIRCUIT CHASSIS

Printed circuit chassis are made with a shallow base with a cap cover on the bottom so that it can be removed to work on the assembly without removing the printed circuit from the chassis. All printed circuit chassis are of plain aluminum.



INTERLOCKING (SCREW-FASTENED OR SNAP LATCH)

Model	Size	Price	Model	Size	Price
M00	2¼″ x 1½″ x 1⅜″	.57	138	6¼″ x 3½″ x 2⅛″	1.32
00Z	2⁵⁄₁₆″ x 2⅛″ x 1¾″	.64	139	5½″ x 3″ x 1¼″	1.01
000	3¼″ x 2⅛″ x 1⅝″	.68	140PL	3″ x 4″ x 5″	1.29
00	4″ x 2⅛″ x 1⅝″	.71	140	3″ x 4″ x 5″	1.61
100	2¾″ x 2⅛″ x 2⅝″	.89	141PL	6″ x 4″ x 3″	1.44
101	4¼″ x 2¼″ x 1¼″	.87	141	6″ x 4″ x 3″	1.72
102	4″ x 2″ x 2¾″	1.02	142PL	6″ x 4″ x 5″	1.68
107	4″ x 2¼″ x 2¼″	.96	142	6″ x 4″ x 5″	2.11
108	5″ x 2¼″ x 2¼″	1.03	143	4″ x 4″ x 2″	1.33
135	3¾″ x 3″ x 2⅛″	.97	144	10″ x 4″ x 2½″	2.19
136	5¼″ x 3″ x 2⅛″	1.08	145	7″ x 5″ x 3″	2.11
650	6½″ x 2⅛″ x 1⅝″	1.05	146	8″ x 6″ x 4½″	2.99
137	8″ x 3″ x 2¾″	1.61	15	12″ x 2″ x 1¾″	1.61
850	8½″ x 2⅛″ x 1⅝″	1.35			

SIDELOCK and ENDLOCK CONSTRUCTION

L. M. B. aluminum Box chassis with sidelock and endlock construction are dust proof, semi-water, and rain proof. Sturdy construction and 100% shielded. The following models are available in plain aluminum, or finished in black, gray, or brown. Endlock or sidelock construction:

Model	Size	Price	Model	Size	Price
221	2¾″ x 3⅛″ x 1⅝″	1.13	654	6″ x 5″ x 4″	2.51
321	3¼″ x 2⅛″ x 1⅝″	1.13	666	6″ x 6″ x 6″	3.39
421	4″ x 2⅛″ x 1⅝″	1.13	686	6″ x 8″ x 6″	4.27
422	4″ x 2¼″ x 2¼″	1.29	695	6″ x 9″ x 5″	3.84
424	4″ x 2″ x 4″	1.98	753	7″ x 5″ x 3″	2.60
435	4″ x 3″ x 5″	2.19	754	7″ x 5″ x 4″	2.76
444	4″ x 4″ x 4″	1.89	863	8″ x 6″ x 3½″	2.86
531	5¼″ x 3″ x 1½″	1.29	865	8″ x 6″ x 5″	3.57
532	5¼″ x 3″ x 2⅛″	1.47	1063	10″ x 6″ x 3½″	3.57
534	5⅝″ x 3″ x 4″	2.06	1085	10″ x 8″ x 5″	4.42
543	5″ x 4″ x 3″	1.87	1221	12″ x 2″ x 1¾″	1.87
546	5″ x 4″ x 6″	2.74	1274	12″ x 7″ x 4″	4.65
645	6″ x 4″ x 5″	2.60	1754	17″ x 5″ x 4″	5.27

SLIDE COVER (or dust cover) BOXES

Designed by BROADCAST ENGINEERS

No.	L W H	Ea.	No.	L W H	Ea.
16—Natural Aluminum	13″ x 3⅛″ x 2⅝″	$1.85	18—Natural Aluminum	13″ x 5¼″ x 2⅝″	3.50
16—Gray, Black, Brown	13″ x 3⅛″ x 2⅝″	2.52	18—Gray, Black, Brown	13″ x 5¼″ x 2⅝″	4.30
17—Natural Aluminum	13″ x 4⅛″ x 2⅝″	3.18	19—Natural Aluminum	17″ x 3⅛″ x 2⅝″	3.35
17—Gray, Black, Brown	13″ x 4⅛″ x 2⅝″	3.95	19—Gray, Black, Brown	17″ x 3⅛″ x 2⅝″	4.15

SHIELDED CHASSIS

	L W H	Ea		L W H	Ea.
No. 20 Plain	7½″ x 7″ x 2″	$1.67	No. 21 Anodized	13″ x 10″ x 3″	$5.81
No. 20 Anodized	7½″ x 7″ x 2″	2.06	No. 22 Plain	17″ x 10″ x 3″	5.13
No. 21 Plain	13″ x 10″ x 3″	4.34	No. 22 Anodized	17″ x 10″ x 3″	6.67

STANDARD SIZES

Model No.	L W D	Mounting Lip	Price
PC 325	3 x 2 x ½	³⁄₁₆″	ea. .70
PC 635	6 x 3 x ½	³⁄₁₆″	ea. .80
PC 645	6 x 4 x ½	⅛″	ea. .91
PC 855	8 x 5 x ½	⅛″	ea. 1.04
PC 10875	10 x 8 x ¾	½″	ea. 1.52
PC 12975	12 x 9 x ¾	⅝″	ea. 1.76

Model No.	Size	Mounting Lip	Model No.	Size	Mounting Lip
D 7131	7 x 13 x 1	½″	D 541	5 x 4 x 1	½″

for use in building with the Danco model No. 14 printed amplifier circuit....ea. 1.17

for use in building with the Danco model No. 21, 31, 41 printed preamplifier circuit ....ea. $ .63

PRICES SUBJECT TO CHANGE

L M B • LOS ANGELES 6, CALIF.

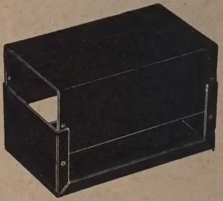
L M B® Box Chassis (Continued)

	Each	Dealer Net Plain	Dealer Net Gray, Black, Brown
T-F 770	2¾x2⅛x1⅝	$ .62	$ .81
T-F 771	2¾x2⅛x2¾	.68	.95
T-F 772	3¼x2⅛x1⅛	.62	.84
T-F 773	3½x2⅛x1⅝	.62	.84
T-F 774	4 x2⅛x1⅝	.62	.95
T-F 775	4 x2¼x2¼	.75	.97
T-F 776	4 x2 x2¾	.75	1.00
T-F 777	4¼x2¼x1½	.72	1.00
T-F 778	5 x2¼x2¼	.78	1.03
T-F 779	5 x4 x3	.94	1.32
T-F 780	5¼x3 x2⅛	.82	$1.12
T-F 781	6 x5 x4	1.47	1.83
T-F 782	7 x5 x3	1.40	1.86
T-F 783	8 x6 x3½	1.72	2.25
T-F 784	10 x6 x3½	2.02	2.54
T-F 785	10 x2 x1⅝	1.15	1.57
T-F 786	12 x2½x2¼	1.37	1.67
T-F 787	12 x7 x4	2.71	3.43
T-F 788	17 x5 x4	2.92	3.44

TITE-FIT BOX CHASSIS

	Each	Prices Plain	Prices Gray, Black, Brown
J-870	2¾x2⅛x1⅝	.62	$ .81
J-871	2¾x2⅛x2¾	.68	.95
J-872	3¼x2⅛x1⅛	.62	.84
J-873	3½x2⅛x1⅝	.62	.84
J-874	4 x2⅛x1⅝	.62	.95
J-875	4 x2¼x2¼	.75	.97
J-876	4 x2 x2¾	.75	1.00
J-877	4¼x2¼x1½	.72	1.00
J-878	5 x2¼x2¼	.78	1.03
J-879	5 x4 x3	.94	1.32
J-880	5¼x3 x2⅛	$ .82	$1.12
J-881	6 x5 x4	1.47	1.83
J-882	7 x5 x3	1.40	1.86
J-883	8 x6 x3½	1.72	2.25
J-884	10 x6 x3½	2.02	2.54
J-885	10 x2 x1⅝	1.15	1.57
J-886	12 x2½x2¼	1.37	1.67
J-887	12 x7 x4	2.71	3.43
J-888	17 x5 x4	2.92	3.44

JIFFY BOX CHASSIS



NO SCREWS

Just push together to close and the Catches snap into place—just a slight pressure of the fingers to open.

		Alum. Gauge Each	Prices Plain	Prices Gray, Black, or Brown
U-C 970	4x 4x2	.040	$1.57	$1.82
U-C 971	5x 4x3	.040	1.69	1.98
U-C 972	6x 5x4	.040	2.18	2.52
U-C 973	6x 6x6	.040	2.55	3.02
U-C 974	7x 5x3	.040	2.98	3.48
U-C 975	9x 6x5	.051	3.38	3.89
U-C 976	10x 8x7	.051	$4.63	$5.35
U-C 977	12x 7x6	.051	4.46	5.30
U-C 978	10x10x8	.051	5.90	6.85
U-C 979	12x11x8	.051	7.06	8.02
U-C 980	15x 9x7	.051	7.15	8.11

UTILITY BOXES

Give approximately 25% more usable spaces for building.

SIZES

No.	L	W	H	No.	L	W	H	No.	L	W	H
M-01	1⅛″	x 1″	x ½″	* 09	2⅝″	x 1″	x ⅜″	016	2″	x 1¾″	x ¾″
02	1″	x ⅞″	x ½″	010	1¾″	x 1¼″	x ⅞″	017	2″	x 1¾″	x 1″
*04	1¼″	x 1 7/32″	x ⅞″	011	2″	x 1¼″	x ¾″	018	2″	x 2″	x 1¼″
*06	1½″	x 1⅛″	x ½″	*012	2″	x 1¼″	x 1″	*019	2½″	x 1¾″	x 9/16″
07	1¾″	x 1″	x ¾″	*013	1¾″	x 1¼″	x 1″	*020	1½″	x 1½″	x 1″
*08	2¼″	x 1″	x 5/16″	014	1½″	x 1½″	x ¾″	*021	2½″	x 1¾″	x ¾″
				*015	2″	x 1¾″	x ½″	022	3⅛″	x 1¾″	x ½″

* Without Mounting Ears

PRICES

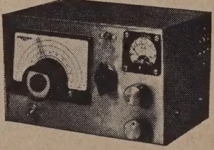
	Plain	Plated
With Mounting Ears in Lots of 100 to 999 ea.	.49	.65
Without Mounting Ears 100 to 999 ea.	.41	.57
Covers for LMB Miniature Boxes 100 to 999 ea.	.15	

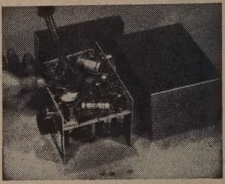
MINIATURE BOX CHASSIS

Precision made in steel only, cadmium plated. Made with or without mounting ears. Covers solder in when used in assembly.

UTILITY ENCLOSURES

No.	L	W	H		Plain	Gray
W-1A	7″	x 5″	x 4½″	with built in chassis	$3.97	$4.84
W-1B	10″	x 4″	x 3½″	with built in chassis	3.97	4.84
W-1C	8½″	x 6⅛″	x 5″	with built in chassis	4.43	5.33
W-1D	18″	x 9″	x 11″	will accommodate an 11″ x 17″ 2″, 3″ or 4″ chassis	9.75	13.13

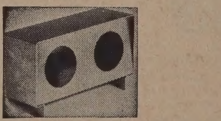


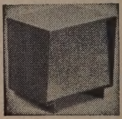


"AL-CAB" CABINETS for meter cases or any application where outstanding appearance is needed

No.	L	W	H		Plain	Gray
W-2AP	3½″	x 4″	x 3″	with holes	$1.88	$2.18
W-2A	3½″	x 4″	x 3½″	without holes	1.98	2.28
W-2B	3″	x 7″	x 3½″	with and without holes	2.25	2.67
W-2C	2⅜″	x 7″	x 3½″	without holes	2.93	3.36
W-2E	4½″	x 4½″	x 3½″	without holes	2.30	2.60

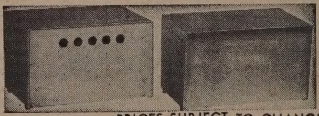
Holes in W-2AP, 2B are 2¼″, 2 13/16″. For 4″ Meter holes and knockout, add 10% to above prices.





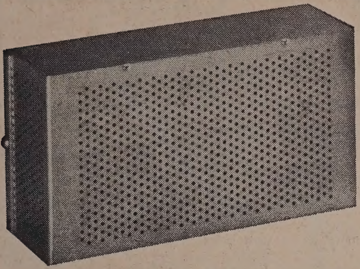
W.M. "AL-CAB" Deluxe Series All with Built-in Chassis

No.	D	W	H	Plain	Gray
W-2F	7½″	x 5″	x 4½″	$4.40	$5.18
W-2G	13″	x 10″	x 5¾″	9.36	11.06
W-2H	7″	x 11″	x 6¼″	7.38	8.63
W-2J	8″	x 11½″	x 7½″	8.10	9.35

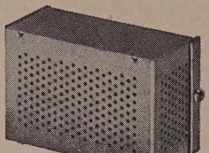


PRICES SUBJECT TO CHANGE

LMB® (Continued)



LMB PERFORATED BOX CHASSIS



LMB Perforated Boxes are adaptable wherever heat dissipation is required as they are spaced in perforations that are set by laboratory research to give utmost heat dissipation and also give utmost shielding. They are die perforated on three sides and top of the box.

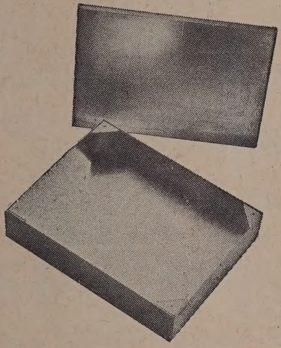
NO.	FINISH	SIZE	NET EA.
00Z	Plain or Gray	2 5⁄16 x 2⅛ x 1¾	$ .83
000	" "	3¼ x 2⅛ x 1⅝	.95
00	" "	4 x 2⅛ x 1⅝	1.02
100	" "	2¾ x 2⅛ x 2⅝	1.20
101	" "	4¼ x 2¼ x 1¼	1.12
102	" "	4 x 2 x 2¾	1.41
107	" "	4 x 2¼ x 2¼	1.09
108	" "	5 x 2¼ x 2¼	1.50
135	" "	3¾ x 3 x 2⅛	1.36
136	" "	5¼ x 3 x 2⅛	1.50
137	" "	8 x 3 x 2¾	2.14
138	Plain or Gray	6¼ x 3½ x 2⅛	$1.82
139	" "	5½ x 3 x 1¼	1.36
140	" "	3 x 4 x 5	1.75
141	" "	6 x 4 x 3	1.88
142	" "	6 x 4 x 5	2.18
143	" "	4 x 4 x 2	1.40
144	" "	10 x 4 x 2½	2.19
650	" "	6½ x 2⅛ x 1⅝	1.41
850	" "	8½ x 2⅛ x 1⅝	1.59
15	" "	12 x 2 x 1¾	1.79

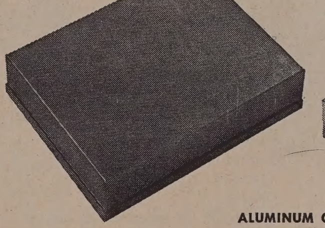
LMB
PRESENTS SOMETHING NEW IN CHASSIS —

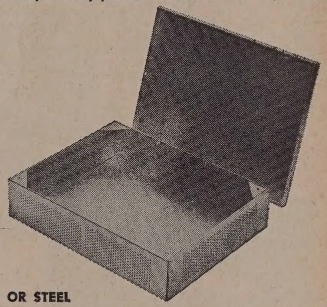
THE CHASSIS WITH THE CAP COVER AS ORIGINATED BY LMB

Built with the new original LMB popular cap cover construction. This construction enables the builder to use either the top or the bottom of the chassis for construction. The Chassis can also be mounted on its side and construction can be on both top and bottom at the same time. Sturdily built from Aircraft quality aluminum, Type 3003, H-14, the same material as is used in the construction of all LMB precision box chassis. Special technique in welding the corners makes for a stronger chassis than the orthodox type. Cap construction allows for using all the space inside the chassis without being hindered by the mounting flange, which takes from 10% to 20% of the mounting space out of the average chassis.

The P Series are perforated on all four sides and are ideal where heat dissipation is a factor. LMB chassis — the better chassis, with the year's ahead advanced construction for your better project application. An advanced quality product competitively priced.







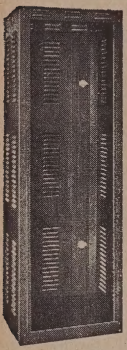
ALUMINUM OR STEEL

WITHOUT COVER				WITH CAP COVER			PERFORATED		
NO.	SIZE L W H	GUAGE	NET	NO.	L W H	NET	NO.	L W H	NET
572	5x 7x2	18	$1.17	572C	5x 7x2	$1.75	572P	5x 7x2	$2.05
573	5x 7x3	18	1.42	573C	5x 7x3	1.95	573P	5x 7x3	2.25
5952	5x9½x2	18	1.25	5952C	5x9½x2	1.85	5952P	5x9½x2	2.15
5103	5x10x3	18	1.65	5103C	5x10x3	2.25	5103P	5x10x3	2.55
5133	5x13x3	18	1.85	5133C	5x13x3	2.50	5133P	5x13x3	2.80
6173	6x17x3	18	2.67	6173C	6x17x3	3.40	6173P	6x17x3	3.70
772	7x 7x2	18	1.35	772C	7x 7x2	1.90	772P	7x 7x2	2.20
792	7x 9x2	18	1.46	792C	7x 9x2	1.95	792P	7x 9x2	2.25
7112	7x11x2	18	1.58	7112C	7x11x2	2.30	7112P	7x11x2	2.60
7123	7x12x3	18	2.03	7123C	7x12x3	2.75	7123P	7x12x3	3.05
7153	7x15x3	18	2.67	7153C	7x15x3	3.60	7153P	7x15x3	3.90
7173	7x17x3	18	2.75	7173C	7x17x3	3.70	7173P	7x17x3	4.00
8123	8x12x3	18	2.42	8123C	8x12x3	3.23	8123P	8x12x3	3.53
8172	8x17x2	18	2.52	8172C	8x17x2	3.50	8172P	8x17x2	3.80
8173	8x17x3	16	2.95	8173C	8x17x3	4.50	8173P	8x17x3	4.80
10123	10x12x3	18	2.70	10123C	10x12x3	3.60	10123P	10x12x3	4.30
10143	10x14x3	18	2.95	10143C	10x14x3	4.30	10143P	10x14x3	4.70
10172	10x17x2	16	2.85	10172C	10x17x2	4.37	10172P	10x17x2	4.77
10173	10x17x3	16	3.40	10173C	10x17x3	5.18	10173P	10x17x3	5.98
10174	10x17x4	16	4.85	10174C	10x17x4	6.37	10174P	10x17x4	7.17
11173	11x17x3	14	4.20	11173C	11x17x3	6.60	11173P	11x17x3	7.10
12172	12x17x2	14	4.50	12172C	11x17x2	6.60	12172P	12x17x2	7.20
12173	12x17x3	14	4.60	12173C	12x17x3	6.90	12173P	12x17x3	7.50
13172	13x17x2	14	4.50	13172C	13x17x2	6.60	13172P	13x17x2	7.30
13173	13x17x3	14	4.80	13173C	13x17x3	6.90	13173P	13x17x3	7.50
13174	13x17x4	14	5.95	13174C	13x17x4	7.95	13174P	13x17x4	8.55

CABINETS CHASSIS — MIDDLETOWN MANUFACTURING CO. — CASES PANELS

MIDDLETOWN IN CONNECTICUT

DE LUXE RELAY RACKS



Middletown De Luxe Relay Racks are made of 16-gauge steel with ⅛" panel supports which are recessed so that edges of panels set flush. Standard 19" panels fit these racks. (See next page.)

Adequate ventilation is provided by louvres in the two sides, the door and in the top at front and back. Door is hung on sturdy hinges and has snap catches. Racks come with rigid, built-in caster supports. (Casters not included in price of rack.) Furnished in either black or grey wrinkle finish. Shipped knocked down with all necessary hardware.

Rack shelves and supporting angles to fit these Relay Racks are available. Information and prices on request.

Cat. No. (Black Wrinkle)	Overall Size H	W	D	Panel Size H	W
DRR 4236	42 1/16	22	17¼	36¾	19
DRR 4742	47 5/16	22	17¼	42	19
DRR 6661	66 9/16	22	17¼	61¼	19
DRR 8277	82 5/16	22	17¼	77	19

Note: When ordering grey wrinkle, add prefix "G" to catalog number. Dimensions in Inches.

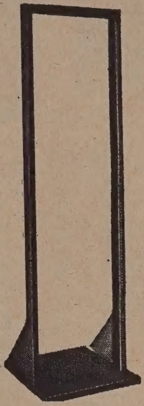
OPEN-TYPE TABLE RELAY RACKS

For table mounting of power transmitters, P. A. systems and other radio and electronic apparatus. Rack is ruggedly constructed with strong base to accommodate heavy components. Drilled and tapped for conventional 19" wide panels which set in recess so that no edges are exposed. (See next page.)

Shipped knocked down with necessary hardware. Black wrinkle finish.

Catalog Number	Overall Size H	W	D	Panel Space H	W
TRR 31	31	21	12	28	19
TRR 24	24	21	12	21	19

OPEN-TYPE CHANNEL RELAY RACKS



Sturdy construction with rigid supporting members and side angle braces make these racks perfectly suited to all heavy-duty assignments. Made of ⅛" steel channels, 3" deep. Held together with angle cross pieces of the same material. Chassis type base. Drilled and tapped to accommodate conventional 19" panels. (See next page.) Black wrinkle finish. Shipped knocked down with necessary hardware.

Cat. No.	Overall Size H	W	D	Panel Size H	W
OCR 35	35½	21	22	31½	19
OCR 70	70½	21	22	66½	19

Dimensions in inches

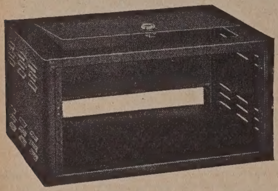
CASTERS

Catalog Number
CA 234

CHASSIS SUPPORTING BRACKETS

Catalog Number	Size
CSB 12	12 x 3 x 3
CSB 14	14½ x 3 x 3

D. C. DELUXE CABINET RACKS — USE 19" RACK PANELS

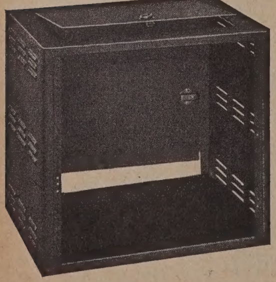


Middletown D. C. Cabinets conform to the conventional design of streamlined cabinets used by builders of amateur and commercial equipment.

Features

- ★ Constructed of 16 gauge steel, electrically welded.
- ★ Adequate ventilation is provided by sufficient louvres in sides, and ventilation in back.
- ★ Front Vertical posts rounded.
- ★ Flush panel mounting (recessed).
- ★ Drilled and tapped for 10/32" screws on universal centers.
- ★ Flush door in top fitted with flush snap-lock and piano hinges.
- ★ Black Wrinkle finish. *Grey Wrinkle if desired.*

Standard 19" panels fit these cabinets. For panel sizes, see listing next page.



CATALOG NUMBER (Black Wrinkle)	OVERALL SIZE H	W	D	PANEL SPACE H	W	TYPE OF UNIT
*DC 108	10½	21½	15	8¾	19	Single
*DC 1210	12¼	21½	15	10½	19	Single
*DC 1412	14	21½	15	12¼	19	Single
*DC 1514	15¾	21½	15	14	19	Single
**DC 1917	19¼	21½	15	17½	19	Double
**DC 2119	21	21½	15	19¼	19	Double
**DC 2321	22¾	21½	15	21	19	Double
**DC 2826	28	21½	15	26¼	19	Triple
**DC 3635	36¾	21½	15	35	19	Quad.

*Door in Top only.

**Door in Top & Rear.

Note: When ordering grey wrinkle, add prefix "G" to catalog number. Dimensions in Inches.

CABINETS
CHASSIS

MIDDLETOWN
MANUFACTURING
CO.

CASES
PANELS

MIDDLETOWN IN CONNECTICUT

RACK PANELS — 19" LONG
(Steel and Aluminum)

Middletown Rack Panels are offered in either ⅛" steel or ⅛" aluminum. They are 19" wide and are slotted for conventional W. E. mounting. Twelve standard sizes. Furnished in black or grey wrinkle finish.

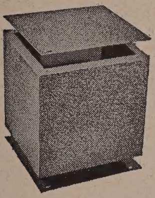
Note: When ordering grey wrinkle, add prefix "G" to catalog number.

*Available on special order.

Aluminum panels 3/16" thick available at 60% increase in cost above ⅛" al. panels.

Cat. No. Steel (Blk. Wrinkle)	Height	Cat. No. Aluminum (Black Wrinkle)
R.P. 1	1¾"	A.R.P. 1
R.P. 3	3½"	A.R.P. 3
R.P. 5	5¼"	A.R.P. 5
R.P. 7	7"	A.R.P. 7
R.P. 8	8¾"	A.R.P. 8
R.P. 10	10½"	A.R.P. 10
R.P. 12	12¼"	A.R.P. 12
R.P. 14	14"	A.R.P. 14
R.P. 15	15¾"	A.R.P. 15
R.P. 17	17½"	A.R.P. 17
R.P. 19	19¼"	A.R.P. 19
R.P. 21	21"	A.R.P. 21
R.P. 26*	26¼"	A.R.P. 26*
R.P. 35*	35"	A.R.P. 35

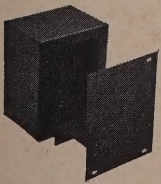
STEEL AND ALUMINUM CASES



These cases are similar to our standard steel utility cans except they have flat tops and bottoms which are held in place with self tapping screws and are removable. These cases are of sturdy construction and have spot welded corners. Case has flanges on all edges. Steel cases furnished in black wrinkle. Aluminum cases are natural.

STEEL				ALUMINUM
Catalog Number	Size			Catalog Number
	W	D	H	
SC 442	4"	4"	2"	AC 442
SC 453	4"	5"	3"	AC 453
SC 465	4"	6"	5"	AC 465
SC 564	5"	6"	4"	AC 564
SC 666	6"	6"	6"	AC 666
SC 596	5"	9"	6"	AC 596
SC 1276	12"	7"	6"	AC 1276
SC 1287	12"	7¾"	6½"	
SC 1576	15"	7¾"	6½"	
SC 1597	15"	9"	7"	

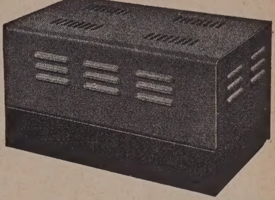
STEEL CASES WITH BUILT IN CHASSIS



Catalog Number	H W D	Chassis Size
SCWC 442	4 4 2	1 x2⅞x1⅞
453	4 5 3	1 x3⅞x2⅞
543	5 4 3	1¼x2⅞x2⅞
654	6 5 4	1¾x3⅞x3⅞
645	5 6 4	1¼x4⅞x3⅞
666	6 6 6	1¾x4⅞x5⅞

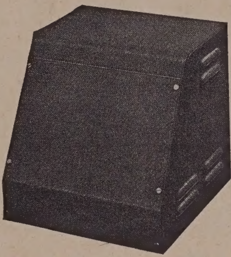
AMPLIFIER FOUNDATIONS—DeLuxe Models

This unit is designed to meet the most critical requirements. It has rounded corners, special Middletown designed louvres on all 4 sides and elongated holes on top to give maximum ventilation. Chassis are finished in Black wrinkle. Covers are finished in Grey wrinkle. Chassis are drilled for bottom plates which are listed separately. Covers all have a depth of 6"



Cat. No.	Size
A.F.-5109	5 x 10 x 9"
A.F.-6149	6 x 14 x 9"
A.F.-7179	7 x 17 x 9"
A.F.-10129	10 x 12 x 9"
A.F.-10179	10 x 17 x 9"
A.F.-13179	13 x 17 x 9"

SLOPING FRONT PANEL CABINETS



Sloping front panel cabinets have a wide application in the electronic field since they are adaptable for various uses. They are constructed of heavy gauge steel electrically spot-welded. Top corner is rounded, front panel is removable, and louvres on sides provide ventilation.

Back panel is ventilated on top and an opening is provided on the bottom so that connections can be made directly to the rear of the chassis. Finished in Grey wrinkle.

Cat. No.	H.W.D.	Chassis Size
S.F.-888	8 x 8 x 8"	7 x 7 x 2"
S.F.-8108	8 x 10 x 8"	7 x 9 x 2"
S.F.-8128	8 x 12 x 8"	7 x 11 x 2"
S.F.-8148	8 x 14 x 8"	7 x 13 x 2"
S.F.-121812	12 x 18 x 12"	10 x 17 x 3"

STEEL UTILITY CANS

These Utility Cans are ruggedly constructed from sheet steel with spot welded reinforced corners. Tops and bottoms are removable and are flanged on all four sides. Held in place with self-tapping screws.

Cat. No.	Size	Weight
U.C.565	5½ x 6 x 5½"	3 lbs.
U.C.596	5 x 9 x 6"	5 lbs.
U.C.8107	8 x 10 x 7"	6 lbs.
U.C.81010	8 x 10 x 10"	7 lbs.
U.C.11128	11 x 12 x 8"	9 lbs.

CABINETS CHASSIS

MIDDLETOWN MANUFACTURING CO.

CASES PANELS

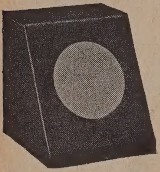
MIDDLETOWN IN CONNECTICUT

METER PANELS

Middletown Meter Panels are made 5¼" high and are made to the same specifications as our Rack Panels—are available to fit 3" meters.

Cat. No.	Holes	Hole Size
R.P.M. 33	3	2 3/16"
R.P.M. 35	5	2 3/16"

METER CASES



These cases have sloping front panel with rounded top corner which blends with streamline equipment. They are sturdily constructed from sheet steel with welded joints.

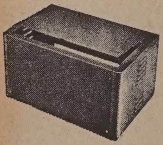
Cat. No.	Meter	Hole Size	H.W.D.
M.C. 13	Single 3"	2 13/16"	4½ x 4 x 4
M.C. 33	3-3" Meters	2 13/16"	4½ x 11¼ x 4

ALUMINUM MIDGET CHASSIS

These small, open-end aluminum chassis are ideal for miniature tube assemblies and all applications where space is limited. Made of prime sheet aluminum with ¼" flange on bottom for fastening down, or attaching bottom plate. Finish is natural aluminum.

Cat. No.	Size			Cat. No.	Size		
AMC	D	W	H	AMC	D	W	H
221	2 5/6	2¾	1¼	541	5¾	4⅞	1½
131	1¾	3⅛	1	431	4	3⅛	1
342	3¼	4½	2	441	4	4⅛	1
241	2¾	4⅛	1	451	4	5⅛	1
341	3¾	4⅛	1½	461	4	6⅛	1
361	3	6⅛	1¼				

ROUNDED CORNER CABINETS

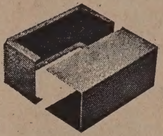


These are de luxe streamlined cabinets with front vertical corners rounded. Flush panel door, hung on full-length piano hinge, provided in top for convenient access. Ventilating louvres on sides. Opening at bottom of rear panel permits easy accessibility for leads, cables, etc. Front panel held in position with self-tapping screws. Grey wrinkle finish. Sturdily built of sheet steel.

	Size			Panel Space		Chassis Size		
Catalog No.	H	W	D	H	W	D	W	H
RC 8108	8	10	8	8	8	7	7	2
RC 8128	8	12	8	8	10	7	9	2
RC 8168	8	16	8	8	14	7	13	2
RC 91711	9	17	11	9	15	10	14	3
RC 122012	12	20	12	12	18	10	17	3

Chassis are not included unless ordered.
See chassis listings. Dimensions in Inches.

MULTI-MOUNTS



These are all-purpose boxes with an unlimited field of application in radio and electronics. Made from prime sheet aluminum. Two-piece telescoping construction, each half forming three sides. Finish is natural aluminum or grey hammer-tone.

Natural Aluminum				Grey Hammertone
Catalog Number	SIZE H	W	D	Catalog Number
MM 122	1⅝	2¾	2⅛	GHMM 122
MM 132	1⅝	3¼	2⅛	GHMM 132
MM 142	1⅝	4	2⅛	GHMM 142
MM 242	2¼	4	2¼	GHMM 242
MM 252	2¼	5	2¼	GHMM 252
MM 354	3	5	4	GHMM 354
MM 253	2⅛	5¼	3	GHMM 253
MM 465	4	6	5	GHMM 465
MM 375	3	7	5	GHMM 375
MM 386	3½	8	6	GHMM 386
MM 3106	3½	10	6	GHMM 3106
MM 4127	4	12	7	GHMM 4127
MM 4175	4	17	5	GHMM 4175
MM 1102	1⅝	10	2	GHMM 1102
MM 2122	2¼	12	2½	GHMM 2122
MM 2420	2¾	4	2	GHMM 2420
MM 1420	1½	4¼	2¼	GHMM 1420

CHASSIS BRACKETS

Mounting

These brackets are for chassis listed on next page. Front end of the bracket is seven inches high. Finished in black wrinkle.

Catalog Number	Size	Shipping Weight
C.B. 8	For 8" Base	2 lbs.
C.B. 11	For 11" Base	3 lbs.
C.B. 13	For 13" Base	3 lbs.

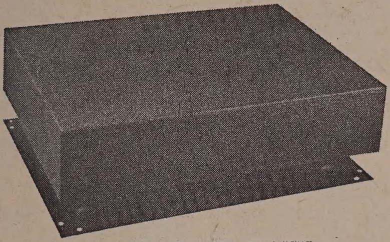
CABINETS CHASSIS

MIDDLETOWN MANUFACTURING CO.

CASES PANELS

MIDDLETOWN IN CONNECTICUT

CHASSIS AND BOTTOM PLATES



HEAVY DUTY CHASSIS WITH BOTTOM PLATE

HEAVY DUTY CHASSIS

Stock Sizes

Black Wrinkle

Catalog Number	Size
H.D. 8172	8 x 17 x 2″
H.D. 8173	8 x 17 x 3″
H.D. 11172	11 x 17 x 2″
H.D. 11173	11 x 17 x 3″
H.D. 13172	13 x 17 x 2″
H.D. 13173	13 x 17 x 3″
H.D. 13174	13 x 17 x 4″

Middletown **STANDARD** Steel Chassis are made from one piece of steel, spot welded at all four corners. 22-, 20- and 18-gauge steel is used as indicated in the table. Bottom edges are folded over on four sides for additional rigidity. Black wrinkle finish.

Middletown **HEAVY-DUTY** Steel Chassis are made from one piece of 16-gauge steel, spot welded at all four corners. Bottom edges are folded over on all four sides for additional rigidity and drilled to match bottom plates. Ends are drilled to fit standard brackets. Black wrinkle finish. **Bottom plates are supplied with HEAVY-DUTY chassis.**

Middletown **ALUMINUM** Chassis are made from one piece of prime sheet aluminum, 16- and 18-gauge aluminum is used as indicated in the table. The design and construction of these chassis are identical with Middletown blank steel chassis. Natural aluminum finish.

Middletown **BOTTOM PLATES** are drilled and have pressed bumpers at corners. Material is 20-gauge steel. Gauge of aluminum bottom plates match gauge of chassis. Natural finish.

CHASSIS — STEEL AND ALUMINUM

CATALOG NUMBERS STEEL				SIZE		
STANDARD	GAUGE	ALUMINUM	GAUGE	D	W	H
*BS 442	22	ABC 442	18	4	4	2
BS 462	22	ABC 462	18	4	6	2
BS 463	20	ABC 463	18	4	6	3
BS 4173	20	ABC 4173	16	4	17	3
BS 572	22	ABC 572	18	5	7	2
BS 573	22	ABC 573	18	5	7	3
BS 591	22	ABC 591	18	5½	9½	1½
BS 592	22	ABC 592	18	5	9½	2
BS 5103	22	ABC 5103	18	5	10	3
BS 5133	20	ABC 5133	18	5	13	3
BS 6143	20	ABC 6143	16	6	14	3
BS 6173	20	ABC 6173	16	6	17	3
BS 772	22	ABC 772	18	7	7	2
BS 792	22	ABC 792	18	7	9	2
BS 7112	20	ABC 7112	18	7	11	2
BS 7123	20	ABC 7123	18	7	12	3
BS 7132	20	ABC 7132	18	7	13	2
BS 7153	20	ABC 7153	16	7	15	3
BS 7173	20	ABC 7173	18	7	17	3
BS 8123	20	ABC 8123	16	8	12	3
BS 8172	20	ABC 8172	16	8	17	2
BS 8173	20	ABC 8173	16	8	17	3
BS 10123	20	ABC 10123	16	10	12	3
BS 10143	20	ABC 10143	16	10	14	3
BS 10172	20	ABC 10172	16	10	17	2
BS 10173	20	ABC 10173	16	10	17	3
BS 10174	20	ABC 10174	16	10	17	4
BS 11172	18	ABC 11172	16	11	17	2
BS 11173	18	ABC 11173	16	11	17	3
BS 12172	20	ABC 12172	16	12	17	2
BS 12173	20	ABC 12173	16	12	17	3
BS 12174	20	ABC 12174	16	12	17	4
BS 13172	18	ABC 13172	16	13	17	2
BS 13173	18	ABC 13173	16	13	17	3
BS 13174	18	ABC 13174	16	13	17	4

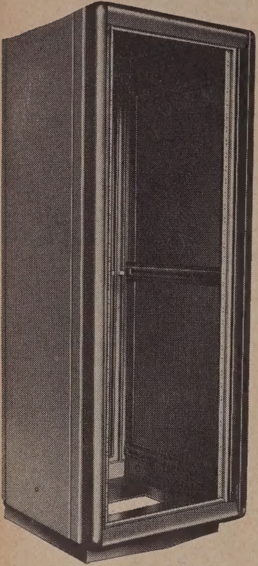
Steel Chassis available in zinc plate at 10% additional cost
**No flange on 4 x 4 x 2 Chassis*

STEEL AND ALUMINUM BOTTOM PLATES

CATALOG NUMBER STEEL	SIZE	CATALOG NUMBER ALUMINUM
BP 46	4 x 6	ABP 46
BP 417	4 x 17	ABP 417
BP 57	5 x 7	ABP 57
BP 59B	5 x 9	ABP 59B
BP 59	5½ x 9½	ABP 59
BP 510	5 x 10	ABP 510
BP 513	5 x 13	ABP 513
BP 614	6 x 14	ABP 614
BP 617	6 x 17	ABP 617
BP 77	7 x 7	ABP 77
BP 79	7 x 9	ABP 79
BP 711	7 x 11	ABP 711
BP 712	7 x 12	ABP 712
BP 713	7 x 13	ABP 713
BP 715	7 x 15	ABP 715
BP 717	7 x 17	ABP 717
BP 812	8 x 12	ABP 812
BP 817	8 x 17	ABP 817
BP 1012	10 x 12	ABP 1012
BP 1014	10 x 14	ABP 1014
BP 1017	10 x 17	ABP 1017
BP 1117	11 x 17	ABP 1117
BP 1217	12 x 17	ABP 1217
BP 1317	13 x 17	ABP 1317

Steel Bottom Plates available in zinc plate at 10% additional cost

PAR-METAL UNIVERSAL CABINET RACKS



SERIES "PL" and "FL"
De Luxe racks with
detachable side panels.

General Description

Our line of universal cabinet racks has been augmented to include a deluxe series "PL", which brings you a new trend in cabinet design, and permits a wider range of modular assemblies to meet your individual requirements.

Although smartly styled, there has been no sacrifice in the rugged construction which features all universal type racks. The same sturdy frame which is used in our "PR" series provides a solid foundation for maximum loading under severe conditions. Series "PL" is particularly adapted for modular assemblies and may be combined with our console units listed on PAR-METAL Pages 10 to 15 to solve your equipment housing problems. Several typical examples are shown on PAR-METAL Page 11.

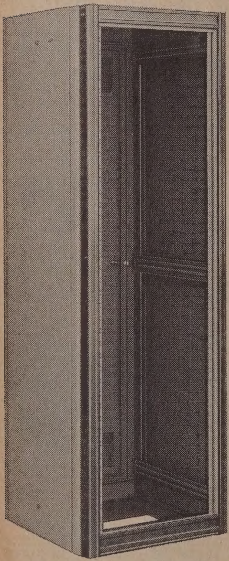
Except where needed for purposes of adjustment or accessibility, every cabinet rack is securely welded into an integral unit. No metal screws, clips, or similar devices are used. Every care has been taken to facilitate your assembly problems with a minimum of parts, an efficient utilization of space, and rapid accessibility to interior components.

RECESSED BASES (shown on illustration at left) are purchased separately as an optional accessory for all universal type racks.

MODULAR GROUPS: All models may be joined into modular groups; cabinets of the same height, in varying panel widths, **with and without front doors**, may be intermixed; Series "PL" and "FL" racks may be combined with our console units.

DIMENSIONS: Racks are available for 19″, 24″, or 30″ wide panels. Cabinet heights are 48⅛″, 67⅜″ 77⅛″ and 83⅛″; depths available are 18″ or 24″.

DESIGN: All sizes listed may be obtained with conventional solid side walls, or with open side walls and detachable side panels. Side shields for use between racks are also available.



SERIES "PR" and "FR"
racks with detachable
side panels.

MID-RAIL MOUNTING OF PANELS: The panel mounting angles or "strips" are fully adjustable on all racks, and may be positioned at any location from front to back. Additional panel mounting angles may be easily inserted where needed for mounting terminal boards, etc.

VERTICAL SIDE SUPPORTS: These supports provide a new method for supporting chassis and other equipment in the racks. Installing brackets or shelves is now a simple procedure; the means of attaching such brackets is fully adjustable so that chassis may be accurately lined up with the front panels. No drilling or other fabrication is required. The chassis may then be installed or removed with a minimum of effort. The vertical side supports also facilitate the installation of special sliding devices obtainable from slide manufacturers.

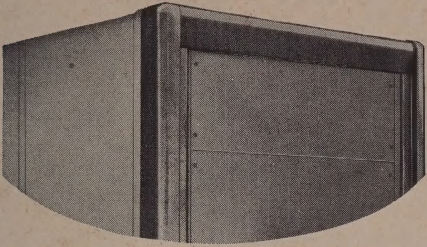
SLIDING SHELVES AND DRAWERS: Several models are listed on PAR-METAL Page 9. These are constructed for mounting on the front of the racks the same as regular panels.

SLOPING INSTRUMENT PANELS and EXTENSION DESK TABLES for single and modular assemblies are available for all universal racks.

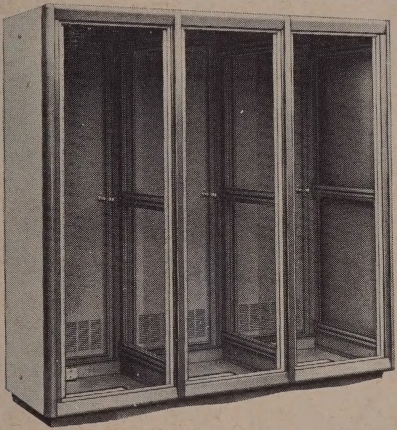
SERIES "PX and "FX"
racks with solid
side walls.

PAR-METAL UNIVERSAL CABINET RACKS

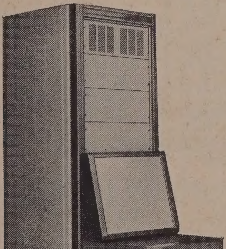
Below are close-up views of the new styling used on our universal cabinet racks. Illustrations of typical assemblies of these racks are shown with additional accessories now available. All racks and accessories may be obtained for 19", 24", and 30" wide panels. On Par-Metal Page 11, you will find additional photographs showing how our "PL" series DeLuxe racks may be combined with console units in modular groups.



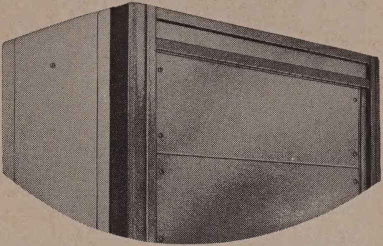
A new concept in modern styling features our series "FL" and "PL" cabinet racks listed on Par-Metal Page 5.



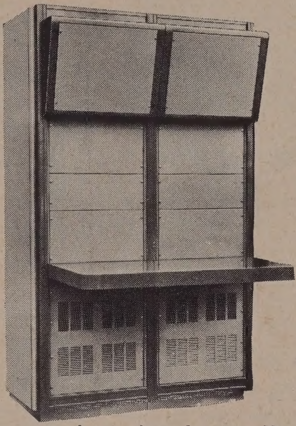
Illustrated above is a modular group of three No. PL-7724 Racks with sub-bases. They are available in various heights for panels 19", 24", and 30" wide.



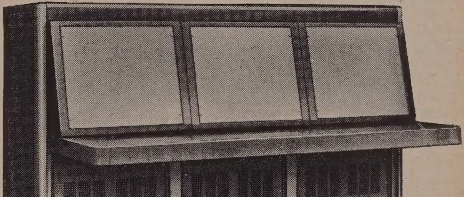
This assembly consists of No. PR-6724-A Rack, a pair of No. RS-624-A Detachable Side Panels, a rack mounted Sloping Panel No. SP-1719, and an Extension Table No. RX-119. All of these units are modular and can be extended in multiple groups. They are available in various heights for panels 19", 24", and 30" wide.



To provide a fresh, compact appearance to our Series PR, FR, PX, and FX Racks, the front of the rack is completely framed as illustrated above.



The duplex unit shown above has two No. PR-8424-A racks, a pair of No. RS-824-A detachable side panels, two sloping panels—No. SP-1719, and an extension table No. RX-219. The same assembly can be made as a single unit or a multiple row, as all units are modular, and are available as 19", 24", and 30" panel widths.



This desirable low console assembly consists of these standard Par-Metal units: three No. PL-4824 racks, a pair of RL-424 detachable side panels, three No. SP-1719 sloping panels, and one RX-319 extension table. Any panels listed on Par-Metal Pages 20 and 21 may be substituted for the ventilated panels shown at the bottom.

PAR-METAL UNIVERSAL CABINET RACKS

DETAILS OF CONSTRUCTION AND ASSEMBLY

RACK CONSTRUCTION:

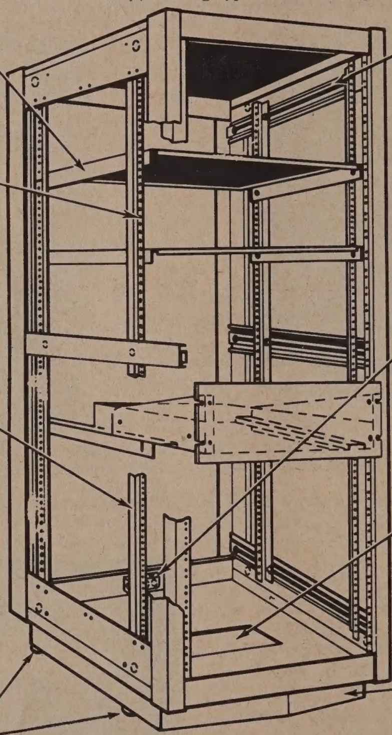
The frame shown is used on series "FL", "FR", "PL", and "PR" racks. The top and bottom is made from 7/64″ steel. The four uprights are also 7/64″ steel, and have multiple-formed angle bends to insure rigidity. Series "PX" and "FX" racks are similar, except that the solid side walls are made from 1/16″ steel. The entire assembly is securely welded to form an integral unit.

DOORS:

For sake of clarity, doors are not shown on the frame drawing. They are stamped from one piece of 1/16″ steel, and "dutch formed" on all sides providing smooth double-thick edges. Adequate ventilation is obtained from full ventilating (venetian-type) louvers. Short doors for fan or blower installations are available.

DOOR HARDWARE:

Door hinges are slip type to permit easy removal. Die cast, chrome plated handles are equipped with cam latches for door closures. Lock type handles are supplied on racks with both front and rear doors. Non-locking handles are used on racks with rear doors only; locking type handles are optional.



● **SIDE MOUNTING BRACKET:**

These may be used separately or with shelves as shown. Slotted holes on the brackets provide any vertical adjustment required.

● **PANEL MOUNTING ANGLES:**

They are made from 1½″ x 1½″ x 3/16″ thick structural steel. All holes are die punched to provide accurate spacings with close tolerances; holes are tapped 12/24 thread on 1½″-¼″ alternate spacings for standard rack panels. Additional angles may be purchased for mounting terminal blocks or other devices.

● **VERTICAL SIDE SUPPORTS:**

These supports are fastened to the same bolt retainer rails used for securing the panel mounting angles. Holes on ⅝″—⅝″—½″ alternate centers, tapped 10/32 thread, provide maximum adjustment for side mounting brackets and equipment shelves. They may also be used for attaching slides or other custom made brackets. The supports are made from 7/64″ thick steel, locked in place with ⅜″ diameter screws, lock washers and hexagon nuts, to afford maximum support.

● **FLOOR LEVELERS:**

Four are supplied with all universal type racks.

● **BOLT RETAINER RAILS:**

To these are bolted the panel mounting angles and vertical side supports, which may be located at any position from front to back. These rails are made from 7/64″ steel, and are rigidly welded in place. Angles and supports are securely fastened to rails with ⅜″ diam. steel bolts, lock washers, and hexagon nuts.

● **OUTLETS:**

"Knockout holes" are available on cabinet side for connecting cables; a duplex outlet, outlet box and plate are mounted on cabinet under rear door.

● **ACCESS OPENING:**

Opening in bottom is 4″ x 14″ on 19″ panel racks; 4″ x 19″ on 24″ panel racks; 4″ x 25″ on 30″ wide panel racks.

● **RECESSED SUB-BASES:**

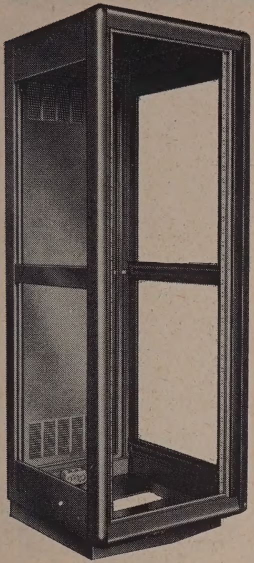
They are available for all universal type racks as an optional accessory (see PAR-METAL Page 8 for listing and description).

FRONT VERTICAL CORNER AND JOINING TRIMS:

In previous catalogs, wide corner trims were listed as standard on our universal racks. They overlapped the side edges of the rack panels to conceal the panel mounting screws. This type of trim was not suitable where sliding shelves, sliding drawers, extension desk tables, sloping panels and similar equipment were mounted on the rack.

Since such shelves, drawers, etc., are now being used on the majority of racks purchased from us, we will now supply as standard a "narrow type" corner trim which does not interfere with the use of these accessories. The wider trims mentioned in the first sentence will be supplied on Type "PR" and "PX" racks where so specified.

PAR-METAL UNIVERSAL CABINET RACKS



PL-4818-A
(WITH REAR
DOOR ONLY)

SERIES "PL" & "FL" DeLUXE RACKS WITH OPEN SIDE WALLS

FOR 19"—24"—30" WIDE RACKS

18" and 24" DEEP

Our new Series "PL" and "FL" racks will solve the major part of your enclosure problems. They are attractively styled with built-in custom quality. Ball corners are not used merely as a sales feature, but are attractively blended into a functional, modular design. The rack frames have the same rugged construction which features all universal type racks. Serious consideration has been given to the problem of stability, as well as maximum flexibility for modular assembly. Removable side panels make the interior readily accessible for assembly, inspection, and adjustment.

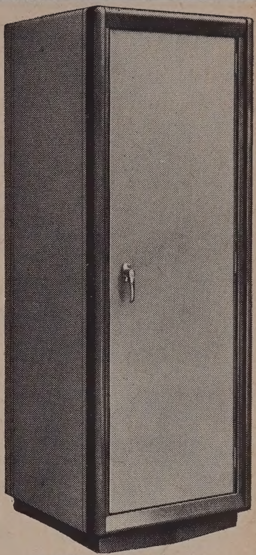
RECESSED RACK SUB-BASES SHOWN IN ILLUSTRATIONS ARE NOT INCLUDED IN RACK PRICES. They are available as an optional accessory. Listings and prices are on PAR-METAL Page 8.

SPECIFICATIONS: Constructional details of rack frame and material specifications are on PAR-METAL Page 3.

ACCESSORIES: All accessories listed on PAR-METAL Pages 8 and 9 may be used with these racks.

CORNER TRIMS: Narrow type corner trims are standard to permit assembly with all accessories and sliding shelves. Where racks are assembled in groups or rows, please specify number of racks in each row so that proper joining trims can be supplied.

FINISHES: **Group 1.** Black or blue grey wrinkle enamel; primer coat only. **Group 2.** Light grey hammertone enamel; light grey hammertone enamel with dark grey hammertone trim on front of assembly; light grey equipment enamel dark grey metallic enamel. **There is an additional charge of 10% for finishes in group 2.** PLEASE SPECIFY FINISH WHEN ORDERING.



FL-4818-A
(WITH FRONT & REAR DOORS)
Side panels attached, See listing below.

TYPE "PL" SERIES RACKS—WITH REAR DOORS ONLY

Catalog No.	Overall Dimensions Height	Width	Depth	Panel Space	Clear Inside Depth	**Clear Inside Width (Front)	Clear Inside Width (Rear)	Shipping Wt. Lbs.	Net Price	DETACHABLE SIDE PANELS Catalog No. (Per Pr.)	Shipping Wt. Lbs. (Per Pr.)	Net Price (Per Pr.)	RECESSED BASES (Optional) Prices on Par-Metal Page 8 Cat. No.
FOR 19" WIDE PANELS — 18" DEEP RACKS													
PL-4818-A	48⅛"	22"	18"	42" x 19"	16⅞"	17¾"	19⅛"	110	$ 92 00	RL-418	40	$40.00	RB-2217
PL-6718-A	67⅜"	22"	18"	61¼" x 19"	16⅞"	17¾"	19⅛"	150	105 00	RL-618	55	48.90	RB-2217
PL-7718-A	76⅛"	22"	18"	70" x 19"	16⅞"	17¾"	19⅛"	160	116.75	RL-718	60	52.20	RB-2217
PL-8418-A	83⅛"	22"	18"	77" x 19"	16⅞"	17¾"	19⅛"	180	128.50	RY-818	65	55.80	RB-2217
FOR 19" WIDE PANELS — 24" DEEP RACKS													
PL-4824-A	48⅛"	22"	24"	42" x 19"	22⅝"	17¾	19⅛"	125	110.50	RL-424	50	47.20	RB-2223
PL-6724-A	67⅜"	22"	24"	61¼" x 19"	22⅝"	17¾"	19⅛	165	128 00	RL-624	60	55.80	RB-2223
PL-7724-A	76⅛"	22"	24"	70" x 19"	22⅝"	17¾"	19⅛"	175	137.75	RL-724	65	59.40	RB-2223
PL-8424-A	83⅛"	22"	24"	77" x 19"	22⅝"	17¾"	19⅛"	190	152.75	RL-824	70	62.60	RB-2223
FOR 24" WIDE PANELS — 24" DEEP RACKS													
PL-4827-A	48⅛"	27"	24"	42" x 24"	22⅝"	22¾"	24⅛"	150	139.75	RL-424	50	47.20	RB-2723
PL-6727-A	67⅜"	27"	24"	61¼" x 24"	22⅝"	22¾"	24⅛"	185	158.75	RL-624	60	55.80	RB-2723
PL-7727-A	76⅛"	27"	24"	70" x 24"	22⅝"	22¾"	24⅛	200	170.50	RL-724	65	59.40	RB-2723
PL-8427-A	83⅛"	27"	24"	77" x 24"	22⅝"	22¾"	24⅛"	215	187.75	RL-824	70	62.60	RB-2723
FOR 30" WIDE PANELS — 24" DEEP RACKS													
PL-6733-A	67⅜"	33"	24"	61¼" x 30"	22⅝"	28¾"	30⅛"	245	189.50	RL-624	60	55.80	RB-3323
PL-7733-A	76⅛"	33"	24"	70" x 30"	22⅝"	28¾"	30⅛"	270	205.50	RL-724	65	59.40	RB-3323
PL-8433-A	83⅛"	33"	24"	77" x 30"	22⅝"	28¾"	30⅛"	285	224.25	RL-824	70	62.60	RB-3323

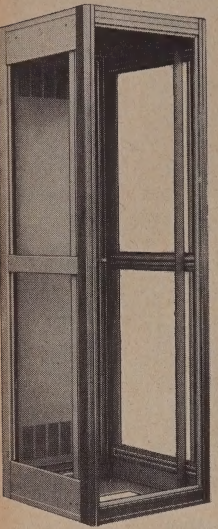
TYPE "FL" SERIES RACKS—WITH FRONT AND REAR DOORS

Catalog No.	Overall Dimensions Height	Width	Depth	Panel Space	*Clear Inside Depth	**Clear Inside Width (Front)	Clear Inside Width (Rear)	Shipping Wt. Lbs.	Net Price	DETACHABLE SIDE PANELS Catalog No. (Per Pr.)	Shipping Wt. Lbs. (Per Pr.)	Net Price (Per Pr.)	RECESSED BASES (Optional) Prices on Par-Metal Page 8 Cat. No.
FOR 19" WIDE PANELS — 18" DEEP RACKS													
FL-4818-A	48⅛"	22"	18"	42" x 19"	16¼"	17¾"	19⅛"	125	$109.25	RL-418	40	$40.00	RB-2217
FL-6718-A	67⅜"	22"	18"	61¼" x 19"	16¼"	17¾"	19⅛"	170	128.00	RL-618	55	48.90	RB-2217
FL-7718-A	76⅛"	22"	18"	70" x 19"	16¼"	17¾"	19⅛"	180	145.25	RL-718	60	52.20	RB-2217
FL-8418-A	83⅛"	22"	18"	77" x 19"	16¼"	17¾"	19⅛"	200	157.00	RL-818	65	55.80	RB-2217
FOR 19" WIDE PANELS — 24" DEEP RACKS													
FL-4824-A	48⅛"	22"	24"	42" x 19"	22¼"	17¾"	19⅛"	145	130.75	RL-424	50	47.20	RB-2223
FL-6724-A	67⅜"	22"	24"	61¼" x 19"	22¼"	17¾"	19⅛"	190	149.00	RL-624	60	55.80	RB-2223
FL-7724-A	76⅛"	22"	24"	70" x 19"	22¼"	17¾"	19⅛"	205	166.75	RL-724	65	59.40	RB-2223
FL-8424-A	83⅛"	22"	24"	77" x 19"	22¼"	17¾"	19⅛"	215	181.25	RL-824	70	62.60	RB-2223
FOR 24" WIDE PANELS — 24" DEEP RACKS													
FL-4827-A	48⅛"	27"	24"	42" x 24"	22¼"	22¾"	24⅛"	170	160.00	RL-424	50	47.20	RB-2723
FL-6727-A	67⅜"	27"	24"	61¼" x 24"	22¼"	22¾"	24⅛"	220	188.00	RL-624	60	55.80	RB-2723
FL-7727-A	76⅛"	27"	24"	70" x 24"	22¼"	22¾"	24⅛"	240	199.00	RL-724	65	59.40	RB-2723
FL-8427-A	83⅛"	27"	24"	77" x 24"	22¼"	22¾"	24⅛"	245	223.00	RL-824	70	62.60	RB-2723
FOR 30" WIDE PANELS — 24" DEEP RACKS													
FL-6733-A	67⅜"	33"	24"	61¼" x 30"	22¼"	28¾"	30⅛"	280	231.50	RL-624	60	55.80	RB-3323
FL-7733-A	76⅛"	33"	24"	70" x 30"	22¼"	28¾"	30⅛"	310	252.75	RL-724	65	59.40	RB-3323
FL-8433-A	83⅛"	33"	24"	77" x 30"	22¼"	28¾"	30⅛"	325	274.00	RL-824	70	62.60	RB-3323

*Clearance between front and rear doors

**Indicates clearance for chassis between panel mounting strips.

PAR-METAL UNIVERSAL CABINET RACKS



PR-4818-A
(WITH REAR DOOR ONLY)

SERIES "PR" & "FR" RACKS WITH OPEN SIDE WALLS

FOR 19"—24"—30" WIDE PANELS
18" and 24" DEEP

SERIES "PR" and "FR" RACKS USE THE SAME sturdy cabinet frames as our DE Luxe racks listed on PAR-METAL Page 4. New horizontal mouldings and vertical corner trims on the front of racks, with new campact side panels, creates a distinctive appearance in keeping with the current trend in cabinet styling. In effect, a frame is provided which can be finished in a contrasting color at your option (see finishes below).

SPECIFICATIONS: Constructional details of rack frame and material specifications are listed on PAR-METAL Page 3.

RECESSED BASES (see illustrations on PAR-METAL Page 3) are available as an optional accessory. Listings and prices are on PAR-METAL Page 8.

ACCESSORIES: All accessories listed on PAR-METAL Pages 8 and 9 may be used with these racks.

CORNER TRIMS: Narrow type corner trims are standard to permit assembly with all accessories and sliding shelves. Where racks are assembled in groups or rows, please specify number of racks in each row so that proper joining trims can be supplied.

FINISHES: **Group 1.** Black or blue grey wrinkle enamel; primer coat only. **Group 2.** Light grey hammertone enamel; light grey hammertone enamel with dark grey hammertone trim on front of assembly; light grey equipment enamel; dark grey metallic enamel. **There is an additional charge of 10% for finishes in group 2.** PLEASE SPECIFY FINISH WHEN ORDERING.

FR-4818-A (WITH FRONT & REAR DOORS)
Side panels attached, See listing below.

TYPE "PR" SERIES RACKS — WITH REAR DOORS ONLY

Catalog No.	Overall Dimensions Height	Width	Depth	Panel Space	*Clear Inside Depth	**Clear Inside Width (Front)	Inside Width (Rear)	Shipping Wt. Lbs.	Net Price	DETACHABLE SIDE PANELS Catalog No. (Per Pr.)	Shipping Wt. Lbs. (Per Pr.)	Net Price (Per Pr.)	RECESSED BASES (Optional) Prices on Par-Metal Page 8 Cat. No.
FOR 19" WIDE PANELS — 18" DEEP RACKS													
PR-4818-A	48⅛"	22"	18"	42" x 19"	16⅞"	17¾"	19⅛"	110	$ 80.60	RS-418-A	40	$34.50	RB-2217
PR-6718-A	67⅜"	22"	18"	61¼" x 19"	16⅞"	17¾"	19⅛"	150	92.20	RS-618-A	55	41.40	RB-2217
PR-7718-A	76⅛"	22"	13"	70" x 19"	16⅞"	17¾"	19⅛"	160	103.80	RS-718-A	60	44.70	RB-22 7
PR-8418-A	83⅛"	22"	18"	77" x 19"	16⅞"	17¾"	19⅛"	1[illegible]0	115.20	RS-818-A	65	48.30	RB-2217
FOR 19" WIDE PANELS — 24" DEEP RACKS													
PR-4824-A	48⅛"	22"	24"	42" x 19"	22⅝"	17¾"	19⅛"	125	97.70	RS-424-A	50	41.70	RB-2223
PR-6724-A	67⅜"	22"	24"	61¼" x 19"	22⅝"	17¾"	19⅛"	165	112.00	RS-624-A	60	48.30	RB-2223
PR-7724-A	76⅛"	22"	24"	70" x 19"	22⅝"	17¾"	19⅛"	175	123.50	RS-724-A	65	51.90	RB-2223
PR-8424-A	83⅛"	22"	24"	77" x 19"	22⅝"	17¾"	19⅛"	190	138.30	RS-824-A	70	55.10	RB-2223
FOR 24" WIDE PANELS — 24" DEEP RACKS													
PR-4827-A	48⅛"	27"	24"	42" x 24"	22⅝"	22¾"	24⅛"	150	126.20	RS-424-A	50	41.70	RB-2723
PR-6727-A	67⅜"	27"	24"	61¼" x 24"	22⅝"	22¾"	24⅛"	185	143.80	RS-624-A	60	48.30	RB-2723
PR-7727-A	76⅛"	27"	24"	70" x 24"	22⅝"	22¾"	24⅛"	200	155.30	RS-724-A	65	51.90	RB-2723
PR-8427-A	83⅛"	27"	24"	77" x 24"	22⅝"	22¾"	24⅛"	215	172.30	RS-824-A	70	55.10	RB-2723
FOR 30" WIDE PANELS — 24" DEEP RACKS													
PR-6733-A	67⅜"	33"	24"	61¼" x 30"	22⅝"	28¾"	30⅛"	245	173.20	RS-624-A	60	48.30	RB-3323
PR-7733-A	76⅛"	33"	24"	70" x 30"	22⅝"	28¾"	30⅛"	270	189.00	RS 724-A	65	51.90	RB-3323
PR-8433-A	83⅛"	33"	24"	77" x 30"	22⅝"	28¾"	30⅛"	285	207.40	RS-824-A	70	55.10	RB-3323

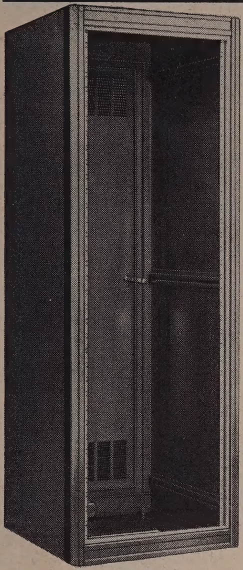
TYPE "FR" SERIES RACKS — WITH FRONT AND REAR DOORS

Catalog No.	Overall Dimensions Height	Width	Depth	Panel Space	*Clear Inside Depth	**Clear Inside Width (Front)	Inside Width (Rear)	Shipping Wt. Lbs.	Net Price	DETACHABLE SIDE PANELS Catalog No. (Per Pr.)	Shipping Wt. Lbs. (Per Pr.)	Net Price (Per Pr.)	RECESSED BASES (Optional) Prices on Par-Metal Page 8 Cat. No.
FOR 19" WIDE PANELS — 18" DEEP RACKS													
FR-4818-A	48⅛"	22"	18"	42" x 19"	16¼"	17¾"	19⅛"	125	$ 97.70	RS-418-A	40	$34.50	RB-2217
FR-6718-A	67⅜"	22"	18"	61¼" x 19"	16¼"	17¾"	19⅛"	170	115.20	RS-618-A	55	41.40	RB-2217
FR-7718-A	76⅛"	22"	18"	70" x 19"	16¼"	17¾"	19⅛"	180	132.20	RS-718-A	60	44.70	RB-2217
FR-8418-A	83⅛"	22"	18"	77" x 19"	16¼"	17¾"	19⅛"	200	143.80	RS-818-A	65	48.30	RB-2217
FOR 19" WIDE PANELS — 24" DEEP RACKS													
FR-4824-A	48⅛"	22"	24"	42" x 19"	22¼"	17¾"	19⅛"	145	118.00	RS-424-A	50	41.70	RB-2223
FR-6724-A	67⅜"	22"	24"	61¼" x 19"	22¼	17¾"	19⅛"	190	134.90	RS-624-A	60	48.30	RB-2223
FR 7724-A	76⅛"	22"	24"	70" x 19"	22¼"	17¾"	19⅛"	205	152.50	RS-724-A	65	51.90	RB-2223
FR-3424-A	83⅛"	22"	24"	77" x 19"	22¼"	17¾"	19⅛"	215	166.80	RS-824-A	70	55.10	RB-2223
FOR 24" WIDE PANELS — 24" DEEP RACKS													
FR-4827-A	48⅛"	27"	24"	42" x 24"	22¼"	22¾"	24⅛"	170	146.50	RS-424-A	50	41.70	RB-2723
FR-6727-A	67⅜"	27"	24"	61¼" x 24"	22¼"	22¾"	24⅛"	220	172.90	RS-624-A	60	48.30	RB-2723
FR-7727-A	76⅛"	27"	24"	70" x 24"	22¼"	22¾"	24⅛"	240	183.80	RS-724-A	65	51.90	RB-2723
FR-8427-A	83⅛"	27"	24"	77" x 24"	22¼	22¾"	24⅛"	245	207.40	RS-824-A	70	55.10	RB-2723
FOR 30" WIDE PANELS — 24" DEEP RACKS													
FR-6733-A	67⅜"	33"	24"	61¼" x 30"	22¼"	28¾"	30⅛"	280	215.20	RS-624-A	60	48.30	RB-3323
FR-7733-A	76⅛"	33"	24"	70" x 30"	22¼"	28¾"	30⅛"	310	236.20	RS-724-A	65	51.90	RB-3323
FR-8433-A	83⅛"	33"	24"	77" x 30"	22¼"	28¾"	30⅛"	325	257.20	RS-824-A	70	55.10	RB-3323

*Clearance between front and rear doors

**Indicates clearance for chassis between panel mounting strips.

PAR-METAL UNIVERSAL CABINET RACKS



PX-4818-A

WITH REAR DOOR ONLY

SERIES "PX" & "FX" RACKS WITH SOLID SIDE WALLS

FOR 19"—24"—30" WIDE PANELS 18" and 24" DEEP

SERIES "PX" and "FX" RACKS ARE SIMILAR to our "PR" series, except that they are constructed with solid side walls as shown.

These racks feature the same horizontal mouldings and corner trims used on our "PR" series, resulting in a trim, compact appearance. The new styling, in effect, provides an attractive frame around the front of the rack where contrasting color finishes are used. (See below under "finishes").

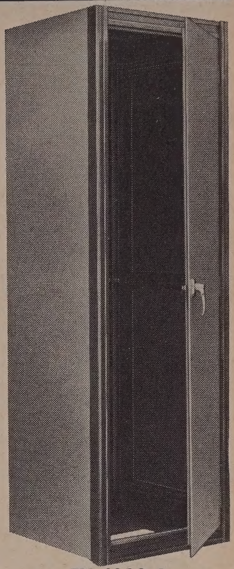
SPECIFICATIONS: Constructional details of rack frame and material specifications are listed on PAR-METAL Page 3.

RECESSED BASES (see illustrations on PAR-METAL Page 3) are available as an optional accessory. Listings and prices are on PAR-METAL Page 8.

ACCESSORIES: All accessories listed on PAR-METAL Pages 8 and 9 may be used with these racks.

CORNER TRIMS: Narrow type corner trims are standard to permit assembly with all accessories and sliding shelves. Where racks are assembled in groups or rows, please specify number of racks in each row so that proper joining trims can be supplied.

FINISHES: Group 1. Black or blue grey wrinkle enamel; primer coat only. **Group 2.** Light grey hammertone enamel; light grey hammertone enamel with dark grey hammertone trim on front of assembly; light grey equipment enamel; dark grey metallic enamel. **There is an additional charge of 10% for finishes in** group 2. PLEASE SPECIFY FINISH WHEN ORDERING.



FX-4818-A

WITH FRONT & REAR DOORS

TYPE "PX" SERIES RACKS — WITH REAR DOORS ONLY

Catalog No.	Overall Dimensions Height	Overall Dimensions Width	Overall Dimensions Depth	Panel Space	*Clear Inside Depth	**Clear Inside Width (Front)	Clear Inside Width (Rear)	Shipping Wt. Lbs.	Net Price	RECESSED BASES (Optional) Prices on Par-Metal Page 8. Cat. No.
FOR 19" WIDE PANELS — 18" DEEP RACKS										
PX-3718-A	42⅞"	22"	18"	36¾" x 19"	16⅞"	17¾"	19⅛"	105	$ 69.00	RB-2217
PX-4818-A	48⅛"	22"	18"	42" x 19"	16⅞"	17¾"	19⅛"	120	80.60	RB-2217
PX-6718-A	67⅜"	22"	18"	61¼" x 19"	16⅞"	17¾"	19⅛"	155	92.20	RB-2217
PX-7718-A	76⅛"	22"	18"	70" x 19"	16⅞"	17¾"	19⅛"	170	103.80	RB-2217
PX-8418-A	83⅛"	22"	18"	77" x 19"	16⅞"	17¾"	19⅛"	185	115.20	RB-2217
FOR 19" WIDE PANELS — 24" DEEP RACKS										
PX-4824-A	48⅛"	22"	24"	42" x 19"	22⅝"	17¾"	19⅛"	140	97.70	RB-2223
PX-6724-A	67⅜"	22"	24"	61¼" x 19"	22⅝"	17¾"	19⅛"	180	112.00	RB-2223
PX-7724-A	76⅛"	22"	24"	70" x 19"	22⅝"	17¾"	19⅛"	195	123.50	RB-2223
PX-8424-A	83⅛"	22"	24"	77" x 19"	22⅝"	17¾"	19⅛"	210	138.30	RB-2223
FOR 24" WIDE PANELS — 24" DEEP RACKS										
PX-4827-A	48⅛"	27"	24"	42" x 24"	22⅝"	22¾"	24⅛"	155	126.20	RB-2723
PX-6727-A	67⅜"	27"	24"	61¼" x 24"	22⅝"	22¾"	24⅛"	200	143.80	RB-2723
PX-7727-A	76⅛"	27"	24"	70" x 24"	22⅝"	22¾"	24⅛"	225	155.30	RB-2723
PX-8427-A	83⅛"	27"	24"	77" x 24"	22⅝"	22¾"	24⅛"	240	172.30	RB-2723
FOR 30" WIDE PANELS — 24" DEEP RACKS										
PX-6733-A	67⅜"	33"	24"	61¼" x 30"	22⅝"	28¾"	30⅛"	260	173.20	RB-3323
PX-7733-A	76⅛"	33"	24"	70" x 30"	22⅝"	28¾"	30⅛"	280	189.00	RB-3323
PX-8433-A	83⅛"	33"	24"	77" x 30"	22⅝"	28¾"	30⅛"	300	207.40	RB-3323

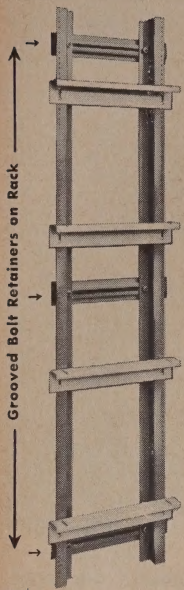
TYPE "FX" SERIES RACKS — WITH FRONT AND REAR DOORS

Catalog No.	Overall Dimensions Height	Overall Dimensions Width	Overall Dimensions Depth	Panel Space	*Clear Inside Depth	**Clear Inside Width (Front)	Clear Inside Width (Rear)	Shipping Wt. Lbs.	Net Price	RECESSED BASES (Optional) Prices on Par-Metal Page 8. Cat. No.
FOR 19" WIDE PANELS — 18" DEEP RACKS										
FX-4818-A	48⅛"	22"	18"	42" x 19"	16¼"	17¾"	19⅛"	135	$ 97.70	RB-2217
FX-6718-A	67⅜"	22"	18"	61¼" x 19"	16¼"	17¾"	19⅛"	175	115.20	RB-2217
FX-7718-A	76⅛"	22"	18"	70" x 19"	16¼"	17¾"	19⅛"	190	132.20	RB-2217
FX-8418-A	83⅛"	22"	18"	77" x 19"	16¼"	17¾"	19⅛"	205	143.80	RB-2217
FOR 19" WIDE PANELS — 24" DEEP RACKS										
FX-4824-A	48⅛"	22"	24"	42" x 19"	22¼"	17¾"	19⅛"	160	118.00	RB-2223
FX-6724-A	67⅜"	22"	24"	61¼" x 19"	22¼"	17¾"	19⅛"	205	134.90	RB-2223
FX-7724-A	76⅛"	22"	24"	70" x 19"	22¼"	17¾"	19⅛"	225	152.50	RB-2223
FX-8424-A	83⅛"	22"	24"	77" x 19"	22¼"	17¾"	19⅛"	235	166.80	RB-2223
FOR 24" WIDE PANELS — 24" DEEP RACKS										
FX-4827-A	48⅛"	27"	24"	42" x 24"	22¼"	22¾"	24⅛"	175	146.50	RB-2723
FX-6727-A	67⅜"	27"	24"	61¼" x 24"	22¼"	22¾"	24⅛"	235	172.90	RB-2723
FX-7727-A	76⅛"	27"	24"	70" x 24"	22¼"	22¾"	24⅛"	265	183.80	RB-2723
FX-8427-A	83⅛"	27"	24"	77" x 24"	22¼"	22¾"	24⅛"	270	207.40	RB-2723
FOR 30" WIDE PANELS — 24" DEEP RACKS										
FX-6733-A	67⅜"	33"	24"	61¼" x 30"	22¼"	28¾"	30⅛"	295	215.20	RB-3323
FX-7733-A	76⅛"	33"	24"	70" x 30"	22¼"	28¾"	30⅛"	320	236.20	RB-3323
FX-8433-A	83⅛"	33"	24"	77" x 30"	22¼"	28¾"	30⅛"	345	257.20	RB-3323

*Clearance between front and rear doors.

**Indicates clearance for chassis between panel mounting strips.

PAR-METAL CABINET RACK ACCESSORIES



VERTICAL SIDE SUPPORTS

These vertical side supports are supplied in sets of four uprights to fit all universal racks listed on PAR-METAL Pages 5 thru 7. (Cut shows side mounting brackets in place which are sold separately—see listing below).

Supports are fastened to grooved bolt retainers which hold panel mounting angles in place, and are adjustably mounted from front to back of rack. Holes are *drilled* and *tapped vertically* to provide adequate vertical adjustment for mounting brackets, shelves, and various sliding devices.

When installed in racks for 19" wide panels, the clearance between supports (from right to left) is 17¾". On 24" wide panel racks, the clearance is 22¾"; on 30" wide panel racks, the clearance is 28¾". Supports are 2⅝" wide and 1½" deep.

Supports are made from ⅛" steel, finished in aluminum enamel. Each set is supplied with necessary bolts for rack mounting.

Cat. No.	Height	To Fit Universal Cabinet Racks	Sh. Wt. Lbs.	Net Price Set of 4
VS-36	41¼"	Series 3718-A	22	$14.15
VS-42	46½"	Series 4318-A, 4824-A, 4827-A	25	15.50
VS-61	65¾"	Series 6718-A, 6724-A, 6727-A, 6733-A	35	20.50
VS-70	74½"	Series 7718-A, 7724-A, 7727-A, 7733-A	39	24.00
VS-77	81½"	Series 8418-A, 8424-A, 8427-A, 8433-A	45	26.75

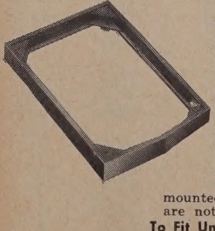
PANEL MOUNTING ANGLES

These panel mounting angles (or strips) are the same as used in all Universal type racks, (see PAR-METAL Pages 5 thru 7). They are supplied with necessary bolts to fit into the grooved retainers which hold the pair of panel mounting angles regularly supplied with each rack.

It is often desirable to use an additional pair of panel mounting angles for mounting chassis, terminal strips, etc. They may be adjusted to any depth within the rack from front to back.

Angle No.	To Fit Universal Cabinet Racks	Net Price Per Pair
PA-36	Series 3718-A	$ 9.50
PA-42	Series 4818-A, 4824-A, 4827-A	11.50
PA-61	Series 6718-A, 6724-A, 6727-A, 6733-A	15.90
PA-70	Series 7718-A, 7724-A, 7727-A, 7733-A	18.10
PA-77	Series 8418-A, 8424-A, 8427-A, 8433-A	19.80

RECESSED RACK SUB-BASES

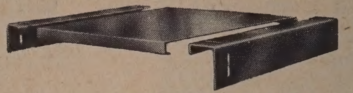


These heavy duty bases will fit under any of the universal racks listed on PAR-METAL Pages 5 thru 7. They are rigidly made from 7/64" thick steel, and are securely braced at all corners.

4 holes in top match those provided in the racks. Hardware for attaching is supplied. 4 adjustable floor levellers are used under the bottom of the bases. Will be finished in enamel to match racks ordered. Where roller trucks are mounted under the racks, recessed bases are not recommended or required.

Cat. No.	To Fit Universal Racks Width	Depth	Net Price
RB-2217	22"	18"	$15.00
RB-2223	22"	24"	16.00
RB-2723	27"	24"	17.50
RB-3323	33"	24"	18.75

SIDE MOUNTING BRACKETS



Brackets BR-118 and Shelf SS-1918

These brackets will fit on Vertical Side Supports shown at left. They are sold in pairs, and slotted to provide vertical adjustment at any height required. Brackets are 2" wide and 1-13/16" high. The vertical face of the bracket is also slotted to match holes in equipment shelves listed below. Where desirable, the horizontal face of the bracket may be bolted to the vertical side supports. They are made from 7/64" steel, zinc plated finish. Necessary bolts supplied.

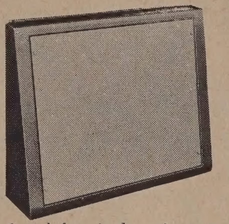
Cat. No.	Length	To Fit Racks	Net Price
BR-118	14"	All 18" deep racks	$3.15 per pr.
BR-124	20"	All 24" deep racks	4.20 per pr.

EQUIPMENT SHELVES

These shelves will assemble with the side mounting brackets listed above, to make a complete shelf between Vertical Side Supports. Made from 1/16" steel, zinc plated. Necessary bolts for assembly are included. All shelves are ⅞" high.

Cat. No.	Width	Depth	To Fit Racks	Net Price
SS-1918	17⅝"	14¼"	19" panels-18" deep	$3.30
SS-1924	17⅝"	20¼"	19" panels-24" deep	3.96
SS-2724	22⅝"	20¼"	24" panels-24" deep	4.68
SS-3324	28⅝"	20¼"	30" panels-24" deep	7.50

SLOPING RACK MOUNTING PANELS



These panels are intended for installation on relay racks, and are installed the same as other standard rack panels.

The front slopes at an angle of 20°, and it may be used with the slope upward or downward (see illustrations on PAR-METAL Page 3).

Front and back have removable panels. They are designed for single unit or modular group assemblies.

Constructed from 1/16" sheet steel; panels are included in prices listed below. Available in all finishes—please specify when ordering.

All panels are 7⅝" deep.

Cat. No.	Panel Space Required	Sloping Panel Size	Rear Panel Size	Net Price
SP-1719	17½" x 19"	15¾" x 19"	14" x 19"	$35.00
SP-1724	17½" x 24"	15¾" x 24"	14" x 24"	42.50
SP-1730	17½" x 30"	15¾" x 30"	14" x 30"	55.00

RACK TYPE EXTENSION TABLES

These rack type desk tables are suitable for use on any of the universal type racks listed on PAR-METAL Pages 5 thru 7.

They are made from grey formica bonded to ¾" thick plywood, reinforced at side and front to a height of 2½"; (see PAR-METAL Page 3 for illustrations). The entire top may be used as a writing surface without obstruction.

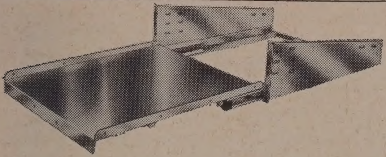
The assembly requires only 3½" in panel height. The table is supported horizontally by heavy steel channels, with interior mounting brackets to provide a rigid support. They are available in single or multiple widths, for 19", 24", and 30" wide panel racks.

Cat. No.	Table Size	Type	Rack Panel Width	Net Price
RX-119	21¼" x 20"	Single	19"	$ 42.00
RX-219	42⅛" x 20"	Double	19"	78.00
RX-319	64¼" x 20"	Triple	19"	104.00
RX-419	86⅜" x 20"	Quadruple	19"	144.00
RX-124	26¼" x 20"	Single	24"	48.00
RX-224	52⅛" x 20"	Double	24"	95.00
RX-324	79¼" x 20"	Triple	24"	128.00
RX-130	32¼" x 20"	Single	30"	55.00
RX-230	64⅛" x 20"	Double	30"	100.00

PAR-METAL RACK TYPE SLIDE ASSEMBLIES

All the sliding shelf units listed on this page are a new improved design, and supersede previously listed units. Additional models with higher load capacities are now available.

All sliding shelf units and phono drawer assemblies are now made to accommodate chassis **up to 17" wide.** The full depth of the shelf may now be extended from the rack.

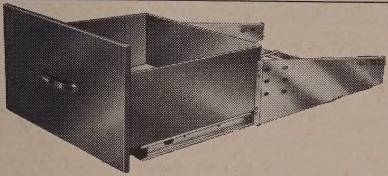


BASIC SLIDE ASSEMBLIES

The basic slide assembly illustrated is sold as a complete unit, ready for installation in all 18" or 24" deep racks. Panels may be attached to chassis by using standard brackets or any other convenient method. The panel and chassis assembly is then bolted directly to the slide pan. Formed panels with a minimum height of 7" are recommended. All load capacities are conservatively rated. All parts are zinc plated.

Catalog No.	Usable Space Width	Usable Space Depth	Panel Width	Rack Depth	Bracket Height	Shelf Height	Load Capacity	Net Price	Shipping Weight	Replaces Catalog No.
BS-1980	17⅛"	14"	19"	18"	6½"	1¾"	50 lbs.	**17.50**	24 lbs.	SD-1916, 1920
BS-1940	17⅛"	20"	19"	24"	6½"	1¾"	36 lbs.	**24.00**	32 lbs.	SD-2016, 2020
BS-2419	17⅛"	20"	19"	24"	6½"	1¾"	60 lbs.	**29.00**	32 lbs.	NEW
BS-2424	22⅛"	20"	24"	24"	6½"	1¾"	55 lbs.	**31.00**	35 lbs.	SD-2416, 2420

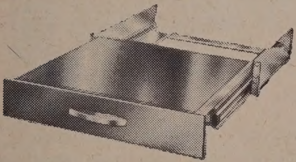
Special brackets are available for mounting rack panels, as listed on Par-Metal page 23.



STORAGE DRAWER ASSEMBLIES

This drawer is similar to our phono drawer except that the sides of the slide are completely enclosed to form a drawer. They are available either 7" or 10½" high to match standard rack panels of the same height. Three models are listed for racks with 19" panels, and one for 24" wide panels.

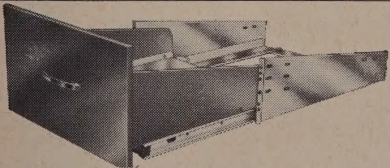
Catalog No.	Usable Space Width	Usable Space Length	Depth	Panel Height	Panel Width	Rack Depth	Load Capacity	Net Price	Shipping Weight	Replaces Catalog No.
DD-1980	17"	14"	5"	7"	19"	18"	40 lbs.	**24.00**	33 lbs.	DD-1925
DD-1940	17"	20"	5"	7"	19"	24"	25 lbs.	**33.00**	42 lbs.	NEW
DD-2419	17"	20"	8"	10½"	19"	24"	45 lbs.	**39.50**	50 lbs.	NEW
DD-2424	22"	20"	8"	10½"	24"	24"	45 lbs.	**44.00**	50 lbs.	NEW



DESK SHELF ASSEMBLIES

This assembly effectively provides a retractable writing desk, or may be used for supporting test instruments or other devices. When not in use, it saves valuable aisle space. The writing surface is charcoal grey micarta. The front requires only 3½" of panel space, and is provided with a drawer pull. It is made for racks using panels either 19" or 24" wide. No. SK-1970 and SK-2419 are identical except for load capacity.

Catalog No.	Shelf Size Width	Shelf Size Depth	Writing Surface	Pulls Out	Panel Width	Rack Depth	Load Capacity	Net Price	Shipping Weight
SK-1970	17"	17"	Micarta	16⅜"	19"	18-24"	36 lbs.	**34.00**	32 lbs.
SK-2419	17"	17"	Micarta	16⅜"	19"	18-24"	60 lbs.	**39.00**	32 lbs.
SK-2424	22"	17"	Micarta	16⅜"	24"	24"	60 lbs.	**46.00**	35 lbs.



PHONO DRAWER ASSEMBLIES

Consists of basic sliding shelf assembly with a drawer front and handle as illustrated. Drawer front is same size as standard formed panel 10½" high. (12¼" high drawer fronts are also available.) The 17" width will accommodate almost all standard changers and turntables.

Where metal base pans are available with changers, it is recommended that such pans be used and bolted directly to the shelf.

Catalog No.	Usable Space Width	Usable Space Depth	Usable Space Height	Panel Height	Panel Width	Rack Depth	Load Capacity	Net Price	Shipping Weight	Replaces Catalog No.
PH-1980	17"	14"	8¾"	10½"	19"	18"	45 lbs.	**23.50**	33 lbs.	PH-1916
PH-1940	17"	20"	8¾"	10½"	19"	24"	30 lbs.	**30.00**	40 lbs.	PH-2020
PH-2419	17"	20"	8¾"	10½"	19"	24"	50 lbs.	**35.50**	40 lbs.	NEW
PH-2424	22"	20"	10½"	12¼"	24"	24"	45 lbs.	**39.00**	44 lbs.	PH-2416

IMPORTANT: When ordering, please specify paint finish of front panels or drawer fronts of series "DD", "PH", or "SK" assemblies.

PAR-METAL PRODUCTS CORP. • Long Island City 3, N. Y.

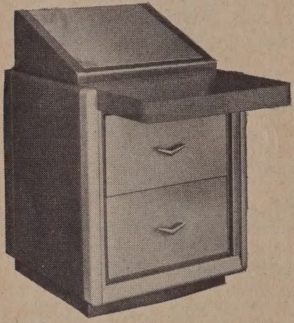
PAR-METAL DE LUXE CONSOLE ASSEMBLIES

General Description

The combination of a control cabinet mounted on table, desk or similar support usually called a console has been in general use in the electronics industry many years.

While it is obvious that no particular fixed design can serve every requirement, *we have devised a group of standard units,* the combination of which is readily adaptable for specialized applications in control equipment, testing facilities, sound distribution systems and industrial purposes. Our previous models have been functionally redesigned and smartly styled to keep pace with current trends. New modular units have been added, all of which may be grouped or expanded to meet your specific needs.

The *versatile pedestal racks* are the keystone to the entire assembly. They are constructed for heavy duty use, having all the essential features of our type "PL" cabinet racks listed on PAR METAL page 5. This would include panel mounting angles. which are adjustable from front to back, and provision for installing chassis mounting brackets and shelves where needed. They offer an efficient utilization of space, complete accessibility for servicing, and are *solidly built* to withstand heavy strains *whether in a laboratory or a moving vehicle.*

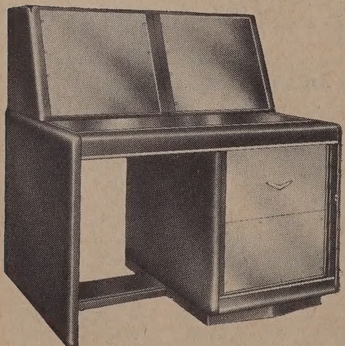


SINGLE UNIT ASSEMBLY

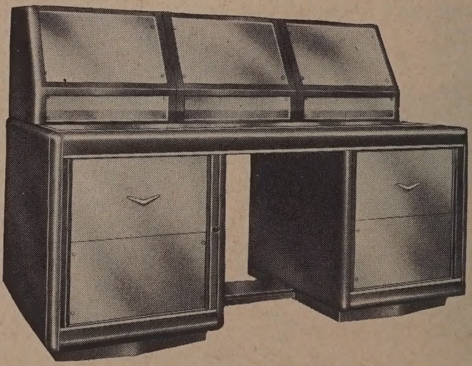
The *new side panels* are readily detachable from the outside. No drilling or fitting is necessary for the assembly of pedestals, cabinets, brackets, shelves or drawers. All panel mounting holes are tapped for screws — no metal screws or clips are used.

Our standard finish is a combination of light and dark gray hammertone enamel. Your desk requirements are easily selected from the group charts on PAR-METAL page 12. For the turret, you may choose from four types of control cabinets listed on PAR-METAL page 15.

Other standard finishes including primer coat only are optional without additional cost.



DOUBLE UNIT ASSEMBLY

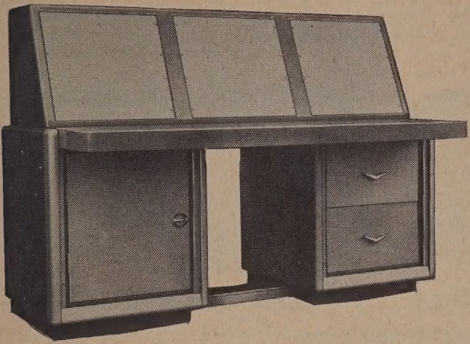


TRIPLE UNIT ASSEMBLY

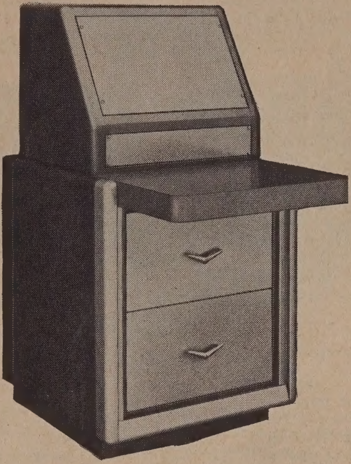
PAR-METAL PRODUCTS CORP. • **Long Island City 3, N. Y.**

PAR-METAL DE LUXE CONSOLE ASSEMBLIES

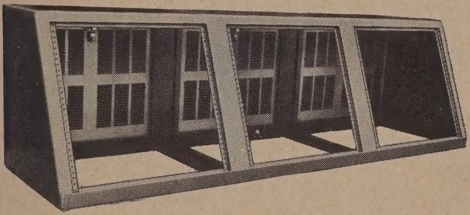
Below are illustrated additional assemblies of console units, as well as console units combined with our Series "PL" universal cabinet racks (listed on Par-Metal Page 5).



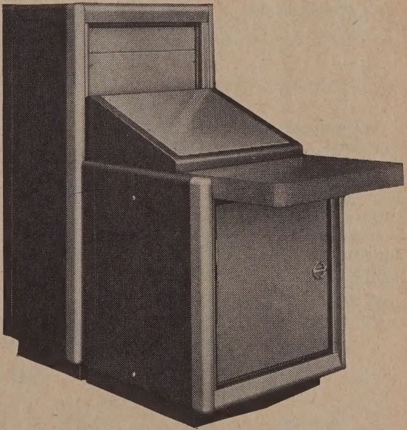
The above unit consists of: two No. PD-224 pedestal frames, two No. EP-24 exterior side panels, two No. KP-24 interior side panels, one No. HS-103 high slope cabinet, one No. CD-24 center desk section, (door drawers, or rack panels for front and back are optional).



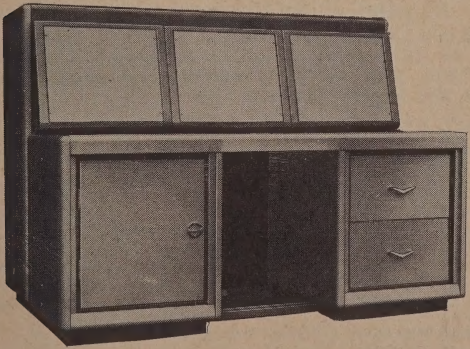
This illustration is a single unit assembly similar to the triple unit shown on the left.



This is an interior view of our No. HS-103 high slope panel cabinet. Note the rigid bracing and well ventilated individual rear doors. This construction is typical of all panel control cabinets listed on Par-Metal Page 15.



A single unit assembly consisting of the following: one No. PL-4818 cabinet rack, one No. LS-101 low slope panel cabinet, one No. PD-224 pedestal frame, one No. CT-119 extension desk table, *one No. DR-2119 pedestal frame door (optional). This particular assembly can be set up as a desk console similar to the illustration at the left. Rack Panels or Sliding Drawers may also be used.



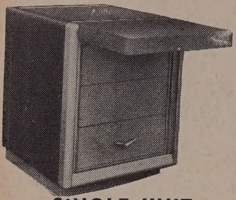
A versatile assembly suitable for many projects is shown above. It consists of the following units: three No. PL-4818 universal racks (Par-Metal Page 5), one pair No. RL-418 detachable side panels (Par-Metal Page 5), two No. PD-224 pedestal frames, two No. EP-24 exterior side panels, two No. KP-24 interior side panels, one No. CD-24 center section, three No. SP-1719 sloping panels, (Door, drawers, and rack panels for front and back are optional).

PAR-METAL DE LUXE CONSOLE ASSEMBLIES

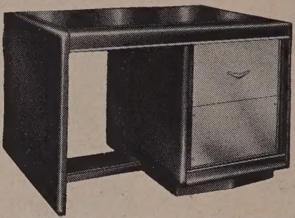
COMPONENT GROUP CHECK LISTS

The group charts below list all necessary and alternate components for single, double, and triple unit assemblies, and also provides a check list to determine your exact requirements.

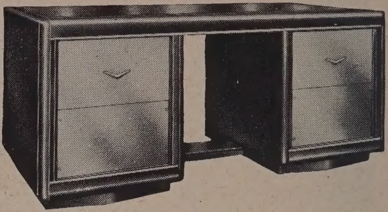
You will note that there are two types of table tops available. You may obtain them with a full depth tabletop (from front to back), or with a short depth tabletop for use with either control or sloping panel mounted on top. For simplicity, these cabinets have been omitted from illustrations on this page; they are fully described and listed on PAR METAL page 15.



SINGLE UNIT ASSEMBLY



DOUBLE UNIT ASSEMBLY



TRIPLE UNIT ASSEMBLY

FOR SINGLE UNIT ASSEMBLIES

Description	Part No.	Quantity	Par-Metal Page No.	Unit Price	Explanation
Pedestal Frame	PD-224	1	13	$80.00	
Extension Desk Table	CT-119	1	14	36.00	
Exterior Side Panel	EP-24	2	13	20.00	
Full depth tabletop	XT-242	1	14	15.60	For use where our control cabinets are not required.
Short depth tabletop					Not required where our control cabinets are used.
Sliding drawers	Various	Optional	9	As listed	Phono drawers or sliding shelves may also be used.
Panels or doors for front and rear of rack pedestals	Various	As required	14, 20, 21	As listed	Available panel space is 21" high, 19" wide.
Mounting Brackets (in pairs)	CB-24	Optional	14	$4.20 pair	If needed for interior support of chassis, etc.
Shelf	SS-24	Optional	14	$4.50	If needed for interior support of chassis, etc.

Overall dimensions of unit: 24½" wide, 36¼" long (front to back), 30" high.

FOR DOUBLE UNIT ASSEMBLIES

Description	Part No.	Quantity	Par-Metal Page No.	Unit Price	Explanation
Pedestal Frame	PD-234	1	13	$95.00	
End Pedestal Assembly	DU-34	1	14	45.00	
Exterior Side Panel	EP-34	1	13	25.00	For outside of pedestals.
Interior Side Panel	KP-34	1	14	20.00	For knee space.
Full depth tabletop	WT-342	1	14	46.00	For use where our control cabinets are not required.
Short depth tabletop	HT-342	1	14	18.20	Required where our control cabinets are used.
Sliding drawers	Various	Optional	9	As listed	Phono drawers or sliding shelves may also be used.
Panels or doors for front and rear of rack pedestals	Various	As required	14, 20, 21	As listed	Available panel space is 21" high, 19" wide.
Mounting Brackets	CB-34	Optional	14	$5.80 pair	If needed for interior support of chassis, etc.
Shelf	SS-34	Optional	14	$6.40	If needed for interior support of chassis, etc.

Overall dimensions of unit: 46½" wide, 35⅜" long (front to back), 30" high.

FOR TRIPLE UNIT ASSEMBLIES

Description	Part No.	Quantity	Par-Metal Page No.	Unit Price	Explanation
Pedestal Frame	PD-234	2	13	$95.00	
Center Desk Section (and floor brace)	CD-34	1	14	19.80	
Exterior Side Panels	EP-34	2	13	25.00	For outside of pedestals at ends.
Interior Side Panels	KP-34	2	13	20.00	For outside of pedestals in knee-space.
Full depth tabletop	WT-343	1	14	68.00	For use where our control cabinets are not required
Short depth tabletop	HT-343	1	14	26.00	Required where our control cabinets are used.
Sliding drawers	Various	Optional	9	As listed	Phono drawers or sliding shelves may also be used.
Panels or doors for front and rear of rack pedestals	Various	Optional	14, 20, 21	As listed	Available panel space is 21" high, 19" wide.
Mounting Brackets	CB-34	Optional	14	$5.80 pair	If needed for interior support of chassis, etc.
Shelf	SS-34	Optional	14	$6.40	If needed for interior support of chassis, etc.

Overall dimensions of unit: 68½" wide, 35⅜" long (front to back), 30" high.

PAR-METAL PRODUCTS CORP. • Long Island City 3, N. Y.

PAR-METAL DE LUXE CONSOLE ASSEMBLIES

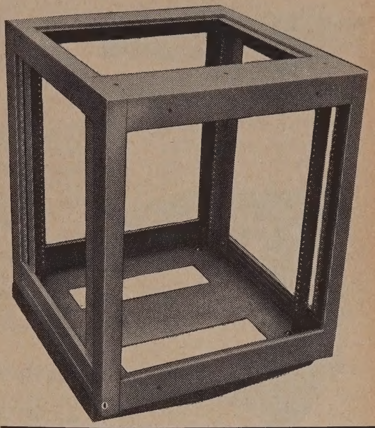
PEDESTAL FRAMES

The rack pedestal is the principal component used in all single and multiple unit assemblies. It combines the essential features of our *type* "PL" rack frames shown on PAR-METAL page 3, and is attractively styled for any environment.

The corner posts, the bottom, and the step base are made from 7/64" thick steel. All parts are substantially welded to insure the extra strength and stability needed for trouble-free installations, wherever located.

Panel space at front and back is 21" x 19". Panel mounting angles (or "strips") may be located at any position from front to back, and have tapped holes for mounting standard rack panels, sliding shelves, phono drawers, or storage drawers. Additional tapped holes are available at the sides for mounting chassis supports and shelves.

Center Desk Sections, Tabletops, Extension Tables, Doors, Mounting Brackets, Shelves, End Pedestal Assemblies which are used for our Single, Double, and Triple Assemblies are listed in complete detail in PAR-METAL Page 14. Various rack panels to fit these frames are listed on PAR-METAL Pages 14, 20, and 21. Sliding drawer assemblies are listed on PAR-METAL Page 9. Pedestal frames and complete assemblies can be obtained with casters (with step-base omitted) at an additional charge.



Cat. No. PD-224

Where no control or sloping panel cabinets are purchased, the full depth table tops should be used. Where our cabinets are included in your assembly, the short depth table tops should be ordered. Both the pedestal bottom and the step base have openings for entry of cables, etc. Where these rack pedestals are required as part of complete assemblies, it is advisable to refer to PAR-METAL page 12.

CATALOG NO. PD-224 (24¼" deep)

Overall Dimensions (less side panels); 29" high, 22" wide, 24¼" deep.

Overall Dimensions (with side panels); 30" high, 24½" wide, 25⅜" deep.

Height of pedestal rack (less step base): 26½"

Panel Mounting Space: Front and Back: 21" high x 19" wide.

Clear opening at front and back: 19⅛"

Clear opening between panel mounting angles: 17¾".

*Clear opening at left and right: 17⅝" wide, 21" high.

Clear inside depth (front to back): 23"

*Suitable for standard rack panel 19" wide, 21" high (if needed).

NET PRICE $80.00

CATALOG NO. PD-234 (34¼" deep)

Overall Dimensions (less side panels); 29" high, 22" wide, 34¼" deep.

Overall Dimensions (with side panels); 30" high, 24½" wide, 35⅜" deep.

Height of pedestal rack (less step base): 26½"

Panel Mounting Space: Front and Back: 21" high x 19" wide.

Clear opening at front and back: 19⅛"

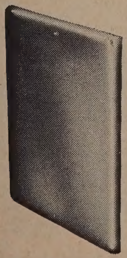
Clear opening between panel mounting angles 17¾"

*Clear opening at left and right side: 22⅝" wide, 21" high.

Clear inside depth (front to back): 33"

*Suitable for standard rack panel 24" wide, 19" high (if needed).

NET PRICE $95.00



DETACHABLE SIDE PANELS

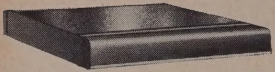
All panels are made from $\frac{1}{16}$" sheet steel. All corners are securely welded and ground smooth. Each panel has cowl fasteners at top and bottom, so that they may be quickly removed to provide complete access to the interior of the pedestals.

Cat. No.	Description	For use on	To fit Pedestal Frame No.	Net Price
EP-24	Exterior side panel	PD-224	All assemblies	$20.00
KP-24	Interior side panel	PD-224	" "	17.50
EP-34	Exterior side panel	PD-234	" "	25.00
KP-34	Interior side panel	PD-234	" "	20.00

(horizontal front trim for frames is included in above prices)

PAR-METAL DE LUXE CONSOLE ASSEMBLIES

CENTER DESK SECTIONS (For Triple Unit Assemblies)

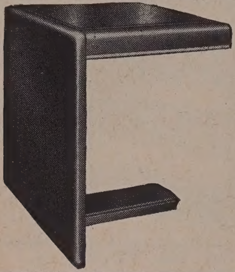


(floor brace included)

The center desk section shown is attached between two rack pedestals to make up a triple unit assembly. It consists of a table top support **and floor brace.**

Table top is not included in prices.

Cat. No.	For assembly with	Height	Width	Front to back	Net Price
CD-24	Pedestal PD-224	1⅝"	22"	25⅜"	$16.80
CD-34	Pedestal PD-234	1⅝"	22"	35⅜"	19.80

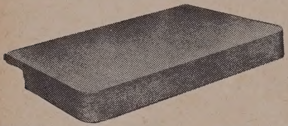


END PEDESTAL (For Double Unit Assemblies)

This end pedestal is designed to make up a double unit assembly as illustrated on PAR METAL Pages 10 and 12. Where a desk cabinet is used on top the short table top should be used. The full depth table top is available for other adaptations. It may be used at either the right or left side of the pedestal.

Cat. No.	For assembly with	Height	Width	Front to back	Net Price
DU-24	Pedestal PD-224	30"	25⅜"	26½"	$38.50
DU-34	Pedestal PD-234	30"	35⅜"	36½"	45.00

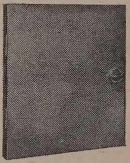
EXTENSION DESK TABLES



These extension desk tables are made from ¾" thick plywood, surfaced with bonded grey formica. The apron is 2½" high, the length (front to back) is 16". Front corners are rounded and rigidly reinforced. Suitable brackets and hardware are supplied for installation on console assemblies.

Cat. No.	For use on Assemblies	Overall Size	Net Price
CT-119	Single Unit	16"x22"x2½"	$36.00
CT-219	Double Unit	16"x44"x2½"	68.00
CT-319	Triple Unit	16"x66"x2½"	96.00

PEDESTAL FRAME DOORS

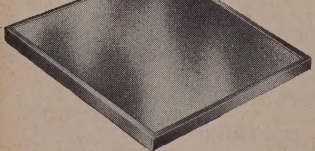


These doors are made to enclose the front or back of rack pedestals. They are "double-wall" type with smooth surfaces inside and outside. Equipped with push - button spring latches and loose-joint hinges for easy removal. Size is 21" high and 19" wide.

Cat. No. DR-2119 **Net Price $16.50**

FORMICA BONDED TABLE TOPS

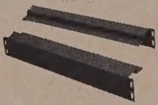
These table tops are made from ¾" thick plywood surfaced with bonded grey formica. All sizes are edged with a narrow stainless steel moulding. They are inserted in place after assembly of other units. Sizes are as listed below. The short depth is used where our desk cabinets are used on top of the desk assemblies; the full depth should be ordered where a desk only is purchased.



Cat. No.	To fit Pedestal	For use on	Depth	Net Price
WT-241	PD-224	*Single unit	Full	$15.60
XT-242	PD-224	**Single unit assembly	Full	15.60
WT-341	PD-234	Single unit	Full	23.40
WT-342	PD-234	Double unit assembly	Full	46.00
HT-342	PD-234	Double unit assembly	Short	18 20
WT-343	PD-234	Triple unit assembly	Full	68.00
HT-343	PD-234	Triple unit assembly	Short	26 00

** With front table extension * Less front table extension

MOUNTING BRACKETS



These brackets may be mounted on each side of the pedestal. They are slotted to match the lapped holes in the sides of the pedestal, and may be adjusted to any height.

Cat. No.	To Fit Pedestal	Overall Size	Net Price Per Pair
CB-24	PD-224	2½" x 2³¹⁄₃₂" x 18¹³⁄₁₆"	$4.20
CB-34	PD-234	2½" x 2³¹⁄₃₂" x 28¹³⁄₁₆"	5.80

SHELVES

These shelves are drilled for assembly with Mounting Brackets CB-24 and CB-34. Both shelves are 17½" wide and ⅝" high.

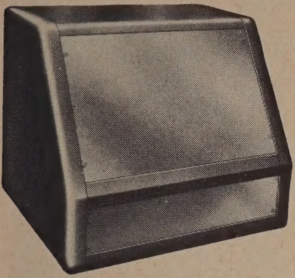
Cat. No.	To Fit Brackets	For Pedestal	Depth	Net Price
SS-24	CB-24	PD-224	22¾"	$4.60
SS-34	CB-34	PD-234	32¾"	6.40

PAR-METAL DE LUXE CONSOLE ASSEMBLIES

The desk control cabinets shown below and on the following page are ideal *for use in the laboratory, for test equipment* and *other industrial applications.* Each cabinet section is made from 1/16″ sheet steel, rigidly welded together—ready for use without a multiplicity of clips, studs, nuts and other fastening devices.

Cabinets are regularly supplied with full hinged ventilated doors at the back (except Series LS-101, etc.). Tapped holes are also provided for mounting standard 19″ wide panels; panels (blank or ventilated) up to 15¾″ high are optional at the same price.

Standard finish is dark grey hammertone for cabinets, with contrasting light grey hammertone for panels. Other finishes are available.

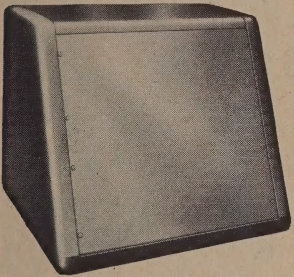


DUAL PANEL CONTROL CABINETS

The upper and lower panels are recessed to accommodate any panel up to 7/16″ thick. The upper panel is 12¼″ high set up at a slope of 60° the lower vertical panel is 3½″ high.
The top of the cabinet measures 11⅝″ from front to back; the bottom of the cabinet is 18⅞″ long, (from front to back). The hinged door at the back can be replaced by a standard panel 15¾″ x 19″ (optional).

SERIES CX-101

Cat. No.	Description	Width	Net Price
CX-101	Single Unit	22″	$ 70.00
CX-102	Double Unit	44″	115.00
CX-103	Triple Unit	66″	160.00

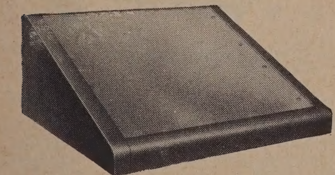


HIGH SLOPE PANEL CABINETS

The front panel on this cabinet, which is 17½″ x 19″, slopes upward at an angle of 67°. The top of the cabinet measures 11⅝″ from front to back. The bottom of the cabinet is 18⅞″ long (front to back). The hinged door at the back can be replaced by a standard panel size 15¾″ x 19″ (optional).

SERIES HS-101

Cat. No.	Description	Width	Net Price
HS-101	Single Unit	22″	$ 66 50
HS-102	Double Unit	44″	110.00
HS-103	Triple Unit	66″	150.00

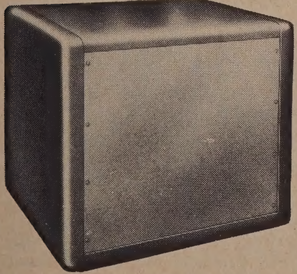


LOW SLOPE PANEL CABINETS

On this cabinet the front panel, which is 17½″ x 19″, slopes upward at an angle of 32°. The bottom is equipped with a removable panel size 15¾″ x 19″. The single, double, and triple units are all 9⅛″ high at the back; and 18⅞″ long (front to back).

SERIES LS-101

Cat. No.	Description	Width	Net Price
LS-101	Single Unit	22″	$ 40.00
LS-102	Double Unit	44″	70.00
LS-103	Triple Unit	66″	100.00



VERTICAL PANEL CABINETS

The vertical front panel on this cabinet is 15¾″ x 19″. The cabinet is 18⅞″ from front to back. The bottom is equipped with a removable panel 15¾″ x 19″. The hinged door at the back may be replaced with a standard panel 15¾″ x 19″ (optional).

SERIES VF-101

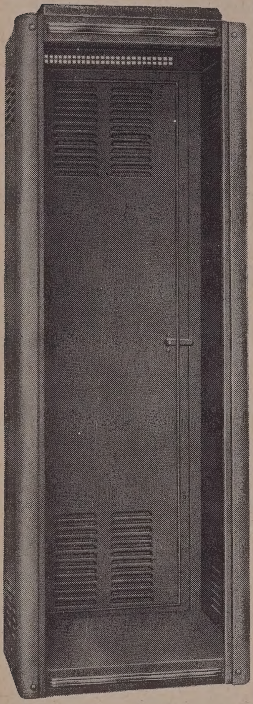
Cat. No.	Description	Width	Net Price
VF-101	Single Unit	22″	$ 55.00
VF-102	Double Unit	44″	100.00
VF-103	Triple Unit	66″	145.00

PAR-METAL PRODUCTS CORP. • Long Island City 3, N. Y.

PAR-METAL TYPE "A" RELAY RACKS

DELUXE TYPE—FOR 19″ WIDE PANELS

WITH REAR DOOR ONLY



No. ER-225

THESE RACKS are in keeping with modern styling. Vertical corner trims cover the panel mounting screws. Panels fit into a recess, so that the edges of panels are not exposed when corner trims are removed. Trimmed at top and bottom with chrome finished mouldings.

CABINET: Entire cabinet is constructed of 1/16″ thick cold-rolled steel. These racks are shipped "knocked-down" with necessary bolts for easy assembly. Screws for panel mounting are also supplied.

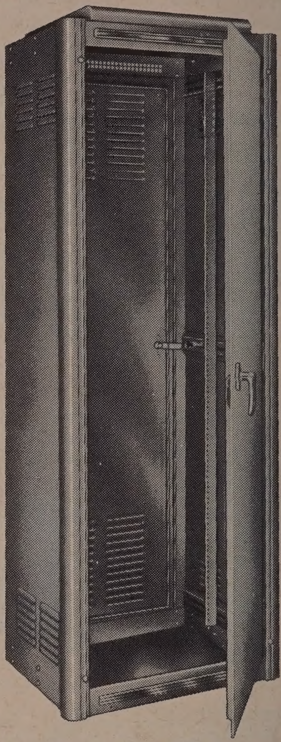
PANEL MOUNTING: Angle irons are of 7/64″ thick steel, holes are accurately drilled and tapped 10-32 thread for all types of panels.

CORNER TRIMS: All racks have quick detachable, new corner trims which are fastened to front with two studs. This provides for rapid, finger-tip removal.

HARDWARE: Doors are the same as our universal racks. "Series ER-225" racks are equipped with "automobile" type non-locking handles on rear doors. On "Series FD-225" racks, similar handles with key locks are used on both front and rear doors. Hinges are the "slip-joint" type so that doors may be easily removed.

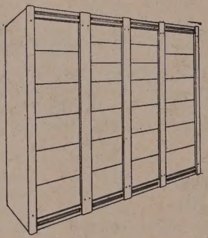
FINISH: Blue grey wrinkle finish is standard. Black wrinkle enamel finish will be supplied without extra charge if so specified on your order. Grey hammertone enamel is available at an additional charge of 10%.

WITH FRONT AND REAR DOORS



No. FD-225

SERIES ER-225 RACKS:
These units may be ganged in "multi-rack" units as shown in drawing. When so ordered, racks are supplied with common intermediate sides which are joined to adjacent tops and bottoms. In multiple units, center joining trims are supplied.



SERIES "ER-225" MULTI-RACK ASSEMBLY

SERIES FD-225 RACKS:
This series with front and rear doors has adjustable panel mounting angles, which may be located at any distance from front to rear of rack. VERTICAL SIDE SUPPORTS listed on PAR-METAL Page 8 will fit into these racks.

Catalog No.	Doors	Overall Dimensions	Panel Space	Clear Inside Width (Front)	Clear Inside Width (Rear)	Clear Inside Depth	Shipping Wt. Lbs.	Net Price
ER-223	Rear only	43¼x22x18″	36¾x19″	17⅝″	19″	16¾″	90	$ 52.20
ER-225	Rear only	67¾x22x18″	61¼x19″	17⅝″	19″	16¾″	120	64.35
ER-227	Rear only	83½x22x18″	77 x19″	17⅝″	19″	16¾″	140	77.70
FD-223	Front & Rear	43¼x22x18″	36¾x19″	19⅛″	19″	*16″	110	66.90
FD-225	Front & Rear	67¾x22x18″	61¼x19″	19⅛″	19″	*16″	150	83.10
FD-227	Front & Rear	83½x22x18″	77 x19″	19⅛″	19″	*16″	175	103.95

* clearance between front and rear doors.

ROLLER TRUCK: Roller truck No. RT-412 for Series ER-225 racks; use RT-418 for Series FD-225; both are listed on PAR-METAL Page 19.

PANELS: Panels 19″ wide to fit these racks are listed on PAR-METAL Pages 20 and 21.

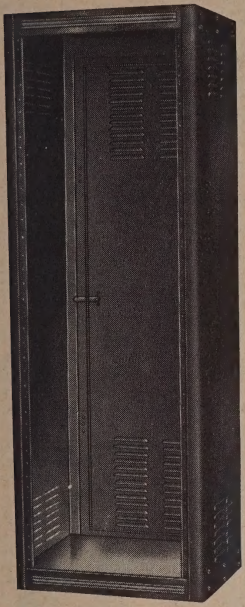
SHELVES: For Series ER-225 Racks, use shelf No. ER-2212 listed on PAR-METAL Page 19. To install shelves in Series FD-225, it is recommended that Vertical Side Supports, Brackets and Shelves listed on PAR-METAL Page 8 be used.

PAR-METAL PRODUCTS CORP. • Long Island City 3, N. Y.

PAR-METAL TYPE "A" RELAY RACKS

ROUNDED CORNER TYPE — FOR 19″ WIDE PANELS

WITH REAR DOOR ONLY



No. ER-215

THESE RACKS ARE SIMILAR in construction to our Series ER-225 Racks. They provide a combination of standard functional design and superior construction at a modest price. The vertical front corners are nicely rounded, and the top and bottom are trimmed with chrome finished mouldings. The panels fit into a recess, so that the edges are not exposed.

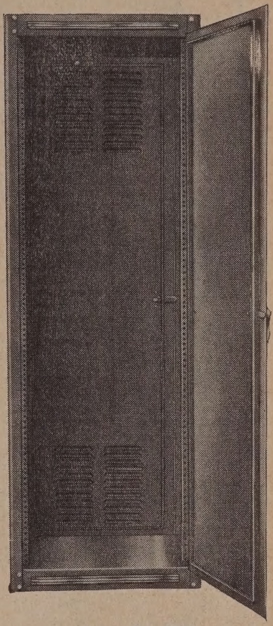
CABINET: Entire cabinet is constructed of 1/16″ thick cold-rolled steel. These racks are shipped "knocked-down" with necessary bolts for easy assembly. Screws for mounting panels are supplied.

PANEL MOUNTING: Angle irons are 7/64″ thick steel, holes are accurately drilled and tapped 10-32 thread for all types of panels.

HARDWARE: Doors are of same design as our universal racks. **"Series ER-215"** racks are equipped with "automobile" type non-locking handles on rear doors. On **"Series FD-215"** racks, similar handles with key locks are used on both front and rear doors. Hinges are the "slip-joint" type so that doors may be easily removed.

FRONT DOOR RACKS: On Series FD-215 racks, the front panel mounting angles are recessed 2″ deep to allow clearance for dials, etc. The clear inside depth behind the panel is 13½″.

WITH FRONT AND REAR DOORS



No. FD-215

SPECIFICATIONS

Catalog No.	Doors	Overall Dimensions	Panel Space	Clear Inside Depth	Clear Inside Width (Rear)	Clear Inside Width (Front)	Shipping Wt. Lbs.	Net Price
ER-213	Rear only	42 x22x16½″	36¾x19″	15¼″	19″	17⅝″	85	$37.20
ER-215	Rear only	66½x22x16½″	61¼x19″	15¼″	19″	17⅝″	110	54.90
ER-217	Rear only	82¼x22x16½″	77 x19″	15¼″	19″	17⅝″	130	66.30
FD-215	Front & Rear	66½x22x16½″	61¼x19″	*13½″	19″	19⅛″	130	73.92
FD-217	Front & Rear	82¼x22x16½″	77 x19″	*13½″	19″	19⅛″	155	89.10

* clearance behind panel.

FINISH: SLATE GREY RIPPLE enamel is standard. Black ripple enamel finish will be supplied without extra charge if so specified on your order. Grey hammertone is available at an extra charge of 10%.

PANELS: Panels 19″ wide to fit these racks are listed on PAR-METAL Pages 20 and 21.

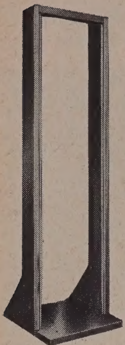
RACK SHELVES: For Series ER-215 racks, use shelf No. ER-2112. For Series FD-215 racks, use shelf No. R-2215. Both shelves are listed on PAR-METAL Page 19.

ROLLER TRUCK: No. RT-411 will fit all racks listed on this page. Roller trucks are listed on PAR-METAL Page 19.

PAR-METAL PRODUCTS CORP. • Long Island City 3, N. Y.

PAR-METAL TYPE "A" RELAY RACKS

STANDARD TYPE CHANNEL RELAY RACKS



No. RX-195

THESE RACKS are sturdily constructed from 7/64" pressed steel, and are braced at the back as illustrated. They have been improved by a formed recess for the panels; the edges of the panels are no longer exposed, and the rigidity of the rack has been greatly increased. The two vertical members and the top crossbrace are securely WELDED TOGETHER.

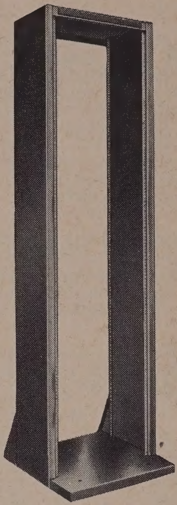
Panel mounting holes are accurately drilled for standard rack panels, tapped for 10-32 machine screws at the front only. An ample supply of panel mounting screws and finishing washers are supplied.

Upright channels are 3" deep with flanges 1⅛" wide. Clearance between uprights is 17¾". Base is 20⅞" deep and extends both front and rear.

FINISH: BLACK WRINKLE ENAMEL.

Cat. No.	Overall Size	Panel Space	Shp. Wt. Lbs.	Net Price
RX-195	74$\frac{7}{16}$x21x20⅞"	71¾x19"	5[illegible]	$24.00
RX-193	39$\frac{7}{16}$x21x20⅞"	36¾x19"	45	19.80

DE LUXE TYPE CHANNEL RELAY RACKS



No. RR-197

OUR DELUXE CHANNEL TYPE RELAY RACK extends the utility and versatility of the standard channel relay rack. The panel space has been changed to 77" high to match a standard height used on enclosed cabinet racks. Side assembly screws are countersunk, so that racks may be readily installed in rows or groups.

The upright channels have been modified to an 8" overall depth, which when combined with a formed recess for the panels, greatly increases the rigidity of the rack. Edges of panels are not exposed.

The rack is drilled and tapped for 10-32 screws **at both front and back** permitting the optional use of either standard rack panels, or dish type chassis at front and back. The **full** space of 77" high is available on the front and back.

The clear distance between panel mounting flanges (from front to back) is 6¾". It is practicable to use this 6" depth as an enclosure for dish type chassis listed on PAR METAL Page 23. When such chassis are mounted at back, the addition of standard or hinged type panels (see PAR METAL Page 21) will make a rack enclosure with a clear depth of 6¾". Top cross-brace is provided with a grille for ventilation where needed.

All parts of this rack are made from 7/64" steel. Top brace and vertical channel members are securely welded together. Base and rear braces are shipped knocked down, with all necessary bolts for assembly. Panel mounting screws are also supplied.

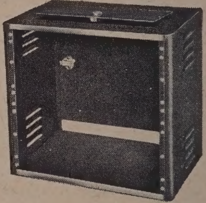
CATALOG No. RR-197: (for 19" Wide Panels)
Overall Dimensions: 80⅜" high, 21⅛" wide, 26" deep
Available Panel Space: 77"x19" (at front and rear)
Clearance between Uprights: 17⅝"
Clear Depth in Channel: 6¾" inside
Shipping Weight: 100 lbs. **Net Price: $40.50.**

CATALOG No. RR-1924: (for 24" Wide Panels)
Overall Dimensions: 80⅜" high, 26⅛" wide, 26" deep
Available Panel Space: 77"x24"
Clearance between Uprights: 22⅝"
Clear Depth in Channel: 6¾" inside
Shipping Weight: 115 lbs. **Net Price $52.00**

FINISH: Standard finish is black wrinkle enamel. For blue grey wrinkle enamel, add 5%. For grey hammertone, add 10%.

PANELS: Panels to fit these racks are listed on **PAR METAL** pages 8, 20, and 21.

DESK PANEL CABINET RACKS — For 19" Rack Panels



No. DL-1713

The **vertical front corners on these racks are rounded** and the **top** and **bottom** are trimmed with chrome finished mouldings.

- Panels fit into a recess, so that the edges are not exposed.
- Panel mounting holes are accurately drilled and tapped $^{10}/_{32}$ for standard rack panels. They may be used with any chassis up to 13"x17" in size. All cabinets are rigidly constructed of $^{1}/_{16}$" thick cold rolled sheet steel, with all joints electrically welded.
- Louvres provide ample ventilation through sides and back. Piano type hinges are used on the top doors. Back doors are mounted on loose-joint hinges, and are removable. Panel mounting screws and washers are furnished.

(With door in top only) ***(not illustrated)***

Catalog No.	Cabinet Size	Available Panel Space	Shp. Wt.	Net Price
DL-128	10½"x21½"x15" deep	8¾"x19"	25 lbs.	$16.20
DL-1210	12¼"x21½"x15" deep	10½"x19"	26 lbs.	17.70
DL-1225	14" x21½"x15" deep	12¼"x19"	29 lbs.	19.20
DL-1413	15¾"x21½"x15" deep	14" x19"	30 lbs.	21.00

(With door in top and door on rear panel)

Catalog No.	Cabinet Size	Available Panel Space	Shp. Wt.	Net Price
DL-1713	19¼"x21½"x15" deep	17½"x19"	35 lbs.	$22.80
DL-2613	28" x21½"x15" deep	26¼"x19"	45 lbs.	26.70
DL-3513	36¾"x21½"x15" deep	35" x19"	53 lbs.	29.50

RACK SHELF: Rack Shelf No. R-2128 listed on PAR-METAL Page 19 will fit these racks.

ROLLER TRUCK: Roller truck No. RT-410 listed on PAR-METAL Page 19 will fit these racks.

FINISH: BLACK WRINKLE ENAMEL is standard. Blue grey wrinkle enamel will be supplied without extra charge if so specified in your order. Grey hammertone available at an additional charge of 10%. **PANELS:** Rack panels to fit these racks are listed on PAR-METAL Pages 20 and 21.

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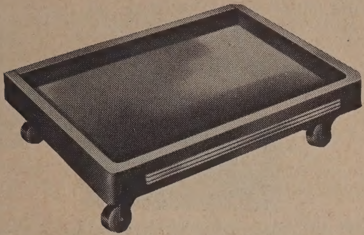
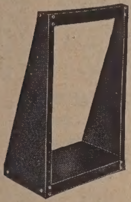
PAR-METAL — ROLLER TRUCKS — SHELVES

STANDARD TYPE ROLLER TRUCKS FOR RACKS



Especially designed for use on our racks, these trucks have rounded corners at the front with chrome trim. Casters are ball-bearing swivel-type with 2" rubber composition wheels. **Finished in blue grey wrinkle enamel.** Also available in grey hammertone at an additional cost of 10%. Shipping weight is 22 lbs.

Catalog No.	Will Fit Rack No.	Par-Metal Page No.	Net Price
RT-410	DL-1713, 2613, 3513	18	$10.08
RT-411	ER-213, ER, FD-215, 217	17	10.56
RT-412	ER-223, ER-225, ER-227	16	12.15
RT-418	FD-223, 225, 227	16	12.90
	PX, FX-3718-A, 4818-A, 6718-A	7	
	PX, FX-7718-A, 8418-A	7	
RT-420	PX, FX-4824-A, 6724-A, 8424-A	7	16.65



No. TR-2520

TABLE TYPE RELAY RACKS

THESE RACKS are intended for table mounting and are useful where a regular floor type heavy duty rack is not required. The base is constructed of one piece, similar to a chassis. Mounting holes are accurately drilled on universal centers, tapped for 10-32 screws.

They are finished in black wrinkle enamel and shipped "knocked down" with all necessary screws.

Cat. No.	Overall Size	Panel Space	Shp. Wt. Lbs.	Net Price
TR-2520	24x21x12"	21x19"	17	$8.10
TR-3200	31x21x12"	28x19"	20	9.90

SHELVES FOR CABINET RACKS

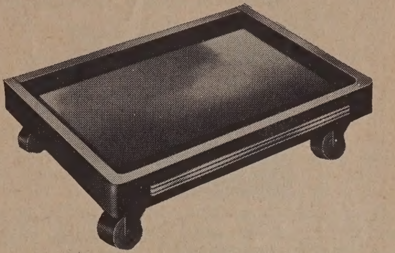
These shelves are designed to fit into the various enclosed racks listed in this catalog. They are constructed to be mounted **inside the rack** with side bolt mounting.

All shelves are 1" high, and **finished in black enamel.** Shipping weight of all shelves is 10 lbs.

No. R-2015

Catalog No.	Will Fit Rack No.	Par-Metal Page No.	Shelf Size	Net Price
ER-2112	ER-213, ER-215, ER-217	17	13"x21 15/16"	$3.60
R-2215	FD-215, FD-217	17	10 5/8"x21 15/16"	3.60
ER-2212	ER-223, ER-225, ER-227	16	15"x21 15/16"	3.60
R-2128	DL-1713, 2613, 3513	18	12"x21 13/16"	2.94

HEAVY DUTY TYPE ROLLER TRUCKS FOR RACKS

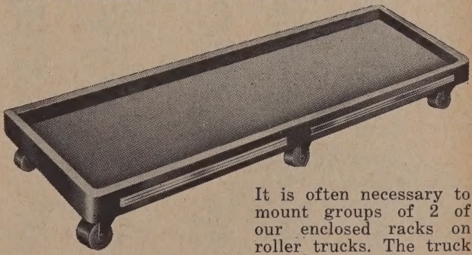


Our heavy duty roller trucks are similar to standard units, except that they have reinforced bottoms. They are equipped with heavy-duty swivel type casters with 3" diameter wheels. Recommended for all 24" deep racks. **Standard finish is blue grey wrinkle enamel.** Black wrinkle is optional. Also available in grey hammertone at additional cost of 10%. Shipping weight is 35 lbs.

Catalog No.	Will Fit Rack No.	Par-Metal Page No.	Net Price
HD-412	ER-223, ER-225, ER-227	16	$20.76
HD-418	FD-223, FD-225, FD-227	16	22.65
	PX, FX-3718-A, 4818-A, 6718-A	7	
	PX, FX-7718-A, 8418-A	7	
HD-420	PX, FX-4824-A, 6724-A	7	24.00
	PX, FX-7724-A, 8424-A	7	
***HD-425**	PL, FL, PR, FR-4818-A, 6718-A	5,6	24.15
	PL, FL, PR, FR-7718-A, 8418-A	5, 6	
***HD-426**	PL, FL, PR, FR-4824-A, 6724-A,	5, 6	26.70
	PL, FL, PR, FR-7718-A, 8418-A	5, 6	
HD-427	PX, FX-4827-A, 6727-A,	7	27.00
	PX, FX-7727-A, 8427-A	7	
***HD-432**	PL, FL, PR, FR-4827-A, 6727-A	5, 6	29.40
	PL, FL, PR, FR-7727-A, 8427-A	5, 6	
HD-434	PX, FX-6733-A, 7733-A, 8433-A	7	33.50
***HD-438**	PL, FL, PR, FR-6733-A, 7733-A	5, 6	36.80
	PL, FL, PR, FR-8433-A	5, 6	

* For racks with detachable side panels attached to racks.

HEAVY DUTY TYPE DOUBLE WIDTH ROLLER TRUCKS



It is often necessary to mount groups of 2 of our enclosed racks on roller trucks. The truck illustrated above is used for that purpose. They are similar to our heavy duty trucks illustrated above except that they have been reinforced with heavier steel because of their greater length.

They are supplied with 6 - 3" diameter wheels with heavy duty type casters. **They are available at double the cost of roller trucks for single racks listed above.** Please advise finish required. They may be obtained in black or blue grey wrinkle, grey hammertone, grey metallic enamel, or primer coat only.

PAR-METAL RACK PANELS 19"-24"-30" WIDE

All panels on this page are uniformly slotted to fit universal cabinet racks and all type "A" racks. They will also fit any other rack equipment having multiple 1¼"-½" spacings or what is commonly termed as W.E. spacing.

STANDARD STEEL BLANK PANELS

⅛" STEEL

Standard flat panels made from ⅛" thick steel, either 19", 24", or 30" wide. Other finishes available as mentioned in page heading.

19" WIDE PANELS — ⅛" STEEL

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammertone Cat. No.	Grey Hammertone Net Price
6600	G-6600	$ .75	1¾"	H-6600	$ .83
6601	G-6601	.96	3½"	H-6601	1.06
6602	G-6602	1.20	5¼"	H-6602	1.32
6603	G-6603	1.47	7"	H-6603	1.62
6604	G-6604	1.74	8¾"	H-6604	1.91
6605	G-6605	1.98	10½"	H-6605	2.18
6606	G-6606	2.34	12¼"	H-6606	2.57
6607	G-6607	2.70	14"	H-6607	2.97
6608	G-6608	3.06	15¾"	H-6608	3.37
6609	G-6609	3.39	17½"	H-6609	3.73
6610	G-6610	3.72	19¼"	H-6610	4.09
6611	G-6611	4.05	21"	H-6611	4.15

24" WIDE PANELS — ⅛" STEEL

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammertone Cat. No.	Grey Hammertone Net Price
6201	G-6201	$1.38	3½"	H-6201	$1.52
6202	G-6202	1.77	5¼"	H-6202	1.95
6203	G-6203	2.16	7"	H-6203	2.38
6204	G-6204	2.76	8¾"	H-6204	3.04
6205	G-6205	3.15	10½"	H-6205	3.47
6206	G-6206	3.57	12¼"	H-6206	3.93
6207	G-6207	4.35	14"	H-6207	4.79
6208	G-6208	4.95	15¾"	H-6208	5.45
6209	G-6209	5.40	17½"	H-6209	5.94
6210	G-6210	6.09	19¼"	H-6210	6.70
6211	G-6211	6.60	21"	H-6211	7.26

30" WIDE PANELS — ⅛" STEEL

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammertone Cat. No.	Grey Hammertone Net Price
6301	G-6301	$2.10	3½"	H-6301	$2.31
6302	G-6302	2.55	5¼"	H-6302	2.81
6303	G-6303	3.00	7"	H-6303	3.30
6304	G-6304	3.60	8¾"	H-6304	3.96
6305	G-6305	3.99	10½"	H-6305	4.39
6306	G-6306	4.71	12¼"	H-6306	5.18
6307	G-6307	5.37	14"	H-6307	5.91
6308	G-6308	6.00	15¾"	H-6308	6.60
6309	G-6309	6.72	17½"	H-6309	7.39
6310	G-6310	7.44	19¼"	H-6310	8.18
6311	G-6311	8.16	21"	H-6311	8.98

IN ADDITION TO FINISHES LISTED BELOW, THEY MAY BE OBTAINED IN GREY METALLIC ENAMEL, LIGHT GREY EQUIPMENT ENAMEL, MEDIUM GREY ENAMEL, PRIMER COAT ONLY, OR UNPAINTED.

STANDARD ALUMINUM BLANK PANELS

⅛" ALUMINUM

Standard flat panels from ⅛" thick aluminum, either 19", 24", or 30" wide. Other finishes available as mentioned in page heading.

19" WIDE PANELS — ⅛" ALUMINUM

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammertone Cat. No.	Grey Hammertone Net Price
6675	G-6675	$ .90	1¾"	H-6675	$ .99
6676	G-6676	1.26	3½"	H-6676	1.39
6677	G-6677	1.74	5¼"	H-6677	1.91
6678	G-6678	2.22	7"	H-6678	2.44
6679	G-6679	2.70	8¾"	H-6679	2.97
6680	G-6680	3.21	10½"	H-6680	3.53
6681	G-6681	3.78	12¼"	H-6681	4.16
6682	G-6682	4.29	14"	H-6682	4.59
6683	G-6683	4.83	15¾"	H-6683	5.31
6684	G-6684	5.37	17½"	H-6684	5.91
6685	G-6685	5.91	19¼"	H-6685	6.50
6686	G-6686	6.47	21"	H-6686	7.12

24" WIDE PANELS — ⅛" ALUMINUM

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammertone Cat. No.	Grey Hammertone Net Price
6276	G-6276	$2.28	3½"	H-6276	$2.51
6277	G-6277	3.00	5¼"	H-6277	3.30
6278	G-6278	3.81	7"	H-6278	4.19
6279	G-6279	4.74	8¾"	H-6279	5.21
6280	G-6280	5.73	10½"	H-6280	6.30
6281	G-6281	6.66	12¼"	H-6281	7.33
6282	G-6282	7.62	14"	H-6282	8.38
6283	G-6283	8.58	15¾"	H-6283	9.44
6284	G-6284	9.54	17½"	H-6284	10.49
6285	G-6285	10.47	19¼"	H-6285	11.52
6286	G-6286	11.40	21"	H-6286	12.54

30" WIDE PANELS — ⅛" ALUMINUM

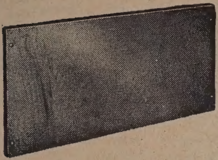
Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammertone Cat. No.	Grey Hammertone Net Price
6376	G-6376	$2.73	3½"	H-6376	$3.00
6377	G-6377	3.96	5¼"	H-6377	4.36
6378	G-6378	5.19	7"	H-6378	5.71
6379	G-6379	6.42	8¾"	H-6379	7.06
6380	G-6380	7.65	10½"	H-6380	8.42
6381	G-6381	8.88	12¼"	H-6381	9.77
6382	G-6382	10.11	14"	H-6382	11.12
6383	G-6383	11.34	15¾"	H-6383	12.47
6384	G-6384	12.57	17½"	H-6384	13.83
6385	G-6385	13.80	19¼"	H-6385	15.18
6386	G-6386	15.00	21"	H-6386	16.50

PAR-METAL PRODUCTS CORP. • Long Island City 3, N. Y.

PAR-METAL RACK PANELS 19" & 24" WIDE

(FOR FURTHER DESCRIPTION, SEE PRECEDING PAGE)

FORMED BLANK PANELS



These panels are made from 1/16" thick steel, with formed edges to make an overall thickness of 7/16". They are made 19" and 24" wide, with mounting holes on standard centers to fit relay racks.

In addition to standard finishes listed, primer coat only can be supplied at same cost as hammertone enamel.

19" WIDE FORMED PANELS — 1/16" STEEL

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammertone Cat. No.	Grey Hammertone Net Price
P-601	G-601	$1.38	3½"	H-601	$1.52
P-602	G-602	1.56	5¼"	H-602	1.72
P-603	G-603	1.83	7"	H-603	2.01
P-604	G-604	2.19	8¾"	H-604	2.39
P-605	G-605	2.46	10½"	H-605	2.71
P-606	G-606	2.88	12¼"	H-606	3.17
P-607	G-607	3.24	14"	H-607	3.56
P-608	G-608	3.72	15¾"	H-608	4.09
P-609	G-609	4.11	17½"	H-609	4.52
P-610	G-610	4.53	19¼"	H-610	4.98
P-611	G-611	4.95	21"	H-611	5.45

24" WIDE FORMED PANELS — 1/16" STEEL

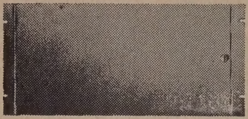
Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammertone Cat. No.	Grey Hammertone Net Price
P-641	G-641	$1.95	3½"	H-641	$2.15
P-642	G-642	2.37	5¼"	H-642	2.61
P-643	G-643	2.85	7"	H-643	3.14
P-644	G-644	3.42	8¾"	H-644	3.76
P-645	G-645	3.78	10½"	H-645	4.16
P-646	G-646	4.14	12¼"	H-646	4.55
P-647	G-647	4.62	14"	H-647	5.08
P-648	G-648	5.22	15¾"	H-648	5.74
P-649	G-649	5.82	17½"	H-649	6.40
P-650	G-650	6.45	19¼"	H-650	7.10
P-651	G-651	7.02	21"	H-651	7.72

19" WIDE FORMED PANELS — 1/16" STEEL VENTILATED TYPE

These are standard formed panels with louvre type ventilation as shown above. Primer coat only available at same price as hammertone. Same panels can be supplied in 24" width if required.

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammertone Cat. No.	Grey Hammertone Net Price
PV-603	GV-603	$3.45	7"	HV-603	$3.80
PV-604	GV-604	3.90	8¾"	HV-604	4.29
PV-605	GV-605	4.29	10½"	HV-605	4.72
PV-606	GV-606	4.86	12¼"	HV-606	5.35
PV-611	GV-611	7.56	21"	HV-611	8.32

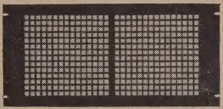
SIDE HINGED BLANK PANELS ⅛" STEEL 19" WIDE



These door panels are made from ⅛" steel, hinged at the sides, with a cowl type fastener to hold the door closed. May be mounted on racks with hinges on right or left side. Clear opening (width) is 15¾". Standard finishes are black wrinkle, blue grey wrinkle, or smooth grey hammertone enamel. Primer coat only is available at hammertone price.

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammertone Cat. No.	Grey Hammertone Net Price
HP-350	GP-350	$3.15	3½"	HA-350	$3.37
HP-525	GP-525	3.27	5¼"	HA-525	3.60
HP-700	GP-700	3.57	7"	HA-700	3.93
HP-875	GP-875	3.84	8¾"	HA-875	4.22
HP-1050	GP-1050	4.14	10½"	HA-1050	4.56
HP-1225	GP-1225	4.41	12¼"	HA-1225	4.85
HP-1400	GP-1400	4.77	14"	HA-1400	5.25
HP-1750	GP-1750	6.90	17½"	HA-1750	7.59
HP-2100	GP-2100	7.50	21"	HA-2100	8.25

GRILLE PANELS 19" WIDE — ⅛" STEEL



This modern type ventilating grille panel is stamped into the panel itself; it is not a pieced assembly.

Black Wrinkle Cat. No.	Grey Wrinkle Cat. No.	Net Price	Panel Size	Grille Size	Grey Hammertone Cat. No.	Grey Hammertone Net Price
P-661	G-661	$2.94	5¼"	3⅜x14⅜"	H-661	$3.23
P-662	G-662	3.24	7"	4⅞x14⅜"	H-662	3.56
P-663	G-663	3.87	8¾"	6⅞x14⅜"	H-663	4.26
P-664	G-664	3.54	8¾"	*3⅞x14⅜"	H-664	3.89
P-665	G-665	4.29	10½"	8⅜x14⅜"	H-665	4.72
P-666	G-666	4.02	10½"	*5⅞x14⅜"	H-666	4.42
P-667	G-667	4.35	12¼"	*7⅜x14⅜"	H-667	4.79

* Allows 3½" space at bottom for chassis mounting.

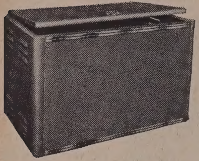
STANDARD DESK PANELS

These tables are rigidly made of 1/16" thick furniture steel. The rounded front corners are of seamless construction and the flanges of the shelf are folded in to provide smooth edges underneath. They are securely mounted to regular ⅛" steel panels, size 10½"x19". Shpg. weight is 25 lbs.

Cat. No.	Width	Depth	Finish	Net Price
BT-2216	22"	16"	Black enamel	15.45
GT-2216	22"	16"	Blue Grey enamel	15.45
HT-2216	22"	16"	Grey Hammertone	17.00
BT-2220	22"	20"	Black enamel	16.95
GT-2220	22"	20"	Blue Grey enamel	16.95
HT-2220	22"	20"	Grey Hammertone	18.65

PAR-METAL — DESK CABINETS — AMPLIFIER CHASSIS

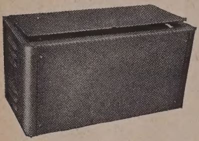
DELUXE TYPE CABINETS



These cabinets make attractive housings for commercial and amateur use. The formed type door, with modern handle, is **hinged at the back** for full access to the interior. Chrome finished mouldings are mounted on the front at top and bottom. Cabinet has ventilating louvres **on each side**, and full width opening at back for leads, etc. Standard finish is blue grey ripple enamel. Prices do not include chassis, which are listed on PAR METAL Page 23.

Catalog No.	Overall Dimensions	Panel Size	For Chassis	Shp. Wt. Lbs.	Net Price
CA-300	9x12⅛x 8″	8½x10″	7x 9x2″	6	**$ 7.95**
CA-301	9x16⅛x 8″	8½x14″	7x13x2″	7	**9.00**
CA-302	10x17⅛x11″	9½x15″	10x14x3″	8	**12.15**
CA-303	10x20⅛x 9″	9½x18″	8x17x3″	11	**12.15**
CA-304	13x20⅛x12″	12½x18″	10x17x3″	15	**13.65**

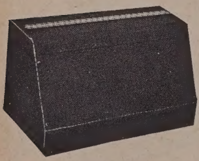
ROUNDED CORNER TYPE CABINETS



Standard type cabinets are similar in design to those listed above. They have **flat type doors,** hinged at back to permit full access to the interior. The vertical front corners are rounded; ventilating loures are stamped in both sides, and full width opening is provided at the back for leads. Standard finish is blue grey ripple enamel. Prices do not include chassis, which are listed on PAR METAL Page 23.

Catalog No.	Overall Dimensions	Panel Size	For Chassis	Shp. Wt. Lbs.	Net Price
CA-200	8½x10⅛x 8″	8½x 8″	7x 7x2″	6	**$ 5.85**
CA-201	8½x12⅛x 8″	8½x10″	7x 9x2″	7	**6.30**
CA-202	8½x16⅛x 8″	8½x14″	7x13x2″	8	**7.65**
CA-203	9½x17⅛x11″	9½x15″	10x14x3″	11	**10.05**
CA-204	12½x20⅛x12″	12½x18″	10x17x3″	15	**11.85**

SLOPING FRONT CABINETS



May be readily adapted as instrument cases for use in studios, laboratories, etc.

- Top corner is rounded and trimmed with a chrome moulding, and with the blue grey ripple finish makes a very attractive case.
- A chassis may be mounted to a front panel and removed as a unit.
- Rear of case is ventilated, with an opening for connections.
- Prices do not include chassis, which are listed on PAR METAL Page 23.

Catalog No.	Overall Dimensions	For Chassis	Shp. Wt. Lbs.	Net Price
SF-500	8x 8x 8″	7x 7x2″	6	**$ 5.70**
SF-501	8x10x 8″	7x 9x2″	7	**6.30**
SF-502	8x14x 8″	7x13x2″	8	**6.75**
SF-503	9x18x 8″	7x17x3″	10	**8.40**
SF-504	12x18x12″	10x17x3″	14	**10.20**

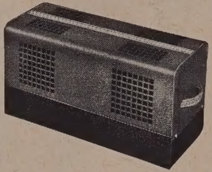
SLOPING FRONT TYPE

These new foundations follow the latest trend in amplifier design. The combination of sloping front panel and streamlined cover enables you to build up a job similar to that used on commercial deluxe type amplifiers. All parts are finished in blue grey ripple enamel, trimmed with red-striped chrome finished mouldings and handles.

The front panel is removable and protrudes 3″ from the face of the screen cover. **Chassis are supplied WITH bottom plates.**

Cat. No.	Chassis Size	Screen Cover	Shp. Wt. Lbs.	Net Price
F-10120	10x12x3″	6½″ high	11	**$ 8.40**
F-10170	10x17x3″	6½″ high	13	**9.90**
F-13170	13x17x3″	6½″ high	15	**10.80**

ROUNDED CORNER TYPE

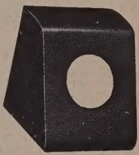


Rounded corners effectively streamline the screen covers of these chassis. Ventilation is obtained through rectangular screen openings. The moulding and handles, finished in chrome with red striping, gives the units a distinctive, modern design. The screen cover is finished in blue grey ripple enamel to contrast with the black chassis. Chassis are drilled for bottom plates, which are listed on PAR METAL Page 23.

Cat. No.	Chassis Size	Depth of Cover	Shp. Wt. Lbs.	Net Price
DF-510	5x10x3″	6″	7	**$5.10**
DF-615	6x14x3″	6″	8	**5.67**
DF-717	7x17x3″	6″	9	**6.57**
DF-1012	10x12x3″	6″	9	**6.57**
DF-1017	10x17x3″	6″	10	**7.35**
DF-1317	13x17x3″	6″	12	**8.76**

UTILITY CASES & CANS

STEEL METER CASES

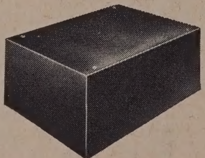


These meter cases may be obtained for 2″ and 3″ meters, in both single and triple units.

They are substantially made of steel, with welded joints, and black ripple enamel finish. Top front corner is rounded.

Cat. No	Meters	Meter Hole	Shp. Wt. Lbs.	Net Price
SM-12	Single 2″	2¼″	1	**$1.32**
SM-32	Three 2″	2¼″	2	**3.00**
SM-13	Single 3″	2 13/16″	1	**1.32**
SM-33	Three 3″	2 13/16″	2	**3.00**

STEEL UTILITY CASES



These cases have flat tops and bottoms, which are removable.

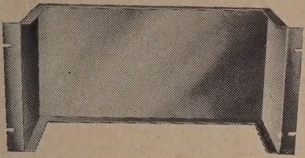
Made from 20 gauge sheet steel, with flanged edges and spot-welded corners. Finished in black ripple enamel.

Cat. No.	Overall Size	Shp. Wt. Lbs.	Net Price
MC-442	4x 4x 2″	1	$1.11
MC-453	4x 5x 3″	2	1.32
MC-596	5x 9x 6″	4	2.28
MC-654	6x 5x 4″	3	1.47
MC-666	6x 6x 6″	3	1.92

Cat. No.	Overall Size	Shp. Wt. Lbs.	Net Price
MC-8101	8x10x10″	7	**$3.51**
MC-8107	8x10x 7″	6	**3.21**
MC-1128	11x12x 8″	9	**3.96**
MC-1597	15x 9x 7″	8	**4.32**

PAR-METAL BLANK CHASSIS BASES

VERTICAL RACK MOUNTING CHASSIS



TO FIT 19" STANDARD RACKS

These chassis are suitable for installation in all cabinet relay racks. They may also be used on Deluxe channel racks listed on PAR-METAL Page 18. Material used is 1⁄16″ aluminum, with corners welded for added rigidity. Etched finish on inside and outside.

All chassis are 5¼″ deep; overall width is 19″; chassis width inside is 16⅞″.

Catalog No.	Height	Shipping Wt. Lbs.	Net Price
AC-430	1¾″	2	$2.70
AC-431	3½″	3	3.09
AC-432	5¼″	3	3.51
AC-433	7″	4	3.90
AC-434	8¾″	5	4.29
AC-435	10½″	5	4.80
AC-436	12¼″	6	5.46
AC-437	14″	7	5.97

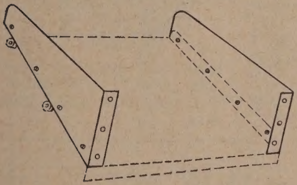
RACK MOUNTING CHASSIS

TO FIT 19" STANDARD RACKS

These chassis are fabricated from 1⁄16″ **thick aluminum** with etched finish, or 1⁄16″ **thick steel, zinc plated.** Overall length including mounting flanges is 18¾″. They are designed to mount under 19″ wide formed panels listed on PAR METAL Page 21. The 4 15⁄16″ height is for use with 5¼″ high panels, 6 11⁄16″ for 7″ high panels, etc. Additional slots are provided in chassis side flanges to clear panel attachment screws. Although chassis are 18¾″ overall width, they will fit on any relay rack.

ALUMINUM Cat. No.	Net Price	Chassis Dimensions	STEEL Cat. No.	Net Price
AC-402	$3.98	4-15/16″x17″x3″	SC-402	$3.06
AC-403	4.54	6-11/16″x17″x3″	SC-403	3.45
AC-404	5.10	8- 7/16″x17″x3″	SC-404	3.84
AC-405	5.64	10- 3/16″x17″x3″	SC-405	4.23
AC-406	6.30	11-15/16″x17″x3″	SC-406	4.59

PANEL MOUNTING BRACKETS FOR BASIC SLIDE ASSEMBLIES

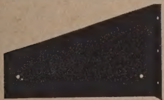


These brackets are useful for attaching rack panels to the sliding shelves of our series "BS" basic slide assemblies listed on Par-Metal page 9. Special short screws and nuts are supplied for mounting brackets which assures free movement of the shelf after assembly. Brackets are made from 1⁄16″ steel, zinc plated. Brackets are 6½″ high at front, and 3½″ at back. Front flange is 9/16″ wide. Made in two lengths, for 14″ and 20″ deep shelf assemblies. Price listed below is for one pair of brackets, with mounting screws and nuts.

Cat. No.	Length	To Fit Assembly	Net Price
BR-14	14¼″	BS-1980	$2.55 pair
BR-20	20¼″	BS-1940, 2419, 2424	3.45 pair

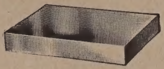
CHASSIS MOUNTING BRACKETS

These brackets are made for assembly with our standard or heavy duty type chassis listed on this page. Panels must be at least 7″ high Finished in black enamel or zinc plated. Made from 1⁄16″ thick steel.



Black Cat. No.	Zinc plated Cat. No.	Dimensions	Shp. Wt. Lbs.	Net Price
SB- 78	CB- 78	For 8″ Base	2	$1.05
SB-710	CB-710	For 10″ Base	2	1.23
SB-711	CB-711	For 11″ Base	2	1.32
SB-713	CB-713	For 13″ Base	3	1.50
SB-717	CB-717	For 17″ Base & Larger	4	2.31

BLANK STEEL CHASSIS



Stamped from one piece of cold rolled steel zinc-plated, and have four solid sides with welded corners. Bottom edges are flanged in on four sides to provide additional reinforcement, and they are drilled for bottom plates. The chassis are made from #20 gauge steel, except those marked (*) which are stamped from 1⁄16″ steel exactly like for heavy-duty use

Cat. No. Zinc Plated	Size	Shp. Wt. Lbs.	Net Price
C-4500	5½x9½x1½″	2	$1.08
C-4507	5x 7x2″	2	1.08
C-4508	5x10x3″	3	1.38
C-4509	6x14x3″	4	1.77
C-4510	7x 7x2″	2	1.08
C-4511	7x 9x2″	2	1.29
C-4512	7x11x2″	3	1.41
C-4513	7x13x2″	3	1.56
C-4514	7x15x3″	4	1.83
C-4518	4x17x3″	4	1.74
C-4515	7x17x3″	4	1.98
C-4502	8x12x3″	5	1.86
C-4531	8x17x2″	4	1.83
C-4532	8x17x3″	5	1.98
C-4525	10x12x3″	4	1.89
C-4524	10x14x3″	5	2.01
C-4528	10x17x2″	5	2.04
C-4529	10x17x4″	7	2.46
C-4526	10x17x3″	7	2.22
C-4533*	11x17x2″	7	2.91
C-4534*	11x17x3″	9	3.18
C-4516	12x17x2″	5	2.31
C-4517	12x17x3″	6	2.55
C-4530	12x17x4″	6	2.88
C-4535*	13x17x2″	8	3.12
C-4536*	13x17x3″	9	3.51
C-4537*	13x17x4″	10	3.87
C-4540*	17x17x4″	13	4.65

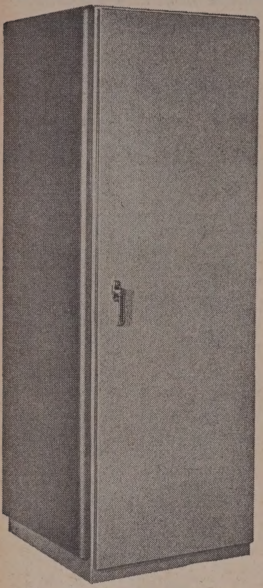
STEEL BOTTOM PLATES

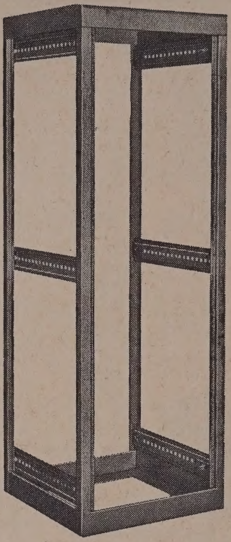
Bottom plates have holes to match our standard or heavy duty type chassis listed on this page, and have pressed "bumpers" at the corners. Made from #20 gauge steel, zinc plated.

Cat. No. Zinc Plated	Size	Shp. Wt. Lbs.	Net Price
CP-4507	5x 7″	1	$0.39
CP-4502	8x12″	1	.84
CP-4500	5½x9½″	1	.48
CP-4508	5x10″	1	.48
CP-4509	6x14″	1	.63
CP-4510	7x 7″	1	.57
CP-4511	7x 9″	1	.66
CP-4512	7x11″	1	.69
CP-4513	7x13″	2	.75
CP-4514	7x15″	2	.78
CP-4518	4x17″	2	.60
CP-4515	7x17″	2	.87
CP-4531	8x17″	2	.90
CP-4525	10x12″	2	.87
CP-4524	10x14″	2	.90
CP-4528	10x17″	2	1.08
CP-4533	11x17″	2	1.05
CP-4516	12x17″	3	1.20
CP-4535	13x17″	3	1.26
CP-4540	17x17″	4	1.71

PAR-METAL PRODUCTS CORP. • Long Island City 3, N. Y.

PREM-Ō-RAK® MODULAR TRANSMITTER RACKS



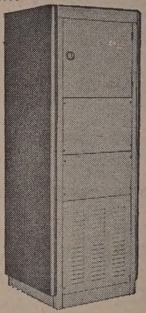


Above unit shown complete with frame, end panels and doors.

22″ and 25½″ Deep

for STANDARD 19″ and 24″ RACK PANELS Designed for MULTIPLE INSTALLATIONS and for use with PREM-O-RAK CONSOLE CABINETS

- TOPS OF FRONT AND REAR ARE ROUNDED.
- Frame Made of No. 14 gauge steel.
- Supplied with one pair 3/16″ thick panel mounting angles and tapped 12/24 on E.I.A. spacings. Adjustable to any desired position.
- Panel mounting angles are held in place at three points by ⅜″ carriage bolts.
- Frame completely welded throughout.
- Top of frame is solid. Cutout furnished at no additional charge.
- Knockouts supplied on sides of uprights for use in ganging frames.
- A rectangular cutout is provided in bottom for leads, etc.
- Rectangular knockouts provided on front and rear of uprights of frame to accommodate hinge and handle brackets, so that door can be mounted either left or right hand. Doors can be mounted to front or rear of frame.
- Holes punched in bottom to accommodate CA-4 (2″) and CA-5 (3″) casters.
- Finished in Gray Hammertone.



Above unit consists of frame, end panels, 2 blank panels, 1 louvred panel and 1 flush door.

FRAMES — 22″ WIDE

22″ DEEP					25½″ DEEP		
Cat. No.	Shpg. Wt. Lbs.	Net Price	Height	Panel Space	Cat. No.	Shpg. Wt. Lbs.	Net Price
F-42-22	50	$78.00	48⅝″	42 x 19″	F-42-255	58	$81.96
F-52-22	65	84.60	59⅛″	52½ x 19″	F-52-255	75	88.80
F-61-22	80	95.85	67⅞″	61¼ x 19″	F-61-255	92	105.60
F-70-22	100	112.44	76⅝″	70 x 19″	F-70-255	115	123.60
F-77-22	110	115.59	83⅝″	77 x 19″	F-77-255	127	127.20

FRAMES — 27″ WIDE

F-2761-22	90	105.00	67⅞″	61¼ x 24″	F-2761-255	98	114.60
F-2770-22	110	123.60	76⅝″	70 x 24″	F-2770-255	123	135.60
F-2777-22	120	126.00	83⅝′	77 x 24″	F-2777-255	135	138.00

END PANELS — 1-11/32″ DEEP

- Made of one piece of 16 gauge steel.
- BALL CORNERED.
- End panels attach to frame by means of a bracket on bottom and held securely by two captive screws on top.
- Panels supplied blank. Louvres furnished at no additional charge.
- Finished in Brown Hammertone.

22″ WIDE				25½″ WIDE		
Cat. No.	Shpg. Wt. Lbs.	Net Price	Hgt.	Cat. No.	Shpg. Wt. Lbs.	Net Price
CEP-42-22	23	$18.00	45¼″	CEP-42-255	28	$21.00
CEP-52-22	27	21.60	55¾″	CEP-52-255	32	24.60
CEP-61-22	30	24.00	64½″	CEP-61-255	35	26.40
CEP-70-22	33	25.80	73¼″	CEP-70-255	38	28.80
CEP-77-22	35	27.90	80¼″	CEP-77-255	40	30.60

DOORS — 13/16″ DEEP

- Made of 16 gauge steel.
- Doors can be mounted either left or right hand by rotating door 180°.
- Doors supplied blank. Louvres furnished at no additional charge.
- Doors hung on slip jointed hinges and equipped with locking handle.
- Finished in Gray Hammertone.

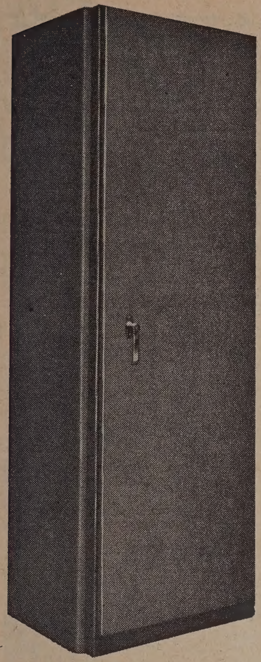
21½″ WIDE				26½″ WIDE		
Cat. No.	Shpg. Wt. Lbs.	Net Price	Hgt.	Cat. No.	Shpg. Wt. Lbs.	Net Price
DF-42	20	$26.40	45 5/16″	—	—	—
DF-52	25	29.40	56 1/16″	—	—	—
DF-61	28	33.60	64 13/16″	DF-2761	34	$39.60
DF-70	31	36.00	73 5/16″	DF-2770	38	43.50
DF-77	34	38.40	80 5/16″	DF-2777	41	45.00

Net—All prices 10% higher West of Miss. River

PREMIER MODULAR TRANSMITTER RACKS

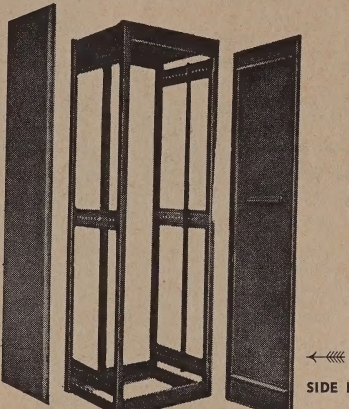
FOR MULTIPLE INSTALLATIONS

For 19", 24" and 30" Wide Panels — 18" and 24" Deep

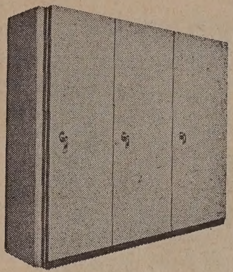


Above unit shown complete with frame, side panels and doors.

- Frame made of No. 14 gauge steel.
- Supplied with one pair 3/16" thick panel mounting angles and tapped 12/24 on E.I.A. spacings. Adjustable to any desired position.
- Panel mounting angles are held in place at three points by ⅜" carriage bolts.
- Frame completely welded throughout.
- Top of frame is solid. Cutout furnished at no additional charge.
- Knockouts supplied on sides of uprights for use in ganging frames.
- A rectangular cutout is provided in bottom for leads, etc.
- Rectangular knockouts provided on front and rear of uprights of frame to accommodate hinge and handle brackets, so that door can be mounted either left or right hand. Doors can be mounted to front or rear of frame.
- Holes punched in bottom to accommodate CA-4 (2") and CA-5 (3") casters.
- Finished in Gray Hammertone.



SIDE PANEL



3 UNITS IN ASSEMBLY

FRAMES

18" DEEP Cat. No.	Shpg. Wt. Lbs.	Net Price	Height	Panel Space	24" DEEP Cat. No.	Shpg. Wt. Lbs.	Net Price
			22" WIDE				
PRX-42	48	$46.80	48⅛"	42 x 19"	PRX-42-24	58	$70.80
PRX-52	60	57.60	58⅝"	52½ x 19"	PRX-52-24	72	78.00
PRX-61	70	71.70	67⅜"	61¼ x 19"	PRX-61-24	85	99.54
PRX-70	88	86.76	76⅛"	70 x 19"	PRX-70-24	108	118.56
PRX-77	100	88.56	83⅛"	77 x 19"	PRX-77-24	120	126.00
			27" WIDE				
PRX-2761	100	80.58	67⅜"	61¼ x 24"	PRX-2761-24	134	112.38
PRX-2770	104	95.58	76⅛"	70 x 24"	PRX-2770-24	140	123.00
PRX-2777	116	100.20	83⅛"	77 x 24"	PRX-2777-24	156	128.76
			33" WIDE				
PRX-3361	122	85.56	67⅜"	61¼ x 30"	PRX-3361-24	162	118.80
PRX-3370	126	109.14	76⅛"	70 x 30"	PRX-3370-24	169	140.64
PRX-3377	142	110.76	83⅛"	77 x 30"	PRX-3377-24	190	143.52

SIDE PANELS

(Sold individually—NOT as pairs) Made of No. 16 Gauge Steel Finished in Gray Hammertone

18" DEEP Cat. No.	Size	Shpg. Wt. Lbs.	Net Price	24" DEEP Cat. No.	Size	Shpg. Wt. Lbs.	Net Price
SP-42	48 x 15 x 1½	20	$16.56 ea.	SP-42-24	48 x 21 x 1½	22	$21.36 ea.
SP-52	58½ x 15 x 1½	21	18.60 ea.	SP-52-24	58½ x 21 x 1½	25	23.40 ea.
SP-61	67¼ x 15 x 1½	23	21.54 ea.	SP-61-24	67¼ x 21 x 1½	28	25.83 ea.
SP-70	76 x 15 x 1½	26	23.16 ea.	SP-70-24	76 x 21 x 1½	31	27.78 ea.
SP-77	83 x 15 x 1½	28	24.90 ea.	SP-77-24	83 x 21 x 1½	34	30.00 ea.

DOORS 13/16" DEEP

● Made of No. 16 gauge steel ● Doors can be mounted either left or right hand by rotating door 180° ● Doors supplied blank. Louvres furnished at no additional charge ● Doors hung on slip jointed hinges and equipped with locking handle ● Finished in Gray Hammertone.

21½" WIDE Cat. No.	Shpg. Wt. Lbs.	Net Price	Height	26½" WIDE Cat. No.	Shpg. Wt. Lbs.	Net Price
DF-42	20	$26.40	45 9/16"	—	—	—
DF-52	25	29.40	56 1/16"	—	—	—
DF-61	28	33.60	64 13/16"	DF-2761	34	$39.60
DF-70	31	36.00	73 3/16"	DF-2770	38	43.50
DF-77	34	38.40	80 9/16"	DF-2777	41	45.00

32½" WIDE (DOUBLE DOORS with 3 Point Locking Device)

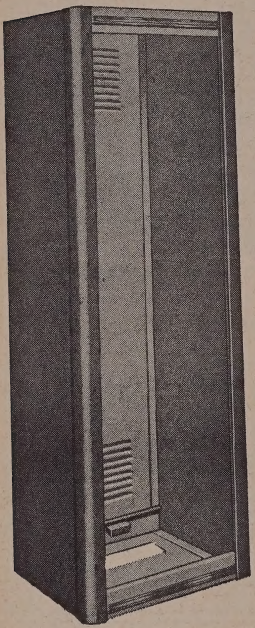
Cat. No.	Shpg. Wt. Lbs.	Net Price	Height	Cat. No	Shpg. Wt. Lbs.	Net Price	Height	Cat. No.	Height	Shpg. Wt. Lbs.	Net Price
DF-3361	40	$45.00	64 13/16"	DF-3370	45	50.50	73 3/16"	DF-3377	54.00	48	80 9/16"

Net—All prices 10% higher West of Miss. River

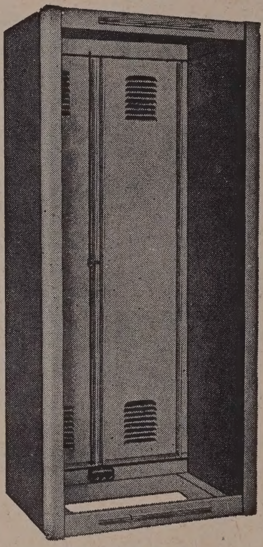
PREMIER HEAVY DUTY TRANSMITTER RACKS

FOR 19", 24" AND 30" RACK PANELS — 18" AND 24" DEEP

- Rigidly constructed of #16 gauge steel with a #12 gauge steel bottom and welded throughout.
- Panel mounting angles are 3/16" thick and are tapped 12-24 on E.I.A. spacings.
- Rear doors are hung on sturdy slip-jointed hinges and closed by a chrome handle.
- A rectangular cut-out is made in the bottom for leads, etc.
- RM-7030 Rack supplied with double rear doors and with a 3-point locking device.
- **All racks are supplied without louvres on sides unless specified.**
- Vertical rounded corner moldings are supplied.
- Tops and bottoms are trimmed with red striped chrome moulding.
- Panel mounting angles are adjustable to any distance from the front by means of channel slides on RMA Racks.
- A Duplex Receptacle and Oulet Box are furnished in the Back Under the Door.
- Racks finished in either Black or Gray wrinkle, Gray or Brown Hammertone. Black wrinkle furnished if color is not specified.

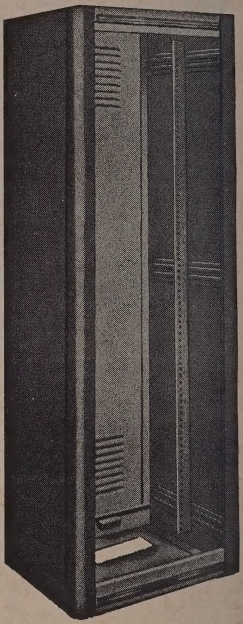


RM MODEL



RM-7030 Model

All RM Racks can be furnished with adjustable panel mounting angles at no additional cost. Specify RMA.



RMA Model

SPECIFY COLOR WHEN ORDERING

18" DEEP RACKS

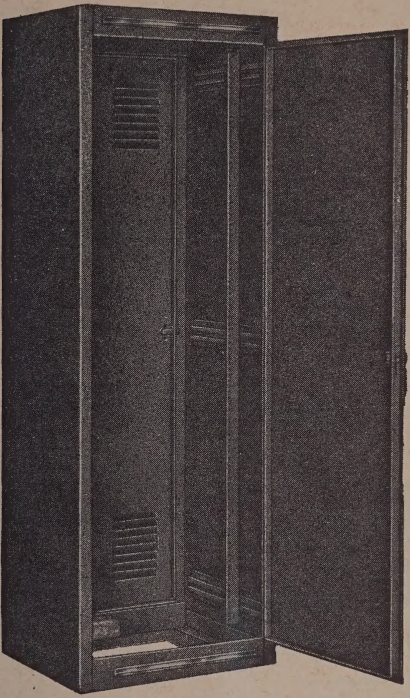
Cat. No.	H x W	Panel Space	Shp. Wt. Lbs.	Net Price
RM-3619	42⅞x22"	36¾x19"	100	**$ 66.15**
RM-4219	48⅛x22"	42 x19"	130	**78.00**
RM-6119	67⅜x22"	61¼x19"	150	**86.01**
RM-7618	76⅛x22"	70 x19"	170	**105.84**
RM-7719	83⅛x22"	77 x19"	190	**109.20**

24" DEEP RACKS

Cat. No.	H x W	Panel Space	Shp. Wt. Lbs.	Net Price
RM-3619-24	42⅞x22"	36¾x19"	110	**$ 84.00**
RM-4219-24	48⅛x22"	42 x19"	130	**93.05**
RM-6119-24	67⅜x22"	61¼x19"	175	**122.40**
RM-7618-24	76⅛x22"	70 x19"	200	**132.30**
RM-7719-24	83⅛x22"	77 x19"	225	**148.86**
RM-7030	76⅛x33"	70 x30"	240	**191.85**
RMA-2742	48⅛x27"	42 x24"	170	**120.78**
RMA-2761	67⅜x27"	61¼x24"	210	**137.58**
RMA-2770	76⅛x27"	70 x24"	240	**148.59**
RMA-2777	83⅛x27	77 x24"	270	**165.39**

All prices F.O.B. N. Y. 59, N. Y.

PREMIER HEAVY DUTY TRANSMITTER RACKS



FD SERIES

WITH FRONT DOORS

FOR 19" AND 24" RACK PANELS — 18" AND 24" DEEP

- Rigidly constructed of #16 gauge steel with a #12 gauge steel bottom and welded throughout.
- Panel mounting angles are 3⁄16" thick and are tapped 12-24 on Universal spacings.
- Rear doors are hung on sturdy slip-jointed hinges and closed by a chrome handle.
- All racks are supplied without louvres on sides and front doors unless specified.
- A rectangular cut-out is made in the bottom for leads, etc.
- Tops and bottoms are trimmed with red striped chrome moulding.
- Supplied with locking handle on front door.
- Panel mounting angles are adjustable to any distance from the front by means of channel slides.
- A Duplex Receptacle and Outlet Box are Furnished in the Back Under the Door.
- Racks finished in either black or gray wrinkle, Gray or Brown Hammertone. Black wrinkle furnished if color is not specified.

18" DEEP RACKS

Cat. No.	H x W	Panel Space	Shp. Wt. Lbs.	Net Price
FD-3619	42⅞x22"	36¾x19"	115	$102.39
FD-4219	48⅛x22"	42 x19"	120	108.00
FD-6119	67⅜x22"	61¼x19"	175	115.77
FD-7019	76⅛x22"	70 x19"	200	132.30
FD-7719	83⅛x22"	77 x19"	220	142.23

24" DEEP RACKS

Cat. No.	H x W	Panel Space	Shp. Wt. Lbs.	Net Price
FD-3619-24	42⅞x22"	36¾x19"	125	$100.80
FD-4219-24	48⅛x22"	42 x19"	150	111.00
FD-6119-24	67⅜x22"	61¼x19"	200	152.16
FD-7019-24	76⅛x22"	70 x19"	255	158.76
FD-7719-24	83⅛x22"	77 x19"	270	181.89
FD-2742	48⅛x27"	42 x24"	180	140.19
FD-2761	67⅜x27"	61¼x24"	230	165.39
FD-2770	76⅛x27"	70 x24"	260	176.22
FD-2777	83⅛x27"	77 x24"	290	198.45

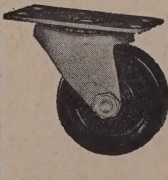
SPECIFY COLOR WHEN ORDERING

PREMIER
SLATE GRAY LACQUER

Self-Spraying LACQUER Available in 3 Colors

Cat. No.	To Match
SGL-101	Premier Gray Wrinkle
GHL-102	Premier Gray Hammertone
BHL-103	Premier Brown Hammertone

NET PRICE: $1.95 EACH 12 oz. CAN



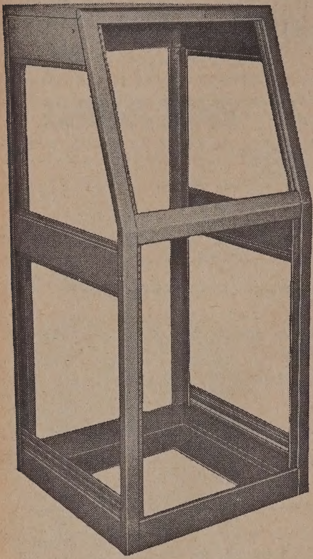
CASTERS FOR RACKS AND CABINETS

Made of Plaskite non-marking composition wheel with Ball Bearing Swivel Plate. Packed one set of 4 in box with screws for assembly.

Catalog No.	Wheel Dia.	Net Price
CA-4	2"	$3.60 set of 4
CA-5	3"	7.20 set of 4

All prices F.O.B. N. Y. 59, N. Y.

PREM-O-RAK® MODULAR CONSOLE SYSTEM



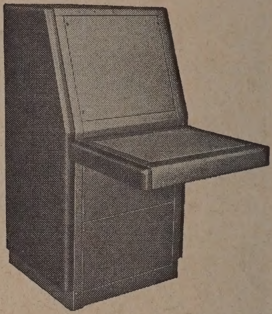
SLOPED FRONT CONSOLE CABINET

- Tops Of Front And Rear Are Rounded
- Designed For Multiple Installations
- Made Of No. 14 Gauge Steel
- Sloped Front is 19° From Vertical
- Frame Completely Welded Throughout
- All Panel Mounting Angles Are Made Of No. 12 Gauge Steel And Tapped 10/32 On E.I.A. Spacings; Front And Rear Vertical Angles Are Adjustable To Any Desired Position.
- Panels Fit Into ½" Recess
- A Rectangular Cutout Is Provided In Bottom For Leads, Etc.
- Holes Punched In Bottom To Accommodate CA-4 (2") and CA-5 (3") Casters
- Finished In Gray Hammertone

FRAME DIMENSIONS

Width	22"	Sloped Front Panel Space	17½" x 19"
Height	50"	Front Vertical Panel Space	26¼" x 19"
Depth	22"	Rear Vertical Panel Space	42" x 19"

Cat. No.	Shpg. Wt. Lbs.	Net Price
FS-1001	53	$80.40



Above unit consists of 1 frame, 2 end panels, 1 writing work shelf and 2 end panels for shelf.

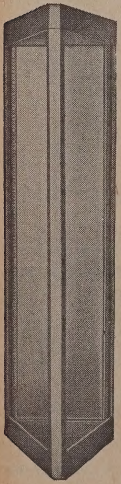
- 1 11/32" Deep
- Ball Cornered
- Made Of One Piece No. 18 Gauge Steel
- End Panels Attached To Frame By Means Of A Bracket On Bottom And Held Securely By Two Captive Screws On Top
- Supplied Blank. Louvres Furnished At No Additional Charge
- Finished In Brown Hammertone

END PANELS FOR SLOPED FRONT CONSOLE FRAME

Cat. No.	Shpg. Wt. Lbs.	Net Price
CEP-1201-LH (Left Hand)	20	$22.62
CEP-1201-RH (Right Hand)	20	22.62

30° and 45° WEDGE FRAMES

- Designed for use in Semi-Circular Arrangements when bolted to Pedestal Frames (CPF Series) or Transmitter Rack Frames (F Series)
- Constructed of 16 gauge steel
- Completely welded throughout
- Supplied with formed panel on rear
- End panels (CEP Series) can be mounted to the side of wedge frames if desired
- Finished in Gray Hammertone

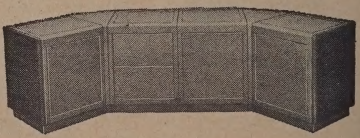


30° WEDGE RACK FRAMES

Cat. No.	Height	Width	For Use With	Net Price
WED-30-42-22	48⅝"	22"	F-42-22	$111.00
WED-30-52-22	59⅛"	22"	F-52-22	120.00
WED-30-61-22	67⅞"	22"	F-61-22	126.00
WED-30-70-22	76⅝"	22"	F-70-22	135.00
WED-30-77-22	83⅝"	22"	F-77-22	141.00
WED-30-42-255	48⅝"	25½"	F-42-255	133.20
WED-30-52-255	59⅛"	25½"	F-52-255	140.40
WED-30-61-255	67⅞"	25½"	F-61-255	144.00
WED-30-70-255	76⅝"	25½"	F-70-255	156.00
WED-30-77-255	83⅝"	25½"	F-77-255	162.00

45° WEDGE RACK FRAMES

Cat. No.	Height	Width	For Use With	Net Price
WED-45-42-22	48⅝"	22"	F-42-22	114.00
WED-45-52-22	59⅛"	22"	F-52-22	123.00
WED-45-61-22	67⅞"	22"	F-61-22	129.00
WED-45-70-22	76⅝"	22"	F-70-22	138.00
WED-45-77-22	83⅝"	22"	F-77-22	144.00
WED-45-42-255	48⅝"	25½"	F-42-255	136.20
WED-45-52-255	59⅛"	25½"	F-52-255	143.00
WED-45-61-255	67⅞"	25½"	F-61-255	147.00
WED-45-70-255	76⅞"	25½"	F-70-255	159.00
WED-45-77-255	83⅝"	25½"	F-77-255	165.00



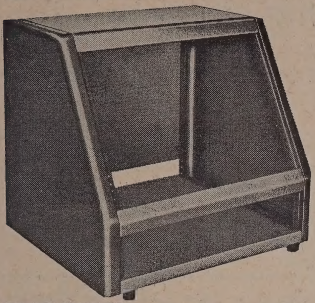
30° Wedge Pedestal Frames

Catalog No.	Height	Width	For Use With	Net Price
WED-30-101	29½"	22"	CPF-101 & 103	$93.00
WED-30-102	36½"	22"	CPF-102 & 104	99.00

45° Wedge Pedestal Frames

Catalog No.	Height	Width	For Use With	Net Price
WED-45-101	29½"	22"	CPF-101 & 103	$96.00
WED-45-102	36½"	22"	CPF-102 & 104	102.00

PREM-O-RAK® MODULAR CONSOLE SYSTEM



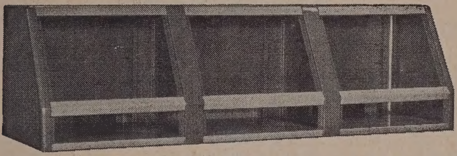
CONSOLE SLOPING CABINET

- BOTH FRONT AND REAR HAVE ATTRACTIVE BALL CORNERS
- Shipped knocked down with necessary hardware for easy assembly.
- All screws for assembling console are not visible from the outside.
- Both front and rear are tapped for 10/32 machine screws on E.I.A. spacings.
- Interlocking removable rear panel made of perforated metal and held in place by four captive screws.
- Made of No. 16 gauge steel.
- Rear panel has 1¾" opening on bottom for leads, etc.
- Panels fit into ½" recess.
- Base has 6 knockouts for leads and furnished with 4 rubber feet.
- Components may be mounted on base before assembly of rack into a complete unit.
- May be used individually or in multiples.
- Handsomely finished in Two Tone Hammertone — Top, cross-piece and base are Gray Hammertone. Rear and side panels are Brown Hammertone.

DIMENSIONS

Width — 21¾" Depth — 18"
Height — 18⅛" Slope — 30° from vertical
Upper panel space — 12¼" x 19"
Lower panel space — 3½ x 19"
Rear panel space — 15¾" x 19"

Cat. No.	Ship. Wt. Lbs.	Net Price
CSC-201	35	$49.80



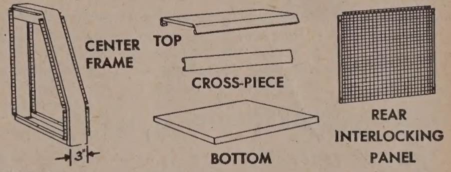
DESIGNED FOR MULTIPLE INSTALLATION

The PREM-O-RAK CONSOLE CABINETS can be joined together to make multiple units by means of a center frame section which is bolted to the top, cross-piece and bottom. When ordering multiple units specify number of units, such as Double, Triple, etc.

MULTIPLE SECTION for SLOPING CABINET

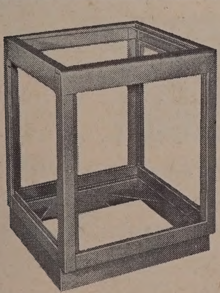
Catalog No.	Shipping Wt. Lbs.	Net Price
CMS-301	26	$30.00

EACH MULTIPLE SECTION comprises 5 pieces as shown:



EXAMPLE:

One Double CSC-201 consists of one CSC-201 and one CMS-301
One Triple CSC-201 consists of one CSC-201 and two CMS-301



PREM-O-RAK® CONSOLE PEDESTAL FRAME

- TOPS OF FRONT AND REAR ARE ROUNDED
- Units are designed for multiple installation.
- Adjustable panel mounting angles front and rear are tapped for 10/32 machine screws on E.I.A. spacings.
- Panels fit into ½" recess.
- Two rectangular knockouts supplied on one top cross member to accommodate channels of Writing Work Shelf.
- Brackets welded in base and punched to accommodate CA-5 (3") casters and supplied with adapter to accommodate CA-4 (2") casters.
- Frame made of No. 16 gauge steel; panel mounting angles of 12 gauge steel.
- Finished in Gray Hammertone.

Cat. No.	Width	Depth	Height with Casters	Height without Casters	Front & Rear Panel Space	Top Panel Space	Shpg. Wt. Lbs.	Net Price
CPF-101	22"	22"	30"	29½"	21 x 19"	17½ x 19"	45	$56.04
CPF-102	22"	22"	37"	36½"	28 x 19"	17½ x 19"	48	64.20
CPF-103	27"	22"	30"	29½"	21 x 24"	17½ x 24"	50	63.00
CPF-104	27"	22"	37"	36½"	28 x 24"	17½ x 24"	53	72.00

END PANELS

- Made of one piece of No. 18 gauge steel.
- Finished in Brown Hammertone.
- For easy installation and access, the end panels attach to pedestal frame CPF Series by means of 2 brackets on bottom and held securely with 2 captive screws on top.

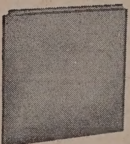
END PANEL

- Ball cornered.
- Finished in Brown Hammertone.

DIMENSIONS
Width — 22"
Depth — 1$^{11}/_{32}$"

Cat. No.	Height	For use with	Ship Wt. Lbs.	Net Price
CEP-401	26"	CPF-101 & 103	17	$15.00
CEP-402	33"	CPF-102 & 104	20	18.00

All prices F.O.B. N. Y. 59, N. Y.



SHORT END PANEL

Used only when work top is mounted between 2 pedestal frames CPF-101 or CPF-103.

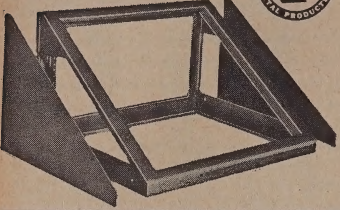
- Finished in Brown Hammertone.

DIMENSIONS
Width — 22", Height — 23",
Depth — 1$^{11}/_{32}$"

Cat. No.	Ship. Wt. Lbs.	Net Price
CSS-701	15	$9.00

PREM-O-RAK® MODULAR CONSOLE SYSTEM

TURRET WITH FLAT SIDE PANELS



- Made of No. 16 gauge steel.
- All panel openings tapped for 10/32 machine screws on universal spacings.
- Panels fit into ½" recess.
- Flat side panels are assembled at factory before shipping.
- Frame finished in Gray Hammertone. Side panels finished in Brown Hammertone.

DIMENSIONS

Width — 22", Height — 12¼" or 17½"*, Depth — 17½" or 12¼"*

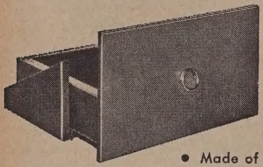
Sloped front panel space is 17½" x 19" when mounted either 35° or 55° from vertical.

Rear panel space — 8¾" x 19", Bottom panel space — 14" x 19"

**According to method of mounting.*

Catalog No.	Shipping Wt. Lbs.	Net Price
TUR-3	20	$34.80

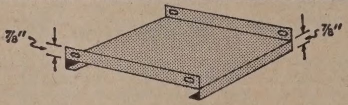
SLIDING DRAWER



- Made of heavy gauge steel.
- Drawer is mounted on ball-bearing suspension slides which can sustain 40 lbs.
- Drawer extends 11" from front of cabinet.
- Entire unit mounts to the rear of the tapped holes of the panel mounting angles of cabinet.
- Furnished with attractive, round, chrome-plated handle.
- Shipped knocked down with all necessary hardware for easy assembly.
- Finished in Gray Hammertone.

Will fit CPF Series, 18" deep POR Series, FS Series, F and PRX Racks (when used with other formed panels).

Cat. No.	Panel Size	Drawer Size W	D	H	Shpg. Wt. Lbs.	Net Price
D-1916	10⅜ x 18⅞"	17	16½	6	23	$18.00
D-2016	6⅞ x 18⅞"	17	16½	6	22	17.25
D-2116	10⅜ x 23⅞"	22	16½	6	25	21.60
D-2216	6⅞ x 23⅞"	22	16½	6	24	20.70



SHELF FOR PEDESTAL FRAMES (CPF SERIES)

- Made of No. 16 Gauge Steel
- Finished in Gray Hammertone

Mounts to 10/32" tapped holes on side of panel mounting angles.

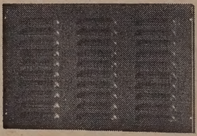
Cat. No.	Depth	Width	For use with	Net Price
SH-101	20½"	20⁷⁄₁₆"	CPF-101 & CPF-102	$9.00
SH-102	20½"	25⁷⁄₁₆"	CPF-103 & CPF-104	10.20

FORMED PANELS — 19" and 24" WIDE

- Made of one piece of No. 16 gauge steel, with edges formed for overall depth of ½".
- Each panel has only 2 mounting holes on each side.
- Finished in Gray or Brown Hammertone.

BLANK

19" WIDE				24" WIDE		
Cat. No.	Shpg. Wt. Lbs.	Net Price	Height	Cat. No.	Shpg. Wt. Lbs.	Net Price
FP-319	2	$1.14	3½"	FP-324	3	$1.38
FP-519	2½	1.32	5¼"	FP-524	3½	1.56
FP-719	3	1.50	7"	FP-724	4	1.80
FP-819	4	1.83	8¾"	FP-824	5	2.22
FP-1019	5	2.25	10½"	FP-1024	6	2.70
FP-1219	6	2.61	12¼"	FP-1224	7	3.12
FP-1419	6½	2.94	14"	FP-1424	7½	3.54
FP-1519	7	3.39	15¾"	FP-1524	8	4.08
FP-1719	7½	3.75	17½"	FP-1724	8½	4.50
FP-1919	8	4.11	19¼"	FP-1924	9	4.92
FP-2119	9	4.50	21"	FP-2124	10	5.40
FP-2619	11	5.55	26¼"	FP-2624	12	6.66
FP-2819	12	6.00	28"	FP-2824	13	7.20



LOUVRED

19" WIDE				24" WIDE		
Cat. No.	Shpg. Wt. Lbs.	Net Price	Height	Cat. No.	Shpg. Wt. Lbs.	Net Price
FPL-719	3	3.15	7"	FPL-724	4	3.78
FPL-819	4	3.54	8¾"	FPL-824	5	4.26
FPL-1019	5	3.90	10½"	FPL-1024	6	4.68
FPL-1219	6	4.41	12¼"	FPL-1224	7	5.28
FPL-1419	6½	4.74	14"	FPL-1424	7½	5.70
FPL-1719	7½	5.55	17½"	FPL-1724	8½	6.66
FPL-2119	9	6.90	21"	FPL-2124	10	8.28
FPL-2619	11	7.74	26¼"	FPL-2624	12	9.30
FPL-2819	12	8.20	28"	FPL-2824	13	9.84

FORMICA WRITING PANELS

19" and 24" WIDE — ½" THICK

Gray Linen Weave Pattern Formica bonded to plywood as top surface; Unfinished Formica bonded to bottom surface.

19" WIDE

Cat. No.	Panel Space	Fits into	Net Price
FWP-1019	10½" x 19"	WW-15-22 & WW-15-255	$6.60
FWP-1419	14" x 19"	WW-18-22 & WW-18-255	8.40
FWP-1719	17½" x 19"	WW-22-22 & WW-22-255, WTO-22-22 & Top Panel Space of CPF-101 and CPF-102	10.20

24" WIDE

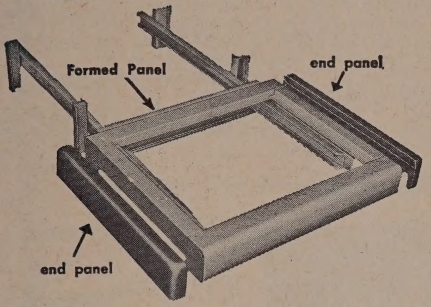
Cat. No.	Panel Space	Fits into	Net Price
FWP-1024	10½" x 24"	WW-2715-22, WW-2715-255	$7.20
FWP-1424	14" x 24"	WW-2718-22, WW-2718-255	9.00
FWP-1724	17½" x 24"	WW-2722-22, WW-2722-255, WTO-2722 & Top Panel Space of CPF-103 & CPF-104	10.80

All prices F.O.B. N. Y. 59, N. Y.

PREM-Ō-RAK® MODULAR CONSOLE SYSTEM

WRITING WORK SHELF

- Made Of No. 16 Gauge Steel
- Tops Of Front And Rear Are Rounded
- Shipped Knocked Down ● Finished In Gray Hammertone
- Supplied with 3½" x 19" Formed Panel
- Supplied With Channels And Brackets For Mounting To Inside of Frames



DESIGNED FOR SINGLE OR MULTIPLE INSTALLATION

22" WIDE — 3" HIGH

To Fit 22" DEEP FRAMES					To Fit 25½" DEEP FRAMES		
Cat. No.	Shpg. Wt. Lbs.	Net Price	Top Panel Space	Depth	Cat. No.	Shpg. Wt. Lbs.	Net Price
WW-15-22	11	$36.00	10½" x 19"	15"	WW-15-255	12	$36.75
WW-18-22	12	37.80	14" x 19"	18½"	WW-18-255	13	38.55
WW-22-22	13	39.60	17½" x 19"	22"	WW-22-255	14	40.35

27" WIDE

Cat. No.	Shpg. Wt. Lbs.	Net Price	Top Panel Space	Depth	Cat. No.	Shpg. Wt. Lbs.	Net Price
WW-2715-22	14	41.40	10½" x 24"	15"	WW-2715-255	15	42.15
WW-2718-22	15	42.60	14" x 24"	18½"	WW-2718-255	16	43.35
WW-2722-22	16	43.80	17½" x 24"	22"	WW-2722-255	17	44.55

END PANELS FOR WRITING WORK SHELF

● Ball cornered ● Attaches to Writing Work Shelf by means of 2 captive screws ● Made of one piece of No. 18 gauge steel ● Finished in Brown Hammertone

Cat. No.	Lbs.	Used With	Net Pr.
CEP-15	1½	WW-15-22, 15-255; 2715-22, 2715-255	$3.54
CEP-18	2	WW-18-22, 18-255; 2718-22, 2718-255	3.78
CEP-22	2½	WW-22-22, 22-255; 2722-22, 2722-255	4.02

WORK TOPS FOR MULTIPLE ASSEMBLY — 3" HIGH

CWT Series

WTO Series

- Tops of front and rear are rounded.
- Designed for mounting between two pedestal frames.
- Made of No. 16 gauge steel.
- Finished in Gray Hammertone.

NOTE: Use Short End Panels for this installation. (Cat. No. CSS-701)

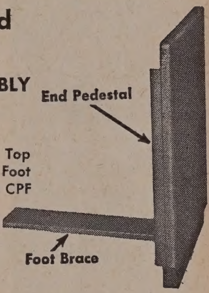
WORK TOPS

Cat. No.	Width	Shpg. Wt. Lbs.	Net Price
CWT-601	22"	14	$12.60
CWT-603	27"	18	15.00

Cat. No.	Width	Panel Space	Shpg. Wt. Lbs.	Net Pr.
WTO-22-22	22"	17½ x 19"	9½	$27.00
WTO-27-22	27"	17½ x 24"	11	32.40

END PEDESTAL and FOOT BRACE

FOR DOUBLE UNIT ASSEMBLY



- Made of No. 18 gauge steel
- Ball cornered
- End Pedestal mounts to Work Top CWT Series or WTO Series. Foot Brace mounts to Pedestal Frame CPF Series and End Pedestal PE-901
  - Foot Brace can be mounted between two Pedestal Frames (CPF Series).
- Finished in Brown Hammertone

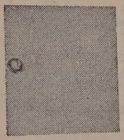
END PEDESTAL

Cat. No.	Shpg. Wt. Lbs.	Net Resale Price
PE-901	25	$30.00

FOOT BRACE

Cat. No.	Shpg. Wt. Lbs.	Used With	Net Pr.
FB-801	3	22" Wide Work Tops	$8.10
FB-802	3½	27" Wide Work Tops	8.76

FLUSH DOORS — ½" DEEP



For Prem-O-Rak Console Frames
CPF, FS, F and PRX Series

- Made of 16 gauge steel ● Finished in Gray or Brown Hammertone.
- Doors can be mounted either left or right hand by rotating door 180°.
- Hinge brackets are punched to accommodate panel mounting angles on cabinets.
- Furnished with attractive round chrome plated handle and snap catch.

Cat. No.	Height	Width	Shpg. Wt. Lbs.	Net Pr.
CD-17	17½"	19"	7	$11.34
CD-21	21"	19"	8	12.21
CD-26	26¼"	19"	9	13.74
CD-28	28"	19"	10	14.40
CD-42	42"	19"	16	24.42
CD-1724	17½"	24"	8	13.62
CD-2124	21"	24"	9	14.64
CD-2824	28"	24"	12	17.28

Use Index Page 1 for Quick, Easy Location of ALL Products

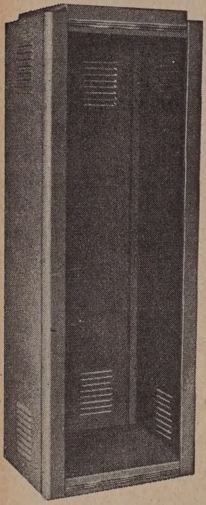
Net—All prices 10% higher West of Miss. River

PREMIER ENCLOSED RELAY RACKS

FOR STANDARD 19" RACK PANELS

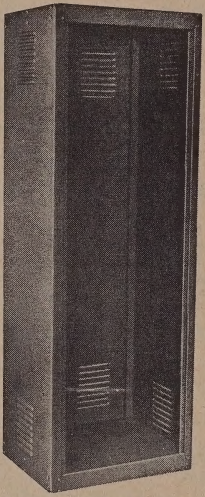
- Rigidly constructed of # 16 gauge cold rolled sheet steel.
- The panel mounting angles are of # 12 gauge steel and are tapped for 10-32 machine screws on Universal spacings.
- Panels fit into a recess so that the edges are not exposed.
- Racks are shipped knocked down with all necessary bolts for easy assembly.
- Rear doors are hung on sturdy slip-jointed hinges, and closed by a chrome handle.
- Holes punched in bottom to accommodate CA-4 casters.
- ROUNDED TYPE have front vertical rounded corners.
- STANDARD TYPE have square front vertical corners.
- DELUXE TYPE — The removable vertical corner mouldings are rounded and cover the mounting screws.
- DELUXE TYPE — Top and bottom are trimmed with red stripped chrome finished moulding.
- Cabinets finished in either Black or Gray wrinkle, Gray or Brown Hammertone. If color is not specified, Black Wrinkle will be furnished.

DELUXE TYPE



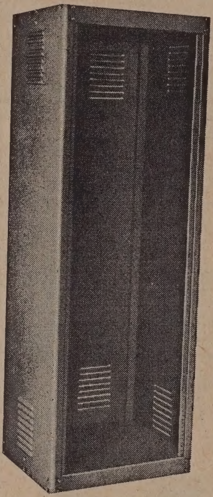
DR Model

STANDARD TYPE



RS Model

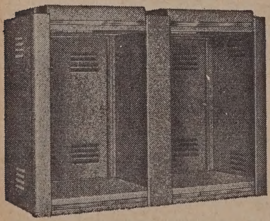
ROUNDED TYPE



R Model

These racks can be joined together to make multiple units by means of a solid center partition which is bolted to the top and bottom. Each multiple section comprises a top, bottom, rear door and center partition. Vertical trim mouldings are supplied on the DR models. When ordering multiple units specify number of units, such as double, triple, quad, etc.

MULTIPLE RACK UNITS



One Double DR-3619 Unit in Assembly

Example:

One Double R-3619 consists of one R-3619 and one MR-3619

One Triple RS-3619 consists of one RS-3619 and two MR-3619

One Quad DR-3619 consists of one DR-3619 and three DMR-3619

SPECIFY COLOR WHEN ORDERING

Racks are 22" wide x 18" deep

	Cat. No.	Overall Height	Panel Space	Ship. Wt.—Lbs.	Net Price
DELUXE	DR-3619	43⅛"	36¾"	85	$54.00
	DR-6119	67⅝"	61¼"	135	66.00
	DR-7719	83⅜"	77"	160	79.89
STANDARD	RS-3619	41⅞"	36¾"	80	37.89
	RS-6119	66⅜"	61¼"	120	56.43
	RS-7719	82⅛"	77"	140	67.77
ROUNDED	R-3619	41⅞"	36¾"	80	37.89
	R-4219	47⅛"	42"	90	43.38
	R-6119	66⅜"	61¼"	120	56.43
	R-7719	82⅛"	77"	140	67.77

MULTIPLE RACK SECTIONS

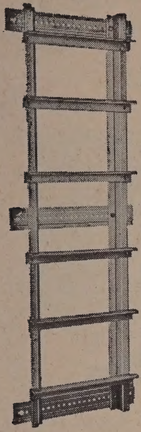
Cat. No.	Overall Height	Panel Space	Used With	Net Price
DMR-3619	43⅛"	36¾"	DR-3619	$51.78
DMR-6119	67⅝"	61¼"	DR-6119	61.83
DMR-7719	83⅜"	77"	DR-7719	73.80
MR-3619	41⅞"	36¾"	R&RS-3619	35.81
MR-4219	47⅛"	42"	R&RS-4219	41.29
MR-6119	66⅜"	61¼"	R&RS-6119	52.29
MR-7719	82⅛"	77"	R&RS-7719	63.57

NEW YORK 59, N. Y.

PREMIER Standard PRECISION BUILT METAL HOUSINGS

VERTICAL SIDE SUPPORTS and PANEL MOUNTING ANGLES

To Fit Premier Heavy Duty Transmitter Racks



Vertical Side Supports are made of No. 12 gauge steel and punched 10-32 on Universal spacings. Finished in Gray Hammertone.

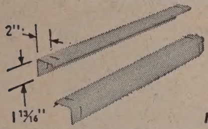
Panel Mounting Angles are made of 3/16" thick steel and punched 12-24 on Universal spacings. Finished in Black or Gray Wrinkle, Gray or Brown Hammertone.

VERTICAL SIDE SUPPORTS					PANEL MOUNTING ANGLES			
Cat. No.	Ht.	Depth	Net Price Set of 4	To Fit Racks	Cat. No.	Ht.	Angle Size	Net Pr. Pair
PVS-422	42"	1¼"	$15.00	FD & RMA 4219, 4219-24, 2742; PRX-42, 42-24; F-42-22, 42-255	PMA-422	42"	1¼x1¼"	$12.00
PVS-522	52½"	1¼"	17.40	PRX 52 & 52-24; F-52-22 & 52-255	PMA-522	52½"	1¼x1¼"	13.80
PVS-612	61¼"	1¼"	19.85	FD & RMA 6119, 6119-24, 2761; PRX-61, 61-24, 2761, 2761-24, 3361, 3361-24; F-61-22, 61-255, 2761-22, 2761-255	PMA-612	61¼"	1¼x1¼"	15.00
PVS-702	70"	1¼"	23.10	FD-7019, 7019-24, 2770; RMA 7618, 7618-24, 7030, 2770; PRX 70, 70-24; 2770, 2770-24, 3370, 3370-24; F-70-22, 70-255, 2770-22, 2770-255	PMA-702	70"	1¼x1¼"	16.80
PVS-772	77"	1¼"	25.85	FD & RMA 7719, 7719-24, 2777; PRX 77, 77-24, 2777, 2777-24, 3377, 3377-24; F-77-22, 77-255, 2777-22, 2777-255	PMA-772	77"	1¼x1¼"	18.00

SIDE SUPPORTS ARE 2⅝" WIDE

◆ **Inside view of PR Rack showing vertical side supports and side mounting brackets assembled.**

NOTE:
RMA Cabinets are constructed exactly the same as RM units except panel mounting angles are adjustable, and are furnished at no additional cost.



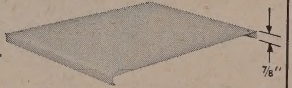
SIDE MOUNTING BRACKETS

Cat. No.	Length	To Fit Racks	Net Price (Pair)
SMB-18	14"	All 18" deep PR, FD & RMA Racks	$3.00
SMB-24	20"	All 24" deep PR, FD & RMA Racks and 22" & 25½" deep F Racks	3.90

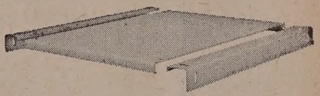
Made of No. 12 Gauge Steel — Finished in Gray Hammertone

SHELVES

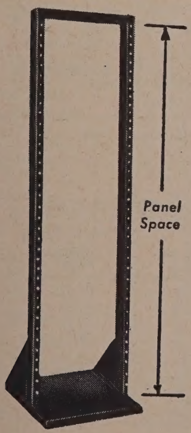
Made of No. 16 Gauge Steel — Finished in Gray Hammertone



Cat. No.	Depth	Width	To Fit Racks	Net Pr.
S-1819	14¼"	17½"	19" Panels-18" Deep	$3.15
S-1824	14¼"	22½"	24" Panels-18" Deep	3.60
S-1830	14¼"	28½"	30" Panels-18" Deep	4.47
S-2419	20¼"	17½"	19" Panels-22", 24", 25½" Deep	3.78
S-2424	20¼"	22½"	24" Panels-22", 24", 25½" Deep	4.47
S-2430	20¼"	28½"	30" Panels-24" Deep	5.40



SHELF AND BRACKETS IN POSITION



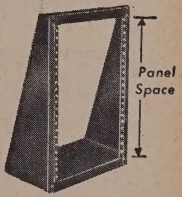
CHANNEL RELAY RACKS

- Rigidly constructed of #12 gauge cold rolled sheet steel and finished in Black Wrinkle.
- Vertical members and top cross-brace are welded together.
- Panel mounting holes are tapped for 10/32 machine screws on Universal Spacings.
- Racks are shipped knocked down with all necessary bolts for easy assembly.
- Base punched to accommodate CA-4 casters.

Cat. No.	H.	W.	D.	Panel Space	Shp. Wt. Lbs.	Net Price
RR-800	39¼"	20"	18⅜"	36¾" x 19"	40	$20.16
RR-801	74¼"	20"	20⅞"	71¾" x 19"	55	24.00
RR-802	79½"	20"	20⅞"	77" x 19"	60	27.78

All prices F.O.B. N. Y. 59, N. Y.

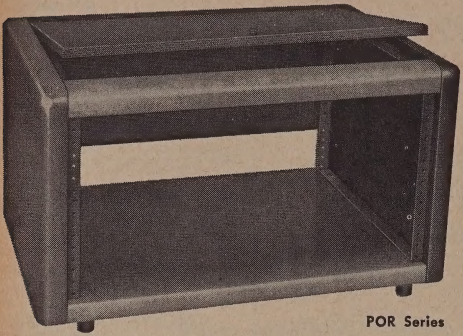
TABLE TYPE RELAY RACKS



- Rigidly constructed of #16 gauge cold rolled sheet steel and finished in Black Wrinkle.
- Base constructed of one piece, similar to a chassis.
- Panel mounting holes are tapped for 10/32 machine screws on Universal Spacings.
- Racks are shipped knocked down with all necessary bolts for easy assembly.

Cat. No.	H.	W.	D.	Panel Space	Shp. Wt. Lbs.	Net Price
TR-2119	25"	21"	12"	21 x 19"	17	$ 8.02
TR-2819	32"	21"	12"	28 x 19"	20	10.03

PREM-O-RAK® DESK CABINET RACKS


POR Series

The ARISTOCRAT of DESK CABINET RACKS

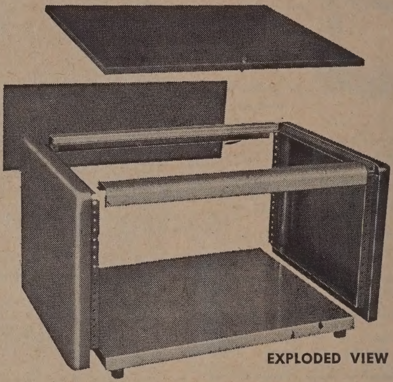
AVAILABLE IN 20 DIFFERENT SIZES — FROM 7" to 35" PANEL SPACES.

BOTH 15¼" and 18" DEEP FOR STANDARD 19" PANELS.

BOTH FRONT AND REAR OF TOP HAVE ATTRACTIVE BALL CORNERS.

SHIPPED KNOCKED-DOWN WITH ALL THE NECESSARY HARDWARE FOR EASY ASSEMBLY.

- All screws for assembling PREM-O-RAK are not visible from the outside.
- Both front and rear verticals are tapped for 10/32 machine screws on universal spacings so that panels may be mounted on both front and rear if desired.
- Interlocking removable top made of perforated metal and held in place by only one captive screw.
- Interlocking removable rear panel made of perforated metal and held in place by two captive screws.
- Rigidly constructed of #16 gauge steel.
- Rear panel has 3½" opening on bottom for leads, etc.
- Panels fit into ½" recess.


EXPLODED VIEW

ALL CABINETS ARE 21¾" WIDE

- Base supplied with four rubber feet.
- Components may be mounted on base before assembly of rack into a complete unit.
- HANDSOMELY FINISHED IN TWO-TONE HAMMERTONE

Top cross braces and base are Gray Hammertone.

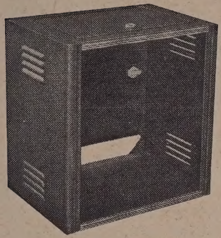
Top and rear panel and side panels are Brown Hammertone.

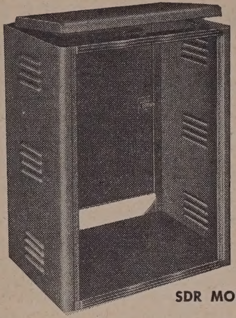
15¼" DEEP					18" DEEP		
Catalog No.	Ship. Wt. Lbs.	Net Price	Overall Height	Panel Space	Catalog No.	Ship. Wt. Lbs.	Net Price
POR-7	22	$25.20	9⅜"	7"	POR-718	24	$27.88
POR-8	24	26.46	11⅛"	8¾"	POR-818	26	29.30
POR-10	26	30.24	12⅞"	10½"	POR-1018	29	33.39
POR-12	28	32.76	14⅝"	12¼"	POR-1218	31	36.07
POR-14	32	36.54	16⅜"	14"	POR-1418	35	40.32
POR-17	40	43.47	19⅞"	17½"	POR-1718	44	47.88
POR-21	44	47.25	23⅜"	21"	POR-2118	48	52.29
POR-26	45	51.03	28⅝"	26¼"	POR-2618	49	56.23
POR-31	50	53.55	33⅞"	31½"	POR-3118	55	59.69
POR-35	55	56.70	37⅜"	35"	POR-3518	60	62.53

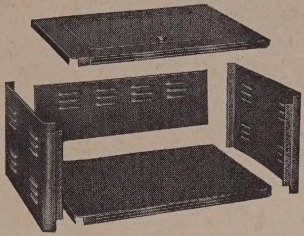
NEW YORK 59, N. Y.

PREMIER DESK CABINET RACKS

DESK CABINET RACKS FOR STANDARD 19" RACK PANELS IN STANDARD, SUPER DELUXE AND KNOCKED DOWN MODELS—BOTH 15¼" AND 18" DEEP


DCR MODEL


SDR MODEL


DRK MODEL

- Front vertical corners are rounded and the top and bottom are trimmed with red striped chrome finished moulding.
- Rigidly constructed of No. 16 Ga. cold rolled sheet steel.
- Panels fit into a recess so that the edges are not exposed.
- Panel mounting holes are tapped for 10-32 machine screws on Universal Spacings.
- Piano type hinges are used on the top doors, which are provided with snap catches.
- Top door on Models SDR and SDRK open to 90° and have a rounded front corner.
- Models SDRK and DRK are supplied knocked down with all necessary bolts for easy assembly. On these models the bolts are not visible from the outside and have the same appearance as the welded models.
- Gussets welded at bottom of rear on Models 170-350 for additional strength.
- Cabinets finished in either Black or Gray Wrinkle, Gray or Brown Hammertone. Black wrinkle furnished if color is not specified.

ALL CABINETS ARE 21¾" WIDE

15¼" DEEP

	Catalog No.	Net Price	Catalog No.	Net Price	Catalog No.	Net Price	Catalog No.	Net Price	Overall Height	Panel Space	Ship. Wt. Lbs.
WITH DOOR ON TOP ONLY	DCR-70	$13.20	SDR-70	$18.09	DRK-70	$12.51	SDRK-70	$17.40	8¾"	7"	22
	DCR-80	13.89	SDR-80	18.78	DRK-80	13.20	SDRK-80	18.09	10½"	8¾"	24
	DCR-100	15.66	SDR-100	20.52	DRK-100	14.97	SDRK-100	19.86	12¼"	10½"	26
	DCR-120	16.92	SDR-120	21.75	DRK-120	16.20	SDRK-120	21.06	14"	12¼"	28
	DCR-140	18.78	SDR-140	23.64	DRK-140	18.09	SDRK-140	22.95	15¾"	14"	32
WITH DOOR ON TOP AND REAR	DCR-170	22.26	SDR-170	27.09	DRK-170	21.57	SDRK-170	26.40	19¼"	17½"	40
	DCR-190	23.31	SDR-190	28.20	DRK-190	22.62	SDRK-190	27.48	21"	19¼"	42
	DCR-210	24.18	SDR-210	29.25	DRK-210	23.49	SDRK-210	28.29	22¾"	21"	44
	DCR-260	26.10	SDR-260	30.99	DRK-260	25.41	SDRK-260	30.24	28"	26¼"	45
	DCR-310	27.48	SDR-310	32.34	DRK-310	26.79	SDRK-310	31.71	33¼"	31½"	50
	DCR-350	28.86	SDR-350	33.72	DRK-350	28.17	SDRK-350	33.03	36¾"	35"	55

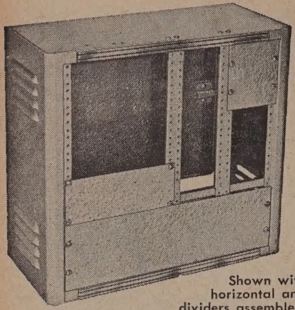
18" DEEP

	Catalog No.	Net Price	Catalog No.	Net Price	Overall Height	Panel Space	Ship. Wt. Lbs.
WITH DOOR ON TOP ONLY	DCR-1880	$16.71	SDR-1880	$21.58	10½"	8¾"	26
	DCR-18100	18.78	SDR-18100	23.64	12¼"	10½"	29
	DCR-18120	20.25	SDR-18120	25.11	14"	12¼"	31
	DCR-18140	22.53	SDR-18140	27.42	15¾"	14"	35
WITH DOOR ON TOP AND REAR	DCR-18170	26.70	SDR-18170	31.59	19¼"	17½"	44
	DCR-18190	27.99	SDR-18190	32.85	21"	19¼"	46
	DCR-18210	28.98	SDR-18210	33.87	22¾"	21"	48
	DCR-18260	31.29	SDR-18260	36.15	28"	26¼"	49
	DCR-18310	32.97	SDR-18310	37.80	33¼"	31½"	55
	DCR-18350	34.65	SDR-18350	39.48	36¾"	35"	60

SPECIFY COLOR WHEN ORDERING

All Prices F.O.B. N. Y. 59, N. Y.

PREMIER Standard PRECISION BUILT METAL HOUSINGS



MDK Series

Shown with panels, horizontal and vertical dividers assembled.

MODU-RAK®

12" DEEP MINIATURE DESK RACKS

for modular construction of test equipment

FOR STANDARD 19", 9½" AND 4¾" RACK PANELS

- Front vertical corners are rounded and the top and bottom are trimmed with red striped chrome moulding.
- Rigidly constructed of No. 16 gauge cold rolled sheet steel.
- Panels fit into a recess so that the edges are not exposed.

21¾" WIDE x 12" DEEP

	Catalog No.	Overall Height	Available Panel-Space	Ship. Wt. Lbs.	Net Price
WITH REMOVABLE REAR PANEL	MDK-50	7"	5¼ x 19"	16	$10.71
	MDK-70	8¾"	7 x 19"	20	11.07
	MDK-80	10½"	8¾ x 19"	21	11.76
	MDK-100	12¼"	10½ x 19"	23	13.53
	MDK-120	14"	12¼ x 19"	25	14.76
	MDK-140	15¾"	14 x 19"	29	16.65
WITH REAR DOOR	MDK-170	19¼"	17½ x 19"	36	20.22
	MDK-210	22¾"	21 x 19"	39	22.05
	MDK-260	28"	26¼ x 19"	40	24.12
	MDK-280	29¾"	28 x 19"	41	26.01

12¼" WIDE x 12" DEEP

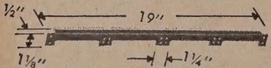
	Catalog No.	Overall Height	Available Panel-Space	Ship. Wt. Lbs.	Net Price
WITH REMOVABLE REAR PANEL	MDK-50-95	7"	5¼ x 9½"	14	10.26
	MDK-70-95	8¾"	7 x 9½"	15	10.71
	MDK-80-95	10½"	8¾ x 9½"	16	11.43
	MDK-100-95	12¼"	10½ x 9½"	17	13.23
	MDK-120-95	14"	12¼ x 9½"	18	14.37
	MDK-140-95	15¾"	14 x 9½"	20	15.81

- Panel mounting holes are tapped for 10-32 machine screws on Universal Spacings.
- 6 knock-out holes are provided on top and bottom of MDK-70 through MDK 280 series to accommodate angle brackets (Cat. No. AB-2).

  Two knock-out holes are provided on top and bottom of MDK-50-95 through MDK-140-95 series.
- Rear panel on Models MDK-70 through MDK-140 and MDK-70-95 through MDK-140-95 can be removed from back of cabinet for service.
- Rear doors have snap catches.
- Bolts are not visible from the outside and these units have the same appearance as the welded models.
- FINISHED IN GRAY HAMMERTONE
- SHIPPED KNOCKED-DOWN WITH ALL NECESSARY HARDWARE FOR EASY ASSEMBLY

ACCESSORIES FOR SUBDIVIDING MODU-RAK INTO MODULAR UNITS

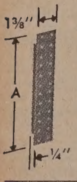
HORIZONTAL DIVIDERS



- Holes punched to accommodate vertical dividers (DV Series) which subdivides MODU-RAK into 9½" and 4¾" widths.
- Made of No. 16 gauge steel.
- Finished in gray hammertone.

Catalog No.	Dimensions	Net Price
DH-19	19" x 1⅛"	$2.85
DH-95	9½" x 1⅛"	2.34

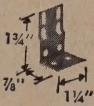
VERTICAL DIVIDERS



- Two rows of 10-32 tapped holes punched on Universal spacings.
- Made of No. 16 gauge steel.
- Finished in gray Hammertone.

Cat. No.	"A" Available Panel Mtg. Space	Net Price
DV-5	5¼"	$0.79
DV-7	7"	1.05
DV-8	8¾"	1.32
DV-10	10½"	1.62
DV-12	12¼"	1.71
DV-14	14"	1.86
DV-17	17½"	2.43
DV-21	21"	2.97
DV-26	26¼"	3.69
DV-28	28"	3.90

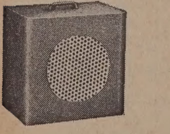
ANGLE BRACKETS



- Punched to accommodate vertical dividers.
- Made of No. 16 gauge steel.
- Finished in gray hammertone.

Cat. No.	Net Price	sold in pairs only
AB-2	$.99 pr.	

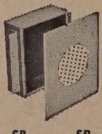
SPEAKER CABINETS



- Constructed of No. 18 gauge steel with perforated grille spot welded behind the opening.
- Front vertical corners are rounded.
- Supplied with handle.
- Removable back plate has key hole slots for hanging.
- Finished in Black Wrinkle.

Cat. No.	H.	W.	D.	Hole Size	Speaker Size	Ship. Wt. Lbs.	Net Price
SC-1006	10"	10"	6"	4⅝"	6"	7⅜	$4.02
SC-1227	12"	12"	7"	6½"	8"	10	5.04

RECESSED SPEAKER BOXES AND PLATES



SB Series SP Series

Designed with adjustable mounting brackets for easy installation in walls or acoustical tile ceilings. Speaker plate has beveled edges to give the same appearance as an acoustical tile, and is easily fastened to the speaker box by means of Tinnerman nuts. Box made of #20 gauge steel; plate of #16 gauge steel with perforated grille spot-welded behind the opening. Interior sprayed with special undercoating to eliminate metallic sound. Finished in gray primer.

SPEAKER BOX

Catalog No.	W H D	Ship. Wt. Lbs.	Net Price
SB-1010	10 x 10 x 4"	4	5.19
SB-1012	10 x 12 x 4"	5	5.49

SPEAKER PLATE

Catalog No.	W.	H.	Speaker Size	Ship. Wt. Lbs.	Net Price
SP-1212	12"	12"	8"	2½	2.58
SP-1214	12"	14"	8"	3	2.76

NEW YORK 59, N. Y.

PREMIER RACK ACCESSORIES

RACK ACCESSORIES

SLIDING DRAWER TO FIT STANDARD 19" RACKS 15" AND 18" DEEP

Panel made of #12 gauge steel; chassis of #16 steel and has a 1" flange on top and bottom to accommodate plywood for the record changer. The chassis is mounted on ball-bearing suspension slides which can sustain 40 lbs. Drawer extends 11" from front of cabinet. Entire unit mounts on angle brackets which can be bolted on to the cabinet. Supplied knocked down with all necessary bolts for easy assembly. Locks in place by means of 2 latches. Finished in black or gray wrinkle, and Gray or Brown Hammertone. Black Wrinkle furnished if color is not specified.

Catalog No.	Will Fit Rack No.	Panel Size	Chassis Size W. D. H.	Ship. Wt. Lbs.	Net Price
RD-10	R, RS, DCR-18, SDR-18, RM, RMA & FD Models	10⅜" x 18⅞"	17" x 16" x 3"	15	$15.66
RD-12		12⅛" x 18⅞"	17" x 16" x 4"	18	17.40
RD-10-14	DCR, SDR, DRK, RM, RMA & FD SDRK, R, RS, DCR-18, SDR-18 Models	10⅜" x 18⅞"	17" x 14" x 3"	14½	15.54
RD-12-14		12⅛" x 18⅞"	17" x 14" x 4"	17	17.25

FRONT DOORS TO FIT STANDARD 19" DESK RACK CABINETS AND ENCLOSED RACKS

Constructed from one piece of #16 gauge steel. Two concealed piano hinges are provided with holes, punched to accommodate E.I.A. spacings and are made to fit on top of the panels. Supplied with cylinder lock and cam bracket to hold door in position on FD-300-306. All necessary bolts furnished for easy assembly. Finished in Black or Gray Wrinkle, Gray or Brown Hammertone. Black Wrinkle furnished if color is not specified. All doors are 20½" wide x 1¼" deep.

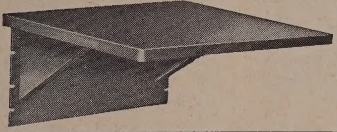
FD-310-313 MODELS

FD-300-306 MODELS

Locking Chrome handle supplied on FD-310-313 models.

Cat. No.	Will Fit Rack No.	Height	Ship Wt. Lbs.	Net Price
FD-300	DCR, DRK, SDR, SDRK-260, 18260	26¼"	10	$12.75
FD-301	DCR, DRK, SDR, SDRK-310, 18310	31½"	11	14.82
FD-302	DCR, DRK, SDR, SDRK-350, 18350	35"	12	16.53
FD-303	DCR, DRK, SDR, SDRK-120, 18120	12¼"	6	9.60
FD-304	DCR, DRK, SDR, SDRK-140, 18140	14"	7	10.44
FD-305	DCR, DRK, SDR, SDRK-170, 18170	17½"	8	11.34
FD-306	DCR, DRK, SDR, SDRK-210, 18210	21"	9	12.21
FD-310	R or RS-3619	36⅞"	13	18.27
FD-311	R-4219	42⅛"	15	20.85
FD-312	R or RS-6119	61⅜	20	24.33
FD-313	R or RS-7719	77⅛"	24	27.81

DESK PANELS



- Made of No. 16 gauge steel and bolted to a standard steel panel 10½" x 19".
- Front corners are rounded.
- Finished in Black or Gray Enamel, Gray or Brown Hammertone.
- SHIPPED KNOCKED DOWN WITH ALL NECESSARY HARDWARE FOR EASY ASSEMBLY.

Cat. No.	Width	Depth	Ship. Wt. Lbs.	Net Price
DP-1016	22"	16"	20	$14.91
DP-1020	22"	20"	22	15.24

RACK SHELF

Made of one piece of #16 Ga. Cold Rolled Steel, 1" high. Holes are punched on sides for mounting to rack. Finished in Black or Gray Wrinkle, Gray or Brown Hammertone. Black Wrinkle furnished if color is not specified.

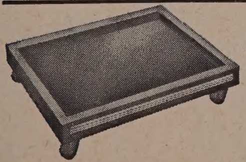
Cat. No.	Will Fit Rack No.	Shelf Size	Ship Wt. Lbs.	Net Price
RS-1106	All 15¼" SDR and DCR Racks	12x21 9/16	7	$2.82
RS-1107	R, RS, DR, 18" deep RM, DCR and SDR Racks	15x21 13/16	7	3.48
RS-1108	18" deep FD Racks	13x21 13/16	7	3.15
RS-1110	RMA-27 and FD-27 Series	22x26⅞	8	6.60
RS-1111	MDK Series	10x21 9/16	6	2.70
RS-1112	24" deep RM and FD Racks	22x21 13/16	7	5.64

CHASSIS SUPPORTS

Made of #12 gauge steel. Finished in black enamel. Sold in pairs only.

Cat. No.	Size	Ship. Wt. Lbs.	Net Price
CS-12	12 x 3 x 3	4	1.92
CS-14	14½ x 3 x 3	5¼	2.10

ROLLER TRUCKS FOR RACKS

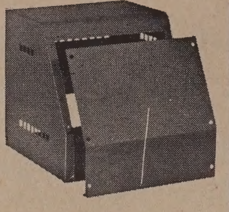


Made from 1 piece of No. 16 Ga. Cold Rolled Steel. Supplied with 2" Dia. Composition Wheels and bolts for easy assembly. Finished in either Black or Gray Wrinkle, Gray or Brown Hammertone and has a red striped Chrome moulding.

Cat. No.	Will Fit Rack No.	Inside Dimensions	Ship. Wt. Lbs.	Net Price
RT-1100	All 15¼" Racks	15¾x22¼	22	$ 9.93
RT-1101	R, RS, DR, 18" deep RM, RMA, FD, DCR and SDR Racks	18¾x22¾	22	12.57
RT-1103	24" deep RM, FD and RMA Racks	22½x24½	23	15.60
RT-1110	RMA-27 and FD-27 Series	27½x24½	25	23.33
RT-1111	RM-7030	33½x24½	30	30.00

NEW YORK 59, N. Y.

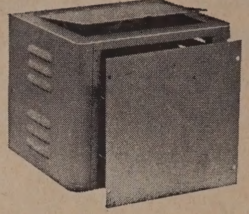
PREMIER Standard PRECISION BUILT METAL HOUSINGS



SLOPING FRONT

Cabinet has rounded top corners and a removable front panel. Back of cabinet is perforated and has opening for leads. Constructed of #20 gauge steel. Finished in Grey Wrinkle.

Catalog No.	H. W. D.	Use Chassis No.	Ship. Wt. Lbs.	Net Price
SFC-500	8 x 8 x 8"	CH-403	6	$ 4.26
SFC-501	8 x 10 x 8"	CH-404	7	4.74
SFC-502	8 x 14 x 8"	CH-406	8	5.07
SFC-503	9 x 18 x 8"	CH-409	10	7.29
SFC-504	12 x 18 x 12"	CH-415	14	9.30

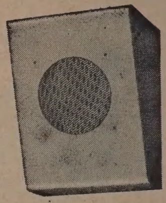


HINGED TOP ROUNDED CORNER TYPE

Cabinet has front vertical rounded corners and a removable front panel. Back of cabinet is louvred and has opening for leads. Constructed of #20 gauge steel. Finished in Grey Wrinkle.

Catalog No.	H. W. D.	Panel Size	Use Chassis No.	Ship Wt. Lbs.	Net Price
HTC-200	8x10x 8"	8x 8"	CH-403	6	$4.19
HTC-201	8x12x 8"	8x10"	CH-404	6½	4.54
HTC-202	8x16x 8"	8x14"	CH-406	11	5.89
HTC-203	9x17x11"	9x15"	CH-413	6½	9.13
HTC-204	12x20x12"	12x18"	CH-415	13½	10.80
HTC-205	8x14x 8"	8x12"	CH-405	7¼	5.23

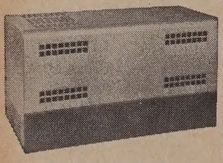
METAL WALL SPEAKER BAFFLE



Sturdily constructed of #18 gauge cold rolled steel to eliminate splitting, warping, or cracking. Perforated grille is spot-welded behind speaker opening. Interior has special undercoating to eliminate metallic sound. Supplied with mounting bracket for simple hanging on wall. Finished in buff enamel or brown hammertone.

Cat. No.	H.	W.	D.	Speaker Size	Net Price
WSB-8	11½ x	9½ x	7"	8"	$5.04
WSB-12	15½ x	13½ x	9¾"	12"	6.30

AMPLIFIER FOUNDATIONS



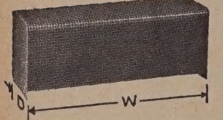
STANDARD TYPE

STANDARD TYPE

TOP COVER has perforations, rounded corners and is 6" high. Finished in Gray Wrinkle.

CHASSIS constructed of one piece with corners spot-welded. Finished in Black Wrinkle.

Cat. No.	Chassis Size	Ship. Wt. Lbs.	Net Price
AF-510	5" x 10" x 3"	5	$4.59
AF-615	6" x 14" x 3"	7	5.29
AF-712	7" x 12" x 3"	6	5.61
AF-717	7" x 17" x 3"	9	6.04
AF-812	8" x 12" x 3"	7	5.61
AF-1012	10" x 12" x 3"	8	6.04
AF-1017	10" x 17" x 3"	11	7.13
AF-1317	13" x 17" x 3"	13	8.58



PERFORATED TYPE COVERS

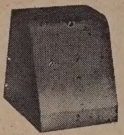
PERFORATED TYPE COVERS

TOP COVER made of perforated steel and has rounded corners with solid ends. 6" high except PC-57*. Finished in Gray Wrinkle. Supplied without chassis.

Cat. No.	W.	D.	Use Chassis No.	Ship. Wt. Lbs.	Net Price
*PC-57	7"	5"	ACH or CH-426	1	$3.06
PC-510	10"	5"	ACH or CH-401	1¾	3.12
PC-615	14"	6"	ACH or CH-402	2⅜	3.60
PC-717	17"	7"	ACH or CH-409	3	3.96
PC-1012	12"	10"	ACH or CH-412	3	4.02
PC-1017	17"	10"	ACH or CH-415	3¼	4.95

* 4" high.

STEEL and ALUMINUM Sloping Panel Cabinets

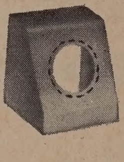


ROUND TOP CORNERS
WITH SLOPING FRONT

No. 20 gauge Steel—Black Wrinkle Finish. No. 18 gauge (.040) Aluminum—Natural Aluminum finish.

Steel Cat. No.	W. H. D.	Ship. Wt. Lbs.	Net Price	Alum. Cat. No.	Net Price
SPC-1200	4 3/16x4½x4¼	¾	$1.14	ASPC-1200	$1.37
SPC-1201	5 3/16x4½x4¼	1	1.29	ASPC-1201	1.55
SPC-1202	6 3/16x4½x4¼	1	1.47	ASPC-1202	1.76
SPC-1203	7 3/16x4½x4¼	1½	1.77	ASPC-1203	2.12

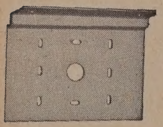
2 in 1 STEEL & ALUMINUM METER CASES



Center Hole for 2" meter increases to 3" meter hole by simply removing a knock-out. Size: 4 3/16" x 4½" x 4¼". Supplied with two ½" dia. knockouts. #20 gauge steel — Black Wrinkle Finish, #18 gauge (.040) Aluminum — Natural Aluminum Finish.

	Cat. No.	Sh. Wt.	Net Price
ALUMINUM	ASPC-23	¾	1.51
STEEL	SPC-23	¾	1.26

WALL SPEAKER MOUNTING PLATE



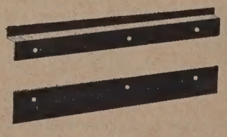
For Use with WSB-8 and WSB-12 Wall Speaker Baffles

DESIGNED FOR SIMPLE MOUNTING OF SPEAKER BAFFLE TO STANDARD 2" x 4" AND 4" x 4" ELECTRICAL OUTLET BOXES

Bracket has two threaded holes for easy mounting to baffle. Made of No. 16 gauge cold rolled steel and finished in gray primer.

Catalog No. SMP-812 .96 Net Price

WALL MOUNTING BRACKETS

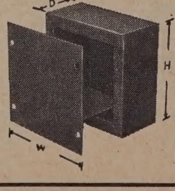


FOR MOUNTING DESK CABINET RACKS ON WALL — REMOVE REAR DOOR AND USE WALL MOUNTING BRACKETS.

Catalog No. WB-19
Net Price $2.85

Sold in sets only.
Finished in Gray Enamel.
Shipping Weight 2½ lbs.

STEEL UTILITY CASES WITH CHASSIS ATTACHED



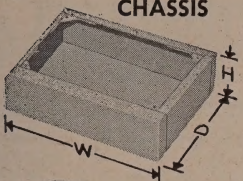
Made of #20 gauge steel with a chassis spot welded to front panel. Front and rear panels are removable. Finished in black wrinkle.

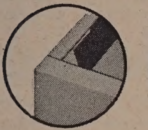
Catalog No.	Height	Width	Depth	Chassis Size	Ship. Wt. Lbs.	Net Price
CA-1400	4"	4"	2"	1 x 2⅞ x 1⅞"	1	$1.22
CA-1401	4"	5"	3"	1 x 3⅞ x 2⅞"	1¼	1.42
CA-1402	5"	4"	3"	1¼ x 2⅞ x 2⅞"	1¼	1.42
CA-1403	6"	5"	4"	1¾ x 3⅞ x 3⅞"	2	1.78
CA-1404	5"	6"	4"	1¼ x 4⅞ x 3⅞"	2	1.78
CA-1405	6"	6"	6"	1¾ x 4⅞ x 5⅞"	3	1.85

Net—All prices 10% higher West of Miss. River

PREMIER STEEL and ALUMINUM CHASSIS

CHASSIS





View of Chassis Showing Gusset Spot-Welded in Corner

STEEL and ALUMINUM BLANK

Chassis are of one piece construction with gussets spot-welded to the bottom flanges for additional strength. Corners have rounded effect and single inside thickness for mounting components. Bottom edges are flanged in on four sides and punched for bottom plates. Steel chassis are made of No. 20 gauge cold rolled steel, except those marked * which are of No. 16 gauge. Steel chassis are finished in either Black Wrinkle or Zinc Plated. Zinc plated furnished if finish is not specified.

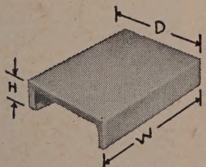
Aluminum chassis are made of No. 18 gauge (.040) aluminum, except those marked * which **are of No. 14 gauge (.064).**

ALUMINUM			Size			STEEL		
Cat. No.	Ship. Wt. Lbs.	Net Price	D.	W.	H.	Cat. No.	Ship. Wt. Lbs.	Net Price
ACH-400	½	$1.33	5½"	9½"	1½"	CH-400	1	$0.91
ACH-401	¾	1.52	5"	10"	3"	CH-401	1½	1.26
ACH-402	1	2.57	6"	14"	3"	CH-402	2½	1.48
ACH-403	½	1.33	7"	7"	2"	CH-403	1¼	1.07
ACH-404	½	1.39	7"	9"	2"	CH-404	1½	1.26
ACH-405	¾	1.52	7"	11"	2"	CH-405	1⅞	1.29
ACH-406	¾	1.64	7"	13"	2"	CH-406	2	1.40
ACH-407	1	2.89	7"	15"	3"	CH-407	2¾	1.67
ACH-408	1	2.36	4"	17"	3"	CH-408	2¼	1.50
ACH-409	1½	2.85	7"	17"	3"	CH-409	3⅛	1.83
ACH-410	1⅛	2.89	8"	17"	2"	CH-410	2¾	1.67
ACH-411	1½	3.00	8"	17"	3"	CH-411	5¼	1.83
ACH-412	1¼	2.68	10"	12"	3"	CH-412	2¾	1.76
ACH-413	1¼	3.40	10"	14"	3"	CH-413	3¼	1.86
ACH-414	1¼	3.26	10"	17"	2"	CH-414	3¼	1.92
ACH-415*	1⅞	3.65	10"	17"	3"	CH-415*	6	2.16
ACH-416*	2	4.20	10"	17"	4"	CH-416*	7½	2.39
ACH-417*	1¾	3.48	11"	17"	2"	CH-417*	5¼	2.62
ACH-418*	2	4.27	11"	17"	3"	CH-418*	6¼	2.87
ACH-419*	1⅞	3.81	12"	17"	2"	CH-419*	5	1.99
ACH-420*	2⅛	4.51	12"	17"	3"	CH-420*	7	2.40
ACH-421*	2⅞	4.98	12"	17"	4"	CH-421*	8½	2.62
ACH-422*	1⅞	4.02	13"	17"	2"	CH-422*	6	2.87
ACH-423*	2⅛	4.79	13"	17"	3"	CH-423*	7	3.31
ACH-424*	2½	5.48	13"	17"	4"	CH-424*	10	3.78
ACH-425	⅞	1.64	7"	11"	3"	CH-425	2¼	1.40
ACH-426	¼	1.09	5"	7"	2"	CH-426	1	1.04
ACH-427	1¼	2.91	8½"	15"	3"	CH-427	3	1.92
ACH-428	¼	1.50	5"	7"	3"	CH-428	1¼	1.06
ACH-429	¾	1.80	5"	13"	3"	CH-429	2	1.56
ACH-430	1	2.19	8"	12"	3"	CH-430	2½	1.67
ACH-431	¼	1.29	4"	6"	2"	CH-431	1	1.01
ACH-432	¼	1.33	4"	6"	3"	CH-432	1	1.04
ACH-433	⅞	1.83	7"	12"	3"	CH-433	2½	1.46
ACH-434	1	2.70	6"	17"	3"	CH-434	4	1.76
ACH-435*	2½	5.37	10"	23"	3"	CH-435*	10	2.74
ACH-436	¼	1.09	4"	6"	1½"	CH-436	¾	1.04
ACH-437	⅜	1.13	4"	8"	2"	CH-437	1	1.07
ACH-438*	3	10.79	17"	17"	4"	CH-438*	13	5.42
—	—	—	10"	17"	5"	CH-439*	8½	2.89
—	—	—	13"	17"	5"	CH-440*	11	4.26
ACH-441	1	1.68	8"	10"	2½"	CH-441	2½	1.42

*Made from No. 14 gauge (.064) aluminum.

*Made from No. 16 gauge steel.

STEEL OPEN END



Made of #20 gauge steel and zinc plated.

Cat. No.	D.	W.	H.	Sh. Wt. Lbs.	Net Price
CH-1300	7"	6"	2"	1	$0.80
CH-1301	5"	7"	1½"	¾	.73
CH-1302	7"	7"	1½"	1	1.16
CH-1303	7"	8"	2"	1	1.03
CH-1304	5½"	9"	1½"	1	.87
CH-1305	7½"	9"	1½"	1	1.16
CH-1306	7"	10"	2"	1¼	1.11
CH-1307	7"	11"	1½"	1¼	1.25
CH-1308	7"	13"	1½"	1½	1.46
CH-1309	10¾"	14"	2"	2½	1.75
CH-1310	7¾"	15"	2"	2	1.67

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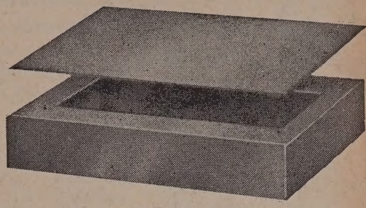


REMOVABLE TOP

Made of #16 Ga. Cold Rolled Steel. Top and Bottom edges flanged in on four sides. Top plate is removable. Finished in either Black Wrinkle or Zinc Plated. Zinc plated furnished if finish is not specified.

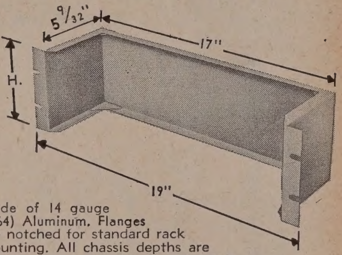
Cat. No.	Size	Ship. Wt. Lbs.	Net Price
RCH-415	10 x 17 x 3	5	$4.01
RCH-416	10 x 17 x 4	5	4.46
RCH-423	13 x 17 x 3	9	4.20
RCH-424	13 x 17 x 4	10	5.18

REPLACEMENT TOPS

Cat. No.	Size	Ship. Wt. Lbs.	Net Price
RTC-415	10 x 17	2	$1.56
RTC-423	13 x 17	3	1.92

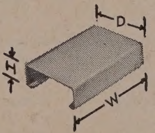
ALUMINUM VERTICAL PANEL

TO FIT 19" STANDARD RACKS



Made of 14 gauge (.064) Aluminum. Flanges are notched for standard rack mounting. All chassis depths are 5-9/32". Gussets are spot welded in each corner for greater strength. Etched finish.

Catalog No.	Height	Ship. Wt. Lbs.	Net Price
ACH-1200	1¾"	¾	$2.55
ACH-1201	3½"	1¾	2.79
ACH-1202	5¼"	1½	3.04
ACH-1203	7"	2	3.51
ACH-1204	8¾"	2¼	4.14
ACH-1205	10½"	2¾	4.44
ACH-1206	12¼"	3	4.95
ACH-1207	14"	3¼	5.35



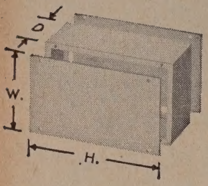
ALUMINUM OPEN END

Made of 18 ga. (.040) Aluminum.

Catalog No.	Depth	Width	Height	Ship. Wt. Lbs.	Net Price
ACH-1350	2⅝"	2¾"	1¼"	¼	$ .37
ACH-1351	1¾"	3⅛"	1"	¼	.41
ACH-1352	3¼"	4½"	2"	¼	.44
ACH-1353	2¾"	4⅛"	1"	¼	.44
ACH-1354	3¾"	4⅛"	1½"	¼	.44
ACH-1355	3"	6⅛"	1¼"	¼	.52
ACH-1356	5¾"	4⅞"	1½"	¼	.55
ACH-1357	4"	3⅛"	1"	½	.44
ACH-1358	4"	4⅛"	1"	½	.48
ACH-1359	4"	5⅛"	1"	½	.51
ACH-1360	4"	6⅛"	1"	½	.55

PREMIER Standard PRECISION BUILT METAL HOUSINGS

UTILITY CASES



ALUMINUM

Constructed of #16 ga. (.051) aluminum with flanged edges, spotwelded corners and two removable flat covers. Natural Aluminum finish or Gray Hammertone.

Natural Aluminum Cat. No.	Net Price	Size H. W. D.	Ship. Wt. Lbs.	Gray Hammertone Cat. No.	Net Price
AC-442	$1.26	4 4 2	½	PAC-442	$1.39
AC-453	1.39	4 5 3	¾	PAC-453	1.62
AC-564	1.65	5 6 4	1	PAC-564	2.02
AC-596	2.71	5 9 6	1½	PAC-596	3.07
AC-666	1.89	6 6 6	1½	PAC-666	2.11
AC-1276	3.73	12 7 6	2¼	PAC-1276	4.14
AC-1597	5.10	15 9 7	3½	PAC-1597	5.65
AC-695	2.71	6 9 5	1½	PAC-695	3.07

STEEL

Constructed of #20 ga. sheet steel with flanged edges, spot-welded corners, and two removable flat covers. Finished in Black Wrinkle.

Catalog No.	H.	W.	D.	Ship. Wt. Lbs.	Net Price
C-442	4	4	2″	⅞	$0.93
C-453	4	5	3″	1¼	1.08
C-564	5	6	4″	1¾	1.28
C-596	5	9	6″	3	2.02
C-666	6	6	6″	2¼	1.46
C-695	6	9	5″	3	2.02
C-754	7	5	4″	2	1.39
C-8101	10	10	8″	6	3.30
C-1276	12	7	6″	4½	2.74

CHASSIS MOUNTING BRACKETS

TRIANGULAR

- Constructed of No. 16 gauge steel.
- Finished in Black enamel.
- Sold in pairs only.

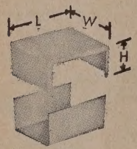
TRIANGULAR TYPE

Cat. No.	Height	Depth	Ship. Wt. Lbs.	Net Price
TCB-55	5"	5"	1	$ .99
TCB-77	7"	7"	1	1.12
TCB-99	9"	9"	1½	1.36

STANDARD

STANDARD TYPE

	Cat. No.	H.	D.	Ship. Wt. Lbs.	Net Price
Notched for 3" Chassis	CB- 78	6½"	8"	1½	$0.96
	CB-710	6½"	10"	1¾	1.29
	CB-711	6½"	11"	2	1.39
	CB-712	6½"	12"	2⅛	1.51
	CB-713	6½"	13"	2¼	1.62
	CB-717	6½"	17"	3	2.51
Notched for 4" Chassis	CB-810	8½"	10"	2⅜	1.91
	CB-813	8½"	13"	3	2.02



ALUMINUM MINIATURE CASES

A two piece case made of #16 Ga. (.051) aluminum. Natural Aluminum Finish or Gray Hammertone.

Natural Aluminum Cat. No.	Net Price	L	W	H	Ship. Wt. Lbs.	Gray Hammertone Cat. No.	Net Price
AMC-1000	$ .70	2¾	2⅛	1⅝	¼	PMC-1000	$ .79
AMC-1001	.70	3¼	2⅛	1⅝	¼	PMC-1001	.79
AMC-1002	.73	4	2⅛	1⅝	¼	PMC-1002	.83
AMC-1003	.96	4	2¼	2¼	⅜	PMC-1003	1.06
AMC-1004	.99	5	2¼	2¼	⅜	PMC-1004	1.09
AMC-1005	1.17	5	4	3	½	PMC-1005	1.23
AMC-1006	1.09	5¼	3	2⅛	½	PMC-1006	1.19
AMC-1007	1.39	6	5	4	1	PMC-1007	1.53
AMC-1008	1.56	7	5	3	¾	PMC-1008	1.69
AMC-1009	2.31	8	6	3½	1⅛	PMC-1009	2.45
AMC-1010	2.88	10	6	3½	1½	PMC-1010	3.04
AMC-1011	3.24	12	7	4	1¾	PMC-1011	3.57
AMC-1012	3.84	17	5	4	2	PMC-1012	4.20
AMC-1013	1.17	10	2	1⅝	½	PMC-1013	1.23
AMC-1014	1.53	12	2½	2¼	¼	PMC-1014	1.65
AMC-1015	.93	4	2	2¾	¼	PMC-1015	1.20
AMC-1016	.96	4¼	2¼	1½	¼	PMC-1016	1.06

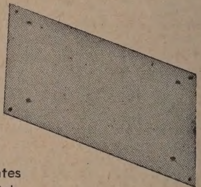
MASKED ALUMINUM PANELS

19″ WIDE — ⅛″ THICK

Made of bright natural aluminum covered on both sides with special self-adhesive paper. Drilling or milling can be done on paper in place, affording complete damage protection. Paper is removed simply by peeling.

Catalog No.	Height	Ship. Wt. Lbs.	Net Price
MAP-119	1¾″	½	$1.01
MAP-319	3½″	1	1.36
MAP-519	5¼″	1½	1.86
MAP-719	7″	2	2.24
MAP-819	8¾″	2½	2.68
MAP-1019	10½″	3	3.37
MAP-1219	12¼″	3½	3.94
MAP-1419	14″	4	4.51
MAP-1519	15¾″	4	5.04
MAP-1719	17½″	4¾	5.54
MAP-1919	19¼″	5	6.08
MAP-2119	21″	6	6.62

ALUMINUM AND STEEL BOTTOM PLATES



The bottom plates have holes to match the chassis and have 4 pressed dimples. Steel plates made of No. 20 gauge steel, finished in either Black Wrinkle or Zinc Plated. Aluminum plates made of No. 18 gauge (.040). Natural aluminum finish.

ALUMINUM Cat. No.	Net Price	Size	STEEL Cat. No.	Ship. Wt. Lbs.	Net Price
ABP-400	$0.87	5½" x 9½"	BP-400	1	$0.41
ABP-401	.87	5" x 10"	BP-401	1	.46
ABP-402	1.32	6" x 14"	BP-402	1	.63
ABP-403	.90	7" x 7"	BP-403	1	.46
ABP-404	.96	7" x 9"	BP-404	1	.50
ABP-405	1.06	7" x 11"	BP-405	1	.60
ABP-406	1.32	7" x 13"	BP-406	2	.66
ABP-407	1.32	7" x 15"	BP-407	2	.73
ABP-408	1.32	4" x 17"	BP-408	2	.60
ABP-409	1.36	7" x 17"	BP-409	2	.77
ABP-410	1.53	8" x 17"	BP-410	2	.77
ABP-412	1.50	10" x 12"	BP-412	2	.77
ABP-413	1.37	10" x 14"	BP-413	2	.80
ABP-414	1.72	10" x 17"	BP-414	2	1.03
ABP-418	2.16	11" x 17"	BP-418	3	1.06
ABP-419	2.28	12" x 17"	BP-419	3	1.11
ABP-422	2.41	13" x 17"	BP-422	3	1.19
ABP-423	.87	5" x 7"	BP-423	1	.41
ABP-424	.99	5" x 13"	BP-424	1	.66
ABP-425	1.32	8" x 12"	BP-425	2	.92
ABP-426	.87	4" x 6"	BP-426	1	.41
ABP-427	1.14	7" x 12"	BP-427	2	.79
ABP-428	1.36	6" x 17"	BP-428	2	.77
ABP-429	2.55	10" x 23"	BP-429	2	1.66
ABP-430	.87	4" x 8"	BP-430	1	.41
ABP-431	2.57	17" x 17"	BP-431	4	1.67
ABP-432	2.41	8½" x 15"	BP-432	1½	1.19
ABP-433	1.14	8" x 10"	BP-433	1	.79

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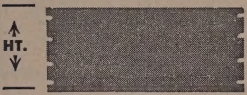
PREMIER STEEL & ALUMINUM RACK PANELS



All 24" and 30" wide blank panels are finished in Black or Gray Wrinkle, Gray or Brown Hammertone. If color is not specified, Black Wrinkle is furnished.

ALL 19" WIDE PANELS ARE FINISHED IN REVERSIBLE COLORS

REVERSIBLE

When ordering just specify Reversible Colors —

Example: Aluminum Panel 8¾ x 19" — Black Wrinkle on one side — Gray Wrinkle on other side — order as follows:

ARP-819 Reversible Wrinkle.

Example: Steel Panel 7" x 19" — Gray Hammertone one side — Brown Hammertone other side — order as follows:

RP-719 Reversible Hammertone.

BLANK RACK PANELS

4¾" - 9½" - 19" - 24" - 30" WIDTHS

ALUMINUM

Made of ⅛" Thick Aluminum and finished in Gray Hammertone only.

4¾" Wide

Cat. No.	Ship. Wt.	Height	Net Price
ARP-147	⅛	1¾"	$0.50
ARP-347	¼	3½"	.70
ARP-547	⅜	5¼"	1.05
ARP-747	½	7"	1.26

9½" Wide

Cat. No.	Ship. Wt.	Height	Net Price
ARP-195	¼	1¾"	$0.84
ARP-395	½	3½"	1.14
ARP-595	¾	5¼"	1.65
ARP-795	1	7"	2.01
ARP-895	1¼	8¾"	2.37
ARP-1095	1½	10½"	3.00
ARP-1295	1¾	12¼"	3.48
ARP-1495	2	14"	3.96

19" WIDE

	Aluminum — 1/8" Thick			Aluminum — 3/16" Thick			Steel — No. 12 Gauge		
Height	Cat. No.	Ship. Wt. Lbs.	Net Price	Cat. No.	Ship. Wt. Lbs.	Net Price	Cat.No.	Ship. Wt. Lbs.	Net Price
1¾"	ARP-119	½	$1.01	ARP-119-36	¾	$1.62	RP-119	1	$0.77
3½"	ARP-319	1	1.36	ARP-319-36	1½	2.11	RP-319	2	.88
5¼"	ARP-519	1½	1.86	ARP-519-36	2½	3.00	RP-519	3	1.09
7"	ARP-719	2	2.24	ARP-719-36	3	3.60	RP-719	4	1.26
8¾"	ARP-819	2½	2.68	ARP-819-36	3¾	4.29	RP-819	5¼	1.54
10½"	ARP-1019	3	3.37	ARP-1019-36	4½	5.40	RP-1019	6¼	1.86
12¼"	ARP-1219	3½	3.94	ARP-1219-36	5	6.30	RP-1219	7¼	2.21
14"	ARP-1419	4	4.51	ARP-1419-36	6	7.23	RP-1419	8¼	2.55
15¾"	ARP-1519	4	5.04	ARP-1519-36	6	8.07	RP-1519	9	2.87
17½"	ARP-1719	4¾	5.54	ARP-1719-36	7	8.88	RP-1719	10½	3.15
19¼"	ARP-1919	5	6.08	ARP-1919-36	7½	9.75	RP-1919	12	3.50
21"	ARP-2119	6	6.62	ARP-2119-36	9	10.59	RP-2119	12½	3.85

24" WIDE

Aluminum — 1/8" Thick				Steel — No. 12 Gauge		
Cat. No.	Ship. Wt. Lbs.	Net Price	Height	Cat. No.	Ship. Wt. Lbs.	Net Price
ARP-324	1¼	$2.09	3½"	RP-324	2¼	$1.35
ARP-524	2	3.09	5¼"	RP-524	3½	1.65
ARP-724	2½	3.72	7"	RP-724	4½	1.89
ARP-824	3	4.44	8¾"	RP-824	6	2.34
ARP-1024	3½	5.58	10½"	RP-1024	7	2.82
ARP-1224	4	6.54	12¼"	RP-1224	8	3.33
ARP-1424	4½	7.47	14"	RP-1424	9	3.81
ARP-1524	5	8.32	15¾"	RP-1524	10	4.32
ARP-1724	5½	9.18	17½"	RP-1724	11	4.74
ARP-1924	6	10.05	19¼"	RP-1924	12	5.25
ARP-2124	6½	10.95	21"	RP-2124	13	5.79

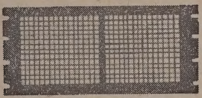
30" WIDE

Aluminum — 1/8" Thick				Steel — No. 12 Gauge		
Cat. No.	Ship. Wt. Lbs.	Net Price	Height	Cat. No.	Ship. Wt. Lbs.	Net Price
ARP-330	1½	$2.77	3½"	RP-330	3	$1.77
ARP-530	2¼	4.11	5¼"	RP-530	4½	2.19
ARP-730	3	4.95	7"	RP-730	6	2.52
ARP-830	3¾	5.89	8¾"	RP-830	8	3.09
ARP-1030	4½	7.44	10½"	RP-1030	9¼	3.12
ARP-1230	5	8.67	12¼"	RP-1230	10¼	4.41
ARP-1430	6	9.93	14"	RP-1430	12	5.07
ARP-1530	6½	11.10	15¾"	RP-1530	13½	5.76
ARP-1730	7	12.24	17½"	RP-1730	15	6.30
ARP-1930	7½	13.41	19¼"	RP-1930	18	6.96
ARP-2130	9	14.56	21"	RP-2130	19	7.71

PANELS — 19" WIDE FINISHED IN EITHER BLACK OR GRAY WRINKLE, GRAY OR BROWN HAMMERTONE

Made of No. 12 Gauge Steel

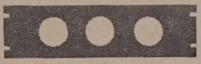
If color is not specified, Black Wrinkle is furnished



GRILLE PANELS

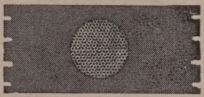
Cat. No.	Grill Size	Height	Ship. Wt. Lbs.	Net Price
GRP-601	3⅞"x13⅜"	5¼"	2	$3.09
GRP-602	3⅞"x13⅜"	7"	2	3.31
GRP-603	5⅞"x13⅜"	8¾"	2½	4.00
GRP-604	*3⅞"x13⅜"	8¾"	2½	3.68
GRP-605	7⅞"x13⅜"	10½"	2½	4.38
GRP-606	*5⅞"x13⅜"	10½"	2½	4.00
GRP-607	*7⅞"x13⅜"	12¼"	3	4.54

* Allows 3½" space at bottom for chassis mounting.



METER PANELS — 5¼"

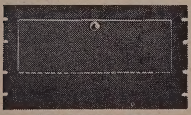
Cat. No.	No. of Holes	Meter Size	Hole Size	Ship. Wt. Lbs.	Net Price
MRP-900	3	2"	2¼"	7	$1.62
MRP-901	5	2"	2¼"	7	2.19
MRP-902	3	3"	2¹³⁄₁₆"	7	1.62
MRP-903	5	3"	2¹³⁄₁₆"	7	2.19



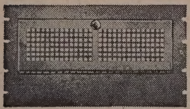
SPEAKER PANELS

A piece of perforated metal is spot-welded behind the opening.

Cat. No.	Height	Spkr. Size	Hole Size	Sh. Wt. Lbs.	Net Price
SRP-819	8¾"	6"	4⅝"	6	$2.88
SRP-1019	10½"	8"	6½"	8	3.66
SRP-1219	12¼"	10"	8½"	9	4.38
SRP-1419	14"	12"	11"	10	5.04



STANDARD TYPE



GRILLE TYPE

DOOR PANELS — 19" WIDE

Made of No. 12 Gauge Steel

Panels have flush hinged doors with piano hinges, and are supplied with a quick turn fastener. Doors are located 1" from top to allow space for chassis at bottom.

STANDARD TYPE					GRILLE TYPE	
Cat. No.	Net Price	Height	Door Size	Ship. Wt. Lbs.	Cat. No.	Net Price
DRP-700	$5.12	8¾"	4½"x15⅜"	9	GDRP-700	$6.57
DRP-701	5.48	10½"	6" x15⅜"	10	GDRP-701	7.13
DRP-702	6.04	12¼"	7½"x15⅜"	12	GDRP-702	7.86

SIDE HINGED DOOR PANELS

Used for left or right hand opening. Supplied with a quick turn fastener.

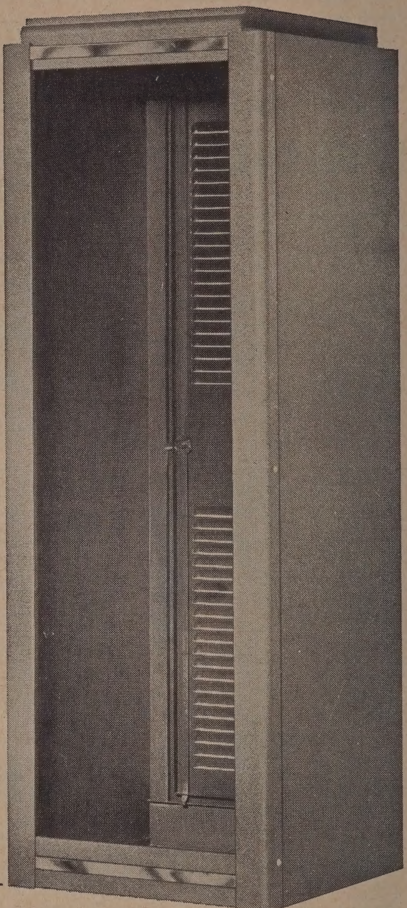
Cat. No.	Height	Net Price
SHP-319	3½"	$3.00
SHP-519	5¼"	3.12
SHP-719	7"	3.42
SHP-819	8¾"	3.66
SHP-1019	10½"	3.96
SHP-1219	12¼"	4.23
SHP-1419	14"	4.59
SHP-2119	21"	7.26

NEW YORK 59, N. Y.

WYCO METAL PRODUCTS ALL-WELDED DELUXE CABINET RACKS

DELUXE "D" SERIES

AN ALL-WELDED UNIT FOR 19" RACK PANELS



SPECIFICATIONS:

A. Rack is constructed throughout from 16 gauge high-quality steel and is completely welded together.

B. Panel mounting angles constructed of 1½ x 1½ x ⅛" angle iron.

C. Mounting holes are tapped 10/32 thread.

D. Mounting holes are at 1¼"-½" spacings. (WESTERN ELECTRIC SPACING.)

E. Double row of louvres in rear door provide ventilation.

F. Door is hung on loose-pin hinges; it may be easily removed.

G. Door is securely locked by means of an "automotive" type highly-polished handle and linkage rods.

H. Highly polished metal trim is on front of rack at top and bottom.

I. Panel mounting screws are concealed by detachable corner vertical trim (see Item "L").

J. Finished in black or grey wrinkle enamel and silver grey hammertone.

K. When it is desired to "gang" two or more of these cabinets together, order connecting trim, using the prefix "AD" plus the last two numbers of the catalog number of the cabinet.

L. Narrow vertical trim, allowing for removal of 19" panels, without removing vertical trim, is available, upon request, at no additional charge.

RACKS — 18½" DEEP

Catalog Number	Overall Dimensions	Panel Space	Clear Inside Width (Front)	Clear Inside width (Rear)	Clear Inside Depth	Approx. Shipping Weight	Dealer Cost
D 1869	69⅝ x 23⅝ x 18½	61¼ x 19	17⅞	19⅝	16¾	155 lbs.	$112.07
D 1878	78⅜ x 23⅝ x 18½	70 x 19	17⅞	19⅝	16¾	167 lbs.	122.73
D 1885	85⅜ x 23⅝ x 18½	77 x 19	17⅞	19⅝	16¾	180 lbs.	138.71

RACKS — 24" DEEP

Catalog Number	Overall Dimensions	Panel Space	Clear Inside Width (Front)	Clear Inside width (Rear)	Clear Inside Depth	Approx. Shipping Weight	Dealer Cost
D 2469	69⅝ x 23⅝ x 24	61¼ x 19	17⅞	19⅝	22¼	176 lbs.	$131.61
D 2478	78⅜ x 23⅝ x 24	70 x 19	17⅞	19⅝	22¼	192 lbs.	142.26
D 2485	85⅜ x 23⅝ x 24	77 x 19	17⅞	19⅝	22¼	205 lbs.	159.97

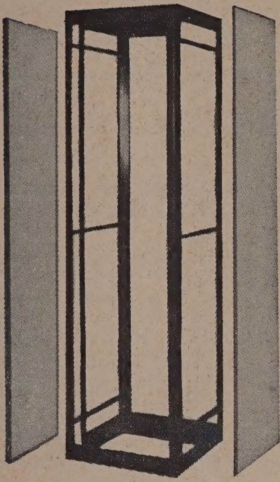
Wyco Metal Products • NORTH HOLLYWOOD, CALIFORNIA

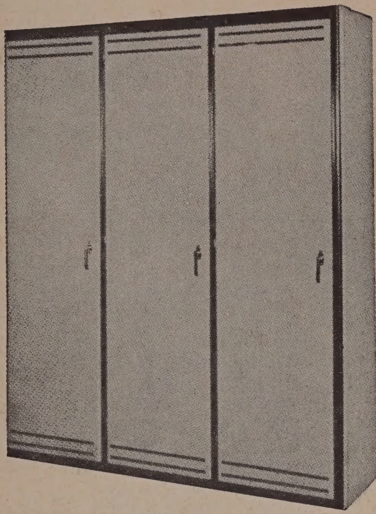
WYCO METAL PRODUCTS

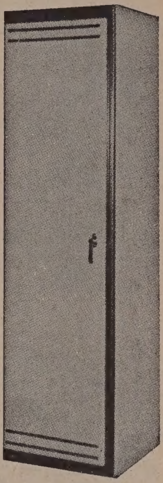
MULTIPLE RACK INSTALLATIONS

ALL-WELDED FRAME—FOR 19″ MODELS
REMOVABLE SIDES—ADJUSTABLE MOUNTING ANGLES

18″ DEEP AND 24″ DEEP







SPECIFICATIONS:

- A. Sides are removable for MULTIPLE RACK installations of two or more units.
- B. This series consists of one frame and rear door, or one frame, rear and front door.
- C. Removable sides sold separately, in pairs only.
- D. Fabricated of high-quality, heavy gauge steel and electronically welded together.
- E. Panel mounting angles are 3/16″ structural steel with mounting holes tapped 10-32 thread on 1¼″-½″ spacing.
- F. Panel mounting angles are adjustable from front to back.
- G. Highly-polished trim on doors.
- H. "Automotive" type, highly-polished handles on doors.
- I. Door can be mounted left or right hand.
- J. Bottom has cut-out for cables, leads, etc.
- K. Louvres in doors, sides and cabinet top can be added at no additional cost.
- L. A rectangular or round opening can be put into cabinet top at no additional cost.
- M. Available in primer coat, two-tone grey enamel (frame in dark grey; doors and ends in silver-grey hammertone), black or grey wrinkle.
- N. Heavy-duty Caster #RC7773 may be used with this series.

18″ DEEP RACK

REAR DOOR ONLY					FRONT AND REAR DOOR				
Cat. No.	Height	Panel Space	Approx. Shp. Wt.	Dealer Cost	Cat. No.	Height	Panel Space	Approx. Shp. Wt.	Dealer Cost
RW861	67⅜″	61¼″	123	$103.28	FW618	67⅜″	61¼″	143	$122.24
RW870	76⅛″	70″	129	119.30	FW708	76⅛″	70″	152	132.71
RW877	83⅛″	77″	143	123.60	FW778	83⅛″	77″	168	145.50

24″ DEEP RACK

REAR DOOR ONLY					FRONT AND REAR DOOR				
Cat. No.	Height	Panel Space	Approx. Shp. Wt.	Dealer Cost	Cat. No.	Height	Panel Space	Approx. Shp. Wt.	Dealer Cost
RW461	67⅜″	61¼″	144	123.94	FW614	67⅜″	61¼″	169	$146.67
RW470	76⅛″	70″	153	143.22	FW704	76⅛″	70″	183	167.65
RW477	83⅛″	77″	169	152.03	FW774	83⅛″-	77″	202	178.42

18″ DEEP REMOVABLE SIDES

Catalog No.	Approx. Shp. Wt. Pairs	Dealer Cost
RS 1861	45 lbs.	$37.88 pr.
RS 1870	50 lbs.	40.76 pr.
RS 1877	55 lbs.	43.84 pr.

24″ DEEP REMOVABLE SIDES

Catalog No.	Approx. Shp. Wt. Pairs	Dealer Cost
RS 2461	56 lbs.	$45.46 pr.
RS 2470	64 lbs.	48.88 pr.
RS 2477	70 lbs.	52.79 pr.

Wyco Metal Products • NORTH HOLLYWOOD, CALIFORNIA

WYCO METAL PRODUCTS ALL-WELDED CABINET RACKS

DELUXE SERIES "G" AND "DF" — STANDARD SERIES "SL" AND "S"

DESCRIPTION:

- A. 16 ga. high quality steel.
- B. Welded together.
- C. Panel mounting angles ⅛" steel.
- D. Western Electric spacing.
- E. Tapped 10/32.
- F. Louvres rear door.
- G. Rear door hung on loose-pin hinges.
- H. Rear door has flush-type latch.
- I. Highly-polished trim at front, top and bottom.
- J. Front corners rounded.
- K. Available grey or black wrinkle and silver grey hammertone.
- L. "SL" and "S" series have detachable vertical trim.
- M. "G" and "DF" series panel mounting angles adjustable front to back.
- N. "DF" series has front door with automotive type handle and three point catch.
- O. "SL" series has louvres at sides.
- P. Narrow vertical trim can be ordered for "SL" and "S" series.

SPECIFICATIONS:

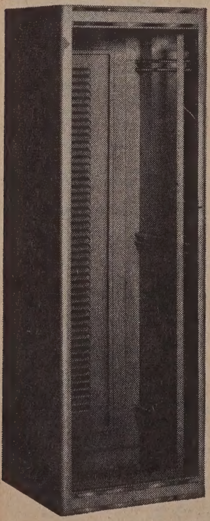
Cat. No.	Overall Dim.	Panel Space	Approx. Ship. Wt. Lbs.	Dealer Cost
G 6119	67⅜" x 22" x 18"	61¼" x 19"	165	$ 99.14
G 7019	76⅛" x 22" x 18"	70" x 19"	185	111.56
G 7719	83⅛" x 22" x 18"	77" x 19"	195	123.92
DF 1961	67⅜" x 22" x 18"	61¼" x 19"	185	123.92
DF 1970	76⅛" x 22" x 18"	70" x 19"	200	142.22
DF 1977	83⅛" x 22" x 18"	77" x 19"	210	154.64
SL 1842	42⅞" x 21⅛" x 18"	36¾" x 19"	107	71.13
SL 1867	67⅜" x 21⅛" x 18"	61¼" x 19"	145	92.08
SL 1883	83⅛" x 21⅛" x 18"	77" x 19"	177	116.86

STANDARD "S" SERIES

FOR 19" RACK PANELS

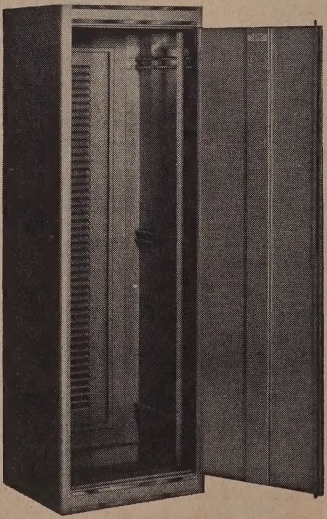
SPECIFICATIONS:

A. ALL SPECIFICATIONS AND DIMENSIONS OF "SL" SERIES APPLY, EXCEPT FOR FOLLOWING:
- (1) LOUVRES AT SIDE ARE OMITTED to facilitate use of racks in rows or "gangs."
- (2) When it is desirable to set up these cabinets in rows or "gangs," we can supply a connecting trim for a small additional charge. Order connecting trim, using prefix "AS" plus the last two numbers of the catalog number of the cabinet.
- (3) Catalog Numbers are prefaced with "S" instead of "SL."



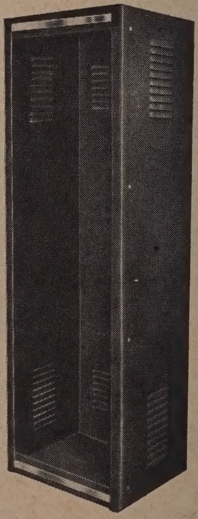
"G" SERIES

ADJUSTABLE MOUNTING ANGLE



"DF" SERIES

ADJUSTABLE MOUNTING ANGLE



"SL" SERIES

DETACHABLE VERTICAL TRIM AT FRONT CORNERS

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WYCO
METAL PRODUCTS

CABINET RACKS - RELAY RACKS EXPAND-A-RACKS

MODEL "W" AND BANNER "B" SERIES

DESCRIPTION: "W" SERIES

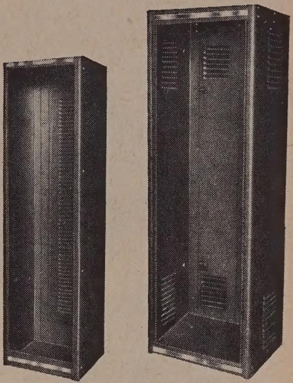
A. 16 gauge high-quality steel.
B. Front corners are rounded.
C. Panel mounting angles ⅛" steel.
D. Mounting holes tapped 10/32 thread.
E. Mounting holes are UNIVERSAL CENTERS.
F. Louvres in rear door and sides.
G. Door hung on loose pin hinges.
H. Door closed by two flush-type latches.
I. Highly-polished trim on front.
J. RACK IS SHIPPED "KNOCKED-DOWN"; all necessary bolts supplied for assembly.
K. Finished in black or grey wrinkle and silver grey hammertone.
L. There are four brackets spot welded to the bottom of the cabinet. Our casters (catalog No. RC100) can be attached to these brackets. This offers instant mobility, if required.

DESCRIPTION: "B" SERIES

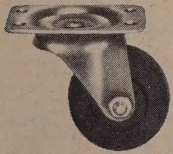
A. 16 gauge high-quality steel and is welded together.
B. Panel mounting angles 1½x1½x⅛" angle iron.
C. Mounting holes are 10/32 thread.
D. (WESTERN ELECTRIC SPACING.)
E. Louvres in rear doors.
F. Rear corners re-inforced.
G. Door hung on loose pin hinges.
H. Door closed by two flush-type latches.
I. Highly-polished trim on front.
J. Panel mounting screws concealed by vertical trim.
K. Finished in black or grey wrinkle enamel and silver grey hammertone.
L. When it is desirable to set up racks in rows or "gangs," order connecting trim, using the prefix "AB" plus the last two numbers of the catalog number of the cabinet.

SPECIFICATIONS:

Catalog Number	Overall Dimensions	Panel Space	Clear Inside Width (Front)	Clear Inside Width (Rear)	Clear Inside Depth	Approx. Shipping Weight	Dealer Cost
W 1036	42 x22x17¼	36¾x19	17⅞	17¼	15⅞	88 lbs.	$45.17
W 1042	47¼x22x17¼	42 x19	17⅞	17¼	15⅞	95 lbs.	51.10
W 1061	66½x22x17¼	61¼x19	17⅞	17¼	15⅞	122 lbs.	63.96
W 1077	82¼x22x17¼	77 x19	17⅞	17¼	15⅞	148 lbs.	76.57
B 1876	76⅛x21⅛x18	70 x19	17⅞	17¼	16½	178 lbs.	124.49



"B" SERIES

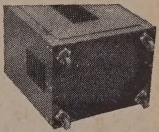


CASTERS

DESCRIPTION:

A. Can be used with our "W" series and Expand-A-Rack series.
B. Load capacity of a set of four is 520 lbs.
C. The swivel bearing wheels are made of a hard fibrous compound.

CATALOG NO. RC-100 APPROX. SHIP. WT. EACH 8 oz.
DEALER COST $1.10 ea.



"W" SERIES

EXPAND-A-RACK SERIES

DESCRIPTION:

A. When it is necessary to join two or more racks together, WYCO METAL PRODUCTS offers the "EXPAND-A-RACK" series.
B. Figure "A" shows two Expand-A-Racks joined together.
C. Figure "B" illustrates the method of expanding your present rack space. In place of purchasing an additional rack, a unit, consisting of the following items, would be bought: (a) the door; (b) the top; (c) the bottom; (d) an Expand-A-Rack joining unit. The right or left side of your existing relay cabinet rack is dis-assembled and replaced with an Expand-A-Rack joining unit. Following this step, the top and bottom are assembled. The cabinet side removed from the original rack is then fastened onto the second rack. Upon hanging the additional door, two complete racks are now joined together.
D. Wyco's Expand-A-Rack series may be purchased by one of two methods. One method consists of buying one complete rack (the "W" series) plus one Expand-A-Rack unit. If you already have one of our basic "W" series cabinets, then order an Expand-A-Rack unit.
E. Supports are electronically welded to the bottom to receive our casters (#RC-100).
F. There is an ample amount of compound knockouts in the Expand-A-Rack joining unit center partition. This allows cables and leads to be taken from one cabinet to the other.
G. Available in Grey or Black Wrinkle and Silver Grey Hammertone.

SPECIFICATIONS:

Cat. No.	Used to Expand-A-Rack With	Approx. Ship Wt. Lbs.	Dealer Cost
E-400	W-1036	74	$44.34
E-401	W-1042	78	49.01
E-402	W-1061	99	60.96
E-403	W-1077	126	74.90

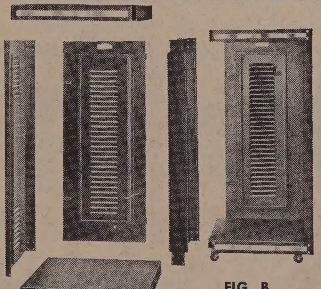


FIG. B

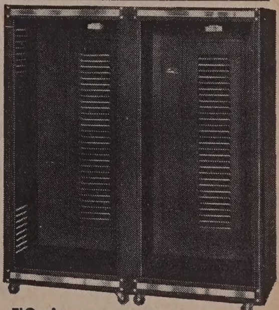


FIG. A

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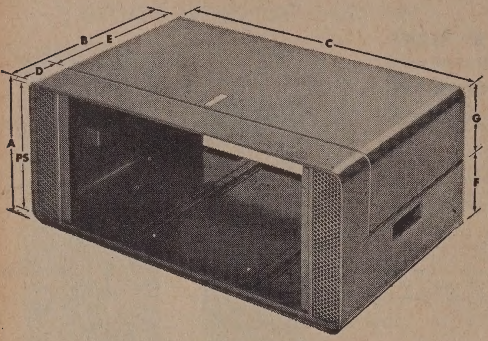
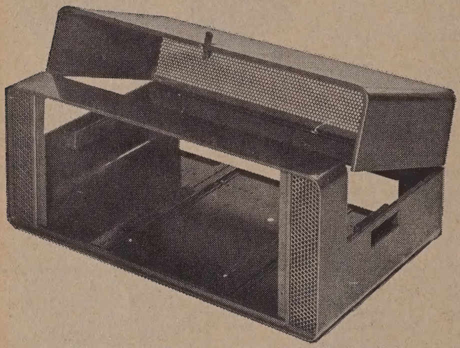
WYCO METAL PRODUCTS

THE "SUPREME LINE" CABINET SERIES AND PORTABLE SCOPE DOLLY



FRONT VIEW



FRONT VIEW — TOP DOOR OPEN

DESCRIPTION:

A. Fabricated of 16 ga. steel.

B. Mounting holes tapped 10-32.

C. Mounting holes: Universal spacing.

D. Ventilated by perforated metal front and back and rear opening.

E. Top door has continuous piano hinge.

F. Top door has flush-type latch.

G. Embossed feet with rubber bumpers at bottom.

H. Adjustable Hat-section type rails, furnished to support chassis, have holes for bolting to cabinet bottom and chassis.

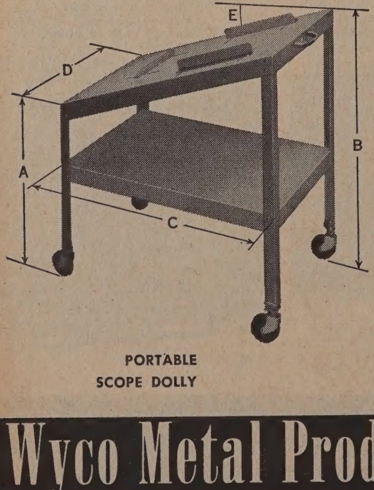
I. Recessed carrying handles are in sides of cabinet.

J. Finished in dark grey hammertone.

K. Utilization of our standard aluminum or steel panels in silver grey hammertone finish with this series creates an attractive contrast.

SPECIFICATIONS

CAT #	PANEL SPACE	A	B	C	D	E	F	G	H	I	Approx. Ship. Wt. Lbs.	Dealer Cost
SL 7760	7x19	7¾	15	24	3	12	3⅞	3⅞	3⅛	3⅞	23	$26.39
SL 7761	8¾x19	9½	15	24	3	12	4¾	4¾	3⅛	4¾	25	28.15
SL 7762	10½x19	11¼	15	24	3	12	5⅝	5⅝	3⅛	5⅝	27	29.91
SL 7763	12¼x19	13	15	24	3	12	6½	6½	3⅛	6½	29	33.87
SL 7764	14x19	14¾	15	24	3	12	7⅜	7⅜	3⅛	7⅜	31	37.66



PORTABLE SCOPE DOLLY

DESCRIPTION

A. Shelves fabricated of high-quality steel.

B. Legs fabricated of structural steel for strength.

C. Highly - polished functional handle included.

D. By adjusting brackets on the top shelf, almost any popular type of laboratory scope may be carried.

E. Full - swivel 3" rubber casters included.

F. Painted in smooth silver-grey hammertone.

G. Shipped knocked-down with all necessary hardware for easy assembly.

CAT. #	Type	"A"	"B"	"C"	"D"	"E"	Approx. Ship. Wt.	Price
SD 7783	sloping	21¾"	32½"	28"	19"	20°	30#	$34.95

(PRICES SUBJECT TO CHANGE WITHOUT NOTICE)

Wyco Metal Products • NORTH HOLLYWOOD, CALIFORNIA

WYCO METAL PRODUCTS

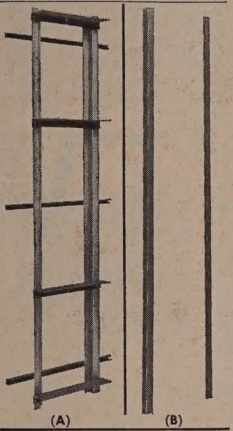
SLIDES — SLIDE ASSEMBLIES

SLIDING DRAWERS
VERTICAL SLIDE SUPPORTS — EXTRA MOUNTING ANGLES
HEAVY DUTY CASTERS

(A) VERTICAL SIDE SUPPORTS

Description: (A) Bolts to Unistrut members in following series cabinets: RW/FW/G/DF. (B) 12 ga. steel; painted hammertone. (C) 10-32 holes; Universal spacing. (D) Supports shelves, mounting brackets and slide units. (E) Support brackets not included; order separately. (F) Mounting hardware included.

Cat. #	Panel Space	Ship Wt.	Price Set 4
ZA-7757	61¼"	30	$20.38
ZA-7758	70"	34	23.71
ZA-7759	77"	38	26.54

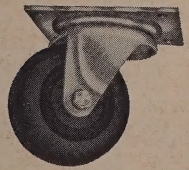


(B) EXTRA MOUNTING ANGLES

Description: (A) Order when additional pair mounting angles required for following cabinet series: RW/FW/DF/G. (B) 12 ga. steel; painted grey hammertone. (C) 10-32 holes; WE spacing.

Cat. #	Panel Space	Ship Wt.	Price Per Pr.
MA-7774	61¼"	22	$17.48
MA-7775	70"	26	19.89
MA-7776	77"	30	21.73

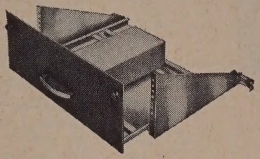
HEAVY DUTY CASTER



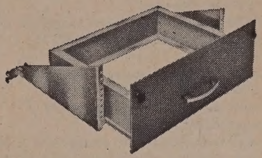
Description: (A) Capacity: 200# per caster. (B) 4" x 1⅝" full-swivel wheel. (C) All rubber cushion tread, hard fibrous center. (D) Used on RW/FW cabinet series.
Catalog #RC-7773
PRICE: ea. $5.18

PHOTOGRAPHS A, B, C, D, ARE EXAMPLES OF SLIDE ASSEMBLIES FOR 19" RACKS

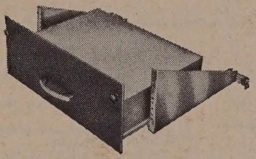
(A) Example: Slide Assembly Using Chassis LESS Than 17" Width



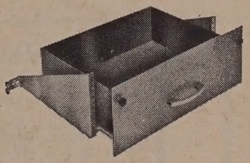
(B) Example: Slide Assembly Using Chassis Frame



(C) Example: Slide Assembly Using 17" Wide Chassis

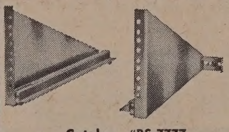


(D) Example: Slide Assembly Using Drawer



ORDER COMBINATION OF PARTS, DESCRIBED BELOW, TO BUILD ASSEMBLIES, AS REQUIRED, FOR 19" RACK MOUNTING

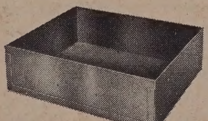
SLIDES FOR 17" WIDE CHASSIS



Catalog #BS-7777
PRICE: $7.77 pr. net

Description: (A) Supports 17" wide chassis. (B) Supports 75 lbs. in extended position. (C) Travels on roller bearings. (D) 14" deep in closed position. (E) Extends 10" to front when pulled out. (F) Attaches to rear side of mounting angle. (G) Fabricated of heavy-gauge, plated steel.

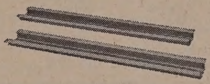
DRAWER



Catalog #BS-7780
PRICE: $8.96 net

Description: (A) Size: 17" wide x 14" deep x 5" high. (B) Heavy-gauge steel. (C) Painted black enamel. (D) Includes hardware for attaching to basic slides.

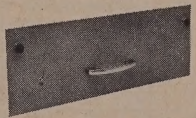
SUPPORTS FOR CHASSIS LESS THAN 17" WIDE



Catalog #BS-7778
PRICE: $2.29 pr. net

Description: (A) Used with BS-7777 to support any chassis less than 17" wide. (B) Heavy-gauge, plated steel. (C) Includes hardware for attaching to basic slides.

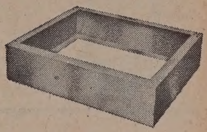
FRONT SLIDE PANEL



Cat. #	Size	Price
BS-7781	7"x19"	$4.59 net
BS-7782	10½"x19"	5.22 net

Description: (A) Used as front panel; attaches to slide assembly. (B) 12 gauge steel. (C) Handle and quick-turn latches included. (D) Colors: Grey and Black wrinkle or grey hammertone.

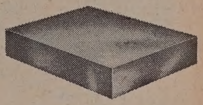
CHASSIS FRAMES



Catalog #BS-7779
PRICE: $5.12 net

Description: (A) Size 17" x 14" x 3" x 1" flange. (B) 1" flange supports plywood for record changer. (C) Heavy-gauge, plated steel. (D) Includes hardware for attaching to basic slides.

STANDARD CHASSIS



Description: (A) Standard aluminum or steel chassis may be used with our slide unit. (B) See list of sizes described in this catalog.

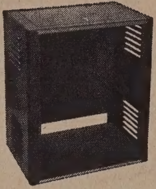
Wyco Metal Products • NORTH HOLLYWOOD, CALIFORNIA

WYCO METAL PRODUCTS

CABINET RACKS - RELAY RACKS CHASSIS - CASES

MODEL "C" SERIES

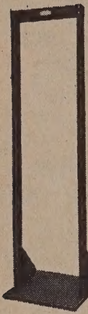
DESCRIPTION:



A. Constructed of heavy gauge high-quality steel and is completely welded together.
B. Front vertical corners rounded.
C. Mounting holes tapped 10/32 thread.
D. Mounting holes spaced on UNIVERSAL CENTERS.
E. Louvres in side provide ample ventilation.
F. Highly-polished trim at top and bottom of front.
G. Top door has piano hinge and flush-type latch.
H. Finished in black or grey wrinkle and silver grey hammertone.
I. Embossed feet on bottom minimize marring of table tops.

SPECIFICATIONS: (DOOR IN TOP ONLY)

Catalog Number	Dimensions	Panel Space	Approx. Shipping Weight	Dealer Cost
C719	8¾x22x15 Deep	7 x19	25 lbs.	$15.28
C819	10½x22x15 Deep	8¾x19	27 lbs.	16.70
C1019	12¼x22x15 Deep	10½x19	28 lbs.	19.12
C1219	14 x22x15 Deep	12¼x19	30 lbs.	20.12
C1419	15¾x22x15 Deep	14 x19	32 lbs.	21.96
(DOOR IN TOP AND REAR)				
C1719	19¼x22x15 Deep	17½x19	36 lbs.	$26.22
C2119	22¾x22x15 Deep	21 x19	40 lbs.	28.06
C2619	28 x22x15 Deep	26¼x19	43 lbs.	30.14
C3119	33¼x22x15 Deep	31½x19	47 lbs.	31.98
C3519	36¾x22x15 Deep	35 x19	50 lbs.	33.65

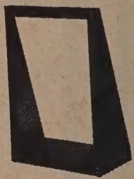


"RC" SERIES

A. Rack constructed of ⅛" high-quality steel.
B. Mounting holes are tapped 10/32 thread.
C. Mounting holes are spaced on UNIVERSAL CENTERS.
D. Base is 20" x 20".
E. Finished in black wrinkle only.
F. SHIPPED "KNOCKED-DOWN"; all necessary bolts supplied for assembly.

"RT" SERIES

A. Rack constructed of heavy gauge high-quality steel.
B. Mounting holes are tapped 10/32 thread.
C. Mounting holes are spaced on UNIVERSAL CENTERS.
D. Finished in black wrinkle only.
E. SHIPPED "KNOCKED-DOWN"; all necessary bolts supplied for assembly.



SPECIFICATIONS:

Catalog Number	Panel Space	Approx. Shipping Weight	Dealer Cost
RC36	36¾x19	28 lbs	$21.96
RC71	71¾x19	41 lbs.	25.13

Catalog Number	Panel Space	Height	Width	Depth	Approx. Shipping Weight	Dealer Cost
RT21	21x19	25"	21"	12"	16 lbs.	$ 9.10
RT28	28x19	32"	21"	12"	18 lbs.	11.19

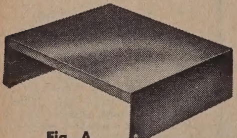


Fig. A

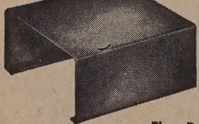


Fig. B

OPEN END CHASSIS

DESCRIPTION: Fig. A

A. Can be utilized on all types of small built-up units such as record amplifier, code oscillator, etc.
B. Electro-Zinc plated.

MINIATURE ALUMINUM CHASSIS

DESCRIPTION: Fig. B

A. Ideal for miniature tube applications, sub-assemblies, small receivers, narrow band FM adaptors.
B. Has ¼" flanges on bottom.
C. Etched aluminum finish.

Catalog Number	Depth	Width	Height	Approx. Shipping Wt.-Lbs.	Dealer Cost
E-570	7"	6"	2"	1	$1.00
E-571	5"	7"	1½"	¾	.97
E-572	7"	7"	1½"	¾	1.24
E-573	7"	8"	2"	1	1.17
E-574	5½"	9"	1½"	¾	1.09
E-575	7½"	9"	1½"	1	1.40
E-576	7"	10"	2"	1¼	1.37
E-577	7"	11"	1½"	1¼	1.30
E-578	7"	13"	1½"	1½	1.59
E-579	10¾"	14"	2"	2½	1.87
E-580	7¾"	15"	2"	2	1.78

Catalog Number	Depth	Width	Height	Approx. Shipping Wt.-Lbs.	Dealer Cost
MA-700	2⅝"	2¾"	1¼"	¼	$.38
MA-701	1¾"	3⅛"	1"	¼	.42
MA-702	3¼"	4½"	2"	¼	.48
MA-703	2¾"	4⅛"	1"	¼	.45
MA-704	3¾"	4⅛"	1½"	¼	.45
MA-705	3"	6⅛"	1¼"	¼	.53
MA-706	5¾"	4⅞"	1½"	¼	.57
MA-707	4"	3⅛"	1"	½	.41
MA-708	4"	4⅛"	1"	½	.50
MA-709	4"	5⅛"	1"	½	.53
MA-710	4"	6⅛"	1"	½	.55

MINIATURE SPEAKER CASE

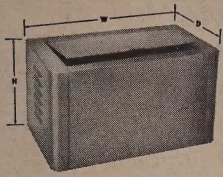
DESCRIPTION:

A. Houses midget 2" or 3" speaker.
B. Silver Grey Hammertone Finish.

SPECIFICATIONS:

Catalog Number	Hole Diameter	Fits Speaker Size	Approx. Ship. Wt. Lbs.	Dealer Cost
MS-80	2¼"	2"	¾	$1.58
MS-81	2$\frac{13}{16}$"	3"	¾	1.58

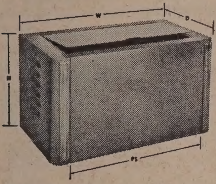
WYCO METAL PRODUCTS RECEIVER CABINETS - SLOPING PANEL/TOP OPENING - MULTI-USE CABINETS - CHASSIS DECK



MODEL "CS" RECEIVER CABINET (Description)

(A.) Front vertical corners are rounded. (B.) Has recessed, hinged, top door. (C.) Top door opened by finger lift. (D.) Removable front panel, included, is attached with self-tapping screws. (E.) Louvers in side provide ventilation. (F.) Silver grey hammertone only.

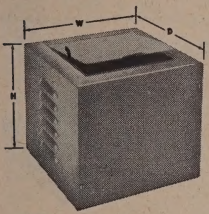
Cat. #	H	W	D	Panel Size	Approx. Ship. Wt. Lbs.	Dealer Cost
CS 7727	8″	10½″	8¼″	8″x 8″	6¼	$4.31
CS 7728	8″	12½″	8¼″	8″x10″	6½	5.31
CS 7729	8″	14½″	8¼″	8″x12″	7	5.78
CS 7730	8″	16½″	8¼″	8″x14″	7½	6.05
CS 7731	8″	18½″	8¼″	8″x16″	8¼	6.63
CS 7732	12″	20⅝″	12″	12″x18″	15½	12.06



MODEL "DC" RECEIVER CABINET (Description)

(A.) Description of Model "DC" Receiver Cabinet is same as Model "CS" Cabinet except for following: There are two vertical, highly-polished trim strips on face of cabinet.

Cat. #	H	W	D	Panel Size	Approx. Ship. Wt. Lbs.	Dealer Cost
DC 7733	8″	10½″	8¼″	8″x 8″	6¼	$6.41
DC 7734	8″	12½″	8¼″	8″x10″	6½	6.51
DC 7735	8″	14½″	8¼″	8″x12″	7	6.88
DC 7736	8″	16½″	8¼″	8″x14″	7½	7.33
DC 7737	8″	18½″	8¼″	8″x16″	8¼	8.06
DC 7738	12″	20⅝″	12″	12″x18″	15½	14.66



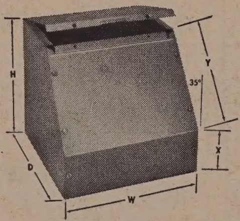
MODEL "CR" RECEIVER CABINET (Description)

(A.) Front vertical corners are square. (B.) Top door is recessed and hinged. (C.) Top door has finger lift. (D.) Removable front panel, included, is attached with self-tapping screws. (E.) Ventilation is supplied by louvers. (F.) Finished in silver grey hammertone only.

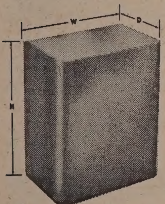
Cat. #	H	W	D	Approx. Ship. Wt. Lbs.	Dealer Cost
CR 7720	7″	8″	8″	5½	$4.18
CR 7721	7″	10″	8″	6	4.84
CR 7722	7″	12″	8″	6¼	5.01
CR 7723	7″	14″	8″	6½	5.26
CR 7724	8″	16″	8″	7½	7.60
CR 7725	9″	15″	11″	8½	9.19
CR 7726	12″	18″	12″	15½	9.92

SLOPING PANEL/TOP OPENING CABINET (Description)

(A.) Sloping front panel, included, is attached with self-tapping screws. (B.) Hinged, top door has finger lift. (C.) Opening at back for leads and ventilation. (D.) Silver grey hammertone only.



Cat. #	H	W	D	X	Y	Approx. Ship. Wt. Lbs.	Dealer Cost
SC 7739	6½″	7 1/16″	7 5/16″	2¼″	5 1/16″	3	$3.30
SC 7740	8″	8 1/16″	8″	2¼″	6 7/16″	3¼	4.51
SC 7741	6½″	9 1/16″	7 5/16″	2¼″	5 1/16″	3½	3.75
SC 7742	8″	10 1/16″	8″	2¼″	6⅞″	3¾	5.01
SC 7743	6½″	11 1/16″	7 5/16″	2¼″	5 1/16″	4	4.34
SC 7744	8″	14 1/16″	8″	2¼″	6⅞″	4½	5.34
SC 7745	8″	13 1/16″	8½″	2¾″	6 5/16″	4¾	5.59
SC 7746	9″	18 1/16″	8⅛″	2¼″	6 15/16″	7½	7.68
SC 7747	10″	18 1/16″	10½″	3¼″	8⅛″	8¾	7.85



MULTI-USE CABINET (Description)

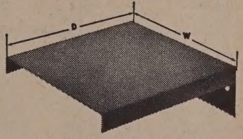
(A.) Ventilated by open back. (B.) Streamlined by rounded corners. (C.) Silver grey hammertone only.

Cat. #	H	W	D	Approx. Ship. Wt. Lbs.	Dealer Cost
MC 7748	4½″	5½″	3½″	1¼	$1.70
MC 7749	6½″	5½″	3½″	1¾	1.75

CHASSIS DECK (Description)

(A.) Can be used for interstage shielding. (B.) Made of steel. (C.) Painted black enamel.

Cat. #	W	D	Approx. Ship. Wt. Lbs.	Dealer Cost
CD 7754	4¾″	5½″	1	$.68
CD 7755	4¾″	4½″	1	.65
CD 7756	5¾″	5½″	1½	.78



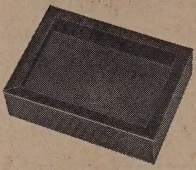
Wyco Metal Products • NORTH HOLLYWOOD, CALIFORNIA

WYCO
METAL PRODUCTS

CHASSIS

Black Wrinkle Cat. No.	Zinc Plated Cat. No.	STEEL Depth	Width	Ht.	Ga.	Approx. Ship. Wt.-Lbs.	Dealer Cost B.W.	Cad.
BC-940	CP-1300	5″	7″	2″	22	1	$1.07	$1.30
BC-941	CP-1301	5″	9½″	2½″	22	1¼	1.37	1.67
BC-942	CP-1302	5″	9½″	1½″	22	1	1.20	1.69
BC-943	CP-1303	5″	10″	3″	22	1¼	1.27	1.84
BC-944	CP-1304	6″	14″	3″	20	1¾	1.75	2.05
BC-945	CP-1305	7″	7″	2″	22	1½	1.20	1.50
BC-946	CP-1306	7″	9″	2″	22	1½	1.40	1.59
BC-947	CP-1307	7″	11″	2″	20	1½	1.45	1.67
BC-948	CP-1308	7″	12″	3″	20	1¾	1.57	2.05
BC-949	CP-1309	7″	13″	2″	20	2	1.54	1.92
BC-950	CP-1310	5″	13½″	2½″	20	1¾	1.77	2.17
BC-951	CP-1311	7″	15″	3″	20	2	2.00	2.40
BC-952	CP-1312	8½″	15″	3″	20	2½	2.24	2.71
BC-953	CP-1313	4″	17″	3″	20	2¼	1.80	2.14
BC-954	CP-1314	7″	17″	2½″	20	2½	1.99	2.37
BC-955	CP-1315	7″	17″	3″	20	1¾	2.15	2.59
BC-956	CP-1316	8″	10″	2½″	20	2	1.72	2.02
BC-957	CP-1317	8″	12″	2½″	20	2½	1.75	2.24
BC-958	CP-1318	8″	12″	3″	20	1¾	1.85	2.34
BC-959	CP-1319	8″	17″	2″	20	2½	1.70	2.34
BC-960	CP-1320	8″	17″	3″	20	3¼	2.05	2.62
BC-961	CP-1321	10″	12″	3″	20	3	1.89	2.25
BC-962	CP-1322	10″	14″	3″	20	4	2.04	2.44
BC-963*	CP-1323	10″	17″	2″	20	3¼	2.00	2.39
BC-964*	CP-1324	10″	17″	3″	20	4	2.00	2.84
BC-965*	CP-1325	10″	17″	3″	18	5	2.54	3.05
BC-966	CP-1326	10″	23″	3″	18	5½	2.86	3.42
BC-967*	CP-1327	11″	17″	2″	18	4½	2.35	2.81
BC-968*	CP-1328	11″	17″	3″	18	4½	2.77	3.49
BC-969*	CP-1329	12″	17″	2″	18	4½	2.44	3.09
BC-970*	CP-1330	12″	17″	3″	18	5¼	2.91	3.67
BC-971*	CP-1331	13″	17″	2″	18	5	2.91	3.72
BC-972*	CP-1332	13″	17″	3″	18	5½	3.41	4.07
BC-973*	CP-1333	10″	17″	4″	18	6½	2.92	3.51
BC-974*	CP-1334	13″	17″	4″	18	7½	3.92	4.68
BC-975	CP-1335	10″	17″	5″	18	7½	4.51	5.34
BC-976	CP-1336	13″	17″	5″	18	8	4.93	5.93

Cat. No.	ALUMINUM Depth	Width	Ht.	Gauge	Approx. Shipping Wt.-Lbs.	Dealer Cost
CA-2001	4″	6″	3″	18	½	$1.34
CA-2002	4″	6″	2″	18	½	1.10
CA-2003	4″	17″	3″	16	1¼	2.33
CA-2004	5″	7″	2″	18	½	1.17
CA-2005	5″	7″	3″	16	¾	1.42
CA-2006	5″	9½″	2″	18	½	1.24
CA-2007	5″	9½″	3″	18	¾	1.60
CA-2008	5″	10″	3″	18	¾	1.63
CA-2009	5″	13″	3″	18	¾	1.84
CA-2010	6″	17″	3″	16	1¼	2.67
CA-2011	7″	7″	2″	18	½	1.35
CA-2012	7″	9″	2″	18	½	1.46
CA-2013	7″	11″	2″	18	¾	1.58
CA-2014	7″	12″	3″	18	1	2.00
CA-2015	7″	13″	2″	18	¾	1.67
CA-2016	7″	15″	3″	16	1½	2.67
CA-2017	7″	17″	3″	16	1¾	2.75
CA-2018	8″	12″	3″	16	1½	2.42
CA-2019	8″	17″	2″	16	1½	2.51
CA-2020	8″	17″	3″	16	1¾	2.84
CA-2021	10″	12″	3″	16	1½	2.67
CA-2022	10″	14″	3″	16	1¾	2.84
CA-2023	10″	17″	2″	16	1¼	2.68
CA-2024	10″	17″	3″	16	2	3.17
CA-2025	11″	17″	2″	14	2¼	3.42
CA-2026	11″	17″	3″	14	2¾	3.97
CA-2027	12″	17″	3″	14	2¾	4.08
CA-2028	13″	17″	2″	14	2½	3.51
CA-2029	13″	17″	3″	14	2¾	4.26
CA-2030	10″	17″	4″	14	3½	4.51
CA-2031	13″	17″	4″	14	3¾	5.26



STEEL CHASSIS

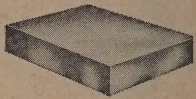
DESCRIPTION:

A. Fabricated from one piece of steel.
B. All corners electronically spot welded.
C. Flanges on bottom formed and punched to allow bottom plate to be attached, if desired.
D. Finished in Black Wrinkle or Zinc plated.
E. Asterisk indicates holes punched to receive chassis mounting brackets.

ALUMINUM CHASSIS

DESCRIPTION:

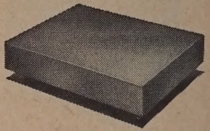
A. Fabricated of one piece of aluminum, 3003-H14.
B. All corners are electronically spot welded.
C. Flanges on bottom formed and punched to allow bottom plate to be attached, if desired.
D. Etched aluminum finish, MIL-C-5541.
E. Gauges indicated are aluminum gauges.



HEAVY DUTY AND PANEL CHASSIS

DESCRIPTION:

A. Made of 16 gauge cold rolled steel.
B. Bottom plate included at no additional charge.
C. Available in Black Wrinkle finish or Electro Zinc Plate.

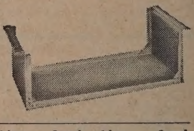


Black Wrinkle Cat. No.	Cad. Plated Cat No.	Depth	Width	Height	Approx. Shipping Wt. - Lbs.	Dealer Cost Black Wrinkle	Cad Plated
C-620	C-627	8″	17″	2″	6	$3.93	$4.50
C-621	C-628	8″	17″	3″	7½	4.26	4.76
C-622	C-629	11″	17″	2″	8½	4.17	4.78
C-623	C-630	11″	17″	3″	9	4.34	4.84
C-624	C-631	13″	17″	2″	9½	4.84	5.34
C-625	C-632	13″	17″	3″	10	4.93	5.43
C-626	C-633	13″	17″	4″	11	5.26	5.85

PANEL CHASSIS ALUMINUM OR STEEL

DESCRIPTION:

A. .062 aluminum (3003-H14) or 16 ga. steel.
B. Aluminum etched finish; steel plated.
C. Flange notched for mounting to rack mounting angles.



Alum. Cat. #	Steel Cat. #	W.	H.	D.	Alum. Wt.	Steel Wt.	Alum. Cost	Steel Cost
PC-505	PC-7765	19″	1¾	5 9/32	¾	1½	$2.30	$2.30
PC-506	PC-7766	19″	3½	5 9/32	1¼	2½	2.59	2.59
PC-507	PC-7767	19″	5¼	5 9/32	1½	3½	2.84	2.84
PC-508	PC-7768	19″	7	5 9/32	2	4	3.26	3.26
PC-509	PC-7769	19″	8¾	5 9/32	2¼	5	3.76	3.76
PC-510	PC-7770	19″	10½	5 9/32	2¾	6	4.43	4.43
PC-511	PC-7771	19″	12¼	5 9/32	3	7	4.84	4.84
PC-512	PC-7772	19″	14	5 9/32	3¼	8	5.34	5.34

Wyco Metal Products • NORTH HOLLYWOOD, CALIFORNIA

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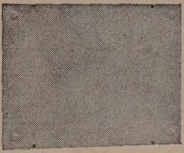
METAL PRODUCTS

ROLLER TRUCKS - BOTTOM PLATES - SHELVES SUPPORTING ANGLES - MOUNTING BRACKETS

CHASSIS BOTTOM PLATES

STEEL AND ALUMINUM



DESCRIPTION:

A. Protects component parts and wiring from dust.

B. Four embossed feet protect table top or other surfaces from being marred.

C. Catalog numbers R6000 to R6022 are Black Wrinkle steel.

D. Catalog number R6023 to R6045 are Zinc plated steel.

E. Catalog numbers R6046 to R6055 are Aluminum etched finish.

Black Wrinkle Cat. No.	Cad. Plated Cat. No.	Aluminum Etched Cat. No.	W.	L.	Steel Ship. Wt.	Alum. Ship. Wt.	Dealer Cost B.W.	Dealer Cost Cad.	Dealer Cost Alum.
R-6000	R-6023	R-6046	5″	7″	½	⅛	$.57	$.69	$.74
R-6001	R-6024	R-6047	5″	9½″	¾	¼	.62	.75	.75
R-6002	R-6025	R-6048	5″	10″	¾	¼	.67	.73	.75
R-6003	R-6026	R-6049	7″	7″	1	⅓	.92	.97	.77
R-6004	R-6027	R-6050	7″	9″	1	⅓	.94	.99	.90
R-6005	R-6028	R-6051	7″	11″	1	⅓	.95	1.07	.90
R-6006	R-6029	R-6052	7″	12″	1¼	½	.99	1.12	.97
R-6007	R-6030	R-6053	7″	13″	1¼	½	1.02	1.20	1.14
R-6008	R-6031		5″	13½″	1		.84	1.00	—
R-6009	R-6032		7″	15″	1¼		1.00	1.37	—
R-6010	R-6033		8½″	15″	1½		1.04	1.47	—
R-6011	R-6034		4″	17″	1½		.84	1.07	—
R-6012	R-6035		6″	17″	1½		.90	1.37	—
R-6013	R-6036		8″	10″	1¼		.92	1.05	—
R-6014	R-6037		8″	12″	1½		1.06	1.34	—
R-6015	R-6038		8″	17″	1¾		.95	1.54	—
R-6016	R-6039		10″	12″	1½		.95	1.57	—
R-6017	R-6040		10″	14″	1½		1.25	1.33	—
R-6018	R-6041	R-6054	10″	17″	1¾	¾	1.20	1.60	1.52
R-6019	R-6042		11″	17″	1½		1.20	1.60	—
R-6020	R-6043		12″	17″	2		1.27	1.87	—
R-6021	R-6044	R-6055	13″	17″	2½	¾	1.47	2.24	2.07
R-6022	R-6045		10″	23″	2¼		2.07	2.37	—

RACK SHELVES

DESCRIPTION:

A. Used to mount heavy power supplies, modulator units, etc.

B. Supported by chassis supporting angles which are described on this page.

C. Made of heavy gauge steel.

D. Finished in black enamel only.

Cat. No.	Size	Wt. Lbs.	Dealer Cost
S195	19″x15″	6½	$3.47
S196	19″x12″	5½	2.64

CHASSIS SUPPORTING ANGLES

DESCRIPTION:

A. Used when heavy weights are encountered in chassis construction.

B. Distributes weight on sides of rack to relieve panel.

C. Made of ⅛″ steel.

D. Finished in black enamel only.

E. Sold in pairs only.

Cat. No.	Length	Wt. Lbs.	Dealer Cost
A143	14½″	4	$2.25 pr.
A144	12″	3	2.17 pr.

CHASSIS MOUNTING BRACKETS

DESCRIPTION:

A. Used to insure proper support of chassis.

B. Made of heavy gauge steel.

C. Cut away at bottom to provide clearance so that chassis can mount flush against panel.

D. Finished in black enamel only.

E. Cat. # CB-565 and CB-566 designed for 4″ chassis height.

F. Sold in pairs only.

Cat. No.	H.	D.	Wt. Lbs.	Dealer Cost
CB-560	6½″	8″	1¼	$1.09 pr.
CB-561	6½″	10″	1¾	1.35 pr.
CB-562	6½″	11″	2	1.50 pr.
CB-563	6½″	12″	2	1.75 pr.
CB-564	6½″	13″	2½	1.69 pr.
CB-565	8½″	10″	2¼	1.97 pr.
CB-566	8½″	13″	3	2.09 pr.

TRIANGULAR MOUNTING BRACKETS

DESCRIPTION:

A. When large weights are involved in panel and chassis assemblies, triangular mounting brackets are used as supports.

B. Fabricated of heavy gauge steel; finished in Black enamel only.

C. Sold only in pairs.

Cat. No.	Size	Approx. Shipping Wt. - Lbs.	Dealer Cost
TB-410	5″x5″	1	$1.00 pr.
TB-411	7″x7″	1	1.17 pr.
TB-412	9″x9″	1½	1.42 pr.

ROLLER TRUCKS

SPECIFICATIONS:

A. Roller Truck constructed from heavy gauge high-quality steel.

B. Casters have 2″ rubber wheels and are ball-bearing swivel type.

C. Finished in black or grey wrinkle or silver grey hammertone.

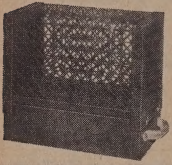
Catalog No.	Constr. for Rack Series	Description of Rack	Inside Clearance	Approx. Ship. Weight	Dealer Cost
T 18	SL	Page #4	21½x18½	16 lbs.	$13.79
	S	Page #4			
	B	Page #5			
T 19	D (18½″ Deep)	Page #2	23⅞x18¾	18 lbs.	14.66
	W	Page #5			
T 24	D (24″ Deep)	Page #2	23⅞x24¼	22 lbs.	15.86

Wyco Metal Products • NORTH HOLLYWOOD, CALIFORNIA

WYCO
METAL PRODUCTS

AMPLIFIER FOUNDATIONS - RACK PANELS
SLOPING PANEL SUPPORTS - CABINETS

AMPLIFIER FOUNDATIONS



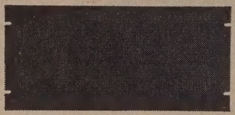
DESCRIPTION:

A. Consists of standard chassis and perforated metal cover.
B. Includes handles.
C. Available in Black Wrinkle only.

Cat. No.	Height	Width	Depth	Height Chassis	Approx. Shipping Wt. - Lbs.	Dealer Cost
AF-680	8 5/16″	9 5/8″	5 1/8″	2 1/2″	3	$5.61
AF-681	8 5/16″	13 5/8″	5 1/8″	2 1/2″	4 3/4	6.43
AF-682	8 5/16″	17 1/8″	7 1/8″	2 1/2″	6	7.26
AF-683	8 13/16″	17 1/8″	10 1/8″	3″	8	8.50
AF-684	8 13/16″	12 1/8″	10 1/8″	3″	7	7.52

STANDARD RELAY RACK PANELS

DESCRIPTION:



A. 11 ga. STEEL or 1/8″ ALUMINUM.
B. 19″ wide.
C. Western Electric notching.
D. Available in black or grey wrinkle, silver grey hammertone and unpainted finish.

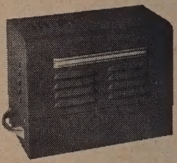
MINIATURE AMPLIFIER FOUNDATION

DESCRIPTION:

A. Chassis size 5″ x 7″ x 2″.
B. Perforated metal cover.
C. Includes handle.
D. Black Wrinkle finish only.

Catalog No.	Approx. Shipping Weight - Lbs.	Dealer Cost
MA-1000	2	$4.00

STREAMLINED AMPLIFIER FOUNDATIONS



DESCRIPTION:

A. Consists of standard chassis and streamlined removable top cover.
B. Includes attractive stainless steel trim and handles.
C. Available in Silver Grey Hammertone only.

Catalog No.	Width	Depth	Approx. Shipping Wt. - Lbs.	Dealer Cost
SA-670	10 1/16″	5″	4 3/4	$6.76
SA-671	12 1/16″	7″	5	8.02
SA-672	17 1/16″	7″	8	8.52
SA-673	17 1/16″	10″	9	9.27

STEEL

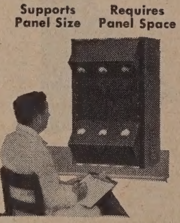
Cat. No.	Height	Wt. Lbs.	Dealer Cost	Cat. No.	Height	Wt. Lbs.	Dealer Cost
SP-210	1 3/4″	1 1/4	$ .84	SP-216	12 1/4″	8 1/4	$2.42
SP-211	3 1/2″	2 1/4	1.00	SP-217	14″	9 1/2	2.84
SP-212	5 1/4″	3 1/4	1.25	SP-218	15 3/4″	10 3/4	3.09
SP-213	7″	4 1/2	1.42	SP-219	17 1/2″	11 3/4	3.51
SP-214	8 3/4″	6	1.75	SP-220	19 1/4″	13	3.84
SP-215	10 1/2″	7	2.09	SP-221	21″	14 1/4	4.26

ALUMINUM

Cat. No.	Height	Wt. Lbs.	Dealer Cost	Cat. No.	Height	Wt. Lbs.	Dealer Cost
AP-320	1 3/4″	1/4	$1.09	AP-326	12 1/4″	2 3/4	$4.09
AP-321	3 1/2″	3/4	1.42	AP-327	14″	3	4.76
AP-322	5 1/4″	1	1.93	AP-328	15 3/4″	3 1/2	5.34
AP-323	7″	1 3/4	2.42	AP-329	17 1/2″	4	5.85
AP-324	8 3/4″	2	2.84	AP-330	19 1/4″	4 1/4	6.43
AP-325	10 1/2″	2 1/2	3.59	AP-331	21″	5	7.01

SLOPING PANEL SUPPORT

In answer to many requests from engineers within the industry, WYCO METAL PRODUCTS presents the all-new SLOPING PANEL SUPPORT. The SLOPING PANEL SUPPORT allows for mounting of the standard 19″ panel in sloping position. This enables the engineer or equipment user to more easily view the rack mounted instrument panel. From this illustration, it is easy to see that the SLOPING PANEL SUPPORT offers a variety of positions in which a standard 19″ panel may be supported in sloping position. The SLOPING PANEL SUPPORT is fabricated of heavy gauge steel and is finished in Black and Grey Wrinkle or Silver Grey Hammertone.



IMPORTANT! When ordering SLOPING PANEL SUPPORTS FOR CABINET RACKS THAT HAVE FRONT CORNER VERTICAL TRIM, use catalog Prefix "B". In all other cases use catalog Prefix "G."

Prefix "B" Cat. No.	Prefix "G" Cat. No.	Supports Panel Size	Requires Panel Space	Prefix "B" Ship. Wt.	Prefix "G" Ship. Wt.	Dealer Cost "B"	Dealer Cost "G"
B-335	G-350	5 1/4″x19″	7″	4	2	$6.50	$3.60
B-336	G-351	7″ x19″	10 1/2″	6	4	7.50	4.20
B-337	G-352	8 3/4″x19″	12 1/4″	6 1/2	4 1/2	8.10	4.67
B-338	G-353	10 1/2″x19″	15 3/4″	9	6 1/2	9.42	5.90
B-339	G-354	12 1/4″x19″	17 1/2″	10	7	10.32	6.80
B-340	G-355	14″ x19″	21″	12	9	11.52	7.97

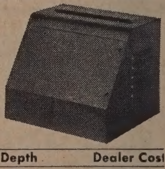
METAL DOOR RACK PANELS

DESCRIPTION:

A. Used when accessability to component parts on chassis is necessary.
B. Made of 1/8″ steel.
C. Available in black or grey wrinkle and silver grey hammertone.
D. 19″ wide.

Cat. No.	Height	Door Opening	Wt. Lbs.	Dealer Cost
RP-310	10 1/2″	15 3/8″ x 5 7/8″	7 1/4	$6.08
RP-311	12 1/4″	15 3/8″ x 7 5/8″	8 1/4	7.52

SLOPING FRONT CABINET



DESCRIPTION:

A. Top corner rounded.
B. Attractive high-polish moulding at top.
C. Front panel is removable.
D. Chassis may be mounted to front panel and removed as unit.
E. Louvres at both sides; vented at rear.
F. Available in silver grey hammertone only.

Cat. No.	Height	Width	Depth	Dealer Cost
K810	8″	8″	8″	$5.13
K811	8″	10″	8″	7.06
K812	8″	14″	8″	8.53
K813	12″	18″	12″	11.46

NOTE: If desired, an attractive handle can be used with above "K" series cabinet. Holes to mount moulding are spaced for handle, also. Catalog # for handle is HK70. Dealer Cost: $.92

Wyco Metal Products • NORTH HOLLYWOOD, CALIFORNIA

WYCO METAL PRODUCTS BOXES-CASES-CABINETS-DESK PANELS

CARRYING CASE

Steel Cat. No.	Alum. Cat. No.	Depth	Width	Height	Steel Approx. Ship. Wt.	Alum. Approx. Ship. Wt.	Dealer Cost Steel	Dealer Cost Alum.
D-850	DA-857	5″	6″	9″	3¼	1⅛	$3.01	$3.09
D-851	DA-858	5″	9″	6″	3¼	1⅛	3.01	3.09
D-852	DA-859	6″	7″	12″	4	1⅓	4.18	4.50
D-853	DA-860	6″	12″	7″	4	1⅓	4.18	4.50
D-854	—	7″	7¾″	15″	5		4.68	—
D-855	—	8″	10″	10″	5		4.84	—
D-856	—	7″	15″	9″	5		5.85	—

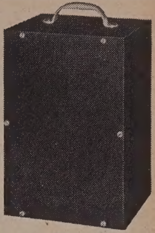
DESCRIPTION:

A. Front and rear panels are removable.

B. Includes handle.

C. Prefix "D" designates steel finished in Grey Hammertone.

D. Prefix "DA" designates aluminum etched finish (.051 alum.).



MINITBOXES

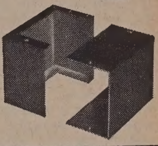
Silver Grey Cat. No.	Etched Cat. No.	Length	Width	Height	Approx. Shipping Wt.-Lbs.	Dealer Cost S.G.H.	Dealer Cost Etched
E-900	E-918	2¾″	2⅛″	1⅝″	¼	$ .85	$ .62
E-901	E-919	3¼″	2⅛″	1⅝″	¼	.92	.62
E-902	E-920	4″	2⅛″	1⅝″	¼	.92	.62
E-903	E-921	4″	2¼″	2¼″	¼	1.00	.75
E-904	E-922	5″	2¼″	2¼″	¼	1.09	.78
E-905	E-923	5″	4″	3″	½	1.25	.94
E-906	E-924	5¼″	3″	2⅛″	¼	1.09	.82
E-907	E-925	6″	5″	4″	¾	1.90	1.47
E-908	E-926	7″	5″	3″	¾	1.82	1.40
E-909	E-927	8″	6″	3½″	1	2.23	1.72
E-910	E-928	10″	6″	3½″	1¼	2.59	2.02
E-911	E-929	12″	7″	4″	1¾	3.27	2.71
E-912	E-930	17″	5″	4″	2¼	3.51	2.92
E-913	E-931	10″	2″	1⅝″	½	1.38	1.15
E-914	E-932	12″	2½″	2¼″	¾	1.70	1.37
E-915	E-933	4″	2″	2¾″	¼	1.09	.75
E-916	E-934	4¼″	2¼″	1½″	¼	1.00	.72
E-917	E-935	3¼″	2⅛″	1⅛″	¼	.84	.62

DESCRIPTION:

A. Fabricated of aluminum (.051).

B. Design assures necessary shielding.

C. Available in etched finish or Silver Grey Hammertone.



EASY BOXES (SAME DESIGN AS MINITBOX)

DESCRIPTION:

A. Design allows a number of small components to be easily wired or serviced.

B. Fabricated of 22 gauge steel.

C. Black Wrinkle finish only.

Catalog No.	Height	Width	Depth	Approx. Shipping Wt.-Lbs.	Dealer Cost
H-105	2¼″	4¼″	1½″	½	$1.15
H-106	2″	4″	2¾″	½	1.17

DESK PANELS

DESCRIPTION:

A. Table is constructed of heavy gauge high-quality steel and measures 21″ x 16″.

B. Panel, constructed of ⅛″ steel, is 10½″ x 19″.

C. Front corners of table are rounded.

D. SHIPPED "KNOCKED-DOWN"; all necessary bolts supplied for easy assembly.

E. Finished in black or grey enamel and silver grey hammertone.

Catalog No.	Width	Depth	Approx. Shipping Weight	Dealer Cost
DP 16	21″	16″	14 lbs.	$14.79

METER CASES

DESCRIPTION:

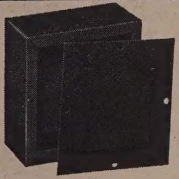
A. Sloping front with top corner rounded.

B. Prefix "MC" designates steel Grey Hammertone finish.

C. Prefix "AC" designates aluminum etched finish.

Catalog No.	Hole Diameter	Approx. Ship. Wt. - Lbs.	Dealer Cost
MC-73	2¼″	1	$1.10
MC-74	2 13/16″	1	1.10
AC-86	2¼″	⅓	1.42
AC-87	2 13/16″	⅓	1.42

METAL UTILITY CABINETS



DESCRIPTION:

A. Cabinet has two removable covers.

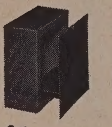
B. Prefix MU designates steel finished in Silver Grey Hammertone only.

C. Prefix LU designates aluminum in an etched finish (.051 Alum.).

D. Used for amplifiers, monitors, input stages, meters, tranceivers, etc.

Steel Cat. No.	Alum. Cat. No.	Depth	Width	Ht.	Steel Approx. Ship. Wt. Lbs.	Alum. Approx. Ship. Wt. Lbs.	Dealer Cost Steel	Dealer Cost Alum.
MU-750	LU-760	2″	4″	4″	¾	¼	$1.09	$1.29
MU-751	LU-761	3″	5″	4″	1	¼	1.22	1.37
MU-752	LU-762	4″	5″	6″	1¼	½	1.38	1.50
MU-753	LU-763	6″	6″	6″	2½	¾	2.09	2.17
MU-754	LU-764	5″	6″	9″	3	1	2.34	2.51
MU-755	—	7″	8″	10″	5		3.34	—
MU-756	—	6″	7″	12″	4		3.29	—
MU-757	—	8″	10″	10″	5½		4.01	—
MU-758	—	8″	11″	12″	6		4.34	—
MU-759	—	7″	9″	15″	7½		4.51	—

MINIATURE UTILITY CABINETS



DESCRIPTION:

A. Front and rear panels are removable.

B. Chassis attached to front panel.

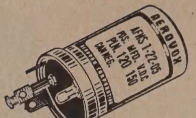
C. Fabricated in steel; Silver Grey Hammertone only.

Cat. No.	Ht.	Width	Depth	Chassis Size	Approx. Shipping Wt.-Lbs.	Dealer Cost
A-780	4″	4″	2″	1″ x3⅛″x1⅞″	¾	$1.34
A-781	4″	5″	3″	1″ x4⅛″x2⅞″	1	1.48
A-782	5″	4″	3″	1¼″x3⅛″x2⅞″	1	1.62
A-783	6″	5″	4″	1¾″x4⅛″x3⅞″	1¾	1.70
A-784	5″	6″	4″	1¼″x5⅛″x3⅞″	1¾	1.92
A-785	6″	6″	6″	1¾″x4⅞″x5⅞″	2¾	2.17

Wyco Metal Products • NORTH HOLLYWOOD, CALIFORNIA

AEROVOX *Capacitors*

ELECTROLYTICS



TYPE AFH (85°C)

Twist-Prong Electrolytic Capacitors

SINGLES • DUALS • TRIPLES • QUADS

The outstanding line of twist-prong electrolytic capacitors with the very latest refinements . . . 85°C operation; improved moisture resistant sealing; special Types AFHS and PWHS for high ripple current circuits; high-purity aluminum foil construction throughout; either etched or composite-plate depending on electrical requirements. Types PWH and PWHS are special construction for printed wiring.

For use over a wide temperature range with minimum change in capacitance. Designed for filter audio bypass applications in radio-TV and amplifier equipment.

While AFH electrolytics enjoy a tremendous papularity as replacement capacitors for TV receivers, they are rapidly gaining acceptance in many industrial applications.

Capacity tolerances and surge voltage are as listed in EIA Specification No. RS-154.

ELECTROLYTIC CAPACITY TOLERANCES:

0- 50 Volts	—10 +250%
51-350 Volts	—10 +100%
351-Up	—10 + 50%

AFH—SINGLES

AFH No.	Capacity	Voltage	Size
1-00-50	2000	6	1⅜x2
1.01	3000	10	1⅜x3
1-01-25	225	15	¾x2
1-02	1000	15	1x3
1-03	2000	15	1⅜x3
1-04	3000	15	1⅜x3
1-05	25	25	¾x2
1-06	40	25	¾x2
1-07	100	25	¾x2
1-08	500	25	1x2½
1-10	1000	25	1⅜x2
1-10-10	4	50	¾x2
1-11	100	50	¾x2
1-12	150	50	¾x2
1-13	500	50	1⅜x2½
1-13-05	500	50	1x3
1-14	1000	50	1⅜x3½
1-14-50	1500	50	1⅜x4
1-15	25	150	1x2
1-16	30	150	1x2
1-17	40	150	1x2
1.18	50	150	1x2
1-19	60	150	1x2
1-20 AFHS	80	150	1x2
1-21	100	150	1x2
1-22 AFHS	120	150	1x3
1-22-05 AFHS	120	150	1⅜x2½
1-23 AFHS	140	150	1x3
†1-23-01 PWHS	140	150	1x3
1-24	150	150	1x3
1-24-24 AFHS	200	150	1x3½
1-24-25 AFHS	200	150	1⅜x2½
1-24-75 AFHS	300	150	1⅜x3
†1-24-95 PWH	375	165	1⅜x3½
1-25	40	200	1x2
1-25-60	120	200	1⅜x2
†1-25-75 PWH	160	200	1⅜x3
1-26	15	250	1x2
1-27	20	250	¾x2
1-28	30	250	¾x2
1-29	40	250	1x2

AFH — SINGLES — (Continued)

AFH No.	Capacity	Voltage	Size
1-30	60	250	1x2½
1-31	80	250	1x3
1-31-25	100	250	1x3
1-31-75	150	250	1⅜x2½
1-31-85	200	250	1⅜x3½
1-32	15	300	1x2
1-33	30	300	1x2
1-34	50	300	1x2½
1-35	80	300	1x3
1-36	100	300	1x3½
1-36-05 AFHS	100	300	1⅜x2½
1-37	125	300	1⅜x3
1-37-25 AFHS	150	300	1⅜x3
1-37-30 AFHS	200	300	1⅜x3½
1-37-35	250	300	1⅜x4
1-38	15	350	1x2
1-39	30	350	1x2
1-40	40	350	1x2½
1-41	50	350	1x3
†1-41-05 PWH	50	350	1x2½
1-42	80	350	1⅜x2½
1-42-10 AFHS	90	350	1⅜x3
1-43 AFHS	125	350	1⅜x3
1-43-20	150	350	1⅜x3½
1-43-80 AFHS	320	350	1⅜x4½
1-44	10	400	¾x2
1-45	20	400	1x2
1-46	40	400	1⅜x2
1-47	80	400	1⅜x2½
1-48	10	450	1x2
1.49	15	450	1x2
1-50	20	450	1x2
1-51	30	450	1x2½
1-52	40	450	1x3
1-53	50	450	1x3
1-54	60	450	1⅜x2½
1-55	80	450	1⅜x3
1-55-20	100	450	1⅜x3
1-55-25	125	450	1⅜x4
1-56	30	475	1x3
1-56-10	40	475	1⅜x2
1-57	90	475	1⅜x3½
1-58	10	500	1x2
1-59	20	500	1x2½
1-60	30	500	1x3
1-61	40	500	1x3½
1-62	80	500	1⅜x3
1-63	90	500	1⅜x3½
1-64	10	525	1x2
1-65	10 ohm-30 cps	3 VNP	¾x2
1-66	0.5 ohm-15,750 cps	3 VNP	1x2
1-67	1 ohm-60 cps	3 VNP	1⅜x3

AEROVOX
CAPACITOR
AFH 1-12

AEROVOX
CAPACITOR
AFH 2-14

AEROVOX
CAPACITOR
AFH 4-14

DUALS

AFH No.	Capacity	Voltage	Size
2-01	1000-500	6NP	1⅜x2
2-02	1000-1000	15	1x3½
2-02-05	250-250	16	1x2
2-02-10	500-100	16	1x2
2-02-55	800-200	16	1x2
†2-02-60 PWH	800-250	16	1x2½
2-02-70	1000-500	16	1x2½
†2-02-75 PWH	500-200	18	1x2
2-03	20-20	25	1x2
2-04	40-40	25	1x2
2-05	150-50	25	1x2
†2-05-25 PWH	250-250	25	1x2½
2-06	50-50	50	1x2
2-06-20	100-100	50	1x2
2-07	20-10	150	1x2
2-08	20-20	150	1x2
2-09	30-15	150	1x2
2-10	30-20	150	1x2

†—Special construction for printed wiring.

AEROVOX *Capacitors*

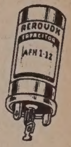
ELECTROLYTICS — (Continued)

DUALS — (Continued)

AFH No.	Capacity	Voltage	Size
2-11	30-30	150	1x2
2-12	40-20	150	1x2
2-13	40-30	150	1x2
2-14	40-40	150	1x2
2.15	50-30	150	1x2
†2-15-05 PWH	50-30	150	1x2
2-16	50-50	150	1x2½
2-17	60-60	150	1x3
†2-17-50 PWH	70-30	150	1x2
2-18	75-75	150	1x3
2-19	80-40	150	1x2½
†2-19-05 PWH	80-40	150	1x2½
2-19-25	80-50	150	1x2½
2-20	80-80	150	1⅜x2
2-20-50	125-100	150	1⅜x2½
2-21 AFHS	200-5	150	1⅜x2½
†2-21-01 PWHS	200-5	150	1⅜x3
2-22	200-125	150	1⅜x3
2-22-50	200-150	150	1⅜x3
2-23	200-200	150	1⅜x3
2-24	60-60	200	1⅜x2
2-24-20 AFHS	100-100	200	1⅜x3
2-24-21	100-100	200	1x3
2-24-75 AFHS	200-5	200	1⅜x3
2-25	10-10	250	1x2
2-26	20-20	250	1x2
2-27	30-30	250	1x2½
2-28	40-20	250	1x2½
2-29	40-40	250	1x3
2-30 AFHS	150-150	250	1⅜x4
2-30-25 AFHS	200-15	250	1⅜x3½
2-30-75 AFHS	200-200	250	1⅜x4½
2-31	10-10	300	1x2
†2-31-01 PWH	10-10	300	1x2
†2-31-02 PWH	10-10	300	1⅜x2
2-32	15-15	300	1x2
2-33	50-50	300	1⅜x2½
2-33-75	80-60	300	1⅜x2½
2-34	80-80	300	1⅜x3
2-35	120-20	300	1⅜x3
2-35-50 AFHS	200-80	300	1⅜x4
2-36	15-15	350	1x2
2-37	20-20	350	1x2½
2-38	30-20	350	1x3
2-39	30-30	350	1x3
2-40	50-30	350	1⅜x2½
2-40-80	80-40	350	1⅜x3
2-41	80-80	350	1⅜x3½
2-41-10	90-40	350	1⅜x3
2-41-40	100-60	350	1⅜x3½
2-41-50	100-100	350	1⅜x4
2-41-80 AFHS	160-10	350	1⅜x3
2-43	15-15	400	1x2½
2-43-30	30-10	400	1x3
2-44	60-60	400	1⅜x3½
2-44-90	75-75	400	1⅜x4
2-44-95	80-4	400	1x4
2-45	80-10	400	1⅜x3
2-45-10	80-20	400	1⅜x3
2-45-40	80-60	400	1⅜x4
2-45-50 AFHS	80-80	400	1⅜x4
2-45-55 AFHS	100-100	400	1⅜x4¼
2-45-60	120-40	400	1⅜x4
2-46	5-5	450	1x2
2-47	10-10	450	1x2
2-48	15-10	450	1x2½
2-49	15-15	450	1x2½
2-50	20-10	450	1x3
2-51	20-20	450	1x3
2-52	30-10	450	1x3
2-53	30-15	450	1⅜x2
2-54	30-30	450	1⅜x2
2-56	40-20	450	1⅜x2½
2-57	40-40	450	1⅜x3
2-58	50-40	450	1⅜x3

DUALS — (Continued)

AFH No.	Capacity	Voltage	Size
2-59	50-50	450	1⅜x3
2-60	60-20	450	1⅜x3
2-61	60-40	450	1⅜x3½
2-61-50	60-60	450	1⅜x4
2-62	80-10	450	1⅜x3
2-63	80-20	450	1⅜x3½
2-64	80-40	450	1⅜x3½
2-64-25	100-40	450	1⅜x4
2-64-50	15-15	475	1x2½
2.65	30-10	475	1⅜x2
2-66	40-10	475	1⅜x2½
2-66-25	40-40	475	1⅜x3
2-66-50	80-40	475	1⅜x4
2-66-60	80-50	475	1⅜x4
2-67	10-10	500	1x2½
2-69	20-20	500	1⅜x2½
2-71	30-10	500	1⅜x2½
2-71-90	40-25	500	1⅜x3
2-72	40-40	500	1⅜x3
2-73	60-40	500	1⅜x3½
2-74	250/1000	10/6	1⅜x2
2-75	250/2000	10/6	1⅜x2
†2-75-45 PWH	1000/1000	16/10	1x2½
2-75-50	1500/1000	16/10	1⅜x2
2-76	50/500	150/5	1x3
2-77-05	50/1000	150/10	1x2
2-78	40/150	150/25	1x2
2-78-10	50/150	150/25	1x2½
2-78-25	150/100	150/25	1⅜x2½
2-78-30	40/20	150/50	1x2
2-78-60 AFHS	150/50	150/50	1x3½
2-79	40/20	250/25	1x2
2-80	50/100	250/50	1⅜x2
2-81	100/150	250/50	1⅜x3
2-81-80	35/500	300/6	1x2½
†2-81-95 PWH	2/20	300/25	1x2
2-82	20/20	300/25	1x2
2-82-30	20/40	300/50	1x3
2-82-55	150/100	300/150	1⅜x4
2-82-57	100/100	300/200	1x4
2-82-60	20/60	300/250	1x3
2-84	20/20	350/25	1x2
2-85	40/20	350/25	1x2½
2-85-70	5/75	350/150	1x3
2-86	40/10	350/200	1⅜x2
2-86-15	40/10	350/250	1x3
2-86-30	60/80	350/250	1⅜x3½
2-86-40	30/30	350/300	1x3
2-86-45	35/100	400/50	1x3
2-86-60	40/100	400/50	1⅜x2
2-86-70	100/30	400/50	1⅜x3
2-86-72	80/80	400/200	1⅜x3½
2-86-75	60/80	400/250	1⅜x4
2-86-85 AFHS	4/140	400/300	1⅜x3
2-86-95	100/80	400/350	1⅜x4
2-87	10/20	450/25	1x2
2-88	20/20	450/25	1x2
2-89	40/20	450/25	1x3
2-89-50	40/50	450/25	1x3
2-90	80/20	450/25	1⅜x3
2-90-50	50/100	450/50	1⅜x2½
2-91	80/50	450/50	1⅜x3
2-91-50	80/100	450/50	1⅜x3
2-92	10/50	450/100	1⅜x2
2-93	20/100	450/100	1⅜x2
2-94	30/40	450/150	1⅜x2
2-94-30	30/200	450/150	1⅜x3
2-94-45	80/40	450/200	1⅜x3
2-94-60	20/50	450/250	1x3
2-94-75 AFHS	20/150	450/250	1⅜x3
2-94-85	90/200	450/250	1⅜x4
2-94-90	10/100	450/350	1⅜x3
2-95	20/80	450/350	1⅜x3
2-96	40/10	450/350	1⅜x2
2-97	40/40	450/350	1⅜x3
2-99	75/50	475/50	1⅜x3
2-99-75	40/80	475/200	1⅜x2½



AEROVOX
CAPACITOR
AFH 2-16

AEROVOX
CAPACITOR
AFH 4-14

†—Special construction for printed wiring.

AEROVOX *Capacitors*

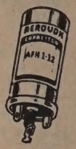
ELECTROLYTICS — (Continued)

DUALS — (Continued)

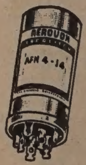
AFH No.	Capacity	Voltage	Size
2-99-90 AFHS	80/80	475/250	1⅜x4
2-100	20/100	475/300	1⅜x3
2-100-50	20/100	475/400	1⅜x4
2-101	40/40	475/400	1⅜x3
2-101-75	80/20	475/400	1⅜x3½
2-102	80/50	500/50	1⅜x3½
2-103	60/80	500/150	1⅜x3
2-104	40/50	500/200	1⅜x3
2-105	15/20	500/300	1x2½
2-106	20/100	500/300	1⅜x3
2-107	40/40	500/400	1⅜x3
2-108	0.5 ohm-15,750 cps 2.5 ohm-60 cps	12 6	1⅜x2

TRIPLES

AFH No.	Capacity	Voltage	Size
3-00-50	1500-1500-1500	3	1x3½
†3-00-80 PWH	250-250-50	16	1x2
3-00-90	400-100-100	16	1x2
†3-00-93 PWH	500-250-50	16	1x2
†3-00-94 PWH	500-250-250	16	1x2
3-00-95	500-500-100	16	1x2
3-00-95.5	700-200-100	16	1x2
3-00-96	1000-200-50	16	1x2
3-00-97	1000-500-20	16	1⅜x2
3-01	20-20-20	25	1x2
3-02	40-40-40	25	1x2
3-03	30-30-30	50	1x2
3-05	20-20-20	150	1x2
†3-05-50 PWH	30-25-20	150	1x2
3-06	30-30-10	150	1x2
3-07	40-20-10	150	1x2
3-08	40-20-20	150	1x2
3-09	40-30-20	150	1x2
3-10	40-40-40	150	1x2½
3-11-20	50-40-10	150	1x2½
†3-11-30 PWH	50-40-30	150	1x2½
3-11-40	50-50-30	150	1x3
3-11-50	50-50-50	150	1x3
3-12	60-40-20	150	1x3
†3-12-10 PWH	70-15-15	150	1x2
3-12-20	70-40-40	150	1x3
3-13	80-40-20	150	1x3
3-13-15	120-80-40	150	1⅜x3
3-13-30	120-120-40	150	1⅜x3
3.13-50	200-100-60	150	1⅜x3½
3-13-60	300-100-80	150	1⅜x4
3-13-70	100-80-40	175	1x3
3-13-75	200-150-150	200	1⅜x4
3-13-90 AFHS	250-200-10	200	1⅜x4
3-14	15-15-10	250	1x2
3-17	20-20-10	250	1x2
3-17-10	20-20-20	250	1x2½
3-17-50	30-15-15	250	1x2½
3-18	30-20-10	250	1x2½
3-19	40-20-10	250	1x3
3-20	40-20-20	250	1x3
3-21	80-80-60	250	1⅜x3
3-22	10-10-10	300	1x2
3-25	60-20-10	300	1⅜x2
3-25-40	80-20-10	300	1⅜x2½
3-25-50	80-40-40	300	1⅜x2½
3-25-75	100-20-10	300	1⅜x3
3-26	120-50-40	300	1⅜x4
†3-26-50 PWHS	150-100-30	300	1⅜x4
3-27	10-10-10	350	1x2½
3-28	20-20-10	350	1x3
3-28-30	30-20-10	350	1x2½
3-29	60-40-20	350	1⅜x3½
3-29-25	60-50-50	350	1⅜x4
3-29-50	80-60-60	350	1⅜x4
3-29-75	90-40-20	350	1⅜x4
3-29-80	100-60-40	350	1⅜x4
3-29-85	100-100-10	350	1⅜x4
3-29-87 AFHS	100-100-40	350	1⅜x4½
3-29-95	120-40-40	350	1⅜x4
3-29-98	140-140-20	350	1⅜x4
3-30	10-10-10	400	1x2½
3-30-30	40-10-4	400	1x3½
3-30-35	40-10-10	400	1x3
3-30-60	80-20-10	400	1⅜x3
3-30-75	90-10-5	400	1⅜x3
3-31	10-10-10	450	1x3
3-33	15-15-10	450	1x3
3-34	15-15-15	450	1x3
3-35	20-10-10	450	1x3
3-36	20-20-20	450	1⅜x2½
3-37	30-20-20	450	1⅜x3
3-37-95	30-30-10	450	1⅜x3
3-38	30-30-20	450	1⅜x3
3-39	30-30-30	450	1⅜x3
3-41	40-10-10	450	1⅜x3
3-42	40-30-20	450	1⅜x3
3-43	40-40-10	450	1⅜x3
3-43-50	40-40-20	450	1⅜x3
3-44	40-40-40	450	1⅜x3½
3-44-50	50-40-30	450	1⅜x4
3-45	60-20-20	450	1⅜x3½
3-45-10	60-30-10	450	1⅜x3
3-45-25	60-40-20	450	1⅜x3½
3-45-50	80-40-10	450	1⅜x4
3-46	80-40-20	450	1⅜x4
3-47	10-10-10	475	1x3
3-47-50	20-20-10	475	1x3½
3-48	30-20-20	475	1⅜x3
3-49	30-30-10	475	1⅜x3
3-49-10	30-30-20	475	1⅜x3
3-50	40-10-10	475	1⅜x3
3-50-05	40-20-20	475	1⅜x3
3-50-07	40-30-10	475	1⅜x3
3-50-10	40-30-30	475	1⅜x4
3-51	10-10-10	500	1x3
3-52	30-20-20	500	1⅜x3
3-53	40-10-10	500	1⅜x3
3-54	40-40-10	500	1⅜x3½
3-54-30	850-400/4	16/11.5RMS	1x2½
3-54-40	1000-500/4	16/11.5RMS	1⅜x2
3-54-41	1000-500/4	16/11.5 RMS	1x2½
3-54-50	5/500-200	25/16	1x2
3-55	100/50-25	100/25	1x3
3-57	15-15/1200	150/2	1x2
3-58	30-20/100	150/6	1x2
3-59	20-20/100	150/10	1x2
3-60	20-20/250	150/10	1x2
3-61	30-30/200	150/10	1x2
3-62	40-20/150	150/10	1x2
3-63	40-20/200	150/10	1x2½
3-64	40-20/250	150/10	1x2½
†3-64-40 PWH	70-30/100	150/10	1x2½
3-64-50	80-20/200	150/10	1⅜x2
3-64-60	80-30/300	150/10	1⅜x2
†3-64-65 PWH	80-60/250	150 10	1x3
†3-64-70 PWH	80-60/400	150/10	1x3
†3-64-75 PWH	90-40/400	150/10	1x3
3-64-85 AFHS	100-80/200	150/10	1⅜x2½
3-65	20/250-100	150/15	1⅜x2
3-66	80-20/100	150/15	1⅜x2
3-67	20-20/20	150/25	1x2
3-68	20-20/200	150/25	1x3
3-69	30-20/20	150/25	1x2
3-70	30-30/20	150/25	1x2
3-72	40-20/20	150/25	1x2
3-73	40-20/100	150/25	1x3
3-74	40-20/200	150/25	1x3
3-75	40-30/20	150/25	1x2½
3-76	40-40/20	150/25	1x2½



AEROVOX
AFH 2-16



†—Special construction for printed wiring.

ELECTROLYTICS — (Continued)

TRIPLES — (Continued)

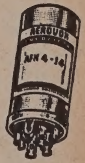
AFH No.	Capacity	Voltage	Size
3-76-50	40-40/200	150/25	1x3
3-76-55	40-40/250	150/25	1x3
3-77	50-30/20	150/25	1x2½
3-78	50-30/100	150/25	1x3
3-79	50-50/20	150/25	1x3
3-80	60-20/20	150/25	1x2
3-81	60-40/20	150/25	1x2½
†3-81-50 PWH	70-30/20	150/25	1x2½
3-82	80-40/20	150/25	1x2½
3-82-40	80-40/300	150/25	1⅜x2½
3-83	120-60/20	150/25	1⅜x2½
3-83-10	10/10-4	150/50	1x2
3-83-95	300-80/200	150/50	1⅜x4
3-84	30-20/20	200/25	1x2
3-84-50	60-5/20	200/50	1x2½
3-84-60	60-5/100	200/50	1x2½
3-84-75	80-10/20	200/50	1x3
3-85	90-90/20	200/50	1⅜x3
3-86	100-10/40	200/50	1⅜x2
3-86-50	30-20/40	200/150	1x2½
3-86-80 AFHS	60/200-140	200/150	1⅜x4
3-86-90	10-10/100	250/10	1x2
3-87	15-15/20	250/25	1x2
3-88	20-15/20	250/25	1x2
3-89	30-30/20	250/25	1x2½
3-90	70-70/20	250/50	1⅜x3
3-91	90-90/20	250/50	1⅜x3
3-92	15/20-20	250/150	1x2
3-93	40-20/10	250/150	1⅜x2
3-94 AFHS	40-40/10	250/200	1⅜x2
3-95	80-80/60	250/200	1⅜x3½
3-96-20 AFHS	10/500-500	300/15	1⅜x2
3-97	20-20/20	300/25	1x2
3-98	40-15/20	300/25	1x2½
†3-98-60 PWH	60-10/25	300/25	1⅜x2
3-98-80	100-10/20	300/25	1⅜x3
3-98-90 AFHS	140-10/100	300/25	1⅜x3½
3-99	30-30/25	300/50	1x3
3-99-75	100-10/60	300/50	1⅜x2½
3-99-80 AFHS	125-20/100	300/50	1⅜x3½
3-99-82	125-60/40	300/50	1⅜x4
3-99-83	140-100/60	300/50	1⅜x3½
3-99-85	200-20/10	300/100	1⅜x4
3-99-95	20/150-80	300/150	1⅜x3
3-100	40-40/20	300/150	1⅜x2
3-100-20	60/200-30	300/150	1⅜x4
3-100-40 AFHS	100/200-30	300/150	1⅜x4
3-100-60	140-10/200	300/150	1⅜x4
3-101	10-10/15	300/250	1x2
3-101-20	60/30-30	300/250	1⅜x2½
3-101-40	100/60-20	300/250	1⅜x3½
3-101-60	200/60-20	300/250	1⅜x4
3-102-90	5/100-40	350/25	1x2
3-103	10-10/20	350/25	1x2
3-104	15-10/20	350/25	1x2
3-105	15-15/20	350/25	1x2½
3-105-50	20-5/100	350/25	1x3
3-106	20-10/20	350/25	1x2½
3-107	20-20/20	350/25	1x2½
3-107-50 AFHS	20/50-50	350/25	1x2
3-108	30-10/20	350/25	1x2½
3-109	30-20/20	350/25	1x3
3-110	30-30/20	350/25	1⅜x2
†3-110-30 PWH	40-10/25	350/25	1⅜x2
3-110-50	40-20/50	350/25	1x2½
3-111	40-40/50	350/25	1⅜x2½
3-111-50	90-40/50	350/25	1⅜x3½
3-111-85 AFHS	200-10/50	350/25	1⅜x4
3-111-90	10-5/30	350/50	1x2
3-112	10-5/150	350/50	1x3
3-112-10	20-5/150	350/50	1x3
3-112-20	20-10/100	350/50	1x3½

TRIPLES — (Continued)

AFH No.	Capacity	Voltage	Size
3-112-50	60-5/20	350/50	1x3½
3-112-60 AFHS	80-40/400	350/50	1⅜x4
3-112-75	150-4/30	350/50	1⅜x3
3-112-80	30-20/100	350/75	1⅜x2½
3-113	40-20/10	350/100	1⅜x2
3-114-50	30-20/100	350/150	1⅜x2½
3-114-52	40-20/10	350/150	1x3
3-114-55	40/200-100	350/150	1⅜x3½
3-114-58	60/200-30	350/150	1⅜x4
3-114-60	10/40-40	350/200	1x3
3-114-70	30-5/100	350/200	1⅜x2½
3-114-80	80-40/100	350/200	1⅜x3
3-115	20-10/5	350/250	1x2½
3-116	30/20-10	350/250	1x3
3-117	30-10/20	350/250	1x3
3-118	100-60/20	350/250	1⅜x4
3-119	15-15/40	400/25	1x2½
3-120	20-20/20	400/25	1x3
3-121	30-10/150	400/50	1⅜x2½
3-122	80-40/150	400/50	1⅜x4
3-122-30	100-10/20	400/50	1⅜x3½
3-122-80	40/200-60	400/200	1⅜x4
3-123	80/20-10	400/300	1⅜x3½
3-123-10	20-10/10	400/350	1x3
3-123-30	20-10/40	400/350	1x4
3-123-40	20-20/10	400/350	1x3
3-123-65	60-30/20	400/350	1⅜x3
3-123-80	80-20/10	400/350	1⅜x3
3-123-90	100-10/80	400/350	1⅜x4
3-124	10-10/10	450/25	1x2
3-125	10-10/20	450/25	1x2
3-127	15-15/20	450/25	1x2½
3-127-10	15-15/40	450/25	1x2½
3-127-30	20-10/20	450/25	1x2½
3-128	20-15/20	450/25	1x3
3-129	20-20/20	450/25	1x2½
3-129-50	20/500-500	450/25	1⅜x3½
3-130	30/100-25	450/25	1⅜x2
3-131	30-30/20	450/25	1⅜x2½
3-131-30	30-30/125	450/25	1⅜x3
3-132	40-20/20	450/25	1⅜x2½
3-133	40-40/20	450/25	1⅜x3
3-134	40-40/40	450/25	1⅜x3
3-134-50	80-10/125	450/25	1⅜x3
3-135	80-40/100	450/25	1⅜x4
3-136	10-10/40	450/50	1x2½
3-137	20-10/40	450/50	1x3
3-138	20-10/50	450/50	1x3
3-138-30	30-10/150	450/50	1⅜x2½
3-138-40	30-15/150	450/50	1⅜x3
3-139	30-30/40	450/50	1⅜x3
3-139-50	35-25/100	450/50	1⅜x3
3-139-75	40-10/40	450/50	1⅜x2½
3-140	40-10/100	450/50	1⅜x3
3-140-50	40-30/25	450/50	1⅜x2½
3-141	40-40/80	450/50	1⅜x3½
3-142	40-40/100	450/50	1⅜x3½
3-142-20	60-40/75	450/50	1⅜x4
3-142-40	80-20/100	450/50	1⅜x4
3-142-50	80-80/50	450/50	1⅜x4
3-142-60	80/100-20	450/50	1⅜x3
3-142-80	30-30/125	450/75	1⅜x3
3-143	10-10/50	450/100	1⅜x2
3-144	30-20/30	450/150	1⅜x2½
3-145	40/90-50	450/150	1⅜x3
3-146	40-10/80	450/150	1⅜x3
3-147	40-40/40	450/150	1⅜x3½
3-148	40-10/80	450/200	1⅜x3
3-148-40	40-40/60	450/200	1⅜x3½
3-148-50	40-40/100	450/200	1⅜x4

AEROVOX
AFH 1-12

AEROVOX
AFH 2-14



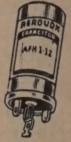
†—Special construction for printed wiring.

AEROVOX *Capacitors*

ELECTROLYTICS — (Continued)

TRIPLES — (Continued)

AFH No.	Capacity	Voltage	Size
3-148-80	10/80-80	450/250	1⅜x3
3-149	20/40-10	450/250	1⅜x2
3-149-35	80/40-40	450/250	1⅜x4
3-149-40	5/80-40	450/300	1⅜x3
3-149-60	10/100-20	450/300	1⅜x3
3-149-80	15-10/120	450/300	1⅜x4
3-150	15-15/10	450/300	1x3
3-151	20/15-10	450/300	1x3
3-152	15-5/15	450/350	1x3
3-152-50	20/15-15	450/350	1x3
3-153	20-20/60	450/350	1⅜x3
3-153-30	20/40-10	450/350	1⅜x2½
3-153-60	20/80-10	450/350	1⅜x3
3-154	40-10/10	450/350	1⅜x2
3-154-20	40-40/60	450/350	1⅜x4
3-154-30	40-40/80	450/350	1⅜x4
3-154-40	50-5/50	450/350	1⅜x3½
3-154-60	60/20-20	450/350	1⅜x3½
3-155-15	10-10/150	475/50	1x3
3-155-30	25-10/20	475/50	1x3
3-155-45	40/80-10	475/300	1⅜x3½
3-155-52	20/20-10	475/350	1x3½
3-155-60	20-10/100	475/400	1⅜x4
3-155-75	40/80-10	475/450	1⅜x4
3-155-90	30-20/20	500/25	1⅜x2½
3-156	10-10/100	500/50	1x3½
3-157	20-10/100	500/50	1x4
3-158	30-10/20	500/50	1⅜x2½
3-159	40-40/100	500/200	1⅜x4
3-160	10-10/5	500/350	1x2½
3-160-50	10/40-40	500/450	1⅜x3½
3-161	20-20/60	500/450	1⅜x3½
3-162	40/25/130	150/25/15	1x3
3-162-80	50/100/25	150/50/25	1x2½
3-163	100/50/25	150/50/25	1x3
3-164	80/40/50	250/150/50	1⅜x2½
†3-164-50 PWH	10/10/20	300/50/25	1x2
3-165	100/60/20	300/150/25	1⅜x3
3-165-30 AFHS	140/200/100	300/150/50	1⅜x4
3-165-70 AFHS	100/60/200	300/200/150	1⅜x4
†3-165-80 PWHS	150/60/200	300/200/150	1⅜x4
3-165-90	30/25/100	350/25/6	1x2½
3-166	20/50/100	350/100/75	1x3
†3-166-25 PWH	125/5/100	350/150/10	1⅜x3½
3-167	10/50/100	350/150/50	1x3
3-167-15 AFHS	60/140/100	350/150/50	1⅜x3½
3-167-25	40/80/500	350/200/25	1⅜x3½
3-167-50	125/5/100	350/200/75	1⅜x3½
3-168	50/10/500	350/250/5	1⅜x2½
3-168-50	100/40/5	350/250/50	1⅜x3½
†3-168-90 PWH	20/20/20	350/300/25	1x2
3-169	30/30/20	350/300/25	1x3
3-169-50	30/50/20	350/300/25	1⅜x2½
3-169-90	10/40/5	350/300/150	1x2½
3-170	20/40/10	350/300/150	1x3½
3-170-50	40/20/10	350/300/200	1⅜x2
3-171	60/40/20	400/300/25	1⅜x3½
3-172	10/40/10	400/300/150	1⅜x2
3-173	55/50/80	400/300/250	1⅜x3½
3-174	10/50/30	400/350/25	1x3
3-174-25	100/10/200	400/350/25	1⅜x3
3-174-50	80/80/100	400/350/50	1⅜x4
3-175	10/50/100	450/150/25	1x3
3-176	40/40/130	450/150/50	1⅜x3
3-177	40/100/50	450/150/50	1⅜x3
3-177-20	10/50/100	450/150/75	1x3
3-177-40	20/50/100	450/150/75	1⅜x2
3-177-50	10/100/200	450/200/25	1x3½
3-177-60	10/100/100	450/200/50	1x3½
3-177-80	20/80/50	450/200/150	1⅜x2½
3-178	20/60/100	450/250/25	1⅜x2½
3-178-25	10/10/50	450/250/50	1x2½
3-178-60 AFHS	50/160/50	450/250/50	1⅜x4
3-179	10/40/10	450/300/150	1⅜x2
3-179-50	30/10/10	450/300/150	1x3
3-180	10/10/20	450/350/25	1x2
3-180-50	10/10/50	450/350/25	1x3
3-181	30/15/40	450/350/25	1x3
3-181-50	30/40/50	450/350/25	1x4
3-182	20/80/100	450/350/50	1⅜x3½
3-182-80	80/50/100	450/350/200	1⅜x4
3-183	15/20/20	450/350/250	1⅜x2
3-184	20/15/10	450/350/300	1x3
3-185	10/30/150	450/400/5	1x3
3-186	30/50/40	450/400/25	1⅜x3
3-186-80	60/80/20	450/400/250	1⅜x4
3-186-90	4/40/40	450/400/300	1⅜x2½
3-187	10/30/30	450/400/300	1⅜x2½
3-187-20	60/80/20	450/400/350	1⅜x4
3-187-25	20/50/20	475/50/25	1x3
3-187-50	20/10/500	475/150/25	1⅜x3
3-187-75	80/80/50	475/150/50	1⅜x4
3-188	10/100/40	475/200/50	1⅜x2½
3-188-50	40/40/100	475/250/100	1⅜x3
3-189	20/20/40	475/300/25	1⅜x2
3-189-40	10/4/100	475/350/50	1x2½
3-189-60	20/10/5	475/350/150	1x2½
3-189-70	10/4/40	475/350/300	1⅜x2
3-190	40/40/25	475/450/50	1⅜x3
3-190-80	10/45/100	475/450/200	1⅜x3
3-191	10/100/40	500/200/50	1⅜x2½
3-192	40/40/100	500/250/50	1⅜x3
3-193	20/20/40	500/300/25	1⅜x2
3-193-25	20/40/100	500/300/25	1⅜x2½
3-193-75	5/100/200	500/300/150	1⅜x4
3-194	40/40/25	500/400/50	1⅜x3



QUADS

AFH No.	Capacity	Voltage	Size
4-01	40-40-40-30	150	1⅜x2
4-01-40	100-80-60-40	150	1⅜x3
4-01-45 AFHS	250-200-10-10	150	1⅜x4
4-01-55 AFHS	200-200-60-30	175	1⅜x4
4-01-60	40-40-40-40	200	1⅜x2
4-01-80	40-20-10-10	300	1⅜x2
4-02	40-40-20-10	300	1⅜x2½
4-02-10	40-40-30-20	300	1⅜x3
4-02-20	60-20-10-5	300	1⅜x2½
4-02-30	60-40-10-10	300	1⅜x2½
4-02-45	80-60-20-10	300	1⅜x4
4-02-60	100-40-20-20	300	1⅜x4
4-02-70 AFHS	140-100-20-20	300	1⅜x4½
4-02-75 AFHS	150-100-10-10	300	1⅜x4
4-02-80	150-150-30-30	300	1⅜x4½
4-02-90	200-20-20-20	300	1⅜x4
4-03	10-10-10-10	350	1⅜x2
4-04	40-20-20-10	350	1⅜x2½
4-04-50	40-40-40-40	350	1⅜x4
4-05	80-10-10-10	350	1⅜x3
4-05-50	80-40-10-4	350	1⅜x3½
4-05-55	80-60-40-20	350	1⅜x4
4-05-60	100-40-10-10	350	1⅜x3½
4-05-70	100-40-20-20	350	1⅜x4
4-06	30-30-20-20	400	1⅜x3
4-06-25	40-35-10-10	400	1⅜x3
4-06-40	50-40-30-20	400	1⅜x4
4-06-75	80-10-10-10	400	1⅜x3
4-07	80-20-10-10	400	1⅜x3½
4-08	100-40-10-10	400	1⅜x4
4-09	5-5-5-5	450	1⅜x2
4-10	10-10-10-10	450	1⅜x2
4-13	20-10-10-10	450	1⅜x2½
4-14	20-20-20-20	450	1⅜x3
4-15	30-15-15-15	450	1⅜x3
4-15-10	30-20-20-10	450	1⅜x3

AEROVOX
CAPACITOR
AFH 2-14

AEROVOX
CAPACITOR
AFH 4-14

†—Special construction for printed wiring.

AEROVOX *Capacitors*

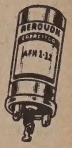
ELECTROLYTICS — (Continued)

QUADS — (Continued)

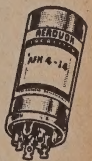
AFH No.	Capacity	Voltage	Size
4-15-20	30-30-15-10	450	1⅜x3
4-15-30	30-30-20-20	450	1⅜x3
4-15-40	30-30-30-15	450	1⅜x4
4-16	35-35-10-5	450	1⅜x3½
4-17	40-10-10-10	450	1⅜x3
4-18	40-20-10-10	450	1⅜x3
4-18-10	40-35-10-10	450	1⅜x3
4-18-20	40-40-5-5	450	1⅜x4
4-18-30	40-40-20-20	450	1⅜x4
4-18-40	40-40-30-30	450	1⅜x4
4-18-45	40-40-40-40	450	1⅜x4
4-18-50	60-20-20-20	450	1⅜x4
4-18-60	60-30-10-2	450	1⅜x3
4-18-75	70-10-10-5	450	1⅜x3
4-18-80	80-10-10-10	450	1⅜x4
4-19	10-10-10-10	475	1⅜x2
4-19-10	20-20-10-10	475	1⅜x2½
4-19-20	20-20-20-20	475	1⅜x3
4-19-40	40-10-10-10	475	1⅜x3
4-19-50	40-20-10-10	475	1⅜x3
4-20	10-10-10-10	500	1⅜x2
4-20-50	40-40-8-8	500	1⅜x4
4-20-75	750-600-350/4	16/11.5 RMS	1⅜x2
4-20-77	750-750-350/4	16/11.5 RMS	1⅜x2
4-21	30-20-20/200	150/10	1⅜x2
4-22	40-40-20/200	150/10	1⅜x2
4-23	60-40-20/200	150/10	1⅜x2
4-23-50 AFHS	80-80-10/200	150/10	1⅜x2½
4-23-70	200-30-10/100	150/10	1⅜x3½
†4-23-72 PWH	290-30-10/100	150/10	1⅜x3½
4-23-75 AFHS	50-20/150-30	150/15	1⅜x2
4-25	20-20-20/20	150/25	1⅜x2
4-25-70	20-20/160-40	150/25	1⅜x2
4-26	30-30-30/40	150/25	1⅜x2
4-27	40-20-20/20	150/25	1⅜x2
4-28	40-40-30/20	150/25	1⅜x2
4-29	40-40-40/20	150/25	1⅜x2
4-30	40-40/40-40	150/25	1⅜x2
4-31	40-40-40/100	150/25	1⅜x2
4-32	40-40-40/160	150/25	1⅜x2
4-33	40-40/100-100	150/25	1⅜x2
4-33-20	40-40/200-100	150/25	1⅜x2
4-33-50 AFHS	50-20-20/200	150/25	1⅜x2
4-34	50-30-30/100	150/25	1⅜x2
†4-34-50 PWH	50-40-10/50	150/25	1⅜x2
4-35	50-50-50/20	150/25	1⅜x2
4-35-15	60-20-10/20	150/25	1⅜x2
4-35-25	60-40-20/20	150/25	1⅜x2
4-35-50 AFHS	60-60-10/60	150/25	1⅜x2
4-35-75 AFHS	70-40-40/25	150/25	1⅜x2½
4-36	75-75-75/30	150/25	1⅜x3
4-37	80-40-40/20	150/25	1⅜x2
4-37-10	80-40-40/40	150/25	1⅜x2½
4-38	80-40-40/100	150/25	1⅜x2½
†4-38-20 PWH	100-40-10/50	150/25	1⅜x2
4-38-30	100-90-60/200	150/25	1⅜x3
4-38-75	125-125-40/100	150/25	1⅜x3
4-38-90 AFHS	140-40/50-30	150/50	1⅜x3
4-38-95 AFHS	200-200-100/10	150/75	1⅜x4
4-39	40-20-10/20	200/25	1⅜x2
4-39-50 AFHS	200-200-100/10	200/75	1⅜x4
4-40	40-20-10/20	250/25	1⅜x2
4-41	100-40-10/100	250/50	1⅜x3½
4-42	80-60-40/20	250/150	1⅜x3½
4-43	10-10-10/20	300/25	1⅜x2
4-44	40-20-20/25	300/25	1⅜x2
4-44-20	40-30-20/50	300/25	1⅜x2½
4-45	40-40-20/20	300/25	1⅜x3
4-46	60-40-20/50	300/25	1⅜x3
4-46-20	60-30-10/60	300/50	1⅜x2½
4-46-30	100-80-20/50	300/50	1⅜x3½
4-46-35	150-30-30/150	300/50	1⅜x4
4-46-50	10/200-140-30	300/150	1⅜x4
4-46-60	10/200-200-30	300/150	1⅜x4

QUADS — (Continued)

AFH No.	Capacity	Voltage	Size
4-47	40-40-40/20	300/150	1⅜x3
4-47-25 AFHS	80-20-20/200	300/150	1⅜x3½
4-47-50 AFHS	100-10/200-30	300/150	1⅜x4
4-47-60 AFHS	140-10/200-60	300/150	1⅜x4
4-47-80 AFHS	120-40-40/10	300/250	1⅜x4
4-48	10-10-10/20	350/25	1⅜x2
4-49	20-10-5/20	350/25	1⅜x2
4-49-25	30-10-5/200	350/25	1⅜x2
4-50	30-20-20/20	350/25	1⅜x2½
4-50-60	40-10/100-25	350/25	1⅜x2
4-50-90	40-20-5/10	350/25	1⅜x2½
4-51	40-20-20/25	350/25	1⅜x2½
4-52	40-40-20/20	350/25	1⅜x3
4-52-05	40-40-30/10	350/25	1⅜x3
4-53	40-40-40/40	350/25	1⅜x3
4-53-40	60-5/100-40	350/25	1⅜x2½
4-53-90	120-20-10/50	350/25	1⅜x3
4-54	15-15-15/50	350/50	1⅜x2
4-55	40-30-10/50	350/50	1⅜x3
4-56	40-40-40/150	350/50	1⅜x3½
4-56-05 AFHS	50-40-20/100	350/50	1⅜x3
4-56-20	60-5/50-20	350/50	1⅜x2½
4-56-30	60-25-25/100	350/50	1⅜x3
4-56-40	70-40-10/50	350/50	1⅜x4
4-56-45 AFHS	80-40-40/100	350/50	1⅜x4
4-56-60	100-10-10/20	350/50	1⅜x3
4-56-65	100-20/50-30	350/50	1⅜x3½
4-56-75	100-40-30/50	350/50	1⅜x4
4-56-80	100-80-10/20	350/50	1⅜x4
4-56-85	140-20-10/100	350/50	1⅜x4
4-56-88	200-10/20-5	350/50	1⅜x4
4-56-90	90-30-5/100	350/75	1⅜x3½
4-56-92	20-10-5/60	350/200	1⅜x2½
4-56-93	20/100-100-20	350/200	1⅜x4
4-56-93.4	30-10-5/100	350/200	1⅜x2½
4-56-93.5	30-20-5/100	350/200	1⅜x3
4-56-94	10-10/10-10	350/300	1⅜x2
4-56-94.8	130-20-10/40	350/300	1⅜x4
4-56-94.9 AFHS	140/100-20-20	350/300	1⅜x4½
4-56-95 AFHS	160/60-10-4	350/300	1⅜x4
4-56-96	10-10/25-25	400/25	1⅜x2
4-57	20-20-20/20	400/25	1⅜x2½
4-57-40	80-40-10/20	400/25	1⅜x4
4-57-50	80-40-30/40	400/25	1⅜x4
4-57-55	90-40-10/40	400/25	1⅜x4
4-57-75	40-40-40/150	400/50	1⅜x4
4-57-85	80-20-10/100	400/50	1⅜x4
4-57-90 AFHS	100-10/30-20	400/50	1⅜x3
4-57-92	20-20/100-100	400/100	1⅜x3
4-57-93 AFHS	80-40-10/100	400/200	1⅜x3½
4-57-95	80-40/40-40	400/200	1⅜x4
4-58	40-10/80-10	400/250	1⅜x3½
4-58-50	80/40-20-10	400/300	1⅜x4
†4-58-65 PWH	40/30-20-20	400/350	1⅜x3
4-58-75	80-40/40-20	400/350	1⅜x4
4-59	10-10-10/20	450/25	1⅜x2
4-60	10-10-10/25	450/25	1⅜x2
4-61	10-10-10/100	450/25	1⅜x2
4-62	10-10-10/150	450/25	1⅜x2½
4-63	10-10/20-20	450/25	1⅜x2
4-65	20-10-10/100	450/25	1⅜x2
4-66	20-15/20-20	450/25	1⅜x2
4-67	20-20-20/20	450/25	1⅜x2½
4-68	30-15-15/40	450/25	1⅜x2½
4-69	30-20-20/20	450/25	1⅜x3
4-70	30-30-10/20	450/25	1⅜x3
4-70-10	30-30-10/125	450/25	1⅜x3
4-71	30-30-20/20	450/25	1⅜x3
4-71-25	30-30/125-125	450/25	1⅜x3
4-72	40-10-10/250	450/25	1⅜x3
4-73	40-10-10/300	450/25	1⅜x3
4-74	40-15-10/25	450/25	1⅜x3
4-75	40-20-10/20	450/25	1⅜x3
4-76	40-20-20/20	450/25	1⅜x3
4-77	40-20-20/40	450/25	1⅜x3
4-78	40-30-10/20	450/25	1⅜x3



AEROVOX
AFH 2-16



†—Special construction for printed wiring.

AEROVOX *Capacitors*

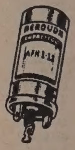
ELECTROLYTICS — (Continued)

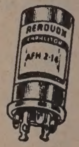
QUADS — (Continued)

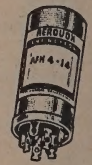
AFH No.	Capacity	Voltage	Size
4-78-10	40-40-10/20	450/25	1⅜x3½
4-79	40-40-20/20	450/25	1⅜x3½
4-79-10	40-40-40/40	450/25	1⅜x4
4-79-20	60-40-40/10	450/25	1⅜x4
4-79-30	60-50-5/20	450/25	1⅜x4
4-79-40	80-40-40/40	450/25	1⅜x4
4-80	20-20-20/100	450/50	1⅜x3
4-81	30-30-15/30	450/50	1⅜x3
4-82	30-30-15/100	450/50	1⅜x3½
4-83	40-20-10/100	450/50	1⅜x3½
4-84	40-40-10/20	450/50	1⅜x3
4.85	40-40/30-10	450/50	1⅜x3
4-85-25	40-40-10/50	450/50	1⅜x4
4-86	60-10-10/20	450/50	1⅜x3
4-86-20	60-30-30/150	450/50	1⅜x4
4-86-25	60-40-10/25	450/50	1⅜x4
4-87	40-40-10/100	450/100	1⅜x3½
4-88	60-10-10/20	450/150	1⅜x3
4-88-20	35-35-10/10	450/200	1⅜x3½
4-88-40	40-40-30/10	450/200	1⅜x4
4-88-50	40-40/100-60	450/200	1⅜x4
4-88-60	40-20-10/100	450/250	1⅜x4
4-88-70	60-10-10/40	450/250	1⅜x3½
4-88-80	10/100-20-20	450/300	1⅜x3
4-89	20-20/30-30	450/300	1⅜x3
4-90	20-20/20-10	450/350	1⅜x3
4-91	20-20/30-30	450/350	1⅜x3
4-91-50	40-10-10/40	450/350	1⅜x3
4-92	40-10/35-10	450/350	1⅜x3
4-92-50	40-20-20/20	450/350	1⅜x3
4-92-75	40-20/80-10	450/350	1⅜x4
4-93	40-40/30-30	450/350	1⅜x4
4-93-40	5/80-40-25	450/400	1⅜x4
4-93-45	10/80-40-25	450/400	1⅜x4
4-93-50	60/40-20-20	450/400	1⅜x4
4-93-75	30-30-10/20	475/25	1⅜x3
4-94	40-20-10/10	475/25	1⅜x3
4-94-50	20/80-20-10	475/300	1⅜x3½
4-94-60	50-30/20-20	475/300	1⅜x4
4-94-70	10/130-20-10	475/350	1⅜x4
4-94-75	20/60-40-10	475/350	1⅜x3½
4-94-85	30/135-10-10	475/350	1⅜x4
4-94-90	10/80-40-40	475/450	1⅜x4
4-95	20-20-10/10	500/300	1⅜x2½
4-96	50-30-10/20	500/300	1⅜x4
4-96-20	5/25-25/100	75/25/15	1⅜x2
4-96-50	40-40/50/80	250/150/50	1⅜x2½
4-96-75	80-8/40/50	250/150/50	1⅜x2½
4-96-90	10/10/100-20	250/200/25	1⅜x2
4-97	100/40/80-20	300/50/25	1⅜x2½
4-97-30	80-5/60/20	300/150/25	1⅜x3
4-97-40	20/150-150/100	300/150/50	1⅜x3½
4-97-75	100-40/125/50	300/150/50	1⅜x4
4-97-90	150-20/10/250	300/250/50	1⅜x4
4-97-95	100-60/100/100	350/150/10	1⅜x4½
4-98	20/150-80/20	350/150/25	1⅜x3
4-98-50	60/60-30/160	350/150/25	1⅜x3
4-98-70	60-20/80/100	350/150/50	1⅜x3½
4-99	15/80-40/200	350/200/25	1⅜x3
4-99-25	20/160-60/40	350/200/25	1⅜x2½
4-99-50	80-20/20/200	350/200/50	1⅜x3½
†4-99-60 PWH	100-60/60/40	350/200/75	1⅜x4
4-99-75	20/100-100/10	350/200/100	1⅜x4
4-99-80	80-60/60/10	350/200/150	1⅜x4
4-99-90	60-40/60/20	350/250/150	1⅜x4
4-99-93	50-30/8/20	350/250/200	1⅜x2½
4-99-95	40-20/10/20	350/300/25	1⅜x2
4-100	40/40-20/20	350/300/25	1⅜x3
4-100-08	160/30-30/20	350/300/50	1⅜x4
4-100-10	30-30/40/100	350/300/75	1⅜x3
4-100-20 AFHS	100-60/40/40	350/300/75	1⅜x4

QUADS — (Continued)

AFH No.	Capacity	Voltage	Size
4-100-25	50-25/100/20	400/50/25	1⅜x3
4-100-40	80-40/100/20	400/50/25	1⅜x4
4-100-45	20-10/10/25	400/100/25	1⅜x2
4-100-50	10-10/40/10	400/200/50	1⅜x2
4-100-65 AFHS	40-40/80/80	400/250/50	1⅜x4
4-100-75	40/120-10/150	400/250/50	1⅜x4
4-100-90	80-10/80/100	400/250/50	1⅜x4
4-101	5-5/50/80	400/300/250	1⅜x3
4-102	10/50-30/30	400/350/25	1⅜x3
4-102-15	50/60-40/20	400/350/25	1⅜x4
4-102-25	80/40-10/10	400/350/25	1⅜x4
4-102-40	20/40/100-10	400/350/50	1⅜x3
4-102-50	20/50-40/80	400/350/50	1⅜x3
4-102-75	30/60-20/100	400/350/50	1⅜x4
4-103	60-40/40/10	400/350/50	1⅜x3½
4-103-40	100-10/20/20	400/350/50	1⅜x4
4-104	40/10/80-10	400/350/250	1⅜x3
4-104-50	60-10/80/10	400/350/250	1⅜x4
4-105-10	10-10/20/60	450/150/25	1⅜x2
4-105-30	20-20/60/100	450/150/25	1⅜x2½
4-105-60	40-40/125/125	450/150/25	1⅜x4
4-106	40/40/30-10	450/150/50	1⅜x3
4-107	10-10/60/100	450/200/50	1⅜x3
4-107-50	10/80-40/100	450/200/50	1⅜x3
4-108	20/80-20/50	450/200/50	1⅜x3
4-108-10	35-25/20/100	450/200/50	1⅜x3
4-108-30	40/40-40/20	450/250/25	1⅜x3
4-108-40	60/80-40/20	450/250/150	1⅜x4
4-108-50	10-10/10/50	450/300/25	1⅜x2
4-108-60	25/100-10/60	450/300/50	1⅜x3
4-108-70	40/40-40/20	450/300/150	1⅜x3
4-108-90	10/100-20/20	450/300/200	1⅜x3
4-109	10/60-40/25	450/350/25	1⅜x3½
4-110	10/100-10/20	450/350/25	1⅜x3½
4-111	20/15-15/20	450/350/25	1⅜x2
4-111-50	20/80-50/100	450/350/50	1⅜x4
4-111-60	50/25-25/100	450/350/50	1⅜x3
4-112	30/40-40/10	450/350/200	1⅜x3½
4-112-05 AFHS	10/140/100-20	450/350/300	1⅜x4½
4-112-10	20/20/50-20	450/400/50	1⅜x3½
4-112-20	80/40-10/150	450/400/50	1⅜x4
4-112-50	80/10/40-30	450/400/300	1⅜x4
4-112-75	10/100-10/100	475/300/25	1⅜x3½
4-112-80	10/140-4/100	475/300/50	1⅜x4
4-113	15-15/80/40	475/300/50	1⅜x3
4-113-10	10/20/100-50	475/350/25	1⅜x2
4-113-20	10/30-5/80	475/350/50	1⅜x2½
4-113-40	40-10/4/40	475/350/300	1⅜x3
4-113-50	10/80-40/100	475/400/50	1⅜x4
4-113-60	10/50-30/30	475/450/25	1⅜x3
4-113-80	20-10/20/100	475/450/25	1⅜x2½
4-114	10-5/80/40	475/450/50	1⅜x3½
4-114-50	10/40-10/100	475/450/50	1⅜x2½
4-114-55	10/10-4/20	500/300/25	1⅜x2
4-114-60	10/100-30/100	500/300/25	1⅜x3½
4-114-75	30/10/150-30	500/450/50	1⅜x3
4-114-90	100/60/10/20	300/200/150/50	1⅜x3
4-115	120/20/100/20	300/250/50/25	1⅜x4
4-116	200/20/100/20	300/250/50/25	1⅜x4
4-116-50	40/100/100/25	350/250/50/25	1⅜x3½
4-117	20/40/10/250	350/300/150/50	1⅜x3
4-117-25	20/150/10/250	350/300/250/50	1⅜x4
4-117-40	20/10/10/20	400/350/200/25	1⅜x2
4-117-44	40/80/100/25	400/350/200/50	1⅜x4½
4-117-45	40/80/100/100	400/350/200/50	1⅜x4½
4-117-47	20/10/80/20	400/350/300/25	1⅜x3







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†—Special construction for printed wiring.

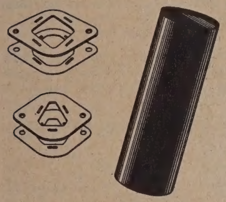
AEROVOX *Capacitors*

ELECTROLYTICS — (Continued)

QUADS — (Continued)

AFH No.	Capacity	Voltage	Size
4-117-48	40/30/10/20	400/350/300/25	1⅜x2
4-117-50	10/10/60/100	450/300/200/50	1⅜x3
4-117-60	10/40/40/100	450/300/250/50	1⅜x3½
4-117-75	30/40/50/200	450/300/250/150	1⅜x4
4-117-90	10/40/100/100	450/350/250/50	1⅜x3
4-117-95	30/25/50/200	450/400/250/150	1⅜x4
4-118	80/10/30/40	450/400/300/150	1⅜x4
4-118-50	5/60/50/20	450/400/350/25	1⅜x3
4-118-90	40/40/50/80	475/250/150/50	1⅜x3½
4-119	20/40/100/80	475/300/50/25	1⅜x3
4-120	10/40/80/100	475/350/200/100	1⅜x3½
4-120-10	20/40/80/100	475/350/200/100	1⅜x4
4-120-20	10/40/80/100	475/350/300/100	1⅜x4
4-120-50	10/40/100/10	475/400/50/25	1⅜x2½
4-120-75	10/40/4/100	475/400/350/50	1⅜x2½
4-120-90	10/10/20/200	475/450/150/50	1⅜x2½
4-121	10/10/80/50	475/450/200/50	1⅜x2½
4-121-50	25/20/20/100	475/450/300/50	1⅜x3
4-122	25/20/40/100	475/450/300/50	1⅜x3½
4-123	10/60/30/125	475/450/400/50	1⅜x4

AFH HARDWARE



BAKELITE WASHERS

Cat. No.	Size
BW-1	¾" d.
BW-2	1" d.
BW-3	1⅜" d.
BW-4	1" in 1⅜" hole mounting

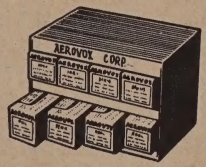
INSULATING TUBES

Cat. No.	Size
TU-1	1 x 2
TU-2	1 x 2½
TU-3	1 x 3
TU-4	1 x 3½
TU-5	1 x 4
TU-6	1⅜ x 2
TU-7	1⅜ x 2½
TU-8	1⅜ x 3
TU-9	1⅜ x 3½
TU-10	1⅜ x 4

METAL WASHERS

Cat. No.	Size
MW-1	¾" d.
MW-2	1" d.
MW-3	1⅜" d.
MW-4	1" in 1⅜" hole mounting

AEROVOX KITS
AK-400 AND AK-401


AEROVOX CORP.

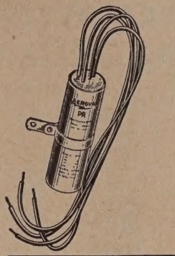
These kits incorporate the sixteen (16) AFH capacitors that are the most popular nationally. Use kits individually (8 pieces) or stack them (16 or more pieces). Stack-a-'Lytic metal cabinets can be assem- storage rack. Special quantity prices.

AK-400

AFH No.	Volt.	Cap.
AFHS 1-22	150	120
AFHS 1-22-05	150	120
AFHS 1-23	150	140
AFHS 1-24-25	150	200
AFHS 1-24-75	150	300
AFH 2-51	450	20-20
AFH 2-57	450	40-40
AFH 3-44	450	40-40-40

AK-401

AFH No.	Volt.	Cap.
AFH 1-21	150	100
AFHS 1-37-25	300	150
AFHS 1-43	350	125
AFH 1-52	450	40
AFH 2-19	150	80-40
AFHS 2-21	150	200-5
AFH 2-72	500	40-40
AFH 4-14	450	20-20-20-20



TYPE PR Wax-Filled Tubular Capacitors

Wax-filled electrolytic tubulars in wax-impregnated cardboard tubes. Sections manufactured to same high standards as more expensive metal-cased units. These units are made for exact duplicate replacements in television receivers and antenna rotating devices. Tolerances meet RETMA standards and are manufactured for operating temperatures of 0-65°C. PR numbers designate replacements for Television Receivers. XA numbers designate replacements for Rotators.

TYPE PR SINGLES

PR No.	Capacity	Voltage	Size
XA-4283	70	50 (VAC)	⅞x3
*XA-4098A	70	50 (VAC)	⅞x3
XA-10001	100	50 (VAC)	1x2⅞
PR 1-050	100	150	1x3½
PR 1-075	200	200	1⅜x3⅜
PR 1-100	140	300	1⅜x3⅜

TYPE PR DUALS

PR No.	Capacity	Voltage	Size
PR 2-020	200-20	8	½x1¼
PR 2-030	50-30	150	1x2½
PR 2-035	50-50	150	1x2½
PR 2-040	80-30	150	1x2½
PR 2-045	100-50	150	1x3
††PR 2-050	120-120	150	1⅛x4⅞
PR 2-100	200-5	150	1x4
PR 2-120	250-50	150	1⅜x3¼
PR 2-200	120-80	200	1⅜x3
PR 2-275	200-5	200	1⅛x4⅛
PR 2-300	150-100	300	1⅜x4½
PR 2-400	140-5	350	1¼x4⅛
PR 2-600	40/125	200/40	1x3¼
PR 2-700	50/75	250/50	1⅛x2¾
PR 2-725	5/25	300/25	¾x1⅞
PR 2-755	200/100	300/50	1¼x4⅝
PR 2-790	100/150	350/250	1⅜x3½
PR 2-800	20/100	450/25	1¼x2¾

TYPE PR TRIPLES

PR No.	Capacity	Voltage	Size
PR 3-005	100-100-65	8	⅝x15⁄16
PR 3-007	500-250-250	8	1x1¾
PR 3-010	150-150-150	150	1⅜x4¼
PR 3-012	250-200-10	150	1⅜x4⅜
PR 3-020	60-60-60	300	1⅜x3½
PR 3-025	60-60-4	350	1⅜x3¼
PR 3-030	80-40-20	350	1⅜x3½
†PR 3-035	30-10-10	450	1⅜x3½
PR 3-043	250-120/50	150/25	1⅜x3⅞
PR 3-045	100-10/20	300/25	1⅛x3½
PR 3-046	100-100/200	300/25	1½x4½
PR 3-046-50	120-40/100	300/50	1⅜x3¾
PR 3-047	100-60/100	300/50	1⅜x4
PR 3-048	100/200-40	300/200	1⅜x4½
PR 3-050	10-10/100	350/50	1¼x2½
PR 3-053	100-10/50	350/50	1⅜x3½
PR 3-054	10/200-100	400/150	1⅜x3½
PR 3-055	20-10/150	450/50	1⅜x3
PR 3-060	20/200-5	450/200	1¼x4⅛
PR 3-065	5/80-40	450/400	1¾x4¼
PR 3-070	150/100/80	150/50/25	1⅜x3
PR 3-080	80/10/100	300/250/50	1⅜x3½
PR 3-085	20/60/100	350/200/25	1⅜x3
PR 3-090	30/40/125	350/200/25	1⅜x2¼
PR 3-100	140/5/200	350/300/200	1½x4⅝
PR 3-125	100/40/40	350/300/250	1⅜x3¾
PR 3-150	30/50/100	450/150/25	1⅜x2½
PR 3-160	25/100/100	450/150/50	1⅜x3

* 5" leads. No bracket.

†† Separate sections.

AEROVOX *Capacitors*

ELECTROLYTICS — (Continued)

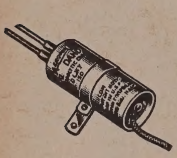
TYPE PR QUADS

PR No.	Capacity	Voltage	Size
PR 4-125	40-40-40-4	150	1x3
PR 4-175	20-20-20-10	450	1⅜x3½
PR 4-185	40-20-20-10	450	1⅜x3¾
PR 4-200	40-40-20-20	450	1½x4⅝
PR 4-220	40-20-20/100	150/25	1 1/16x3¼
PR 4-225	40-10-10/200	150/35	1⅛x3
PR 4-250	100-80-20/50	300/50	1⅜x4¼
PR 4-275	140-4/50-4	300/150	1⅜x3½
PR 4-280	140-5/200-30	300/150	1½x4
PR 4-285	140-10-5/200	300/150	1½x4⅜
PR 4-295	80-40-10/40	300/250	1⅜x4
PR 4-300	120-40-40/10	300/250	1⅜x4¼
PR 4-325	150-100-20/100	350/50	1½x4¾
PR 4-350	15-15/150-150	350/150	1⅜x4¼
PR 4-450	80-60-20/40	350/300	1⅜x4⅝
PR 4-500	10-10-10/150	450/50	1¼x3¾
PR 4-550	100-40/40/25	300/50/25	1⅜x3¼
PR 4-600	140/5/200-30	350/300/200	1½x4⅝
·PR 4-700	80-10/40/100	400/300/50	1⅜x4
PR 4-800	10/80/40-40	450/300/250	1⅜x3½
PR 4-850	40/100/100/25	350/250/ 50/25	1⅜x3¼
PR 4-875	140/5/200/100	350/300/ 200/150	1½x4⅝
PR 4-900	20/120/40/100	450/300/ 250/50	1⅜x4¼

TYPE PR QUINTS

PR No.	Capacity	Voltage	Size
PR 5-500	40-20-20-20/50	300/75	1⅜x3

† Separate negative furnished for two 10 mfd sections.



TYPE PRS "DANDEE" (85°C)

SINGLES • DUALS • TRIPLES QUADS

Metal Can Tubular Electrolytic Capacitors

TYPE PRS-AC (AC rated units)

NP-PRS (non-polarized units)

Compact, electrolytic tubular capacitors furnished in aluminum cans with cardboard insulating sleeves. Designed for use in television and radio applications where space is at a premium.

Included in this listing are the AC rated units (PRS-AC) and non-polarized units (NP-PRS) for replacement use in cross-over networks and color TV receivers. Also listed are Types PRSB — separate section, dual units for use in specialized applications.

Single section capacitors are furnished with bare tinned copper leads 3 inches long. Negative grounded to case. Multiple units are furnished with insulated, stranded copper leads 5 inches long. Negative is common and grounded to case. Multiple units have common cathode.

Sizes listed are diameters over cardboard insulating sleeve. For actual can size deduct 1/16" from diameter and 3/16" from length. Multiple units are supplied with mounting strap. If mounting strap is required on single units, specify on order.

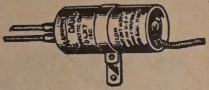
Tolerance and surge voltage are in accordance with EIA Specification RS-154.

TYPE PRS — SINGLES

PRS No.	Cap. Mfd.	Size
		4V
1050	2000	1 1/16 x 2¾
		6V
1100	100	11/16 x 1¼
1110	250	11/16 x 1¾
1120	500	13/16 x 1¾
1130	1000	15/16 x 2¼
1140	1500	1 1/16 x 2¼
1145	2000	1 1/16 x 2¾
		10V
1147	2000	1 1/16 x 2
		12V
1150	100	11/16 x 1½
1160	250	13/16 x 1¾
1170	500	15/16 x 2¼
1180	1000	1 1/16 x 3¼
		15V
1200	100	11/16 x 1½
1210	250	13/16 x 2¼
1220	500	15/16 x 2¼
1230	1000	1 1/16 x 2¼
		25V
1250	10	9/16 x 1¼
1255	16	9/16 x 1¼
1260	25	9/16 x 1¼
1265	50	11/16 x 1½
1270	100	13/16 x 1½
1280	250	13/16 x 1¾
1290	500	1 1/16 x 2½
		50V
1300	2	9/16 x 1 3/16
1310	5	9/16 x 1¼
1320	10	9/16 x 1¼
1330	20	11/16 x 1¼
1340	25	11/16 x 1¼
1350	50	11/16 x 1¾
1360	100	13/16 x 1¾
1370	150	15/16 x 1¾
1380	250	15/16 x 1¾
1390	500	1⅛ x 3 9/16
		150V
1400	4	9/16 x 1¼
1405	8	11/16 x 1¼
1410	10	11/16 x 1¼
1420	12	11/16 x 1¼
1430	16	11/16 x 1½
1440	20	11/16 x 1¾
1450	24	11/16 x 1¾
1460	30	13/16 x 1½
1470	40	13/16 x 1¾
1480	50	15/16 x 1¾
1490	60	15/16 x 1¾
1500	80	15/16 x 2¼
1510	100	15/16 x 2¼
1520	150	1 1/16 x 3
1530	200	1 1/16 x 3
1540	300	1 1/16 x 4
		250V
1550	4	11/16 x 1¼
1555	8	11/16 x 1½
1560	12	11/16 x 1¾
1565	16	13/16 x 1½
1570	20	13/16 x 1½
1575	30	13/16 x 2¼
1580	40	13/16 x 2¼
1585	50	15/16 x 2¼
1590	60	15/16 x 2¼
1595	100	1 1/16 x 3¼
		350V
1600	4	11/16 x 1½
1610	8	13/16 x 1½
1620	10	13/16 x 1¾
1630	12	13/16 x 1¾
1640	16	13/16 x 1¾
1650	24	15/16 x 1¾
1660	30	13/16 x 2¼
1670	40	15/16 x 2¼
1680	50	1 1/16 x 2¼
1690	60	1 1/16 x 2½
		450V
1700	1	9/16 x 1¼
1705	2	9/16 x 1¼
1710	4	11/16 x 1½
1715	8	13/16 x 1½
1720	10	13/16 x 1¾
1725	12	15/16 x 1½
1730	16	15/16 x 1¾
1735	20	1 1/16 x 1¾
1740	30	1 1/16 x 2¼
1750	40	1 1/16 x 2½
1760	50	1 1/16 x 3¼
1770	60	1 1/16 x 3¼
1780	80	1 1/16 x 3¾
1790	100	1 1/16 x 3¾
		500V
1800	4	11/16 x 2
1805	8	13/16 x 1¾
1810	10	15/16 x 1¾
1815	12	15/16 x 2¼
1820	16	1 1/16 x 2¼
1830	20	1 1/16 x 2¼
1840	30	1 1/16 x 2¾
		600V
1845	4	⅝ x 2¾
1850	8	15/16 x 3 1/16
1860	10	15/16 x 3 1/16
1870	12	1 1/16 x 3 1/16
1880	16	1 1/16 x 3 9/16
1890	20	1 1/16 x 3 9/16
		700V
1900	8	15/16 x 3 1/16
1905	10	1 1/16 x 3 1/16
1910	12	1 1/16 x 3 9/16
1915	16	1 1/16 x 3 9/16

TYPE PRS — DUALS

PRS No.	Cap. Mfd.	Size
		15V
2020	500-150	15/16 x 1¾
		25V
2050	10-10	11/16 x 1¼
2075	20-20	11/16 x 1¼
		150V
2150	8-8	11/16 x 1¾
2155	16-8	11/16 x 2¼
2160	20-10	13/16 x 1½
2165	20-20	13/16 x 1¾
2170	30-20	13/16 x 2¼
2175	30-30	15/16 x 1¾
2180	40-20	15/16 x 1¾
2190	40-30	15/16 x 2¼
2195	40-40	15/16 x 2¼
2200	50-30	15/16 x 2¼
2210	50-50	15/16 x 2¼
2220	80-20	15/16 x 2¼
2230	80-40	15/16 x 2¾
2240	80-50	1 1/16 x 2¾
2245	100-100	1 1/16 x 3¼
		200V
2250	8-8	11/16 x 1¾
2260	16-8	11/16 x 2¼
2280	16-16	13/16 x 1¾
2290	30-30	15/16 x 2¼
		250V
2300	10-10	13/16 x 1¾
2320	16-16	13/16 x 2¼
2330	20-20	15/16 x 2¼
2340	30-30	15/16 x 2¼
		300V
2345	50-10	1 1/16 x 2¼
		450V
2350	8-8	13/16 x 2¼
2360	10-10	15/16 x 2¼
2370	16-8	15/16 x 2¼
2380	16-16	1 1/16 x 2¼
2390	20-20	15/16 x 3 1/16
2400	30-30	1 1/16 x 3¼
2410	40-20	1 1/16 x 3¼
2420	40-40	1 1/16 x 4
2430	50-30	1 1/16 x 4



ELECTROLYTICS — (Continued)

TYPE PRS — TRIPLES

PRS No.	Cap. Mfd.	Size
		15V
3200	500-100-100	15/16 x 1 13/16
		150V
3500	20-20-20	15/16 x 1¾
3550	30-20-10	15/16 x 1¾
3555	30-25-20	1 1/16 x 1¾
3560	30-30-20	1 1/16 x 1¾
3570	30-30-30	15/16 x 2¼
3600	40-20-20	15/16 x 2¼

PRS No.	Cap. Mfd.	Size
3625	40-30-20	15/16 x 2¼
3650	40-40-20	1 1/16 x 2¼
3675	40-40-40	1 1/16 x 2¼
3700	50-30-10	15/16 x 2¼
3750	50-30-20	1 1/16 x 2½
3800	80-40-20	1 1/16 x 2½
3825	80-50-20	1 1/16 x 2¾
		450V
3900	10-10-10	1 1/16 x 2¾

TYPE PRS — B

PRS No.	Cap. Mfd.	Size
		150V
5200	20-20	1 x 2½
5250	40-20	1 x 3
		250V
5300	16-8	1 x 2½

PRS No.	Cap. Mfd.	Size
5400	16-16	1 x 3
		450V
5500	8-8	1 x 3
5600	16-8	1⅛ x 3½
5700	16-16	1⅜ x 3½

TYPE PRS — MULTIPLE VOLTAGES

PRS No.	Cap. Mfd.	VCDW	Size
4150	40-40/250	150/10	1 1/16 x 2¼
4200	20-20/20	150/25	13/16 x 1¾
4300	30-20/20	150/25	15/16 x 1¾
4350	30-20/100	150/25	15/16 x 2¼
4400	40-20/20	150/25	15/16 x 1¾
4425	40-30/20	150/25	15/16 x 2¼
4450	40-40/20	150/25	1 1/16 x 1¾
4475	40-40/100	150/25	1 1/16 x 2¼
4500	50-30/20	150/25	1 1/16 x 1¾
4525	50-30/100	150/25	1 1/16 x 2¼
4550	50-30/250	150/25	1 1/16 x 2¾
4575	50-50/20	150/25	1 1/16 x 2¼
4600	80-20/100	150/25	1 1/16 x 2¼
4650	80-40/20	150/25	1 1/16 x 2¼
4700	20-20/20	450/25	1 1/16 x 2¾
*4800	20/100	475/50	1 x 2 11/16

*No tube

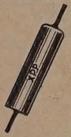
TYPE PRS — AC Rated — NP-PRS — NON-POLARIZED

PRS No.	Cap. Mfd.	Size
		10 VAC
6200	8	11/16 x 1½
		25 VAC
6400	20	13/16 x 1½
		50 VAC
6500	30	⅞ x 1⅝
6550	60	¾ x 2⅝
	TYPE NP-PRS Non-Polarized	
		3 VNP
7050	1000	1 1/16 x 2¼
		6 VNP
7100	500	15/16 x 2¼
		10 VNP
7200	25	7/16 x 1¼
7220	50	13/16 x 1½

PRS No.	Cap. Mfd.	Size
7240	450	1 1/16 x 2¼
7245	500	1 1/16 x 1¾
		15 VNP
7250	500	1 1/16 x 2¼
7275	1000	1 1/16 x 3¾
		25 VNP
7300	2	13/16 x 1½
7315	10	13/16 x 1¾
7330	50	15/16 x 1½
7340	100	15/16 x 1¾
		30 VNP
7350	20	13/16 x 1½
		50 VNP
7400	2	13/16 x 1¼
7405	4	13/16 x 1¼

PRS No.	Cap. Mfd.	Size
		150 VNP
7450	40	1 1/16 x 2¼
		200 VNP
7500	2	11/16 x 1¼
		350 VNP
7550	5	15/16 x 1¾
7555	10	1 1/16 x 2
7560	20	1 1/16 x 2¼
		400 VNP
7650	10	1 1/16 x 2
		450 VNP
7750	4	15/16 x 1½

TYPE XPP — MINIATURIZED METAL-CASED ELECTROLYTICS



OPERATING TEMPERATURE RANGE — minus 20°C to plus 65°C.

CAPACITANCE AT 25°C — minus 10%—plus 250%.

RC PRODUCT AT 25°C — 120 CPS: 500 maximum.
RC product (rated capacitance in mfd. x equivalent series resistance in ohms).

MAXIMUM LEAKAGE:
.15 microamperes/mfd/volt: below 10 volt rating.
.10 microamperes/mfd/volt: above 10 volt rating.

Miniature hermetically-sealed, metal cased, tubular aluminum electrolytic capacitors.

For use in all transistorized assemblies such as personal portable radios, hearing aids, instruments and many other miniaturized electronic apparatus.

Cap.	3VDCW		6VDCW		10VDCW		12VDCW		15VDCW		25VDCW	
Mfds.	Type No.	Size	Type No.	Size	Type No.	Size	Type No.	Size	Type No.	Size	Type No.	Size
1	XPP-3001	A	XPP-6001	A	XPP-10001	A	XPP-12001	A	XPP-15001	A	XPP-25001	B
2	XPP-3002	A	XPP-6002	A	XPP-10002	A	XPP-12002	A	XPP-15002	A	XPP-25002	B
3	XPP-3003	A	XPP-6003	A	XPP-10003	B	XPP-12003	B	XPP-15003	C	XPP-25003	C
4	XPP-3004	A	XPP-6004	B	XPP-10004	B	XPP-12004	B	XPP-15004	C	XPP-25004	C
5	XPP-3005	A	XPP-6005	B	XPP-10005	B	XPP-12005	B	XPP-15005	C	XPP-25005	C
6	XPP-3006	A	XPP-6006	B	XPP-10006	C	XPP-12006	C	XPP-15006	C	XPP-25006	C
8	XPP-3008	B	XPP-6008	C	XPP-10008	C	XPP-12008	C	XPP-15008	C	XPP-25008	E
10	XPP-3010	C	XPP-6010	C	XPP-10010	C	XPP-12010	C	XPP-15010	C	XPP-25010	E
15	XPP-3015	C	XPP-6015	C	XPP-10015	C	XPP-12015	C	XPP-15015	D	XPP-25015	F
20	XPP-3020	C	XPP-6020	D	XPP-10020	D	XPP-12020	D	XPP-15020	E	XPP-25020	F
25	XPP-3025	C	XPP-6025	D	XPP-10025	E	XPP-12025	E	XPP-15025	E	XPP-25025	F
30	XPP-3030	D	XPP-6030	E	XPP-10030	E	XPP-12030	E	XPP-15030	F		
40	XPP-3040	D	XPP-6040	E	XPP-10040	E	XPP-12040	F	XPP-15040	F		
50	XPP-3050	D	XPP-6050	E	XPP-10050	E	XPP-12050	F	XPP-15050	F		
60	XPP-3060	E	XPP-6060	F								
100	XPP-3100	F										

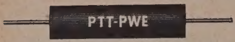
Size

A	3/16x⅝	D	.265x⅞
B	3/16x¾	E	⅜x¾
C	.265x¾	F	⅜x⅞

AEROVOX *Capacitors*

ELECTROLYTICS — (Continued)

TYPE PTT-PWE TUBULAR PLASTIC-CASED ELECTROLYTICS



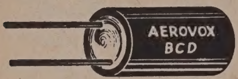
Small in size, big in performance, designed especially for wide applications in transistorized circuitry and cramped electronic assemblies, here is a truly MINIATURE electrolytic tubular that will handle full sized loads. Aerovox Type PTT-PWE units feature "Polycap" cases that are the next best thing to metal cans for maximum protection against humidity. Advanced construction techniques assure long capacitor life. Units are rated for operation at temperatures from —30°C to +65°C.

	3 VDCW			6 VDCW			10 VDCW			12 VDCW		
Cap.	PTT #	Size	PWE #	PTT #	Size	PWE #	PTT #	Size	PWE #	PTT #	Size	PWE #
1	PTT 1	A	PWE 3001	PTT 18	A	PWE 6001	PTT 34	A	PWE 1001	PTT 48	A	PWE 12001
2	PTT 2	A	PWE 3002	PTT 19	A	PWE 6002	PTT 35	A	PWE 1002	PTT 49	A	PWE 12002
3	PTT 3	A	PWE 3003	PTT 20	A	PWE 6003	PTT 36	A	PWE 1003	PTT 50	A	PWE 12003
5	PTT 4	A	PWE 3005	PTT 21	A	PWE 6005	PTT 37	A	PWE 1005	PTT 51	A	PWE 12005
8	PTT 5	A	PWE 3008	PTT 22	A	PWE 6008	PTT 38	A	PWE 1008	PTT 52	A	PWE 12008
10	PTT 6	A	PWE 3010	PTT 23	A	PWE 6010	PTT 39	A	PWE 10010	PTT 53	A	PWE 12010
15	PTT 7	A	PWE 3015	PTT 24	A	PWE 6015	PTT 40	A	PWE 10015	PTT 54	B	PWE 12015
20	PTT 8	A	PWE 3020	PTT 25	A	PWE 6020	PTT 41	B	PWE 10020	PTT 55	C	PWE 12020
25	PTT 9	A	PWE 3025	PTT 26	B	PWE 6025	PTT 42	C	PWE 10025	PTT 56	C	PWE 12025
30	PTT 10	A	PWE 3030	PTT 27	B	PWE 6030	PTT 43	C	PWE 10030	PTT 57	C	PWE 12030
40	PTT 11	A	PWE 3040	PTT 28	C	PWE 6040	PTT 44	C	PWE 10040	PTT 58	C	PWE 12040
50	PTT 12	B	PWE 3050	PTT 29	C	PWE 6050	PTT 45	D	PWE 10050	PTT 59	E	PWE 12050
100	PTT 13	C	PWE 3100	PTT 30	E	PWE 6100	PTT 46	E	PWE 10100	PTT 60	H	PWE 12100
200	PTT 14	E	PWE 3200	PTT 31	F	PWE 6200	PTT 47	K	PWE 10200			
250	PTT 15	F	PWE 3250	PTT 32	H	PWE 6250						
300	PTT 16	G	PWE 3300	PTT 33	K	PWE 6300						
500	PTT 17	K	PWE 3500									

	15 VDCW			25 VDCW			50 VDCW		
Cap.	PTT #	Size	PWE #	PTT #	Size	PWE #	PTT #	Size	PWE #
1	PTT 61	A	PWE 15001	PTT 74	A	PWE 25001	PTT 87	A	PWE 50001
2	PTT 62	A	PWE 15002	PTT 75	A	PWE 25002	PTT 88	A	PWE 50002
3	PTT 63	A	PWE 15003	PTT 76	A	PWE 25003	PTT 89	A	PWE 50003
5	PTT 64	A	PWE 15005	PTT 77	A	PWE 25005	PTT 90	B	PWE 50005
8	PTT 65	A	PWE 15008	PTT 78	A	PWE 25008	PTT 91	C	PWE 50008
10	PTT 66	B	PWE 15010	PTT 79	B	PWE 25010	PTT 92	C	PWE 50010
15	PTT 67	B	PWE 15015	PTT 80	C	PWE 25015	PTT 93	D	PWE 50015
20	PTT 68	C	PWE 15020	PTT 81	C	PWE 25020	PTT 94	D	PWE 50020
25	PTT 69	C	PWE 15025	PTT 82	C	PWE 25025	PTT 95	F	PWE 50025
30	PTT 70	C	PWE 15030	PTT 83	D	PWE 25030	PTT 96	H	PWE 50030
40	PTT 71	C	PWE 15040	PTT 84	D	PWE 25040	PTT 97	K	PWE 50040
50	PTT 72	E	PWE 15050	PTT 85	E	PWE 25050	PTT 98	K	PWE 50050
100	PTT 73	H	PWE 15100	PTT 86	J	PWE 25100			

SIZE CHART

A	¼ x ¾
B	¼ x ⅞
C	⅜ x ¾
D	⅜ x ⅞
E	⅜ x 1
F	⅜ x 1¼
G	⅜ x 1⅜
H	⅜ x 1½
J	⅜ x 1¾
K	⅜ x 2



TYPE B C D UPRIGHT MOUNTING PLASTIC CASED ELECTROLYTICS

Plastic cased, epoxy end-filled electrolytic capacitors. Upright mounting for replacement in printed wiring, transistorized personal radios and car radios.

Small size and type of mounting make these units ideal for use in any printed wiring circuit.

Plastic case and epoxy end seal offer good moisture barrier which protects against drying out or leakage of electrolyte.

High purity foil insures long life and low leakage.

Minimum 1" lead length assists in threading connections into printed wiring boards even in tightest spaces.

Positive lead is identified by a +(plus) mark on case. Lead space varies with diameter.

DIAMETER	SPACING
⅜	.187
7/16	.250
½	.312

Cap. Mfds.	BCD 3VDCW No.	Size	BCD 10VDCW No.	Size	BCD 6VDCW No.	Size	BCD 12VDCW No.	Size	BCD 15VDCW No.	Size	BCD 25VDCW No.	Size	BCD 50 VDCW No.	Size
1	3001	A	6001	A			12001	A	15001	A	25001	A	50001	A
2	3002	A	6002	A			12002	A	15002	A	25002	A	50002	A
3	3003	A	6003	A			12003	A	15003	A	25003	A	50003	A
4	3004	A	6004	A			12004	A	15004	A	25004	A	50004	A
5	3005	A	6005	A			12005	A	15005	A	25005	A	50005	A
6	3006	A	6006	A			12006	A	15006	A	25006	A	50006	A
8	3008	A	6008	A			12008	A	15008	A	25008	A	50008	A
10	3010	A	6010	A	10010	A	12010	A	15010	A	25010	B	50010	B
15	3015	A	6015	A			12015	A	15015	A	25015	B	50015	C
20	3020	A	6020	A			12020	A	15020	A	25020	B	50020	C
25	3025	A	6025	A	10025	A	12025	A	15025	A	25025	B	50025	D
35	3035	A	6035	A			12035	A	15035	B	25035	C		
50	3050	A	6050	A	10050	B	12050	B	15050	C	25050	D		
75	3075	A	6075	B			12075	C	15075	D	25075	D		
80					10080	C								
100	3100	B	6100	C	10100	C	12100	D	15100	D				
150	3150	C	6150	D			12150	E						
190					10190	E	12500	F						
200	3200	C	6200	D										
250	3250	D												
300	3300	D												
50-30					10x5030	D								
50-50					10x5050	D								
80-50					10x8050	D								
80-80					10x8080	D								
100-30			6x10030	E										

SIZE CODE

A—⅜ x ⅝
B—⅜ x ¾
C—7/16 x ¾
D—½ x ¾
E—½ x ⅞
F—⅝ x 1⅜

SPECIAL RATINGS

BCD No.	CAP. MFDS.		VDCW	Size
18100	100	-	18	⅝ x ¾
12500	500	-	12	⅝ x 1⅜
20200	200	-	20	⅝ x 1⅛

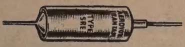
Non-Polarized
BCD-NP

5005	5-5VNP	⅜ x ¾
10005	5-10VNP	½ x 1⅛

AEROVOX *Capacitors*

ELECTROLYTICS — (Continued)

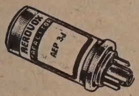
TYPE SRE "BANTAM" METAL TUBULAR ELECTROLYTICS



Although smaller than the PRS the SRE handles full size loads at operating temperature range of 0°C to 85°C at rated voltage. Hermetically-sealed in aluminum cans and furnished with a carboard insulating sleeve. Negative grounded to can. If required without tube specify type SREN.

Cap.	Size	Cap.	Size	Cap.	Size	Cap.	Size	Cap.	Size	Cap.	Size
3V		**6V**		**12V**		**25V**		**50V**		**70V**	
25	⅜ x 1	5	⅜ x 1	50	⅜ x 1⅛	5	⅜ x 1	1	⅜ x 1	10	⅜ x 1
50	⅜ x 1	25	⅜ x 1	100	½ x 1	10	⅜ x 1	2	⅜ x 1	**150V**	
100	⅜ x 1	50	⅜ x 1	200	½ x 1⅝	20	⅜ x 1	5	⅜ x 1	5	⅜ x 1
200	⅜ x 1⅝	100	½ x 1⅛			25	⅜ x 1	10	⅜ x 1	10	⅜ x 1⅝
300	½ x 1⅛	250	½ x 1⅝	**15V**		50	½ x 1	15	⅜ x 1⅛	15	½ x 1⅛
500	½ x 1⅝			100	½ x 1⅛	100	½ x 1⅝	25	½ x 1	20	½ x 1⅝
										25	½ x 1⅝

TYPE AEP Plug-in Electrolytic Capacitors

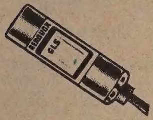


Hermetically sealed, dry electrolytic capacitor furnished in round, aluminum can and 4-pin, octal-base mounting. For quick changes, readily removed and replaced in a standard octal-base tube socket. For use where continuous service is important. They are ideally suited for experimental testing, juke boxes and communication receiver uses. These units are the commercial equivalents of Type CE51's, 2's and 3's, as listed in MIL Specification MIL C62A.

Operating temperature to +65°C. Quadruple element units furnished with ground lug for cathode connection.

Type	Capacity Mfd.	VDCW	Diam. x Hght.
SINGLE ELEMENT UNITS			
AEP400P	2000	15	1⅜ x 2½
AEP5A	25	25	1 5/32 x 2½
AEP4D	20	150	1 5/32 x 2½
AEP8D	40	150	1 5/32 x 2½
AEP2J	10	450	1 5/32 x 2½
AEP3J	15	450	1 5/32 x 2½
AEP4J	20	450	1 5/32 x 2½
AEP6J	30	450	1 5/32 x 2½
AEP8J	40	450	1 5/32 x 2½
AEP16J	80	450	1⅜ x 3½
AEP2L	10	600	1⅜ x 4¼
DUAL ELEMENT UNITS			
AEP44D	20-20	150	1 5/32 x 2½
AEP88D	40-40	150	1 5/32 x 2½
AEP22J	10-10	450	1 5/32 x 2½
AEP44J	20-20	450	1⅜ x 2½
AEP88J	40-40	450	1⅜ x 3
TRIPLE ELEMENT UNITS			
AEP444D	20-20-20	150	1 5/32 x 2½
AEP88D4A	40-40/20	150/25	1 5/32 x 2½
AEP222J	10-10-10	450	1 5/32 x 2½
AEP22J4A	10-10/20	450/25	1 5/32 x 2½
AEP44J4A	20-20/20	450/25	1⅜ x 2½
AEP444J	20-20-20	450	1⅜ x 3
AEP822J	40-10-10	450	1⅜ x 3
QUADRUPLE ELEMENT UNITS			
AEPG444D4A	20-20-20/20	150/25	1⅜ x 2½
AEPG2222J	10-10-10-10	450	1⅜ x 2½
AEPG444J4A	20-20-20/20	450/25	1⅜ x 3

TYPE GL



These ever-popular inverted-mounting, aluminum can units, are furnished with the same high purity materials as the more expensive type E and G. Two separate color-coded leads 4" long for each section. Inverted chassis mounting can be made, using palnut and threaded neck. Threaded neck size ⅝—18.

TYPE GL SINGLE ELEMENT

Cap. Mfd.	Size—DxH
TYPE GL600	
600 VDCW	**750V. Surge Peak**
4	1⅜ x 4
8	1⅜ x 4½
16	1⅜ x 4½
TYPE GL475	
475 VDCW	**550V. Surge Peak**
8	1⅜ x 3
12	1⅜ x 3
16	1⅜ x 3

Cap. Mfd.	Size—DxH
TYPE GL450	
450 VDCW	**525V. Surge Peak**
4	1⅜ x 3
8	1⅜ x 3
10	1⅜ x 3
12	1⅜ x 3
16	1⅜ x 3
20	1⅜ x 3
30	1⅜ x 3
40	1⅜ x 3
80	1⅜ x 4

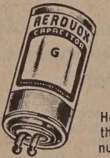
DUAL ELEMENT

Cap. Mfd.	Size—DxH
TYPE GL475	
8-8	1⅜ x 4
TYPE GL450	
8-8	1⅜ x 4
10-10	1⅜ x 4
12-12	1⅜ x 4
16-8	1⅜ x 4
16-16	1⅜ x 4
20-20	1⅜ x 4

TRIPLE ELEMENT

Cap. Mfd.	Size—DxH
TYPE GL450	
8-8-8	1⅜ x 4
10-10-10	1⅜ x 4

TYPE G Insulated Screw-Mounting Capacitors

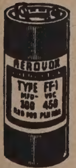


Hermetically-sealed aluminum can unit, threaded cover size ⅞—16 with hex nut and washer for convenient mounting on chassis. Washer can be used to insulate can from chassis. Terminals molded in cover. Cathode connection through terminal in cover. These units are the commercial equivalent of case style CE41 and 42 of specification MIL C62A.

Cap. Mfd.	Size—DxH
SINGLE TYPE G450	
450 VDCW	**525V. Surge Peak**
10	1⅜ x 2¼
20	1⅜ x 2¼
40	1⅜ x 2¾
80	1⅜ x 4¼

Cap. Mfd.	Size—DxH
SINGLE TYPE G500	
500 VDCW	**550V. Surge Peak**
10	1⅜ x 2¼
DUAL TYPE G-450	
450 VDCW	**525V. Surge Peak**
10-10	1⅜ x 2¼
20-20	1⅜ x 2¾

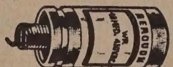
TYPE FF Photo-Flash Capacitors



Selective choice of highest purity materials makes these units ideal for rugged photoflash application calling for lowest leakage requirements. Furnished in molded black plastic container with screw lug terminals. Highly resistant to moisture and oil. Surge voltages and time duty cycles as listed in EIA specification No. RS-154.

Type Number	Cap. Mfd.	Working Voltage	Surge Voltage	Watt Secs.	Size
FF-1	300	450	525	30	2 1/16 x 4⅜
FF-2	525	450	525	53	2 1/16 x 4⅜

TYPE WR* Replacement for Wet Electrolytic

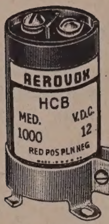


Dry electrolytic for replacement of wet electrolytic units. Furnished in round aluminum cans, the range of capacities covers most applications in standard radio receivers and other equipment originally using wet type electrolytic capacitors. 450V. D. C.

Capacity Mfd.	Replacement for	Dia. x Hght.
10	4 to 12 mfd.	1⅜ x 3
20	16 to 20 mfd.	1⅜ x 3
30	20 to 30 mfd.	1⅜ x 3
40	30 to 40 mfd.	1⅜ x 3

*Type WR to be discontinued when present stock is depleted and replaced with Type GL.

AEROVOX *Capacitors*



ELECTROLYTICS — (Continued)

TYPES HCB and NPB
High Capacity/Low Voltage Bakelite Cased Electrolytics

Type HCB units are polarized electrolytic capacitors designed for use in industrial applications such as battery eliminators, power supplies, electric fence controls and sound movie projectors. For non-polarized applications in welding and control equipment Type NPB units are available.
Both types feature heavy-duty, moisture resistant bakelite cases which eliminate the need for outer cardboard insulating tubes. Operating temperature range from —40°C to +85°C. Capacitance tolerance up to 150 VDCW —10%+100%, over 150 VDCW —10%+50%. High capacity etched plate construction assures long trouble-free operation. Units supplied with wrap around—footed brackets for vertical mtg.—horizontal mtg. means available on Special Order.

STOCK SIZES*

	TYPE HCB					TYPE NPB		
Capacity MFD	**6 VDCW 8V Surge**	**12 VDCW 18V Surge**	**18 VDCW 25V Surge**	**25 VDCW 40V Surge**	**50 VDCW 75V Surge**	**125 VNP 175V Surge**	**300 VNP 375V Surge**	**450 VNP 525V Surge**
15							1 7/16x2¾	
50								1 13/16x3⅜
100							1 13/16x3⅜	2 1/16x4⅜
200						1 7/16x3⅜	2 1/16x4⅜	
300						1 13/16x3⅜		
500		1 7/16x2¾	1 7/16x2¾	1 7/16x2¾	1 7/16x3⅜	1 13/16x4⅜		
1000		1 7/16x2¾	1 7/16x2¾	1 7/16x2¾	1 7/16x3⅜			
1250				1 7/16x3⅜				
1500			1 7/16x2¾					
2000		1 7/16x2¾	1 7/16x2¾	1 7/16x3⅜	1 13/16x3⅜			
3000		1 7/16x3⅜		1 13/16x3⅜	1 13/16x4⅜			
4000		1 7/16x3⅜	1 13/16x3⅜	1 13/16x3⅜	2 1/16x4⅜			
6000		1 13/16x3⅜	1 13/16x3⅜	1 13/16x4⅜				
10000		1 13/16x4⅜						
12000	1 13/16x4⅜							

*Sizes shown reflect latest design. Some ratings will be furnished in slightly larger sizes until initial stock is depleted.

TYPE E
Hermetically-Sealed, Aluminum, Round Metal-Cased Capacitors

Can be mounted with terminals upright or inverted by use of a ring-type clamp provided with unit. Can is floating, thus having two terminals on single-section capacitors, three on duals, and four on triples.
These units are the commercial equivalent of case style CE31, 2 and 3 of MIL Specification C62A.

SINGLE ELEMENT

Cap. Mfd.	Can Size Dia. x Hght.
450 VDCW	
10	1 x 2¼
20	1 x 2¾
40	1⅜ x 2¾
80	1⅜ x 4¼
250 VDCW	
500	2 x 4⅛
50 VDCW	
10	1 x 1¾
25	1 x 1¾
25 VDCW	
10	1 x 1¾
25	1 x 1¾
1 VNP	
1250	1⅜ x 4¼

DUAL ELEMENT

Cap. Mfd.	Can Size Dia. x Hght.
450 VDCW	
10-10	1⅜ x 2¼
20-20	1⅜ x 2¾

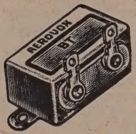
TRIPLE ELEMENT

Cap. Mfd.	Can Size Dia. x Hght.
450 VDCW	
10-10-10	1⅜ x 2¼
350/50 VDCW	
30-30/50	1⅜ x 4¼

QUADRUPLE ELEMENT

Cap. Mfd.	Can Size Dia. x Hght.
350/150 VDCW	
20-10/5-5	1⅜ x 4¼

TYPE BT
Drawn-Case "Bathtub" Electrolytic Capacitors



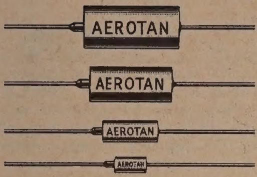
Hermetically-sealed units designed for rigid mounting in minimum space. Of sturdy construction, these high-quality units are commercial equivalent to the case style CE63 of MIL Specification C62A.

Capacity Mfd.	L x W x H
TYPE BT500	**500 VDCW**
4	2 x 2 x 1⅛
8	2 x 1¾ x 1⅛
TYPE BT450	**450 VDCW**
8	1¾ x 1 x 1
12	1¾ x 1¼ x 1
16	2 x 1¾ x 1
TYPE BT350	**350 VDCW**
8	1¾ x 1 x ⅞
12	1¾ x 1 x ⅞
16	1¾ x 1 x 1
20	1¾ x 1¼ x 1⅛
TYPE BT150	**150 VDCW**
8	1¾ x 1 x ⅞
12	1¾ x 1 x ⅞
16	1¾ x 1 x ⅞
24	1¾ x 1 x ⅞
30	1¾ x 1 x 1
40	1¾ x 1 x 1
TYPE BT50	**50 VDCW**
10	1¾ x 1 x ⅞
25	1¾ x 1 x ⅞
50	1¾ x 1 x ⅞
TYPE BT25	**25 VDCW**
10	1¾ x 1 x ⅞
25	1¾ x 1 x ⅞
50	1¾ x 1 x ⅞

AEROVOX *Capacitors*

"AEROTAN" SOLID TANTALUM CAPACITORS

Type ST12 (uninsulated) Type ST13 (insulated)



Aerotan capacitors are solid electrolyte units featuring sintered tantalum anodes and hermetically sealed in metal cases. The use of a semiconductor electrolyte provides an assembly that is completely dry with absolute freedom from corrosion or electrolyte leakage. All Aerotan units offer excellent stability, high reliability, rugged construction, subminiature sizes and long shelf life. Units are designed to meet all the requirements of MIL-C-26655A (proposed). Continuous operation over the temperature range of —80° to +125°C in voltage ratings of 6, 10, 15, 20 and 35 VDC for +85°C operation; 4, 7, 10, 13 and 23 VDC for +125°C operation. Items in bold face type indicate values that are available for immediate delivery. All others will be available upon special order.

SURGE VOLTAGE

25C° to 85°C		85°C to 125°C	
Rated Voltage	**Surge Voltage**	**Rated Voltage**	**Surge Voltage**
6 VDC	8 VDC	4 VDC	6 VDC
10 VDC	13 VDC	7 VDC	9 VDC
15 VDC	18 VDC	10 VDC	12 VDC
20 VDC	24 VDC	13 VDC	16 VDC
35 VDC	42 VDC	23 VDC	28 VDC

CASE SIZES

Case Size	ST12 Dimensions Uninsulated Case		ST13 Dimensions Insulated Case		Lead Diam.
	L±.031"	D $^{+.016''}_{-.010''}$	L±.031"	D $^{+.016''}_{-.010''}$	$^{+.005''}_{-.001''}$
A	.250"	.125"	.322"	.135"	.020"
B	.438"	.175"	.510"	.185"	.020"
C	.650"	.279"	.722"	.289"	.025"
D	.750"	.341"	.822"	.351"	.025"

STANDARD STOCK VALUES

CASE SIZES — UNINSULATED TYPE ST12 AND INSULATED TYPE ST13

CAP. MFD.	6 VDCW 85° C	10 VDCW 85° C	15 VDCW 85° C	20 VDCW 85° C	35 VDCW 85° C
1.0	**A**	**A**	**A**	**A**	**A**
1.5	**A**	**A**	**A**	**A**	**B**
2.2	**A**	**A**	**A**	**A**	**B**
3.3	**A**	**A**	**A**	**B**	**B**
4.7	**A**	**A**	**B**	**B**	**B**
6.8	**A**	**B**	**B**	**B**	**B**
10.	**B**	**B**	**B**	**B**	**C**
15.	**B**	**B**	**B**	**B**	**C**
22.	**B**	**B**	**B**	**C**	**C**
33.	**B**	**B**	**C**	**C**	**D**
47.	**B**	**C**	**C**	**C**	**D**
68.	**C**	**C**	**C**	**D**	
100.	**C**	**C**	**D**	**D**	
120.	**C**	**C**	**D**		
150.	**C**	**D**	**D**		
180.	**C**	**D**			
220.	**D**	**D**			
270.	**D**				
330.	**D**				

STANDARD VALUES — SPECIAL ORDER

CASE SIZES — UNINSULATED TYPE ST12 AND INSULATED TYPE ST13

CAP. MFD.	6 VDCW 85° C	10 VDCW 85° C	15 VDCW 85° C	20 VDCW 85° C	35 VDCW 85° C
1.2	A	A	A	A	A
1.8	A	A	A	A	B
2.7	A	A	A	B	B
3.9	A	A	B	B	B
5.6	A	B	B	B	B
8.2	B	B	B	B	C
12.	B	B	B	B	C
18.	B	B	B	C	C
27.	B	B	C	C	D
39.	B	B	C	C	D
56.	B	C	C	D	
82.	C	C	D	D	

TYPE QE

Energy Storage and Computer Grade Electrolytics

AEROVOX
TYPE QE

Precisely engineered for high reliability and long operating life, QE capacitors have a life expectancy of greater than 10 years when operated within ratings. Units are rated for operation at temperatures from —20°C to +85°C. Manufactured in drawn aluminum cases in four diameters and one standard 4½" height to facilitate bus bar connections for purposes of ganging units in banks. Units find wide application in computers, power supplies, telephone networks and industrial electronic equipment.

STOCK LISTING*

Cat. No.	VDCW	Cap. Mfd.	Size	Cat. No.	VDCW	Cap. Mfd.	Size
QE15A-6	15	6,000	A	QE50A-1P75	50	1,750	A
QE15B-13P5	15	13,500	B	QE50C-5P5	50	5,500	C
QE15C-22	15	22,000	C	QE50C-6P5	50	6,500	C
QE15D-33	15	33,000	D	QE50D-9	50	9,000	D
QE25C-15	25	15,000	C	QE150A-P4	150	400	A
QE25D-25	25	25,000	D	QE150A-P5	150	500	A
QE35A-2	35	2,000	A	QE250C-1	250	1,000	C
QE35B-5	35	5,000	B	QE350C-P7	350	700	C
QE35C-8	35	8,000	C	QE350D-1	350	1,000	D
QE35D-12	35	12,000	D	QE450A-P125	450	125	A

*For values other than those shown above, contact your Authorized Aerovox Distributor or Aeroxov Corporation, Distributor Division, New Bedford, Mass.

MAXIMUM RATINGS IN MFD.

VDCW	Surge	A—1$\frac{7}{16}$" Diameter	B—2$\frac{1}{16}$" Diameter	C—2$\frac{9}{16}$" Diameter	D—3$\frac{1}{16}$" Diameter
5	7	8,500	25,000	45,000	65,000
10	13	6,500	17,000	32,000	40,000
15	20	6,000	15,000	25,000	36,000
25	40	4,000	8,000	15,000	25,000
35	45	2,000	5,000	8,000	12,000
50	65	1,750	4,250	7,000	10,000
75	100	1,000	2,500	4,250	6,000
100	135	675	1,950	3,500	4,500
150	185	600	1,250	2,400	3,250
200	250	300	900	1,450	2,250
250	300	250	700	1,250	2,000
300	350	200	575	1,050	1,600
350	400	170	450	750	1,200
400	475	150	350	625	1,000
450	525	125	300	550	850

All units are 4½ inches in height over insulating tube. Diameters are measured over insulating tube. Bare can size is obtained by subtracting $\frac{1}{16}$" from diameter and ⅜" from height.

AEROVOX *Capacitors*

AEROVOX
BI-ELECTRIC

BI-ELECTRIC MYLAR* PAPER BYPASS TUBULARS

Radial Lead Mounting

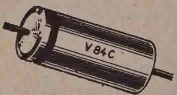
Two famous dielectrics . . . quality kraft tissue and Mylar film . . . are combined with Aerolene impregnant and exclusive "Polycap" plastic case to bring you a truly superior bypass capacitor. The advanced construction techniques presented in "Bi-Electric" capacitors offer distinct advantages over other radial lead types. "Polycap" case provides a solid uniform coating from end-to-end. Controlled end-fills provide a sealed protection, and leads cannot crack end-fill or pull-out when leads are extended for axial mounting. Standard capacitance tolerance is ±10%. Operating temperature range is —30°C to +100°C.

* DuPont Trademark

Capacity Mfd.	Cat #	Size
	200 VDCW	
.01	BE2S1	11/32 x 11/16
.015	BE2S15	3/8 x 11/16
.02	BE2S2	7/16 x 27/32
.022	BE2S22	7/16 x 27/32
.047	BE2S47	7/16 x 27/32
.05	BE2S5	15/32 x 1 1/8
.1	BE2P1	17/32 x 1 5/32
.15	BE2P15	9/16 x 1 5/32
.2	BE2P2	5/8 x 1 5/16
.22	BE2P22	5/8 x 1 5/16
.25	BE2P25	11/16 x 1 9/16
.33	BE2P33	11/16 x 1 9/16
.47	BE2P47	3/4 x 1 9/16
.5	BE2P5	3/4 x 1 9/16
	400 VDCW	
.01	BE4S1	3/8 x 11/16
.015	BE4S15	7/16 x 27/32
.02	BE4S2	7/16 x 27/32
.022	BE4S22	7/16 x 27/32
.025	BE4S25	7/16 x 27/32
.03	BE4S3	7/16 x 27/32
.033	BE4S33	7/16 x 27/32
.04	BE4S4	15/32 x 1 1/8
.047	BE4S47	15/32 x 1 1/8
.05	BE4S5	15/32 x 1 1/8
.068	BE4S68	1/2 x 1 1/8
.1	BE4P1	9/16 x 1 5/32
.15	BE4P15	5/8 x 1 5/16
.2	BE4P2	11/16 x 1 9/16
.22	BE4P22	11/16 x 1 9/16
.25	BE4P25	11/16 x 1 9/16
.33	BE4P33	3/4 x 1 9/16
	600 VDCW	
.001	BE6D1	11/32 x 11/16
.0012	BE6D12	11/32 x 11/16
.0015	BE6D15	11/32 x 11/16
.0018	BE6D18	11/32 x 11/16
.002	BE6D2	11/32 x 11/16
.0022	BE6D22	11/32 x 11/16
.0025	BE6D25	3/8 x 11/16
.003	BE6D3	3/8 x 11/16
.0033	BE6D33	3/8 x 11/16
.0039	BE6D39	3/8 x 11/16
.004	BE6D4	13/32 x 11/16
.0047	BE6D47	13/32 x 11/16
.005	BE6D5	13/32 x 27/32
.006	BE6D6	13/32 x 27/32
0068	BE6D68	13/32 x 27/32
.007	BE6D7	13/32 x 27/32
.0075	BE6D75	13/32 x 27/32
.008	BE6D8	13/32 x 27/32
.0082	BE6D82	13/32 x 27/32
.01	BE6S1	13/32 x 27/32
.015	BE6S15	15/32 x 13/16
.018	BE6S18	17/32 x 7/8
.02	BE6S2	17/32 x 7/8
.022	BE6S22	17/32 x 7/8
.025	BE6S25	15/32 x 1 5/32
.027	BE6S27	15/32 x 1 5/32
.03	BE6S3	15/32 x 1 5/32
.033	BE6S33	15/32 x 1 5/32
.039	BE6S39	15/32 x 1 5/32
.04	BE6S4	17/32 x 1 5/32
.047	BE6S47	17/32 x 1 5/32
.05	BE6S5	17/32 x 1 5/32
.056	BE6S56	17/32 x 1 5/32
.06	BE6S6	5/8 x 1 5/16
.068	BE6S68	5/8 x 1 5/16
.075	BE6S75	5/8 x 1 5/16
.1	BE6P1	5/8 x 1 5/16
.15	BE6P15	11/16 x 1 9/16
.2	BE6P2	3/4 x 1 9/16
.22	BE6P22	3/4 x 1 9/16
	1000 VDCW	
.001	BE10D1	11/32 x 11/16
.0012	BE10D12	11/32 x 11/16
.0015	BE10D15	11/32 x 11/16
.0018	BE10D18	11/32 x 11/16
.002	BE10D2	3/8 x 11/16
.0022	BE10D22	3/8 x 11/16
.0033	BE10D33	13/32 x 27/32
.0047	BE10D47	13/32 x 27/32
.0068	BE10D68	15/32 x 13/16
.01	BE10S1	17/32 x 7/8
.018	BE10S18	15/32 x 1 5/32
.025	BE10S25	17/32 x 1 5/32
.027	BE10S27	17/32 x 1 5/32
.033	BE10S33	5/8 x 1 5/16
.039	BE10S39	5/8 x 1 5/16
.047	BE10S47	5/8 x 1 5/16
.056	BE10S56	11/16 x 1 9/16
.068	BE10S68	11/16 x 1 9/16
.075	BE10S75	11/16 x 1 9/16
.1	BE10P1	3/4 x 1 9/16

TYPE V84C

AEROFILM (MYLAR*) CAPACITORS



V84C Aerofilm† Tubular Capacitors are high quality units in dense steatite cases. These units have exceptionally high insulation resistance and low dielectric absorption and power factor. They are extremely stable having a relatively small capacitance change with temperature variations over a range of 0 to 85°C.

These excellent characteristics are due to the use of Aerofilm (Aerovox's trade name for Mylar* polyester film), finest quality casing material, and an epoxy end fill which will not flow, soften or melt at any operating temperature. Standard tolerance is ±20% but also available in ±5% and ±10%.

Rated Voltage for Temperatures of 85°C. and above:

85°C.	200 VDCW	400 VDCW	600 VDCW
125°C.	100 VDCW	300 VDCW	400 VDCW
150°C.	75 VDCW	200 VDCW	300 VDCW

Catalogue No.	Cap. Mfd.	Size
	200 VCDW	
V84C 2D47	.0047	1/4 x 13/16
V84C 2D68	.0068	1/4 x 13/16
V84C 2S1	.01	1/4 x 13/16
V84C 2S15	.015	1/4 x 13/16
V84C 2S22	.022	1/4 x 1 1/16
V84C 2S33	.033	1/4 x 1 1/16
V84C 2S47	.047	1/4 x 1 1/16
V84C 2S5	.05	5/16 x 1 1/16
V84C 2S68	.068	5/16 x 1 1/16
V84C 2P1	.1	5/16 x 1 1/4
V84C 2P15	.15	3/8 x 1 1/4
V84C 2P22	.22	1/2 x 1 1/4
V84C 2P25	.25	1/2 x 1 1/2
V84C 2P33	.33	17/32 X 1 1/2
V84C 2P47	.47	9/16 x 1 1/2
V84C 2P68	.68	21/32 x 1 3/4
V84C 2W1	1.0	7/8 x 1 7/8
	400 VDCW	
V84C 4D15	.0015	1/4 x 13/16
V84C 4D22	.0022	1/4 x 13/16
V84C 4D33	.0033	1/4 x 13/16
V84C 4D47	.0047	1/4 x 13/16
V84C 4D68	.0068	1/4 x 13/16
V84C 4S1	.01	1/4 x 1 1/16
V84C 4S15	.015	1/4 x 1 1/16
V84C 4S2	.02	5/16 x 1 1/16
V84C 4S22	.022	5/16 x 1 1/16
V84C 4S3	.03	3/8 x 1 1/16
V84C 4S33	.033	3/8 x 1 1/16
V84C 4S47	.047	3/8 x 1 1/4
V84C 4S5	.05	3/8 x 1 1/4
V84C 4S68	.068	7/16 x 1 1/4
V84C 4P1	.1	1/2 x 1 1/4
V84C 4P15	.15	9/16 x 1 1/2
V84C 4P22	.22	5/8 x 1 3/4
V84C 4P25	.25	5/8 x 1 3/4
V84C 4P33	.33	11/16 x 1 3/4
V84C 4P47	.47	3/4 x 2
V84C 4P5	.5	3/4 x 2
V84C 4P68	.68	7/8 x 2
V84C 4W1	1.0	7/8 x 2 5/8
	600 VDCW	
V84C 6D1	.001	1/4 x 13/16
V84C 6D15	.0015	1/4 x 13/16
V84C 6D2	.002	1/4 x 13/16
V84C 6D22	.0022	1/4 x 13/16
V84C 6D3	.003	1/4 x 13/16
V84C 6D33	.0033	1/4 x 13/16
V84C 6D4	.004	1/4 x 1 1/16
V84C 6D47	.0047	1/4 x 1 1/16
V84C 6D5	.005	1/4 x 1 1/16
V84C 6D68	.0068	1/4 x 1 1/16
V84C 6S1	.01	5/16 x 1 1/16
V84C 6S15	.015	5/16 x 1 3/16
V84C 6S2	.02	3/8 x 1 3/16
V84C 6S22	.022	3/8 x 1 3/16
V84C 6S3	.03	3/8 x 1 3/16
V84C 6S33	.033	3/8 x 1 7/16
V84C 6S4	.04	1/2 x 1 1/4
V84C 6S47	.047	1/2 x 1 1/4
V84C 6S5	.05	1/2 x 1 1/4
V84C 6S68	.068	1/2 x 1 1/2
V84C 6S75	.075	9/16 x 1 1/2
V84C 6P1	.1	5/8 x 1 1/2
V84C 6P15	.15	11/16 x 1 5/8
V84C 6P2	.2	13/16 x 1 5/8
V84C 6P22	.22	13/16 x 1 5/8
V84C 6P25	.25	13/16 x 1 7/8
V84C 6P33	.33	7/8 x 1 7/8
V84C 6P47	.47	7/8 x 2 3/8
V84C 6P5	.5	7/8 x 2 1/2

* Dupont's Registered trade name.

†TRADE MARK

AEROVOX *Capacitors*

PAPER

TYPE P88N
†DURANITE
Duranite Blue Moulded Tubular Capacitors

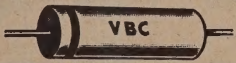
Toughest capacitors ever offered for radio-electronic equipment, DURANITE capacitors. Design, impregnant, processing, and casing insure glove-fitting contact and seal throughout. DURANITE provides a permanent, non-varying, rock-hard casing, does not dry out, does not develop cracks or fissures. Pig-tail leads firmly imbedded, won't pull out, won't work loose. Moisture-proof; operate from sub-zero to over 212°F. Exposure to temperatures of 250°F. will not impair life or performance, no deterioration on the shelf. A white band around one end of the capacitor identifies the outside foil.

Cap. Mfd.	200 V Size	400 V Size	600 V Size	1000 V Size
.0001			A	
.00025			A	
.0004			A	
.0005			A	
.001	A	A	A	A
.0015	A	A	A	A
.002	A	A	A	A
.0022	A	A	A	A
.003	A	A	A	B
.0033	A	A	A	B
.004	A	A	A	B
.0047	A	A	A	B
.005	A	A	A	B
.006	A	A	B	B
.0068	A	A	B	B
.007	A	A	B	B
.0075	A	A	B	B
.008	A	A	B	B
.01	A	A	B	B
.015	A	B	B	D
.02	B	B	D	E
.022	B	B	D	E
.025	B	B	D	E
.03	B	B	D	E

Cap. Mfd.	200 V Size	400 V Size	600 V Size	1000 V Size
.033	B	B	E	E
.04	B	D	E	F
.047	B	D	E	F
.05	B	D	E	F
.06	D	E	F	F
.068	D	E	F	F
.075	D	E	F	
.1	D	E	F	
.15	E	F	F	
.2	F	F	G	
.22	F	F	G	
.25	F	F	G	
.27	F	G	H	
.33	F	G	H	
.47	F	G	H	
.5	F	G	H	
1.0	H	H		

Size	Length x Dia.	Size	Length x Dia.
A	1⅛ x 11/32	E	1⅝ x 17/32
B	1⅜ x 13/32	F	2 x 21/32
		G	2¼ x ¾
D	1⅜ x 15/32	H	2½ x 1

Type VBC Vibrator Buffer Capacitors



These units are heavy-duty, Hyvol M impregnated, vibrator buffer capacitors in ceramic tubes, specifically designed for severe-service auto-radio applications.

Type	Cap. Mfd.	Size
VBC-2	.001	⅜ x 1¼
VBC-3	.002	⅜ x 1½
VBC-4	.0022	⅜ x 1½
VBC-5	.003	⅜ x 1½
VBC-6	.0033	7/16 x 1½
VBC-7	.004	7/16 x 1½
VBC-8	.0047	7/16 x 1½
VBC-9	.005	15/32 x 1½
VBC-22	.006	15/32 x 1½
VBC-23	.0068	17/32 x 1½
VBC-24	.007	17/32 x 1½

Type	Cap. Mfd.	Size
VBC-25	.0075	17/32 x 1½
VBC-26	.008	17/32 x 1½
VBC-27	.01	9/16 x 1½
VBC-28	.015	⅝ x 1¾
VBC-29	.02	⅝ x 2
VBC-32	.025	11/16 x 2
VBC-33	.03	¾ x 2
VBC-34	.05	15/16 x 2
VBC-35	.015-.015	13/16 x 2
VBC-45	.007-3000 WVDC	11/16 x 2

Vibrator "HASH" Capacitor VHC36

.5 Mfd. 100 Volts WVDC 13/16 x 1⅛

†"AUTOPASS" Vertical Mounting Plastic-Cased Paper Capacitors

Aerovox Type P151N capacitors were specifically designed and developed for use in conjunction with printed-wiring assemblies where it is highly desirable to mount capacitors at right angles to the mounting surface thereby conserving valuable space.

Aerolene impregnated and assembled into a molded phenolic case, Type P151N capacitors are then sealed with a thermo-setting end-seal. The end-seal surface is below the outside edges of the plastic case, permitting the capacitor to be mounted flush against the mounting surface. The leads of these capacitors are stiff, and critical spacing is closely held to facilitate their use in mechanized assemblies. Outside foil is identified by wire lead nearest to edge of case or by a paint stripe on the case nearest the outside foil.

Cap.	200	400	600
.001	⅜ x 1	⅜ x 1	⅜ x 1
.0015	⅜ x 1	⅜ x 1	⅜ x 1
.0022	⅜ x 1	⅜ x 1	⅜ x 1
.0033	⅜ x 1	⅜ x 1	⅜ x 1
.0047	⅜ x 1	⅜ x 1	⅜ x 1
.0068	⅜ x 1	⅜ x 1	⅜ x 1⅜
.01	⅜ x 1	⅜ x 1	⅜ x 1⅜
.015	⅜ x 1	⅜ x 1⅜	7/16 x 1⅜
.022	⅜ x 1⅜	7/16 x 1⅜	7/16 x 1⅜
.033	⅜ x 1⅜	7/16 x 1⅜	½ x 1¼
.047	7/16 x 1⅜	½ x 1¼	½ x 1½
.068	7/16 x 1⅜	½ x 1½	⅝ x 1⅞
.1	½ x 1¼	⅝ x 1¼	⅝ x 1⅞
.15	⅝ x 1¼	⅝ x 1⅞	¾ x 1⅞
.22	⅝ x 1⅞	⅝ x 1⅞	¾ x 2 9/32
.33	⅝ x 1⅞	¾ x 1⅞	⅞ x 2 17/32
.47	¾ x 1⅞		

Standard Tolerance ±20%. Also available in 10% on special order.

† Trade Mark

AEROVOX *Capacitors*

PAPER

AEROVOX
DURAMIC
V.D.C.W.
MFD.
.05
600

TYPE P84CM
†DURAMIC
Ceramic-Cased Tubular Capacitors

New ceramic (dense steatite) encased paper tubular for performance above that of conventional paper tubulars. New thermosetting end-seals for exceptional humidity protection — 250 hour humidity test as per REC-118. Firmly imbedded terminals will not work loose or pull out. Operating temps are —55°C to +85°C. Meets all requirements of EIA Spec. REC-118, hi-temp range, class M.

Cap. Mfd.	200 VDCW Size Dia. x Lgth.	400 VDCW Size Dia. x Lgth.	600 VDCW Size Dia. x Lgth.	1000 VDCW Size Dia. x Lgth.	1600 VDCW Size Dia. x Lgth.	2500 VDCW Size Dia. x Lgth.	6000 VDCW Size Dia. x Lgth.
.0001						3/8 x 1 1/2	3/8 x 1 3/4
.00025						3/8 x 1 1/2	3/8 x 1 3/4
.0005			5/16 x 1		5/16 x 1	3/8 x 1 1/2	7/16 x 1 3/4
.001			5/16 x 1	5/16 x 1	3/8 x 1 1/4	3/8 x 1 1/2	17/32 x 1 3/4
.0015			5/16 x 1	5/16 x 1	3/8 x 1 1/4		
.002			5/16 x 1	5/16 x 1	3/8 x 1 1/4		
.0022			5/16 x 1	5/16 x 1	3/8 x 1 1/4		
.003			5/16 x 1	5/16 x 1	7/16 x 1 1/4	7/16 x 1 1/2	5/8 x 2 1/8
.0033			5/16 x 1	5/16 x 1	7/16 x 1 1/4		
.004			5/16 x 1	3/8 x 1 1/4	7/16 x 1 1/4		
.0047			5/16 x 1	3/8 x 1 1/4	7/16 x 1 1/4		
.005			5/16 x 1	3/8 x 1 1/4	7/16 x 1 1/2	17/32 x 1 9/16	3/4 x 2 1/8
.006			5/16 x 1	3/8 x 1 1/4	17/32 x 1 9/16		
.0068		5/16 x 1	3/8 x 1 1/4	3/8 x 1 1/4	17/32 x 1 9/16		
.007			3/8 x 1 1/4		17/32 x 1 9/16		
.0075			3/8 x 1 1/4	3/8 x 1 1/4	17/32 x 1 9/16		
.008		5/16 x 1	3/8 x 1 1/4		17/32 x 1 9/16		
.01	5/16 x 1	5/16 x 1	3/8 x 1 1/4	7/16 x 1 1/4	17/32 x 1 9/16	5/8 x 1 7/8	15/16 x 2 1/8
.015	3/8 x 1 1/4	3/8 x 1 1/4	3/8 x 1 1/4	7/16 x 1 1/4	5/8 x 1 7/8		
.02	3/8 x 1 1/4	3/8 x 1 1/4	7/16 x 1 1/4	17/32 x 1 9/16	5/8 x 1 7/8		
.022	3/8 x 1 1/4	3/8 x 1 1/4	7/16 x 1 1/4	17/32 x 1 9/16	3/4 x 2		
.025				17/32 x 1 9/16			
.03	3/8 x 1 1/4	7/16 x 1 1/4	17/32 x 1 9/16	5/8 x 1 7/8	3/4 x 2	13/16 x 2	*1 3/16 x 2 5/8
.033	3/8 x 1 1/4	7/16 x 1 1/4	17/32 x 1 9/16	5/8 x 1 7/8	3/4 x 2		
.04			17/32 x 1 9/16	5/8 x 1 7/8			
.047	7/16 x 1 1/4	7/16 x 1 1/2	17/32 x 1 9/16	5/8 x 1 7/8	13/16 x 2 1/4		
.05	7/16 x 1 1/4	7/16 x 1 1/2	17/32 x 1 9/16	5/8 x 1 7/8	13/16 x 2 1/4	25/32 x 2 5/8	*1 3/16 x 3 1/8
.06				11/16 x 1 7/8			
.068	17/32 x 1 9/16	17/32 x 1 9/16	9/16 x 1 7/8	3/4 x 2	1 x 2 1/4		
.075			5/8 x 1 7/8	3/4 x 2			
.1	17/32 x 1 9/16	17/32 x 1 9/16	5/8 x 1 7/8	13/16 x 2 1/4	1 x 2 7/8	*1 x 2 5/8	
.15	17/32 x 1 3/4	5/8 x 1 7/8	3/4 x 2	1 x 2 1/4		*1 x 3 1/8	
.2	5/8 x 1 7/8	5/8 x 1 7/8	13/16 x 2 1/4	1 x 2 1/4			
.22	5/8 x 1 7/8	5/8 x 1 7/8	13/16 x 2 1/4	1 x 2 7/8			
.25	5/8 x 1 7/8	3/4 x 2	7/8 x 2 1/4	1 x 2 7/8			
.33	3/4 x 2	3/4 x 2	1 x 2 1/4				
.47	13/16 x 2 1/4	13/16 x 2 1/4	1 x 2 7/8				
.5	13/16 x 2 1/4	13/16 x 2 1/4	1 x 2 7/8				
.68	15/16 x 2	1 x 2 1/4	*1 5/16 x 3				
1.0	1 x 2 1/4	1 x 2 7/8	**1 5/16 x 3				

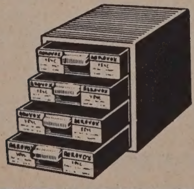
Cap. Mfd.	10,000 VDCW Size Dia. x Lgth.	12,500 VDCW Size Dia. x Lgth.	15,000 VDCW Size Dia. x Lgth.
.0001	7/16 x 2 1/4		17/32 x 2 1/2
.00025	11/16 x 2 1/4	11/16 x 2 1/4	3/4 x 2 1/2
.0005	11/16 x 2 1/4		7/8 x 2 1/2
.001	15/16 x 2 1/4		*1 x 2 1/2
.003	1 x 2 3/4		*1 1/4 x 3
.005	*1 x 3		*1 3/8 x 3 1/4
.01	*1 3/8 x 3		

* Will be furnished in cardboard tube Type P84M.
** Will be furnished in cardboard tube Type P84K.

SPECIAL CLOSE TOLERANCE UNITS FOR HORIZONTAL OSCILLATOR CIRCUIT.
P84CM — Tolerance ± 10%

Cap. Mfd.	600 VDCW Size Dia. x Lgth.	1000 VDCW Size Dia. x Lgth.
.0012	5/16 x 1	5/16 x 1
.0039	5/16 x 1	
.0082	3/8 x 1 1/4	
.018	7/16 x 1 1/4	1/2 x 1 1/2
.025	7/16 x 1 5/8	17/32 x 1 9/16
.027	7/16 x 1 1/2	17/32 x 1 9/16
.033	17/32 x 1 9/16	17/32 x 1 7/8
.039	17/32 x 1 9/16	9/16 x 1 7/8
.057	9/16 x 1 5/8	11/16 x 1 7/8

AEROVOX KITS AK-100 and AK-101HS



Most popular 600 volt, 20% tolerance units packaged in a practical four-drawer metal cabinet with four compartments per plastic drawer. Each cabinet designed to stack so that you can add units as needed.
Kit AK-100 consists of 75 V84C capacitors in our twelve most popular values.
Kit AK-101HS contains 76 units consisting of the fourteen values recommended in the Howard W. Sams' PF Reporter "Stock Guide for Popular Replacement Parts."

Kit AK-100

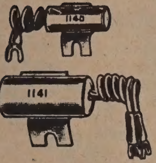
Quantity	Cap. Mfd.	Quantity	Cap. Mfd.
5	.001	7	.02
5	.002	3	.022
3	.0022	3	.03
5	.0047	5	.047
5	.005	12	.05
12	.01	10	.1

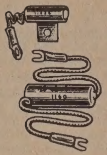
Kit AK-101HS

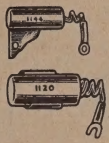
Quantity	Cap. Mfd.	Quantity	Cap. Mfd.
5	.001	5	.02
3	.0015	3	.022
5	.002	3	.033
3	.003	10	.047
10	.0047	3	.068
10	.01	10	.1
3	.015	3	.15

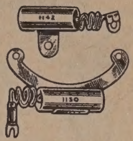
AEROVOX *Capacitors*

AUTO-RADIO CAPACITORS









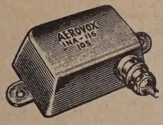
Type	Cap. Mfd.
	SINGLE ELEMENT
Car Generators	
Type 1120	1.0
Type 1140	0.5
	DUAL ELEMENT
Type 1141	0.5-0.5
Ford Auto Radios	
Type 1144	0.5
For 1936 Models	
Type 1150	0.5

Type	Cap. Mfd.
Motorola Auto Radios Type 1466	.0008
Ammeter Condenser Type 1160	0.5
Gas Gage Filter Condenser Type 1143-G	0.05
Oil Gage Filter Condenser Type 1142-O	0.25

Note: All auto radio capacitors subject to Federal Excise Tax.

FILTERS

R-F NOISE CAPACITANCE SUPPRESSORS

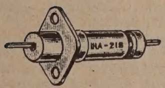


BYPASS
INA-116, INA-117, INA-118

These radio-noise suppression capacitors have been especially designed for use in aircraft, vehicular and industrial electric and electronic fields.

Primary application of the INA-116, INA-117, and INA-118, is as r-f bypass capacitors from line to ground in low voltage DC supply lines. These units are rated at full 150 VDC over temperature range of —55°C. to +71°C. and 60 VDC from —55°C. to +95°C.

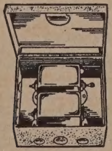
Types INA-218, INA-219, INA-220 and INA-221 are feed-thru capacitors in which the effective section inductance is minimized by the so-called "duct-type" design. Significant reductions can often be realized in size, weight and in some instances, overall cost by the use of feed-thru capacitors as compared to the conventional r-f suppression filter designs. The feed-thru capacitors listed below may be used with good characteristics to 1000 megacycles. Operating temperature range is —55°C. to +85°C.

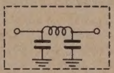


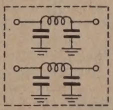
FEED-THRU
INA-218, INA-219, INA-220, INA-221

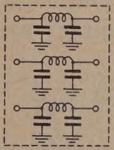
Type	Maximum Voltage	Nom. Cap. Rating (Mfd.)	Case Size	Mounting Centers
INA-117	150 VDC	2.0	1¾ x 1 x ¾	2⅛
INA-116	150 VDC	4.0	1¾ x 1 x ⅛	2⅛
INA-118	150 VDC	10.0	2 x 2 x ⅞	2⅜
INA-218	115 VAC - 200 VDC	.01	7/16 x 1	13/16
INA-219	115 VAC - 200 VDC	.05	7/16 x 2 3/16	13/16
INA 220	115 VAC - 200 VDC	.1	¾ x 1	1⅛
INA-221	115 VAC - 200 VDC	.25	¾ x 1 7/16	1⅛

HEAVY DUTY INDUSTRIAL FILTERS









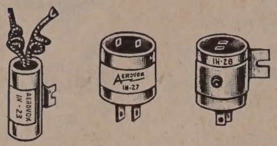
Current Rating	One Circuit	
Amps	Type	L x W x D
5	INB-104	4½ x 5 x 3
10	INB-100	4½ x 5 x 3
30	INB-101	6 x 6 x 4
60	INB-121	6 x 6 x 4
100	INB-123	9 x 9 x 4
200	INB-125	9 x 9 x 4

Two Circuit	
Type	L x W x D
INB-105	6 x 6 x 3
INB-102	6 x 6 x 3
INB-103	6 x 9 x 4
INB-122	6 x 9 x 4
INB-118	12 x 9 x 4
INB-126	12 x 9 x 4

Three Circuit	
Type	L x W x D
INB-106	4½ x 9 x 3
INB-107	4½ x 9 x 3
INB-108	6 x 12 x 4
INB-119	6 x 12 x 4
INB-124	16 x 9 x 4
INB-127	16 x 9 x 4

FILTERS (Cont'd)

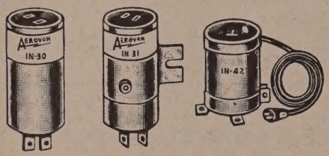
INTERFERENCE FILTERS



TYPE IN-23. Especially used for neon sign fixtures. Convenient mounting bracket. One filter for each fixture. Flexible leads. Also used on small motors. Size: 1 x 2⅛ inches.

TYPE IN-27. Simple, inexpensive, plug-in unit where interference is slight. Size: 1⅜ x 1½ inches.

TYPE IN-28. For use where ground is at considerable distance. Most efficient when mounted on appliance. Bracket supplied. Size: 1⅜ x 2 inches.

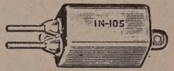


TYPE IN-29. Effective plug-in unit for local noise sources of variable character but strong intensity. Especially suited for shavers and other vibrating devices. Sizes: 1⅜ x 3 inches.

TYPE IN-30. Similar to IN-29 but with greater inductance to handle more severe noise interference. Size: 1⅜ x 3 inches.

TYPE IN-31. Bracket mounted unit with high inductance. Size: 1⅜ x 3 inches.

TYPE IN-42. Heavy duty unit for serious interference from power transmission lines, etc. Plugs into outlet. Appliance or radio plugs into receptacle in filter. Mounting ring provided. Rating: 110/220V AC; 6 amps. Size: 2½ inch dia. x 3¾ inch.

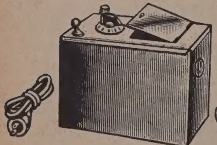


TYPE IN-105. Low-Impedance delta connected capacitor for fluorescent light fixture in bathtub case size 1¾" x 1" x ¾" high.

TYPE IN-106. Best filter for fluorescents. Balanced network. Especially suited for radio and television salesrooms. One unit per fixture in series where power leads enter. Metal container with four stranded wire leads. Rating: 125V AC or DC; 2.6 amps. Size: 1⅞" x 3" x 1⅜" high.

INTERFERENCE ANALYZER

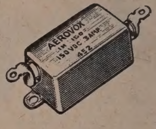
TYPE ANL-37



The Aerovox Filter Selector eliminates the guess work in determining the proper filter to use. Plugs between interfering device and outlet. Adjust selector switch until noise is eliminated or minimized. Dial then indicates type filter (IN27 thru IN42) to be used.

Unit in handsome, sturdy metal cabinet. Compartment contains necessary attachment plugs and clips. Size: 5½ x 5½ x 8 inches.

UHF-INTERFERENCE FILTERS



These latest filter units provide maximum attenuation from 150 KC well up into the UHF range. And they are extra-rugged, extra-compact, extra-efficient, by any comparison with previous filters.

Primary applications are in r.f. noise suppression work in military or commercial aircraft and for vehicular low-voltage DC applications. Also, for special applications such as battery or low-voltage DC filters, for shield room applications, and for critical equipment.

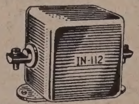
Available in seven standard types meeting a wide variety of applications. For extraordinary requirements, special filters can be developed and built to your order.

Type	Amps	VDC	L x W x H
IN 148	2.0	150	1¾" x 1" x ⅞"
IN 150	3.0	150	1 13/16" x 1" x 1"
IN 151	5.0	150	1 13/16" x 1¼" x 1"
IN 152	10.0	150	2 1/16" x 1¼" x 1"
IN 153	25.0	150	2" x 2" x 1 3/16"
IN 156	40.0	150	5 1/16" x 1 13/32" x 1 1/16"
IN 154	100.0	150	3 1/16" x 2⅛" x 2⅞"

BUILT-IN FILTERS

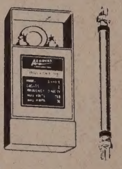
High attenuaton type, hermetically sealed units for use where severe interference is encountered and dependability is required. For permanently mounted applications. Aerovox special "Pi type" construction insures efficient radio noise reduction over low frequency broadcast shortwave, and television bands. Suitable for Army-Navy or aircraft equipment where immersion and severe humidity tests must be met.

For single wire unbalanced applications. For two filtering use one filter in each line. Filter case must be securely bonded to the filter appliance and ground for maximum efficiency. These filters when used on high voltage AC should be used only on permanently grounded equipment.



Type	Maximum Voltage	Maximum Amperes	L x W x H
IN 110	250 VAC	5	2" x 2" x 1"
IN 111	250 VAC	10	2" x 2" x 1¼"
IN 112	250 VAC	30	3 1/16" x 2⅛" x 2⅞"

SCREEN ROOM FILTERS



Screen room filters comply with rigid specifications set up by the designers of the most advanced type screen rooms. All have attenuation equal to or exceeding that of the screen room. Easy mounting arrangements plus high attenuation assure you of the finest equipment specially designed for screen room use. These filters are hermetically sealed and terminals at both ends are shielded using knock-outs for ¾" and 1" conduit.

1¼" diameter mounting hole on all cases is countersunk to permit flush mounting of the filter on the screen room.

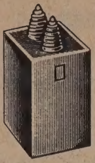
Part No.	Curr. (Amps.)	Circuits	CPS	Attenuation vs. Frequency	Size L x W x D	
*S-1076-1	50	1	0-60	100 db from 14 kc to 1000 mc	20" x 3⅝" x 3⅝"	
*S-1076-2	50	2	0-60	100 db from 14 kc to 1000 mc	20" x 7 3/16" x 3⅝"	
*S-1076-3	50	3	0-60	100 db from 14 kc to 1000 mc	20⅛" x 10⅞" x 3 11/16"	
S-1142-1	30	1	0-400	100 db from 150 kc to 1000 mc	10⅛" x 2⅞" x 2 7/16"	
S-1142-2	30	2	0-400	100 db from 150 kc to 1000 mc	10⅛" x 4¾" x 2 7/16"	
S-1142-3	30	3	0-400	100 db from 150 kc to 1000 mc	10⅛" x 7" x 2 7/16"	
S-1302-1	100	1	0-60	100 db from 200 kc to 1000 mc	14" x 4⅜" x 4⅜"	
*S-1303-1	60	1	0-1000	100 db from 100 kc to 1000 mc	20" x 3⅝" x 3⅝"	
S-1304-1	80	1	0-60	100 db from 14 kc to 1000 mc	22" x 4⅜" x 4⅜"	
S-1305-1	100	1	0-1000	100 db from 100 kc to 1000 mc	22" x 4⅜" x 4⅜"	
S-1361-1	100	1	0-60	100 db from 14 kc to 1000 mc	22" x 4⅜" x 4⅜"	
S-1432-1	100	1	0-60	100 db from 100 kc to 1000 mc	22" x 4⅜" x 4⅜"	
S-1455-1	100	1	0-60	100 db from 150 kc to 1000 mc	22" x 4⅜" x 4⅜"	
					Overall L.	**Overall D.**
S-1468-A	50	1	0-1000	≥60 db/1000 mc to 10000 mc	10¾"	⅞"
S-1468-B	100	1	0-1000	≥60 db/1000 mc to 10000 mc	10¾"	⅞"

*250VAC/DC. All others 500VAC/DC.

AEROVOX *Capacitors*

TYPE JP20

High Voltage Transmitter Capacitors



PAPER OIL

High quality oil capacitors for communications, electronic and general DC applications in industrial equipment. Single or parallel grouped from 6000 to 50,000 VDCW. Heavy duty, highest quality precision construction thruout. Aerovox Hyvol impregnated. Hermetically sealed for long life under exacting operating conditions. Single units rated at 30 KV or less normally supplied with capacitor element insulated from ground. Units built to order. Submit full application information when ordering.

SIZE: HEIGHT x WIDTH x DEPTH

Capacity Mfd.	6000 VDCW	7500 VDCW	10,000 VDCW	12,500 VDCW	
.5		11 x 8 x 4		11 x 8 x 4	
1.0		11 x 8 x 4	11 x 8 x 4	11 x 12 x 4	
1.5					
2.0	11 x 8 x 4	11 x 8 x 4	11 x 12 x 4	13 x 12 x 6	
4.0	11 x 12 x 4	13 x 12 x 4	13 x 12 x 6		
5.0	11 x 12 x 4		13 x 12 x 6	15 x 12 x 9½	
6.0	13 x 12 x 4	13 x 12 x 6			
10.0	13 x 12 x 6				
	15,000 VDCW	20,000 VDCW	25,000 VDCW	37,500 VDCW	50,000 VDCW
.1				13 x 13½ x 4	13 x 13½ x 4
.2			11 x 12 x 4	13 x 13½ x 6	15 x 13½ x 8½
.25	11 x 8 x 4	11 x 8 x 4	11 x 12 x 4	15 x 13½ x 8½	15 x 15½ x 15
.5	11 x 12 x 4	11 x 12 x 4	11 x 12 x 6	15 x 13½ x 15	
1.0	13 x 12 x 4	13 x 12 x 6	15 x 12 x 9½		
1.5		15 x 12 x 9½			
2.0	15 x 12 x 9½	15 x 12 x 9½			
3.0	15 x 12 x 9½				
4.0		15 x 14 x 16			

For high-speed flash photography, flash signaling equipment, pulsing and other energy storage uses

TYPE PX—Energy Storage Capacitors

VDC Peak	Nominal Cap. Mfd.	Type No.
	22.5 Watt Seconds	
1500	20	PX10D1
	50.0 Watt Seconds	
2000	28	PX14D3
	75.0 Watt Seconds	
2500	24	PX14D2
3000	16	PX18D1
	100.0 Watt Seconds	
2500	30	PX15D1
4000	12.5	PX20D1

Size: Depth x Width x Height

PX10D1	2½" x 3¾" x 4⅝"
PX15D1	4⁹⁄₁₆" x 3¾" x 6½"
ALL OTHERS	4⁹⁄₁₆" x 3¾" x 4⅝"

TYPE JP12

Vertical-Mounting Oil-Impregnated Oil-Filled

High-voltage, inverted or vertical, immersion-proof unit suitable for such high-voltage circuit applications as in television, cathode-ray tube power supplies, high-voltage rectifiers, or as a high-voltage by-pass capacitor.

Cap. Mfd.	Hght. x Dia.	Cap. Mfd.	Hght. x Dia.	Cap. Mfd.	Hght. x Dia.
2000 VDCW		4000 VDCW		7500 VDCW	
1.0	3¾ x 2¼	.05	2¾ x 2¼	.01	3¼ x 2¼
2.0	5¼ s 2¼	.1	3¾ x 2¼	.02	3¼ x 2¼
		.25	5¼ x 2¼	.03	3¾ x 2¼
3000 VDCW				.05	4¼ x 2¼
.05	2¼ x 2¼	6000 VDCW		.1	4¾ x 2¼
.1	2¼ x 2¼	.03	2¾ x 2¼		
.25	3¼ x 2¼	.05	3¾ x 2¼		
.5	3¾ x 2¼	.1	4¾ x 2¼		
1.0	5¼ x 2¼				

Delivery on items listed on this page are subject to availability of raw materials and manufacturing cycles.

AEROVOX *Capacitors*

INDUSTRIAL SECTION — STANDARD TYPES

TYPE JPO9 HYVOL

PAPER CAPACITORS

JP09

JP09MSB

JP09MS

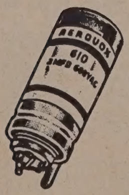
JP09MB

Immersion-proof units in sturdy, rectangular metal cans. High-voltage, screw-type, pillar terminals fitted with soldering lugs. Use of HYVOL allows exceptionally compact size for capacity, working voltage and safety factor. Intended for heavy-duty, continuous service in transmitters, amplifiers, etc. Operating temperature —55 to +85°C.

Standard tolerance +20 —10%. Other tolerance on request.

Type MB bracket is supplied unless otherwise specified except on units with base sizes 3¾" x 3 3/16" and 3¾" x 4 9/16" where Type MS bracket is supplied. MSB bracket is available for all sizes on request.

CAP.	SIZE	CAP.	SIZE	CAP.	SIZE	CAP.	SIZE	CAP.	SIZE
	600 V	6.0	1¼ x 3¾ x 4¾		**2000 V**		**3000 V**		**5000 V**
		8.0	1¼ x 3¾ x 4¾	.1	1 1/16 x 1 13/16 x 2⅛	.1	1 3/16 x 2½ x 2	.1	2¼ x 3¾ x 2¾
.5	1 1/16 x 1 13/16 x 2¼	10.0	1¾ x 3¾ x 4¾	.25	1 1/16 x 1 13/16 x 2⅛	.25	1 3/16 x 2½ x 2½	.25	2¼ x 3¾ x 3⅞
1.0	1 1/16 x 1 13/16 x 2¼	12.0	2¼ x 3¾ x 3⅞	.5	1 1/16 x 1 13/16 x 2⅞	.5	1 3/16 x 2½ x 3⅞	.5	2¼ x 3¾ x 4½
2.0	1 1/16 x 1 13/16 x 2⅞	15.0	2½ x 3¾ x 4¾	1.0	1 3/16 x 2½ x 3½	1.0	2¼ x 3¾ x 3⅞	1.0	3¾ x 4 9/16 x 4⅜
3.0	1 1/16 x 1 13/16 x 3⅞			2.0	1¼ x 3¾ x 4¼	2.0	3 3/16 x 3¾ x 4⅛	2.0	3¾ x 4 9/16 x 6
4.0	1 3/16 x 2½ x 3½			3.0	1¼ x 3¾ x 4¾	4.0	3¾ x 4 9/16 x 4¾		
5.0	1 1/16 x 1 13/16 x 4¾		**1500 V**	4.0	2¼ x 3¾ x 3⅞				
6.0	1 3/16 x 2½ x 4¾	.5	1 1/16 x 1 13/16 x 2⅞	5.0	2¼ x 3¾ x 4¾				**8000 V**
8.0	1¼ x 3¾ x 3⅞	1.0	1 1/16 x 1 13/16 x 3⅞	6.0	3 3/16 x 3¾ x 4½		**4000 V**	.1	2¼ x 3¾ x 3⅜
10.0	1¼ x 3¾ x 4¾	2.0	1 3/16 x 2½ x 4¼	8.0	3 3/16 x 3¾ x 4¾	.1	2¼ x 3¾ x 2¾	.25	2¼ x 3¾ x 4½
12.0	1½ x 3¾ x 4¾	3.0	1 3/16 x 2½ x 4¾	10.0	3¾ x 4 9/16 x 4¾	.25	2¼ x 3¾ x 2¾	1.0	3¾ x 4 9/16 x 7½
15.0	1¾ x 3¾ x 4¾	4.0	1¼ x 3¾ x 4¾	12.0	3¾ x 4 9/16 x 5½	.5	2¼ x 3¾ x 3⅞		
		5.0	1¾ x 3¾ x 4¾	15.0	3¾ x 4 9/16 x 6½	1.0	2¼ x 3¾ x 5⅛		
		6.0	1¾ x 3¾ x 4¾			2.0	3¾ x 4 9/16 x 5⅛		**7500 V**
	1000 V	8.0	2½ x 3¾ x 4¾			4.0	3¾ x 4 9/16 x 8½	.1	2¼ x 3¾ x 3⅞
.1	1 1/16 x 1 13/16 x 1⅝	10.0	3 3/16 x 3¾ x 4¾		**2500 V**			.25	3¾ x 4 9/16 x 3⅞
.25	1 1/16 x 1 13/16 x 2¼	12.0	3 3/16 x 3¾ x 4¾	.5	1 3/16 x 2½ x 3½			.5	3¾ x 4 9/16 x 5⅛
.5	1 1/16 x 1 13/16 x 2¼	15.0	3¾ x 4 9/16 x 4¾	1.0	1¾ x 3¾ x 3¼				
1.0	1 1/16 x 1 13/16 x 2¼			2.0	1¾ x 3¾ x 4¾				
2.0	1 1/16 x 1 13/16 x 3⅛			4.0	3¾ x 4 9/16 x 4				
3.0	1 3/16 x 2½ x 3½			10.0	3¾ x 4 9/16 x 6⅜				
4.0	1 3/16 x 2½ x 4¾								
5.0	1¼ x 3¾ x 3⅞								



TYPE JP10

Cylindrical hermetically sealed can with screwbase molded cover for vertical mounting. These units are Hyvol impregnated and filled for long life and safe operation at temperatures from —55 to +85°C.

Standard units have two terminals, case floating.

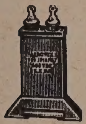
Standard tolerance +20% —10%. Other tolerances available on request.

CAPACITY	600 V D C W SIZE	1000 V D C W SIZE	1500 V D C W SIZE
	JP610	JP1010	JP1510
.5			1½x 2⅜
1.0		1½ x 2⅞	1½ x 3⅞
2.0	1½ x 2⅞	1½ x 4½	
4.0	1½ x 4½		

AEROVOX *Capacitors*

INDUSTRIAL SECTION—STANDARD TYPES (Continued)

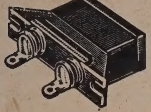
TYPE JP16M and JP16MCT



Small corrosion and immersion-proof unit for severe atmospheric and climatic conditions. JP16MCT is standard; JP16M is available in 400 and 600 volts. Operating temperature —55 to +85°C. Dual units have two terminals, case grounded. Standard tolerance +20 —10%. CP06S and CP06F brackets available for JP16M. Base Size 1 5/16 x 11/16.

SINGLE CAPACITY	400 VDCW	600 VDCW	1000 VDCW	DUAL CAPACITY	600 VDCW
	HEIGHT	HEIGHT	HEIGHT		HEIGHT
	JP416M, JP416MCT	JP616M, JP616MCT	JP1016MCT		JP616M JP616MCT
.05		1 1/16	1⅜	2 x .05	1⅜
.1	1 1/16	1⅜	1⅜	2 x .1	1⅝
.25	1⅜	1⅝	2	2 x .25	2
.5	1⅝	2	2¾	2 x .5	2¾
1.0	2	2¾			

TYPE JP18MCB

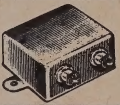


Similar to JP16M in construction and electrical characteristics. Because of the difference in the base size type JP18MCB can be supplied with three terminals. Dual units are case floating, triples are case grounded. The size difference also makes these units suitable for use in assemblies where JP16M's do not fit. Operating temperature range —55 to +85°C. Standard tolerance +20 —10%.

Capacity	400 VDCW	600 VDCW	1000 VDCW	Capacity	400 VDCW	600 VDCW	1000 VDCW	Capacity	400 VDCW	600 VDCW	1000 VDCW
	Height	Height	Height		Height	Height	Height		Height	Height	Height
	JP418MCB	JP618MCB	JP1018MCB		JP418MCB	JP618MCB	JP1018MCB		JP418MCB	JP618MCB	JP1018MCB
.01			1 1/16	2 x .01			1 1/16	3 x .01			1 1/16
.02			1 1/16	2 x .02			1 1/16	3 x .02			1 1/16
.05	1	1 1/16	1 1/16	2 x .05	1	1 1/16	1½	3 x .05	1⅛	1½	1½
.1	1	1 1/16	1½	2 x .1	1¼	1½	2	3 x .1	1⅝	1½	2½
.25	1¼	1½	2	2 x .25	1½	2	2¾	3 x .25	2	2¾	
.5	1½	2	2½	2 x .5	2¼	2¾					
1.0	2	2¾									

BASE SIZE 1¾ x 9/16

TYPE JP30M
Bathtub Case



High-quality bypass capacitors furnished in drawn metal bathtub cases, hermetically sealed. These units are Hyvol M impregnated for operation at temperatures from —55 to +85°C. They are especially recommended for applications where high reliability and superior performance are required. Typical applications for these rugged units would include marine, aircraft and tropical climates. Standard tolerance +20% —10%.

Capacity	400 VDCW	600 VDCW	1000 VDCW
	Size	Size	Size
	JP430M	JP630M	JP1030M
.05	1¾ x 1 x ¾	1¾ x 1 x ¾	1¾ x 1 x ¾
.1	1¾ x 1 x ¾	1¾ x 1 x ¾	1¾ x 1 x ¾
.25	1¾ x 1 x ¾	1¾ x 1 x 13/16	1¾ x 1 x ⅞
.5	1¾ x 1 x ⅞	1¾ x 1 x 1	2 x 1¾ x ⅞
.75	2 1/16 x 1¼ x ⅞	2 1/16 x 1¼ x ⅞*	2 x 1¾ x ⅞
1.0	2 x 1¾ x ⅞	2 x 1¾ x 1	2 x 2 x 1⅛
2.0	2 x 2 x 1⅛	2 x 2 x 1 3/16	

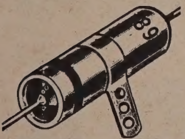
* Also available with top terminals, size 2 x 1¾ x ⅞, Type JP30MT.

Capacity	400 VDCW	600 VDCW	1000 VDCW
	Size	Size	Size
	JP430M	JP630M	JP1030M
2 x .05	1¾ x 1 x ¾	1¾ x 1 x ¾	1¾ x 1 x ¾
2 x .1	1¾ x 1 x ¾	1¾ x 1 x ¾	1¾ x 1 x ⅞
2 x .25	1¾ x 1 x 15/16	1¾ x 1 x 1	2 x 1¾ x ⅞
2 x .5	2 x 1¾ x ⅞	2 x 1¾ x ⅞	2 x 2 x 1 3/16
2 x 1.0	2 x 2 x 1⅛	2 x 2 x 1 3/16	
3 x .05	1¾ x 1 x ¾	1¾ x 1 x 13/16	1¾ x 1 x 13/16
3 x .1	1¾ x 1 x 13/16	1¾ x 1 x 15/16	2 x 1¾ x ⅞
3 x .25	2 x 1¾ x ⅞	2 x 1¾ x ⅞	2 x 2 x 1⅛
3 x .5	2 x 2 x 1	2 x 2 x 1 3/16	

TYPE JP89M

Immersion-proof, oil-impregnated, oil filled units in hermetically sealed metal tubes. Ideal for coupling and bypass functions in transmitters, high-voltage applications and for use in test equipment. Case is insulated, not connected to the capacitor section. Standard units are supplied with cardboard insulating sleeve and radial mounting bracket (Type P89M). All sizes shown are can sizes. For size over insulating sleeve add 1/16″ to diameter and 3/16″ to length.

Available in the following style variations:



JP89M —with cardboard insulating sleeve, radial mtg. bracket.
JP89MA —with cardboard insulating sleeve and tangential mounting bracket.
JP89MAP—with plastic insulating sleeve and tangential mtg. bracket.
JP89MAY—without insulating sleeve but with tangential mounting bracket.
JP89MP —with plastic insulating sleeve, radial mtg. bracket.
JP89MX —without mounting bracket but with cardboard insulating sleeve.
JP89MXP—without mounting bracket but with plastic insulating sleeve.
JP89MXY—without insulating sleeve or mtg. bracket.
JP89MY —without insulating sleeve but with radial mounting bracket.

Voltage	Capacity	Can Size
400V	.01	⅜ x 1 5/16
400V	.02	½ x 1 5/16
400V	.05	½ x 1 7/16
400V	.1	⅝ x 1 11/16
400V	.25	13/16 x 2 1/16
400V	.5	1 x 2 1/16
600V	.001	⅜ x 1 3/16
600V	.005	⅜ x 1 3/16
600V	.01	7/16 x 1 5/16
600V	.02	7/16 x 1 7/16
600V	.05	9/16 x 1 7/16
600V	.1	⅝ x 1 13/16
600V	.25	¾ x 2 5/16
600V	.5	15/16 x 2⅜
1000V	.01	7/16 x 1 5/16

Voltage	Capacity	Can Size
1000V	.03	9/16 x 1 9/16
1000V	.05	⅝ x 1 9/16
1000V	.1	11/16 x 1 15/16
1000V	.25	⅞ x 2 5/16
2000V	.001	¾ x 1⅝
2000V	.005	¾ x 1⅝
2000V	.01	¾ x 1⅝
2000V	.015	¾ x 1¾
2000V	.02	¾ x 1⅞
2000V	.03	¾ x 1⅞
2000V	.04	¾ x 2¼
2000V	.05	⅞ x 2¼
2000V	.1	1 x 2½
2500V	.005	¾ x 1⅝
2500V	.01	¾ x 1¾

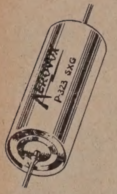
Voltage	Capacity	Can Size
2500V	.02	¾ x 2
2500V	.03	¾ x 2¼
2500V	.05	⅞ x 2½
2500V	.1	1 x 3
3000V	.005	⅞ x 1⅝
3000V	.01	⅞ x 1¾
3000V	.02	⅞ x 2
3000V	.03	1 x 2¼
3000V	.05	1 x 2½
3000V	.1	1⅜ x 2¾
4000V	.05	1⅜ x 3¼
4000V	.1	1⅜ x 4¾
6000V	.005	1 x 2½
6000V	.01	1 x 3¼
6000V	.05	1⅜ x 5

ALL TYPES ON THIS PAGE AVAILABLE IN CLOSER TOLERANCE ON SPECIAL ORDER

AEROVOX Capacitors

INDUSTRIAL SECTION—STANDARD TYPES (Continued)

PAPER SUB-MINIATURES



Tubular, metal-cased capacitors, hermetically sealed with glass terminal end seals. Miniaturized, conventional, foil-paper construction Especially developed to meet high temperature and minimum space requirements of present day electronic equipment. Designed for rugged long life operation, these units are preferred for many of those applications where reliability is a factor. Impregnated with Hyvol "S" a special, high-temperature-operating, stable, liquid impregnant for operation at elevated temperature. These units are capable of withstanding a voltage breakdown test of twice rated voltage between terminals or between terminals and case for a one-minute period. Ambient temperature shall be plus 25°C. plus or minus 10°C. during this test. Power factor will be less than 1% when measured or referred to a frequency of 1000 cycles per second at 25°C. Types P123S and P123SX are rated for operation over a temperature range of —65°C. to +100°C. Types P323S and P323SX are rigidly processed to assure operation over the temperature range of —65°C. to +125°C. The capacitor sections on types P123S and P323S utilize an inserted tab construction to obtain minimum size. Types P123SX and P323SX utilize extended foil construction for those applications where operation is required at very low AC voltages.

All values are available in ±10% or ±20%.

100 Volts

Capacity	P123S P323S	P123SP P323SP	P123SX P323SX	P123SXP P323SXP
.001	.175 x ¾	.237 x 13/16	.175 x ¾	.237 x 13/16
.0015	.175 x ¾	.237 x 13/16	.175 x ¾	.237 x 13/16
.0022	.175 x ¾	.237 x 13/16	.175 x ¾	.237 x 13/16
.0033	.175 x ¾	.237 x 13/16	.175 x ¾	.237 x 13/16
.0047	.175 x ¾	.237 x 13/16	.175 x ¾	.237 x 13/16
.0068	.175 x ¾	.237 x 13/16	.195 x ¾	.257 x 13/16
.01	.175 x ¾	.237 x 13/16	.235 x ¾	.297 x 13/16
.015	.175 x ¾	.237 x 13/16	.235 x ¾	.297 x 13/16
.022	.195 x ¾	.257 x 13/16	.312 x ⅞	.374 x 15/16
.033	.235 x ¾	.297 x 13/16	.312 x ⅞	.374 x 15/16
.047	.312 x ⅞	.374 x 15/16	.312 x ⅞	.374 x 15/16
.068	.312 x ⅞	.374 x 15/16	.400 x ⅞	.462 x 15/16
.1	.312 x ⅞	.374 x 15/16	.400 x ⅞	.462 x 15/16
.15	.400 x ⅞	.462 x 15/16	.400 x 1⅛	.462 x 1 3/16
.22	.400 x 1⅛	.462 x 1 3/16	.400 x 1⅜	.462 x 1 7/16
.33	.400 x 1⅜	.462 x 1 7/16	.562 x 1⅛	.624 x 1 3/16
.47	.562 x 1⅛	.624 x 1 3/16	.562 x 1⅜	.624 x 1 7/16
.68	.562 x 1⅜	.624 x 1 7/16	.562 x 1⅝	.624 x 1 11/16
1.0	.562 x 1⅞	.624 x 1 15/16	.670 x 1⅝	.732 x 1 11/16

200 Volts

Capacity	P123S P323S	P123SP P323SP	P123SX P323SX	P123SXP P323SXP
.001	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.0015	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.0022	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.0033	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.0047	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.0068	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.01	.235 x ¾	.297 x 13/16	.312 x ⅞	.374 x 15/16
.015	.235 x ¾	.297 x 13/16	.312 x ⅞	.374 x 15/16
.022	.235 x ¾	.297 x 13/16	.312 x ⅞	.374 x 15/16
.033	.312 x ⅞	.374 x 15/16	.312 x ⅞	.374 x 15/16
.047	.312 x ⅞	.374 x 15/16	.400 x ⅞	.462 x 15/16
.068	.312 x ⅞	.374 x 15/16	.400 x ⅞	.462 x 15/16
.1	.400 x ⅞	.462 x 15/16	.400 x 1⅛	.462 x 1 3/16
.15	.400 x 1⅛	.462 x 1 3/16	.400 x 1⅜	.462 x 1 7/16
.22	.400 x 1⅜	.462 x 1 7/16	.562 x 1⅛	.624 x 1 3/16
.33	.562 x 1⅛	.624 x 1 3/16	.562 x 1⅜	.624 x 1 7/16
.47	.562 x 1⅜	.624 x 1 7/16	.562 x 1⅝	.624 x 1 11/16
.68	.562 x 1⅞	.624 x 1 15/16	.670 x 1⅝	.732 x 1 11/16
1.0	.670 x 1⅞	.732 x 1 15/16	.750 x 2⅛	.812 x 2 3/16

300 Volts

Capacity	P123S P323S	P123SP P323SP	P123SX P323SX	P123SXP P323SXP
.001	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.0015	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.0022	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.0033	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.0047	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.0068	.235 x ¾	.297 x 13/16	.312 x ⅞	.374 x 15/16
.01	.235 x ¾	.297 x 13/16	.312 x ⅞	.374 x 15/16
.015	.235 x ¾	.297 x 13/16	.312 x ⅞	.374 x 15/16
.022	.312 x ⅞	.374 x 15/16	.312 x ⅞	.374 x 15/16
.033	.312 x ⅞	.374 x 15/16	.400 x ⅞	.462 x 15/16
.047	.312 x ⅞	.374 x 15/16	.400 x ⅞	.462 x 15/16
.068	.400 x ⅞	.462 x 15/16	.400 x 1⅛	.462 x 1 3/16
.1	.400 x 1⅛	.462 x 1 3/16	.400 x 1⅜	.462 x 1 7/16
.15	.400 x 1⅜	.462 x 1 7/16	.562 x 1⅛	.624 x 1 3/16
.22	.562 x 1⅛	.624 x 1 3/16	.562 x 1⅜	.624 x 1 7/16
.33	.562 x 1⅜	.624 x 1 7/16	.562 x 1⅝	.624 x 1 11/16
.47	.562 x 1⅞	.624 x 1 15/16	.670 x 1⅝	.732 x 1 11/16
.68	.670 x 1⅞	.732 x 1 15/16	.750 x 2⅛	.812 x 2 3/16
1.0	.750 x 2⅛	.812 x 2 3/16	1.000 x 2⅛	1.062 x 2 3/16

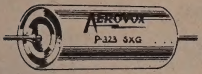
400 Volts

Capacity	P123S P323S	P123SP P323SP	P123SX P323SX	P123SXP P323SXP
.001	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.0015	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.0022	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.0033	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.0047	.235 x ¾	.297 x 13/16	.312 x ⅞	.374 x 15/16
.0068	.235 x ¾	.297 x 13/16	.312 x ⅞	.374 x 15/16
.01	.235 x ¾	.297 x 13/16	.312 x ⅞	.374 x 15/16
.015	.312 x ⅞	.374 x 15/16	.312 x ⅞	.374 x 15/16
.022	.312 x ⅞	.374 x 15/16	.400 x ⅞	.462 x 15/16
.033	.312 x ⅞	.374 x 15/16	.400 x ⅞	.462 x 15/16
.047	.400 x ⅞	.462 x 15/16	.400 x 1⅛	.462 x 1 3/16
.068	.400 x 1⅛	.462 x 1 3/16	.400 x 1⅜	.462 x 1 7/16
.1	.400 x 1⅜	.462 x 1 7/16	.562 x 1⅛	.624 x 1 3/16
.15	.562 x 1⅛	.624 x 1 3/16	.562 x 1⅜	.624 x 1 7/16
.22	.562 x 1⅜	.624 x 1 7/16	.562 x 1⅝	.624 x 1 11/16
.33	.562 x 1⅞	.624 x 1 15/16	.670 x 1⅝	.732 x 1 11/16
.47	.670 x 1⅞	.732 x 1 15/16	.750 x 2⅛	.812 x 2 3/16
.68	.750 x 2⅛	.812 x 2 3/16	.750 x 2⅜	.812 x 2 7/16
1.0	1.000 x 1⅞	1.062 x 1 15/16	1.000 x 2⅝	1.062 x 2 11/16

600 Volts

Capacity	P123S P323S	P123SP P323SP	P123SX P323SX	P123SXP P323SXP
.001	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.0015	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.0022	.235 x ¾	.297 x 13/16	.235 x ¾	.297 x 13/16
.0033	.235 x ¾	.297 x 13/16	.312 x ⅞	.374 x 15/16
.0047	.235 x ¾	.297 x 13/16	.312 x ⅞	.374 x 15/16
.0068	.235 x ¾	.297 x 13/16	.312 x ⅞	.374 x 15/16
.01	.312 x ⅞	.374 x 15/16	.312 x ⅞	.374 x 15/16
.015	.312 x ⅞	.374 x 15/16	.400 x ⅞	.462 x 15/16
.022	.312 x ⅞	.374 x 15/16	.400 x ⅞	.462 x 15/16
.033	.400 x ⅞	.462 x 15/16	.400 x 1⅛	.462 x 1 3/16
.047	.400 x 1⅛	.462 x 1 3/16	.400 x 1⅜	.462 x 1 7/16
.068	.400 x 1⅜	.462 x 1 7/16	.562 x 1⅛	.624 x 1 3/16
.1	.562 x 1⅛	.624 x 1 3/16	.562 x 1⅜	.624 x 1 7/16
.15	.562 x 1⅜	.624 x 1 7/16	.562 x 1⅝	.624 x 1 11/16
.22	.562 x 1⅞	.624 x 1 15/16	.670 x 1⅝	.732 x 1 11/16
.33	.670 x 1⅞	.732 x 1 15/16	.750 x 2⅛	.812 x 2 3/16
.47	.750 x 2⅛	.812 x 2 3/16	.750 x 2⅜	.812 x 2 7/16
.68	1.000 x 1⅞	1.062 x 1 15/16	1.000 x 2⅛	1.062 x 2 3/16
1.0	1.000 x 2⅜	1.062 x 2 7/16	1.000 x 2⅝	1.062 x 2 11/16

AEROVOX *Capacitors*



INDUSTRIAL SECTION—STANDARD TYPES (Continued)

PAPER SUB-MINIATURES (Continued)

Suffix	Description
G	One end grounded
	Omit G, both ends insulated
GP	Grounded and plastic sleeve
P	Insulated with plastic sleeve
GT	Grounded with threaded neck mounting
T	Insulated with threaded neck mounting
GE	Grounded with axial threaded stud
GR	Grounded with two radial threaded studs
R	Insulated with two radial threaded studs
GV	Grounded with side vertical bracket
V	Insulated with side vertical bracket
GB	Grounded with tangential bracket
B	Insulated with tangential bracket
GL	Grounded with tab terminal
L	Insulated with tab terminal

*Style variations and ratings listed below are standard. All others available on special order.

100 Volts

Capacity	P123SG P323SG	P123SGP P323SGP	P123SXG P323SXG	P123SXGP P323SXGP
.01	—	—	.235 x 11/16	.297 x ¾
.015	—	—	.235 x 11/16	.297 x ¾
.022	—	—	.312 x 13/16	.374 x ⅞
.033	.235 x 11/16	.297 x ¾	.312 x 13/16	.374 x ⅞
.047	.312 x 13/16	.374 x ⅞	.312 x 13/16	.374 x ⅞
.068	.312 x 13/16	.374 x ⅞	.400 x 13/16	.462 x ⅞
.1	.312 x 13/16	.374 x ⅞	.400 x 13/16	.462 x ⅞
.15	.400 x 13/16	.462 x ⅞	.400 x 1 1/16	.462 x 1⅛
.22	.400 x 1 1/16	.462 x 1⅛	.400 x 1 5/16	.462 x 1⅜
.33	.400 x 1 5/16	.462 x 1⅜	.562 x 1 1/16	.624 x 1⅛
.47	.562 x 1 1/16	.624 x 1⅛	.562 x 1 5/16	.624 x 1⅜
.68	.562 x 1 5/16	.624 x 1⅜	.562 x 1 9/16	.624 x 1⅝
1.0	.562 x 1 13/16	.624 x 1⅞	.670 x 1 9/16	.732 x 1⅝

200 Volts

Capacity	P123SG P323SG	P123SGP P323SGP	P123SXG P323SXG	P123SXGP P323SXGP
.001	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.0015	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.0022	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.0033	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.0047	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.0068	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.01	.235 x 11/16	.297 x ¾	.312 x 13/16	.374 x ⅞
.015	.235 x 11/16	.297 x ¾	.312 x 13/16	.374 x ⅞
.022	.235 x 11/16	.297 x ¾	.312 x 13/16	.374 x ⅞
.033	.312 x 13/16	.374 x ⅞	.312 x 13/16	.374 x ⅞
.047	.312 x 13/16	.374 x ⅞	.400 x 13/16	.462 x ⅞
.068	.312 x 13/16	.374 x ⅞	.400 x 13/16	.462 x ⅞
.1	.400 x 13/16	.462 x ⅞	.400 x 1 1/16	.462 x 1⅛
.15	.400 x 1 1/16	.462 x 1⅛	.400 x 1 5/16	.462 x 1⅜
.22	.400 x 1 5/16	.462 x 1⅜	.562 x 1 1/16	.624 x 1⅛
.33	.562 x 1 1/16	.624 x 1⅛	.562 x 1 5/16	.624 x 1⅜
.47	.562 x 1 5/16	.624 x 1⅜	.562 x 1 9/16	.624 x 1⅝
.68	.562 x 1 13/16	.624 x 1⅞	.670 x 1 9/16	.732 x 1⅝
1.0	.670 x 1 13/16	.732 x 1⅞	.750 x 2 1/16	.812 x 2⅛

300 Volts

Capacity	P123SG P323SG	P123SGP P323SGP	P123SXG P323SXG	P123SXGP P323SXGP
.001	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.0015	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.0022	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.0033	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.0047	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.0068	.235 x 11/16	.297 x ¾	.312 x 13/16	.374 x ⅞
.01	.235 x 11/16	.297 x ¾	.312 x 13/16	.374 x ⅞
.015	.235 x 11/16	.297 x ¾	.312 x 13/16	.374 x ⅞

300 Volts (Cont.)

Capacity	P123SG P323SG	P123SGP P323SGP	P123SXG P323SXG	P123SXGP P323SXGP
.022	.312 x 13/16	.374 x ⅞	.312 x 13/16	.374 x ⅞
.033	.312 x 13/16	.374 x ⅞	.400 x 13/16	.462 x ⅞
.047	.312 x 13/16	.374 x ⅞	.400 x 13/16	.462 x ⅞

400 Volts

Capacity	P123SG P323SG	P123SGP P323SGP	P123SXG P323SXG	P123SXGP P323SXGP
.001	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.0015	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.0022	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.0033	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.0047	.235 x 11/16	.297 x ¾	.312 x 13/16	.374 x ⅞
.0068	.235 x 11/16	.297 x ¾	.312 x 13/16	.374 x ⅞
.01	.235 x 11/16	.297 x ¾	.312 x 13/16	.374 x ⅞
.015	.312 x 13/16	.374 x ⅞	.312 x 13/16	.374 x ⅞
.022	.312 x 13/16	.374 x ⅞	.400 x 13/16	.462 x ⅞
.033	.312 x 13/16	.374 x ⅞	.400 x 13/16	.462 x ⅞
.047	.400 x 13/16	.462 x ⅞	.400 x 1 1/16	.462 x 1⅛
.068	.400 x 1 1/16	.462 x 1⅛	.400 x 1 5/16	.462 x 1⅜
.1	.400 x 1 5/16	.462 x 1⅜	.562 x 1 1/16	.624 x 1⅛
.15	.562 x 1 1/16	.624 x 1⅛	.562 x 1 5/16	.624 x 1⅜
.22	.562 x 1 5/16	.624 x 1⅜	.562 x 1 9/16	.624 x 1⅝
.33	.562 x 1 13/16	.624 x 1⅞	.670 x 1 9/16	.732 x 1⅝
.47	.670 x 1 13/16	.732 x 1⅞	.750 x 2 1/16	.812 x 2⅛
.68	.750 x 2 1/16	.812 x 2⅛	.750 x 2 5/16	.812 x 2⅜
1.0	1.000 x 1 13/16	1.062 x 1⅞	1.000 x 2 9/16	1.062 x 2⅝

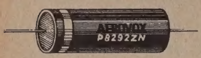
600 Volts

Capacity	P123SG P323SG	P123SGP P323SGP	P123SXG P323SXG	P123SXGP P323SXGP
.001	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.0015	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.0022	.235 x 11/16	.297 x ¾	.235 x 11/16	.297 x ¾
.0033	.235 x 11/16	.297 x ¾	.312 x 13/16	.374 x ⅞
.0047	.235 x 11/16	.297 x ¾	.312 x 13/16	.374 x ⅞
.0068	.235 x 11/16	.297 x ¾	.312 x 13/16	.374 x ⅞
.01	.312 x 13/16	.374 x ⅞	.312 x 13/16	.374 x ⅞
.015	.312 x 13/16	.374 x ⅞	.400 x 13/16	.462 x ⅞
.022	.312 x 13/16	.374 x ⅞	.400 x 13/16	.462 x ⅞
.033	.400 x 13/16	.462 x ⅞	.400 x 1 1/16	.462 x 1⅛
.047	.400 x 1 1/16	.462 x 1⅛	.400 x 1 5/16	.462 x 1⅜
.068	.400 x 1 5/16	.462 x 1⅜	.562 x 1 1/16	.624 x 1⅛
.1	.562 x 1 1/16	.624 x 1⅛	.562 x 1 5/16	.624 x 1⅜
.15	.562 x 1 5/16	.624 x 1⅜	.562 x 1 9/16	.624 x 1⅝
.22	.562 x 1 13/16	.624 x 1⅞	.670 x 1 9/16	.732 x 1⅝
.33	.670 x 1 13/16	.732 x 1⅞	.750 x 2 1/16	.812 x 2⅛
.47	.750 x 2 1/16	.812 x 2⅛	.750 x 2 5/16	.812 x 2⅜
.68	1.000 x 1 13/16	1.062 x 1⅞	1.000 x 2 1/16	1.062 x 2⅛
1.0	1.000 x 2 5/16	1.062 x 2⅜	1.000 x 2 9/16	1.062 x 2⅝

INDUSTRIAL SECTION — STANDARD TYPES (Continued)

METALLIZED-PAPER CAPACITORS

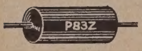
TYPE P8292ZN
Plastic-Cased, Metallized-Paper Tubulars



Featuring an exclusive "poly-cap" plastic-case construction, these capacitors offer outstanding resistance to humidity and improved insulation resistance. The high temperature impregnant permits operation over the temperature range of —30°C to +100°C at working voltage. Distinctive black cases are completely free of any wax coating to facilitate handling problems in automatic insertion and assembly equipment. Standard tolerance on these units is ±20%. Available in closer tolerances upon request at an additional charge. Mechanical Tolerances— ±1⁄16" on length and diameter.

Cap. Mfd.	200 VDCW D x L	Catalog Number	400 VDCW D x L	Catalog Number	600 VDCW D x L	Catalog Number
.01	¼ x 19⁄32	P8292ZN6	5⁄16 x 23⁄32	P8292ZN15	⅜ x 23⁄32	P8292ZN24
.02	¼ x 21⁄32	P8292ZN7	⅜ x 23⁄32	P8292ZN16	⅜ x 23⁄32	P8292ZN25
.03	5⁄16 x 23⁄32	P8292ZN8	⅜ x 23⁄32	P8292ZN17	7⁄16 x 23⁄32	P8292ZN26
.05	5⁄16 x 23⁄32	P8292ZN9	7⁄16 x 23⁄32	P8292ZN18	½ x 23⁄32	P8292ZN27
.1	⅜ x 23⁄32	P8292ZN10	7⁄16 x 1 5⁄32	P8292ZN19	7⁄16 x 1 5⁄32	P8292ZN28
.25	½ x 23⁄32	P8292ZN11	9⁄16 x 1 5⁄32	P8292ZN20	⅝ x 1 5⁄32	P8292ZN29
.5	7⁄16 x 1 5⁄32	P8292ZN12	⅝ x 1 15⁄32	P8292ZN21	11⁄16 x 1 19⁄32	P8292ZN30
1.0	9⁄16 x 1 5⁄32	P8292ZN13	11⁄16 x 1 31⁄32	P8292ZN22	13⁄16 x 2	P8292ZN31
2.0	⅝ x 1 21⁄32	P8292ZN14	⅞ x 2⅜	P8292ZN23	1 x 2⅜	P8292ZN32

TYPE P83Z Microminiatures



Ultra-small, new metallized-paper dielectric capacitor particularly applicable in the electronic field to replace the low capacity paper units now being used. Hyvol K impregnated in humidity resistant molded thermo-plastic cases.

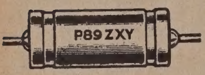
Standard Tolerance ±25%

Capacity Mfd.	Voltage	Case Size (Inches) Dia. x Lgth.
.004	200 VDC	3⁄16 x 7⁄16
.005	200 VDC	3⁄16 x 7⁄16
.01	200 VDC	3⁄16 x 7⁄16
.02	200 VDC	¼ x 9⁄16
.04	200 VDC	¼ x 9⁄16
.002	400 VDC	3⁄16 x 7⁄16
.003	400 VDC	3⁄16 x 7⁄16
.008	400 VDC	¼ x 9⁄16
.01	400 VDC	¼ x 9⁄16

Capacity Mfd.	Voltage	Case Size (Inches) Dia. x Lgth.
.0005	600 VDC	3⁄16 x 7⁄16
.0008	600 VDC	3⁄16 x 7⁄16
.001	600 VDC	3⁄16 x 7⁄16
.002	600 VDC	¼ x 9⁄16
.0022	600 VDC	¼ x 9⁄16
.0047	600 VDC	¼ x 9⁄16
.005	600 VDC	¼ x 9⁄16

TYPE P89ZXY
Hermetically Sealed Tubulars

Hermetically sealed metallized paper capacitors. Sealed in metal cases with rubber bakelite end seals. Impregnated with Hyvol K or Hyvol M, these units are manufactured for operating temperature of —55°C. to +70°C. without voltage derating and operation up to 95°C. ambient with derating.
Standard units are furnished without insulating tube or bracket (P89ZXY).
Standard tolerance ±20%. Also available in ±10% and ±5% on special order.

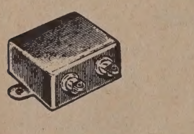


Style Variations

- **P89Z** —with cardboard insulating sleeve and radial mounting bracket.
- **P89ZXP**—without mounting bracket but with plastic insulating sleeve.
- **P89ZXY**—without insulating sleeve or mounting bracket.
- **P89ZY** —without insulating sleeve but with radial mounting bracket.

Cap. Mfd.	Size 150 VDC	Size 200 VDC	Size 400 VDC	Size 600 VDC
.01				⅜ x 1
.02				⅜ x 1
.03			⅜ x 1	7⁄16 x 1
.05		⅜ x 1	7⁄16 x 1	½ x 1
.1		7⁄16 x 1	7⁄16 x 1 5⁄16	½ x 1½
.25		½ x 1	⅝ x 1 5⁄16	⅝ x 1⅝
.5		½ x 1 5⁄16	⅝ x 2	¾ x 2
1.0		⅝ x 1½	¾ x 2½	13⁄16 x 2½
2.0		⅝ x 2	1 x 2½	1¼ x 2½
3.0	¾ x 2			
4.0	13⁄16 x 2			
6.0	1 x 2			

TYPE P30Z Bathtub Case



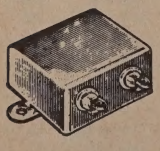
Aerolite Metallized-Paper capacitors. Hyvol K or M impregnated in bathtub, hermetically-sealed metal cases. Meets rigid MIL requirements for moisture immersion and vibration testing.

Standard Tolerance ±20%

Cap Mfd.	Volts	Size
4.0	150	1¾ x 1 x ⅞
6.0	150	2 x 1¾ x ⅞
8.0	150	2 x 2 x 13⁄16
10.0	150	2 x 2 x 1⅛
12.0	150	2 x 2 x 1⅛
.5	200	1¾ x 1 x ¾
1.0	200	1¾ x 1 x ¾
2.0	200	1¾ x 1 x ¾
.25	400	1¾ x 1 x ¾

Cap. Mfd.	Volts	Size
.5	400	1¾ x 1 x ¾
1.0	400	1¾ x 1 x ⅞
2.0	400	2 x 1¾ x ⅞
4.0	400	2 x 2 x 1⅛
.1	600	1¾ x 1 x ¾
.25	600	1¾ x 1 x ¾
.5	600	1¾ x 1 x ¾
1.0	600	1¾ x 1¼ x ⅞
2.0	600	2 x 2 x 1

TYPE P30ZN High Temperature Bathtub Case



AEROVOX type P30ZN Aerolene impregnated metallized-paper capacitors housed in "bathtub" metal cases hermetically sealed. Operating temperature range—65°C. to+100°C. at full rating with operation to +125°C. at 75 percent of voltage rating.

Standard Tolerance ±20%

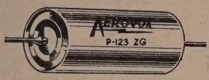
Capacity	150 V	200 V	400 V	600 V
.1		1¾ x 1 x ¾	1¾ x 1 x ¾	1¾ x 1 x ¾
.25		1¾ x 1 x ¾	1¾ x 1 x ¾	1¾ x 1 x ¾
.5		1¾ x 1 x ¾	1¾ x 1 x ¾	1¾ x 1 x ¾
1.0		1¾ x 1 x ¾	1¾ x 1 x ⅞	1¾ x 1¼ x ⅞
2.0		1¾ x 1 x ¾	2 x 1¾ x 13⁄16	2 x 2 x ⅞
3.0	1¾ x 1 x ¾		2 x 1¾ x 15⁄16	2 x 2 x 1⅛
4.0	1¾ x 1 x ¾		2 x 2 x 1	2 x 2 x 1¼
5.0	1¾ x 1 x ¾		2 x 2 x 1¼	
6.0	1¾ x 1¼ x ⅞			
8.0	2 x 1¾ x ¾			
10.0	2 x 1¾ x ¾			
12.0	2 x 2 x ⅞			
15.0	2 x 2 x 1			

NOTE: See following two pages for additional information on other metallized paper capacitors.

INDUSTRIAL SECTION—STANDARD TYPES (Continued)

TYPES P123ZG and P123ZNG

Metal-Cased Capacitors



METALLIZED-PAPER

Metallized paper tubulars hermetically sealed in metal tubes with glass end seals soldered for positive moisture seal. Designed to meet critical operating temperatures and the need for increased reliability in the electronic field.

The P123ZG is manufactured to meet operating temperature range of −55°C. to +70°C. without derating and up to 100°C. with derating to 75%.

The P123ZNG—Aerolene impregnated—is similar to the P123ZG, with the additional feature that it will operate up to temperatures of 100°C., at full voltage rating and 125°C. with voltage derating to 75%.

P123ZG and P123ZNG are case grounded. P123Z and P123ZN are case insulated. Standard tolerance .01 mfd and lower ±25%, .015 mfd and up ±20%. Also available in ±10% and ±5% on special order.

Suffix P denotes plastic tube; B denotes mtg. bracket (not available with plastic tube); T denotes threaded neck terminal

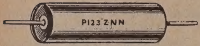
Capacity	P123Z	P123ZP	P123ZG	P123ZGP
200 Volts				
.0005	.175 x 1/2	.237 x 9/16	.175 x 7/16	.237 x 1/2
.001	.175 x 1/2	.237 x 9/16	.175 x 7/16	.237 x 1/2
.002	.175 x 1/2	.237 x 9/16	.175 x 7/16	.237 x 1/2
.003	.175 x 1/2	.237 x 9/16	.175 x 7/16	.237 x 1/2
.005	.175 x 1/2	.237 x 9/16	.175 x 7/16	.237 x 1/2
.01	.175 x 1/2	.237 x 9/16	.175 x 7/16	.237 x 1/2
.015	.195 x 9/16	.257 x 5/8	.195 x 1/2	.257 x 9/16
.02	.195 x 9/16	.257 x 5/8	.195 x 1/2	.257 x 9/16
.022	.195 x 9/16	.257 x 5/8	.195 x 1/2	.257 x 9/16
.033	.235 x 5/8	.297 x 11/16	.235 x 9/16	.297 x 5/8
.04	.235 x 5/8	.297 x 11/16	.235 x 9/16	.297 x 5/8
.047	.235 x 25/32	.297 x 27/32	.235 x 23/32	.297 x 25/32
.05	.235 x 25/32	.297 x 27/32	.235 x 23/32	.297 x 25/32
.068	.312 x 25/32	.374 x 27/32	.312 x 23/32	.374 x 25/32
.1	.312 x 25/32	.374 x 27/32	.312 x 23/32	.374 x 25/32
.15	.312 x 1 3/32	.374 x 1 5/32	.312 x 1 1/22	.374 x 1 3/32
.2	.312 x 1 3/32	.374 x 1 5/32	.312 x 1 1/32	.374 x 1 3/32
.22	.312 x 1 3/32	.374 x 1 5/32	.312 x 1 1/32	.374 x 1 3/32
.25	.312 x 1 3/32	.374 x 1 5/32	.312 x 1 1/32	.374 x 1 3/32
.33	.400 x 1 3/32	.462 x 1 5/32	.400 x 1 1/32	.462 x 1 3/32
.47	.400 x 1 3/32	.462 x 1 5/32	.400 x 1 1/32	.462 x 1 3/32
.5	.400 x 1 3/32	.462 x 1 5/32	.400 x 1 1/32	.462 x 1 3/32
.68	.562 x 1 3/32	.624 x 1 5/32	.562 x 1 1/32	.624 x 1 3/32
1.0	.562 x 1 9/32	.624 x 1 11/32	.562 x 1 7/32	.624 x 1 9/32
1.5	.562 x 1 25/32	.624 x 1 27/32	.562 x 1 23/32	.624 x 1 25/32
2.0	.562 x 1 25/32	.624 x 1 27/32	.562 x 1 23/32	.624 x 1 25/32
400 Volts				
.0005	.235 x 1/2	.297 x 9/16	.235 x 7/16	.297 x 1/2
.001	.235 x 1/2	.297 x 9/16	.235 x 7/16	.297 x 1/2
.002	.235 x 1/2	.297 x 9/16	.235 x 7/16	.297 x 1/2
.003	.235 x 5/8	.297 x 11/16	.235 x 9/16	.297 x 5/8
.005	.235 x 5/8	.297 x 11/16	.235 x 9/16	.297 x 5/8
.01	.235 x 5/8	.297 x 11/16	.235 x 9/16	.297 x 5/8
.015	.235 x 25/32	.297 x 27/32	.235 x 23/32	.297 x 25/32
.02	.235 x 25/32	.297 x 27/32	.235 x 23/32	.297 x 25/32
.022	.312 x 25/32	.374 x 27/32	.312 x 23/32	.374 x 25/32
.033	.312 x 25/32	.374 x 27/32	.312 x 23/32	.374 x 25/32
.04	.312 x 25/32	.374 x 27/32	.312 x 23/32	.374 x 25/32
400 Volts (Continued)				
.047	.400 x 25/32	.462 x 27/32	.400 x 23/32	.462 x 25/32
.05	.400 x 25/32	.462 x 27/32	.400 x 23/32	.462 x 25/32
.068	.400 x 1 3/32	.462 x 1 5/32	.400 x 1 1/32	.462 x 1 3/32
.1	.400 x 1 3/32	.462 x 1 5/32	.400 x 1 1/32	.462 x 1 3/32
.15	.500 x 1 3/32	.562 x 1 5/32	.500 x 1 1/32	.562 x 1 3/32
.2	.500 x 1 3/32	.562 x 1 5/32	.500 x 1 1/32	.562 x 1 3/32
.22	.562 x 1 3/32	.624 x 1 5/32	.562 x 1 1/32	.624 x 1 3/32
.25	.562 x 1 3/32	.624 x 1 5/32	.562 x 1 1/32	.624 x 1 3/32
.33	.562 x 1 9/32	.624 x 1 11/32	.562 x 1 7/32	.624 x 1 9/32
.47	.562 x 1 25/32	.624 x 1 27/32	.562 x 1 23/32	.624 x 1 25/32
.5	.562 x 1 25/32	.624 x 1 27/32	.562 x 1 23/32	.624 x 1 25/32
.68	.670 x 1 25/32	.732 x 1 27/32	.670 x 1 23/32	.732 x 1 25/32
1.0	.670 x 2 9/32	.732 x 2 11/32	.670 x 2 7/32	.732 x 2 9/32
600 Volts				
.0005	.235 x 1/2	.297 x 9/16	.235 x 7/16	.297 x 1/2
.001	.235 x 1/2	.297 x 9/16	.235 x 7/16	.297 x 1/2
.002	.235 x 5/8	.297 x 11/16	.235 x 9/16	.297 x 5/8
.003	.235 x 5/8	.297 x 11/16	.235 x 9/16	.297 x 5/8
.005	.235 x 5/8	.297 x 11/16	.235 x 9/16	.297 x 5/8
.01	.312 x 25/32	.374 x 27/32	.312 x 23/32	.374 x 25/32
.015	.312 x 25/32	.374 x 27/32	.312 x 23/32	.374 x 25/32
.02	.312 x 25/32	.374 x 27/32	.312 x 23/32	.374 x 25/32
.022	.312 x 25/32	.374 x 27/32	.312 x 23/32	.374 x 25/32
.033	.400 x 25/32	.462 x 27/32	.400 x 23/32	.462 x 25/32
.04	.400 x 25/32	.462 x 27/32	.400 x 23/32	.462 x 25/32
.047	.400 x 25/32	.462 x 27/32	.400 x 23/32	.462 x 25/32
.05	.400 x 25/32	.462 x 27/32	.400 x 23/32	.462 x 25/32
.068	.400 x 1 3/32	.462 x 1 5/32	.400 x 1 1/32	.462 x 1 3/32
.1	.500 x 1 3/32	.562 x 1 5/32	.500 x 1 1/32	.562 x 1 3/32
.15	.500 x 1 3/32	.562 x 1 5/32	.500 x 1 1/32	.562 x 1 3/32
.2	.562 x 1 9/32	.624 x 1 11/32	.562 x 1 7/32	.624 x 1 9/32
.22	.562 x 1 9/32	.624 x 1 11/32	.562 x 1 7/32	.624 x 1 9/32
.25	.562 x 1 13/32	.624 x 1 15/32	.562 x 1 11/32	.624 x 1 13/32
.33	.562 x 1 25/32	.624 x 1 27/32	.562 x 1 23/32	.624 x 1 25/32
.47	.670 x 1 25/32	.732 x 1 27/32	.670 x 1 23/32	.732 x 1 25/32
.5	.670 x 1 25/32	.732 x 1 27/32	.670 x 1 23/32	.732 x 1 25/32
.68	.670 x 2 9/32	.732 x 2 11/32	.670 x 2 7/32	.732 x 2 9/32
1.0	.750 x 2 9/32	.812 x 2 11/32	.750 x 2 7/32	.812 x 2 9/32

Capacity	P123ZN	P123ZNP	P123ZNG	P123ZNGP
200 Volts				
.0005	.175 x 1/2	.237 x 9/16	.175 x 7/16	.237 x 1/2
.001	.175 x 1/2	.237 x 9/16	.175 x 7/16	.237 x 1/2
.002	.175 x 1/2	.237 x 9/16	.175 x 7/16	.237 x 1/2
.003	.175 x 1/2	.237 x 9/16	.175 x 7/16	.237 x 1/2
.005	.175 x 1/2	.237 x 9/16	.175 x 7/16	.237 x 1/2
.01	.175 x 1/2	.237 x 9/16	.175 x 7/16	.237 x 1/2
.015	.195 x 5/8	.257 x 11/16	.195 x 9/16	.257 x 5/8
.02	.195 x 5/8	.257 x 11/16	.195 x 9/16	.257 x 5/8
.022	.195 x 5/8	.257 x 11/16	.195 x 9/16	.257 x 5/8
.033	.235 x 5/8	.297 x 11/16	.235 x 9/16	.297 x 5/8
.04	.235 x 3/4	.297 x 13/16	.235 x 5/8	.297 x 11/16
.047	.235 x 3/4	.297 x 13/16	.235 x 5/8	.297 x 11/16
.05	.235 x 3/4	.297 x 13/16	.235 x 5/8	.297 x 11/16
.068	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
.1	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
.15	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x 1 1/8
.2	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x 1 1/8
.22	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x 1 1/8
.25	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x 1 1/8
.33	.400 x 1 1/8	.462 x 1 3/16	.400 x 1 1/16	.462 x 1 1/8
.47	.400 x 1 1/8	.462 x 1 3/16	.400 x 1 1/16	.462 x 1 1/8
.5	.400 x 1 1/8	.462 x 1 3/16	.400 x 1 1/16	.462 x 1 1/8
.68	.500 x 1 1/8	.562 x 1 3/16	.500 x 1 1/16	.562 x 1 1/8
1.0	.562 x 1 1/8	.624 x 1 3/16	.562 x 1 1/16	.624 x 1 1/8
1.5	.562 x 1 5/8	.624 x 1 11/16	.562 x 1 9/16	.624 x 1 5/8
2.0	.562 x 1 7/8	.624 x 1 15/16	.562 x 1 13/16	.624 x 1 7/8
400 Volts				
.0005	.235 x 1/2	.297 x 9/16	.235 x 7/16	.297 x 1/2
.001	.235 x 1/2	.297 x 9/16	.235 x 7/16	.297 x 1/2
.002	.235 x 1/2	.297 x 9/16	.235 x 7/16	.297 x 1/2
.003	.235 x 5/8	.297 x 11/16	.235 x 9/16	.297 x 5/8
.005	.235 x 5/8	.297 x 11/16	.235 x 9/16	.297 x 5/8
.01	.235 x 13/16	.297 x 7/8	.235 x 3/4	.297 x 13/16
.015	.235 x 13/16	.297 x 7/8	.235 x 3/4	.297 x 13/16
.02	.235 x 13/16	.297 x 7/8	.235 x 3/4	.297 x 13/16
.022	.235 x 13/16	.297 x 7/8	.235 x 3/4	.297 x 13/16
.033	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
.04	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x. 1/8
.047	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x 1/8
.05	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x 1/8
400 Volts (Continued)				
.068	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x 1 1/8
.1	.400 x 1 1/8	.462 x 1 3/16	.400 x 1 1/16	.462 x 1 1/8
.15	.500 x 1 1/8	.562 x 1 3/16	.500 x 1 1/16	.562 x 1 1/8
.2	.500 x 1 1/8	.562 x 1 3/16	.500 x 1 1/16	.562 x 1 1/8
.22	.500 x 1 1/8	.562 x 1 3/16	.500 x 1 1/16	.562 x 1 1/8
.25	.500 x 1 1/8	.562 x 1 3/16	.500 x 1 1/16	.562 x 1 1/8
.33	.562 x 1 3/8	.624 x 1 7/16	.562 x 1 5/16	.624 x 1 11/16
.47	.562 x 1 5/8	.624 x 1 11/16	.562 x 1 9/16	.624 x 1 5/8
.5	.562 x 1 5/8	.624 x 1 11/16	.562 x 1 9/16	.624 x 1 5/8
.68	.670 x 1 5/8	.732 x 1 11/16	.670 x 1 9/16	.732 x 1 5/8
1.0	.670 x 2 1/8	.732 x 2 3/16	.670 x 2 1/16	.732 x 2 1/8
1.5	.750 x 2 3/8	.812 x 2 7/16	.750 x 2 5/16	.812 x 2 3/8
2.0	1.000 x 1 7/8	1.062 x 1 15/16	1.000 x 1 13/16	1.062 x 1 7/8
600 Volts				
.0005	.235 x 1/2	.297 x 9/16	.235 x 7/16	.297 x 1/2
.001	.235 x 5/8	.297 x 11/16	.235 x 9/16	.297 x 5/8
.002	.235 x 5/8	.297 x 3/4	.235 x 9/16	.297 x 5/8
.003	.235 x 5/8	.297 x 3/4	.235 x 9/16	.297 x 5/8
.005	.235 x 5/8	.297 x 3/4	.235 x 9/16	.297 x 5/8
.01	.235 x 13/16	.297 x 7/8	.235 x 3/4	.297 x 13/16
.015	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
.02	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
.022	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
.033	.400 x 13/16	.462 x 7/8	.400 x 3/4	.462 x 13/16
.04	.400 x 13/16	.462 x 7/8	.400 x 3/4	.462 x 13/16
047	.400 x 13/16	.462 x 7/8	.400 x 3/4	.462 x 13/16
.05	.400 x 13/16	.462 x 7/8	.400 x 3/4	.462 x 13/16
.068	.400 x 1 1/8	.462 x 1 3/16	.400 x 1 1/16	.462 x 1 1/8
.1	.400 x 1 1/8	.462 x 1 3/16	.400 x 1 1/16	.462 x 1 1/8
.15	.500 x 1 1/8	.562 x 1 3/16	.500 x 1 1/16	.562 x 1 1/8
.2	.562 x 1 3/8	.624 x 1 7/16	.562 x 1 5/16	.624 x 1 3/8
.22	.562 x 1 3/8	.624 x 1 7/16	.562 x 1 5/16	.624 x 1 3/8
.25	.562 x 1 3/8	.624 x 1 7/16	.562 x 1 5/16	.624 x 1 3/8
.33	.562 x 1 5/8	.624 x 1 11/16	.562 x 1 9/16	.624 x 1 5/8
.47	.670 x 1 7/8	.732 x 1 15/16	.670 x 1 13/16	.732 x 1 7/8
.5	.670 x 1 7/8	.732 x 1 15/16	.670 x 1 13/16	.732 x 1 7/8
.68	.670 x 1 7/8	.732 x 1 15/16	.670 x 1 13/16	.732 x 1 7/8
1.0	.750 x 2 3/8	.812 x 2 7/16	.750 x 2 5/16	.812 x 2 3/8
1.5	1.000 x 1 7/8	1.062 x 1 15/16	1.000 x 1 13/16	1.062 x 1 7/8
2.0	1.000 x 2 3/8	1.062 x 2 7/16	1.000 x 2 5/16	1.062 x 2 3/8

AEROVOX *Capacitors*

TYPE P123ZNN

Designed For Low Voltage Operation. Temperature Range —55°C To +100°C.



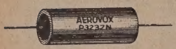
Type P123ZNN capacitors are specifically designed for transistor applications and miniaturized circuits. They provide the smallest units available for this type of construction. Operating temperature range of these capacitors is —55°C to +100°C. Aerovox's special type solid impregnant allows use of these units at any voltage up to rated voltage.

50 VDCW

Capacity Mfd.	P123ZNN Case Floating	P123ZNNP Case Floating Plastic Insulating Sleeve	P123ZNNG Case Grounded	P123ZNNGP Case Grounded Plastic Insulating Sleeve
	Size	Size	Size	Size
.047	.195 x 13/16	.257 x 7/8	.195 x 3/4	.257 x 13/16
.068	.195 x 13/16	.257 x 7/8	.195 x 3/4	.257 x 13/16
.1	.195 x 15/16	.257 x 1	.195 x 7/8	.257 x 15/16
.15	.235 x 15/16	.297 x 1	.235 x 7/8	.297 x 15/16
.22	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
.33	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x 1 1/8
.47	.312 x 1 3/16	.374 x 1 1/4	.312 x 1 1/8	.374 x 1 3/16
.68	.400 x 1 1/8	.462 x 1 3/16	.400 x 1 1/16	.462 x 1 1/8
1.0	.400 x 1 5/16	.462 x 1 3/8	.400 x 1 1/4	.462 x 1 5/16
1.5	.500 x 1 1/8	.562 x 1 3/16	.500 x 1 1/16	.562 x 1 1/8
2.0	.562 x 1 5/16	.624 x 1 3/8	.562 x 1 1/4	.624 x 1 5/16
3.0	.562 x 1 7/16	.624 x 1 1/2	.562 x 1 3/8	.624 x 1 7/16
4.0	.670 x 1 7/16	.732 x 1 1/2	.670 x 1 3/8	.732 x 1 7/16

TYPE P323ZN

125°C, Metal-Cased, Metallized-Paper Tubulars Similar to CH04 and CH05 — MIL-C-18312A



Miniature, hermetically-sealed in metal cases with glass terminal and seal, Type P323ZN units are designed for operation at temperatures from —55°C to +125°C WITH DERATING for voltage. They will meet all the requirements for minimum size, light weight and high temperature in present day electronic equipments. Designed for long life, rugged duty and high reliability operation in critical military and premium priced commercial electronic assemblies.

150 VDCW

Capacity Mfd.	P323ZN Case Floating	P323ZNP Case Floating Plastic Insulating Sleeve	P323ZNG Case Grounded	P323ZNGP Case Grounded Plastic Insulating Sleeve
	Size	Size	Size	Size
*3.0	.670 x 1 7/8	.732 x 1 15/16	.670 x 1 13/16	.732 x 1 7/8
*4.0	.750 x 1 7/8	.812 x 1 15/16	.750 x 1 13/16	.812 x 1 7/8
5.0	1.000 x 1 7/8	1.062 x 1 15/16	1.000 x 1 13/16	1.062 x 1 7/8
*6.0	1.000 x 1 7/8	1.062 x 1 15/16	1.000 x 1 13/16	1.062 x 1 7/8
8.0	1.000 x 2 1/8	1.062 x 2 3/16	1.000 x 2 1/16	1.062 x 2 1/8
10.0	1.000 x 2 3/8	1.062 x 2 7/16	1.000 x 2 5/16	1.062 x 2 3/8
12.0	1.000 x 2 7/8	1.062 x 2 15/16	1.000 x 2 13/16	1.062 x 2 7/8

200 VDCW

Capacity Mfd.	P323ZN Case Floating	P323ZNP Case Floating Plastic Insulating Sleeve	P323ZNG Case Grounded	P323ZNGP Case Grounded Plastic Insulating Sleeve
	Size	Size	Size	Size
.01	.175 x 1/2	.237 x 5/8	.175 x 7/16	.237 x 1/2
.012	.195 x 5/8	.257 x 11/16	.195 x 9/16	.257 x 5/8
.015	.195 x 5/8	.257 x 11/16	.195 x 9/16	.257 x 5/8
.018	.235 x 5/8	.297 x 11/16	.235 x 9/16	.297 x 5/8
.022	.235 x 5/8	.297 x 11/16	.235 x 9/16	.297 x 5/8
.027	.235 x 5/8	.297 x 11/16	.235 x 9/16	.297 x 5/8
.033	.235 x 3/4	.297 x 13/16	.235 x 11/16	.297 x 3/4
.039	.235 x 13/16	.297 x 7/8	.235 x 3/4	.297 x 13/16
.047	.235 x 13/16	.297 x 7/8	.235 x 3/4	.297 x 13/16
.056	.235 x 13/16	.297 x 7/8	.235 x 3/4	.297 x 13/16
.068	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
.082	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
* .1	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
.12	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x 1 1/8
.15	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x 1 1/8
.18	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x 1 1/8
* .22	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x 1 1/8
.27	.400 x 1 1/8	.462 x 1 3/16	.400 x 1 1/16	.462 x 1 1/8
.33	.400 x 1 1/8	.462 x 1 3/16	.400 x 1 1/16	.462 x 1 1/8
.39	.400 x 1 1/8	.462 x 1 3/16	.400 x 1 1/16	.462 x 1 1/8
* .47	.500 x 1 1/8	.562 x 1 3/16	.500 x 1 1/16	.562 x 1 1/8
.56	.500 x 1 1/8	.562 x 1 3/16	.500 x 1 1/16	.562 x 1 1/8
.68	.500 x 1 1/8	.562 x 1 3/16	.500 x 1 1/16	.562 x 1 1/8
.82	.562 x 1 1/8	.624 x 1 3/16	.562 x 1 1/16	.624 x 1 1/8
*1.0	.562 x 1 1/8	.624 x 1 3/16	.562 x 1 1/16	.624 x 1 1/8
*1.5	.562 x 1 5/8	.624 x 1 11/16	.562 x 1 9/16	.624 x 1 5/8
*2.0	.670 x 1 5/8	.732 x 1 11/16	.670 x 1 9/16	.732 x 1 5/8

400 VDCW

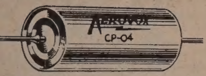
Capacity Mfd.	P323ZN Case Floating	P323ZNP Case Floating Plastic Insulating Sleeve	P323ZNG Case Grounded	P323ZNGP Case Grounded Plastic Insulating Sleeve
	Size	Size	Size	Size
.001	.235 x 3/4	.297 x 13/16	.235 x 11/16	.297 x 3/4
.0022	.235 x 3/4	.297 x 13/16	.235 x 11/16	.297 x 3/4
.0047	.235 x 3/4	.297 x 13/16	.235 x 11/16	.297 x 3/4
.01	.235 x 3/4	.297 x 13/16	.235 x 11/16	.297 x 3/4
.012	.235 x 13/16	.297 x 7/8	.235 x 3/4	.297 x 13/16
.015	.235 x 13/16	.297 x 7/8	.235 x 3/4	.297 x 13/16
.018	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
* .022	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
.027	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
.033	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
.039	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x 1 1/8
* .047	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x 1 1/8
.056	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x 1 1/8
.068	.400 x 1 1/8	.462 x 1 3/16	.400 x 1 1/16	.462 x 1 1/8
.082	.400 x 1 1/8	.462 x 1 3/16	.400 x 1 1/16	.462 x 1 1/8
* .1	.400 x 1 1/8	.462 x 1 3/16	.400 x 1 1/16	.462 x 1 1/8
.12	.500 x 1 1/8	.562 x 1 3/16	.500 x 1 1/16	.562 x 1 1/8
.15	.500 x 1 1/8	.562 x 1 3/16	.500 x 1 1/16	.562 x 1 1/8
.18	.500 x 1 1/8	.562 x 1 3/16	.500 x 1 1/16	.562 x 1 1/8
* .22	.562 x 1 1/8	.624 x 1 3/16	.562 x 1 1/16	.624 x 1 1/8
.27	.562 x 1 1/8	.624 x 1 3/16	.562 x 1 1/16	.624 x 1 1/8
.33	.562 x 1 3/8	.624 x 1 7/16	.562 x 1 5/16	.624 x 1 3/8
.39	.562 x 1 5/8	.624 x 1 11/16	.562 x 1 9/16	.624 x 1 5/8
* .47	.670 x 1 5/8	.732 x 1 11/16	.670 x 1 9/16	.732 x 1 5/8
.56	.670 x 1 5/8	.732 x 1 11/16	.670 x 1 9/16	.732 x 1 5/8
.68	.670 x 1 7/8	.732 x 1 15/16	.670 x 1 13/16	.732 x 1 7/8
.82	.750 x 1 7/8	.812 x 1 15/16	.750 x 1 13/16	.812 x 1 7/8
*1.0	.750 x 1 7/8	.812 x 1 15/16	.750 x 1 13/16	.812 x 1 7/8
1.5	1.000 x 1 7/8	1.062 x 1 15/16	1.000 x 1 13/16	1.062 x 1 7/8
2.0	1.000 x 2 1/8	1.062 x 2 3/16	1.000 x 2 1/16	1.062 x 2 1/8

600 VDCW

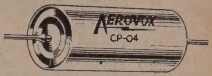
Capacity Mfd.	P323ZN Case Floating	P323ZNP Case Floating Plastic Insulating Sleeve	P323ZNG Case Grounded	P323ZNGP Case Grounded Plastic Insulating Sleeve
	Size	Size	Size	Size
.001	.235 x 3/4	.297 x 13/16	.235 x 11/16	.297 x 3/4
.0022	.235 x 3/4	.297 x 13/16	.235 x 11/16	.297 x 3/4
.0047	.235 x 3/4	.297 x 13/16	.235 x 11/16	.297 x 3/4
* .01	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
.012	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
.015	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
.018	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
* .022	.312 x 13/16	.374 x 7/8	.312 x 3/4	.374 x 13/16
.027	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x 1 1/8
.033	.312 x 1 1/8	.374 x 1 3/16	.312 x 1 1/16	.374 x 1 1/8
.039	.400 x 1 1/8	.462 x 1 3/16	.400 x 1 1/16	.462 x 1 1/8
* .047	.400 x 1 1/8	.462 x 1 3/16	.400 x 1 1/16	.462 x 1 1/8
.056	.400 x 1 1/8	.462 x 1 3/16	.400 x 1 1/16	.462 x 1 1/8
.068	.400 x 1 1/8	.462 x 1 3/16	.400 x 1 1/16	.462 x 1 1/8
.082	.500 x 1 1/8	.562 x 1 3/16	.500 x 1 1/16	.562 x 1 1/8
* .1	.500 x 1 1/8	.562 x 1 3/16	.500 x 1 1/16	.562 x 1 1/8
.12	.500 x 1 1/8	.562 x 1 3/16	.500 x 1 1/16	.562 x 1 1/8
.15	.500 x 1 1/8	.562 x 1 3/16	.500 x 1 1/16	.562 x 1 1/8
.18	.562 x 1 1/8	.624 x 1 3/16	.562 x 1 1/16	.624 x 1 1/8
* .22	.562 x 1 3/8	.624 x 1 7/16	.562 x 1 5/16	.624 x 1 3/8
.27	.562 x 1 5/8	.624 x 1 11/16	.562 x 1 9/16	.624 x 1 5/8
.33	.562 x 1 5/8	.624 x 1 11/16	.562 x 1 9/16	.624 x 1 5/8
.39	.670 x 1 5/8	.732 x 1 11/16	.670 x 1 9/16	.732 x 1 5/8
* .47	.670 x 1 7/8	.732 x 1 15/16	.670 x 1 13/16	.732 x 1 7/8
.56	.670 x 1 7/8	.732 x 1 15/16	.670 x 1 13/16	.732 x 1 7/8
.68	.670 x 1 7/8	.732 x 1 15/16	.670 x 1 13/16	.732 x 1 7/8
.82	1.000 x 1 7/8	1.062 x 1 15/16	1.000 x 1 13/16	1.062 x 1 7/8
*1.0	1.000 x 1 7/8	1.062 x 1 15/16	1.000 x 1 13/16	1.062 x 1 7/8
1.5	1.000 x 2 1/8	1.062 x 2 3/16	1.000 x 2 1/16	1.062 x 2 1/8
2.0	1.000 x 2 3/8	1.062 x 2 7/16	1.000 x 2 5/16	1.062 x 2 3/8

Foot Note: Values marked are those listed in specification MIL-C-18312A.

AEROVOX *Capacitors*



INDUSTRIAL SECTION — MIL TYPES
MIL-C-25A CAPACITORS

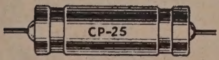


Hermetically sealed tubular capacitors with glass terminal seal and axial wire leads. Characteristic E for operation at —65 to +100°C. Characteristic K for operation at —65 to +125°C. CP04 and CP05 are inserted tab construction; CP08 and CP09 are extended foil construction. Standard tolerance is ±10% (K). Also available in ±20% (M).

TYPES CP04 and CP05 — Characteristics E and K

		CP04, CHAR. E		CP04, CHAR. K		CP05, CHAR. E		CP05, CHAR. K	
		P123S	P123SG	P323S	P323SG	P123SP	P123SGP	P323SP	P323SGP
		NO TUBE		NO TUBE		PLASTIC TUBE		PLASTIC TUBE	
CAPACITY	VOLTAGE	Case Floating	Case Grounded	Case Floating	Case Grounded	Case Floating	Case Grounded	Case Floating	Case Grounded
.033	100V	CP04A1EB333K	CP04A3EB333K	CP04A1KB333K	CP04A3KB333K	CP05A1EB333K	CP05A3EB333K	CP05A1KB333K	CP05A3KB333K
.1	100V	CP04A1EB104K	CP04A3EB104K	CP04A1KB104K	CP04A3KB104K	CP05A1EB104K	CP05A3EB104K	CP05A1KB104K	CP05A3KB104K
.15	100V	CP04A1EB154K	CP04A3EB154K	CP04A1KB154K	CP04A3KB154K	CP05A1EB154K	CP05A3EB154K	CP05A1KB154K	CP05A3KB154K
.22	100V	CP04A1EB224K	CP04A3EB224K	CP04A1KB224K	CP04A3KB224K	CP05A1EB224K	CP05A3EB224K	CP05A1KB224K	CP05A3KB224K
.33	100V	CP04A1EB334K	CP04A3EB334K	CP04A1KB334K	CP04A3KB334K	CP05A1EB334K	CP05A3EB334K	CP05A1KB334K	CP05A3KB334K
.47	100V	CP04A1EB474K	CP04A3EB474K	CP04A1KB474K	CP04A3KB474K	CP05A1EB474K	CP05A3EB474K	CP05A1KB474K	CP05A3KB474K
.68	100V	CP04A1EB684K	CP04A3EB684K	CP04A1KB684K	CP04A3KB684K	CP05A1EB684K	CP05A3EB684K	CP05A1KB684K	CP05A3KB684K
1.0	100V	CP04A1EB105K	CP04A3EB105K	CP04A1KB105K	CP04A3KB105K	CP05A1EB105K	CP05A3EB105K	CP05A1KB105K	CP05A3KB105K
.015	200V	CP04A1EC153K	CP04A3EC153K	CP04A1KC153K	CP04A3KC153K	CP05A1EC153K	CP05A3EC153K	CP05A1KC153K	CP05A3KC153K
.022	200V	CP04A1EC223K	CP04A3EC223K	CP04A1KC223K	CP04A3KC223K	CP05A1EC223K	CP05A3EC223K	CP05A1KC223K	CP05A3KC223K
.047	200V	CP04A1EC473K	CP04A3EC473K	CP04A1KC473K	CP04A3KC473K	CP05A1EC473K	CP05A3EC473K	CP05A1KC473K	CP05A3KC473K
.068	200V	CP04A1EC683K	CP04A3EC683K	CP04A1KC683K	CP04A3KC683K	CP05A1EC683K	CP05A3EC683K	CP05A1KC683K	CP05A3KC683K
.1	200V	CP04A1EC104K	CP04A3EC104K	CP04A1KC104K	CP04A3KC104K	CP05A1EC104K	CP05A3EC104K	CP05A1KC104K	CP05A3KC104K
.15	200V	CP04A1EC154K	CP04A3EC154K	CP04A1KC154K	CP04A3KC154K	CP05A1EC154K	CP05A3EC154K	CP05A1KC154K	CP05A3KC154K
.22	200V	CP04A1EC224K	CP04A3EC224K	CP04A1KC224K	CP04A3KC224K	CP05A1EC224K	CP05A3EC224K	CP05A1KC224K	CP05A3KC224K
.33	200V	CP04A1EC334K	CP04A3EC334K	CP04A1KC334K	CP04A3KC334K	CP05A1EC334K	CP05A3EC334K	CP05A1KC334K	CP05A3KC334K
.47	200V	CP04A1EC474K	CP04A3EC474K	CP04A1KC474K	CP04A3KC474K	CP05A1EC474K	CP05A3EC474K	CP05A1KC474K	CP05A3KC474K
.68	200V	CP04A1EC684K	CP04A3EC684K	CP04A1KC684K	CP04A3KC684K	CP05A1EC684K	CP05A3EC684K	CP05A1KC684K	CP05A3KC684K
1.0	200V	CP04A1EC105K	CP04A3EC105K	CP04A1KC105K	CP04A3KC105K	CP05A1EC105K	CP05A3EC105K	CP05A1KC105K	CP05A3KC105K
.01	400V	CP04A1EE103K	CP04A3EE103K	CP04A1KE103K	CP04A3KE103K	CP05A1EE103K	CP05A3EE103K	CP05A1KE103K	CP05A3KE103K
.033	400V	CP04A1EE333K	CP04A3EE333K	CP04A1KE333K	CP04A3KE333K	CP05A1EE333K	CP05A3EE333K	CP05A1KE333K	CP05A3KE333K
.047	400V	CP04A1EE473K	CP04A3EE473K	CP04A1KE473K	CP04A3KE473K	CP05A1EE473K	CP05A3EE473K	CP05A1KE473K	CP05A3KE473K
.068	400V	CP04A1EE683K	CP04A3EE683K	CP04A1KE683K	CP04A3KE683K	CP05A1EE683K	CP05A3EE683K	CP05A1KE683K	CP05A3KE683K
.1	400V	CP04A1EE104K	CP04A3EE104K	CP04A1KE104K	CP04A3KE104K	CP05A1EE104K	CP05A3EE104K	CP05A1KE104K	CP05A3KE104K
.15	400V	CP04A1EE154K	CP04A3EE154K	CP04A1KE154K	CP04A3KE154K	CP05A1EE154K	CP05A3EE154K	CP05A1KE154K	CP05A3KE154K
.22	400V	CP04A1EE224K	CP04A3EE224K	CP04A1KE224K	CP04A3KE224K	CP05A1EE224K	CP05A3EE224K	CP05A1KE224K	CP05A3KE224K
.33	400V	CP04A1EE334K	CP04A3EE334K	CP04A1KE334K	CP04A3KE334K	CP05A1EE334K	CP05A3EE334K	CP05A1KE334K	CP05A3KE334K
.47	400V	CP04A1EE474K	CP04A3EE474K	CP04A1KE474K	CP04A3KE474K	CP05A1EE474K	CP05A3EE474K	CP05A1KE474K	CP05A3KE474K
.68	400V	CP04A1EE684K	CP04A3EE684K	CP04A1KE684K	COP4A3KE684K	CP05A1EE684K	CP05A3EE684K	CP05A1KE684K	CP05A3KE684K
1.0	400V	CP04A1EE105K	CP04A3EE105K	CP04A1KE105K	CP04A3KE105K	CP05A1EE105K	CP05A3EE105K	CP05A1KE105K	CP05A3KE105K
.001	600V	CP04A1EF102K	CP04A3EF102K	CP04A1KF102K	CP04A3KF102K	CP05A1EF102K	CP05A3EF102K	CP05A1KF102K	CP05A3KF102K
.0015	600V	CP04A1EF152K	CP04A3EF152K	CP04A1KF152K	CP04A3KF152K	CP05A1EF152K	CP05A3EF152K	CP05A1KF152K	CP05A3KF152K
.0022	600V	CP04A1EF222K	CP04A3EF222K	CP04A1KF222K	CP04A3KF222K	CP05A1EF222K	CP05A3EF222K	CP05A1KF222K	CP05A3KF222K
.0033	600V	CP04A1EF332K	CP04A3EF332K	CP04A1KF332K	CP04A3KF332K	CP05A1EF332K	CP05A3EF332K	CP05A1KF332K	CP05A3KF332K
.0047	600V	CP04A1EF472K	CP04A3EF472K	CP04A1KF472K	CP04A3KF472K	CP05A1EF472K	CP05A3EF472K	CP05A1KF472K	CP05A3KF472K
.0068	600V	CP04A1EF682K	CP04A3EF682K	CP04A1KF682K	CP04A3KF682K	CP05A1EF682K	CP05A3EF682K	CP05A1KF682K	CP05A3KF682K
.01	600V	CP04A1EF103K	CP04A3EF103K	CP04A1KF103K	CP04A3KF103K	CP05A1EF103K	CP05A3EF103K	CP05A1KF103K	CP05A3KF103K
.015	600V	CP04A1EF153K	CP04A3EF153K	CP04A1KF153K	CP04A3KF153K	CP05A1EF153K	CP05A3EF153K	CP05A1KF153K	CP05A3KF153K
.022	600V	CP04A1EF223K	CP04A3EF223K	CP04A1KF223K	CP04A3KF223K	CP05A1EF223K	CP05A3EF223K	CP05A1KF223K	CP05A3KF223K
.033	600V	CP04A1EF333K	CP04A3EF333K	CP04A1KF333K	CP04A3KF333K	CP05A1EF333K	CP05A3EF333K	CP05A1KF333K	CP05A3KF333K
.047	600V	CP04A1EF473K	CP04A3EF473K	CP04A1KF473K	CP04A3KF473K	CP05A1EF473K	CP05A3EF473K	CP05A1KF473K	CP05A3KF473K
.068	600V	CP04A1EF683K	CP04A3EF683K	CP04A1KF683K	CP04A3KF683K	CP05A1EF683K	CP05A3EF683K	CP05A1KF683K	CP05A3KF683K
.1	600V	CP04A1EF104K	CP04A3EF104K	CP04A1KF104K	CP04A3KF104K	CP05A1EF104K	CP05A3EF104K	CP05A1KF104K	CP05A3KF104K
.15	600V	CP04A1EF154K	CP04A3EF154K	CP04A1KF154K	CP04A3KF154K	CP05A1EF154K	CP05A3EF154K	CP05A1KF154K	CP05A3KF154K
.22	600V	CP04A1EF224K	CP04A3EF224K	CP04A1KF224K	CP04A3KF224K	CP05A1EF224K	CP05A3EF224K	CP05A1KF224K	CP05A3KF224K
.33	600V	CP04A1EF334K	CP04A3EF334K	CP04A1KF334K	CP04A3KF334K	CP05A1EF334K	CP05A3EF334K	CP05A1KF334K	CP05A3KF334K
.47	600V	CP04A1EF474K	CP04A3EF474K	CP04A1KF474K	CP04A3KF474K	CP05A1EF474K	CP05A3EF474K	CP05A1KF474K	CP05A3KF474K
.68	600V	CP04A1EF684K	CP04A3EF684K	CP04A1KF684K	CP04A3KF684K	CP05A1EF684K	CP05A3EF684K	CP05A1KF684K	CP05A3KF684K

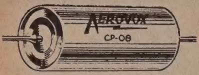
MIL-C-25A
TYPES CP-25, CP26, CP27, CP28, CP29



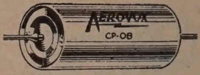
Oil impregnated and filled hermetically sealed tubular capacitors for use in bypass and coupling applications in transmitters and test equipment. Available in 5 case styles, with plastic insulating sleeve and either radial or soldered tangential bracket. Case is floating, but can be furnished grounded on special order. Standard tolerance ±20% tolerance (M).

CAPACITY	VOLTAGE	P89MXY	P89MXP	P89MY	P89MP	P89MAY
.1	200V	CP25A1EC104K	CP26A1EC104K	CP27A1EC104K	CP28A1EC104K	CP29A1EC104K
.25	200V	CP25A1EC254K	CP26A1EC254K	CP27A1EC254K	CP28A1EC254K	CP29A1EC254K
.5	200V	CP25A1EC504K	CP26A1EC504K	CP27A1EC504K	CP28A1EC504K	CP29A1EC504K
.003	600V	CP25A1EF302K	CP26A1EF302K	CP27A1EF302K	CP28A1EF302K	CP29A1EF302K
.006	600V	CP25A1EF602K	CP26A1EF602K	CP27A1EF602K	CP28A1EF602K	CP29A1EF602K
.01	600V	CP25A1EF103K	CP26A1EF103K	CP27A1EF103K	CP28A1EF103K	CP29A1EF103K
.02	600V	CP25A1EF203K	CP26A1EF203K	CP27A1EF203K	CP28A1EF203K	CP29A1EF203K
.05	600V	CP25A1EF503K	CP26A1EF503K	CP27A1EF503K	CP28A1EF503K	CP29A1EF503K
.1	600V	CP25A1EF104K	CP26A1EF104K	CP27A1EF104K	CP28A1EF104K	CP29A1EF104K
.25	600V	CP25A1EF254K	CP26A1EF254K	CP27A1EF254K	CP28A1EF254K	CP29A1EF254K
.5	600V	CP25A1EF504K	CP26A1EF504K	CP27A1EF504K	CP28A1EF504K	CP29A1EF504K
.003	1000V	CP25A1EG302K	CP26A1EG302K	CP27A1EG302K	CP28A1EG302K	CP29A1EG302K
.006	1000V	CP25A1EG602K	CP26A1EG602K	CP27A1EG602K	CP28A1EG602K	CP29A1EG602K
.01	1000V	CP25A1EG103K	CP26A1EG103K	CP27A1EG103K	CP28A1EG103K	CP29A1EG103K

AEROVOX Capacitors



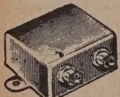
INDUSTRIAL SECTION — MIL TYPES
MIL-C-25A CAPACITORS



Hermetically sealed tubular capacitors with glass terminal seal and axial wire leads. Characteristic E for operation at —65 to +100°C. Characteristic K for operation at —65 to +125°C. CP04 and CP05 are inserted tab construction; CP08 and CP09 are extended foil construction. Standard tolerance is ±10% (K). Also available in ±20% (M).

TYPES CPO8 and CPO9 — Characteristics E and K

		CP08, CHAR. E		CP08, CHAR. K		CP09, CHAR. E		CP09, CHAR. K	
		P123SX	P123SXG	P323SX	P323SXG	P123SXP	P123SXGP	P323SXP	P323SXGP
		NO TUBE		NO TUBE		PLASTIC TUBE		PLASTIC TUBE	
CAPACITY	VOLTAGE	Case Floating	Case Grounded	Case Floating	Case Grounded	Case Floating	Case Grounded	Case Floating	Case Grounded
.01	100V	CP08A1EB103K	CP08A3EB103K	CP08A1KB103K	CP08A3KB103K	CP09A1EB103K	CP09A3EB103K	CP09A1KB103K	CP09A3KB103K
.015	100V	CP08A1EB153K	CP08A3EB153K	CP08A1KB153K	CP08A3KB153K	CP09A1EB153K	CP09A3EB153K	CP09A1KB153K	CP09A3KB153K
.047	100V	CP08A1EB473K	CP08A3EB473K	CP08A1KB473K	CP08A3KB473K	CP09A1EB473K	CP09A3EB473K	CP09A1KB473K	CP09A3KB473K
.1	100V	CP08A1EB104K	CP08A3EB104K	CP08A1KB104K	CP08A3KB104K	CP09A1EB104K	CP09A3EB104K	CP09A1KB104K	CP09A3KB104K
.15	100V	CP08A1EB154K	CP08A3EB154K	CP08A1KB154K	CP08A3KB154K	CP09A1EB154K	CP09A3EB154K	CP09A1KB154K	CP09A3KB154K
.22	100V	CP08A1EB224K	CP08A3EB224K	CP08A1KB224K	CP08A3KB224K	CP09A1EB224K	CP09A3EB224K	CP09A1KB224K	CP09A3KB224K
.33	100V	CP08A1EB334K	CP08A3EB334K	CP08A1KB334K	CP08A3KB334K	CP09A1EB334K	CP09A3EB334K	CP09A1KB334K	CP09A3KB334K
.47	100V	CP08A1EB474K	CP08A3EB474K	CP08A1KB474K	CP08A3KB474K	CP09A1EB474K	CP09A3EB474K	CP09A1KB474K	CP09A3KB474K
.68	100V	CP08A1EB684K	CP08A3EB684K	CP08A1KB684K	CP08A3KB684K	CP09A1EB684K	CP09A3EB684K	CP09A1KB684K	CP09A3KB684K
1.0	100V	CP08A1EB105K	CP08A3EB105K	CP08A1KB105K	CP08A3KB105K	CP09A1EB105K	CP09A3EB105K	CP09A1KB105K	CP09A3KB105K
.0047	200V	CP08A1EC472K	CP08A3EC472K	CP08A1KC472K	CP08A3KC472K	CP09A1EC472K	CP09A3EC472K	CP09A1KC472K	CP09A3KC472K
.0068	200V	CP08A1EC682K	CP08A3EC682K	CP08A1KC682K	CP08A3KC682K	CP09A1EC682K	CP09A3EC682K	CP09A1KC682K	CP09A3KC682K
.022	200V	CP08A1EC223K	CP08A3EC223K	CP08A1KC223K	CP08A3KC223K	CP09A1EC223K	CP09A3EC223K	CP09A1KC223K	CP09A3KC223K
.033	200V	CP08A1EC333K	CP08A3EC333K	CP08A1KC333K	CP08A3KC333K	CP09A1EC333K	CP09A3EC333K	CP09A1KC333K	CP09A3KC333K
.047	200V	CP08A1EC473K	CP08A3EC473K	CP08A1KC473K	CP08A3KC473K	CP09A1EC473K	CP09A3EC473K	CP09A1KC473K	CP09A3KC473K
.068	200V	CP08A1EC683K	CP08A3EC683K	CP08A1KC683K	CP08A3KC683K	CP09A1EC683K	CP09A3EC683K	CP09A1KC683K	CP09A3KC683K
.1	200V	CP08A1EC104K	CP08A3EC104K	CP08A1KC104K	CP08A3KC104K	CP09A1EC104K	CP09A3EC104K	CP09A1KC104K	CP09A3KC104K
.15	200V	CP08A1EC154K	CP08A3EC154K	CP08A1KC154K	CP08A3KC154K	CP09A1EC154K	CP09A3EC154K	CP09A1KC154K	CP09A3KC154K
.22	200V	CP08A1EC224K	CP08A3EC224K	CP08A1KC224K	CP08A3KC224K	CP09A1EC224K	CP09A3EC224K	CP09A1KC224K	CP09A3KC224K
.33	200V	CP08A1EC334K	CP08A3EC334K	CP08A1KC334K	CP08A3KC334K	CP09A1EC334K	CP09A3EC334K	CP09A1KC334K	CP09A3KC334K
.47	200V	CP08A1EC474K	CP08A3EC474K	CP08A1KC474K	CP08A3KC474K	CP09A1EC474K	CP09A3EC474K	CP09A1KC474K	CP09A3KC474K
.68	200V	CP08A1EC684K	CP08A3EC684K	CP08A1KC684K	CP08A3KC684K	CP09A1EC684K	CP09A3EC684K	CP09A1KC684K	CP09A3KC684K
1.0	200V	CP08A1EC105K	CP08A3EC105K	CP08A1KC105K	CP08A3KC105K	CP09A1EC105K	CP09A3EC105K	CP09A1KC105K	CP09A3KC105K
.0033	400V	CP08A1EE332K	CP08A3EE332K	CP08A1KE332K	CP08A3KE332K	CP09A1EE332K	CP09A3EE332K	CP09A1KE332K	CP09A3KE332K
.015	400V	CP08A1EE153K	CP08A3EE153K	CP08A1KE153K	CP08A3KE153K	CP09A1EE153K	CP09A3EE153K	CP09A1KE153K	CP09A3KE153K
.033	400V	CP08A1EE333K	CP08A3EE333K	CP08A1KE333K	CP08A3KE333K	CP09A1EE333K	CP09A3EE333K	CP09A1KE333K	CP09A3KE333K
.047	400V	CP08A1EE473K	CP08A3EE473K	CP08A1KE473K	CP08A3KE473K	CP09A1EE473K	CP09A3EE473K	CP09A1KE473K	CP09A3KE473K
.068	400V	CP08A1EE683K	CP08A3EE683K	CP08A1KE683K	CP08A3KE683K	CP09A1EE683K	CP09A3EE683K	CP09A1KE683K	CP09A3KE683K
.1	400V	CP08A1EE104K	CP08A3EE104K	CP08A1KE104K	CP08A3KE104K	CP09A1EE104K	CP09A3EE104K	CP09A1KE104K	CP09A3KE104K
.15	400V	CP08A1EE154K	CP08A3EE154K	CP08A1KE154K	CP08A3KE154K	CP09A1EE154K	CP09A3EE154K	CP09A1KE154K	CP09A3KE154K
.22	400V	CP08A1EE224K	CP08A3EE224K	CP08A1KE224K	CP08A3KE224K	CP09A1EE224K	CP09A3EE224K	CP09A1KE224K	CP09A3KE224K
.33	400V	CP08A1EE334K	CP08A3EE334K	CP08A1KE334K	CP08A3KE334K	CP09A1EE334K	CP09A3EE334K	CP09A1KE334K	CP09A3KE334K
.47	400V	CP08A1EE474K	CP08A3EE474K	CP08A1KE474K	CP08A3KE474K	CP09A1EE474K	CP09A3EE474K	CP09A1KE474K	CP09A3KE474K
.001	600V	CP08A1EF102K	CP08A3EF102K	CP08A1KF102K	CP08A3KF102K	CP09A1EF102K	CP09A3EF102K	CP09A1KF102K	CP09A3KF102K
.0015	600V	CP08A1EF152K	CP08A3EF152K	CP08A1KF152K	CP08A3KF152K	CP09A1EF152K	CP09A3EF152K	CP09A1KF152K	CP09A3KF152K
.0022	600V	CP08A1EF222K	CP08A3EF222K	CP08A1KF222K	CP08A3KF222K	CP09A1EF222K	CP09A3EF222K	CP09A1KF222K	CP09A3KF222K
.0033	600V	CP08A1EF332K	CP08A3EF332K	CP08A1KF332K	CP08A3KF332K	CP09A1EF332K	CP09A3EF332K	CP09A1KF332K	CP09A3KF332K
.0047	600V	CP08A1EF472K	CP08A3EF472K	CP08A1KF472K	CP08A3KF472K	CP09A1EF472K	CP09A3EF472K	CP09A1KF472K	CP09A3KF472K
.0068	600V	CP08A1EF682K	CP08A3EF682K	CP08A1KF682K	CP08A3KF682K	CP09A1EF682K	CP09A3EF682K	CP09A1KF682K	CP09A3KF682K
.01	600V	CP08A1EF103K	CP08A3EF103K	CP08A1KF103K	CP08A3KF103K	CP09A1EF103K	CP09A3EF103K	CP09A1KF103K	CP09A3KF103K
.015	600V	CP08A1EF153K	CP08A3EF153K	CP08A1KF153K	CP08A3KF153K	CP09A1EF153K	CP09A3EF153K	CP09A1KF153K	CP09A3KF153K
.022	600V	CP08A1EF223K	CP08A3EF223K	CP08A1KF223K	CP08A3KF223K	CP09A1EF223K	CP09A3EF223K	CP09A1KF223K	CP09A3KF223K
.033	600V	CP08A1EF333K	CP08A3EF333K	CP08A1KF333K	CP08A3KF333K	CP09A1EF333K	CP09A3EF333K	CP09A1KF333K	CP09A3KF333K
.047	600V	CP08A1EF473K	CP08A3EF473K	CP08A1KF473K	CP08A3KF473K	CP09A1EF473K	CP09A3EF473K	CP09A1KF473K	CP09A3KF473K
.068	600V	CP08A1EF683K	CP08A3EF683K	CP08A1KF683K	CP08A3KF683K	CP09A1EF683K	CP09A3EF683K	CP09A1KF683K	CP09A3KF683K
.1	600V	CP08A1EF104K	CP08A3EF104K	CP08A1KF104K	CP08A3KF104K	CP09A1EF104K	CP09A3EF104K	CP09A1KF104K	CP09A3KF104K
.15	600V	CP08A1EF154K	CP08A3EF154K	CP08A1KF154K	CP08A3KF154K	CP09A1EF154K	CP09A3EF154K	CP09A1KF154K	CP09A3KF154K
.22	600V	CP08A1EF224K	CP08A3EF224K	CP08A1KF224K	CP08A3KF224K	CP09A1EF224K	CP09A3EF224K	CP09A1KF224K	CP09A3KF224K
.33	600V	CP08A1EF334K	CP08A3EF334K	CP08A1KF334K	CP08A3KF334K	CP09A1EF334K	CP09A3EF334K	CP09A1KF334K	CP09A3KF334K
.47	600V	CP08A1EF474K	CP08A3EF474K	CP08A1KF474K	CP08A3KF474K	CP09A1EF474K	CP09A3EF474K	CP09A1KF474K	CP09A3KF474K



TYPES CP53, CP54, CP55 — Characteristic E

Oil impregnated and filled, drawn-metal cased capacitors, immersion proof and hermetically sealed. This unusually compact "bathtub" type capacitor is the most popular of the small units for severe operating conditions. Available with terminals on side (CP53), top (CP54), or bottom (CP55). The standard tolerance on single section units is ±10% (K), on multiple section units +20 —10% (V).

CAPACITY	VOLTAGE	JP30M, SIDE TERM.	JP30MT, TOP TERM.	JP30MB, BOTTOM TERM.
2.0	100V	CP53B1EB205K		
4.0	100V	CP53B1EB405K		
1.0	200V	CP53B1EC105K		
2.0	200V	CP53B1EC205K		
.5	400V	CP53B1EE504K	CP54B1EE504K	
3X.5	400V	CP53B5EE504V		
.05	600V	CP53B1EF503K	CP54B1EF503K	CP55B1EF503K
.1	600V	CP53B1EF104K	CP54B1EF104K	CP55B1EF104K
.25	600V	CP53B1EF254K	CP54B1EF254K	CP55B1EF254K
.5	600V	CP53B1EF504K	CP54B1EF504K	CP55B1EF504K
1.0	600V	CP53B1EF105K	CP54B1EF105K	CP55B1EF105K
2.0	600V	CP53B1EF205K	CP54B1EF205K	CP55B1EF205K
2X.05	600V	CP53B4EF503V	CP54B4EF503V	CP55B4EF503V
2X.1	600V	CP53B4EF104V	CP54B4EF104V	CP55B4EF104V
2X.25	600V	CP53B4EF254V	CP54B4EF254V	CP55B4EF254V
2X.5	600V	CP53B4EF504V	CP54B4EF504V	CP55B4EF504V
2X1.0	600V	CP53B4EF105V	CP54B4EF105V	CP55B4EF105V

CAPACITY	VOLTAGE	JP30M, SIDE TERM.	JP30MT, TOP TERM.	JP30MB, BOTTOM TERM.
3X.05	600V	CP53B5EF503V	CP54B5EF503V	CP55B5EF503V
3X.1	600V	CP53B5EF104V	CP54B5EF104V	CP55B5EF104V
3X.25	600V	CP53B5EF254V	CP54B5EF254V	CP55B5EF254V
3X.5	600V	CP53B5EF504V	CP54B5EF504V	CP55B5EF504V
.05	1000V	CP53B1EG503K		
.1	1000V	CP53B1EG104K		
.25	1000V	CP53B1EG254K		
.5	1000V	CP53B1EG504K		
1.0	1000V	CP53B1EG105K		
2X.05	1000V	CP53B4EG503V		
2X.1	1000V	CP53B4EG104V		
2X.25	1000V	CP53B4EG254V		
2X.5	1000V	CP53B4EG504V		
3X.05	1000V	CP53B5EG503V		
3X.1	1000V	CP53B5EG104V		
3X.25	1000V	CP53B5EG254V		

CHARACTERISTIC F

CAP.	VOLT.	JP30J SIDE TERM.
8.0	100V	CP53B1FB805K
10.0	100V	CP53B1FB106K

AEROVOX Capacitors

INDUSTRIAL SECTION — MIL TYPES

TYPE CP70

Characteristics E and F • Porcelain and Riveted Terminals

Oil impregnated and filled, large, rectangular, metal-cased capacitor for heavy-duty, continuous-service applications such as power supplied for transmitters, amplifiers, etc. immersion proof and hermetically sealed. Available with either high-voltage screw-type porcelain-pillar terminals or the space-saving riveted terminal. Pillar terminals have soldering lugs. Standard tolerance ±10% (K). Also available in ±20% tolerance (M). MIL-C-25A mounting brackets are also available for all units.

Capacity	Voltage	CHAR. E JP09M Porc. Term	Case Size and Brkt. Desig.	CHAR. F JP09M Porc. Term	Case Size and Brkt. Desig.	CHAR. E JP09MR Rivet Term	Case Size and Brkt. Desig.	CHAR. F JP09MR Rivet Term	Case Size and Brkt. Desig.
.5	600V	CP70E1EF504K	A2						
1.0	600V	CP70E1EF105K	A2			CP70B1EF105K	A2		
2.0	600V	CP70E1EF205K	A4	CP70E1FF205K	A3	CP70B1EF205K	A4	CP70B1FF205K	A3
4.0	600V	CP70E1EF405K	B4	CP70E1FF405K	B3	CP70B1EF405K	B4	CP70B1FF405K	B3
6.0	600V	CP70E1EF605K	C2	CP70E1FF605K	B6	CP70B1EF605K	C2	CP70B1FF605K	B6
8.0	600V	CP70E1EF805K	C3	CP70E1FF805K	C2	CP70B1EF805K	C3	CP70B1FF805K	C2
10.0	600V	CP70E1EF106K	D3	CP70E1FF106K	C4	CP70B1EF106K	D3	CP70B1FF106K	C4
.1	1000V	CP70E1EG104K	A1						
.25	1000V	CP70E1EG254K	A2						
.5	1000V	CP70E1EG504K	A2						
1.0	1000V	CP70E1EG105K	A3	CP70E1FG105K	A2	CP70B1EG105K	A3		
2.0	1000V	CP70E1EG205K	A6	CP70E1FG205K	A5	CP70B1EG205K	A6	CP70B1FG205K	A5
4.0	1000V	CP70E1EG405K	C2	CP70E1FG405K	B6	CP70B1EG405K	C2	CP70B1FG405K	B6
6.0	1000V	CP70E1EG605K	D3	CP70E1FG605K	C4	CP70B1EG605K	D3	CP70B1FG605K	C4
8.0	1000V	CP70E1EG805K	D5			CP70B1EG805K	D5	CP70B1FG805K	D2
10.0	1000V	CP70E1EG106K	E5	CP70E1FG106K	D5	CP70B1EG106K	E5	CP70B1FG106K	D5
12.0	1000V	CP70E1EG126K	E6			CP70B1EG126K	E6	CP70B1FG126K	E4
15.0	1000V	CP70E1EG156K	G2	CP70E1FG156K	F1	CP70B1EG156K	G2	CP70B1FG156K	F1
.5	1500V	CP70E1EH504K	A3			CP70B1EH504K	A3		
1.0	1500V	CP70E1EH105K	A6	CP70E1FH105K	A5	CP70B1EH105K	A6		
2.0	1500V	CP70E1EH205K	B6	CP70E1FH205K	B5	CP70B1EH205K	B6	CP70B1FH205K	B5
4.0	1500V	CP70E1EH405K	D4	CP70E1FH405K	C4	CP70B1EH405K	D4	CP70B1FH405K	C4
6.0	1500V	CP70E1EH605K	E5	CP70E1FH605K	D5	CP70B1EH605K	E5	CP70B1FH605K	D5
8.0	1500V	CP70E1EH805K	F2	CP70E1FH805K	F1	CP70B1EH805K	F2	CP70B1FH805K	F1
10.0	1500V	CP70E1EH106K	G4	CP70E1FH106K	G2	CP70B1EH106K	G4	CP70B1FH106K	G2
12.0	1500V	CP70E1EH126K	J3	CP70E1FH126K	G2	CP70B1EH126K	J3	CP70B1FH126K	G2
15.0	1500V	CP70E1EH156K	J6	CP70E1FH156K	J3	CP70B1EH156K	J6	CP70B1FH156K	J3
.1	2000V	CP70E1EJ104K	B1						
.25	2000V	CP70E1EJ254K	B1						
.5	2000V	CP70E1EJ504K	B2						
1.0	2000V	CP70E1EJ105K	B6	CP70E1FJ105K	B3				
2.0	2000V	CP70E1EJ205K	C4	CP70E1FJ205K	C3				
4.0	2000V	CP70E1EJ405K	E6	CP70E1FJ405K	E3				
6.0	2000V			CP70E1FJ605K	G1				
10.0	2000V			CP70E1FJ106K	J3				
12 0	2000V			CP70E1FJ126K	J5				
15.0	2000V			CP70E1FJ156K	J7				
.5	2500V	CP70E1EK504K	B4	CP70E1FK504K	B3				
1.0	2500V	CP70E1EK105K	D2	CP70E1FK105K	D1				
2.0	2500V	CP70E1EK205K	E5	CP70E1FK205K	D5				
4.0	2500V	CP70E1EK405K	J2						
10.0	2500V	CP70E1EK106K	J10						
.1	3000V	CP70E1EL104K	B2						
.25	3000V	CP70E1EL254K	B3						
.5	3000V	CP70E1EL504K	B6						
1.0	3000V	CP70E1EL105K	E4						
2.0	3000V	CP70E1EL205K	G2	CP70E1FL205K	G1				
4.0	3000V	CP70E1EL405K	J7	CP70E1FL405K	J3				
.1	4000V	CP70E1EM104K	E1						
.25	4000V			CP70E1FM254K	E1				
.5	4000V			CP70E1FM504K	E3				
1.0	4000V			CP70E1FM105K	E6				
2.0	4000V			CP70E1FM205K	J4				
4.0	4000V	CP70E1EM405K	J11	CP70E1FM405K	J10				
.1	5000V	CP70E1EN104K	E1						
.25	5000V	CP70E1EN254K	E3						
.5	5000V	CP70E1EN504K	E6	CP70E1FN504K	E4				
1.0	5000V			CP70E1FN125K	J2				
2.0	5000V			CP70E1FN205K	J6				
.1	6000V	CP70D1EP104K	E3	CP70D1FP104K	E2				
.25	6000V	CP70D1EP254K	E5	CP70D1FP254K	E4				
.5	6000V	CP70D1EP504K	J3						
1.0	6000V			CP70D1FP105K	J9				
.1	7500V			CP70D1FR104K	E3				
.25	7500V			CP70D1FR254K	J1				
.5	7500V			CP70D1FR504K	J4				

A1	1 13/16 x 1 1/16 x 1⅝	E2	3¾ x 2¼ x 3⅜
A2	1 13/16 x 1 1/16 x 2¼	E3	3¾ x 2¼ x 4½
A3	1 13/16 x 1 1/16 x 2⅞	E4	3¾ x 2¼ x 4½
A4	1 13/16 x 1 1/16 x 3¼	E5	3¾ x 2¼ x 4¾
A5	1 13/16 x 1 1/16 x 3⅞	E6	3¾ x 2¼ x 5⅛
A6	1 13/16 x 1 1/16 x 4¾	F1	3¾ x 2½ x 4¾
B1	2½ x 1 3/16 x 2½	F2	3¾ x 2½ x 5¾
B2	2½ x 1 3/16 x 2⅞	G1	3¾ x 3 3/16 x 4½
B3	2½ x 1 3/16 x 3½	G2	3¾ x 3 3/16 x 4¾
B4	2½ x 1 3/16 x 3⅞	G4	3¾ x 3 3/16 x 5½
B5	2½ x 1 3/16 x 4¼	J1	4 9/16 x 3¾ x 3⅞
B6	2½ x 1 3/16 x 4¾	J2	4 9/16 x 3¾ x 4⅜
C2	3¾ x 1¼ x 3⅞	J3	4 9/16 x 3¾ x 4¾
C3	3¾ x 1¼ x 4¼	J4	4 9/16 x 3¾ x 5⅛
C4	3¾ x 1¼ x 4¾	J5	4 9/16 x 3¾ x 5½
D1	3¾ x 1¾ x 3¼	J6	4 9/16 x 3¾ x 6
D2	3¾ x 1¾ x 3⅞	J7	4 9/16 x 3¾ x 6½
D3	3¾ x 1¾ x 4	J9	4 9/16 x 3¾ x 7½
D4	3¾ x 1¾ x 4¼	J10	4 9/16 x 3¾ x 8½
D5	3¾ x 1¾ x 4¾	J11	4 9/16 x 3¾ x 9⅝
E1	3¾ x 2¼ x 2¾		

If MIL brackets are required with units, specify CP07S (spade) or CP07F (footed) and add the bracket designation listed beside the unit.

Example: CP70E1EF504K with CP07SA2 brackets.

TYPE CP41 — Characteristics E and F

Cylindrical, hermetically sealed can with screwbase molded cover for vertical mounting. Operating temperature range —55 +85°C. Solder lug. nonremovable terminals ML designation B). Supplied with mounting nut and lockwasher. Standard tolerance ±10% (K). Also available in ±20% (M).

CAPACITY	VOLTAGE	CHAR. E JP10M	CHAR. F JP10M
2.0	600V	CP41B1EF205K	CP41B1FF205K
4.0	600V	CP41B1EF405K	CP41B1FF405K
1.0	1000V	CP41B1EG105K	CP41B1FG105K
2.0	1000V	CP41B1EG205K	CP41B1FG205K
.5	1500V		CP41B1FH504K
1.0	1500V		CP41B1FH105K

AEROVOX *Capacitors*

INDUSTRIAL SECTION — MIL TYPES

MIL-C-25A CAPACITORS

CP63, CP65 — Characteristic E

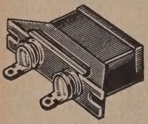
Compact, oil impregnated and filled, rectangular units. Immersion proof and hermetically sealed. Dual section has case grounded. Channel brackets attached. Standard tolerance on single section units, ±10% (K), on multiple section units +20 —10% (V).

Cap.	Voltage	JP16MCT Top Term.	JP16MCB Bottom Term.
.1	400V	CP63B1EE104K	CP65B1EE104K
.25	400V	CP63B1EE254K	
1.0	400V	CP63B1EE105K	
.05	600V	CP63B1EF503K	CP65B1EF503K
.1	600V	CP63B1EF104K	CP65B1EF104K
.25	600V	CP63B1EF254K	CP65B1EF254K
.5	600V	CP63B1EF504K	CP65B1EF504K
1.0	600V	CP63B1EF105K	CP65B1EF105K
2X.05	600V	CP63B6EF503V	CP65B6EF503V
2X.1	600V	CP63B6EF104V	CP65B6EF104V
2X.25	600V	CP63B6EF254V	CP65B6EF254V
2X.5	600V	CP63B6EF504V	CP65B6EF504V
.01	1000V	CP63B1EG103K	CP65B1EG103K
.02	1000V	CP63B1EG203K	CP65B1EG203K
.05	1000V	CP63B1EG503K	CP65B1EG503K
.1	1000V	CP63B1EG104K	
.25	1000V	CP63B1EG254K	
.5	1000V	CP63B1EG504K	

CP90, CP91 — Characteristic E

New MIL-C-25A type designations for variations of capacitor formerly listed as CP61. Base size CP90— 1 5/16 x 11/16, CP91—1 5/16 x 5/8. Brackets must be ordered separately and are not interchangeable. Specify CP090 or CP091. Add S for Spade; F for Footed.

Cap.	Voltage	JP16M No Brackets	JP116M Special No Brackets
.1	400V	CP90B1EE104K	CP91B1EE104K
.25	400V	CP90B1EE254K	CP91B1EE254K
1.0	400V	CP90B1EE105K	CP91B1EE105K
.05	600V	CP90B1EF503K	CP91B1EF503K
.1	600V	CP90B1EF104K	CP91B1EF104K
.25	600V	CP90B1EF254K	CP91B1EF254K
.5	600V	CP90B1EF504K	CP91B1EF504K
1.0	600V	CP90B1EF105K	CP91B1EF105K
2X.05	600V	CP90B6EF503V	CP91B6EF503V
2X.1	600V	CP90B6EF104V	CP91B6EF104V
2X.25	600V	CP90B6EF254V	CP91B6EF254V
2X.5	600V	CP90B6EF504V	CP91B6EF504V
.01	1000V	CP90B1EG103K	CP91B1EG103K
.02	1000V	CP90B1EG203K	CP91B1EG203K
.05	1000V	CP90B1EG503K	CP91B1EG503K
.1	1000V	CP90B1EG104K	CP91B1EG104K
.25	1000V	CP90B1EG254K	CP91B1EG254K
.5	1000V	CP90B1EG504K	CP91B1EG504K

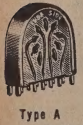


TYPES CP67, CP69 — Characteristics E

Oil impregnated and filled unit, rectangular cased. Similar to CP90 except additional length in base size of 1 3/4 x 9/16 permits 2 or 3 sections, case floating. Single units can also be used for special applications where type CP90 does not fit. Both CP67 and CP69 supplied with channel brackets attached. Standard tolerance on single section units ±10% (K), on multiple section units +20 —10% (V).

Capacity	Voltage	JP18MCT Top Terminal	JP18MCB Bottom Terminal
.05	600V	CP67B1EF503K	CP69B1EF503K
.1	600V	CP67B1EF104K	CP69B1EF104K
.25	600V	CP67B1EF254K	CP69B1EF254K
.5	600V	CP67B1EF504K	CP69B1EF504K
1.0	600V	CP67B1EF105K	CP69B1EF105K
2X.05	600V	CP67B4EF503V	CP69B4EF503V
2X.1	600V	CP67B4EF104V	CP69B4EF104V
2X.25	600V	CP67B4EF254V	CP69B4EF254V
2X.5	600V	CP67B4EF504V	CP69B4EF504V
3X.05	600V	CP67B5EF503V	CP69B5EF503V
3X.1	600V	CP67B5EF104V	CP69B5EF104V
3X.25	600V	CP67B5EF254V	CP69B5EF254V
.01	1000V	CP67B1EG103K	CP69B1EG103K
.02	1000V	CP67B1EG203K	CP69B1EG203K
.05	1000V	CP67B1EG503K	CP69B1EG503K
.1	1000V		CP69B1EG104K
.25	1000V		CP69B1EG254K
.5	1000V		CP69B1EG504K
2X.01	1000V		CP69B4EG103V
2X.02	1000V		CP69B4EG203V
2X.05	1000V		CP69B4EG503V
2X.1	1000V		CP69B4EG104V
2X.25	1000V		CP69B4EG254V
3X.01	1000V		CP69B5EG103V
3X.02	1000V		CP69B5EG203V
3X.05	1000V		CP69B5EG503V
3X.1	1000V		CP69B5EG104V

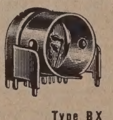
**RIGHT ANGLE TUBE SOCKETS



Type A

Type AX

Type B



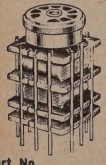
Type BX

Ordering Example: RA7A = (Type A 7 Pin Socket)

Available in 7-pin and 9-pin types in four styles, these sockets are designed to meet existing MIL Specifications. Active contacts are silver plated and non-fatiguing contact pressure provides proper insertion and withdrawal pressure with a minimum of contact resistance. Ideal for hand or mechanical insertion into printed-wiring boards using simple in-line punched round holes. Templates are furnished with each socket. Long terminals permit use of sockets on wide range of board thickness.

Type A — for general purpose applications.
Type AX — for special applications (military and commercial) where extra strength and rigidity are required.
Type B — same as Type A except tube shield shell added.
Type BX — same as Type AX except tube shield shell added.

RA 7 — 7 pin right angle tube socket. RA 9 — 9 pin right angle tube socket



**MODULIZED STANDARD CIRCUITS

Modules are comprised of uniformly standard, stacked steatite wafers combining the required resistive, capacity and inductive components to form a completely reliable, ruggedly compact electronic circuit.

Based on a study conducted by the National Bureau of Standards, the modules listed below were chosen as representative of circuits appearing in both military and commercial equipment. In all cases, similar functional circuits have been in use for at least 10 years without major improvement. Accessories, such as the twelve position bread board*, the individual module mounting socket† and mounting socket and banana plugs are available to facilitate the inter-connecting of standard circuit modules to form complete electronic sub-assemblies.

Part No.	Description
A1001	Linear Amplifier, Low Level.
A1002	Linear Amplifier, Intermediate.
A1003	Linear Amplifier, Phase inverter-driver.
C1002	Flip-flop, 1 megacycle.
G1001	PRF Multivibrator.
P1001	Video Limiter.
P1002	Low-level Cathode Follower.
P1003	Common Cathode Mixer or Dual Cathode Follower.
P1004	Cascade Intermediate Video Amplifier.
P1005	Triode Video Driver Amplifier.
P1006	Dual High Level Cathode Follower.
R1001	DC Regulator Plus or minus 300V.
R1002	DC Regulator, Plus or Minus 150V.
T1001	Variable Time Delay Monostable Multivibrator.
T1002	Phantastron Delay.

*MBB-12

†MBB-1

**Write for complete technical bulletins on these items.

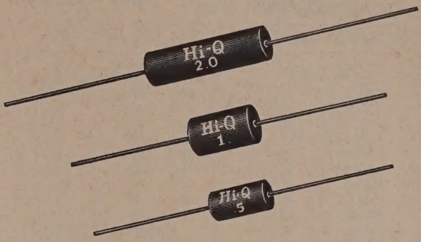
AEROVOX *Capacitors*

CEROL®

HI-Q CERAMIC CAPACITORS

HIGH CAPACITY, HIGH RELIABILTY, ROLLED CERAMIC CAPACITORS

CEROL capacitors are rolled ceramic capacitors in the high capacitance range of paper and plastic film dielectrics but in much smaller physical sizes and with superior electrical characteristics. Designed for general applications in bypass-coupling, filtering and blocking circuits. Excellent electrical characteristics for critical applications in decoupling and pulse circuits where low series resistance at high frequencies together with miniature sizes are required. Low series resistance makes them ideal for use in all computer circuits. Operating temperature range at 100 VDC —55°C to 85°C and at 50 VDC —55°C to 125°C. Capacitance tolerance is ±20%. Will meet or surpass all the requirements of MIL-C-11015B.



SPECIFICATIONS

Cap. Tol. = ±20%
P.F. = 2% Max.
T.C. (0 Voltage) = + 15% —25% over temperature range of —55°C. to 125°C.
T.C. (100 V. applied) = + 15% —35% over temperature range of —55°C to +85°C.
Working Voltage = 100 VDC at 85°C. derate to 50 VDC at 125°C.
Test Voltage = 300 VDC
Insulation Resistance = 100 Meg.—Mfd. minimum
Series Resistance .25 ohms at 8 to 10 mc.
Other requirements per MIL-C-11015B
Leads axial #22 gauge 1½" ±⅛" long

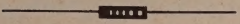
STOCK VALUES FOR CEROL CAPACITORS TYPE CR90

Part Number	Cap. Mfd.	D Max. in.	L Max. in.	Color Code
CR90V104AM	.1	.210	.690	Brown, Black, Yellow & Black
CR90V254AM	.25	.260	.690	Red, Green, Yellow & Black
CR90V504AM	.5	.350	.690	Green, Black, Yellow & Black
CR90V105AM	1.0	.480	.690	Brown, Black, Green, Black
CR90V205AM	2.0	.400	1.44	Red, Black, Green, Black

*CERAFIL CAPACITORS

Cerafil Capacitors, the smallest ceramic capacitors available anywhere for airborne transistorized circuit applications, and other critical requirements where space and weight are at an absolute premium.

When tested using Cerafil ratings C80 type units will meet or surpass the requirements of MIL-C-11015A.



†Actual Size

SPECIFICATIONS:

VOLTAGE—100 VDCW @ 85°C
50 VDCW @ 125°C
300 VDCT @ 85°C
CAPACITY TOLERANCE—±20%
INSULATION RESISTANCE—
100 mfd.—meghoms minimum.
TEMPERATURE COEFFICIENT—
(—55°C to +85°C)
No voltage +10% to —15%
100 volts applied—
+10% to —35%
POWER FACTOR—2.5% maximum
OPERATING TEMPERATURE—
—55°C to + 85°C @ 100 VDCW
—55°C to +125°C @ 50 VDCW
SIZE—overall length may exceed dimension shown by as much as ⅟₁₆" due to deposit of insulation material on leads.
All dimensions in inches
LEADS—Tinned Copper
Below .01 mfd.—#26 gauge
.01 mfd. and above #22 gauge
LEAD LENGTHS—1½" minimum
MARKING—Color code. No code for temperature coefficient; no code for lead designation since it is obvious.

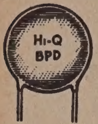
PART NUMBER	CAP. (Mfd.)	DIMENSIONS (Insulated) Diam.	Lgth.	COLOR CODE
C80V 100AM	.00001	.090	.320	Brown, black, black, black
C80V 220AM	.000022	.090	.320	Red, red, black, black
C80V 330AM	.000033	.090	.320	Orange, orange, black, black
C80V 470AM	.000047	.090	.320	Yellow, violet, black, black
C80V 101AM	.0001	.090	.320	Brown, black, brown, black
C80V 221AM	.00022	.090	.320	Red, red, brown, black
C80V 331AM	.00033	.090	.320	Orange, orange, brown, black
C80V 471AM	.00047	.090	.320	Yellow, violet, brown, black
C80V 102AM	.001	.090	.320	Brown, black, red, black
C80V 502AM	.005	.120	.500	Green, black, red, black
C80V 103AM	.01	.180	.500	Brown, black, orange, black
C80V 203AM	.02	.200	.500	Red, black, orange, black
C80V 503AM	.05	.240	.650	Green, black, orange, black
C80V 104AM	.1	.310	.750	Brown, black, yellow, black

***Trade Mark**

C80V listed above is equal to old Hi-Q Type designation C80T and new designation C80A.

AEROVOX *Capacitors*

Hi-Q DISK CAPACITORS



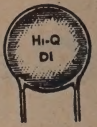
DISK CAPACITORS
Bypass and Coupling

BPD-GMV CAPACITOR
Stock Items 1000 VDCW

Type	Cap. Mfd.	Dia.	Type	Cap. Mfd.	Dia.
BPD	.00001	5/16	BPD	.0033	7/16
BPD	.000015	5/16	BPD	.004	7/16
BPD	.000022	5/16	BPD	.0047	19/32
BPD	.000025	5/16	BPD	.005	19/32
BPD	.000033	5/16	BPD	.0068	19/32
BPD	.000047	5/16	BPD	.01	3/4
BPD	.00005	5/16	BPD	.015	23/32
BPD	.000068	5/16	BPD	.02	23/32
BPD	.0001	5/16	BPD	.03	23/32
BPD	.00012	5/16	BPD	.05*	23/32
BPD	.00015	5/16			
BPD	.0002	5/16	**DUALS and TRIPLES**		
BPD	.00027	5/16	BPD2-2 x .001		7/16
BPD	.00033	5/16	BPD2-2 x .0015		19/32
BPD	.00047	5/16	BPD2-2 x .002		19/32
BPD	.0005	5/16	BPD2-2 x .0022		19/32
BPD	.00068	5/16	BPD2-2 x .003		3/4
BPD	.0008	5/16	BPD2-2 x .004		3/4
BPD	.001	5/16	BPD2-2 x .0047		3/4
BPD	.0015	5/16	BPD2-2 x .01		3/4
BPD	.002	3/8	BPD2-2 x .02		23/32
BPD	.0022	3/8	BPD3-3 x .0015		3/4
BPD	.0025	3/8	BPD3-3 x .002		3/4

* .05MFD can be supplied in 500VDCW only.

DI-DISK CAPACITORS
General Purpose

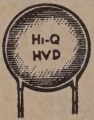


Stock Items 1000 VDCW

Type	Cap. Mmfd.	Dia.	Type	Cap. Mmfd.	Dia.
DI	3.3	5/16	DI	250	5/16
DI	5	5/16	DI	270	5/16
DI	6.8	5/16	DI	300	5/16
DI	8.2	5/16	DI	330	5/16
DI	10	5/16	DI	390	5/16
DI	12	5/16	DI	470	5/16
DI	15	5/16	DI	500	5/16
DI	18	5/16	DI	560	5/16
DI	20	5/16	DI	680	5/16
DI	22	5/16	DI	750	3/8
DI	25	5/16	DI	820	3/8
DI	27	5/16	DI	1000	3/8
DI	30	5/16	DI	1200	7/16
DI	33	5/16	DI	1500	7/16
DI	39	5/16	DI	1800	19/32
DI	47	5/16	DI	2000	19/32
DI	50	5/16	DI	2200	19/32
DI	56	5/16	DI	2500	19/32
DI	68	5/16	DI	2700	19/32
DI	82	5/16	DI	3000	11/16
DI	100	5/16	DI	3300	11/16
DI	120	5/16	DI	4000	11/16
DI	150	5/16	DI	4700	3/4
DI	180	5/16	DI	5000	3/4
DI	200	5/16	DI	5600	3/4
DI	220	5/16	DI	6800	23/32
			DI	7500	23/32
			DI	10000	23/32

Standard tolerance ±10%.

Hi-VOLTAGE DISK CAPACITORS
General Purpose



Hi-Q high voltage disk capacitors are available in many capacities and voltage ratings. These types offer many possible uses in TV circuits where voltages above 500 are necessary. They are the ideal units for dependable day-after-day service. Hi-Q has available numerous combinations of capacity, working voltages and physical sizes. These units are manufactured to specific tolerances as listed.

1500 VDCW

Type	Capacity Mmfd.	Dia.
HVD-15	4.7	7/16
HVD-15	6.8	7/16
HVD-15	10	7/16
HVD-15	15	7/16
HVD-15	22	7/16
HVD-15	33	7/16
HVD-15	39	7/16
HVD-15	47	7/16
HVD-15	56	7/16
HVD-15	68	7/16
HVD-15	82	7/16
HVD-15	100	7/16
HVD-15	120	7/16
HVD-15	150	7/16
HVD-15	180	7/16
HVD-15	220	7/16
HVD-15	270	7/16
HVD-15	330	7/16
HVD-15	390	9/16
HVD-15	470	9/16
HVD-15	560	9/16
HVD-15	680	9/16

1500 VDCW—(Cont'd)

Type	Capacity Mmfd.	Dia.
HVD-15	820	9/16
HVD-15	1000	9/16
HVD-15	1200	9/16
HVD-15	1500	11/16
HVD-15	2200	11/16
HVD-15	3300	11/16
HVD-15	4700	15/16
HVD-15	5600	15/16

3000 VDCW

Type	Capacity Mmfd.	Dia.
HVD-30	4.7	9/16
HVD-30	6.8	9/16
HVD-30	10	9/16
HVD-30	15	9/16
HVD-30	22	9/16
HVD-30	33	9/16
HVD-30	39	9/16
HVD-30	47	9/16
HVD-30	56	9/16
HVD-30	68	9/16
HVD-30	82	9/16

3000 VDCW

Type	Capacity Mmfd.	Dia.
HVD-30	100	9/16
HVD-30	120	9/16
HVD-30	150	9/16
HVD-30	180	9/16
HVD-30	220	9/16
HVD-30	270	9/16
HVD-30	330	9/16
HVD-30	390	9/16
HVD-30	470	9/16
HVD-30	560	9/16
HVD-30	680	9/16
HVD-30	820	9/16
HVD-30	1000	9/16
HVD-30	1200	9/16
HVD-30	1500	9/16
HVD-30	2200	9/16
HVD-30	3300	11/16

6000 VDCW

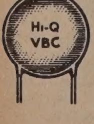
Type	Capacity Mmfd.	Dia.
HVD-60	4.7	11/16
HVD-60	6.8	11/16

6000 VDCW

Type	Capacity Mmfd.	Dia.
HVD-60	10	11/16
HVD-60	15	11/16
HVD-60	18	11/16
HVD-60	22	11/16
HVD-60	30	11/16
HVD-60	33	11/16
HVD-60	39	11/16
HVD-60	47	11/16
HVD-60	56	11/16
HVD-60	68	11/16
HVD-60	82	11/16
HVD-60	100	11/16
HVD-60	120	11/16
HVD-60	150	11/16
HVD-60	180	11/16
HVD-60	220	11/16
HVD-60	330	11/16
HVD-60	390	11/16
HVD-60	470	11/16

Tolerance ±20% up to .001 mfd.
+80% —20% over .001 mfd.

VIBRATOR BUFFER CAPACITORS — DAC
1600 VDCW — GMV



Vibrator Buffer Capacitors — ceramic disks for use as buffers in car radios and similar equipment, compact, easily assembled, 1/4 the size of previous paper tubular types rated for 1600 VDCW GMV. For use as replacements only when original equipment uses ceramic buffer.

Type	Capacity Mfd.	Diameter	Type	Capacity Mfd.	Diameter
DAC-2	.001	11/16	DAC-9	.005	15/16
DAC-3	.002	11/16	DAC-22	.006	15/16
DAC-4	.0022	11/16	DAC-23	.0068	1
DAC-5	.003	11/16	DAC-24	.007	1
DAC-6	.0033	11/16	DAC-25	.0075	1
DAC-7	.004	15/16	DAC-26	.008	1
DAC-8	.0047	15/16	DAC-27	.01	1

AEROVOX *Capacitors*

TEMPERATURE COMPENSATING CERAMIC CAPACITORS

Hi-Q TEMPERATURE COMPENSATING DISK CAPACITORS — 500 VDC

NPO and N750-DI

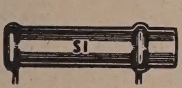
500 VDCW

Type	NPO Cap. Mmfd.	Dia.
NPO-D1	1.0	5/16
NPO-D1	1.5	5/16
NPO-D1	2.2	5/16
NPO-DI	3.0	5/16
NPO-DI	3.3	5/16
NPO-DI	4.7	5/16
NPO-DI	5.0	5/16
NPO-DI	6.8	5/16
NPO-DI	8.2	5/16
NPO-DI	10	5/16
NPO-DI	15	3/8
NPO-DI	20	3/8
NPO-DI	22	7/16
NPO-DI	25	7/16
NPO-DI	33	19/32
NPO-DI	39	19/32
NPO-DI	47	19/32
NPO-DI	50	19/32
NPO-DI	68	11/16
NPO-DI	75	11/16
NPO-DI	100	3/4
NPO-DI	120	29/32
NPO-DI	150	29/32

Type	N-750 Capacity Mmfd.	Size
N750-DI	10	5/16
N750-DI	15	5/16
N750-DI	20	5/16
N750-DI	22	5/16
N750-DI	25	5/16
N750-DI	33	5/16
N750-DI	47	3/8
N750-DI	68	7/16
N750-DI	75	7/16
N750-DI	100	19/32
N750-DI	150	19/32
N750-DI	200	11/16
N750-DI	220	11/16
N750-DI	330	29/32
N750-DI	360	29/32
N750-DI	390	29/32
N750-DI	430	29/32

Standard Tolerance — up to 10 mmf. ±.5 mmf., above 10 mmf. ±10%

TUBULAR and DISK CAPACITOR SIZES



SI TUBULAR

Designation	Size
SI-1	.234 x .437
SI-2	.234 x .687
SI-3	.312 x 1.250
SI-4	.375 x 1.093
SI-5	.375 x 1.600
SI-6	.375 x 1.968
SI-7	.275 x .875
SI-13	.234 x .468
SI-19	.312 x .937
SI-22	.280 x .750
SI-27	.275 x .500

CI TUBULAR

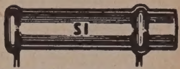
Designation	Size
CI-1	.250 x .562
CI-2	.250 x .812
CI-3	.340 x 1.320

DI DISK

Designation	Diameter
DI-0	1/4
DI-1	5/16
DI-2	3/8
DI-3	7/16
DI-4	19/32
DI-5	11/16
DI-6	3/4
DI-7	29/32

Hi-Q TEMPERATURE COMPENSATING TUBULAR CAPACITORS

N750-SI 500 VDCW



Type	Capacity Mmfd.	Size
N750-SI	3.3	SI-1
N750-SI	5	SI-1
N750-SI	10	SI-1
N750-SI	12	SI-1
N750-SI	15	SI-1
N750-SI	18	SI-1
N750-SI	20	SI-1
N750-SI	22	SI-1
N750-SI	24	SI-1
N750-SI	25	SI-1
N750-SI	27	SI-1
N750-SI	30	SI-1
N750-SI	33	SI-1
N750-SI	36	SI-1
N750-SI	39	SI-1
N750-SI	43	SI-1
N750-SI	47	SI-1
N750-SI	50	SI-1
N750-SI	51	SI-1
N750-SI	56	SI-1
N750-SI	62	SI-1
N750-SI	68	SI-1
N750-SI	75	SI-13
N750-SI	82	SI-13

Type	Capacity Mmfd.	Size
N750-SI	91	SI-2
N750-SI	100	SI-2
N750-SI	110	SI-2
N750-SI	120	SI-7
N750-SI	130	SI-2
N750-SI	150	SI-7
N750-SI	160	SI-7
N750-SI	180	SI-7
N750-SI	200	SI-7
N750-SI	220	SI-7
N750-SI	240	SI-7
N750-SI	270	SI-7
N750-SI	300	SI-19
N750-SI	330	SI-3
N750-SI	360	SI-3
N750-SI	390	SI-3
N750-SI	430	SI-4
N750-SI	470	SI-4
N750-SI	510	SI-4
N750-SI	560	SI-5
N750-SI	620	SI-5
N750-SI	680	SI-5
N750-SI	750	SI-5

Standard Tolerance — up to 10 mmf. ±.5 mmf., above 10 mmf. ±10%

NPO-SI — 500 VDCW

Type	Capacity Mmfd.	Size
NPO-SI	.5	SI-1
NPO-SI	.68	SI-1
NPO-SI	1.0	SI-1
NPO-SI	1.5	SI-1
NPO-SI	2	SI-1
NPO-SI	2.2	SI-1
NPO-SI	3.0	SI-1
NPO-SI	3.3	SI-1
NPO-SI	4.7	SI-1
NPO-SI	5.0	SI-1
NPO-SI	6.8	SI-1
NPO-SI	8.2	SI-1
NPO-SI	10	SI-1
NPO-SI	12	SI-1
NPO-SI	15	SI-1
NPO-SI	18	SI-1
NPO-SI	20	SI-1
NPO-SI	22	SI-1
NPO-SI	24	SI-13
NPO-SI	25	SI-13
NPO-SI	27	SI-13
NPO-SI	30	SI-13
NPO-SI	33	SI-13
NPO-SI	36	SI-2

Type	Capacity Mmfd.	Size
NPO-SI	39	SI-2
NPO-SI	43	SI-2
NPO-SI	47	SI-2
NPO-SI	50	SI-2
NPO-SI	51	SI-2
NPO-SI	56	SI-7
NPO-SI	62	SI-7
NPO-SI	68	SI-7
NPO-SI	75	SI-7
NPO-SI	82	SI-7
NPO-SI	91	SI-7
NPO-SI	100	SI-7
NPO-SI	110	SI-19
NPO-SI	120	SI-19
NPO-SI	130	SI-3
NPO-SI	150	SI-3
NPO-SI	160	SI-4
NPO-SI	175	SI-4
NPO-SI	180	SI-4
NPO-SI	220	SI-5
NPO-SI	240	SI-5
NPO-SI	270	SI-5

NO80 — 500 VDCW

Type	Capacity Mmfd.	Size
N080-SI	10	SI-1
N080-SI	22	SI-1
N080-SI	33	SI-13

Type	Capacity Mmfd.	Size
N080-SI	47	SI-27
N080-SI	62	SI-27

N330 ± 500 ppm

Deflection Yoke Capacitor for silvered mica capacitor replacement

Type	Capacity Mmfd.	Type	Size
N330-SI	47±10%	1500 VDCW	SI-2
N330-SI	56±10%	1500 VDCW	SI-2

Standard Tolerance — up to 10 mmf. ±.5% mmf., above 10 mmf. ±10%
When ordering the above units, designate type and MMFD fully.

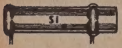
AEROVOX *Capacitors*

CERAMICS

GENERAL PURPOSE TUBULARS — INDUSTRIAL TUBULARS

The items listed below fall into two type categories. The type SI or "Dog Bone" Durez coated tubular, and the CI which is an insulated tubular made in a ceramic tube.

GENERAL PURPOSE TUBULARS



500 VDCW

Cap. Mmfd.	Size		Cap. Mmfd.	Size		Cap. Mmfd.	Size	
5	SI-1	CI-1	120	SI-1	CI-1	1800	SI-2	CI-2
10	SI-1	CI-1	150	SI-1	CI-1	2000	SI-2	CI-2
12	SI-1	CI-1	180	SI-1	CI-1	2200	SI-7	CI-3
15	SI-1	CI-1	200	SI-1	CI-1	2400	SI-7	CI-3
18	SI-1	CI-1	220	SI-1	CI-1	2500	SI-7	CI-3
20	SI-1	CI-1	240	SI-1	CI-1	2700	SI-7	CI-3
22	SI-1	CI-1	250	SI-1	CI-1	3000	SI-19	CI-3
24	SI-1	CI-1	270	SI-1	CI-1	3300	SI-19	CI-3
25	SI-1	CI-1	300	SI-1	CI-1	4000	SI-19	CI-3
27	SI-1	CI-1	330	SI-1	CI-1	4700	SI-3	CI-3
30	SI-1	CI-1	360	SI-1	CI-1	5000	SI-3	CI-3
33	SI-1	CI-1	390	SI-1	CI-1	5100	SI-3	CI-3
39	SI-1	CI-1	470	SI-1	CI-1	5600	SI-3	CI-3
47	SI-1	CI-1	500	SI-1	CI-1	6000	SI-3	CI-3
50	SI-1	CI-1	510	SI-1	CI-1	6800	SI-4	
51	SI-1	CI-1	560	SI-1	CI-1	7500	SI-4	
56	SI-1	CI-1	680	SI-1	CI-1	10,000	SI-5	
68	SI-1	CI-1	750	SI-1	CI-1	15,000	SI-6	
75	SI-1	CI-1	820	SI-1	CI-2	17,500	SI-6	
82	SI-1	CI-1	910	SI-1	CI-2	20,000	SI-5 GMV	
91	SI-1	CI-1	1000	SI-1	CI-2	25,000	SI-5 GMV	
100	SI-1	CI-1	1200	SI-2	CI-2	30,000	SI-6 GMV	
110	SI-1	CI-1	1500	SI-2	CI-2	33,000	SI-6 GMV	

Standard Tolerance ±20%

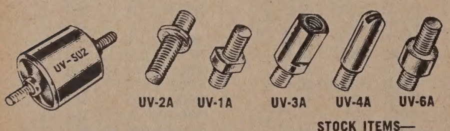
SI-TV Hi-VOLTAGE—6000 VDCW

Cap. Mmfd.	Size	Cap. Mmfd.	Size	Cap. Mmfd.	Size
4.7	SI-22	20	SI-22	40	SI-3
8.2	SI-22	22	SI-22	47	SI-3
12	SI-22	24	SI-3	50	SI-3
15	SI-22	27	SI-3	60	SI-3
18	SI-22	30	SI-3		

HIGH VOLTAGE "CARTWHEELS"

Hi-Q high voltage "cartwheels" are thoroughly tested units capable of assuring dependable service while withstanding high voltages. This new universal type (UV) offers interchangeable terminals in 5 styles for use in filter and by-pass applications in TV high voltage power supplies.

Terminal Hardware



STOCK ITEMS

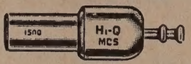
Type	Voltage	Cap. Mmfd.
UV-501	10,000 VDCW	500 mmf.
UV-502	20,000 VDCW	500 mmf.
UV-503	30,000 VDCW	500 mmf.

STOCK ITEMS— TERMINAL HARDWARE

Type	Type
UV-1A	UV-4A
UV-2A	UV-6A
UV-3A	

STAND-OFF CAPACITORS

TYPE MCS



TYPE CS

Hi-Q stand-off capacitors have a screw fixture for mounting to the chassis or common ground. All units are coated with a high temperature enamel, stamped with capacity and supplied with mounting nut, if desired.

The MCS is a quick mounting type which permits high speed mechanical installation. The ceramic tube is enclosed in a cadmium-plated metal case with a specially developed end seal for protection against humidity and temperature changes. All units are flash tested at 1250 volts D.C. The power factor is under 3% and the insulation resistance is above 7500 megohms.

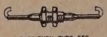
500 VDCW

Type	Capacity Mmfd.	Type	Capacity Mmfd.
CS-1A	50	CS-4	7500
CS-1A	100	CIS-1	50
CS-1B	500	CIS-1	100
CS-1B	1000	CIS-1	500
CS-1B	1500	CIS-1	1000
CS-2	3000	CIS-2	1500
CS-3	4000	MCS	1500

Radial leads only

Tolerance ±10% up to and including 500 mmf.
±20% above 500 mmf.

FEED THRU CAPACITORS


FEED-THRU TYPE CFC

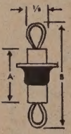
FEED-THRU TYPE CF

Type	Cap. Mmfd.	Thread
CFC-1	500 mmf.	12-28
	1000 mmf.	12-28
	1500 mmf.	12-28
CF-1	1500 mmf.	¼-28

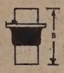
Tolerance ±20%

Type	Cap. Mmfd.	Thread
CF-2	1800 mmf.	5/16-24
	2300 mmf.	5/16-24
	3000 mmf.	5/16-24
CF-3	4000 mmf.	5/16-24
CF-4	7000 mmf.	5/16-24

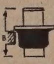
EYELET FEED-THRU CAPACITORS



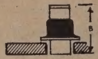
EF-1



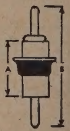
EF-3



EF-4



EF-5

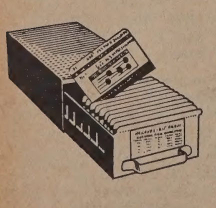


EF-6

Hi-Q Eyelet Feed-Thru Ceramic Capacitors provide the ultimate in miniaturization. They can be soldered directly to the chassis and provide excellent by-pass performance where space is critical. Especially recommended for use in UHF.

Style	Capacity in mmfd.						DCWV	SIZE A	SIZE B
EF-1	50	100	200	500	1000	1500	500	.375	.750
EF-3	50	100	200	500	1000	1500	500	—	.375
EF-4	50	100	200	500			250	—	.250
EF-5	50	100	200	500	1000		250	—	.250
EF-6	50	100	200	500	1000	1500	500	.375	.875

Tolerance ±20% up to and including 500 mmfd.
GMV above 500 mmfd.



Most popular 1000 VDCW 10% tolerance general disk ceramics. Packaged in Aerovox **VUE PACKS** and housed in 3 x 5 metal file cabinet. Cabinets may be stacked when additional kits are purchased.

KIT AK-200 consists of 135 capacitors in our 24 most popular values.

KIT AK-201HS consists of 95 capacitors in the 15 values recommended in the Howard W. Sams' PF Reporter "Stock Guide for Popular Replacement Parts."

AEROVOX KITS—AK-200 and AK-201HS

Kit AK-200

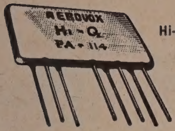
Quan.	Cap. Mmf.	Quan.	Cap. Mmf.	Quan.	Cap. Mmf.
5	10	5	270	5	1500
5	47	5	330	5	2000
5	50	5	390	5	3000
5	82	5	470	5	3300
10	100	5	500	5	4000
5	150	5	560	5	4700
5	180	5	680	5	5000
5	220	10	1000	10	10000

Kit AK-201HS

Quan.	Cap. Mmf.	Quan.	Cap. Mmf.
10	100	5	560
5	150	5	680
5	180	10	1000
5	220	5	1500
5	270	5	2000
5	330	5	3000
5	390	5	4700
5	470	10	10000

AEROVOX *Capacitors*

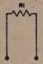
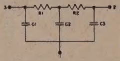
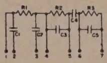
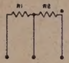
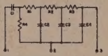
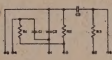
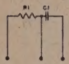
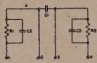
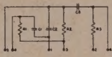
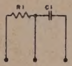
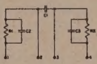
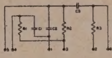
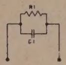
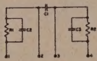
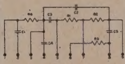
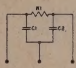
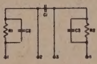
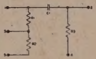
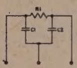
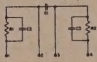
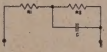
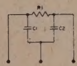
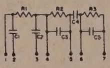
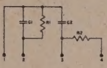
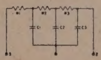
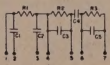
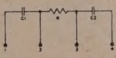
Hi-Q PLATE ASSEMBLIES



Hi-Q plate assemblies offer many distinct advantages:

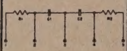
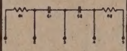
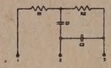
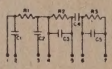
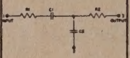
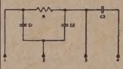
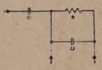
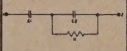
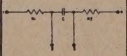
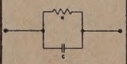
1. Several components replaced by one.
2. Saves installation time — fewer connections.
3. Saves space by combining components into one compact unit.
4. Improved circuit stability.

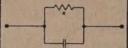
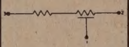
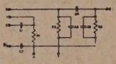
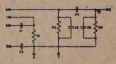
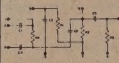
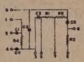
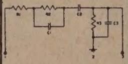
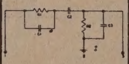
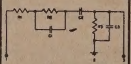
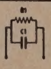
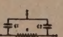
Plate assemblies are combinations of resistor-capacitor networks in one rugged miniature unit. 'Manufactured with high dielectric base plates and covered with a Durez moisture-proof coating and impregnated with low-loss microcrystalline wax. Simplifies assembly and gives dependable service. Widely used in radio and TV applications.

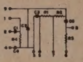
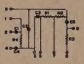
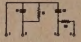
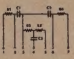
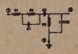
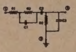
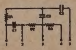
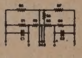
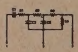
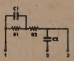
PA-92 SINGLE RESISTOR		R1 — 2 meg.	**PA-110-4** VERTICAL INTEGRATOR		R1 — 8.2K R2 — 8.2K C1 — .002 mf. C2 — .005 mf. C3 — .005 mf.	**PA-113-3** 2nd DETECTOR & AUDIO AMPLIFIER COUPLER		R1 — 6.8 meg. R2 — 470K R3 — 470K C1 — .002 mf. C2 — 220 mmf. C4 — .005 mf. C3 + C5 — 500 mmf.
PA-93 DUAL RESISTOR		R1 — 500K R2 — 110K.	**PA-111** VERTICAL INTEGRATOR		R1 — 22K R2 — 8.2K R3 — 8.2K R4 — 22K C1 — .01 mf. C2 — .002 mf. C3 — .005 mf. C4 — .005 mf.	**PA-116-1** PENTODE COUPLER		R1 — 4.7 meg. R2 — 1 meg. R3 — 2.2 meg. C1 — .005 mf. C2 — 50 mmf. C3 — .002 mf.
PA-94 RC NETWORK		R1 — 240K C1 — 1000 mmf.	**PA-112-1** TRIODE COUPLER		R1 — 500K R2 — 500K C1 — .005 mf. C2 + C3 — 250 mmf.	**PA-116-2** PENTODE COUPLER		R1 — 4.7 meg. R2 — 1 meg. R3 — 2.2 meg. C1 — 5000 mmf. C2 — 100 mmf. C3 — 2000 mmf.
PA-95 RC NETWORK		R1 — 1 meg. C1 — 1000 mmf.	**PA-112-2** TRIODE COUPLER		R1 — 250K R2 — 500K C1 — .005 mf. C2 + C3 — 250 mmf.	**PA-117** PENTODE COUPLER		R1 — 4.7 meg. R2 — 1 meg. R3 — 2.2 meg. C1 — 5000 mmf. C2 — 100 mmf. C3 — 5000 mmf.
PA-96 RC NETWORK		R1 — 100K C1 — 100 mmf.	**PA-112-3** TRIODE COUPLER		R1 — 500K R2 — 500K C1 — .01 mf. C2 + C3 — 250 mmf.	**PA-136-3** PENTODE DETECTOR COUPLER		R1 — 4.7 meg. R2 — 1.0 meg. R3 — 3.3 meg. R4 — 10.0 meg. C1 — 2000 mmf. C2 — 150 mmf. C3 — .01 mf. C4 — 150 mmf. C5 — 5000 mmf.
PA-97 DIODE FILTER		R1 — 47K C1 — 100 mmf. C2 — 100 mmf.	**PA-112-4** TRIODE COUPLER		R1 — 250K R2 — 500K C1 — .01 mfd. C2 + C3 — 250 mmf.	**PA-138** SPECIAL		R1 — 150K R2 — 47K R3 — 1 meg. C1 — .01 mf.
PA-98 DIODE FILTER		R1 — 47K C1 — 150 mmf. C2 — 150 mmf.	**PA-112-5** TRIODE COUPLER		R1 — 500K R2 — 500K C1 — .01 mf. C2 + C3 — 500 mmf.	**PA-172** SPECIAL		R1 — 15K R2 — 270K C1 — 150 mmf.
PA-99 DIODE FILTER		R1 — 47K C1 — 50 mmf. C2 — 50 mmf.	**PA-113-1** 2nd DETECTOR & AUDIO AMPLIFIER COUPLER		R1 — 6.8 meg. R2 — 470K R3 — 470K C1 — .002 mf. C2 — 220 mmf. C4 — .005 mf. C3 + C5 — 250 mmf.	**PA-209** SPECIAL		R1 — 150 ohms R2 — 220 ohms C1 — .005 mf. C2 — .005 mf.
PA-110 VERTICAL INTEGRATOR		R1 — 22K R2 — 8.2K R3 — 8.2K C1 — 2000 mmf. C2 — 5000 mmf. C3 — 5000 mmf.	**PA-113-2** 2nd DETECTOR & AUDIO AMPLIFIER COUPLER		R1 — 6.8 meg. R2 — 470K R3 — 470K C1 — 5000 mmf. C2 — 220 mmf. C4 — 5000 mmf. C3 + C5 — 250 mmf.	**PA-237** SPECIAL		R1 — 4.7 meg. C1 — 250 mmf. C2 — .01 mf.

AEROVOX *Capacitors*

Hi-Q PLATE ASSEMBLIES

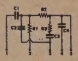
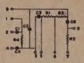
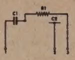
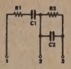
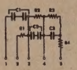
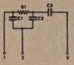
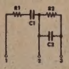
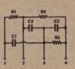
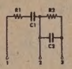
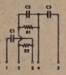
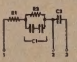
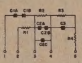
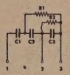
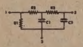
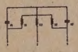
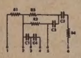
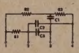
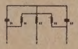
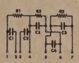
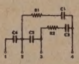
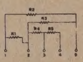
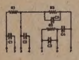
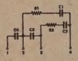
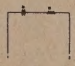
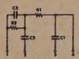
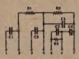
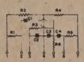
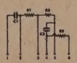
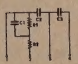
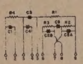
PA-271 PLATE FILTER		R1 — 1000 ohms R2 — 820 ohms C1 — .005 mf. C2 — .005 mf.
PA-272 PLATE FILTER		R1 — 220 ohms R2 — 1000 ohms C1 — .005 mf. C2 — .005 mf.
PA-273 SPECIAL		R1 — 82K R2 — 39K C1 — .001 mf C2 — .002 mf.
PA-306 2nd DETECTOR & AUDIO AMPLIFIER COUPLER		R1 — 10 meg. R2 — 470K R3 — 470K C1 — .005 mf. C2 — 220 mmf. C4 — .005 mf. C3+C5—250 mmf.
PA-383-2 VERTICAL INTEGRATOR		R1 — 22K R2 — 10K C1 — 4700 mmf. C2 — 4700 mmf.
PA-425 SPECIAL		R1 — 22K C1 — .001 mf. C2 — .004 mf. C3 — .01 mf.
PA-428 SPECIAL		R1 — 4.7 meg. C1 — .01 mf. C2 — 50 mmf.
PA-429 SPECIAL		R1 — 270K C1 — .01 mf. C2 — 150 mmf.
PA-430 SPECIAL		R1 — 470K R2 — 1 meg. C1 — .01 mf.
PA-431 RC NETWORK		R1 — 270K C1 — 100 mmf.

PA-432 RC NETWORK		R1 — 270K C1 — 300 mmf.
PA-501 VERTICAL INTEGRATOR		R1 — 38.4K C1 — .012 mf.
PA-511-2 2nd DETECTOR & AUDIO AMPLIFIER COUPLER		R1 — 6.8 meg. R2 — .47 meg. R3 — .47 meg. C1 — 2000 mmf. C2 — 220 mmf. C4 — 5000 mmf. C3+C5—250 mmf.
PA-512-3 2nd DETECTOR & AUDIO AMPLIFIER COUPLER		R1 — 6.8 meg. R2 — .47 meg. R3 — .47 meg. C1 — 5000 mmf. C2 — 220 mmf. C4 — 5000 mmf. C3+C5—250 mmf.
PA-521 PENTODE DETECTOR COUPLER		R1 — 4.7 meg. R2 — 1.0 meg. R3 — 3.3 meg. R4 — 10.0 meg. C1 — .002 mf. C2 — 150 mmf. C3 — .01 mf. C4 — 150 mmf. C5 — .005 mf.
PA-522 PENTODE DETECTOR COUPLER		R1—4.7 meg. R2—1 meg. R3—2.2 meg. R4—4.7 meg. C1—2000 mmf. C2—150 mmf. C3—.01 mfd. C4—150 mmf. C5—5000 mmf.
PA-531 SYNC. TAKE-OFF COUPLER		R1 — 10K R2 — 330K R3 — 2.2 meg. C1 — 270 mmf. C2 — .01 mf. C3 — 25 mmf.
PA-533 SYNC. TAKE-OFF COUPLER		R1 — 220K R2 — 2.2 meg. C1 — 270 mmf. C2 — .01 mf. C3 — 25 mmf.
PA-534 SYNC. TAKE-OFF COUPLER		R1 — 10K R2 — 220K R3 — 2.2 meg. C1 — 270 mmf. C2 — .01 mf. C3 — 25 mmf.
PA-654 RC NETWORK		R1—470K C1—100 mmf.
PA-655 DIODE LOAD FILTER		R1—100K C1—100 mmf. C2—100 mmf.

PA-656 PENTODE DETECTOR COUPLER		R1—4.7 meg. R2—1 meg. R3—3.3 meg. R4—10 meg. C1—1000 mmf. C2—68 mmf. C3—5000 mmf. C4—68 mmf. C5—2500 mmf.
PA-657 PENTODE DETECTOR COUPLER		R1—4.7 meg. R2—1 meg. R3—3.3 meg. R4—10 meg. C1—2000 mmf. C2—150 mmf. C3—.01 mfd. C4—150 mmf. C5—5000 mmf.
PA-658 SPECIAL		R1—330 R2—27K C1—5000 mmf. C2—2000 mmf.
PA-659 SPECIAL		R1—100K R2—470K R3—1000 R4—100K C1—4700 mmf. C2—4700 mmf. C3—100 mmf.
PA-660 SYNC. TAKE-OFF COUPLER		R1—10K R2—330K R3—2.2 meg. C1—270 mmf. C2—.01 mfd. C3—9.5 mmf.
PA-661 SYNC. TAKE-OFF COUPLER		R1—omit R2—470K R3—2.2 meg. C1—150 mmf. C2—.01 mfd. C3—25 mmf.
PA-662 SPECIAL		R1—47K R2—10K R3—10K C1—390 mmf. C2—2200 mmf. C3—5000 mmf.
PA-663 SPECIAL		R1—470K R2—470K R3—470K R4—470K R5—100K R6—47K R7—100K C1—500 mmf. C2—500 mmf.
PA-664 SPECIAL		R1—10K R2—10K R3—10K R4—1 meg. C1—4000 mmf. C2—.01 mfd. C3—.01 mfd.
PA-665 SPECIAL		R1—4.7 meg. R2—220K C1—1000 mmf. C2—.014 mfd.

AEROVOX *Capacitors*

Hi-Q PLATE ASSEMBLIES

PA-666 HORIZONTAL OSCILLATOR		R1—10K R2—39K R3—5.6K C1—1000 mmf. C2—1500 mmf. C3—390 mmf. C4—3000 mmf.	**PA-676** PENTODE DETECTOR COUPLER		R1—4.7 meg. R2—1 meg. R3—3.3 meg. R4—10 meg. C1—5000 mmf. C2—150 mmf. C3—.01 mfd. C4—150 mmf. C5—500 mmf.	**PA-686** SPECIAL		R1—38.4K C1—.01 mfd. C2—.012 mfd.
PA-667 RETRACE-SUPPRESSION COUPLER		R1—10K R2—1 meg. C1—5000 mmf. C2—.01 mfd.	**PA-677** PHASE COMPARATOR		R1—680K R2—680K R3—4.7 meg. R4—220K C1—82 mmf. C2—100 mmf. C3—1000 mmf.	**PA-687** SPECIAL		R1—22K C1—1000 mmf. C2—4000 mmf. C3—.01 mfd.
PA-668 RETRACE-SUPPRESSION COUPLER		R1—2.7K R2—56K C1—.01 mfd. C2—.01 mfd.	**PA-678** SPECIAL		R1—100K R2—100K R3—100K C1—1000 mmf. C2—150 mmf. C3—150 mmf.	**PA-688** RETRACE-SUPPRESSION COUPLER		R1—10K R2—1 meg. C1—5000 mmf. C2—2000 mmf.
PA-669 AUDIO COUPLER		R1—1.5 meg. R2—10 meg. C1—5000 mmf. C2—410 mmf. C3—3000 mmf.	**PA-679** SPECIAL		R1—10K R2—220K C1—680 mmf. C2—5000 mmf.	**PA-689** SPECIAL		R1—100K R2—680K R3—4.7 meg. R4—220K C1—82 mmf. C2—200 mmf. C3—1500 mmf.
PA-670 VERTICAL FEED-BACK		R1—100K R2—100K C1—1000 mmf. C2—1000 mmf. C3—2000 mmf.	**PA-680** SPECIAL		R1—4.7 meg. R2—4.7 meg. R3—4.7 meg. C1—1500 mmf. C2—1500 mmf.	**PA-690** SPECIAL		R1—1 meg. R2—2.2 meg. R3—270K C1—330 mmf. C2—330 mmf.
PA-671 VERTICAL INTEGRATOR		R1—47K R2—47K R3—68K R4—100K C1—180 mmf. C2—800 mmf. C3—800 mmf. C4—130 mmf.	**PA-681** SPECIAL		R1—4.7 meg. R2—4.7 meg. R3—4.7 meg. C1—3000 mmf. C2—250 mmf. C3—400 mmf.	**PA-691** SPECIAL		R1—270K R2—2.2 meg. R3—560K C1—330 mmf. C2—330 mmf.
PA-672 AUDIO DETECTOR COUPLER		R1—6.8 meg. R2—470K R3—470K C1—5000 mmf. C2—220 mmf. C3 and C5—375 mmf. C4—5000 mmf.	**PA-682** SPECIAL		R1—50K R2—50K C1—4500 mmf. C2—4500 mmf. C3—100 mmf. C4—200 mmf.	**PA-692** SPECIAL		R1—22k R2—680K R3—1.2 meg. R4—82K R5—820K
PA-673 AUDIO DETECTOR COUPLER		R1—6.8 meg. R2—470K R3—470K C1—2000 mmf. C2—400 mmf. C3 and C5—220 mmf. C4—5000 mmf.	**PA-683** SPECIAL		R1—100K R2—100K C1—2500 mmf. C2—2500 mmf. C3—50 mmf. C4—100 mmf.	**PA-693** SPECIAL		R1—68K C1—3300 mmf.
PA-674 SYNC. TAKE-OFF COUPLER		R1—2.2 meg. R2—470K C1—800 mmf. C2—.01 mfd. C3—470 mmf.	**PA-684** AUDIO DETECTOR COUPLER		R1—6.8 meg. R2—470K R3—470K C1—2000 mmf. C2—400 mmf. C3 and C5—220 mmf. C4—5000 mmf.	**PA-694** SPECIAL		R1—1500 ohms R2—6.8K R3—68K R4—6.8K R5—1 meg. R6—68 ohms C1—300 mmf. C2—1000 mmf. C3—300 mmf. C4—300 mmf.
PA-675 AUDIO COUPLER		R1—6.8 meg. R2—470K R3—1 meg. C1—6800 mmf. C2—.01 mfd.	**PA-685** SPECIAL		R1—4.7 meg. R2—220K C1—1000 mmf. C2—1000 mmf. C3—3300 mmf.	**PA-695** PENTODE COUPLER		R1—4.7 meg. R2—1 meg. R3—3.3 meg. R4—10 meg. C1—2000 mmf. C2—220 mmf. C3—.01 mfd. C4—150 mmf. C5—5000 mmf.

(Use Index Page 1 for Quick, Easy Location of ALL Products)

AEROVOX *Capacitors*

M I C A S

MIL Types CM20, CM30, CM35

AEROVOX Types 1468, 1469, 1467, 1464

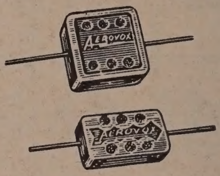
Compact precision made mica dielectric capacitors made in accordance with MIL specification C-5A. Molded in low-loss, bakelite, impregnated and color-coded. Tested to meet all MIL requirements. Types 1467 and 1468 are stacked mica and foil units molded in yellow bakelite to meet MIL characteristic B. Types 1464 and 1469 are silvered mica molded in red bakelite, available in characteristics C and D.

Type CM-20 (500 VDCW)

1468LS		1469	
Cap. Mmf.	Type Designation	Cap. Mmf.	Type Designation
1	CM-20B-010	5	CM-20C-050
5	CM-20B-050	10	CM-20C-100
10	CM-20B-100	12	CM-20C-120
12	CM-20B-120	15	CM-20C-150
15	CM-20B-150	18	CM-20C-180
18	CM-20B-180	20	CM-20C-200
20	CM-20B-200	22	CM-20C-220
22	CM-20B-220	24	CM-20C-240
24	CM-20B-240	25	CM-20C-250
25	CM-20B-250	27	CM-20C-270
27	CM-20B-270	30	CM-20C-300
30	CM-20B-300	33	CM-20C-330
33	CM-20B-330	36	CM-20C-360
36	CM-20B-360	39	CM-20C-390
39	CM-20B-390	40	CM-20C-400
40	CM-20B-400	43	CM-20C-430
43	CM-20B-430	47	CM-20C-470
47	CM-20B-470	50	CM-20C-500
50	CM-20B-500	51	CM-20C-510
51	CM-20B-510	56	CM-20C-560
56	CM-20B-560	62	CM-20C-620
62	CM-20B-620	68	CM-20C-680
68	CM-20B-680	70	CM-20C-700
75	CM-20B-750	75	CM-20C-750
82	CM-20B-820	82	CM-20C-820
91	CM-20B-910	91	CM-20C-910
100	CM-20B-101	100	CM-20C-101
110	CM-20B-111	110	CM-20C-111
120	CM-20B-121	120	CM-20C-121
130	CM-20B-131	130	CM-20C-131
150	CM-20B-151	150	CM-20C-151
160	CM-20B-161	160	CM-20C-161
180	CM-20B-181	180	CM-20C-181
200	CM-20B-201	200	CM-20D-201
220	CM-20B-221	220	CM-20D-221
240	CM-20B-241	240	CM-20D-241
250	CM-20B-251	250	CM-20D-251
270	CM-20B-271	270	CM-20D-271
300	CM-20B-301	300	CM-20D-301
330	CM-20B-331	330	CM-20D-331
350	CM-20B-351	350	CM-20D-351
360	CM-20B-361	360	CM-20D-361
390	CM-20B-391	390	CM-20D-391
400	CM-20B-401	400	CM-20D-401
430	CM-20B-431	430	CM-20D-431
470	CM-20B-471	470	CM-20D-471
500	CM-20B-501	500	CM-20D-501
510	CM-20B-511	510	CM-20D-511
560	CM-20B-561	560	CM-20D-561
600	CM-20B-601	620	CM-20D-621
620	CM-20B-621	680	CM-20D-681
680	CM-20B-681	750	CM-20D-751
750	CM-20B-751	820	CM-20D-821
800	CM-20B-801	910	CM-20D-911
820	CM-20B-821	1000	CM-20D-102
900	CM-20B-901		
910	CM-20B-911		
1000	CM-20B-102		

Type CM-30 (500 VDCW)

1467LS		1464	
Cap. Mmf.	Type Designation	Cap. Mmf.	Type Designation
470	CM-30B-471	470	CM-30D-471
500	CM-30B-501	510	CM-30D-511
510	CM-30B-511	560	CM-30D-561
560	CM-30B-561	620	CM-30D-621
620	CM-30B-621	680	CM-30D-681
680	CM-30B-681	750	CM-30D-751
750	CM-30B-751	800	CM-30D-801
820	CM-30B-821	820	CM-30D-821
910	CM-30B-911	900	CM-30D-901
1000	CM-30B-102	910	CM-30D-911
1100	CM-30B-112	1000	CM-30D-102
1200	CM-30B-122	1100	CM-30D-112
1300	CM-30B-132	1200	CM-30D-122
1500	CM-30B-152	1300	CM-30D-132
1600	CM-30B-162	1500	CM-30D-152
1800	CM-30B-182	1600	CM-30D-162
2000	CM-30B-202	1800	CM-30D-182
2200	CM-30B-222	2000	CM-30D-202
2400	CM-30B-242	2200	CM-30D-222
2500	CM-30B-252	2400	CM-30D-242
2700	CM-30B-272	2500	CM-30D-252
3000	CM-30B-302	2700	CM-30D-272
3300	CM-30B-332	3000	CM-30D-302
3600	CM-30B-362	3300	CM-30D-332
3900	CM-30B-392	3600	CM-30D-362
4000	CM-30B-402	3900	CM-30D-392
4300	CM-30B-432	4000	CM-30D-402
4700	CM-30B-472	4300	CM-30D-432
5000	CM-30B-502	4700	CM-30D-472
5100	CM-30B-512	5000	CM-30D-502
5600	CM-30B-562	5100	CM-30D-512
6000	CM-30B-602	5600	CM-30D-562
6200	CM-30B-622	6200	CM-30D-622
6800	CM-30B-682	6800	CM-30D-682
7000	CM-30B-702	7500	CM-30D-752
7500	CM-30B-752	8200	CM-30D-822
8000	CM-30B-802	9100	CM-30D-912
8200	CM-30B-822		
9000	CM-30B-902		
9100	CM-30B-912		
10000	CM-30B-103		



Type CM-35 (500 VDCW)

1467LS		1464	
Cap. Mmf.	Type Designation	Cap. Mmf.	Type Designation
3600	CM-35B-362	3600	CM-35D-362
3900	CM-35B-392	3900	CM-35D-392
4000	CM-35B-402	4000	CM-35D-402
4300	CM-35B-432	4300	CM-35D-432
4700	CM-35B-472	4700	CM-35D-472
5000	CM-35B-502	5000	CM-35D-502
5100	CM-35B-512	5100	CM-35D-512
5600	CM-35B-562	5600	CM-35D-562
6200	CM-35B-622	6000	CM-35D-602
6800*	CM-35B-682	6200	CM-35D-622
7000*	CM-35B-702	6800*	CM-35D-682
7500*	CM-35B-752	7000*	CM-35D-702
8000*	CM-35B-802	7500*	CM-35D-752
8200*	CM-35B-822	8000*	CM-35D-802
9100*	CM-35B-912	8200*	CM-35D-822
10000*	CM-35B-103	9100*	CM-35D-912
12000*	CM-35B-123	10000*	CM-35D-103
13000*	CM-35B-133		
14000*	CM-35B-143		
15000*	CM-35B-153		

NOTES

In mica and foil construction the standard tolerance is ±20%. Also available in ±10% and ±5%. Closest available tolerance up to and including 10 mmf. is ±1 mmf.; above 10 mmf. ±2% or ±2 mmf., whichever is greater.

In silver mica the standard tolerance is ±5%. Also available in ±2% and ±1%. Closest available tolerance up to 10 mmf. is ±½ mmf.; 10 mmf. and up ±1% or ±1 mmf., whichever is greater.

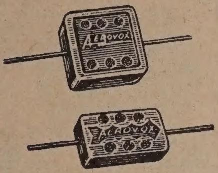
Nominal Size All CM30 Units — 53/64 x 53/64 x 9/32
Nominal Size All CM35 Units — 53/64 x 53/64 x 21/64
Nominal Size All CM20 Units — 45/64 x 29/64 x 3/16

* Capacities are 300 WV. Type Designation 1467XLS and 1464X.

M I C A S — (Continued)

TYPES 1468LS-HV and 1467LS-HV

Designed especially for television, low power transmitters and power amplifier applications, these capacitors feature the highest voltages ever before available in these case sizes. They are furnished to meet characteristic B of the Mil specification. Standard Tolerance is plus and minus 20% and they are tested to meet EIA standards. Units are marked with capacity and working voltage and are tested at double the rated voltage to insure long life.



TYPE 1468LS-HV

Cap. Mmfd.	1000 VDCW 2000 VDCT	1500 VDCW 3000 VDCT	2000 VDCW 4000 VDCT	2500 VDCW 5000 VDCT
5	☐	☐	☐	☐
10	☐	☐	☐	☐
12	☐	☐	☐	☐
15	☐	☐	☐	☐
18	☐	☐	☐	☐
20	☐	☐	☐	☐
22	☐	☐	☐	☐
24	☐	☐	☐	☐
25	☐	☐	☐	☐
27	☐	☐	☐	☐
30	☐	☐	☐	☐
33	☐	☐	☐	☐
36	☐	☐	☐	☐
39	☐	☐	☐	☐
43	☐	☐	☐	☐
47	☐	☐	☐	☐
50	☐	☐	☐	☐
51	☐	☐	☐	☐
56	☐	☐	☐	☐
62	☐	☐	☐	☐
68	☐	☐	☐	☐
75	☐	☐	☐	☐
82	☐	☐	☐	☐
91	☐	☐	☐	☐
100	☐	☐	☐	☐
110	☐	☐	☐	☐
120	☐	☐	☐	☐
130	☐	☐	☐	☐
150	☐	☐	☐	—
160	☐	☐	☐	—
180	☐	☐	☐	—
200	☐	☐	☐	—
220	☐	☐	☐	—
240	☐	☐	☐	—
250	☐	☐	☐	—
270	☐	☐	☐	—
300	☐	☐	—	—
330	☐	☐	—	—
350	☐	☐	—	—
360	☐	☐	—	—
390	☐	☐	—	—
400	☐	☐	—	—
430	☐	—	—	—
470	☐	—	—	—
500	☐	—	—	—
510	☐	—	—	—
560	☐	—	—	—
620	☐	—	—	—

TYPE 1467LS-HV

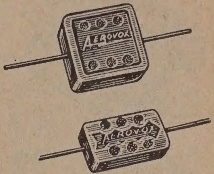
Cap. Mmfd.	1000 VDCW 2000 VDCT	1500 VDCW 3000 VDCT	2000 VDCW 4000 VDCT	2500 VDCW 5000 VDCT.
150	—	—	—	☐
160	—	—	—	☐
180	—	—	—	☐
220	—	—	—	☐
240	—	—	—	☐
250	—	—	—	☐
270	—	—	—	☐
300	—	—	☐	☐
330	—	—	☐	☐
360	—	—	☐	☐
390	—	—	☐	☐
430	—	☐	☐	☐
470	—	☐	☐	☐
500	—	☐	☐	☐
510	—	☐	☐	☐
560	—	☐	☐	☐
620	—	☐	☐	☐
680	☐	☐	☐	☐
750	☐	☐	☐	☐
820	☐	☐	☐	☐
910	☐	☐	☐	☐
1000	☐	☐	☐	☐
1100	☐	☐	☐	☐
1200	☐	☐	☐	☐
1300	☐	☐	☐	☐
1500	☐	☐	☐	☐
1600	☐	☐	☐	☐
1800	☐	☐	☐	—
2000	☐	☐	☐	—
2200	☐	☐	—	—
2400	☐	☐	—	—
2500	☐	—	—	—
2700	☐	—	—	—
3000	☐	—	—	—
3300	☐	—	—	—
3600	☐	—	—	—
3900	☐	—	—	—
4000	☐	—	—	—
4300	☐	—	—	—
4700	☐	—	—	—
5000	☐	—	—	—
5100	☐	—	—	—

Std. Tolerance ±20%
Nominal Size—53/64 X 53/64 X 21/64—
1467LS-HV ☐
Nominal Size—45/64 X 29/64 X 3/16—
1468LS-HV ☐

ALL ITEMS ON THIS PAGE ARE AVAILABLE IN CLOSER TOLERANCES ON SPECIAL ORDER.

☐ SYMBOL INDICATES STOCK ITEMS

TYPES 1441W, 1441WX 1478LS, and 1479



Additional selection of design, sizes and voltages offer the correct Aerovox mica unit for every application—Types 1441W, 1441WX and 1478LS are made in mica and foil construction. Type 1479 is made in silvered mica construction. Units molded in low loss bakelite. (Red used for Type 1479).

TYPE 1441W (Similiar to CM-40)

500 VDCW	1000 VDCT
Cap. Mfd.	**Cap. Mfd.**
.0005	.003
.00075	.004*
.001	.005*
.0015	.006*
.002	.007*
.0025	.008*

Size: 1″x5/8″x3/16″ Compact with wire leads.
* Thickness 5/16″
Std. Tolerance ±20%

TYPE 1441WX (Similar to CM-40)

300 VDCW	600 VDCT
Cap. Mfd.	**Cap. Mfd.**
.004	.008*
.005	.009*
.006	.01*
.007*	

Size: 1″x5/8″x3/16″ Compact with wire leads.
* Thickness 5/16″
Std. Tolerance ±20%

TYPE 1478LS (Similar to CM-25)

500 VDCW	1000 VDCT
Cap. Mfd.	**Cap. Mfd.**
.0005	.0015
.00075	.002
.001	

Size: 1 1/16″x7/16″x3/16″ Midget size with wire leads.
Std. Tolerance ±20%

TYPE 1479 (Similar to CM25)

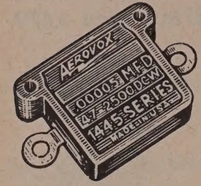
500 VDCW	1000 VDCT
Cap. Mfd.	**Cap. Mfd.**
.0001	.0005
.00015	.0007
.0002	.00075
.00025	.0008
.0003	.0009
.00035	.001
.0004	

Standard Tolerance ±5%
Size: 1 1/16″x7/16″x3/16″ provided with wire leads.

AEROVOX *Capacitors*

MICAS—(Continued)

TYPES 1445, 1446 and 1447



Designed with insulated mounting holes 1 5/16″ apart independent of soldering lugs. Used to shunt meter windings.

Size: 1⅛″ x 1⅝″ x 11/32″

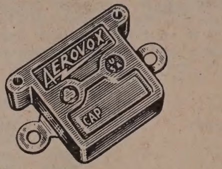
Standard Tolerance ±10%

±5% and ±2% tolerance are available on special order. Meter Mounting Bracket E available. Specify when ordering. These units are equivalent to case styles CM45 and CM50 of specification MIL-C5A.

TYPE 1445	TYPE 1446	TYPE 1447
600 VDCW 1000 VDCT	1200 VDCW 2500 VDCT	2500 VDCW 5000 VDCT
Cap. Mfd.	Cap. Mfd.	Cap. Mfd.
.00005	.00005	.00005
.0001	.0001	.000075
.00015	.00015	.0001
.0002	.0002	.00015
.00025	.00025	.0002
.0003	.0003	.00025
.00035	.00035	.0003
.0004	.0004	.00035
.0005	.0005	.0004
.001	.001	.0005
.0015	.0015	.001
.002	.002	.0015
.0025	.0025	.002*
.003	.003	.0025*
.004	.004*	.003*
.005	.005*	.004*
.006	.006*	.005*
.008	.008*	
.01	.01*	
.015*	.015*	
.02*		
.025*		
.03*		
.04*		

*Thickness 7/16″

TYPES 1455, 1456 and 1457



Same as Types 1445-47 except for sizes and capacitance ranges. Distance between mounting holes is 1½″.

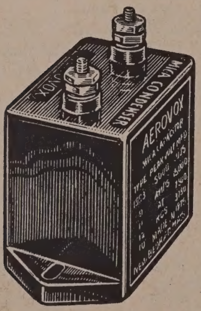
Size: 1¼″ x 1 25/32″ x 11/32″

Standard Tolerance ±10%

±5% and ±2% tolerance are available on special order. Meter Mounting Bracket E available. Specify when ordering.

TYPE 1455		TYPE 1456		TYPE 1457	
600 VDCW 1000 VDCT		1200 VDCW 2500 VDCT		2500 VDCW 5000 VDCT	
Cap. Mfd.	Cap. Mfd.	Cap. Mfd.	Cap. Mfd.	Cap. Mfd.	Cap. Mfd.
.00005	.0025	.00005	.0015	.00005	.0005
.0001	.003	.0001	.002	.000075	.001
.00015	.004	.00015	.0025	.0001	.0015
.0002	.005	.0002	.003	.00015	.002
.00025	.006	.00025	.004	.0002	.0025
.0003	.008	.0003	.005	.00025	.003
.00035	.01	.00035	.006	.0003	
.0004	.015	.0004	.008	.00035	
.0005	.02	.0005	.01	.0004	
.001	.025	.001			
.0015	.03				
.002					

TYPES 1991 thru 1996
Porcelain-Cased Capacitors



Ideal for high-frequency application. Glazed porcelain case, high temperature wax sealed. Heavy duty power terminals. Minimum power loss due to dielectric absorption. No heating at full load.

Size: 4″ overall by 3″ high; 2½″ between mounting holes.

Standard Tolerance ±10%

Cap. Mfd.	DC Voltage Rating	Type	Maximum Current Capacity—Amperes			
			15 mc	7.5 mc	3750 kc	1875 kc
.00005	12,500	1996	3	2.5	1.5	1
.0001	12,500	1996	5	4	3	2
.00025	12,500	1996	7	8	6	4
.0005	12,500	1996	8	9	8	7
	7,000	1994	7	8	6	4
.001	12,500	1996	9	10	11	12
	7,000	1994	8	9	10	8
	3,500	1992	8	9	8	5
.0015	12,500	1996	9	10	11	12
	7,000	1994	9	9	10	8
	5,000	1993	8	9	9	7
	3,500	1992	8	9	8	5
	2,000	1991	7	8	8	5
.002	12,500	1996	9	12	13	15
	10,000	1995	9	10	11	12
	7,000	1994	9	9	10	10
	5,000	1993	8	9	9	8
	3,500	1992	8	8	9	7
	2,000	1991	7	8	8	6
.003	12,500	1996	9	12	13	15
	10,000	1995	9	11	12	13
	7,000	1994	9	10	10	10
	5,000	1993	8	9	9	9
	3,500	1992	8	9	9	8
	2,000	1991	7	8	8	7
.005	10,000	1995	10	13	14	15
	7,000	1994	9	11	12	11
	5,000	1993	9	11	12	10
	3,500	1992	9	10	11	9
	2,000	1991	8	9	10	8
.01	7,000	1994	10	13	15	15
	5,000	1993	10	13	15	15
	3,500	1992	10	13	14	14
	2,000	1991	10	13	14	14
.02	3,500	1992	10	14	16	17
	2,000	1991	10	13	15	15
.05	3,500	1992	10	14	17	18
	2,000	1991	10	14	16	17
.1	2,000	1991	10	14	17	18

AEROVOX *Capacitors*

M I C A S — (Continued)

TYPES 1650L, 1651L, 1652L, 1653L and 1654L

Heaviest-duty molded in bakelite mica capacitors of the AEROVOX line. Threaded mounting holes for roundhead screw terminals or plain holes available. Add suffix "A" for plain holes.

AEROVOX
MFD
1652-.0015
2500 VDC

TYPE 1650L
600 VDCW — 1000 VDCT 350 VACW — 700 VACT
.00005
.0001
.00025
.0003
.00035
.0004
.0005
.001
.0015
.002
.0025
.003
.004
.005
.006
.008
.01
.015
.02
.025
.03
.04*
.05*
.06*

TYPE 1651L
1200 VDCW — 2500 VDCT 875 VACW — 1750 VACT
.00005
.0001
.00025
.0003
.00035
.0004
.0005
.001
.0015
.002
.0025
.003
.004
.005
.006
.008
.01
.015
.02*
.025*
.03*

TYPE 1652L
2500 VDCW — 5000 VDCT 1750 VACW — 3500 VACT
.00005
.000075
.0001
.00015
.0002
.00025
.0003
.00035
.0004
.0005
.001
.0015
.002
.0025
.003
.004
.005
.006
.008*
.01*

TYPE 1653L
3750 VDCW — 7500 VDCT 2625 VACW — 5250 VACT
.00005
.000075
.0001
.00015
.0002
.00025
.0003
.00035
.0004
.0005
.001
.0015
.002
.0025
.003*

TYPE 1654L
5000 VDCW—10,000 VDCT 3500 VACW— 7000VACT
.00005
.000075
.0001
.00015
.0002
.00025
.0003
.00035
.0004
.0005
.001*

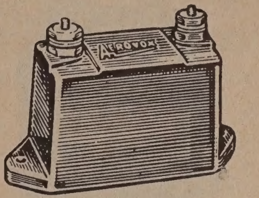
These units are equivalent to case styles CM55, CM56, CM60, and CM61 of specification MIL-C-5A. Standard Tolerance ±10%

±5% Tolerance available on special order.
±2% Tolerance available on special order.
Nominal Size: 1¾" x 1 5/16" x 7/16"
*Thickness ¾"

Ceramic mounting insulators (specify "M") available. 1650-54 series furnished with 6-32 tapped holes for screw mounting.

TYPES 1550L, 1570L and 1590L
Potted Transmitting Capacitors

These potted transmitting capacitors in thermo-setting case materials have greater load-carrying capacity than molded-in-thermo-setting case material capacitors. Types 1550 to 1590, inclusive, not only have high voltage rating but afford higher current ratings than equivalent capacitances in thermo-setting case material units. Because of their construction they are made with higher capacitance stability. Furnished only in low-loss thermo-setting case material as standard. Bakelite cased mica stack capacitors. These units have highest quality mica sections stacked for greater load carrying capacity. The sections are potted in low-loss bakelite cases and permanently clamped with non-magnetic material.



TYPE 1570L (Similar to CM65)

Cat. No.	Capacity	Test Volts Eff.	Max. Operating Current in Amps.			
			3000 kc	1000 kc	300 kc	100 kc
1570LS-204	.00005	3500	1.3	.6	.15	.05
1570LS-210	.0001	3500	2.0	.9	.3	.1
1570LS-214	.00015	3500	2.2	1.0	.45	.15
1570LS-217	.0002	3500	2.6	1.2	.6	.25
1570LS-219	.00025	3500	2.9	1.6	.7	.25
1570LS-221	.0003	3500	3.2	1.9	.8	.3
1570LS-223	.0004	3500	3.6	2.0	.9	.4
1570LS-226	.0005	3500	3.75	2.0	1.0	.5
1570LS-228	.0006	3500	4.1	2.0	1.2	.6
1570LS-232	.0008	3500	4.6	2.5	1.5	.7
1570LS-234	.001	3500	4.9	3.0	1.6	.8
1570LS-236	.0015	3500	5.8	3.5	2.0	1.0
1570LS-237	.002	3500	6.3	4.0	2.5	1.3
1570LS-240	.003	2500	7.1	5.0	3.0	1.5
1570LS-242	.004	2500	7.6	6.0	3.5	1.6
1570LS-245	.005	2500	8.5	6.5	4.0	2.0
1570LS-248	.006	2500	9.0	7.5	4.5	2.2
1570LS-254	.008	1500	10.0	8.0	5.0	2.3
1570LS-257	.01	1500	10.0	10.0	6.0	2.5
1570LS-260	.02	1500	11.0	10.0	7.0	3.0
1570LS-268	.05	500	8.5	7.5	6.0	3.8
1570LS-273	.1	250	11.0	12.0	10.0	6.0

Type 1570L also manufactured in case style CM65 of Spec. MIL-C-5A. Prices on request.

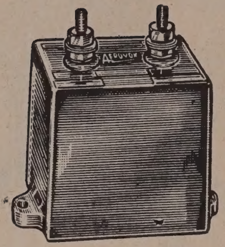
TYPE 1550L (Similar to CM70)

Cat. No.	Capacity	Test Volts Eff.	Max. Operating Current in Amps.			
			3000 kc	1000 kc	300 kc	100 kc
1550LS-200	.00005	6000	1.5	.7	.2	.07
1550LS-201	.0001	6000	2.5	1.3	.35	.1
1550LS-202	.00015	6000	3.0	1.7	.5	.16
1550LS-203	.0002	6000	3.5	1.8	.7	.3
1550LS-204	.00025	6000	5.0	2.5	1.0	.3
1550LS-206	.0003	6000	5.0	2.5	1.0	.4
1550LS-208	.0004	6000	5.0	2.7	1.1	.5
1550LS-210	.0005	6000	5.0	3.0	1.6	.75
1550LS-212	.0006	6000	5.1	3.1	1.7	.8
1550LS-215	.00075	6000	5.5	3.5	2.1	1.0
1550LS-216	.0008	6000	6.0	4.0	2.1	1.0
1550LS-218	.001	6000	7.0	4.0	2.2	1.0
1550LS-220	.0015	6000	9.0	5.1	3.0	1.6
1550LS-221	.002	6000	9.0	6.0	4.0	1.9
1550LS-222	.002	3000	6.0	4.6	3.0	1.1
1550LS-223	.0025	5000	9.0	6.0	4.0	2.0
1550LS-225	.003	3000	6.5	6.0	4.1	1.6
1550LS-228	.004	3000	10.0	6.5	4.5	2.0
1550LS-230	.005	3000	10.0	6.8	5.0	2.5
1550LS-235	.0075	3000	11.0	8.0	6.5	2.9
1550LS-236	.008	3000	11.0	9.0	6.8	3.0
1550LS-238	.01	2000	11.0	10.0	8.0	4.0
1550LS-239	.015	2000	11.5	11.0	9.0	5.0
1550LS-240	.02	2000	12.5	11.0	10.5	7.0
1550LS-241	.03	2000	13.0	16.0	13.0	7.0
1550LS-242	.04	1500	13.0	16.0	13.0	7.5
1550LS-243	.05	1500	14.0	16.0	13.0	7.5
1550LS-244	.1	1000	16.0	18.0	14.0	9.0
1550LS-247	.25	250	16.0	18.0	14.0	12.0

Type 1550L also manufactured in case style CM70 of Spec. MIL-C-5A. Prices on request.
Standard Tolerance for all Transmitting Mica Capacitors is ±5%.
±2% Tolerance Available on Special Order.

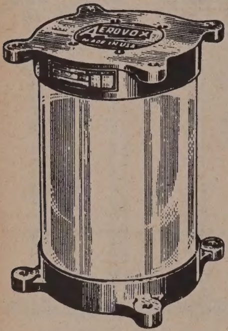
M I C A S — (Continued)

TYPE 1590L — POTTED TRANSMITTING CAPACITORS



Cat. No.	Capacity	Test Volts Eff.	Max. Operating Current in Amps.			
			3000 kc	1000 kc	300 kc	100 kc
1590L-200	.00025	8000	7.0	5.0	2.0	.6
1590L-201	.0005	8000	8.5	6.0	3.0	1.0
1590L-203	.001	8000	10.0	8.5	4.5	2.0
1590L-205	.002	8000	12.0	11.0	8.0	4.0
1590L-207	.003	8000	15.0	15.0	11.0	5.0
1590L-209	.004	8000	16.0	16.0	12.0	6.0
1590L-211	.005	8000	16.0	16.0	13.0	7.0
1590L-213	.006	8000	16.0	18.0	13.0	7.0
1590L-217	.01	8000	17.0	21.0	15.0	9.0
1590L-218	.01	6000	16.0	20.0	15.0	8.0
1590L-219	.02	5000	18.0	22.0	18.0	12.0
1590L-220	.03	4000	18.0	23.0	20.0	13.0
1590L-222	.05	4000	18.0	25.0	23.0	15.0
1590L-223	.05	2000	18.0	25.0	22.0	12.0
1590L-224	.1	2000	18.0	28.0	23.0	15.0
1590L-226	.2	600	18.0	28.0	23.0	15.0
1590L-227	.25	600	18.0	28.0	23.0	15.0
1590L-228	.3	600	18.0	28.0	23.0	15.0
1590L-230	.5	600	18.0	28.0	23.0	15.0
1590L-233	1.0	600	18.0	28.0	23.0	15.0

Standard Tolerance ±5%
Also Available in ±2% on Special Order.



TYPES 1940, 1950, 1960, 1970 and 1980

Stack-Mounting Transmitting Capacitors

These stack-mounting transmitting mica capacitors are especially intended for various applications such as grid, plate blocking, coupling, tank, and by-passing functions for higher-powered installations. They are made with a special cylindrical low-loss, glazed ceramic case providing a long creepage path between terminals. They are designed to eliminate corona losses, inside and outside alike, and also provide uniform voltage gradient. The cast-aluminum terminal ends provide low contact resistance between units. These units are conservatively rated to withstand surge voltages above their rated values. They have extremely low power factor so that they can handle large KVA loads without overheating.

TYPE 1940

Catalog No.	Cap. Mfd.	Test Volts Eff.
1940-236	.000075	35000
1940-203	.0001	35000
1940-204	.00015	35000
1940-205	.0002	35000
1940-206	.00025	35000
1940-207	.0003	35000
1940-208	.00035	35000
1940-209	.0004	35000
1940-210	.0005	35000
1940-211	.0006	35000
1940-212	.0007	35000
1940-213	.0008	35000
1940-214	.001	35000
1940-215	.00125	35000
1940-216	.0015	35000
1940-217	.002	30000
1940-218	.0025	25000
1940-219	.003	25000
1940-220	.004	20000
1940-221	.005	20000
1940-222	.006	15000
1940-223	.007	15000
1940-224	.008	15000
1940-225	.01	15000
1940-237	.02	12000
1940-238	.03	10000
1940-239	.04	7500
1940-240	.05	6000
1940-241	.06	6000
1940-242	.07	6000
1940-243	.08	6000
1940-244	.1	5000

TYPE 1950 (Similar to CM75)

Catalog No.	Cap. Mfd.	Test Volts Eff.
1950-202	.00005	6000
1950-204	.0001	6000
1950-207	.0002	6000
1950-209	.0003	6000
1950-212	.0005	6000
1950-216	.001	6000
1950-218	.002	6000
1950-220	.003	6000
1950-222	.005	6000
1950-226	.01	5000
1950-228	.02	3000
1950-231	.05	1500

TYPE 1960 (Similar to CM80)

Catalog No.	Cap. Mfd.	Test Volts Eff.
1960-202	.00005	15,000
1960-203	.0001	15,000
1960-204	.00015	12,500
1960-205	.0002	12,500
1960-209	.0005	12,500
1960-212	.0008	10,000
1960-213	.001	10,000
1960-214	.0015	10,000
1960-215	.002	10,000
1960-218	.004	8,000
1960-219	.005	8,000
1960-223	.01	7,000
1960-224	.015	5,000
1960-225	.02	4,000

TYPE 1970 (Similar to CM85)

Catalog No.	Cap. Mfd.	Test Volts Eff.
1970-202	.00005	20,000
1970-203	.0001	20,000
1970-204	.00015	20,000
1970-205	.0002	20,000
1970-210	.0005	20,000
1970-213	.0008	20,000
1970-214	.001	20,000
1970-216	.0015	20,000
1970-217	.002	15,000
1970-220	.004	12,000
1970-221	.005	10,000
1970-225	.01	10,000
1970-227	.02	6,000

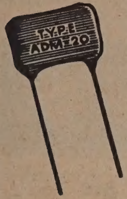
TYPE 1980 (Similar to CM90)

Catalog No.	Cap. Mfd.	Test Volts Eff.
1980-202	.00005	35,000
1980-203	.0001	35,000
1980-204	.00015	35,000
1980-207	.0003	35,000
1980-209	.0004	35,000
1980-210	.0005	35,000
1980-213	.0008	30,000
1980-214	.001	25,000
1980-217	.002	20,000
1980-220	.004	20,000
1980-221	.005	20,000
1980-224	.008	15,000
1980-225	.01	15,000
1980-230	.05	5,000

All units also manufactured in equivalent MIL-C-5A case styles. Prices on request.
Standard tolerance for all units is plus and minus 5%.
Also Available in ±2% on Special Order.

AEROVOX *Capacitors*

MICAS—(Continued)



DIPPED, SILVERED MICA CAPACITORS
TYPES ADM-15, ADM-19, ADM-20 and ADM-30

Aerovox plastic-coated dipped-mica units exceed many of the advantages of molded mica units, and at the same time are smaller than conventional units. Meeting all the applicable MIL-C-5A Test Standards for molded mica capacitors, these unique dipped-mica units offer the following outstanding features:

• High operating temperatures —55°C to +125°C • Excellent long-life characteristics • Improved temperature coefficient range • Radial leads for automatic insertion and plug-in assemblies • Ideal for printed-wiring assemblies • Unsurpassed performance and stability characteristics • Smaller physical size.

Humidity Resistance: these capacitors shall have an insulation resistance of not less than 2,000 megohms after being subjected to the Humidity Resistance Test as outlined in MIL-C-5A. Minimum Insulation Resistance: 25,000 megohms at 25°C; 1000 megohms at 125°C.

Capacitors will be marked with capacity and tolerance. In addition voltage rating will be marked on all units other than 500 volts rating.

CHARACTERISTICS

ADM-15—from 5 to 20 mmf. Characteristic "C".
from 22 to 150 mmf. Characteristic "E".
from 160 mmf. and up Characteristic "F".
ADM-19—All capacities listed "F" Characteristic.
ADM-20—All capacities listed "F" Characteristic.
ADM-30—All capacities listed "F" Characteristic.

Standard Tolerance ±5%

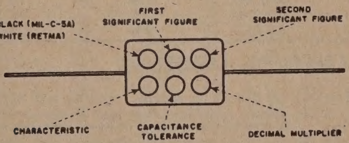
Minimum tolerance for capacitances up to and including 10 mmf. is ± ½ mmf., for all other capacitances ± 1% or 1 mmf. whichever is greater.

Sizes	L	W	T
ADM-15	13/32	5/16	7/32 max.
ADM-19	21/32	15/32	7/32 max.
ADM-20	3/4	15/32	7/32 max.
ADM-30	25/32	27/32	5/16 max.

Cap. Mmf.	Type Designation	Cap. Mmf.	Type Designation	Type Designation	Cap. Mmf.	Type Designation	Type Designation	Cap. Mmf.	Type Designation	Type Designation
5	ADM-15-050	100	ADM-15-101	ADM-19-101	680	ADM-19-681	ADM-20-681	3300	ADM-20-332	
10	ADM-15-100	110	ADM-15-111	ADM-19-111	750	ADM-19-751	ADM-20-751	3600	ADM-20-362	
12	ADM-15-120	120	ADM-15-121	ADM-19-121	820	ADM-19-821	ADM-20-821	3900	ADM-20-392	
15	ADM-15-150	130	ADM-15-131	ADM-19-131	910	ADM-19-911	ADM-20-911	4300	*ADM-20-432	ADM-30-432
18	ADM-15-180	150	ADM-15-151	ADM-19-151	1000	ADM-19-102	ADM-20-102	4700	*ADM-20-472	ADM-30-472
20	ADM-15-200	160	ADM-15-161	ADM-19-161	1100	ADM-19-112	ADM-20-112	5000	*ADM-20-502	ADM-30-502
22	ADM-15-220	180	ADM-15-181	ADM-19-181	1200	ADM-19-122	ADM-20-122	5100	*ADM-20-512	ADM-30-512
24	ADM-15-240	200	ADM-15-201	ADM-19-201	1300	ADM-19-132	ADM-20-132	5600		ADM-30-562
27	ADM-15-270	220	ADM-15-221	ADM-19-221	1500	ADM-19-152	ADM-20-152	6200		ADM-30-622
30	ADM-15-300	240	ADM-15-241	ADM-19-241	1600	ADM-19-162	ADM-20-162	6800		ADM-30-682
33	ADM-15-330	250	ADM-15-251	ADM-19-251	1800	ADM-19-182	ADM-20-182	7500		ADM-30-752
36	ADM-15-360	270	ADM-15-271	ADM-19-271	2000	ADM-19-202	ADM-20-202	8200		ADM-30-822
39	ADM-15-390	300	ADM-15-301	ADM-19-301	2200	ADM-19-222	ADM-20-222	9100		ADM-30-912
43	ADM-15-430	330	ADM-15-331	ADM-19-331	2400	*ADM-19-242	ADM-20-242	10000		ADM-30-103
47	ADM-15-470	360	ADM-15-361	ADM-19-361	2500	*ADM-19-252	ADM-20-252	12000		*ADM-30-123
50	ADM-15-500	390	ADM-15-391	ADM-19-391	2700	*ADM-19-272	ADM-20-272	13000		*ADM-30-133
51	ADM-15-510	430	*ADM-15-431	ADM-19-431				15000		*ADM-30-153
56	ADM-15-560	470	*ADM-15-471	ADM-19-471						
62	ADM-15-620	500	*ADM-15-501	ADM-19-501						
68	ADM-15-680	510	*ADM-15-511	ADM-19-511						
75	ADM-15-750	560		ADM-19-561						
82	ADM-15-820	620		ADM-19-621						
91	ADM-15-910									

* All items asterisked are rated at 300 VDCW.

COLOR CODE INFORMATION

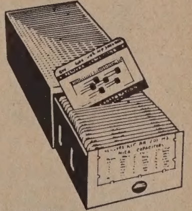


Color	Capacitance		Tolerance %	Charac-teristic
	Significant Figure	Decimal Multiplier		
BLACK	0	1	20 (M)	A
BROWN	1	10		B
RED	2	100	2 (G)	C
ORANGE	3	1000	3 (RETMA only)	D
YELLOW	4	-		E
GREEN	5	-	5 (RETMA only)	F
BLUE	6	-	-	
VIOLET	7	-	-	-
GRAY	8	-	-	-
WHITE	9	-	-	-
GOLD	-	0.1	5 (MIL-C-5 only) (J)	-
SILVER	-	.01	10 (K)	-
NONE				

MIL-C-5 LETTER DESIGNATION FOR CHARACTERISTIC

Characteristic	Temperature Coefficient Parts/Million/Degree C. see par. F-2h(1)	Capacitance Drift see par. F-2h(2) (maximum)
A	Not specified	Not specified
B	Not specified	Not specified
C	-200 to +200	±0.5 per cent
D	-100 to +100	±0.3 per cent
E	- 20 to +100	±(0.1 per cent +0.1 mmf.)
F	0 to +70	±(0.05 per cent +0.1 mmf.)

AEROVOX KIT AK300HS



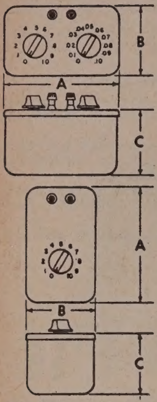
List Price

Selection of close tolerance, silvered mica capacitors in the modern radial lead type packaged in Aerovox VUE PACKS and housed in the same 3x5 metal file drawer used for disc ceramic kits. Kit consist of 10 values, 5 pieces each, and all units are rated at 500 vdcw, ±5% tolerance. Selected by Howard W. Sams' PF Reporter magazine in their "Stock Guide for Popular Replacement Parts."

KIT AK300HS

Quan.	Cap. Mmf.	Quan.	Cap. Mmf.
5 ADM-15	100	5 ADM-19	330
5 "	150	5 "	390
5 "	180	5 "	470
5 "	220	5 "	560
5 ADM-19	270	5 "	680

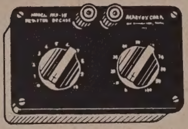
AEROVOX *Capacitors*



SIZE CODE: A-5-1/8, B-3-5/32, C-2-27/32

AEROVOX DECADE BOXES

RESISTANCE CAPACITANCE INDUCTANCE



ARD

ACD

ALD

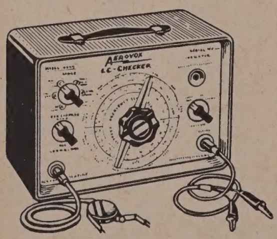
Laboratory quality Standards in capacitance, resistance and inductance at a price far below that of equivalent quality Standards. Available in ten units: three resistance decades, three capacitance decades and four inductance decades. Housed in a seamless, drawn steel case coated with grey enamel. Panels are black with the markings engraved in white.

All ratings are maximum and no guarantee can be enforced if ratings are exceeded in any way. Overload can change accuracy or cause actual burn-outs.

Multiple dial units have the highest value multipliers on the left-hand side so that readings are in order exactly as they should be read.

PART NO.	TYPE	DIELECTRIC	DIALS	RANGE	STEPS	ACCURACY ± 1st Dial	ACCURACY ± 2nd Dial	RATING 1st Dial	RATING 2nd Dial
RESISTANCE									
ARD-15	R	Wire-Wound	2	0 to 110 ohms	1.0 ohm	5%	3%	1.0 Amp.	.5 Amp.
ARD-23	R	Wire-Wound	2	0 to 11 K	100 ohm	3%	3%	100 Ma.	50 Ma.
ARD-31	R	Carbon Deposited	2	0 to 1.1 meg.	10 K ohms	1%	1%	5 Ma.	2 Ma.
CAPACITANCE									
ACD-13	C	Mica	2	0 to .011 mfd.	.0001 mfd.	3%	3%	600 VDC 220 VAC	600 VDC 220 VAC
ACD-23	C	Oil-Paper	2	0 to 1.1 mfd.	.01 mfd.	3%	3%	600 VDC 220 VAC	600 VDC 220 VAC
ACD-33	C	Oil-Paper	1	0 to 10.0 mfd.	1.0 mfd.	3%	—	600 VDC 220 VAC	—
INDUCTANCE									
ALD-12	L	Toroidal	1	0 to 10 mh.	1.0 mh.	2%	—	250 MaDC	—
ALD-22	L	Toroidal	1	0 to 100 mh.	10.0 mh.	2%	—	79 MaDC	—
ALD-32	L	Toroidal	1	0 to 1.0 hy.	100.0 mh.	2%	—	25 MaDC	—
ALD-42	L	Toroidal	1	0 to 10.0 hy.	1.0 hy.	2%	—	8 MaDC	—

AEROVOX L-C CHECKER—MODEL 97



The Aerovox Model 97 L-C Checker is a highly versatile test instrument capable of testing capacitance in circuit **without removing either lead of the capacitor from the circuit.**

The new Model 97 has been completely redesigned and engineered according to the latest design theories and utilizes the newest techniques of printed-circuitry to achieve the most efficient instrumentation available today to servicemen and technicians. The L-C Checker represents the ultimate in versatility and adaptability in a test instrument.

Some of the features of the Model 97 L-C Checker include: extended frequency range from a minimum of 74 kc to a maximum of 44 megacycles; a recessed front panel with an extra-large, easy-to-read dial with magnifying indicator. Finished in an attractive smooth grey, the instrument weighs only 8½ pounds and measures 13" x 8½" x 6" deep and comes furnished with all necessary test cords and probes.

A partial listing of the applications of the Model 97 L-C Checker includes:

1. Checking capacitors in circuit for values of capacitance and relative Q at radio frequency.
2. Checking capacitor insulation resistance (leakage).
3. Checking alignment of radio frequency and intermediate frequency circuits of domestic, marine, and short-wave receivers.
4. Tracking super-het oscillators.
5. Checking alignment of FM-I.F. channels and independent alignment of FM-I.F. transformers.
6. Checking resonant absorption troubles in "all wave" receiver circuits, locating dead spots, etc.
7. Location of resonant points in shorted windings (unused coils) in multi-range oscillators, etc.
8. Checking natural resonant points of r.f. chokes to make sure they are beyond circuit operating range.
9. Checking natural period of antennae and transmission lines.
10. Checking quartz crystals for true or false frequency, operation at harmonics and activity.
11. Checking transmitter buffer, amplifier and tank circuits for parasitic current loops with power off for safety.
12. Tuning of wave traps and filters for harmonic supression.

ARCO electronics inc.
ELMENCO capacitors

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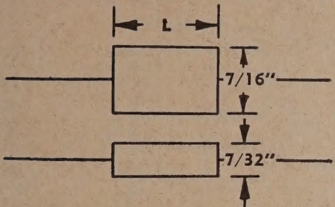
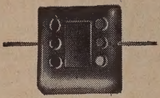
Dallas 19, Texas

MOLDED FOIL MICA

TYPE CM-19 & 20



CM-19
EL-MENCO
MADE IN U.S.A.



L—CM-19—11/16": CM-20—25/32"

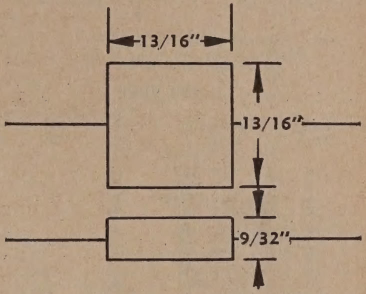
500 VDCW

Cap. Mmf.	Type Designation	List Price Tolerance "M" ±20%	"K" ±10%	"J" ±5%
5	CM-20B-050	$0.30	$0.33	
10	CM-20B-100	.30	.33	$0.38
12	CM-20B-120	.30	.33	.38
15	CM-20B-150	.30	.33	.38
18	CM-20B-180	.30	.33	.38
20	CM-20B-200	.30	.33	.38
22	CM-20B-220	.30	.33	.38
24	CM-20B-240	.30	.33	.38
27	CM-20B-270	.30	.33	.38
30	CM-20B-300	.30	.33	.38
33	CM-20B-330	.20	.22	.25
36	CM-20B-360	.20	.22	.25
39	CM-20B-390	.20	.22	.25
43	CM-20B-430	.20	.22	.25
47	CM-20B-470	.20	.22	.25
50	CM-20B-500	.20	.22	.25
51	CM-20B-510	.20	.22	.25
56	CM-20B-560	.20	.22	.25
62	CM-20B-620	.20	.22	.25
68	CM-20B-680	.20	.22	.25
75	CM-20B-750	.20	.22	.25
82	CM-20B-820	.20	.22	.25
91	CM-20B-910	.20	.22	.25
100	CM-20B-101	.20	.22	.25
110	CM-20B-111	.20	.22	.25
120	CM-20B-121	.20	.22	.25
130	CM-20B-131	.25	.28	.31
150	CM-20B-151	.25	.28	.31
160	CM-20B-161	.25	.28	.31
180	CM-20B-181	.25	.28	.31
200	CM-20B-201	.25	.28	.31
220	CM-20B-221	.25	.28	.31
240	CM-20B-241	.30	.33	.38
250	CM-20B-251	.30	.33	.38
270	CM-20B-271	.30	.33	.38
300	CM-20B-301	.30	.33	.38
330	CM-20B-331	.30	.33	.38
360	CM-20B-361	.30	.33	.38
390	CM-20B-391	.30	.33	.38
430	CM-20B-431	.30	.33	.38
470	CM-20B-471	.30	.33	.38
500	CM-20B-501	.30	.33	.38
510	CM-20B-511	.30	.33	.38
560	CM-20B-561	.35	.39	.44
620	CM-20B-621	.35	.39	.44
680	CM-20B-681	.35	.39	.44
750	CM-20B-751	.35	.39	.44
820	CM-20B-821	.40	.44	.50
910	CM-20B-911	.45	.50	.56
1000	CM-20B-102	.45	.50	.56
1100	CM-20B-112	.50	.55	.63
1200	CM-20B-122	.50	.55	.63
1300	CM-20B-132	.50	.55	.63
1500	CM-20B-152	.60	.66	.75
1600	CM-20B-162	.60	.66	.75
1800	CM-20B-182	.70	.77	.88
2000	CM-20B-202	.75	.83	.94
2200	CM-20B-222	.80	.88	1.00
2400	CM-20B-242	.85	.94	1.06
2500	CM-20B-252	.90	.99	1.13

Cap. Mmf.	Type Designation	List Price Tolerance "M" ±20%	"K" ±10%	"J" ±5%
2700	CM-20B-272	$0.95	$1.05	$1.19
3000	CM-20B-302	1.00	1.10	1.25
3300	CM-20B-332	1.05	1.16	1.31
3600*	CM-20B-362	1.00	1.10	1.25
3900*	CM-20B-392	1.05	1.16	1.31
4300*	CM-20B-432	1.10	1.21	1.38
4700*	CM-20B-472	1.20	1.32	1.50
5000*	CM-20B-502	1.25	1.38	1.56
5100*	CM-20B-512	1.25	1.38	1.56

Capacities from 5 mmf. to 2700 mmf. can be supplied in CM-19 cases.

TYPE CM-30



T—CM-30—9/32"; CM-35—11/32"

500 VDCW

Cap. Mmf.	Type Designation	List Price Tolerance "M" ±20%	"K" ±10%	"J" ±5%
510	CM-30-B-511	$0.30	$0.36	$0.39
560	CM-30-B-561	.30	.36	.39
620	CM-30-B-621	.30	.36	.39
680	CM-30-B-681	.30	.36	.39
750	CM-30-B-751	.30	.36	.39
820	CM-30-B-821	.30	.36	.39
910	CM-30-B-911	.30	.36	.39
1000	CM-30-B-102	.35	.39	.44
1100	CM-30-B-112	.35	.39	.44
1200	CM-30-B-122	.35	.39	.44
1300	CM-30-B-132	.35	.39	.44
1500	CM-30-B-152	.40	.44	.50
1600	CM-30-B-162	.40	.44	.50
1800	CM-30-B-182	.45	.50	.56
2000	CM-30-B-202	.45	.50	.56
2200	CM-30-B-222	.45	.50	.56
2400	CM-30-B-242	.50	.55	.63
2500	CM-30-B-252	.50	.55	.63
2700	CM-30-B-272	.50	.55	.63
3000	CM-30-B-302	.60	.66	.75
3300	CM-30-B-332	.60	.66	.75
3600	CM-30-B-362	.60	.66	.75
3900	CM-30-B-392	.65	.75	.85
4300	CM-30-B-432	.65	.75	.85
4700	CM-30-B-472	.65	.75	.85
5000	CM-30-B-502	.70	.81	.91
5100	CM-30-B-512	.70	.81	.91
5600	CM-30-B-562	.70	.81	.91
6200	CM-30-B-622	.90	1.04	1.17

TYPE CM-35

Cap. Mmf.	Type Designation	List Price Tolerance "M" ±20%	"K" ±10%	"J" ±5%
6800*	CM-35-B-682	$0.95	$1.05	$1.19
7500*	CM-35-B-752	1.00	1.10	1.25
8200*	CM-35-B-822	1.15	1.27	1.44
9100*	CM-35-B-912	1.15	1.27	1.44
10000*	CM-35-B-103	1.40	1.54	1.75
12000*	CM-35-B-123	1.60	1.76	2.00
15000*	CM-35-B-153	2.00	2.20	2.50
6800	VCM-35-B-682	1.05	1.16	1.31
7500	VCM-35-B-752	1.15	1.27	1.44
8200	VCM-35-B-822	1.30	1.43	1.62
9100	VCM-35-B-912	1.30	1.43	1.62
10000	VCM-35-B-103	1.55	1.71	1.94

All capacities marked with * are 300WV.

ARCO electronics inc.
ELMENCO capacitors

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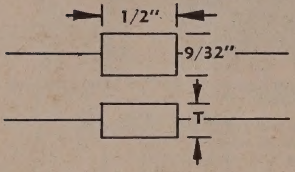
Dallas 19, Texas

MOLDED SILVERED MICA

TYPE CM-15



T—from 1-300 mmf. 3/16"
T—from 301-510 mmf. 7/32"

CM-15

EL-MENCO
MADE IN USA

CM-19

500 VDCW

Cap. Mmf.	Designation Type	List Price Tolerance 5% "J"	2% "G"	1% "F"
1	CM-15-C-010†	$0.40		
2	CM-15-C-020†	.40		
3	CM-15-C-030†	.40		
5	CM-15-C-050†	.40		
10	CM-15-C-100	.40		
12	CM-15-C-120	.40		
15	CM-15-C-150	.40		
18	CM-15-C-180	.40		
20	CM-15-C-200	.40		
22	CM-15-C-220	.40		
24	CM-15-E-240	.40		
27	CM-15-E-270	.40	$0.46	
30	CM-15-E-300	.40	.46	
33	CM-15-E-330	.40	.46	
36	CM-15-E-360	.40	.46	
39	CM-15-E-390	.40	.46	
43	CM-15-E-430	.40	.46	
47	CM-15-E-470	.40	.46	
50	CM-15-E-500	.40	.46	$0.50
51	CM-15-E-510	.40	.46	.50
56	CM-15-E-560	.40	.46	.50
62	CM-15-E-620	.40	.46	.50
68	CM-15-E-680	.40	.46	.50
75	CM-15-E-750	.40	.46	.50
82	CM-15-E-820	.45	.52	.56
91	CM-15-E-910	.45	.52	.56
100	CM-15-E-101	.45	.52	.56
110	CM-15-E-111	.45	.52	.56
120	CM-15-E-121	.45	.52	.56
130	CM-15-E-131	.45	.52	.56
150	CM-15-E-151	.45	.52	.56
160	CM-15-E-161	.50	.58	.63
180	CM-15-E-181	.50	.58	.63
200	CM-15-E-201	.50	.58	.63
220	CM-15-E-221	.55	.63	.69
240	CM-15-E-241	.55	.63	.69
250	CM-15-E-251	.55	.63	.69
270	CM-15-E-271	.60	.69	.75
300	CM-15-E-301	.60	.69	.75
330	CM-15-E-331	.65	.75	.81
360	CM-15-E-361	.70	.81	.88
390	CM-15-E-391	.70	.81	.88
430*	CM-15-E-431	.75	.86	.94
470*	CM-15-E-471	.80	.92	1.00
500*	CM-15-E-501	.80	.92	1.00
510*	CM-15-E-511	.80	.92	1.00
560**	CM-15-E-561J	.85	.98	1.06
620**	CM-15-E-621J	.90	1.04	1.13
680**	CM-15-E-681J	.95	1.09	1.19
750**	CM-15-E-751J	1.00	1.15	1.25
820**	CM-15-E-821J	1.05	1.21	1.31

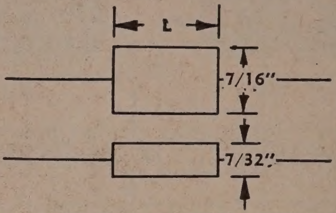
NOTES—*300 VDCW—**100 VDCW.

†Closest Tolerance ±0.5 mmf.

SPECIFICATIONS NOTES:

±½% tolerance available above 100 mmf. at double ±5% list price.
CM15, available "F" characteristic above 33 mmf.
CM19, 20 available "E" characteristic above 33 mmf.
CM19, 20 available "F" characteristic above 56 mmf.

TYPE CM-19 & 20



L—CM-19—11/16": CM-20—25/32"

500 VDCW

Cap. Mmf.	Type Designation	List Price Tolerance "J" ±5%	"G" ±2%	"F" ±1%
5	CM-20C-050	$0.40		
10	CM-20C-100	.40		
12	CM-20C-120	.40		
15	CM-20C-150	.40		
18	CM-20C-180	.40		
20	CM-20C-200	.40		
22	CM-20C-220	.40		
24	CM-20C-240	.40		
27	CM-20C-270	.40	$0.46	
30	CM-20C-300	.40	.46	
33	CM-20C-330	.40	.46	
36	CM-20C-360	.40	.46	
39	CM-20C-390	.40	.46	
43	CM-20C-430	.40	.46	
47	CM-20C-470	.40	.46	
50	CM-20C-500	.40	.46	$0.50
51	CM-20C-510	.40	.46	.50
56	CM-20C-560	.40	.46	.50
62	CM-20C-620	.40	.46	.50
68	CM-20C-680	.40	.46	.50
75	CM-20C-750	.40	.46	.50
82	CM-20C-820	.40	.46	.50
91	CM-20C-910	.40	.46	.50
100	CM-20C-101	.40	.46	.50
110	CM-20C-111	.45	.52	.56
120	CM-20C-121	.45	.52	.56
130	CM-20C-131	.45	.52	.56
150	CM-20C-151	.45	.52	.56
160	CM-20C-161	.45	.52	.56
180	CM-20C-181	.45	.52	.56
200	CM-20D-201	.45	.52	.56
220	CM-20D-221	.45	.52	.56
240	CM-20D-241	.55	.63	.69
250	CM-20D-251	.55	.63	.69
270	CM-20D-271	.55	.63	.69
300	CM-20D-301	.55	.63	.69
330	CM-20D-331	.55	.63	.69
360	CM-20D-361	.55	.63	.69
390	CM-20D-391	.65	.75	.81
430	CM-20D-431	.65	.75	.81
470	CM-20D-471	.70	.81	.88
500	CM-20D-501	.70	.81	.88
510	CM-20D-511	.70	.81	.88
560	CM-20D-561	.75	.86	.94
620	CM-20D-621	.75	.86	.94
680	CM-20D-681	.80	.92	1.00
750	CM-20D-751	.80	.92	1.00
820	CM-20D-821	.85	.98	1.06
910	CM-20D-911	.85	.98	1.06
1000	CM-20E-102	.90	1.04	1.13
1100	CM-20E-112	.90	1.04	1.13
1200	CM-20E-122	1.00	1.15	1.25
1300	CM-20E-132	1.00	1.15	1.25
1500	CM-20E-152	1.10	1.27	1.38
1600	CM-20E-162	1.10	1.27	1.38
1800	CM-20E-182	1.20	1.38	1.50
2000	CM-20E-202	1.30	1.50	1.63
2200	CM-20E-222	1.40	1.61	1.75
2400	CM-20E-242	1.45	1.67	1.81
2500	CM-20E-252	1.50	1.73	1.88

ARCO electronics inc.
ELMENCO capacitors

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ARCO CAPACITORS, INC.
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ARCO ELECTRONICS, INC.
Dallas 19, Texas

MOLDED SILVERED MICA

TYPE CM-19 & 20

500 VDCW

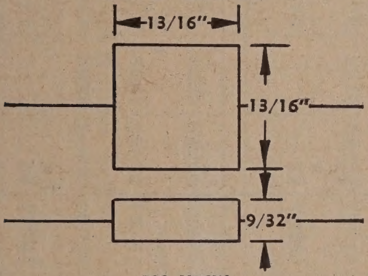
Cap. Mmf.	Type Designation	List Price Tolerance "J" ±5%	"G" ±2%	"F" ±1%
2700	CM-20E-272	1.60	1.84	2.00
3000	CM-20E-302	1.80	2.07	2.25
3300	CM-20E-332	1.90	2.19	2.38
3600*	CM-20E-362	1.90	2.19	2.38
3900*	CM-20E-392	2.00	2.30	2.50
4300*	CM-20E-432	2.10	2.42	2.63
4700*	CM-20E-472	2.20	2.53	2.75
5000*	CM-20E-502	2.30	2.65	2.88
5100*	CM-20E-512	2.30	2.65	2.88

Capacities from 5 mmf. to 2700 mmf. can be supplied in CM-19 cases.

CM-30

CM-42

TYPE CM-30



500 VDCW

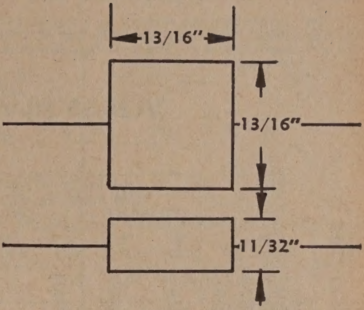
Cap. Mmf.	Type Designation	List Price Tolerance "J" ±5%	"G" ±2%	"F" ±1%
510	CM-30-E-511	$0.70	$0.81	$0.88
560	CM-30-E-561	.75	.86	.94
620	CM-30-E-621	.75	.86	.94
680	CM-30-E-681	.80	.92	1.00
750	CM-30-E-751	.80	.92	1.00
820	CM-30-E-821	.85	.98	1.06
910	CM-30-E-911	.90	1.04	1.13
1000	CM-30-E-102	1.00	1.15	1.25
1100	CM-30-E-112	1.00	1.15	1.25
1200	CM-30-E-122	1.15	1.32	1.44
1300	CM-30-E-132	1.15	1.32	1.44
1500	CM-30-E-152	1.25	1.44	1.56
1600	CM-30-E-162	1.25	1.44	1.56
1800	CM-30-E-182	1.25	1.44	1.56
2000	CM-30-E-202	1.35	1.55	1.69
2200	CM-30-E-222	1.35	1.55	1.69
2400	CM-30-E-242	1.60	1.84	2.00
2500	CM-30-E-252	1.60	1.84	2.00
2700	CM-30-E-272	1.80	2.07	2.25
3000	CM-30-E-302	1.90	2.19	2.38
3300	CM-30-E-332	1.90	2.19	2.38
3600	CM-30-E-362	2.00	2.30	2.50
3900	CM-30-E-392	2.00	2.30	2.50
4300	CM-30-E-432	2.10	2.42	2.63
4700	CM-30-E-472	2.10	2.42	2.63
5000	CM-30-E-502	2.15	2.47	2.69
5100	CM-30-E-512	2.15	2.47	2.69
5600	CM-30-E-562	2.25	2.59	2.81
6200	CM-30-E-622	2.40	2.76	3.00

NOTE:—All above "SILVERED MICA" units can be supplied in "F" Characteristic at no extra cost. For ±½% Tolerance double the 5% List prices.

All Type CM-42 units can be supplied in "F" characteristic at no extra cost. For ±½% Tolerance double the 1% list price.

Silvered Molded Mica Types CM-25 and CM-40 are also available. Immediate delivery is offered on most values.

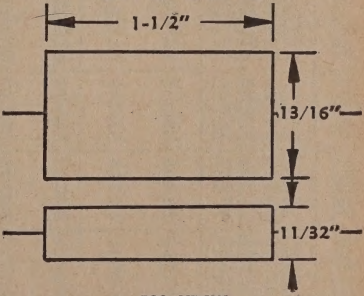
TYPE CM-35



500 VDCW

Cap. Mmf.	Type Designation	List Price Tolerance "J" ±5%	"G" ±2%	"F" ±1%
6800*	CM-35-E-682	$2.65	$3.05	$3.31
7500*	CM-35-E-752	2.80	3.22	3.50
8200*	CM-35-E-822	3.00	3.45	3.75
9100*	CM-35-E-912	3.20	3.68	4.00
10000*	CM-35-E-103	3.50	4.03	4.38
12000*	CM-35-E-123	4.25	4.89	5.31
15000*	CM-35-E-153	5.00	5.75	6.25
6800	VCM-35-E-682	2.90	3.34	3.62
7500	VCM-35-E-752	3.05	3.51	3.81
8200	VCM-35-E-822	3.30	3.80	4.13
9100	VCM-35-E-912	3.50	4.03	4.38
10000	VCM-35-E-103	3.85	4.43	4.81

TYPE CM-42



500 VDCW

12000	CM-42-E-123	3.90	4.49	4.88
13000	CM-42-E-133	4.20	4.83	5.25
15000	CM-42-E-153	4.80	5.52	6.00
16000	CM-42-E-163	5.10	5.87	6.38
18000	CM-42-E-183	5.70	6.56	7.13
20000	CM-42-E-203	6.30	7.25	7.88
22000	CM-42-E-223	6.90	7.94	8.63
24000	CM-42-E-243	7.50	8.63	9.38
25000	CM-42-E-253	7.80	8.97	9.75
27000*	CM-42-E-273	7.50	8.63	9.38
30000*	CM-42-E-303	7.80	8.97	9.75
33000*	CM-42-E-333	8.50	9.78	10.63
36000*	CM-42-E-363	9.50	10.93	11.88
39000*	CM-42-E-393	10.50	12.08	13.13

All capacities marked with * are 300WV.

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ELMENCO *capacitors*

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Dallas 19, Texas

Demand for smaller units in higher voltages designed to meet the requirements for TELEVISION, POWER AMPLIFIERS, LOW POWER TRANSMITTERS, and various INDUSTRIAL USES has increased. EL-MENCO designed and produced units listed below are especially adaptable to compact circuits where space is an important factor. Their acceptance has been overwhelming by the various manufacturers of TELEVISION RECEIVERS.

In many cases, these units will do the work of capacitors molded in CM-45, CM-50, and CM-55 cases without breaking down. NO SPECIAL MOUNTINGS ARE NECESSARY; Just wire right into the circuit.

The capacitors are molded in low-loss Phenolic Resin in CM-20, CM-35, CM-42 cases and tested at double the branded voltage. They are tested for dielectric strength, insulation resistance, temperature coefficient capacitance drift, susceptibility to humidity, and length of life, according to RMA Standards. All units are wax-dipped for protection against salt water immersion.

VCM-20 HI-VOLTAGE MOLDED SILVER MICA

CHARACTERISTICS "B" - "C" & "D"

		2000 VOLTS DC TEST 1000 VOLTS DC WKG. TOLERANCE . . . . . LIST PRICE					3000 VOLTS DC TEST 1500 VOLTS DC WKG. TOLERANCE . . . . . LIST PRICE					5000 VOLTS DC TEST 2500 VOLTS DC WKG. TOLERANCE . . . . . LIST PRICE				
Cap. Mmf.	Type Designation	"M" ±20%	"K" ±10%	"J" ±5%	"G" ±2%	"F" ±1%	"M" ±20%	"K" ±10%	"J" ±5%	"G" ±2%	"F" ±1%	"M" ±20%	"K" ±10%	"J" ±5%	"G" ±2%	"F" ±1%
5	VCM-20-050	$0.30	$0.35	$0.45			USE 2500 WV UNITS					$0.35	$0.40			
10	VCM-20-100	.30	.35	.45					$0.50			.35	.40	$0.50		
12	VCM-20-120	.30	.35	.45					.50			.35	.40	.50		
15	VCM-20-150	.30	.35	.45					.50			.35	.40	.50		
18	VCM-20-180	.30	.35	.45					.50			.35	.40	.50		
20	VCM-20-200	.30	.35	.45					.50			.35	.40	.50		
22	VCM-20-220	.30	.35	.45					.50			.35	.40	.50		
24	VCM-20-240	.30	.35	.45					.50			.35	.40	.50		
27	VCM-20-270	.30	.35	.45	$0.52				.50	$0.58		.35	.40	.50	$0.58	
30	VCM-20-300	.30	.35	.45	.52		$0.35	$0.40	.50	.58		.40	.46	.60	.69	
33	VCM-20-330	.30	.35	.45	.52		.35	.40	.50	.58		.40	.46	.60	.69	
36	VCM-20-360	.30	.35	.45	.52		.35	.40	.50	.58		.40	.46	.60	.69	
39	VCM-20-390	.30	.35	.45	.52		.35	.40	.50	.58		.40	.46	.60	.69	
43	VCM-20-430	.30	.35	.45	.52		.35	.40	.50	.58		.40	.46	.60	.69	
47	VCM-20-470	.30	.35	.45	.52		.35	.40	.55	.63		.40	.46	.70	.81	
50	VCM-20-500	.30	.35	.45	.52	$0.56	.35	.40	.55	.63	$0.69	.40	.46	.70	.81	$0.88
51	VCM-20-510	.30	.35	.45	.52	.56	.35	.40	.55	.63	.69	.40	.46	.70	.81	.88
56	VCM-20-560	.30	.35	.45	.52	.56	.35	.40	.55	.63	.69	.40	.46	.70	.81	.88
62	VCM-20-620	.30	.35	.45	.52	.56	.35	.40	.55	.63	.69	.40	.46	.70	.81	.88
68	VCM-20-680	.30	.35	.45	.52	.56	.35	.40	.55	.63	.69	.45	.52	.80	.92	1.00
75	VCM-20-750	.30	.35	.45	.52	.56	.35	.40	.55	.63	.69	.50	.58	.90	1.04	1.13
82	VCM-20-820	.30	.35	.45	.52	.56	.35	.40	.55	.63	.69	.50	.58	.90	1.04	1.13
91	VCM-20-910	.35	.40	.50	.58	.63	.40	.46	.60	.69	.75	.50	.58	.90	1.04	1.13
100	VCM-20-101	.35	.40	.50	.58	.63	.40	.46	.60	.69	.75	.55	.66	1.00	1.15	1.25
110	VCM-20-111	.35	.40	.50	.58	.63	.40	.46	.60	.69	.75	.60	.72	1.10	1.27	1.38
120	VCM-20-121	.35	.40	.50	.58	.63	.40	.46	.60	.69	.75	.60	.72	1.20	1.38	1.50
130	VCM-20-131	.35	.40	.50	.58	.63	.40	.46	.60	.69	.75	.60	.72	1.20	1.38	1.50
150	VCM-20-151	.35	.40	.50	.58	.63	.40	.46	.70	.81	.88	.65	.78	1.30	1.50	1.63
160	VCM-20-161	.35	.40	.55	.63	.69	.40	.46	.70	.81	.88	.70	.84	1.40	1.61	1.75
180	VCM-20-181	.35	.40	.55	.63	.69	.40	.46	.70	.81	.88	.70	.84	1.40	1.61	1.75
200	VCM-20-201	.40	.46	.55	.63	.69	.45	.52	.80	.92	1.00	.80	.96	1.60	1.84	2.00
220	VCM-20-221	.40	.46	.60	.69	.75	.45	.52	.80	.92	1.00	.85	1.02	1.60	1.84	2.00
240	VCM-20-241	.40	.46	.60	.69	.75	.45	.52	.80	.92	1.00					
250	VCM-20-251	.40	.46	.65	.75	.81	.55	.66	1.00	1.15	1.25					
270	VCM-20-271	.40	.46	.65	.75	.81	.55	.66	1.00	1.15	1.25					
300	VCM-20-301	.45	.52	.70	.81	.88	.60	.72	1.10	1.27	1.38					
330	VCM-20-331	.45	.52	.70	.81	.88	.60	.72	1.10	1.27	1.38					
360	VCM-20-361	.45	.52	.70	.81	.88	.60	.72	1.15	1.32	1.44					
390	VCM-20-391	.45	.52	.70	.81	.88	.65	.78	1.15	1.32	1.44					
430	VCM-20-431	.50	.58	.75	.86	.94	.65	.78	1.20	1.38	1.50					
470	VCM-20-471	.50	.58	.75	.86	.94	.70	.84	1.25	1.44	1.56					
500	VCM-20-501	.50	.58	.75	.86	.94	.70	.84	1.30	1.50	1.63					
510	VCM-20-511	.50	.58	.75	.86	.94	.70	.84	1.30	1.50	1.63					
560	VCM-20-561	.55	.66	.80	.92	1.00	.80	.96	1.35	1.55	1.69					
620	VCM-20-621	.55	.66	.85	.98	1.06										
680	VCM-20-681	.60	.72	.90	1.04	1.13										
750	VCM-20-751	.60	.72	.95	1.09	1.19										
820	VCM-20-821	.65	.78	1.00	1.15	1.25										
910	VCM-20-911	.70	.84	1.05	1.21	1.31										
1000	VCM-20-102	.75	.90	1.10	1.27	1.38										
1100	VCM-20-112	.80	.92	1.20	1.38	1.50										
1200	VCM-20-122	.85	.98	1.25	1.44	1.56										
1300	VCM-20-132	.90	1.04	1.30	1.50	1.63										

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VCM-35 & 42 HI-VOLTAGE REGULAR FOIL MICA

VCM-35 & 42 HI-VOLTAGE SILVERED MICA

		"B" CHARACTERISTIC						"C" - "D" - "E" - "F" CHARACTERISTIC								
		2000VDC Test 1000VDC Wkg. List Price		3000VDC Test 1500VDC Wkg. List Price		5000VDC Test 2500VDC Wkg. List Price		2000VDC Test 1000VDC Wkg. List Price			3000VDC Test 1500VDC Wkg. List Price			5000VDC Test 2500VDC Wkg. List Price		
Cap. Mmf.	Type Designation	"M" ±20%	"K" ±10%	"M" ±20%	"K" ±10%	"M" ±20%	"K" ±10%	"J" ±5%	"G" ±2%	"F" ±1%	"J" ±5%	"G" ±2%	"F" ±1%	"J" ±5%	"G" ±2%	"F" ±1%
240	VCM-35-241					$0.60	$0.69							$1.20	$1.38	$1.50
250	VCM-35-251					.60	.69							1.20	1.38	1.50
270	VCM-35-271					.60	.69							1.20	1.38	1.50
300	VCM-35-301					.65	.75							1.30	1.50	1.63
330	VCM-35-331					.65	.75							1.30	1.50	1.63
360	VCM-35-361					.75	.86							1.50	1.73	1.88
390	VCM-35-391					.80	.92							1.60	1.84	2.00
430	VCM-35-431					.80	.92							1.60	1.84	2.00
470	VCM-35-471					.80	.92							1.60	1.84	2.00
500	VCM-35-501					.85	.98							1.70	1.96	2.13
510	VCM-35-511					.85	.98							1.70	1.96	2.13
560	VCM-35-561					.90	1.04							1.80	2.07	2.25
620	VCM-35-621			$0.75	$0.86						$1.50	$1.73	$1.88			
680	VCM-35-681			.75	.86						1.50	1.73	1.88			
750	VCM-35-751			.75	.86						1.50	1.73	1.88			
820	VCM-35-821			.85	.98						1.70	1.96	2.13			
910	VCM-35-911			.90	1.04						1.80	2.07	2.25			
1000	VCM-35-102			.90	1.04						1.80	2.07	2.25			
1100	VCM-35-112	$0.60	$0.69	.95	1.09			$1.20	$1.38	$1.50	1.90	2.19	2.38			
1200	VCM-35-122	.65	.75	1.10	1.27			1.30	1.50	1.63	2.20	2.53	2.75			
1300	VCM-35-132	.65	.75	1.15	1.32			1.30	1.50	1.63	2.30	2.65	2.88			
1500	VCM-35-152	.75	.86	1.30	1.50			1.50	1.73	1.88	2.60	2.99	3.25			
1600	VCM-35-162	.80	.92	1.30	1.50			1.60	1.84	2.00	2.60	2.99	3.25			
1800	VCM-35-182	.80	.92	1.45	1.67			1.60	1.84	2.00	2.90	8.34	3.63			
2000	VCM-35-202	.85	.98	1.60	1.84			1.70	1.96	2.13	3.20	3.68	4.00			
2200	VCM-35-222	.95	1.09	1.70	1.96			1.90	2.19	2.38	3.40	3.91	4.25			
2400	VCM-35-242	1.05	1.21	1.80	2.07			2.10	2.42	2.63	3.60	4.14	4.50			
2700	VCM-35-272	1.05	1.21	2.00	2.30			2.10	2.42	2.63	4.00	4.60	5.00			
3000	VCM-35-302	1.15	1.32	2.20	2.53			2.30	2.65	2.88	4.40	5.06	5.50			
3300	VCM-35-332	1.20	1.38	2.30	2.65			2.40	2.76	3.00	4.60	5.29	5.75			
3600	VCM-35-362	1.35	1.55					2.70	3.10	3.38						
3900	VCM-35-392	1.40	1.61					2.80	3.22	3.50						
4300	VCM-35-432	1.50	1.73					3.00	3.45	3.75						
4700	VCM-35-472	1.65	1.90					3.30	3.80	4.13						
5000	VCM-35-502	1.75	2.00					3.40	3.91	4.25						
5100	VCM-35-512	1.75	2.00					3.40	3.91	4.25						
5600	VCM-35-562	2.00	2.30					3.80	4.37	4.75						
6200	VCM-42-622	2.10	2.42					4.30	4.95	5.38						
6800	VCM-42-682	2.20	2.53					4.60	5.29	5.75						
7500	VCM-42-752	2.30	2.65					4.90	5.64	6.13						
8200	VCM-42-822	2.40	2.76					5.30	6.10	6.63						
9100	VCM-42-912	2.60	2.99					5.80	6.67	7.25						
10000	VCM-42-103	2.80	3.22					6.30	7.25	7.88						
12000	VCM-42-123	3.00	3.45					7.30	8.40	9.13						
13000	VCM-42-133	3.50	4.03					8.00	9.20	10.00						
15000	VCM-42-153	4.00	4.60					9.00	10.35	11.25						
16000	VCM-42-163	4.50	5.18					9.60	11.04	12.00						

NOTE:—All above units can be supplied in characteristic "C"-"D"-"E"-"F" at the above list prices.

WHEN ORDERING PLEASE SPECIFY WORKING VOLTAGE RATING

REGULAR FOIL MICA
Designate VCM-35B

SILVERED MICA
Designate VCM-35C-D-E or F

ARCO electronics inc.
ELMENCO *capacitors*

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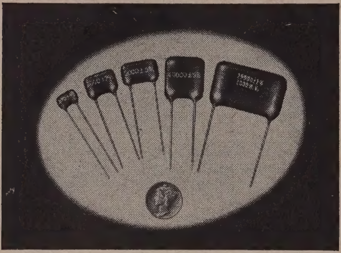
New York 13, New York

ARCO CAPACITORS, INC.
Los Angeles 35, California
ARCO ELECTRONICS, INC.
Dallas 19, Texas

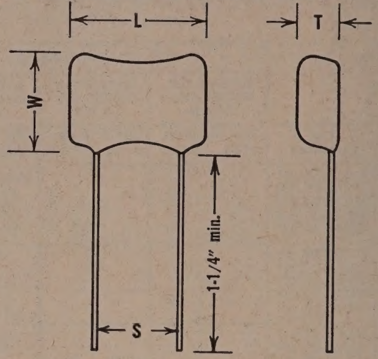
DUR-MICA



CASE SIZES — DUR-MICA SERIES

Case Size	Cap. mmf.	Volt. VDCW	L max.	W max.	T max.
DM-15	10	500	.446	.351	.163
	40	500	.448	.355	.166
	100	500	.451	.360	.175
	200	500	.457	.372	.190
	400	500	.470	.395	.220
	400	300	.457	.365	.190
	600	300	.463	.371	.204
	820	300	.470	.378	.220
DM-16	430	500	.726	.378	.196
	600	500	.731	.388	.210
	720	500	.736	.395	.220
	720	300	.723	.365	.190
DM-19	100	500	.622	.476	.178
	200	500	.624	.478	.180
	500	500	.628	.482	.186
	1000	500	.636	.490	.197
	2000	500	.652	.506	.219
	3000	500	.668	.520	.240
	3000	300	.655	.510	.223
	4000	300	.665	.520	.240
DM-20	200	500	.722	.463	.181
	600	500	.726	.469	.189
	1000	500	.730	.475	.196
	2000	500	.740	.490	.215
	3000	500	.750	.505	.234
	4300	500	.760	.525	.258
	4300	300	.750	.511	.233
	5000	300	.755	.520	.242
	6200	300	.763	.533	.258
DM-30	3000	500	.757	.845	.238
	5000	500	.765	.855	.253
	7000	500	.773	.865	.268
	10000	500	.783	.879	.290
	10000	300	.780	.855	.273
	15000	300	.798	.868	.302
	20000	300	.815	.880	.330
DM-40	3000	500	.927	.659	.220
	5000	500	.938	.682	.247
	10000	500	.965	.740	.315
	10000	300	.962	.693	.263
	15000	300	.990	.725	.305
DM-42	10000	500	1.385	.833	.237
	20000	500	1.406	.851	.287
	30000	500	1.426	.868	.337
	40000	500	1.446	.886	.384
	40000	300	1.431	.880	.357
	50000	300	1.446	.918	.396
	63000	300	1.466	.963	.442
DM-43	50000	500	2.056	.873	.352
	60000	500	2.069	.884	.381
	75000	500	2.089	.901	.428
	75000	300	2.069	.912	.391
	90000	300	2.084	.948	.425
	100000	300	2.092	.964	.443

Not all dimensions of every capacitance value are listed below. It has been found that size varies almost linearly with capacitance value. As a result, dimensions of values between those specified below should be determined by interpolation.



	DM 15	DM 16	DM 19	DM 20	DM 30	DM 40	DM 42	DM 43
S ± 1/32	15/64	1/2	11/32	7/16	7/16	19/32	1-1/16	1-11/16
LEAD WIRE GAGE	#22	#22	#20	#20	#18	#18	#18	#18

TYPE DM10 500VDCW

Cap. mmf.	Type Designation	LIST PRICE ±10%	±5%	TOLERANCE ±2%	±1%
1	DM10-010†	$0.30			
2	DM10-020†	0.30			
3	DM10-030†	0.30			
5	DM10-050	0.30			
10	DM10-100	0.30	$0.33		
12	DM10-120	0.35	0.39		
15	DM10-150	0.35	0.39		
18	DM10-180	0.35	0.39		
20	DM10-200	0.35	0.39		
22	DM10-220	0.35	0.39		
24	DM10-240	0.35	0.39		
27	DM10-270	0.35	0.39	$0.46	
30	DM10-300	0.35	0.39	0.46	
33	DM10-330	0.35	0.39	0.46	
36	DM10-360	0.35	0.39	0.46	
39	DM10-390	0.35	0.39	0.46	
43	DM10-430	0.35	0.39	0.46	
47	DM10-470	0.40	0.44	0.52	
50	DM10-500	0.40	0.44	0.52	$0.64
51	DM10-510	0.40	0.44	0.52	0.64
56	DM10-560	0.40	0.44	0.52	0.64
62	DM10-620	0.40	0.44	0.52	0.64
68	DM10-680	0.40	0.44	0.52	0.64
75	DM10-750	0.40	0.44	0.52	0.64
82	DM10-820	0.40	0.44	0.52	0.64
91	DM10-910	0.40	0.44	0.52	0.64
100	DM10-101	0.40	0.44	0.52	0.64
110	DM10-111	0.40	0.44	0.52	0.64
120	DM10-121	0.45	0.50	0.59	0.72
130	DM10-131	0.45	0.50	0.59	0.72
150	DM10-151	0.50	0.55	0.65	0.80
160	DM10-161	0.55	0.61	0.72	0.88
180	DM10-181	0.60	0.66	0.78	0.96
200	DM10-201	0.60	0.66	0.78	0.96
220	DM10-221	0.65	0.72	0.85	1.04
240	DM10-241	0.70	0.77	0.91	1.12
250	DM10-251	0.70	0.77	0.91	1.12
270*	DM10-271	0.70	0.77	0.91	1.12
300*	DM10-301	0.75	0.83	0.98	1.20
330**	DM10-331	0.75	0.83	0.98	1.20
360**	DM10-361	0.80	0.88	1.04	1.28

† min. tol. ±0.5 mmf. * 300VDCW ** 100VDCW

ARCO electronics inc.
ELMENCO capacitors

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New York 13, New York

ARCO CAPACITORS, INC.
Los Angeles 35, California
ARCO ELECTRONICS, INC.
Dallas 19, Texas

DUR-MICA

TYPE DM-15 500VDCW

Cap. Mmf.	Type Designation	List Price Tolerance ± 10% "K"	± 5% "J"	± 2% "G"	± 1% "F"
1	DM-15-010†	$0.25			
2	DM-15-020†	.25			
3	DM-15-030†	.25			
5	DM-15-050†	.25			
10	DM-15-100	.25	$0.28		
12	DM-15-120	.25	.28		
15	DM-15-150	.25	.28		
18	DM-15-180	.25	.28		
20	DM-15-200	.25	.28		
22	DM-15-220	.25	.28		
24	DM-15-240	.25	.28		
27	DM-15-270	.25	.28	$0.33	
30	DM-15-300	.25	.28	.33	
33	DM-15-330	.25	.28	.33	
36	DM-15-360	.25	.28	.33	
39	DM-15-390	.25	.28	.33	
43	DM-15-430	.25	.28	.33	
47	DM-15-470	.25	.28	.33	
50	DM-15-500	.25	.28	.33	$0.40
51	DM-15-510	.25	.28	.33	.40
56	DM-15-560	.25	.28	.33	.40
62	DM-15-620	.25	.28	.33	.40
68	DM-15-680	.25	.28	.33	.40
75	DM-15-820	.25	.28	.33	.40
82	DM-15-820	.25	.28	.33	.40
91	DM-15-910	.25	.28	.33	.40
100	DM-15-101	.25	.28	.33	.40
110	DM-15-111	.30	.33	.39	.48
120	DM-15-121	.30	.33	.39	.48
130	DM-15-131	.30	.33	.39	.48
150	DM-15-151	.30	.33	.39	.48
160	DM-15-161	.35	.39	.46	.56
180	DM-15-181	.35	.39	.46	.56
200	DM-15-201	.35	.39	.46	.56
220	DM-15-221	.40	.44	.52	.64
240	DM-15-241	.40	.44	.52	.64
250	DM-15-251	.40	.44	.52	.64
270	DM-15-271	.45	.50	.59	.72
300	DM-15-301	.45	.50	.59	.72
330	DM-15-331	.50	.55	.65	.80
360	DM-15-361	.50	.55	.65	.80
390	DM-15-391	.55	.61	.72	.88
430*	DM-15-431	.55	.61	.72	.88
470*	DM-15-471	.60	.66	.78	.96
500*	DM-15-501	.60	.66	.78	.96
510*	DM-15-511	.60	.66	.78	.96
560*	DM-15-561	.65	.72	.85	1.04
620*	DM-15-621	.70	.77	.91	1.12
680*	DM-15-681	.75	.83	.98	1.20
750*	DM-15-751	.80	.88	1.04	1.28
820*	DM-15-821	.85	.94	1.11	1.36
910**	DM-15-911	.95	1.05	1.24	1.43
1000**	DM-15-102	1.00	1.10	1.30	1.60

NOTE

Characteristics on above units are as follows:
DM-15 "C" Characteristic from 1 to 20 Mmf.
DM-15 "E" Characteristic from 22 to 51 Mmf.
DM-15 "F" Characteristic from 56 and up.
†Minimum Tolerance ± 0.5 Mmf.

TYPE DM-16 500 VDCW

430	DM-16-431	$0.55	$0.61	$0.72	$0.88
470	DM-16-471	.60	.66	.78	.96
500	DM-16-501	.60	.66	.78	.96
510	DM-16-511	.60	.66	.78	.96
560	DM-16-561	.65	.72	.85	1.04
620	DM-16-621	.70	.77	.91	1.12
680	DM-16-681	.75	.83	.98	1.20
750	DM-16-751	.80	.88	1.04	1.28
820*	DM-16-821	.85	.94	1.11	1.36
910*	DM-16-911	.90	.99	1.17	1.44
1000*	DM-16-102	.95	1.05	1.24	1.52
1100*	DM-16-112	1.00	1.10	1.30	1.60
1200*	DM-16-122	1.05	1.16	1.37	1.68
1300*	DM-16-132	1.15	1.27	1.50	1.84
1500**	DM-16-152	1.00	1.10	1.30	1.60
1600**	DM-16-162	1.05	1.16	1.37	1.68

Lower values less than above listing use DM-15 prices.
All capacities marked with * are 300VDCW.
All capacities marked with ** are 100 VDCW.

TYPE DM-19 500VDCW

Cap. Mmf.	Type Designation	List Price Tolerance ± 10% "K"	± 5% "J"	± 2% "G"	± 1% "F"
100	DM-19-101	$0.25	$0.28	$0.30	$0.38
110	DM-19-111	.30	.33	.36	.45
120	DM-19-121	.30	.33	.36	.45
130	DM-19-131	.30	.33	.36	.45
150	DM-19-151	.30	.33	.36	.45
160	DM-19-161	.30	.33	.36	.45
180	DM-19-181	.30	.33	.36	.45
200	DM-19-201	.30	.33	.36	.45
220	DM-19-221	.30	.33	.36	.45
240	DM-19-241	.35	.39	.42	.53
250	DM-19-251	.35	.39	.42	.53
270	DM-19-271	.40	.44	.48	.60
300	DM-19-301	.40	.44	.48	.60
330	DM-19-331	.40	.44	.48	.60
360	DM-19-361	.45	.50	.54	.68
390	DM-19-391	.45	.50	.54	.68
430	DM-19-431	.45	.50	.54	.68
470	DM-19-471	.50	.55	.60	.75
500	DM-19-501	.50	.55	.60	.75
510	DM-19-511	.50	.55	.60	.75
560	DM-19-561	.55	.61	.66	.83
620	DM-19-521	.55	.61	.66	.83
680	DM-19-681	.60	.66	.72	.90
750	DM-19-751	.60	.66	.72	.90
820	DM-19-821	.60	.66	.72	.90
910	DM-19-911	.65	.72	.78	.98
1000	DM-19-102	.70	.77	.84	1.05
1100	DM-19-112	.70	.77	.84	1.05
1200	DM-19-122	.75	.83	.90	1.13
1300	DM-19-132	.80	.88	.96	1.20
1500	DM-19-152	.85	.94	1.02	1.28
1600	DM-19-162	.90	.99	1.08	1.35
1800	DM-19-182	1.00	1.10	1.20	1.50
2000	DM-19-202	1.10	1.21	1.32	1.65
2200	DM-19-222	1.20	1.32	1.44	1.80
2400	DM-19-242	1.30	1.43	1.56	1.95
2500	DM-19-252	1.35	1.49	1.62	2.03
2700	DM-19-272	1.40	1.54	1.68	2.10
3000	DM-19-302	1.50	1.65	1.80	2.25
3300	DM-19-332	1.60	1.76	1.92	2.40
3600	DM-19-362	1.70	1.87	2.04	2.55
3900	DM-19-392	1.80	1.98	2.16	2.70
4300*	DM-19-432	1.80	1.98	2.16	2.70
4700*	DM-19-472	1.90	2.09	2.28	2.85
5000*	DM-19-502	2.00	2.20	2.40	3.00
5100*	DM-19-512	2.00	2.20	2.40	3.00
5600**	DM-19-562	2.10	2.31	2.52	3.15
6200**	DM-19-622	2.20	2.42	2.64	3.30
6800**	DM-19-682	2.30	2.53	2.76	3.45

TYPE DM-20 500VDCW

680	DM-20-681	$0.50	$0.55	$0.60	$0.75
750	DM-20-751	.50	.55	.60	.75
820	DM-20-821	.50	.55	.60	.75
910	DM-20-911	.55	.61	.66	.83
1000	DM-20-102	.60	.66	.72	.90
1100	DM-20-112	.60	.66	.72	.90
1200	DM-20-122	.65	.72	.78	.98
1300	DM-20-132	.70	.77	.84	1.05
1500	DM-20-152	.75	.83	.90	1.13
1600	DM-20-162	.80	.88	.96	1.20
1800	DM-20-182	.90	.99	1.08	1.35
2000	DM-20-202	.95	1.05	1.14	1.43
2200	DM-20-222	1.05	1.16	1.26	1.58
2400	DM-20-242	1.10	1.21	1.32	1.65
2500	DM-20-252	1.10	1.21	1.32	1.65
2700	DM-20-272	1.20	1.32	1.44	1.80
3000	DM-20-302	1.30	1.43	1.56	1.95
3300	DM-20-332	1.40	1.54	1.68	2.10
3600	DM-20-362	1.50	1.65	1.80	2.25
3900	DM-20-392	1.60	1.76	1.92	2.40
4300	DM-20-432	1.70	1.87	2.04	2.55
4700*	DM-20-472	1.80	1.98	2.16	2.70
5000*	DM-20-502	1.75	1.93	2.10	2.63
5100*	DM-20-512	1.80	1.98	2.16	2.70
5600*	DM-20-562	1.90	2.09	2.28	2.85
6200*	DM-20-622	2.00	2.20	2.40	3.00
6800**	DM-20-682	2.10	2.31	2.52	2.73
7500**	DM-20-752	2.20	2.42	2.64	3.30
8200**	DM-20-822	2.50	2.75	3.00	3.75

All capacities listed above in DM-19 and DM-20 are "F" Characteristic.

For ± ½% double the list price of the 5% units.

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TYPE DM-30 500VDCW

Cap. Mmf.	Type Designation	List Price Tolerance ± 10% "K"	± 5% "J"	± 2% "G"	± 1% "F"
4300	DM-30-432	$1.60	$1.76	$1.92	$2.08
4700	DM-30-472	1.70	1.87	2.04	2.21
5000	DM-30-502	1.75	1.93	2.10	2.28
5100	DM-30-512	1.75	1.93	2.10	2.28
5600	DM-30-562	1.80	1.98	2.16	2.34
6200	DM-30-622	1.90	2.09	2.28	2.47
6800	DM-30-682	2.10	2.31	2.52	2.73
7500	DM-30-752	2.30	2.53	2.76	2.99
8200	DM-30-822	2.50	2.75	3.00	3.25
9100	DM-30-912	2.70	2.97	3.24	3.51
10000	DM-30-103	3.00	3.30	3.60	3.90
12000	DM-30-123	3.50	3.85	4.20	4.55
13000	DM-30-133	3.75	4.13	4.50	4.88
15000	DM-30-153	4.25	4.68	5.10	5.53
16000	DM-30-163	4.50	4.95	5.40	5.85
18000	DM-30-183	5.00	5.50	6.00	6.50
20000	DM-30-203	5.50	6.05	6.60	7.15
22000*	DM-30-223	5.70	6.27	6.84	7.41
24000"	DM-30-243	6.15	6.77	7.38	8.00
25000*	DM-30-253	6.40	7.04	7.68	8.32
27000*	DM-30-273	6.85	7.54	8.22	8.91
30000**	DM-30-303	7.50	8.25	9.00	9.75
33000**	DM-30-333	8.25	9.08	9.90	10.73
36000**	DM-30-363	9.00	9.90	10.80	11.70

TYPE DM-40 500VDCW

This case size series is available, but it is not carried as a standard stock item as yet. Add 15% to list prices for DM-30 values with comparable specifications to determine the DM-40 list price. Delivery time is four weeks.

TYPE DM-42 500VDCW

CAP. MMF.	TYPE DESIGNATION	LIST PRICE TOLERANCE ± 5% "J"	± 2% "G"	± 1% "F"
10000	DM-42-103	$3.30	$3.80	$4.13
12000	DM-42-123	3.90	4.49	4.88
13000	DM-42-133	4.20	4.83	5.25
15000	DM-42-153	4.80	5.52	6.00
16000	DM-42-163	5.10	5.87	6.38
18000	DM-42-183	5.70	6.56	7.13
20000	DM-42-203	6.30	7.25	7.88
22000	DM-42-223	6.90	7.94	8.63
24000	DM-42-243	7.50	8.63	9.38
25000	DM-42-253	7.80	8.97	9.75
27000	DM-42-273	8.40	9.66	10.50
30000	DM-42-303	9.30	10.70	11.63
33000	DM-42-333	10.20	11.73	12.75
36000	DM-42-363	11.10	12.77	13.88
39000	DM-42-393	12.00	13.80	15.00
43000	DM-42-433	13.00	14.95	16.25
47000*	DM-42-473	11.00	12.65	13.75
50000*	DM-42-503	12.80	14.72	16.00
51000*	DM-42-513	13.10	15.07	16.38
56000*	DM-42-563	14.20	16.33	17.75
62000*	DM-42-623	15.60	17.94	19.50
68000**	DM-42-683	17.00	19.55	21.25
75000**	DM-42-753	18.70	21.51	23.38
82000**	DM-42-823	20.40	23.46	25.50

TYPE DM-43 500 VDCW

47000	DM-43-473	$14.20	$16.33	$17.75
50000	DM-43-503	14.50	16.68	18.13
51000	DM-43-513	14.80	17.02	18.50
56000	DM-43-563	16.20	18.63	20.25
62000	DM-43-623	17.90	20.58	22.38
68000	DM-43-683	19.50	22.43	24.38
75000*	DM-43-753	16.00	18.40	20.00
82000*	DM-43-823	17.50	20.13	21.88
91000*	DM-43-913	19.00	21.85	23.75
100000*	DM-43-104	21.00	24.15	26.25
110000**	DM-43-114	17.00	19.55	21.25
120000**	DM-43-124	18.50	21.28	23.13
130000**	DM-43-134	20.00	23.00	25.00

All capacities marked with * are 300WV.
All capacities marked with ** are 100WV.

SCDM15 capacitors are units which have been given a single protective resin coat rather than the full series of dips to which standard units are subjected. There is a marked difference in size of these thin-coated capacitors, but there is a sacrifice in moisture resistance as a result. SCDM15 units are therefore recommended for applications requiring extreme miniaturization such as military and transistor filter, networks, and delay lines. However, for long term high reliability of operation, the capacitors should receive additional environmental protection such as encapsulation, circuit potting, or hermetic sealing.

	Cap.	Volt	L	W	T
Type SCDM-15	10	500	.415	.267	.144
Case Sizes:*	40	500	.417	.268	.146
	100	500	.419	.271	.148
	200	500	.423	.275	.152
	400	500	.430	.283	.160
	400	300	.425	.277	.156
	600	300	.430	.282	.162
	820	300	.437	.287	.169
	1000	100	.442	.290	.174

* Please refer to DM-15 case size information on page 6 which is equally applicable to SCDM-15 units.

TYPE SCDM-15 500VDCW

CAP. MMF.	TYPE DESIGNATION	LIST PRICE ± 10% "K"	TOLERANCE ± 5% "J"	± 2% "G"	± 1% "F"
1	SCDM-15-010†	$0.25			
2	SCDM-15-020†	.25			
3	SCDM-15-030†	.25			
5	SCDM-15-050†	.25			
10	SCDM-15-100		$0.28		
12	SCDM-15-120		.28		
15	SCDM-15-150		.28		
18	SCDM-15-180		.28		
20	SCDM-15-200		.28		
22	SCDM-15-220		.28		
24	SCDM-15-240		.28		
27	SCDM-15-270		.28	$0.33	
30	SCDM-15-300		.28	.33	
33	SCDM-15-330		.28	.33	
36	SCDM-15-360		.28	.33	
39	SCDM-15-390		.28	.33	
43	SCDM-15-430		.28	.33	
47	SCDM-15-470		.28	.33	
50	SCDM-15-500		.28	.33	$0.40
51	SCDM-15-510		.28	.33	.40
56	SCDM-15-560		.28	.33	.40
62	SCDM-15-620		.28	.33	.40
68	SCDM-15-680		.28	.33	.40
75	SCDM-15-750		.28	.33	.40
82	SCDM-15-820		.28	.33	.40
91	SCDM-15-910		.28	.33	.40
100	SCDM-15-101		.28	.33	.40
110	SCDM-15-111		.33	.39	.48
120	SCDM-15-121		.33	.39	.48
130	SCDM-15-131		.33	.39	.48
150	SCDM-15-151		.33	.39	.48
160	SCDM-15-161		.39	.46	.56
180	SCDM-15-181		.39	.46	.56
200	SCDM-15-201		.39	.46	.56
220	SCDM-15-221		.44	.52	.64
240	SCDM-15-241		.44	.52	.64
250	SCDM-15-251		.44	.52	.64
270	SCDM-15-271		.50	.59	.72
300	SCDM-15-301		.50	.59	.72
330	SCDM-15-331		.55	.65	.80
360	SCDM-15-361		.55	.65	.80
390	SCDM-15-391		.61	.72	.88
430*	SCDM-15-431		.61	.72	.88
470*	SCDM-15-471		.66	.78	.96
500*	SCDM-15-501		.66	.78	.96
510*	SCDM-15-511		.66	.78	.96
560*	SCDM-15-561		.72	.85	1.04
620*	SCDM-15-621		.77	.91	1.12
680*	SCDM-15-681		.83	.98	1.20
750*	SCDM-15-751		.88	1.04	1.28
820*	SCDM-15-821		.94	1.11	1.36
910**	SCDM-15-911		1.05	1.24	1.43
1000**	SCDM-15-102		1.10	1.30	1.60

Characteristics on above units are as follows:
SCDM-15 "C" Characteristic from 1 to 20 Mmf.
SCDM-15 "E" Characteristic from 22 to 51 Mmf.
SCDM-15 "F" Charactersitic from 56 and up.
† Minimum Tolerance ± 0.5 Mmf.

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HIGH VOLTAGE DUR-MICA

A new line of ELMENCO Silvered Hi-Voltage Dur-Mica capacitors is now available to complement the similar values in the molded configuration. These high voltage capacitors afford the same facility of use in low power applications by providing reliable operation in a small case size. Elmenco Dur-Mica capacitors may be substituted for similarly rated molded units normally supplied in the larger CM45, CM50, CM55, and CM60 case sizes.

The Dur-Mica design provides advantage of higher temperature operation (125° C. max.); radial leads for printed circuit application; higher capacitance in a given case size; and improved reliability. The dipped units, being solidly impregnated with corona resistant material, do not have the voids which make molded types susceptible to corona. As a result, the dipped capacitors can be supplied with voltage rating as high as 5000VDCW.

All Elmenco Dur-Mica capacitors are silvered mica construction. They conform to electrical and environmental specifications set forth in MIL-C-5 specifications.

VDM-20 HI-VOLTAGE
TOLERANCE ±5%

CAP. MMF.	TYPE DESIGNATION	VDC 2000T 1000W	VDC 3000T 1500W	VDC 5000T 2500W
5	VDM-20-050K	USE 2500V	USE 2500V	.40
10	VDM-20-100J			.40
12	VDM-20-120J			.40
15	VDM-20-150J			.40
18	VDM-20-180J	USE 1500V	.40	.45
20	VDM-20-200J		.40	.45
22	VDM-20-220J		.40	.45
24	VDM-20-240J		.40	.45
27	VDM-20-270J		.40	.45
30	VDM-20-300J		.40	.45
33	VDM-20-330J		.40	.50
36	VDM-20-360J		.40	.50
39	VDM-20-390J		.40	.50
43	VDM-20-430J	.40	.45	.50
47	VDM-20-470J	.40	.45	.55
50	VDM-20-500J	.40	.45	.55
51	VDM-20-510J	.40	.45	.55
56	VDM-20-560J	.40	.45	.55
62	VDM-20-620J	.40	.45	.60
68	VDM-20-680J	.40	.45	.60
75	VDM-20-750J	.40	.45	.60
82	VDM-20-820J	.40	.50	.65
91	VDM-20-910J	.40	.50	.70
100	VDM-20-110J	.45	.50	.70
110	VDM-20-111J	.45	.50	.75
120	VDM-20-121J	.45	.50	.75
130	VDM-20-131J	.45	.55	.80
150	VDM-20-151J	.45	.55	.85
160	VDM-20-161J	.50	.60	.95
180	VDM-20-181J	.50	.60	.95
200	VDM-20-201J	.50	.60	1.05
220	VDM-20-221J	.50	.65	1.10
240	VDM-20-241J	.50	.65	1.15
250	VDM-20-251J	.50	.70	1.20
270	VDM-20-271J	.50	.70	1.25
300	VDM-20-301J	.55	.75	1.35
330	VDM-20-331J	.55	.80	1.45
360	VDM-20-361J	.55	.80	1.55
390	VDM-20-391J	.60	.85	
430	VDM-20-431J	.60	.90	
470	VDM-20-471J	.60	.95	
500	VDM-20-501J	.65	1.00	
510	VDM-20-511J	.65	1.00	
560	VDM-20-561J	.65	1.15	
620	VDM-20-621J	.70	1.15	
680	VDM-20-681J	.75	1.20	
750	VDM-20-751J	.75	1.30	
820	VDM-20-821J	.80	1.40	
910	VDM-20-911J	.85	1.50	
1000	VDM-20-102J	.90	1.60	
1100	VDM-20-112J	.95	1.75	
1200	VDM-20-122J	1.00	1.85	
1300	VDM-20-132J	1.05	2.00	
1500	VDM-20-152J	1.10		
1600	VDM-20-162J	1.15		
1800	VDM-20-182J	1.25		
2000	VDM-20-202J	1.40		
2200	VDM-20-222J	1.50		
2400	VDM-20-242J	1.60		
2700	VDM-20-272J	1.75		
3000	VDM-20-302J	1.90		

NOTE: All above units can be supplied in characteristic "C"-"D"-"E"-"F" at above list prices.

VDM-30 HI-VOLTAGE
TOLERANCE ±5%

CAP. MMF.	TYPE DESIGNATION	VDC 2000T 1000W	VDC 3000T 1500W	VDC 5000T 2500W
390	VDM-30-391J	USE CASE VDM20	USE CASE VDM20	1.25
430	VDM-30-431J			1.35
470	VDM-30-471J			1.45
500	VDM-30-501J			1.60
510	VDM-30-511J			1.60
560	VDM-30-561J			1.70
620	VDM-30-621J			1.80
680	VDM-30-681J			2.00
750	VDM-30-751J			2.10
820	VDM-30-821J			2.35
910	VDM-30-911J			2.55
1000	VDM-30-102J			2.75
1100	VDM-30-112J			3.00
1200	VDM-30-122J			3.20
1300	VDM-30-132J			3.40
1500	VDM-30-152J		1.75	4.00
1600	VDM-30-162J		1.80	4.20
1800	VDM-30-182J		2.00	4.60
2000	VDM-30-202J		2.20	5.25
2200	VDM-30-222J		2.30	5.60
2400	VDM-30-242J		2.50	6.10
2700	VDM-30-272J		2.75	6.75
3000	VDM-30-302J		3.00	
3300	VDM-30-332J	2.15	3.35	
3600	VDM-30-362J	2.35	3.65	
3900	VDM-30-392J	2.50	3.90	
4300	VDM-30-432J	2.70	4.20	
4700	VDM-30-472J	3.00	4.60	
5000	VDM-30-502J	3.15	4.85	
5100	VDM-30-512J	3.15	5.00	
5600	VDM-30-562J	3.45	5.50	
6200	VDM-30-622J	3.75	6.00	
6800	VDM-30-682J	4.20		
7500	VDM-30-752J	4.50		
8200	VDM-30-822J	5.00		
9100	VDM-30-912J	5.40		
10000	VDM-30-103J	6.00		

VDM-42 HI-VOLTAGE

3000	VDM-42-302J	USE VDM30 CASE	USE VDM30 CASE	4.80
3300	VDM-42-332J			5.00
3600	VDM-42-362J			5.40
3900	VDM-42-392J			5.85
4300	VDM-42-432J			6.50
4700	VDM-42-472J			6.90
5000	VDM-42-502J			7.30
5100	VDM-42-512J			7.30
5600	VDM-42-562J			7.95
6200	VDM-42-622J			8.80
6800	VDM-42-682J		5.50	9.65
7500	VDM-42-752J		5.85	10.50
8200	VDM-42-822J		6.40	11.30
9100	VDM-42-912J		7.00	12.55
10000	VDM-42-103J		7.50	13.65
12000	VDM-42-123J	5.70	8.85	
13000	VDM-42-133J	6.25	9.50	
15000	VDM-42-153J	6.95	10.85	
16000	VDM-42-163J	7.50	11.60	
18000	VDM-42-183J	8.20	12.95	
20000	VDM-42-203J	9.10		
22000	VDM-42-223J	10.00		
24000	VDM-42-243J	10.70		
25000	VDM-42-253J	11.20		
27000	VDM-42-273J	11.70		
30000	VDM-42-303J	12.15		

Above prices are for Standard 5% Tolerance. Add 15% for 2% Tolerance; Add 25% for 1% Tolerance; Add 100% for ½% Tolerance. Minimum Tolerance ± 0.5 mmf.

VDM-43 HI-VOLTAGE
TOLERANCE ±5%

CAP. MMF.	TYPE DESIGNATION	VDC 2000T 1000W	VDC 3000T 1500W	VDC 5000T 2500W
12000	VDM-43-123J	USE VDM42 CASE	USE VDM42 CASE	16.20
13000	VDM-43-133J			17.20
15000	VDM-43-153J			19.70
20000	VDM-43-203J		14.00	
22000	VDM-43-223J		15.50	
24000	VDM-43-243J		16.50	
25000	VDM-43-253J		17.50	
27000	VDM-43-273J		18.50	
30000	VDM-43-303J		20.00	
33000	VDM-43-333J	13.85		
36000	VDM-43-363J	15.20		
39000	VDM-43-393J	19.50		
43000	VDM-43-433J	18.00		
47000	VDM-43-473J	19.50		

SPECIAL HVDM-42 & HVDM-43 5000WV UNITS

CAP. MMF.	TYPE DESIGNATION	10000 VOLTS DC TEST 5000 VOLTS DC WKG.
5	HVDM-42-050K	1.90
10	HVDM-42-100J	1.90
12	HVDM-42-120J	1.90
15	HVDM-42-150J	1.90
18	HVDM-42-180J	1.90
20	HVDM-42-200J	1.90
22	HVDM-42-220J	1.90
24	HVDM-42-240J	1.90
27	HVDM-42-270J	1.90
30	HVDM-42-300J	2.25
33	HVDM-42-330J	2.25
36	HVDM-42-360J	2.25
39	HVDM-42-390J	2.25
43	HVDM-42-430J	2.25
47	HVDM-42-470J	2.25
50	HVDM-42-500J	2.25
51	HVDM-42-510J	2.25
56	HVDM-42-560J	2.25
62	HVDM-42-620J	2.60
68	HVDM-42-680J	2.60
75	HVDM-42-750J	2.60
82	HVDM-42-820J	2.60
91	HVDM-42-910J	2.95
100	HVDM-42-101J	2.95
110	HVDM-42-111J	2.95
120	HVDM-42-121J	3.30
130	HVDM-42-131J	3.30
150	HVDM-42-151J	3.65
160	HVDM-42-161J	3.65
180	HVDM-42-181J	4.00
200	HVDM-42-201J	4.35
220	HVDM-42-221J	4.35
240	HVDM-42-241J	4.70
250	HVDM-42-251J	4.70
270	HVDM-42-271J	5.05
300	HVDM-42-301J	5.40
330	HVDM-42-331J	5.75
360	HVDM-42-361J	6.10
390	HVDM-42-391J	6.45
430	HVDM-42-431J	7.15
470	HVDM-42-471J	7.40
500	HVDM-42-501J	7.75
510	HVDM-42-511J	8.10
560	HVDM-42-561J	8.45
620	HVDM-42-621J	9.50
680	HVDM-43-681J	11.25
750	HVDM-43-751J	12.25
820	HVDM-43-821J	13.25
910	HVDM-43-911J	14.25

PLEASE SPECIFY WORKING VOLTAGE RATING WHEN ORDERING

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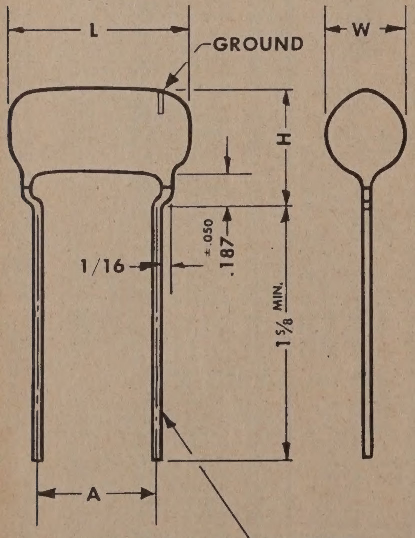
Dallas 19, Texas

DIPPED MYLAR*—PAPER (Elmenco type MPD)

The new Elmenco Type MPD (ARCO dp) capacitors are dip-coated tubular Mylar*-paper dielectric capacitors. They represent a double breakthrough in capacitor design by combining missile and computer quality with commercial radio-TV cost. The "dp" series is designed for near universal use from TV by-pass to critical industrial applications requiring stringent electrical and environmental characteristics. New high levels of ruggedness, stability, and reliability have been achieved, yet these new Elmenco capacitors are miniaturized for transistor circuitry.

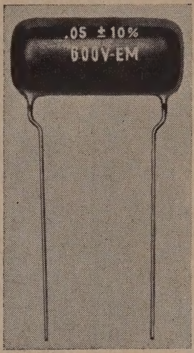
Elmenco Type MPD capacitors are non-inductively wound and vacuum dipped to obtain solid impregnation and a rugged, moisture-proof coat. New fabricating techniques realize the full potential of the dielectric materials utilizing most of the low-cost procedures of the exclusive Elmenco dip-coat process. The result is a product of electrical excellence with high reliability in operation at 110°C. without derating. The specifications listed on this and following pages well-illustrate the inherent quality of these capacitors.

NOTE: The 100VDCW rated dp units are pure mylar* dielectric capacitors.



CASE SIZE	1	2	3	4	5	6
DIM. "A" ± 1/32	1/4	7/16	23/32	27/32	1 3/32	1 27/32

NOTE: The 1DP-1 100VDCW dp capacitors up through .015 mfd. value have straight leads spaced 1/2" apart.



ACTUAL SIZE

SPECIFICATIONS

Tolerance ± 10%.

VOLTAGE RATINGS:	100VDCW, 200VDCW, 400VDCW, 600VDCW, 1600VDCW, (1000VDCW upon request).
INSULATION RESISTANCE:	@ 25°C.: 5000 megohm-microfarads or 100,000 megohms minimum, whichever is the lesser. F @ 110°C.: 70 megohm-microfarads or 1400 megohms minimum, whichever is the lesser.
POWER FACTOR:	1.0% maximum at 1kc.
TEMPERATURE RANGE:	—55°C. to +125°C. with no voltage derating.
CAPACITANCE CHANGE VS. TEMPERATURE:	From 25°C. to —55° (—9.0% max.) From 25°C. to +110°C. (+10.0% max.)

LONG TERM OPERATING STABILITY AT FULL RATED VOLTAGE AND RATED TEMPERATURE EXTREMES IS ± 2% MAXIMUM.

Part Numbers:

The part numbers indicated in the table of values on page 385 are constructed as follows:

6	DP	-	2	-	103
Voltage Rating (in 100's of volts DCW)	Type Designation		Case Size		Cap. Value (2 sig. figs. & dec. mult.)

The above example calls for a .01 mfd. capacitor with a 600VDCW voltage rating. Case dimensions are shown in the table of values listing on page 385.

* Reg. Du Pont Trademark

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ARCO CAPACITORS, INC.
Los Angeles 35, California
ARCO ELECTRONICS, INC.
Dallas 19, Texas

DIPPED MYLAR*—PAPER (Elmenco type MPD)

100VDCW

Cap Mfd.	Part No.	L	W	H	List Price
.005	1DP-1-502	11/16	5/16	1/2	$0.35
.006	1DP-1-602	11/16	5/16	1/2	.35
.0068	1DP-1-682	11/16	5/16	1/2	.35
.0075	1DP-1-752	11/16	5/16	1/2	.35
.01	1DP-1-103	11/16	5/16	1/2	.35
.015	1DP-1-153	23/32	11/32	17/32	.35
.02	1DP-1-203	23/32	11/32	19/32	.35
.022	1DP-1-223	23/32	11/32	19/32	.35
.025	1DP-1-253	23/32	11/32	19/32	.35
.03	1DP-1-303	23/32	3/8	5/8	.35
.033	1DP-1-333	23/32	3/8	5/8	.35
.04	1DP-1-403	23/32	3/8	5/8	.40
.047	1DP-2-473	7/8	11/32	19/32	.40
.05	1DP-2-503	7/8	11/32	19/32	.40
.056	1DP-2-563	7/8	3/8	5/8	.40
.068	1DP-2-683	7/8	13/32	5/8	.40
.075	1DP-2-753	7/8	13/32	5/8	.40
.1	1DP-2-104	29/32	7/16	11/16	.45
.15	1DP-3-154	1-1/4	7/16	11/16	.45
.2	1DP-3-204	1-9/32	1/2	23/32	.50
.22	1DP-3-224	1-9/32	1/2	23/32	.50
.25	1DP-3-254	1-9/32	17/32	3/4	.55
.33	1DP-4-334	1-3/8	9/16	13/16	.65
.47	1DP-4-474	1-3/8	21/32	29/32	.80
.5	1DP-4-504	1-3/8	21/32	29/32	.80
.68	1DP-5-684	1-9/16	11/16	15/16	1.10
1.0	1DP-5-105	1-9/16	3/4	1	1.60

200VDCW

Cap Mfd.	Part No.	L	W	H	List Price
.1	2DP-3-104	1-7/32	1/2	23/32	$0.45
.15	2DP-3-154	1-1/4	9/16	25/32	.50
.2	2DP-4-204	1-11/32	5/8	7/8	.55
.22	2DP-4-224	1-11/32	5/8	7/8	.60
.25	2DP-4-254	1-11/32	21/32	7/8	.60
.33	2DP-5-334	1-9/16	21/32	7/8	.70
.47	2DP-5-474	1-9/16	3/4	1	.85
.5	2DP-5-504	1-9/16	25/32	1	.85

400VDCW

Cap. Mfd.	Part No.	L	W	H	List Price
.01	4DP-1-103	23/32	3/8	5/8	$0.35
.015	4DP-1-153	23/32	7/16	21/32	.35
.02	4DP-2-203	7/8	13/32	5/8	.35
.022	4DP-2-223	7/8	13/32	5/8	.40
.025	4DP-2-253	7/8	7/16	21/32	.40
.03	4DP-2-303	7/8	15/32	21/32	.40
.033	4DP-2-333	7/8	15/32	21/32	.40
.04	4DP-3-403	1-3/16	7/16	21/32	.40
.047	4DP-3-473	1-3/16	7/16	21/32	.40
.05	4DP-3-503	1-3/16	7/16	21/32	.40
.056	4DP-3-563	1-3/16	15/32	11/16	.40
.068	4DP-3-683	1-3/16	1/2	23/32	.50
.075	4DP-3-753	1-1/4	17/32	3/4	.50
.1	4DP-3-104	1-1/4	19/32	27/32	.50
.15	4DP-4-154	1-11/32	5/8	7/8	.55
.2	4DP-5-204	1-9/16	5/8	7/8	.65
.22	4DP-5-224	1-9/16	21/32	7/8	.65
.25	4DP-5-254	1-9/16	11/16	15/16	.70
.27	4DP-5-274	1-9/16	11/16	15/16	.70
.33	4DP-5-334	1-9/16	3/4	15/16	1.00
.47	4DP-6-474	2-3/8	13/16	1-1/16	1.40
.5	4DP-6-504	2-3/8	13/16	1-1/16	1.40

*Reg. Du Pont Trademark

600VDCW

Cap. Mfd.	Part No.	L	W	H	List Price
.001	6DP-1-102	11/16	11/32	17/32	$0.35
.0012	6DP-1-122	11/16	11/32	17/32	.35
.0015	6DP-1-152	11/16	11/32	17/32	.35
.002	6DP-1-202	11/16	11/32	17/32	.35
.0022	6DP-1-222	11/16	11/32	17/32	.35
.0025	6DP-1-252	11/16	11/32	17/32	.35
.0027	6DP-1-272	11/16	11/32	17/32	.35
.003	6DP-1-302	11/16	11/32	17/32	.35
.0033	6DP-1-332	11/16	11/32	17/32	.35
.0039	6DP-1-392	11/16	11/32	9/16	.35
.004	6DP-1-402	11/16	11/32	9/16	.35
.0047	6DP-1-472	23/32	3/8	19/32	.35
.005	6DP-1-562	23/32	3/8	19/32	.35
.0056	6DP-1-562	23/32	3/8	19/32	.35
.006	6DP-1-602	23/32	3/8	5/8	40
.0068	6DP-1-682	23/32	13/32	21/32	.40
.0075	6DP-2-752	7/8	11/32	9/16	.40
.008	6DP-2-802	7/8	11/32	9/16	.40
.0082	6DP-2-822	7/8	11/32	9/16	.40
.01	6DP-2-103	7/8	3/8	19/32	.40
.012	6DP-2-123	7/8	3/8	19/32	.40
.015	6DP-2-153	7/8	13/32	5/8	.40
.02	6DP-2-203	7/8	7/16	21/32	.40
.022	6DP-2-223	7/8	15/32	21/32	.40
.025	6DP-2-253	7/8	1/2	11/16	.45
.027	6DP-3-273	1-3/16	7/16	21/32	.45
.03	6DP-3-303	1-3/16	7/16	21/32	.45
.033	6DP-3-333	1-3/16	7/16	21/32	.45
.039	6DP-3-393	1-3/16	15/32	11/16	.45
.04	6DP-3-403	1-3/16	15/32	11/16	.45
.047	6DP-3-473	1-3/16	1/2	23/32	.50
.05	6DP-3-503	1-3/16	1/2	23/32	.50
.056	6DP-3-563	1-3/16	17/32	3/4	.50
.06	6DP-3-603	1-3/16	17/32	3/4	.55
.068	6DP-4-683	1-11/32	17/32	13/16	.55
.075	6DP-4-753	1-11/32	17/32	13/16	.55
.082	6DP-4-823	1-11/32	9/16	27/32	.55
.1	6DP-4-104	1-11/32	5/8	7/8	.55
.15	6DP-5-154	1-9/16	21/32	7/8	.70
.2	6DP-5-204	1-9/16	23/32	15/16	.80
.22	6DP-5-224	1-9/16	25/32	1	.80
.25	6DP-5-254	1-9/16	13/16	1-1/6	.85
.33	6DP-6-334	2-3/8	3/4	1	1.15
.47	6DP-6-474	2-3/8	7/8	1-1/8	1.60
.5	6DP-6-504	2-3/8	7/8	1-1/8	1.60

1600VDCW

Cap. Mfd.	Part No.	L	W	H	List Price
.001	16DP-2-102	7/8	11/32	9/16	$0.55
.0015	16DP-2-152	7/8	11/32	9/16	.55
.0018	16DP-2-182	7/8	3/8	19/32	.55
.002	16DP-2-202	7/8	3/8	19/32	.55
.0022	16DP-2-222	7/8	3/8	19/32	.55
.0025	16DP-2-252	7/8	13/32	5/8	.55
.003	16DP-2-302	7/8	7/16	21/32	.55
.0033	16DP-2-332	7/8	7/16	21/32	.55
.004	16DP-2-402	7/8	15/32	21/32	.55
.0047	16DP-2-472	7/8	1/2	23/32	.55
.005	16DP-2-502	7/8	17/32	3/4	.60
.006	16DP-3-602	1-3/16	7/16	21/32	.60
.007	16DP-3-702	1-3/16	15/32	11/16	.60
.0075	16DP-3-752	1-3/16	1/2	23/32	.60
.008	16DP-3-802	1-3/16	17/32	3/4	.60
.01	16DP-3-103	1-3/16	17/32	3/4	.60
.015	16DP-4-153	1-11/32	9/16	27/32	.65
.02	16DP-4-203	1-11/32	21/32	7/8	.70
.022	16DP-4-223	1-9/16	5/8	7/8	.70
.025	16DP-5-253	1-9/16	21/32	7/8	.70
.03	16DP-5-303	1-9/16	11/16	15/16	.70
.033	16DP-5-333	1-9/16	23/32	15/16	.70
.04	16DP-5-403	1-9/16	3/4	1	.75
.047	16DP-5-473	1-9/16	13/16	1-1/16	.80
.05	16DP-5-503	1-9/16	13/16	1-1/16	.80

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Dallas 19, Texas

STEATITE TUBULAR CAPACITORS CP TYPE

.05 MFD.
600 V.D.C.
MAX. TEMP. 85° C
ELMENCO

El-Menco CP type paper tubular capacitors are sealed into Steatite Tubes which serve to insulate the capacitor electrically as well as against moisture and heat. The capacitor insert is impregnated with Mineral Oil, thereby assuring long life at 85° C operating conditions. This feature insures successful operation at the high ambient temperatures existing in small, compact enclosures.

The Non-Inductively wound paper and foil units are sealed in the Ceramic Tubes by means of baked Synthetic Resin End Fills which cannot melt at any conceivable operating temperature. The end fills will not dissolve in wax, permitting the capacitors to be potted without damage to the insert. Leads are of tinned copper 2¼″ long.

MINERAL OIL IMPREGNATION NON INDUCTIVE WINDING SYNTHETIC RESIN END SEALS — STEATITE CASE

The Steatite tube and baked synthetic resin end-fill provide a seal which rivals that of hermetically sealed construction, resulting in a dependability and longevity previously unequalled. Whether in operation or on the shelf, this paper tubular capacitor will maintain its excellent characteristics for years.

DIMENSIONS FOR CP TYPE CAPACITORS

	Max. Diameter	Max. Length
CP-1	23/64"	1-1/8"
CP-2	27/64"	1-3/8"
CP-3	31/64"	1-3/8"
CP-4	9/16"	1-5/8"
CP-5	3/4"	2"
CP-6	51/64"	2"
CP-7	1"	2-7/8"

Part numbers can be read as follows: First one or two numbers indicate voltage rating in hundreds of volts. CP indicates type of capacitor. Next number between the dashes indicates case size. Last three digits indicate capacity, the first two being significant figures and the last the decimal multiplier.

Cap. Mfd.	Part No.	List Price
	200VDCW	
.02	2CP-1-203	$0.25
.022	2CP-1-223	.25
.05	2CP-3-503	.30
.1	2CP-4-104	.35
.15	2CP-4-154	.40
.2	2CP-5-204	.45
.22	2CP-5-224	.45
.25	2CP-5-254	.45
.33	2CP-6-334	.55
.47	2CP-6-474	.70
.5	2CP-6-504	.70
	400VDCW	
.01	4CP-1-103	.25
.015	4CP-2-153	.25
.02	4CP-2-203	.25
.022	4CP-2-223	.30
.025	4CP-3-253	.30
.03	4CP-3-303	.30
.033	4CP-3-333	.30
.04	4CP-4-403	.30
.047	4CP-4-473	.30
.05	4CP-4-503	.30
.056	4CP-4-563	.30
.068	4CP-4-683	.35
.075	4CP-4-753	.35
.1	4CP-4-104	.35
.15	4CP-5-154	.45
.2	4CP-6-204	.55
.22	4CP-6-224	.55
.25	4CP-6-254	.55
.33	4CP-7-334	.70
.47	4CP-7-474	.80
.5	4CP-7-504	.90
	600VDCW	
.001	6CP-1-102	$0.25
.0012	6CP-1-122	.25
.0015	6CP-1-152	.25
.002	6CP-1-202	.25
.0022	6CP-1-222	.25
.0025	6CP-1-252	.25
.0027	6CP-1-272	.25
.003	6CP-1-302	.25
.0033	6CP-1-332	.25
.0039	6CP-1-392	.25
.004	6CP-1-402	.25
.0047	6CP-1-472	.25
.005	6CP-1-502	.25
.0056	6CP-1-562	.25
.006	6CP-2-602	.25
.0068	6CP-2-682	.30
.0075	6CP-2-752	.30
.008	6CP-2-802	.30
.0082	6CP-2-822	.30
.01	6CP-2-103	.30
.012	6CP-2-123	.30
.015	6CP-2-153	.30
.02	6CP-3-203	.30
.022	6CP-3-223	.30
.025	6CP-3-253	.35
.03	6CP-4-303	.35
.033	6CP-4-333	.35
.04	6CP-4-403	.35
.047	6CP-4-473	.40
.05	6CP-4-503	.40
.056	6CP-4-563	.40
.06	6CP-5-603	.45
.068	6CP-5-683	.45
	600VDCW	
.075	6CP-5-753	$0.45
.082	6CP-5-823	.45
.1	6CP-5-104	.45
.15	6CP-5-154	.55
.2	6CP-6-204	.65
.22	6CP-6-224	.70
.25	6CP-6-254	.70
.33	6CP-7-334	.95
.47	6CP-7-474	1.25
.5	6CP-7-504	1.25
	1000VDCW	
.001	10CP-1-102	.40
.0015	10CP-1-152	.40
.002	10CP-1-202	.40
.0022	10CP-1-222	.40
.0025	10CP-1-252	.40
.003	10CP-1-302	.40
.0033	10CP-2-332	.40
.004	10CP-2-402	.40
.0047	10CP-2-472	.40
.005	10CP-2-502	.40
.006	10CP-2-602	.40
.0068	10CP-2-682	.40
.0075	10CP-2-752	.40
.01	10CP-2-103	.45
.015	10CP-3-153	.45
.02	10CP-4-203	.45
.022	10CP-4-223	.45
.025	10CP-4-253	.45
.03	10CP-4-303	.45
.033	10CP-5-333	.55
.04	10CP-5-403	.55
.047	10CP-5-473	.55
	1000VDCW	
.05	10CP-5-503	$0.55
.056	10CP-5-563	.60
.068	10CP-5-683	.65
.075	10CP-6-753	.65
.1	10CP-6-104	.70
	1600VDCW	
.001	16CP-2-102	.50
.0015	16CP-2-152	.50
.002	16CP-2-202	.50
.0022	16CP-2-222	.50
.0025	16CP-3-252	.50
.003	16CP-3-302	.50
.0033	16CP-3-332	.50
.004	16CP-3-402	.50
.0047	16CP-3-472	.50
.005	16CP-3-502	.50
.006	16CP-4-602	.55
.0068	16CP-4-682	.55
.007	16CP-4-702	.55
.0075	16CP-4-752	.55
.008	16CP-4-802	.55
.01	16CP-4-103	.55
.015	16CP-5-153	.60
.02	16CP-5-203	.65
.022	16CP-5-223	.65
.025	16CP-5-253	.65
.03	16CP-5-303	.65
.033	16CP-5-333	.65
.04	16CP-6-403	.70
.047	16CP-6-473	.70
.05	16CP-6-503	.70

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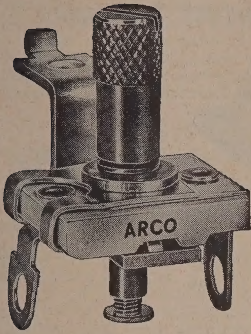
VARIABLE COMPRESSION MICA CAPACITORS



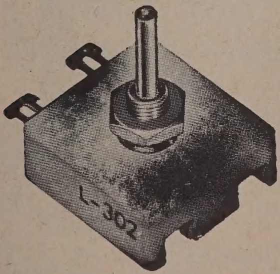
TYPE S46

List Price:
Add 45¢ to the
list price of
trimmer alone

A complete Type 46 trimmer assembly with mounting bracket and adjusting shaft for ease of tuning. Can be supplied as pictured from stock or with construction variations to order.

To specify precede trimmer part number with the letter "S".

For example:
Type 460 trimmer will be ordered as S-460.



TYPE - L30

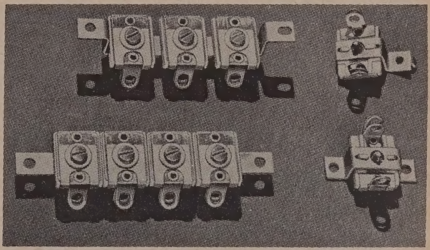
List Price:
Add 10¢ to the
list price of
padder alone

The Type 30 or Type 30M padder can now be obtained with a special adjusting screw which has been lengthened to accommodate a tuning knob. To obtain a padder with the special screw, precede the regular padder part number with the letter "L". For example, a 302 padder with the special screw would be specified as "L-302".

NOTE: Knobs may also be obtained if desired at a cost of 30¢ each list.

The two new assemblies shown at left have been developed due to increasing demands for miniaturized tuning devices. However, certain precautions must be taken in design so that these variable mica capacitors are not used in circuits for which they are not adapted. These assemblies are highly stable for components of their design, but they do not match the stability of the air dielectric tuners. Short term drift of the mica trimmers and padders after tuning is negligible. Long term drift at one setting due to changes in atmospheric conditions and physical motion should be well within ± 2%.

It should also be remembered that variable compression type mica capacitors do not have linear variation with adjustment. Rate of change of capacity decreases per turn as the screw is withdrawn. For example, a 306 padder will reduce to half the nominal maximum value within one opening turn. Those with a greater number of plates require further screw disengagement for a similar percentage reduction in capacity value. On the other hand, a 302 padder will reach one-half the nominal maximum in less than one-half turn open. Type 46 trimmers operate in much the same way. Detailed information on specific sizes is available upon request.



Mounting brackets as illustrated above can be supplied for all types of trimmers in flat "Z" (single mounting hole with or without non-rotational stop), and "U" (dual mounting hole) configurations.

	List Price
Bracket for mounting 1 Trimmer	$0.15
Bracket for mounting 2 Trimmers	.18
Bracket for mounting 3 Trimmers	.21
Bracket for mounting 4 Trimmers	.24
Bracket for mounting 5 Trimmers	.27
Bracket for mounting 6 Trimmers	.30

ARCO electronics inc.
ELMENCO capacitors

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Los Angeles 35, California
ARCO ELECTRONICS, INC.
Dallas 19, Texas

TRIMMERS

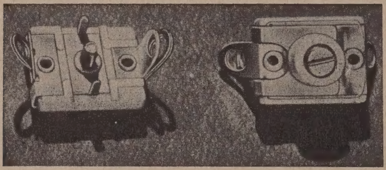
El-Menco Trimming Condensers are treated for resistance to humidity and for permanence of capacity setting.

The base is made of the lowest dielectric loss ceramic material available and the mica is clear India Ruby.

The soldering lugs may be bent in any position without affecting capacity setting due to the rigid construction of adjusting plates.

Trimmers shown here are standard sizes and capacities.

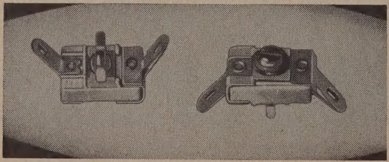
Voltage 350 VDCT — 175 VDCW.



TYPE 46 STANDARD TRIMMER ¾'' x ⅝''

TYPE 46—STANDARD TRIMMER

TYPE 46W		GUARANTEED RANGE		
NUMBER PART	PLATES NUMBER OF	At Tight Cap. Will Be More Than MMF.	At 3 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
460	1¼ Pl.	15	1.5	$0.40
461	1¾ Pl.	30	2.7	.40
462	2 Pl.	80	5	.45
463	3 Pl.	180	9	.50
464	4 Pl.	280	25	.55
465	5 Pl.	380	50	.60
466	6 Pl.	480	80	.65
467	7 Pl.	580	110	.75
468	8 Pl	680	140	.80
469	9 Pl.	780	170	.85

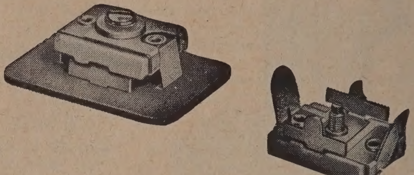


TYPE 40 MINIATURE TRIMMER ⅜'' x 9/16''

TYPE 40—MINIATURE TRIMMER

TYPE 40		GUARANTEED RANGE		
NUMBER PART	PLATES NUMBER OF	At Tight Cap. Will Be More Than MMF.	At 3 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
400	1⅛ Pl.	7	0.9	$0.40
402	2 Pl.	20	1.5	.45
403	3 Pl.	35	3	.50
404	4 Pl	60	8	.55

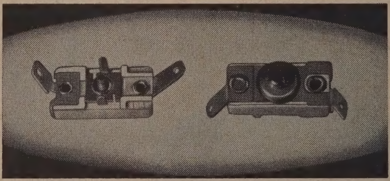
TYPE PC46
PRINTED CIRCUIT TRIMMERS



The Elmenco Type 46 trimmer series has been adapted for printed circuit techniques through alteration of terminals and mounting configuration. The holes in the terminal lugs are removed since necessity for hook-up is eliminated. The resulting solid terminals have greatly increased spring action, allowing the trimmer to be "snapped-in" the circuit and firmly held until soldered.

This printed circuit trimmer, available at present only in the Type 46 style, is identified by the prefix letter "PC". All capacitance ranges listed for Type 46 are available, designated as part numbers PC460 through PC468.

For list price add $0.05 to list price of standard Type 46 trimmer.



TYPE 42 MIDGET TRIMMER ⅜'' x ¾''

TYPE 42—MIDGET TRIMMER

TYPE 42		GUARANTEED RANGE		
NUMBER PART	PLATES NUMBER OF	At Tight Cap. Will Be More Than MMF.	At 3 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
420	1⅛ Pl.	12	1	$0.40
421	1¾ Pl.	25	2	.40
422	2 Pl.	40	4	.45
423	3 Pl.	100	7	.50
424	4 Pl.	150	14	.55
425	5 Pl.	200	24	.60
426	6 Pl.	250	37	.65
427	7 Pl.	300	55	.75
428	8 Pl.	350	70	.80
429	9 Pl.	400	90	.85

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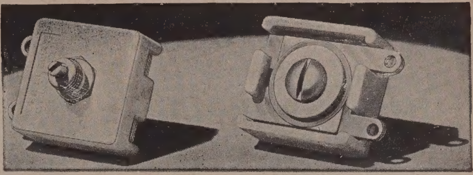
Single and Dual
PADDERS

El-Menco Padding Condensers have been acclaimed by engineers as the finest development in adjustable mica condensers.

The construction is such as to completely enclose and protect the delicate edges of the mica films, made of the finest quality clear India ruby mica.

The phosphor bronze adjusting plates assure permanent resilience and freedom from mechanical fatigue. All parts are heavily plated to resist corrosion.


TYPE 30 AND TYPE 30-M PADDER 7/8" x 15/16"

TYPE 30
500 Volts DC Flash-Test — 250 WVDC

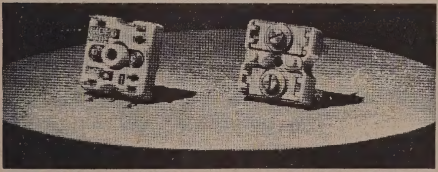
PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At 1½ Inch Pounds Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2½ Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
302	2 Pl.	130	15	$0.80
303	3 Pl.	340	65	.85
304	4 Pl.	550	100	.90
305	5 Pl.	760	190	1.00
306	6 Pl.	970	275	1.10
307	7 Pl.	1180	350	1.20
308	8 Pl.	1390	450	1.25
309	9 Pl.	1600	550	1.35
310	10 Pl.	1890	650	1.45
311	11 Pl.	2110	780	1.55
312	12 Pl.	2330	880	1.65
313	13 Pl.	2605	1150	1.75
314	14 Pl.	2830	1300	1.85
315	15 Pl.	3055	1400	1.95

Screw is insulated from top plate my mica washer. Above maximum capacity values are based on using 1½ to 1¾ Mil Mica films.

TYPE 30-M
1000 Volts DC Flash-Test — 500 Working Volts DC

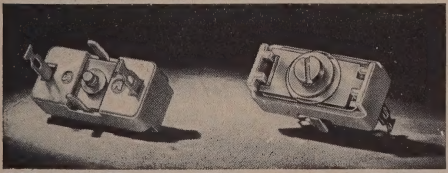
PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At 1½ Inch Pounds Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2½ Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
302-M	2 Pl.	120	15	$0.80
303-M	3 Pl.	320	65	.90
304-M	4 Pl.	500	100	.95
305-M	5 Pl.	690	180	1.05
306-M	6 Pl.	880	265	1.15
307-M	7 Pl.	1070	340	1.25
308-M	8 Pl.	1260	425	1.30
309-M	9 Pl.	1415	525	1.40
310-M	10 Pl.	1600	615	1.50
311-M	11 Pl.	1785	730	1.60
312-M	12 Pl.	1970	800	1.70
313-M	13 Pl.	2155	1000	1.80
314-M	14 Pl.	2340	1100	1.90
315-M	15 Pl.	2525	1200	2.00

Screw is insulated from top plate by mica washer. Above maximum capacity values are based on using 2 to 2¼ Mil Mica.


TYPE 50 DUAL PADDER 175VDCW
(will fit any size shield having dimensions exceeding 1-1/16" x 1-1/16")

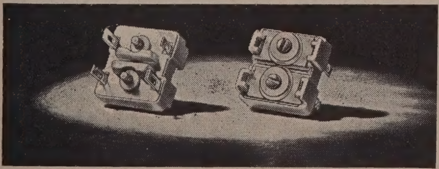
PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At Tight Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
502	2 Pl.	80	7.5	$0.85
503	3 Pl.	160	19	1.00
504	4 Pl.	240	50	1.15

◄TYPE 50 Dual Padders provide two variable trimmers mounted on a single base. This unit is designed as a tuning component for I.F. transformers; and as such, may be snap-in mounted along with the transformer coil in any size shield having dimensions exceeding 1 1/16" x 1 1/16'.


TYPE 58 PADDER 1" x 15/32" 175VDCW

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At Tight Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
582	2 Pl.	80	7.5	$0.55
583	3 Pl.	160	19	.60
584	4 Pl.	240	50	.65

◄TYPE 58 Padder is a single variable trimmer section provided with a two-pronged staple mounting for attachment to bracket or chassis. Base is made of lowest loss steatite and the mica is India Ruby.


TYPE 60 DUAL PADDER 175VDCW
(will fit any size shield having dimensions exceeding ¾" x ¾")

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At Tight Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
602	2 Pl.	55	7	$0.80
603	3 Pl.	100	15	.95
604	4 Pl.	160	35	1.10
605	5 Pl.	220	60	1.25

◄TYPE 60 Dual Padders provide two variable trimmers mounted on a single base. This unit is designed as a tuning component for I.F. transformers; and as such, may be snap-in mounted along with the transformer coil in any size shield having dimensions exceeding ¾" x ¾"

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Dallas 19, Texas

CERAMIC DISC

MINIATURE GENERAL PURPOSE

Elmenco Type CCD ceramic disc capacitors have improved ceramic bodies which impart longer life and greater stability to any application. The standard CCD line has a ±10% tolerance and 1000VDCW rating, making possible a single ceramic disc stock for universal use. Whether a broad coupling or by-pass application, or a critical close tolerance use, Elmenco CCD units fill the bill with dependability and economy. The 'space-saving' size of Elmenco discs is another feature designed to offer greater service convenience with complete safety of operation. In addition to the 1000VDCW line, higher voltage ratings are available in Type CCD units. 3000VDCW (Type 3CCD) and 6000-VDCW (Type 6CCD) disc ceramics are supplied in tolerance of ±20%.

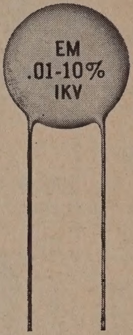
TYPE CCD

(ELMENCO Type GP)

± 10% Tolerance — 1000 VDCW

Cap. mmf.	Part Number	List Price	Cap. mmf.	Part Number	List Price
5	CCD-050	$0.25	390	CCD-391	$0.25
10	CCD-100	0.25	400	CCD-401	0.25
12	CCD-120	0.25	470	CCD-471	0.25
15	CCD-150	0.25	500	CCD-501	0.25
18	CCD-180	0.25	560	CCD-561	0.25
20	CCD-200	0.25	680	CCD-681	0.25
22	CCD-220	0.25	750	CCD-751	0.25
25	CCD-250	0.25	800	CCD-801	0.25
27	CCD-270	0.25	820	CCD-821	0.25
30	CCD-300	0.25	1000	CCD-102	0.25
33	CCD-330	0.25	1200	CCD-122	0.25
39	CCD-390	0.25	1500	CCD-152	0.25
47	CCD-470	0.25	2000	CCD-202	0.25
50	CCD-500	0.25	2200	CCD-222	0.25
56	CCD-560	0.25	2500	CCD-252	0.25
68	CCD-680	0.25	2700	CCD-272	0.25
75	CCD-750	0.25	3000	CCD-302	0.25
82	CCD-820	0.25	3300	CCD-332	0.25
91	CCD-910	0.25	3900	CCD-392	0.25
100	CCD-101	0.25	4700	CCD-472	0.25
120	CCD-121	0.25	5000	CCD-502	0.30
150	CCD-151	0.25	5600	CCD-562	0.30
180	CCD-181	0.25	6800	CCD-682	0.30
200	CCD-201	0.25	8200	CCD-822	0.30
220	CCD-221	0.25	10000	CCD-103	0.30
250	CCD-251	0.25	*15000	CCD-153	0.30
270	CCD-271	0.25	*20000	CCD-203	0.30
300	CCD-301	0.25	*30000	CCD-303	0.50
330	CCD-331	0.25			

*500 VDCW, ± 20% Tolerance



TYPE 3CCD

(ELMENCO Type GP)

High Voltage — ± 20% Tolerance
3000 VDCW

Cap. mmf.	Part Number	List Price	Cap. mmf.	Part Number	List Price
4.7	3CCD-4R7	$0.40	180	3CCD-181	$0.40
6.8	3CCD-6R8	0.40	220	3CCD-221	0.40
10	3CCD-100	0.40	270	3CCD-271	0.40
15	3CCD-150	0.40	330	3CCD-331	0.40
22	3CCD-220	0.40	390	3CCD-391	0.40
27	3CCD-270	0.40	470	3CCD-471	0.40
33	3CCD-330	0.40	560	3CCD-561	0.40
39	3CCD-390	0.40	680	3CCD-681	0.40
47	3CCD-470	0.40	820	3CCD-821	0.40
56	3CCD-560	0.40	1000	3CCD-102	0.40
68	3CCD-680	0.40	2000	3CCD-202	0.40
82	3CCD-820	0.40	5000	3CCD-502	0.40
100	3CCD-101	0.40			
120	3CCD-121	0.40			
150	3CCD-151	0.40			

TYPE 6CCD

(ELMENCO Type GP)

High Voltage — ± 20% Tolerance
6000 VDCW

Cap. mmf.	Part Number	List Price	Cap. mmf.	Part Number	List Price
4.7	6CCD-4R7	$0.50	82	6CCD-820	$0.50
6.8	6CCD-6R8	0.50	100	6CCD-101	0.50
10	6CCD-100	0.50	120	6CCD-121	0.50
15	6CCD-150	0.50	150	6CCD-151	0.50
22	6CCD-220	0.50	220	6CCD-221	0.50
27	6CCD-270	0.50	330	6CCD-331	0.50
33	6CCD-330	0.50	470	6CCD-471	0.50
47	6CCD-470	0.50			
56	6CCD-560	0.50			
68	6CCD-680	0.50			

TEMPERATURE STABLE

This new ELMENCO ceramic capacitor maintains excellent capacitance stability with wide temperature variation. The graph illustrates typical percentage variation of capacity value with temperature. The operating temperature range has been extended to −55°C. to +125°C. without derating of the 1000VDCW specification. Standard tolerance is ±10%. The combined small size, low cost, and high stability represents another significant advance in the quality line of ELMENCO capacitors. All units are marked "TS" for identification.

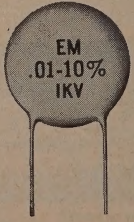
TYPE CCS

(ELMENCO Type TS)

± 10% Tolerance — 1000 VDCW

Cap. mmf.	Part Number	List Price	Cap. mmf.	Part Number	List Price
150	CCS-151	$0.30	820	CCS-821	$0.35
180	CCS-181	0.30	1000	CCS-102	0.35
200	CCS-201	0.30	1200	CCS-122	0.35
220	CCS-221	0.30	1500	CCS-152	0.35
250	CCS-251	0.30	1800	CCS-182	0.35
270	CCS-271	0.30	2000	CCS-202	0.35
300	CCS-301	0.30	2200	CCS-222	0.35
330	CCS-331	0.30	2500	CCS-252	0.40
390	CCS-391	0.30	2700	CCS-272	0.40
470	CCS-471	0.30	3000	CCS-302	0.40
500	CCS-501	0.30	3300	CCS-332	0.40
560	CCS-561	0.30	3900	CCS-392	0.40
620	CCS-621	0.30	4700	CCS-472	0.40
680	CCS-681	0.30			
750	CCS-751	0.30			

LOOK for the "EM" brand on all ELMENCO disc ceramic capacitors



ARCO electronics inc.
ELMENCO *capacitors*

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Dallas 19, Texas

CERAMIC DISC — Temperature Compensating

TYPE CCTO

Elmenco Type CCTO ceramic disc capacitors are zero temperature coefficient units specifically suited for high stability, high Q application. In addition to extreme temperature stability, Type CCTO capacitors have very high insulation resistance and low aging rate. These special characteristics are added to the high 1000VDCW rating and close tolerance of the entire Elmenco ceramic line to provide a superior capacitor for the special purpose intended. Type CCTO capacitors are identified by "NPO" printed on each unit.

NPO — TYPE CCTO

(ELMENCO Type TC)

± 10% Tolerance 1000 VDCW

Cap. mmf.	Part Number	List Price	Cap. mmf.	Part Number	List Price
*2.2	CCTO-2R2	$0.50	27	CCTO-270	$0.50
*3.3	CCTO-3R3	0.50	30	CCTO-300	0.50
*4.7	CCTO-4R7	0.50	33	CCTO-330	0.50
5.0	CCTO-050	0.50	36	CCTO-360	0.50
6.8	CCTO-6R8	0.50	39	CCTO-390	0.50
10	CCTO-100	0.50	47	CCTO-470	0.50
12	CCTO-120	0.50	51	CCTO-510	0.55
15	CCTO-150	0.50	56	CCTO-560	0.55
18	CCTO-180	0.50	68	CCTO-680	0.55
20	CCTO-200	0.50	75	CCTO-750	0.55
22	CCTO-220	0.50	82	CCTO-820	0.55
24	CCTO-240	0.50	100	CCTO-101	0.55

*± .5% mmf. tolerance

TYPE CCTN

Another member of the Elmenco temperature compensating disc ceramic line is the Type CCTN unit which has a negative temperature coefficient of —750 ppm/°C. (N750). These units are used to counterbalance shifts in other circuit components with change in temperature. The result is a more stable circuit essential to many frequency control applications. Improved ceramic bodies in the temperature compensating line provide greater long term stability in addition to accurate temperature compensation. Type CCTN capacitors are identified by "N750" imprinted on each unit except the smallest size. On the small units the E.I.A. temperature coefficient designation "U2" is imprinted.

N750 — TYPE CCTN

(ELMENCO Type TC)

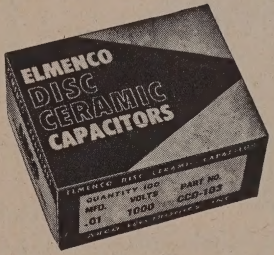
± 10% Tolerance 1000 VDCW

Cap. mmf.	Part Number	List Price	Cap. mmf.	Part Number	List Price
5	CCTN-050	$0.50	68	CCTN-680	$0.50
10	CCTN-100	0.50	75	CCTN-750	0.50
15	CCTN-150	0.50	82	CCTN-820	0.50
22	CCTN-220	0.50	100	CCTN-101	0.50
27	CCTN-270	0.50	120	CCTN-121	0.50
33	CCTN-330	0.50	150	CCTN-151	0.50
39	CCTN-390	0.50	200	CCTN-201	0.50
47	CCTN-470	0.50	220	CCTN-221	0.50
56	CCTN-560	0.50	270	CCTN-271	0.50
62	CCTN-620	0.50	300	CCTN-301	0.50

NOTE: In addition to the NPO and N750 standard stock ratings, a wide assortment of other negative temperature coefficient ratings are available to special order. N030, N080, N150, N220, N330, N470, N1500, N2100, N3300, N4100, N4700, and N5600 ratings are included. Specifications and prices will be supplied upon request.

Nominal Diameter	Max. Diam.	Capacitance Range (mmf.) CCD	3CCD*	6CCD*	CCTO*	CCTN	CCS
1/4"	.290	5— 820	4.7— 15		2.2— 12	5— 30	150— 330
5/16"	.406	1000— 3300	22— 820		15— 30	33— 68	390— 750
1/2"	.570	4700— 8200	1000— 2000	4.7— 6.8	33— 68	75— 150	820— 2000
5/8"	.660	10000— 20000	5000	10— 22—	75— 82	200— 220—	2200— 3000
3/4"	.800	30000		27— 470	100	270— 300	3300— 4700

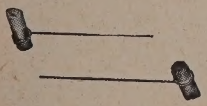
Maximum Thickness: Types CCD, CCTO, CCTN 5/32"
Type 3CCD ¼"
Type 6CCD 5/16"
* Below 5 mmf. .300 x 3/16" Thick max.



PACKED 100 CAPACITORS OF THE SAME VALUE IN A COMPACT COLORFUL BLUE & YELLOW BOX

Capacity value, voltage and part number clearly indicated for quick identification.

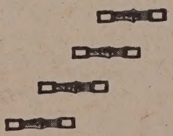
VARIABLE CERAMIC TRIMMER



Adjustable ceramic trimmer capacitor for high frequency applications. Silvered Steatite tubes ⅝" in length provide capacity ranges listed below upon insertion of 6-32 screw.

PART No.	CAP. RANGE MMF.	LIST PRICE
CV-1	0.5 - 3	$0.35
CV-2	1 - 4	.35
CV-3	2 - 6	.35

FEED THRU CERAMICS



Compact rugged ceramic feed through capacitors are designed for high frequency coupling with a minimum of inductive reactance through elimination of wire leads. These units are three dot RMA coded and rated at 500VDCW.

PART No.	CAP. (MMF.) (Guar. Min. Val.)	LIST PRICE
CCF-501	500	$0.40
CCF-102	1000	.40
CCF-152	1500	.40
CCF-202	2000	.40

ARCO electronics inc.
ELMENCO capacitors

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ARCO CM-15 MINIATURE MICA CAPACITOR KIT #1

FOR EXPERIMENTAL WORK

THESE MINIATURES FIT INTO THE SMALLEST AREA CAPACITOR SIZE (9/32" x ½" x 3/16")

SPECIAL KIT LIST PRICE

ONLY $90.00

DON'T GET CAUGHT SHORT!

ALWAYS HAVE THE CORRECT CAPACITY ON HAND!

This Handy Kit consists of 46 most commonly used Capacitors . . . per MIL-C-5 specifications . . . five of each capacity as listed on page P-376 packed in individual tuck boxes, of 5 each properly identified for permanent use.

•

The complete set of capacitors amounts to $111.50 at list prices. You get the entire set *for only* $90.00.

COMPARE THE COST!

THESE KITS CONTAIN FIVE EACH OF THE FOLLOWING ELMENCO MICA CAPACITORS (500 V D C W)

CM20 Cap. mmf.	CM20 Cap. mmf.	CM20 Cap. mmf.	CM20 Cap. mmf.	CM30 Cap. mmf.	CM30 Cap. mmf.
5	39	120	390	1100	3600
10	43	130	430	1200	3900
12	47	150	470	1300	4300
15	51	160	510	1500	4700
18	56	180	560	1600	5100
20	62	200	620	1800	5600
22	68	220	680	2000	6200
24	75	240	750	2200	CM35
27	82	270	820	2400	6800*
30	91	300	910	2700	7500*
33	100	330	1000	3000	8200*
36	110	360		3300	9100*
					10000*

*300VDCW

PER MIL-C-5 SPECIFICATIONS

MIL-C-5

ARCO SILVERED MICA KIT #3

SPECIAL KIT LIST PRICE

$325

Purchased individually the total list price value of the capacitors contained in this kit would be . . . $385

This kit contains the complete range of ELMENCO silvered molded mica capacitors from 5 mmf. to 10,000 mmf. manufactured in accordance with MIL-C-5 specifications. All units are of letters "C", "D" or "E" characteristics as specified and letter "J" (5%) tolerance and are MIL color coded.

MIL-C-5

ARCO REG. FOIL MICA KIT #2

This kit contains the complete range of ELMENCO regular foil molded mica capacitors from 5 mmf. to 10,000 mmf. manufactured in accordance with MIL-C-5 specifications. All units are of the letter "B" characteristics and letter "K" (10%) tolerance and are MIL color coded.

SPECIAL KIT LIST PRICE

$140

Purchased individually the total list price value of the capacitors contained in this kit would be . . . $158.40

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FOR: ENGINEERING LABS • GOVERNMENTAL AGENCIES • EXPERIMENTAL LABS SCHOOLS, ETC.

DUR-MICA the silvered mica capacitor coated with a specially developed plastic coating for extra durability . . . provides maximum protection at environmental extremes of moisture and temperature.

ARCO DM-15 KIT
ELMENCO
SILVERED
DUR-MICA CAPACITORS
ARCO
CAPACITOR KIT

ARCO DM-15 KIT #10

This handy kit consists of five of each DM-15 capacity as listed. All are 500 VDCW and ±5% tolerance . . . packed in individual transparent plastic snap boxes, properly identified for ease of handling.

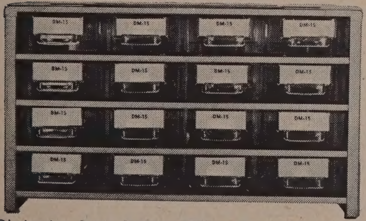
SPECIAL KIT LIST PRICE $95^00

Purchased individually the total list price value of the capacitors contained in this kit would be — **$103.31**

CAP. MMF.	TYPE DESIGNATION	CAP. MMF.	TYPE DESIGNATION
1	DM-15-010†	91	DM-15-910
2	DM-15-020†	100	DM-15-101
3	DM-15-030†	110	DM-15-111
5	DM-15-050†	120	DM-15-121
10	DM-15-100	130	DM-15-131
12	DM-15-120	150	DM-15-151
15	DM-15-150	160	DM-15-161
18	DM-15-180	180	DM-15-181
20	DM-15-200	200	DM-15-201
22	DM-15-220	220	DM-15-221
24	DM-15-240	240	DM-15-241
27	DM-15-270	250	DM-15-251
30	DM-15-300	270	DM-15-271
33	DM-15-330	300	DM-15-301
36	DM-15-360	330	DM-15-331
39	DM-15-390	360	DM-15-361
43	DM-15-430	390	DM-15-391
47	DM-15-470	430*	DM-15-431
50	DM-15-500	470*	DM-15-471
51	DM-15-510	500*	DM-15-501
56	DM-15-560	510*	DM-15-511
62	DM-15-620	560*	DM-15-561
68	DM-15-680	620*	DM-15-621
75	DM-15-750	680*	DM-15-681
82	DM-15-820	750*	DM-15-751
		820*	DM-15-821

* All capacitors marked with * are 300WV.
† Minimum tolerance ±0.5 mmf.

ARCO MINIATURE DM-15 CAPACITOR STOCK PACKAGE



SPECIAL LIST PRICE $596

Distinctive Steel Cabinet With Plastic Pull-Out Drawers Supplied FREE With DM-15 Package.

Purchased individually the total list price value of the capacitors contained in this package would be — **$715**

A complete stock of DM-15 capacitors (fifty-one items) totaling 2100 capacitors; fifty each of the most used values and 25 each of the others. Capacity range is 1-820 mmf., tolerance ±5% or ±0.5 mmf., whichever is greater.

ARCO
DUR-MICA KIT
ELMENCO
DUR-MICA CAPACITORS
ARCO
CAPACITOR KIT

ARCO DUR-MICA KIT #11

This Kit contains five each of the following listed DUR-MICA capacitors, all 500 VDCW and ±5% tolerance; or ±0.5 mmf., whichever is greater. Packed in individual transparent plastic snap boxes, properly identified for ease of handling.

SPECIAL KIT LIST PRICE $250^00

Purchased individually the total list price value of the capacitors contained in this kit would be — **$286.35**

CAP. MMF.	TYPE DESIGNATION	CAP. MMF.	TYPE DESIGNATION
2	DM15-020M	360	DM19-361J
5	DM15-050K	390	DM19-391J
10	DM15-100J	430	DM19-431J
12	DM15-120J	470	DM19-471J
15	DM15-150J	510	DM19-511J
18	DM15-180J	560	DM19-561J
20	DM15-200J	620	DM19-621J
22	DM15-220J	680	DM20-681J
24	DM15-240J	750	DM20-751J
27	DM15-270J	820	DM20-821J
30	DM15-300J	910	DM20-911J
33	DM15-330J	1000	DM20-102J
36	DM15-360J	1100	DM20-112J
39	DM15-390J	1200	DM20-122J
43	DM15-430J	1300	DM20-132J
47	DM15-470J	1500	DM20-152J
51	DM15-510J	1600	DM20-162J
56	DM15-560J	1800	DM20-182J
62	DM15-620J	2000	DM20-202J
68	DM15-680J	2200	DM20-222J
75	DM15-750J	2400	DM20-242J
82	DM15-820J	2700	DM20-272J
91	DM15-910J	3000	DM20-302J
100	DM15-101J	3300	DM20-332J
110	DM15-111J	3600	DM20-362J
120	DM15-121J	3900	DM20-392J
130	DM15-131J	4300	DM20-432J
150	DM15-151J	4700	DM30-472J
160	DM19-161J	5100	DM30-512J
180	DM19-181J	5600	DM30-562J
200	DM19-201J	6200	DM30-622J
220	DM19-221J	6800	DM30-682J
240	DM19-241J	7500	DM30-752J
270	DM19-271J	8200	DM30-822J
300	DM19-301J	9100	DM30-912J
330	DM19-331J	10000	DM30-103J

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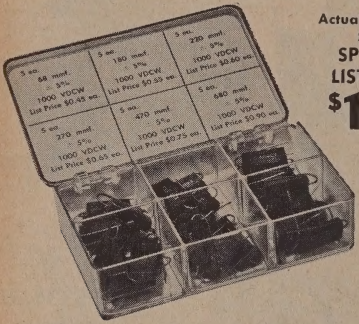
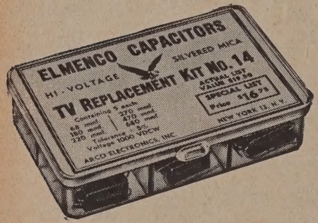
FOR RESALE TO SERVICE DEALERS

ARCO TV HI-VOLTAGE REPLACEMENT KIT #14

An assortment of the most popular ELMENCO High Voltage Silvered Mica Capacitors used in all TV circuits


5 ea. 68 mmf. ± 5% 1000 VDCW List Price $0.45 ea.
5 ea. 180 mmf. ± 5% 1000 VDCW List Price $0.55 ea.
5 ea. 220 mmf. ± 5% 1000 VDCW List Price $0.60 ea.
5 ea. 270 mmf. ± 5% 1000 VDCW List Price $0.65 ea.
5 ea. 470 mmf. ± 5% 1000 VDCW List Price $0.75 ea.
5 ea. 680 mmf. ± 5% 1000 VDCW List Price $0.90 ea.

Actual List Value
$19.50
SPECIAL LIST PRICE
$16.75


ELMENCO CAPACITORS
HI-VOLTAGE
SILVERED MICA
TV REPLACEMENT KIT NO. 14
SPECIAL LIST Price $16.75
NEW YORK 13, N.Y.
ARCO ELECTRONICS, INC.

- All Silvered Mica
- All 1000 Working Volts
- All ± 5% Tolerance
- All Capacities, Tolerance and Voltages Imprinted on Each Unit
- Handy Compact Plastic Container

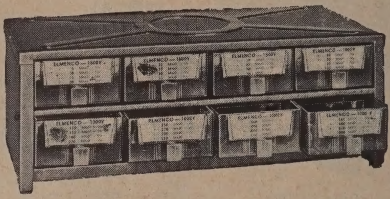
CONTAINS 5 EACH OF:
68 mmf. 270 mmf.
180 mmf. 470 mmf.
220 mmf. 680 mmf.

FOR RESALE TO SERVICE DEALERS

"TV-1000" HI-VOLTAGE STOCK PACKAGE

A complete stock assortment of 101 of the most popular ELMENCO Silvered Mica Hi-Voltage Capacitors used in all TV Circuits . . . All ± 5% Tolerance

This handy 8 drawer sturdy metal cabinet FREE with every stock package order!



FREE CABINET $4.95 Value

LIST PRICE
$63.00

Capacities, Tolerance & Voltages Imprinted on Each Unit

CONTENTS

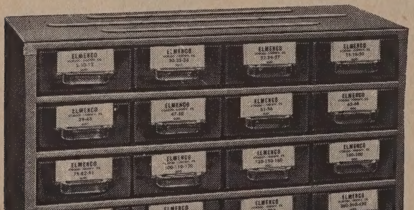
Quan.	Cap. mmf.	Voltage Rating	Quan.	Cap. mmf.	Voltage Rating
3	5	1500	2	120	1000
3	10	1500	3	150	1000
3	15	1500	4	180	1000
2	20	1500	4	220	1000
3	22	1500	3	250	1000
2	27	1500	4	270	1000
2	30	1500	3	300	1000
2	33	1500	4	330	1000
3	39	1500	3	360	1000
4	47	1500	3	390	1000
3	50	1500	4	470	1000
4	56	1500	3	510	1000
4	68	1000	3	560	1000
4	82	1000	4	680	1000
2	91	1000	4	820	1000
3	100	1000	3	1000	1000

TV REPLACEMENT "HI-VOLT" STOCK PACKAGE

A complete distributor stock assortment of the most popular ELMENCO Hi-Voltage Silvered Mica Capacitors used in all TV Circuits

A complete stock of HI-VOLTAGE capacitors (forty-nine items) totaling 1180 capacitors; 40 each of the most used values and 20 each of the others. Capacity range 5 mmf to 56 mmf VDCW, 62 mmf to 1000 mmf 1000 VDCW.

- ALL SILVERED MICA
- ALL ± 5% TOLERANCE
- ALL HI-VOLTAGE CAPACITORS
- FULL 20 DRAWER COMPACT STEEL CABINET FREE!



FULL 20 DRAWER COMPACT STEEL CABINET FREE

Purchased individually the total list price would be **$689.90.**

SPECIAL LIST PRICE **$575.00**

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ELMENCO capacitors

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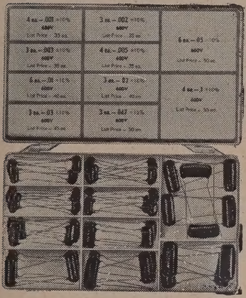
MYLAR* — PAPER BY-PASS CAPACITOR KIT #15

A revolutionary low cost quality capacitor that can be installed with complete confidence



FEATURES

- MINIATURIZED (50% smaller)
- High Temperature Operation
- Superior Moisture Resistance
- Long Life and High Reliability
- High Insulation Resistance
- All Values ± 10% Tolerance
- Transistor & Printed Circuit Application

LIST PRICE **$16.50**

ELMENCO TUBULARS
ARCO ELECTRONICS INC. NEW YORK 13, N. Y.

CONTENTS

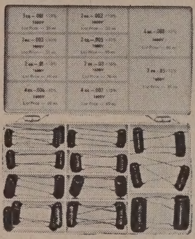
4 each	.001	600V
3 each	.002	600V
3 each	.003	600V
4 each	.005	600V
6 each	.01	600V
3 each	.02	600V
3 each	.03	600V
3 each	.047	600V
6 each	.05	600V
4 each	.1	600V

* Reg. Du Pont Trademark

FOR RESALE TO SERVICE DEALERS

MYLAR* — PAPER BUFFER CAPACITOR KIT #16

Guaranteed against 3200 volts surge in all auto radio applications



FEATURES

- 50% Smaller Than Other Brands
- All Values ± 10% Tolerance
- High Temperature Operation
- Superior Moisture Resistance
- Long Life and High Reliability
- High Insulation Resistance

LIST PRICE **$16.35**

ELMENCO TUBULARS
BUFFER KIT
16
ARCO ELECTRONICS INC. NEW YORK 13, N. Y.

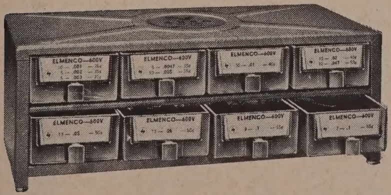
ALL VALUES
±10% TOLERANCE

CONTENTS

3 each	.001	1600V
2 each	.002	1600V
2 each	.003	1600V
2 each	.005	1600V
4 each	.006	1600V
4 each	.007	1600V
4 each	.008	1600V
2 each	.01	1600V
2 each	.02	1600V
2 each	.05	1600V

"DP-600" TUBULAR STOCK PACKAGE

A complete stock assortment of 125 of the most popular ELMENCO Mylar* - Paper Capacitors

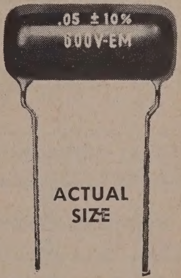


FREE! This handy 8 drawer sturdy metal cabinet given FREE with every stock package order!

LIST PRICE **$54.00**

CONTENTS

10	.001	30	.01
5	.002	10	.02
5	.003	10	.047
5	.0047	25	.05
10	.005	15	.1



- MINIATURIZED
- ALL ± 10% TOLERANCE
- ALL 600 WORKING VOLTS

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ELMENCO capacitors

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ARCO ELECTRONICS, INC.
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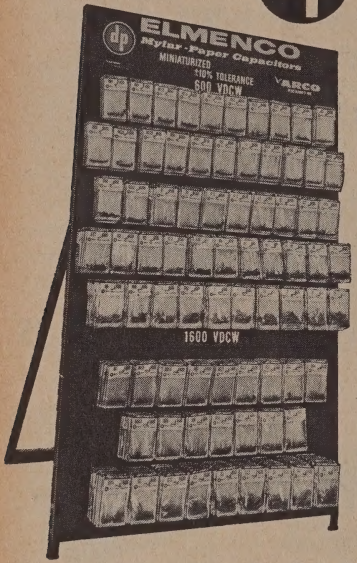
ARCO DEAL #1925

A complete distributor stock assortment of the most popular

ELMENCO dp MYLAR*-PAPER CAPACITORS


ELMENCO
dp
Mylar-Paper Capacitors
MINIATURIZED
±10% TOLERANCE
600 VDCW
ARCO
1600 VDCW

THIS $75.00 SELF-SERVICE RACK GIVEN FREE WITH EACH ARCO DEAL #1925

Dimensions
78″ h x 47″ w x 29″ d

Deal #1925 contains a complete stock of dp capacitors (67 values) totaling 1925 capacitors; 25 * each of all the 600 volt and 1600 volt values † listed on page 385 . . . individually packed 5 dp capacitors, of the same values to a "5-PAK".

For complete information ask for form #105.

TOTAL LIST PRICE

$968.75

†NOTE: Does not include .33, .47, and .5 mfd., 600 volts.

***NOTE:** The following values are in quantities of 50 each. .001, .002, .003, .005, .01, .02, .03, .047, .05, .1 mfd.

67 FAST MOVING VALUES

Guaranteed Sale . . . exchangeable at any time.

INDIVIDUALLY PACKED

5 capacitors to a "5 pak" in transparent bag. Each bag marked with list price.

600V and 1600V

GREATER SALES APPEAL

Colorful Blue & Yellow Self-Service Steel Rack. Each steel rod will hold at least ten "5 Paks."

ARCO-ELMENCO
.05
CAP
600
VOLTS
dp
Mylar-Paper Capacitors
5 EACH

ARCO dp "5 Pak"

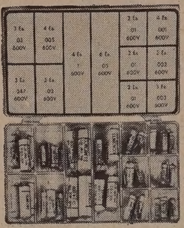
FOR RESALE TO SERVICE DEALERS

ARCO BY-PASS CAPACITOR KIT #9

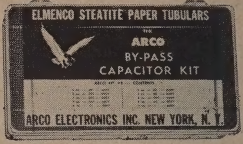
LIST PRICE **$12.50**

CP-Type

Mineral Oil Impregnation
Non Inductive Winding
Synthetic Resin End Seals
Steatite Case



A low cost, practical assortment of fast moving sizes for service replacement!


ELMENCO STEATITE PAPER TUBULARS
ARCO
BY-PASS
CAPACITOR KIT
ARCO ELECTRONICS INC. NEW YORK, N.Y.

CONTENTS

4 ea. — .001 — 600V
3 ea. — .002 — 600V
3 ea. — .003 — 600V
4 ea. — .005 — 600V
6 ea. — .01 — 600V
3 ea. — .02 — 600V
3 ea. — .03 — 600V
3 ea. — .047 — 600V
6 ea. — .05 — 600V
4 ea. — .1 — 600V

ARCO STANDARD PAPER TUBULAR CAPACITOR KIT #7

El-Menco
STANDARD PAPER TUBULAR
CAPACITOR KIT

CP-Type

SPECIAL KIT LIST PRICE

$40.00

Purchased individually the total list price value of the capacitors would be **$44.00**

This Kit contains 5 EACH of the following PAPER TUBULAR CAPACITOR SIZES

PART NUMBER	CAPACITY MFD.	WORKING VOLTAGE
6CP-1-102	.001	600
6CP-1-152	.0015	600
6CP-1-202	.002	600
6CP-1-222	.0022	600
6CP-1-252	.0025	600
6CP-1-302	.003	600
6CP-1-332	.0033	600
6CP-1-402	.004	600
6CP-1-472	.0047	600
6CP-1-502	.005	600
6CP-2-602	.006	600
6CP-2-682	.0068	600
6CP-2-752	.0075	600
6CP-2-103	.01	600
6CP-2-153	.015	600
6CP-3-203	.02	600
6CP-3-223	.022	600
6CP-4-303	.03	600
6CP-4-333	.033	600
6CP-4-403	.04	600
6CP-4-473	.047	600
6CP-4-503	.05	600
6CP-5-104	.1	600
4CP-6-254	.25	400
2CP-6-504	.5	200

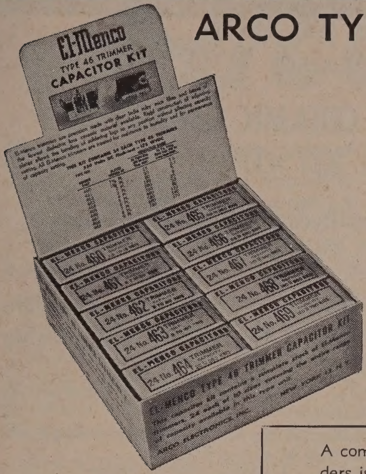
Use Index Page 1 for Quick, Easy Location of ALL Products

TRADE DISCOUNT APPLIES TO *LIST* PRICES ONLY

ARCO electronics inc.
ELMENCO capacitors

Main Office:
ARCO ELECTRONICS, INC.
New York 13, New York

ARCO CAPACITORS, INC.
Los Angeles 35, California
ARCO ELECTRONICS, INC.
Dallas 19, Texas



ARCO TYPE 46 TRIMMER KIT #5

This Kit Contains 24 of Each Trimmer Listed Below

TYPE 46W

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At Tight Cap. Will Be More Than MMF.	At A Turns Open Cap. Will Be Less Than MMF.
460	1¼ Pl.	15	1.5
461	1¾ Pl.	30	2.7
462	2 Pl.	80	5
463	3 Pl.	180	9
464	4 Pl.	280	25
465	5 Pl.	380	50
466	6 Pl.	480	80
467	7 Pl.	580	110
468	8 Pl.	680	140
469	9 Pl.	780	170

The total list price for all units included in the kit is $142.80.

Yet you may have this complete kit for only

SPECIAL KIT
LIST PRICE

$120⁰⁰

A complete stock of trimmers and padders is provided in these compact, easily handled, and readily accessible kits. Always have a full line of El-Menco trimmers and padders available for immediate use.

ARCO TYPE 30 PADDER KIT #6

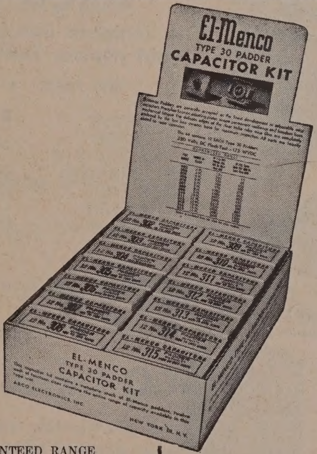
This Kit Contains 12 Each of Padders Listed Below

The total list price for all units included in the kit is $223.80.

Yet you may have this complete kit for only

SPECIAL KIT
LIST PRICE

$195⁰⁰



ARCO TYPE 30M PADDER KIT #6M

This Kit Contains 12 Each of Padders Listed Below

The total list price for all units included in the kit is $231.60

Yet you may have this complete kit for only

SPECIAL KIT
LIST PRICE

$200⁰⁰

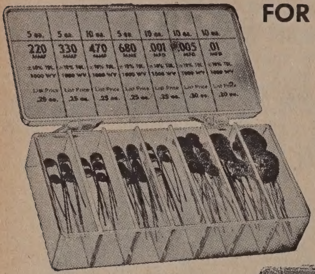
PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At 1½ Inch Pounds Cap. Will Be More Than MMF.	At 2½ Turns Open Cap. Will Be Less Than MMF.
302	2 Pl.	130	15
303	3 Pl.	340	65
304	4 Pl.	550	100
305	5 Pl.	760	190
306	6 Pl.	970	275
307	7 Pl.	1180	350
308	8 Pl.	1390	450
309	9 Pl.	1600	550
310	10 Pl.	1890	650
311	11 Pl.	2110	780
312	12 Pl.	2330	880
313	13 Pl.	2605	1150
314	14 Pl.	2830	1300
315	15 Pl.	3055	1400

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At 1½ Inch Pounds Cap. Will Be More Than MMF.	At 2½ Turns Open Cap. Will Be Less Than MMF.
302-M	2 Pl.	120	15
303-M	3 Pl.	320	65
304-M	4 Pl.	500	100
305-M	5 Pl.	690	180
306-M	6 Pl.	880	265
307-M	7 Pl.	1070	340
308-M	8 Pl.	1260	425
309-M	9 Pl.	1415	525
310-M	10 Pl.	1600	615
311-M	11 Pl.	1785	730
312-M	12 Pl.	1970	800
313-M	13 Pl.	2155	1000
314-M	14 Pl.	2340	1100
315-M	15 Pl.	2525	1200

ARCO electronics inc.
ELMENCO *capacitors*

Main Office:
ARCO ELECTRONICS, INC.
New York 13, New York

ARCO CAPACITORS, INC.
Los Angeles 35, California
ARCO ELECTRONICS, INC.
Dallas 19, Texas


220
330
470
680
.001
.005
.01

FOR RESALE TO SERVICE DEALERS

ARCO DISC CERAMIC CAPACITOR KIT #17

An assortment of the most popular high stability general purpose ELMENCO Disc Ceramic Capacitors

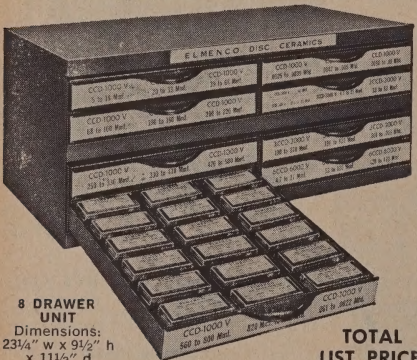
- ± 10% Tolerance
- 1000 VDCW rating for surge resistance & long life
- Space savers . . . smaller than comparable capacitors of the same value
- Higher stability through use of improved materials
- Tough durez phenolic coating
- Wax impregnated for extra moisture resistance
- Capacitance, tolerance, and voltage imprinted on each unit
- Famous Elmenco "Safety-Design"
- Meet or exceed E.I.A. specification RS-198 for ceramic capacitors

ELMENCO
MINIATURE
Disc
Ceramics
GENERAL PURPOSE
$14.75
ARCO
CCD
ARCO ELECTRONICS INC.

CONTENTS OF ARCO KIT #17

5 ea. 220 mmf.
5 ea. 330 mmf.
10 ea. 470 mmf.
5 ea. 680 mmf.
10 ea. .001 mfd.
10 ea. .005 mfd.
10 ea. .01 mfd.

LIST PRICE **$14.75**


ELMENCO DISC CERAMICS

8 DRAWER UNIT
Dimensions: 23¼" w x 9½" h x 11½" d

ARCO DEAL #1660

A complete distributor stock assortment of the most popular ELMENCO Disc Ceramic Capacitors

1000 VOLTS • 3000 VOLTS • 6000 VOLTS

THIS $35.00
HI-GRADE
COMPACT EQUIPTO
STEEL CABINET
GIVEN FREE
WITH EACH
ARCO DEAL #1660

Deal #1660 contains all the 101 disc ceramic values listed on page 390 in various quantities totaling 1660 capacitors. Individually packed 5 capacitors of the same value in a compact plastic box.

TOTAL LIST PRICE **$472.25**

For complete information ask for form #117.

ELMENCO
DISC
CERAMIC
CAPACITORS
ELMENCO DISC CERAMIC CAPACITORS
QUANTITY 100
MFD. VOLTS PART NO.
.01 1000 CCD-103
ARCO ELECTRONICS INC.

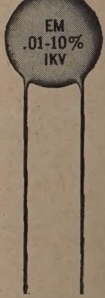
Packed **100** capacitors of the same value in a compact, colorful, blue and yellow box!

ARCO DEAL #5700

A complete distributor stock assortment of miniature, general purpose, ELMENCO Disc Ceramic Capacitors

*** All ± 10% Tolerance — * All 1000 VDCW**
Note: 15000, 20000 and 30000 mmf are ± 20% tol., 500 VDCW

Deal #5700 contains all 57 type CCD values listed on page 390, packed 100 capacitors of each value for a total of 5700 capacitors.



TOTAL LIST PRICE VALUE **$1485.00**

announcing

the NEW Arcolytic® CAPACITOR LINE

The newest step in expansion of Arco to a "full-line" capacitor supplier is the opening of our electrolytic capacitor manufacturing plant. The same excellence of quality and service for which Arco has been known over the years may now be expected of the "Arcolytic" line.

The current "Arcolytic" line includes single and multiple section aluminum electrolytics in metal can tubular, wax-filled tubular, and twist prong styles. In addition to the standard tubular types, threaded mount and printed circuit designs are available. Motor start and non-polarized aluminum electrolytic capacitors are also in production. Use of premium grade ingredients plus careful process and quality control combine to provide an optimum product at competitive prices. Qualification samples are available on short notice.

Arcolytic features:

- **Extended shelf and operating life**
- **99.99% pure aluminum foil**
- **High temperature characteristics**
- **Excellent surge resistance**
- **Built and tested to meet EIA Specification RS-154**
- **Maximum operating temperature: 85° C.**

direct all inquiries to:

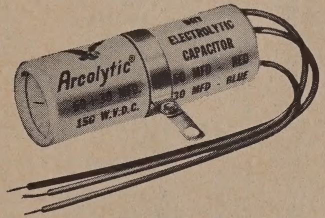
ARCO electronics inc.
Electrolytic Division
New York 13, N. Y.

All "ARCOLYTIC" capacitors are fabricated using only 99.99% high purity aluminum foil and premium grade capacitor paper.

- Arcolytic® +
DRY ELECTROLYTIC CAPACITOR

Type CTA

Single and multiple section tubular electrolytics in drawn aluminum cans with cardboard sleeves. Single section units have bare wire leads with negative grounded to can. Multiple units have a common negative grounded to can, and all leads have vari-colored insulated wire for ease of identification.



Type CTW

Multiple section electrolytics in wax-filled cardboard tubes. These units also have a common negative and all leads have vari-colored insulation. Internal construction of these is the same as for the Type CTA. Maximum operating temperature 65° C.

Type CMB
Type CTM

Type CTM

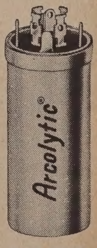
Twist-prong, single and multiple section electrolytics for those applications calling for this style of enclosure.

Type CMB

A.C. Motor-starting electrolytic capacitors in molded bakelite case. Up to 330V AC rating.

Type CMM

A.C. Motor-starting electrolytics enclosed in tubular aluminum cans with cardboard insulating sleeve.



Type CMM

ASTRON capacitors

ASTRON CORPORATION
EAST NEWARK, N. J.

MINIMITE* TYPE MM

Miniature Metal-Cased Tubular Electrolytics

"SM" Safety Margin Construction*

ASTRON
MINIMITE
MM-10-450
10 MF 450 WVDC

- Hermetically sealed aluminum-cased tubulars. Small and light. Ideal for under-chassis mounting in compact, tight assemblies.
- Designed to withstand high surge voltages and high ripple currents. Stable capacitance characteristics. Long service life.
- Exceptionally low leakage. Terminal tab connections provide permanent low-resistance contact for life of the unit.
- Outer insulating tube. Duals have centered mounting strap, and 3 leads (common negative).

SINGLE MINIMITE (2 leads)

Cat. No.	Cap. Mf.	WVDC	†Dia x L.	List Price
MM-50-3	50	3	½x1-1/16	$ .95
MM-500-3	500	3	⅝x1⅝	1.55
MM-50-6	50	6	½x1-1/16	.95
MM-100-6	100	6	½x1-1/16	1.20
MM-500-6	500	6	¾x1⅝	1.55
MM-1000-6	1000	6	⅞x2 1/16	1.90
MM-100-10	100	10	⅝x1-1/16	1.25
MM-100-15	100	15	⅝x1-1/16	1.25
MM-250-15	250	15	⅝x1⅝	1.25
MM-500-15	500	15	⅞x2 1/16	1.75
MM-1000-15	1000	15	1 x2 11/16	2.30
MM-10-25	10	25	½x1 1/16	1.00
MM-25-25	25	25	½x1 1/16	1.00
MM-50-25	50	25	⅝x1 1/16	1.10
MM-100-25	100	25	⅝x1⅝	1.35
MM-250-25	250	25	⅞x1⅝	1.70
MM-500-25	500	25	1 x2⅜	2.40
MM-4-50	4	50	½x1 1/16	.95
MM-10-50	10	50	½x1 1/16	1.00
MM-25-50	25	50	⅝x1 1/16	1.00
MM-50-50	50	50	⅝x1⅝	1.20
MM-100-50	100	50	¾x1⅝	1.40
MM-4-150	4	150	½x1 1/16	1.00
MM-8-150	8	150	½x1⅝	1.05
MM-16-150	16	150	⅝x1⅝	1.15
MM-20-150	20	150	⅝x1⅝	1.20
MM-30-150	30	150	¾x1⅝	1.30
MM-40-150	40	150	¾x1⅝	1.35
MM-50-150	50	150	⅞x1⅝	1.40
MM-80-150	80	150	⅞x2 1/16	1.60
MM-100-150	100	150	⅞x2⅜	1.75
MM-150-150	150	150	1 x2⅜	1.90
MM-200-150	200	150	1⅛x3	2.05
MM-8-250	8	250	⅝x1⅝	1.15
MM-16-250	16	250	¾x1⅝	1.30
MM-20-250	20	250	¾x1⅝	1.35
MM-40-250	40	250	⅞x1¾	1.55
MM-8-350	8	350	⅝x1⅝	1.20
MM-10-350	10	350	¾x1⅝	1.25
MM-20-350	20	350	⅞x1⅝	1.45
MM-4-450	4	450	⅝x1⅜	1.15
MM-8-450	8	450	¾x1⅜	1.25
MM-10-450	10	450	¾x1⅝	1.30
MM-12-450	12	450	⅞x1⅝	1.35
MM-16-450	16	450	⅞x1¾	1.40
MM-20-450	20	450	⅞x2 1/16	1.55
MM-30-450	30	450	1 x2⅜	1.70
MM-40-450	40	450	1 x2 11/16	1.80
MM-50-450	50	450	1 x3	2.05
MM-60-450	60	450	1⅛x3	2.30
MM-80-450	80	450	1⅛x3¾	2.80
MM-8-500	8	500	⅞x2 1/16	1.30
MM-16-500	16	500	1 x2⅜	1.50
MM-20-500	20	500	1 x2⅜	1.60

††DUAL MINIMITE (3 leads, Common Negative)

MM-2x20-150	20+20	150	¾x1⅝*	$1.55
MM-2x30-150	30+30	150	⅞x1⅝*	1.80
MM-2x40-150	40+40	150	⅞x2 1/16*	1.85
MM-5030-150	50+30	150	⅞x2 1/16*	1.95
MM-2x50-150	50+50	150	⅞x2⅜*	2.10
MM-8040-150	80+40	150	1 x2⅜*	2.20
MM-2x8-450	8+8	450	⅞x2 1/16*	1.70
MM-2x10-450	10+10	450	⅞x2 1/16*	1.85
MM-168-450	16+8	450	1 x2 1/16*	1.9[illegible]
MM-2x16-450	16+16	450	1 x2 11/16*	2.25
MM-2x20-450	20+20	450	1 x2 11/16*	[illegible]
MM-2x40-450	40+40	450	1⅛x3¾ *	3.40

†Dimensions are for metal tubes. Add 1/16" to diameter and ⅛" to length for dimensions over cardboard insulating tubes.

††Supplied with radial mounting strap.

*TRADE MARK

TYPE ET

Subminiature Electrolytics

"SM" Safety Margin Construction*

ASTRON
TYPE ET

- Industry's widest range of values.
- Conservative ratings in subminiature cases.
- Hermetically sealed for reliable operation in all climates.
- Dependable 85°C. operation.
- Stable capacitance characteristics due to extremely pure foil and special high-gain etch process.
- Exceptionally low leakage current.
- Low-resistance terminal tab connection.

Cat. No.	Rating Cap.	Rating Volts	Size	List Price Each
ET-25-3	25	3	⅜x1 1/16	$0.85
ET-50-3	50	3	⅜x1 1/16	.95
ET-100-3	100	3	⅜x1 1/16	1.10
ET-150-3	150	3	⅜x1⅝	1.10
ET-200-3	200	3	⅜x1⅝	1.25
ET-300-3	300	3	⅜x1⅝	1.30
ET-5-6	5	6	⅜x1 1/16	.80
ET-25-6	25	6	⅜x1 1/16	.85
ET-50-6	50	6	⅜x1 1/16	.95
ET-75-6	75	6	⅜x1 1/16	1.00
ET-100-6	100	6	⅜x1⅝	1.20
ET-125-6	125	6	⅜x1⅝	1.20
ET-50-15	50	15	⅜x1 1/16	1.00
ET-100-15	100	15	⅜x1⅝	1.25
ET-5-25	5	25	⅜x1 1/16	1.00
ET-10-25	10	25	⅜x1 1/16	1.00
ET-20-25	20	25	⅜x1 1/16	1.00
ET-25-25	25	25	⅜x1 1/16	1.00
ET-50-25	50	25	⅜x1⅝	1.10
ET-1-50	1	50	⅜x1 1/16	.90
ET-2-50	2	50	⅜x1 1/16	.90
ET-4-50	4	50	⅜x1 1/16	1.00
ET-5-50	5	50	⅜x1 1/16	1.00
ET-10-50	10	50	⅜x1 1/16	1.00
ET-15-50	15	50	⅜x1 1/16	1.00
ET-20-50	20	50	⅜x1 1/16	1.05
ET-25-50	25	50	⅜x1⅝	1.05
ET-10-90	10	90	⅜x1⅝	1.10
ET-5-100	5	100	⅜x1 1/16	1.00
ET-10-100	10	100	⅜x1⅝	1.00
ET-1-150	1	150	⅜x1 1/16	1.00
ET-2-150	2	150	⅜x1 1/16	1.00
ET-4-150	4	150	⅜x1 1/16	1.00
ET-5-150	5	150	⅜x1 1/16	1.00
ET-8-150	8	150	⅜x1⅝	1.05
ET-10-150	10	150	⅜x1⅝	1.05
ET-12-150	12	150	⅜x1⅝	1.10
ET-4-250	4	250	⅜x1⅝	1.00

*TRADE MARK

TYPE EK

Miniature Ceramic Cased Electrolytics

Astron Type EK ceramic cased subminiature electrolytics are small capacitors, designed for all industrial and commercial applications. Using a steatite case, they are second only to hermetically sealed metal cased units in moisture and humidity resistance. High capacity, low voltage and extremely small size are the features that make the Astron EK highly suitable for application in transistorized circuitry and miniature electronic instruments and equipment.

Cat. No.	WVDC	Cap. Mf.	Dia. x L.	List Price
EK-2-1	1	2	.180x½	$1.25
EK-5-3	3	5	.180x½	1.25
EK-10-3	3	10	.180x½	1.25
EK-35-3	3	35	.270x¾	1.25
EK-40-3	3	40	.270x¾	1.25
EK-50-3	3	50	.270x¾	1.25
EK-75-3	3	75	.359x⅝	1.50
EK-90-3	3	90	.325x¾	1.50
EK-5-6	6	5	.180x½	1.25
EK-10-6	6	10	.180x⅝	1.25
EK-20-6	6	20	.250x⅝	1.25
EK-25-6	6	25	.250x¾	1.25
EK-50-6	6	50	.325x¾	1.50
EK-65-6	6	65	.325x¾	1.50
EK-10-8	8	10	.250x⅝	1.35
EK-10-10	10	10	.250x⅝	1.35
EK-15-10	10	15	.270x¾	1.35
EK-25-10	10	25	.325x⅝	1.35
EK-50-10	10	50	.325x¾	1.50
EK-65-10	10	65	.375x¾	1.50
EK-80-10	10	80	.375x¾	1.50
EK-100-10	10	100	.375x1	1.70
EK-5-12	12	5	.180x⅝	1.35
EK-20-12	12	20	.325x¾	1.35
EK-6-15	15	6	.180x⅝	1.35
EK-20-15	15	20	.325x¾	1.50
EK-30-15	15	30	.325x¾	1.50
EK-1-16	16	1	.180x½	1.50
EK-10-16	16	10	.270x¾	1.35
EK-12-16	16	12	.270x¾	1.35
EK-10-20	20	10	.250x¾	1.35
EK-12-20	20	12	.250x¾	1.35
EK-4-25	25	4	.250x⅝	1.35
EK-10-25	25	10	.270x¾	1.45
EK-10-30	30	10	.270x¾	1.45
EK-4-50	50	4	.250x¾	1.65

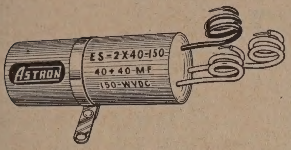
Note: Other ratings available on request.

ASTRON® capacitors

ASTRON CORPORATION
EAST NEWARK, N. J.

TYPE ES

Cardboard-Cased Electrolytics



- Dual and triple-section units. Can be used in place of costlier metal-can types of equal rating in television, radio, radio-phonos and other equipment. 65°C. operation.
- Sections wrapped in plastic film. Lasting protection from moisture, humidity, severest climatic conditions. High-melting-point wax fill.
- Centered radial mounting strap. Plastic insulated wire leads, 6″ long. Color coding on tubes.
- Overall wax coating for added protection against moisture and humidity.

DUAL UNITS (Common Negative)

Cat. No.	Cap. Mf./WVDC	D. x L.	List Price
ESD-140	10+10/50	⅝x2⅜	$1.40
ESD-150	8+8/150	⅝x2⅜	1.45
ESD-155	20+20/150	¾x2½	1.65
ESD-156	30+20/150	¾x2½	1.70
ESD-160	30+30/150	⅞x2½	1.80
ESD-163	40+20/150	⅞x2½	1.75
ESD-165	40+40/150	1 x2½	1.85
ESD-170	50+30/150	1 x2½	1.95
ESD-175	50+50/150	1 x3	2.10
ESD-190	80+40/150	1⅛x3	2.25
ESD-250	16+16/250	⅞x2½	1.80
ESD-255	20+20/250	⅞x2½	1.85
ESD-450	8+8/450	1 x2½	1.70
ESD-455	20+20/450	1⅛x3¼	2.50
ESD-475	40+40/450	1⅜x3½	3.40

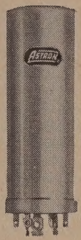
TRIPLE UNITS (Common Negative)

Cat. No.	Cap. Mf./WVDC	D. x L.	Price
EST-555	20+20+20/150	1 x2½	$2.20
EST-560	40+20+20/150	1 x2½	2.25
EST-570	40+30+20/150	1 x2½	2.35
EST-575	40+40+20/150	1 x3	2.35
EST-580	40+40+40/150	1 x3¼	2.45
EST-585	60+40+20/150	1 x3¼	2.40
EST-595	80+40+20/150	1⅛x3¼	2.50
EST-610	40+10/150+ 20/25	1 x2½	1.95
EST-620	40+30/150+ 20/25	1 x2½	2.30
EST-625	40+40/150+ 40/25	1 x3¼	2.40
EST-640	50+30/150+100/25	1 x3¼	2.50
EST-655	50+30/150+200/10	1 x3¼	2.55

TYPE EY

Twist-Prong Electrolytics

"SM"* Safety Margin Construction



- Widest choice of singles, and dual, triple and quadruple capacitance-voltage combinations in smallest practical aluminum can sizes.
- Ideal for replacement in television, rado and other high quality electronic equipment where high ripple and high surge voltages are encountered.
- Hermetically sealed. Designed for 85°C. operation.
- Quick, easy, firm mounting through chassis slots or slotted plates for insulated or grounded connection. Mounting prong ring serves as common negative terminal.
- Terminal coding clearly stamped on container.
- Individually packaged for the service trade, including metal and phenolic mounting plates.

SINGLE UNITS

Cat. No.	Cap. Mf./WVDC	Dia. x Length	List Price
EYS-90	2000/6	1⅜x2	2.55
EYS-100	1000/15	1 x3	2.55
EYS-105	2000/15	1⅜x3	3.45
EYS-108	3000/15	1⅜x3	3.50
EYS-115	100/25	1 x2	1.60
EYS-120	500/25	1 x3	2.55
EYS-125	1000/25	1⅜x3	3.55
EYS-130	500/50	1⅜x2½	2.65
EYS-131	1000/50	1⅜x3	3.75
EYS-133	1500/50	1⅜x4	3.75
EYS-135	50/150	1 x2	1.65
EYS-140	80/150	1 x2	1.85
EYS-145	100/150	1 x2	2.00
EYS-150	120/150	1 x2½	2.10
EYS-151	120/150	1⅜x3	2.10
EYS-155	140/150	1 x3	2.15
EYS-160	150/150	1 x3	2.15
EYS-161	200/150	1⅜x2½	2.45
EYS-162	300/150	1⅜x3	2.80
EYS-165	15/250	1 x2	1.55
EYS-170	30/250	1 x2	1.70
EYS-175	40/250	1 x2	1.80
EYS-180	60/250	1 x2½	2.05
EYS-185	80/250	1 x3	2.15
EYS-186	100/250	1 x2½	2.70
EYS-190	150/250	1⅜x2½	3.10
EYS-1901	200/250	1⅜x3	3.95
EYS-1902	80/300	1 x3	2.55
EYS-191	100/300	1⅜x2½	2.90
EYS-193	150/300	1⅜x3	3.50
EYS-195	30/350	1 x2	1.90
EYS-200	40/350	1 x2½	2.00
EYS-205	50/350	1 x3	2.10
EYS-215	80/350	1⅜x2½	2.85
EYS-220	125/350	1⅜x3	3.65
EYS-222	150/350	1⅜x3½	3.95
EYS-225	80/400	1⅜x2½	2.95
EYS-230	10/450	1 x2	1.55
EYS-235	20/450	1 x2	1.75
EYS-240	30/450	1 x2½	1.95
EYS-245	40/450	1 x3	2.05
EYS-246	50/450	1 x3½	2.35
EYS-247	60/450	1⅜x2½	2.60
EYS-250	80/450	1⅜x3	3.05
EYS-251	100/450	1⅜x3	3.45
EYS-253	125/450	1⅜x4	4.25
EYS-255	30/475	1 x3	2.00
EYS-260	40/475	1⅜x2	2.50
EYS-265	90/475	1⅜x3½	3.50
EYS-266	10/500	1 x2	1.60
EYS-267	20/500	1 x2½	1.85

SINGLE UNITS (Cont.)

Cat. No.	Cap. Mf./WVDC	Dia. x Length	List Price
EYS-268	30/500	1 x3	2.00
EYS-269	40/500	1 x3½	2.50
EYS-270	80/500	1⅜x3½	3.20
EYS-271	90/500	1⅜x3½	3.50

DUAL UNITS

Cat. No.	Cap. Mf./WVDC	Dia. x Length	List Price
EYD-500	1000-1000/15	1⅜x3	4.40
EYD-505	150-50/25	1 x2	1.75
EYD-506	50-50/50	1 x2	1.70
EYD-507	100-25/50	1 x2	1.85
EYD-508	20-20/150	1 x2	1.70
EYD-510	30-30/150	1 x2	1.75
EYD-511	40-20/150	1 x2	1.80
EYD-512	40-30/150	1 x2	1.85
EYD-513	40-40/150	1 x2	1.90
EYD-514	50-30/150	1 x2	2.00
EYD-515	50-50/150	1 x2½	1.95
EYD-5151	60-60/150	1 x2½	2.35
EYD-5152	75-75/150	1 x3	2.60
EYD-5153	80-40/150	1 x2½	2.30
EYD-5154	80-80/150	1⅜x2	2.65
EYD-516	125-100/150	1⅜x2½	3.50
EYD-517	200-5/150	1⅜x2½	2.75
EYD-520	200-200/150	1⅜x3½	4.00
EYD-525	20-20/250	1 x2	1.90
EYD-530	40-40/250	1 x2½	2.50
EYD-532	150-150/250	1⅜x4	5.15
EYD-533	200-200/250	1⅜x4½	6.10
EYD-540	80-80/300	1⅜x3½	4.05
EYD-545	120-20/300	1⅜x3	3.80
EYD-547	120-40/300	1⅜x3½	4.35
EYD-550	15-15/350	1 x2	2.25
EYD-555	20-20/350	1 x2½	2.35
EYD-556	30-30/350	1 x3	2.90
EYD-557	50-30/350	1⅜x2½	3.15
EYD-558	80-20/350	1⅜x2½	3.50
EYD-559	80-40/350	1⅜x3	3.95
EYD-560	80-80/350	1⅜x3½	4.70
EYD-5601	90-40/350	1⅜x3	4.30
EYD-561	100-100/350	1⅜x4	6.15
EYD-562	160-10/350	1⅜x3½	4.30
EYD-563	40-10/400	1⅜x2½	2.50
EYD-5631	80-60/400	1⅜x3½	4.85
EYD-564	5-5/450	1 x2	1.60
EYD-565	10-10/450	1 x2	1.90
EYD-566	15-15/450	1 x2½	2.25
EYD-567	20-10/450	1 x2½	2.25
EYD-575	20-20/450	1 x3	2.55
EYD-576	30-10/450	1 x3	2.50
EYD-580	30-30/450	1⅜x2½	3.05
EYD-581	40-20/450	1⅜x2½	3.00
EYD-585	40-40/450	1⅜x3	3.45
EYD-586	50-50/450	1⅜x3	3.85

ASTRON® capacitors

ASTRON CORPORATION
EAST NEWARK, N. J.

DUAL UNITS

Cat. No.	Cap. Mf./WVDC	Dia. x Length	List Price
EYD-587	60-20/450	1⅜x3	**3.55**
EYD-588	60-40/450	1⅜x3	**3.95**
EYD-590	80-10/450	1⅜x3	**3.60**
EYD-592	80-20/450	1⅜x3	**3.90**
EYD-600	80-40/450	1⅜x4	**4.35**
EYD-601	100-40/450	1⅜x4	**4.85**
EYD-602	15-15/475	1 x2½	**2.35**
EYD-603	30-10/475	1⅜x2	**2.60**
EYD-604	40-10/475	1⅜x2½	**3.10**
EYD-605	40-40/475	1⅜x3½	**4.30**
EYD-6051	80-50/475	1⅜x4	**5.20**
EYD-606	10-10/500	1 x2½	**1.95**
EYD-610	20-20/500	1⅜x2½	**2.85**
EYD-611	30-10/500	1⅜x2½	**2.60**
EYD-615	40-40/500	1⅜x4	**4.40**
EYD-616	60-40/500	1⅜x3½	**4.60**
EYD-617	100/400 30/50	1⅜x2½	**3.10**
EYD-620	250/10 1000/6	1⅜x2	**2.85**
EYD-621	50/150 500/5	1 x2½	**2.45**
EYD-622	150/150 100/25	1⅜x2½	**2.70**
EYD-623	100/250 150/50	1⅜x3	**3.65**
EYD-624	35/300 500/6	1 x2½	**2.80**
EYD-625	20/350 30/250	1 x2½	**2.30**
EYD-630	60/350 80/250	1⅜x3	**3.45**
EYD-633	80/350 100/50	1⅜x3	**3.95**
EYD-6331	35/400 100/50	1 x3	**2.60**
EYD-634	10/450 20/25	1 x2	**1.70**
EYD-635	20/450 20/25	1 x2½	**2.00**
EYD-640	20/450 100/100	1⅜x2½	**2.65**
EYD-644	20/450 50/250	1 x3	**2.80**
EYD-645	20/450 80/350	1⅜x3	**3.65**
EYD-650	30/450 40/150	1⅜x2	**2.50**
EYD-651	30/450 200/150	1⅜x3	**3.50**
EYD-655	40/450 20/25	1 x3½	**2.40**
EYD-660	40/450 10/350	1⅜x2½	**2.60**
EYD-661	50/450 100/50	1⅜x2½	**3.00**
EYD-665	80/450 50/50	1⅜x3	**3.50**
EYD-666	80/450 100/50	1⅜x3½	**3.75**
EYD-670	20/475 100/300	1⅜x3½	**3.95**
EYD-671	20/475 100/400	1⅜x4	**4.50**
EYD-675	40/500 50/200	1⅜x3½	**3.35**

TRIPLE UNITS

Cat. No.	Cap. Mf./WVDC	Dia. x Length	List Price
EYT-999	20-20-20/25	1 x2	**1.95**
EYT-1000	40-40-40/25	1 x2	**2.15**
EYT-1001	20-20-20/150	1 x2	**2.30**
EYT-1005	40-20-20/150	1 x2	**2.40**
EYT-1007	40-30-20/150	1 x2	**2.50**
EYT-1010	40-40-40/150	1 x2½	**2.60**
EYT-1012	50-40-10/150	1 x2½	**2.55**
EYT-1015	50-50-50/150	1 x3	**3.00**
EYT-1016	60-40-20/150	1 x2½	**2.75**
EYT-1017	70-15-15/150	1 x2½	**2.70**
EYT-1018	80-40-20/150	1 x3	**2.90**
EYT-1019	120-80-40/150	1⅜x2½	**3.80**
EYT-10191	120-120-40/150	1⅜x3	**4.05**
EYT-10192	200-100-60/150	1⅜x3½	**4.55**
EYT-10193	200-150-150/150	1⅜x4	**7.50**
EYT-10194	20-20-20/250	1 x2	**2.60**
EYT-1020	40-20-10/250	1 x2½	**2.85**
EYT-1021	40-20-20/250	1 x2½	**2.90**
EYT-1022	80-80-60/250	1⅜x3½	**4.90**
EYT-1023	60-20-10/300	1⅜x2	**3.45**
EYT-1024	80-40-40/300	1⅜x3	**4.75**
EYT-10241	120-50-40/300	1⅜x4	**5.65**
EYT-10242	20-20-10/350	1 x2½	**4.45**
EYT-10243	30-20-10/350	1 x3	**3.25**
EYT-1025	60-40-20/350	1⅜x3	**4.25**
EYT-1026	60-50-50/350	1⅜x3½	**4.90**
EYT-10261	80-60-60/350	1⅜x4	**5.55**
EYT-10262	90-40-20/350	1⅜x3½	**5.25**
EYT-10263	100-100-10/350	1⅜x4	**5.50**
EYT-1027	40-40-20/400	1⅜x3	**3.75**
EYT-1028	30-50-4/400	1⅜x2½	**3.85**
EYT-1029	80-20-10/400	1⅜x3	**4.30**
EYT-10291	90-10-5/400	1⅜x3	**4.40**
EYT-1030	10-10-10/450	1 x3	**2.60**
EYT-10301	15-15-15/450	1 x3	**3.10**
EYT-1035	20-10-10/450	1 x3	**2.95**
EYT-1040	20-20-20/450	1⅜x3	**3.60**
EYT-1041	30-20-20/450	1⅜x3	**3.85**
EYT-1045	30-30-30/450	1⅜x3½	**4.35**
EYT-1046	40-10-10/450	1⅜x2½	**3.60**
EYT-1047	40-30-20/450	1⅜x3	**4.30**
EYT-1050	40-40-10/450	1⅜x3½	**4.15**
EYT-1051	40-40-20/450	1⅜x3½	**4.45**
EYT-1055	40-40-40/450	1⅜x4	**4.90**
EYT-1056	50-40-30/450	1⅜x3½	**4.90**
EYT-1057	60-20-20/450	1⅜x3½	**4.60**
EYT-1058	60-40-20/450	1⅜x3½	**5.00**
EYT-1060	60-30-10/450	1⅜x3½	**4.50**
EYT-1065	80-40-20/450	1⅜x4½	**5.40**
EYT-1070	10-10-10/475	1 x3	**2.70**
EYT-1075	30-30-20/475	1⅜x3½	**4.40**
EYT-1078	40-10-10/475	1⅜x3½	**3.90**
EYT-10781	40-30-10/475	1⅜x3	**4.50**
EYT-1079	40-30-30/475	1⅜x3½	**5.15**
EYT-1080	10-10-10/500	1 x3½	**2.70**
EYT-1081	30-20-20/500	1⅜x3	**4.20**
EYT-1082	40-10-10/500	1⅜x3	**3.90**
EYT-1083	40-40-10/500	1⅜x3½	**5.05**
EYT-1085	40-20/150 20/25	1 x2	**2.30**
EYT-1087	40-20/150 100/25	1 x2½	**2.50**
EYT-1088	40-20/150 200/25	1 x2½	**2.70**
EYT-10882	40-40/150 20/25	1 x2	**2.40**
EYT-10883	40-40/150 250/25	1 x3	**3.15**
EYT-10884	50-30/150 20/25	1 x2	**2.50**
EYT-1089	50-30/150 30/25	1 x2	**2.60**
EYT-10891	50-30/150 100/25	1 x2½	**2.70**
EYT-1090	50-50/150 20/25	1 x2½	**2.70**
EYT-10901	80-30/150 300/10	1⅜x2	**3.15**
EYT-10902	80-40/150 20/25	1 x2½	**2.80**
EYT-1091	80-40/150 300/25	1⅜x2½	**3.70**
EYT-1093	100-80/150 200/10	1⅜x2½	**3.60**
EYT-1095	120-60/150 20/25	1⅜x2½	**3.30**
EYT-1097	30-20/200 40/25	1 x2	**2.80**
EYT-10971	30-20/200 40/150	1 x2½	**2.70**
EYT-1098	60-5/200 20/50	1 x2½	**2.50**
EYT-1100	100-10/200 40/50	1⅜x2	**3.10**
EYT-1101	15-15/250 20/25	1 x2	**2.35**
EYT-1102	30-30/250 20/25	1 x2½	**2.80**
EYT-1105	40-20/250 10/150	1 x2½	**2.75**
EYT-1110	70-70/250 20/50	1⅜x2½	**3.90**
EYT-1112	90-90/250 20/50	1⅜x3	**4.60**
EYT-1113	10-10/300 10/15	1 x2	**2.35**
EYT-1115	10-10/300 15/250	1 x2	**2.45**
EYT-1117	100-10/300 60/50	1⅜x2½	**4.05**
EYT-11191	200-20/300 10/100	1⅜x4	**4.90**
EYT-1120	10-5/350 150/50	1 x3	**2.70**
EYT-1121	15-10/350 20/25	1 x2	**2.50**
EYT-1122	20-5/350 100/25	1 x2½	**2.60**
EYT-1123	20-5/350 150/50	1 x3	**2.95**
EYT-1124	20-10/350 20/25	1 x2	**2.55**
EYT-1125	15-15/350 20/25	1 x2½	**2.50**
EYT-11251	20-10/350 5/250	1 x2	**2.55**
EYT-1126	20-20/350 20/25	1 x2½	**2.80**
EYT-1130	30-20/350 20/25	1 x3	**3.10**
EYT-1131	30-20/350 100/150	1⅜x2½	**4.00**
EYT-1135	30-30/350 20/25	1⅜x2	**3.40**
EYT-1140	30-30/350 50/50	1⅜x2½	**3.50**
EYT-1145	40-20/350 10/100	1⅜x2	**2.80**
EYT-1150	40-40/350 50/25	1⅜x2½	**3.70**
EYT-1151	20-20/400 10/350	1 x3	**3.00**
EYT-1153	40-10/400 200/50	1⅜x3½	**3.70**
EYT-11531	60-30/400 20/350	1⅜x3	**4.55**
EYT-11532	80-40/400 150/50	1⅜x3½	**5.15**
EYT-11533	100-10/400 20/50	1⅜x3½	**4.50**
EYT-1154	100-10/400 80/350	1⅜x4	**6.10**
EYT-1155	10-10/450 20/25	1 x2½	**2.40**
EYT-1160	10-10/450 40/50	1 x2½	**2.75**
EYT-1162	15-15/450 40/25	1 x2½	**2.75**
EYT-1163	20-10/450 20/25	1 x2½	**2.70**
EYT-1165	20-10/450 50/50	1 x3	**2.85**
EYT-1170	20-20/450 20/25	1 x3½	**3.10**
EYT-1175	20-20/450 60/350	1⅜x3½	**4.00**
EYT-1177	30-10/450 150/50	1⅜x2½	**2.50**
EYT-1180	30-30/450 20/25	1⅜x2½	**3.50**
EYT-1185	30-30/450 40/50	1⅜x3	**3.65**
EYT-1186	30-30/450 125/25	1⅜x3	**3.95**
EYT-1188	40-10/450 100/50	1⅜x3	**4.30**
EYT-1190	40-10/450 80/200	1⅜x3	**3.90**
EYT-1195	40-10/450 100/200	1⅜x3½	**4.10**
EYT-1200	40-10/450 10/350	1⅜x2½	**3.30**
EYT-1201	40-20/450 20/25	1⅜x2½	**3.50**
EYT-1205	40-20/450 25/50	1⅜x3	**3.40**
EYT-1210	40-40/450 20/25	1⅜x3½	**3.95**
EYT-1215	40-40/450 40/25	1⅜x3½	**4.00**
EYT-1217	40-40/450 100/50	1⅜x3½	**4.30**
EYT-1220	40-40/450 40/150	1⅜x3½	**4.15**
EYT-1221	40-40/450 60/200	1⅜x3½	**4.45**
EYT-1225	40-40/450 100/200	1⅜x4	**4.95**
EYT-12251	40-40/450 80/350	1⅜x4	**5.55**
EYT-12252	60-40/450 75/50	1⅜x3½	**4.60**
EYT-12253	80-10/450 125/25	1⅜x3½	**4.40**
EYT-1226	80-20/450 100/50	1⅜x4	**4.80**
EYT-1240	80-40/450 100/25	1⅜x4½	**5.10**
EYT-1241	20-10/475 100/400	1⅜x4	**5.25**
EYT-1245	20-20/475 60/400	1⅜x4	**4.80**
EYT-1250	10-10/500 4/350	1 x3	**2.50**
EYT-1251	20-10/500 100/50	1 x3½	**3.30**
EYT-1255	10-10/500 100/50	1 x3½	**2.85**
EYT-1260	30-10/500 20/50	1⅜x2½	**3.10**
EYT-1261	40-40/500 100/200	1⅜x4	**5.85**
EYT-1262	60/200 200-140/150	1⅜x4	**4.80**
EYT-1263	10/300 500-500/15	1⅜x2	**3.90**
EYT-1264	20/300 150-80/150	1⅜x3	**3.95**
EYT-1265	40/300 80/40/250	1⅜x3	**4.35**
EYT-1266	100/300 200-60/150	1⅜x4	**5.55**
EYT-12661	200/300 60-20/250	1⅜x4½	**5.80**
EYT-1267	60/400 20-20/350	1⅜x3	**4.25**
EYT-1270	80/400 20-10/300	1⅜x3½	**4.25**
EYT-12701	5/450 80-40/300	1⅜x3	**4.15**
EYT-1273	10/450 20-10/25	1 x2	**2.15**
EYT-12731	10/450 80-80/250	1⅜x3	**4.20**
EYT-1275	20/450 40-10/250	1⅜x2	**3.15**
EYT-1276	20/450 40-10/350	1⅜x2½	**3.50**
EYT-1277	20/450 80-10/350	1⅜x3	**4.25**
EYT-1280	30/450 100-25/25	1⅜x2	**3.00**
EYT-1281	40/450 90-50/150	1⅜x3	**3.95**
EYT-1282	80/450 40-40/250	1⅜x4	**4.95**
EYT-1290	40/450 90-50/150	1⅜x3½	**4.00**
EYT-1291	40/475 80-10/450	1⅜x3½	**5.50**
EYT-1292	80/250 40/150 50/50	1⅜x2½	**2.35**
EYT-1295	20/350 30/250 20/25	1 x2½	**2.80**
EYT-1300	100/300 60/150 20/25	1⅜x2½	**2.85**
EYT-1301	20/350 50/100 100/75	1 x3	**3.10**
EYT-1310	10/350 50/150 100/50	1 x3	**2.85**
EYT-1313	20/350 10/300 20/25	1 x2½	**2.50**
EYT-1315	20/350 40/300 10/150	1 x3	**3.15**
EYT-1320	30/350 30/300 20/25	1 x3	**3.15**
EYT-1321	125/350 5/200 100/75	1⅜x3½	**5.30**
EYT-1325	40/350 20/300 10/200	1⅜x2	**3.30**
EYT-1327	60/400 40/300 20/25	1⅜x3	**4.20**
EYT-1328	10/450 50/150 100/75	1 x3	**3.25**
EYT-1329	10/450 40/300 10/150	1⅜x2	**3.10**

ASTRON

capacitors

ASTRON CORPORATION

EAST NEWARK, N. J.

TRIPLE UNITS (Cont.)

Cat. No.	Cap. Mf./WVDC	Dia. x Length	List Price
EYT-1330	10/450 30/400 30/300	1⅜x2½	3.35
EYT-1335	20/450 60/250 100/25	1⅜x2½	3.65
EYT-1340	20/450 80/350 100/50	1⅜x3½	4.50
EYT-1341	30/450 15/350 40/25	1⅜x2	2.40
EYT-1342	30/450 40/350 50/25	1 x4	3.70
EYT-1345	40/450 40/150 130/50	1⅜x3	3.65
EYT-13451	10/475 4/350 40/250	1⅜x2	3.00
EYT-1346	10/475 40/450 100/200	1⅜x3	4.20
EYT-1350	10/475 100/200 40/50	1⅜x2½	3.35
EYT-1351	20/475 50/50 20/25	1 x3	2.75
EYT-1352	80/475 80/150 50/50	1⅜x4	4.85
EYT-1360	20/500 20/300 40/25	1⅜x2½	3.10
EYT-1365	40/500 40/250 100/50	1⅜x3½	3.75

QUADRUPLE UNITS

Cat. No.	Cap. Mf./WVDC	Dia. x Length	List Price
EYQ-1998	100-80-60-40/150	1⅜x3	4.65
EYQ-1999	40-20-10-10/300	1⅜x2	3.95
EYQ-2000	40-40-20-10/300	1⅜x2½	4.55
EYQ-20004	40-40-30-20/300	1⅜x3	4.85
EYQ-20005	60-40-10-10/300	1⅜x2½	4.55
EYQ-2002	200-20-20-20/300	1⅜x4½	6.15
EYQ-2003	80-40-20-10/350	1⅜x3½	5.20
EYQ-2004	40-40-40-40/350	1⅜x3½	6.00
EYQ-2005	30-30-20-20/400	1⅜x3½	4.85
EYQ-2007	50-40-30-20/400	1⅜x4	5.65
EYQ-2010	80-10-10-10/400	1⅜x3½	4.70
EYQ-2011	80-25-10-10/400	1⅜x3½	5.05
EYQ-2012	5-5-5-5/450	1⅜x2	3.00
EYQ-2015	10-10-10-10/450	1⅜x2	3.35
EYQ-2020	20-10-10-10/450	1⅜x2½	3.70
EYQ-2025	20-20-20-20/450	1⅜x3	4.70
EYQ-2027	20-60-20-20/450	1⅜x3½	5.65
EYQ-2030	30-15-15-15/450	1⅜x3	4.45
EYQ-2035	30-30-15-10/450	1⅜x3½	4.70
EYQ-2036	30-30-20-20/450	1⅜x3½	5.20
EYQ-2037	35-35-10- 5/450	1⅜x3	4.65
EYQ-2038	40-10-10-10/450	1⅜x3	4.15
EYQ-2040	40-20-10-10/450	1⅜x3	4.45
EYQ-2041	40-35-10-10/450	1⅜x3	4.80
EYQ-2042	40-40- 4- 4/450	1⅜x3½	4.65
EYQ-2043	40-40-20-20/450	1⅜x4	5.55
EYQ-20431	40-40-30-30/450	1⅜x4	6.05
EYQ-2044	40-40-40-40/450	1⅜x4½	6.45
EYQ-20441	60-20-20-20/450	1⅜x4	5.65
EYQ-20442	60-30-10- 2/450	1⅜x3½	5.10
EYQ-20443	80-10-10-10/450	1⅜x3½	5.05
EYQ-2045	10-10-10-10/475	1⅜x2	3.50
EYQ-2048	20-20-10-10/475	1⅜x2½	4.35
EYQ-2049	20-20-20-20/475	1⅜x3	5.20
EYQ-2050	40-20-10-10/475	1⅜x3½	5.10
EYQ-2051	10-10-10-10/500	1⅜x2	3.50
EYQ-2052	40-40- 8- 8/500	1⅜x3½	5.70
EYQ-2053	30-30-30/150 40/25	1⅜x2	3.10
EYQ-2054	40-20-20/150 20/25	1⅜x2	2.95
EYQ-20541	40-40-20/150 200/10	1⅜x2	3.25
EYQ-20542	40-40-30/150 20/25	1⅜x2	3.10
EYQ-2055	40-40-40/150 20/25	1⅜x2	3.15
EYQ-2056	40-40-40/150 160/25	1⅜x2	3.55
EYQ-20561	50-20-20/150 200/25	1⅜x2	3.50
EYQ-20562	50-30-30/150 100/25	1⅜x2	3.45
EYQ-2057	50-50-50/150 20/25	1⅜x2	3.55
EYQ-2058	60-40-20/150 200/10	1⅜x2	3.50
EYQ-20581	80-40-40/150 40/25	1⅜x2	3.60
EYQ-20582	80-40-40/150 100/25	1⅜x2½	3.75
EYQ-20583	100-90-60/150 200/25	1⅜x3	4.95
EYQ-2059	200-200-100/150 10/75	1⅜x4	5.95
EYQ-2060	80-60-40/250 20/150	1⅜x3	5.10
EYQ-2065	100-40-10/250 100/50	1⅜x3	5.15
EYQ-2066	40-20-20/300 25/25	1⅜x2	4.00

Cat. No.	Cap. Mf./WVDC	Dia. x Length	List Price
EYQ-2074	40-40-10/300 20/15	1⅜x2½	4.25
EYQ-2075	40-40-40/300 20/150	1⅜x2½	4.90
EYQ-2076	60-40-20/300 50/25	1⅜x2½	4.70
EYQ-20761	120-40-40/300 10/250	1⅜x4	6.15
EYQ-20762	150-20-10/300 250/50	1⅜x4	6.05
EYQ-2077	150-40-10/300 100/50	1⅜x4	5.90
EYQ-20771	20-10- 5/350 20/25	1⅜x2	3.10
EYQ-20772	30-10- 5/350 200/25	1⅜x2	3.80
EYQ-20773	30-10- 5/350 100/200	1⅜x2½	4.40
EYQ-20774	30-20- 5/350 100/200	1⅜x3	4.70
EYQ-2080	40-20-20/350 25/25	1⅜x2½	4.25
EYQ-2081	40-40-30/350 10/25	1⅜x3	4.95
EYQ-2085	40-40-40/350 40/25	1⅜x3	5.20
EYQ-2090	40-40-40/350 150/50	1⅜x3½	5.70
EYQ-2091	90-30- 5/350 100/75	1⅜x3½	6.15
EYQ-2092	100-10-10/350 20/50	1⅜x3	5.15
EYQ-2094	100-40-30/350 50/50	1⅜x4	6.55
EYQ-20941	100-80-10/350 20/50	1⅜x4	6.60
EYQ-2095	20-20-20/400 20/25	1⅜x2½	3.85
EYQ-2096	80-40-10/400 20/25	1⅜x3½	5.30
EYQ-20961	80-40-10/400 100/200	1⅜x4	6.30
EYQ-20962	80-40-30/400 40/25	1⅜x4	5.95
EYQ-2097	80-60-15/400 60/50	1⅜x4	6.25
EYQ-2105	10-10-10/450 20/25	1⅜x2	3.15
EYQ-2110	10-10-10/450 10/150	1⅜x2	3.15
EYQ-2115	20-10-10/450 100/25	1⅜x2½	3.70
EYQ-2120	20-20-20/450 20/25	1⅜x2½	4.15
EYQ-2125	20-20-20/450 100/50	1⅜x3	4.55
EYQ-2126	30-30-10/450 125/25	1⅜x3	4.50
EYQ-2130	30-30-15/450 30/50	1⅜x3	4.15
EYQ-2135	30-30-20/450 20/25	1⅜x3½	4.65
EYQ-2140	40-10-10/450 250/25	1⅜x3½	4.25
EYQ-2145	40-10-10/450 10/350	1⅜x3	3.90
EYQ-2146	40-10-10/450 40/350	1⅜x3	4.75
EYQ-2150	40-15-10/450 20/25	1⅜x3	4.10
EYQ-2151	40-20-10/450 100/50	1⅜x3½	4.60
EYQ-2152	40-20-10/450 100/250	1⅜x4	5.85
EYQ-2153	40-20-20/450 20/25	1⅜x3½	4.60
EYQ-2155	40-20-20/450 40/25	1⅜x3½	4.65
EYQ-2160	40-30-10/450 20/25	1⅜x3	4.60
EYQ-2162	40-40-10/450 50/50	1⅜x3½	4.80
EYQ-2163	40-40-10/450 100/100	1⅜x4	5.35
EYQ-2164	40-40-20/450 20/25	1⅜x3½	5.00
EYQ-21641	40-40-40/450 40/25	1⅜x3½	5.50
EYQ-2165	40-40-40/450 25/50	1⅜x4	4.70
EYQ-2170	60-10-10/450 20/150	1⅜x3½	4.60
EYQ-2171	60-40-10/450 25/50	1⅜x3½	5.25
EYQ-2172	60-40-40/450 10/25	1⅜x4	6.00
EYQ-2173	60-50- 5/450 20/25	1⅜x3½	5.35
EYQ-2175	20-20-10/475 10/300	1⅜x3	4.30
EYQ-2180	40-20-10/475 10/25	1⅜x3½	4.85
EYQ-2181	20-20/150 160-40/25	1⅜x2	3.20
EYQ-2182	50-20/150 150-30/15	1⅜x2	3.20
EYQ-2183	100-10/300 200-30/150	1⅜x4½	5.90
EYQ-2184	60- 4/350 100-40/25	1⅜x2½	3.80
EYQ-2185	40-10/400 80-10/250	1⅜x3½	4.70
EYQ-2186	100-10/400 30-20/50	1⅜x3½	5.10
EYQ-2190	10-10/450 20-20/25	1⅜x2	2.95
EYQ-2195	20-20/450 20-20/25	1⅜x2	3.60
EYQ-2197	40-10/450 35-10/350	1⅜x4	5.50
EYQ-2198	40-40/450 100-60/200	1⅜x4	6.05
EYQ-2200	40-40/450 30-30/350	1⅜x4½	5.90
EYQ-2202	60-10/300 10/75 10/25	1⅜x2	3.60
EYQ-22021	80- 5/300 60/150 20/25	1⅜x2½	4.30
EYQ-2203	60-40/350 60/200 20/150	1⅜x3½	5.00
EYQ-22031	10-10/450 60/200 100/50	1⅜x3	3.85

Cat. No.	Cap. Mf./WVDC	Dia. x Length	List Price
EYQ-22032	20-20/450 60/150 100/25	1⅜x2½	4.25
EYQ-22033	35-25/450 20/200 100/50	1⅜x3	4.65
EYQ-22034	40-40/450 125/150 125/25	1⅜x4	5.70
EYQ-2205	10- 5/475 80/450 40/50	1⅜x4	4.95
EYQ-2210	15-15/475 80/300 40/50	1⅜x3½	4.80
EYQ-2211	20-10/475 20/450 100/25	1⅜x2½	4.20
EYQ-2212	40-10/475 4/350 40/300	1⅜x3	4.95
EYQ-2213	20/400 50-40/350 80/50	1⅜x3	5.00
EYQ-2215	10/450 120-40/300 25/25	1⅜x4	5.25
EYQ-2220	10/450 60-40/350 25/25	1⅜x3½	4.60
EYQ-2222	10/450 100-10/350 20/25	1⅜x3½	5.25
EYQ-2225	20/450 80-20/200 50/50	1⅜x3	4.15
EYQ-2227	25/450 100-10/300 50/50	1⅜x3	5.25
EYQ-22271	40/450 40-40/300 20/150	1⅜x3	4.90
EYQ-22272	60/450 80-40/250 20/150	1⅜x4	5.65
EYQ-2228	10/475 140-40/350 100/50	1⅜x4	5.30
EYQ-2229	10/475 40-10/450 100/50	1⅜x3	4.30
EYQ-2230	25/500 80-10/350 10/50	1⅜x4½	4.50
EYQ-2235	100/300 40/50 80-20/25	1⅜x3	4.50
EYQ-2236	80/450 10/400 40-30/300	1⅜x4	5.80
EYQ-2237	30/500 10/450 150-30/50	1⅜x3	4.20
EYQ-2238	10/300 200-140-30/150	1⅜x4½	5.10
EYQ-22381	10/300 200-200-30/150	1⅜x4½	5.35
EYQ-22391	160/350 60-10-4/300	1⅜x4	6.40
EYQ-22392	30/475 130-10-10/350	1⅜x4	6.40
EYQ-22393	20/300 150-150/150 100/30	1⅜x3½	5.30
EYQ-2240	120/300 20/250 100/50 20/25	1⅜x3½	5.05
EYQ-2245	200/300 20/250 100/50 20/25	1⅜x4½	5.45
EYQ-2246	20/350 150/300 10/250 250/50	1⅜x4	6.10
EYQ-2250	10/450 10/300 60/200 100/50	1⅜x2½	3.80
EYQ-2255	20/450 20/400 20/350 20/25	1⅜x3	3.80
EYQ-2260	80/450 10/400 30/300 40/150	1⅜x4½	5.25
EYQ-2261	10/475 40/350 80/300 100/100	1⅜x4	5.55
EYQ-2262	10/475 40/400 4/350 100/50	1⅜x2½	4.05
EYQ-2263	20/300 20-8-4/250	1⅜x2	3.10
EYQ-2265	10/475 10/450 80/200 50/60	1⅜x3	3.85
EYQ-2270	10/475 60/450 30/400 125/50	1⅜x4	5.45
EYQ-2275	20/475 40/300 100/50 80/25	1⅜x3	4.50
EYQ-2276	20/475 40/350 80/200 100/100	1⅜x4	5.45
EYQ-2280	25/475 20/450 40/300 100/50	1⅜x3½	4.95
EYQ-2281	40/475 40/250 50/150 80/50	1⅜x3½	5.00

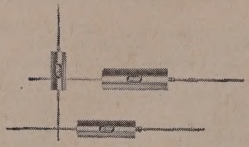
ASTRON capacitors

ASTRON CORPORATION
EAST NEWARK, N. J.

TYPE TES

Solid Electrolyte Tantalum Capacitors

ACTUAL SIZE



The Astron Type TES solid electrolyte tantalum capacitor is a subminiature metal cased, hermetically sealed unit, containing solid materials only. A new development in solid state technology allows the use of a semiconductor electrolyte, resulting in capacitors of improved reliability over a wide range of environmental conditions.

The tantalum oxide dielectric endows these capacitors with long shelf life and stability even at maximum rated temperature. The solid manganese dioxide electrolyte can never leak or corrode even if the seals are damaged or destroyed. The dissipation factor is low over the temperature range of −80°C. to +125°C. and the capacitor variation averages ±4% of the 25°C. value. TES capacitors are polar units. The case is the negative terminal. At 25°C., a maximum of 6% dissipation factor is allowed.

VDC WORKING 6, 10, 15, 20, 35
VDC SURGE 8, 13, 18, 23, 40

Partial Catalog No.	Cap. Mfd.	Case	Case	Case	Case	Case
TES-0022	.0022	A	A	A	A	A
TES-0027	.0027	A	A	A	A	A
TES-0033	.0033	A	A	A	A	A
TES-0039	.0039	A	A	A	A	A
TES-0047	.0047	A	A	A	A	A
TES-0056	.0056	A	A	A	A	A
TES-0068	.0068	A	A	A	A	A
TES-0082	.0082	A	A	A	A	A
TES-01	.01	A	A	A	A	A
TES-012	.012	A	A	A	A	A
TES-015	.015	A	A	A	A	A
TES-018	.018	A	A	A	A	A
TES-022	.022	A	A	A	A	A
TES-027	.027	A	A	A	A	A
TES-033	.033	A	A	A	A	A
TES-039	.039	A	A	A	A	A
TES-047	.047	A	A	A	A	A
TES-056	.056	A	A	A	A	A
TES-068	.068	A	A	A	A	A
TES-082	.082	A	A	A	A	A
TES-1	.1	A	A	A	A	A
TES-12	.12	A	A	A	A	A
TES-15	.15	A	A	A	A	A
TES-18	.18	A	A	A	A	A
TES-22	.22	A	A	A	A	A
TES-27	.27	A	A	A	A	A
TES-33	.33	A	A	A	A	A
TES-39	.39	A	A	A	A	A
TES-47	.47	A	A	A	A	A
TES-56	.56	A	A	A	A	A
TES-68	.68	A	A	A	A	A
TES-82	.82	A	A	A	A	A
TES-1M	1.	A	A	A	A	A
TES-1.2M	1.2	A	A	A	A	B
TES-1.5M	1.5	A	A	A	A	B
TES-1.8M	1.8	A	A	A	A	C
TES-2.2M	2.2	A	A	A	A	C
TES-2.7M	2.7	A	A	A	B	C
TES-3.3M	3.3	A	A	A	B	C
TES-3.9M	3.9	A	A	B	C	C
TES-4.7M	4.7	A	A	B	C	C
TES-5.6M	5.6	A	B	C	C	C
TES-6.8M	6.8	A	B	C	C	C
TES-8.2M	8.2	B	C	C	C	C
TES-10M	10.	B	C	C	C	D
TES-12M	12.	C	C	C	C	D
TES-15M	15.	C	C	C	C	D
TES-18M	18.	C	C	C	D	D
TES-22M	22.	C	C	C	D	D
TES-27M	27.	C	C	D	D	D
TES-33M	33.	C	C	D	D	E
TES-39M	39.	C	C	D	D	E
TES-40M	40.		C			
TES-47M	47.	C	D	D	D	E
TES-56M	56.	C	D	D	E	
TES-60M	60.	C				
TES-68M	68.	D	D	D	E	
TES-82M	82.	D	D	E	E	
TES-100M	100.	D	D	E	E	
TES-120M	120.	D	D	E		
TES-150M	150.	D	E	E		
TES-180M	180.	D	E			
TES-220M	220.	E	E			
TES-270M	270.	E				
TES-330M	330.	E				

NOTES TO STANDARD RATINGS

I — TO ORDER: Simply write the partial catalog number indicated for the listed capacitance and add the listed WVDC.

Example:	Listed Capacitance	.0068
	Partial Catalog Number	TES-0068
	Listed WVDC	20
	Catalog (Order) Number	TES-0068-20

II — Ratings appearing in bold face are available in either ±20% or ±10% tolerance (with exception of 40M and 60M). All other ratings are available in 10% tolerance only. To designate 10% tolerance, add —10 to the catalog No. For example—TES-15M-20-10.

III — For insulating sleeve add (M) designation to catalog number: Example — TESM-15M-20.

IV — Higher capacities and voltages than those shown above will be available in the near future. Special ratings and tolerances are available on request.

DIMENSIONS — INCHES

Case	D (±.010)	X L	(±.032)	Wire Lead Gauge
A	.125		.250	24
B	.125		.375	24
C	.175		.438	24
D	.279		.650	22
E	.341		.750	22

CASE SIZES WITH MYLAR INSULATING SLEEVE

Case	D (+.016)	X L	(+.031)
A	.131	X	.322
B	.131	X	.447
C	.181	X	.510
D	.285	X	.722
E	.381	X	.822

ASTRON® capacitors

ASTRON CORPORATION
EAST NEWARK, N. J.

BLUE POINT® TYPE BP

Molded Plastic Tubulars

ASTRON
BLUE-POINT
BP-6-05

- A MAJOR ACHIEVEMENT in molded capacitor construction and performance. Engineered and produced exclusively by ASTRON (Pat. Pend.). Greatest protection against heat, moisture and humidity.
- Designed for continuous operation at 85°C. WITHOUT DERATING.
- Toughest shell bonded with tightest immersion-proof seal . . . unaffected by soldering iron heat. Leads cannot pull or melt out.
- Solid thermosetting impregnant. Vacuum impregnated sections—as in hermetically sealed metal case capacitors—insure uniformity and dependability of every unit.

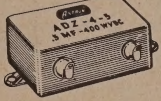
Cat. No.	Cap. Mf.	Dia. x Length	List Price
200 VOLTS DC WORKING			
BP-2-01	.01	⅜x1	$0.25
BP-2-02	.02	⅜x1	.25
BP-2-05	.05	⅜x1¼	.25
BP-2-1	.1	7/16x1¼	.35
BP-2-2	.2	⅝x⅞	.45
BP-2-022	.022	⅜x1	.25
BP-2-25	.25	⅝x1⅞	.45
BP-2-5	.5	⅝x1⅞	.60
400 VOLTS DC WORKING			
BP-4-01	.01	⅜x1	.25
BP-4-02	.02	⅜x1¼	.25
BP-4-022	.022	⅜x1¼	.25
BP-4-03	.03	7/16x1¼	.30
BP-4-033	.033	7/16x1¼	.30
BP-4-047	.047	7/16x1¼	.30
BP-4-05	.05	7/16x1¼	.30
BP-4-1	.1	½x1⅝	.35
BP-4-2	.2	⅝x1⅞	.40
BP-4-25	.25	⅝x1⅞	.45
600 VOLTS DC WORKING			
BP-6-001	.001	⅜x1	.25
BP-6-0015	.0015	⅜x1	.25
BP-6-002	.002	⅜x1	.25
BP-6-0022	.0022	⅜x1	.25
BP-6-003	.003	⅜x1	.25
BP-6-0033	.0033	⅜x1	.25
BP-6-004	.004	⅜x1	.25
BP-6-0047	.0047	⅜x1	.25
BP-6-005	.005	⅜x1	.25
BP-6-006	.006	⅜x1	.25
BP-6-01	.01	⅜x1¼	.30
BP-6-015	.015	⅜x1¼	.30
BP-6-02	.02	7/16x1¼	.30
BP-6-022	.022	7/16x1¼	.30
BP-6-03	.03	½x1⅝	.35
BP-6-033	.033	½x1⅝	.35
BP-6-04	.04	½x1⅝	.35
BP-6-047	.047	½x1⅝	.40
BP-6-05	.05	½x1⅝	.40
BP-6-06	.06	⅝x1⅞	.40
BP-6-08	.08	⅝x1⅞	.40
BP-6-1	.1	⅝x1⅞	.45
1600 VOLTS DC WORKING			
BP-16-001	.001	7/16x1¼	.55
BP-16-002	.002	7/16x1¼	.55
BP-16-003	.003	7/16x1¼	.55
BP-16-004	.004	7/16x1¼	.55
BP-16-005	.005	7/16x1¼	.55
BP-16-006	.006	½x1⅝	.55
BP-16-007	.007	½x1⅝	.60
BP-16-008	.008	½x1⅝	.60
BP-16-01	.01	½x1⅝	.60
BP-16-015	.015	⅝x1⅞	.60
BP-16-02	.02	⅝x1⅞	.60
BP-16-03	.03	⅝x1⅞	.60
BP-16-033	.033	⅝x1⅞	.60
BP-16-05	.05	⅝x1⅞	.60

CAPACITANCE TOLERANCES

Nominal Capacitance	Capacitance Tolerance
.001 mfd — .0019 mfd	+60% −25%
.002 mfd — .009 mfd	+40% −20%
.01 mfd — .1 mfd	+20% −20%
.11 mfd — .5 mfd	+20% −10%

METEOR* TYPE ADZ

Bathtub Capacitors
125°C. Operation



MIL TYPE
CP53
CP54 Char. K
CP55

- Designed for operation at temperatures up to 125°C without voltage derating.
- Excellent capacitance stability, less than 5% change over entire range −65°C. to +125°C. achieved by use of ASTRON—developed X-250* impregnant.
- Temperature characteristics exceed MIL specifications for Characteristic K.
- Compact sizes in handy, easy-mounting bathtub cases. Glass-to-metal sealed lug-type terminals. Positive immersion proof seal.
- Standard position of terminals is on side (ASTRON Type ADZ or MIL Style CP53). Available also with terminals on top (ASTRON Type ADZT or MIL Style CP54); bottom terminals (ASTRON Type ADZB or MIL Style CP55).
- Standard Capacitance Tolerance: ±20%.

Cat. No.	Cap. Mf.	L. x W. x H.	Mtg. Ctr.
200 VOLTS DC WORKING			
ADZ-2-5	.5	1 13/16x1 x ⅞	2⅛
ADZ-2-1M	1.0	2 x1¾x ⅞	2⅜
ADZ-2-2M	2.0	2 x2 x1	2⅜
400 VOLTS DC WORKING			
ADZ-4-05	.05	1 13/16x1 x ¾	2⅛
ADZ-4-1	.1	1 13/16x1 x ¾	2⅛
ADZ-4-25	.25	1 13/16x1 x ¾	2⅛
ADZ-4-5	.5	1 13/16x1 x ⅞	2⅛
ADZ-4-1M	1.0	2 x1¾x ⅞	2⅜
600 VOLTS DC WORKING			
ADZ-6-05	.05	1 13/16x1 x ¾	2⅛
ADZ-6-1	.1	1 13/16x1 x ¾	2⅛
ADZ-6-25	.25	1 13/16x1 x ¾	2⅛
ADZ-6-5	.5	1 13/16x1 x1	2⅛
ADZ-6-1M	1.0	2 x1¾x1	2⅜
ADZ-6-2M	2.0	2 x2 x1⅛†	2⅜

CAPACITANCE TOLERANCE: ±20% (M). Other tolerances are available.

*Case ht. (C dim.) 1¼″ for top terminals (ADZT) or bottom terminals (ADZB).

TYPE AXM

ASTRON
TYPE AXMJ-4-10M
400 WVDC
10.0 MF

MIL C-25 TYPE
(CP70
(B Terminal)
Char. E)

Terneplate
"Squeeze Seam"
Case with Spade
Bolt Brackets

Cat. No.	Cap. MF	L. x W. x H.
600 VOLTS DC WORKING		
AXM 6-25	.25	1 13/16x1 1/16x1⅝
AXM 6-5	.5	1 13/16x1 1/16x2¼
AXM 6-1M	1.0	1 13/16x1 1/16x2¼
AXM 6-2M	2.0	1 13/16x1 1/16x3¼
AXM 6-4M	4.0	2½ x1 3/16x3⅞
AXM 6-6M	6.0	3¾ x1¼ x3⅞
AXM 6-8M	8.0	3¾ x1¼ x4¼
AXM 6-10M	10.0	3¾ x1¾ x4
1000 VOLTS DC WORKING		
AXM 10-1	.1	1 13/16x1 1/16x1⅝
AXM 10-25	.25	1 13/16x1 1/16x2¼
AXM 10-5	.5	1 13/16x1 1/16x2¼
AXM 10-1M	1.0	1 13/16x1 1/16x2⅞
AXM 10-2M	2.0	1 13/16x1 1/16x4¾
AXM 10-4M	4.0	3¾ x1¼ x3⅞
AXM 10-6M	6.0	3¾ x1¾ x4
AXM 10-8M	8.0	3¾ x1¾

ASTRON® **capacitors**

ASTRON CORPORATION
EAST NEWARK, N. J.

METEOR* TYPE TQF (CPO4)

Glass-to-Metal Sealed SUBMINIATURE TUBULARS

125°C. Operation

- Inserted tab construction provides smallest paper-foil capacitors available. Ideal where resonant losses are secondary to small size.
- No voltage derating necessary over entire operating temperature range —65°C. to +125°C.
- Excellent capacitance stability over entire temperature range.
- Available in a variety of construction styles to meet your specific needs, as follows:

CP04* **CP10***
CP05* **CP11***
of
MIL C-25A

ASTRON
METEOR
TQF-6-033

Cat. No.	Cap. Mf.	Dia. x Length
100 VOLTS DC WORKING		
TQF-1-001	.001	.235x ¾
TQF-1-0015	.0015	.235x ¾
TQF-1-0022	.0022	.235x ¾
TQF-1-0033	.0033	.235x ¾
TQF-1-0047	.0047	.235x ¾
TQF-1-0068	.0068	.235x ¾
TQF-1-01	.01	.235x ¾
TQF-1-015	.015	.235x ¾
TQF-1-022	.022	.235x ¾
TQF-1-027	.027	.235x ¾
TQF-1-033	.033	.235x ¾
TQF-1-047	.047	.312x ⅞
TQF-1-068	.068	.312x ⅞
TQF-1-1	.1	.312x ⅞
TQF-1-15	.15	.400x ⅞
TQF-1-22	.22	.400x1⅛
TQF-1-27	.27	.400x1⅜
TQF-1-33	.33	.400x1⅜
TQF-1-47	.47	.562x1⅛
TQF-1-68	.68	.562x1⅜
TQF-1-1M	1.0	.562x1⅞
200 VOLTS DC WORKING		
TQF-2-001	.001	.235x ¾
TQF-2-0015	.0015	.235x ¾
TQF-2-0022	.0022	.235x ¾
200 VOLTS DC WORKING (Cont.)		
TQF-2-0033	.0033	.235x ¾
TQF-2-0047	.0047	.235x ¾
TQF-2-0068	.0068	.235x ¾
TQF-2-01	.01	.235x ¾
TQF-2-015	.015	.235x ¾
TQF-2-022	.022	.235x ¾
TQF-2-027	.027	.312x ⅞
TQF-2-033	.033	.312x ⅞
TQF-2-047	.047	.312x ⅞
TQF-2-068	.068	.312x ⅞
TQF-2-1	.1	.400x ⅞
TQF-2-15	.15	.400x1⅛
TQF-2-22	.22	.400x1⅜
TQF-2-27	.27	.562x1⅛
TQF-2-33	.33	.562x1⅛
TQF-2-47	.47	.562x1⅜
TQF-2-68	.68	.562x1⅞
TQF-2-1M	1.0	.670x1⅞
300 VOLTS DC WORKING		
TQF-3-001	.001	.235x ¾
TQF-3-0015	.0015	.235x ¾
TQF-3-0022	.0022	.235x ¾
TQF-3-0033	.0033	.235x ¾
TQF-3-0047	.0047	.235x ¾
TQF-3-0068	.0068	.235x ¾
300 VOLTS DC WORKING (Cont.)		
TQF-3-01	.01	.235x ¾
TQF-3-015	.015	.235x ¾
TQF-3-022	.022	.312x ⅞
TQF-3-027	.027	.312x ⅞
TQF-3-033	.033	.312x ⅞
TQF-3-047	.047	.312x ⅞
TQF-3-068	.068	.400x ⅞
TQF-3-1	.1	.400x1⅛
TQF-3-15	.15	.400x1⅜
TQF-3-22	.22	.562x1⅛
TQF-3-27	.27	.562x1⅜
TQF-3-33	.33	.562x1⅜
TQF-3-47	.47	.562x1⅞
TQF-3-68	.68	.670x1⅞
TQF-3-1M	1.0	.750x2⅛
400 VOLTS DC WORKING		
TQF-4-001	.001	.235x ¾
TQF-4-0015	.0015	.235x ¾
TQF-4-0022	.0022	.235x ¾
TQF-4-0033	.0033	.235x ¾
TQF-4-0047	.0047	.235x ¾
TQF-4-0068	.0068	.235x ¾
TQF-4-01	.01	.235x ¾
TQF-4-015	.015	.312x ⅞
TQF-4-022	.022	.312x ⅞
TQF-4-027	.027	.312x ⅞
TQF-4-033	.033	.312x ⅞
TQF-4-047	.047	.400x ⅞
TQF-4-068	.068	.400x1⅛
TQF-4-1	.1	.400x1⅜
TQF-4-15	.15	.562x1⅛
TQF-4-22	.22	.562x1⅜
TQF-4-27	.27	.562x1⅞
TQF-4-33	.33	.562x1⅞
TQF-4-47	.47	.670x1⅞
TQF-4-56	.56	.750x2⅛
TQF-4-68	.68	.750x2⅛
TQF-4-1M	1.0	1x1⅞
600 VOLTS DC WORKING		
TQF-6-001	.001	.235x ¾
TQF-6-0015	.0015	.235x ¾
TQF-6-0022	.0022	.235x ¾
TQF-6-0033	.0033	.235x ¾
TQF-6-0047	.0047	.235x ¾
TQF-6-0068	.0068	.235x ¾
TQF-6-01	.01	.312x ⅞
TQF-6-015	.015	.312x ⅞
TQF-6-022	.022	.312x ⅞
TQF-6-027	.027	.400x ⅞
TQF-6-033	.033	.400x ⅞
TQF-6-047	.047	.400x1⅛
TQF-6-068	.068	.400x1⅜
TQF-6-1	.1	.562x1⅛
TQF-6-15	.15	.562x1⅜
TQF-6-22	.22	.562x1⅞
TQF-6-27	.27	.670x1⅞
TQF-6-33	.33	.670x1⅞
TQF-6-47	.47	.750x2⅛
TQF-6-68	.68	1x1⅞
1000 VOLTS DC WORKING		
TQF-10-001	.001	.400x ⅞
TQF-10-0015	.0015	.400x ⅞
TQF-10-0022	.0022	.400x ⅞
TQF-10-0033	.0033	.400x ⅞
TQF-10-0047	.0047	.400x ⅞
TQF-10-0068	.0068	.400x ⅞
TQF-10-01	.01	.400x ⅞
TQF-10-015	.015	.400x ⅞
TQF-10-022	.022	.400x1⅛
TQF-10-027	.027	.400x1⅜
TQF-10-033	.033	.400x1⅜
TQF-10-047	.047	.562x1⅛
TQF-10-068	.068	.562x1⅜
TQF-10-1	.1	.562x1⅝
TQF-10-15	.15	.670x1⅝
TQF-10-22	.22	.750x2⅛
TQF-10-27	.27	.750x2⅝
TQF-10-33	.33	.750x2⅝
TQF-10-47	.47	1.000x2⅛

VARIATIONS

CIRCUIT 1	CAPACITOR SECTION INSULATED FROM THE CASE	MIL STYLE	ASTRON TYPE
UNINSULATED BODY SIZES SHOWN IN LISTINGS	Basic unit in floating construction. Sizes as shown in listings.	CP04 (1)	TQF
	Basic unit with tangential soldered-on bracket. Add suffix (A).	CP10 (1)	TQF-A
	Basic unit with soldered-on L type bracket. Add suffix (B).	—	TQF-B
	Screw neck mounting type. Available in same ratings as TQF. Minimum in case diameter .400".	CP11 (1)	TQFS
FOR INSULATED BODY ADD 1/16" TO DIAMETER AND LENGTH OF TQF SIZES LISTED	Internally insulated ("Floating" Construction) with plastic outer sleeve (P).	CP05 (1)	TQFP

CIRCUIT 3	CAPACITOR SECTION GROUNDED TO CASE	MIL STYLE	ASTRON TYPE
UNINSULATED BODY DEDUCT 1/16" FROM LENGTH OF UNITS LISTED	Basic unit—Grounded construction.	CP04 (3)	TQ
	Basic TQ unit with soldered-on tangential (A) bracket.	CP10 (3)	TQ-A
	Basic TQ unit with soldered-on L type bracket (B).	—	TQ-B
	Screw neck mounting type. Available in same ratings as TQ. Minimum case diameter is .400".	CP11 (3)	TQS
	Stud base mounting type. Available in same ratings as TQ.	—	TQV
FOR INSULATED BODY ADD 1/16" TO DIAMETER OF TQF SIZES LISTED	Grounded construction, with plastic outer sleeve (P).	CP05 (3)	TQP

See complete military listings page 416

ASTRON capacitors

ASTRON CORPORATION
EAST NEWARK, N. J.

METEOR* SUBMINIATURE PAPER CAPACITORS

For 125°C. Operation without voltage derating

- Amazingly small sizes, compact and light-weight units.
- Highly dependable operation at temperatures up to 125°C. **without voltage derating.**
- Exceptional capacitance stability, less than 5% change, over entire temperature range of —65°C. to +125°C. due to use of ASTRON-developed high-temperature impregnant X-250*.
- High insulation resistance, low power factor, unusually low resonance loss. High test voltage indicates extra margin of safety in operation.
- Built to exceed stringent requirements of Specification MIL-C-25A.
- Positive hermetic closure of the metal cases is assured by glass-to-metal solder seal terminals.
- Tubulars supplied in a variety of construction and mounting styles to meet your specific needs: extended foil or inserted tab; capacitor section grounded to case or insulated from case; plastic outer sleeve; with soldered-on tangential or L-type bracket; screw neck mounting style; or stud-base mounting style.

TYPE AQF (50V)

SUBMINIATURE GLASS-TO-METAL SEALED TUBULARS
For Transistorized Applications
50 Volt Rating —
Extended Foil Construction

ASTRON
TYPE AQF

- SMALLER SIZE THAN LOWEST RATING AVAILABLE IN MIL-C-25A
- MEETS ELECTRICAL AND ENVIRONMENTAL REQUIREMENTS OF MIL-C-25A
- SUPPLIED TO COMPLY WITH CHARACTERISTICS E OR K OF MIL-C-25A
- CONTINUOUS OPERATION OVER TEMPERATURE RANGE OF —65°C. TO 125°C. WITHOUT DERATING
- EXCELLENT CAPACITANCE TEMPERATURE STABILITY

Designed to fill the need for a high quality capacitor for use primarily in transistor and other low voltage applications. These capacitors offer the outstanding advantage of smaller sizes without any loss in performance or electrical and physical characteristics in accordance with MIL-C-25A.

50 VOLTS DC WORKING

AQF-.5-027	.027	.235x¾
AQF-.5-068	.068	.312x⅞
AQF-.5-1	.1	.312x⅞
AQF-.5-27	.27	.400x1⅜
AQF-.5-47	.47	.500x1¼
AQF-.5-1M	1.0	.562x1⅝
AQF-.5-2M	2.0	.750x2⅛

METEOR* TYPE AQF (CP08)

Glass-to-Metal Sealed SUBMINIATURE TUBULARS

CP08* and CP09* MIL C-25A

ASTRON
METEOR

100 VOLTS DC WORKING

Cat. No.	Cap. Mf.	Dia. x Lgth.
AQF-1-001	.001	.235x¾
AQF-1-0015	.0015	.235x¾
AQF-1-0022	.0022	.235x¾
AQF-1-0033	.0033	.235x¾
AQF-1-0047	.0047	.235x¾
AQF-1-01	.01	.235x¾
AQF-1-015	.015	.235x¾
AQF-1-022	.022	.312x⅞
AQF-1-033	.033	.312x⅞
AQF-1-047	.047	.312x⅞
AQF-1-068	.068	.400x⅞
AQF-1-1	.1	.400x⅞
AQF-1-15	.15	.400x1⅛
AQF-1-22	.22	.400x1⅜
AQF-1-27	.27	.562x1⅛
AQF-1-33	.33	.562x1⅛
AQF-1-47	.47	.562x1⅜
AQF-1-56	.56	.562x1⅝
AQF-1-68	.68	.562x1⅝
AQF-1-1M	1.0	.670x1⅝

200 VOLTS DC WORKING

Cat. No.	Cap. Mf.	Dia. x Lgth.
AQF-2-001	.001	.235x¾
AQF-2-0015	.0015	.235x¾
AQF-2-0022	.0022	.235x¾
AQF-2-0033	.0033	.235x¾
AQF-2-0047	.0047	.235x¾
AQF-2-0068	.0068	.235x¾
AQF-2-01	.01	.312x⅞
AQF-2-015	.015	.312x⅞
AQF-2-022	.022	.312x⅞
AQF-2-033	.033	.312x⅞
AQF-2-047	.047	.400x⅞
AQF-2-056	.056	.400x⅞
AQF-2-068	.068	.400x⅞
AQF-2-1	.1	.400x1⅛
AQF-2-15	.15	.400x1⅜
AQF-2-22	.22	.562x1⅛
AQF-2-27	.27	.562x1⅜
AQF-2-33	.33	.562x1⅜
AQF-2-47	.47	.562x1⅝
AQF-2-56	.56	.670x1⅝
AQF-2-68	.68	.670x1⅝
AQF-2-1M	1.0	.750x2⅛

300 VOLTS DC WORKING

AQF-3-001	.001	.235x¾
AQF-3-0015	.0015	.235x¾
AQF-3-0022	.0022	.235x¾
AQF-3-0033	.0033	.235x¾
AQF-3-0047	.0047	.235x¾
AQF-3-01	.01	.312x⅞
AQF-3-015	.015	.312x⅞
AQF-3-022	.022	.312x⅞
AQF-3-033	.033	.400x⅞
AQF-3-047	.047	.400x⅞
AQF-3-068	.068	.400x1⅛
AQF-3-1	.1	.400x1⅜
AQF-3-15	.15	.562x1⅛
AQF-3-22	.22	.562x1⅜
AQF-3-27	.27	.562x1⅝
AQF-3-33	.33	.562x1⅝
AQF-3-47	.47	.670x1⅝
AQF-3-56	.56	.750x2⅛
AQF-3-68	.68	.750x2⅛
AQF-3-1M	1.0	.750x2⅜

400 VOLTS DC WORKING

AQF-4-001	.001	.235x¾
AQF-4-0015	.0015	.235x¾
AQF-4-0022	.0022	.235x¾
AQF-4-0033	.0033	.235x¾
AQF-4-0047	.0047	.312x⅞
AQF-4-0068	.0068	.312x⅞
AQF-4-01	.01	.312x⅞
AQF-4-015	.015	.312x⅞
AQF-4-022	.022	.400x⅞
AQF-4-033	.033	.400x⅞
AQF-4-047	.047	.400x1⅛
AQF-4-068	.068	.400x1⅜
AQF-4-1	.1	.562x1⅛
AQF-4-15	.15	.562x1⅜
AQF-4-22	.22	.562x1⅝
AQF-4-27	.27	.670x1⅝
AQF-4-33	.33	.670x1⅝
AQF-4-47	.47	.750x2⅛

600 VOLTS DC WORKING

AQF-6-001	.001	.235x¾
AQF-6-0015	.0015	.235x¾
AQF-6-0022	.0022	.235x¾
AQF-6-0033	.0033	.312x⅞
AQF-6-0047	.0047	.312x⅞
AQF-6-0068	.0068	.312x⅞
AQF-6-01	.01	.312x⅞
AQF-6-015	.015	.400x⅞
AQF-6-022	.022	.400x⅞
AQF-6-033	.033	.400x1⅛
AQF-6-047	.047	.400x1⅜
AQF-6-068	.068	.562x1⅛
AQF-6-1	.1	.562x1⅜
AQF-6-15	.15	.562x1⅝
AQF-6-22	.22	.670x1⅝
AQF-6-27	.27	.750x2⅛
AQF-6-33	.33	.750x2⅛
AQF-6-47	.47	.750x2⅜

1000 VOLTS DC WORKING

AQF-10-001	.001	.400x⅞
AQF-10-0015	.0015	.400x⅞
AQF-10-0022	.0022	.400x⅞
AQF-10-0033	.0033	.400x⅞
AQF-10-0047	.0047	.400x⅞
AQF-10-0068	.0068	.400x⅞
AQF-10-01	.01	.400x⅞
AQF-10-015	.015	.400x1⅛
AQF-10-022	.022	.400x1⅜
AQF-10-033	.033	.562x1⅛
AQF-10-047	.047	.562x1⅜
AQF-10-068	.068	.562x1⅝
AQF-10-1	.1	.670x1⅝
AQF-10-15	.15	.670x1⅞
AQF-10-22	.22	.750x2⅛
AQF-10-33	.33	1.000x2⅛
AQF-10-47	.47	1.000x2⅜

VARIATIONS

CIRCUIT 1	CAPACITOR SECTION INSULATED FROM THE CASE	MIL STYLE	ASTRON TYPE
UNINSULATED BODY SIZES SHOWN IN LISTINGS	Basic unit in floating construction. Sizes as shown in listings.	CP08 (1)	AQF
	Basic unit with tangential soldered-on bracket. Add suffix (A).	—	AQF-A
	Basic unit with soldered-on L type bracket. Add suffix (B).	—	AQF-B
	Screw neck mounting type. Available in same ratings as AQF.	—	AQFS
	Minimum in case diameter .400″.		
FOR INSULATED BODY ADD 1/16″ TO DIAMETER AND LENGTH OF AQF SIZES LISTED	Internally insulated ("Floating" Construction) with plastic outer sleeve (P).	CP09 (1)	AQFP

CIRCUIT 3	CAPACITOR SECTION GROUNDED TO CASE	MIL STYLE	ASTRON TYPE
UNINSULATED BODY DEDUCT 1/16″ FROM LENGTH OF UNITS LISTED	Basic unit—Grounded construction.	CP08 (3)	AQ
	Basic AQ unit with soldered-on tangential (A) bracket.	—	AQ-A
	Basic AQ unit with soldered-on L type bracket (B).	—	AQ-B
	Screw neck mounting type. Available in same ratings as AQ. Minimum case diameter is .400″.	—	AQS
	Stud base mounting type. Available in same ratings as AQ.	—	AQV
FOR INSULATED BODY ADD 1/16″ TO DIAMETER OF AQF SIZES LISTED	Grounded construction, with plastic outer sleeve (P).	CP09 (3)	AQP

*** See complete military listings page 417**

ASTRON® capacitors

ASTRON CORPORATION
EAST NEWARK, N. J.

METALITE®

Metallized Paper Capacitors for 65°C. and 85°C. Operation

METALITE CAPACITORS

Feature:

- Ultra-compact sizes. Light weight. Ideal for miniaturization applications, and portable, mobile and airborne equipment.
- As much as 75% reduction in size over conventional paper-foil capacitors.
- Self-healing — the ability to withstand high dielectric stresses. METALITE capacitors can be subjected to momentary overvoltages and surges over and over again without danger of permanent failure.
- Temperature Range (Metal cased units) −65°C. to +85°C.; (cardboard cased Type ML) −55°C. to +65°C.
- Excellent RF characteristics. Low RF impedance due to small sizes and short current path. Low power factor.
- Wide variety of applications: RF and audio bypass circuits, noise suppression filters and systems, instruments, and various types of communication equipment where small size, light weight and the self-healing feature are especially desirable characteristics to meet specific circuit requirements.
- Interchangeability with standard paper-foil capacitor designs when operated within published ratings and circuit requirements.

METALITE® TYPE MQCF

85°C. Operation

ASTRON
METALITE
MQC—4—5

Glass-to-Metal Sealed SUBMINIATURE TUBULARS

- Smallest paper capacitor type available.
- Temperature Range —65°C. to +85°C.
- Non-inductively wound. Mineral wax impregnated and filled. Tinned, non-ferrous metal cases.
- Capacitor section grounded to case (Type MQC) with glass-to-metal terminal at one end. Available also with capacitor section insulated from case (Type MQCF) with glass-to-metal terminal at each end.
- Lead length 1¾″ minimum. Standard capacitance tolerance: ±20%.

VARIATIONS AVAILABLE

CAPACITOR SECTION INSULATED FROM CASE

Glass-to-Metal Terminal at both ends Circuit 1

UNINSULATED BODY	MQCF	— Basic internally insulated unit as listed.
	MQCF-A	— with tangential (A) soldered-on bracket.
	MQCF-B	— with L-type (B) soldered on bracket.
	MQCFS	— Screw neck vertical-mounting type. Same ratings as MQC. Minimum diameter .400″.
INSULATED BODY Add 1/16″ to dia. and length of MQCF sizes listed.	MQCFP	— Basic internally insulated unit with plastic outer sleeve (P).

CAPACITOR SECTION GROUNDED TO CASE

Glass-to-Metal Terminal at one end Circuit 3

TYPE & DESCRIPTION

UNINSULATED BODY Sizes shown in listings Deduct 1/16″ from length of MQCF sizes listed.	MQC	— Basic type.
	MQC-A	— with tangential (A) soldered-on bracket.
	MQC-B	— with L-type (B) soldered-on bracket.
	MQCS	— screw neck vertical-mounting type. Same ratings as MQC. Minimum dia. .400″.
	MQV	— Stud base vertical-mounting type. Same ratings and sizes as Type MQC.
INSULATED BODY Add 1/16″ to dia. of MQCF sizes listed.	MQCP	— Basic grounded construction as listed with plastic outer sleeve (P).

Cat. No.	Cap. Mf.	Dia. x Lgth.
150 VOLTS DC WORKING		
MQCF-1.5-4M	4.0	1x1 13/16
MQCF-1.5-6M	6.0	1x1 13/16
MQCF-1.5-8M	8.0	1x2 5/16
200 VOLTS DC WORKING		
MQCF-2-01	.01	.235x13/16
MQCF-2-02	.02	.235x13/16
MQCF-2-033	.033	.235x13/16
MQCF-2-04	.04	.235x13/16
MQCF-2-05	.05	.235x13/16
MQCF-2-1	.1	.312x13/16
MQCF-2-15	.15	.400x13/16
MQCF-2-2	.2	.400x13/16
MQCF-2-25	.25	.400x13/16
MQCF-2-33	.33	.400x1⅛
MQCF-2-5	.5	.400x1⅛
MQCF-2-68	.68	.562x1 5/16
MQCF-2-1M	1.0	.562x1 5/16
MQCF-2-1.5M	1.5	.562x1 13/16
MQCF-2-2M	2.0	.562x1 13/16
400 VOLTS DC WORKING		
MQCF-4-01	.01	.235x13/16
MQCF-4-02	.02	.235x13/16
MQCF-4-03	.03	.312x13/16
MQCF-4-04	.04	.312x1⅛
MQCF-4-05	.05	.312x1⅛
MQCF-4-1	.1	.400x1⅛
MQCF-4-15	.15	.562x1⅛
MQCF-4-2	.2	.562x1⅛
MQCF-4-25	.25	.562x1⅛
MQCF-4-33	.33	.562x1 5/16
MQCF-4-5	.5	.562x1 13/16
MQCF-4-68	.68	.670x1 13/16
MQCF-4-1M	1.0	.670x2 5/16
MQCF-4-1.5M	1.5	1x2 5/16
MQCF-4-2M	2.0	1x2 5/16
MQCF-4-4M	4.0	1⅛x2 5/16
600 VOLTS DC WORKING		
MQCF-6-01	.01	.235x13/16
MQCF-6-015	.015	.312x13/16
MQCF-6-02	.02	.312x13/16
MQCF-6-03	.03	.312x13/16
MQCF-6-04	.04	.312x1⅛
MQCF-6-05	.05	.312x1⅛
MQCF-6-1	.1	.400x1⅛
MQCF-6-15	.15	.562x1⅛
MQCF-6-22	.22	.562x1 5/16
MQCF-6-25	.25	.562x1 5/16
MQCF-6-33	.33	.670x1 5/16
MQCF-6-5	.5	.670x1 13/16
MQCF-6-68	.68	.670x2 5/16
MQCF-6-1M	1.0	.750x2 5/16
MQCF-6-2M	2.0	1x2 5/16

STANDARD CAPACITANCE TOLERANCE: ±20%.

ASTRON® capacitors

ASTRON · CORPORATION
EAST NEWARK, N. J.

TYPE MQZF

Transistor Metallized Paper Capacitors

Catalog Number	WVDC	Cap. Mfd.	Dia. ±1/64″ (Inches) D	Length ±1/32″ (Inches) L
MQZF .5-047	50	.047	.195	11/16
MQZF .5-068	50	.068	.195	13/16
MQZF .5-1	50	.1	.235	11/16
MQZF .5-15	50	.15	.235	13/16
MQZF .5-22	50	.22	.235	1
MQZF .5-33	50	.33	.312	1
MQZF .5-47	50	.47	.312	1
MQZF .5-68	50	.68	.400	1
MQZF .5-1M	50	1.0	.400	1
MQZF .5-1.5M	50	1.5	.500	1-1/8
MQZF .5-2M	50	2.0	.562	1-1/8
MQZF .5-4M	50	4.0	.670	1-11/32
MQZF .5-6M	50	6.0	.670	1-15/16
MQZF .5-8M	50	8.0	.750	1-15/16

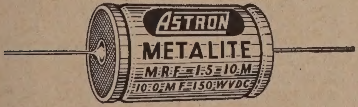
NOTE:

1. Standard MQZF is supplied in "floating" construction.
2. Grounded construction is available upon request. Specify Type MQZ. Subtract 1/16″ from length of sizes listed.
3. For plastic insulating outer sleeve (P) specify MQZFP or MQZP.
   - (A) For floating type add 1/16″ to diameter and length of sizes listed.
   - (B) For grounded units add 1/16″ to diameter of sizes listed.
4. Standard tolerance of Type MQZF is ±20%; special tolerances of ±10% and ±5% available upon request. Specify by adding tolerance numerals to part number. Example: MQZF-.5-1M-10.

METALITE® TYPE MRF

Metal Cased Tubulars

85°C. Operation



- Temperature Range −65°C. to +85°C.
- Mineral wax impregnated and filled.
- Hermetically sealed. Neoprene-phenolic end discs.
- Type MRF supplied with capacitor section insulated from case. Also available with section grounded to case (Type MRG).
- Lead length 1¾″ minimum.
- Standard capacitance tolerance: ±20%.

VARIATIONS AVAILABLE

CAPACITOR SECTION INSULATED FROM CASE CIRCUIT 1	
TYPE AND DESCRIPTION	
UNINSULATED BODY Sizes shown in listings	MRF — Basic type as listed. MRF-Y — with radial (Y) bracket. MRF-A — with tangential (A) soldered-on bracket.
INSULATED BODY Add 3/16″ to length and 1/16″ to dia.	MRFP — Basic type, with plastic sleeve (P). MRFP-Y — with plastic sleeve (P) and radial (Y) bracket.
CAPACITOR SECTION GROUNDED TO CASE CIRCUIT 3	
TYPE AND DESCRIPTION	
UNINSULATED BODY deduct 3/32″ from length shown in listings	MRG — Basic grounded section unit. MRG-Y — with radial (Y) bracket. MRG-A — with tangential (A) soldered-on bracket.
INSULATED BODY add 3/32″ to length and 1/16″ to dia. shown in listings	MRGP — Basic grounded section type with plastic sleeve (P). MRGP-Y — with plastic sleeve (P) and radial (Y) bracket.

Cat. No.	Cap. Mf.	Dia. x Length
150 VOLTS DC WORKING		
MRF-1.5-4M	4.0	1 x1 15/16
MRF-1.5-6M	6.0	1 x1 15/16
MRF-1.5-8M	8.0	1⅛x1 15/16
MRF-1.5-10M	10.0	1¼x1 15/16
200 VOLTS DC WORKING		
MRF-2-05	.05	⅜x ⅞
MRF-2-1	.1	7/16x ⅞
MRF-2-25	.25	½x ⅞
MRF-2-5	.5	½x1⅜
MRF-2-1M	1.0	.670x1⅜
MRF-2-2M	2.0	.670x1⅞
400 VOLTS DC WORKING		
MRF-4-03	.03	⅜x ⅞
MRF-4-05	.05	½x ⅞
MRF-4-1	.1	½x1⅜
MRF-4-25	.25	.670x1⅜
MRF-4-5	.5	.670x1⅞
MRF-4-1M	1.0	¾x2⅜
MRF-4-2M	2.0	1 x2 7/16
MRF-4-3M	3.0	1⅛x2 7/16
MRF-4-4M	4.0	1¼x2 7/16
600 VOLTS DC WORKING		
MRF-6-01	.01	⅜x ⅞
MRF-6-02	.02	7/16x ⅞
MRF-6-03	.03	7/16x ⅞
MRF-6-05	.05	½x ⅞
MRF-6-1	.1	½x1⅜
MRF-6-2	.2	.670x1⅜
MRF-6-25	.25	.670x1⅜
MRF-6-5	.5	.670x1⅞
MRF-6-1M	1.0	¾x2⅜
MRF-6-2M	2.0	1⅛x2 7/16
MRF-6-3M	3.0	1¼x2 7/16

Standard capacitance tolerance: ±20%
Other tolerances are available.

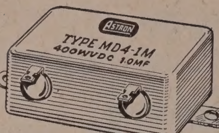
ASTRON capacitors

ASTRON CORPORATION
EAST NEWARK, N. J.

METALITE® TYPE MD

Bathtub Capacitors

85°C. Operation



- Units meet MIL tests for moisture resistance, thermal cycle immersion and vibration.
- Single units have two terminals; dual units have three terminals, one terminal common negative.
- Standard position of terminals on side. Also available with terminals on top (Type MDT) or bottom (Type MDB).
- Standard capacitance tolerance: ±20%.
- Compact sizes. Light weight. Up to 75% reduction in sizes over conventional paper-foil capacitors.
- Temperature Range —65°C. to +85°C.
- Space-saving metallized paper dielectric makes possible wider choice of high capacitance ratings than ever before obtainable in bathtub cases.
- Hermetically sealed. Silicone rubber compression seal lug terminals.

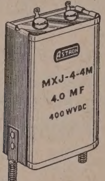
Cat. No.	Cap. Mf.	L. x W. x H.	Mtg. Ctr.
	150 VOLTS DC WORKING		
MD-1.5-4M	4.0	1¾x1 x ⅞	2⅛
MD-1.5-6M	6.0	2 x1¾x ⅞	2⅜
MD-1.5-8M	8.0	2 x2 x ⅞	2⅜
MD-1.5-10M	10.0	2 x2 x ⅞	2⅜
MD-1.5-12M	12.0	2 x2 x1	2⅜
MD-1.5-16M	16.0	2 x2 x1⅜	2⅜
MD-1.5-18M	18.0	2 x2 x1½	2⅜
MD-1.5-2x4M	4.0-4.0	2 x2 x ⅞	2⅜
MD-1.5-2x6M	6.0-6.0	2 x2 x1	2⅜
	200 VOLTS DC WORKING		
MD-2-5	.5	1¾x1 x ¾	2⅛
MD-2-1M	1.0	1¾x1 x ¾	2⅛
MD-2-2M	2.0	1¾x1 x ¾	2⅛
MD-2-2x1M	1.0-1.0	1¾x1 x ¾	2⅛
MD-2-2x2M	2.0-2.0	1¾x1 x ⅞	2⅛
	400 VOLTS DC WORKING		
MD-4-25	.25	1¾x1 x ¾	2⅛
MD-4-5	.5	1¾x1 x ¾	2⅛
MD-4-1M	1.0	1¾x1 x ⅞	2⅛
MD-4-2M	2.0	2 x1¾x ⅞	2⅜
MD-4-4M	4.0	2 x2 x1⅛	2⅜
MD-4-6M	6.0	2 x2 x1½	2⅜
MD-4-2x5	.5-.5	1¾x1 x ⅞	2⅛
MD-4-2x1M	1.0-1.0	2 x1¾x ⅞	2⅜
MD-4-2x2M	2.0-2.0	2 x2 x1⅛	2⅜
	600 VOLTS DC WORKING		
MD-6-1	.1	1¾x1 x ¾	2⅛
MD-6-25	.25	1¾x1 x ¾	2⅛
MD-6-5	.5	1¾x1 x ¾	2⅛
MD-6-1M	1.0	1¾x1¼x ⅞	2⅛
MD-6-2M	2.0	2 x2 x1	2⅜
MD-6-3M	3.0	2 x2 x1⅜	2⅜
MD-6-4M	4.0	2 x2 x1½	2⅜
MD-6-2x25	.25-.25	1¾x1 x ¾	2⅛
MD-6-2x5	.5-.5	1¾x1¼x ⅞	2⅛
MD-6-2x1M	1.0-1.0	2 x2 x1	2⅜

STANDARD CAPACITANCE TOLERANCE: ±20%.

METALITE® TYPE MXJ

in Terneplate Cases

85°C. Operation



Cat. No.	Cap. Mf.	L. x W. x H.	Mtg. Ctr.
	600 VOLTS DC WORKING		
MXJ-6-1M	1.0	1¾x1 x1⅝	2
MXJ-6-2M	2.0	1¾x1 x2⅜	2
MXJ-6-4M	4.0	1¾x1 x3⅞	2
MXJ-6-6M	6.0	1¾x1 x4¾	2
MXJ-6-8M	8.0	2½x1 3/16x3⅞	2¾
MXJ-6-10M	10.0	2½x1 3/16x4¾	2¾
MXJ-6-15M	15.0	3¾x1¼x4¾	4
MXJ-6-20M	20.0	3¾x1¾x4¼	4

STANDARD CAPACITANCE TOLERANCE: ±20%. Other tolerances are available.

Cat. No.	Cap. Mf.	L. x W. x H.	Mtg. Ctr.
	100 VOLTS DC WORKING		
MXJ-1-100M	100.0	3¾x1¾x4 13/16	4

Cat. No.	Cap. Mf.	L. x W. x H.	Mtg. Ctr.
	150 VOLTS DC WORKING		
MXJ-1.5-4M	4.0	1¾x1 x1⅝	2
MXJ-1.5-10M	10.0	1¾x1 x2⅝	2
MXJ-1.5-12M	12.0	1¾x1 x2⅞	2
MXJ-1.5-15M	15.0	1¾x1 x3⅜	2
MXJ-1.5-20M	20.0	1¾x1 x4⅜	2
MXJ-1.5-25M	25.0	2½x1 3/16x3	2¾
MXJ-1.5-30M	30.0	2½x1 3/16x3⅞	2¾
MXJ-1.5-50M	50.0	2½x1 3/16x4¾	2¾
	400 VOLTS DC WORKING		
MXJ-4-2M	2.0	1¾x1 x2⅛	2
MXJ-4-4M	4.0	1¾x1 x2⅞	2
MXJ-4-6M	6.0	1¾x1 x3⅞	2
MXJ-4-8M	8.0	1¾x1 x4¾	2
MXJ-4-10M	10.0	2½x1 3/16x3⅞	2¾
MXJ-4-20M	20.0	2½x1 3/16x4¾	2¾
MXJ-4-30M	30.0	3¾x1¼x4¾	4

TYPE E

Metal Screw-Base Electrolytics

"SM"* Safety Margin Construction

SINGLE UNITS (2 leads)

Cat. No.	Mf.	WVDC	D. x L.	List Price
E-12-250	12	250	1x2½	**$2.05**
E-25-250	25	250	1x3½	**2.05**
E-8-450	8	450	1⅜x3½	**2.20**
E-12-450	12	450	1⅜x3½	**2.40**
E-16-450	16	450	1⅜x3½	**2.45**
E-20-450	20	450	1⅜x3½	**2.75**
E-30-450	30	450	1⅜x3½	**3.00**
E-40-450	40	450	1⅜x3½	**3.15**

High Voltage Series Wound Units

Cat. No.	Mf.	WVDC	D. x L.	List Price
E-4-600	4	600	1⅜x3½	**$2.95**
E-8-600	8	600	1⅜x3½	**3.15**
E-16-600	16	600	1⅜x3½	**3.75**

DUAL UNITS (4 leads) and TRIPLE UNITS (6 leads)

Cat. No.	Mf.	WVDC	D. x L.	List Price
E-2x8-450	8+8	450	1⅜x3½	**$3.00**
E-2x16-450	16+16	450	1⅜x3½	**3.55**
E-3x8-450	8+8+8	450	1⅜x3½	**5.00**

* Trade Mark

MILITARY TYPES TO MIL C-62A

MIL TYPES, CE61, CE62, CE63, CE64

ASTRON Catalog Number	‡ASTRON Cat. No. based on Spec. JAN-C-62	Cap. Mf.	WVDC	List Price
ED-100-15	AS-CE63C101E	100	15	$4.75
ED-25-25	AS-CE63C250F	25	25	4.50
ED-50-25	AS-CE63C500F	50	25	4.60
ED-75-25	AS-CE63C750F	75	25	4.75
ED-25-50	AS-CE63C250G	25	50	4.55
ED-50-50	AS-CE63C500G	50	50	4.70
ED-10-100	AS-CE63C100H	10	100	4.55
ED-25-100	AS-CE63C250H	25	100	4.75
ED-10-150	AS-CE63C100J	10	150	4.55
ED-20-150	AS-CE63C200J	20	150	4.70
ED-10-200	AS-CE63C100K	10	200	4.65
ED-15-200	AS-CE63C150K	15	200	4.75
ED-10-250	AS-CE63C100M	10	250	4.70
ED-12-250	AS-CE63C120M	12	250	4.75
ED-10-300	AS-CE63C100N	10	300	4.75
ED-8-350	AS-CE63C080P	8	350	4.70
ED-6-400	AS-CE63C060Q	6	400	4.70
ED-4-450	AS-CE63F040R	4	450	4.65

NOTE: For Jan Type CE61 — order (EDG) single terminal on side case grounded. Same list price.

For Jan Type CE62 — order (EDGT) single terminal on top case grounded. Same list price.

For Jan Type CE63 — order (ED) two terminals on side. Same list price.

For Jan Type CE64 — order (EDT) two terminal units with terminals on top. Same list price.

(All items listed are furn. in case size 1-13/16x1x⅞ in accord. with MIL-C-62)

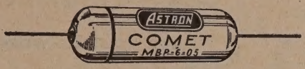
ASTRON® capacitors

ASTRON CORPORATION
EAST NEWARK, N. J.

NEW COMET* TYPE MBP

Molded Plastic Metallized Paper Tubulars

125°C. Operation



- First, molded plastic metallized paper tubular capacitor . . . ever!
- Tough, metallized paper capacitor sections for miniature size, self-healing characteristics, light weight and dependable operation.
- Impervious immersion-proof shell is uneffected by any heat and/or moisture condition.
- Exclusive bonded seal locks out environmental effects . . . locks in performance.
- Solid thermosetting impregnant for reliable operation over temperature range of –65°C. to ±125°C. . . . vacuum impregnation guarantees uniformity of units.
- Firmly implanted leads won't pull or melt out . . . makes soldering in tight places easy!

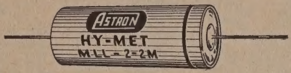
Cat. No.	Cap. Mf.	Dia. x Length
MBP-2-01	.01	⅜ x 1
MBP-2-02	.02	⅜ x 1
MBP-2-03	.03	⅜ x 1
MBP-2-047	.047	⅜ x 1
MBP-2-05	.05	⅜ x 1
MBP-2-1	.1	⅜ x 1
MBP-2-2	.2	⅜ x 1¼
MBP-2-25	.25	⅜ x 1¼
MBP-2-33	.33	7/16 x 1¼
MBP-2-47	.47	½ x 1⅝
MBP-2-5	.5	½ x 1⅝
MBP-2-68	.68	½ x 1⅝
MBP-2-1M	1.0	⅝ x 1⅞
MBP-2-2M	2.0	⅝ x 1⅞
MBP-4-01	.01	⅜ x 1
MBP-4-02	.02	⅜ x 1
MBP-4-03	.03	⅜ x 1
MBP-4-047	.047	⅜ x 1¼
MBP-4-05	.05	⅜ x 1¼
MBP-4-1	.1	7/16 x 1¼
MBP-4-2	.2	½ x 1⅝
MBP-4-25	.25	½ x 1⅝
MBP-4-33	.33	⅝ x 1⅞
MBP-4-47	.47	⅝ x 1⅞
MBP-4-5	.5	⅝ x 1⅞
MBP-6-01	.01	⅜ x 1
MBP-6-02	.02	⅜ x 1
MBP-6-03	.03	⅜ x 1¼
MBP-6-047	.047	⅜ x 1¼
MBP-6-05	.05	⅜ x 1¼
MBP-6-068	.068	7/16 x 1¼
MBP-6-1	.1	½ x 1⅝
MBP-6-2	.2	⅝ x 1⅞
MBP-6-25	.25	⅝ x 1⅞

*TRADE MARK

METALITE® HY-MET* TYPE MLL

Cardboard Tubulars

85°C. Operation



- Sturdy cardboard cased units. Temperature Range –55° to +100°C. Solid thermosetting impregnant.
- Exceptional strength. Metal end caps. Units can be point-to-point connected and supported by own leads. Leads 1½″ minimum length.
- Overall mineral wax coat provides added protection against moisture and humidity.
- Standard capacitance tolerance: –20% +30%.

200 VOLTS DC WORKING

Cat. No.	Cap. Mf.	Dia. x Length
MLL-2-01	.01	⅜ x ⅝
MLL-2-02	.02	⅜ x ⅝
MLL-2-03	.03	⅜ x ⅝
MLL-2-05	.05	⅜ x ⅝
MLL-2-1	.1	⅜ x ⅝
MLL-2-25	.25	15/32 x ⅝
MLL-2-5	.5	15/32 x 1⅛
MLL-2-1M	1.0	9/16 x 1⅛
MLL-2-2M	2.0	⅝ x 1⅝

400 VOLTS DC WORKING

Cat. No.	Cap. Mf.	Dia. x Length
MLL-4-01	.01	⅜ x ⅝
MLL-4-02	.02	⅜ x ⅝
MLL-4-03	.03	⅜ x ⅝
MLL-4-05	.05	15/32 x ⅝
MLL-4-1	.1	15/32 x 1⅛
MLL-4-25	.25	9/16 x 1⅛
MLL-4-5	.5	⅝ x 1⅝
MLL-4-1M	1.0	23/32 x 2⅛

600 VOLTS DC WORKING

Cat. No.	Cap. Mf.	Dia. x Length
MLL-6-01	.01	⅜ x ⅝
MLL-6-02	.02	⅜ x ⅝
MLL-6-03	.03	15/32 x ⅝
MLL-6-05	.05	15/32 x ⅝
MLL-6-1	.1	15/32 x 1⅛
MLL-6-25	.25	⅝ x 1⅛
MLL-6-5	.5	23/32 x 1⅝
MLL-6-1M	1.0	23/32 x 2⅛

CAPACITANCE TOLERANCE: –20% +30%.

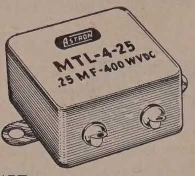
*TRADE MARK

ASTRON capacitors

ASTRON CORPORATION
EAST NEWARK, N. J.

METALITE® HY-MET* TYPE MTL

Subminiature Bathtub Capacitors 125°C. Operation



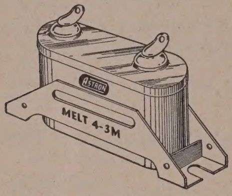
*TRADE MARK

Cat. No.	Cap. Mf.	L. x W x H.
200 VOLTS DC WORKING		
MTL-2-1	.1	1⅛x1x½
MTL-2-25	.25	1⅛x1x½
MTL-2-5	.5	1⅛x1x½
MTL-2-1M	1.0	1⅛x1x½
MTL-2-2M	2.0	1⅛x1x1 1/16
400 VOLTS DC WORKING		
MTL-4-1	.1	1⅛x1x½
MTL-4-25	.25	1⅛x1x½
MTL-4-5	.5	1⅛x1x1 1/16
600 VOLTS DC WORKING		
MTL-6-1	.1	1⅛x1x½
MTL-6-25	.25	1⅛x1x½
MTL-6-5	.5	1⅛x1x1 1/16

STANDARD CAPACITANCE TOLERANCE: ±20%. Other tolerances are available.

METALITE® HY-MET* TYPE MEL

Compact Seamless Cases
125°C. Operation



*TRADE MARK

SINGLE UNITS — 2 terminals

Cat. No.	Cap. Mf.	L. x W. x H.*
150 VOLTS DC WORKING		
MELT-1.5-3M	3.0	1.788x.619x1½
MELT-1.5-4M	4.0	1.788x.619x2
MELT-1.5-6M	6.0	1.788x.619x2½
200 VOLTS DC WORKING		
MELT-2-2M	2.0	1.788x.619x1
400 VOLTS DC WORKING		
MELT-4-5	.5	1.788x.619x1
MELT-4-1M	1.0	1.788x.619x1½
MELT-4-2M	2.0	1.788x.619x2½
MELT-4-3M	3.0	1.788x.619x2¾
600 VOLTS DC WORKING		
MELT-6-5	.5	1.788x.619x1
MELT-6-1M	1.0	1.788x.619x1¾
MELT-6-2M	2.0	1.788x.619x2¾

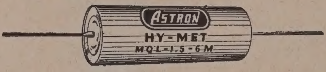
DUAL UNITS — 3 terminals

Cat. No.	Cap. Mf.	L. x W. x H.*
200 VOLTS DC WORKING		
MELT-2-2x1M	1.0-1.0	1.788x.619x1
MELT-2-2x2M	2.0-2.0	1.788x.619x2
400 VOLTS DC WORKING		
MELT-4-2x1M	1.0-1.0	1.788x.619x2½
600 VOLTS DC WORKING		
MELT-6-2x1M	1.0-1.0	1.788x.619x2¾

CAPACITANCE TOLERANCE: ±20%.
*Add 1/32" to height for bracket.

METALITE® HY-MET* TYPE MQLF

Glass-to-Metal Sealed
SUBMINIATURE TUBULARS
125°C. Operation



- Smallest paper capacitors available for the given ratings.
- Solid thermosetting impregnant. Temperature Range: −65°C. to +125°C.
- Tinned, non-ferrous metal cases. Hermetically sealed.
- Non-inductively wound. Capacitor section grounded to case, glass-to-metal seal terminal at one end. Available also with section insulated from case with glass-to-metal terminal at each end (Type MQLF).

VARIATIONS AVAILABLE

CAPACITOR SECTION INSULATED FROM CASE
Glass-to-Metal Terminal at both ends Circuit 1

TYPE AND DESCRIPTION		
UNINSULATED BODY	MQLF	— Basic internally insulated unit as listed.
	MQLF-A	— with tangential (A) soldered-on bracket. Example: MQLF-2-1-A.
	MQLF-B	— with L-type (B) soldered-on bracket. Example: MQLF-2-1-B.
	MQLFS	— screw neck vertical-mounting type. Same ratings as MQL. Minimum diameter .400". Example: MQLFS-2-1.
INSULATED BODY Add 1/16" to dia. and length of MQLF sizes listed	MQLFP	— Basic internally insulated unit with plastic outer sleeve (P). Example: MQLFP-2-1.

CAPACITOR SECTION GROUNDED TO CASE
Glass-to-Metal Terminal at one end Circuit 3

TYPE AND DESCRIPTION		
UNINSULATED BODY Sizes shown in listings Deduct 1/16" from length of MQLF sizes listed	MQL	— Basic type.
	MQL-A	— with tangential (A) soldered-on bracket. Example: MQL-2-1-A.
	MQL-B	— with L-type (B) soldered-on bracket. Example: MQL-2-1-B.
	MQLS	— screw neck vertical-mounting type. Same ratings as Type MQL. Minimum diameter .400". Example: MQLS-2-1.
	MQLV	— Stud base vertical-mounting type. Same ratings and size as type MQL. Example: MQLV-2-1.
INSULATED BODY Add 1/16" to dia. of MQLF sizes listed	MQLP	— Basic grounded construction as listed, with plastic outer sleeve (P). Example: MQLP-2-1.

Cat. No.	Cap Mf.	Dia. x Length
150 VOLTS DC WORKING		
MQLF-1.5-4M	4.0	1x1-13/16
MQLF-1.5-6M	6.0	1x1-13/16
MQLF-1.5-8M	8.0	1x2-5/16
200 VOLTS DC WORKING		
MQLF-2-01	.01	.235x13/16
MQLF-2-022	.022	.235x13/16
MQLF-2-033	.033	.235x13/16
MQLF-2-047	.047	.235x13/16
MQLF-2-05	.05	.235x13/16
MQLF-2-068	.068	.312x13/16
MQLF-2-1	.1	.312x13/16
MQLF-2-15	.15	.312x1⅛
MQLF-2-22	.22	.312x1⅛
MQLF-2-25	.25	.312x1⅛
MQLF-2-33	.33	.400x1⅛
MQLF-2-47	.47	.400x1⅛
MQLF-2-5	.5	.400x1⅛
MQLF-2-68	.68	.500x1⅛
MQLF-2-1M	1.0	.562x1⅛
MQLF-2-2M	2.0	.562x1-13/16
400 VOLTS DC WORKING		
MQLF-4-01	.01	.235x13/16
MQLF-4-022	.022	.235x13/16
MQLF-4-033	.033	.312x13/16
MQLF-4-047	.047	.312x1⅛
MQLF-4-05	.05	.312x1⅛
MQLF-4-068	.068	.400x1⅛
MQLF-4-1	.1	.400x1⅛
MQLF-4-22	.22	.500x1⅛
MQLF-4-25	.25	.500x1⅛
MQLF-4-33	.33	.562x1-5/16
MQLF-4-47	.47	.562x1-13/16
MQLF-4-5	.5	.562x1-13/16
MQLF-4-68	.68	.670x1-13/16
MQLF-4-1M	1.0	.670x2-5/16
MQLF-4-2M	2.0	1 x2-5/16
600 VOLTS DC WORKING		
MQLF-6-01	.01	.235x13/16
MQLF-6-022	.022	.312x13/16
MQLF-6-033	.033	.400x13/16
MQLF-6-047	.047	.400x13/16
MQLF-6-05	.05	.400x13/16
MQLF-6-068	.068	.400x1⅛
MQLF-6-1	.1	.400x1⅛
MQLF-6-15	.15	.500x1⅛
MQLF-6-22	.22	.562x1-5/16
MQLF-6-25	.25	.562x1-5/16
MQLF-6-33	.33	.562x1-13/16
MQLF-6-47	.47	.670x1-13/16
MQLF-6-5	.5	.670x1-13/16
MQLF-6-68	.68	.670x2-5/16
MQLF-6-1M	1.0	.750x2-5/16
MQLF-6-2M	2.0	1 x2-5/16

STANDARD CAPACITANCE TOLERANCE: ±20%. Other tolerances are available.

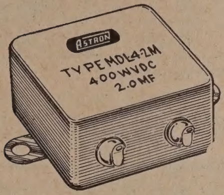
ASTRON® capacitors

ASTRON CORPORATION
EAST NEWARK, N. J.

METALITE® HY-MET* TYPE MDL

Bathtub Capacitors

125°C. Operation



- Higher capacitance ratings than ever before offered in same size MIL Style CP53-55 cases in conventional paper-foil types.
- Solid thermosetting plastic impregnant enables operation to 125°C. Temperature Range: –65°C. to +125°C.
- Hermetically sealed. Lug type glass-to-metal sealed terminals.
- Standard position of terminals is on side. Can be supplied with top terminals (Type MDLT) or bottom terminals (Type MDLB).
- Standard capacitance tolerance: ±20%.

*TRADE MARK

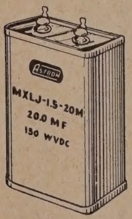
Cat. No.	Cap. Mf.	L. x W. x H.
150 VOLTS DC WORKING		
MDL-1.5-3M	3.0	1¾ x1 x ⅞
MDL-1.5-4M	4.0	1¾ x1 x ⅞
MDL-1.5-5M	5.0	1¾ x1 x ⅞
MDL-1.5-6M	6.0	1¾ x1¼ x ⅞
MDL-1.5-8M	8.0	2 x1¾ x ¾
MDL-1.5-10M	10.0	2 x1¾ x ¾
MDL-1.5-12M	12.0	2 x2 x ⅞
MDL-1.5-15M	15.0	2 x2 x1
MDL-1.5-18M	18.0	2 x2 x1¼
MDL-1.5-20M	20.0	2 x2 x1½
200 VOLTS DC WORKING		
MDL-2-1	.1	1¾ x1 x ¾
MDL-2-25	.25	1¾ x1 x ¾
MDL-2-5	.5	1¾ x1 x ¾
MDL-2-1M	1.0	1¾ x1 x ¾
MDL-2-2M	2.0	1¾ x1 x ¾
400 VOLTS DC WORKING		
MDL-4-1	.1	1¾ x1 x ¾
MDL-4-25	.25	1¾ x1 x ¾
MDL-4-5	.5	1¾ x1 x ¾
MDL-4-1M	1.0	1¾ x1 x ⅞
MDL-4-2M	2.0	2 x1¾ x 13/16
MDL-4-3M	3.0	2 x1¾ x 15/16
MDL-4-4M	4.0	2 x2 x1
MDL-4-5M	5.0	2 x2 x1¼
MDL-4-6M	6.0	2 x2 x1½
600 VOLTS DC WORKING		
MDL-6-1	.1	1¾ x1 x ¾
MDL-6-25	.25	1¾ x1 x ¾
MDL-6-5	.5	1¾ x1 x ¾
MDL-6-1M	1.0	1¾ x1¼ x ⅞
MDL-6-2M	2.0	2 x2 x ⅞
MDL-6-3M	3.0	2 x2 x1⅛
MDL-6-4M	4.0	2 x2 x1⅜

STANDARD CAPACITANCE TOLERANCE: ±20%. OTHER TOLERANCES ARE AVAILABLE

METALITE® HY-MET* TYPE MXLJ

In Terneplate Cases

125°C. Operation



- Higher capacitance than ever before achieved in MIL Style CP70 cases, due to use of metallized paper sections.
- Temperature range –65°C. to +125°C. due to use of solid thermosetting impregnant.
- Hermetically sealed. Glass-to-metal sealed lug terminals.
- Exceptionally small sizes for the given ratings. Size reductions of 50% to 75% over equal ratings in conventional paper-foil units.
- Spade bolt "J" brackets supplied with each unit for convenient, rigid mounting.
- Standard capacitance tolerance: ±20%.

*TRADE MARK

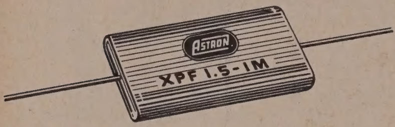
Cat. No.	Cap. Mf.	L. x W. x H.
150 VOLTS DC WORKING		
MXLJ-1.5-4M	4.0	1¾ x1 x1⅝
MXLJ-1.5-10M	10.0	1¾ x1 x2⅝
MXLJ-1.5-12M	12.0	1¾ x1 x2⅞
MXLJ-1.5-15M	15.0	1¾ x1 x3⅜
MXLJ-1.5-20M	20.0	1¾ x1 x4⅜
MXLJ-1.5-25M	25.0	2½ x1 3/16 x3
MXLJ-1.5-30M	30.0	2½ x1 3/16 x3⅞
MXLJ-1.5-50M	50.0	2½ x1 3/16 x4¾
400 VOLTS DC WORKING		
MXLJ-4-2M	2.0	1¾ x1 x2⅛
MXLJ-4-4M	4.0	1¾ x1 x2⅞
MXLJ-4-6M	6.0	1¾ x1 x3⅞
MXLJ-4-8M	8.0	1¾ x1 x4¾
MXLJ-4-10M	10.0	2½ x1 3/16 x3⅞
MXLJ-4-20M	20.0	2½ x1 3/16 x4¾
MXLJ-4-30M	30.0	3¾ x1¼ x4¾
600 VOLTS DC WORKING		
MXLJ-6-1M	1.0	1¾ x1 x1⅝
MXLJ-6-2M	2.0	1¾ x1 x2⅜
MXLJ-6-4M	4.0	1¾ x1 x3⅞
MXLJ-6-6M	6.0	1¾ x1 x4¾
MXLJ-6-8M	8.0	2½ x1 3/16 x3⅞
MXLJ-6-10M	10.0	2½ x1 3/16 x4¾
MXLJ-6-15M	15.0	3¾ x1¼ x4¾
MXLJ-6-20M	20.0	3¾ x1¾ x4¼

STANDARD CAPACITANCE TOLERANCE: ±20%. Other tolerances are available.

ASTRON capacitors

ASTRON CORPORATION
EAST NEWARK, N. J.

FLAT MINIATURE MYLAR* DIELECTRIC CAPACITORS



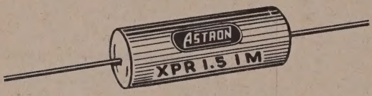
Cat. No.	Cap. Mds.	L	T	W
XPF-1.5-01	.01	3/4″	5/32″	9/32″
XPF-1.5-015	.015	3/4″	3/16″	5/16″
XPF-1.5-022	.022	3/4″	1/4″	3/8″
XPF-1.5-033	.033	3/4″	7/32″	11/32″
XPF-1.5-047	.047	3/4″	1/4″	3/8″
XPF-1.5-068	.068	7/8″	7/32″	3/8″
XPF-1.5-082	.082	7/8″	1/4″	13/32″

Cat. No.	Cap. Mds.	L	T	W
XPF-1.5-1	.1	7/8″	9/32″	7/16″
XPF-1.5-15	.15	1″	5/16″	7/16″
XPF-1.5-22	.22	1 1/4″	9/32″	15/32″
XPF-1.5-33	.33	1 1/4″	3/8″	17/32″
XPF-1.5-47	.47	1 3/8″	13/32″	9/16″
XPF-1.5-68	.68	1 5/8″	7/16″	19/32″
XPF-1.5-82	.82	1 5/8″	15/32″	5/8″
XPF-1.5-1M	1.0M	1 7/8″	15/32″	5/8″

Standard Tolerance ±20%.

* Reg. Dupont Trade Mark

ROUND MINIATURE MYLAR* DIELECTRIC CAPACITORS



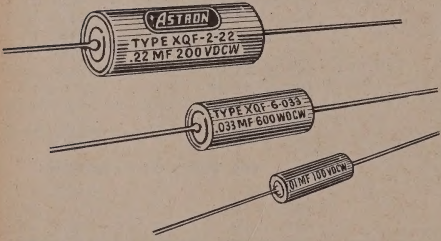
Cat. No.	Cap. Mfds.	L	Dia.
XPR-1.5-01	.01	3/4″	.230
XPR-1.5-015	.015	3/4″	.270
XPR-1.5-022	.022	3/4″	.310
XPR-1.5-033	.033	3/4″	.280
XPR-1.5-047	.047	3/4″	.330
XPR-1.5-068	.068	7/8″	.320
XPR-1.5-082	.082	7/8″	.350

Cat. No.	Cap. Mfds.	L	Dia.
XPR-1.5-1	.1	7/8″	.380
XPR-1.5-15	.15	1″	.390
XPR-1.5-22	.22	1 1/4″	.390
XPR-1.5-33	.33	1 1/4″	.460
XPR-1.5-47	.47	1 3/8″	.500
XPR-1.5-68	.68	1 5/8″	.530
XPR-1.5-82	.82	1 5/8″	.580
XPR-1.5-1M	1.0	1 7/8″	.580

Standard Tolerance ±20%.

*Reg. Dupont Trade Mark

SERIES "X" MYLAR-PLUS CAPACITORS



SERIES "X" MYLAR-PLUS CAPACITORS

Astron's new series "X" Mylar capacitors are engineered for reliable operation up to 150° without derating. These miniaturized, metal tubulars provide exceptional capacitance stability, excellent insulation resistance, power factor and long life. The XQF series are designed to meet MIL-C-25A specifications.

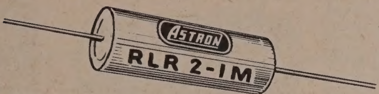
WVDC	Catalog Number	Cap. Mf.	Dia. x Length
50	XQF-.5-0047	.0047	.235 x 13/16
	XQF-.5-01	.01	.235 x 13/16
	XQF-.5-022	.022	.235 x 13/16
	XQF-.5-033	.033	.235 x 15/16
	XQF-.5-047	.047	.312 x 15/16
	XQF-.5-1	.1	.400 x 15/16
	XQF-.5-22	.22	.400 x 1 1/16
	XQF-.5-27	.27	.400 x 1 7/16
	XQF-.5-47	.47	.562 x 1 1/16
	XQF-.5-1M	1.0	.562 x 1 11/16
100	XQF-1-0047	.0047	.235 x 13/16
	XQF-1-01	.01	.235 x 13/16
	XQF-1-022	.022	.312 x 15/16
	XQF-1-033	.033	.312 x 15/16
	XQF-1-047	.047	.312 x 15/16
	XQF-1-1	.1	.400 x 15/16
	XQF-1-22	.22	.562 x 1 1/16
	XQF-1-27	.27	.562 x 1 1/16
	XQF-1-47	.47	.562 x 1 11/16
	XQF-1-1M	1.0	.750 x 1 11/16
200	XQF-2-0047	.0047	.235 x 13/16
	XQF-2-01	.01	.235 x 15/16
	XQF-2-022	.022	.312 x 15/16
	XQF-2-033	.033	.400 x 15/16
	XQF-2-047	.047	.400 x 1 1/16
	XQF-2-1	.1	.400 x 1 7/16
	XQF-2-22	.22	.562 x 1 7/16
	XQF-2-27	.27	.670 x 1 11/16
	XQF-2-47	.47	.750 x 1 11/16
	XQF-2-1M	1.0	1 x 2 3/16
400	XQF-4-0047	.0047	.235 x 13/16
	XQF-4-01	.01	.312 x 15/16
	XQF-4-022	.022	.312 x 1 1/16
	XQF-4-033	.033	.400 x 1 1/16
	XQF-4-047	.047	.400 x 1 7/16
	XQF-4-1	.1	.562 x 1 7/16
	XQF-4-22	.22	.670 x 1 11/16
	XQF-4-27	.27	.750 x 1 11/16
	XQF-4-47	.47	.750 x 2 3/16
600	XQF-6-0047	.0047	.235 x 15/16
	XQF-6-01	.01	.312 x 15/16
	XQF-6-022	.022	.400 x 15/16
	XQF-6-033	.033	.400 x 1 7/16
	XQF-6-047	.047	.400 x 1 7/16
	XQF-6-1	.1	.562 x 1 7/16
	XQF-6-22	.22	.750 x 1 11/16
	XQF-6-27	.27	.750 x 2 3/16
	XQF-6-47	.47	1 x 2 3/16

STANDARD CAPACITANCE TOLERANCE: ±20%. Closer tolerances can be supplied.

ASTRON® capacitors

ASTRON CORPORATION
EAST NEWARK, N. J.

METALLIZED MYLAR* CAPACITORS

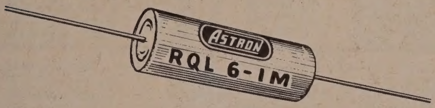


ASTRON TYPE RLR metallized Mylar* capacitors provide reliable operation even under adverse conditions in spite of their smaller size and lower cost.
Type RLR is an uncased unit, with a tough, protective Mylar* wrap and epoxy end seal . . . ideal for potted assembly, military and commercial applications.

WVDC	Catalog Number	Mfd. Cap.	Dia. x Lgth.
200	RLR 2-01	.01	.155″ x ⅝″
	RLR 2-012	.012	.165″ x ⅝″
	RLR 2-015	.015	.180″ x ⅝″
	RLR 2-018	.018	.190″ x ⅝″
	RLR 2-022	.022	.205″ x ⅝″
	RLR 2-027	.027	.220″ x ⅝″
	RLR 2-047	.047	.200″ x ¾″
	RLR 2-068	.068	.220″ x ¾″
	RLR 2-1	.1	.255″ x ¾″
	RLR 2-15	.15	.227″ x 1⅛″
	RLR 2-22	.22	.262″ x 1⅛″
	RLR 2-33	.33	.305″ x 1⅛″
	RLR 2-47	.47	.355″ x 1⅛″
	RLR 2-56	.56	.380″ x 1⅛″
	RLR 2-68	.68	.415″ x 1⅛″
	RLR 2-1M	1.0	.490″ x 1⅛″
	RLR 2-1.5M	1.5	.470″ x 1⅝″
	RLR 2-2M	2.0	.535″ x 1⅝″
	RLR 2-3M	3.0	[illegible] 5″ x 1⅞″
	RLR 2-6M	6.0	.825″ x 1⅞″

Cap. Tolerance ±20%. * Reg. Dupont Trade Mark

MYLAR* METALLIZED CAPACITORS



ASTRON TYPE RQL combines in a miniature hermetically sealed case the outstanding attributes of reliability at high temperatures — 125°C without derating — with significant savings of space. They will find their main applications in military reliabilty equipment and in critical industrial circuits.
Type RQL Mylar* metallized capacitors are available in various military case and mounting styles.

WVDC	Catalog Number	Cap. Mfd.	Dia. x Lgth. in inches
200	RQL 2-01	.010	.235 x 11/16
	RQL 2-012	.012	.235 x 11/16
	RQL 2-015	.015	.235 x 11/16
	RQL 2-018	.018	.235 x 11/16
	RQL 2-022	.022	.235 x 11/16
	RQL 2-027	.027	.235 x 11/16
	RQL 2-033	.033	.235 x 11/16
	RQL 2-039	.039	.312 x 13/16
	RQL 2-047	.047	.312 x 13/16
	RQL 2-056	.056	.312 x 13/16
	RQL 2-068	.068	.312 x 13/16
	RQL 2-082	.082	.312 x 13/16
	RQL 2-1	.1	.312 x 13/16
	RQL 2-12	.12	.312 x 1 1/16
	RQL 2-15	.15	.312 x 1 1/16
	RQL 2-18	.18	.400 x 13/16
	RQL 2-22	.22	.400 x 13/16
	RQL 2-27	.27	.400 x 1 1/16
	RQL 2-33	.33	.400 x 1 1/16
	RQL 2-39	.39	.500 x 1 1/16
	RQL 2-47	.47	.500 x 1 1/16
	RQL 2-56	.56	.500 x 1 1/16
	RQL 2-68	.68	.500 x 1 1/16
	RQL 2-82	.82	.562 x 1 1/16
	RQL 2-1. M	1.0	.562 x 1 1/16
	RQL 2-1.5 M	1.5	.562 x 1 9/16
	RQL 2-2. M	2.0	.670 x 1 9/16
	RQL 2-3. M	3.0	.670 x 1 13/16
	RQL 2-4. M	4.0	.750 x 1 13/16
	RQL 2-5. M	5.0	1.00 x 1 13/16
	RQL 2-6. M	6.0	1.00 x 1 13/16
	RQL 2-8. M	8.0	1.00 x 1 13/16
	RQL 2-10. M	10.0	1.00 x 2 5/16
	RQL 2-12. M	12.0	1.00 x 2 9/16
400	RQL 4-01	.010	.312 x 13/16
	RQL 4-012	.012	.312 x 13/16
	RQL 4-015	.015	.312 x 13/16
	RQL 4-018	.018	.312 x 13/16
	RQL 4-022	.022	.312 x 13/16
	RQL 4-027	.027	.312 x 1 1/16
	RQL 4-033	.033	.312 x 1 1/16
	RQL 4-039	.039	.400 x 1 1/16
	RQL 4-047	.047	.400 x 1 1/16
	RQL 4-056	.056	.400 x 1 1/16
	RQL 4-068	.068	.400 x 1 1/16

WVDC	Catalog Number	Cap. Mfd.	Dia. x Lgth. in inches
400 (cont'd)	RQL 4-082	.082	.500 x 1 1/16
	RQL 4-1	.1	.500 x 1 1/16
	RQL 4-12	.12	.500 x 1 1/16
	RQL 4-15	.15	.500 x 1 1/16
	RQL 4-18	.18	.562 x 1 5/16
	RQL 4-22	.22	.562 x 1 5/16
	RQL 4-27	.27	.562 x 1 9/16
	RQL 4-33	.33	.562 x 1 9/16
	RQL 4-39	.39	.670 x 1 9/16
	RQL 4-47	.47	.670 x 1 9/16
	RQL 4-56	.56	.670 x 1 13/16
	RQL 4-68	.68	.670 x 1 13/16
	RQL 4-82	.82	.750 x 1 13/16
	RQL 4-1. M	1.0	.750 x 1 13/16
	RQL 4-1.5 M	1.5	1.00 x 1 13/16
	RQL 4-2. M	2.0	1.00 x 1 13/16
	RQL 4-3. M	3.0	1.00 x 2 9/16
600	RQL 6-01	.010	.312 x 13/16
	RQL 6-012	.012	.312 x 13/16
	RQL 6-015	.015	.312 x 13/16
	RQL 6-018	.018	.312 x 1 1/16
	RQL 6-022	.022	.312 x 1 1/16
	RQL 6-027	.027	.312 x 1 1/16
	RQL 6-033	.033	.312 x 1 1/16
	RQL 6-039	.039	.400 x 1 1/16
	RQL 6-047	.047	.400 x 1 1/16
	RQL 6-056	.056	.400 x 1 1/16
	RQL 6-068	.068	.400 x 1 1/16
	RQL 6-082	.082	.500 x 1 1/16
	RQL 6-1	.1	.500 x 1 1/16
	RQL 6-12	.12	.562 x 1 1/16
	RQL 6-15	.15	.562 x 1 1/16
	RQL 6-18	.18	.562 x 1 5/16
	RQL 6-22	.22	.562 x 1 5/16
	RQL 6-27	.27	.562 x 1 9/16
	RQL 6-33	.33	.562 x 1 9/16
	RQL 6-39	.39	.670 x 1 9/16
	RQL 6-47	.47	.670 x 1 9/16
	RQL 6-56	.56	.670 x 1 13/16
	RQL 6-68	.68	.670 x 1 13/16
	RQL 6-82	.82	1.00 x 1 13/16
	RQL 6-1. M	1.0	1.00 x 1 13/16
	RQL 6-1.5 M	1.5	1.00 x 2 1/16
	RQL 6-2. M	2.0	1.00 x 2 1/16
	RQL 6-2.5 M	2.5	1.00 x 2 9/16

* Reg. Dupont Trade Mark

ASTRON® capacitors

ASTRON CORPORATION
EAST NEWARK, N. J.

TYPE TQF

MILITARY
TYPE

CP04 CP10
CP05 CP11
MIL-C-25A

ASTRON
METEOR
TQF-6-033

Commercial
Equivalent

TEMPERATURE CHARACTERISTICS E AND K

CIRCUIT 1

(Capacitor Section Insulated From Case)

100 VOLTS	Commercial Equivalent	Cap. Mfd.	Dia. x Length
AS-CP04A1-B333M	TQF-1-033	.033	.235 x ¾
AS-CP04A1-B104M	TQF-1-1	.1	.312 x ⅞
AS-CP04A1-B154M	TQF-1-15	.15	.400 x ⅞
AS-CP04A1-B224M	TQF-1-22	.22	.400 x 1⅛
AS-CP04A1-B334M	TQF-1-33	.33	.400 x 1⅜
AS-CP04A1-B474M	TQF-1-47	.47	.562 x 1⅛
AS-CP04A1-B684M	TQF-1-68	.68	.562 x 1⅜
AS-CP04A1-B105M	TQF-1-1M	1.0	.562 x 1⅞
200 VOLTS			
AS-CP04A1-C153M	TQF-2-015	.015	.235 x ¾
AS-CP04A1-C223M	TQF-2-022	.022	.235 x ¾
AS-CP04A1-C473M	TQF-2-047	.047	.312 x ⅞
AS-CP04A1-C683M	TQF-2-068	.068	.312 x ⅞
AS-CP04A1-C104M	TQF-2-1	.1	.400 x ⅞
AS-CP04A1-C154M	TQF-2-15	.15	.400 x 1⅛
AS-CP04A1-C224M	TQF-2-22	.22	.400 x 1⅜
AS-CP04A1-C334M	TQF-2-33	.33	.562 x 1⅛
AS-CP04A1-C474M	TQF-2-47	.47	.562 x 1⅜
AS-CP04A1-C684M	TQF-2-68	.68	.562 x 1⅞
AS-CP04A1-C105M	TQF-2-1M	1.0	.670 x 1⅞

400 VOLTS	Commercial Equivalent	Cap. Mfd.	Dia. x Length
AS-CP04A1-E103M	TQF-4-01	.01	.235 x ¾
AS-CP04A1-E333M	TQF-4-033	.033	.312 x ⅞
AS-CP04A1-E473M	TQF-4-047	.047	.400 x ⅞
AS-CP04A1-E683M	TQF-4-068	.068	.400 x 1⅛
AS-CP04A1-E104M	TQF-4-1	.1	.400 x 1⅜
AS-CP04A1-E154M	TQF-4-15	.15	.562 x 1⅛
AS-CP04A1-E224M	TQF-4-22	.22	.562 x 1⅜
AS-CP04A1-E334M	TQF-4-33	.33	.562 x 1⅞
AS-CP04A1-E474M	TQF-4-47	.47	.670 x 1⅞
AS-CP04A1-E684M	TQF-4-68	.68	.750 x 2⅛
AS-CP04A1-E105M	TQF-4-1M	1.0M	1.000 x 1⅞
600 VOLTS			
AS-CP04A1-F102M	TQF-6-001	.001	.235 x ¾
AS-CP04A1-F152M	TQF-6-0015	.0015	.235 x ¾
AS-CP04A1-F222M	TQF-6-0022	.0022	.235 x ¾
AS-CP04A1-F332M	TQF-6-0033	.0033	.235 x ¾
AS-CP04A1-F472M	TQF-6-0047	.0047	.235 x ¾
AS-CP04A1-F682M	TQF-6-0068	.0068	.235 x ¾
AS-CP04A1-F103M	TQF-6-01	.01	.312 x ⅞
AS-CP04A1-F153M	TQF-6-015	.015	.312 x ⅞
AS-CP04A1-F223M	TQF-6-022	.022	.312 x ⅞
AS-CP04A1-F333M	TQF-6-033	.033	.400 x ⅞
AS-CP04A1-F473M	TQF-6-047	.047	.400 x 1⅛
AS-CP04A1-F683M	TQF-6-068	.068	.400 x 1⅜
AS-CP04A1-F104M	TQF-6-1	.1	.562 x 1⅛
AS-CP04A1-F154M	TQF-6-15	.15	.562 x 1⅜
AS-CP04A1-F224M	TQF-6-22	.22	.562 x 1⅞
AS-CP04A1-F334M	TQF-6-33	.33	.670 x 1⅞
AS-CP04A1-F474M	TQF-6-47	.47	.750 x 2⅛
AS-CP04A1-F684M	TQF-6-68	.68	1.000 x 1⅞
1000 VOLTS			
AS-CP04A1-G153M	TQF-10-015	.015	.400 x ⅞
AS-CP04A1-G223M	TQF-10-022	.022	.400 x 1⅛
AS-CP04A1-G333M	TQF-10-033	.033	.400 x 1⅜
AS-CP04A1-G473M	TQF-10-047	.047	.562 x 1⅛
AS-CP04A1-G683M	TQF-10-068	.068	.562 x 1⅜
AS-CP04A1-G104M	TQF-10-1	.1	.562 x 1⅝
AS-CP04A1-G154M	TQF-10-15	.15	.670 x 1⅝
AS-CP04A1-G224M	TQF-10-22	.22	.750 x 2⅛
AS-CP04A1-G334M	TQF-10-33	.33	.750 x 2⅝
AS-CP04A1-G474M	TQF-10-47	.47	1.000 x 2⅛

VARIATIONS

CIRCUIT 1	CAPACITOR SECTION INSULATED FROM THE CASE	MIL STYLE	ASTRON TYPE
UNINSULATED BODY SIZES SHOWN IN LISTINGS	Basic unit in floating construction. Sizes as shown in listings.	CP04 (1)	TQF
	Basic unit with tangential soldered-on bracket. Add suffix (A).	CP10 (1)	TQF-A
	Basic unit with soldered-on L type bracket. Add suffix (B).	—	TQF-B
	Screw neck mounting type. Available in same ratings as TQF. Minimum in case diameter .400″.	CP11 (1)	TQFS
FOR INSULATED BODY ADD 1/16″ TO DIAMETER AND LENGTH OF TQF SIZES LISTED	Internally insulated (“Floating” Construction) with plastic outer sleeve (P).	CP05 (1)	TQFP
CIRCUIT 3	**CAPACITOR SECTION GROUNDED TO CASE**	**MIL STYLE**	**ASTRON TYPE**
UNINSULATED BODY DEDUCT 1/16″ FROM LENGTH OF UNITS LISTED	Basic unit — Grounded construction.	CP04 (3)	TQ
	Basic TQ unit with soldered-on tangential (A) bracket.	CP10 (3)	TQ-A
	Basic TQ unit with soldered-on L type bracket (B).	—	TQ-B
	Screw neck mounting type. Available in same ratings as TQ. Minimum case diameter is .400″.	CP11 (3) —	TQS TQV
	Stud base mounting type. Available in same ratings as TQ.		
FOR INSULATED BODY ADD 1/16″ TO DIAMETER OF TQF SIZES LISTED	Grounded construction, with plastic outer sleeve (P).	CP05 (3)	TQP

See complete commercial listings page 406

ASTRON capacitors

ASTRON CORPORATION
EAST NEWARK, N. J.

TYPE AQF
MILITARY TYPE

CP08
CP09
MIL-C-25A

ASTRON
METEOR

Commercial Equivalent

TEMPERATURE CHARACTERISTICS E AND K
CIRCUIT 1
(Capacitor Section Insulated From Case)

100 VOLTS	Commercial Equivalent	Cap. Mfd.	Dia. x Length
AS-CP08A1-B103M	AQF-1-01	.01	.235 x ¾
AS-CP08A1-B153M	AQF-1-015	.015	.235 x ¾
AS-CP08A1-B473M	AQF-1-047	.047	.312 x ⅞
AS-CP08A1-B104M	AQF-1-1	.1	.400 x ⅞
AS-CP08A1-B154M	AQF-1-15	.15	.400 x 1⅛
AS-CP08A1-B224M	AQF-1-22	.22	.400 x 1⅜
AS-CP08A1-B334M	AQF-1-33	.33	.562 x 1⅛
AS-CP08A1-B474M	AQF-1-47	.47	.562 x 1⅜
AS-CP08A1-B684M	AQF-1-68	.68	.562 x 1⅝
AS-CP08A1-B105M	AQF-1-1M	1.0	.670 x 1⅝
200 VOLTS			
AS-CP08A1-C472M	AQF-2-0047	.0047	.235 x ¾
AS-CP08A1-C682M	AQF-2-0068	.0068	.235 x ¾
AS-CP08A1-C223M	AQF-2-022	.022	.312 x ⅞
AS-CP08A1-C333M	AQF-2-033	.033	.312 x ⅞
AS-CP08A1-C473M	AQF-2-047	.047	.400 x ⅞
AS-CP08A1-C683M	AQF-2-068	.068	.400 x ⅞
AS-CP08A1-C104M	AQF-2-1	.1	.400 x 1⅛
AS-CP08A1-C154M	AQF-2-15	.15	.400 x 1⅜
AS-CP08A1-C224M	AQF-2-22	.22	.562 x 1⅛
AS-CP08A1-C334M	AQF-2-33	.33	.562 x 1⅜
AS-CP08A1-C474M	AQF-2-47	.47	.562 x 1⅝
AS-CP08A1-C684M	AQF-2-68	.68	.670 x 1⅝
AS-CP08A1-C105M	AQF-2-1M	1.0	.750 x 2⅛

400 VOLTS	Commercial Equivalent	Cap. Mfd.	Dia. x Length
AS-CP08A1-E332M	AQF-4-0033	.0033	.235 x ¾
AS-CP08A1-E153M	AQF-4-015	.015	.312 x ⅞
AS-CP08A1-E333M	AQF-4-033	.033	.400 x ⅞
AS-CP08A1-E473M	AQF-4-047	.047	.400 x 1⅛
AS-CP08A1-E683M	AQF-4-068	.068	.400 x 1⅜
AS-CP08A1-E104M	AQF-4-1	.1	.562 x 1⅛
AS-CP08A1-E154M	AQF-4-15	.15	.562 x 1⅜
AS-CP08A1-E224M	AQF-4-22	.22	.562 x 1⅝
AS-CP08A1-E334M	AQF-4-33	.33	.670 x 1⅝
AS-CP08A1-E474M	AQF-4-47	.47	.750 x 2⅛
600 VOLTS			
AS-CP08A1-F102M	AQF-6-001	.001	.235 x ¾
AS-CP08A1-F152M	AQF-6-0015	.0015	.235 x ¾
AS-CP08A1-F222M	AQF-6-0022	.0022	.235 x ¾
AS-CP08A1-F332M	AQF-6-0033	.0033	.312 x ⅞
AS-CP08A1-F472M	AQF-6-0047	.0047	.312 x ⅞
AS-CP08A1-F682M	AQF-6-0068	.0068	.312 x ⅞
AS-CP08A1-F103M	AQF-6-01	.01	.312 x ⅞
AS-CP08A1-F153M	AQF-6-015	.015	.400 x ⅞
AS-CP08A1-F223M	AQF-6-022	.022	.400 x ⅞
AS-CP08A1-F333M	AQF-6-033	.033	.400 x 1⅛
AS-CP08A1-F473M	AQF-6-047	.047	.400 x 1⅜
AS-CP08A1-F683M	AQF-6-068	.068	.562 x 1⅛
AS-CP08A1-F104M	AQF-6-1	.1	.562 x 1⅝
AS-CP08A1-F154M	AQF-6-15	.15	.562 x 1⅜
AS-CP08A1-F224M	AQF-6-22	.22	.670 x 1⅝
AS-CP08A1-F334M	AQF-6-33	.33	.750 x 2⅛
AS-CP08A1-F474M	AQF-6-47	.47	.750 x 2⅜
1000 VOLTS			
AS-CP08A1-G102M	AQF-10-001	.001	.400 x ⅞
AS-CP08A1-G152M	AQF-10-0015	.0015	.400 x ⅞
AS-CP08A1-G222M	AQF-10-0022	.0022	.400 x ⅞
AS-CP08A1-G332M	AQF-10-0033	.0033	.400 x ⅞
AS-CP08A1-G472M	AQF-10-0047	.0047	.400 x ⅞
AS-CP08A1-G682M	AQF-10-0068	.0068	.400 x ⅞
AS-CP08A1-G103M	AQF-10-01	.01	.400 x ⅞
AS-CP08A1-G153M	AQF-10-015	.015	.400 x 1⅛
AS-CP08A1-G223M	AQF-10-022	.022	.400 x 1⅜
AS-CP08A1-G333M	AQF-10-033	.033	.562 x 1⅛
AS-CP08A1-G473M	AQF-10-047	.047	.562 x 1⅜
AS-CP08A1-G683M	AQF-10-068	.068	.562 x 1⅝
AS-CP08A1-G104M	AQF-10-1	.1	.670 x 1⅝
AS-CP08A1-G154M	AQF-10-15	.15	.670 x 1⅞
AS-CP08A1-G224M	AQF-10-22	.22	.750 x 2⅛
AS-CP08A1-G334M	AQF-10-33	.33	1.000 x 2⅛
AS-CP08A1-G474M	AQF-10-47	.47	1.000 x 2⅜

VARIATIONS

CIRCUIT 1	CAPACITOR SECTION INSULATED FROM THE CASE	MIL STYLE	ASTRON TYPE
UNINSULATED BODY SIZES SHOWN IN LISTINGS	Basic unit in floating construction. Sizes as shown in listings.	CP08 (1)	AQF
	Basic unit with tangential soldered-on bracket. Add suffix (A).	—	AQF-A
	Basic unit with soldered-on L type bracket. Add suffix (B).	—	AQF-B
	Screw neck mounting type. Available in same ratings as AQF. Minimum in case diameter .400″.	—	AQFS
FOR INSULATED BODY ADD 1/16″ TO DIAMETER AND LENGTH OF AQF SIZES LISTED	Internally insulated ("Floating" Construction) with plastic outer sleeve (P).	CP09 (1)	AQFP

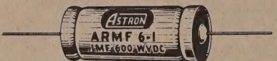
CIRCUIT 3	CAPACITOR SECTION GROUNDED TO CASE	MIL STYLE	ASTRON TYPE
UNINSULATED BODY DEDUCT 1/16″ FROM LENGTH OF UNITS LISTED	Basic unit — Grounded construction.	CP08 (3)	AQ
	Basic AQ unit with soldered-on tangential (A) bracket.	—	AQ-A
	Basic AQ unit with soldered-on L type bracket (B).	—	AQ-B
	Screw neck mounting type. Available in same ratings as AQ. Minimum case diameter is .400″.	—	AQS
	Stud base mounting type. Available in same ratings as AQ.	—	AQV
FOR INSULATED BODY ADD 1/16″ TO DIAMETER OF AQF SIZES LISTED	Grounded construction, with plastic outer sleeve (P).	CP09 (3)	AQP

See complete commercial listings page 407

ASTRON® capacitors

ASTRON CORPORATION
EAST NEWARK, N. J.

CP25
thru
CP29
of
MIL C-25A



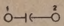
TYPE ARMF Oil Filled Metal Tubulars *85°C. Operation*

- Non-inductively wound. Mineral oil impregnated and filled. Hermetically sealed.
- Excellent capacitance stability and low power factor over entire temperature range −55°C. to +85°C.
- Units listed are internally insulated from case. Also available with capacitor section grounded to case (Type ARMG) and in accordance with all Specification MIL-C-25A styles CP25-26-27-28-29.
- Wire leads 1½" long. Standard capacitance tolerance ±20%.

Military Number	Astron Type	Cap. Mf.	Dia. x Length
200 VOLTS DC WORKING			
AS-CP25A1EC104M	ARMF-2-1	.1	⅝ x 1⅝
AS-CP25A1EC254M	ARMF-2-25	.25	¾ x 2⅛
AS-CP25A1EC504M	ARMF-2-5	.5	1 x 2⅛
600 VOLTS DC WORKING			
AS-CP25A1EF302M	ARMF-6-003	.003	7⁄16 x 1⅛
AS-CP25A1EF602M	ARMF-6-006	.006	7⁄16 x 1⅛
AS-CP25A1EF103M	ARMF-6-01	.01	7⁄16 x 1⅛
AS-CP25A1EF203M	ARMF-6-02	.02	7⁄16 x 1⅝
AS-CP25A1EF503M	ARMF-6-05	.05	⅝ x 1½
AS-CP25A1EF104M	ARMF-6-1	.1	⅝ x 1⅞
AS-CP25A1EF254M	ARMF-6-25	.25	1 x 2⅛
AS-CP25A1EF504M	ARMF-6-5	.5	1 x 2⅝
1000 VOLTS DC WORKING			
AS-CP25A1EG302M	ARMF-10-003	.003	⅝ x 1⅛
AS-CP25A1EG602M	ARMF-10-006	.006	⅝ x 1⅛
AS-CP25A1EG103M	ARMF-10-01	.01	⅝ x 1⅛
AS-CP25A1EG203M	ARMF-10-02	.02	⅝ x 1½
AS-CP25A1EG503M	ARMF-10-05	.05	¾ x 1⅝
AS-CP25A1EG104M	ARMF-10-1	.1	1 x 1⅞
AS-CP25A1EG254M	ARMF-10-25	.25	1 x 2⅝
1500 VOLTS DC WORKING			
AS-CP25A1EH302M	ARMF-15-003	.003	1 x 1¼
AS-CP25A1EH602M	ARMF-15-006	.006	1 x 1¼
AS-CP25A1EH103M	ARMF-15-01	.01	1 x 1¼
AS-CP25A1EH203M	ARMF-15-02	.02	1 x 1⅝
AS-CP25A1EH503M	ARMF-15-05	.05	1 x 1⅞
AS-CP25A1EH104M	ARMF-15-1	.1	1 x 2⅛

VARIATIONS AVAILABLE

CAPACITOR SECTION INSULATED FROM CASE

Circuit 1 

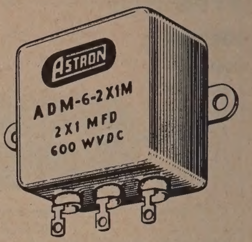
ASTRON TYPE AND DESCRIPTION			MIL STYLE
UNINSULATED BODY (sizes shown in listings)	ARMF	—Basic type as listed.	CP25
	ARMF-Y	—with radial (Y) bracket. Example: ARMF-2-1Y.	CP27
	ARMF-A	—with tangential (A) soldered-on bracket. Example: ARMF-2-1A.	CP29
INSULATED BODY add 3⁄16" to length and 1⁄16" to dia.	ARMFP	—Basic with plastic sleeve (P). Example: ARMFP-2-1.	CP26
	ARMFP-Y	—with plastic sleeve (P) and radial (Y) bracket. Example: ARMFP-2-1Y.	CP28

CAPACITOR SECTION GROUNDED TO CASE

Circuit 3

ASTRON TYPE AND DESCRIPTION			MIL STYLE
UNINSULATED BODY deduct ⅛" from length in above listings	ARMG	—Basic grounded section type.	CP25
	ARMG-Y	—with radial (Y) bracket. Example: ARMG-2-1Y.	CP27
	ARMG-A	—with tangential (A) soldered-on bracket. Example: ARMG-2-1A.	CP29
INSULATED BODY add 1⁄16" to length and 1⁄16" to dia. in above listings	ARMGP	—Basic grounded section type with plastic sleeve (P).	CP26
	ARMGP-Y	—with plastic sleeve (P) and radial (Y) bracket. Example: ARMGP-2-1Y.	CP28

CP53
thru
CP55
of
MIL C-25A



TYPE ADM

Bathtub Paper Capacitors *85°C. Operation*

- Non-inductively wound. Mineral oil impregnated and filled. Hermetically sealed.
- Operating temperature range —55°C. to +85°C.
- Built to comply with strict requirements of MIL-C-25A. Silicone rubber compression-seal lug terminals. Completely immersion-proof.
- Single units have two terminals; duals have three terminals (one common); triple units have three terminals (case common).
- Standard position of Type ADM terminals is on side (MIL-C-25A Style CP53). Available also with terminals on top (ASTRON Type ADMT or MIL Style CP54) and bottom terminals (ASTRON Type ADMB or MIL Style CP55).
- Cap. Tolerance: ±20%.

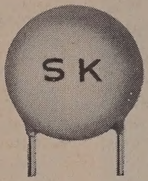
Military Number	Astron Type	L. x W. x H.
100 VOLTS DC WORKING		
AS-CP53B1EB105M	ADM-1-1M	1¹³⁄₁₆x1 x ⅞
AS-CP53B1EB205M	ADM-1-2M	2 x1¾x ⅞
AS-CP53B1EB405M	ADM-1-4M	2 x2 x1⅛
200 VOLTS DC WORKING		
AS-CP53B1EC504M	ADM-2-5	1¹³⁄₁₆x1 x ⅞
AS-CP53B1EC105M	ADM-2-1M	2 x1¾x ⅞
AS-CP53B1EC205M	ADM-2-2M	2 x2 x1
400 VOLTS DC WORKING		
AS-CP53B1EE504M	ADM-4-5	1¹³⁄₁₆x1 x ⅞
AS-CP53B1EE105M	ADM-4-1M	2 x1¾x ⅞
AS-CP53B5EE504M	ADM-4-3x5	2 x2 x1⅛
600 VOLTS DC WORKING		
AS-CP53B1EF503M	ADM-6-05	1¹³⁄₁₆x1 x ¾
AS-CP53B1EF104M	ADM-6-1	1¹³⁄₁₆x1 x ¾
AS-CP53B1EF254M	ADM-6-25	1¹³⁄₁₆x1 x ¾
AS-CP53B1EF504M	ADM-6-5	1¹³⁄₁₆x1 x1
AS-CP53B1EF105M	ADM-6-1M	2 x1¾x1
AS-CP53B1EF205M	ADM-6-2M	2 x2 x1⅛ *
AS-CP53B4EF503M	ADM-6-2x05	1¹³⁄₁₆x1 x ¾
AS-CP53B4EF104M	ADM-6-2x1	1¹³⁄₁₆x1 x ¾
AS-CP53B4EF254M	ADM-6-2x25	1¹³⁄₁₆x1 x1
AS-CP53B4EF504M	ADM-6-2x5	2 x1¾x1
AS-CP53B4EF105M	ADM-6-2x1M	2 x2 x1⅛ *
AS-CP53B5EF503M	ADM-6-3x05	1¹³⁄₁₆x1 x ¾
AS-CP53B5EF104M	ADM-6-3x1	1¹³⁄₁₆x1 x ⅞
AS-CP53B5EF254M	ADM-6-3x25	2 x1¾x ⅞
AS-CP53B5EF504M	ADM-6-3x5	2 x2 x1⅛ *
1000 VOLTS DC WORKING		
AS-CP53B1EG503M	ADM-10-05	1¹³⁄₁₆x1 x ¾
AS-CP53B1EG104M	ADM-10-1	1¹³⁄₁₆x1 x ¾
AS-CP53B1EG254M	ADM-10-25	1¹³⁄₁₆x1 x ⅞
AS-CP53B1EG504M	ADM-10-5	2 x1¾x ⅞
AS-CP53B1EG105M	ADM-10-1M	2 x2 x1⅛
AS-CP53B4EG503M	ADM-10-2x05	1¹³⁄₁₆x1 x ¾
AS-CP53B4EG104M	ADM-10-2x1	1¹³⁄₁₆x1 x ¾
AS-CP53B4EG254M	ADM-10-2x25	2 x1¾x ⅞
AS-CP53B4EG504M	ADM-10-2x5	2 x2 x1⅛
AS-CP53B5EG503M	ADM-10-3x05	1¹³⁄₁₆x1 x ¾
AS-CP53B5EG104M	ADM-10-3x1	2 x1¾x ⅞
AS-CP53B5EG254M	ADM-10-3x25	2 x2 x1⅛

ASTRON® capacitors

ASTRON CORPORATION
EAST NEWARK, N. J.

TEMPERATURE COMPENSATING CERAMIC CAPACITORS DISC (TCD)

SKOTTIE ELECTRONICS CORPORATION
PECKVILLE, PENNSYLVANIA
A WHOLLY-OWNED SUBSIDIARY
OF ASTRON CORPORATION



CHARACTERISTICS AND APPLICATIONS: Changes in ambient temperature affect the values of the various components which make up any receiver. This alters the exact frequency of resonance as is illustrated by some "drifty'" tuners which must be retuned after they have warmed up. It is possible to control this by introducing reactive components of such temperature characteristics and of such values as to offset the undesired changes.

Available Capacitance—temperature characteristics range from a change of plus 100 parts per million per degree centigrade (P100) to a negative change of 5600 parts per million (N5600).

MAXIMUM CAPACITANCES (MMFD) VS. SIZE

SKOTTIE STYLE:	TCD-4	TCD-5	TCD-8	TCD-10	TCD-12
Max. Dia.	.290"	.410"	.570"	.670"	.790"
Raw Disc	4/16"	5/16"	8/16"	10/16"	12/16"
Temperature Coefficient	Minimum & Maximum	Max.	Max.	Max.	Max.
P100	0 to 6	9	28	—	—
NPO	1 to 15	34	56	100	115
NO30	1 to 16	35	56	100	125
NO80	3 to 17	36	60	105	140
N150	3 to 18	40	75	110	150
N220	3 to 23	52	80	120	160
N330	3 to 25	56	90	135	170
N470	3 to 30	60	120	150	200
N750	3 to 45	82	150	200	300
N1500	20 to 65	150	200	250	330
N2200	20 to 100	160	250	275	470
N3300	20 to 175	234	598	910	1100
N4700	30 to 275	300	657	1000	1210
N5600	40 to 350	381	900	1090	1325

SPECIFICATIONS: TCD

WORKING VOLTAGE: 500 V.D.C. (Higher voltages available.)

TEST VOLTAGE (Flash): 2000 V.D.C.

"Q": Over 1000 at 1 megacycle, for capacitances of 15 mmf and up.

INITIAL LEAKAGE RESISTANCE: Over 10000 megohms.

CAPACITANCE TOLERANCE: At 25°C: ±5% ±10% ±20%. (Special tolerances available).

INSULATION: Durez — vacuum-wax impregnated.

LEADS: No. 22 tinned copper (.026" diameter).

CODING: Capacitance, tolerance, and temperature coefficient stamped on disc.

PRINTED CIRCUIT CONSTRUCTION AVAILABLE ON ALL TYPES.

ALL-PURPOSE CERAMIC CAPACITORS

SKOTTIE STYLE TXD all purpose ceramics provide the highest available capacitances at 250°C. in the smallest possible size. These capacitors exhibit less capacitance change with temperature than the limits specified in the EIA RS-198 specification for Z5U ceramics. This specification allows a maximum capacitance change of +22% and −56% along a temperature range of +10°C. to +85°C.

CAPACITANCES (MMFD) VS. SIZE

SKOTTIE STYLE:	TXD-4		TXD-5	TXD-8	TXD-10	TXD-12
Max. Dia.	.290"		.410"	.570"	.670"	.790"
Raw Disc	4/16"		5/16"	8/16"	10/16"	12/16"
Standard Values:	120 mmf	680 mmf	.0018 mfd	.0047 mfd	.01 mfd	.02 mfd
(others available)	150 "	750 "	.002 "	.005 "	.015 "	.02 +80 −20%
	220 "	800 "	.0022 "	.0068 "	.018 "	2 x .005
	330 "	820 "	.0025 "	.0075 "	.02 ±20%	
	470 "	.001 mfd	.0027 "	.0082 "		
	500 "	.0012 "	.003 "	.01 ±20%		
	560 "	.0015 "	.0033 "			

SKOTTIE STYLE TSD: Stable Capacitance Ceramics afford the best available linearity of capacitance with temperature for an extended temperature range. These units are notable for extremely low aging rate and excellent dielectric strength. The standard 500 V.D.C. working voltage rating is ultra conservative.

TEMPERATURE COEFFICIENT OF CAPACITANCE

Temperature Range	Max. % Cap. Change from 25°C. Value
−55°C to + 85°C	+3% to −7.5%
−30°C to + 85°C	+3% to −3%
+10°C to + 85°C	+3% to −3%
+10°C to +125°C	+5% to −7.5%

CAPACITANCE (MMFD) VS. SIZE

SKOTTIE STYLE:	TSD-4	TSD-5	TSD-8	TSD-10	TSD-12
Max. Dia.	.290"	.410"	.570"	.670"	.790"
Raw Disc	4/16"	5/16"	8/16"	10/16"	12/16"
Max. Capacitance (mmfd)	500	1200	2200	3000	5000

(Specify desired Capacitance)

SPECIFICATIONS: TXD, TSD, TFD

WORKING VOLTAGE: 500 W.V.D.C. (Higher voltages available.)

TEST VOLTAGE (Flash): 2000 W.V.D.C.

POWER FACTOR: 1.5% Maximum at 1kc (initial).

CAPACITANCE: Measured at 25°C, an RMS voltage between 0.5 and 5.0 and a frequency of 1kc.

INITIAL INSULATION RESISTANCE: Over 10000 megohms.

INSULATION: Durez — vacuum-wax impregnated.

LEADS: No. 22 tinned copper (.026" diameter).

CODING: Manufacturer's identification, capacitance and tolerance stamped on disc.

CAPACITANCE TOLERANCES: Available as shown.

SKOTTIE STYLE TFD: Semi-stable Capacitance Ceramics exceed the standards specified in the EIA RS-198 specification for Y5S temperature characteristics. This specification allows a maximum capacitance change of ±22% along a temperature range of −30°C to +85°C. These capacitors exhibit excellent capacitance stability with voltage and frequency and afford relatively high capacitance vs. size.

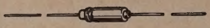
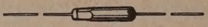
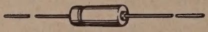
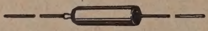
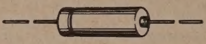
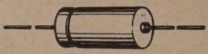
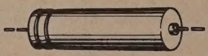
CAPACITANCE (MMFD) VS. SIZE

SKOTTIE STYLE:	TFD-4	TFD-5	TFD-8	TFD-10	TFD-12
Max. Capacitance (mmfd)	1000	2000	3500	5000	10000
Max. Dia.	.290"	.400"	.570"	.670"	.790"
Raw Disc	4/16"	5/16"	8/16"	10/16"	12/16"

(Specify desired Capacitance)

Barco, Inc. MILWAUKEE 1, WISCONSIN

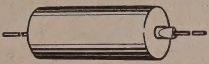
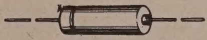
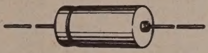
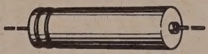
Ultra Miniature 'Lectrolytics

	CATALOG NO.	CAPACITY −20 + 60%	WORKING VOLTAGE	LIST PRICE	BODY SIZE (actual) Tolerances: dia. ± 1/64, Length ± 1/32 Leads: 1⅛ in. Minimum
TYPE 0	*P3-2I	2 mfd.	3 v dc	.85	 1/8 dia. x 7/16 length
	*P6-1	1 mfd.	6 v dc	.85	
	P6-1.5	1.5 mfd.	6 v dc	.85	
	P6-3	3 mfd.	6 v dc	$1.00	
	P10-2	2 mfd.	10 v dc	$1.00	
	*P16-1.25	1.25 mfd.	16 v dc	$1.00	
	*P18-1I	1 mfd.	18 v dc	$1.00	
	*P25-8I	0.8 mfd.	25 v dc	$1.00	
	P40-.5I	0.5 mfd.	40 v dc	$1.00	
	P70-.3I	0.3 mfd.	70 v dc	$1.00	
TYPE ½	*PT4-4	4 mfd.	4 v dc	.85	 1/8 dia. x 5/8 length
	*PT8-2	2 mfd.	8 v dc	$1.00	
	PT50-.25	0.25 mfd.	50 v dc	$1.00	
	PT70-.1	0.1 mfd.	70 v dc	$1.00	
TYPE ¾	*PX3-10I	10 mfd.	3 v dc	.85	 11/64 dia. x 7/16 length
	*PC4-25	25 mfd.	4 v dc	.85	
	*PX6-8I	8 mfd.	6 v dc	.85	
	*P12-5I	5 mfd.	12 v dc	.85	
	*PX25-2.5I	2.5 mfd.	25 v dc	.85	
	PC40-3	3 mfd.	40 v dc	.85	
	*P70-1I	1 mfd.	70 v dc	.85	
TYPE I-IA	*PT6-2	2 mfd.	6 v dc	.70	 11/64 dia. x 9/16 length
	PT6-4	4 mfd.	6 v dc	.70	
	PT12/25-2	2 mfd.	12/25 v dc	.70	
	*PS12-3I	3 mfd.	12 v dc	.70	①
	*P25-2.5I	2.5 mfd.	25 v dc	.70	① Body size 11/64 x 3/4
TYPE II	PT3-32I	32 mfd.	3 v dc	.75	 1/4 dia. x 11/16 length
	*P3-40I	40 mfd.	3 v dc	.75	
	PC4-100††	100 mfd.	4 v dc	.85	
	*P6-25I	25 mfd.	6 v dc	.75	
	PC6-80I††	80 mfd.	6 v dc	.85	
	*P12-16I	16 mfd.	12 v dc	.75	
	PC16-40I††	40 mfd.	16 v dc	.85	
	*P25-8I	8 mfd.	25 v dc	.75	
	PC25-25I††	25 mfd.	25 v dc	.85	
	*P40-5I	5 mfd.	40 v dc	.75	
	*P70-3	3 mfd.	70 v dc	.75	
TYPE III	PC6-200††	200 mfd.	6 v dc	$1.00	 23/64 dia. x 11/16 length
	*P12-50I	50 mfd.	12 v dc	$1.00	
	PC40-30I††	30 mfd.	40 v dc	$1.00	
	*P70-10I	10 mfd.	70 v dc	$1.00	
TYPE IV	PC4-500	500 mfd.	4 v dc	$1.35	
	PC6-400	400 mfd.	6 v dc	$1.35	
	P12-100I	100 mfd.	12 v dc	$1.25	
	P12-320I	320 mfd.	12 v dc	$1.25	② 23/64 dia. x 1-3/16 length
	P25-100I	100 mfd.	25 v dc	$1.25	③
	PC40-64I	64 mfd.	40 v dc	$1.35	② Body size 19/32 dia. x 1-9/32
	P70-20I	20 mfd.	70 v dc	$1.25	③ Body size 1/2 dia. x 1-9/32

* Indicates fastest selling items which should be stocked heavily.
I Designates insulated covering available; add I to catalog number if desired (*I* insulated only.)
†† New, super-small, dimensions for these capacity-voltage ratings.

Barco, Inc. MILWAUKEE 1, WISCONSIN

Ultra Miniature 'Lectrolytics

	CATALOG NO.	CAPACITY —20 + 60%	WORKING VOLTAGE	LIST PRICE	BODY SIZE (actual) Tolerances: dia. ± 1/64, Length ± 1/32 Leads: 1⅛ in. Minimum
TYPE V	PT3-500I PT50-25*I* PT150-8*I* PT150-20*I*	500 mfd. 25 mfd. 8 mfd. 150 v dc	3 v dc 50 v dc 150 v dc 150 v dc	$1.25 $1.25 $1.25 $1.25	④ ⓸a  7/16 dia. x 1-1/8 length ④ Body size 7/16 x 1-3/8 (⓸a 1-5/8)
	FOR OPERATING TEMPERATURES UP TO 85° C.				
TYPE IIA	PCH10-25 PCH25-10	25 mfd. 10 mfd.	10 v dc 25 v dc	.75 .75	 1/4 dia. x 11/16 length
TYPE IIIA	PCH4-100 PCH6-80 PCH25-25 PCH40-16	100 mfd. 80 mfd. 25 mfd. 16 mfd.	4 v dc 6 v dc 25 v dc 40 v dc	$1.00 $1.00 $1.00 $1.00	 23/64 dia. x 11/16 length
TYPE IV A	PCH4-200 PCH6-160 PCH25-50I PCH40-30I	200 mfd. 160 mfd. 50 mfd. 30 mfd.	4 v dc 6 v dc 25 v dc 40 v dc	$1.25 $1.25 $1.25 $1.25	 23/64 dia. x 1-3/16 length

CROSS REFERENCE OF RATINGS AND CATALOG NUMBERS

RATINGS UP TO 70° C IN STANDARD TYPE; 85° C IN *ITALICS*. — † USE PCH INSTEAD OF PC

READ → For → VOLTAGE D. C. W.

READ ↓ For ↓ CAPACITY — MFD.

	3	4	6	8	10	12	16	18	25	40	50	70	150
0.1												PT70-.1	
0.25											PT50-.25		
0.3												P70-.3I	
0.5										P40-.5I			
0.8									P25-.8I				
1:00			P6-1					P18-1I				P70-1I	
1.25							P16-1.25						
1.5			P6-1.5										
2.0	P3-2I		PT6-2	PT8-2	P10-2	PT12/25-2							
2.5									P25-2.5I PX25-2.5I				
3.0			P6-3			PS12-3*I*				PC40-3		P70-3	
4.0		PT4-4	PT6-4										
5.0						P12-5I				P40-5I			
8.0			PX6-8I						P25-8I				PT150-8*I*
10.0	PX3-10I								*PCH25-10*			P70-10I	
16.0						P12-16I				*PCH40-16*			
20.0												P70-20I	PT150-20*I*
25.0		PC4-25	P6-25I		*PCH10-25*				*PC†25-25I*		PT50-25*I*		
30.0										*PC†40-30I*			
32.0	PT3-32*I*												
40.0	P3-40I						PC16-40I						
50.0						P12-50I			*PCH25-50I*				
64.0										PC40-64I			
80.0			*PC†6-80I*										
100		*PC†4-100*				P12-100I			P25-100I				
160			*PCH6-160*										
200		*PCH4-200*	PC6-200										
320						P12-320I							
400			PC6-400										
500	PT3-500I	PC4-500											

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

Centralab Ceramic Capacitors, Kits

3000-6000 VOLT HI-VO-DISC® CAPACITORS

All these units are highly efficient for bypass-coupling in high frequency circuits under conditions of extreme humidity or temperature. Maintain high capacity and performance at 85° C. All units have a tolerance of ±20%.

CRL Type DD30—3000 v. DC working, 6000 v. DC test; 7/32" thick. Values through 2700 μμf. Net Each................ **24c**
CRL Type DD30—Values 3000 μμf through 5000 μμf. Net Ea. **30c**
CRL Type DD60—6000 v. DC working, 12,000 v. DC test; 21/64" thick. Values through 820 μμf. Net Each.................. **36c**
CRL Type DD60—Values 1000 μμf and up. Net Each....... **60c**

Cap. μμf	3000 Volt, DC Working		6000 Volt, DC Working	
	CRL No.	Dia.	CRL No.	Dia.
4.7	DD30-4R7	¼"	DD60-4R7	9/16"
6.8	DD30-6R8	¼"	DD60-6R8	9/16"
8.2	DD30-8R2	¼"	DD60-8R2	9/16"
10	DD30-100	¼"	DD60-100	9/16"
12	DD30-120	¼"	DD60-120	9/16"
15	DD30-150	¼"	DD60-150	9/16"
22	DD30-220	¼"	DD60-220	9/16"
25	DD30-250	¼"	DD60-250	9/16"
27	DD30-270	¼"	DD60-270	9/16"
30	DD30-300	¼"	DD60-300	9/16"
33	DD30-330	¼"	DD60-330	9/16"
39	DD30-390	¼"	DD60-390	9/16"
47	DD30-470	¼"	DD60-470	9/16"
50	DD30-500	¼"	DD60-500	9/16"
56	DD30-560	¼"	DD60-560	9/16"
68	DD30-680	¼"	DD60-680	9/16"
75	DD30-750	¼"	DD60-750	9/16"
82	DD30-820	¼"	DD60-820	9/16"
100	DD30-101	¼"	DD60-101	9/16"
120	DD30-121	¼"	DD60-121	9/16"
150	DD30-151	¼"	DD60-151	9/16"
180	DD30-181	¼"	DD60-181	9/16"
200	DD30-201	¼"	DD60-201	9/16"
220	DD30-221	¼"	DD60-221	9/16"
250	DD30-251	¼"	DD60-251	9/16"
270	DD30-271	¼"	DD60-271	9/16"
300	DD30-301	¼"	DD60-301	9/16"
330	DD30-331	¼"	DD60-331	9/16"
390	DD30-391	¼"	DD60-391	9/16"
400	DD30-401	¼"	DD60-401	9/16"
470	DD30-471	⅜"	DD60-471	9/16"
500	DD30-501	⅜"	DD60-501	9/16"
560	DD30-561	⅜"	DD60-561	9/16"
680	DD30-681	⅜"	DD60-681	9/16"
750	DD30-751	⅜"	DD60-751	9/16"
820	DD30-821	⅜"	DD60-821	9/16"
1000	DD30-102	9/16"	DD60-102	¾"
1200	DD30-122	9/16"	DD60-122	¾"
1500	DD30-152	9/16"	DD60-152	¾"
2000	DD30-202	⅝"	DD60-202	⅞"
2200	DD30-222	⅝"	DD60-222	⅞"
2500	DD30-252	⅝"		
2700	DD30-272	⅝"		
3000	DD30-302	¾"		
3300	DD30-332	⅞"		
3900	DD30-392	⅞"		
4700	DD30-472	⅞"		
5000	DD30-502	⅞"		

TYPE DD2 DUO-KAPS®

Single disc, dual capacity. Double Durez insulation. Rated 600 v. DC, working; 1200 v. DC, test.

CRL No.	Cap., μf	Tolerance	Dia.	Thick.	Net Each
DD2-102	2 x .001	GMV	⅜"	5/32"	24c
DD2-152	2 x .0015	GMV	9/16"	5/32"	24c
DD2-502	2 x .005	−20% +80%	⅝"	5/32"	24c

TYPE DD3 SHIELDED DUO-KAPS®

Three leads—two capacitors in the space formerly needed for one. Shielded to minimize stray capacities between discs. Rated 600 v. DC, working; 1200 v. DC, test.

CRL No.	Cap., μf	Tolerance	Dia.	Thick.	Net Ea.
DD3-102	2 x .001	GMV	⅜"	7/32"	30c
DD3-152	2 x .0015	GMV	⅜"	7/32"	30c
DD3-202	2 x .002	GMV	9/16"	7/32"	30c
DD3-502	2 x .005	GMV	9/16"	7/32"	30c
DD3-103	2 x .01	GMV	⅝"	7/32"	30c

TYPE DD16 HI-KAP® BUFFERS

Compact, easy to install. Long life, low cost. Able to withstand high heat, moisture, and vibration. Size: ⅞" diam., 11/64" thick.

CRL No.	Cap., μf	Tolerance	VDCW	Net Ea.
DD16-302	.003	GMV	1600	21c
DD16-402	.004	GMV	1600	21c
DD16-502	.005	GMV	1600	21c
DD16-602	.006	GMV	1600	21c
DD16-702	.007	GMV	1600	21c
DD16-752	.0075	GMV	1600	21c
DD16-802	.008	GMV	1600	21c
DD16-103	.01	GMV	1600	21c
DD16-153*	.015	−20% +80%	1600	36c

*¼" thick.

1000 VDCW DD DISC HI-KAPS®

Ideal for bypass coupling in high frequency circuits. Rated 1000 v. DC working except Nos. DD6-103, DD-153, DD-203, DD-303, DD-403 and DD-503, which are 600 v. DC working. Tolerance ±10%, except as otherwise indicated.

CRL No. DD-	Cap., μμf	Dia., In.	Net Each	CRL No. DD-	Cap., μμf	Dia., In.	Net Each
3R3	3.3*	¼	15c	501	500	¼	15c
050	5	¼	15c	511	510	¼	15c
060	6	¼	15c	561	560	¼	15c
6R8	6.8	¼	15c	601	600	¼	15c
7R5	7.5	¼	15c	681	680	¼	15c
080	8	¼	15c	751	750	¼	15c
100	10	¼	15c	801	800†	¼	15c
120	12	¼	15c	821	820	¼	15c
150	15	¼	15c	911	910	¼	15c
180	18	¼	15c	102	1000	⅜	15c
200	20	¼	15c	102G	1000†	¼	15c
220	22	¼	15c	122	1200	⅜	15c
240	24	¼	15c	122G	1200†	¼	15c
250	25	¼	15c	132	1300	⅜	15c
270	27	¼	15c	152	1500	⅜	15c
300	30	¼	15c	152G	1500†	¼	15c
330	33	¼	15c	162	1600	⅜	15c
390	39	¼	15c	182	1800	⅜	15c
470	47	¼	15c	202	2000†	⅜	15c
500	50	¼	15c	222	2200†	⅜	15c
510	51	¼	15c	252	2500†	⅜	15c
560	56	¼	15c	272	2700†	⅜	15c
680	68	¼	15c	302	3000†	⅜	15c
750	75	¼	15c	332	3300†	9/16	15c
820	82	¼	15c	392	3900†	9/16	15c
910	91	¼	15c	402	4000†	9/16	15c
101	100	¼	15c	432	4300†	9/16	15c
121	120	¼	15c	472	4700‡	9/16	15c
131	130	¼	15c	472G	4700†	9/16	15c
151	150	¼	15c	5022	5000‡	9/16	15c
181	180	¼	15c	502	5000†	⅝	15c
201	200	¼	15c	562	5600†	9/16	15c
221	220	¼	15c	682	6800†	9/16	15c
241	240	¼	15c	752	7500†	9/16	15c
251	250	¼	15c	822	8200†	⅝	15c
271	270	¼	15c	6-103	10,000†	⅝	15c
301	300	¼	15c	1032	10,000‡	¾	15c
331	330	¼	15c	103	10,000†	¾	15c
351	350	¼	15c	153	15,000§	⅞	18c
361	360	¼	15c	203	20,000§	⅞	18c
391	390	¼	15c	303	30,000§	⅞	36c
401	400	¼	15c	403	40,000§	⅞	36c
471	470	¼	15c	503	50,000§	⅞	36c
471G	470†	¼	15c	....	....	....	....

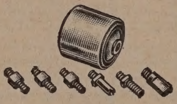
Tolerance: *±0.5 μμf. †GMV. ‡±20%. §+80, −20%.

TYPE DF FLAT-PLATE HI-KAPS®

A dependable 600 volt ceramic capacitor recommended for general replacement applications where their unusual thinness makes them useful. Types listed below are 1 7/16" l. x 1 1/16" h. 600 v. DC, working; 1200 v. DC. test.

CRL No.	Cap. μf	Thickness	Net Each
DF-303	.03	7/32"	$0.75
DF-403	.04	7/32"	.75
DF-503	.05	7/32"	.75
DF-753	.075	19/64"	1.05
DF-104	.1	19/64"	1.05

ATTACHABLE TERMINAL HI-VO-KAPS®



TYPE TV-20—20,000 v. DC working ceramic capacitors; 35,000 v. DC test. Capacity 500 μμf. Terminals will not pull out or break off. Fivedifferent type terminalsavailable as listed below.

Type TV-20 Capacitor— Net Each............... **$1.11**

ATTACHABLE TERMINALS

CRL Type TX—Net Each.................................. **6c**

CRL No.	Type	Thread	CRL No.	Type	Thread
TX-1	Slotted Rod	....	TX-4	Short Male	8-32
TX-2	Female Tap	6-32	TX-5	Long Male	8-32
TX-3	Male Thread	6-32	....	....	....

HI-VO-KAP KITS®

CRL Type TV-207—One TV-20 capacitor with 7 attachable terminals. Net Each.......................... **$1.35**

CRL Type TVK-5-50—Five TV-20 capacitors with 10 each terminals in plastic box. Net Each.................... **$6.75**

FIXED TERMINAL HI-VO-KAPS®

Similar to TV-20, with fixed terminals. Rated 30 kv working, 45 kv test. TV1-503: 2-rod type. TV8-503: Two 8-32 male terminals.

CRL Type TV1-503 or TV8-503— Net Each.. **$1.98**

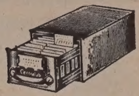
Centralab Ceramic Capacitors, Kits

TYPE TC

TC DISC

D6

TYPE FT



DDK-200

TEMPERATURE COMPENSATING TUBULAR HI-KAP® CAPACITORS

Especially designed to limit frequency drift in RF circuits where temperature variations are prevalent. Ceramic body construction changes capacities as the temperature varies; made to comply with JAN-C-20A specifications. Rated 1,200 volts DC, test; 600 volts DC, working. Extremely compact. Weight, 2 oz. **Type TCZ:** NPO or zero units, superior to micas for all uses. Show zero capacitance changeover temperature range −20° C to +85° C. Left end coded black. **Type TCN:** N750 units show negative capacity of −750 parts per million per degree C rise in temperature. Left end coded violet.

TYPES TCN AND TCZ

Cap., μμf	Type TCN Units				Type TCZ Units			
	CRL Number	**Size †**	**Tol. ±**	**Net Each**	**CRL Number**	**Size †**	**Tol. ±**	**Net Each**
0.5	....	....	.....	......	**TCZ-R5**	A	.25 μμf	**30c**
0.68	....	....	.....	......	**TCZ-R68**	A	.25 μμf	**30c**
1.0	....	....	.....	......	**TCZ-1**	A	.25 μμf	**30c**
1.5	....	....	.....	......	**TCZ-1R5**	A	.25 μμf	**30c**
2.2	....	....	.....	......	**TCZ-2R2**	A	.25 μμf	**30c**
3.3	**TCN-3R3**	A	.5 μμf	**30c**	**TCZ-3R3**	A	.25 μμf	**30c**
4.7	....	....	.....	......	**TCZ-4R7**	A	.5 μμf	**30c**
5.0	**TCN-5**	A	.5 μμf	**30c**	....	....	.....	......
6.8	....	....	.....	......	**TCZ-6R8**	A	.5 μμf	**30c**
10	**TCN-10**	A	.5 μμf	**30c**	**TCZ-10**	A	.5 μμf	**30c**
12	**TCN-12**	A	2%	**30c**	**TCZ-12**	A	2%	**30c**
15	**TCN-15**	A	2%	**30c**	**TCZ-15**	A	2%	**30c**
18	**TCN-18**	A	2%	**30c**	**TCZ-18**	A	2%	**30c**
20	**TCN-20**	A	2%	**30c**	**TCZ-20**	A	2%	**30c**
22	**TCN-22**	A	2%	**30c**	**TCZ-22**	A	2%	**30c**
24	**TCN-24**	A	2%	**30c**	**TCZ-24**	A	2%	**30c**
25	**TCN-25**	A	2%	**30c**	**TCZ-25**	A	2%	**30c**
27	**TCN-27**	A	2%	**30c**	**TCZ-27**	A	2%	**30c**
30	**TCN-30**	A	2%	**30c**	**TCZ-30**	A	2%	**30c**
33	**TCN-33**	A	2%	**30c**	**TCZ-33**	A	2%	**30c**
36	**TCN-36**	A	2%	**30c**	**TCZ-36**	A	2%	**30c**
39	**TCN-39**	A	2%	**30c**	**TCZ-39**	A	2%	**30c**
43	**TCN-43**	A	2%	**30c**	**TCZ-43**	B	2%	**30c**
47	**TCN-47**	A	2%	**30c**	**TCZ-47**	B	2%	**30c**
50	**TCN-50**	A	2%	**30c**	**TCZ-50**	B	2%	**30c**
51	**TCN-51**	A	2%	**30c**	**TCZ-51**	B	2%	**30c**
56	**TCN-56**	A	2%	**30c**	**TCZ-56**	B	2%	**30c**
62	**TCN-62**	A	2%	**30c**	**TCZ-62**	B	2%	**30c**
68	**TCN-68**	A	2%	**30c**	**TCZ-68**	B	2%	**30c**
75	**TCN-75**	A	2%	**30c**	**TCZ-75**	B	2%	**30c**
82	**TCN-82**	A	2%	**30c**	**TCZ-82**	B	2%	**30c**
91	**TCN-91**	A	2%	**30c**	**TCZ-91**	C	2%	**30c**
100	**TCN-100**	A	2%	**30c**	**TCZ-100**	C	2%	**30c**
110	**TCN-110**	B	5%	**30c**	**TCZ-110**	D	5%	**45c**
120	**TCN-120**	B	5%	**30c**	**TCZ-120**	D	5%	**45c**
130	**TCN-130**	B	5%	**30c**	**TCZ-130**	D	5%	**45c**
150	**TCN-150**	B	5%	**30c**	**TCZ-150**	D	5%	**45c**
160	**TCN-160**	B	5%	**30c**	**TCZ-160**	D	5%	**45c**
180	**TCN-180**	B	5%	**30c**	**TCZ-180**	D	5%	**45c**
200	**TCN-200**	B	5%	**30c**	**TCZ-200**	D	5%	**45c**
220	**TCN-220**	C	5%	**30c**	**TCZ-220**	D	5%	**45c**
240	**TCN-240**	C	5%	**30c**	**TCZ-240**	E	5%	**60c**
270	**TCN-270**	C	5%	**30c**	**TCZ-270**	E	5%	**60c**
300	**TCN-300**	D	5%	**45c**	**TCZ-300**	E	5%	**60c**
330	**TCN-330**	D	5%	**45c**	....	....	.....	......
360	**TCN-360**	D	5%	**45c**	....	....	.....	......
390	**TCN-390**	D	5%	**45c**	....	....	.....	......
430	**TCN-430**	D	5%	**45c**	....	....	.....	......
470	**TCN-470**	D	5%	**45c**	....	....	.....	......
510	**TCN-510**	D	5%	**45c**	....	....	.....	......
560	**TCN-560**	D	5%	**45c**	....	....	.....	......
620	**TCN-620**	E	5%	**60c**	....	....	.....	......
680	**TCN-680**	E	5%	**60c**	....	....	.....	......
750	**TCN-750**	E	5%	**60c**	....	....	.....	......

TYPES TCA AND TCL

Intermediate stock values. This group changes negatively capacity-wise with temperature increases. **Type TCA:** Changes 330 parts per million per degree C. **Type TCL:** Changes 1500 parts per million per degree C.

Cap., μμf	Type TCA Units				Type TCL Units			
	CRL Number	**Size †**	**Tol. ±**	**Net Each**	**CRL Number**	**Size †**	**Tol. ±**	**Net Each**
10	**TCA-10**	A	.5 μμf	**30c**	**TCL-10**	A	.5 μμf	**30c**
15	**TCA-15**	A	2%	**30c**	**TCL-15**	A	2%	**30c**
22	**TCA-22**	A	2%	**30c**	**TCL-22**	A	2%	**30c**
33	**TCA-33**	A	2%	**30c**	**TCL-33**	A	2%	**30c**
47	**TCA-47**	A	2%	**30c**	**TCL-47**	A	2%	**30c**
68	**TCA-68**	A	2%	**30c**	**TCL-68**	A	2%	**30c**
100	**TCA-100**	B	2%	**30c**	**TCL-100**	A	2%	**30c**

SIZE†

Key	Size, Inches	Key	Size, Inches	Key	Size, Inches
A	.400 x .200	C	.860 x .225	E	1.625 x .285
B	.690 x .200	D	1.165 x .285		

TEMPERATURE COMPENSATING DISC HI-KAPS®

Very popular unit that replaces mica types in all applications. High stability and small size, using TC ceramic dielectric material. Type DTZ is NPO or zero TC disc type. Type DTN is an N750 TC type. Thickness: 5/32" and 7/32". Tolerance: ±5%.

TYPE DTN (N750)

CRL No.	Cap. μμf	Dia., In.	Net Each	CRL No.	Cap., μμf	Dia., In.	Net Each
DTN-5*	5	¼	**30c**	**DTN-68**	68	⅜	**30c**
DTN-10*	10	¼	**30c**	**DTN-75**	75	⅜	**30c**
DTN-15	15	¼	**30c**	**DTN-100**	100	⅜	**30c**
DTN-20	20	¼	**30c**	**DTN-150**	150	9/16	**45c**
DTN-22	22	¼	**30c**	**DTN-200**	200	9/16	**45c**
DTN-25	25	¼	**30c**	**DTN-220**	220	9/16	**45c**
DTN-33	33	¼	**30c**	**DTN-330**	330	⅝	**45c**
DTN-47	47	¼	**30c**				

TYPE DTZ (NPO)

CRL No.	Cap. μμf	Dia., In.	Net Each	CRL No.	Cap. μμf	Dia., In.	Net Each
DTZ-1R5*	1.5	¼	**30c**	**DTZ-50**	50	9/16	**30c**
DTZ-2R2*	2.2	¼	**30c**	**DTZ-68**	68	9/16	**30c**
DTZ-3R3*	3.3	¼	**30c**	**DTZ-75**	75	9/16	**30c**
DTZ-4R7*	4.7	¼	**30c**	**DTZ-82**	82	9/16	**30c**
DTZ-6R8*	6.8	¼	**30c**	**DTZ-100**	100	9/16	**30c**
DTZ-10	10	¼	**30c**	**DTZ-120**	120	⅝	**45c**
DTZ-15	15	¼	**30c**	**DTZ-150**	150	¾	**45c**
DTZ-20	20	¼	**30c**	**DTZ-180**	180	9/16	**45c**
DTZ-22	22	⅜	**30c**	**DTZ-200**	200	9/16	**45c**
DTZ-25	25	⅜	**30c**	**DTZ-220**	220	⅝	**45c**
DTZ-33	33	⅜	**30c**	**DTZ-270**	270	⅝	**45c**
DTZ-47	47	9/16	**30c**				

*Tolerance, ±.5 μμf.

D6 TUBULAR BC HI-KAPS®

Rated 600 v. DC working; 1200 v., test. Tropicalized. Operating temperature 85° C. Tolerance: ±0.5 μμf, D6-030; ±10%, 5 μμf through 680 μμf; ±20%, 750 μμf through 2200 μμf; GMV, 2500 μμf and up.

CRL Type D6—Any model. Net Each.................... **15c**

CRL No.	Cap., μμf	Size *	CRL No.	Cap., μμf	Size *	CRL No.	Cap., μμf	Size *
D6-030	3	A	**D6-910**	91	A	**D6-821**	820	A
D6-050	5	A	**D6-101**	100	A	**D6-102**	1000	A
D6-100	10	A	**D6-121**	120	A	**D6-122**	1200	A
D6-120	12	A	**D6-151**	150	A	**D6-152**	1500	A
D6-150	15	A	**D6-181**	180	A	**D6-182**	1800	A
D6-180	18	A	**D6-201**	200	A	**D6-202**	2000	B
D6-200	20	A	**D6-221**	220	A	**D6-222**	2200	B
D6-220	22	A	**D6-251**	250	A	**D6-252**	2500	B
D6-250	25	A	**D6-271**	270	A	**D6-272**	2700	B
D6-270	27	A	**D6-301**	300	A	**D6-302**	3000	B
D6-330	33	A	**D6-331**	330	A	**D6-332**	3300	B
D6-390	39	A	**D6-391**	390	A	**D6-402**	4000	B
D6-400	40	A	**D6-401**	400	A	**D6-472**	4700	C
D6-470	47	A	**D6-471**	470	A	**D6-502**	5000	C
D6-500	50	A	**D6-501**	500	A	**D6-562**	5600	C
D6-560	56	A	**D6-561**	560	B	**D6-682**	6800	D
D6-680	68	A	**D6-601**	600	B	**D6-752**	7500	D
D6-750	75	A	**D6-681**	680	B	**D6-103**	10000	D
D6-820	82	A	**D6-751**	750	A			

***Size: A**—.260" x .460". **B**—.260" x .790". **C**—.280" x .900". **D**—.330" x 1.21".

FT AND MFT FEED-THRU HI-KAPS®

Rated 500 v. DC, working; 1000 v. DC, test. **Type FT:** Hooked end terminals; mounting nut supplied. **Type MFT:** ¼" (max.) flange eyelet inserts in .160" hole; solders direct to chassis.

CRL Type FT—Any model. Net Each.................... **75c**

CRL Type MFT—Any model. Net Each.................... **30c**

Type FT Hi-Kaps ®			Type MFT Hi-Kaps ®		
No.	**μμf**	**Tolerance**	**No.**	**μμf**	**Tolerance**
FT-500	500	±20%	**MFT-50**	50	±10%
FT-1000	1000	±20%	**MFT-100**	100	±10%
FT-1500	1500	−20, +50%	**MFT-500**	500	±20%
FT-1800	1800	−20, +50%	**MFT-1000**	1000	GMV
FT-2300	2300	−20, +50%			

CERAMIC CAPACITOR KITS

Each kit contains a carefully balanced inventory of the most required replacement values. All kits utilize the sturdy, convenient Centralab ceramic capacitor packages. Housed in a 6" x 4" x 11", one drawer, heavy gauge steel cabinet. Entire contents labeled and marked for prompt identification.

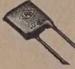
CRL Kit No. DDK-200—Contains 200 disc capacitors of 31 assorted values, rated at 1 kv DCW. Values range from 5 μμf to 20,000 μμf. Net Each.............................. **$31.10**

CRL Kit No. D6K-200—Contains 200 tubular capacitors of 27 assorted values, rated at 600 VDCW. Values range from 5 μμf to 10,000 μμf. Net Each.............................. **$30.00**

CRL Kit No. HVK-150—Contains 150 high voltage capacitors of 17 assorted values, rated at 1.6 kv, 3 kv, and 6 kv. Values range from 47 μμf to 15,000 μμf. Net Each............ **$38.60**

CRL Kit No. TCK-80—Contains 80 temperature compensating capacitors of 28 assorted values, rated at 600 VDCW. Values range from .68 μμf to 750 μμf. Net Each....... **$26.90**

Centralab Special Capacitors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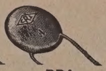
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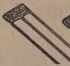
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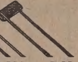
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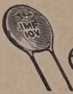
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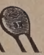
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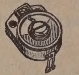
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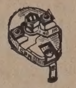
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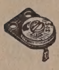
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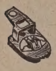
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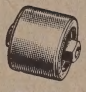
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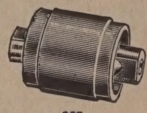
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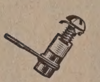
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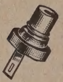
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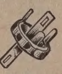
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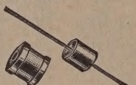

853, 854, 855

MINIATURE PLATE CAPACITORS

Extremely small size. Proven in use by transistor radio receivers. designed for cathode bypass and transistor applications. Power factor, 2.5% at 1 kc. Rated 30 v. DC working; 50 v. DC test. Vacuum wax impregnated with Durez resin coating. Tolerances: +100% −20%.

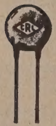
CRL No.	Cap. µf	Size (Sq.) In., Max.	Thick, Inches	Net Each
DA-203	.02	1/2	.140	$0.36
DA-503	.05	1/2	.160	.81
DA-104	.1	1/2	.187	1.35

TYPE DDA MINIATURE DISCS

Disc type similar to above, 75 VDCW, 150 VDCT. Size: 5/8" diam. x 5/32" thick.

CRL No.	Cap. µf	Tolerance	Net Each
DDA-503	.05	−30% +80%	30c
DDA-104	.1	−30% +80%	54c

MIN-KAP® MINIATURE CAPACITORS



Ceramic disc type capacitors for smaller voltage requirement applications: 150 VDCW; 300 VDC test. Very small in size; maximum of 3/8" diam. in high capacity values. Ideal for hearing aid, miniature radio, intercom and experimental rigs. Packaged 5 per package. Tolerance: −40% +60%.

CRL Number	Cap. µf	VDCW	Thickness Inches	Net Each
DDM-502	.005	150	.146	30c
DDM-103	.01	150	.146	30c
DDM-203	.02	150	.166	54c
DDM2-103	2 x .01	150	.166	54c

FLAT-PLATE MIN-KAPS®

150 VDCW, 300 v. DC test. Size: 7/32" x 11/32" x 7/64". Tolerance +50%, −20%, except (*) +80%, −20%.

CRL No.	Cap., µf	Net Each	CRL No.	Cap., µf	Net Each
DM-101	.0001	30c	DM-202	.002	30c
DM-201	.0002	30c	DM-302*	.003	30c
DM-301	.0003	30c	DM-502*	.005	30c
DM-501	.0005	30c	DM-103*	.01	60c
DM-102	.001	30c	DM2-502*	2 x .005	60c

TYPES UK AND UK10 ULTRA-KAPS

Miniature ceramic disc capacitors for transistor circuit uses; ideally suited for low voltage uses requiring extremely high capacities and low power factors. Leads are No. 22 tinned copper wire. Wt., 2 oz. **Type UK:** Rated 3 v. DC working; GMV tolerance. **Type UK10:** Rated 10 v. DC working; tolerance +80, −20%.

Type UK—3 WVDC				Type UK10—10 WVDC			
CRL Number	Cap., µf	Dia., In.	Net Each	CRL Number	Cap., µf	Dia., In.	Net Each
UK-104	.1	3/16	54c	UK10-503	.05	1/4	33c
UK-224	.22	1/4	33c	UK10-104	.1	3/8	33c
UK-474	.47	3/8	33c	UK10-204	.2	9/16	33c
UK-105	1.0	9/16	54c	UK10-474	.47	3/4	54c
UK-225	2.2	3/4	54c				

CERAMIC AND STEATITE TRIMMERS

Highly stable, small lightweight design. Power factor less than 0 2% at 1 mc. All units rated 600 v. DC, working; 1200 v. DC, test. **Suffix Z:** Indicates zero temperature coefficient. **Suffix N:** Indicates negative coefficient. Shpg. Wt., 3 oz. max.

CRL Type 820—High dielectric ceramic base impervious to moisture. Flat rotor and stator. Mounting holes take No. 4 machine screws; 5/8" x 27/32". Net Each.................... **78c**

CRL Type 822—Steatite body; silver rotor and stator plates; 41/64" x 27/32". Mtg. holes take No. 4 screw. Net Each...... **$1.05**

CRL Type 823—Steatite body; 15/16" x 19/32". Net Each.... **$2.40**

CRL Type 827—Ceramic molded phenolic body has high stability under vibration. Insulation resistance 10,000 megs. minimum. Size: 17/32" x 3/4". Net Each.............................. **75c**

CRL Type 829—Tiny, tubular, high voltage types for TV or FM. Ceramic bodies .215" dia. Full capacity in 180° rotation. Net. **30c**

CRL No.	Range, µµf	CRL No.	Range, µµf	CRL No.	Range, µµf
820D	1.0-3.5	822-AZ	4.5-25	823-DN	8.-50
820A	2.5-6.0	822-DN	2.0-6.0	823-BN	10.-100
820B	5.0-20	822-EN	4.0-30	823-AN	20.-125
820C	7.0-35	822-CN	4.5-25	827A	2.5-7
820E*	35-55	822-BN	7.0-45	827B	3.5-12
820F*	55-75	822-AN	8.0-50	827C	6.0-30
820G*	70-90	823-EZ	5.-12	827D	7.0-35
822-DZ	1.5-3	823-DZ	6.-25	829-3	.5-3
822-EZ	1.5-7	823-BZ	10.-50	829-4	1.-4
822-CZ	2.0-7.5	823-AZ	12-62	829-6	1.-6
822-BZ	2.5-13.0	823-FN	5.-15	829-7	1.-7.5
822-FZ	3.0-12	823-EN	8.-25	829-10	1.5-10

*Less brackets.

TYPE 833 TRIMMERS

Steatite bodv trimmers have silver rotor and stator plates. Size: /64" x 27/32". Meet MIL-C-81A specifications.
CRL Type 833—Net Each.............................. **$1.50**

CRL No.	MIL Spec.	Cap., µµf	CRL No.	MIL Spec.	Cap., µµf
833-EZ	CV11A070	1.5-7	833-DN	CV11D060	2-6
833-FZ	CV11A120	3-12	833-EN	CV11D300	4-30
833-AZ	CV11A250	4.5-25	833-BN	CV11D450	7-45

TRANSMITTING CAPACITORS

Designed for high voltage, high frequency circuits requiring very low power factor and stable retrace characteristics. Double cup design for long leakage paths and rugged construction.

TYPE 850 AND 858—5 AND 7.5 KV

Tolerance: ±10% 850 type; ±20% 858 type. Size: 13/16" dia. x 5/8". Stud type has 1/8" long hex studs 6-32 thread. Lug type 9/16" long solder lugs with tapped 6-32 threaded hole.

CRL No.		Cap. µµf	KV DCW	Temp. Coeff.	RF Load at 30 MC†	Net Each
Stud Type	Lug Type					
850S-25Z	859SL-25Z	25	7.5	NPO	7 amps.	$2.70
850S-50Z	850SL-50Z	50	7.5	NPO	10 amps.	
850S-50N	850SL-50N	50	7.5	N750	8.8 amps.	
850S-75N	850SL-75N	75	7.5	N750	10 amps.	
850S-100N	850SL-100N	100	5	N750	9.8 amps.	
858S-500	....	500	5	Hi-K	....	
858S-1000	....	1 K	5	Hi-K	....	

TYPE 853, 854, 855—5 KV

Tolerance: ±10%. Size: 853, 9/16" dia. x 1/2". 854, 7/16" dia. x 7/16". 855, 5/16" dia. x 3/8". Lead type has 1 1/2" axial leads. Tap type has axial screw terminals tapped 2-56.

CRL No.		Cap. µµf	KV DCW	Temp. Coeff.	RF Load at 30 MC†	Net Each
Lead Type	Tap Type					
855-3Z	855A-3Z	3	5	NPO	1.8 amps.	$1.80
855-5Z	855A-5Z	5	5	NPO	1.8 amps.	
854-10Z	854A-10Z	10	5	NPO	1.8 amps.	
855-10N	855A-10N	10	5	N750	3.2 amps.	
853-20Z	853A-20Z	20	5	NPO	2.8 amps.	
854-20N	854A-20N	20	5	N750	3.2 amps.	
853-40N	853A-40N	40	5	N750	5.6 amps.	

TYPE 857—7.5 AND 15 KV

Tolerance: 10%. Size: 19/32" dia. x 15/16". Axial screw terminals at both ends; 1/4" deep 10-32 NF-2 thread.

CRL No.	Cap. µµf	Temp. Coeff.	RF Load at 30 MC†	KV DCW	Net Each
857-25Z	25	NPO	12 amps.	15	$8.40
857-50Z	50	NPO	12 amps.	15	8.40
857-100N	100	N750	14.4 amps.	15	7.20
857-200N	200	N750	18.2 amps.	7.5	7.20

TYPE 859—15 AND 20 KV

Tolerance: ±10%. Size: 2" dia. x 2 7/8" overall. Terminals 7/16" deep both ends, tapped 10-32.

859S-50Z	50	NPO	30 amps.	20	$54.00
859S-100Z	100	NPO	30 amps.	20	
859S-250N	250	N750	30 amps.	20	
859S-500N	500	N3300	30 amps.	15	

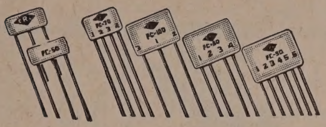
†R.F. Load Ratings based on 30° C rise in temperature.

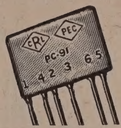
BUTTON-STYLE CERAMICS

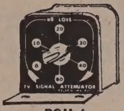
Solder-sealed for long life and high quality performance. Shell is effective at ground potential. 500 VDCW, 1000 VDCT. **Type ZA** is standoff 3-48 thread tapped base and ground terminal. **Type ZB** is feed-thru style with three solder lugs.

Cap. µµf	CRL No.	Tol.	Net Each	CRL No.	Tol.	Net Each
15	ZA-150	±10%	75c	ZB-150	±10%	75c
50	ZA-500	±10%		ZB-500	±10%	
500	ZA-501	±20%		ZB-501	±20%	
1000	ZA-102	GMV		ZB-102	GMV	

Centralab Packaged Electronic Circuits







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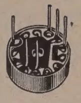


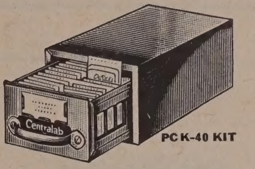
TA-12-B

PACKAGED ELECTRONIC CIRCUITS

These compact units contain resistors, capacitors, conductors and in some instances, inductance integrally bound to a ceramic base plate. Completely sealed against moisture, temperature change and shock. **Write for your Free copy of the current Packaged Electronic Circuit Guide.**

CRL No.	Description	Net Each
PC-2	Single Resistor	$0.60
PC-21	Series Resistor	.60
PC-30	Series R-C Network	.60
PC-33	Series R-C Network	.60
PC-36	Parallel R-C Network	.60
PC-37	Parallel R-C Network	.60
PC-50	Diode Filter	.60
PC-51	Diode Filter	.60
PC-52	Diode Filter	.60
PC-60	Parallel R-C Network	.60
PC-61	Parallel R-C Network	.60
PC-70	Triode Couplate*	.60
PC-71	Triode Couplate*	.60
PC-80	Triode Couplate*	.60
PC-81	Triode Couplate*	.60
PC-82	Triode Couplate*	.60
PC-84	Triode Couplate*	.60
PC-90	Pentode Couplate*	.90
PC-91	Pentode Couplate*	.90
PC-92	Pentode Couplate*	.90
PC-100	Vertical Integrator	.75
PC-101	Vertical Integrator	1.05
PC-104	Vertical Integrator	.75
PC-105	Vertical Integrator	.75
PC-106	Vertical Integrator	.75
PC-110	R-C Filter Bypass	.60
PC-111	R-C Filter Bypass	.60
PC-150	Audio Detector Couplate*	.90
PC-151	Audio Detector Couplate*	.90
PC-154	Audio Detector Couplate*	.90
PC-157	Audio Detector Couplate*	.90
PC-158	Audio Detector Couplate*	.90
PC-159	Audio Detector Couplate*	.90
PC-160	Pentode Diode Couplate*	1.20
PC-165	Pentode Diode Couplate*	1.20
PC-166	Pentode Diode Couplate*	1.20
PC-175	R-C Network	.60
PC-176	Integrator	.90
PC-177	R-C Network	.90
PC-178	R-C Network	.60
PC-179	Sound IF Network	.90
PC-184	R-C Network	.75
PC-185	R-C Network	.75
PC-186	Integrator	.75
PC-190	Baxandall Tone Control	1.05
PC-260	Sync. Take-off	.90
PC-262	Sync. Take-off	.90
PC-263	Sync. Take-off	.90
PC-264	Sync. Take-off	.90
PC-304	R-C Network	.75
PC-305	Elect. Organ Network	1.20
PC-306	R-C Network	.75
PC-307	R-C Network	.60
PC-308	Horizontal Oscillator	1.05
PC-309	Retrace Suppression Network	.75
PC-310	First Audio Couplate*	.90
PC-311	Vertical Feed-Back	.75
PC-312	Vertical Integrator	.75
PC-313	Audio Detector Couplate*	.90
PC-314	Retrace Suppression Network	.75
PC-315	Audio Detector Couplate*	.90
PC-316	Sync. Take-off	1.20
PC-317	Audio Couplate*	.60
PC-318	Audio Det. Pentode Couplate*	1.20
PC-319	Phase Comparator	.75
PC-320	Discriminator Network	.75
PC-321	Sync. Sep. Grid Network	.60
PC-322	Electronic Organ Network	.75
PC-323	Electronic Organ Network	.75
PC-324	Compentrol Network	.75
PC-325	Compentrol Network	.75
PC-326	Diode Filter	.60
PC-327	Pentode Diode Couplate*	1.05
PC-328	Pentode Diode Couplate*	.90
PC-329	Sound IF Network	.75
PC-330	Sync. Take-off	.90
PC-331	Diode-Triode Couplate*	.75
PC-332	R-C Network	.75
PC-333	Vertical Integrator	.90
PC-334	Audio Network	.60
PC-336	Retrace Suppression	.75
PC-337	Phase Comparator	.90
PC-338	Sync. Time K Network	$0.90
PC-339	Sync. Time K Network	.90
PC-340	AGC Voltage Divider	.75
PC-341	Series R-C Network	.60
PC-342	FM Balanced Ratio Detector	1.20
PC-343	Diode-Pentode Couplate*	1.20
PC-344	Loudness Contour Network	.90
PC-345	Loudness Contour Network	.90
PC-346	Loudness Contour Network	.75
PC-347	Phono Input Network	.75
PC-348	Diode-Triode Couplate*	.75
PC-349	R-C Network	.60
PC-350	Integrator Network	.90
PC-351	De-Emphasis Network	.60
PC-352	Sync. Circuit Resistor Bank	.75
PC-353	Horizontal AFC Network	.75
PC-354	Ratio Detector Network	1.05
PC-355	Sync. Coupling Network	1.05
PC-356	Tone Control Network	.75
PC-357	Phase Detector Network	.90
PC-358	Sync. Coupling Network	1.05
PC-359	Balanced Dual Capacitor	.60
PC-360	Antenna Isolation Network	.60
PC-361	Ant. Filter Output Coupling Network	.60
PC-362	Sync. Take-off Network	.75
PC-363	Tone Control Network	.60
PC-364	Horizontal AFC Network	.90
PC-365	Ant. Filter Output Coupling Network	.60
PC-366	Ground Chassis Circuit	.75
PC-367	Horiz. Oscillator and Phase Detector	1.20
PC-368	Vertical Integrator	.75
PC-369	Phase Comparator Network	.75
PC-370	Horizontal Oscillator Network	.90
PC-371	Audio Couplate*	.75
PC-372	Audio Couplate*	.60
PC-373	Audio Coupling Network	.90
PC-374	Vertical Integrator	.90
PC-375	Phase Comparator Network	.90
PC-376	Retrace Suppression Network	.75
PC-377	Antenna Isolation Network	.60
PC-378	Tone Control Network	.90
PC-379	Audio Coupling Network	.90
PC-380	De-Coupling Network	.90
PC-381	Sync. Coupling Network	.75
PC-382	Parallel R-C Network	.60
PC-383	Parallel R-C Network	.60
PC-384	Series R-C Network	.60
PC-385	Vertical Integrator	.90
PC-386	Vertical Feedback Network	.90
PC-387	IF De-Coupling Network	1.05
PC-388	Yoke Balancing Network	.90
PC-389	Yoke Balancing Network	1.05
PC-390	Audio Detector Couplate*	.90
PC-391	Sync. Take-off Network	.75
PC-392	Integrator Network	.75
PC-393	Tone Control Network	.75
PC-394	Horizontal Oscillator Network	1.20
PC-395	Vertical Integrator	1.20
PC-396	Video Coupling Network	1.05
PC-397	Sound Detector Couplate*	.90
PC-400	Audio Coupling Network	1.05
PC-402	Twin T Rumble Filter Network	1.20
PC-403	Flip Flop Network	.75
PC-404	Compentrol Network	.75
PC-405	Compentrol Network	.60
PC-406	Audio Network	.60
PC-407	Integrator Network	.60
PC-408	Integrator Network	1.20
PC-409	Phase Detector Network	1.20

*Registered Trade Mark.



PCK-40 KIT

PCK-40 PACKAGED ELECTRONIC CIRCUIT KIT

Contains 40 PEC units in 13 of the most frequently used types. All units packaged in transparent plastic with identification clearly visible. Supplied in one-drawer, sturdy steel cabinet with attractive blue baked enamel finish. **Size:** 11⅛" x 6 9/16" x 4¼".

CRL No. PCK-40—Net Each... $35⁴⁵

KIT CONTAINS

Quan.	Part No.	Quan.	Part No.
2	**PC-81**	5	**PC-150**
2	**PC-91**	2	**PC-151**
10	**PC-100**	2	**PC-158**
5	**PC-101**	2	**PC-159**
2	**PC-104**	2	**PC-160**
2	**PC-105**	2	**PC-165**
2	**PC-106**		

PCH-4 TV ATTENUATOR SWITCH

Permits proper attenuation required for best TV reception through use of "H" pads. Eliminates tearing of image due to high powered nearby stations. Six switching positions from regular antenna to 60 db loss. Comes complete with knob, leads, dial plate and container.

CRL No. PCH-4—Net Each..... $6⁰⁰

CRL No. PCH-10 (10 db), **PCH-20** (20 db), **PCH-30** (30 db) **or PCH-40** (40 db). **"H" Pads**—Net Each........... 90ᶜ

CRL No. PCH-100—Set of 4 "H" pads; one each of above in plastic box. Net Per Set.................. $3⁶⁰

TA-12-B FOUR-STAGE PACKAGED TRANSISTOR AMPLIFIER

Complete, ultra-miniature audio amplifier has 4 stages, yet only 0.531" dia. x .228" thick. Patented layerized construction assembles resistors, capacitors and transistors in extremely compact and efficient amplifier. Ideal for pocket radios, recorders, mike amplifiers, hearing aids, etc. **Gain:** 73 db min. at 1 kc. **Power Output:** Up to 0.5 mw. **Frequency Characteristic:** ±5 db, 300-20,000 cps. **Input Imped.:** 2,500 ohms, nom. **Signal-to-Noise:** 30 db below signal for signal input of 25 μv at 1 kc, max. Input shorted to ground for no signal noise. **Supply Voltage:** 1.34 v. mercury cell. **Current Drain:** 1.6 to 2.2 ma, nom. **Design Load:** 1,000 ohms imped. at 1 kc; 450 ohms max. DC resistance.

CRL No. TA-12-B—Complete with instructions. Net Each.... $45⁰⁰

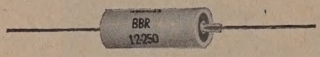
TYPE RC TUBE-R-CAPS®

Radial lead ceramic tubular capacitor and resistor in parallel in the same space as a tubular capacitor alone.

CRL No.	Capacitor		Resistor			Size, In. Dia. x L.	Net Each
	μμf	Tolerance	Ohms	Tolerance	Rating		
RC-421	56	±10%	47K	±20%	¼ watt	.260 x .503	**18c**
RC-428	150	GMV	3.3 meg.	±30%	½ watt	.260 x .790	**18c**
RC-431	330	±20%	220K	±20%	½ watt	.260 x .790	**18c**
RC-465	470	±20%	470K	±20%	¼ watt	.260 x .503	**18c**
RC-471	470	GMV	3-1 meg.	....	½ watt	.280 x .910	**18c**
RC-476	800	GMV	22K	±20%	¼ watt	.260 x .503	**18c**
RC-485	4700	+80, −20%	180	±20%	¼ watt	260 x .790	**18c**
RC-490	4700	+80, −20%	75-1.5 meg.	....	⅓ watt	.330 x .910	**18c**

CDÉ CORNELL-DUBILIER

"BLUE BEAVER" ELECTROLYTIC TUBULARS



TYPE BBR

Electrolytic Capacitor
"BEAVER"

TYPE BR

BBR

Type BBR "BLUE BEAVERS," miniature versions of the BR, are especially popular for cramped space installations in television receivers, hearing aids, miniature radios and other small assemblies. They are hermetically sealed *in tubular aluminum containers with cardboard sleeve* and ideally suited to meet requirements in low voltage circuits. NEGATIVE TERMINAL IS GROUNDED TO CAN.

The anodes AND cathodes of all 150 volt BBR and BR units are ETCHED. This feature recommends these types for use with JUNCTION RECTIFIERS.

BR

Type BR is the compact unit in *aluminum can with cardboard outer sleeve.* Fits neatly into the cramped quarters, self-supported by rigid tinned copper leads. Larger sizes may be further supported by a metal strap. NEGATIVE TERMINAL IS GROUNDED TO CAN.

TEMPERATURE RANGE: to +85°C except 500 V. D.C., to +65°C.

BBR/BR Cat. No.	Cap. Mfd.	*Can Size—Inches Diam. x Length	List Price	Net Price
		3 Volts		
BBR 25-3	25	⅜ x 1 1/16	$1.05	**$ .62**
BBR 50-3	50	⅜ x 1 1/16	1.15	**.69**
		6 Volts		
BBR 5-6	5	⅜ x 1 1/16	1.05	**.62**
BBR 25-6	25	⅜ x 1 1/16	1.10	**.64**
BBR 50-6	50	⅜ x 1 1/16	1.20	**.71**
BBR 100-6	100	½ x 1 1/16	1.45	**.87**
BBR 250-6	250	½ x 1 7/16	1.85	**1.10**
BR 500-6	500	⅝ x 1 11/16	2.10	**1.26**
BR 1000-6	1000	¾ x 2	2.60	**1.54**
BR 2000-6	2000	1 x 2 3/16	3.10	**1.74**
		15 Volts		
BBR 100-15	100	½ x 1 1/16	1.50	**.90**
BR 2501	250	⅝ x 1 11/16	2.15	**1.27**
BR 5001	500	¾ x 2	2.40	**1.42**
BR 10001	1000	⅞ x 2	3.10	**1.85**
BR 20001	2000	1 x 3	3.65	**1.19**
		25 Volts		
BBR 10-25	10	⅜ x 1 1/16	1.25	**.73**
BBR 20-25	20	⅜ x 1 1/16	1.25	**.75**
BBR 25-25	25	⅜ x 1 1/16	1.30	**.76**
BBR 50-25	50	½ x 1 1/16	1.35	**.81**
BBR 100-25	100	½ x 1 7/16	1.65	**.99**
BR 2502	250	¾ x 1 11/16	2.30	**1.36**
BR 5002	500	⅞ x 2	3.10	**1.85**

*For Overall BBR Size add 1/16" to Diam. and 5/32" to Length.
*For Overall BR Size add 1/16" to Diam. and 3/16" to Length

Lead Lengths: BBR — 2⅜" ± ⅛" — #20 AWG
Lead Lengths: BR — 3⅜" ± ⅛" — #18 AWG

BBR/BR Cat. No.	Cap. Mfd.	*Can Size—Inches Diam. x Length	List Price	Net Price
		50 Volts		
BBR 1-50	1	⅜ x 1 1/16	$ 1.15	**$ .68**
BBR 2-50	2	⅜ x 1 1/16	1.15	**.68**
BBR 4-50	4	⅜ x 1 1/16	1.20	**.72**
BBR 5-50	5	⅜ x 1 1/16	1.20	**.72**
BBR 10-50	10	⅜ x 1 1/16	1.25	**.73**
BBR 25-50	25	½ x 1 1/16	1.30	**.77**
BR 505	50	⅝ x 1 7/16	1.50	**.89**
BR 1005	100	⅝ x 1 11/16	1.75	**1.03**
BR 1505	150	¾ x 1 11/16	1.90	**1.14**
BR 2505	250	⅞ x 1 11/16	2.40	**1.43**
BR 5005	500	1 x 3	3.20	**1.92**
		90 Volts		
BBR 10-90	10	½ x 1 1/16	1.30	**.76**
BBR 16-90	16	½ x 1 7/16	1.30	**.77**
		150 Volts		
BBR 4-150	4	⅜ x 1 1/16	1.15	**.74**
BBR 8-150	8	½ x 1 1/16	1.30	**.77**
BBR 10-150	10	½ x 1 1/16	1.35	**.79**
BBR 12-150	12	½ x 1 1/16	1.35	**.81**
BBR 16-150	16	½ x 1 7/16	1.45	**.85**
BBR 20-150	20	½ x 1 7/16	1.45	**.87**
BR 2515	25	¾ x 1 7/16	1.55	**.92**
BR 3015	30	¾ x 1 7/16	1.60	**.95**
BR 4015	40	¾ x 1 11/16	1.70	**1.80**
BR 5015	50	¾ x 1 11/16	1.75	**1.03**
BR 6015	60	⅞ x 1 11/16	1.85	**1.09**
BR 8015	80	⅞ x 1 11/16	2.00	**1.19**
BR 10015	100	⅞ x 2	2.15	**1.29**
BR 15015	150	1 x 2 3/16	2.35	**1.41**
BR 20015	200	1 x 3	2.60	**1.55**
BR 30015	300	1 x 3 13/16	3.20	**1.93**
		250 Volts		
BBR 4-250	4	½ x 1 1/16	1.40	**.82**
BBR 8-250	8	½ x 1 7/16	1.55	**.93**
BBR 12-250	12	½ x 1 7/16	1.65	**.99**
BR 1625	16	¾ x 1 7/16	1.75	**1.04**
BR 2025	20	¾ x 1 7/16	1.85	**1.11**
BR 3025	30	¾ x 1 11/16	2.00	**1.18**
BR 4025	40	¾ x 2	2.15	**1.27**
BR 5025	50	⅞ x 1 11/16	2.35	**1.39**
BR 6025	60	1 x 1 11/16	2.45	**1.46**
BR 20025	200	1⅜ x 3⅛	4.80	**2.86**
		350 V. D.C.		
BR 435	4	⅝ x 1 1/16	1.40	**.84**
BR 835	8	⅝ x 1 7/16	1.60	**.95**
BR 1235	12	¾ x 1 7/16	1.75	**1.05**
BR 1635	16	¾ x 1 7/16	1.90	**1.14**
BR 2035	20	¾ x 1 7/16	1.95	**1.17**
BR 3035	30	¾ x 2	2.25	**1.33**
BR 4035	40	⅞ x 2	2.35	**1.40**
BR 5035	50	1 x 2	2.25	**1.51**
BR 6035	60	1 x 2	2.65	**1.58**
BR 8035	80	1 x 3	2.75	**1.63**
BR 10035	100	1 x 3	3.60	**2.14**
		450 V. D.C.		
BR 145	1	⅝ x 1 1/16	1.50	**.88**
BR 245	2	⅝ x 1 1/16	1.50	**.89**
BR 445	4	⅝ x 1 1/16	1.55	**.93**
BR 845	8	¾ x 1 7/16	1.75	**1.03**
BR 1045	10	¾ x 1 7/16	1.75	**1.03**
BR 1245	12	¾ x 1 7/16	1.85	**1.11**
BR 1645	16	¾ x 1 11/16	1.95	**1.17**
BR 2045	20	⅞ x 1 11/16	2.10	**1.26**
BR 3045	30	1 x 2	2.35	**1.39**
BR 4045	40	1 x 2 3/16	2.40	**1.44**
BR 5045	50	1 x 2 11/16	2.85	**1.69**
BR 6045	60	1 x 3	2.85	**1.69**
BR 8045	80	1 x 3 9/16	4.00	**2.40**
BR 10045	100	1 x 3 13/16	4.65	**2.77**
		500 V. D.C.		
BR 450	4	⅝ x 1 7/16	1.60	**.96**
BR 850	8	¾ x 1 7/16	1.75	**1.05**
BR 1250	12	¾ x 1 11/16	1.90	**1.14**
BR 1650	16	⅞ x 1 11/16	2.05	**1.21**
BR 2050	20	⅞ x 2	2.15	**1.29**
BR 3050	30	1 x 2	2.40	**1.44**

*For Overall BBR Size add 1/16" to Diam. and 5/32" to Length.
*For Overall BR Size add 1/16" to Diam. and 3/16" to Length.

LOW CAPACITY BRHV HIGH VOLTAGE

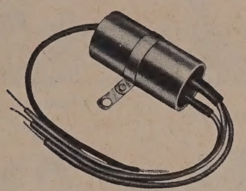
BRHV Cat. No.	Cap. Mfd.	OVERALL Size—Inches Diam. x Length	List Price	Net Price
		600 D.C. W. Volts		
BRHV 604	4	13/16 x 2 7/16	$3.80	**$2.27**
BRHV 608	8	13/16 x 3 3/16	4.45	**2.67**
BRHV 610	10	15/16 x 3 3/16	4.60	**2.74**
BRHV 612	12	1 1/16 x 3 3/16	4.85	**2.89**
BRHV 616	16	1 1/16 x 3 3/16	5.25	**3.14**
BRHV 620	20	1 1/16 x 3 11/16	5.35	**3.21**
		700 D.C. W. Volts		
BRHV 708	8	15/16 x 3 3/16	4.55	**2.41**
BRHV 710	10	1 1/16 x 3 3/16	4.75	**2.84**
BRHV 712	12	1 1/16 x 3 11/16	4.95	**2.97**
BRHV 716	16	1 1/16 x 4 5/16	5.35	**3.19**

For High Capacity-Low Voltage units see Page 4.

Lead Lengths: 3⅜" + ⅛" — #18 AWG

CORNELL-DUBILIER

MULTI-SECTION TUBULAR ELECTROLYTICS



BBRT

A series of compact, tubular METAL-CASED, CARDBOARD SLEEVED electrolytics—specially sealed against heat and humidity.

Featuring—

- Direct-to-terminal internal lead construction reduces possibility of shorts. (Pure aluminum wires crimped securely together with outer leads within aluminum stud terminals.)
- New high-insulation vinylite covered leads — generous 7 inches long.
- Sections sealed in aluminum tube for protection against moisture getting in, or electrolyte drying out.
- Wax impregnated cardboard outer insulation sleeve.
- Rubber diaphragm-type vent insures ideal vent action under all conditions.
- **IDEAL FOR OPERATION AT TEMPERATURES UP TO 85° C.**

BBRD — Dual Common Negative

BBRD Cat. No.	Cap. Mfd.	D.C. W. Volts	Can† Size—Inches Dia. x Lgth.	List Price	Net Price
BBRD 2202	20-20	25	¾ x 1 1/16	$2.10	$1.26
BBRD 115	10-10	50	¾ x 1 1/16	2.10	1.26
BBRD 2115	20-10	150	¾ x 1 7/16	2.25	1.34
BBRD 2215	20-20	150	¾ x 1 11/16	2.30	1.38
BBRD 3215	30-20	150	⅞ x 1 11/16	2.40	1.43
BBRD 3315	30-30	150	⅞ x 1 11/16	2.45	1.47
BBRD 4215	40-20	150	⅞ x 1 11/16	2.45	1.46
BBRD 4315	40-30	150	⅞ x 2	2.50	1.50
BBRD 4415	40-40	150	⅞ x 2	2.60	1.53
BBRD 5315	50-30	150	⅞ x 2	2.60	1.54
BBRD 5515	50-50	150	1 x 2	2.70	1.62
BBRD 8415	80-40	150	1 x 2 3/16	2.85	1.70
*BBRD 0183.7	100-50	150	1 x 3	3.10	1.85
*BBRD 101015	100-100	150	1 x 3	3.40	2.03
*BBRD 0196	200-5	200	1 x 4 1/16	4.70	2.82
BBRD 8D25	8-8	250	¾ x 1 7/16	2.25	1.33
BBRD 16825	16-8	250	¾ x 2	2.35	1.39
BBRD 16D25	16-16	250	⅞ x 2	2.45	1.47
BBRD 2225	20-20	250	1 x 1 11/16	2.60	1.55
BBRD 3325	30-30	250	1 x 2 3/16	2.90	1.73
*BBRD 7V225	75-20	250	1 x 3	3.95	2.34
*BBRD 0242	80-10	250	1 x 3	3.90	2.34
*BBRD 0286	150-100	300	1⅜ x 4 3/16	8.40	5.04
*BBRD 0334	140-5	350	1⅛ x 4 1/16	6.80	4.08
BBRD 8D45	8-8	450	⅞ x 1 11/16	2.55	1.53
BBRD 1145	10-10	450	⅞ x 2	2.55	1.53
BBRD 16845	16-8	450	1 x 2 3/16	2.90	1.73
BBRD 16D45	16-16	450	1 x 2½	3.20	1.90
*BBRD 2245	20-20	450	1 x 3	3.50	2.10
*BBRD 3345	30-30	450	1⅛ x 3 9/16	4.25	2.54
*BBRD 4445	40-40	450	1 x 4 1/16	4.90	2.92
*BBRD 0576	60, 125	200, 50	1 x 3	3.75	2.23
BBRD 0646	20, 100	450, 25	1 x 2½	3.70	2.20
*BBRD 0652	40, 50	450, 50	1 x 3 9/16	3.70	2.21
*BBRD 0722	80, 100	450, 50	1⅜ x 3 9/16	5.75	3.45
*BBRD 0707	30, 50	450, 200	1⅛ x 2½	3.70	2.21

BBRT — Triple-Common Negative

BBRT Cat. No.	Cap. Mfd.	D.C. W. Volts	Can† Size—Inches Dia. x Lgth.	List Price	Net Price
BBRT 22215	20-20-20	150	⅞ x 1 11/16	$3.05	$1.83
BBRT 32V215	30-25-20	150	⅞ x 2	3.20	1.90
BBRT 33315	30-30-30	150	1 x 2	3.35	2.01
BBRT 42215	40-20-20	150	1 x 1 11/16	3.25	1.92
BBRT 43215	40-30-20	150	1 x 2	3.30	1.96
BBRT 44215	40-40-20	150	1 x 2	3.35	2.00
BBRT 44415	40-40-40	150	1 x 2 3/16	3.50	2.08
BBRT 53215	50-30-20	150	1 x 2	3.35	1.99
*BBRT 84215	80-40-20	150	1 x 3	3.65	2.15
*BBRT 0126.5	150-150-150	150	1⅜ x 4 3/16	6.40	3.83
BBRT 0129	250-200-10	150	1⅜ x 4 3/16	7.75	4.63
*BBRT 7V4125	75-40-10	250	1⅛ x 3	4.90	2.94
*BBRT 0185	40-40-40	300	1⅛ x 3	5.05	3.01
*BBRT 0196	120-40-10	300	1⅜ x 3 1/16	7.05	4.22
*BBRT 0235	60-60-5	350	1⅜ x 3 1/16	6.95	4.15
*BBRT 11145	10-10-10	450	1 x 2½	3.65	2.19
*BBRT 16T45	16-16-16	450	1⅛ x 3	4.40	2.62
BBRT 4415X25	40-40, 250	150, 10	1 x 2 3/16	3.65	2.18
BBRT 5315X20	50-30, 200	150, 10	1 x 2 3/16	3.65	2.18
BBRT 5315C	50-30, 20	150, 25	1 x 1 11/16	3.25	1.24
BBRT 5515C	50-50, 20	150, 25	1 x 2 3/16	3.40	2.02
BBRT 8415C	80-40, 20	150, 25	1 x 2½	3.50	2.08
BBRT 3215C10	30-20, 100	150, 25	1 x 2	3.25	1.95
BBRT 2215C	20-20, 20	150, 25	⅞ x 1 11/16	3.00	1.78
BBRT 3315C	30-30, 20	150, 25	⅞ x 2	3.10	1.86
BBRT 4215C	40-20, 20	150, 25	1 x 1 11/16	3.15	1.87
BBRT 4315C	40-30, 20	150, 25	1 x 1 11/16	3.20	1.91
BBRT 4415C	40-40, 20	150, 25	1 x 1 11/16	3.25	1.94
BBRT 5315C10	50-30, 100	150, 25	1 x 2 3/16	3.50	2.08
*BBRT 5315C25	50-30, 250	150, 25	1 x 3	4.40	2.63
BBRT 8215C10	80-20, 100	150, 25	1 x 2½	3.55	2.13
BBRT 2225C	20-20, 20	250, 25	1 x 2	3.25	1.94
BBRT 4225C	40-20, 20	250, 25	1 x 2 3/16	3.55	2.12
BBRT 4425C	40-40, 20	250, 25	1 x 2 11/16	3.85	2.30
*BBRT 0733	80-10, 100	300, 50	1⅜ x 3 1/16	5.30	3.17
*BBRT 0878	140-5, 200	350, 200	1½ x 4 3/16	11.00	6.58
*BBRT 2245C	20-20, 20	450, 25	1 x 3	4.15	2.48
BBRT 0925	10-10, 100	450, 50	1 x 3	4.55	2.70
*BBRT 1238	5, 80-40	450, 400	1⅜ x 3 9/16	6.75	4.04
*BBRT 1411	30, 50, 100	450, 150, 25	1⅛ x 3	4.40	2.62

BBRQ — Quadruple-Common Negative

BBRQ Cat. No.	Cap. Mfd.	D.C. W. Volts	Can† Size—Inches Dia. x Lgth.	List Price	Net Price
*BBRQ 111145	10-10-10-10	450	1 x 3	$4.65	$2.78
*BBRQ 222245	20-20-20-20	450	1⅛ x 4 1/16	6.25	3.75
*BBRQ 0125	20-20-20-10	450	1⅜ x 3 1/16	6.25	3.75
*BBRQ 0170.5	40-20-20-10	450	1⅜ x 3 9/16	6.35	3.79
*BBRQ 0174	40-40-20-20	450	1⅜ x 4 3/16	7.40	4.08
BBRQ 33215C	30-30-20, 20	150, 25	1 x 2	4.00	2.38
BBRQ 42215C	40-20-20, 20	150, 25	1 x 2	4.15	2.48
BBRQ 44315C	40-40-30, 20	150, 25	1 x 2½	4.15	2.48
BBRQ 53215C	50-30-20, 20	150, 25	1 x 2½	4.35	2.60
*BBRQ 55515C	50-50-50, 20	150, 25	1 x 3	4.35	2.60
*BBRQ 0789.4	140-5, 200-30	300, 150	1½ x 4 3/16	7.25	4.36
*BBRQ 0385	120-40-40, 10	300, 250	1⅜ x 3 9/16	7.90	4.72
*BBRQ 22245C	20-20-20, 20	450, 25	1⅛ x 3 9/16	5.05	3.02
BBRQ 0500	10-10-10, 150	450, 50	1⅛ x 3	5.05	3.02
*BBRQ 0695.3	10, 20-20-10	450, 350	1⅛ x 3	7.55	4.35
*BBRQ 0789.5	80-60, 40, 20	350, 300, 150	1⅜ x 3 9/16	6.85	4.10
*BBRQ 0925	140, 5, 200-30	350, 300, 200	1½ x 4 3/16	8.30	4.99
*BBRQ 0805	80-10, 40, 100	400, 300, 50	1⅜ x 3 9/16	6.65	3.98
*BBRQ 0926.5	10, 80, 40-40	450, 300, 250	1⅜ x 3 9/16	6.55	3.92
*BBRQ 0954	10, 80, 40, 100	450, 300, 250, 50	1⅜ x 3 9/16	6.10	3.64
BBRQ 0954.5	20, 120, 40, 100	450, 300, 250, 50	1⅜ x 4 3/16	6.70	4.02

EDL — Dual SEPARATE Section

Type EDL Capacitors are dual units in CARDBOARD TUBE containers with wax-filled ends. Capacities, voltages and polarity of the leads are clearly defined by color coding stamped on the tube casing.

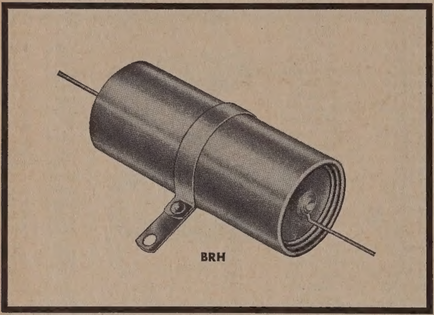
TEMPERATURE RANGE: to +65°C.

EDL Cat. No.	Cap. Mfd.	D.C. W. Volts	OVERALL Size—Inches Dia. x Lgth.	List Price	Net Price
*EDL 2215SS	20-20	150	15/16 x 2⅝	$2.00	$1.19
*EDL 3315SS	30-30	150	1 x 2⅝	2.25	1.33
*EDL 4215SS	40-20	150	1 x 2⅝	2.15	1.29
*EDL 4415SS	40-40	150	1 1/16 x 2⅞	2.35	1.40
*EDL 5315SS	50-30	150	1 1/16 x 2⅞	2.35	1.40
*EDL 5515SS	50-50	150	1⅛ x 3⅛	2.50	1.48
*EDL 8415SS	80-40	150	1 3/16 x 3⅜	2.60	1.56

†For OVERALL size add 1/16″ to Diam. and 3/16″ to Length.
All above Packed—5 Units per Carton, except those marked (*) which are individual Carton Packed.

CDE CORNELL-DUBILIER

HIGH-CAPACITY LOW-VOLTAGE* ELECTROLYTICS



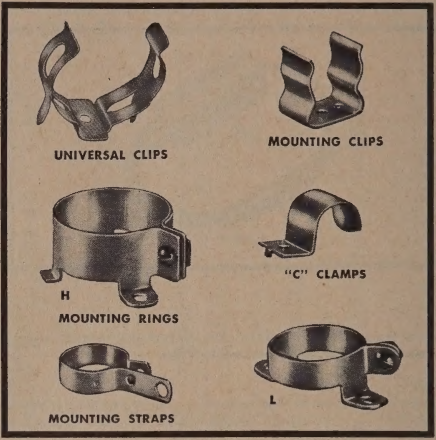
BRH compact tubular electrolytic capacitors are widely employed in portable radio power rectifying circuits, electric fence devices, telephone and D.C. timing circuits. Hermetically sealed in pure aluminum cans with an external cardboard insulating sleeve, these units are provided with metal mounting strap and bare wire leads for convenient wiring into any circuit assembly.

TEMPERATURE RANGE to +85°C.

BRH Cat. No.	Cap. Mfd.	Can† Size—Inches Diam. x Length	List Price	Net Price
		6 D.C. W. Volts		
BRH 601	100	⅝ x 1 1/16	$1.55	**$ .92**
BRH 6025	250	⅝ x 1 7/16	1.95	**1.15**
BRH 605	500	⅝ x 1 11/16	2.20	**1.31**
BRH 610	1000	¾ x 2	2.65	**1.59**
BRH 620	2000	1 x 2 3/16	3.20	**1.91**
		12 D.C. W. Volts		
BRH 121	100	⅝ x 1 1/16	1.60	**.94**
BRH 1225	250	⅝ x 1 11/16	2.05	**1.23**
BRH 125	500	¾ x 2	2.40	**1.42**
BRH 1210	1000	⅞ x 2	3.15	**1.87**
BRH 1220	2000	1 x 3	3.70	**2.21**
		15 D.C. W. Volts		
BRH 151	100	⅝ x 1 1/16	1.60	**.95**
BRH 1525	250	⅝ x 1 11/16	2.20	**1.32**
BRH 155	500	¾ x 2	2.45	**1.47**
BRH 1510	1000	⅞ x 2	3.20	**1.90**
BRH 1520	2000	1 x 3	3.05	**1.82**
		25 D.C. W. Volts		
BRH 251	100	⅝ x 1 7/16	1.75	**1.04**
BRH 2525	250	¾ x 1 11/16	2.30	**1.36**
BRH 255	500	⅞ x 2	3.20	**1.90**
BRH 2510	1000	1 x 3	3.25	**1.93**
		50 D.C. W. Volts		
BRH 501	100	⅝ x 1 11/16	1.75	**1.04**
BRH 5015	150	¾ x 1 11/16	1.90	**1.14**
BRH 5025	250	⅞ x 1 11/16	2.40	**1.43**
BRH 5050	500	1 x 3	3.20	**1.91**

†For Overall Size add 1/16″ to Diam. and 3/16″ to Length.
*For Low Capacity—High Voltage see page 3.
Lead Lengths: 3⅜″ ± ⅛″ — #18 AWG

MOUNTING HARDWARE



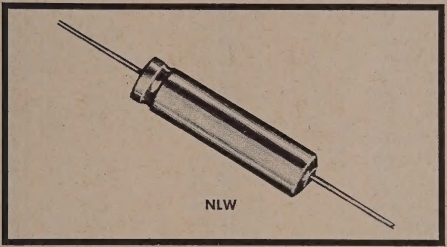
Part No.	Description	List Price	Suggested Resale
12125	Mounting Ring for 1⅜″ dia. Cans.....L...	$.20	**$.12**
13590	Mounting Ring for 2½″ dia. Cans.....L...	.50	**.30**
13591	Mounting Ring for 3″ dia. Cans.......L...	.50	**.30**
14464	Mounting Ring for 2″ dia. Cans.......L...	.50	**.30**
14582	Mounting Ring for 1″ dia. Cans.......L...	.20	**.12**
15266	Mounting Ring for 3½″ dia. Cans.....L...	.50	**.30**
15591	Mounting Ring for 1½″ dia. Cans.....L...	.30	**.18**
16279	Tubular Mounting Straps, 7/16″ ID..........	.15	**.09**
16280	Tubular Mounting Straps, ½″ ID..........	.15	**.09**
16285	Tubular Mounting Straps, 11/16″ ID..........	.15	**.09**
16693	Mounting Ring for 1¾″ dia. Cans.....L...	.40	**.24**
17203	Tubular Mounting Straps, 9/16″ ID..........	.15	**.09**
17516	Tubular Mounting Straps, ⅝″ ID...........	.15	**.09**
17517	Tubular Mounting Straps, ¾″ ID...........	.15	**.09**
17842A	Mounting Ring for 1″ dia. Cans.......H...	.20	**.12**
17843	Mounting Ring for 1⅜″ dia. Cans.....H...	.20	**.12**
17844	Mounting Ring for 1½″ dia. Cans.....H...	.30	**.18**
17920	"C" Clamp for ⅝″-¾″ Cans or Tubulars...	.30	**.18**
17921	"C" Clamp for ⅞″-1″ Cans or Tubulars....	.30	**.18**
18573	Mounting Ring for 1¼″ dia. Cans.....H...	.20	**.12**
19213	Mounting Ring for 1⅛″ dia. Cans.....H...	.20	**.12**
19883	Metal Washer for 1″....................	.15	**.09**
19884	Bakelite Washer for 1″..................	.15	**.09**
19887	Metal Washer for 1⅜″.................	.15	**.09**
19888	Bakelite Washer for 1⅜″...............	.15	**.09**
19890	Metal Washer for ¾″....................	.15	**.09**
19891	Bakelite Washer for ¾″..................	.15	**.09**
21368-1	Mounting Clip for ¾″....................	.30	**.18**
21368-2	Mounting Clip for 1″....................	.30	**.18**
21368-3	Mounting Clip for 1⅜″..................	.30	**.18**
22272	Wrench for Mounting Units...............	2.48	**1.49**
28521-1	Insulating Tube for ¾″ x 2″.............	.14	**.08**
28521-4	Insulating Tube for 1″ x 2″.............	.14	**.08**
28521-5	Insulating Tube for 1″ x 2½″...........	.14	**.08**
28521-6	Insulating Tube for 1″ x 3″.............	.14	**.08**
28521-7	Insulating Tube for 1⅜″ x 2″............	.14	**.08**
28521-8	Insulating Tube for 1⅜″ x 2½″..........	.14	**.08**
28521-9	Insulating Tube for 1⅜″ x 3″............	.14	**.08**
28521-12	Insulating Tube for 1⅜″ x 3⅝″..........	.14	**.08**
28521-15	Insulating Tube for 1⅜″ x 4⅛″..........	.14	**.08**
28521-19	Insulating Tube for 1″ x 3⅝″...........	.14	**.08**
30010-1	Universal Clips, ⅜″- 7/16″ Cans or Tubulars..	.30	**.18**
30010-2	Universal Clips, ½″- 9/16″ Cans or Tubulars..	.30	**.18**
30010-3	Universal Clips, ⅝″-11/16″ Cans or Tubulars..	.30	**.18**
30010-4	Universal Clips, ¾″-13/16″ Cans or Tubulars..	.30	**.18**
30010-5	Universal Clips, ⅞″-15/16″ Cans or Tubulars..	.30	**.18**
30010-6	Universal Clips, 1″-1 1/16″ Cans or Tubulars...	.30	**.18**
30010-7	Universal Clips, 1⅜″-1 7/16″ Cans or Tubulars.	.30	**.18**
30035	Bakelite Washer for 1″ in 1⅜″ Hole Mounting	.15	**.09**
30036	Metal Washer for 1″ in 1⅜″ Hole Mounting.	.15	**.09**

For Twist-Prong Adapters See Page 14.

CORNELL-DUBILIER

MINIATURIZED ELECTROLYTICS FOR TRANSISTORIZED AND PRINTED CIRCUITRY

"ELECTOMITE"® METAL-CASED



Type **NLW** is an aluminum foil capacitor, hermetically sealed into an ultra-small tubular aluminum can which is tightly fitted with an outer transparent plastic sleeve to insure freedom from "shorts" with adjacent components commonly found in compact assemblies. All terminal connections are securely *welded*. Despite their extremely small size, "Electomites" exhibit excellent electrical characteristics as well as rugged physical construction. Ideal for by-pass, filter and coupling applications in low-voltage, compact, miniaturized equipment.

TEMPERATURE RANGE: —20°C. to +85°C.
TOLERANCE: —10%, +150%

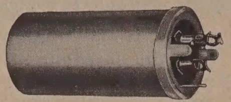
NLW Cat. No.	Cap. Mfd.	WVDC	Can Size—Inches Diam. x Length	List Price	Net Price
NLW 25-3	25	3	¼ x ½	$1.40	**$.84**
NLW 35-3	35	3	¼ x ⅝	1.40	**.84**
NLW 40-3	40	3	¼ x ⅝	1.40	**.84**
NLW 50-3	50	3	¼ x ¾	1.40	**.84**
NLW 75-3	75	3	5/16 x ¾	1.50	**.88**
NLW 100-3	100	3	⅜ x ⅝	1.65	**.98**
NLW 125-3	125	3	⅜ x ⅝	1.65	**.98**
NLW 150-3	150	3	⅜ x ¾	1.65	**.98**
NLW 175-3	175	3	⅜ x ¾	1.65	**.98**
NLW 200-3	200	3	⅜ x ⅞	1.65	**.98**
NLW 250-3	250	3	⅜ x 1	1.65	**.98**
NLW 300-3	300	3	⅜ x 1	1.80	**1.06**
NLW 350-3	350	3	⅜ x 1	1.85	**1.10**
NLW 400-3	400	3	⅜ x 1¼	1.90	**1.14**
NLW 450-3	450	3	⅜ x 1½	1.95	**1.17**
NLW 10-6	10	6	3/16 x ½	1.35	**.80**
NLW 15-6	20	6	¼ x ½	1.40	**.84**
NLW 30-6	30	6	¼ x ⅝	1.40	**.84**
NLW 40-6	40	6	5/16 x ⅝	1.40	**.84**
NLW 125-6	125	6	⅜ x ¾	1.65	**.98**
NLW 150-6	150	6	⅜ x ⅞	1.65	**.98**
NLW 175-6	175	6	⅜ x 1	1.65	**.98**
NLW 250-6	250	6	⅜ x 1¼	1.80	**1.06**
NLW 300-6	300	6	⅜ x 1½	1.90	**1.14**
NLW 8-10	8	10	3/16 x ½	1.35	**.80**
NLW 25-10	25	10	¼ x ⅝	1.50	**.88**
NLW 40-10	40	10	5/16 x ¾	1.50	**.88**
NLW 50-10	50	10	5/16 x ¾	1.65	**.98**
NLW 75-10	75	10	⅜ x ⅝	1.65	**.98**
NLW 125-10	125	10	⅜ x ⅞	1.70	**1.02**
NLW 150-10	150	10	⅜ x 1	1.75	**1.04**
NLW 225-10	225	10	⅜ x 1¼	1.90	**1.14**
NLW 15-12	15	12	¼ x ½	1.40	**.84**
NLW 35-12	35	12	5/16 x ⅝	1.50	**.88**
NLW 100-12	100	12	⅜ x ¾	1.65	**.98**
NLW 200-12	200	12	⅜ x 1¼	1.85	**1.10**
NLW 250-12	250	12	⅜ x 1½	1.95	**1.17**

NLW (cont'd)

NLW Cat. No.	Cap. Mfd.	WVDC	Can Size—Inches Diam. x Length	List Price	Net Price
NLW 4-15	4	15	3/16 x ½	$1.35	**$.80**
NLW 5-15	5	15	3/16 x ½	1.35	**.80**
NLW 6-15	6	15	3/16 x ½	1.35	**.80**
NLW 10-15	10	15	¼ x ½	1.40	**.84**
NLW 15-15	15	15	¼ x ⅝	1.40	**.84**
NLW 20-15	20	15	¼ x ⅝	1.40	**.84**
NLW 25-15	25	15	5/16 x ⅝	1.50	**.88**
NLW 30-15	30	15	5/16 x ⅝	1.50	**.88**
NLW 35-15	35	15	⅜ x ⅝	1.50	**.88**
NLW 40-15	40	15	⅜ x ⅝	1.50	**.88**
NLW 50-15	50	15	⅜ x ⅝	1.65	**.98**
NLW 75-15	75	15	⅜ x ¾	1.65	**.98**
NLW 100-15	100	15	⅜ x ⅞	1.65	**.98**
NLW 125-15	125	15	⅜ x 1	1.70	**1.02**
NLW 150-15	150	15	⅜ x 1¼	1.80	**1.06**
NLW 175-15	175	15	⅜ x 1¼	1.85	**1.10**
NLW 200-15	200	15	⅜ x 1½	1.95	**1.17**
NLW 3-25	3	25	3/16 x ½	1.35	**.80**
NLW 6-25	6	25	¼ x ½	1.40	**.84**
NLW 8-25	8	25	¼ x ½	1.40	**.84**
NLW 10-25	10	25	¼ x ⅝	1.40	**.84**
NLW 15-25	15	25	5/16 x ⅝	1.50	**.88**
NLW 25-25	25	25	⅜ x ⅝	1.65	**.98**
NLW 30-25	30	25	⅜ x ⅝	1.65	**.98**
NLW 35-25	35	25	⅜ x ¾	1.65	**.98**
NLW 40-25	40	25	⅜ x ¾	1.65	**.98**
NLW 50-25	50	25	⅜ x ⅞	1.65	**.98**
NLW 75-25	75	25	⅜ x 1¼	1.75	**1.04**
NLW 100-25	100	25	⅜ x 1½	1.80	**1.08**
NLW 1-50	1	50	3/16 x ½	1.60	**.96**
NLW 2-50	2	50	3/16 x ½	1.60	**.96**
NLW 3-50	3	50	¼ x ½	1.60	**.96**
NLW 4-50	4	50	¼ x ½	1.60	**.96**
NLW 5-50	5	50	¼ x ½	1.60	**.96**
NLW 6-50	6	50	¼ x ⅝	1.65	**.96**
NLW 8-50	8	50	5/16 x ½	1.65	**.97**
NLW 10-50	10	50	5/16 x ⅝	1.65	**.97**
NLW 15-50	15	50	⅜ x ⅝	1.65	**.98**
NLW 20-50	20	50	⅜ x ⅝	1.65	**.98**
NLW 25-50	25	50	⅜ x ¾	1.65	**.98**
NLW 30-50	30	50	⅜ x ¾	1.65	**.98**
NLW 35-50	35	50	⅜ x ⅞	1.70	**1.02**
NLW 40-50	40	50	⅜ x 1	1.75	**1.04**
NLW 50-50	50	50	⅜ x 1¼	1.75	**1.05**
NLW 75-50	75	50	⅜ x 1½	1.80	**1.06**
NLW 2-100	2	100	¼ x ⅝	1.60	**.96**
NLW 3-100	3	100	5/16 x ⅝	1.60	**.96**
NLW 6-100	6	100	⅜ x ⅝	1.60	**.96**
NLW 8-100	8	100	⅜ x ¾	1.65	**.97**
NLW 10-100	10	100	⅜ x ⅞	1.65	**.97**
NLW 20-100	20	100	⅜ x 1½	1.70	**1.01**
NLW 1-150	1	150	¼ x ½	1.70	**1.01**
NLW 2-150	2	150	5/16 x ⅝	1.70	**1.01**
NLW 3-150	3	150	⅜ x ⅝	1.70	**1.01**
NLW 4-150	4	150	⅜ x ⅝	1.70	**1.01**
NLW 5-150	5	150	⅜ x ⅝	1.70	**1.01**
NLW 6-150	6	150	⅜ x ¾	1.70	**1.01**
NLW 8-150	8	150	⅜ x ⅞	1.70	**1.01**
NLW 10-150	10	150	⅜ x 1	1.70	**1.02**
NLW 12-150	12	150	⅜ x 1¼	1.75	**1.04**
NLW 15-150	15	150	⅜ x 1¼	1.80	**1.06**
NLW 18-150	18	150	⅜ x 1½	1.80	**1.07**

CDE CORNELL-DUBILIER

TWIST-PRONG BASE ELECTROLYTICS



Small round-can TWIST-PRONG electrolytic units. Each is furnished with a bakelite and a metal mounting washer.

X types are especially designed for SELENIUM RECTIFIER circuit applications. ONLY THIS TYPE SHOLD BE USED FOR THIS SERVICE.

TEMP. RANGE: to 475 V.D.C.W. +85°C.
over 475 V.D.C.W. +65°C.

★ PREFERRED TYPE

1 SECTION — 1 VOLTAGE

Single Section Cap./Volts	Rotational Stock No.	Size—Ins. Dia. x Lgth.	List Price	Net Price
10 Ohms 30 CPS.	**A0010**	¾ x 2	$2.50	**$1.50**
.5 Ohms 15,750 CPS.	**A0020**	1 x 2	2.75	**1.65**
1 Ohms 60 CPS.	**A0030**	1⅜ x 3	3.50	**2.10**
★ 2000/**6**	**A0040**	1⅜ x 2	3.80	**2.26**
3000/**10**	**A0050**	1⅜ x 2½	3.65	**2.19**
★ 225/**15**	**A0053**	¾ x 2	1.70	**1.01**
★ 1000/**15**	**A0060**	1 x 2½	2.75	**1.63**
★ 2000/**15**	**A0070**	1⅜ x 2½	4.20	**2.50**
★ 3000/**15**	**A0080**	1⅜ x 3	5.25	**3.15**
★ 40/**25**	**A0090**	¾ x 2	1.55	**.91**
100/**25**	**A0100**	¾ x 2	2.00	**1.20**
500/**25**	**A0110**	1 x 2½	3.20	**1.92**
★ 500/**25**	**A0120**	1 x 2	2.55	**1.51**
★ 1000/**25**	**A0130**	1⅜ x 2	3.75	**2.24**
★ 100/**50**	**A0140**	¾ x 2	1.70	**1.00**
★ 150/**50**	**A0150**	1 x 2	2.00	**1.19**
★ 500/**50**	**A0160**	1⅜ x 2	2.75	**1.63**
★ 1000/**50**	**A0170**	1⅜ x 3⅝	4.30	**2.58**
★ 1500/**50**	**A0174**	1⅜ x 4⅛	5.45	**3.25**
★ 30/**150**	**A0180**	¾ x 2	1.60	**.95**
40/**150**	**XA0191**	¾ x 2	2.00	**1.20**
★ 50/**150**	**A0200**	1 x 2	1.90	**1.14**
60/**150**	**A0220**	1 x 2	2.20	**1.32**
★ 80/**150**	**XA0231**	1 x 2	2.25	**1.35**
★ 100/**150**	**XA0241**	1 x 2½	2.35	**1.41**
★ 120/**150**	**XA0248**	1 x 2½	2.45	**1.46**
★ 120/**150**	**A0250**	1⅜ x 2	2.65	**1.57**
★ 150/**150**	**XA0261**	1 x 3	2.70	**1.60**
★ 200/**150**	**XA0262**	1⅜ x 2½	3.00	**1.80**
★ 200/**150**	**XA0262.1**	1 x 3⅝	3.10	**1.86**
★ 300/**150**	**XA0263**	1⅜ x 3	2.20	**1.32**
80/**200**	**XA0265**	1⅜ x 2	2.45	**1.47**
★ 120/**200**	**XA0265.3**	1⅜ x 2	3.10	**1.87**
★ 20/**250**	**A0270**	¾ x 2	1.65	**.98**
30/**250**	**A0280**	1 x 2	2.15	**1.29**
★ 40/**250**	**XA0291**	1 x 2	2.30	**1.37**
★ 100/**250**	**XA0312**	1 x 3	2.85	**1.70**
★ 150/**250**	**XA0315**	1⅜ x 2½	3.70	**2.20**
★ 200/**250**	**XA0318**	1⅜ x 3	2.85	**1.71**
50/**300**	**A0320**	1 x 2½	2.55	**1.53**
60/**300**	**XA0324**	1 x 2½	2.65	**1.59**
★ 80/**300**	**XA0331**	1 x 3	2.85	**1.71**
★ 100/**300**	**A0340**	1⅜ x 3	3.25	**1.95**
★ 100/**300**	**A0350**	1 x 3⅝	3.25	**1.95**
★ 150/**300**	**XA0355**	1⅜ x 3	4.05	**2.41**
15/**350**	**A0360**	1 x 2	2.05	**1.23**
★ 30/**350**	**A0370**	1 x 2	2.10	**1.25**
★ 40/**350**	**A0380**	1 x 2½	2.25	**1.34**
★ 50/**350**	**A0390**	1 x 3	2.40	**1.43**
★ 80/**350**	**XA0401**	1⅜ x 2½	3.50	**2.09**
★ 125/**350**	**XA0411**	1⅜ x 3	3.50	**2.09**
★ 150/**350**	**XA0415**	1⅜ x 3⅝	3.60	**2.14**
★ 10/**450**	**A0430**	1 x 2	2.20	**1.30**
10/**450**	**A0440**	¾ x 2	$1.95	**$1.17**
15/**450**	**A0450**	1 x 2	2.15	**1.29**
★ 20/**450**	**A0460**	1 x 2	2.10	**1.25**
★ 30/**450**	**A0470**	1 x 2½	2.30	**1.38**
★ 40/**450**	**A0480**	1 x 3	2.55	**1.52**
★ 50/**450**	**A0490**	1 x 3⅝	2.80	**1.68**
★ 60/**450**	**A0500**	1⅜ x 2½	3.35	**2.01**
★ 80/**450**	**A0510**	1⅜ x 3	3.85	**2.29**
★ 100/**450**	**A0512**	1⅜ x 3	5.25	**2.54**
★ 125/**450**	**A0514**	1⅜ x 4⅛	4.90	**2.93**
★ 40/**475**	**A0516**	1⅜ x 2	3.05	**1.83**
★ 10/**500**	**A0520**	1 x 2	2.25	**1.35**
★ 20/**500**	**A0530**	1 x 2½	2.25	**1.35**
25/**500**	**A0532**	1 x 2½	2.45	**1.47**
★ 30/**500**	**XA0541**	1 x 3	2.85	**1.70**
★ 40/**500**	**A0550**	1 x 3⅝	2.90	**1.72**
★ 80/**500**	**A0560**	1⅜ x 3⅝	4.55	**2.72**
★ 90/**500**	**A0570**	1⅜ x 3⅝	4.85	**2.89**

2 SECTIONS — 1 VOLTAGE

.5 Ohms 15,750 CPS. 2.5 Ohms 60 CPS.	**B0010**	1⅜ x 2	4.90	**2.94**
1000-500/**6 VNP**	**B0020**	1⅜ x 2	4.80	**2.88**
★ 1000-1000/**15**	**B0030**	1 x 3⅝	4.05	**2.41**
★ 1000-1000/**15**	**B0040**	1⅜ x 2½	4.45	**2.66**
★ 500-100/**20**	**B0045**	1 x 2	2.90	**1.74**
20-20/**25**	**B0050**	1 x 2	1.80	**1.08**
40-40/**25**	**B0060**	1 x 2	2.00	**1.20**
150-50/**25**	**B0070**	1 x 2	2.40	**1.44**
★ 50-50/**50**	**B0080**	1 x 2	2.15	**1.27**
★ 100-100/**50**	**B0085**	1 x 2	2.35	**1.39**
★ 20-20/**150**	**XB0091**	1 x 2	2.40	**1.42**
★ 30-20/**150**	**B0100**	1 x 2	2.20	**1.32**
30-30/**150**	**B0110**	1 x 2	1.85	**1.11**
★ 40-20/**150**	**B0120**	1 x 2	2.20	**1.31**
★ 40-30/**150**	**B0130**	1 x 2	2.25	**1.32**
★ 40-40/**150**	**XB0141**	1 x 2	2.55	**1.53**
★ 50-30/**150**	**B0150**	1 x 2	2.35	**1.40**
★ 50-50/**150**	**XB0161**	1 x 2½	2.70	**1.60**
★ 60-60/**150**	**XB0165**	1 x 3	2.80	**1.66**
★ 75-75/**150**	**B0170**	1 x 3	1.95	**1.17**
★ 80-40/**150**	**XB0181**	1 x 2½	2.75	**1.65**
★ 80-80/**150**	**XB0183**	1⅜ x 2	3.35	**2.00**
100-100/**150**	**XB0184**	1⅜ x 2½	4.05	**2.43**
★ 125-100/**150**	**XB0184.5**	1⅜ x 2½	3.50	**2.08**
150-150/**150**	**XB0185**	1⅜ x 3	4.40	**2.64**
200-5/**150**	**B0186**	1⅜ x 2½	3.40	**2.04**
★ 200-125/**150**	**XB0187**	1⅜ x 3⅝	4.25	**2.53**
★ 200-150/**150**	**XB0188**	1⅜ x 3⅝	4.35	**2.60**
★ 200-200/**150**	**XB0189**	1⅜ x 3⅝	4.60	**2.74**
★ 60-60/**200**	**B0190**	1⅜ x 2	3.10	**1.86**
★ 100-100/**200**	**XB0194**	1⅜ x 3	4.00	**2.39**
★ 200-5/**200**	**XB0196**	1⅜ x 2½	4.05	**2.42**
10-10/**250**	**B0200**	1 x 2	2.15	**1.29**
★ 20-20/**250**	**B0210**	1 x 2	2.25	**1.35**
30-30/**250**	**B0220**	1 x 2½	2.90	**1.74**
40-20/**250**	**B0230**	1 x 2½	2.75	**1.65**
40-40/**250**	**B0240**	1 x 3	3.20	**1.92**
★ 40-40/**250**	**XB0241**	1 x 3	2.90	**1.74**
80-40/**250**	**XB0243**	1⅜ x 2½	3.75	**2.25**
★ 150-150/**250**	**B0250**	1⅜ x 4⅛	5.10	**2.05**
★ 200-200/**250**	**XB0252**	1⅜ x 4⅛	6.20	**3.72**
40-40/**300**	**XB0254**	1 x 3	3.75	**2.25**
50-50/**300**	**B0260**	1⅜ x 2½	4.20	**2.52**
80-40/**300**	**XB0264**	1⅜ x 2½	4.45	**2.67**
★ 80-80/**300**	**B0270**	1⅜ x 3	4.20	**2.51**
★ 120-20/**300**	**B0280**	1⅜ x 3	3.95	**2.37**
120-40/**300**	**B0282**	1⅜ x 3⅝	5.45	**3.27**
★ 200-80/**300**	**B0286**	1⅜ x 3⅝	5.55	**3.33**
★ 15-15/**350**	**B0290**	1 x 2	2.35	**1.38**
20-20/**350**	**B0300**	1 x 2½	2.90	**1.74**
★ 30-30/**350**	**B0310**	1 x 3	2.80	**1.66**

(Use Index Page 1 for Quick, Easy Location of ALL Products)

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

CORNELL-DUBILIER

CDE

TWIST-PRONG BASE ELECTROLYTICS

★ PREFERRED TYPE

2 SECTIONS — 1 VOLTAGE

Single Section Cap./Volts	Rotational Stock No.	Size—Ins. Dia. x Lgth.	List Price	Net Price
★ 50-30/**350**	**BO320**	1⅜ x 2½	$3.50	**$2.08**
★ 80-20/**350**	**BO322**	1 x 3⅝	3.35	**2.00**
★ 80-20/**350**	**BO324**	1⅜ x 2½	3.75	**2.25**
★ 80-40/**350**	**BO326**	1⅜ x 3	4.10	**2.44**
★ 80-80/**350**	**BO330**	1⅜ x 3⅝	4.70	**2.80**
★ 90-40/**350**	**BO331**	1⅜ x 3	4.20	**2.52**
★ 100-100/**350**	**BO332**	1⅜ x 4⅛	5.25	**3.16**
★ 160-10/**350**	**BO334**	1⅜ x 3⅝	4.80	**2.87**
★ 40-120/**400**	**BO336**	1⅜ x 4⅛	5.45	**3.26**
60-60/**400**	**BO340**	1⅜ x 3⅝	5.50	**3.30**
80-10/**400**	**BO350**	1⅜ x 3	4.25	**2.55**
★ 80-60/**400**	**BO354**	1⅜ x 3⅝	5.05	**3.02**
★ 80-80/**400**	**BO356**	1⅜ x 4⅛	5.45	**3.26**
★ 5-5/**450**	**BO362**	1 x 2	2.10	**1.26**
★ 10-10/**450**	**BO370**	1 x 2	2.35	**1.39**
15-10/**450**	**BO374**	1 x 2½	2.55	**1.53**
★ 15-15/**450**	**BO380**	1 x 2½	2.55	**1.53**
★ 20-10/**450**	**BO390**	1 x 2½	2.55	**1.53**
★ 20-20/**450**	**BO400**	1 x 3	2.80	**1.67**
★ 30-10/**450**	**BO410**	1 x 3	2.80	**1.67**
★ 30-30/**450**	**BO430**	1⅜ x 2½	3.65	**2.18**
40-5/**450**	**BO436**	1 x 3	3.20	**1.92**
★ 40-20/**450**	**BO440**	1⅜ x 2½	3.65	**2.18**
★ 40-40/**450**	**BO450**	1⅜ x 3	4.10	**2.45**
★ 50-50/**450**	**XBO455†**	1⅜ x 3	4.80	**2.87**
★ 60-20/**450**	**BO460**	1⅜ x 3	4.10	**2.44**
★ 60-40/**450**	**BO462**	1⅜ x 3⅝	4.55	**2.73**
60-60/**450**	**BO464**	1⅜ x 3⅝	5.65	**3.39**
★ 80-10/**450**	**BO470**	1⅜ x 3	4.30	**2.58**
★ 80-20/**450**	**BO473**	1⅜ x 3⅝	4.55	**2.73**
★ 80-40/**450**	**BO480**	1⅜ x 3⅝	5.00	**2.98**
★ 100-40/**450**	**BO483**	1⅜ x 4⅛	5.45	**3.25**
★ 15-15/**475**	**BO485**	1 x 2½	2.70	**1.60**
★ 30-10/**475**	**BO486**	1⅜ x 2	3.35	**1.99**
★ 40-10/**475**	**BO487**	1⅜ x 2½	3.60	**2.15**
★ 80-50/**475**	**BO489**	1⅜ x 4⅛	5.70	**3.41**
★ 10-10/**500**	**BO490**	1 x 2½	2.95	**1.76**
★ 20-20/**500**	**BO500**	1⅜ x 2½	3.55	**2.11**
25-40/**500**	**BO510**	1⅜ x 3	4.55	**2.73**
★ 30-10/**500**	**BO520**	1⅜ x 2½	3.55	**2.11**
★ 40-40/**500**	**BO530**	1⅜ x 3⅝	4.75	**2.85**
★ 60-40/**500**	**BO540**	1⅜ x 3⅝	5.35	**3.19**

2 SECTIONS — 2 VOLTAGES

Single Section Cap./Volts	Rotational Stock No.	Size—Ins. Dia. x Lgth.	List Price	Net Price
★ 250/**10** 1000/**6**	**BO550**	1⅜ x 2	3.45	**2.05**
40/**150** 20/**50**	**BO560**	1 x 2	2.15	**1.29**
40/**150** 150/**25**	**BO570**	1 x 2	2.55	**1.53**
★ 50/**150** 500/**5**	**BO574**	1 x 2½	2.55	**1.52**
★ 150/**150** 100/**25**	**BO575**	1⅜ x 2½	3.25	**1.93**
60/**200** 125/**50**	**BO576**	1 x 3	3.00	**1.80**
40/**250** 20/**25**	**BO580**	1 x 2	2.50	**1.50**
50/**250** 100/**50**	**BO590**	1⅜ x 2	3.25	**1.95**
★ 100/**250** 150/**50**	**BO600**	1⅜ x 3	3.60	**2.15**
★ 35/**300** 500/**6**	**XBO603**	1 x 2½	3.00	**1.77**
80/**300** 100/**50**	**BO606**	1⅜ x 2½	3.95	**2.37**
★ 150/**300** 100/**150**	**BO608**	1⅜ x 3⅝	4.60	**2.74**
20/**350** 20/**25**	**BO610**	1 x 2	2.40	**1.44**
20/**350** 100/**75**	**BO612**	1 x 2½	2.80	**1.68**
40/**350** 20/**25**	**BO620**	1 x 2½	2.95	**1.77**
★ 35/**400** 100/**50**	**BO623**	1 x 3	2.80	**1.67**
★ 100/**400** 30/**50**	**BO626**	1⅜ x 3	4.35	**2.58**
★ 10/**450** 20/**25**	**BO630**	1 x 2	2.15	**1.27**
20/**450** 20/**25**	**BO640**	1 x 2	2.50	**1.50**
20/**450** 100/**25**	**BO646**	1 x 2½	2.75	**1.65**
40/**450** 20/**25**	**BO650**	1 x 3	3.05	**1.83**
40/**450** 50/**50**	**BO652**	1 x 3⅝	3.75	**2.25**
80/**450** 20/**25**	**BO660**	1⅜ x 3	4.25	**2.55**
10/**450** 100/**50**	**BO670**	1⅜ x 2	2.55	**1.53**
★ 20/**450** 50/**250**	**BO674**	1 x 3	2.80	**1.67**
★ 20/**450** 80/**350**	**BO680**	1⅜ x 3	3.60	**2.13**
20/**450** 100/**100**	**BO690**	1⅜ x 2	3.30	**1.98**
30/**450** 40/**150**	**BO700**	1⅜ x 2	3.15	**1.89**
★ 30/**450** 200/**150**	**BO705**	1⅜ x 3	3.95	**2.38**
★ 40/**450** 10/**350**	**BO710**	1⅜ x 2	$3.30	**$1.98**
★ 50/**450** 100/**50**	**BO715**	1⅜ x 2½	4.65	**2.17**
★ 80/**450** 50/**50**	**BO720**	1⅜ x 3	4.20	**2.51**
★ 80/**450** 100/**50**	**BO722**	1⅜ x 3⅝	4.35	**2.60**
★ 20/**475** 100/**400**	**BO726**	1⅜ x 4⅛	4.85	**2.89**
15/**500** 20/**300**	**BO730**	1 x 2½	2.90	**1.74**
20/**500** 100/**300**	**BO740**	1⅜ x 3	4.95	**2.97**
40/**500** 50/**200**	**BO750**	1⅜ x 2½	4.20	**2.52**
60/**500** 80/**150**	**BO760**	1⅜ x 3⅝	4.70	**2.82**
80/**500** 50/**50**	**BO770**	1⅜ x 3⅝	4.75	**2.85**

3 SECTIONS — 1 VOLTAGE

Single Section Cap./Volts	Rotational Stock No.	Size—Ins. Dia. x Lgth.	List Price	Net Price
★ 20-20-20/**25**	**CO010**	1 x 2	2.25	**1.34**
★ 40-40-40/**25**	**CO020**	1 x 2	2.35	**1.40**
30-30-30/**50**	**CO030**	1 x 2	3.25	**1.95**
★ 20-20-20/**150**	**XCO041**	1 x 2	2.70	**1.61**
30-30-10/**150**	**CO050**	1 x 2	3.55	**2.13**
★ 40-20-10/**150**	**CO060**	1 x 2	2.45	**1.47**
★ 40-20-20/**150**	**XCO071**	1 x 2	2.80	**1.67**
★ 40-30-20/**150**	**CO080**	1 x 2	2.55	**1.53**
★ 40-40-40/**150**	**CO090**	1 x 2½	2.70	**1.62**
★ 40-70-40/**150**	**CO100**	1 x 3	2.85	**1.71**
★ 50-40-10/**150**	**CO103**	1 x 2½	2.60	**1.56**
★ 50-50-50/**150**	**XCO105**	1 x 3	3.15	**1.88**
★ 60-40-20/**150**	**CO110**	1 x 2½	2.70	**1.62**
★ 70-15-15/**150**	**CO113**	1 x 2½	2.60	**1.56**
★ 80-40-20/**150**	**CO120**	1 x 3	2.85	**1.69**
80-80-80/**150**	**XCO123**	1⅜ x 3	5.65	**3.39**
★ 120-80-40/**150**	**XCO125**	1⅜ x 3	4.00	**2.38**
★ 120-120-40/**150**	**XCO126**	1⅜ x 3	4.25	**2.53**
★ 200-100-60/**150**	**XCO127**	1⅜ x 3⅝	4.65	**2.78**
★ 200-150-150/**150**	**XCO128**	1⅜ x 4⅛	5.35	**3.19**
★ 250-200-10/**150**	**XCO129**	1⅜ x 4⅛	5.15	**3.08**
20-20-10/**250**	**CO130**	1 x 2	3.75	**2.25**
★ 20-20-20/**250**	**CO132**	1 x 2	2.65	**1.58**
30-20-10/**250**	**CO140**	1 x 2½	4.05	**2.43**
40-20-10/**250**	**CO150**	1⅜ x 2	4.30	**2.58**
★ 40-20-20/**250**	**CO160**	1 x 3	2.90	**1.72**
★ 80-10-10/**250**	**CO165**	1 x 3	3.05	**1.81**
★ 80-80-60/**250**	**CO170**	1⅜ x 3⅝	4.60	**2.75**
20-80-10/**300**	**CO180**	1⅜ x 2½	5.70	**3.42**
★ 60-20-10/**300**	**CO190**	1⅜ x 2½	3.60	**2.16**
★ 80-40-40/**300**	**CO194**	1⅜ x 3	4.45	**2.65**
★ 120-50-40/**300**	**CO200**	1⅜ x 4⅛	5.10	**3.04**
★ 10-10-10/**350**	**CO210**	1 x 2	2.55	**1.53**
20-20-10/**350**	**CO220**	1 x 3	4.45	**2.67**
★ 30-20-10/**350**	**CO225**	1 x 3	3.00	**1.80**
★ 60-40-20/**350**	**CO230**	1⅜ x 3	4.35	**2.59**
60-40-40/**350**	**CO232**	1⅜ x 3⅝	7.05	**4.23**
★ 60-50-50/**350**	**CO234**	1⅜ x 3⅝	4.80	**2.86**
★ 80-60-60/**350**	**CO236**	1⅜ x 4⅛	5.50	**3.30**
★ 90-40-20/**350**	**CO237**	1⅜ x 3⅝	4.80	**2.86**
★ 100-100-10/**350**	**CO238**	1⅜ x 4⅛	5.65	**3.39**
★ 80-20-10/**400**	**CO239**	1⅜ x 3	4.70	**2.81**
★ 90-10-5/**400**	**CO239.2**	1⅜ x 3	4.60	**2.75**
★ 10-10-10/**450**	**CO240**	1 x 2½	2.80	**1.67**
15-15-10/**450**	**CO250**	1 x 3	4.45	**2.67**
★ 15-15-15/**450**	**CO254**	1 x 3	2.60	**1.54**
★ 20-10-10/**450**	**CO260**	1 x 3	2.65	**1.57**
★ 20-20-20/**450**	**CO270**	1⅜ x 2½	3.90	**2.32**
★ 30-20-20/**450**	**CO280**	1⅜ x 3	4.15	**2.47**
★ 30-30-30/**450**	**CO300**	1⅜ x 3	4.55	**2.72**
★ 30-60-10/**450**	**CO310**	1⅜ x 3⅝	4.80	**2.87**
★ 40-10-10/**450**	**CO320**	1⅜ x 3	3.90	**2.34**
★ 40-30-20/**450**	**CO330**	1⅜ x 3	4.55	**2.72**
★ 40-40-10/**450**	**CO340**	1⅜ x 3	4.55	**2.72**
★ 40-40-20/**450**	**CO344**	1⅜ x 3⅝	4.80	**2.87**
★ 40-40-40/**450**	**CO350**	1⅜ x 3⅝	5.20	**3.12**
★ 50-40-30/**450**	**CO355**	1⅜ x 3⅝	5.20	**3.12**
★ 60-20-20/**450**	**CO360**	1⅜ x 3⅝	4.80	**2.87**
★ 60-40-20/**450**	**CO365**	1⅜ x 3⅝	5.20	**3.12**
★ 80-40-20/**450**	**CO370**	1⅜ x 4⅛	5.70	**3.40**
★ 30-30-20/**475**	**CO371**	1⅜ x 3	4.65	**2.77**

† For Photoflash use only.

CDE CORNELL-DUBILIER

TWIST-PRONG BASE ELECTROLYTICS

★ PREFERRED TYPE

3 SECTIONS — 1 VOLTAGE

Single Section Cap./Volts	Rotational Stock No.	Size—Ins. Dia. x Lgth.	List Price	Net Price
★ 40-20-20/475	C0372	1⅜ x 3	$5.20	$3.12
★ 40-30-10/475	C0373	1⅜ x 3	4.65	2.77
★ 40-30-30/475	C0374	1⅜ x 3⅝	5.15	3.09
★ 10-10-10/500	C0380	1 x 3	3.55	2.11
★ 30-20-20/500	C0390	1⅜ x 3	4.65	2.79
★ 40-10-10/500	C0400	1⅜ x 3	4.35	2.61
★ 40-40-10/500	C0410	1⅜ x 3⅝	5.30	3.16

2 SECTIONS HV — 1 SECTION LV

Single Section Cap./Volts	Rotational Stock No.	Size—Ins. Dia. x Lgth.	List Price	Net Price
★ 15-15/150 1200/1.5	C0420	1 x 2	3.20	1.90
20-20/150 20/25	XC0431	1 x 2	3.30	1.98
20-20/150 100/10	C0440	1 x 2	3.55	2.13
20-20/150 250/10	C0450	1 x 2	3.90	2.34
30-30/150 20/25	C0460	1 x 2	3.55	2.13
30-30/150 200/10	C0470	1 x 2	3.75	2.25
★ 40-20/150 20/25	XC0481	1 x 2	2.70	1.62
40-20/150 100/25	C0490	1 x 2	3.75	2.25
★ 40-20/150 200/25	C0510	1 x 2½	2.75	1.66
★ 40-20/150 200/10	C0520	1 x 2	2.60	1.56
40-20/150 250/10	C0530	1 x 2	4.05	2.43
40-30/150 20/25	C0540	1 x 2	3.55	2.13
★ 40-40/150 20/25	XC0551	1 x 2	2.85	1.69
★ 40-40/150 250/25	XC0555	1 x 3	3.25	1.94
★ 50-30/150 20/25	C0560	1 x 2	2.55	1.52
★ 50-30/150 100/25	C0570	1 x 2½	2.70	1.61
★ 50-50/150 20/25	C0580	1 x 2½	2.65	1.59
60-20/150 20/25	C0590	1 x 2	3.85	2.31
60-40/150 20/25	C0600	1 x 2½	4.00	2.40
★ 80-30/150 300/10	XC0602	1⅜ x 2	3.65	2.18
80-30/150 300/25	XC0604	1⅜ x 2½	5.50	3.30
★ 80-40/150 20/25	C0610	1 x 2½	2.75	1.64
★ 80-40/150 300/25	XC0613	1⅜ x 2½	3.95	2.36
★ 80-60/150 250/10	XC0615	1⅜ x 2½	3.80	2.26
★ 100-80/150 200/10	XC0618	1⅜ x 2½	3.75	2.24
120-60/150 20/25	C0620	1⅜ x 2½	5.05	3.03
★ 300-80/150 200/50	C0626	1⅜ x 4⅛	4.90	2.93
30-20/200 20/25	C0630	1 x 2	3.85	2.31
★ 30-20/200 40/150	C0632	1 x 2½	2.65	1.59
40-80/200 100/50	C0634	1⅜ x 3	5.25	3.15
★ 60-5/200 20/50	C0636	1 x 2½	2.60	1.56
100-10/200 40/50	C0640	1⅜ x 2	4.75	2.85
★ 15-15/250 20/25	C0650	1 x 2	2.45	1.45
20-15/250 20/25	C0660	1 x 2	3.55	2.13
★ 30-30/250 20/25	C0670	1 x 2½	2.70	1.62
40-40/250 10/200	C0674	1 x 3	4.45	2.67
70-70/250 20/50	C0680	1⅜ x 3	5.85	3.51
80-80/250 10/450	C0690	1⅜ x 3⅝	6.30	3.78
★ 90-90/250 20/50	C0695	1⅜ x 3	3.75	2.23
10-10/300 15/250	C0700	1 x 2	3.70	2.22
20-20/300 20/25	C0710	1 x 2	4.15	2.49
30-30/300 25/50	C0720	1 x 3	4.35	2.61
40-20/300 20/25	XC0732	1 x 2½	4.65	2.79
★ 100-10/300 60/50	C0733	1⅜ x 2½	3.95	2.37
★ 140-10/300 200/150	C0734	1⅜ x 4⅛	5.35	3.19
★ 140-100/300 60/50	C0734.3	1⅜ x 4⅛	5.55	3.31
★ 200-20/300 10/100	C0735	1⅜ x 4⅛	5.20	3.12
10-5/350 30/50	C0739	1 x 2½	3.85	2.31
10-5/350 150/50	C0740	1 x 3	4.05	2.43
10-15/350 20/25	C0760	1 x 2	3.75	2.25
★ 15-10/350 20/25	C0770	1 x 2	2.50	1.50
★ 20-4/350 100/25	C0773	1 x 2½	2.40	1.42
★ 20-5/350 150/50	C0775	1 x 3	2.85	1.69
★ 20-10/350 20/25	C0780	1 x 2	2.60	1.55
★ 20-10/350 5/250	C0790	1 x 2	2.60	1.55
★ 20-20/350 20/25	C0800	1 x 2½	2.75	1.64
30-5/350 100/200	C0806	1⅜ x 2½	6.00	3.60
30-10/350 20/25	C0810	1 x 2½	4.30	2.58
30-10/350 20/250	C0820	1 x 3	4.60	2.76
★ 30-20/350 20/25	C0830	1 x 3	2.90	1.73
★ 30-20/350 100/150	C0835	1⅜ x 2½	3.80	2.25
★ 30-30/350 20/25	C0840	1⅜ x 2	3.45	2.06
40-20/350 10/100	C0850	1⅜ x 2	4.30	2.58
20-40/350 10/150	C0860	1 x 3	4.80	2.88
40-40/350 50/25	C0870	1⅜ x 2½	$5.65	$3.39
★ 80-40/350 400/50	XC0874	1⅜ x 4⅛	5.50	3.29
★ 100-60/350 20/250	C0875	1⅜ x 4⅛	5.15	3.09
★ 20-20/400 10/350	C0876	1 x 3	3.04	1.82
30-10/400 150/50	C0880	1⅜ x 2½	5.10	3.06
★ 60-30/400 20/350	C0885	1⅜ x 3	4.55	2.71
★ 80-40/400 150/50	C0890	1⅜ x 3⅝	5.25	3.13
★ 100-10/400 20/50	C0894	1⅜ x 3⅝	4.80	2.86
★ 100-10/400 80/350	C0896	1⅜ x 4⅛	5.90	3.53
15-5/450 15/350	C0900	1 x 3	4.30	2.58
★ 10-10/450 20/25	C0910	1 x 2	2.60	1.55
★ 10-10/450 40/50	C0920	1 x 2½	2.65	1.59
10-10/450 50/100	C0930	1⅜ x 2	4.00	2.40
15-15/450 20/25	C0940	1 x 2½	4.15	2.49
★ 15-15/450 40/25	C0945	1 x 2½	2.84	1.70
15-15/450 10/300	C0950	1 x 3	4.35	2.61
★ 20-10/450 20/25	C0960	1 x 2½	2.85	1.69
★ 20-10/450 50/50	C0970	1 x 3	2.95	1.75
20-15/450 20/25	C0980	1 x 3	4.35	2.61
★ 20-20/450 20/25	C0990	1 x 3	3.05	1.83
20-20/450 100/50	C0992	1⅜ x 2½	5.25	3.15
20-20/450 60/350	C1000	1⅜ x 3	6.10	3.66
★ 30-10/450 150/50	C1005	1⅜ x 2½	3.80	2.25
30-20/450 30/150	C1010	1⅜ x 2½	5.25	3.15
★ 30-30/450 20/25	C1020	1⅜ x 2½	3.90	2.34
30-30/450 40/50	C1030	1⅜ x 3	5.50	3.30
★ 30-30/450 125/25	C1034	1⅜ x 3	4.20	2.50
★ 35-25/450 100/50	C1036	1⅜ x 3	4.35	2.60
★ 40-10/450 100/50	C1040	1⅜ x 3	3.90	2.34
★ 40-10/450 80/200	C1050	1⅜ x 3	4.15	2.49
★ 40-20/450 20/25	C1060	1⅜ x 2½	3.90	2.34
★ 40-40/450 20/25	C1070	1⅜ x 3	4.40	2.62
★ 40-40/450 40/25	C1080	1⅜ x 3	4.40	2.63
★ 40-40/450 100/50	C1090	1⅜ x 3⅝	4.60	2.75
★ 40-40/450 40/150	C1100	1⅜ x 3⅝	4.55	2.73
★ 40-40/450 60/200	C1102	1⅜ x 3⅝	4.75	2.85
★ 40-40/450 80/350	C1103	1⅜ x 4⅛	5.55	3.31
★ 50-5/450 50/350	C1103.5	1⅜ x 3⅝	4.55	2.72
★ 60-40/450 75/50	C1104	1⅜ x 3⅝	4.95	2.96
★ 80-10/450 125/25	C1106	1⅜ x 3⅝	4.75	2.87
★ 80-20/450 100/50	C1108	1⅜ x 4⅛	5.05	3.02
★ 80-40/450 100/25	C1110	1⅜ x 4⅛	5.40	3.24
★ 20-10/475 100/400	C1114	1⅜ x 4⅛	5.20	3.12
10-10/500 100/50	C1120	1 x 3	4.30	2.58
10-10/500 4/350	C1130	1 x 2½	3.75	2.25
★ 20-10/500 100/50	C1150	1 x 3⅝	3.25	1.95
20-20/500 60/400	C1160	1⅜ x 3⅝	7.20	4.32
★ 20-20/500 60/450	C1162	1⅜ x 3⅝	5.10	3.05
30-10/500 20/50	C1170	1⅜ x 2½	4.65	2.79
★ 40-40/500 100/200	C1180	1⅜ x 4⅛	5.10	3.03

1 SECTION HV — 2 SECTIONS LV

Single Section Cap./Volts	Rotational Stock No.	Size—Ins. Dia. x Lgth.	List Price	Net Price
100/100 50-25/25	C1190	1 x 3	4.00	2.40
20/150 250-100/15	C1200	1⅜ x 2	4.35	2.61
★ 60/200 200-140/150	XC1202	1⅜ x 4⅛	5.00	2.98
★ 10/300 500-500/15	XC1204	1⅜ x 2½	4.05	2.41
★ 20/300 150-80/150	C1206	1⅜ x 3	3.95	2.36
★ 100/300 200-30/150	XC1207	1⅜ x 4⅛	5.20	3.10
★ 100/300 200-60/150	XC1208	1⅜ x 4⅛	5.35	3.19
100/300 60-20/250	XC1209	1⅜ x 4⅛	7.35	4.41
120/300 15-10/450	C1210	1⅜ x 3⅝	6.75	4.05
★ 200/300 60-20/250	XC1212	1⅜ x 5	6.00	3.60
4/350 100-40/25	C1214	1 x 2	3.40	2.04
30/350 20-10/250	C1220	1 x 3	4.50	2.70
★ 40/350 200-100/150	C1224	1⅜ x 3⅝	4.65	2.78
★ 60/350 200-30/150	C1226	1⅜ x 3⅝	4.60	2.74
80/400 20-10/300	C1230	1⅜ x 3⅝	6.40	3.84
★ 5/450 80-40/300	C1231	1⅜ x 3	4.10	2.45
10/450 20-10/25	C1232	1 x 2	3.25	1.95
★ 10/450 80-80/250	C1236	1⅜ x 3⅝	4.30	2.56
20/450 40-10/250	C1240	1⅜ x 2	4.75	2.85
★ 20/450 40-10/350	C1243	1⅜ x 2½	3.75	2.22
★ 20/450 80-10/350	C1246	1⅜ x 3⅝	4.35	2.61

CORNELL-DUBILIER

TWIST-PRONG BASE ELECTROLYTICS

★ PREFERRED TYPE

1 SECTION HV — 2 SECTIONS LV

Single Section Cap./Volts	Rotational Stock No.	Size—Ins. Dia. x Lgth.	List Price	Net Price
30/450 100-25/25	C1250	1⅜ x 2	$4.50	$2.70
★ 40/450 90-50/150	C1260	1⅜ x 3	4.15	2.48
60/450 40-20/350	C1261	1⅜ x 3⅝	6.90	4.14
★ 80/450 40-40/250	C1262	1⅜ x 4⅛	5.10	3.05
80/450 100-20/50	C1263	1⅜ x 3⅝	6.40	3.84
40/475 40-10/250	C1265	1⅜ x 2½	6.00	3.60
40/475 80-10/300	C1266	1⅜ x 3⅝	7.20	4.32
40/475 20-20/450	C1268	1⅜ x 3	6.75	4.05
★ 40/475 80-10/450	C1167	1⅜ x 4⅛	5.60	3.36
10/500 80-10/150	C1269	1 x 3⅝	4.30	2.58

1 SECTION HV — 1 SECTION MV — 1 SECTION LV

Single Section Cap./Volts	Rotational Stock No.	Size—Ins. Dia. x Lgth.	List Price	Net Price
40/150 25/25 130/15	C1270	1 x 3	3.55	2.13
50/150 100/50 20/25	C1274	1 x 3	4.30	2.58
★ 80/250 40/150 50/50	C1280	1⅜ x 2½	3.60	2.15
100/300 60/150 20/50	C1290	1⅜ x 3	6.30	3.78
★ 20/350 50/100 100/75	C1300	1 x 3	2.90	1.73
★ 30/350 30/300 20/25	C1310	1 x 3	2.60	1.56
50/350 10/250 500/5	C1320	1⅜ x 2½	5.40	3.24
★ 125/350 5/200 100/75	C1325	1⅜ x 3⅝	4.85	2.91
10/400 50/350 30/25	C1330	1 x 3	4.65	2.79
40/400 80/350 100/200	C1336	1⅜ x 3⅝	7.95	4.77
60/400 40/300 20/25	C1340	1⅜ x 3⅝	6.30	3.78
10/450 50/150 100/25	C1350	1 x 3	4.15	2.49
★ 10/450 50/150 100/75	C1355	1 x 3	2.90	1.72
★ 10/450 40/300 10/150	C1360	1⅜ x 2	3.25	1.95
10/450 40/350 100/50	C1366	1⅜ x 3⅝	5.10	3.06
10/450 30/400 30/300	C1370	1⅜ x 2½	5.05	3.03
15/450 20/350 20/250	C1380	1 x 3	4.50	2.70
★ 20/450 80/200 50/50	C1385	1⅜ x 2½	3.65	2.19
★ 20/450 60/250 100/25	C1390	1⅜ x 2½	3.70	2.22
20/450 15/350 10/300	C1400	1 x 3	4.60	2.76
20/450 80/350 100/50	C1410	1⅜ x 3⅝	6.75	4.05
★ 30/450 15/350 40/25	C1412	1⅜ x 2	3.46	2.08
★ 30/450 40/350 50/25	C1414	1 x 4⅛	3.46	2.08
30/450 50/400 40/25	C1420	1⅜ x 3	5.95	3.57
★ 40/450 40/150 130/50	C1430	1⅜ x 3	3.85	2.30
40/450 100/150 50/50	C1440	1⅜ x 3	5.95	3.57
40/450 50/350 50/300	C1442	1⅜ x 4⅛	7.30	4.38
★ 60/450 80/400 20/350	C1443	1⅜ x 4⅛	5.75	3.44
★ 10/475 4/350 40/250	C1444	1⅜ x 2	3.25	1.93
10/475 4/350 100/50	C1445	1 x 2½	4.50	2.70
★ 10/475 40/450 100/200	C1445.3	1⅜ x 3	4.40	2.62
★ 20/475 50/50 20/25	C1446	1 x 3	2.80	1.67
20/475 10/350 5/150	C1448	1 x 2½	4.90	2.94
★ 80/475 80/150 50/50	C1449	1⅜ x 4⅛	5.20	3.10
10/500 100/200 40/50	C1450	1⅜ x 2½	5.05	3.03
20/500 20/300 40/25	C1460	1⅜ x 2	4.65	2.79
40/500 40/250 100/50	C1470	1⅜ x 3	6.45	3.87
40/500 40/400 25/50	C1480	1⅜ x 3	6.45	3.87

4 SECTIONS — 1 VOLTAGE

Single Section Cap./Volts	Rotational Stock No.	Size—Ins. Dia. x Lgth.	List Price	Net Price
★ 40-40-40-30/150	D0010	1⅜ x 2	3.50	2.09
★ 100-80-60-40/150	D0014	1⅜ x 3	4.20	2.50
★ 40-20-10-10/300	D0016	1⅜ x 2	3.65	2.19
★ 40-40-20-10/300	D0020	1⅜ x 2½	4.05	2.43
★ 40-40-30-20/300	D0022	1⅜ x 3	4.30	2.58
★ 60-40-10-10/300	D0024	1⅜ x 3⅝	4.25	2.54
★ 150-100-10-5/300	D0025	1⅜ x 4⅛	5.90	3.54
★ 200-20-20-20/300	D0026	1⅜ x 5	5.95	3.56
★ 40-20-20-10/350	D0032	1⅜ x 2½	4.10	2.44
★ 40-40-40-40/350	D0034	1⅜ x 3⅝	5.15	3.08
80-10-10-10/350	D0040	1⅜ x 3⅝	6.90	4.14
100-40-10-10/350	D0044	1⅜ x 3⅝	7.60	4.56
140-40-10-10/350	D0046	1⅜ x 4⅛	7.90	4.74
30-30-20-20/400	D0050	1⅜ x 3	7.30	4.38
★ 50-40-30-20/400	D0054	1⅜ x 4⅛	5.55	3.33
80-10-10-10/400	D0058	1⅜ x 3⅝	7.05	4.23
★ 80-20-10-10/400	D0060	1⅜ x 3⅝	5.15	3.08
★ 5-5-5-5/450	D0080	1⅜ x 2	3.30	1.98
10-10-10-5/450	D0088	1⅜ x 2	4.90	2.94
★ 10-10-10-10/450	D0090	1⅜ x 2	3.60	2.16
15-30-30-10/450	D0100	1⅜ x 3	7.05	4.23

4 SECTIONS — 1 VOLTAGE

Single Section Cap./Volts	Rotational Stock No.	Size—Ins. Dia. x Lgth.	List Price	Net Price
15-30-30-30/450	D0110	1⅜ x 3⅝	$7.95	$4.77
★ 20-10-10-10/450	D0120	1⅜ x 2½	3.90	2.33
★ 20-20-20-20/450	D0130	1⅜ x 3	4.55	2.73
★ 30-15-15-15/450	D0140	1⅜ x 3	4.45	2.66
★ 30-30-20-20/450	D0144	1⅜ x 3⅝	5.05	3.01
★ 35-35-10-5/450	D0150	1⅜ x 3⅝	4.70	2.82
★ 40-10-10-10/450	D0160	1⅜ x 3	4.35	2.60
★ 40-20-10-10/450	D0170	1⅜ x 3	4.55	2.73
★ 40-35-10-10/450	D0171	1⅜ x 3	4.90	2.91
★ 40-40-4-4/450	D0172	1⅜ x 3⅝	4.80	2.85
★ 40-40-20-20/450	D0174	1⅜ x 4⅛	5.50	3.29
★ 40-40-30-30/450	D0176	1⅜ x 4⅛	5.90	3.54
★ 40-40-40-40/450	D0177	1⅜ x 5	6.45	3.85
★ 60-20-20-20/450	D0177.4	1⅜ x 4⅛	5.50	3.29
★ 60-30-10-2/450	D0177.6	1⅜ x 3⅝	5.05	3.03
70-10-10-5/450	D0178	1⅜ x 3⅝	7.15	4.29
★ 80-10-10-10/450	D0179	1⅜ x 3⅝	5.45	3.26
★ 20-20-10-10/475	D0179.3	1⅜ x 2½	4.30	2.58
★ 20-20-20-20/475	D0179.5	1⅜ x 3	4.85	2.91
★ 40-20-10-10/475	D0179.7	1⅜ x 3	4.85	2.91
★ 10-10-10-10/500	D0180	1⅜ x 2	3.95	2.36
★ 40-40-8-8/500	D0185	1⅜ x 3⅝	5.70	3.40

3 SECTIONS HV — 1 SECTION LV

Single Section Cap./Volts	Rotational Stock No.	Size—Ins. Dia. x Lgth.	List Price	Net Price
20-20-20/150 20/25	D0190	1⅜ x 2	4.35	2.61
30-20-20/150 200/10	D0200	1⅜ x 2	4.65	2.79
★ 30-30-30/150 40/25	D0210	1⅜ x 2	3.30	2.96
★ 40-20-20/150 20/25	D0220	1⅜ x 2	3.90	2.33
★ 40-40-20/150 200/10	D0230	1⅜ x 2	3.45	2.06
★ 40-40-30/150 20/25	D0240	1⅜ x 2	3.35	2.00
★ 40-40-40/150 20/25	D0250	1⅜ x 2	3.35	2.00
40-40-40/150 100/25	D0260	1⅜ x 2	5.05	3.03
★ 40-40-40/150 160/25	D0270	1⅜ x 2	3.60	2.16
★ 50-20-20/150 200/25	D0275	1⅜ x 2	3.55	2.11
★ 50-30-30/150 100/25	D0280	1⅜ x 2	3.45	2.07
★ 50-50-50/150 20/25	D0290	1⅜ x 2	3.50	2.10
★ 60-40-20/150 200/10	D0300	1⅜ x 2	3.55	2.11
75-75-75/150 30/25	D0310	1⅜ x 3	6.45	3.87
★ 80-40-40/150 40/25	D0325	1⅜ x 2	3.60	2.15
★ 80-40-40/150 100/25	D0330	1⅜ x 2½	3.75	2.24
★ 100-90-60/150 200/25	D0336	1⅜ x 3	4.00	2.41
★ 200-200-100/150 10/75	D0338	1⅜ x 4⅛	4.40	2.62
40-20-10/250 20/25	D0340	1⅜ x 2	5.10	3.06
80-60-40/250 20/150	D0350	1⅜ x 3⅝	7.65	4.59
★ 100-40-10/250 100/50	D0360	1⅜ x 3⅝	4.45	2.65
★ 40-20-20/300 25/25	D0367	1⅜ x 2	3.70	2.22
★ 40-40-40/300 20/150	D0370	1⅜ x 3	4.30	2.58
★ 60-40-20/300 50/25	D0380	1⅜ x 3	4.30	2.58
★ 120-40-40/300 10/250	D0385	1⅜ x 4⅛	5.25	3.16
★ 150-20-10/300 250/50	D0387	1⅜ x 4⅛	5.50	3.28
10-10-10/350 20/25	D0390	1⅜ x 2	4.45	2.67
15-15-15/350 50/50	D0400	1⅜ x 2	5.70	3.42
★ 20-10-5/350 20/25	D0410	1⅜ x 2	3.30	1.98
★ 30-10-5/350 200/25	D0414	1⅜ x 2	3.75	2.24
★ 30-10-5/350 100/200	D0416	1⅜ x 2½	4.10	2.45
★ 30-20-5/350 100/200	D0418	1⅜ x 3	4.30	2.56
30-20-20/350 20/25	D0420	1⅜ x 2½	6.15	3.69
★ 40-40-20/350 20/25	D0430	1⅜ x 3	4.30	2.57
★ 40-40-30/350 10/25	D0433	1⅜ x 3	4.45	2.64
40-20-20/350 25/25	D0440	1⅜ x 2½	6.40	3.84
40-30-10/350 50/50	D0450	1⅜ x 3	6.60	3.96
★ 40-40-40/350 40/25	D0460	1⅜ x 3	4.60	2.75
★ 40-40-40/350 150/50	D0470	1⅜ x 3⅝	4.90	2.93
80-60-60/350 10/50	D0472	1⅜ x 4⅛	9.30	5.58
★ 90-30-5/350 100/75	D0473	1⅜ x 3⅝	4.95	2.94
★ 100-10-10/350 20/50	D0473.3	1⅜ x 3	4.60	2.75
★ 100-80-10/350 20/50	D0473.5	1⅜ x 4⅛	5.65	3.38
★ 100-40-30/350 50/50	D0474	1⅜ x 4⅛	5.45	3.25
★ 20-10-10/400 25/25	D0476	1⅜ x 2	3.55	2.13
★ 80-40-10/400 20/25	D0477	1⅜ x 3⅝	5.35	3.19
★ 80-40-10/400 100/200	D0477.5	1⅜ x 4⅛	6.00	3.60
★ 80-40-30/400 40/25	D0478	1⅜ x 4⅛	5.80	3.48
★ 10-10-10/450 20/25	D0480	1⅜ x 2	3.45	2.07

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

CORNELL-DUBILIER

TWIST-PRONG BASE ELECTROLYTICS

★ PREFERRED TYPE

Single Section Cap./Volts	Rotational Stock No.	Size—Ins. Dia. x Lgth.	List Price	Net Price
3 SECTIONS HV — 1 SECTION LV				
10-10-10/450 100/25	D0490	1⅜ x 2	$5.05	$3.03
10-10-10/450 150/50	D0500	1⅜ x 2½	5.55	3.33
15-10-10/450 20/25	D0504	1⅜ x 2	4.95	2.97
20-10-10/450 100/25	D0510	1⅜ x 2	5.55	3.33
★ 20-20-20/450 20/25	D0520	1⅜ x 2½	4.15	2.47
★ 20-20-20/450 100/50	D0530	1⅜ x 3	4.35	2.59
30-15-15/450 40/25	D0540	1⅜ x 2½	6.25	3.75
30-20-20/450 20/25	D0550	1⅜ x 3	6.60	3.96
★ 30-30-10/450 125/25	D0555	1⅜ x 3	4.55	2.73
★ 30-30-15/450 30/50	D0560	1⅜ x 3	4.50	2.70
30-30-15/450 100/50	D0570	1⅜ x 3⅝	7.35	4.41
30-30-20/450 20/25	D0590	1⅜ x 3	7.00	4.20
35-35-10/450 10/200	D0592	1⅜ x 3⅝	6.90	4.14
★ 40-10-10/450 250/25	D0600	1⅜ x 3	4.55	2.72
40-10-10/450 40/300	D0604	1⅜ x 3⅝	7.00	4.20
★ 40-10-10/450 40/350	D0606	1⅜ x 3	4.70	2.80
40-20-10/450 25/25	D0610	1⅜ x 3	6.40	3.84
★ 40-20-10/450 100/50	D0620	1⅜ x 3⅝	4.60	2.75
★ 40-20-10/450 100/250	D0622	1⅜ x 4⅛	5.30	3.17
★ 40-20-20/450 20/25	D0624	1⅜ x 3	4.60	2.75
★ 40-20-20/450 40/25	D0630	1⅜ x 3	4.65	2.77
★ 40-30-10/450 20/25	D0640	1⅜ x 3	4.60	2.75
★ 40-40-10/450 25/50	D0650	1⅜ x 3⅝	4.85	2.91
★ 40-40-10/450 50/50	D0655	1⅜ x 3⅝	4.90	2.94
★ 40-40-10/450 100/100	D0660	1⅜ x 3⅝	5.20	3.10
40-40-10/450 10/350	D0662	1⅜ x 3⅝	7.20	4.32
★ 40-40-20/450 20/25	D0663	1⅜ x 3⅝	5.05	3.02
★ 40-40-40/450 40/25	D0663.2	1⅜ x 3⅝	5.50	3.29
50-40-5/450 20/25	D0664	1⅜ x 3⅝	7.20	4.32
★ 60-10-10/450 20/150	D0670	1⅜ x 3	4.65	2.78
★ 60-40-10/450 25/50	D0672	1⅜ x 3⅝	5.30	3.16
★ 60-40-40/450 10/25	D0674	1⅜ x 4⅛	5.90	3.55
★ 60-50-5/450 20/25	D0676	1⅜ x 3⅝	5.35	3.20
40-10-20/475 10/25	D0680	1⅜ x 3	7.30	4.38
★ 20-20-10/500 10/300	D0690	1⅜ x 2½	3.50	2.70
★ 50-30-10/500 20/300	D0692	1⅜ x 3⅝	5.75	3.43
1 SECTION HV — 3 SECTIONS LV				
★ 10/300 200-140-30/150	D0694	1⅜ x 5	4.90	2.93
★ 10/300 200-200-30/150	XD0694.5	1⅜ x 5	5.40	3.24
★ 160/350 60-10-4/300	XD0695	1⅜ x 4⅛	6.05	3.63
★ 5/475 70-25-5/400	D0695.3	1⅜ x 3⅝	5.05	3.03
★ 10/450 100-20-20/300	D0695.5	1⅜ x 3	4.60	2.77
★ 10/475 130-20-10/350	D0695.7	1⅜ x 4⅛	5.40	3.24
20/475 60-40-10/350	D0696	1⅜ x 3⅝	7.80	4.68
★ 30/475 130-10-10/350	D0697	1⅜ x 4⅛	5.80	3.47
★ 20/500 80-20-10/300	D0698	1⅜ x 3⅝	4.70	2.81
1 SECTION HV — 2 SECTIONS MV — 1 SECTION LV				
5/75 25-25/25 100/15	D0700	1⅜ x 2	4.15	2.49
★ 20/300 150-150/150 100/30	D0710	1⅜ x 4⅛	4.75	2.85
15/350 80-40/200 200/25	D0720	1⅜ x 3	6.75	4.05
20/350 150-80/150 20/25	D0722	1⅜ x 3	6.85	4.11
40/350 50-20/150 80/50	D0724	1⅜ x 3	6.10	3.66
10/400 50-30/350 30/25	D0730	1⅜ x 3	6.60	3.96
★ 20/400 50-40/350 80/50	D0730.4	1⅜ x 3	4.70	2.81
30/400 60-20/350 100/50	D0731	1⅜ x 3	6.80	4.08
★ 40/400 120-10/250 150/50	D0731.3	1⅜ x 4⅛	5.15	3.08
80/400 40-10/350 10/25	D0732	1⅜ x 3⅝	7.95	4.77
50/400 60-40/350 20/25	D0733	1⅜ x 3⅝	7.35	4.41
10/450 100-20/300 20/200	D0736	1⅜ x 3⅝	7.60	4.56
★ 10/450 60-40/350 25/25	D0740	1⅜ x 3⅝	4.50	2.73
★ 10/450 100-10/350 20/25	D0750	1⅜ x 3⅝	4.70	2.81
★ 20/450 80-20/200 50/50	D0760	1⅜ x 3	4.05	2.42
★ 20/450 80-50/350 100/50	D0764	1⅜ x 4⅛	5.40	3.24
25/450 100-10/300 60/50	D0768	1⅜ x 3⅝	8.40	5.04
30/450 125-125/25 30/450	D0770	1⅜ x 3	7.35	4.41
30/450 40-40/350 10/200	D0780	1⅜ x 3⅝	7.75	4.65
40/450 40-40/250 20/25	D0782	1⅜ x 3	6.85	4.11
★ 40/450 40-40/300 20/150	D0783	1⅜ x 3	4.70	2.81
★ 60/450 80-40/250 20/150	D0783.2	1⅜ x 4⅛	5.35	3.20
★ 10/475 140-4/350 100/50	D0783.4	1⅜ x 4⅛	5.40	3.24
★ 10/475 40-10/450 100/50	D0783.6	1⅜ x 3	4.35	2.61

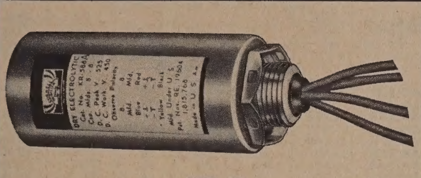
Single Section Cap./Volts	Rotational Stock No.	Size—Ins. Dia. x Lgth.	List Price	Net Price
1 SECTION HV — 2 SECTIONS MV — 1 SECTION LV				
★ 10/475 50-30/450 30/25	D0783.8	1⅜ x 3⅝	$5.00	$3.00
5/500 100-10/300 200/150	D0784	1⅜ x 3⅝	10.45	6.27
★ 10/500 10-4/300 20/25	D0784.8	1⅜ x 2	3.25	1.95
★ 10/500 100-10/300 100/25	D0785	1⅜ x 3⅝	4.60	2.77
20/525 40-20/450 100/25	D0786	1⅜ x 3⅝	8.95	5.37
2 SECTIONS HV — 1 SECTION MV — 1 SECTION LV				
5-5/75 25/25 100/15	D0788	1⅜ x 2	4.00	2.40
★ 80-5/300 60/150 20/25	D0788.2	1⅜ x 2½	4.10	2.45
★ 140-10/300 10/150 100/50	D0788.3	1⅜ x 3⅝	4.80	2.88
★ 30-30 /350 50/300 100/75	D0788.7	1⅜ x 3	4.80	2.88
★ 60-40/350 60/250 20/150	D0789.2	1⅜ x 3⅝	4.80	2.88
★ 60-100/350 60/200 40/75	D0789.4	1⅜ x 4⅛	5.70	3.39
5-5/400 50/300 80/250	D0790	1⅜ x 3	7.00	4.20
40-60/400 40/350 10/50	D0800	1⅜ x 3⅝	8.65	5.19
★ 100-10/400 20/350 20/50	D0805	1⅜ x 3⅝	5.30	3.16
★ 10-10/450 60/200 100/50	D0810	1⅜ x 3	3.90	2.34
★ 20-20/450 60/150 100/25	D0816	1⅜ x 2½	4.10	2.45
★ 35-25/450 20/200 100/50	D0820	1⅜ x 3⅝	4.75	2.85
★ 40-40/450 125/150 125/25	D0825	1⅜ x 4⅛	5.40	3.24
10-5/475 80/450 40/50	D0830	1⅜ x 3⅝	7.45	4.47
★ 15-15/475 80/300 40/50	D0840	1⅜ x 3	4.80	2.88
★ 20-10/475 20/450 100/25	D0841	1⅜ x 2½	4.20	2.50
★ 40-10/475 4/350 40/300	D0842	1⅜ x 3	4.60	2.77
2 SECTIONS HV — 2 SECTIONS LV				
★ 20-20/150 160-40/25	XD0844	1⅜ x 2	3.60	2.15
40-40/150 40-40/25	D0850	1⅜ x 2	4.60	2.76
40-40/150 100-100/25	D0860	1⅜ x 2	5.05	3.03
★ 50-20/150 150-30/15	XD0862	1⅜ x 2	3.80	2.26
140-40/150 50-30/50	XD0864	1⅜ x 2½	5.25	3.15
★ 100-10/300 200-30/150	D0866	1⅜ x 5	5.50	3.28
★ 60-4/350 100-40/25	D0868	1⅜ x 2½	4.00	2.38
60-40/350 60-20/200	D0869	1⅜ x 3⅝	7.00	4.20
40-10/400 80-10/250	D0870	1⅜ x 3⅝	7.05	4.23
★ 100-10/400 30-20/50	D0875	1⅜ x 3⅝	5.05	3.03
10-10/450 20-20/25	D0880	1⅜ x 2	4.45	2.67
★ 20-20/450 20-20/25	D0890	1⅜ x 2	3.75	2.22
20-20/450 30-30/350	D0900	1⅜ x 3	7.60	4.56
30-10/450 150-30/50	D0906	1⅜ x 3	6.15	3.69
40-10/450 35-10/350	D0910	1⅜ x 3	6.90	4.14
40-20/450 80-10/350	D0912	1⅜ x 4⅛	8.70	5.22
★ 40-40/450 100-60/200	D0914	1⅜ x 4⅛	5.70	3.39
★ 40-40/450 30-30/350	D0920	1⅜ x 4⅛	5.45	3.28
1 SECTION HV — 1 SECTION MV — 2 SECTIONS LV				
100/300 40/50 80-20/25	D0922	1⅜ x 2½	6.85	4.11
40/350 100/250 100-25/50	D0924	1⅜ x 3⅝	6.30	3.78
20/400 50/350 80-40/25	D0926	1⅜ x 2½	6.25	3.75
★ 80/450 10/400 40-30/300	D0927	1⅜ x 4⅛	5.60	3.35
★ 30/500 10/450 150-30/50	D0928	1⅜ x 3	4.30	2.57
ALL SECTIONS DIFFERENT VOLTAGE				
★ 100/300 60/200 10/150 20/50	D0929	1⅜ x 3	4.50	2.69
120/300 20/250 20/25 100/50	D0930	1⅜ x 4⅛	7.60	4.56
★ 200/300 20/250 20/25 100/50	D0940	1⅜ x 5	5.65	3.38
20/350 40/300 10/150 250/50	D0950	1⅜ x 3	6.90	4.14
★ 20/350 150/300 10/250 250/50	D0951	1⅜ x 4⅛	5.55	3.32
10/400 100/300 10/75 100/25	D0952	1⅜ x 3	6.70	4.02
★ 10/450 40/350 100/250 100/50	D0953	1⅜ x 3	4.70	2.81
60/450 40/250 10/150 80/50	D0956	1⅜ x 3⅝	7.20	4.32
80/450 10/400 30/300 40/150	D0960	1⅜ x 4⅛	7.90	4.74
★ 10/475 40/350 80/300 100/100	D0961	1⅜ x 4⅛	5.00	3.00
10/475 40/350 80/200 100/50	D0962	1⅜ x 3⅝	7.20	4.32
10/475 40/400 100/50 10/25	D0964	1⅜ x 2½	6.00	3.60
★ 10/475 40/400 4/350 100/50	D0966	1⅜ x 2½	4.10	2.46
10/475 10/450 80/200 50/60	D0970	1⅜ x 2½	5.80	3.48
★ 10/475 60/450 30/400 125/50	D0980	1⅜ x 4⅛	5.30	3.16
★ 20/475 40/300 100/50 80/25	D0990	1⅜ x 3	4.15	2.49
★ 20/475 40/350 80/200 100/100	D0995	1⅜ x 4⅛	4.80	2.89
★ 25/475 20/450 20/300 100/50	D0997	1⅜ x 3	4.30	2.57
25/475 20/450 40/300 100/50	D1000	1⅜ x 3	7.45	4.47
★ 40/475 40/250 50/150 80/50	D1004	1⅜ x 3⅝	4.60	2.77

(Use Index Page 1 for Quick, Easy Location of ALL Products)

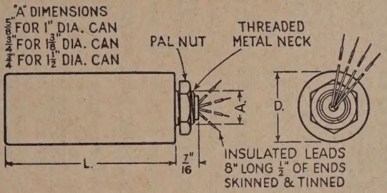
TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

CORNELL-DUBILIER

ROUND CAN-TYPE ELECTROLYTICS



TYPE KR



Types KR are single-hole mounting units compact etched foil type dry electrolytic capacitors furnished in round (inverted mounting) aluminum cans. Available in single, dual and triple sections with color-coded leads. Metal threaded neck.

TYPE KR

TEMPERATURE RANGE to +65°C.

KR Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
KR 508	8	450	1 x 2½	$3.60	**$2.14**
KR 520	20	450	1⅜ x 2½	4.10	**2.46**
KR 540	40	450	1⅜ x 4⅜	4.55	**2.71**
KR 604C	4	600	1⅜ x 3½	5.85	**3.51**
KR 608C	8	600	1⅜ x 4⅜	6.15	**3.69**
KR 616C	16	600	1⅜ x 4⅜	6.90	**4.12**

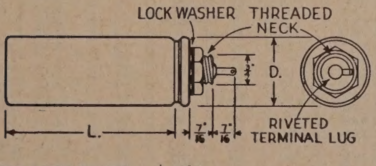
Separate Section Units

KR 588A	8-8	450	1⅜ x 3	5.45	**3.27**
KR 5888A	8-8-8	450	1⅜ x 4½	6.15	**3.67**

TYPE WR

REPLACEMENTS FOR WET ELECTROLYTICS

TYPE WR—500-VOLT D.C.



TEMPERATURE RANGE to +65°C.

WR Cat. No.	Cap. Mfd.	Replacement for	Size—Ins. Dia. x Lgth.	List Price	Net Price
WR 10	10	4 to 12 mfd.	1⅜ x 2½	$3.50	**$2.09**
WR 20	20	16 to 20 mfd.	1⅜ x 2½	3.80	**2.26**
WR 30	30	20 to 30 mfd.	1⅜ x 3¼	4.10	**2.45**
WR 40	40	30 to 40 mfd.	1⅜ x 3¼	4.35	**2.61**

HIGH-CAPACITY LOW-VOLTAGE ELECTROLYTICS

TYPE FB ★

Type FB capacitors in round cardboard sleeved aluminum cans are designed for high capacity, low voltage applications, and are especially popular as replacements in motion picture sound equipment, and other low voltage circuits.

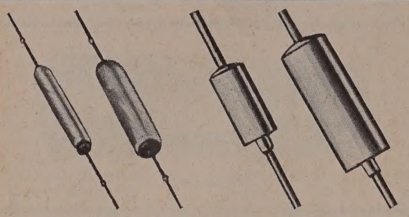
TEMPERATURE RANGE: to +85°C.

FB Cat. No.	Cap. Mfd.	D.C. W. Volts	Can†† Size—Inches Dia. x Lgth.	List Price	Net Price
FB 1005	500	10	1⅜ x 2⅜	$4.45	**$2.65**
FB 1010	1000	10	1⅜ x 2⅜	5.35	**3.20**
FB 1015	1500	10	1⅜ x 2⅜	5.55	**3.32**
FB 1020	2000	10	1⅜ x 2⅝	5.85	**3.51**
FB 1030	3000	10	1⅜ x 3⅛	6.70	**4.02**
FB 1040	4000	10	1⅜ x 4⅛	7.25	**4.33**
FB 1050	5000	10	1½ x 4⅛	7.80	**4.68**
FB 1060	6000	10	1¾ x 4⅛	8.30	**4.95**
FB 1205	500	12	1⅜ x 2⅜	4.45	**2.65**
FB 1210	1000	12	1⅜ x 2⅜	5.35	**3.20**
FB 1215	1500	12	1⅜ x 2⅝	5.55	**3.32**
FB 1220	2000	12	1⅜ x 3⅛	6.35	**3.79**
FB 1225	2500	12	1⅜ x 3⅛	6.45	**3.87**
FB 1230	3000	12	1⅜ x 4⅛	6.85	**4.10**
FB 1240	4000	12	1½ x 4⅛	7.55	**4.53**
FB 1260	6000	12	2 x 4⅛	8.40	**5.04**
FB 1505	500	15	1⅜ x 2⅜	4.45	**2.65**
FB 1510	1000	15	1⅜ x 2⅜	5.35	**3.20**
FB 1515	1500	15	1⅜ x 2⅝	5.55	**3.32**
FB 1520	2000	15	1⅜ x 3⅛	6.35	**3.79**
FB 1530	3000	15	1⅜ x 4⅛	6.85	**4.10**
FB 1540	4000	15	1½ x 4⅛	7.55	**4.53**
FB 1560	6000	15	2 x 4⅛	8.40	**5.04**
FB 1805	500	18	1⅜ x 2⅜	4.45	**2.65**
FB 1810	1000	18	1⅜ x 2⅜	5.35	**3.20**
FB 1820	2000	18	1⅜ x 3⅛	6.35	**3.79**
FB 1840	4000	18	1½ x 4⅛	7.55	**4.53**
FB 2005	500	20	1⅜ x 2⅜	4.45	**2.65**
FB 2010	1000	20	1⅜ x 3⅛	5.85	**3.51**
FB 2020	2000	20	1⅜ x 4⅛	6.90	**4.14**
FB 2040	4000	20	2 x 4⅛	8.65	**5.19**
FB 2505	500	25	1⅜ x 2⅜	4.45	**2.65**
FB 2510	1000	25	1⅜ x 3⅛	5.85	**3.51**
FB 2520	2000	25	1⅜ x 4⅛	6.90	**4.14**
FB 2530	3000	25	1¾ x 4⅛	8.15	**4.88**
FB 2540	4000	25	2 x 4⅛	8.65	**5.19**
FB 2550	5000	25	2½ x 4⅛	10.10	**6.05**
FB 3005	500	30	1⅜ x 3⅛	5.80	**3.48**
FB 3010	1000	30	1⅜ x 4⅛	6.85	**4.10**
FB 3020	2000	30	1¾ x 4⅛	8.55	**5.11**
FB 3030	3000	30	2 x 4⅛	12.85	**7.69**
FB 3040	4000	30	2½ x 4⅛	18.20	**10.92**
FB 3505	500	35	1⅜ x 3⅛	5.80	**3.48**
FB 3510	1000	35	1⅜ x 4⅛	6.85	**4.10**
FB 3520	2000	35	1¾ x 4⅛	8.55	**5.11**
FB 3530	3000	35	2 x 4⅛	12.85	**7.69**
FB 3540	4000	35	2½ x 4⅛	18.20	**10.92**
FB 4005	500	40	1⅜ x 3⅛	5.80	**3.48**
FB 4010	1000	40	1⅜ x 4⅛	6.85	**4.10**
FB 4020	2000	40	1¾ x 4⅛	8.55	**5.11**
FB 4030	3000	40	2 x 4⅛	12.85	**7.69**
FB 4040	4000	40	2½ x 4⅛	18.20	**10.92**
FB 5005	500	50	1⅜ x 3⅛	5.80	**3.48**
FB 5010	1000	50	1⅜ x 4⅛	6.85	**4.10**
FB 5020	2000	50	1¾ x 4⅛	8.55	**5.11**
FB 5030	3000	50	2 x 4⅛	12.85	**7.69**
FB 5040	4000	50	2½ x 4⅛	18.20	**10.92**

★When MIL-C-62A units must be supplied, order according to specific CE type designations. ††For Overall Size add 1/16" to Diam. and 3/8" to Length.

CORNELL-DUBILIER

TANTALUM ELECTROLYTICS
TUBULAR FOIL & SOLID ELECTROLYTE


TAN (Foil) TY (Solid)

C-D type **TAN** is a tubular tantalum foil capacitor available in both etched and plain foil construction — polarized and non-polarized. Over 18 years of C-D research in tantalum capacitors have combined to produce a product of outstanding performance characteristics featuring low leakage current, excellent frequency characteristics, low power factor and extended service life. TAN capacitors are an ideal selection for critical applications where peak and long-term dependability is demanded.

The types listed here are only representative of a much wider range of units available in voltages from 0.5 to 150 working volts and in capacitances from 0.01 to 2000 Mfd. Inquiries are invited on ratings to meet specific needs.

	Dia. x Lgth.	Dia. x Lgth.
♦SIZES:	a = 3/16″ x 9/16″	e = 3/8″ x 1 7/16″
	b = 3/16″ x 11/16″	f = 3/8″ x 2 1/8″
	c = 3/16″ x 7/8″	g = 3/8″ x 2 3/4″
	d = 9/32″ x 7/8″	h = 1/8″ x 1/2″

*FOIL: ET = Etched PL = Plain

†POLARITY: PO = Polarized NP = Non-Polarized
A non-polarized unit may be used as a polarized unit, but not vice versa.

TEMPERATURE RANGE: —55°C to +85°C

TOLERANCE: Etched —15%, +75%
Plain ±20%

TAN Cat. No.	Cap. Mfd.	Foil*	Polarity†	Sizes♦	List Price	Net Price
			3 WVDC			
TAN 389	3	PL	PO	a	$8.40	**$5.04**
TAN 102	5	PL	PO	a	8.40	**5.04**
TAN 75	10	PL	PO	a	8.40	**5.04**
TAN 470	16	ET	PO	a	8.40	**5.04**
TAN 152	50	PL	PO	d	12.85	**7.71**
TAN 422	50	ET	NP	c	8.40	**5.04**
TAN 156	75	PL	PO	d	12.85	**7.71**
TAN 351	100	PL	PO	d	12.85	**7.71**
TAN 485	100	ET	NP	d	14.20	**8.52**
TAN 173	140	PL	PO	e	21.05	**12.63**
TAN 395	250	ET	NP	e	24.75	**14.85**
TAN 350	365	PL	PO	e	21.05	**12.63**
TAN 175	390	PL	PO	g	38.40	**23.04**
TAN 326	1000	ET	NP	g	53.65	**32.19**
			3.75 WVDC			
TAN 163	10	PL	NP	b	8.40	**5.04**
TAN 164	45	PL	NP	d	12.85	**7.71**
TAN 165	140	PL	NP	e	21.05	**12.63**
TAN 166	280	PL	NP	f	28.65	**17.19**
TAN 167	400	PL	NP	g	38.40	**23.04**
			6 WVDC			
TAN 60	1	PL	PO	a	8.40	**5.04**
TAN 37	1	PL	NP	a	8.40	**5.04**
TAN 330	2	PL	PO	a	8.40	**5.04**
TAN 38	2	PL	NP	a	8.40	**5.04**
TAN 78	4	PL	PO	a	8.40	**5.04**
TAN 168	8	PL	PO	b	8.40	**5.04**
TAN 62	10	PL	PO	b	8.40	**5.04**
TAN 162	20	PL	PO	c	8.40	**5.04**
TAN 352	20	PL	PO	c	12.85	**7.71**
TAN 177	25	PL	NP	d	12.85	**7.71**
TAN 54	30	PL	PO	d	12.85	**7.71**
			6WVDC (cont'd)			
TAN 434	30	ET	PO	b	$ 8.40	**$ 5.04**
TAN 325	50	PL	PO	d	12.85	**7.71**
TAN 362	50	ET	PO	c	8.40	**5.04**
TAN 333	60	PL	PO	d	12.85	**7.71**
TAN 472	60	ET	PO	c	8.40	**5.04**
TAN 170	100	PL	PO	e	21.05	**12.63**
TAN 353	100	PL	PO	e	21.05	**12.63**
TAN 486	100	ET	NP	e	24.75	**14.85**
TAN 153	200	PL	PO	f	28.65	**17.19**
TAN 180	250	PL	NP	g	38.40	**23.04**
TAN 172	300	PL	PO	g	38.40	**23.04**
TAN 368	500	ET	PO	f	40.30	**24.18**
TAN 375	800	ET	PO	g	53.65	**32.19**
TAN 369	1000	ET	PO	g	53.65	**32.19**
			10 WVDC			
TAN 56	1	PL	PO	a	8.40	**5.04**
TAN 57	1	PL	NP	a	8.40	**5.04**
TAN 58	2	PL	PO	a	8.40	**5.04**
TAN 181	5	PL	PO	b	8.40	**5.04**
TAN 396	5	ET	NP	a	8.40	**5.04**
TAN 182	6	PL	PO	b	8.40	**5.04**
TAN 397	10	ET	NP	b	8.40	**5.04**
TAN 48	20	PL	PO	d	12.85	**7.71**
TAN 183	25	PL	PO	d	12.85	**7.71**
TAN 138	25	ET	PO	b	8.40	**5.04**
TAN 378	25	PL	NP	e	21.05	**12.63**
TAN 443	50	ET	PO	d	14.20	**8.52**
TAN 185	80	PL	PO	e	21.05	**12.63**
TAN 462	90	PL	NP	f	28.65	**17.19**
TAN 194	150	PL	NP	g	38.40	**23.04**
TAN 187	160	PL	PO	g	38.40	**23.04**
TAN 188	180	PL	PO	g	38.40	**23.04**
TAN 189	220	PL	PO	g	38.40	**23.04**
			15 WVDC			
TAN 41	.5	PL	NP	a	8.40	**5.04**
TAN 331	1	PL	PO	a	8.40	**5.04**
TAN 42	1	PL	NP	a	8.40	**5.04**
TAN 196	4.5	PL	PO	b	8.40	**5.04**
TAN 313	5	ET	PO	h	8.40	**5.04**
TAN 44	5	PL	NP	d	12.85	**7.71**
TAN 442	5	ET	NP	b	8.40	**5.04**
TAN 3	10	PL	PO	d	12.85	**7.71**
TAN 210	10	PL	NP	d	12.85	**7.71**
TAN 214	10	ET	NP	b	8.40	**5.04**
TAN 52	15	PL	PO	d	12.85	**7.71**
TAN 204	15	ET	PO	b	8.40	**5.04**
TAN 197	18	PL	PO	d	12.85	**7.71**
TAN 482	20	PL	NP	e	21.05	**12.63**
TAN 199	55	PL	PO	e	21.05	**12.63**
TAN 205	60	ET	PO	d	14.20	**8.52**
TAN 213	100	PL	NP	g	38.40	**23.04**
TAN 459	100	ET	PO	d	14.20	**8.52**
TAN 201	110	PL	PO	f	28.65	**17.19**
TAN 460	150	ET	PO	e	24.75	**14.85**
TAN 203	160	PL	PO	g	38.40	**23.04**
TAN 206	200	ET	PO	e	24.75	**14.85**
TAN 207	400	ET	PO	f	40.30	**24.18**
TAN 208	580	ET	PO	g	53.65	**32.19**
			25 WVDC			
TAN 132	.5	PL	NP	a	8.40	**5.04**
TAN 315	1	PL	NP	a	8.40	**5.04**
TAN 321	2	PL	PO	a	8.40	**5.04**
TAN 453	2	ET	NP	h	8.40	**5.04**
TAN 115	5	PL	PO	c	8.40	**5.04**
TAN 234	5	ET	NP	b	8.40	**5.04**
TAN 51	10	PL	PO	d	12.85	**7.71**
TAN 137	10	ET	PO	b	8.40	**5.04**
TAN 332	10	ET	NP	d	14.20	**8.52**
TAN 439	15	ET	PO	c	8.40	**5.04**
TAN 445	15	ET	NP	d	14.20	**8.52**
TAN 29	25	PL	PO	e	21.05	**12.63**
TAN 110	25	PL	NP	e	21.05	**12.63**
TAN 384	25	ET	PO	d	14.20	**8.52**
TAN 226	40	ET	PO	d	14.20	**8.52**
TAN 4	50	PL	PO	e	21.05	**12.63**
TAN 364	50	ET	NP	e	24.75	**14.85**
TAN 320	80	PL	PO	f	28.65	**17.19**
TAN 225	100	PL	PO	g	38.40	**23.04**
TAN 457	100	ET	PO	e	24.75	**14.85**
TAN 431	120	ET	PO	e	24.75	**14.85**
TAN 458	150	ET	PO	e	24.75	**14.85**
TAN 238	200	ET	NP	g	53.65	**32.19**
TAN 228	250	ET	PO	f	40.30	**24.18**
TAN 229	350	ET	PO	g	53.65	**32.19**

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CORNELL-DUBILIER

TANTALUM ELECTROLYTICS
TUBULAR FOIL & SOLID ELECTROLYTE

continued from preceding page

TAN Cat. No.	Cap. Mfd.	Foil*	Polarity†	Sizes♦	List Price	Net Price
			50 WVDC			
TAN 372	.25	PL	NP	a	$ 8.40	**$ 5.04**
TAN 361	.5	PL	PO	a	8.40	**5.04**
TAN 371	.5	PL	NP	b	8.40	**5.04**
TAN 370	1	PL	NP	c	8.40	**5.04**
TAN 241	1.5	PL	PO	b	8.40	**5.04**
TAN 112	1.5	PL	NP	c	8.40	**5.04**
TAN 379	1.5	ET	NP	a	8.40	**5.04**
TAN 28	3	PL	PO	d	12.85	**7.71**
TAN 251	3	PL	NP	d	12.85	**7.71**
TAN 418	3	ET	PO	a	8.40	**5.04**
TAN 246	4.5	ET	PO	b	8.40	**5.04**
TAN 49	5	PL	PO	d	12.85	**7.71**
TAN 327	5	ET	NP	d	14.20	**8.52**
TAN 452	5	ET	PO	b	8.40	**5.04**
TAN 242	6	PL	PO	d	12.85	**7.71**
TAN 111	10	PL	NP	e	21.05	**12.63**
TAN 255	10	ET	NP	d	14.20	**8.52**
TAN 359	10	PL	PO	e	21.05	**12.63**
TAN 247	18	ET	PO	d	14.20	**8.52**
TAN 63	20	PL	PO	e	21.05	**12.63**
TAN 252	20	PL	NP	f	28.65	**17.19**
TAN 27	25	PL	PO	e	21.05	**12.63**
TAN 365	25	ET	NP	e	24.75	**14.85**
TAN 6	36	PL	PO	f	28.65	**17.19**
TAN 244	40	PL	PO	f	28.65	**17.19**
TAN 155	50	PL	PO	g	38.40	**23.04**
TAN 123	50	ET	PO	e	24.75	**14.85**
TAN 245	55	PL	PO	g	38.40	**23.04**
TAN 248	60	ET	PO	e	24.75	**14.85**
TAN 249	100	ET	PO	f	40.30	**24.18**
TAN 250	150	ET	PO	g	53.65	**32.19**
			75 WVDC			
TAN 264	1	PL	PO	b	8.40	**5.04**
TAN 268	3	ET	PO	b	8.40	**5.04**
TAN 136	4	PL	PO	d	12.85	**7.71**
TAN 64	10	PL	PO	e	21.05	**12.63**
TAN 269	12	ET	PO	d	14.20	**8.52**
TAN 265	14	PL	PO	e	21.05	**12.63**
TAN 280	15	ET	NP	e	24.75	**14.85**
TAN 492	15	PL	PO	e	21.05	**12.63**
TAN 277	20	PL	NP	g	38.40	**23.04**
TAN 266	28	PL	PO	f	28.15	**17.19**
TAN 270	30	ET	PO	e	24.75	**14.85**
TAN 267	40	PL	PO	g	38.40	**23.04**
TAN 282	50	ET	NP	g	53.65	**32.19**
TAN 271	70	ET	PO	f	40.30	**24.18**
TAN 272	100	ET	PO	g	53.65	**32.19**
			100 WVDC			
TAN 283	.8	PL	PO	b	8.40	**5.04**
TAN 294	1.5	PL	NP	d	12.85	**7.71**
TAN 367	1.5	PL	PO	c	8.40	**5.04**
TAN 288	2	ET	PO	b	8.40	**5.04**
TAN 345	2	ET	NP	c	8.40	**5.04**
TAN 284	3	PL	PO	d	12.85	**7.71**
TAN 289	8	ET	PO	d	14.20	**8.52**
TAN 285	10	PL	PO	e	21.05	**12.63**
TAN 296	10	PL	NP	f	28.65	**17.19**
TAN 297	15	PL	NP	g	38.40	**23.04**
TAN 286	20	PL	PO	f	28.65	**17.19**
TAN 290	25	ET	PO	e	24.75	**14.85**
TAN 287	30	PL	PO	g	38.40	**23.04**
TAN 291	50	ET	PO	f	40.30	**24.18**
TAN 292	70	ET	PO	g	53.65	**32.19**
			150 WVDC			
TAN 303	.5	PL	PO	b	8.40	**5.04**
TAN 1	1	PL	PO	d	12.85	**7.71**
TAN 2	1	PL	NP	d	12.85	**7.71**
TAN 307	1	ET	PO	b	8.40	**5.04**
TAN 10	2	PL	PO	d	12.85	**7.71**
TAN 21	2	PL	NP	e	21.05	**12.63**
TAN 141	2	ET	NP	d	14.20	**8.52**
TAN 11	4	PL	PO	e	21.05	**12.63**
TAN 131	4	ET	PO	d	14.20	**8.52**
TAN 360	5	PL	PO	e	21.05	**12.63**
TAN 304	7	PL	PO	e	21.05	**12.63**
TAN 12	8	PL	PO	f	28.65	**17.19**
TAN 94	10	PL	PO	f	28.65	**17.19**
TAN 310	10	PL	NP	g	38.40	**23.04**
TAN 13	12	PL	PO	g	38.40	**23.04**
TAN 144	13	ET	PO	e	24.75	**14.85**
TAN 135	14	PL	PO	g	38.40	**23.04**
TAN 426	15	ET	PO	e	24.75	**14.85**
TAN 306	20	PL	PO	g	38.40	**23.04**
TAN 145	25	ET	PO	f	40.30	**24.18**
TAN 146	36	ET	PO	g	53.65	**32.19**

"SOLITAN"®
SOLID ELECTROLYTE

CD type **TY** is a completely dry and hermetically sealed tantalum capacitor encased in a tubular metal case. Solitans contain no liquid electrolyte, residue or moisture of any kind. Remarkable stability of capacitance with time and temperature is thus possible. These are the smallest sized units yet developed in a tantalum capacitor, ⅛" in diameter and ¼" long. They are unmatched for the super-critical demands of computer, military and transistor circuitry. Many other ratings available upon request.

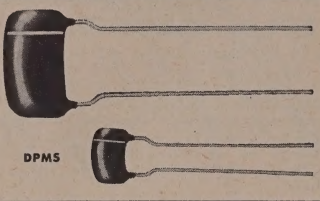
***SIZES:** a=⅛" Dia. x ¼" Lgth.
b=³⁄₁₆" Dia. x ⁷⁄₁₆" Lgth.

TEMPERATURE RANGE: −80°C. to +85°C.

TOLERANCE: ±20%

TY Cat. No.	Cap. Mfd.	WVDC	Size*	List Price	Net Price
TY171	.004	35	a	$ 4.50	**$ 2.70**
TY172	.0047	35	a	4.50	**2.70**
TY91	.005	35	a	4.50	**2.70**
TY173	.0056	35	a	4.50	**2.70**
TY174	.0068	35	a	4.50	**2.70**
TY175	.0082	35	a	4.50	**2.70**
TY93	.01	35	a	4.50	**2.70**
TY94	.015	35	a	4.50	**2.70**
TY178	.02	35	a	4.50	**2.70**
TY179	.022	35	a	4.50	**2.70**
TY95	.025	35	a	4.50	**2.70**
TY180	.027	35	a	4.50	**2.70**
TY181	.03	35	a	4.50	**2.70**
TY182	.033	35	a	4.50	**2.70**
TY184	.04	35	a	4.50	**2.70**
TY185	.047	35	a	4.50	**2.70**
TY97	.05	35	a	4.50	**2.70**
TY186	.056	35	a	4.50	**2.70**
TY187	.068	35	a	4.50	**2.70**
TY188	.082	35	a	4.50	**2.70**
TY99	.1	35	a	4.50	**2.70**
TY189	.22	35	a	5.00	**3.00**
TY100	.25	35	a	5.00	**3.00**
TY190	.33	35	a	5.00	**3.00**
TY191	.47	35	a	5.00	**3.00**
TY101	.5	35	a	5.00	**3.00**
TY192	.68	35	a	5.00	**3.00**
TY103	1.0	35	a	5.00	**3.00**
TY104	1.5	35	b	5.25	**3.15**
TY26	1.5	20	a	5.00	**3.00**
TY105	2.0	35	b	5.25	**3.15**
TY27	2.0	20	a	5.00	**3.00**
TY193	2.2	35	b	5.25	**3.15**
TY165	2.2	20	a	5.00	**3.00**
TY107	3.0	35	b	5.25	**3.15**
TY20	3.0	15	a	5.00	**3.00**
TY114	3.3	15	a	5.00	**3.00**
TY194	4.0	35	b	5.25	**3.15**
TY122	4.0	10	a	5.00	**3.00**
TY195	4.7	35	b	5.25	**3.15**
TY123	4.7	10	a	5.00	**3.00**
TY110	5.0	35	b	5.25	**3.15**
TY14	5.0	10	a	5.00	**3.00**
TY88	6.0	20	b	5.25	**3.15**
TY168	6.8	20	b	5.25	**3.15**
TY169	7.0	20	b	5.25	**3.15**
TY29	8.0	20	b	5.25	**3.15**
TY90	9.0	20	b	5.25	**3.15**
TY30	10.0	20	b	5.25	**3.15**
TY22	12.0	15	b	5.25	**3.15**
TY141	13.0	15	b	5.25	**3.15**
TY142	15.0	15	b	5.25	**3.15**
TY80	18.0	15	b	5.25	**3.15**
TY81	20.0	15	b	5.25	**3.15**
TY129	22.0	10	b	5.25	**3.15**
TY130	24.0	10	b	5.25	**3.15**
TY131	25.0	10	b	5.25	**3.15**
TY132	27.0	10	b	5.25	**3.15**
TY133	30.0	10	b	5.25	**3.15**
TY134	33.0	10	b	5.25	**3.15**
TY135	36.0	10	b	5.25	**3.15**
TY56	40.0	6	b	5.25	**3.15**

PAPER-MYLAR* DIELECTRIC SIDE-LEAD TUBULARS



Type **DPMS** is unique in that it is constructed with TWO dielectrics — Mylar* Polyester Film and a film of the very highest grade paper. The combination of the two thus provides the best features of both —

- ★ **HIGH TEMPERATURE OPERATION**
- ★ **HIGH INSULATION RESISTANCE**
- ★ **HIGH RELIABILITY**
- ★ **COMPACT — SPACE SAVING**
- ★ **IDEAL for Printed and Transistorized Circuitry**

"FIXFIL" impregnant, a C-D exclusive, assures stability of temperature characteristics. This solid thermosetting compound will not crack, soften or flow, even at maximum operating temperatures.

The **DPMS** has a "dipped" rock-hard casing which holds wire leads rigidly at fixed spacings. This tough, durable material has high humidity resistance, high dielectric strength against grounding and is unaffected by accidental contact with soldering iron. The crimped side-leads are space saving and permit uniform mounting of units parallel to the plane of the chassis or printed wiring board.

LEAD SPACING—INCHES

Case Length	Lead Spacing	Case Length	Lead Spacing	Case Length	Lead Spacing
.690	.250	1.150	.719	1.300	.844
.855	.438	1.160	.719	1.560	1.094
.870	.438	1.180	.719	1.600	1.094

TEMPERATURE RANGE: —55°C to +125°C
Derate Working Voltage by 25%
for over +100°C operation.

TOLERANCE: ± 10%

DPMS Cat. No.	Cap. Mfd.	Size—Inches Diam. x Length	List Price	Net Price
		200 W.V.D.C.		
DPMS 2S2	.02	.350 x .855	$.35	**$.20**
DPMS 2S47	.047	.450 x .855	.40	**.22**
DPMS 2S5	.05	.450 x .855	.40	**.22**
DPMS 2P1	.1	.470 x 1.180	.45	**.25**
DPMS 2P15	.15	.540 x 1.180	.50	**.29**
DPMS 2P22	.22	.590 x 1.300	.60	**.35**
DPMS 2P25	.25	.620 x 1.300	.60	**.40**
		400 W.V.D.C.		
DPMS 4S1	.01	.390 x .690	.30	**.17**
DPMS 4S15	.015	.430 x .690	.30	**.18**
DPMS 4S2	.02	.390 x .855	.35	**.20**
DPMS 4S22	.022	.400 x .855	.35	**.20**
DPMS 4S33	.033	.440 x .855	.40	**.22**
		400 W.V.D.C.		
DPMS 4S47	.047	.415 x 1.150	$ .45	**$.25**
DPMS 4S5	.05	.415 x 1.150	.45	**.25**
DPMS 4S68	.068	.440 x 1.180	.45	**.27**
DPMS 4P1	.10	.520 x 1.180	.50	**.29**
DPMS 4P15	.15	.560 x 1.300	.60	**.35**
DPMS 4P22	.22	.620 x 1.560	.75	**.43**
DPMS 4P25	.25	.650 x 1.560	.75	**.43**
		600 W.V.D.C.		
DPMS 6D1	.001	.340 x .690	.30	**.17**
DPMS 6D12	.0012	.340 x .690	.30	**.17**
DPMS 6D15	.0015	.340 x .690	.30	**.18**
DPMS 6D2	.002	.340 x .690	.30	**.18**
DPMS 6D22	.0022	.340 x .690	.30	**.18**
DPMS 6D25	.0025	.350 x .690	.30	**.18**
DPMS 6D27	.0027	.370 x .690	.30	**.18**
DPMS 6D3	.003	.370 x .690	.30	**.18**
DPMS 6D33	.0033	.370 x .690	.30	**.18**
DPMS 6D39	.0039	.370 x .690	.30	**.18**
DPMS 6D4	.004	.370 x .690	.30	**.18**
DPMS 6D47	.0047	.400 x .690	.30	**.18**
DPMS 6D5	.005	.400 x .690	.30	**.18**
DPMS 6D56	.0056	.415 x .690	.30	**.18**
DPMS 6D6	.006	.415 x .690	.30	**.18**
DPMS 6D68	.0068	.430 x .690	.30	**.18**
DPMS 6D75	.0075	.370 x .870	.30	**.18**
DPMS 6D8	.008	.370 x .870	.30	**.18**
DPMS 6D82	.0082	.370 x .870	.30	**.18**
DPMS 6S1	.01	.390 x .870	.30	**.19**
DPMS 6S12	.012	.400 x .870	.35	**.19**
DPMS 6S15	.015	.415 x .870	.35	**.19**
DPMS 6S2	.02	.445 x .870	.40	**.22**
DPMS 6S22	.022	.470 x .870	.40	**.22**
DPMS 6S25	.025	.400 x 1.150	.40	**.23**
DPMS 6S27	.027	.415 x 1.150	.40	**.23**
DPMS 6S3	.03	.415 x 1.150	.40	**.24**
DPMS 6S33	.033	.430 x 1.150	.40	**.24**
DPMS 6S39	.039	.470 x 1.150	.45	**.25**
DPMS 6S4	.04	.470 x 1.150	.45	**.25**
DPMS 6S47	.047	.490 x 1.150	.45	**.26**
DPMS 6S5	.05	.490 x 1.150	.45	**.26**
DPMS 6S56	.056	.520 x 1.180	.45	**.26**
DPMS 6S6	.06	.520 x 1.180	.45	**.26**
DPMS 6S68	.068	.540 x 1.300	.50	**.30**
DPMS 6S75	.075	.570 x 1.300	.55	**.32**
DPMS 6S82	.082	.590 x 1.300	.55	**.32**
DPMS 6P1	.10	.640 x 1.300	.60	**.35**
DPMS 6P15	.15	.650 x 1.560	.60	**.35**
DPMS 6P2	.20	.730 x 1.560	.75	**.43**
		1600 W.V.D.C.		
DPMS 16D1	.001	.350 x .870	.40	**.23**
DPMS 16D15	.0015	.375 x .870	.40	**.24**
DPMS 16D18	.0018	.400 x .870	.40	**.24**
DPMS 16D2	.002	.405 x .870	.40	**.24**
DPMS 16D22	.0022	.420 x .870	.45	**.25**
DPMS 16D25	.0025	.445 x .870	.45	**.25**
DPMS 16D3	.003	.475 x .870	.45	**.25**
DPMS 16D33	.0033	.480 x .870	.45	**.26**
DPMS 16D4	.004	.520 x .870	.45	**.27**
DPMS 16D47	.0047	.540 x .870	.50	**.28**
DPMS 16D5	.005	.565 x .870	.50	**.29**
DPMS 16D6	.006	.460 x 1.180	.50	**.30**
DPMS 16D7	.007	.485 x 1.180	.50	**.30**
DPMS 16D75	.0075	.495 x 1.180	.50	**.30**
DPMS 16D8	.008	.510 x 1.180	.55	**.31**
DPMS 16S1	.01	.525 x 1.180	.55	**.33**
DPMS 16S15	.015	.560 x 1.300	.65	**.37**
DPMS 16S2	.02	.570 x 1.600	.70	**.40**
DPMS 16S22	.022	.585 x 1.600	.80	**.46**
DPMS 16S25	.025	.620 x 1.600	.80	**.46**
DPMS 16S3	.03	.665 x 1.600	.80	**.46**
DPMS 16S33	.033	.695 x 1.600	.90	**.52**
DPMS 16S4	.04	.735 x 1.600	.90	**.52**
DPMS 16S47	.047	.785 x 1.600	1.00	**.58**
DPMS 16S5	.05	.815 x 1.600	1.00	**.58**

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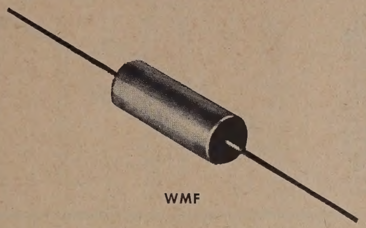
*DUPONT-TM

MYLAR* DIELECTRIC FILM-ENCASED



Type WMF is an ultra-compact Mylar dielectric tubular capacitor encased in a thin, tough Mylar film wrapping and end-sealed with a high density thermosetting plastic. A most desirable unit where a metal-cased unit is not indicated. The WMF is extremely small in size, has high resistance to humidity and excellent capacitance stability with temperature and life.

TEMPERATURE RANGE: —55°C. to +125°C.
Full rated voltage at 85°C.
Derate voltage 10% at 100°C.
Derate voltage 50% at 125°C.

TOLERANCE: ±10%.

WMF Cat. No.	Cap. Mfd.	Size—Inches Diam. x Length	List Price	Net Price
		100 WVDC		
WMF1D1E	.001	.156 x ½	$.35	**$.19**
WMF1D15E	.0015	.156 x ½	.35	**.19**
WMF1D22E	.0022	.156 x ½	.35	**.19**
WMF1D33E	.0033	.156 x ½	.35	**.19**
WMF1D47E	.0047	.156 x ½	.35	**.19**
WMF1D68E	.0068	.156 x ½	.35	**.19**
WMF1S1E	.01	.156 x ½	.35	**.20**
WMF1S15E	.015	.187 x ½	.35	**.20**
WMF1S22E	.022	.203 x ⅝	.35	**.21**
WMF1S33E	.033	.218 x ⅝	.40	**.22**
WMF1S47E	.047	.234 x ¾	.40	**.23**
WMF1S68E	.068	.265 x ¾	.40	**.24**
WMF1P1E	.1	.281 x ⅞	.45	**.25**
WMF1P15E	.15	.312 x ⅞	.50	**.29**
WMF1P22E	.22	.328 x 1	.55	**.32**
WMF1P33E	.33	.375 x 1⅛	.65	**.39**
WMF1P47E	.47	.437 x 1¼	.80	**.47**
WMF1P68E	.68	.531 x 1¼	.90	**.53**
WMF1W1E	1.0	.562 x 1½	1.10	**.65**
WMF1W1P25E	1.25	.625 x 1½	1.30	**.77**
WMF1W1P5E	1.5	.718 x 1¾	1.45	**.86**
WMF1W2E	2.0	.812 x 1¾	1.85	**1.10**
		200 WVDC		
WMF2D1E	.001	.156 x ½	.35	**.19**
WMF2D15E	.0015	.156 x ½	.35	**.19**
WMF2D22E	.0022	.156 x ½	.35	**.19**
WMF2D33E	.0033	.156 x ½	.35	**.19**
WMF2D47E	.0047	.156 x ½	.35	**.19**
WMF2D68E	.0068	.156 x ½	.35	**.19**
WMF2S1E	.01	.171 x ½	.40	**.23**
WMF2S15E	.015	.203 x ½	.40	**.23**
WMF2S22E	.022	.250 x ⅝	.40	**.23**
WMF2S33E	.033	.250 x ¾	.45	**.25**
		200 WVDC (cont'd)		
WMF2S47E	.047	.296 x ¾	$.45	**$ .25**
WMF2S68E	.068	.343 x ¾	.45	**.25**
WMF2P1E	.1	.375 x ⅞	.50	**.28**
WMF2P15E	.15	.453 x ⅞	.50	**.28**
WMF2P22E	.22	.437 x 1⅛	.65	**.39**
WMF2P33E	.33	.484 x 1⅛	.85	**.49**
WMF2P47E	.47	.546 x 1¼	.95	**.55**
WMF2P68E	.68	.609 x 1⅝	1.05	**.63**
WMF2W1E	1.0	.671 x 1¾	1.30	**.77**
WMF2W1P25E	1.25	.750 x 1¾	1.45	**.86**
WMF2W1P5E	1.5	.828 x 1¾	1.65	**.98**
WMF2W2E	2.0	.875 x 1⅞	1.95	**1.17**
		400 WVDC		
WMF4D1E	.001	.156 x ⅝	.40	**.23**
WMF4D15E	.0015	.156 x ⅝	.40	**.23**
WMF4D22E	.0022	.156 x ⅝	.40	**.23**
WMF4D33E	.0033	.156 x ⅝	.40	**.23**
WMF4D47E	.0047	.187 x ⅝	.40	**.23**
WMF4D68E	.0068	.218 x ⅝	.40	**.23**
WMF4S1E	.01	.250 x ⅝	.40	**.23**
WMF4S15E	.015	.296 x ⅝	.40	**.23**
WMF4S22E	.022	.312 x ¾	.45	**.25**
WMF4S33E	.033	.312 x ⅞	.45	**.25**
WMF4S47E	.047	.343 x ⅞	.50	**.28**
WMF4S68E	.068	.375 x 1	.55	**.32**
WMF4P1E	.1	.421 x 1	.65	**.39**
WMF4P15E	.15	.468 x 1¼	.80	**.47**
WMF4P22E	.22	.531 x 1⅜	.85	**.51**
WMF4P33E	.33	.562 x 1⅝	.95	**.57**
WMF4P47E	.47	.656 x 1⅝	1.10	**.65**
WMF4P68E	.68	.750 x 1¾	1.30	**.78**
WMF4W1E	1.0	.812 x 2	1.60	**.94**
WMF4W1P25E	1.25	.875 x 2	1.80	**1.06**
WMF4W1P5E	1.5	.875 x 2¼	1.95	**1.17**
WMF4W2E	2.0	1.062 x 2¼	2.70	**1.60**
		600 WVDC		
WMF6D1E	.001	.156 x ¾	.40	**.23**
WMF6D15E	.0015	.171 x ¾	.40	**.23**
WMF6D22E	.0022	.187 x ¾	.40	**.23**
WMF6D33E	.0033	.203 x ¾	.40	**.23**
WMF6D47E	.0047	.234 x ¾	.40	**.23**
WMF6D68E	.0068	.265 x ¾	.45	**.25**
WMF6S1E	.01	.312 x ¾	.45	**.25**
WMF6S15E	.015	.312 x ⅞	.50	**.28**
WMF6S22E	.022	.375 x ⅞	.50	**.28**
WMF6S33E	.033	.375 x 1	.55	**.32**
WMF6S47E	.047	.437 x 1	.65	**.39**
WMF6S68E	.068	.531 x 1	.80	**.47**
WMF6P1E	.1	.500 x 1⅜	.85	**.51**
WMF6P15E	.15	.625 x 1⅜	.95	**.57**
WMF6P22E	.22	.687 x 1⅝	1.15	**.67**
WMF6P33E	.33	.687 x 2	1.35	**.80**
WMF6P47E	.47	.812 x 2	1.75	**1.04**
WMF6P68E	.68	.937 x 2	2.60	**1.56**
WMF6W1E	1.0	1.125 x 2½	3.45	**2.05**
WMF6W1P25E	1.25	1.187 x 2½	4.05	**2.42**
WMF6W1P5E	1.5	1.187 x 3	4.65	**2.79**
WMF6W2E	2.0	1.375 x 3	5.90	**3.53**

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*Dupont TM.

CDE CORNELL-DUBILIER

MOLDED MYLAR* TUBULARS

CORNELL
DUBILIER
PM

PM

CDE type PM is a MYLAR* dielectric, high temperature, moisture resistant molded tubular capacitor. The thermoset molded case is tough and non-inflammable. The Mylar dielectric assures dependable operation under high humidity conditions, and it exhibits very high insulation resistance. Low RF impedance of these capacitors makes them ideal for all general bypass and coupling applications. High stability under changes in temperature makes these capacitors excellent replacements in tuned circuits.

TOLERANCE: ±10%

TEMPERATURE RANGE: —55°C to +130°C.

Derate voltage by 10% at 100°C; by 50% at 130°C. Full rating at 85°C.

PM Cat. No.	Cap. Mfd.	Dimensions—Inches Diameter x Length	List Price	Net Price
		200 V. D.C.W.		
PM 2S2	.02	⅜ x 1¼	$.40	**$ .22**
PM 2S47	.047	⅜ x 1¼	.40	**.24**
PM 2S5	.05	⅜ x 1¼	.40	**.24**
PM 2P1	.10	7/16 x 1¼	.50	**.30**
PM 2P15	.15	½ x 1½	.65	**.38**
PM 2P22	.22	½ x 1½	.75	**.43**
PM 2P25	.25	9/16 x 1 9/16	.75	**.43**
PM 2P47	.47	⅝ x 1⅞	1.10	**.65**
PM 2P5	.50	⅝ x 1⅞	1.10	**.65**
PM 2W1	1.00	¾ x 2¼	1.90	**1.13**
		400 V. D.C.W.		
PM 4S1	.01	5/16 x 1	.40	**.22**
PM 4S15	.015	⅜ x 1¼	.40	**.22**
		400 V. D.C.W. (Cont'd)		
PM 4S2	.02	⅜ x 1¼	$ .40	**$.23**
PM 4S22	.022	⅜ x 1¼	.40	**.23**
PM 4S33	.033	7/16 x 1¼	.40	**.24**
PM 4S47	.047	7/16 x 1¼	.45	**.25**
PM 4S5	.05	7/16 x 1¼	.45	**.25**
PM 4S68	.068	½ x 1½	.55	**.33**
PM 4P1	.10	½ x 1½	.60	**.35**
PM 4P15	.15	9/16 x 1 9/16	.75	**.45**
PM 4P22	.22	⅝ x 1⅞	.95	**.55**
PM 4P25	.25	⅝ x 1⅞	.95	**.55**
PM 4P33	.33	11/16 x 1 15/16	1.05	**.63**
PM 4P47	.47	¾ x 2¼	1.55	**.90**
PM 4P5	.50	¾ x 2¼	1.55	**.90**
PM 4P68	.68	1 x 2⅛	2.25	**1.35**
PM 4W1	1.00	1 x 2⅛	2.65	**1.59**
		600 V. D.C.W.		
PM 6T1	.0001	5/16 x 1	.40	**.22**
PM 6T25	.00025	5/16 x 1	.40	**.22**
PM 6T4	.0004	5/16 x 1	.40	**.22**
PM 6T5	.0005	5/16 x 1	.40	**.22**
PM 6D1	.001	5/16 x 1	.45	**.24**
PM 6D15	.0015	5/16 x 1	.45	**.24**
PM 6D2	.002	5/16 x 1	.45	**.24**
PM 6D22	.0022	5/16 x 1	.45	**.24**
PM 6D3	.003	5/16 x 1	.45	**.24**
PM 6D33	.0033	5/16 x 1	.45	**.24**
PM 6D4	.004	5/16 x 1	.45	**.24**
PM 6D47	.0047	5/16 x 1	.45	**.25**
PM 6D5	.005	5/16 x 1	.45	**.25**
PM 6D6	.006	5/16 x 1	.45	**.25**
PM 6D68	.0068	5/16 x 1	.45	**.25**
PM 6S1	.01	⅜ x 1¼	.40	**.24**
PM 6S15	.015	⅜ x 1¼	.45	**.25**
PM 6S2	.02	7/16 x 1¼	.45	**.27**
PM 6S22	.022	7/16 x 1¼	.45	**.27**
PM 6S3	.03	7/16 x 1¼	.50	**.30**
PM 6S33	.033	7/16 x 1¼	.50	**.30**
PM 6S4	.04	7/16 x 1¼	.50	**.30**
PM 6S47	.047	½ x 1½	.60	**.35**
PM 6S5	.05	½ x 1½	.60	**.35**
PM 6S6	.06	½ x 1½	.60	**.35**
PM 6S68	.068	½ x 1½	.65	**.38**
PM 6P1	.10	9/16 x 1 9/16	.85	**.49**
PM 6P15	.15	⅝ x 1⅞	1.05	**.61**
PM 6P2	.20	⅝ x 1⅞	1.20	**.72**
PM 6P22	.22	⅝ x 1⅞	1.20	**.72**
PM 6P25	.25	11/16 x 1 15/16	1.20	**.72**
PM 6P33	.33	¾ x 2¼	1.60	**.94**
PM 6P47	.47	¾ x 2¼	2.00	**1.20**
PM 6P5	.50	¾ x 2¼	2.00	**1.20**

*Dupont TM.

"*The* CUB" MOLDED TUBULAR

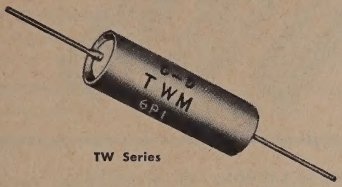
The Cornell-Dubilier "CUB" is an outstandingly superior molded paper tubular capacitor recommended for general replacement service. Sold exclusively through C-D electronic parts Distributors.

TEMP. RANGE: —55°C to + 100°C (units rated at 600 WVDC and over)

CUB Cat. No.	Cap. Mfd.	Size—Inches Dia. x Length	List Price	Net Price
		1000 V. D.C.		
CUB 10T5	.0005	⅜ x 1	$ .40	**$ .22**
CUB 10D1	.001	⅜ x 1	.40	**.22**
CUB 10D15	.0015	⅜ x 1	.40	**.22**
CUB 10D2	.002	⅜ x 1	.40	**.22**
CUB 10D22	.0022	⅜ x 1	.40	**.22**
CUB 10D3	.003	⅜ x 1	.40	**.23**
CUB 10D4	.004	7/16 x 1¼	.40	**.23**
CUB 10D47	.0047	7/16 x 1¼	.40	**.23**
CUB 10D5	.005	7/16 x 1¼	.40	**.23**
CUB 10D68	0068	7/16 x 1¼	.45	**.25**
CUB 10S1	01	7/16 x 1¼	.45	**.26**
CUB 10S15	.015	9/16 x 1½	.50	**.29**
CUB 10S2	.02	9/16 x 1½	.50	**.29**
CUB 10S22	.022	9/16 x 1½	.50	**.30**
CUB 10S3	.03	9/16 x 1½	.55	**.33**
CUB 10S35	.035	11/16 x 1⅞	.60	**.34**
CUB 10S47	.047	11/16 x 1⅞	.65	**.38**
CUB 10S5	.05	11/16 x 1⅞	.65	**.39**
CUB 10S68	.068	11/16 x 1⅞	.75	**.43**
CUB 10P1	.1	¾ x 2¼	1.00	**.59**
		1600 V. D.C.		
CUB 16T5	.0005	7/16 x 1¼	$ .55	**$ .43**
CUB 16D1	.001	7/16 x 1¼	.40	**.24**
CUB 16D15	.0015	7/16 x 1¼	.40	**.24**
CUB 16D2	.002	7/16 x 1¼	.40	**.24**
CUB 16D22	.0022	7/16 x 1¼	.45	**.25**
CUB 16D3	.003	7/16 x 1¼	.45	**.26**
CUB 16D33	.0033	7/16 x 1¼	.45	**.26**
CUB 16D4	.004	7/16 x 1¼	.45	**.27**
CUB 16D47	.0047	7/16 x 1¼	.50	**.27**
CUB 16D5	.005	7/16 x 1¼	.50	**.29**
CUB 16D6	.006	9/16 x 1½	.50	**.30**
CUB 16D68	.0068	9/16 x 1½	.50	**.30**
CUB 16D7	.007	9/16 x 1½	.50	**.30**
CUB 16D75	.0075	9/16 x 1½	.50	**.30**
CUB 16D8	.008	9/16 x 1½	.55	**.31**
CUB 16S1	.01	9/16 x 1½	.55	**.33**
CUB 16S15	.015	9/16 x 1½	.65	**.37**
CUB 16S2	.02	11/16 x 1⅞	.70	**.40**
CUB 16S22	.022	11/16 x 1⅞	.80	**.46**
CUB 16S3	.03	11/16 x 1⅞	.80	**.46**
CUB 16S4	.04	¾ x 2¼	.90	**.52**
CUB 16S5	.05	¾ x 2¼	1.00	**.58**
		6000 V. D.C.		
CUB 60T5	.0005	9/16 x 1½	2.85	**1.71**
CUB 60D1	.001	9/16 x 1½	2.85	**1.71**
CUB 60D5	.005	11/16 x 1⅞	2.85	**1.71**
		10,000 V. D.C.		
CUB 100T5	.0005	11/16 x 1⅞	3.20	**1.90**
		12,500 V. D.C.		
CUB 125T25	.00025	11/16 x 1⅞	3.60	**2.15**

CORNELL-DUBILIER

MINIATURE METAL-CASED TUBULARS "DEMICONS"



TW Series

Cornell-Dubilier DEMICONS are hermetically sealed in metal cases, with glass-to-metal seal terminals and are available in a wide variety of mounting styles, impregnants, tolerances, and internal construction. See Bulletins 147A and 151.

STANDARD TOLERANCE: ±20%.

TEMPERATURE RANGE:

TWH	High Temperature wax	—40°C to + 85°C.
TWC	"Dykanol C"*	—55°C to + 85°C.
TWU	"Dykanol U"*	—55°C to +125°C.
TWMA	"Mylar"** polyester film	—55°C to +160°C.†

†Full Rating at 85°C.
†Derate to 90% at 100°C.
†Derate to 50% at 125°C.
†Derate to 33% at 160°C.

PRICES shown below are for BASIC STYLE—UNGROUNDED.

*Registered Cornell-Dubilier trade mark. **Registered Dupont trade mark.

"BASIC" STYLE UNGROUNDED

TWH Cat. No.	Cap. Mfd.	V.D.C.W.	Size—Inches Dia. x Length	List Price	Net Price
TWH 1D1	.001	100	.175 x ¾	$2.25	$1.35
TWH 1D47	.0047	100	.175 x ¾	2.30	1.38
TWH 1S1	.01	100	.175 x ¾	2.30	1.38
TWH 1S22	.022	100	.175 x ¾	2.30	1.38
TWH 1S47	.047	100	.235 x ¾	2.35	1.41
TWH 1P1	.1	100	.312 x ⅞	2.50	1.50
TWH 1P22	.22	100	.400 x ⅞	2.55	1.53
TWH 1P47	.47	100	.400 x 1⅜	2.70	1.62
TWH 1W1	1.0	100	.562 x 1⅜	3.20	1.92
TWH 2D1	.001	200	.235 x ¾	2.35	1.41
TWH 2D47	.0047	200	.235 x ¾	2.40	1.44
TWH 2S1	.01	200	.235 x ¾	2.40	1.44
TWH 2S22	.022	200	.235 x ¾	2.40	1.44
TWH 2S47	.047	200	.312 x ⅞	2.50	1.50
TWH 2P1	.1	200	.312 x ⅞	2.60	1.56
TWH 2P47	.47	200	.562 x 1⅛	2.95	1.77
TWH 2W1	1.0	200	.562 x 1⅞	3.30	1.98
TWH 4D1	.001	400	.235 x ¾	2.40	1.44
TWH 4D47	.0047	400	.235 x ¾	2.45	1.47
TWH 4S1	.01	400	.235 x ¾	2.50	1.50
TWH 4S22	.022	400	.312 x ⅞	2.55	1.53
TWH 4S47	.047	400	.312 x ⅞	2.55	1.53
TWH 4P1	.1	400	.400 x 1⅛	2.70	1.62
TWH 4P47	.47	400	.562 x 1⅞	3.35	2.01
TWH 4W1	1.0	400	.750 x 2⅛	3.90	2.34

TWC Cat. No.	Cap. Mfd.	V.D.C.W.	Size—Inches Dia. x Length	List Price	Net Price
TWC 1D1	.001	100	.175 x ¾	$2.65	$1.59
TWC 1D47	.0047	100	.175 x ¾	2.65	1.59
TWC 1S1	.01	100	.175 x ¾	2.70	1.62
TWC 1S22	.022	100	.195 x ¾	2.75	1.65
TWC 1S47	.047	100	.312 x ⅞	2.90	1.74
TWC 1P1	.1	100	.312 x ⅞	2.95	1.77
TWC 1P47	.47	100	.562 x 1⅛	3.45	2.07
TWC 1W1	1.0	100	.562 x 1⅞	3.90	2.34
TWC 2D1	.001	200	.235 x ¾	2.75	1.65
TWC 2D47	.0047	200	.235 x ¾	2.80	1.68
TWC 2S1	.01	200	.235 x ¾	2.85	1.71
TWC 2S22	.022	200	.235 x ¾	3.00	1.80
TWC 2S47	.047	200	.312 x ⅞	3.00	1.80
TWC 2P1	.1	200	.400 x ⅞	3.10	1.86
TWC 2P22	.22	200	.400 x 1⅜	3.35	2.01
TWC 2P47	.47	200	.562 x 1⅜	3.70	2.22

TWC (cont'd)

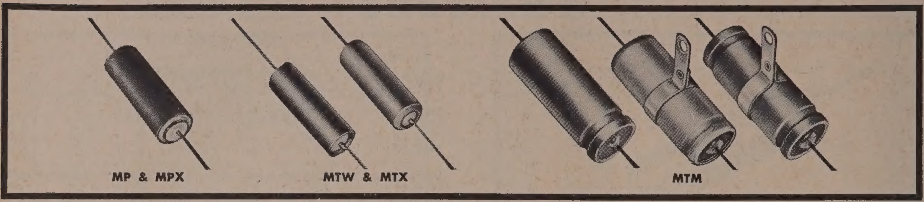
TWC Cat. No.	Cap. Mfd.	V.D.C.W.	Size—Inches Dia. x Length	List Price	Net Price
TWC 2W1	1.0	200	.670 x 1⅞	$4.35	$2.61
TWC 4D1	.001	400	.235 x ¾	3.15	1.89
TWC 4D47	.0047	400	.235 x ¾	2.90	1.74
TWC 4S1	.01	400	.235 x ¾	2.95	1.77
TWC 4S22	.022	400	.312 x ⅞	3.05	1.83
TWC 4S47	.047	400	.400 x ⅞	3.15	1.89
TWC 4P1	.1	400	.400 x 1⅜	3.35	2.01
TWC 4P22	.22	400	.562 x 1⅜	3.75	2.25
TWC 4P47	.47	400	.670 x 1⅞	4.30	2.58
TWC 6D1	.001	600	.235 x ¾	2.90	1.74
TWC 6D47	.0047	600	.235 x ¾	2.95	1.77
TWC 6S1	.01	600	.312 x ⅞	3.05	1.83
TWC 6S22	.022	600	.312 x ⅞	3.10	1.86
TWC 6S47	.047	600	.400 x 1⅛	3.25	1.95
TWC 6P1	.1	600	.562 x 1⅛	3.60	2.16
TWC 6P22	.22	600	.562 x 1⅞	4.00	2.40
TWC 6P47	.47	600	.750 x 2⅛	4.65	2.79

TWU Cat. No.	Cap. Mfd.	V.D.C.W.	Size—Inches Dia. x Length	List Price	Net Price
TWU 1D1	.001	100	.175 x ¾	$2.95	$1.77
TWU 1D47	.0047	100	.175 x ¾	2.95	1.77
TWU 1S1	.01	100	.175 x ¾	3.00	1.80
TWU 1S22	.022	100	.195 x ¾	3.00	1.80
TWU 1S47	.047	100	.312 x ⅞	3.20	1.92
TWU 1P1	.1	100	.312 x ⅞	3.25	1.95
TWU 1P47	.47	100	.562 x 1⅛	3.80	2.28
TWU 1W1	1.0	100	.562 x 1⅞	4.30	2.58
TWU 2D1	.001	200	.235 x ¾	3.05	1.83
TWU 2D47	.0047	200	.235 x ¾	3.10	1.86
TWU 2S1	.01	200	.235 x ¾	3.15	1.89
TWU 2S22	.022	200	.235 x ¾	3.15	1.89
TWU 2S47	.047	200	.312 x ⅞	3.30	1.98
TWU 2P1	.1	200	.400 x ⅞	3.40	2.04
TWU 2P22	.22	200	.400 x 1⅜	3.65	2.19
TWU 2P47	.47	200	.562 x 1⅜	4.10	2.46
TWU 2W1	1.0	200	.670 x 1⅞	4.75	2.85
TWU 4D1	.001	400	.235 x ¾	3.15	1.89
TWU 4D47	.0047	400	.235 x ¾	3.20	1.92
TWU 4S1	.01	400	.235 x ¾	3.25	1.95
TWU 4S22	.022	400	.312 x ⅞	3.35	2.01
TWU 4S47	.047	400	.400 x ⅞	3.50	2.10
TWU 4P1	.1	400	.400 x 1⅜	3.70	2.22
TWU 4P22	.22	400	.562 x 1⅜	4.10	2.46
TWU 4P47	.47	400	.670 x 1⅞	4.75	2.85
TWU 6D1	.001	600	.235 x ¾	3.20	1.92
TWU 6D47	.0047	600	.235 x ¾	3.25	1.95
TWU 6S1	.01	600	.312 x ⅞	3.35	2.01
TWU 6S22	.022	600	.312 x ⅞	3.40	2.04
TWU 6S47	.047	600	.400 x 1⅛	3.60	2.16
TWU 6P1	.1	600	.562 x 1⅛	3.95	2.37
TWU 6P22	.22	600	.562 x 1⅞	4.55	2.73
TWU 6P47	.47	600	.750 x 2⅛	5.35	3.21

TWMA Cat. No.	Cap. Mfd.	V.D.C.W.	Size—Inches Dia. x Length	List Price	Net Price
TWMA 1S1	.01	100	.235 x ⅞	$3.55	$2.13
TWMA 1S22	.022	100	.312 x ⅞	3.55	2.13
TWMA 1S47	.047	100	.312 x ⅞	3.75	2.25
TWMA 1P1	.1	100	.400 x ⅞	3.75	2.25
TWMA 4D47	.0047	400	.235 x ⅞	3.75	2.25
TWMA 4S1	.01	400	.312 x ⅞	3.80	2.28
TWMA 4S22	.022	400	.400 x ⅞	3.95	2.37
TWMA 4S47	.047	400	.400 x 1	4.10	2.46
TWMA 4P1	.1	400	.562 x 1	4.35	2.61
TWMA 4P22	.22	400	.562 x 1⅜	4.30	2.58
TWMA 4P47	.47	400	.670 x 1⅞	5.60	3.36
TWMA 4W1	1.0	400	.750 x 2½	6.70	4.02
TWMA 6D47	.0047	600	.312 x 1	3.80	2.28
TWMA 6S1	.01	600	.312 x 1	3.95	2.37
TWMA 6S22	.022	600	.400 x 1	4.00	2.40
TWMA 6S47	.047	600	.400 x 1⅜	4.20	2.52
TWMA 6P1	.1	600	.562 x 1⅜	4.65	2.79
TWMA 6P22	.22	600	.670 x 1⅝	5.15	3.09
TWMA 6P47	.47	600	.750 x 2⅜	6.05	3.63
TWMA 6W1	1.0	600	1 x 2 11/16	6.80	4.08

CORNELL-DUBILIER

COMPACT METALIZED-PAPER CAPACITORS



Cornell-Dubilier self-healing, metalized paper capacitors have better electrical characteristics and extra long service life. Units are light and compact.

"PUP" units have bare wire leads securely anchored in metal end-caps, wax-impregnated and dip-sealed against humidity. All units are extended foil—non-inductive wound for low impedance at high frequencies, have high insulation resistance, low power factor and small capacity change with temperature and life.

"METAPUPS" are one piece metal tubular cased, pressure sealed by spin-over on synthetic rubber gaskets.

"SEALPUPS" are a high quality metalized paper capacitor, designed for smallest size and positive seal against moisture. They are hermetically sealed in metal cases with solder—seal glass terminals. Especially recommended in military and commercial equipment where miniature size and light weight are paramount.

For further data on other style C-D metalized capacitors, write for Bulletins 142-3-4, 152 and 152-1, 185.

TEMPERATURE RANGE: —40°C to +70°C.

"PUP" METAL END-CAP CARDBOARD TUBULARS

MP Cat. No.	Cap. Mfd.	Voltage DCW	Size—Inches Diam. x Length	List Price	Net Price
MP 2S5	.05	200	⅜ x ⅝	$1.10	**$ .66**
MP 2P1	.1	200	⅜ x ⅝	1.25	**.75**
MP 2P25	.25	200	15/32 x ⅝	1.65	**.99**
MP 2P5	.5	200	15/32 x 1⅛	1.95	**1.17**
MP 2W1	1.0	200	9/16 x 1⅛	2.60	**1.57**
MP 2W2	2.0	200	⅝ x 1⅝	3.55	**2.14**
MP 4S5	.05	400	15/32 x ⅝	1.15	**.70**
MP 4P1	.1	400	15/32 x 1⅛	1.40	**.83**
MP 4P25	.25	400	9/16 x 1⅛	1.80	**1.09**
MP 4P5	.5	400	⅝ x 1⅝	2.30	**1.39**
MP 4W1	1.0	400	23/32 x 2⅛	3.25	**1.94**
MP 6S1	.01	600	⅜ x ⅝	1.10	**.66**
MP 6P1	.1	600	15/32 x 1⅛	1.45	**.86**
MP 6P25	.25	600	⅝ x 1⅛	2.25	**1.35**
MP 6P5	.5	600	23/32 x 1⅝	2.80	**1.69**
MP 6W1	1.0	600	23/32 x 2⅛	3.50	**2.10**

TEMPERATURE RANGE: —55°C to +95°C.

"METAPUP" ONE-PIECE METAL TUBULARS
STYLE A (Ungrounded)

MTM Cat. No.	Cap. Mfd.	Voltage DCW	Size—Inches Diam. x Length	* List Price	Net Price
MTM 2S5	.05	200	⅜ x 15/16	$2.95	**$1.78**
MTM 2P1	.1	200	7/16 x 15/16	3.10	**1.87**
MTM 2P25	.25	200	½ x 15/16	3.45	**2.06**
MTM 2P5	.5	200	½ x 1¼	3.75	**2.25**
MTM 2W1	1.0	200	⅝ x 1 7/16	4.40	**2.66**
MTM 2W2	2.0	200	⅝ x 1 15/16	5.50	**3.29**
MTM 4S5	.05	400	7/16 x 15/16	3.10	**1.87**
MTM 4P1	.1	400	7/16 x 1¼	3.30	**1.98**
MTM 4P25	.25	400	⅝ x 1¼	3.85	**2.30**
MTM 4P5	.5	400	⅝ x 1 15/16	4.30	**2.58**
MTM 4W1	1.0	400	¾ x 2 7/16	5.40	**3.25**
MTM 4W2	2.0	400	1 x 2 7/16	7.80	**4.68**
MTM 6S1	.01	600	⅜ x 15/16	3.15	**1.91**
MTM 6P1	.1	600	½ x 1 7/16	3.45	**2.06**
MTM 6P25	.25	600	⅝ x 1 9/16	4.25	**2.54**
MTM 6P5	.5	600	¾ x 1 15/16	4.75	**2.86**
MTM 6W1	1.0	600	13/16 x 2 7/16	5.55	**3.34**

*DEDUCT 10¢ from List Price for Basic GROUNDED style.

TEMPERATURE RANGE: —55°C to +95°C.

"SEALPUP" GLASS-METAL END-SEALED TUBULARS
STYLE A (Ungrounded)

MTW Cat. No.	Cap. Mfd.	Voltage DCW	Size—Inches Diam. x Length	* List Price	Net Price
MTW 2S5	.05	200	.235 x ¾	$3.55	**$2.13**
MTW 2P1	.1	200	.312 x ¾	3.65	**2.20**
MTW 2P25	.25	200	.312 x 1 1/16	3.95	**2.38**
MTW 2P5	.5	200	.400 x 1 1/16	4.35	**2.62**
MTW 2W1	1.0	200	.562 x 1¼	4.70	**2.82**
MTW 2W15	1.5	200	.562 x 1¾	6.70	**4.01**
MTW 2W2	2.0	200	.562 x 1¾	6.70	**4.01**
MTW 4S5	.05	400	.400 x ¾	3.75	**2.24**
MTW 4P1	.1	400	.400 x 1 1/16	3.80	**2.28**
MTW 4P25	.25	400	.562 x 1 1/16	4.40	**2.65**
MTW 4P5	.5	400	.562 x 1¾	5.30	**3.19**
MTW 4W1	1.0	400	.670 x 2¼	5.65	**3.39**
MTW 6S1	.01	600	.312 x ¾	3.55	**2.13**
MTW 6P1	.1	600	.500 x 1¼	3.95	**2.36**
MTW 6P25	.25	600	.670 x 1⅜	4.65	**2.81**
MTW 6P5	.5	600	.750 x 1¾	5.50	**3.29**
MTW 6W1	1.0	600	.750 x 2¼	6.10	**3.66**

*DEDUCT 50¢ from List Price for Basic GROUNDED style.

CORNELL-DUBILIER

HIGH TEMPERATURE Metalized-Paper CAPACITORS

- **POLYKANE-IMPREGNATED:** This impregnant insures excellent electrical properties over long service life.
- **MOISTURE RESISTANT:** MTX tubulars have the finest glass-to-metal solder seal terminals for maximum protection against moisture. MPX tubulars have POLYKANE-impregnated paper tubes, bonded securely to the POLYKANE fill. An external flash wax dip provides an increased moisture seal for extra long storage and service conditions under extremes of humidity.
- **NON-LEAKING:** "POLYKANE" is a solid thermosetting plastic that will not soften, crack, or leak at the maximum temperature. No oil or wax is used internally with these units.

MPX†—HIGH TEMPERATURE Paper-Cased TUBULARS

STANDARD TOLERANCE: +40 —20% to 1 mfd.
+30 —20% over 1 mfd.

TEMP. RANGE: —35°C to +100°C

MPX Cat. No.	Cap. Mfd.	Voltage DCW	Size—Inches Dia. x Length	List Price	Net Price
MPX 2S5	.05	200	¼ x 13/16	$1.10	**$ .66**
MPX 2P1	.10	200	5/16 x 13/16	1.25	**.75**
MPX 2P25	.25	200	13/32 x 13/16	1.65	**.99**
MPX 2P5	.50	200	13/32 x 1⅛	1.95	**1.17**
MPX 2W1	1.0	200	9/16 x 1 3/16	2.60	**1.57**
MPX 2W2	2.0	200	⅝ x 1½	3.55	**2.14**
MPX 4S5	.05	400	⅜ x 13/16	1.15	**.70**
MPX 4P1	.10	400	⅜ x 1⅛	1.40	**.83**
MPX 4P25	.25	400	9/16 x 1 3/16	1.80	**1.09**
MPX 4P5	.50	400	⅝ x 1⅜	2.30	**1.39**
MPX 4W1	1.0	400	11/16 x 1⅞	3.25	**1.94**
MPX 6S1	.01	600	¼ x 13/16	1.10	**.66**
MPX 6P1	.10	600	¼ x 1⅛	1.45	**.86**
MPX 6P25	.25	600	⅝ x 1 3/16	2.25	**1.35**
MPX 6P5	.50	600	11/16 x 1½	2.80	**1.69**
MPX 6W1	1.0	600	13/16 x 1⅞	3.50	**2.10**
MPX 6W2	2.0	600	1 x 2⅜	3.50	**2.10**

†For High Temperature Metalized Paper Capacitors in "BATHTUB" TYPE cases (Type SBX)—See Bulletin 152-1.

MTX†—HIGH TEMPERATURE Metal-Cased‡ TUBULARS

STYLE BASIC (Ungrounded)

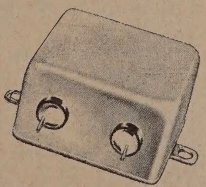
STANDARD TOLERANCE: +40 —20% to 1 mfd.
+30 —20% over 1 mfd.

TEMP. RANGE: —55°C to +130°C
Derate voltage by 25% for operation at +130°C.
No derating at 100°C.

MTX Cat. No.	Cap. Mfd.	Voltage DCW	Size—Inches Diam. x Length	* List Price	Net Price
MTX 2S5	.05	200	.235 x 13/16	$3.55	**$2.13**
MTX 2P1	.10	200	.312 x 13/16	3.65	**2.20**
MTX 2P25	.25	200	.312 x 1⅛	3.95	**2.38**
MTX 2P5	.50	200	.400 x 1⅛	4.35	**2.62**
MTX 2W1	1.0	200	.562 x 1⅛	4.70	**2.82**
MTX 2W1P5	1.5	200	.562 x 1 7/16	6.70	**4.01**
MTX 2W2	2.0	200	.562 x 1 13/16	6.70	**4.01**
MTX 4S5	.05	400	.312 x 13/16	3.75	**2.24**
MTX 4P1	.10	400	.400 x 1⅛	3.80	**2.28**
MTX 4P25	.25	400	.500 x 1⅛	4.40	**2.65**
MTX 4P5	.50	400	.562 x 1 13/16	5.30	**3.19**
MTX 4W1	1.0	400	.670 x 2 5/16	5.65	**3.39**
MTX 6S1	.01	600	.312 x 13/16	3.55	**2.13**
MTX 6P1	.10	600	.400 x 1⅛	3.95	**2.36**
MTX 6P25	.25	600	.562 x 1 5/16	4.65	**2.81**
MTX 6P5	.50	600	.670 x 1 13/16	5.50	**3.29**
MTX 6W1	1.0	600	.750 x 2 5/16	6.10	**3.66**

‡Other Styles available—See Bulletins NB-142, 3, 4 and 152.
*DEDUCT 50¢ from List for Basic GROUNDED style.

METAL CASED DYKANOL PAPER CAPACITORS



TYPE DYR
(Similar to CP53)

Type DYR Dykanol Bypass Capacitors are non-inductively wound and meet the need for dependable capacitors of fractional capacities that will operate efficiently in R.F. and A.F. bypass, audio frequency coupling under all humidity conditions. They are built to meet MIL-C-25A performance and test requirements and have been specially designed to fill the severe requirements of aircraft, submarine, marine and tropical applications.

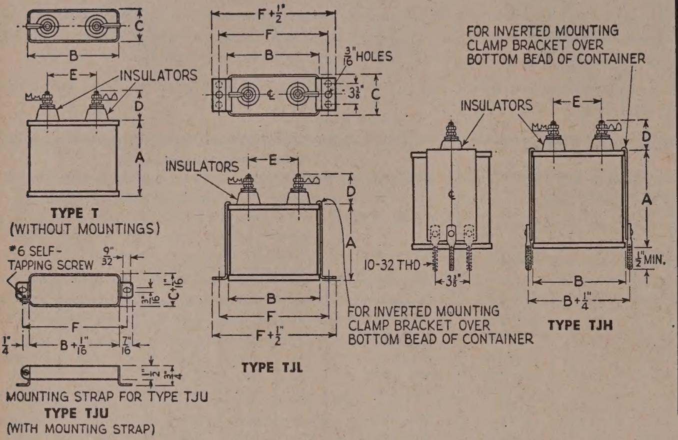
TEMPERATURE RANGE: —55°C to +85°C.

STANDARD TOLERANCE: +20%, —10%.

DYR Cat. No.	Cap. Mfd.	Size—Inches L. x W. x T.	List Price	Net Price
		600 V. D.C. Work.		
DYR 6005	.05	1 13/16 x 1 x ¾	$3.80	**$2.27**
DYR 6010	.1	1 13/16 x 1 x ¾	3.90	**2.34**
DYR 6025	.25	1 13/16 x 1 x ¾	4.10	**2.45**
DYR 6050	.5	1 13/16 x 1 x ⅞	4.40	**2.63**
DYR 6100	1	2 x 1¾ x ⅞	5.05	**3.02**
DYR 6200	2	2 x 2 x 1⅛	6.75	**4.03**
DYR 60055	.05-.05	1 13/16 x 1 x ¾	5.25	**3.13**
DYR 6011	.1-.1	1 13/16 x 1 x ¾	5.35	**3.20**
DYR 6022X	.25-.25	1 13/16 x 1 x ⅞	5.55	**3.31**
DYR 6055	.5-.5	2 x 1¾ x ⅞	6.20	**3.71**
DYR 6110	1.-1.	2 x 2 x 1⅛	7.60	**4.54**
DYR 6111	.1-.1-.1	1 13/16 x 1 x ¾	6.15	**3.67**
DYR 6222	.25-.25-.25	2 x 1¾ x 13/16	6.80	**4.07**
DYR 6555	.5-.5-.5	2 x 2 x 1⅛	8.40	**5.04**
		1000 V. D.C. Work.		
DYR 10005	.05	1 13/16 x 1 x ¾	4.00	**2.38**
DYR 10010	.1	1 13/16 x 1 x ¾	4.15	**2.48**
DYR 10025	.25	1 13/16 x 1 x ¾	4.30	**2.56**
DYR 10050	.5	2 x 1¾ x 13/16	4.60	**2.74**
DYR 10100	1	2 x 2 x 1⅛	6.20	**3.71**
DYR 100055	.05-.05	1 13/16 x 1 x ¾	5.40	**3.24**
DYR 10011	.1-.1	1 13/16 x 1 x ¾	5.55	**3.31**
DYR 10022	.25-.25	2 x 1¾ x 13/16	6.00	**3.60**
DYR 10055	.5-.5	2 x 2 x 1⅛	7.90	**4.72**
DYR 10111X	.1-.1-.1	2 x 1¾ x ⅞	6.80	**4.07**
DYR 10222	.25-.25-.25	2 x 2 x 1⅛	8.50	**5.08**

CDE CORNELL-DUBILIER

DYKANOL TRANSMITTING CAPACITORS


C
B
E
INSULATORS
D
A
TYPE T
(WITHOUT MOUNTINGS)
#6 SELF-TAPPING SCREW
9/32"
C+1/16
5/16
F
1/4"
B+1/16"
7/16"
1/2
MOUNTING STRAP FOR TYPE TJU
TYPE TJU
(WITH MOUNTING STRAP)
F+1/2"
F
B
3/16" HOLES
3 3/8"
C
INSULATORS
E
D
A
B
F
F+1/2"
FOR INVERTED MOUNTING CLAMP BRACKET OVER BOTTOM BEAD OF CONTAINER
TYPE TJL
FOR INVERTED MOUNTING CLAMP BRACKET OVER BOTTOM BEAD OF CONTAINER
INSULATORS
E
D
A
10-32 THD
3 3/8"
1/2" MIN.
B
B+1/4"
TYPE TJH

DYKANOL A
T 20010
1 MFD.
2000 V.D.C.
Made in U. S. A.
Cornell-Dubilier Elec. Corp.
So. Plainfield, N. J.

TYPE T
(Similar to CP70)
Provided with mounting brackets designated upon ordering as explained below.

TYPE DESIGNATIONS—Type T (basic units) are without mountings. To order Types TJH, TJL or TJU with mountings as shown above, add letter symbols of type mountings desired to Cat. No. as follows:

TYPE T—(Basic unit) without mountings.
TYPE TJH—With screw spade-lug brackets.
TYPE TJL—With mounting foot brackets.
TYPE TJU—With universal mounting strap.

Prices below do not include mounting brackets or universal mounting strap.

TEMPERATURE RANGE: —55° to +85°C. STANDARD TOLERANCE: ± 10%.

T Cat. No.	Cap. Mfd.	Dimensions—Inches A	B	C	D	E	F	List Price	Net Price
		600 V. D.C. Working							
T 6005	.5	2⅛	1 13/16	1 1/16	⅞	13/16	2¼	$4.90	**$2.96**
T 6010	1	2⅛	1 13/16	1 1/16	⅞	13/16	2¼	5.55	**3.34**
T 6020	2	2⅞	1 13/16	1 1/16	⅞	13/16	2¼	6.50	**3.89**
T 6030	3	3⅞	1 13/16	1 1/16	⅞	13/16	2¼	8.75	**5.26**
T 6040	4	3⅜	2½	1 3/16	⅞	1⅛	3	8.75	**5.26**
T 6050	5	4¾	1 13/16	1 1/16	⅞	13/16	2¼	10.55	**6.34**
T 6060	6	4⅝	2½	1 3/16	⅞	1⅛	3	10.55	**6.34**
T 6080	8	3 13/16	3¾	1¼	⅞	2	4⅜	12.65	**7.59**
T 6100	10	4⅝	3¾	1¼	⅞	2	4⅜	14.65	**8.78**
		1000 V. D.C. Working							
T 10001	.1	2	1 13/16	1 1/16	⅞	13/16	2¼	5.45	**3.28**
T 100025	.25	2⅛	1 13/16	1 1/16	⅞	13/16	2¼	5.55	**3.32**
T 10005	.5	2⅛	1 13/16	1 1/16	⅞	13/16	2¼	5.70	**3.41**
T 10010	1	2⅛	1 13/16	1 1/16	⅞	13/16	2¼	6.10	**3.65**
T 10020	2	4	1 13/16	1 1/16	⅞	13/16	2¼	7.40	**4.44**
T 10030	3	3½	2½	1 3/16	⅞	1⅛	3	9.80	**5.88**
T 10040	4	4⅝	2½	1 3/16	⅞	1⅛	3	9.80	**5.88**
T 10050	5	3 13/16	3¾	1¼	⅞	2	4⅜	12.20	**7.33**
T 10060	6	4¾	3¾	1¼	⅞	2	4⅜	12.20	**7.33**
T 10080X	8	3⅞	3¾	1¾	⅞	2	4⅜	14 50	**8.71**
T 10100	10	4⅝	3¾	1¾	⅞	2	4⅜	16.95	**10.17**
T 10120	12	3 13/16	3¾	2¼	⅞	2	4⅜	19.80	**11.87**
T 10150	15	4¾	3¾	2½	⅞	2	4⅜	23.85	**14.31**
		1500 V. D.C. Working							
T 15005	.5	2⅞	1 13/16	1 1/16	⅞	13/16	2¼	5.75	**3.44**
T 15010X	1	3⅞	1 13/16	1 1/16	⅞	13/16	2¼	6.75	**4.04**
T 15020X	2	4¼	2½	1 3/16	⅞	1⅛	3	8.95	**5.36**
T 15030	3	4¾	2½	1 3/16	⅞	1⅛	3	13.15	**7.89**
T 15040X	4	4¾	3¾	1¼	⅞	2	4⅜	13.15	**7.89**
T 15050	5	4¾	3¾	1¾	⅞	2	4⅜	17.45	**10.46**
T 15060	6	4¾	3¾	1¾	⅞	2	4⅜	17.45	**10.46**
T 15080	8	4¾	3¾	2½	⅞	2	4⅜	21.90	**13.14**
***T 15100**	10	4¾	3¾	3 3/16	⅞	2	4⅜	25.85	**15.52**
***T 15120**	12	4¾	3¾	3 3/16	⅞	2	4⅜	30.15	**18.09**
†*T 15150	15	4¾	3¾	4 3/16	⅞	2	4⅜	36.50	**21.89**
		2000 V. D.C. Working							
T 20001	.1	2⅛	1 13/16	1 1/16	⅞	13/16	2¼	$7.45	**$4.46**
T 200025	.25	2⅛	1 13/16	1 1/16	⅞	13/16	2¼	7.95	**4.78**
T 20005	.5	2⅞	1 13/16	1 1/16	⅞	13/16	2¼	8.60	**5.17**
T 20010	1	3⅜	2½	1 3/16	1	1⅛	3	10.20	**6.11**
T 20020	2	4	3¾	1¼	1	2	4⅜	12.95	**7.76**
T 20030	3	4¾	3¾	1¼	1	2	4⅜	18.35	**11.01**
T 20040	4	3 13/16	3¾	2¼	1	2	4⅜	18.35	**11.01**
T 20050	5	4¾	3¾	2¼	1	2	4⅜	22.35	**13.42**
***T 20060**	6	4¾	3¾	3 3/16	1	2	4⅜	22.35	**13.42**
***T 20080**	8	4¾	3¾	3 3/16	1	2	4⅜	28.10	**16.86**
†*T 20100	10	4¾	3¾	4 9/16	1	2	4⅜	33.25	**19.94**
†*T 20120	12	5⅜	3¾	4 9/16	1	2	4⅜	38.70	**23.21**
		2500 V. D.C. Working							
T 25005	.5	3½	3¾	1¼	1	2	4⅜	12.30	**7.39**
T 25010	1	3¼	3¾	1¾	1	2	4⅜	14.40	**8.63**
T 25020	2	4¾	3¾	1¾	1	2	4⅜	18.85	**11.32**
†*T 25040	4	4	3¾	4 9/16	1	2	4⅜	28.15	**16.89**
†*T 25100A	10	6⅜	3¾	4 9/16	1	2	4⅜	53.80	**32.27**
		3000 V. D.C. Working							
T 30001	.1	2	2½	1 3/16	1	1⅛	1	14.85	**8.92**
T 300025	.25	2½	2½	1 3/16	1	1⅛	3	16.50	**9.89**
T 30005	.5	3⅞	2½	1 3/16	1	1⅛	3	17.65	**10.61**
T 30010	1	3 13/16	3¾	2¼	1	2	4¾	21.10	**12.66**
***T 30020**	2	4⅛	3¾	3 3/16	1	2	4⅜	27.30	**16.38**
†*T 30040	4	4¾	3¾	4 9/16	1	2	4⅜	38.05	**22.83**
		4000 V. D.C. Working							
T 40001	.1	2¾	3¾	2¼	2¼	2	4⅜	16.00	**9.61**
T 400025	.25	2¾	3¾	2¼	2¼	2	4⅜	17.15	**10.30**
T 40005	.5	4	3¾	2¼	2¼	2	4⅜	19.45	**11.67**
T 40010	1	5	3¾	2¼	2¼	2	4⅜	24.55	**14.72**
†*T 40020	2	5	3¾	4 9/16	2¼	2	4⅜	32.85	**19.71**
†*T 40040A	4	8	3¾	4 9/16	2¼	1¾	4⅜	52.35	**31.42**
		5000 V. D.C. Working							
T 50005	.5	4¼	3¾	2¼	2¼	2	4⅜	21.85	**13.10**
†*T 50010	1	4¼	3¾	4 9/16	2¼	2	4⅜	29.60	**17.77**
†*T 50020	2	6	3¾	4 9/16	2¼	2	4⅜	45.15	**27.09**
		6000 V. D.C. Working							
T 60001	.1	2¾	3¾	2¼	2¼	1¾	4⅜	22.95	**13.78**
†*T 60010A	1	5	3¾	4 9/16	2¼	1¾	4⅜	40.80	**24.49**

NOTES—*Type TJU units are not furnished in these larger sizes.
† Types TJL and TJH units furnished with two mounting holes or spade lugs 3⅜" apart. All other units furnished with a single mounting hole or spade lug centered on each bracket.

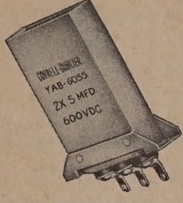
For higher voltage units, from 6,000 to 25,000 v.d.c., write for data and prices on Type TK capacitors.

CORNELL-DUBILIER CDE

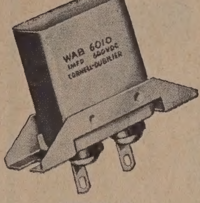
METAL CASED DYKANOL PAPER CAPACITORS

CORNELL-DUBILIER
YAT-6055
2X.5 MFD
600VDC

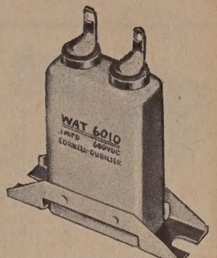
TYPE YAT
(Similar to CP67)


CORNELL-DUBILIER
YAB-6055
2X.5 MFD
600VDC

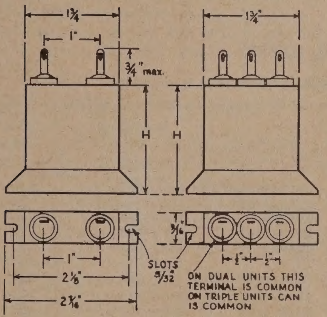
TYPE YAB
(YAB—Similar to CP69)


WAB 6010
1MFD 600VDC
CORNELL-DUBILIER

TYPE WAB
(Similar to CP65)


WAT 6010
1MFD 600VDC
CORNELL-DUBILIER

TYPE WAT
(Similar to CP63)


1¾
1"
¾" max.
H
H
1¾"
9/16
1"
2⅛"
2 3/16"
SLOTS
5/32
½
½
ON DUAL UNITS THIS TERMINAL IS COMMON ON TRIPLE UNITS CAN IS COMMON

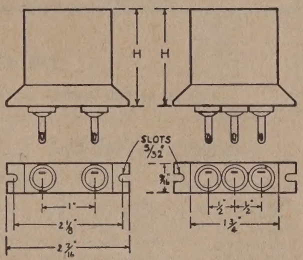
TYPE YAT

Types YAT and YAB are impregnated and filled with Dykanol "G" (chlorinated diphenyl) a synthetic, non-inflammable, non-oxidizable liquid compound. They are especially suited for use in bypass, audio frequency coupling circuits and other applications. Units are sealed in drawn metal shell containers and provided with leakproof terminals either on top or bottom of the can containers, designated as Types YAT and YAB. They will meet MIL-C-25A performance and test requirements.

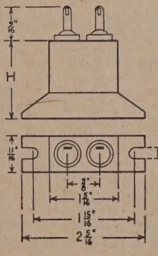
TEMPERATURE RANGE: —55°C to +85°C.

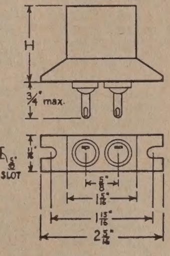
STANDARD TOLERANCE: +20%, —10%.

YAT-YAB Cat. No.	Cap. Mfd.	Case Size—Inches L. x W. x H.	List Price	Net Price
		600 V. D.C. Work.		
YAT or **YAB 6005**	.05	1¾ x 9/16 x 1 1/16	$4.55	**$2.72**
YAT or **YAB 6010**	.1	1¾ x 9/16 x 1 1/16	4.75	**2.83**
YAT or **YAB 6025**	.25	1¾ x 9/16 x 1½	4.85	**2.91**
YAT or **YAB 6050X**	.5	1¾ x 9/16 x 2	5.05	**3.02**
YAT or **YAB 6100**	1.0	1¾ x 9/16 x 2½	5.60	**3.34**
YAT or **YAB 60055**	.05-.05	1¾ x 9/16 x 1 1/16	5.55	**3.32**
YAT or **YAB 6011**	.1-.1	1¾ x 9/16 x 1½	5.70	**3.41**
YAT or **YAB 6022X**	.25-.25	1¾ x 9/16 x 2	6.15	**3.67**
YAT or **YAB 6055**	.5-.5	1¾ x 9/16 x 2½	6.70	**4.01**
YAT or **YAB 60555**	.05-.05-.05	1¾ x 9/16 x 1 1/16	6.70	**4.01**
YAT or **YAB 6111**	.1-.1-.1	1¾ x 9/16 x 1½	7.15	**4.10**
YAT or **YAB 6222**	.25-.25-.25	1¾ x 9/16 x 2½	7.35	**4.40**
		1000 V. D.C. Work.		
YAT or **YAB 10005**	.05	1¾ x 9/16 x 1 1/16	4.65	**2.78**
YAT or **YAB 10010**	.1	1¾ x 9/16 x 1 1/16	4.80	**2.87**
YAT or **YAB 10025X**	.25	1¾ x 9/16 x 2	4.95	**2.95**
YAT or **YAB 10050**	.5	1¾ x 9/16 x 2½	5.40	**3.22**
YAT or **YAB 100055**	.05-.05	1¾ x 9/16 x 1 1/16	5.70	**3.39**
YAT or **YAB 10011**	.1-.1	1¾ x 9/16 x 1½	5.90	**3.54**
YAT or **YAB 10022**	.25-.25	1¾ x 9/16 x 2½	6.30	**3.76**
YAT or **YAB 100555**	.05-.05-.05	1¾ x 9/16 x 1½	6.80	**4.08**
YAT or **YAB 10111**	.1-.1-.1	1¾ x 9/16 x 2½	7.05	**4.22**


H
H
SLOTS
5/32"
9/16
1"
2⅛"
2 3/16"
½
½
1¾"

TYPE YAB


9/16"
H
11/16"
5/8"
1 5/16"
1 15/16"
2 5/16"


5/32" SLOT
H
¾" max.
11/16"
5/8"
1 5/16"
1 15/16"
2 5/16"

TYPE WAT **TYPE WAB**

Types WAT and WAB Capacitors are smaller size units of similar construction and electrical characteristics but only supplied in single section units with two terminals. These units are ideally suited for use in assemblies where space is limited and multiple units may be mounted close together. They will meet MIL-C-25A performance and test requirements.

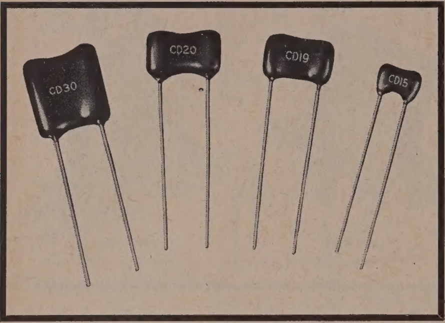
TEMPERATURE RANGE: —55°C to +85°C.

STANDARD TOLERANCE: +20%, —10%.

WAT-WAB Cat. No.	Cap. Mfd.	Case Size—Inches L. x W. x H.	List Price	Net Price
		600 V. D.C. Work.		
WAT or **WAB 6005X**	.05	1 5/16 x 11/16 x 1 1/16	$3.75	**$2.22**
WAT or **WAB 6010**	.1	1 5/16 x 11/16 x 1⅜	3.90	**2.33**
WAT or **WAB 6025**	.25	1 5/16 x 11/16 x 1⅝	4.05	**2.42**
WAT or **WAB 6050**	.5	1 5/16 x 11/16 x 2	4.15	**2.49**
WAT or **WAB 6100**	1.0	1 5/16 x 11/16 x 2½	4.70	**2.81**
		1000 V. D.C. Work.		
WAT or **WAB 10005**	.05	1 5/16 x 11/16 x 1⅜	3.90	**2.32**
WAT or **WAB 10010**	.1	1 5/16 x 11/16 x 1⅜	4.05	**2.40**
WAT or **WAB 10025**	.25	1 5/16 x 11/16 x 2	4.15	**2.47**
WAT or **WAB 10050**	.5	1 5/16 x 11/16 x 2½	4.55	**2.70**

CORNELL-DUBILIER

MINIATURE DIPPED SILVERED MICA CAPACITORS



- Designed to Replace Molded Mica or Ceramic Capacitors in Critical Circuits
- Silvered Mica Assures Close Temperature Coefficient and High Stability
- Operate at Temperatures from —55°C to +125°C without Derating, and to 150°C with Derating
- Multi-Coated with Tough Phenolic to Withstand Extremes of Heat and Humidity
- Meet Specifications of EIA and MIL-C-5B (Proposed)

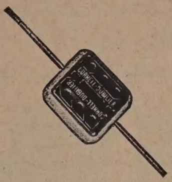
TYPE CD15, CD19, CD20, CD30

Rated at 500 WVDC . . . Tolerance ±5% or 0.5 MMF (whichever is greater)

Cap. MMF	Cat. No.	Size—Inches Lgth. x Wid. x Thick.	List Price	Net Price
1	**CD15-5V1**	.440 x .344 x .180	$.20	**$.12**
2	**CD15-5V2**	.440 x .344 x .180	.20	**.12**
3	**CD15-5V3**	.440 x .344 x .180	.20	**.12**
5	**CD15-5V5**	.440 x .344 x .180	.20	**.12**
10	**CD15-5Q1**	.440 x .344 x .180	.20	**.12**
12	**CD15-5Q12**	.440 x .344 x .180	.20	**.12**
15	**CD15-5Q15**	.440 x .344 x .180	.20	**.12**
18	**CD15-5Q18**	.440 x .344 x .180	.20	**.12**
20	**CD15-5Q2**	.440 x .344 x .180	.20	**.12**
22	**CD15-5Q22**	.440 x .344 x .180	.20	**.12**
24	**CD15-5Q24**	.440 x .344 x .190	.20	**.12**
27	**CD15-5Q27**	.440 x .344 x .190	.20	**.12**
30	**CD15-5Q3**	.440 x .344 x .190	.20	**.12**
33	**CD15-5Q33**	.440 x .344 x .190	.20	**.12**
36	**CD15-5Q36**	.440 x .344 x .190	.20	**.12**
39	**CD15-5Q39**	.440 x .344 x .190	.20	**.12**
43	**CD15-5Q43**	.440 x .344 x .190	.20	**.12**
47	**CD15-5Q47**	.440 x .344 x .190	.20	**.12**
50	**CD15-5Q5**	.440 x .344 x .190	.20	**.12**
51	**CD15-5Q51**	.440 x .344 x .200	.20	**.12**
56	**CD15-5Q56**	.440 x .344 x .200	.20	**.12**
62	**CD15-5Q62**	.440 x .344 x .200	.20	**.12**
68	**CD15-5Q68**	.440 x .344 x .200	.20	**.13**
75	**CD15-5Q75**	.440 x .344 x .200	.20	**.13**
82	**CD15-5Q82**	.440 x .344 x .200	.20	**.13**
91	**CD15-5Q91**	.440 x .344 x .200	.20	**.13**
100	**CD15-5T1**	.440 x .344 x .200	.20	**.13**
110	**CD15-5T11**	.440 x .344 x .200	.25	**.14**
120	**CD15-5T12**	.440 x .344 x .200	.25	**.14**
130	**CD15-5T13**	.440 x .344 x .200	.25	**.15**
150	**CD15-5T15**	.440 x .344 x .200	.25	**.15**
160	**CD15-5T16**	.440 x .344 x .200	.25	**.16**
180	**CD15-5T18**	.440 x .344 x .200	.30	**.19**
200	**CD15-5T2**	.440 x .344 x .200	.30	**.19**
220	**CD15-5T22**	.440 x .344 x .200	.30	**.19**
240	**CD15-5T24**	.440 x .344 x .200	.30	**.19**
250	**CD15-5T25**	.440 x .344 x .200	.30	**.19**
270	**CD15-5T27**	.440 x .344 x .200	.35	**.21**
300	**CD15-5T3**	.440 x .344 x .200	.35	**.22**
330	**CD15-5T33**	.440 x .344 x .200	.40	**.24**
360	**CD15-5T36**	.440 x .344 x .200	$.40	**$.25**
390	**CD15-5T39**	.440 x .344 x .200	.45	**.26**
430	**CD19-5T43**	.610 x .460 x .175	.30	**.18**
470	**CD19-5T47**	.610 x .460 x .175	.35	**.20**
500	**CD19-5T5**	.610 x .460 x .175	.35	**.20**
510	**CD19-5T51**	.610 x .460 x .175	.35	**.20**
560	**CD19-5T56**	.610 x .460 x .175	.35	**.23**
620	**CD19-5T62**	.610 x .460 x .175	.35	**.23**
680	**CD19-5T68**	.610 x .460 x .175	.40	**.25**
750	**CD19-5T75**	.610 x .460 x .175	.40	**.25**
820	**CD19-5T82**	.610 x .460 x .175	.45	**.27**
910	**CD19-5T91**	.610 x .460 x .175	.45	**.29**
1000	**CD19-5D1**	.610 x .460 x .175	.50	**.31**
1100	**CD19-5D11**	.630 x .480 x .190	.50	**.31**
1200	**CD19-5D12**	.630 x .480 x .190	.55	**.33**
1300	**CD19-5D13**	.630 x .480 x .190	.60	**.35**
1500	**CD19-5D15**	.630 x .480 x .190	.65	**.39**
1600	**CD19-5D16**	.630 x .480 x .190	.70	**.41**
1800	**CD19-5D18**	.630 x .480 x .190	.75	**.45**
2000	**CD19-5D2**	.630 x .480 x .190	.80	**.50**
2200	**CD19-5D22**	.650 x .500 x .220	.85	**.52**
2400	**CD19-5D24**	.650 x .500 x .220	.90	**.56**
2500	**CD19-5D25**	.650 x .500 x .220	.95	**.58**
2700	**CD19-5D27**	.650 x .500 x .220	1.05	**.62**
3000	**CD19-5D3**	.650 x .500 x .220	1.15	**.68**
3300	**CD20-5D33**	.740 x .500 x .220	1.05	**.62**
3600	**CD20-5D36**	.740 x .500 x .220	1.10	**.66**
3900	**CD20-5D39**	.740 x .500 x .220	1.15	**.70**
4300	**CD20-5D43**	.740 x .500 x .220	1.25	**.77**
4700	**CD30-5D47**	.780 x .880 x .300	1.25	**.77**
5000	**CD30-5D5**	.780 x .880 x .300	1.35	**.80**
5100	**CD30-5D51**	.780 x .880 x .300	1.35	**.80**
5600	**CD30-5D56**	.780 x .880 x .300	1.45	**.88**
6200	**CD30-5D62**	.780 x .880 x .300	1.55	**.95**
6800	**CD30-5D68**	.780 x .880 x .300	1.75	**1.05**
7500	**CD30-5D75**	.780 x .880 x .300	1.85	**1.12**
8200	**CD30-5D82**	.780 x .880 x .300	2.05	**1.23**
9100	**CD30-5D91**	.780 x .880 x .300	2.20	**1.34**
10,000	**CD30-5S1**	.780 x .880 x .300	2.40	**1.44**

CORNELL-DUBILIER

MOLDED MIDGET MICA



TYPE 1W, 1D & 1DP ★
(Similar to CM30 & CM35)

TYPE 5W & 5P
(Similar to CM20)

Types 1W, 1D, and 5W are specially adapted to functions in low-voltage radio receiving circuits. Individually tested for capacity and voltage breakdown and designed to give dependable service where small size units are required.

STANDARD TOLERANCE: ±20%.

Also available, on order, in plus or minus 10%, 5%, 3% and 2% tolerance ratings (or within 1 mmfd.—whichever is greater). For capacity tolerance of: 10% add 10% to list prices; 5% add 20% to list prices; 3% add 40% to list prices; 2% add 75% to list prices.

SIZES: 1W—13/16″ x 13/16″ x 1/4″
1D—13/16″ x 13/16″ x 5/16″
5W—51/64″ x 15/32″ x 7/32″

Cap. mmf.	500 V. D.C. W.—1000 V. D.C. T.			List Price	Net Price
	Type 5W Cat. No.	Type 1W Cat. No.	Type 1D Cat. No.		
5	**5W 5V5**			$.20	**$.11**
10	**5W 5Q1**			.20	**.11**
12	**5W 5Q12**			.20	**.11**
15	**5W 5Q15**			.20	**.11**
18	**5W 5Q18**			.20	**.11**
20	**5W 5Q2**			.20	**.11**
22	**5W 5Q22**			.20	**.11**
24	**5W 5Q24**			.20	**.11**
25	**5W 5Q25**			.20	**.11**
27	**5W 5Q27**			.20	**.11**
30	**5W 5Q3**			.20	**.11**
33	**5W 5Q33**			.20	**.11**
36	**5W 5Q36**			.20	**.11**
39	**5W 5Q39**			.20	**.11**
40	**5W 5Q4**			.20	**.11**
43	**5W 5Q43**			.20	**.11**
47	**5W 5Q47**			.20	**.11**
50	**5W 5Q5**			.20	**.11**
51	**5W 5Q51**			.20	**.11**
56	**5W 5Q56**			.20	**.11**
62	**5W 5Q62**			.20	**.11**
68	**5W 5Q68**			.20	**.11**
70	**5W 5Q7**			.20	**.11**
75	**5W 5Q75**			.20	**.11**
82	**5W 5Q82**			.20	**.11**
91	**5W 5Q91**			.20	**.11**
100	**5W 5T1**			.20	**.11**
110	**5W 5T11**			.20	**.11**
120	**5W 5T12**			.20	**.11**
130	**5W 5T13**			.20	**.11**
150	**5W 5T15**			.20	**.11**
160	**5W 5T16**			.20	**.11**
180	**5W 5T18**			.20	**.11**
200	**5W 5T2**			.20	**.11**
220	**5W 5T22**			.20	**.11**
240	**5W 5T24**			.20	**.13**
250	**5W 5T25**			.20	**.13**
270	**5W 5T27**			.20	**.13**
300	**5W 5T3**			.20	**.13**
330	**5W 5T33**			.20	**.13**
360	**5W 5T36**			.20	**.13**
390	**5W 5T39**			.20	**.13**
400	**5W 5T4**			.20	**.13**
430	**5W 5T43**			.20	**.13**
470	**5W 5T47**			.25	**.15**
500	**5W 5T5**			.25	**.15**
510	**5W 5T51**			.25	**.15**
560	**5W 5T56**			.25	**.15**
600	**5W 5T6**			.25	**.15**
620	**5W 5T62**			.25	**.15**
680	**5W 5T68**			.30	**.17**
700	**5W 5T7**			.30	**.17**
750	**5W 5T75**			.30	**.17**
800	**5W 5T8**			.30	**.17**

5W, 1W (cont'd)

Cap. mmf.	500 V. D.C. W.—1000 V. D.C. T.			List Price	Net Price
	Type 5W Cat. No.	Type 1W Cat. No.	Type 1D Cat. No.		
820	**5W 5T82**			$.30	**$.17**
900	**5W 5T9**			.30	**.17**
910	**5W 5T91**			.30	**.17**
1,000	**5W 5D1**			.35	**.21**
1,100	**5W 5D11**			.35	**.21**
1,200	**5W 5D12**			.35	**.21**
1,300	**5W 5D13**			.35	**.21**
1,500	**5W 5D15**			.40	**.24**
1,600	**5W 5D16**			.40	**.24**
1,800	**5W 5D18**			.40	**.24**
2,000	**5W 5D2**			.40	**.24**
2,200		**1W 5D22**		.45	**.27**
2,400		**1W 5D24**		.45	**.27**
2,500		**1W 5D25**		.45	**.27**
2,700		**1W 5D27**		.45	**.27**
3,000		**1W 5D3**		.45	**.27**
3,300		**1W 5D33**		.55	**.33**
3,600		**1W 5D36**		.55	**.33**
3,900		**1W 5D39**		.55	**.33**
4,000		**1W 5D4**		.55	**.33**
4,300		**1W 5D43**		.55	**.33**
4,700		**1W 5D47**		.70	**.41**
5,000		**1W 5D5**		.70	**.41**
5,100		**1W 5D51**		.70	**.41**
5,600		**1W 5D56**		.70	**.41**
6,000		**1W 5D6**		.70	**.41**
6,200		**1W 5D62**		.70	**.41**
6,800			**1D 5D68**	.95	**.57**
7,000			**1D 5D7**	.95	**.57**
7,500			**1D 5D75**	.95	**.57**
8,000			**1D 5D8**	.95	**.57**
8,200			**1D 5D82**	.95	**.57**
9,000			**1D 5D9**	.95	**.57**
9,100			**1D 5D91**	.95	**.57**
10,000			**1D 5S1**	1.40	**.85**

"HIVOMIKE"†

High Voltage Molded Midget Mica Capacitors

Where high voltage, capacitance stability and high Q are important and units of the smallest size are requisite, the "HIVOMIKE" is ideal. Recommended for commercial—civilian and military uses under Characteristic "B." Voltage ratings actually exceed those required under MIL-C-5A.

TYPE 5P (JAN CM20 Case 51/64″ x 15/32″ x 7/32″)

Type	Cap. mmf.	Voltage D.C. Working	List Price	Net Price
5P25Q1	10	2500	$.20	**$.14**
5P25Q2	20	2500	.20	**.14**
5P25Q3	30	2500	.25	**.16**
5P25Q5	50	2500	.25	**.16**
5P25Q75	75	2500	.30	**.17**
5P25T1	100	2500	.30	**.19**
5P25T15	150	2500	.35	**.23**
5P25T2	200	2500	.45	**.26**
5P15Q1	10	1500	.20	**.14**
5P15Q2	20	1500	.20	**.14**
5P15Q3	30	1500	.20	**.14**
5P15Q5	50	1500	.25	**.16**
5P15Q75	75	1500	.25	**.16**
5P15T1	100	1500	.30	**.17**
5P15T15	150	1500	.30	**.19**
5P15T2	200	1500	.35	**.20**
5P15T25	250	1500	.40	**.24**
5P15T3	300	1500	.40	**.25**
5P15T47	470	1500	.45	**.28**
5P15T5	500	1500	.45	**.28**

TYPE 1DP (JAN CM35 Case 13/16″ x 13/16″ x 5/16″)

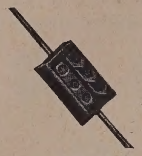
1DP25T25	250	2500	.40	**.25**
1DP25T3	300	2500	.45	**.27**
1DP25T5	500	2500	.60	**.35**
1DP25T75	750	2500	.70	**.42**
1DP25D1	1,000	2500	.85	**.52**
1DP25D12	1,200	2500	.95	**.57**
1DP25D15	1,500	2500	1.30	**.80**
1DP25D18	1,800	2500	1.55	**.95**
1DP25D2	2,000	2500	1.65	**.99**
1DP15T75	750	1500	.60	**.37**
1DP15D1	1,000	1500	.70	**.44**
1DP15D12	1,200	1500	.85	**.51**
1DP15D15	1,500	1500	.95	**.58**
1DP15D18	1,800	1500	1.05	**.63**
1DP15D2	2,000	1500	1.15	**.69**

†For Complete Listings—See Bulletin 422-3.

★When MIL-C-5A unit must be supplied, order according to specific CM type designations listed in C-D Mica Bulletin—Series 422.

CDE CORNELL-DUBILIER

"SILVER-MIKE" MOLDED MIDGET MICA



TYPE 22R ★
(Similar to CM15)

TYPE 1R & 1DR★
(Similar to CM30 & CM35)

TYPE 5R
(Similar to CM20)

HIGH-STABILITY "SILVER-MIKE"† UNITS

Type 22R miniature "Silver-Mike" capacitors are especially adapted for use in circuits where accuracy and stability of capacity is of prime importance. They are rated at 500 volts D.C.W. and tested at 1,000 volts D.C., molded in low-loss red plastic and fully protected against physical damage or changes in characteristics due to varying atmospheric conditions.

STANDARD TOLERANCE ±5%, but in no instance less than ±1mmf. For capacity Tolerance of: 20% deduct 10% from List; 10% deduct 5% from List; 3% add 10% to List; 2% add 15% to List; 1% add 25% to List. (Applies also to 1R, 1DR, and 5R.)

SIZE: ½" x 19/64" x 3/16"

22 R

22R Cat. No.	Rating mmf.	List Price	Net Price
22R 5V2	2	$ .20	$ .11
22R 5V5	5	.20	.11
22R 5Q1	10	.20	.11
22R 5Q12	12	.20	.11
22R 5Q15	15	.20	.11
22R 5Q18	18	.20	.11
22R 5Q2	20	.20	.11
22R 5Q22	22	.20	.11
22R 5Q24	24	.20	.11
22R 5Q25	25	.20	.11
22R 5Q27	27	.20	.11
22R 5Q3	30	.20	.11
22R 5Q33	33	.20	.11
22R 5Q36	36	.20	.11
22R 5Q39	39	.20	.11
22R 5Q4	40	.20	.11
22R 5Q43	43	.20	.11
22R 5Q47	47	.20	.11
22R 5Q5	50	.20	.11
22R 5Q51	51	.20	.11
22R 5Q56	56	.20	.11
22R 5Q62	62	.20	.11
22R 5Q68	68	.20	.11
22R 5Q7	70	.20	.11
22R 5Q75	75	.20	.12
22R 5Q82	82	.20	.12
22R 5Q91	91	.25	.14
22R 5T1	100	.25	.14
22R 5T1T	110	.25	.14
22R 5T12	120	.25	.15
22R 5T13	131	.25	.15
22R 5T15	151	.30	.17
22R 5T16	161	.30	.17
22R 5T18	181	.30	.18
22R 5T2	200	.30	.19
22R 5T22	220	.30	.19
22R 5T24	240	.35	.20
22R 5T25	250	.35	.20
22R 5T27	270	.35	.22
22R 5T3	300	.35	.23
22R 5T33	330	.40	.24
22R 5T36	360	.40	.25
22R 5T39	390	.45	.26
22R 3T43	430	.45	.27
22R 3T47	470	.45	.29
22R 3T51	510	.45	.29

*Rated at 300 WVDC

Notes On Ordering 5R, 1R, 1DR Units

Standard capacity tolerance is 5% (or within 1 mmfd.—whichever is greater). Also available, on special order, in tolerance ratings of plus or minus 3%, add 10% to list prices, 2% add 15% to list prices and 1% add 25% to list prices. All types can also be supplied in plus or minus 10% and 20% tolerances at lower prices.

Types 1R, 1DR, and 5R "Silver-Mike" capacitors are designed for use in high Q electronic circuits where frequency stability and minimum loss must be maintained. Ideally suited for use in circuits where the LC product must be maintained constant, and particularly adapted for use in tuning IF transformers, tuning circuits and other similar applications.

SIZES: 5R—51/64" x 15/32" x 7/32"
1R—13/16" x 13/16" x ¼"
1DR—13/16" x 13/16" x 5/16"

See Notes bottom of column 1.

1R, 1DR, 5R

Cap. mmf.	500 V. D.C. W.—1000 V. D.C. T.			List Price	Net Price
	Type 5R Cat. No.	Type 1R Cat. No.	Type 1DR Cat. No.		
270	5R 5T27			$ .30	$ .17
300	5R 5T3			.30	.17
330	5R 5T33			.30	.17
360	5R 5T36			.30	.17
390	5R 5T39			.30	.17
400	5R 5T4			.35	.22
430	5R 5T43			.35	.22
470	5R 5T47			.35	.22
500	5R 5T5			.35	.22
510	5R 5T51			.35	.22
560	5R 5T56			.40	.24
600	5R 5T6			.40	.24
620	5R 5T62			.40	.24
680	5R 5T68			.40	.24
700	5R 5T7			.45	.27
750	5R 5T75			.45	.27
800	5R 5T8			.45	.27
820	5R 5T82			.45	.27
900	5R 5T9			.50	.29
910	5R 5T91			.50	.29
1,000	5R 5D1			.50	.31
1,100	5R 5D11			.55	.35
1,200	5R 5D12			.55	.35
1,300	5R 5D13			.55	.35
1,500	5R 5D15			.65	.39
1,600	5R 5D16			.65	.39
1,800	5R 5D18			.70	.43
2,000	5R 5D2			.75	.46
2,200		1R 5D22		.85	.50
2,400		1R 5D24		.85	.50
2,500		1R 5D25		.90	.53
2,700		1R 5D27		.90	.53
3,000		1R 5D3		1.00	.61
3,300		1R 5D33		1.10	.65
3,600		1R 5D36		1.15	.70
3,900		1R 5D39		1.20	.73
4,000		1R 5D4		1.30	.78
4,300		1R 5D43		1.30	.78
4,700		1R 5D47		1.40	.85
5,000		1R 5D5		1.45	.88
5,100		1R 5D51		1.45	.88
5,600		1R 5D56		1.55	.95
6,200		1R 5D62		1.70	1.03
6,800			1DR 5D68	1.90	1.15
7,000			1DR 5D7	2.00	1.21
7,500			1DR 5D75	2.00	1.21
8,000			1DR 5D8	2.20	1.33
8,200			1DR 5D82	2.20	1.33
9,000			1DR 5D9	2.35	1.43
9,100			1DR 5D91	2.35	1.43
10,000			1DR 5S1	2.65	1.59

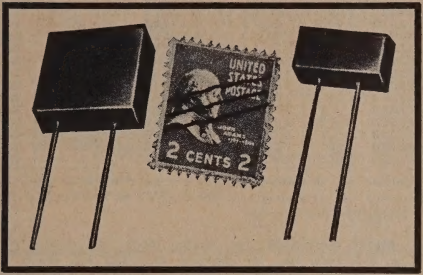
†Reg. U.S. Pat. Off.

★When MIL-C-5A unit must be supplied, order according to specific CM type designations listed in C-D Mica Bulletin — Series 422.

CORNELL-DUBILIER

CDE

ENCAPSULATED
Molded-Case MIDGET MICA
"*Super* MICADON"



Cornell-Dubilier "SUPER MICADONS" represent an entirely new concept in Midget Mica Capacitor construction. The vastly improved design and construction makes it possible to produce miniature units of greatly increased capacitance and superior quality over conventional units of the same case size. Ideally suited for printed board assemblies.

◆ 3 to 6 Times Greater Capacity Over Conventional Case Sizes

◆ 10 to 35 Times Higher Insulation Resistance

◆ Up to 20 Times Greater Moisture Resistance

◆ Up to 19 Times Longer Life

STANDARD TOLERANCE: ±5%; ±2% from stock when specified; ±½% and ±1% on special order.
For ±2% Tol. add 15% to List
For ±1% Tol. add 25% to List
For ±½% Tol. add 50% to List

CHARACTERISTICS*: All types are supplied from stock as follows:
1 to 24 mmfd. in Char. "C".
24 to 51 mmfd. in Char. "E".
51 to 41,000 mmfd. in Char. "E". (Char. "F" on Spec. Order)

		Long	Wide	Thick
Type	1A	53/64 x	53/64 x	9/32
SIZES	1AD	53/64 x	53/64 x	11/32
in	5A	51/64 x	15/32 x	7/32
Inches	22A	35/64 x	5/16 x	7/32

TEMPERATURE RANGE: —55°C to +130°C.

TYPE 22A

500 V. D.C. Working

Type	Cap Mfds	List* Price	Net* Price
22A5V5	.000005	$.20	$.13
22A5Q1	.00001	.20	.13
22A5Q12	.000012	.20	.13
22A5Q15	.000015	.20	.13
22A5Q18	.000018	.20	.13
22A5Q2	.00002	.20	.13
22A5Q22	.000022	.20	.13
22A5Q24	.000024	.20	.13
22A5Q27	.000027	.20	.13
22A5Q3	.00003	.20	.13
22A5Q33	.000033	.20	.13
22A5Q36	.000036	.20	.13
22A5Q39	.000039	.20	.13
22A5Q43	.000043	.20	.13
22A5Q47	.000047	.20	.13
22A5Q51	.000051	.20	.13
22A5Q56	.000056	.20	.13
22A5Q62	.000062	.20	.13
22A5Q68	.000068	.20	.13
22A5Q75	.000075	.20	.13
22A5Q82	.000082	.20	.13
22A5Q91	.000091	.25	.15

TYPE 22A (Cont'd)

500 V. D.C. Working

Type	Cap Mfds	List* Price	Net* Price
22A5T1	.0001	$.25	$.15
22A5T11	.00011	.25	.15
22A5T12	.00012	.25	.15
22A5T13	.00013	.25	.15
22A5T15	.00015	.30	.19
22A5T16	.00016	.30	.19
22A5T18	.00018	.35	.20
22A5T2	.0002	.35	.21
22A5T22	.00022	.35	.21
22A5T24	.00024	.35	.23
22A5T27	.00027	.40	.24
22A5T3	.0003	.40	.25
22A5T33	.00033	.45	.26
22A5T36	.00036	.45	.28
22A5T39	.00039	.45	.29
22A5T43	.00043	.50	.30
22A5T47	.00047	.50	.32
22A5T51	.00051	.60	.36
22A5T56	.00056	.60	.36
22A5T62	.00062	.65	.39
22A5T68	.00068	.70	.42
22A5T75	.00075	.80	.47
22A5T82	.00082	.85	.51
22A5T91	.00091	.90	.53
22A5D1	.001	.95	.57

TYPE 5A

500 V. D.C. Working

5A5D11	.0011	$.65	$.38
5A5D12	.0012	.65	.38
5A5D13	.0013	.65	.38
5A5D15	.0015	.75	.44
5A5D16	.0016	.75	.44
5A5D18	.0018	.90	.53
5A5D2	.002	1.10	.68
5A5D22	.0022	1.10	.68
5A5D24	.0024	1.25	.74
5A5D27	.0027	1.35	.81
5A5D3	.003	1.45	.87
5A5D33	.0033	1.55	.93
5A5D36	.0036	1.85	1.00

TYPE 1A

500 V. D.C. Working

1A5D39	.0039	$1.40	$.84
1A5D43	.0043	1.50	.91
1A5D47	.0047	1.65	.98
1A5D51	.0051	1.70	1.03
1A5D56	.0056	1.85	1.10
1A5D62	.0062	1.95	1.19
1A5D68	.0068	2.15	1.31
1A5D75	.0075	2.30	1.38
1A5D82	.0082	2.50	1.51
1A5D91	.0091	2.70	1.63
1A5S1	.01	3.15	1.89
1A5S11	.011	3.35	2.00
1A5S12	.012	3.50	2.11
1A5S13	.013	3.85	2.32
1A5S15	.015	4.20	2.53

TYPE 1AD

500 V. D.C. Working

1AD5S16	.016	$4.85	$2.90
1AD5S18	.018	5.30	3.19
1AD5S2	.02	5.80	3.49
1AD5S22	.022	6.10	3.65
1AD5S24	.024	6.50	3.92
1AD5S27	.027	7.10	4.28
1AD5S3	.03	7.85	4.73
†1AD3S33	.033	8.45	5.09
†1AD3S36	.036	9.05	5.45
†1AD3S39	.039	9.80	5.90
†1AD3S4	.04	9.95	5.99

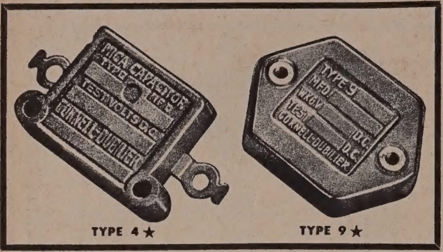
†Rated at 300 V. D.C. Working.

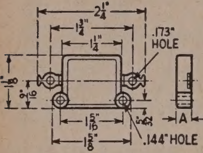
*Prices shown cover Char. "C" or "E"; For Char. "F" add 25¢ each to list.

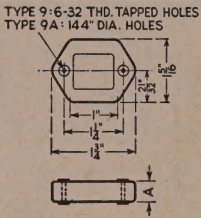
SEE ENG. BULL. 160 FOR DETAILED DATA AND COMPLETE LISTINGS

CDE CORNELL-DUBILIER

LOW-POWER MOLDED MICA







C-D types 4 and 9 are designed to meet applications in power amplifiers and low-power transmitters. Principally employed for grid and plate blocking and for r.f. by-pass. **Units are molded in a low-loss bakelite and have a special salt water immersion seal against humidity.**

In the type 9 the two terminals are tapped to receive mounting screws.

STANDARD TOLERANCE ±10%. Also available on order in plus or minus 5% and 2%. For capacity tolerance of: 5% add 15c to list prices; 2% add 40c to list prices.

TYPE 4

Cat. No.	Cap. Mfd.	List Price	Net Price
1200 V. D.C. Test— 600 V. D.C. Working			
4-14050	.00005	$1.20	**$ .72**
4-13010	.0001	1.20	**.72**
4-13020	.0002	1.20	**.72**
4-13025	.00025	1.20	**.72**
4-13030	.0003	1.20	**.72**
4-13040	.0004	1.20	**.72**
4-13050	.0005	1.20	**.72**
4-12010	.001	1.20	**.72**
4-12015	.0015	1.20	**.72**
4-12020 *	.002	1.30	**.78**
4-12025	.0025	1.30	**.78**
4-12030	.003	1.45	**.87**
4-12040	.004	1.50	**.90**
4-12050	.005	1.55	**.93**
4-12060	.006	1.80	**1.08**
4-12070	.007	1.85	**1.11**
4-12080	.008	1.90	**1.14**
4-11010	.01	2.15	**1.29**
4-11015	.015	2.65	**1.59**
4-11020	.02	3.05	**1.83**
4-11025 †	.025	3.60	**2.16**
4-11030	.03	4.45	**2.67**
2500 V. D.C. Test— 1200 V. D.C. Working			
4-24050	.00005	$1.60	**$ .96**
4-23010	.0001	1.60	**.96**
4-23020	.0002	1.60	**.96**
4-23025	.00025	1.60	**.96**
4-23030	.0003	1.60	**.96**
4-23050 *	.0005	1.60	**.96**
4-22010	.001	1.80	**1.08**
4-22015	.0015	2.30	**1.38**
4-22020	.002	2.40	**1.44**
4-22025	.0025	2.80	**1.68**
4-22030	.003	3.05	**1.83**
4-22040	.004	3.05	**1.83**
4-22050	.005	3.30	**1.98**
4-22060 †	.006	3.30	**1.98**
4-22080	.008	3.85	**2.31**
4-21010	.01	5.10	**3.06**

TYPE 9

Cat. No.	Cap. Mfd.	List Price	Net Price
1200 V. D.C. Test— 600 V. D.C. Working			
9-14050	.00005	$1.45	**$ .87**
9-13010	.0001	1.45	**.87**
9-13025	.00025	1.45	**.87**
9-13050	.0005	1.45	**.87**
9-12010	.001	1.45	**.87**
9-12020	.002	1.65	**.99**
9-12025	.0025	1.70	**1.02**
9-12030	.003	1.85	**1.11**
9-12040 *	.004	2.00	**1.20**
9-12050	.005	2.10	**1.26**
9-12060	.006	2.20	**1.32**
9-12080	.008	2.45	**1.47**
9-11010	.01	2.80	**1.68**
9-11015	.015	3.05	**1.83**
9-11020	.02	3.55	**2.13**
9-11025	.025	4.35	**2.61**
9-11030	.03	4.55	**2.73**
9-11040	.04	5.85	**3.51**
9-11050 †	.05	7.10	**4.26**
9-11060	.06	8.05	**4.83**
2500 V. D.C. Test— 1200 V. D.C. Working			
9-24050	.00005	$1.60	**$ .96**
9-23010	.0001	1.60	**.96**
9-23025	.00025	1.60	**.96**
9-23050	.0005	1.60	**.96**
9-22010	.001	1.90	**1.14**
9-22020	.002	2.50	**1.50**
9-22025 *	.0025	2.80	**1.68**
9-22030	.003	2.95	**1.77**
9-22040	.004	3.10	**1.86**
9-22050	.005	3.30	**1.98**
9-22060	.006	3.45	**2.07**
9-22080	.008	4.10	**2.46**
9-21010	.01	4.70	**2.82**
9-21015	.015	5.80	**3.48**
9-21020	.02	7.05	**4.23**
9-21025 †	.025	7.90	**4.74**
9-21030	.03	8.10	**4.86**

TYPE 4

Cat. No.	Cap. Mfd.	List Price	Net Price
5000 V. D.C. Test— 2500 V. D.C. Working			
4-54050	.00005	$1.90	**$1.14**
4-53010	.0001	1.90	**1.14**
4-53020	.0002	1.90	**1.14**
4-53025	00025	2.20	**1.32**
4-53030 *	.0003	2.25	**1.35**
4-53050	.0005	2.50	**1.50**
4-52010	.001	2.80	**1.68**
4-52015	.0015	3.55	**2.13**
4-52020	.002	4.15	**2.49**
4-52025	.0025	4.50	**2.70**
4-52030 †	.003	4.90	**2.94**
4-52040	.004	5.65	**3.39**
4-52050	.005	6.40	**3.84**

TYPE 9

Cat. No.	Cap. Mfd.	List Price	Net Price
5000 V. D.C. Test— 2500 V. D.C. Working			
9-54050	.00005	$1.90	**$1.14**
9-53010	.0001	1.90	**1.14**
9-53025	.00025	2.15	**1.29**
9-53050	.0005	2.55	**1.53**
9-52010 *	.001	2.90	**1.74**
9-52020	.002	4.25	**2.55**
9-52025	.0025	4.60	**2.76**
9-52030	.003	5.10	**3.06**
9-52040	.004	5.65	**3.39**
9-52050	.005	6.20	**3.72**
9-52060	.006	6.35	**3.81**
9-52080 †	.008	6.85	**4.11**
9-51010	.01	7.30	**4.38**
9-51015	.015	8.05	**4.83**

*Dimension "A" in diagram—for type 4—11/32"; for type 9—7/16".

†Dimension "A" in diagram—for type 4—7/16"; for type 9—47/64".

Supplied as Type 4D or 9D.

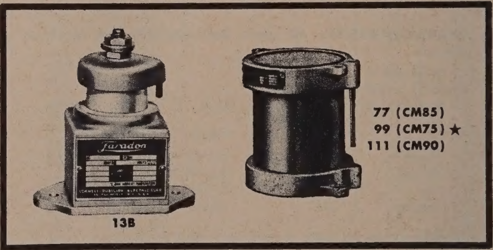
"E" METER BRACKETS: For Weston Model 301 meters. Add "E" to C-D Type No., for example, 4E-52020, etc. These "E" brackets are also available separately. Specify by ordering (2) Part No. 18445 per capacitor.

EQUIVALENT JAN TYPE NUMBERS

C-D Type	JAN Type	C-D Type	JAN Type
4	**CM45**	**9A**	**CM56**
4D	**CM50**	**9D**	**CM60**
9	**CM55**	**9DA**	**CM61**

Faradon

REPLACEMENT MICA TRANSMITTING CAPACITORS



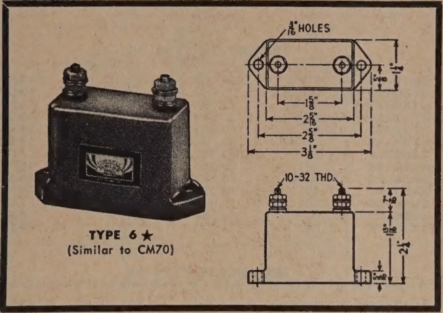
The "Faradon" trade mark has been a symbol of outstanding quality for over 45 years . "Faradons" are made exclusively by Cornell-Dubilier, supplementing the standard C-D line in types designed for original equipment incorporating Faradon specifications.

C-D Cat. No.	Type Case	Cap. Mfd.	Volts D.C.W.	List Price	Net Price
UC 2325A	77	.001	15,000	$ 129.94	**$ 77.96**
UC 2344	77	.0005	20,000	129.94	**77.96**
UC 2360A	77	.004	12,000	138.77	**83.26**
UC 2446	77	.05	3,000	129.94	**77.96**
UC 2992	99	.05	2,000	86.63	**51.98**
UC 3000	111	.02	5,000	240.63	**144.38**
UC 3031A	13B	.005	5,000	94.64	**56.78**
UC 3047	13B	.003	5,000	88.23	**52.94**
UC 3073	99	.001	10,000	78.29	**46.97**
UC 3075	111	.001	20,000	224.59	**134.75**
UC 3097	99	.0005	10,000	78.29	**46.97**
UC 3099	111	.0005	25,000	224.59	**134.75**
UC 3117	99	.0002	10,000	78.29	**46.97**
UC 3123	99	.00015	10,000	78.29	**46.97**

For complete information on C-D FARADON Capacitors see C-D Mica Catalog No. 420.

★When MIL-C-5 units must be supplied, order according to specific CM type designations listed in C-D Mica Capacitor Catalog No. 420.

MEDIUM-POWER MICA BAKELITE CASED



TYPE 6 ★
(Similar to CM70)

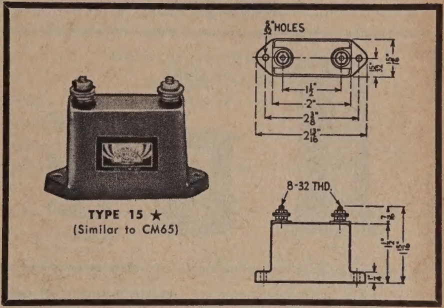
Plastic-cased capacitors designed for a wide variety of radio-frequency applications, especially where small size and minimum weight are essential such as in airborne and portable equipment. Used also in stationary medium-power transmitters, television transmitters, oscillators, and many electronic devices, in grid, plate, coupling, tank and bypass functions.

- ◆ SPECIAL C-D SERIES-SECTION MICA STACK
- ◆ STACKS PERMANENTLY HELD UNDER PRESSURE WITH NON-MAGNETIC CLAMPS
- ◆ COMPLETELY SOLDERED FOILS
- ◆ VACUUM - IMPREGNATED STACK
- ◆ NON-TURNABLE PLATED BRASS STUD TERMINALS
- ◆ SECTIONS INDIVIDUALLY TESTED FOR CAPACITY AND VOLTAGE
- ◆ SPECIAL LOW-LOSS FILLER
- ◆ FINEST INDIA RUBY MICA DIELECTRIC
- ◆ LOW-LOSS PLASTIC CASES

TYPE 6

Cat. No.	Cap. Mfd.	Test. Volt. Effective	Max. Oper. Cur. in Amps.				List Price	Net Price
			3000 kc.	1000 kc.	300 kc.	100 kc.		
390-6	.00005	5,000	1.5	.8	.2	.07	$17.30	**$10.38**
362-6	.0000625	5,000	1.8	.85	.3	.075	17.30	**10.38**
321-6	.0001	5,000	2.4	1.2	.47	.1	17.30	**10.38**
395-6	.00015	5,000	3.7	1.8	.68	.24	17.30	**10.38**
307-6	.0002	5,000	3.6	2.0	.82	.33	17.30	**10.38**
364-6	.00025	5,000	5.0	2.5	1.0	.45	17.30	**10.38**
294A-6	.0003	5,000	3.9	2.7	1.1	.51	17.30	**10.38**
283-6	.0004	5,000	4.3	2.7	1.3	.62	17.30	**10.38**
272-6	.0005	5,000	4.7	3.3	1.7	.8	17.30	**10.38**
266-6	.0006	5,000	5.1	3.6	1.8	.8	17.30	**10.38**
654-6	.00075	5,000	5.6	3.9	2.2	.91	17.30	**10.38**
599-6	.0008	5,000	6.0	4.0	2.3	1.0	17.30	**10.38**
246-6	.001	5,000	6.2	4.3	2.4	1.2	17.30	**10.38**
234-6	.0015	5,000	6.8	5.1	3.3	1.5	17.30	**10.38**
215-6	.002	3,000	6.0	3.0	1.5	.8	17.30	**10.38**
217-6	.002	6,000	9.0	6.2	4.0	2.0	17.30	**10.38**
473-6	.0025	5,000	9.0	6.2	4.3	2.0	17.30	**10.38**
197-6	.003	3,000	8.2	6.8	4.7	2.2	17.30	**10.38**
184-6	.004	3,000	9.1	7.5	5.6	2.7	17.30	**10.38**
173-6	.005	2,000	8.0	5.0	3.0	1.5	17.30	**10.38**
474-6	.005	3,000	9.1	8.2	6.2	3.0	17.30	**10.38**
565-6	.0075	2,000	10.0	9.1	6.8	3.9	17.30	**10.38**
476-6	.008	2,000	11.0	9.0	7.0	3.0	17.30	**10.38**
162-6	.008	3,000	10.0	10.0	7.5	3.9	17.30	**10.38**
151-6	.01	2,000	11.0	11.0	8.2	4.3	17.30	**10.38**
140-6	.015	1,500	12.0	10.0	7.0	4.0	17.30	**10.38**
784-6	.015	2,000	12.0	12.0	10.0	5.1	17.30	**10.38**
131-6	.02	2,000	13.0	13.0	11.0	6.2	17.30	**10.38**
479-6	.03	2,000	14.0	20.0	15.0	7.0	17.30	**10.38**
480-6	.04	1,500	15.0	16.0	13.0	7.5	17.30	**10.38**
118-6	.05	1,500	15.0	16.0	15.0	7.5	17.30	**10.38**
111-6	.1	500	15.0	18.0	15.0	8.2	19.20	**11.52**
406-6	.1	1,000	18.0	20.0	15.0	8.0	17.30	**10.38**
110-6	.1—.1	250	20.0	20.0	15.0	10.0	17.30	**10.38**
105-6	.2	250	18.0	20.0	16.0	12.0	25.25	**15.15**
885-6	.25	250	18.0	20.0	16.0	12.0	27.90	**16.74**

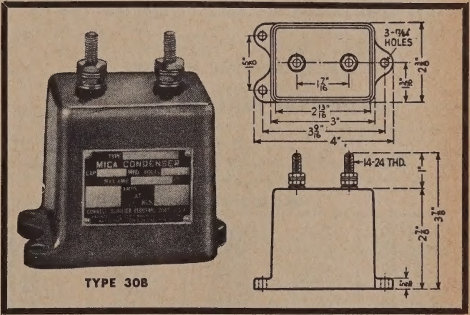
TYPE 15



TYPE 15 ★
(Similar to CM65)

Cat. No.	Cap. Mfd.	Test. Volt. Effective	Max. Oper. Cur. in Amps.				List Price	Net Price
			3000 kc.	1000 kc.	300 kc.	100 kc.		
639-15	.00005	3,000	1.3	.6	.18	.06	$12.60	**$7.56**
583A-15	.0001	3,000	1.8	.75	.33	.1	12.60	**7.56**
657-15	.00015	3,000	2.2	1.0	.47	.18	12.60	**7.56**
582A-15	.0002	3,000	2.4	1.2	.62	.24	12.60	**7.56**
805-15	.00025	3,000	3.0	2.0	.8	.3	12.60	**7.56**
640A-15	.0003	3,000	3.0	1.5	.75	.36	12.60	**7.56**
641-15	.0004	3,000	4.0	2.0	.9	.45	12.60	**7.56**
642-15	.0005	3,000	4.0	2.0	1.1	.55	12.60	**7.56**
643-15	.0006	3,000	4.5	2.4	1.2	.6	12.60	**7.56**
727-15	.0008	3,000	4.5	2.7	1.5	.7	12.60	**7.56**
581B-15	.001	3,000	4.7	3.0	1.6	.75	12.60	**7.56**
679-15	.0015	3,000	5.6	3.9	2.0	.91	12.60	**7.56**
726-15	.002	3,000	6.2	4.3	2.4	1.1	12.60	**7.56**
645-15	.003	3,000	7.5	5.0	3.0	1.5	12.60	**7.56**
699-15	.004	3,000	8.2	6.2	3.5	1.6	12.60	**7.56**
725-15	.005	3,000	8.5	6.8	4.0	2.0	12.60	**7.56**
580-15	.006	2,000	9.1	7.5	4.5	2.2	12.60	**7.56**
724-15	.008	1,500	10.0	8.2	5.0	2.3	12.60	**7.56**
677-15	.01	1,000	10.0	9.1	5.1	2.4	12.60	**7.56**
723-15	.02	1,000	11.0	11.0	7.5	3.6	14.30	**8.58**
722-15	.05	500	11.0	11.0	9.1	5.0	14.30	**8.58**
721-15	.1	250	11.0	11.0	9.1	5.6	15.10	**9.06**

TYPE 30B



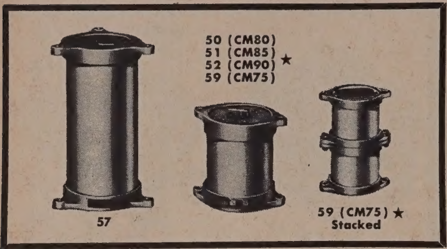
TYPE 30B

Cat. No.	Cap. Mfd.	Test. Volt. Effective	Max. Oper. Cur. in Amps.				List Price	Net Price
			3000 kc.	1000 kc.	300 kc.	100 kc.		
533-30B	.0001	4,000	(20 Amps. at 60 mc.)		(3 Amps. at 4 mc.)		$35.25	**$21.15**
959-30B	.0005	8,000	8.5	6	3	1	35.25	**21.15**
960-30B	.001	8,000	10	8.5	4.5	1.5	39.25	**23.55**
961-30B	.002	8,000	11	11	7.5	2.5	39.25	**23.55**
759-30B	.003	8,000	12	14	10	5	42.25	**25.35**
757-30B	.004	8,000	12	14	10	6	44.60	**26.76**
758-30B	.005	8,000	13	15	11	7	48.60	**29.16**
756-30B	.006	6,000	15	15	11	7	48.60	**29.16**
962-30B	.01	6,000	16	20	15	8	52.55	**31.53**
915-30B	.01	8,000	17	21	15	9	55.20	**33.12**
963-30B	.02	5,000	18	22	18	12	55.20	**33.12**
741-30B	.03	4,000	18	23	20	13	55.20	**33.12**
113-30B	.1	2,000	18	25	22	12	48.60	**29.16**
603-30B	.2	600	18	28	23	15	39.25	**23.55**
750-30B	.25	600	18	28	23	15	44.60	**26.76**
933-30B	.3	600	18	28	23	15	44.60	**26.76**
898-30B	1.0	600	18	28	23	15	81.85	**49.11**

★When JAN-C-5 unit must be supplied, order according to specific CM type designations listed in C-D Mica Bulletin—Series 422.

CDE CORNELL-DUBILIER

HIGH-POWER MICA CERAMIC-CASED



C-D Ceramic-Cased Capacitors are used in a variety of industrial electronic equipment and high-power transmitters. Built to handle high rf currents and withstand high-voltage stresses with a wide factor of safety. For grid, plate blocking, coupling, tank, and bypass applications—in induction heating, as high-frequency filters to obtain special wave shapes, in Loran circuits. Higher currents and voltages may be obtained with parallel or series combinations by selecting units of the proper capacity and rating, then bolting or strapping the terminal flanges together.

- ◆ CYLINDRICAL WHITE GLAZED, LOW-LOSS CERAMIC CASE
- ◆ VACUUM - IMPREGNATED STACK ASSEMBLY
- ◆ THE C-D SERIES SECTION MICA STACK
- ◆ FINEST INDIA RUBY MICA
- ◆ EACH SECTION INDIVIDUALLY TESTED FOR VOLTAGE AND CAPACITY
- ◆ CAST ALUMINUM END TERMINALS
- ◆ STACKS HELD UNDER HIGH PRESSURE
- ◆ SPECIAL LOW-LOSS FILLER

ALSO REFER TO "FARADON" TYPES.

***SIZE DATA**—applies to both Broadcast & Heavy Duty Types;

Type 50 — 5″ x 3½″ x 3″ high
Type 52 — 6½″ x 5″ x 5¾″ high
Type 51 — 6½″ x 5″ x 4″ high
Type 57 — 8½″ x 14″ high
Type 59 — 3

BROADCAST TRANSMITTING TYPES

Cat. No.	Cap. Mfd.	Peak Working Voltage	List Price	Net Price
BROADCAST TYPE 50				
2210-50	.0001	10,000	$65.55	**$39.33**
2220-50	.00015	10,000	65.55	**39.33**
2230-50	.0002	10,000	65.55	**39.33**
2251-50	.00051	10,000	65.55	**39.33**
2271-50	.00082	10,000	65.55	**39.33**
2280-50	.001	10,000	65.55	**39.33**
2300-50	.0015	10,000	65.55	**39.33**
2310-50	.002	10,000	65.55	**39.33**
2333-50	.0043	8,000	65.55	**39.33**
2341-50	.0051	6,000	65.55	**39.33**
2360-50	.01	5,000	69.15	**41.49**
2370-50	.015	4,000	69.15	**41.49**
2380-50	.02	3,000	69.15	**41.49**
BROADCAST TYPE 51				
2411-51	.000051	20,000	$111.90	**$67.14**
2420-51	.0001	20,000	121.00	**72.60**
2430-51	.00015	20,000	126.00	**75.60**
2440-51	.0002	20,000	131.10	**78.66**
2483-51	.00051	20,000	137.15	**82.29**
2501-51	.00082	20,000	137.15	**82.29**
2510-51	.001	20,000	141.15	**84.69**
2530-51	.0015	15,000	143.20	**85.92**
2550-51	.002	15,000	143.20	**85.92**
2583-51	.0043	12,000	151.25	**90.75**
2591-51	.0051	10,000	151.25	**90.75**
2610-51	.01	8,000	147.20	**88.32**
2620-51	.02	5,000	151.25	**90.75**

Cat. No.	Cap. Mfd.	Peak Working Voltage	List Price	Net Price
BROADCAST TYPE 52				
2710-52	.0001	30,000	$210.30	**$126.18**
2720-52	.00015	30,000	210.30	**126.18**
2740-52	.0003	30,000	221.16	**132.70**
2763-52	.00043	30,000	221.16	**132.70**
2773-52	.00051	30,000	221.16	**132.70**
2791-52	.00082	30,000	221.16	**132.70**
2800-52	.001	30,000	229.10	**137.46**
2820-52	.002	20,000	229.10	**137.46**
2853-52	.0043	15,000	234.30	**140.58**
2861-52	.0051	15,000	242.00	**145.20**
2882-52	.0082	12,000	260.00	**156.00**
2890-52	.01	10,000	272.44	**163.46**
2911-52	.043	5,000	272.44	**163.46**
BROADCAST TYPE 59				
2011-59	.000051	6,000	$38.20	**$22.92**
2020-59	.0001	6,000	40.60	**24.36**
2040-59	.0002	6,000	40.60	**24.36**
2060-59	.0003	6,000	42.60	**25.56**
2083-59	.00051	6,000	46.65	**27.99**
2100-59	.001	6,000	46.65	**27.99**
2120-59	.002	6,000	48.90	**29.34**
2140-59	.003	6,000	50.60	**30.36**
2161-59	.0051	4,000	50.60	**30.36**
2170-59	.01	4,000	51.45	**30.87**
2180-59	.02	2,000	51.45	**30.87**

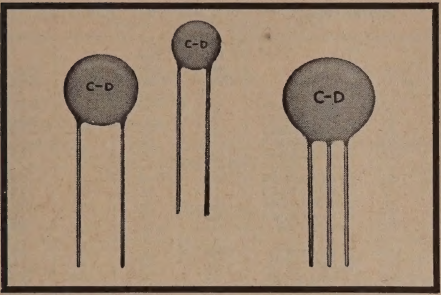
HEAVY DUTY INDUSTRIAL TYPES

Cat. No.	Cap. Mfd.	Peak Working Voltage	List Price	Net Price
HEAVY DUTY TYPE 50				
278-50	.0005	12,500	$81.95	**$49.17**
250-50	.001	12,500	81.95	**49.17**
238-50	.0015	10,000	81.95	**49.17**
223-50	.002	10,000	81.95	**49.17**
191-50	.004	8,000	81.95	**49.17**
HEAVY DUTY TYPE 51				
252-51	.001	20,000	176.45	**105.87**
239-51	.0015	20,000	189.05	**113.43**
225-51	.002	15,000	176.45	**105.87**
193-51	.004	12,000	189.05	**113.43**
158-51	.01	10,000	189.05	**113.43**
HEAVY DUTY TYPE 52				
298-52	.0003	35,000	276.45	**165.87**
286-52	.0004	35,000	276.45	**165.87**
485-52	.005	20,000	315.30	**189.18**
164-52	.008	12,000	325.00	**195.00**
430-52	.01	15,000	340.55	**204.33**
HEAVY DUTY TYPE 57				
402-57	.0006	40,000	$537.00	**$322.20**
676-57	.002	40,000	708.00	**424.80**
776-57	.004	30,000	805.50	**483.30**
HEAVY DUTY TYPE 59				
544-59	.0005	7,500	58.30	**34.98**
545-59	.001	7,500	58.30	**34.98**
572-59	.002	7,500	86.45	**51.87**
595-59	.003	6,000	63.25	**37.95**
547-59	.005	6,000	61.15	**36.69**
548-59	.01	5,000	64.30	**38.58**

★When JAN-C-5 units must be supplied, order according to specific CM type designations listed in C-D Mica Capacitor Catalog No. 420.

CORNELL-DUBILIER CDE

"TINYMIKE" CERAMIC CAPACITORS



THE CERAMIC WITH THE MILLION DOLLAR BODY

- Small, space-saving and lightweight.
- Available in all popular capacities.
- Guaranteed minimum capacity tolerance.
- Adapted for wide variety of applications.
- Minimized eddy current losses due to construction.
- Low inductance, stable, dependable performance.
- Available with temperature compensating characteristics.

General Purpose DISC HIGH K

TYPE: BYA — BYB

VOLTAGE: 1000 VDCW, except as noted.

TOLERANCE: GMC, except as noted.

TEMPERATURE RANGE: —55°C to +85°C.

SINGLES

Cap. Mmfd.	Cat. No.	Dia. Max. (Inches)	Thick. Max. (Inches)	List Price	Net Price
470	**BYA10T47**	9/32	5/32	$.25	**$.12**
500	**BYA10T5**	9/32	5/32	.25	**.12**
680	**BYA10T68**	9/32	5/32	.25	**.12**
820	**BYA10T82**	9/32	5/32	.25	**.12**
1000	**BYA10D1**	9/32	5/32	.25	**.12**
†1000	**BYA10D1M**	3/8	5/32	.25	**.12**
1500	**BYA10D15**	3/8	5/32	.25	**.12**
2000	**BYA10D2**	3/8	5/32	.25	**.12**
2200	**BYA10D22**	3/8	5/32	.25	**.12**
2500	**BYA10D25**	19/32	5/32	.30	**.15**
2700	**BYA10D27**	19/32	5/32	.30	**.15**
3000	**BYA10D3**	19/32	5/32	.30	**.15**
3300	**BYA10D33**	19/32	5/32	.30	**.15**
4000	**BYA10D4**	19/32	5/32	.30	**.15**
†4700	**BYA10D47M**	19/32	5/32	.30	**.15**
5000	**BYA10D5**	5/8	5/32	.30	**.15**
†5000	**BYA10D5M**	5/8	5/32	.30	**.15**
6800	**BYA10D68**	19/32	5/32	.30	**.15**
*10000	**BYA6S1**	5/8	5/32	.30	**.15**
10000	**BYA10S1**	3/4	5/32	.30	**.15**
†10000	**BYA10S1M**	5/8	5/32	.30	**.15**
15000	**BYA10S15**	7/8	5/32	.40	**.24**
*20000	**BYB6S2**	7/8	7/32	.75	**.46**
*30000	**BYB6S3**	7/8	7/32	.75	**.46**
*40000	**BYB6S4**	7/8	7/32	.75	**.46**

*Rated at 600 VDCW.

†Tolerance ±20%

General Purpose DISC UNSHIELDED

TYPE: BYC

VOLTAGE: 600 VDCW

TOLERANCE: GMC

TEMPERATURE RANGE: —55°C to +85°C.

DUALS

Cap. Mmfd.	Cat. No.	Dia. Max. (Inches)	Thick. Max. (Inches)	List Price	Net Price
2 x 1000	**BYC6DD1**	3/8	5/32	$.45	**$.26**
2 x 1500	**BYC6DD15**	19/32	5/32	.45	**.26**
2 x 2000	**BYC6DD2**	19/32	5/32	.45	**.26**
2 x 2200	**BYC6DD22**	19/32	5/32	.45	**.26**
2 x 2500	**BYC6DD25**	19/32	5/32	.45	**.26**
2 x 3000	**BYC6DD3**	3/4	5/32	.50	**.27**
2 x 4000	**BYC6DD4**	3/4	5/32	.50	**.27**
2 x 4700	**BYC6DD47**	3/4	5/32	.50	**.27**
2 x 5000	**BYC6DD5**	3/4	5/32	.50	**.27**

General Purpose DISC SHIELDED

TYPE: BYD

VOLTAGE: 600 VDCW

TOLERANCE: GMC

TEMPERATURE RANGE: —55°C to +85°C.

DUALS

Cap. Mmfd.	Cat. No.	Dia. Max. (Inches)	Thick. Max. (Inches)	List Price	Net Price
2 x 1000	**BYD6DD1**	3/8	7/32	$.65	**$.38**
2 x 2000	**BYD6DD2**	3/8	7/32	.65	**.38**
2 x 5000	**BYD6DD5**	19/32	7/32	.65	**.38**
2 x 10000	**BYD6DS1**	5/8	7/32	.65	**.38**

General Purpose DISC CLOSE TOLERANCE

TYPE: L

VOLTAGE: 1000 VDCW

TOLERANCE: ±10%, except as noted, to 390 mmfd. incl.
±20%, 400 mmfd. and over.

TEMPERATURE RANGE: —55°C to +85°C.

SINGLES

Cap. Mmfd.	Cat. No.	Dia. Max. (Inches)	Thick. Max. (Inches)	List Price	Net Price
†3.3	**L10V33**	9/32	5/32	$.30	**$.15**
†5.0	**L10V5**	9/32	5/32	.30	**.15**
†6.8	**L10V68**	9/32	5/32	.30	**.15**
7.0	**L10V7**	9/32	5/32	.30	**.15**
8.0	**L10V8**	9/32	5/32	.30	**.15**
10	**L10Q1**	9/32	5/32	.30	**.15**
12	**L10Q12**	9/32	5/32	.30	**.15**
15	**L10Q15**	9/32	5/32	.30	**.15**
18	**L10Q18**	9/32	5/32	.30	**.15**
20	**L10Q2**	9/32	5/32	.30	**.15**
22	**L10Q22**	9/32	5/32	.30	**.15**
24	**L10Q24**	9/32	5/32	.30	**.15**
25	**L10Q25**	9/32	5/32	.30	**.15**
27	**L10Q27**	9/32	5/32	.30	**.15**
30	**L10Q3**	9/32	5/32	.30	**.15**
33	**L10Q33**	9/32	5/32	.30	**.15**
39	**L10Q39**	9/32	5/32	.30	**.15**
47	**L10Q47**	9/32	5/32	.30	**.15**
50	**L10Q5**	9/32	5/32	.30	**.15**
51	**L10Q51**	9/32	5/32	.30	**.15**

†Tolerance ±.5 Mmfd.

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CDE CORNELL-DUBILIER

"TINYMIKE" CERAMIC CAPACITORS

TYPE: L (cont'd)

SINGLES

Cap. Mmfd.	Cat. No.	Dia. Max. (Inches)	Thick. Max. (Inches)	List Price	Net Price
.56	**L10Q56**	9/32	5/32	$.30	**$.15**
68	**L10Q68**	9/32	5/32	.30	**.15**
75	**L10Q75**	9/32	5/32	.30	**.15**
82	**L10Q82**	9/32	5/32	.30	**.15**
91	**L10Q91**	9/32	5/32	.30	**.15**
100	**L10T1**	9/32	5/32	.30	**.15**
110	**L10T11**	9/32	5/32	.30	**.15**
120	**L10T12**	9/32	5/32	.30	**.15**
130	**L10T13**	9/32	5/32	.30	**.15**
150	**L10T15**	9/32	5/32	.30	**.15**
180	**L10T18**	9/32	5/32	.30	**.15**
200	**L10T2**	9/32	5/32	.30	**.15**
220	**L10T22**	9/32	5/32	.30	**.15**
240	**L10T24**	9/32	5/32	.30	**.15**
250	**L10T25**	9/32	5/32	.30	**.15**
270	**L10T27**	9/32	5/32	.30	**.15**
300	**L10T3**	9/32	5/32	.30	**.15**
330	**L10T33**	9/32	5/32	.30	**.15**
350	**L10T35**	9/32	5/32	.30	**.15**
360	**L10T36**	9/32	5/32	.30	**.15**
390	**L10T39**	9/32	5/32	.30	**.15**
400	**L10T4**	9/32	5/32	.30	**.15**
420	**L10T42**	3/8	5/32	.30	**.15**
470	**L10T47**	3/8	5/32	.30	**.15**
500	**L10T5**	3/8	5/32	.30	**.15**
510	**L10T51**	3/8	5/32	.30	**.15**
560	**L10T56**	3/8	5/32	.30	**.15**
600	**L10T6**	3/8	5/32	.30	**.15**
620	**L10T62**	3/8	5/32	.30	**.15**
680	**L10T68**	3/8	5/32	.30	**.15**
750	**L10T75**	3/8	5/32	.30	**.15**
800	**L10T8**	3/8	5/32	.30	**.15**
820	**L10T82**	19/32	5/32	.30	**.15**
910	**L10T91**	19/32	5/32	.30	**.15**
1000	**L10D1**	19/32	5/32	.30	**.15**
1200	**L10D12**	19/32	5/32	.30	**.15**
1500	**L10D15**	19/32	5/32	.30	**.15**
1600	**L10D16**	19/32	5/32	.30	**.15**
1800	**L10D18**	19/32	5/32	.30	**.15**
2000	**L10D2**	19/32	5/32	.30	**.15**
2200	**L10D22**	19/32	5/32	.30	**.15**
2500	**L10D25**	3/4	5/32	.30	**.17**
2700	**L10D27**	3/4	5/32	.30	**.17**
3000	**L10D3**	3/4	5/32	.30	**.17**
3300	**L10D33**	3/4	5/32	.30	**.17**
3900	**L10D39**	7/8	5/32	.35	**.19**
4000	**L10D4**	7/8	5/32	.35	**.19**
4300	**L10D43**	7/8	5/32	.35	**.19**
4700	**L10D47**	7/8	5/32	.35	**.19**
5000	**L10D5**	7/8	5/32	.35	**.19**
5100	**L10D51**	7/8	5/32	.35	**.19**

General Purpose DISC
HIGH VOLTAGE

TYPE: HVA — HVB — HVC

VOLTAGE: 1600 VDCW

TEMPERATURE RANGE: —55°C to +85°C.

TOLERANCE: 4.7 to 100 mmfd. incl. ±10%, except as noted.
150 to 1000 mmfd. incl. ±20%.
1200 to 6800 mmfd. incl. GMC.

SINGLES

Cap. Mmfd.	Cat. No.	Dia. Max. (Inches)	Thick. Max. (Inches)	List Price	Net Price
†4.7	**HVA16V47**	3/8	7/32	$.35	**$.19**
6.8	**HVA16V68**	3/8	7/32	.35	**.19**
10	**HVA16Q1**	3/8	7/32	.35	**.19**
12	**HVA16Q12**	3/8	7/32	.35	**.19**
15	**HVA16Q15**	3/8	7/32	.35	**.19**

TYPE: HVA — HVB — HVC (Cont'd)

Cap. Mmfd.	Cat. No.	Dia. Max. (Inches)	Thick. Max. (Inches)	List Price	Net Price
18	**HVA16Q18**	3/8	7/32	$.35	**$.19**
20	**HVA16Q2**	3/8	7/32	.35	**.19**
22	**HVA16Q22**	3/8	7/32	.35	**.19**
33	**HVA16Q33**	3/8	7/32	.35	**.19**
47	**HVA16Q47**	19/32	7/32	.35	**.19**
56	**HVA16Q56**	19/32	7/32	.35	**.19**
62	**HVA16Q62**	19/32	7/32	.35	**.19**
68	**HVA16Q68**	19/32	7/32	.35	**.19**
82	**HVA16Q82**	19/32	7/32	.35	**.19**
100	**HVA16T1**	19/32	7/32	.35	**.19**
150	**HVB16T15**	3/8	7/32	.35	**.19**
180	**HVB16T18**	3/8	7/32	.35	**.19**
220	**HVB16T22**	3/8	7/32	.35	**.19**
300	**HVB16T3**	3/8	7/32	.35	**.19**
330	**HVB16T33**	3/8	7/32	.35	**.19**
390	**HVB16T39**	3/8	7/32	.35	**.19**
470	**HVB16T47**	19/32	7/32	.35	**.19**
680	**HVB16T68**	19/32	7/32	.35	**.19**
1000	**HVB16D1**	19/32	7/32	.35	**.19**
1200	**HVC16D12**	19/32	7/32	.35	**.19**
1500	**HVC16D15**	19/32	7/32	.35	**.19**
2000	**HVC16D2**	19/32	7/32	.35	**.19**
2200	**HVC16D22**	19/32	7/32	.35	**.19**
3300	**HVC16D33**	19/32	7/32	.35	**.19**
4700	**HVC16D47**	3/4	7/32	.40	**.24**
6800	**HVC16D68**	7/8	7/32	.50	**.30**

†Tolerance ±.5 Mmfd.

High Voltage DISC
for BUFFER Applications

TYPE: HVE

VOLTAGE: 1600 VDCW

TOLERANCE: GMC, except as noted.

TEMPERATURE RANGE: —55°C to +85°C.

SINGLES

Cap. Mmfd.	Cat. No.	Dia. Max. (Inches)	Thick. Max. (Inches)	List Price	Net Price
3000	**HVE16D3**	3/4	7/32	$.40	**$.24**
4000	**HVE16D4**	3/4	7/32	.40	**.24**
5000	**HVE16D5**	3/4	7/32	.40	**.24**
6000	**HVE16D6**	7/8	7/32	.50	**.30**
7000	**HVE16D7**	7/8	7/32	.50	**.30**
7500	**HVE16D75**	7/8	7/32	.50	**.30**
8000	**HVE16D8**	7/8	7/32	.50	**.30**
10000	**HVE16S1**	7/8	7/32	.50	**.30**
†15000	**HVE16S15**	7/8	1/4	.50	**.30**

†Tolerance +80%, —20%.

Low Voltage Miniature DISC
for TRANSISTOR CIRCUITRY

TYPE: H

VOLTAGE: 50 VDCW

TOLERANCE: +100%, —0%, except as noted.

TEMPERATURE RANGE: +10°C to +85°C.

Cap. Mmfd.	Cat. No.	Dia. Max. (Inches)	Thick. Max. (Inches)	List Price	Net Price
.001	**H-05D1**	.290	1/8	$.35	**$.20**
.005	**H-05D5**	.350	1/8	.35	**.20**
.01	**H-05S1**	.350	1/8	.35	**.21**
.02	**H-05S2**	.500	1/8	.35	**.21**
.025	**H-05S25**	.500	1/8	.35	**.21**
*.05	**H-05S5**	.625	1/8	.40	**.22**
*.10	**H-05P1**	.625	3/16	.45	**.27**

*Tolerance +80%, —20%.

CORNELL-DUBILIER CDE

"TINYMIKE" CERAMIC CAPACITORS

General Purpose DISC
HIGH VOLTAGE

TYPE: HVA — HVB — HVC

VOLTAGE: 2000 VDCW

TEMPERATURE RANGE: —55°C to +85°C.

TOLERANCE: 4.7 to 82 mmfd. incl. ±10%, except as noted.
100 to 1500 mmfd. incl. ±20%.
2000 to 6000 mmfd. incl. GMC.

SINGLES

Cap. Mmfd.	Cat. No.	Dia. Max. (Inches)	Thick. Max. (Inches)	List Price	Net Price
†4.7	HVA20V47	3/8	7/32	$.35	$.19
6.8	HVA20V68	3/8	7/32	.35	.19
10	HVA20Q1	3/8	7/32	.35	.19
15	HVA20Q15	3/8	7/32	.35	.19
22	HVA20Q22	3/8	7/32	.35	.19
33	HVA20Q33	3/8	7/32	.35	.19
39	HVA20Q39	19/32	7/32	.35	.19
47	HVA20Q47	19/32	7/32	.35	.19
56	HVA20Q56	19/32	7/32	.35	.19
62	HVA20Q62	19/32	7/32	.35	.19
68	HVA20Q68	19/32	7/32	.35	.19
75	HVA20Q75	19/32	7/32	.35	.19
82	HVA20Q82	19/32	7/32	.35	.19
100	HVB20T1	3/8	7/32	.35	.19
120	HVB20T12	3/8	7/32	.35	.19
150	HVB20T15	3/8	7/32	.35	.19
180	HVB20T18	3/8	7/32	.35	.19
200	HVB20T2	3/8	7/32	.35	.19
220	HVB20T22	3/8	7/32	.35	.19
270	HVB20T27	3/8	7/32	.35	.19
300	HVB20T3	3/8	7/32	.35	.19
330	HVB20T33	19/32	7/32	.35	.19
390	HVB20T39	19/32	7/32	.35	.19
470	HVB20T47	19/32	7/32	.35	.19
500	HVB20T5	19/32	7/32	.35	.19
560	HVB20T56	19/32	7/32	.35	.19
680	HVB20T68	19/32	7/32	.35	.19
1000	HVB20D1	3/4	7/32	.45	.25
1500	HVB20D15	3/4	7/32	.45	.25
2000	HVC20D2	19/32	7/32	.45	.25
2200	HVC20D22	19/32	7/32	.45	.25
3300	HVC20D33	3/4	7/32	.45	.25
4700	HVC20D47	3/4	7/32	.45	.25
5000	HVC20D5	3/4	7/32	.45	.25
6000	HVC20D6	7/8	7/32	.55	.31

†Tolerance ±.5 Mmfd.

High Voltage DISC
for DEFLECTION YOKE Applications

TYPE: HVD

VOLTAGE: 2000 VDCW

TOLERANCE: ±10%

TEMPERATURE RANGE: —55°C to +85°C.

SINGLES

Cap. Mmfd.	Cat. No.	Dia. Max. (Inches)	Thick. Max. (Inches)	List Price	Net Price
15	HVD20Q15	3/8	7/32	$.40	$.24
18	HVD20Q18	3/8	7/32	.40	.24
20	HVD20Q2	3/8	7/32	.40	.24
22	HVD20Q22	3/8	7/32	.40	.24
33	HVD20Q33	3/8	7/32	.40	.24
39	HVD20Q39	19/32	7/32	.40	.24
47	HVD20Q47	19/32	7/32	.40	.24
62	HVD20Q62	19/32	7/32	.40	.24
68	HVD20Q68	19/32	7/32	.40	.24
75	HVD20Q75	19/32	7/32	.40	.24
82	HVD20Q82	19/32	7/32	.40	.24
91	HVD20Q91	19/32	7/32	.40	.24

General Purpose DISC
HIGH VOLTAGE

TYPE: HVA — HVB — HVC

VOLTAGE: 3000 VDCW

TEMPERATURE RANGE: —55°C to +85°C.

TOLERANCE: 4.7 to 60 mmfd. .incl. ±10%, except as noted; 68 to 1000 mmfd. incl. ±20%; 1500 to 4000 mmfd. incl. GMC.

SINGLES

Cap. Mmfd.	Cat. No.	Dia. Max. (Inches)	Thick. Max. (Inches)	List Price	Net Price
†4.7	HVA30V47	3/8	7/32	$.40	$.24
6.8	HVA30V68	3/8	7/32	.40	.24
10	HVA30Q1	3/8	7/32	.40	.24
12	HVA30Q12	3/8	7/32	.40	.24
15	HVA30Q15	3/8	7/32	.40	.24
22	HVA30Q22	3/8	7/32	.40	.24
33	HVA30Q33	19/32	7/32	.40	.24
39	HVA30Q39	19/32	7/32	.40	.24
47	HVA30Q47	19/32	7/32	.40	.24
50	HVA30Q5	19/32	7/32	.40	.24
60	HVA30Q6	19/32	7/32	.40	.24
68	HVB30Q68	3/8	7/32	.40	.24
100	HVB30T1	3/8	7/32	.40	.24
120	HVB30T12	3/8	7/32	.40	.24
150	HVB30T15	3/8	7/32	.40	.24
180	HVB30T18	3/8	7/32	.40	.24
200	HVB30T2	3/8	7/32	.40	.24
220	HVB30T22	19/32	7/32	.40	.24
250	HVB30T25	19/32	7/32	.40	.24
270	HVB30T27	19/32	7/32	.40	.24
300	HVB30T3	19/32	7/32	.40	.24
330	HVB30T33	19/32	7/32	.40	.24
390	HVB30T39	19/32	7/32	.40	.24
470	HVB30T47	19/32	7/32	.40	.24
500	HVB30T5	19/32	7/32	.40	.24
680	HVB30T68	3/4	7/32	.50	.30
1000	HVB30D1	7/8	7/32	.50	.30
1500	HVC30D15	19/32	7/32	.50	.30
2000	HVC30D2	3/4	7/32	.50	.30
2200	HVC30D22	3/4	7/32	.50	.30
3300	HVC30D33	7/8	7/32	.60	.35
4000	HVC30D4	7/8	7/32	.60	.35

†Tolerance ±.5 Mmfd.

General Purpose DISC
HIGH VOLTAGE

TYPE: HVA — HVB

VOLTAGE: 5000 VDCW

TOLERANCE: ±20%

TEMPERATURE RANGE: —55°C to +85°C.

SINGLES

Cap. Mmfd.	Cat. No.	Dia. Max. (Inches)	Thick. Max. (Inches)	List Price	Net Price
4.7	HVA50V47	3/8	7/32	$.70	$.44
10	HVA50Q1	3/8	7/32	.70	.44
22	HVA50Q22	19/32	7/32	.70	.44
47	HVB50Q47	3/8	7/32	.70	.44
100	HVB50T1	3/8	7/32	.70	.44
220	HVB50T22	19/32	7/32	.70	.44
330	HVB50T33	19/32	7/32	.70	.44
470	HVB50T47	3/4	7/32	.70	.44

CDE CORNELL-DUBILIER

"TINYMIKE" CERAMIC CAPACITORS

Temperature Compensating DISC Coefficient NPO

TYPE: C

VOLTAGE: 1000 VDCW

TOLERANCE: ±5%, except as noted.

TEMPERATURE RANGE: −55°C to +85°C.

SINGLES

Cap. Mmfd.	Cat. No.	Dia. Max. (Inches)	Thick. Max. (Inches)	List Price	Net Price
†1.5	C10V15C	9/32	5/32	$.30	$.18
†2.0	C10V2C	9/32	5/32	.30	.18
†2.2	C10V22C	9/32	5/32	.30	.18
†3.0	C10V3C	9/32	5/32	.30	.18
†3.3	C10V33C	9/32	5/32	.30	.18
†4.0	C10V4C	9/32	5/32	.30	.18
†4.7	C10V47C	9/32	5/32	.30	.18
5.0	C10V5C	9/32	5/32	.30	.18
6.0	C10V6C	9/32	5/32	.30	.18
6.8	C10V68C	9/32	5/32	.30	.18
7.0	C10V7C	9/32	5/32	.30	.18
8.0	C10V8C	9/32	5/32	.30	.18
8.2	C10V82C	9/32	5/32	.30	.18
9.0	C10V9C	9/32	5/32	.30	.18
10	C10Q1C	9/32	5/32	.30	.18
12	C10Q12C	3/8	5/32	.30	.18
13	C10Q13C	3/8	5/32	.30	.18
15	C10Q15C	3/8	5/32	.30	.18
18	C10Q18C	3/8	5/32	.30	.18
20	C10Q2C	3/8	5/32	.30	.18
22	C10Q22C	19/32	5/32	.35	.18
24	C10Q24C	19/32	5/32	.35	.18
25	C10Q25C	19/32	5/32	.35	.18
27	C10Q27C	19/32	5/32	.35	.18
30	C10Q3C	19/32	5/32	.35	.18
33	C10Q33C	19/32	5/32	.35	.18
36	C10Q36C	19/32	5/32	.35	.18
39	C10Q39C	19/32	5/32	.35	.18
43	C10Q43C	19/32	5/32	.35	.18
47	C10Q47C	19/32	5/32	.35	.18
50	C10Q5C	3/4	5/32	.40	.22
51	C10Q51C	3/4	5/32	.40	.22
56	C10Q56C	3/4	5/32	.40	.22
62	C10Q62C	3/4	5/32	.40	.22
68	C10Q68C	3/4	5/32	.40	.22
75	C10Q75C	3/4	5/32	.40	.22
82	C10Q82C	3/4	5/32	.40	.22
91	C10Q91C	7/8	5/32	.40	.22
100	C10T1C	7/8	5/32	.40	.22

†Tolerance ±.5 Mmfd.

Temperature Compensating DISC Coefficient N750

TYPE: C

VOLTAGE: 1000 VDCW

TOLERANCE: ±5%

TEMPERATURE RANGE: −55°C to +85°C.

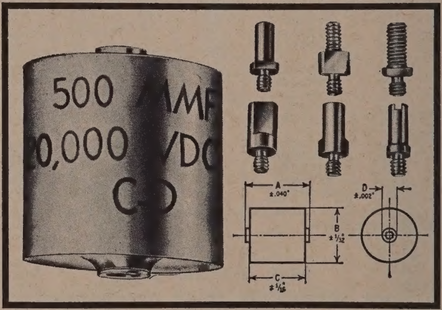
SINGLES

Cap. Mmfd.	Cat. No.	Dia. Max. (Inches)	Thick. Max. (Inches)	List Price	Net Price
5.0	C10V5U	9/32	5/32	$.30	$.18
6.0	C10V6U	9/32	5/32	.30	.18
6.8	C10V68U	9/32	5/32	.30	.18
7.0	C10V7U	9/32	5/32	.30	.18
8.0	C10V8U	9/32	5/32	.30	.18
8.2	C10V82U	9/32	5/32	.30	.18
9.0	C10V9U	9/32	5/32	.30	.18
10	C10Q1U	9/32	5/32	.30	.18
12	C10Q12U	9/32	5/32	.30	.18
13	C10Q13U	9/32	5/32	.30	.18
15	C10Q15U	9/32	5/32	.30	.18
18	C10Q18U	9/32	5/32	.30	.18
20	C10Q2U	9/32	5/32	.30	.18
22	C10Q22U	9/32	5/32	.30	.18
24	C10Q24U	9/32	5/32	.30	.18

TYPE: C (cont'd)

Cap. Mmfd.	Cat. No.	Dia. Max. (Inches)	Thick. Max. (Inches)	List Price	Net Price
25	C10Q25U	9/32	5/32	$.30	$.18
27	C10Q27U	9/32	5/32	.30	.18
30	C10Q3U	9/32	5/32	.30	.18
33	C10Q33U	9/32	5/32	.30	.18
36	C10Q36U	3/8	5/32	.30	.18
39	C10Q39U	3/8	5/32	.30	.18
43	C10Q43U	3/8	5/32	.30	.18
47	C10Q47U	3/8	5/32	.30	.18
50	C10Q5U	3/8	5/32	.30	.18
51	C10Q51U	3/8	5/32	.30	.18
56	C10Q56U	3/8	5/32	.30	.18
62	C10Q62U	3/8	5/32	.30	.18
68	C10Q68U	3/8	5/32	.30	.18
75	C10Q75U	19/32	5/32	.35	.18
82	C10Q82U	19/32	5/32	.35	.18
91	C10Q91U	19/32	5/32	.35	.18
100	C10T1U	19/32	5/32	.35	.18
110	C10T11U	19/32	5/32	.35	.18
120	C10T12U	19/32	5/32	.35	.18
130	C10T13U	19/32	5/32	.35	.18
150	C10T15U	19/32	5/32	.35	.18
160	C10T16U	3/4	5/32	.40	.22
175	C10T175U	3/4	5/32	.40	.22
180	C10T18U	3/4	5/32	.40	.22
200	C10T2U	3/4	5/32	.40	.22
220	C10T22U	3/4	5/32	.40	.22
240	C10T24U	3/4	5/32	.40	.22
270	C10T27U	7/8	5/32	.45	.26
300	C10T3U	7/8	5/32	.45	.26
330	C10T33U	7/8	5/32	.45	.26

UNIVERSAL HIGH VOLTAGE



- **New, superior design and construction.**
- **Generous factor of safety permits use at FULL rated voltage.**
- **High insulation resistance, low power factor.**
- **Choice of terminal styles to meet all TV assembly requirements.**

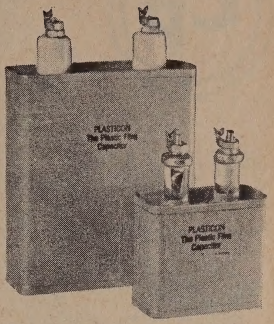
STANDARD TOLERANCE: +50%, −20%

	Cat. No. **MMU200T5**	Cat. No. **MMU300T5**
Cap. Mmfd.	500	500
VDCW	20,000	30,000
Flash Test	30,000	40,000
Body Size		
A	1.068"	1.381"
B	.950"	1.375"
C	.937"	1.250"
D	.250"	.250"
List Price	$1.85	$4.25
Net Price	**1.10**	**2.54**

A 10,000 VDCW (MMU 100T5) unit is available on special order.

PLASTICON DC RECTANGULARS

Mineral oil impregnated and filled. Hermetically sealed. Can be operated in any position, continuously at 10% over rated voltage up to +40° C. Tolerance 10%. Ambient temperature range -40° C. to 105° C. Insulators: Two ceramic type bushings for standard temperature range. Two soldered-in metallized glass insulators for extended temperature range. All DC rectangulars have 8-32 screw and hex nut terminals with removable hot-tinned solder lugs. Case: Rectangular base, lead coated steel with heavy finish of grey organic lacquer.



Mfr's. No.	Cap. Mfd.	Volts DC	Dimensions - Inches Height	Width	Depth	Term. Height	Dist. Bet. Ter.	Net
AOC6C1	1.0	600	2⅛	1¾	1	⅝	13/16	$ 2.69
AOC6C2	2.0	600	2¾	1¾	1	⅝	13/16	3.25
AOC6C4	4.0	600	3½	2½	1 3/16	⅝	1⅛	4.04
AOC6C8	8.0	600	4	3¾	1¼	⅝	2	6.10
AOC6C10	10.0	600	4	3¾	1¾	⅝	2	6.85
AOC1M1	1.0	1000	2⅜	1¾	1	⅝	13/16	2.60
AOC1M2	2.0	1000	3	2½	1 13/16	¾	1⅛	3.47
AOC1M4	4.0	1000	4⅝	2½	1 3/16	¾	1⅛	4.24
AOC1M8	8.0	1000	4⅝	3¾	1¾	⅝	2	5.99
AOC1M10	10.0	1000	4⅝	3¾	2¼	⅝	2	6.91
AOC2M05	0.5	2000	2¾	1¾	1	⅝	13/16	3.14
AOC2M1	1.0	2000	4½	1¾	1	⅝	13/16	3.81
AOC2M2	2.0	2000	3¼	3¾	1¼	¾	2	4.42
AOC2M4	4.0	2000	3½	3¾	2¼	¾	2	5.99
AOC3M1	1.0	3000	4	2½	1 3/16	1⅛	1⅛	7.84
AOC3M2	2.0	3000	4⅝	3¾	1¼	1 1/16	2	9.98
AOC3M4	4.0	3000	4⅝	3¾	2¼	1	2	13.80
AOC4M1	1.0	4000	4	3¾	1¼	1¼	2	17.82
AOC4M2	2.0	4000	4	3¾	1¾	1¼	2	21.38
AOC4M4	4.0	4000	4	3¾	4 9/16	1 1/16	2	32.69
AOC5M1	1.0	5000	4	3¾	1¾	2¼	2	21.38
AOC5M2	2.0	5000	3½	3¾	4 9/16	1⅛	2	26.73
AOC10M1	1.0	10000	4⅝	3¾	4 9/16	2¼	2	57.02

PLASTICON TEFLON CAPACITORS FOR 200° C. APPLICATIONS

POWER FACTOR .... @ 25°C .... .05%
@ 165°C .... .07%

TEMPERATURE COEFFICIENT .... —70°C to 200°C .... —200 ppm/°C.

INSULATION RESISTANCE ...... @25°C ...... 500,000 meg x mfd.
But need not exceed .... 10,000,000 megohms

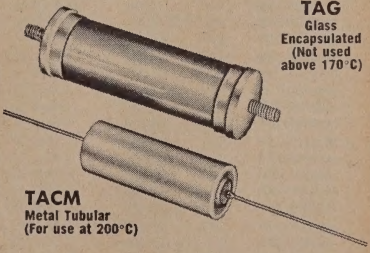
@ 165°C .... 7,000 meg. x mfd.
But need not exceed .... 50,000 megohms

@ 170°C .... 4,000 meg. x mfd.
But need not exceed .... 25,000 megohms

@ 200°C .... 1,000 meg. x mfd.
But need not exceed .... 5,000 megohms

DIELECTRIC ABSORPTION .... @25°C .... .02%

TAC
CP-70 Type Can
(For use at 200°C)



TAG
Glass Encapsulated
(Not used above 170°C)

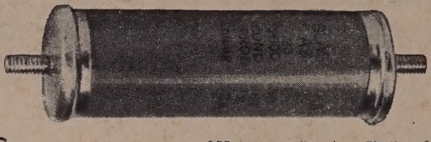
TACM
Metal Tubular
(For use at 200°C)

VOLTAGE RANGE .... 200 to 1,000 vdc.
CAPACITANCE RANGE .... TAG, TACM — .001 to 1.0 mfd
TAC — 1 mfd and above.

Condenser Products Company

MANUFACTURERS: Glassmikes • Plasticon Capacitors • HiVolt Power Supplies • Pulse Forming Networks

"Glassmike" Plasticon Capacitors



Type ASG

Type ASG are Plasticon A dielectric-silicone fluid impregnated capacitor elements in hermetically sealed glass tubes. Standard range —60°C to +85°C, extended range —60°C to +125°C with proper derating. The smallest and lightest high voltage capacitors made. Type ASG are ideal for DC and low frequency AC applications.

LSG type capacitors have Plasticon L film-silicone fluid impregnant. Designed to compete with mica capacitors, the LSG capacitors are more applicable for Radio Frequency. Special beneficial features include greater safety factor, lower RF loss, more conveniently mounted, utilizes less chassis space, impervious to moisture, and smaller in overall volume.

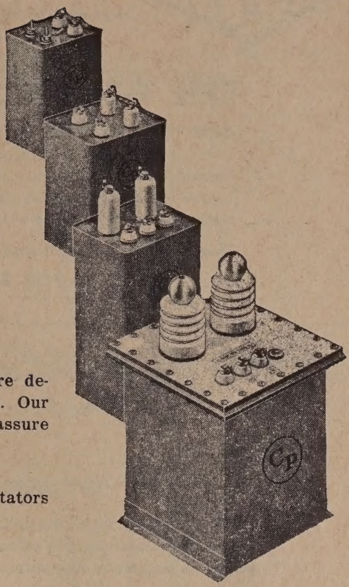
All 19/32 diameter Glassmikes are supplied with pigtail leads.

Cat. No.	Cap. Mfd.	Volts D.C.	Dimensions Dia. & Length	List Price
ASG502-1M	.005	1000	19/32x1 9/16	$ 2.85
ASG103-1M	.01	1000	19/32x1 3/16	2.85
ASG203-1M	.02	1000	19/32x1 3/16	2.85
ASG503-1M	.05	1000	¾x1 ¾	3.08
ASG104-1M	.1	1000	¾x2 ¼	3.08
ASG254-1M	.25	1000	29/32x2 ¾	3.08
ASG504-1M	.5	1000	1 ⅛x2 ¼	2.90
ASG102-3M	.001	3000	19/32x1 3/16	4.08
ASG202-3M	.002	3000	19/32x1 3/16	4.08
ASG502-3M	.005	3000	19/32x1 3/16	4.08
ASG103-3M	.01	3000	19/32x1 9/16	4.25
ASG203-3M	.02	3000	¾x1 ¾	4.95
ASG503-3M	.05	3000	29/32x2 ¼	5.45
ASG104-3M	.1	3000	1 ⅛x2 ¼	6.00
ASG254-3M	.25	3000	1 ⅜x2	6.60
ASG102-5M	.001	5000	19/32x1 3/16	6.30
ASG202-5M	.002	5000	19/32x1 3/16	6.40
ASG502-5M	.005	5000	19/32x1 ⅝	6.50
ASG103-5M	.01	5000	¾x1 ¾	6.80
ASG203-5M	.02	5000	¾x2 ¼	7.20
ASG503-5M	.05	5000	29/32x2 ¼	7.60
ASG104-5M	.1	5000	1 ⅜x3 ½	8.50
ASG501-8M	.0005	8000	19/32x1 9/16	6.50
ASG102-8M	.001	8000	19/32x1 9/16	6.50
ASG202-8M	.002	8000	19/32x1 ¾	6.80
ASG502-8M	.005	8000	¾x1 ¾	7.00
ASG103-8M	.01	8000	¾x2 ¼	7.50
ASG203-8M	.02	8000	29/32x2 ¾	8.60
ASG503-8M	.05	8000	1 ⅜x4 ¼	11.00
ASG501-10M	.0005	10,000	19/32x1 ⅝	7.00
ASG102-10M	.001	10,000	19/32x1 ⅝	7.20
ASG202-10M	.002	10,000	19/32x1 ⅝	7.40
ASG502-10M	.005	10,000	13/16x1 ¾	8.50
ASG103-10M	.01	10,000	29/32x3 ½	9.20
ASG203-10M	.02	10,000	1 ⅛x2 ¾	11.40
ASG303-10M	.03	10,000	1 ⅜x2 ¾	14.60
ASG603-10M	.06	10,000	1 ⅜x4 ¼	17.50
ASG501-15M	.0005	15,000	19/32x2 ¾	13.50
ASG102-15M	.001	15,000	¾x2 ¼	13.80
ASG202-15M	.002	15,000	¾x2 ¼	14.60
ASG502-15M	.005	15,000	1 ⅛x2 ¾	17.00
ASG103-15M	.01	15,000	1 ⅛x3 ¾	20.00
ASG203-15M	.02	15,000	1 ⅜x4 ½	22.00
ASG501-20M	.0005	20,000	19/32x3 ½	18.00
ASG102-20M	.001	20,000	¾x3 ½	19.00
ASG202-20M	.002	20,000	13/16x3 ½	21.00
ASG502-20M	.005	20,000	1 ⅛x3 ½	22.50
ASG103-20M	.01	20,000	1 ⅜x4 ½	24.00
ASG501-30M	.0005	30,000	19/32x4 9/16	21.00
ASG102-30M	.001	30,000	¾x5	23.50
ASG202-30M	.002	30,000	1 ⅜x4 ¼	26.00
ASG502-30M	.005	30,000	1 ⅜x5	28.00
ASG501-40M	.0005	40,000	¾x6 ½	22.50
ASG102-40M	.001	40,000	13/16x6 ½	26.00
ASG202-40M	.002	40,000	1 ⅛x6 ½	28.00
ASG501-50M	.0005	50,000	¾x8 ¼	24.50
ASG102-50M	.001	50.0000	13/16x8 ¼	28.00
ASG202-50M	.002	50,000	1 ⅛x8 ¼	31.50
ASG502-50M	.005	50,000	1 ⅝x10 ¼	36.00
ASG501-60M	.0005	60,000	¾x11	28.50
ASG102-60M	.001	60,000	29/32x11	34.00

Part No.	Size	Cap	Volts D.C.	List Price
LSG303-1M	13/16x1 ½	.03	1000	$ 6.17
LSG403-1M	29/32x1 ½	.04	1000	6.85
LSG503-1M	1 ⅛x1 ½	.05	1000	7.33
LSG603-1M	1 ⅛x1 ½	.06	1000	7.33
LSG753-1M	1 ⅛x1 ½	,075	1000	7.33
LSG104-1M	1 ⅛x2	0.1	1000	8.00
LSG154-1M	1 ⅜x2	0.15	1000	9.50
LSG204-1M	1 ⅜x2 ½	0.2	1000	10.80
LSG254-1M	1 ⅝x2 ½	0.25	1000	11.00
LSG304-1M	1 ⅝x3	0.3	1000	11.70
LSG404-1M	1 ⅝x3 ½	0.4	1000	12.70
LSG752-25C	29/32x1	.0075	2500	6.17
LSG103-25C	1 ⅛x1	.01	2500	6.50
LSG203-25C	1 ⅛x1 ½	.02	2500	7.18
LSG253-25C	1 ⅛x1 ½	.025	2500	7.18
LSG303-25C	1 ⅛x1 ½	.03	2500	7.18
LSG403-25C	1 ⅛x2	.04	2500	8.00
LSG503-25C	1 ⅜x2	.05	2500	8.68
LSG603-25C	1 ⅜x2	.06	2500	8.68
LSG753-25C	1 ⅝x2	.075	2500	10.40
LSG104-25C	1 ⅝x2 ½	0.1	2500	11.70
LSG154-25C	1 ⅝x3 ½	0.15	2500	12.70
LSG402-35C	29/32x1	.004	3500	7.00
LSG502-35C	1 ⅛x1	.005	3500	7.50
LSG602-35C	1 ⅛x1	.006	3500	7.50
LSG752-35C	1 ⅜x1	.0075	3500	7.85
LSG103-35C	1 ⅝x1	.01	3500	8.18
LSG203-35C	1 ⅝x1 ½	.02	3500	8.50
LSG253-35C	1 ⅝x1 ½	.025	3500	8.67
LSG303-35C	1 ⅝x2	.03	3500	10.80
LSG403-35C	1 ⅝x2	.04	3500	10.80
LSG503-35C	1 ⅝x2 ½	.05	3500	11.65
LSG603-35C	1 ⅝x3	.06	3500	12.35
LSG753-35C	1 ⅝x3	.075	3500	12.35
LSG104-35C	1 ⅝x4	0.1	3500	13.65
LSG252-5M	13/16x2	.0025	5000	9.65
LSG302-5M	13/16x2	.003	5000	9.65
LSG402-5M	1 ⅛x2	.004	5000	10.50
LSG502-5M	1 ⅛x2	.005	5000	10.50
LSG602-5M	1 ⅛x2	.006	5000	10.50
LSG752-5M	1 ⅜x2	.0075	5000	11.50
LSG103-5M	1 ⅜x2	.01	5000	11.50
LSG203-5M	1 ⅜x3	.02	5000	12.50
LSG253-5M	1 ⅜x3	.025	5000	12.50
LSG303-5M	1 ⅜x4	.03	5000	15.00
LSG403-5M	1 ⅝x4	.04	5000	16.70
LSG503-5M	1 ⅜x6	.05	5000	18.70
LSG603-5M	1 ⅝x6	.06	5000	20.70
LSG753-5M	1 ⅜x8	.075	5000	22.70
LSG104-5M	1 ⅝x8	0.1	5000	24.70
LSG751-7M	¾x2	.00075	7000	9.00
LSG102-7M	¾x2	.001	7000	9.00
LSG202-7M	29/32x2	.002	7000	11.00
LSG252-7M	1 ⅛x2	.0025	7000	11.85
LSG302-7M	1 ⅛x2	.003	7000	11.85
LSG402-7M	1 ⅜x2	.004	7000	12.35
LSG502-7M	1 ⅝x2	.005	7000	14.35
LSG602-7M	1 ⅝x2	.006	7000	14.35
LSG752-7M	1 ⅛x4	.0075	7000	17.00
LSG103-7M	1 ⅛x4	.01	7000	17.00
LSG203-7M	1 ⅝x4	.02	7000	18.65
LSG253-7M	1 ⅜x6	.025	7000	21.30
LSG303-7M	1 ⅝x6	.03	7000	21.30
LSG403-7M	1 ⅜x8	.04	7000	23.00
LSG503-7M	1 ⅝x8	.05	7000	23.00
LSG102-10M	29/32x3	.001	10 KV	12.35
LSG202-10M	1 ⅛x3	.002	10 KV	13.65
LSG252-10M	1 ⅜x3	.0025	10 KV	15.35
LSG302-10M	1 ⅜x3	.003	10 KV	15.35
LSG402-10M	1 ⅝x3	.004	10 KV	17.65
LSG502-10M	1 ⅛x6	.005	10 KV	21.30
LSG602-10M	1 ⅛x6	.006	10 KV	21.30
LSG752-10M	1 ⅜x6	.0075	10 KV	24.00
LSG103-10M	1 ⅜x6	.01	10 KV	24.00
LSG203-10M	1 ⅝x9	.02	10 KV	27.70
LSG253-10M	1 ⅝x9	.025	10 KV	27.70
LSG101-14M	19/32x4	.0001	14 KV	12.00
LSG201-14M	¾x4	.0002	14 KV	12.85
LSG251-14M	¾x4	.00025	14 KV	12.85

OTHER VALUES READILY AVAILABLE

HiVolt POWER SUPPLIES



Where size and weight must be kept to a minimum —

These hermetically-sealed, self-contained power supplies are designed for Hi Voltage low current DC for many applications. Our exclusive engineering techniques and oil-filled construction assure smaller, lighter, more flexible units.

APPLICATIONS:

- radiation counters
- spectrographic analyzers
- projection television sets
- dust and electrostatic precipitators
- oscilloscopes
- display tubes, etc.

Model *	Output Voltage	Rated Output Current	Max. Output Current	% Ripple at Rated Current	Circuit	Case Size	Weight
PS 2-2M60	2 KV DC	2.0 ma	5.0 ma	1.5	Half Wave	3¾ x 3 3/16 x 5½	4.5 pounds
PS 5-5M60	5 KV DC	5.0 ma	5.0	1.5	Half Wave	3¾ x 4 9/16 x 6	9 pounds
PS10-1M60V	0-12 KV DC	1.0 ma	1.75ma	3.0	Full Wave Doubler	3¾ x 4 9/16 x 8	11.5 pounds
PS15-1M60V	0-15 KV DC	1.0 ma	1.75ma	3.0	Full Wave Doubler	3¾ x 4 9/16 x 9	12 pounds
PS30-1M60V	0-30 KV DC	1.0 ma	1.5 ma	3.0	Full Wave Doubler	7 x 7 x 8¼	25 pounds
PS50-2M60VT	0-50 KV DC	2.0 ma	4.0 ma	1.5	Full Wave Tripler	12½ x 12½ x 12½	30 pounds

NOTES: *The PS 50 supply has a separate accessible compartment for the rectifier tubes.
1. Hivolt Supplies are rated at 118 V AC input, 60 cycles.
2 Hivolt Supplies for 400 cycle operation are also available for aircraft use, built to military specifications.
3. Hivolt Supplies are engineered for various applications. Send us your requirements.

LABORATORY GRADE PLASTICON CAPACITORS

Low dielectric absorption, .01-.02% residual. Low dissipation factor, .0002-.0003 at 1 MC. Constant Q and capacitance, from DC to 100 KC. High insulation resistance, 10^{12} ohms/mfd. average. Negative temp. coefficient, minus 400-500 ppm/°C. Rated voltage 500 V DC. Resistance and absorption readings taken at 200 V DC. 2% and 5% standard tolerances, 1% to order. Type LAG Glassmike style. Type LAC rectangular metal can.

No.	Mfd.	Dimensions	List Price 5% Tolerance
LAG101	.0001	19/32 x 1"	$ 6.25
LAG201	.0002	19/32 x 1"	6.33
LAG501	.0005	19/32 x 1"	6.50
LAG102	.001	¾ x 1"	6.67
LAG202	.002	¾ x 1"	6.83
LAG502	.005	¾ x 1"	7.25
LAG103	.01	29/32 x 1"	7.75
LAG203	.02	29/32 x 1"	8.50
LAG503	.05	1⅜ x 1"	9.33
LAC104	.1	2¼ x 1¾ x 1"	12.83
LAC204	.2	2¼ x 2½ x 1 3/16"	13.83
LAC504	.5	4 x 2½ x 1 3/16"	15.83
LAC105	1.	4⅝ x 3¾ x 1¼"	27.50
LAC205	2.	4⅝ x 3¾ x 2¼"	40.83
LAC505	5.	6 x 4 9/16 x 3¾"	88.33

Condenser Products Company

MANUFACTURERS: Glassmikes • Plasticon Capacitors • HiVolt Power Supplies • Pulse Forming Networks

ERIE

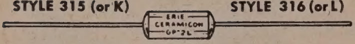
ELECTRONICS DISTRIBUTOR DIVISION

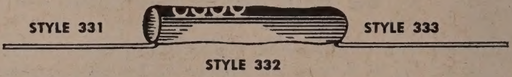
ERIE RESISTOR CORPORATION — ERIE, PA.

ERIE GENERAL PURPOSE CERAMICONS®

ERIE CERAMICONS are small fixed capacitors consisting essentially of a ceramic dielectric with silver electrodes which are fired on at a very high temperature. Erie Ceramicons are outstanding because of their excellent high frequency characteristics, small size, rugged construction and availability in a wide range of capacity values.

These capacitors meet performance specifications of EIA Standard No. RS—
198 FOR BOTH CLASS 1 AND CLASS 2





"GP"® GENERAL PURPOSE CERAMICONS

are ideally suited for such applications as coupling and by-passing, in circuits where temperature coefficient is not important—in other words for all receiver applications except in frequency determining circuits. Working voltage—500 volts D.C.

Order by Catalog Number from Table Below

500 VDCW—STOCK ITEMS—1500 VDC TEST

STANDARD TOLERANCE ± 10% 5 MMF THROUGH 1500 MMF

±20% 1800 MMF THROUGH 2200 MMF

+80% —20% 2500 MMF THROUGH 10,000 MMF

Catalog No.	Cap. MMF	Body Style
GP-5	5	315
GP-10	10	315
GP-12	12	315
GP-15	15	315
GP-18	18	315
GP-20	20	315
GP-22	22	315
GP-24	24	315
GP-25	25	315
GP-27	27	315
GP-30	30	315
GP-33	33	315
GP-39	39	315
GP-47	47	315
GP-50	50	315
GP-51	51	315
GP-56	56	315
GP-68	68	315
GP-75	75	315
GP-82	82	315
GP-100	100	315
GP-110	110	315
GP-120	120	315
GP-150	150	315
GP-180	180	315
GP-200	200	315
GP-220	220	315
GP-240	240	315
GP-250	250	315

Catalog No.	Cap. MMF	Body Style
GP-270	270	315
GP-300	300	315
GP-330	330	315
GP-360	360	315
GP-390	390	315
GP-470	470	315
GP-500	500	315
GP-510	510	315
GP-560	560	315
GP-680	680	315
GP-750	750	315
GP-820	820	315
GP-1,000	1,000	316
GP-1,200	1,200	316
GP-1,500	1,500	316
GP-1,800	1,800	316
GP-2,000	2,000	316
GP-2,200	2,200	316
GP-2,500	2,500	316
GP-2,700	2,700	316
GP-3,000	3,000	316
GP-3,300	3,300	316
GP-4,000	4,000	316
GP-4,700	4,700	316
GP-5,000	5,000	316
GP-5,600	5,600	316
GP-6,000	6,000	316
GP-6,800	6,800	316
GP-7,500	7,500	316
GP-10,000	10,000	316

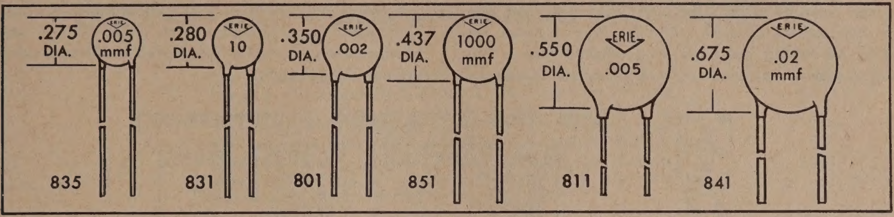
Note: "Ceramicon" and "GP Ceramicon" are registered trade names and refer to ceramic dielectric capacitors manufactured only by Erie Resistor Corporation.

ELECTRONICS DISTRIBUTOR DIVISION

ERIE RESISTOR CORPORATION — ERIE, PA.

ERIE DISC CERAMICONS®

Erie Disc Ceramicons consist of a flat ceramic dielectric with silver fired onto the dielectric. Lead wires are firmly soldered to the silver electrodes, and the unit is given a protective coating of phenolic. Low series inductance assures efficient high frequency operation.



Order by Catalog Number from Table Below

600 VDCW — STOCK ITEMS — 1500 VDC TEST

HIGH STABILITY GENERAL PURPOSE CERAMICONS ±10%

Catalog No.	Capacity	Body Style
ED-5	5 mmf	831
ED-10	10 mmf	831
ED-12	12 mmf	831
ED-15	15 mmf	831
ED-18	18 mmf	831
ED-20	20 mmf	831
ED-22	22 mmf	831
ED-24	24 mmf	831
ED-25	25 mmf	831
ED-27	27 mmf	831
ED-30	30 mmf	831
ED-33	33 mmf	831
ED-39	39 mmf	831
ED-47	47 mmf	831
ED-50	50 mmf	831
ED-51	51 mmf	831
ED-56	56 mmf	831
ED-68	68 mmf	831
ED-75	75 mmf	831
ED-82	82 mmf	831
ED-91	91 mmf	831
ED-100	100 mmf	831
ED-120	120 mmf	831
ED-150	150 mmf	831
ED-180	180 mmf	831
ED-200	200 mmf	831
ED-220	220 mmf	831
ED-240	240 mmf	831
ED-250	250 mmf	831
ED-270	270 mmf	831
ED-300	300 mmf	831
ED-330	330 mmf	831
ED-360	360 mmf	831
ED-390	390 mmf	831
ED-470	470 mmf	831
ED-500	500 mmf	801
ED-510	510 mmf	801
ED-560	560 mmf	801
ED-680	680 mmf	801
ED-750	750 mmf	851
ED-820	820 mmf	851
ED-910	910 mmf	851
ED-1000	1000 mmf	851
ED-1200	1200 mmf	811
ED-1500	1500 mmf	811
ED-1800	1800 mmf	811

HI-K BY-PASS AND COUPLING CERAMICONS GMV

Catalog No.	Capacity	Body Style
ED-.00047	.00047 mfd	831
ED-.0008	.0008 mfd	831
ED-.001	.001 mfd	801
ED-.0012	.0012 mfd	801
ED-.0015	.0015 mfd	801
ED-.002	.002 mfd	801
ED-.0022	.0022 mfd	851
ED-.0025	.0025 mfd	851
ED-.0027	.0027 mfd	851
ED-.003	.003 mfd	851
ED-.0033	.0033 mfd	851
ED-.004	.004 mfd	811
ED-.0047	.0047 mfd	811
ED-.005	.005 mfd	811
ED-.0068	.0068 mfd	811
ED-.01	.01 mfd	811
ED-.015	.015 mfd	841
ED-.02	.02 mfd	841

HI-K DUAL CERAMICONS GMV

Catalog No.	Capacity	Body Style
ED2-.002	2x.002 mfd	812
ED2-.003	2x.003 mfd	822
ED2-.004	2x.004 mfd	822

MIL-C-11015A DISC CERAMICONS +100%—20% TOLERANCE

MIL Designation	Body Style	Capacity
CK60Y471Z	831	470
CK60Y681Z	831	680
CK60Y821Z	831	820
CK61Y102Z	801	1000
CK61Y152Z	801	1500
CK62Y222Z	811	2200
CK62Y322Z	811	3300
CK62Y472Z	811	4700
CK63Y103Z	841	10000

TRANSISTOR DISC CERAMICONS® TYPE "ET-8" 100 VDCW +80% —20% TOLERANCE

Catalog No.	Capacity	Body Style
ET8-.005	.005 MFD	835
ET8-.01	.01 MFD	855
ET8-.02	.02 MFD	855
ET8-.025	.025 MFD	815
ET8-.033	.033 MFD	815
ET8-.039	.039 MFD	815
ET8-.05	.05 MFD	815*
ET8-.047	.047 MFD	845
ET8-.05	.05 MFD	845
ET8-.1	.1 MFD	845*

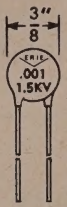
*Dual Ceramicons

ELECTRONICS DISTRIBUTOR DIVISION

ERIE RESISTOR CORPORATION — ERIE, PA.

ERIE HIGH VOLTAGE DISC CERAMICONS®

Designed to employ the same basic diameters that have been standardized in 600 volt capacitors. Careful and detailed life testing has been accomplished over a long period of time to establish required dielectric thicknesses to assure conservative ratings in the high voltage line. They differ in appearance from lower voltage units in having greater thickness, the degree of difference depending on voltage rating.

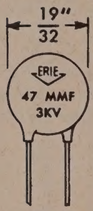


HD15-1000

1500 VDCW—STOCK ITEMS—±20% TOLERANCE

Catalog No.	Capacity MMF
HD15-4R7	4.7
HD15-6R8	6.8
HD15-10	10
HD15-15	15
HD15-22	22
HD15-33	33
HD15-47	47
HD15-68	68
HD15-82	82
HD15-100	100
HD15-150	150
HD15-180	180

Catalog No.	Capacity MMF
HD15-220	220
HD15-330	330
HD15-470	470
HD15-680	680
HD15-820	820
HD15-1000	1000
HD15-1500	1500
HD15-2200	2200
HD15-3300	3300
HD15-4700	4700
HD15-5600	5600
HD15-6200	6200

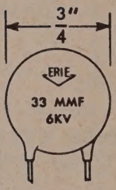


HD3-47

3000 VDCW—STOCK ITEMS—±20% TOLERANCE

Catalog No.	Capacity MMF
HD3-4R7	4.7
HD3-6R8	6.8
HD3-10	10
HD3-15	15
HD3-22	22
HD3-33	33
HD3-47	47
HD3-56	56
HD3-68	68
HD3-82	82
HD3-100	100

Catalog No.	Capacity MMF
HD3-150	150
HD3-220	220
HD3-330	330
HD3-470	470
HD3-680	680
HD3-820	820
HD3-1000	1000
HD3-1500	1500
HD3-2200	2200
HD3-3300	3300



HD6-33

6000 VDCW—STOCK ITEMS—±20% TOLERANCE

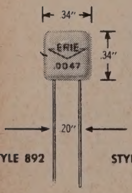
Catalog No.	Capacity MMF
HD6-4R7	4.7
HD6-6R8	6.8
HD6-10	10
HD6-15	15
HD6-22	22
HD6-33	33
HD6-39	39
HD6-47	47
HD6-56	56
HD6-68	68

Catalog No.	Capacity MMF
HD6-82	82
HD6-100	100
HD6-150	150
HD6-180	180
HD6-220	220
HD6-330	330
HD6-470	470
HD6-680	680
HD6-820	820

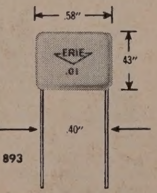
ERIE HIGH CAPACITY MINIATURE CERAMICONS®

By employing basically new methods of construction, Erie is able to offer high capacitance Ceramicons in small size for transistor and other miniaturized circuitry. Rectangular in shape—for the most capacity in the smallest space—these Plate Ceramicons are available in sizes and capacitance values as tabled below.

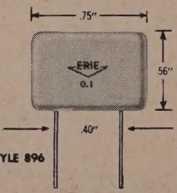
Voltage Rating: 200 VDC @ 85° C. Leads: #22 Hot Tinned



STYLE 892



STYLE 893



STYLE 896

STOCK ITEMS

Erie Part No.	Capacity MFD	Cap Tol.
892- .0022	.0022	20%
892- .0033	.0033	20%
892- .0047	.0047	20%
893- .0068	.0068	20%
893- .01	.01	20%
896- .015	.015	20%
896- .022	.022	20%
896- .033	.033	20%
896- .047	.047	+80% —20%
896- .068	.068	+80% —20%
896- .1	.1	+80% —20%

TEMPERATURE COMPENSATING CERAMICONS®

Erie Ceramicons are capacity-sensitive to temperature in varying pre-determined degrees, and because of this characteristic have found wide-spread application as temperature-compensating elements in circuits which must be frequency-stabilized over wide temperature ranges. They are also manufactured with practically no thermal sensitivity for use in applications requiring a capacitor whose value is not affected by temperature.

NPO TEMPERATURE COEFFICIENT CERAMICONS®

NPO Temperature Coefficient Ceramicons are highly recommended for frequency determining applications where no capacity change with change in temperature is desired. "Q" for NPO Ceramicons above 30 mmf is 1000 or higher. Below 30 mmf "Q" decreases slightly as capacity decreases. Working voltage — 600 volts D. C.

Order by Catalog Number from Table Below

STOCK ITEMS — 600 VDCW

Catalog No.	Cap. MMF	Cap. Tol.	TC Tol.	Body Size
TCO-.5	0.5	0.25 mmf	±250	301 or A
TCO-.68	0.68	0.25 mmf	±250	301 or A
TCO-1	1.0	0.25 mmf	±250	301 or A
TCO-1.5	1.5	0.25 mmf	±250	301 or A
TCO-2.2	2.2	0.25 mmf	±120	301 or A
TCO-3	3.0	0.25 mmf	±120	301 or A
TCO-3.3	3.3	0.50 mmf	±120	301 or A
TCO-4.7	4.7	0.50 mmf	± 60	301 or A
TCO-5	5.0	0.50 mmf	± 60	301 or A
TCO-6.8	6.8	0.50 mmf	± 60	301 or A
TCO-8.2	8.2	0.50 mmf	± 60	301 or A
TCO-10	10	0.50 mmf	± 30	301 or A
TCO-12	12	5%	± 30	315 or K
TCO-15	15	5%	± 30	315 or K
TCO-18	18	5%	± 30	315 or K
TCO-20	20	5%	± 30	315 or K
TCO-22	22	5%	± 30	315 or K
TCO-24	24	5%	± 30	316 or L
TCO-25	25	5%	± 30	316 or L
TCO-27	27	5%	± 30	316 or L
TCO-30	30	5%	± 30	316 or L
TCO-33	33	5%	± 30	316 or L
TCO-36	36	5%	± 30	316 or L
TCO-39	39	5%	± 30	316 or L

Catalog No'	Cap. MMF	Cap. Tol.	TC Tol.	Body Size
TCO-43	43	5%	±30	316 or L
TCO-47	47	5%	±30	338
TCO-50	50	5%	±30	338
TCO-51	51	5%	±30	338
TCO-56	56	5%	±30	337
TCO-62	62	5%	±30	337
TCO-68	68	5%	±30	337
TCO-75	75	5%	±30	337
TCO-82	82	5%	±30	337
TCO-91	91	5%	±30	337
TCO-100	100	5%	±30	337
TCO-110	110	5%	±30	333
TCO-120	120	5%	±30	333
TCO-130	130	5%	±30	333
TCO-150	150	5%	±30	334
TCO-160	160	5%	±30	334
TCO-175	175	5%	±30	334
TCO-180	180	5%	±30	334
TCO-200	200	5%	±30	334
TCO-220	220	5%	±30	335
TCO-240	240	5%	±30	335
TCO-270	270	5%	±30	335
TCO-300	300	5%	±30	335

PARALLELING TC AND CAPACITIES

A wide range of capacitance values and temperature coefficients can be obtained by using Erie NPO capacitors in parallel with either N330 or N750 units. The following formulae are used in determining the capacitance of the various temperature compensating units that are required to obtain any desired temperature coefficient and capacitance:

1. $$\frac{\text{(Capacitance in MMF) (Temp. Coef. Required)}}{{}^{*}750} =$$

   Capacitance in MMF of the N750 unit to be used (use nearest standard capacitance value)

2. (Total Capacitance Required) minus the value found in step 1 = capacitance in MMF of the NPO unit to be used.
3. The total desired capacitance and temperature coefficient are obtained by connecting the units found in steps 1 and 2 in parallel.

*If an N330 unit is to be used in parallel with an NPO unit, substitute 330 for 750 in this equation.

ERIE

ELECTRONICS DISTRIBUTOR DIVISION

ERIE RESISTOR CORPORATION — ERIE, PA.

NEGATIVE TEMPERATURE COEFFICIENT CERAMICONS®

N330 and N750 units provide temperature compensation to eliminate drift. Positive and Negative Temperature Coefficient Ceramicons P100 through N1500 are available on special order through your distributor. See table on page 7 for other values and styles.

ERIE TUBULAR TYPE N330 CERAMICONS®

Order by Catalog Number from Table Below

STOCK ITEMS — 600 VDCW

Catalog No.	Cap. MMF	Cap. Tol.	TC Tol.	Body Size
TC3-1	1.0	0.5 mmf	±250	301 or A
TC3-1.5	1.5	0.5 mmf	±250	301 or A
TC3-2.2	2.2	0.5 mmf	±120	301 or A
TC3-3.3	3.3	0.5 mmf	±120	301 or A
TC3-3.9	3.9	0.5 mmf	±120	301 or A
TC3-4.7	4.7	0.5 mmf	± 60	301 or A
TC3-5.6	5.6	0.5 mmf	± 60	301 or A
TC3-6.8	6.8	0.5 mmf	± 60	301 or A
TC3-8.2	8.2	0.5 mmf	± 60	301 or A
TC3-10	10	0.5 mmf	± 60	301 or A
TC3-12	12	5%	± 60	315 or K
TC3-15	15	5%	± 60	315 or K
TC3-18	18	5%	± 60	315 or K
TC3-22	22	5%	± 60	315 or K
TC3-27	27	5%	± 60	315 or K
TC3-33	33	5%	±60	315 or K
TC3-39	39	5%	±60	316 or L
TC3-47	47	5%	±60	316 or L
TC3-56	56	5%	±60	316 or L
TC3-68	68	5%	±60	316 or L
TC3-82	82	5%	±60	338
TC3-100	100	5%	±60	337
TC3-120	120	5%	±60	337
TC3-150	150	5%	±60	337
TC3-180	180	5%	±60	333
TC3-220	220	5%	±60	334
TC3-270	270	5%	±60	334
TC3-330	330	5%	±60	334
TC3-390	390	5%	±60	335
TC3-470	470	5%	±60	335

ERIE TUBULAR TYPE N750 CERAMICONS®

Order by Catalog Number from Table Below

STOCK ITEMS — 600 VDCW

Catalog No.	Cap. MMF	Cap. Tol.	TC Tol.	Body Size
TC7-2.2	2.2	0.5 mmf	±120	301 or A
TC7-3.3	3.3	0.5 mmf	±120	301 or A
TC7-5	5	0.5 mmf	±120	301 or A
TC7-6.8	6.8	0.5 mmf	±120	301 or A
TC7-10	10	0.5 mmf	±120	301 or A
TC7-12	12	5%	±120	315 or K
TC7-15	15	5%	±120	315 or K
TC7-18	18	5%	±120	315 or K
TC7-20	20	5%	±120	315 or K
TC7-22	22	5%	±120	315 or K
TC7-24	24	5%	±120	315 or K
TC7-25	25	5%	±120	315 or K
TC7-27	27	5%	±120	315 or K
TC7-30	30	5%	±120	315 or K
TC7-33	33	5%	±120	315 or K
TC7-36	36	5%	±120	315 or K
TC7-39	39	5%	±120	315 or K
TC7-43	43	5%	±120	315 or K
TC7-47	47	5%	±120	315 or K
TC7-50	50	5%	±120	315 or K
TC7-51	51	5%	±120	315 or K
TC7-56	56	5%	±120	315 or K
TC7-62	62	5%	±120	315 or K
TC7-68	68	5%	±120	316 or L
TC7-75	75	5%	±120	316 or L
TC7-82	82	5%	±120	316 or L
TC7-91	91	5%	±120	316 or L
TC7-100	100	5%	±120	316 or L
TC7-110	110	5%	±120	316 or L
TC7-120	120	5%	±120	316 or L
TC7-130	130	5%	±120	337
TC7-150	150	5%	±120	337
TC7-160	160	5%	±120	337
TC7-180	180	5%	±120	337
TC7-200	200	5%	±120	337
TC7-220	220	5%	±120	337
TC7-240	240	5%	±120	337
TC7-270	270	5%	±120	337
TC7-300	300	5%	±120	333
TC7-330	330	5%	±120	333
TC7-360	360	5%	±120	333
TC7-390	390	5%	±120	334
TC7-430	430	5%	±120	334
TC7-470	470	5%	±120	334
TC7-510	510	5%	±120	334
TC7-560	560	5%	±120	334
TC7-620	620	5%	±120	335
TC7-680	680	5%	±120	335
TC7-750	750	5%	±120	335

ELECTRONICS DISTRIBUTOR DIVISION

ERIE RESISTOR CORPORATION — ERIE, PA.

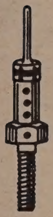
ERIE STAND-OFF CERAMICONS®

Stand-off Ceramicons, an original Erie development, are now widely used for the dual purposes of by-passing R.F. current to ground, and of mechanically supporting other circuit elements. They are especially suited for V.H.F. and U.H.F. applications, due to their low-inductance electrical paths and resultant high resonant frequency.

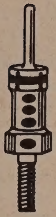
Order by Part Number from Table

500 VDCW — STOCK ITEMS — ± 20%

Erie Part No.	Capacity MMF
318-471	470
318-501	500
319-470	47
319-471	470
319-501	500
319-102	1000
323-500	50
323-101	100
323-501	500
324-102	1000
324-152	1500
325-102	1000
325-152	1500
326-102	1000
326-152	1500



STYLE 318



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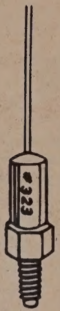

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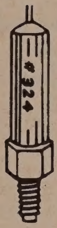

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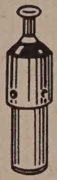
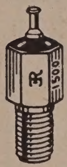


STYLE 325



STYLE 326

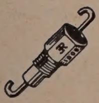
ERIE FEED-THRU CERAMICONS®

These very practical feed-thru capacitors are highly recommended for by-passing R.F. to ground in feed-thru applications. Wire terminals of Style 362 and hook type terminals of Style 327 are sufficiently rugged to serve as tie points for several connections, for supporting other circuit elements, and long enough for point to point wiring. Style 327 is hermetically sealed and ruggedized, and is primarily for military and similar commercial usage.

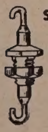
Order by Part Number from Table Below

500 VDCW—STOCK ITEMS—±20%

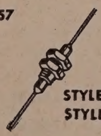
Erie Part No.	Capacity MMF
321-102	1000
327-102	1000
357-102	1000
357-152	1500
357-202	2000 GMV
362-102	1000
362-152	1500
362-202	2000 GMV
2404-500	50
2404-101	100
2404-102	1000 GMV
2405-501	500
2405-102	1000 GMV



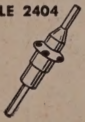
STYLE 327



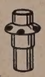
STYLE 357



STYLE 362
STYLE 321



STYLE 2404



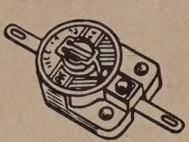
STYLE 2405

ELECTRONICS DISTRIBUTOR DIVISION

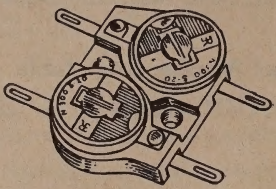
ERIE RESISTOR CORPORATION — ERIE, PA.

ERIE CERAMICON® TRIMMERS

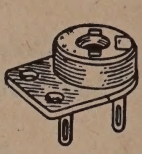
These trimmers have been well known for years for their stability under the most exacting conditions. The top of the base and underside of the titanium dioxide rotor are lapped optically flat, thus eliminating air space variations with temperature. Fired silver electrodes are applied to top of base and rotor, so that capacity is changed by varying the amount of overlap. Capacity change per degree of rotation is approximately constant, resulting in a smoothness of adjustment not possible with compression type trimmers, where the greater part of capacity change is concentrated close to one end of adjustment.



STYLE TS2A



STYLE TD2A



STYLE 557
Patented

Order by Catalog Number from Table Below

STOCK ITEMS — 500 VDCW

Catalog No.	Capacity Range (MMF)	Temperature Coefficient
TS-A	1.5-7	NPO
TS-B	3-12	NPO
TS-C	4-30	N500
TS-D	5-20	N300
TS-E	7-45	N500
TD-A	1.5-7	NPO
TD-B	3-12	NPO
TD-C	4-30	N500
TD-D	5-20	N300
TD-E	7-45	N500
557-A	1.5-7	NPO
557-B	3-12	NPO
557-F	5-25	NPO
557-G	5-30	N750
557-H	8-50	N750

MIL- C-81A Trimmers		
CV11A070	1.5-7	NPO
CV11A120	3-12	NPO
CV11A250	4.5-25	NPO
CV11B130	3-13	N300
CV11B200	5-20	N300
CV11C300	4-30	N500
CV11C450	7-45	N500
CV11D300	4-30	N650
CV11D450	7-45	N650
CV11D500	8-50	N650

ERIE TUBULAR TRIMMERS

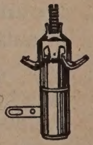
These are compact, economical Tubular Trimmers that are ideal for applications calling for a low minimum capacity and a high ratio of maximum to minimum capacity. Styles 532 and 535 have molded plastic dielectric. Styles 3115-01 and 3139-01 have ceramic dielectric.

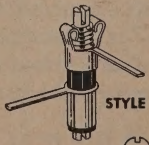
Order by Catalog Number from Table Below

STOCK ITEMS — 500 VDCW

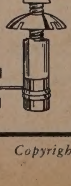
Catalog No.	Capacity Range (MMF)	Panel Thickness
532-A	0.5-5	.040″ to .065″
532-B	1-8	.040″ to .065″
535-C	0.7-3	up to .050″
3115-D	0.5-3	.025″ to .065″
3115-E	1-4	.025″ to .065″
3139-D	0.5-3	.025″ to .065″
3139-E	1-4	.025″ to .065″

STYLE 532





STYLE 535



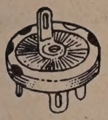
STYLE 3139-01

STYLE 3115-01

ELECTRONICS DISTRIBUTOR DIVISION

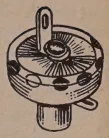
ERIE RESISTOR CORPORATION — ERIE, PA.

ERIE BUTTON®
SILVER-MICA CAPACITORS

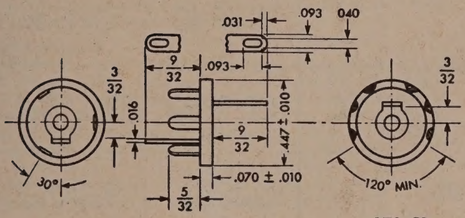


STYLE CB

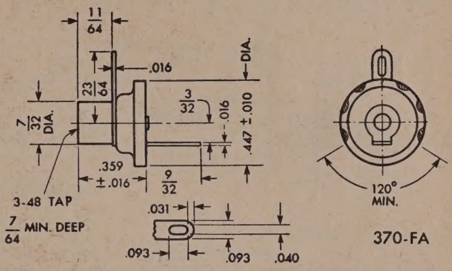
These are midget silver-mica capacitors, for use where compact size, minimum series inductance, and high leakage resistance are essential. They offer high stability of capacitance over the full temperature range — 55°C. to + 85°C. Erie button silver-mica capacitors are unmatched for V.H.F. and U.H.F. work. "Q" at 1 MC is not less than 1000 above 100 MMF; not less than 700 between 50 and 100 MMF; not less than 500 below 50 MMF. Type 370-CB has ring type metal shell with three soldering ears. High potential terminal at either end for feed-thru connection. Type 370-FA is fastened to chassis with 3-48 screw. Meet MIL-C-10950-B characteristics "B" or "D" specification.



STYLE FA



370-CB



370-FA

Order by Part Number from Table Below

STOCK ITEMS — 500 VDCW

Part No. FA Styles	Part No. CB Styles	Cap. MMF	Tol.
370-FA-150K	370-CB-150K	15	10%
370-FA-150J	370-CB-150J	15	5%
370-FA-250K	370-CB-250K	25	10%
370-FA-250J	370-CB-250J	25	5%
370-FA-500K	370-CB-500K	50	10%
370-FA-500J	370-CB-500J	50	5%
370-FA-101K	370-CB-101K	100	10%
370-FA-101J	370-CB-101J	100	5%
370-FA-151K	370-CB-151K	150	10%
370-FA-151J	370-CB-151J	150	5%
370-FA-201K	370-CB-201K	200	10%
370-FA-201J	370-CB-201J	200	5%

Part No. FA Styles	Part No. CB Styles	Cap. MMF	Tol.
370-FA-251K	370-CB-251K	250	10%
370-FA-251J	370-CB-251J	250	5%
370-FA-301K	370-CB-301K	300	10%
370-FA-301J	370-CB-301J	300	5%
370-FA-401K	370-CB-401K	400	10%
370-FA-401J	370-CB-401J	400	5%
370-FA-501K	370-CB-501K	500	10%
370-FA-501J	370-CB-501J	500	5%
370-FA-751K	370-CB-751K	750	10%
370-FA-751J	370-CB-751J	750	5%
370-FA-102K	370-CB-102K	1000	10%
370-FA-102J	370-CB-102J	1000	5%

"Button" is a registered trade name of Erie Resistor Corporation

CORNING FUSION-SEALED FIXED CAPACITORS

It is generally recognized that the fused construction of the basic glass dielectric capacitative element used in Corning Glass Works' capacitors provides outstanding electrical performance under standard environmental conditions. To this basic element, now has been successfully added a glass encapsulation process with glass-to-metal seals at the leads. The resultant impenetrable unit insures reliable performance even in extremely severe environments, particularly those involving moisture or vibration.

Cornings' New CYF Capacitors are guaranteed to be four times better than MIL specs require on moisture resistance.

Here are two new capacitors that are practically indestructible.

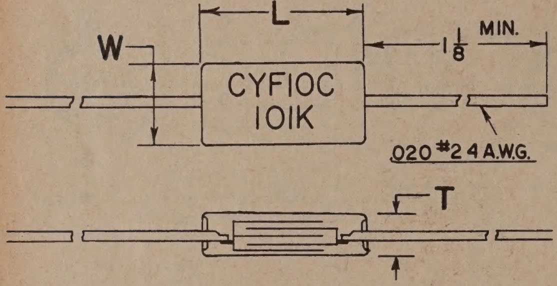
CYF's will withstand MIL-STD 202A moisture conditions for over 1,000 hours with no sign of deterioration.

CYF10's and CYF15's do better on all counts for the specifications set forth in MIL-C-11272A.

CYF10's are available in 5-150 uuf at 500VDC and 160-240 uuf at 300VDC at 125°C.

CYF15's are available in 160-510 uuf at 500VDC and 560-1200 uuf at 300VDC at 125°C.

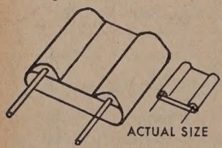
If you need high reliability and miniaturization, the CYF's — the only FUSION-SEALED Capacitors available — are worth looking into.



	CYF-10	CYF-15
L	11/32 ± 3/64	15/32 ± 3/64
W	11/64 ± 1/32	17/64 ± 1/32
T	5/64 ± 1/32	7/64 ± 3/64

CORNING FIXED GLASS CAPACITORS...TYPE WL-4

Truly miniature fixed capacitors—



- ***Specially designed for printed circuits***
- ***Stable under high temperatures, moisture, long shelf life . . .***

COMPLETE RELIABILITY UNDER EXTREME CONDITIONS

Corning has developed these miniature glass dielectric capacitors for vertical mounting on printed circuit boards. These truly miniature fixed glass capacitors possess outstanding behavior characteristics that suggest use in critical applications and under high temperatures. If you're concerned with guided missile development, nuclear equipment, and other high reliability systems, these glass capacitors offer you much.

THE DIELECTRIC

A homogeneous, low-loss, uniformly produced continuous ribbon of glass; no foreign inclusions, no cracks, no imperfections to degrade the performance of the capacitor.

CONSTRUCTION

Only four simple elements: The glass dielectric; the metal foil plates; the wire terminal leads; and high temperature solder. After stacking the many layers of dielectric glass and metal foil plates, they are sealed together at a high temperature and pressure as an integral, rugged, monolithic unit. The wire leads are soldered directly to the foil plates with high temperature solder.

CHARACTERISTICS

Corning miniature fixed glass capacitors are manufactured to conform to the performance requirements of Military Specification MIL-C-11272A.

VOLTAGE RATINGS

The DC working voltage is a full 300 volts over the temperature range from —55 to +125°C.

CAPACITANCE

From 1 to 1,000 mmf.

CAPACITANCE TOLERANCE

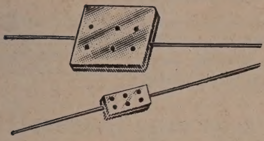
Standard tolerance is ±10% or ±0.25 uuf whichever is greater. Also available as ±5%, ±2%, ±1%, but in no case less than ±0.25 mmf.

ELECTRONICS DISTRIBUTOR DIVISION

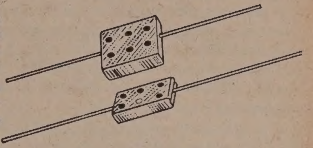
ERIE RESISTOR CORPORATION — ERIE, PA.

National Distributors for Corning Glass Works Electronic Components

CORNING MINIATURE FIXED CAPACITORS



Developed through Corning research, these truly miniature fixed glass capacitors possess outstanding behavior characteristics that suggest use in critical applications and under high temperatures. If you're concerned with guided missile development, nuclear equipment, and other high reliability systems, these glass capacitors offer you much.



THE DIELECTRIC

A homogeneous, low-loss, uniformly produced continuous ribbon of glass; no foreign inclusions, no cracks, no imperfections to degrade the performance of the capacitor.

THE CASE

The glass case, used only to anchor the wire leads, is of the same glass composition as the dielectric; thus, the capacitor performance is a function only of the superior dielectric properties of the glass and not of any enclosing or potting material or impregnant.

CONSTRUCTION

Only three simple elements: The glass dielectric and case of identical glass composition; the metal foil plates; the wire terminal leads. After assembly, the many layers of dielectric glass, the metal foil plates, the glass case, and the wire leads are sealed together at a high temperature and pressure as an integral, rugged, monolithic unit. Thus, the properties of the capacitor are those of the closely controlled dielectric, and are not determined by assembly method or affected by any subsequent treatment.

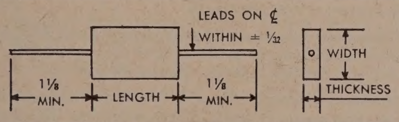
CHARACTERISTICS

Corning Fixed Glass Dielectric Capacitors, Types CY10, CY15, CY20, and CY30, are designed and manufactured to conform to the requirements of Military Specification MIL-C-11272A.

STABILITY

Capacitance Drift — As defined by MIL-C-11272A is less than 0.1% or 0.1 uuf whichever is greater; it is very nearly zero and is generally within the accuracy of measurements.

Temperature Coefficient — Is fixed and therefore predictable and retraceable. It is within the limits of +140 ± 25 ppm/°C. as defined by MIL-C-11272A from −55°C. to +85°C. and referred to +25°C. (See figures 1 and 2.) The difference in temperature coefficient between any units at any given temperature is less than 15 ppm/°C.



TYPE	LENGTH (in inches)	WIDTH (in inches)	THICK-NESS (in inches)	WIRE SIZE (in inches)	WEIGHT (Grams)
CY10	11/32 ± 3/64	11/64 ± 1/32	5/64 ± 1/32	0.020 #24 AWG	0.25–0.50
CY15	15/32 ± 3/64	17/64 ± 1/32	7/64 ± 3/64	0.025 #22 AWG	0.75–1.25
CY20	47/64 ± 1/16	27/64 ± 3/64	9/64 ± 3/64	0.032 #20 AWG	2.50–4.00
CY30	49/64 ± 1/16	3/4 ± 5/64	9/64 ± 3/64	0.032 #20 AWG	5.00–7.00

FIGURE 1

MINIATURIZATION

The glass capacitor offers a higher degree of miniaturization than any other high quality capacitor. The volume of Type CY10 is only about 0.005 cubic inches; further reductions to as little as one-tenth of the volume of the standard wire lead types can be realized where wire lead terminals are not required. For physical dimensions see figure 1.

INSULATION RESISTANCE

When measured under the conditions specified in MIL-C-11272A, the insulation resistance will be found to be greater than 10^{11} ohms; that is, above the range of most standard measuring equipment.

INDUCTANCE

Because of the direct connection of the wire leads to the foil plates, the inductance is less and therefore the self-resonant frequency is higher than for other similar capacitors.

DIELECTRIC ABSORPTION

The dielectric absorption is extremely low; the percentage of charge reappearing after discharge is less than 0.1%.

MOISTURE RESISTANCE

The glass capacitor meets the temperature cycling, immersion, and 10-day moisture resistance tests which are prescribed in the military standards MIL-C-11272A for capacitors which must meet stringent environmental requirements.

VOLTAGE RATINGS

VDCW is 300V and 500V from −55 to +125°C. No derating necessary. See Figure 2.

CAPACITANCE

From 1 to 10,000 uuf in standard sizes as shown in figure 2. Higher capacitances in special forms available upon request.

CAPACITANCE RANGE (UUF)		
TYPE	DC WORKING VOLTAGE	
	300 V.	500 V.
CY10	160 — 240	1 — 150
CY15	560 — 1200	5 — 510
CY20	3600 — 5100	560 — 3300
CY30	6800 — 10,000	3600 — 6200

FIGURE 2

CAPACITANCE TOLERANCE

Standard tolerance is ±5% or ±0.25 uuf whichever is greater. Also available as ±10%, ±2%, ±1%, but in no case less than ±0.25 uuf.

DIELECTRIC LOSS

Losses are extremely low. The dissipation factor at 1 kc. and 25°C. is in the order of 0.055% and is not dependent on capacitance. Losses remain relatively low at elevated temperatures.

LIFE

After 2000 hours at 125°C with 150% of full rated voltage capacitance change is less than 1% at 1 MC or 1 KC; at 125°C dissipation factor is less than 0.007 and insulation resistance is greater than 10^{10} ohms.

EXPOSURE TO RADIATION

The completely inorganic materials used in Corning capacitors make them highly resistant to nuclear radiation. Exposures to radiation levels of 10^{18} NVTth result in significant changes in properties.

ELECTRONIC DISTRIBUTOR DIVISION

ERIE RESISTOR CORPORATION — ERIE, PA.

National Distributors of Corning Glass Works Electronic Components

CORNING FUSION-SEALED FIXED CAPACITORS

Layers of conductor and glass dielectric are sealed together at high temperature and pressure to form Corning capacitors into integral, rugged, monolithic units. The seal of the electrodes to the dielectric sheets cannot be broken or shifted without destroying the capacitor; so the properties of these capacitors are those of the closely controlled dielectric and are not determined by assembly methods or subsequent heat treatments.

It is generally recognized that this fused construction of the basic glass dielectric capacitive element used in Corning's capacitors provides outstanding electrical performance under standard environmental conditions. To this basic element, we have successfully added a **glass encapsulation** process with **glass-to-metal seals** at the leads. The resultant Corning CYF impenetrable unit insures reliable performance even in extremely severe environments, particularly those involving moisture and vibration.

Corning CYF Capacitors are **guaranteed to be four times** better than required by Mil specs for moisture resistance. They will withstand Mil-Std. 202A moisture conditions for **over 1000 hours.**

These miniature fusion sealed CYF units come with copper-clad nickel-iron terminals, hot solder dipped for reliable soldering or welding. Some of the many application areas include guided missiles, nuclear equipment, computers, aircraft, and any high reliability system.

Corning CYF Capacitors, which are practically indestructible under severe environmental stresses, meet or exceed all performance requirements of Mil-C-11272A. They are available in two sizes, CYF 10 and CYF 15 with capacitance values from 1 to 1200 uuf.

CHARACTERISTICS

Corning CYF Capacitors meet or exceed all performance requirements of Mil-C-11272A.

Voltage Rating—VDCW is 300v and 500v from −55 to +125°C. **No derating necessary.**

Temperature Coefficient—Temperature Coefficient is +140 ±25 ppm/°C from −55°C to +125°C at 100 kc or 1 mc. Temperature Coefficient difference between capacitors is less than 15 ppm. Retrace of temperature coefficient is essentially absolute. Capacitance drift is less than 0.1% or 0.1 uuf whichever is greater and is generally within the accuracy of measurements.

Capacitance Tolerance—Standard tolerance is ±5% or ±0.25 uuf, whichever is greater. Available as ±10%, ±2%, ±1%, but in no case less than ±.25 uuf.

Insulation Resistance—High I.R. over entire operating temperature range; at 125°C I.R. is greater than 500 ohm farads.

Losses—Losses are extremely low and remain relatively low at elevated temperatures. D.F. less than 0.001 at 1 kc and 25°C.

Life—After **2000** hrs. at **125°C** with 150% of **full** rated voltage capacitance change is less than 1% at 1 mc or 1 kc; at **125°C** dissipation factor is less than 0.007 and insulation resistance is greater than 10^{10} ohms.

Moisture Resistance—Exceeds all requirements of Mil-C-11272A and Mil-Std-202 Method 106. Corning CYF capacitors are guaranteed to withstand Mil-Std 202A (Method 106A) conditions for over **1000 hours.** The capacitors have been immersed in **boiling salt water** for **450 hours**-and saturated in **steam** at 15 pounds gage pressure for **150 hours** without altering their performance.

Radiation—The completely inorganic materials used in Corning capacitors make them highly resistant to nuclear radiation. Exposures to radiation levels of 10^{18} NVT$_{th}$ result in no significant changes in properties.

CORNING FIXED GLASS WAFER CAPACITORS

These compact capacitors are extremely rugged because the glass dielectric and conductor layers are sealed together at high temperatures and pressure. Electrodes are sealed to dielectric sheets in such a manner that the seal cannot be broken or shifted without destroying the capacitor. Thus, these capacitors have properties identical with those of the closely controlled dielectric and are not determined by assembly methods or subsequent treatments. The unique construction makes any need for further encasing unnecessary.

The construction features add up to the following advantages: fixed temperature coefficient; high insulation resistance; low dielectric absorption; readily used where miniaturization is demanded; and ability to operate in environments involving high humidity and high temperatures.

Corning Wafer Capacitors are available in two styles; W1, 2, 3, 4, and 5 (without leads), and WL-1, 2, 3, 4, and 5 (with leads). Capacitance range is from 1 to 10,000 uuf.

All meet the performance requirements of MIL-C-11272A and are ideally suited for use in printed circuit, modular or encapsulated assemblies in any high reliability systems such as guided missiles, computors, and nuclear equipment.

CHARACTERISTICS

Corning Wafer capacitors meet or exceed all performance requirements of Mil-C-11272A

Voltage Rating—VDCW is 300v from −55 to +125°C. **No derating necessary.**

Temperature Coefficient—Temperature Coefficient is +140 ±25 ppm/°C from −55°C to +125°C at 100 kc or 1 mc. Temperature Coefficient difference between capacitors is less than 15 ppm. Retrace of temperature coefficient is essentially absolute. Capacitance drift is less than 0.1% or 0.1 uuf whichever is greater and is generally within the accuracy of measurements.

Capacitance Tolerance—Standard tolerance is ±5% or ±0.25 uuf, whichever is greater. Available as ±10%, ±2%, ±1%, but in no case less than ±.25 uuf.

Insulation Resistance—High I.R. over entire operating temperature range; at 125°C I.R. is greater than 500 ohm farads.

Losses—Losses are extremely low and remain relatively low at elevated temperatures. D.F. less than 0.001 at 1 kc and 25°C.

Life—After **2000** hrs. at **125°C** with 150% of **full** rated voltage capacitance change is less than 1% at 1 mc or 1 kc; at **125°C** dissipation factor is less than 0.007 and insulation resistance is greater than 10^{10} ohms.

Moisture Resistance—Exceeds all requirements of MIL-C-11272 and MIL-STD-202 Method 106.

Radiation—The completely inorganic materials used in Corning capacitors make them highly resistant to nuclear radiation. Exposures to radiation levels of 10^{18} NVT$_{th}$ result in no significant changes in properties.

ELECTRONICS DISTRIBUTOR DIVISION

ERIE RESISTOR CORPORATION — ERIE, PA.

National Distributors for Corning Glass Works Electronic Components

CORNING GLASS TRIMMER CAPACITORS

MIDGET ROTARY TYPE

Corning Midget Rotary Trimmer Capacitors offer outstanding performance coupled with economy. Midget trimmers are available in a variety of mounting types to cover the ranges of 0.3 to 3.0 mmfd., 1 to 8.0 mmfd., and 1 to 12.0 mmfd. respectively.

Dimensions — O.D. — .252″-.270″		
Height (Chassis to Top of Glass)	**Push-On**	**Split-Bushing**
1 — 12 mmf	1 19/64″ ± 1/32″	1 15/32″ ± 1/32″
1 — 8 mmf	15/16″ ± 1/32″	1 1/32″ ± 1/32″
.5 — 3 mmf	25/32″ ± 1/32″	13/16″ ± 1/32″

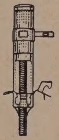
ELECTRICAL CHARACTERISTICS CORNING MIDGET ROTARY TRIMMER CAPACITORS

Temperature Coefficient of Capacitance
(Solid or Split Bushing Types Only)
Brass core units — Approx. 200 ±50 ppm/°C.
Invar core units — Approx. 50 ±50 ppm/°C.

Power Factor of the Dielectric — 0.16%

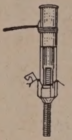
Direct Current Breakdown Voltage
500 volts for all types with core at the maximum capacity position.

MIDGET TRIMMER CAPACITOR WITH ROTARY TUNING MOTION



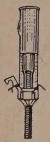
I. Push-On Mount with Saddle Clip, Brass Core

Part No.	Range mmf.
680000	.5 — 3
680001	1 — 8
680002	1 — 12



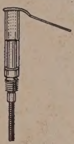
II. Push-On Mount with Wire Lead, Brass Core

Part No.	Range mmf.
680003	.5 — 3
680004	1 — 8
680005	1 — 12



III. Push-On Mount with Solder Spots, Brass Core

Part No.	Range mmf.
680006	.5 — 3
680007	1 — 8
680008	1 — 12



IV. Split-Bushing Mount with Pan Terminal, Invar Core

Part No.	Range mmf.
680073	.5 — 3
680071	1 — 8
680072	1 — 12

MIDGET DIRECT TRAVERSE TYPE

For those applications where sheer ruggedness is desired in addition to thermal stability and a smooth tuning characteristic, a direct traverse type of trimmer capacitor is recommended. Standard units are supplied with either a pan type terminal or a wire wrap-around terminal.

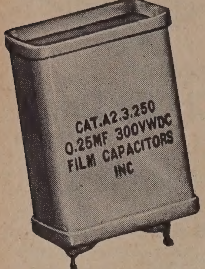
This basic direct traverse trimmer motion is used in single-ended trimmers having the following ratings:

0.5 to 3.0 mmfd.	1.0 to 8.0 mmfd.
1.0 to 7.5 mmfd.	1.0 to 12.0 mmfd.

TEMPERATURE COEFFICIENT OF CAPACITANCE

With *Invar Core* — Plus 50 ± 50 ppm/°C.
With *Brass Core* — Plus 50-200 ± 50 ppm/°C.
Minimum Q at Max. C. (1½ turns from end cap) — 500 checked on a Boonton 160-A Q-Meter at 50 Mcs.
Dielectric Strength (glass only) 1000 volts D.C. with core set at mid-capacity position.
Safe Operating Temperature Range — From −55° C. to 125°C.
Rated D.C. Breakdown Voltage (Core set at Max. C. position) 500 volts.

CODE NO.	Capacity Range mmfds.	Core Material	Terminal	Max. C Stop	Electrical Selection
682023	0.5-3.0	I	Pan	Yes	Special
682024	0.5-3.0	I	Pan	Yes	None
682025	0.5-3.0	I	Pan	Yes	None
682026	0.5-3.0	I	Pan	No	None
682048	1.0-12.0	I	Pan	No	Special
682049	1.0-12.0	I	Pan	Yes	Special
682053	1.0-7.5	I	Pan	Yes	Special
682054	1.0-7.5	I	Pan	Yes	None
682055	1.0-7.0	I	Pan	Yes	None
682056	1.0-8.0	I	Pan	No	None
682060	1.0-8.0	I	Wire	No	None
682061	1.0-8.0	I	Wire	No	Special
682062	1.0-8.0	Br	Wire	No	None
682063	1.0-8.0	I	Pan	No	None
682064	1.0-8.0	I	Pan	No	Special
682065	1.0-8.0	Br	Pan	No	None
682075	1.0-8.0	I	Wire	Yes	Special



FILM CAPACITORS, INC.

F-C-I POLYSTYRENE CAPACITORS

F-C-I Polystyrene capacitors are characterized by a unique combination of low power factor, high insulation resistance and low dielectric absorption ("soakage") which cannot be duplicated by any other type capacitor except Teflon units. Furthermore, the capacitance stability is excellent, and the temperature coefficient of capacitance is very small. Values of electrical characteristics are given in Table I. F-C-I Polystyrene capacitors are furnished as standard units in hermetically sealed steatite tubes with metal end caps; in bathtub cases with low loss glass terminals; and in style CP70 metal cans with low loss glass terminals. Special units, including multi-section blocks are also available to order.

TOLERANCES TO .25% AVAILABLE.

STEATITE CASED POLYSTYRENE CAPACITORS

Part Number	Volts DC	Cap. MFD.	Case Size—Ins. L	D	List Price
A1-1-10	100	.01	1⅜	½	$5.00
A1-1-20	100	.02	1⅜	½	5.00
A1-1-50	100	.05	1⅜	½	5.25
A1-1-100	100	.10	1⅜	11/16	5.35
A1-1-250	100	.25	2⅜	11/16	5.45
A1-1-500	100	.50	2⅜	⅞	6.00
A1-2-10	200	.01	1⅜	½	5.00
A1-2-20	200	.02	1⅜	½	5.00
A1-2-50	200	.05	1⅜	½	5.25
A1-2-100	200	.10	1⅜	11/16	5.35
A1-2-250	200	.25	2⅜	¾	5.45
A1-4-5	400	.005	1⅜	½	5.00
A1-4-10	400	.01	1⅜	½	5.15
A1-4-20	400	.02	1⅜	½	5.15
A1-4-50	400	.05	1⅜	11/16	5.25
A1-4-100	400	.10	2⅜	11/16	5.35
A1-4-250	400	.25	2⅜	¾	5.45
A1-6-1	600	.001	1⅜	½	5.00
A1-6-2	600	.002	1⅜	½	5.00
A1-6-5	600	.005	1⅜	½	5.00
A1-6-10	600	.01	1⅜	½	5.15
A1-6-20	600	.02	1⅜	11/16	5.15
A1-6-50	600	.05	2⅜	11/16	5.25
A1-6-100	600	.10	2⅜	¾	5.35
A1-10-1	1000	.001	1⅜	½	7.10
A1-10-2	1000	.002	1⅜	½	7.50
A1-10-5	1000	.005	1⅜	½	7.90
A1-10-10	1000	.01	1⅜	11/16	8.35
A1-10-20	1000	.02	2⅜	11/16	8.75
A1-10-50	1000	.05	2⅜	⅞	9.15
A1-10-100	1000	.10	2⅜	1⅛	9.60

STYLE CP70 CASED POLYSTYRENE CAPACITORS

Part Number	Volts DC	Cap. MFD.	Case Size—Ins. L	W	H	List Price
A2-1-500	100	0.5	1¾	1	2¼	$6.00
A2-1-1000	100	1.0	1¾	1	2⅞	9.50
A2-1-2000	100	2.0	2½	1¼	3½	13.65
A2-1-4000	100	4.0	3¾	1¼	3½	17.55
A2-1-6000	100	6.0	3¾	2¼	3½	23.50
A2-1-8000	100	8.0	3¾	3 3/16	3½	27.70
A2-1-10M	100	10.0	4 9/16	3¾	3½	32.30
A2-2-250	200	0.25	1¾	1	2¼	5.40
A2-2-500	200	0.5	1¾	1	3¼	6.10
A2-2-1000	200	1.0	2½	1¼	3½	9.60
A2-2-2000	200	2.0	3¾	1¼	3½	13.75
A2-2-4000	200	4.0	3¾	2¼	3½	17.90
A2-2-6000	200	6.0	3¾	3 3/16	3½	23.80
A2-2-8000	200	8.0	3¾	3 3/16	5⅛	28.00
A2-2-10M	200	10.0	4 9/16	3¾	5⅛	32.60
A2-4-250	400	0.25	1¾	1	2¼	5.45
A2-4-500	400	0.5	1¾	1	3¼	7.20
A2-4-1000	400	1.0	2½	1¼	3½	14.50
A2-4-2000	400	2.0	3¾	1¼	3½	21.70
A2-4-4000	400	4.0	3¾	2¼	3½	34.10
A2-4-6000	400	6.0	3¾	3 3/16	3½	47.50
A2-4-8000	400	8.0	3¾	3 3/16	5⅛	58.50
A2-4-10M	400	10.0	4 9/16	3¾	5⅛	72.00
A2-6-250	600	0.25	1¾	1	2¼	5.45
A2-6-500	600	0.5	2½	1¼	3½	7.20
A2-6-1000	600	1.0	3¾	1¼	3½	14.50
A2-6-2000	600	2.0	3¾	2¼	3½	22.10
A2-6-4000	600	4.0	4 9/16	3¾	3½	34.60
A2-6-5000	600	5.0	4 9/16	3¾	3½	41.65
A2-10-100	1000	0.1	1¾	1	3¼	9.60
A2-10-250	1000	0.25	1¾	1	3¼	11.25
A2-10-500	1000	0.5	2½	1¼	3½	15.00
A2-10-1000	1000	1.0	3¾	1¾	3½	21.70
A2-10-2000	1000	2.0	3¾	3 3/16	3½	34.10
A2-10-4000	1000	4.0	3¾	3 3/16	7¼	57.50
A2-10-5000	1000	5.0	4 9/16	3¾	7¼	70.00

BATHTUB CASED POLYSTYRENE CAPACITORS

Part Number	Volts DC	Cap. MFD.	Case Size—Ins. L	W	H	List Price
A3-1-50	100	.05	1¾	1	¾	$5.25
A3-1-100	100	.10	1¾	1	¾	5.35
A3-1-250	100	.25	1¾	1	¾	5.45
A3-1-500	100	.50	2	1¾	⅞	6.00
A3-1-1000	100	1.0	2	1¾	⅞	9.50
A3-2-50	200	.05	1¾	1	¾	5.25
A3-2-100	200	.10	1¾	1	¾	5.35
A3-2-250	200	.25	2	1¾	⅞	5.45
A3-2-500	200	.50	2	1¾	⅞	6.10
A3-2-1000	200	1.0	2	2	1¼	9.60
A3-4-10	400	.01	1¾	1	¾	5.15
A3-4-20	400	.02	1¾	1	¾	5.15
A3-4-50	400	.05	1¾	1	¾	5.25
A3-4-100	400	.10	1¾	1	¾	5.35
A3-4-250	400	.25	2	1¾	⅞	5.45
A3-4-500	400	.50	2	1¾	⅞	7.20
A3-4-1000	400	1.0	2	2	1¼	14.50
A3-6-10	600	.01	1¾	1	¾	5.15
A3-6-20	600	.02	1¾	1	¾	5.15
A3-6-50	600	.05	1¾	1	¾	5.25
A3-6-100	600	.10	1¾	1	1	5.35
A3-6-250	600	.25	2	1¾	⅞	5.45
A3-6-500	600	.50	2	2	1¼	7.20
A3-10-10	1000	.01	1¾	1	¾	8.35
A3-10-20	1000	.02	1¾	1	¾	8.75
A3-10-50	1000	.05	1¾	1	1	9.15
A3-10-100	1000	.10	2	1¾	⅞	9.60
A3-10-250	1000	.25	2	2	1¼	11.25

F-C-I TEFLON CAPACITORS

F-C-I Teflon capacitors are essentially identical to polystyrene capacitors in their electrical characteristics, with one important difference—Teflon capacitors may be operated at temperatures up to 200° C, whereas polystyrene capacitors have a maximum operating temperature of 85° C. Furthermore, the insulation resistance of Teflon capacitors is many times that of polystyrene at elevated temperatures.

Table I
ELECTRICAL CHARACTERISTICS OF F-C-I PLASTIC DIELECTRIC CAPACITORS

	POLYSTYRENE	TEFLON
OPERATING TEMP. RANGE	–55° C to +85° C	–55° C to 200° C
Voltage Range, D.C.	100 to 30,000	100 to 30,000
Capacitance Range	.001 to 20 MF	.001 to 20 MF
Power Factor	.02% @ 1 KC	.02% @ 1 KC
Dielectric Absorption	.01%	.01%
Voltage Derating at 85° C	none	none
Voltage Derating at 125° C	not operable	none
Voltage Derating at 150° C	not operable	none
Voltage Derating at 200° C	not operable	33%
Temperature Coefficient	–100 PPM/° C	–50 PPM/° C
I.R. at Room Temperature	10^7 megohms/MF	10^7 megohms/MF
Capacitance Stability	0.1%	0.1%

CERAMIC CASED TEFLON CAPACITORS

Part Number	Volts DC	Capacity MFD.	Case Size — Inches L	D	List Price
C1-3-5	300	.005	1⅜	½	$ 4.45
C1-3-10	300	.01	1⅜	½	4.45
C1-3-20	300	.02	1⅜	½	4.45
C1-3-50	300	.05	1⅜	11/16	5.15
C1-3-100	300	.10	2⅜	11/16	6.15
C1-6-1	600	.001	1⅜	½	5.15
C1-6-2	600	.002	1⅜	½	5.15
C1-6-5	600	.005	1⅜	½	5.15
C1-6-10	600	.01	1⅜	½	6.70
C1-6-20	600	.02	1⅜	11/16	7.20
C1-6-50	600	.05	2⅜	11/16	8.20
C1-6-100	600	.10	2⅜	⅞	10.30

BATHTUB CASED TEFLON CAPACITORS

Part Number	Volts DC	Capacity MFD.	Case Sizes — Inches L	W	H	List Price
C3-3-5	300	.005	1¾	1	¾	$ 4.45
C3-3-10	300	.01	1¾	1	¾	4.45
C3-3-20	300	.02	1¾	1	¾	4.45
C3-3-50	300	.05	1¾	1	1	5.15
C3-3-100	300	.10	2	1¾	⅞	6.15
C3-6-1	600	.001	1¾	1	¾	5.15
C3-6-2	600	.002	1¾	1	¾	5.15
C3-6-5	600	.005	1¾	1	¾	5.15
C3-6-10	600	.01	1¾	1	¾	6.70
C3-6-20	600	.02	1¾	1	1	7.20
C3-6-50	600	.05	2	1¾	⅞	8.20
C3-6-100	600	.10	2	2	1⅛	10.30

STYLE CP70 CASED TEFLON CAPACITORS

Part Number	Volts DC	Capacity MFD.	Case Sizes — Inches L	W	H	List Price
C2-3-250	300	0.25	1¾	1	2¼	$ 11.50
C2-3-500	300	0.50	1¾	1	3¼	22.00
C2-3-1000	300	1.0	2½	1¼	3½	44.00
C2-3-2000	300	2.0	3¾	1¼	3½	82.30
C2-6-250	600	0.25	1¾	1	3¼	22.00
C2-6-500	600	0.50	2½	1¼	3½	44.00
C2-6-1000	600	1.0	3¾	2¼	3½	83.30
C2-6-2000	600	2.0	4 9/16	3¾	3½	155.00

FILM CAPACITORS, INC.

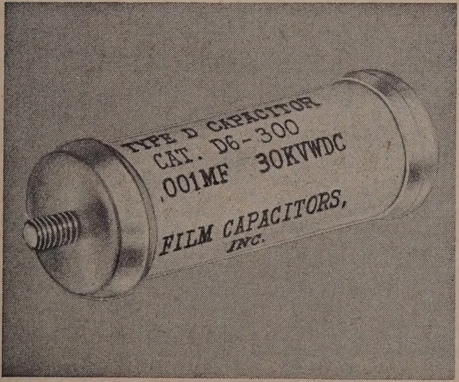
F-C-I HIGH VOLTAGE CAPACITORS

F-C-I Type D capacitors employ a newly developed plastic film dielectric which, with suitable processing, produces capacitors which are better, smaller and cheaper than could ever be produced before. The table below shows the electrical properties of these capacitors. In view of these excellent characteristics, it is evident that F-C-I Type D capacitors are suitable for practically every type of high voltage D.C. application. With these capacitors available, it is no longer necessary to stock groups of units each outstanding in only one property. F-C-I Type D capacitors are furnished in steatite tubes with hermetically sealed metal end caps and either threaded studs or wire leads. Sizes not listed here can be furnished upon request. Ask for our quotation.

NOW FURNISHED IN STEATITE CASES—NO BREAKAGE...NO LEAKAGE

Cat. No.	Capacity MFD.	Working Volts DC	Dimensions Dia.	Dimensions L	List Price
D6-6-10	.01	600	½	1⅜	$ 2.80
D6-6-20	.02	600	½	1⅜	2.80
D6-6-50	.05	600	½	1⅜	2.90
D6-6-100	.10	600	11/16	1⅜	3.00
D6-6-250	.25	600	11/16	2⅜	3.20
D6-6-500	.50	600	1	2⅜	3.60
D6-6-1000	1.00	600	1¼	2⅜	3.90
D6-10-10	.01	1000	½	1⅜	2.90
D6-10-20	.02	1000	½	1⅜	2.90
D6-10-50	.05	1000	11/16	1⅜	2.90
D6-10-100	.10	1000	11/16	2⅜	3.10
D6-10-250	.25	1000	⅞	2⅜	3.10
D6-10-500	.50	1000	1	2⅜	3.30
D6-20-2	.002	2000	½	1⅜	2.90
D6-20-5	.005	2000	½	1⅜	2.90
D6-20-10	.01	2000	½	1⅜	2.90
D6-20-20	.02	2000	½	1⅜	2.90
D6-20-50	.05	2000	11/16	1⅜	2.90
D6-20-100	.10	2000	11/16	2⅜	3.10
D6-20-250	.25	2000	1	2⅜	3.50
D6-20-500	.50	2000	1¼	2⅜	4.10
D6-30-2	.002	3000	½	1⅜	4.10
D6-30-5	.005	3000	½	1⅜	4.10
D6-30-10	.01	3000	½	1⅜	4.30
D6-30-20	.02	3000	11/16	1⅜	5.00
D6-30-50	.05	3000	11/16	2⅜	5.50
D6-30-100	.10	3000	⅞	2⅜	6.00
D6-30-250	.25	3000	1¼	2⅜	6.60
D6-50-5	.005	5 KV	⅝	1 11/16	6.50
D6-50-10	.01	5 KV	¾	1 11/16	6.80
D6-50-20	.02	5 KV	¾	2 9/16	7.20
D6-50-50	.05	5 KV	⅞	2 9/16	7.60
D6-50-100	.10	5 KV	1¼	2 9/16	8.50
D6-75-1	.001	7½ KV	⅝	1 11/16	6.50
D6-75-2	.002	7½ KV	⅝	1 11/16	6.80
D6-75-5	.005	7½ KV	¾	1 11/16	7.00
D6-75-10	.01	7½ KV	¾	2 9/16	7.50
D6-75-20	.02	7½ KV	⅞	2 9/16	8.60
D6-75-50	.05	7½ KV	1¼	2 9/16	11.10
D6-75-100	.10	7½ KV	1½	2 9/16	12.50

Cat. No.	Capacity MFD.	Working Volts DC	Dimensions Dia.	Dimensions L	List Price
D6-100-1	.001	10 KV	⅝	1 11/16	$ 7.20
D6-100-2	.002	10 KV	⅝	1 11/16	7.40
D6-100-5	.005	10 KV	⅝	2 9/16	8.50
D6-100-10	.01	10 KV	⅞	2 9/16	9.20
D6-100-20	.02	10 KV	1	2 9/16	11.40
D6-100-50	.05	10 KV	1½	2 9/16	14.60
D6-150-1	.001	15 KV	⅝	2⅜	13.80
D6-150-2	.002	15 KV	⅞	2⅜	14.60
D6-150-5	.005	15 KV	⅞	2 9/16	17.00
D6-150-10	.01	15 KV	1¼	2 9/16	20.00
D6-150-20	.02	15 KV	1¼	4¾	22.00
D6-150-50	.05	15 KV	1½	4¾	26.00
D6-200-05	.0005	20 KV	⅝	2⅜	18.00
D6-200-1	.001	20 KV	¾	2⅜	19.00
D6-200-2	.002	20 KV	¾	2 9/16	21.00
D6-200-5	.005	20 KV	1	2 9/16	22.50
D6-200-10	.01	20 KV	1½	2 9/16	24.00
D6-200-20	.02	20 KV	1½	4¾	27.00
D6-300-02	.0002	30 KV	⅝	3	20.00
D6-300-05	.0005	30 KV	⅝	3	21.00
D6-300-1	.001	30 KV	⅞	3	23.50
D6-300-2	.002	30 KV	¾	4¾	26.00
D6-300-5	.005	30 KV	1¼	4¾	28.00
D6-300-10	.01	30 KV	1¼	6⅞	35.00
D6-400-01	.0001	40 KV	⅝	3	20.50
D6-400-02	.0002	40 KV	⅝	3	21.50
D6-400-05	.0005	40 KV	¾	3	22.50
D6-400-1	.001	40 KV	¾	4¾	26.00
D6-400-2	.002	40 KV	1	4¾	28.00
D6-400-5	.005	40 KV	1½	4¾	33.00
D6-500-01	.0001	50 KV	⅝	4¼	22.50
D6-500-02	.0002	50 KV	⅝	4¼	23.50
D6-500-05	.0005	50 KV	¾	4¼	24.50
D6-500-1	.001	50 KV	¾	6⅞	28.00
D6-500-2	.002	50 KV	⅞	6⅞	31.50
D6-500-5	.005	50 KV	1¼	6⅞	36.00
D6-600-01	.0001	60 KV	⅝	4¼	23.50
D6-600-02	.0002	60 KV	⅝	4¼	24.50
D6-600-05	.0005	60 KV	⅞	4¼	28.00
D6-600-1	.001	60 KV	⅞	6⅞	34.00
D6-600-2	.002	60 KV	1¼	6⅞	36.50
D6-600-5	.005	60 KV	1¼	13	41.50



ELECTRICAL PROPERTIES OF F-C-I TYPE D CAPACITORS

Operating Range	−55° C to +125° C
Voltage Range, D.C.	600 Volts to 60KV; higher on order
Capacitance Range	.0001 MF to 0.1 MF
Power Factor	0.5% at 1 KC
I.R. at Room Temperature	10^6 Megohm-Microfarads
Dielectric Absorption	0.1%
Temperature Coefficient	+500 PPM/° C
Capacitance Stability	0.5%
Voltage Derating at 65° C	None
Voltage Derating at 85° C	80%
Voltage Derating at 105° C	50%
Voltage Derating at 125° C	66%
Capacity Tolerance	±10%

FILM CAPACITORS, INC.

MINIATURE POLYSTYRENE AND MYLAR® CAPACITORS

HERMETICALLY SEALED — CLOSE TOLERANCE

F-C-I miniature polystyrene and "Mylar" capacitors are furnished in metal shells hermetically sealed with metal-glass compression type seals. The capacitor elements are non-inductively wound, and wire leads are carefully soldered to the swedged, extended foils to minimize self-inductance, power factor and noise. Characteristics of the polystyrene capacitors are given on pg. P-1156. The Mylar dielectric capacitors are characterized by high insulation resistance (10^6 megohm-microfarads at 20° C); 0.5% power factor; and a temperature coefficient of +500 PPM/° C.

POLYSTYRENE

		SIZE		
PART No.	CAP. MFD.	L	D	LIST PRICE
		100 VWDC		
A4-1-10	.01	1	.235	$4.00
A4-1-15	.015	1	.235	4.00
A4-1-22	.022	1	.312	4.00
A4-1-33	.033	1	.312	4.10
A4-1-47	.047	1	.400	4.15
A4-1-68	.068	1	.400	4.20
A4-1-100	.10	1⅜	.400	4.40
A4-1-220	.22	1⅜	.562	4.80
A4-1-330	.33	1⅜	.670	5.25
A4-1-470	.47	1⅞	.670	5.60
		200 VWDC		
A4-2-10	.01	1	.312	4.00
A4-2-15	.015	1	.312	4.00
A4-2-22	.022	1	.400	4.10
A4-2-33	.033	1	.400	4.10
A4-2-47	.047	1⅜	.400	4.15
A4-2-68	.068	1⅜	.400	4.15
A4-2-100	.10	1⅜	.562	4.50
A4-2-220	.22	1⅞	.562	5.20
A4-2-330	.33	1⅞	.750	5.80
A4-2-470	.47	1⅞	1.00	6.10
		400 VWDC		
A4-4-10	.01	1	.312	4.00
A4-4-15	.015	1	.400	4.00
A4-4-22	.022	1	.400	4.10
A4-4-33	.033	1⅜	.400	4.25
A4-4-47	.047	1⅜	.400	4.35
A4-4-68	.068	1⅜	.562	4.50
A4-4-100	.10	1⅞	.562	4.90
A4-4-220	.22	1⅞	.750	5.45
A4-4-330	.33	1⅞	.750	6.30
A4-4-470	.47	1⅞	1.00	7.20
		600 VWDC		
A4-6-10	.01	1	.400	4.00
A4-6-15	.015	1⅜	.400	4.00
A4-6-22	.022	1⅜	.562	4.25
A4-6-33	.033	1⅜	.562	4.25
A4-6-47	.047	1⅜	.670	4.50
A4-6-68	.068	1⅞	.562	4.80
A4-6-100	.10	1⅞	.670	5.10
A4-6-220	.22	1⅞	.750	5.45
A4-6-330	.33	2⅜	1.00	6.30
A4-6-470	.47	2⅜	1.00	7.20

Prices listed above are for ±5% tolerance. For ±2% tolerance, add 20% and for ±1% tolerance, add 50% to these prices. These capacitors are also available in ceramic shells with epoxy resin end fill. Write for prices.

®Du Pont Trade Mark

MYLAR

		SIZE		
PART No.	CAP. MFD.	L	D	LIST PRICE
		100 VWDC		
HD4-1-10	.01	1	.235	$2.25
HD4-1-15	.015	1	.235	2.25
HD4-1-22	.022	1	.235	2.25
HD4-1-33	.033	1	.312	2.25
HD4-1-47	.047	1	.312	2.25
HD4-1-68	.068	1	.400	2.35
HD4-1-100	.10	1	.400	2.40
HD4-1-220	.22	1⅜	.400	2.60
HD4-1-330	.33	1⅜	.562	2.65
HD4-1-470	.47	1⅜	.562	2.75
HD4-1-1000	1.0	1⅜	.670	3.40
		200 VWDC		
HD4-2-10	.01	1	.235	2.25
HD4-2-15	.015	1	.235	2.25
HD4-2-22	.022	1	.312	2.25
HD4-2-33	.033	1	.312	2.25
HD4-2-47	.047	1	.400	2.35
HD4-2-68	.068	1	.400	2.40
HD4-2-100	.10	1⅜	.400	2.55
HD4-2-220	.22	1⅜	.562	2.65
HD4-2-330	.33	1⅜	.670	2.70
HD4-2-470	.47	1⅞	.670	4.10
HD4-2-1000	1.0	1⅞	1.00	4.70
		400 VWDC		
HD4-4-10	.01	1	.312	2.90
HD4-4-15	.015	1	.312	2.90
HD4-4-22	.022	1	.400	3.00
HD4-4-33	.033	1	.400	3.05
HD4-4-47	.047	1⅜	.400	3.05
HD4-4-68	.068	1⅜	.400	3.40
HD4-4-100	.10	1⅜	.562	3.45
HD4-4-220	.22	1⅞	.670	4.00
HD4-4-330	.33	1⅞	.750	4.15
HD4-4-470	.47	1⅞	1.00	4.50
HD4-4-1000	1.0	2⅜	1.00	5.70
		600 VWDC		
HD4-6-10	.01	1	.400	3.65
HD4-6-15	.015	1	.400	3.70
HD4-6-22	.022	1⅜	.400	3.75
HD4-6-33	.033	1⅜	.400	3.80
HD4-6-47	.047	1⅜	.562	3.85
HD4-6-68	.068	1⅜	.562	3.90
HD4-6-100	.10	1⅜	.670	4.00
HD4-6-220	.22	1⅞	1.00	5.00
HD4-6-330	.33	1⅞	1.00.	6.00
HD4-6-470	.47	2⅜	1.00	7.00

The capacitors listed above are suitable for continuous operation at 125° C without derating. For 85° C operation, 100 volt series HD capacitors may be operated at 200 volts; 200 volt capacitors at 400 volts; 400 volt capacitors at 600 volts; and 600 volt capacitors at 1000 volts. To correctly designate 85° C capacitors, omit the letter "H" in the part number, and correct the single number standing for the voltage rating.

Prices listed above are for ±5% tolerance. For ±2% tolerance, add 20% and for ±1% tolerance, add 50% to these prices. These capacitors are also available in ceramic shells with epoxy resin end fill. Write for prices.

We are set up to produce these capacitors in any quantity to any odd value of capacitance at close tolerance for manufacturers of filter networks, R-C networks and the like. Write for information.

FILM CAPACITORS, INC.

HIGH CAPACITANCE MYLAR® CAPACITORS

HERMETICALLY SEALED — HIGH INSULATION RESISTANCE

F-C-I Series D-2 capacitors are Mylar dielectric capacitors which possess extremely high insulation resistance, together with good power factor and dielectric absorption. The insulation resistance runs well over 10^6 megohm-microfarads at room temperature, even for the highest values of capacitance. The power factor and the dielectric absorption are both on the order of 0.5%. These properties make Series D-2 capacitors extremely useful in computers of moderate precision, in timing circuits, and similar types of circuitry. Standard tolerance is ±10%, and closer tolerances are available on order. (Case sizes indicated below are in inches.) (D3 indicates bathtub case.)

	100 VWDC				200 VWDC				300 VWDC				400 VWDC				600 VWDC			
CAP. MFD.	CASE SIZE L	W	H	LIST PRICE	CASE SIZE L	W	H	LIST PRICE	CASE SIZE L	W	H	LIST PRICE	CASE SIZE L	W	H	LIST PRICE	CASE SIZE L	W	H	LIST PRICE
0.5	1¾	1	¾	$ 3.00	1¾	1	¾	$ 3.00	1¾	1	1	$ 3.20	1¾	1	1	$ 3.38	1¾	1	1	$ 3.38
CAT #	D3-1-500				D3-2-500				D3-3-500				D3-4-500				D3-6-500			
1.0	1¾	1	¾	3.12	1¾	1	1	3.12	1¾	1	1⅝	4.95	1¾	1	2¼	5.37	1¾	1	2¾	5.50
CAT #	D3-1-1000				D3-2-1000				D2-3-1000				D2-4-1000				D2-6-1000			
2.0	1¾	1	1	4.00	1¾	1	1⅝	5.12	1¾	1	2¼	6.35	1¾	1	3¼	6.60	2½	1¼	3½	7.60
CAT #	D3-1-2000				D2-2-2000				D2-3-2000				D2-4-2000				D2-6-2000			
5.0	1¾	1	2¾	6.35	1¾	1	3¼	7.00	2½	1¼	3½	9.50	3¾	1¼	2½	11.25	3¾	1¼	5	11.25
CAT #	D2-1-5000				D2-2-5000				D2-3-5000				D2-4-5000				D2-6-5000			
10.0	2½	1¼	3½	11.00	2½	1¼	3½	11.60	3¾	1¾	3¼	17.75	3¾	1¾	4	19.75	3¾	1¾	5	24.70
CAT #	D2-1-10000				D2-2-10000				D2-3-10000				D2-4-10000				D2-6-10000			
20.0	3¾	1¾	2½	18.80	3¾	1¾	3¼	20.30	4$\frac{9}{16}$	3¾	3	29.40	4$\frac{9}{16}$	3¾	4	32.50	4$\frac{9}{16}$	3¾	4½	42.50
CAT #	D2-1-20000				D2-2-20000				D2-3-20000				D2-4-20000				D2-6-20000			
25.0	3¾	1¾	3¼	22.20	3¾	1¾	4	23.70	4$\frac{9}{16}$	3¾	3½	36.10	4$\frac{9}{16}$	3¾	4	39.00	4$\frac{9}{16}$	3¾	5	51.50
CAT #	D2-1-25000				D2-2-25000				D2-3-25000				D2-4-25000				D2-6-25000			

FCI TYPE MMS METALLIZED MYLAR CAPACITORS (Glass Button Seal Terminals)

WVDC	Catalog Number	Cap. Mfd.	Dia. x Length in Inches
200	MMS 2-01	.010	.235 x ¾
	MMS 2-022	.022	.235 x ¾
	MMS 2-033	.033	.235 x ¾
	MMS 2-047	.047	.312 x ⅞
	MMS 2-1	.1	.312 x ⅞
	MMS 2-22	.22	.400 x ⅞
	MMS 2-33	.33	.400 x 1⅛
	MMS 2-47	.47	.500 x 1⅛
	MMS 2-1.M	1.0	.562 x 1⅛
	MMS 2-1.5M	1.5	.562 x 1⅛
	MMS 2-2.M	2.0	.670 x 1⅝
	MMS 2-3.M	3.0	.670 x 1⅞
	MMS 2-4.M	4.0	.750 x 1⅞
	MMS 2-5.M	5.0	1.00 x 1⅞
	MMS 2-6.M	6.0	1.00 x 1⅞
	MMS 2-8.M	8.0	1.00 x 1⅞
	MMS 2-10.M	10.0	1.00 x 2⅝
	MMS 2-12.M	12.0	1.00 x 2⅝

- Standard tolerance plus or minus 20%. Tolerances to 1% are also available.

WVDC	Catalog Number	Cap. Mfd.	Dia. x Length in Inches
400	MMS 4-01	.010	.312 x ⅞
	MMS 4-022	.022	.312 x ⅞
	MMS 4-033	.033	.312 x 1⅛
	MMS 4-047	.047	.400 x 1⅛
	MMS 4-1	.1	.500 x 1⅛
	MMS 4-22	.22	.562 x 1⅜
	MMS 4-33	.33	.562 x 1⅝
	MMS 4-47	.47	.670 x 1⅝
	MMS 4-1.M	1.0	.750 x 1⅞
	MMS 4-1.5M	1.5	1.00 x 1⅞
	MMS 4-2.M	2.0	1.00 x 1⅞
	MMS 4-3.M	3.0	1.00 x 2⅝

- For flat mylar wrap types specify MMMF.

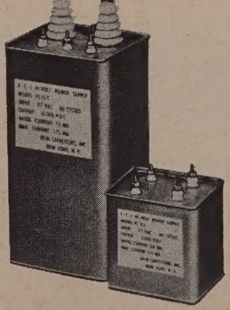
WVDC	Catalog Number	Cap. Mfd.	Dia. x Length in Inches
600	MMS 6-01	.010	.312 x ⅞
	MMS 6-022	.022	.312 x 1⅛
	MMS 6-033	.033	.312 x 1⅛
	MMS 6-047	.047	.400 x 1⅛
	MMS 6-1	.1	.500 x 1⅛
	MMS 6-22	22	.562 x 1⅜
	MMS 6-33	.33	.562 x 1⅝
	MMS 6-47	.47	.670 x 1⅝
	MMS 6-1.M	1.0	1.00 x 1⅞
	MMS 6-1.5M	1.5	1.00 x 1⅞
	MMS 6-2.M	2.0	1.00 x 2⅛
	MMS 6-2.5M	2.5	1.00 x 2⅝

- For round mylar wrap types specify MMMR.

HIGH VOLTAGE PACKAGED POWER SUPPLIES

Completely enclosed and hermetically sealed power supplies operating on 115 volt, 60 or 400 cycle, AC input. Output ranges from 2,000 vdc to 50,000 vdc. Standard sizes as follows:

PART No.	OUTPUT VOLTAGE	RATED CURRENT OUTPUT	MAX. CURRENT OUTPUT
PS—2S	2 KVDC	5 MA	7.5 MA
PS—5S	5 KVDC	5 MA	7.5 MA
PS—12S	12 KVDC	1 MA	1.75 MA
PS—15S	15 KVDC	1 MA	1.75 MA
PS—20S	20 KVDC	1 MA	1.75 MA
PS—30S	30 KVDC	1 MA	1.75 MA
PS—50S	50 KVDC	1 MA	1.75 MA



® Du Pont Trade Mark

CAPACITORS
for
Radio-Electronic Applications

Tantalytic* Capacitors

G-E Tantalytic capacitors provide optimum characteristics and reliability for computer, missile, ground-support equipment and airborne electronic applications where small size, light weight and superior performance are required.

High-voltage—Ratings to 300 volts at 85C; to 250 volts at 125C. Capacitance from 0.15 mfd to 35 mfd, both polar and nonpolar. Maximum stability, low capacitance change. Bulletin GEA-7065.

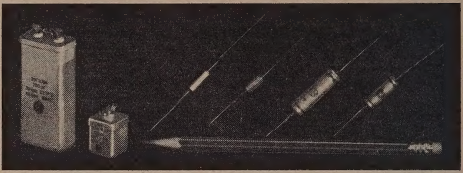
125C KSR*—Ratings from 150 volts d-c from —55C to +85C; to 100 volts for 125C operation. Up to 50% lighter, 30% smaller. Bulletin GEA-6766.

125C Cylindrical—Smaller, lighter single-case design for 125C operation. 10-150 volts, polar or nonpolar, with ratings to 7750 vuf. Special units available for 30G 2000 cps. Bulletin GEA-7085.

85C Wet-slug—Completely sealed porous anode provides lowest impedance, per unit volume, of any capacitor. From —55 to +85C. Bulletin GEA-7008.

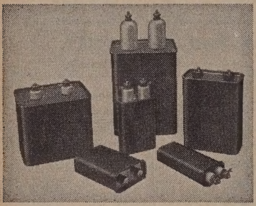
Solid—Small size, to .003 cu. in.; stable operating characteristic, long shelf life, and operating temperature from —55C to +85C; ratings to 50 volts d-c; capacities to 22 mfd. Bulletin GEZ-2796.

85C Cylindrical—Dependable operation over a temperature range of —55C to +85C. Polarized, nonpolarized, etched, or plain foil units with improved shelf life. Bulletin GEC-808.



* Registered trade-mark of the General Electric Co.

Fixed Paper Dielectric Capacitors for Electronic Applications.



Standard Commercial Types—Fixed, paper Pyranol* liquid-dielectric capacitors for a-c/d-c applications such as blocking, by-passing, and power supply filters. Case styles 60 and 70 units, rated from 100-50,000 volts d-c-, and for 60 cycles from 236 to 660 volts a-c. Capacitance range from 0.05 to 120 microfarads.

MIL-C-25A—Hermetically sealed in metallic cases, for use in filtering, by-passing, and blocking applications. Case Style 70 units are available in ratings from 0.1 to 15 microfarads and 600 to 1500 volts d-c.

Permafil—Fixed dual-dielectric (paper and polyester film) capacitors for use over a wide temperature range (—55C to +125C). Ratings from 0.01 to 10 microfarads and 100 to 1500 volts d-c.

Bulletin GET-3032.

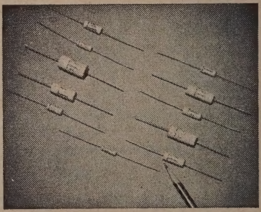
* Registered trade-mark of the General Electric Co.

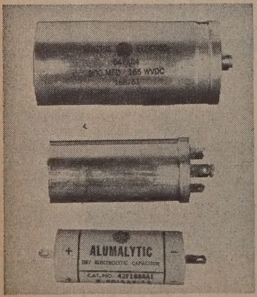
Lectrofilm†-B Capacitors

These nonmetallic cased tubular capacitors with Mylar‡ film dielectric offer extremely high reliability at temperatures up to 125C at minimum cost. They are designed for 44,000-hour life at recommended voltage and temperature. Ratings: 100 to 600 volts d-c; 0.0010 to 0.68 microfarads. Tolerances as low as ±5 percent. For use in missiles, radar, computers, and mobile communications.

Bulletins GEC-1518 and GET-2904.

† Trade-mark of the General Electric Co.
‡ Trade-mark of DuPont Co.





Alumalytic* Capacitors

For radio, TV, and other communications equipment in tubular and 'twist-tab' styles, insulated or uninsulated, with a choice of leads and terminals. Voltages range from 30 to 450 d-c, with microfarad values up to 500 for service from 0 to +85C.

"Computer-Grade" Alumalytic capacitors are used to provide "bulk" capacitance for computer power supplies. These high-reliability units offer microfarad ratings to 150,000 and voltages from 3 to 450 d-c, for operation in ambients of —20C to +65C.

An expanded line of a-c Alumalytic capacitors for motor-starting applications is also available with ratings to 330 volts a-c.

Bulletins GEZ-1912, GEA-6819 and GEA-7040.

* Registered trade-mark of the General Electric Co.

HAMMARLUND

STANDARD VARIABLE CAPACITORS

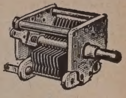
"RMC" CAPACITORS

FEATURES—The "RMC" was designed specifically for applications requiring an "MC" type tuning capacitor with very rigid construction. Its sturdy frame consists of heavy gauge aluminum end panels held together by three aluminum tie rods. It has a brass sleeve front bearing and a single ball thrust rear bearing for smooth tuning and a high degree of resetability. The rotor contact is a forked silver plated phosphor bronze spring wiping against a wide disc on the rotor. The plate shape and other constructional features are the same as on the "MC." Tapped holes in front panel and in mounting feet, as well as additional brackets for inverted mounting permit a wide variety of assembly methods.

SPECIFICATIONS—Straight line capacity. Air gap is 0.0245" nominal. Tested at 1000 V. R.M.S., 60 cycles.

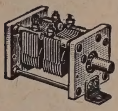
	CAPACITY*		
CODE	Max.	Min.	PLATES
RMC-50-S	50.	7.3	7
RMC-100-S	105.	9.5	14
RMC-140-S	143.5	11.0	19
RMC-325-S	327.	17.5	43

*Nominal Values.



RMC

"VU" CAPACITORS



VU

FEATURES—The "VU" is a uniquely designed UHF tuning capacitor using completely original concepts. With it, conventional "lumped constant" circuits, rather than tuned cavity techniques, can be efficiently used up to 500 megacycles. In addition to employing the capacitor sections in series to eliminate the rotor wiper, the design also utilizes Pyrex balls to form precision bearings and to completely isolate the rotor. Thus, noise generated by rubbing metal-to-metal contacts and variable resistance paths in the bearings have been totally eliminated. Circuit connections are made to threaded studs on each stator. This permits vacuum tube and inductor to minimize circuit inductance. The symmetrical design is ideal for tuned circuits operating up to 500 megacycles.

CONSTRUCTION—Rotors and stators are of brass with plates soldered in precisely located grooves and then silver plated to increase the "Q" of the capacitor. The insulation is silicone treated steatite. All lengthwise frame members are of brass to minimize temperature effects. Base mounting brackets are provided. **SPECIFICATIONS**—The capacity characteristic approaches a straight line frequency curve as indicated by nominal values in table. Air gap is .0168" nominal. Tested at 700 V. R.M.S., 60 cycles, between rotor and each stator.

CODE	SERIES CAPACITY* Eff.	SERIES CAPACITY* Min.	PLATES/ SECTION
VU-20	22.5	3.35	11
VU-30	31.5	3.5	15
VU-45	45.0	3.8	21

*Nominal Values.

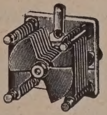
DIAL % ROTATION	EFFECTIVE SERIES CAPACITY VU-20	VU-30	VU-45
0	0.	0.	0.
10	.55	.8	1.15
20	1.55	2.2	3.15
30	2.75	3.85	5.45
40	4.2	5.85	8.35
50	6.0	8.4	12.0
60	8.35	11.65	16.65
70	11.2	15.7	22.4
80	14.65	20.55	29.35
90	18.6	26.05	37.2
100	22.5	31.5	45.0

Cap. Tol.: +.15MMFD. or 1¼% whichever is greater.
(SPECIALLY CALIBRATED UNITS ONLY.)

"BFC" CAPACITORS

FEATURES—The "BFC" "butterfly" type capacitor has very low minimum capacity, low inductance and isolated rotor for use in VHF applications as a series capacitor with no rotor connection. For dual split-stator capacitor use, it has a low-loss positive rotor contact. Mechanical and electrical symmetry and stator terminal locations minimize circuit inductance. **CONSTRUCTION**—Brass rotors and stators are soldered and nickel-plated. The contact wiper is heavily silver plated phosphor bronze. Tapped studs on the silicone treated steatite front panel permit mounting the capacitor without grounding the rotor. The sleeve type bearing is nickel-plated brass. **SPECIFICATIONS**—Straight line capacity. 90° rotation from minimum to maximum capacity position. Air gap is 0.030" nominal. Tested at 1200 V. R.M.S., 60 cycles between rotor and each stator.

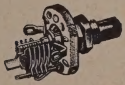
High Speed Ball-Bearing Models Also Are Available.



	CAPACITY SECTION*		SERIES CAPACITY*		PLATES	
CODE	Max.	Min.	Max.	Min.	Rotor	Each Stator
BFC-12	14.5	3.4	7.6	2.2	4	3
BFC-25	27.3	4.8	14.1	2.9	7	6
BFC-38	40.1	6.2	20.6	3.6	10	9
BFC-50	52.4	7.6	27.1	4.3	13	12

* Nominal Values.

"MAC" CAPACITORS



MAC

FEATURES—The "MAC" provides the low minimum capacity essential for use as a trimmer in the VHF range. It was engineered to achieve the smallest dimensions practical to meet the requirements of a miniaturized component.

CONSTRUCTION—Its silicone treated steatite base is only ¾" x ⅝". Rotor and stator are soldered assemblies and are of brass, nickel-plated. Rotor and stator terminals are positioned to permit short leads. The threaded bearing is provided with flat sides to permit single hole mounting.

SPECIFICATIONS—Straight line capacity. Screwdriver adjustment. Air gap is 0.017" nominal. Tested at 880 V. R.M.S., 60 cycles.

	CAPACITY*		
CODE	Max.	Min.	PLATES
MAC-5	5.4	1.3	5
MAC-10	9.6	1.5	9
MAC-15	15.8	1.9	15
MAC-20	21.5	2.2	31
MAC-30	30.0	2.5	27

DIFFERENTIAL TYPE

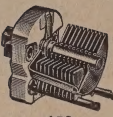
	CAPACITY/SECT.*		
CODE	Max.	Min.	PLATES
MAC-5-5	5.4	1.3	7
MAC-10-10	9.6	1.5	13
MAC-15-15	15.8	1.9	22
MAC-20-20	21.5	2.2	31

* Nominal Values.

HAMMARLUND

STANDARD VARIABLE CAPACITORS

"APC" CAPACITORS



APC

FEATURES—The "APC" trimmer capacitor originated by Hammarlund over twenty years ago is still widely recognized as the standard capacitor of its type. Its use is indicated in all classes of equipment where a compact, high quality air dielectric trimmer is required. It was designed to resist effects of temperature, moisture and vibration. Silicone treated steatite insulation is used to insure high leakage resistance.

CONSTRUCTION—Brass rotor and stator plates are soldered to brass supports. Nickel-plated phosphor bronze wiper assures positive rotor contact. All metal parts are nickel-plated. Terminals are hot-tin dipped. Tapped brass mounting studs fastened to silicone treated steatite base permit mounting capacitor without grounding the rotor.

SPECIFICATIONS—Straight line capacity characteristic. Available either with hexagonal collar on slotted shaft to permit rotor adjustments to be made with wrench or screwdriver or with ½" extended shaft for knob control or shaft coupling. "APC-C" Lock Type now also available through distributors. Air Gap is 0.015" nominal. Tested at 600 V. R.M.S., 60 cycles.

	CAPACITY*		
CODE	Max.	Min.	PLATES
APC-15	17.	2.8	5
APC-25	25.	3.0	7
APC-50	50.	3.9	14
APC-75	75.	4.6	20
APC-100	100.	5.5	27
APC-140	140.	6.7	37

*Nominal Values.

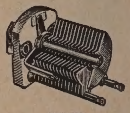
"MAPC" CAPACITORS

FEATURES—The "MAPC" capacitor is representative of Hammarlund's efforts to meet the demand for smaller dependable components. It is a scaled-down version of the popular "APC" with everything reduced except the quality and performance characteristics. For example, an "MAPC" is about half the size and weight of an "APC." Lower minimum capacities and low inductance make the "MAPC" suitable for VHF use. **CONSTRUCTION**—The standard "APC" construction is used in this capacitor. Rotors and stators are fabricated by soldering brass plates to supporting members and nickel-plating the assemblies. Nickel-plated phos. Bronze wiper assures positive rotor contact. Tapped brass mounting studs fastened to silicone treated steatite base permit mounting capacitor without grounding rotor.

SPECIFICATIONS—Straight line capacity. Available either with screwdriver or socket wrench adjustment or with 7/16" extended shaft for knob control or shaft coupling. "MAPC-C" Lock Type now also available through distributors. Air Gap is 0.0135" nominal. Tested at 600 V. R.M.S., 60 cycles.

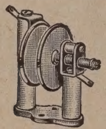
	CAPACITY*		
CODE	Max.	Min.	PLATES
MAPC-15	15.	2.3	6
MAPC-25	25.	2.6	10
MAPC-35	35.	2.9	14
MAPC-50	50.	3.2	19
MAPC-75	75.	3.9	29
MAPC-100	100.	4.5	38
MAPC-140	140.	5.5	52

*Nominal Values.



MAPC

"NZ-10" CAPACITORS

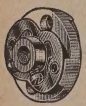


NZ-10

FEATURES—The "NZ-10" is a compact transmitter neutralizing capacitor designed for easy and accurate adjustment. The rotor is attached to a fine-thread lead screw which may be adjusted with smooth and precise action by a screwdriver and locked securely by a readily accessible clamping screw. A stop prevents shorting of plates at maximum capacity. Long leakage paths to ground from both rotor and stator are provided. Glazed steatite insulators and smoothly rounded aluminum plates minimize flashover.

SPECIFICATIONS—Capacity is adjustable from 2.3 to 10 mmf. Peak voltage rating is 3000 V. at maximum capacity (minimum gap) position.

"FC" and "FNC" COUPLINGS



FEATURES—The "FC-46-S" is an insulated flexible coupling designed to provide for mechanical ganging of shafts even though angularly misaligned. The smallest dimensions have been incorporated consistent with the rugged construction necessary for general service. A high degree of electrical isolation is achieved through the use of silicone treated steatite insulation. Flashover voltage is approximately 5000 V. R.M.S. Brass hubs and spring temper phosphor bronze flexible arms are nickel plated. An exclusive and important feature of this coupling is its characteristic of uniform side-thrust through 360° of rotation. This eliminates tendency to vibrate at high speeds, minimizes bearing wear and assures accurate tracking.

The "FNC-46-S" is a non-insulated coupling for use where electrical continuity between shafts is required. The flexible arms are held securely to a nickel plated brass ring instead of an insulator.

STANDARD STOCK TYPES

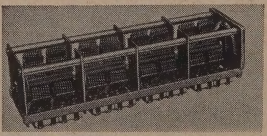
CODE FC-46-S	Insulated flexible coupling
CODE FNC-46-S	Non-insulated flexible coupling

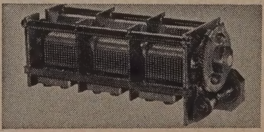
SPECIAL VARIABLE CAPACITORS FOR ALL NEEDS

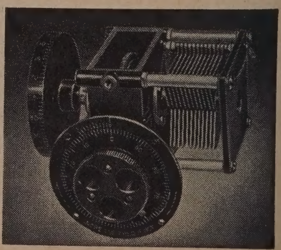
HAMMARLUND CUSTOM ENGINEERED CAPACITORS

Hammarlund has for many years been considered the foremost designer and producer of variable capacitors for special military, scientific and precision applications. Should you have a special capacitor requirement, your engineers will find the services of our capacitor design group to be of inestimable value. Illustrated are two communications receiver multiple-section tuning capacitors and a single-section frequency meter capacitor. All of these capacitors feature exceptionally precise calibration accuracy, the highest possible degree of resetability, essentially zero temperature coefficient, close tolerances on starting and running torque, high "Q" under adverse operating conditions and complete freedom from noise. To produce these and similar capacitor designs involve the techniques of metallurgy, gearing, finishing, bearing design, ceramics, vibration and shock—to mention but a few. These techniques are possessed to a high degree here at Hammarlund.

Should you have need for facilities such as ours, we will welcome your inquiry.



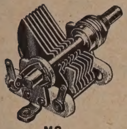


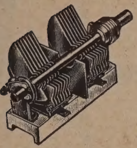


HAMMARLUND

STANDARD VARIABLE CAPACITORS

"MC" and "MCD" CAPACITORS


MC


MCD

FEATURES—The "MC" is a versatile single section tuning capacitor designed to give the equipment engineer a choice of mountings, connctions and capacity characteristics. The threaded brass front bearing and tapped aluminum end brackets permit panel or base mounting. A rotor stop permits 180° clockwise rotation for increasing capacity. "MC-S" capacitors have a straight line capacity characteristic. "MC-M" units have offset plates resulting in a "Midline" characteristic which more equally spaces frequencies. "MC-X" units are wide-spaced for high voltages. For optimum performance all Hammarlund "MC" capacitors have silver plated spring tempered wiping contact, silicone-treated steatite insulation, soldered nickel-plated brass rotors and stators, rotor shaft supported on bearings at both front and rear of capacitor. The "MCD" is a split-stator panel-mounted capacitor with all the "MC" features. Stators have terminals on both sides. Stators on single-spaced capacitors are separated by a shield. Wide-spaced units have no shield. **SPECIFICATIONS**—Straight line or "Midline" capacity characteristic. Single-spaced types have 0.0245" nominal air gap and are tested at 1000 V. R.M.S., 60 cycles. Wide-spaced ("X") types have 0.0715" nominal air gap and are tested at 1750 V. R.M.S., 60 cycles.

CODE	CAPACITY* Max.	Min.	PLATES/ SECTION
MC-20-S	20.	5.5	3
MC-35-S	35.	6.0	5
MC-50-M	50.	6.3	7
MC-50-S	50.	6.5	7
MC-75-M	80.	7.3	11
MC-75-S	80.	8.0	11
MC-100-M	100.	7.7	14
MC-100-S	100.	8.3	14
MC-140-M	140.	9.0	19
MC-140-S	140.	10.0	19
MC-200-M	200.	10.3	27
MC-250-M	250.	12.0	34
MC-325-M	320.	13.5	43

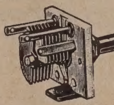
CODE	CAPACITY/SECT.* Max.	Min.	PLATES/ SECTION
MC-20-SX	20.	6.8	7
MC-35-MX	32.	7.8	11
MC-35-SX	32.	8.5	11
MC-50-MX	53.	10.5	19
MC-50-SX	53.	11.5	19
MC-100-SX	100.	16.5	35
MCD-50-M	50.	5.5	7
MCD-100-M	100.	6.3	14
MCD-100-S	100.	7.0	14
MCD-140-M	140.	7.8	19
MCD-35-MX	31.	6.0	11
MCD-35-SX	31.	6.8	11

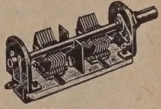
M-Midline plates. S-Straightline plates. X-Wide-Spaced. *Nominal Values.

"HF" and "HFD" CAPACITORS

SINGLE SECTION CAPACITOR—The "HF" is a single section tuning capacitor employing "APC" rotor and stator design. Extra long sleeve bearing and positive contact nickel-plated phosphor bronze wiper make this unit ideally suited to high frequency applications. Silicone treated steatite insulation. Single hole or base mounting. Special spacing, capacity values, finishes and other modifications are available to manufacturers on special order.

DOUBLE SECTION CAPACITOR—The "HFD" dual capacitors. like the "HF" singles, incorporate advanced features providing for maximum efficiency at high frequency. Soldered brass plates are nickel-plated. Aluminum front and rear end panels are mounted on a heavy silicone treated steatite base. Wide front and rear bearings with individual silver plated spring tempered wipers for each section assure long life and maximum contact efficiency. Single hole panel mount or base mounting. Electrostatic shield between sections. Terminals are provided on both sides of each stator to permit mounting tube and inductor on opposite sides. **SPECIFICATIONS**—Straight line capacity. Single spaced types (HF and HFD) have 0.015" air gap and are tested at 600 V. RMS., 60 cycles. Wide spaced types (HF-X and HFD-X) have 0.045" air gap and are tested at 1400 V. R.M.S., 60 cycles.


HF

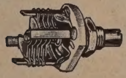

HFD

CODE	CAPACITY* Max.	Min.	PLATES/ SECTION
HF-15	17.5	2.8	5
HF-35	36.	3.2	10
HF-50	52.	3.7	14
HF-100	102.	5.3	27
HF-140	142.	6.3	37
HF-15-X	15.	3.6	10

CODE	CAPACITY* Max.	Min.	PLATES/ SECTION
HF-30-X	30.	5.2	20
HFD-25	25.0	2.9	7
HFD-50	52.	3.6	14
HFD-100	102.	5.0	27
HFD-140	142.	6.0	37
HFD-15-X	16.	3.8	11
HFD-30-X	28.5	5.0	19

D-Split stator. X-Wide-Spaced. *Nominal Values.

MACBF CAPACITORS


MACBF

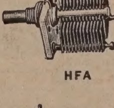
FEATURES—The "MACBF" is a miniaturized butterfly capacitor providing extremely low capacity for the VHF range. It is of the straight-line capacity type. **CONSTRUCTION**—Rotor and stator of brass, solder assembled, and nickel-plated. Base is of silicone-treated steatite. Terminals are hot-tinned dipped. Threaded bushing with flatted sides for panel or chassis mounting. **SPECIFICATIONS**—Straight line capacity. Screwdriver adjustment. Air gap is 0.017" nominal. Tested at 880 V. R.M.S., 60 cycles.

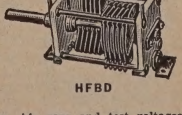
CODE	Part No.	CAPACITY (per section) Max. ±10%	Min. ±15%	No. of PLATES Rotor	Stator
MACBF-3	34604-G1	3.1	1.3	3	4
MACBF-5	34604-G2	5.0	1.6	5	8
MACBF-8	34604-G3	7.9	2.0	8	14
MACBF-11	34604-G4	10.8	2.4	11	20

"HFA" and "HFBD" CAPACITORS

SINGLE SECTION CAPACITOR—The "HFA" is a single section tuning capacitor similar to the "HF" except that larger plates permit wider air-gaps for the same capacitance values. Resultant higher break-down ratings extend the use of the capacitor into the high frequency low-power transmitter field. A threaded sleeve bearing permits single hole mounting and the bracket supplied may be used for base mounting. A lug-type terminal mounted with the bearing provides an efficient rotor connection.

DOUBLE SECTION CAPACITOR—The "HFBD" is a dual, balanced rotor transmitting capacitor employing front and rear panels plus a ball-thrust rear bearing, but other incorporating constructional features identical to the smaller "HFA." An insulted shaft extension safeguards operating personnel from the high voltages which may be applied to the rotor. The small size, rugged construction, balanced rotor and range of capacitance values and breakdown voltages make this capacitor ideally suited to many applications.


HFA


HFBD

CODE	CAPACITY** Max.	Min.	SPAC-ING	PLATES/ SEC-TION
HFA-100-A	102.	4.5	0.020	19
HFA-140-A	145.	6.0	0.020	27
HFA-200-A	200.0	8.0	0.020	38
HFA-10-B	9.	2.3	0.030	3
HFA-15-B	16.	2.8	0.030	5
HFA-25-B	25.	3.0	0.030	7
HFA-50-B	50.	4.3	0.030	14

CODE	CAPACITY** Max.	Min.	SPAC-ING	PLATES/ SEC-TION
HFA-100-B†	100.	7.5	0.030	27
HFA-15-E	16.	4.0	0.070	9
HFBD-50-C	50.	9.0	0.050	11
HFBD-100-C	105.	14.0	0.050	23
HFBD-35-E*	37.	9.5	0.070	11
HFBD-65-E*	63.	12.5	0.070	19

60 cycle voltage: "HFA"—"A" 800 V. R.M.S. "B" 1200 V. R.M.S. "E" 1750 V. R.M.S. "HFBD"—"C" 1500 V. RMS. "E*" 3000 V. R.M.S.; plates have rounded edges.
†Has front and rear supporting panels. **Nominal Values.

SPECIFICATIONS—Straight line capacity. Air gaps and test voltages are as indicated in table. However, "HFBD" breakdown voltages are doubled and capacitance values approximately halved when stator sections are connected in series.

Jennings® VACUUM

Vacuum Variable Capacitors

Type GCS
5-100 mmfd
15 kv

Type UCSL
7-1000 mmfd
5 kv

Type UCSXF
50-2000 mmfd
12 kv

	FIG.	TYPE		CAPACITY	PEAK VOLTAGE	RMS AMPERES①		NOMINAL DIMENSIONS②	
		NICKEL	COPPER	MMFD	KILOVOLTS	NICKEL	COPPER	LENGTH	DIAMETER
2 to 5 KV	E		UCSL	4-250	3, 5		30	4⅛	2¼
	B		USL	5-500	3, 5		40	5½	2⅜
	B		USLS	5-465 shorting	3, 5		40	5⅝	2⅜
	B		USL	10-1000	3, 5		40	5	3⅛
	A		UCSL	5-750, 7-1000	3, 5		42	7⅝	3⅛
	A		UCSL	20-2000 , 50-3000	2, 3		42	8⅜	3 9/16
7.5 to 15 KV	E		UCSB	5-100	7.5, 10, 15		40	4⅞	2⅜
	I		UCSV	8-110, 125-250	7.5, 10, 15		50	5¼	2⅞
	K		ATCS	10-150, 15-200	7.5, 10, 15		20	7	3⅛
	L		UCS	5-200, 10-300	7.5, 10, 15		42	8¾	2⅝
	L		UCS	10-400, 25-500	7.5, 10, 15		42	9	3⅛
	A		UCSF	5-250, 12-500	7.5, 10, 15		45	7¾	3⅝
	H		UCSX	25-700, 25-1000	7.5, 10, 15		45	9⅞	3¾
	M		UCSXF	12-1000, 15-1200	7.5, 10, 15		45	10	4⅜
	M		UCSXF	20-1500, 50-2000	7.5, 10, 12		45	10	5⅛
	C		ECS	2-8, 3-30	10, 15		20	4	1⅜
10 to 20 KV	K	T	TC	5-25	20	10.5	20	6⅝	2¼
	K	AT	ATC	10-50, 15-75	20, 30	10.5	20	6⅞	3⅛
	F	U	UC	50-250	10, 15, 20	21	60	11½	5
	D	UX	UXC	25-500	10, 15, 20	21	60	14	5
	M		UXCF	10-250, 20-500	10, 15, 20		60	9⅞	4⅜
	J	VMM	VMMC	50-1000, 100-2000	10, 15	35	125	15⅞	6⅛
	G		VMMC	100-5000	7.5, 10, 15		125	19	9¼
35 to 60 KV	I		UCSVH	8-35	25, 35		40	4¾	3
	F	UH	UHC	10-75, 75-150	35, 45, 55, 60	21	60	12	5
	D	UXH	UXHC	25-150	35, 45, 55	21	60	14⅝	5
	H		UCSXH	10-200	35, 45		45	10	4½
	M		UCSXHF	25-450	35, 40		60	10½	5⅛
	J		VMMHC	10-250, 25-450 , 30-650	35, 45, 55		125	17	8⅛
	N		VMMHCW	25-250, 50-400	35, 45, 55		500	17	9⅝
	G		VMMHC	60-1000	35, 40, 45		125	19⅜	9¼
120 KV	G		VMMHHC	25-200	120		125	20¼	9¼

①Current ratings can usually be doubled with forced air cooling. Water cooled units are also available

②Nominal Dimensions are for the largest unit of each type.

NOTE: A series of adjustable capacitors are available to cover the range of 8 to 1000 mmfd at 10 KV.

Vacuum Transfer Relays

Jennings Type	RA1 Series	RB7B	RB1D	RB2A	RB3	RB4	RE6B
Contact arrangement	1, 2, 3 & 4PDT	2PDT	SPDT	2PDT	2PDT	4PDT	SPDT
Rated operating voltage—dc or 60 cycle	300v	5 kv	12 kv	20 kv	12 kv	20 kv	25 kv
16 mc		2.5 kv	8 kv	10 kv	8 kv	10 kv	15 kv
Test voltage— 60 cycle peak	2000v	7.5 kv	18 kv	30 kv	15 kv	25 kv	35 kv
Continuous current—rms amps— 60 cycle	30, 40 amps	8 amps	15 amps	20 amps	30 amps	20 amps	25 amps
2.5 mc		5 amps	10 amps	14 amps	10 amps	10 amps	11 amps
16 mc		3 amps	6 amps	8 amps	6 amps	6 amps	7 amps
Contact resistance	.01 ohms	.01 ohms	.01 ohms	.01 ohms	.01 ohms	.01 ohms	.01 ohms
Contact capacitance	17 mmfd	1.0 mmfd	0.5 mmfd	1 mmfd	1 mmfd	1 mmfd	1 mmfd
Capacitance to ground	11 mmfd	2.0 mmfd	1.0 mmfd max	2.5 mmfd max	2.5 mmfd max	2.5 mmfd max	2.5 mmfd max.
Operate times	18–25 msec	8-15 msec	10 to 18 ms	10–16 ms	12–20 ms	25–45 ms	17–25 ms
Release times	2–9 msec	1-4 msec	1 to 8 ms	3 to 5ms	4 to 8 ms	4 to 10 ms	3-8 ms
DC actuating coil—resistance ± 10%	225 ohms	270 ohms	270 ohms	225 ohms	120 ohms	131 ohms	120 ohms
voltage	26.5 vdc	26.5 vdc	26.5 vdc	26.5 vdc	26.5 vdc	26.5 vdc	26.5 vdc
Shock	50G-11 ms	30G-11 ms	30G-11 ms	30G-11 ms	30G-11 ms	30G-11 ms	30G-11 ms
Vibration	20G to 2000 cps	15G 10-2000 cps	5G to 2000 cps	5G to 2000 cps	5G to 2000 cps	5G to 500 cps	10G to 500 cps

NOTE: Most of the rf voltage and current ratings can be increased 30% by the use of special brass terminals.

JENNINGS RADIO MANUFACTURING CORPORATION • SAN JOSE 8, CALIF.

CAPACITORS & RELAYS

Vacuum Fixed Capacitors

	FIG.	TYPE		CAPACITY	PEAK VOLTAGE	RMS AMPERES①		NOMINAL DIMENSIONS②	
		NICKEL	COPPER	MMFD	KILOVOLTS	NICKEL	COPPER	LENGTH	DIAMETER
2 to 5 KV	L		JCSL	100, 250	3, 5		35	2⅝	1⅞
	M		JSLF	250, 450	3, 5		30	1¾	1⅞
	B		JSLF	1000, 1500, 2000	3, 5		30	1⅝	3⅛
	B		JCSL	500. 750. 1000. 1500. 2000	2, 3		42	4	2⅞
7.5 to 15 KV	M		JCSF	25, 40, 80, 120, 150	7.5, 10, 15		30	1⅝	1⅝
	L		JCS2	10, 20, 25, 50, 75, 100, 150	7.5, 10, 15		20	3⅛	1⅞
	B		JCS1	25, 50, 75, 100, 150	7.5, 10, 15		50	3¾	2⅛
	B		JCS	250, 400, 500	7.5, 10, 15		42	4	3⅛
	A		JCS	900, 1000	7.5, 10, 12		42	4⅝	3⅝
	D		MC1	500, 750, 1000	10, 15		75	4⅛	4⅛
	C	M	MC	500, 750, 1000	10, 15, 20	21	120	8⅜	5
	J	MM	MMC	1500, 2000	10, 15	35	125	9¼	6⅛
	F		MMC1	2000	10, 15		125	5	6⅛
	E		MMC	3000, 4000, 5000	10. 15		125	13	9¼
17 to 30 KV	K	Y		1, 2, 3, 4, 5	17	7		3¼	¾
	K	X		5, 10, 15, 20, 25	17	7		3¼	1⅛
	N	W		6, 12, 25, 50, 100	20, 25	10.5		4⅝	2¼
	I		VCCA	6, 12, 25, 50, 75, 100, 150	20, 30		60	4½	2⅜
	I	VC	VCCE	6, 12, 25, 50, 75, 100, 150	20, 30, 35	14	60	6½	2⅝
	I	VC	VCCE	200, 250	20, 30	14	60	6½	2⅝
	M		JMF	50, 75, 100	20, 30		40	2¾	2⅛
	H		JC2	25, 50, 75, 100	20, 30		42	4	3¼
	C	ML	MLC	500, 750, 1000	25. 30	21	125	9¼	5
35 to 60 KV	A		JHC	75	50, 60		42	4	3½
	G		JC3	20, 40, 50, 60	35, 45, 55, 60		140	8¼	3½
	G		JC4	75, 100, 125	35, 45, 55, 60		175	9¼	5
	G		JC5	200	35, 45, 55, 60		225	11¼	7
	J		MMHC	450	35, 45, 55		125	9¼	6⅛
	E		MMHC	1000	35. 40, 45		150	13	9¼

Type JCSF
150 mmfd
15 kv

Type JCSL
1500 mmfd
5 kv

Type MMC
2000 mmfd
15 kv

①Current ratings can usually be doubled with forced air cooling. Water cooled units are also available.

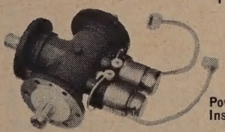
②Nominal Dimensions are for the largest unit of each type.

NOTE: Intermediate capacities, feed-thru capacitors, and glass insulators are available.

The all copper construction of Vacuum Fixed Capacitors give high current ratings, long life and stability of operation.

Vacuum Coaxial Relays

FOR 50 OHM 3⅛ LINES



TYPE RC21F SPDT VACUUM RELAY

Impedance: 50 ohms.

Frequency: (0-600 MC) —Crossstlk —VSWR
200 MC —47.12 db —1.03
225 MC —46.1 db —1.04
250 MC —45.0 db —1.05
300 MC —43.6 db —1.05
400 MC —41.2 db —1.06
500 MC —39.2 db —1.07
600 MC —37.5 db —1.09

Power Rating: 3 megawatt pk. 20 kw average 0 to 600 MC.

Insertion Loss: 0.01 db max.

TYPE RC 10 VACUUM RELAY

A SPST latching relay for use at frequencies up to 60 mc at 50 kw average power. Simple fittings are available that permit assembling multiple units in crossbar networks in a minimum of space. As an example a 4 x 5 (4 inputs, 5 outputs) crossbar network can be assembled occupying less than 9 cu. ft. of space.

TYPE RC21F SPDT VACUUM RELAY

Size: 3⅛ inch. **Fittings:** "RETMA," Flange type.

Inner Connector: Anchor type. "Retma" Bullet to Jennings spring type.

Configuration "T": May be installed in place of "Retma" 50 ohm standard elbow without modification of existing coaxial line.

Actuation: Electro-mechanical latching type. Momentary energize to open/close. 24 or 115 V DC or manual operation.

Indicator: Auxiliary Microswitches 2PDT. (Two each.)

Transfer time: Less than 50 millisec. **Weight:** 18 lbs. (approx.).,

TYPE RC 10 LATCHING VACUUM RELAY

Characteristic Impedance: 50 ohms

Power Rating: 50 kw average to 60 mc

Frequency Range: 0 to 100 mc

VSWR: 1.02 max. at 30 mc; 1.05 max. at 60 mc

Crosstalk: Greater than —60 db isolation at 60 mc

Actuating Voltage: 24, 48, 115 vdc

Actuator: Latching type

Position Indicators: SPDT or DPDT microswitches

High Voltage Measuring Equipment

MODEL JP 325 HIGH VOLTAGE PROBE

VOLTAGE RATINGS: 40, 50, or 60 KV peak.

VOLTAGE DIVISION RATIO: 325 to 1 to termination of 3 ft. of RG-58 A U cable.

INPUT IMPEDANCE:
Resistance: above 10^{12} ohms.
Capacitance: 4 mmfd.

FREQUENCY RESPONSE: High frequency limited by that of measuring instrument. (Internal resonances are above 200 mc.) Low frequency response is 100 cps if operating into 10 megohm shunt resistance; 1000 cps if operating into 1 megohm shunt resistance.

MODEL J-1003 HIGH VOLTAGE VACUUM TUBE VOLTMETER
for use in pulse, rf and 60 cycle circuits at voltages up to 100 KV.

VOLTAGE RANGES (peak volts full Scale):
Single Ended: 2.5, 5, 10, 25, 50 KV.
Double Ended: 2.5, 5, 10, 25, 50, 100 KV.
(By using Type JCD Series capacitor, these ranges can be more than doubled.)

OSCILLOSCOPE CONNECTION: 300 to 1 division ratio.

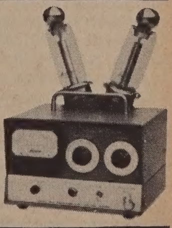
FREQUENCY RESPONSE: 10 cycles to 20 megacycles at full rated voltage and up to 50 megacycles for lower voltages with low harmonic content.

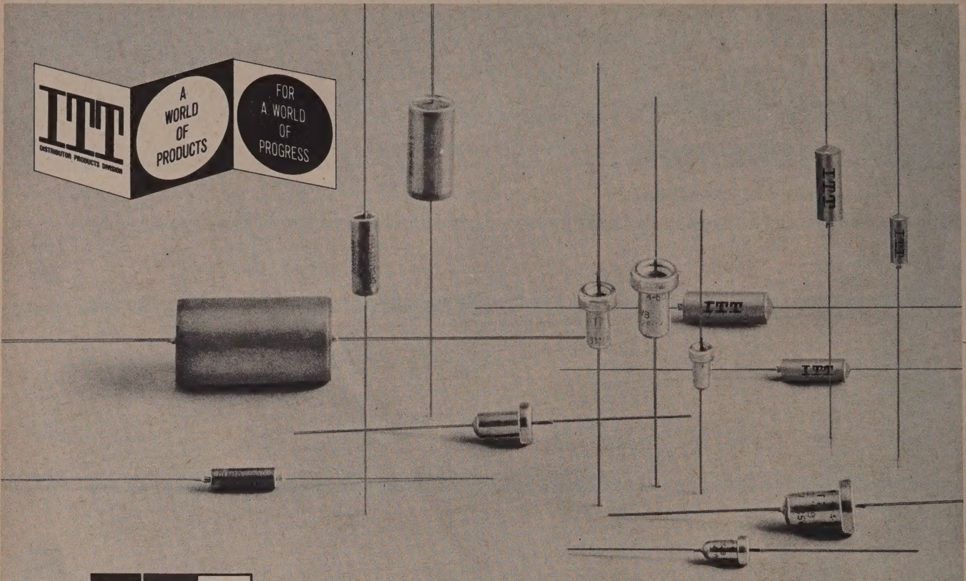
INPUT IMPEDANCE: 10^{12} ohms and 4 mmfd.

CALIBRATION ACCURACY: — 3% of full scale.

POWER SUPPLY: 117 volt, 50, 60 cy.

DIMENSIONS: 16¼" v 11" x 9"





ITT CAPACITORS

WET ANODE TYPE These ITT capacitors are intended for applications from 85° to 125°C. They are ruggedly reliable and extremely compact to meet the particular needs of transistorized equipment. Featuring a sintered slug in a fine-silver case, this design is able to function reliably under the severe environmental requirements of missile, airborne, and mobile service.

Complete stability of the tantalum-oxide dielectric assures trouble-free operation and long storage life. Design and production of ITT wet anode tantalum capacitors meet the requirements of MIL specifications.

FEATURES:

- Large capacitance per unit volume
- Very low leakage current
- Long operating and shelf life
- Ruggedly dependable construction
- Conformance to MIL specifications
- Excellent low-temperature stability
- Proven mechanical seal

SOLID ANODE TYPE ITT capacitors represent the ultimate in high capacity ratings with miniaturized construction—plus high reliability and unusually stable characteristics over their entire range of operating temperatures. These capacitors employ a sintered tantalum anode with a solid electrolyte, hermetically sealed, which affords full protection against moisture and extremes of atmospheric pressure. This solid construction assures long operating and shelf life.

ITT Solid Anode Tantalum Capacitors are particularly suited for use in transistorized equipment, timing circuits, power supplies, computers, data processing equipment, telemetry and other electronic applications in which reliability is of prime importance and minimum space a factor.

FEATURES:

- Largest capacitance per unit of volume
- Wide operating temperature range
- Linear temperature characteristic
- Excellent frequency
- Hermetically sealed
- Inorganic, nonliquid electrolyte
- Extremely low leakage
- Rugged construction
- Long shelf life
- Designed to MIL specifications

ITT-GUDEMAN SUBMINIATURE TUBULAR PAPER CAPACITORS

*MIL-C-25A SPECIFICATIONS —CP04—CP05—CP08—CP09—Series—XH—XHF. Hermetically sealed—metal cases in all sizes, with or without insulating sleeves—inserted tab or extended foil construction. Capacitance Range: .001 mfd. to 1.0 mfd. Voltage Range: 100 VDC to 1000 VDC. Standard Capacitance Tolerance: ±5%, ±10%, ±20%. Operating Temperature Range:

Type X .... —55°C to +85°C
Type XH .... —55°C to +125°C

Special Features—"Long Life" shell plating . . . Extra rugged glass and seals . . . specially selected dielectric materials . . . high temperature solder throughout...wire leads resist breakage . . . specially processed impregnant for optimum electrical properties.

ITT
DISTRIBUTOR PRODUCTS DIVISION
INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION

Consult your local authorized industrial ITT distributor.

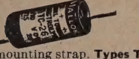
*Transition to MIL-C-25C As Required

P R MALLORY & CO Inc
MALLORY

P. R. MALLORY & CO. INC.
INDIANAPOLIS 6, IND.

DRY ELECTROLYTIC CAPACITORS
TC Series • W Series

TYPES TC-TCD-TCS AND TCT TUBULAR DRY ELECTROLYTICS



Combine small size and long life. Tolerance; Up to 50 WVDC, −10%, +250%; 51 through 350 WVDC, −10%, +100%; over 350 WVDC, −10%, +50%. Rated 85° C, except units marked *, 65° C. All TC's with a 13/16" dia. or more and all TCD, TCS and TCT types are equipped with fixed mounting strap. **Types TC and TCN** are single section units with 3" bare solid copper tinned leads. **Type TCD** are dual common negative units with 7" insulated wire leads. **Type TCS** are dual separate section units supplied with soldering lugs. **Type TCT** are triple common negative units with 7" insulated wire leads.

TYPE TC SINGLE SECTION

No. TC-	Cap., µf	WV DC	Size, In. Dia. x Lg.	Net Each
110	1000	1	11/16 x 2	$0.90
304	200	3	11/16 x 1 1/4	.69
305	500	3	11/16 x 1 1/2	.84
310	1000	3	15/16 x 1 3/4	1.02
605	500	6	13/16 x 1 3/4	.93
610	1000	6	15/16 x 2	1.14
1502	200	15	13/16 x 1 1/2	.84
1505	500	15	15/16 x 2	1.05
1501	1000	15	1 1/16 x 2 1/4	1.38
22	10	25	7/16 x 3/4	.60
26	25	25	7/16 x 3/4	.60
29	50	25	9/16 x 1 1/2	.66
2501	100	25	11/16 x 1 3/4	.81
25015	150	25	11/16 x 1 3/4	.87
2505	500	25	1 1/16 x 2 1/4	1.38
31	1	50	1/4 x 11/16	.54
302	2	50	5/16 x 3/4	.54
30	5	50	5/16 x 7/8	.60
32	10	50	7/16 x 3/4	.60
36	25	50	11/16 x 1 1/4	.63
39	50	50	13/16 x 1 1/4	.72
3501	100	50	11/16 x 1 3/4	.84
50025	250	50	15/16 x 1 3/4	1.05
40	5	150	7/16 x 7/8	.60
41	8	150	7/16 x 1	.63
42	10	150	7/16 x 1 1/4	.63
43	12	150	7/16 x 1 1/4	.66
44	16	150	11/16 x 1 1/2	.69
45	20	150	13/16 x 1 1/2	.72
47	30	150	13/16 x 1 1/2	.78
48	40	150	15/16 x 1 3/4	.81
49	50	150	15/16 x 1 3/4	.84
492	80	150	15/16 x 2	.96
493	100	150	1 1/16 x 2 1/4	1.05
495	150	150	1 1/16 x 2 1/4	1.14
499	300	150	1 7/16 x 3	1.53
50X	5	250	11/16 x 1 1/4	.63
51	8	250	11/16 x 1 3/4	.69
52	10	250	11/16 x 1 3/4	.72
53	12	250	13/16 x 1 3/4	.75
54	16	250	13/16 x 1 3/4	.78
55	20	250	13/16 x 1 3/4	.81
58	40	250	1 1/16 x 1 3/4	.93
59	50	250	1 1/16 x 1 3/4	1.02
1265	100	250	1 1/16 x 2 7/8	1.47
595	2	350	7/16 x 1 1/2	1.26
60	5	350	11/16 x 1 3/4	.63
61	8	350	13/16 x 1 3/4	.72
62	10	350	13/16 x 1 3/4	.75
63	12	350	13/16 x 1 3/4	.78
64	16	350	15/16 x 1 3/4	.84
65	20	350	15/16 x 1 3/4	.87
68	60	350	1 1/16 x 2 1/4	1.17
69	100	350	1 1/16 x 4	1.86
695	2	450	11/16 x 1 1/2	.66
70	5	450	11/16 x 1 3/4	.72
71	8	450	13/16 x 1 3/4	.75
72	10	450	13/16 x 1 3/4	.78
73	12	450	15/16 x 1 3/4	.81
74	16	450	15/16 x 1 3/4	.84
75	20	450	1 1/16 x 1 3/4	.93
77	30	450	1 1/16 x 2 1/4	1.02
78	40	450	1 1/16 x 2 1/4	1.08
79	50	450	1 1/16 x 2 7/8	1.26
795	60	450	1 1/16 x 2 7/8	1.38
80	80	450	1 1/16 x 4	1.68
805	100	450	1 7/16 x 3	1.92
81*	10	500	15/16 x 1 3/4	.81
82*	10	500	1 1/16 x 2 15/16	1.62
83*	20	500	1 1/16 x 1 3/4	.96
84*	30	500	1 1/16 x 2 1/4	1.05
92	10	600	1 1/16 x 2 7/8	1.77
308†	.5Z‡	3	1 1/16 x 2	1.32
420†	1.5Z§	4	1 1/16 x 2 7/8	2.10
421†	1.5Z#	6	1 1/16 x 2	1.80
N105†	5	10	11/16 x 1 1/4	.69
N106†	6	10	9/16 x 1 1/4	.69
N108†	8	10	11/16 x 1 1/2	.69
N1025†	25	10	7/16 x 7/8	1.47
N412†	500	10	1 1/16 x 2 1/4	1.20
N1550†	500	15	1 1/16 x 2 1/4	1.32
N415†	1000	15	1 1/16 x 3 1/2	1.71
N2516†	16	25	9/16 x 1 1/2	.60
N425†	100	25	1 1/16 x 1 1/2	1.02
N502†	2	50	9/16 x 1 1/4	.69
N503†	3	50	7/16 x 3/4	.72
N504†	4	50	7/16 x 3/4	.75
N5010†	10	50	11/16 x 1 1/4	.75
N510†	4	150	11/16 x 1 1/4	.75
N3520†	20	350	1 1/16 x 2 7/8	1.08
N511†	10	450	1 1/16 x 2 1/4	.99

*Limited to operation up to 65° C. †Non-polarized. ‡At 15750 cps. §At 60 cps. #At 120 cps.

TCD DUAL COMMON NEGATIVE

No. TCD-	Cap., µf	WVDC	Size, In. Dia. x Lg.	Net Each
204	250-1000	10-6	1 1/16x2 1/4	$1.68
16	500-100	16-16	15/16x2	.78
26	25-25	25-25	13/16x1 1/4	.84
40	10-10	100-100	1 3/16x1 1/4	.87
45	20-20	150-150	13/16x1 3/4	.99
47	30-30	150-150	15/16x1 3/4	1.08
485	40-20	150-150	15/16x1 3/4	1.05
475	40-30	150-150	15/16x2	1.08
48	40-40	150-150	1 1/16x2	1.11
497	50-30	150-150	15/16x2	1.17
49	50-50	150-150	1 1/16x2 1/4	1.26
4975	80-40	150-150	1 1/16x2 1/4	1.32
498	80-50	150-150	1 1/16x2 1/4	1.41
2155	100-100	150-150	1 1/16x4	1.92
46	30-20	200-200	15/16x2	1.17
2165	30-30	200-200	1 1/16x2 1/4	1.32
2169	50-75	250-50	1 1/16x2 1/4	1.44
2174	100-150	250-50	1 1/16x4	2.16
2173	8-8	250-250	15/16x1 3/4	.96
52	10-10	250-250	15/16x2	.99
55	20-20	250-250	1 1/16x2	1.11
2274	40-40	300-300	1 1/16x3 1/8	1.77
58	80-40	300-300	1 1/16x4	2.07
62	10-10	350-350	15/16x2	1.02
65	20-20	350-350	1 1/16x2 3/8	1.35
2297	40-50	450-50	1 1/16x3 1/8	1.50
2302	30-60	450-300	1 1/16x4	1.92
71	8-8	450-450	15/16x2	1.02
72	10-10	450-450	1 1/16x2	1.11
74	15-15	450-450	1 1/16x3 1/8	1.32
745	20-8	450-450	1 1/16x2 1/4	1.26
75	20-20	450-450	1 1/16x3 1/8	1.50
77	30-30	450-450	1 1/16x4	1.80
78	40-40	450-450	1 1/16x4	2.04

TCS DUAL SEPARATE SECTION

No. TCS-	Cap. µf	WV DC*	Size, In. Dia. x Lg.	Net Each
44	15-15	150	13/16 x 2 3/8	$1.20
45	20-20	150	15/16 x 2 3/8	1.26
47	30-30	150	1 1/16 x 2 3/8	1.35
48	40-40	150	1 1/16 x 2 7/8	1.41
49	120-120	150	1 1/16 x 3 7/8	1.98
505	70-70	175	1 1/16 x 3 7/8	2.16
52	10-10	250	15/16 x 2 3/8	1.26
55	20-20	250	1 1/16 x 2 7/8	1.41
61	8-8	350	15/16 x 2 3/8	1.26
64	15-15	350	1 1/16 x 2 7/8	1.65
71	8-8	450	1 1/16 x 2 3/8	1.29
74	15-15	450	1 1/16 x 2 7/8	1.65
75	20-20	450	1 1/16 x 3 1/2	1.89

*Each section.

TCT TRIPLE COMMON NEGATIVE

No. TCT-	Cap. µf	Volts*	Size, In. Dia.x L.	Net Each
3053	20-20-20	150-150-25	15/16x2 1/4	$1.23
3055	30-30-20	150-150-25	1 1/16x2 1/4	1.32
3094	50-30-200	150-150-25	1 1/16x2 7/8	1.65
3109	20-10-10	150-150-150	15/16x1 3/4	1.20
3112	20-20-20	150-150-150	1 1/16x1 3/4	1.29
3113	30-30-30	150-150-150	1 1/16x2 1/4	1.41
3114	40-20-20	150-150-150	1 1/16x2 1/4	1.35
3105	40-30-20	150-150-150	1 1/16x1 3/4	1.38
3116	40-40-20	150-150-150	1 1/16x2 1/4	1.41
3115	40-40-40	150-150-150	1 1/16x2 1/4	1.47
3107	50-30-20	150-150-150	1 1/16x2 1/4	1.41
3119	60-50-20	150-150-150	1 1/16x2 7/8	1.62
3117	80-40-20	150-150-150	1 1/16x2 7/8	1.65
3118	80-50-50	150-150-150	1 1/16x4	1.86
3285	40-30-40	350-250-150	1 1/16x4	1.98
3405	30-50-100	450-150-25	1 1/16x4	1.92
3432	30-30-30	450-350-250	1 1/16x4	2.25
3764	40-20-10	450-450-450	1 1/16x4	2.13

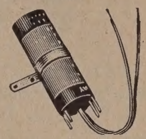
*Non-polarized.

CLIPS FOR TC CAPACITORS

Special clips mount any tubular or FP type capacitor horizontally. Mounts without tools under special chassis lances in original equipment; or, with any 5-32 screw in 1/8" hole.

Mall. No.	Spring Clip for	Size, In.	Net Each
TH-13	TC	3/8	3c
TH-15	TC	1/2-9/16	3c
TH-17	TC	5/8-11/16	3c
TH-19	TC and FP	3/4-13/16	3c
TH-21	TC	7/8-15/16	3c
TH-23	TC and FP	1 -1 1/16	3c
TH-25	TC and FP	1 3/8-1 7/16	6c

HIGH TEMPERATURE WAX TUBULARS



For use in modern TV chassis and similar applications requiring large values of capacity at comparatively high voltages in a single container. Made with FP plate, similar to that used in Type FP's, and high temperature wax end-seal. Wax-dipped cardboard sleeve; 5" flexible leads. **Tolerances:** All values up to 50 WVDC, −10%, +250%; 51 to 350 WVDC, −10%, +100%; above 350 WVDC, −10% +50%. No. WQ240 is double-ended; all others are single-ended.

Mall. No.	Cap. µf @ WVDC	Size, In. D. x L.	Net Each
WD270	120-120 @ 150	1 x4 3/8	$2.61
WD210	50-30 @ 150	7/8x2 7/8	1.17
WD215	50-50 @ 150	7/8x2 7/8	1.26
WD220	70-30 @ 150	7/8x2 7/8	1.29
WD235	100-50 @ 150	1 x3 3/8	1.59
WD251	250-50 @ 150	1 3/8x2 7/8	1.98
WS342	200 @ 200	1 1/8x3 3/8	1.74
WS427	140 @ 300	1 1/4x3 3/8	1.89
WT217	40-40-20 @ 150	1 x2 7/8	1.41
WT460	60-60-4 @ 350	1 1/4x3 3/8	3.15
WD340	60-125 @ 200-50	1 1/16x2 7/8	1.44
WD345	5-200 @ 200-200	1 1/8x3 3/8	2.13
WD425	150-100 @ 300-300	1 3/8x3 3/8	2.31
WD450	5-140 @ 350-350	1 1/8x4 3/8	2.25
WT312	250-120-50 @ 150-150-25	1 3/8x3 7/8	2.61
WT630	5-40-80 @ 450-400-400	1 3/16x4 3/8	2.73
WT700	10-10-150 @ 450-450-50	1 1/8x2 7/8	1.65
WT458	60-60-60 @ @ 350-350-300	1 1/4x4 3/8	2.85
WT455	100-40-40 @ 350-350-250	1 1/8x4 3/8	3.42
WT400	120-40-100 @ 300-250-50	1 3/8x2 7/8	2.97
WT407	70-50-30 @ 300-300-250	1 1/4x3 7/8	2.52
WT430	100-60-100 @ 300-300-50	1 1/4x4 3/8	3.06
WT449	140-5-200 @ 350-300-200	1 3/8x4 3/8	4.11
WT240	60-60-100 @ 150-150-25	1 1/16x2 3/4	2.73
WT316	150-150-150 @ 150-150-150	1 1/4x4 3/8	2.91
WT320	200-250-10 @ 150-150-150	1 1/4x4 3/8	2.73
WT201	60-40-250 @ 150-150-15	1 x2 7/8	1.95
WQ209	60-40-20-200 @ 150-150-150-10	1 1/16x3	2.07
WQ240	10-10-40-200 @ 150-150-150-35	1 1/8x2 3/8	1.95
WT447	10-100-200 @ 350-150-150	1 3/8x3 3/8	2.55
WQ402	150-100-20-100 @ 300-300-300-25	1 1/2x4 3/8	4.17
WQ775	10-20-20-40 @ 450-450-450-450	1 1/4x3 3/8	2.82
WQ650	10-40-80-100 @ 450-300-400-50	1 1/4x4 3/8	3.30
WQ505	5-30-140-200 @ 300-200-350-200	1 1/2x4 3/8	4.50
WQ511	140-5-200-100 @ 350-300-200-150	1 1/2x4 3/8	4.92
WQ795	20-20-40-40 @ 450-450-450-450	1 1/4x4 3/8	3.27
WQ230	40-40-20-20 @ 150-150-150-25	15/16x2 7/8	1.83
WQ215	40-20-20-100 @ 150-150-150-25	1 1/16x2 7/8	1.98
WQ250	60-40-40-20 @ 150-150-150-25	1 1/16x2 7/8	1.95
WQ635	100-25-10-50 @ 300-450-300-50	1 3/8x3 3/8	2.82
WQ405	120-40-40-10 @ 300-300-300-250	1 3/8x4 1/4	2.91
WQ410	80-40-40-10 @ 300-300-250-250	1 5/16x3 3/8	3.12
WQ349	40-20-20-100 @ 350-300-250-50	1 3/8x2 7/8	2.70
WV404	40-20-20-20-50 @ 300-300-300-300-50	1 1/4x3 3/8	3.21

ELECTROLYTIC CAPACITOR

Designed for antenna rotators.

ST75	70 @ 50 v. AC	7/8x2 5/8	$0.75

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P R MALLORY & CO Inc
MALLORY

DRY ELECTROLYTIC CAPACITORS

P.R. MALLORY & CO. INC.
INDIANAPOLIS 6, IND.

FP-WP Series

FP AND WP CAPACITORS

For top chassis mounting in filter and audio bypass circuits and TV applications. Extremely dependable under heavy ripple current and high surge voltage. All WP and FP capacitors are designed for high temperature (85° C) operation at full rated voltage, except as noted in table by (‡). Single, dual, triple and quad section units encased in compact rubber sealed aluminum cases with self-contained mounting feature. **Type FP** is supplied with Fabricated Plate (metallized cotton gauze) anodes, **Type WP** with etched plate anodes. Special internal design provides low RF impedance and minimum coupling between sections. Case at negative potential. Supplied insulating washer may be used where negative ground is not wanted. For twist-prong mounting through chassis slots. ***SIZES are shown at end of listing.**

FP-WP—SINGLES

Mallory No.	Cap., µf	WV DC	*	Net Each
WP510	.5Z/15750†	3NP	B	**$1.32**
WP540	1.0Z/60†	3NP	H	**2.40**
WP505	10Z/30†	3NP	A	**1.20**
WP035	225	15	A	**1.05**
WP039	1000	15	C	**1.53**
WP041	2000	15	G	**2.07**
WP042	3000	15	H	**2.10**
WP052	40	25	A	**.81**
WP055	100	25	B	**.96**
WP057	500	25	C	**1.53**
WP059	1000	25	F	**2.13**

Mallory No.	Cap., µf	WV DC	*	Net Each
WP063	4	50	A	**$0.75**
WP064	100	50	B	**.99**
WP064.2	150	50	B	**1.08**
WP065	500	50	F	**1.59**
WP066	500	50	D	**1.59**
WP068	1500	50	H	**2.31**
FP113	30	150	A	**.93**
FP115	50	150	B	**.99**
FP116	100	150	C	**1.20**
FP116.5	120	150	D	**1.23**
FP116.6	120	150	F	**1.23**
FP117	150	150	D	**1.29**
FP117.5	150	150	F	**1.29**
FP118	200	150	G	**1.47**

Mallory No.	Cap., µf	WV DC	*	Net Each
FP119	300	150	H	**$1.68**
FP121	120	200	F	**1.41**
WP123	500	200	I	**2.19**
FP125	15	250	A	**.93**
FP126	200	250	H	**2.43**
FP128	80	300	D	**1.53**
FP129.1	100	300	D	**1.74**
FP131	150	300	H	**2.10**
FP135	30	350	B	**1.14**
FP137	50	350	C	**1.26**
FP137.2	60	350	D	**1.32**
FP138	80	350	G	**1.71**
FP140	125	350	H	**2.37**
FP141	320	350	I	**3.45**

Mallory No.	Cap., µf	WV DC	*	Net Each
FP142	10	450	A	**$0.93**
FP143	15	450	B	**1.02**
FP144	20	450	B	**1.08**
FP145	30	450	C	**1.17**
FP146	40	450	C	**1.23**
FP148	60	450	G	**1.68**
FP149	80	450	G	**1.83**
FP150	100	450	H	**2.07**
FP171‡	10	500	B	**.96**
FP173‡	20	500	B	**1.11**
FP175‡	30	500	C	**1.20**
FP176‡	40	500	F	**1.50**
FP177‡	40	500	D	**1.50**
FP187‡	90	500	H	**2.10**

FP-WP—DUALS

Mallory No.	Capacity µf	Working Volts DC	*	Net Each
WP204	250-1000	10-6	F	**$1.71**
WP205	.5Z-2.5Z/15750†-60†	12-6	I	**2.16**
WP200	1000-1000	15-15	F	**2.64**
WP200.1	1000-1000	15-15	D	**2.64**
WP200.23	1500-1000	16-10	F	**2.55**
WP200.6	500-500	16-16	B	**1.95**
WP200.21	1000-500	16-16	C	**2.28**
WP200.5	500-100	20-20	B	**1.65**
WP200.7	500-200	20-20	B	**1.80**
WP200.2	1000-2000	25-15	H	**3.87**
WP201.1	40-40	25-25	B	**.93**
WP201.15	1000-1000	25-25	G	**2.91**
WP202.1	50-50	50-50	B	**1.02**
WP202.5	100-100	50-50	B	**1.26**
WP205.6	50-500	150-5	C	**1.41**
WP206	50-150	150-25	C	**1.32**
FP208	20-20	150-150	B	**1.02**
FP211	30-30	150-150	B	**1.11**
FP210	40-20	150-150	B	**1.08**
FP212	40-40	150-150	B	**1.14**
FP213	50-30	150-150	B	**1.20**
FP214	50-50	150-150	C	**1.29**
FP214.5	75-75	150-150	F	**1.56**
FP214.6	75-75	150-150	E	**1.56**
FP216.2	80-40	150-150	C	**1.38**
FP215	125-100	150-150	G	**2.04**
FP216.3	200-150	150-150	I	**2.25**
FP216.4	200-200	150-150	I	**2.40**
FP216.6	60-60	200-200	D	**1.53**
FP216.1	200-5	200-200	G	**1.65**
FP216.8	40-25	250-150	C	**1.29**
FP217	20-20	250-250	B	**1.14**
FP221	40-40	250-250	D	**1.50**
FP217.7	150-150	250-250	I	**3.09**

Mallory No.	Capacity µf	Working Volts DC	*	Net Each
FP217.74	200-200	250-250	I	**$3.60**
WP217.85	35-500	300-6	C	**1.68**
FP217.86	30-20	300-50	B	**1.14**
FP217.8	20-60	300-250	D	**1.65**
FP217.87	40-40	300-300	F	**1.77**
FP217.88	50-10	300-300	F	**1.53**
FP217.9	75-75	300-300	H	**2.28**
FP218	120-20	300-300	H	**2.40**
FP223	5-75	350-150	D	**1.26**
FP225	15-15	350-350	B	**1.35**
FP227	20-20	350-350	C	**1.38**
FP227.3	30-30	350-350	D	**1.74**
WP227.35	80-20	350-350	D	**2.10**
FP227.4	80-20	350-350	G	**2.10**
FP227.5	80-40	350-350	H	**2.16**
FP227.6	80-80	350-350	I	**2.82**
FP227.7	100-100	350-350	I	**3.69**
FP228.3	150-20	350-350	H	**2.73**
FP229	35-100	400-50	D	**1.56**
FP229.2	40-4	400-350	D	**1.41**
FP229.3	75-75	400-400	I	**2.91**
FP229.4	80-60	400-400	I	**2.82**
FP229.5	120-40	400-400	I	**3.15**
FP229.55	40-100	450-50	E	**1.68**
FP229.6	50-100	450-50	G	**1.80**
FP244	80-50	450-50	H	**2.10**
FP229.8	80-100	450-50	H	**2.25**
FP229.9	30-200	450-150	H	**2.10**
FP230	20-50	450-250	D	**1.68**
FP230.3	40-10	450-300	D	**1.56**
FP230.6	10-100	450-350	H	**2.40**
FP235	20-80	450-350	G	**2.19**
FP550	10-80	450-400	H	**2.07**
WP230.9	5-5	450-450	B	**1.02**
FP231	10-10	450-450	B	**1.14**

Mallory No.	Capacity µf	Working Volts DC	*	Net Each
FP231.3	20-10	450-450	C	**$1.32**
FP234	20-20	450-450	D	**$1.53**
FP237	30-30	450-450	G	**1.83**
FP238	40-40	450-450	H	**2.07**
FP239	50-40	450-450	H	**2.19**
FP240‡‡	50-50	450-450	H	**2.31**
FP242	60-20	450-450	H	**2.10**
FP242.5	60-60	450-450	I	**2.70**
FP245	80-10	450-450	H	**2.16**
FP245.2	80-20	450-450	H	**2.34**
FP245.3	80-30	450-450	I	**2.49**
FP247	100-40	450-450	I	**2.91**
FP250	40-80	475-200	G	**2.19**
FP252	80-80	475-250	I	**2.79**
FP255	20-100	475-300	H	**2.37**
FP256	20-100	475-400	I	**2.70**
FP258	15-15	475-475	C	**1.41**
FP259	30-10	475-475	D	**1.56**
FP260	40-10	475-475	H	**1.86**
FP262	40-40	475-475	H	**2.58**
FP263	60-40	475-475	I	**2.73**
FP264.5	80-40	475-475	I	**3.03**
FP266	80-50	475-475	I	**3.12**
FP277‡	60-80	500-150	H	**2.25**
FP280‡	40-50	500-200	G	**1.98**
FP282‡	10-10	500-500	C	**1.17**
FP283‡	30-10	500-500	F	**1.56**
FP284‡	30-30	500-500	G	**1.95**
FP288‡	40-40	500-500	H	**2.58**
FP290‡	60-40	500-500	J	**2.73**

‡‡ Recommended for photoflash applications. Can is ungrounded. ‡Limited operation up to 65° C. †Cycles.

FP-WP—TRIPLES

Mallory No.	Capacity µf	Working Volts DC	*	Net Each
WP300.15	200-200-30	10-10-10	B	**$1.35**
WP300.6	850-400-2.2	16-16-11.5 rms	C	**2.97**
WP300.7	850-400-4	16-16-11.5 rms	C	**2.97**
WP300.89	1000-400-4	16-16-11.5 rms	F	**2.58**
WP300.9	1000-500-4	16-16-11.5 rms	C	**3.12**
WP300.5	400-100-100	16-16-16	B	**1.80**
WP300.8	500-100-100	16-16-16	B	**2.64**
WP300.85	500-500-100	16-16-16	B	**2.40**
WP300	1000-500-20	16-16-16	F	**2.52**
WP300.17	500-200-5	16-16-25	B	**1.92**
WP520	40-40-40	25-25-25	B	**1.29**
WP301	30-30-30	50-50-50	B	**1.29**
FP303	20-250-100	150-15-15	F	**1.74**
FP312	100-50-25	150-50-25	D	**1.80**
WP302	15-15-1000	150-150-2	B	**1.80**
WP302.1	15-15-1200	150-150-2	B	**1.80**
FP302.4	80-20-200	150-150-10	F	**1.71**
FP302.5	80-60-250	150-150-10	D	**2.04**
FP302.7	80-30-300	150-150-10	F	**1.89**
FP302.8	100-80-200	150-150-10	G	**2.16**
FP302.9	80-20-100	150-150-15	F	**1.68**
FP306	40-20-20	150-150-25	B	**1.38**
FP307	40-20-100	150-150-25	C	**1.50**
FP304	40-20-200	150-150-25	C	**1.62**
FP310	40-40-20	150-150-25	C	**1.44**
FP314	40-40-200	150-150-25	D	**1.68**
WP308.1	40-40-250	150-150-25	D	**1.89**
FP309	50-30-100	150-150-25	C	**1.62**
FP311	50-50-20	150-150-25	D	**1.59**
FP311.1	80-40-25	150-150-25	D	**1.65**
FP311.15	80-40-300	150-150-25	G	**2.22**

Mallory No.	Capacity µf	Working Volts DC	*	Net Each
FP311.2	20-20-20	150-150-150	B	**$1.38**
FP311.4	40-20-20	150-150-150	C	**1.44**
FP311.5	40-40-40	150-150-150	D	**1.56**
FP311.55	50-20-20	150-150-150	C	**1.53**
FP311.6	50-40-10	150-150-150	B	**1.53**
FP311.65	50-50-50	150-150-150	D	**1.80**
FP311.66	70-15-15	150-150-150	C	**1.62**
FP311.8	70-40-40	150-150-150	E	**1.74**
FP311.67	80-30-10	150-150-150	D	**1.65**
FP311.7	80-40-20	150-150-150	F	**1.74**
FP311.85	120-80-40	150-150-150	H	**2.22**
FP311.9	120-120-40	150-150-150	H	**2.43**
FP312.5	200-100-60	150-150-150	I	**2.73**
FP312.8	60-200-140	200-150-150	I	**2.85**
FP313	30-20-20	200-200-25	B	**1.53**
FP318.3	30-20-40	200-200-150	C	**1.62**
FP318.5	20-20-20	200-200-200	C	**1.50**
FP318.7	30-20-20	200-200-200	C	**1.62**
FP318.74	40-40-20	200-200-200	F	**1.77**
FP318.8	250-200-10	200-200-200	I	**4.02**
FP319	80-40-50	250-150-50	G	**1.98**
FP360	15-20-20	250-150-150	B	**1.44**
FP319.5	90-90-20	250-250-50	H	**2.76**
FP319.8	20-20-20	250-250-250	C	**1.56**
FP320	40-20-20	250-250-250	F	**1.74**
FP321	40-20-20	250-250-250	D	**1.74**
FP323	80-80-60	250-250-250	I	**2.94**
FP326	100-60-20	300-150-25	H	**2.52**
FP326.2	20-150-80	300-150-150	H	**2.37**
FP326.3	100-200-60	300-150-150	I	**3.27**
FP334	20-80-10	300-250-200	G	**2.07**
FP326.4	60-30-30	300-250-250	G	**2.25**
FP335	100-60-20	300-250-250	H	**2.94**
FP336	200-60-20	300-250-250	I	**3.48**
FP326.5	150-10-25	300-300-25	H	**2.37**
FP326.6	100-10-60	300-300-50	G	**2.43**
FP326.7	140-100-60	300-300-50	I	**3.57**
FP326.74	140-10-200	300-300-150	I	**3.30**
FP326.65	100-60-4	300-300-300	H	**2.82**

Mallory No.	Capacity µf	Working Volts DC	*	Net Each
FP326.67	120-50-40	300-300-300	I	**$3.33**
FP326.75	150-30-30	300-300-300	I	**3.00**
WP326.8	4-100-40	350-25-25	B	**1.35**
FP327	40-100-25	350-50-25	F	**1.92**
WP327.2	20-50-100	350-100-75	D	**1.98**
FP327.4	125-5-100	350-200-75	I	**3.18**
FP327.5	10-40-40	350-200-200	D	**2.58**
FP327.6	30-20-100	350-250-50	D	**1.95**
FP331	30-30-20	350-300-25	D	**1.89**
FP327.8	30-50-20	350-300-25	G	**2.16**
FP327.87	100-40-40	350-300-250	I	**3.36**
FP327.89	40-40-40	350-300-300	G	**2.61**
FP328	15-10-20	350-350-25	B	**1.50**
FP329.1	20-4-100	350-350-25	C	**1.56**
FP329.5	20-20-20	350-350-25	B	**1.68**
FP330	30-20-20	350-350-25	D	**1.86**
FP330.13	200-10-50	350-350-25	I	**3.06**
FP330.15	10-5-30	350-350-50	B	**1.32**
FP330.2	10-5-150	350-350-50	C	**1.62**
FP330.21	20-5-150	350-350-50	D	**1.77**
FP330.23	80-40-400	350-350-50	H	**3.39**
FP330.22	100-20-50	350-350-50	H	**2.91**
FP330.25	30-20-100	350-350-150	G	**2.40**
FP330.26	100-60-20	350-350-200	I	**3.30**
FP330.27	125-60-40	350-350-200	I	**3.54**
FP330.3	20-10-5	350-350-250	B	**1.53**
FP330.5	10-10-10	350-350-350	B	**1.44**
FP330.7	30-20-10	350-350-350	D	**1.95**
FP330.9	60-50-50	350-350-350	I	**2.94**
FP331.3	80-60-60	350-350-350	I	**3.33**
FP331.6	90-40-20	350-350-350	I	**3.15**
FP332.4	100-100-10	350-350-350	I	**4.08**
FP332.5	40-200-60	400-200-200	I	**3.33**
FP332.7	10-4-40	400-350-25	B	**1.32**
FP333	10-50-30	400-350-25	F	**1.86**
FP333.1	40-4-4	400-350-150	D	**1.71**
FP333.2	80-40-100	400-400-50	I	**3.00**

*See table of sizes on another page.
FP-WP triples continued on next page.

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MALLORY
P R MALLORY & CO Inc
P.R. MALLORY & CO. INC.
INDIANAPOLIS 6, IND.

DRY ELECTROLYTIC CAPACITORS

FP-WP Series (CONT.)

FP-WP—TRIPLES—CONTINUED

Mallory No.	Capacity µf	Working Volts DC	*	Net Each
FP333.3	80-40-150	400-400-50	I	$3.09
FP333.15	100-20-20	400-400-50	H	2.88
FP333.5	20-10-40	400-400-350	E	2.04
FP333.6	20-20-10	400-400-350	D	1.80
FP333.7	60-30-20	400-400-350	H	2.73
FP333.8	80-20-10	400-400-350	H	2.58
FP333.85	100-10-80	400-400-350	I	3.66
FP333.88	50-30-4	400-400-400	G	2.31
FP333.9	90-10-5	400-400-400	H	2.64
FP333.95	100-30-20	400-400-400	I	3.30
WP334.6	20-500-500	450-25-25	H	3.21
FP342	40-40-130	450-150-50	G	2.22
FP343	40-100-50	450-150-50	H	2.37
WP339.5	10-50-100	450-150-75	D	1.95
FP340	20-50-100	450-150-75	F	2.04
FP341	40-90-50	450-150-150	H	2.40
FP341.3	20-80-50	450-200-150	G	2.16
FP341.5	20-60-100	450-250-25	G	2.19
FP341.6	50-160-50	450-250-50	I	3.09
FP341.8	10-80-80	450-250-250	H	2.61
FP342.2	5-80-40	450-300-300	H	2.49
FP342.5	30-15-40	450-350-25	F	1.92
FP342.7	30-40-50	450-350-25	E	2.22
FP342.8	80-50-100	450-350-200	I	3.51
FP343.1	15-20-20	450-350-250	D	1.77
FP343.4	20-15-15	450-350-350	D	1.95
FP343.6	20-40-10	450-350-350	G	2.10
FP343.9	10-30-150	450-400-5	D	1.80
FP344.2	60-80-20	450-400-250	I	3.27
FP344.4	4-40-40	450-400-300	G	2.22
FP344.5	10-30-40	450-400-300	G	2.19
FP345.2	10-10-20	450-450-25	B	1.44

‡Limited operation up to 65°C.

Mallory No.	Capacity µf	Working Volts DC	*	Net Each
FP345.5	15-15-40	450-450-25	C	$1.65
FP345.8	20-20-20	450-450-25	C	1.83
FP345.3	40-20-20	450-450-25	G	2.10
FP346	40-40-20	450-450-25	H	2.37
FP345.4	80-10-125	450-450-25	H	2.64
FP364	80-40-100	450-450-25	I	3.06
FP365	10-10-40	450-450-50	C	1.47
FP366	20-10-50	450-450-50	D	1.71
FP366.5	30-10-150	450-450-50	G	2.10
FP367	35-25-100	450-450-50	H	2.37
FP367.5	40-30-25	450-450-50	G	2.25
FP368	60-40-75	450-450-50	I	2.76
FP368.3	80-20-100	450-450-50	I	2.88
FP368.5	80-50-50	450-450-50	I	3.12
FP386.6	30-30-125	450-450-75	H	2.70
FP369.1	40-40-40	450-450-150	H	2.49
FP370	40-10-80	450-450-200	H	2.34
FP375	40-40-100	450-450-200	I	2.97
FP375.2	15-10-120	450-450-300	I	2.70
FP375.4	40-40-60	450-450-350	I	2.94
FP375.5	40-40-80	450-450-350	I	3.33
FP375.6	60-20-40	450-450-350	I	2.94
FP375.7	20-10-15	450-450-400	D	1.86
FP375.8	10-10-10	450-450-450	C	1.56
FP376.1	15-15-10	450-450-450	D	1.77
FP376.3	20-10-10	450-450-450	D	1.74
FP376.5	20-20-20	450-450-450	G	2.16
FP376.6	30-10-10	450-450-450	F	1.89
FP376.7	30-30-30	450-450-450	H	2.67
FP376.8	40-40-10	450-450-450	H	2.49
FP376.9	40-40-20	450-450-450	H	2.67
FP377	40-40-40	450-450-450	I	2.94

Mallory No.	Capacity µf	Working Volts DC	*	Net Each
FP377.2	50-40-30	450-450-450	I	$2.94
FP377.4	60-10-10	450-450-450	H	2.34
FP377.6	60-30-10	450-450-450	H	2.70
FP378	80-40-20	450-450-450	I	3.24
FP379.1	20-50-20	450-50-25	D	1.65
FP381.1	80-80-50	475-150-50	I	2.91
FP382.1	40-40-100	475-250-100	H	2.46
FP384	20-20-40	475-300-25	F	1.86
FP384.12	30-100-50	475-300-50	H	2.46
FP384.14	5-100-200	475-300-150	I	3.09
FP384.16	10-4-100	475-350-50	B	2.37
FP384.2	10-4-40	475-350-300	F	1.80
FP384.5	10-45-100	475-450-50	G	2.19
FP384.7	40-40-25	475-450-50	H	2.64
FP385	10-40-100	475-450-200	H	2.52
FP385.5	40-80-10	475-450-450	I	3.30
FP386	10-10-5	475-475-25	C	1.47
FP387.1	10-10-150	475-475-50	D	1.80
FP388.1	25-10-20	475-475-50	D	1.77
FP389.1	20-10-100	475-475-400	I	3.15
FP391.1	20-20-60	475-475-450	I	2.91
FP394	10-10-10	475-475-475	D	1.62
FP396	30-30-20	475-475-475	H	2.67
FP396.2	40-10-10	475-475-475	G	2.31
FP396.1	40-20-20	475-475-475	H	2.85
FP396.12	40-30-10	475-475-475	H	2.70
FP396.14	40-30-30	475-475-475	I	3.09
FP397	40-35-10	475-475-475	H	2.73
FP398‡	10-40-40	500-450-450	H	2.49
FP399‡	20-10-100	500-500-50	K	1.95
FP399.5‡	40-20-20	500-500-500	H	2.85

FP-WP—QUADS

Mallory	Capacity µf	Working Volts DC	*	Net Each
WP401.5	750-600-350-4	16-16-16-11.5rms	F	$3.24
WP401.8	750-750-350-4	16-16-16-11.5rms	F	3.87
FP403	50-20-150-30	150-150-15-15	F	1.92
FP405	20-20-160-40	150-150-25-25	F	1.92
WP405.5	50-40-160-40	150-150-25-25	F	2.01
WP406	40-40-200-100	150-150-25-25	F	2.13
FP407	30-20-20-200	150-150-150-10	F	1.86
FP407.5	40-40-20-200	150-150-150-10	F	1.92
FP408	60-40-20-200	150-150-150-10	F	2.07
FP408.5	80-80-10-200	150-150-150-10	G	2.34
FP408.7	300-30-10-100	150-150-150-10	H	2.73
FP408.9	30-30-30-40	150-150-150-25	F	1.86
FP409	40-40-30-20	150-150-150-25	F	1.86
FP409.4	50-20-20-200	150-150-150-25	F	2.10
FP409.6	50-40-10-50	150-150-150-25	F	1.89
FP410	50-50-50-20	150-150-150-25	G	2.13
FP410.3	60-40-20-20	150-150-150-25	F	1.98
FP410.7	60-60-10-60	150-150-150-25	G	2.10
FP411	80-40-30-100	150-150-150-25	G	2.22
FP411.3	80-40-40-20	150-150-150-25	G	2.10
FP411.32	80-40-40-40	150-150-150-25	G	2.16
FP411.4	80-50-50-25	150-150-150-25	G	2.28
FP411.5	100-90-60-200	150-150-150-25	H	2.97
FP411.7	125-125-40-100	150-150-150-25	I	2.91
FP411.8	200-200-100-10	150-150-150-75	I	3.57
FP412	100-80-60-40	150-150-150-150	H	2.79
WP412.1	200-200-60-30	175-175-175-175	I	3.12
FP412.2	40-40-50-80	250-250-150-150	G	2.46
FP417	100-40-80-20	300-50-25-25	G	2.73
FP417.2	20-150-150-100	300-150-150-30	I	3.09
FP417.3	10-200-140-30	300-150-150-150	I	3.06
FP417.8	10-200-200-30	300-150-150-150	I	3.21
FP417.9	100-60-10-20	300-200-150-50	H	2.91
FP419	200-20-100-20	300-250-50-25	I	3.48
FP423	40-40-40-40	300-250-250-25	G	2.64
FP419.11	60-5-50-20	300-300-50-50	F	2.16
FP418.7	140-10-10-100	300-300-150-50	I	2.97
FP419.4	100-10-200-30	300-300-150-150	I	3.54
FP419.1	150-20-10-250	300-300-250-50	I	3.63
FP419.2	40-30-20-50	300-300-300-25	G	2.49
FP419.7	60-40-20-50	300-300-300-25	H	2.79
FP419.35	60-30-10-60	300-300-300-50	G	2.52
FP419.37	150-30-30-150	300-300-300-50	I	3.66
FP419.45	120-40-40-10	300-300-300-250	I	3.63
FP419.5	40-40-30-20	300-300-300-300	H	2.91
FP419.53	60-40-10-10	300-300-300-300	H	2.73
FP419.55	150-100-10-10	300-300-300-300	I	3.96
FP419.54	200-20-20-20	300-300-300-300	I	3.87
FP419.56	60-60-30-160	350-150-150-25	H	2.76
FP419.58	20-60-160-40	350-200-25-25	G	2.40
FP414	15-80-40-200	350-200-200-25	H	2.70
FP418.3	120-20-100-20	350-250-50-25	I	3.03
FP419.65	160-60-10-4	350-300-300-300	I	3.84
FP419.6	40-10-100-25	350-350-25-25	F	2.25
FP419.62	60-4-100-40	350-350-25-25	G	2.28
FP419.61	100-4-50-50	350-350-50-25	H	3.03
FP419.63	200-10-4-20	350-350-50-25	I	3.36
FP419.64	40-20-50-25	350-350-150-25	G	2.49
FP419.67	100-60-60-40	350-350-200-75	I	3.93
FP419.66	60-40-60-20	350-350-250-150	I	3.24
FP419.68	15-15-15-15	350-350-300-25	F	2.07
FP419.8	35-35-10-20	350-350-300-25	G	2.49
FP419.82	20-10-5-10	350-350-350-25	F	1.86
FP419.84	30-10-5-200	350-350-350-25	F	2.28
FP419.86	40-20-5-10	350-350-350-25	G	2.28
FP419.87	40-20-20-50	350-350-350-25	G	2.55
FP419.88	40-30-15-30	350-350-350-25	G	2.70
FP419.3	40-40-20-20	350-350-350-25	H	2.79
FP419.9	15-15-15-50	350-350-350-50	F	2.25
FP420.2	50-40-40-160	350-350-350-50	I	3.45

Mallory No.	Capacity µf	Working Volts DC	*	Net Each
FP420.15	70-40-10-50	350-350-350-50	H	$3.15
FP420.23	100-10-10-20	350-350-350-50	H	3.09
FP420.26	100-40-30-50	350-350-350-50	I	3.93
FP420.28	140-20-10-100	350-350-350-50	I	3.63
FP420.29	90-30-5-100	350-350-350-75	I	3.54
FP420.32	20-10-5-60	350-350-350-200	G	2.19
FP420.33	30-10-5-100	350-350-350-200	G	2.64
FP420.35	40-20-20-10	350-350-350-350	G	2.61
FP420.38	40-40-40-40	350-350-350-350	I	3.60
FP420.4	80-60-40-20	350-350-350-350	I	3.84
FP420.39	100-40-25-25	350-350-350-350	I	4.20
FP420.41	40-120-10-150	400-250-250-50	I	3.48
FP420.44	30-40-50-200	400-300-250-150	I	3.60
FP420.43	80-80-100-100	400-350-25-25	I	3.78
FP420.45	40-80-100-25	400-350-200-50	I	3.63
FP420.46	80-40-20-20	400-350-300-300	I	3.48
FP420.47	20-50-40-80	400-350-350-50	H	3.00
FP420.5	30-60-20-100	400-350-350-50	I	3.00
FP420.51	20-20-50-50	400-400-15-15	F	2.04
FP420.53	20-5-20-20	400-400-25-25	F	1.83
FP420.54	80-50-25-25	400-400-25-25	H	3.21
FP420.56	50-25-100-20	400-400-50-25	H	2.79
FP420.6	80-40-100-20	400-400-50-25	I	3.36
FP420.7	100-10-30-20	400-400-50-50	H	3.06
FP420.8	20-10-10-25	400-400-100-25	F	1.86
WP420.9	20-20-100-100	400-400-100-100	H	3.15
FP421	5-5-50-80	400-400-300-250	H	2.79
FP421.2	60-40-40-10	400-400-350-50	I	3.45
FP421.3	100-10-20-20	400-400-350-50	I	3.27
FP421.4	30-30-15-20	400-400-400-25	H	2.58
FP421.6	80-40-30-40	400-400-400-25	I	3.57
FP421.8	40-40-40-150	400-400-400-50	I	3.42
FP421.9	50-40-30-20	400-400-400-400	I	3.39
FP422.1	20-80-20-50	450-200-200-50	G	2.46
FP422.7	60-80-40-20	450-250-250-150	I	3.39
FP422.8	25-100-10-60	450-300-300-50	H	3.18
FP413X	40-40-40-20	450-300-300-150	H	2.94
FP422.9	10-100-20-20	450-300-300-300	H	3.15
FP423.4	10-40-100-100	450-350-250-50	H	3.33
FP424.1	10-100-10-20	450-350-350-25	H	3.12
FP424.3	20-80-50-100	450-350-350-50	I	3.60
FP425	30-40-40-10	450-350-350-200	H	3.09
FP425.6	40-100-20-10	450-350-350-350	I	3.84
FP425.1	80-10-40-30	450-400-300-300	I	3.48
FP426	20-15-20-20	450-450-25-25	F	2.07
FP426.5	20-20-60-100	450-450-150-25	G	2.55
FP426.9	40-40-125-125	450-450-150-25	I	3.42
FP427.5	10-10-60-100	450-450-200-50	G	2.31
FP427.6	35-25-20-100	450-450-200-50	H	2.79
FP427.65	40-40-100-60	450-450-200-200	I	3.63
FP427.7	10-10-10-50	450-450-300-25	F	1.89
FP427.9	20-20-20-10	450-450-350-350	H	2.49
FP428	40-10-35-10	450-450-350-350	H	2.76
FP428.4	40-40-30-30	450-450-350-350	I	3.54
FP424	15-15-10-20	450-450-450-25	F	2.10
FP428.9	30-30-10-125	450-450-450-25	H	2.58
FP432	40-10-10-250	450-450-450-25	H	2.82
FP431	40-15-10-25	450-450-450-25	G	2.46
FP430.2	40-20-20-25	450-450-450-25	H	2.76
FP436	40-20-20-40	450-450-450-25	H	2.79
FP429	40-30-10-20	450-450-450-25	H	2.70
FP430.6	40-40-40-40	450-450-450-25	I	3.30
FP430.9	60-40-40-10	450-450-450-25	I	3.60
FP430.95	60-50-5-20	450-450-450-25	I	3.21
FP430.97	20-20-20-20	450-450-450-50	G	2.49
FP437	20-20-20-100	450-450-450-50	G	2.73
FP431.2	40-40-10-25	450-450-450-50	H	2.82
FP431.3	40-40-10-50	450-450-450-50	I	2.13
FP431.4	60-40-10-25	450-450-450-50	I	3.15
FP431.7	40-40-10-100	450-450-450-100	I	3.18

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P R MALLORY & CO Inc
MALLORY

DRY ELECTROLYTIC CAPACITORS

P.R. MALLORY & CO. INC.
INDIANAPOLIS 6, IND.

FP-WP (CONCL.) • PFP-PWP • TT

FP-WP—QUADS—(CONTINUED)

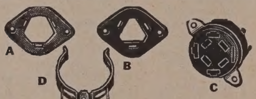
Mallory No.	Capacity, µf	WVDC	*	Net Each
FP433	60-10-10-20	450-450-450-150	H	$2.76
FP432.4	40-40-30-10	450-450-450-200	I	3.21
FP432.9	40-20-10-100	450-450-450-250	I	3.51
FP433.2	40-10-10-40	450-450-450-350	H	2.85
FP433.4	40-20-20-20	450-450-450-350	H	3.00
WP433.6	5-5-5-5	450-450-450-450	F	1.80
FP434	10-10-10-10	450-450-450-450	F	2.01
FP434.5	20-10-10-10	450-450-450-450	F	2.22
FP444	20-20-20-20	450-450-450-450	H	2.82
FP444.4	30-15-15-15	450-450-450-450	H	2.67
FP444.5	30-20-20-10	450-450-450-450	H	2.76
FP444.6	30-30-15-10	450-450-450-450	H	2.82
FP444.8	30-30-20-20	450-450-450-450	H	3.12
FP444.9	30-30-30-15	450-450-450-450	I	3.18
FP444.54	40-20-20-4	450-450-450-450	H	2.79
FP445	35-35-10-5	450-450-450-450	H	2.76
FP446	40-35-10-10	450-450-450-450	H	2.88
FP447	40-40-20-20	450-450-450-450	I	3.33
FP447.5	40-40-30-30	450-450-450-450	I	3.63
FP448	60-20-20-20	450-450-450-450	I	3.39
FP448.5	60-30-10-2	450-450-450-450	H	3.06
FP449	70-10-10-5	450-450-450-450	H	2.85
FP450	80-10-10-10	450-450-450-450	I	3.03
FP450.5	40-40-50-80	475-250-150-50	H	3.00
FP451	10-100-10-100	475-300-300-25	H	2.94
FP451.3	10-140-4-100	475-300-300-50	I	3.18
FP452	20-80-20-10	475-300-300-300	H	3.00
FP452.5	10-20-100-50	475-350-25-25	F	2.07
FP453	20-40-80-100	475-350-200-100	I	3.27
FP453.4	10-40-80-100	475-350-300-100	I	3.33
FP453.8	10-30-5-80	475-350-350-50	G	2.22
FP454.4	10-130-20-10	475-350-350-350	I	3.54
FP454.2	20-60-40-10	475-350-350-350	H	3.12
FP454.6	10-40-4-100	475-400-350-50	G	2.43
FP454.8	10-80-40-100	475-400-400-50	I	3.48
FP455.5	25-20-20-100	475-450-300-50	G	2.73
FP456	25-20-40-100	475-450-300-50	H	2.97
FP456.5	10-60-30-125	475-450-400-50	I	3.33
FP455	10-50-30-30	475-450-450-25	H	2.85
FP457	10-40-10-20	475-450-450-50	G	2.37
FP459	10-40-10-100	475-450-450-50	G	2.58
FP461	15-15-80-40	475-475-300-50	H	2.88
FP463	50-30-20-20	475-475-300-300	I	3.42
FP464.9	40-10-4-40	475-475-350-300	H	2.97
FP467	20-10-20-100	475-475-450-25	G	2.52
FP474	10-10-10-10	475-475-475-475	F	2.10
FP474.5	20-20-10-10	475-475-475-475	G	2.61
FP475	20-20-20-20	475-475-475-475	H	3.12
FP475.5	40-10-10-10	475-475-475-475	H	2.79
FP476	40-20-10-10	475-475-475-475	H	3.06
FP485‡	10-20-10-4	500-300-300-300	F	1.98
FP490‡	30-10-150-30	500-450-50-50	G	2.52
FP495‡	40-40-8-8	500-500-500-500	I	3.42

‡Limited operation up to 65° C.

*SIZES

Key	Diameter	Length	Key	Diameter	Length
A	¾"	2"	G	1⅜"	2½"
B	1"	2"	H	1⅜"	3"
C	1"	2½"	I	1⅜"	4"
D	1"	3"	J	1⅜"	3½"
E	1"	4"	K	1"	3½"
F	1⅜"	2"			

FP-WP CAPACITOR HARDWARE



MOUNTING WAFERS, SOCKETS

Mallory Number	Fig.	Punch Hole Dia.	Mtg. Cntr.	Net Each
MP-2‡	A*	¾-1"	1¼"	3c
MP-4#	A*	1-1¼"	1½"	3c
MP-6	A*	1⅜"	1 13/16"	3c
BP-2‡	B†	⅞-1"	1¼"	3c
BP-4#	B†	1 1/16-1¼"	1½"	3c
BP-6	B†	1⅜"	1 13/16"	3c
PS-4	C	1 7/64"	1½"	42c
PS-6	C	1⅜"	1 27/32"	54c

*Metal. †Bakelite. ‡2-prong. #3-prong.

HORIZONTAL MOUNTING CLIPS

Mall. No.	Fig.	Size, Inches	Net. Ea.
TH-19	D	¾-1 3/16	3c
TH-21	D	⅞-1 5/16	3c
TH-23	D	1-1 1/16	3c
TH-25	D	1⅜-1 7/16	6c

INSULATING SLEEVES

Closed-end type.

No.	Lgth.	Net	No.	Lgth.	Net
CE-1*	2¼"	6c	CE-5‡	2¼"	6c
CE-3†	2¼"	6c	CE-9‡	2¾"	6c
CE-7†	2¾"	6c	CE-6‡	3¼"	6c
CE-4†	3¼"	6c	CE-10‡	4¼"	9c
CE-8†	4¼"	9c			

*15/16" dia. †1 3/16" dia. ‡1 9/16" dia.

PFP AND PWP PRINTED CIRCUIT TYPES

Identical to FP and WP types except designed for inserting terminals in printed circuit boards. Mounting lugs conform with EIA standard RS-154A. Straight standard terminal ¾" long. May be substituted in applications normally calling for an FP or WP type.

Mallory FPA Adapter Kit—Converts FP's for printed circuit applications on values not listed below. Net Each..........**27c**

Mallory Number	Capacity µf	Working Volts DC	*	Net Each
PWP030	750	6	A	$1.17
PWP031	2500	10	D	1.74
PWP036	400	15	A	1.17
PWP056	400	25	B	1.38
PWP060	1500	25	D	2.25
PWP063.9	100	50	A	.99
PWP067	1250	50	H	2.25
PFP116.8	140	150	D	1.26
PFP122	160	200	G	1.71
PFP144	20	450	B	1.08
PFP176.5	40	500	D	1.50
PWP200.3	250-250	20-20	B	1.71
PWP200.6	500-100	20-20	B	1.77
PWP200.4	800-250	20-20	C	2.40
PWP201.13	400-200	25-25	B	1.80
PWP201.15	1000-1000	25-25	G	3.90
PWP201.3	1500-1500	25-25	H	4.14
PFP213.1	50-30	150-150	B	1.20
PFP214.3	70-30	150-150	B	1.32
PWP214.4	80-40	150-150	C	1.35
PFP214.7	100-50	150-150	D	1.62
PFP216.4	200-200	150-150	H	2.40
PFP216.45	50-100	200-150	F	1.68
PFP216.5	40-20	200-200	B	1.23
PFP216.1	200-5	200-200	G	2.16
PFP217.86	10-10	300-300	F	1.17
PFP217.1	2-20	450-400	B	.87
PFP284	30-30	500-500	G	1.95
PWP300.3	250-250-50	16-16-16	B	1.95
PWP300.4	500-250-250	16-16-16	C	2.58
PFP302.38	70-30-100	150-150-10	C	1.68
PWP302.55	80-60-250	150-150-10	D	2.04
PFP302.75	90-40-400	150-150-10	D	2.10
PFP311.1	40-20-20	150-150-25	B	1.38
PFP311.12	70-30-20	150-150-25	C	2.40
PFP311.63	50-30-40	150-150-150	C	1.92
PFP311.53	60-60-40	150-150-150	F	1.83
PWP311.75	80-60-20	150-150-150	D	1.86
PFP326.15	10-20-10	300-150-150	B	1.35
PFP326.4	60-10-25	300-300-25	F	2.25
PFP326.76	150-100-30	300-300-300	I	3.06
PWP327.95	20-20-1000	350-350-15	G	2.55
PFP330.4	10-10-60	350-350-300	F	1.92
PFP330.6	20-20-20	350-350-350	D	1.92
PFP330.8	40-40-40	350-350-350	H	3.33
PFP333.15	40-30-20	400-350-300	G	2.97
PFP368.9	40-30-8	450-450-150	G	2.25
PFP397.5	40-40-60	500-200-50	G	2.37
PFP397.7	40-40-20	500-350-250	H	2.67
PFP411.9	60-60-40-10	150-150-150-150	G	2.19
PFP419.42	20-20-20-100	300-300-300-150	G	2.73
PFP420.17	40-20-10-100	350-350-350-50	G	2.58
PFP420.52	40-30-20-20	400-350-350-350	H	2.97

TYPE TT TINY TUBULAR ELECTROLYTIC CAPACITORS

Ideal for miniaturized circuitry in transistorized pocket radios, hearing aids, test equipment, etc. High purity, etched aluminum plate for low leakage current limits; high ratings and small size. Conforms to EIA standards RS-154-A. Axial leads 1¾" long. **Temperature Range:** −20°, +85° C. **Tolerance:** Up to 50 WVDC, −10%, +150%; above 50 WVDC, −10%, +100%.

Mallory Number	Cap., µf	WV DC	Size, In.* Dia.xLgth.	Net Each
TT1X5	5	1	7/32X9/16	$0.75
TT2X150	150	2	25/64X13/16	.90
TT3X10	10	3	7/32X9/16	.75
TT3X25	25	3	9/32X11/16	.75
TT3X40	40	3	9/32X11/16	.75
TT3X110	110	3	25/64X13/16	.84
TT3X200	200	3	25/64X15/16	.90
TT6X2	2	6	7/32X9/16	.75
TT6X3	3	6	7/32X9/16	.75
TT6X4	4	6	7/32X9/16	.75
TT6X5	5	6	7/32X9/16	.75
TT6X8	8	6	7/32X5/8	.81
TT6X10	10	6	7/32X11/16	.81
TT6X15	15	6	9/32X11/16	.81
TT6X25	25	6	9/32X11/16	.81
TT6X30	30	6	25/64X11/16	.84
TT6X40	40	6	25/64X11/16	.84
TT6X50	50	6	25/64X11/16	.84
TT6X60	60	6	25/64X11/16	.84
TT6X80	80	6	25/64X13/16	.93
TT6X100	100	6	25/64X13/16	.90

Mallory Number	Cap., µf	WV DC	Size, In.* Dia.xLgth.	Net Each
TT10X6	6	10	7/32X11/16	$0.81
TT10X15	15	10	9/32X11/16	.81
TT10X25	25	10	25/64X11/16	.81
TT10X50	50	10	25/64X13/16	.90
TT10X60	60	10	25/64X13/16	.90
TT12X1	1	12	7/32X9/16	.75
TT12X2	2	12	7/32X9/16	.75
TT12X3	3	12	7/32X5/8	.75
TT12X5	5	12	7/32X11/16	.81
TT12X10	10	12	9/32X11/16	.81
TT15X10	10	15	9/32X11/16	.84
TT15X20	20	15	25/64X11/16	.87
TT15X30	30	15	25/64X11/16	.90
TT15X40	40	15	25/64X13/16	.90
TT15X50	50	15	25/64X13/16	.96
TT15X100	100	15	25/64X1 3/16	1.08
TT25X5	5	25	9/32X11/16	.84
TT25X6	6	25	9/32X11/16	.84
TT25X8	8	25	25/64X11/16	.87
TT25X15	15	25	25/64X11/16	.87
TT25X20	20	25	25/64X11/16	.90
TT25X25	25	25	25/64X11/16	.93
TT50X4	4	50	9/32X11/16	.93
TT50X5	5	50	9/32X13/16	.87
TT50X10	10	50	25/64X11/16	.90
TT50X20	20	50	25/64X13/16	.90
TT50X35	35	50	25/64X1 3/16	1.02
TT80X4	4	80	9/32X13/16	.96
TT150X1	1	150	9/32X11/16	.84
TT150X2	2	150	9/32X13/16	.87
TT150X3	3	150	25/64X11/16	.87
TT150X4	4	150	25/64X11/16	.87
TT150X5	5	150	25/64X13/16	.93
TT150X8	8	150	25/64X15/16	.96
TT150X10	10	150	25/64X1 3/16	.96
TT150X12	12	150	25/64X1 3/16	.96
TT250X1	1	250	25/64X11/16	1.02
TT350X2	2	350	25/64X1 7/16	1.05

*Includes mylar insulating sleeves.

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MALLORY

P.R. MALLORY & CO. INC.
INDIANAPOLIS 6, IND.

DRY AND OIL IMPREGNATED ELECTROLYTIC CAPACITORS

PET • CB • BS • PB • RS • HC • NP

PET SERIES MINIATURE BAKELITE ELECTROLYTICS

Miniaturized version of FP and TC types designed for printed circuit applications. Low-impedance electrolyte assure long shelf and operating life, outstanding stability, and higher capacitance for the size. Enclosed in bakelite case with epoxy resin end seal. **Type PET-A** has axial leads 1½" long. **Type PET** is single-end design for p-c board mounting; leads 1" long. **Temperature Range:** −30°C to +85°C. **Tolerance:** −10%, +150% at 25°C.

Mallory No.PET-	Cap., µf	WV DC	Size, In.	Net Each
118	8	3	⅜ x ⅝	$0.87
122	15	3	⅜ x ⅝	.87
130	30	3	⅜ x ¾	.87
140	40	3	⅜ x ¾	.90
1260	60	6	7/16 x ¾	.96
1340	10	10	⅜ x ⅝	.87
1400	100	10	½ x ⅞	1.08
1500	100	12	7/16 x 1⅛	1.14
1535	6	15	⅜ x ⅝	.90
1570	20	15	⅜ x ¾	.93
1575	50	15	7/16 x ⅞	.99
1760	10	25	⅜ x ¾	.93
1930	2	50	⅜ x ⅝	.90
1935	4	50	⅜ x ¾	.99
1960	25	50	7/16 x 1	.99
1980	50	50	½ x 1⅛	1.11
2290	100-40	6-3	½ x ⅞	1.26
2410	200-20	8-8	½ x 1½	1.47
2365C*	50-25	10-10	½ x ¾	1.20
2370	50-50	10-10	½ x 1	1.29
3400	100-100-65	8-8-8	⅝ x 1	1.56
A190	750	3	⅝ x 1⅜	1.17
A1675	65	16	7/16 x 1⅛	1.02
A2300	250-100	7-3	½ x 1⅜	1.47
A2385	80-50	10-10	½ x 1¼	1.35
A2395	100-40	10-3	½ x 1⅛	1.35

*Uses common positive construction.

STEEL-CASED, OIL-FILLED PAPER CAPACITORS

Mineral oil impregnated; in hermetically sealed steel case. Two terminals on single section units; three on duals; three on triples with common grounded to case. Mounting ears on each end. Tol., −10%, +20%. Temp. range. −55°C to +85°C.

400 WVDC

Mall. No.CB-	Cap., µf	Net Ea.	Mall. No.CB-	Cap., µf	Net Ea.
401	.05	$1.50	D402	2 x .1	$2.25
402	.1	1.50	D403	2 x .25	2.19
403	.25	1.50	D404*	2 x .5	2.52
404	.5	1.59	D406*	2 x 1.0	3.09
405*	1.0	2.22	T402	3 x .1	3.51
406*	2.0	2.85	T403*	3 x .25	2.91
D401	2 x .05	2.16	T404*	3 x .5	3.36

600 WVDC

Mall. No.CB-	Cap., µf	Net Ea.	Mall. No.CB-	Cap., µf	Net Ea.
601	.05	$1.92	D602	2 x .1	$2.46
602	.1	1.95	D603	2 x .25	2.49
603	.25	2.04	D604*	2 x .5	2.85
604	.5	2.19	D605*	2 x 1.0	3.51
605*	1.0	2.49	T602	3 x .1	2.76
606*	2.0	3.30	T603*	3 x .25	3.15
D601	2 x .05	2.43	T604*	3 x .5	3.81

1000 WVDC

Mall. No.CB-	Cap., µf	Net Ea.	Mall. No.CB-	Cap., µf	Net Ea.
1001	.05	$2.01	D1002	2 x .1	$2.64
1002	.1	2.07	D1003*	2 x .25	2.76
1003	.25	2.16	D1004*	2 x .5	3.60
1004*	.5	2.34	T1002*	3 x .1	3.03
1005*	1.0	2.91	T1003*	3 x .25	3.63
D1001	2 x .05	2.55			

*Mtg. centers 2⅜"; all others 2⅛".

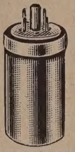
BATHTUB DRY ELECTROLYTICS

For filter and bypass circuits under extreme operating conditions. Corrosion-resistant, hot-tinned steel case is hermetically sealed with internal insulation from case. Two solder lug terminals and mounting flanges. Temp. range, −55°C to +65°C. Tol.: Up to 50 WVDC, −10%, +150%; 100-150 WVDC, −10%, +100%; above 350 WVDC, −10%, +50%.

Mall. No.	Cap. µf	WV DC	Size, Inches H. x W. x L.	Net Each
BS26	25	25	¾ x 1 x 1¾	$2.70
BS29	50	25	¾ x 1 x 1¾	2.76
BS36	25	50	¾ x 1 x 1¾	2.73
BS39	50	50	⅞ x 1 x 1¾	2.82
BS45	20	150	⅞ x 1 x 1¾	2.82
BS48	40	150	1 x 1¼ x 1¾	2.91
BS62	10	300	⅞ x 1 x 1¾	2.85
BS65	20	300	1⅛ x 1¼ x 1¾	2.94
BS81*	8	500	1 x 1¾ x 2	3.45
BS91*	8	600	1 x 1¾ x 2	3.51

*Mtg. centers 2⅜"; all others 2⅛".

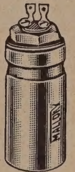
OCTAL BASE, PLUG-IN ELECTROLYTICS



Designed for military and communications parts replacement. Ideal for designers and builders. Meet all ML-C-62 requirements. Plug-in base for easy replacement in standard octal tube socket. Can be mounted in any position; though if in inverted position, provisions should be made to hold unit securely in socket.

Mallory No.	Cap. µf	WV DC	Size Dia.x L.	Net Each
PB110	20	150	1 5/32x2½	$2.37
PB114	40	150	1 5/32x2½	2.46
PB139	100	350	1⅜x3½	3.51
PB142	10	450	1 5/32x2½	2.43
PB144	20	450	1 5/32x2½	2.58
PB146	40	450	1⅜x2½	2.73
PB149	80	450	1⅜x4¼	3.33
PB208	20-20	150	1 5/32x2½	2.52
PB212	40-40	150	1 5/32x2½	2.61
PB234	20-20	450	1⅜x2½	3.03
PB238	40-40	450	1⅜x4¼	3.57
PB311.2	20-20-20	150	1 5/32x2½	2.88
PB345.8	20-20-20	450-450-25	1⅜x2½	3.33
PB375.8	10-10-10	450	1 5/32x2½	3.06

THREADED NECK DRY ELECTROLYTICS



Single and multiple separate-section capacitors operable to 65° C., encased in aluminum cans equipped with threaded necks for mounting. Type HD is heavy duty. Type HS is for high-surge voltage conditions, operable to 85° C. Type SR638 is lug-type dual. Type SR645 has special internal connections; one terminal common anode, one terminal negative to one section and case negative to the other section. RS, RM types have 8" and HS type has 5" flexible, insulated stranded-copper leads out the threaded neck end of case. Type HD is supplied with one solder lug terminal for positive; case is negative. Type SR has two positive-lug terminals with case common negative. Types RS, RM, HD and HS have threaded necks (⅝-16 for 1" dia. —¾-16 for 1⅜" dia.) equipped with Palnut and special washer. All 1" dia. units are supplied with turn-over washer for 1⅜" clamp mounting. Type SR has ⅞-16 threaded molded neck with solid nut.

Mallory No.	Cap. µf	WV DC	Size Dia. x L.	Net Each
RS207	30	250	1 x 3½	$1.23
RS212	8	450	1⅜ x 3	1.32
RS213	8	450	1 x 2¾	1.32
RS214	12	450	1⅜ x 3	1.44
RS215	12	450	1 x 2¾	1.44
RS216	16	450	1 x 3½	1.47
RS217	16	450	1⅜ x 3	1.47
RS219	20	450	1⅜ x 3	1.62
RS223	30	450	1⅜ x 3	1.80
RS224	40	450	1⅜ x 3	1.89
HD684	10	450	1 x 3	1.38
HS691	4	600	1⅜ x 4	1.77
HS693	8	600	1⅜ x 3¾	1.89
HS696	20	600	1⅜ x 4¼	2.31
RM262	8-8	450	1⅜ x 3	1.80
RM265	8-8-8	450	1⅜ x 4¼	3.00
SR638	8-8	450	1⅜ x 2¾	1.80
SR645	8-8	450	1⅜ x 2¾	1.80

SPECIAL DISCOUNTS ARE AVAILABLE TO INDUSTRIAL USERS

WRITE FOR INFORMATION ON ANY CAPACITOR TYPE NOT SHOWN.

HC, HIGH CAPACITY, AND NP, NON-POLARIZED DRY ELECTROLYTICS

For heavy duty industrial applications. Rated for high ripple currents. Temp. range: −40° to +85° C. Plastic, self-insulated case with leak-proof seal and silicone safety vent. High stability, long-life.

TYPE HC POLARIZED TYPE

Supplied with a VR bracket for vertical mounting.
Capacity Tolerances: Up to 150 WVDC, −10%, +100%. Above 150 WVDC, −10%, +50%.

Mallory No. HC-	Cap., µf	WV DC	Size, In. Dia. x Lgth.	Net Each
1020A	2000	10	1 7/16 x 2¾	$3.36
1040A	4000	10	1 7/16 x 3⅜	4.60
1060A*	6000	10	1½ x 4⅛	5.20
10100	10000	10	2 1/16 x 4⅜	7.81
1520A	2000	15	1 7/16 x 2¾	3.47
1540A	4000	15	1 7/16 x 4⅜	5.37
1560A	6000	15	1 13/16x 3⅜	5.62
2060	6000	20	2 1/16 x 4⅜	6.11
2060A	6000	20	1 13/16x 4⅜	6.11
2510A	1000	25	1 7/16 x 2¾	3.19
2520A	2000	25	1 7/16 x 3⅜	4.15
2540A	4000	25	1 13/16x 3⅜	5.58
4040	4000	40	2 1/16 x 4⅜	6.98
4040A	4000	40	1 13/16x 4⅜	6.98
5005	500	50	1 7/16 x 3⅜	3.33
5005A	500	50	1 7/16 x 2¾	3.33
5010A	1000	50	1 7/16 x 3⅜	4.25
5020A	2000	50	1 13/16x 3⅜	5.06
5040	4000	50	2 1/16 x 4⅜	7.32
15010	1000	150	2 1/16 x 4⅜	6.44
15010A	1000	150	1 13/16x 4⅜	6.44
20005	500	200	2 1/16 x 4⅜	5.53
20005A	500	200	1 13/16x 3⅜	5.53
45003	300	450	2 1/16 x 4⅜	8.47
2050-50	2 x 5000	20-20	2 1/16 x 4⅜	8.00

*Aluminum can with solder lug terminals.

TYPE NP NON-POLARIZED TYPE

Supplied with a VR bracket for vertical mounting.
Capacity Tolerances: −25%, +25% except NP3003 is −15%, +25%.

Mallory No. NP-	Cap., µf	WV DC	Size, In. Dia. x Lgth.	Net Each
1225A	200	125	1 7/16 x 3⅜	$4.04
1235A	300	125	1 13/16x 3⅜	4.87
1255A	500	125	1 13/16x 4⅜	6.30
3003A	15	300	1 7/16 x 2¾	2.87
3008	50	300	1 7/16 x 3⅜	5.25
3014A	100	300	1 13/16x 3⅜	6.13
3025	200	300	2 1/16 x 4⅜	7.00
4505	50	450	1 13/16x 3⅜	6.30
4510	100	450	2 1/16 x 4⅜	7.70

HARDWARE FOR HP AND NP TYPES

Mall. No.	Description	Size In.	Net Ea.
PL-3	Plastic end cap—on motor	1 7/16	12c
PL-6	Plastic end cap—on motor	1 13/16	15c
PL-8	Plastic end cap—on motor	2 1/16	18c
PL-10	Plastic end cap—on motor	2 9/16	27c
PL-A3	Plastic end cap—off motor	1 7/16	12c
PL-A6	Plastic end cap—off motor	1 13/16	15c
PL-A8	Plastic end cap—off motor	2 1/16	18c
PL-A10	Plastic end cap—off motor	2 9/16	27c
HB-2	Horiz. bkt. (plastic cases)	3 1/64	15c
HB-4	Horiz. bkt. (plastic cases)	3 21/32	18c
HB-8	Horiz. bkt. (plastic cases)	4 31/32	21c

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P R MALLORY & CO Inc. MALLORY

AC CAPACITORS & HARDWARE

P.R. MALLORY & CO. INC.
INDIANAPOLIS 6, IND.

DRY ELECTROLYTIC AC MOTOR STARTING CAPACITORS

Type PSU are dry electrolytic non-polarized capacitors for intermittent duty in AC motor starting circuits. Rated at minimum capacity with plus tolerance of 20%. Round cases are of moisture and oil resistant molded plastic. Equipped with two quick disconnect terminals. Packed with two PSUA terminal adapters for solder or screw type connection. Also may be mounted by means of Type PL plastic end cap and metal snap-in bracket Type HB which may be ordered separately. Type EP has aluminum case, cardboard sleeve.

Mallory No.	Capacity, μf Min.-Max.	Volts AC	Size, Inches D. x L.	Net Each
PSU2010	20-24	110	1 7/16 x 2 3/4	**$1.23**
PSU2610	26-31	110	1 7/16 x 2 3/4	**1.26**
PSU3210	32-39	110	1 7/16 x 2 3/4	**1.26**
PSU3810	38-46	110	1 7/16 x 2 3/4	**1.26**
PSU4310	43-52	110	1 7/16 x 2 3/4	**1.26**
PSU5310	56-64	110	1 7/16 x 2 3/4	**1.29**
PSU6410	64-77	110	1 7/16 x 2 3/4	**1.35**
PSU7010	70-84	110	1 7/16 x 2 3/4	**1.44**
PSU7510	75-90	110	1 7/16 x 3 3/8	**1.53**
PSU8610	86-104	110	1 7/16 x 3 3/8	**1.59**
PSU9710	97-116	110	1 7/16 x 3 3/8	**1.68**
PSU10810	108-130	110	1 7/16 x 2 3/4	**1.71**
PSU12410	124-149	110	1 7/16 x 2 3/4	**1.77**
PSU13010	130-156	110	1 7/16 x 2 3/4	**1.77**
PSU15410	145-175	110	1 7/16 x 2 3/4	**1.92**
PSU15810	158-190	110	1 7/16 x 2 3/4	**1.95**
PSU16110	161-193	110	1 7/16 x 2 3/4	**1.95**
PSU19210	192-230	110	1 7/16 x 3 3/8	**2.25**
PSU19410	194-233	110	1 7/16 x 3 3/8	**2.34**
PSU20010	200-240	110	1 7/16 x 3 3/8	**2.34**
PSU21610	216-259	110	1 7/16 x 3 3/8	**2.43**
PSU23310	233-280	110	1 7/16 x 4 3/8	**2.70**
PSU24310	243-292	110	1 13/16 x 3 3/8	**2.82**
PSU27010	270-324	110	1 13/16 x 3 3/8	**2.85**
PSU28210	282-339	110	1 13/16 x 3 3/8	**2.91**
PSU32410	324-389	110	1 13/16 x 3 3/8	**3.24**
PSU34010	340-408	110	1 13/16 x 3 3/8	**3.33**
PSU34110	341-409	110	1 13/16 x 3 3/8	**3.33**
PSU37810	378-454	110	1 13/16 x 3 3/8	**3.60**
PSU40010	400-480	110	1 13/16 x 4 3/8	**3.63**
PSU43010	430-516	110	1 13/16 x 4 3/8	**4.17**
PSU48510	485-582	110	1 13/16 x 4 3/8	**4.56**
PSU54010	540-648	110	1 13/16 x 4 3/8	**4.89**
PSU3825	38-46	125	1 7/16 x 2 3/4	**1.38**
PSU7225	72-86	125	1 7/16 x 3 3/8	**1.53**
PSU8625	86-104	125	1 7/16 x 2 3/4	**1.65**
PSU10825	108-130	125	1 7/16 x 3 3/8	**1.83**
PSU12425	124-149	125	1 7/16 x 3 3/8	**1.95**
PSU13025	130-156	125	1 7/16 x 3 3/8	**1.95**
PSU14525	145-174	125	1 7/16 x 3 3/8	**2.19**
PSU16125	161-194	125	1 7/16 x 4 3/8	**2.31**
PSU19225	192-231	125	1 7/16 x 4 3/8	**2.58**
PSU24325	243-292	125	1 13/16 x 3 3/8	**3.12**
PSU27325	273-328	125	1 13/16 x 4 3/8	**3.30**
PSU32425	324-389	125	1 13/16 x 4 3/8	**3.48**
PSU34125	341-409	125	1 13/16 x 4 3/8	**3.90**
PSU40025	400-480	125	2 1/16 x 4 3/8	**4.05**
PSU18965	189-227	165	1 13/16 x 4 3/8	**4.35**
PSU21665	216-260	165	1 13/16 x 4 3/8	**4.50**
PSU24365	243-292	165	2 1/16 x 3 3/8	**5.16**
PSU2520	25-30	220	1 7/16 x 2 3/4	**2.76**
PSU3220	32-39	220	1 7/16 x 2 3/4	**2.94**
PSU3820	38-46	220	1 7/16 x 3 3/8	**3.18**
PSU4320	43-51	220	1 13/16 x 3 3/8	**3.33**
PSU5020	50-60	220	1 13/16 x 3 3/8	**3.39**
PSU5320	53-64	220	1 13/16 x 3 3/8	**3.45**
PSU6420	64-77	220	1 13/16 x 3 3/8	**4.05**
PSU7020	70-84	220	1 13/16 x 3 3/8	**4.20**
PSU7520	75-90	220	1 13/16 x 3 3/8	**4.41**
PSU8620	86-103	220	1 13/16 x 4 3/8	**4.59**
PSU10820	108-130	220	2 1/16 x 4 3/8	**4.59**
PSU12120	121-145	220	2 1/16 x 4 3/8	**5.16**
PSU13520	135-162	220	2 1/16 x 4 3/8	**6.78**
PSU14120	141-170	220	2 1/16 x 4 3/8	**5.61**
PSU14120R	141-170	220	2 1/16 x 4 3/8	**5.76**
PSU14520	145-174	220	2 1/16 x 4 3/8	**7.11**
PSU5050	50-60	250	1 13/16 x 3 3/8	**3.45**
PSU7550	75-90	250	1 13/16 x 4 3/8	**4.35**
PSU8150	18-97	250	1 13/16 x 4 3/8	**4.50**
PSU10850	108-130	250	2 1/16 x 4 3/8	**6.15**
PSU12150	121-146	250	2 1/16 x 4 3/8	**6.75**
PSU13550	135-162	250	2 1/16 x 4 3/8	**6.75**
PSU14150	141-170	250	2 1/16 x 4 3/8	**6.90**
PSU2730	27-32	330	1 13/16 x 3 3/8	**3.90**
EP8130	81-90	330	2 9/16 x 4 3/8	**6.90**
EP10830	108-130	330	2 9/16 x 4 3/8	**8.22**
PSU10830R	108-130	330	2 9/16 x 4 3/8	**8.37**
PSU12430	124-149	330	2 9/16 x 4 3/8	**8.91**
PSU12730	127-152	330	2 9/16 x 4 3/8	**9.27**
PSU13530	135-162	330	2 9/16 x 4 3/8	**9.57**
PSU13530R	135-162	330	2 9/16 x 4 3/8	**9.72**

PSU PLASTIC END CAPS

For "On Motor" Mtg.			For "Off Motor" Mtg.		
No.	Dia.	Net Ea.	No.	Dia.	Net Ea.
PL-3	1 7/16	**12c**	**PL-A3**	1 7/16	**12c**
PL-6	1 13/16	**15c**	**PL-A6**	1 13/16	**15c**
PL-8	2 1/16	**18c**	**PL-A8**	2 1/16	**18c**
PL-10	2 9/16	**27c**	**PL-A10**	2 9/16	**27c**

CONTINUOUS DUTY OIL IMPREGNATED AC CAPACITORS

Type RP designed primarily for heavy duty AC applications. May be used as motor running capacitors, fluorescent light ballast, etc., where continuous duty is required. Type OP designed primarily for use in home room air conditioners. Supplied in metal cases, these units may be safely operated at voltages up to 10% above rated values and at temperatures as high as 75° C. Impregnating oil is non-inflammable and non-oxidizing. Quick disconnect terminals have flash guards to prevent arcing. Type 35A has stripped leads for soldering. Tolerance: ±10%.

TYPE RP ROUND

Mallory No.	Cap. μf	Volts AC	Size, In. Dia. x Lgth.	Net Each
RP-3301	1	330	1 3/8 x 1 7/8	**$2.52**
RP-3302	2	330	1 3/8 x 3 1/8	**3.12**
RP-3303	3	330	2 x 2 7/16	**3.33**
RP-3304	4	330	2 x 2 7/8	**3.72**
RP-3305	5	330	2 x 3 7/16	**4.08**
RP-3306	6	330	2 x 3 15/16	**4.50**
RP-3307	7	330	2 x 4 7/16	**4.74**
RP-3308	8	330	2 x 5 1/8	**5.01**
RP-3310	10	330	2 1/2 x 4 9/16	**5.73**
RP-3312	12	330	2 1/2 x 5 3/16	**6.54**
RP-3315	15	330	2 1/2 x 6 1/16	**8.28**

TYPE 35A ROUND WITH LEADS

35A3702	2	370	2 x 2 9/16	**$3.88**
35A3703	3	370	2 x 3	**3.91**
35A3704	4	370	2 x 3 1/2	**3.97**
35A3705	5	370	2 x 4	**4.62**
35A3706	6	370	2 x 4 1/2	**5.46**
35A3708	8	370	2 x 5 1/2	**6.98**
35A3710	10	370	2 x 5 1/2	**7.37**

TYPE OP OVAL

Mallory No.	Cap. μf	Volts AC	Size, Inches	Net Each
OP336	3	236	1 5/16 x 2 5/32 x 2 1/4	**$ 2.34**
OP436	4	236	1 5/16 x 2 5/32 x 2 7/8	**2.49**
OP536	5	236	1 5/16 x 2 5/32 x 3 1/8	**2.82**
OP7x36	7.5	236	1 5/16 x 2 5/32 x 4 3/8	**5.16**
OP1036	10	236	2 5/32 x 2 27/32 x 3 1/32	**5.85**
OP1536	15	236	2 5/32 x 2 27/32 x 4 5/32	**6.54**
OP2036	20	236	2 5/32 x 2 27/32 x 4 5/32	**10.68**
OP17525	17.5	250	2 5/32 x 2 27/32 x 4 5/32	**9.48**
OP1033	10	330	2 5/32 x 2 27/32 x 3 1/32	**5.70**
OP14533	14.5	330	2 5/32 x 2 27/32 x 4 5/32	**8.16**
OP370	3	370	1 5/16 x 2 5/32 x 2 7/8	**2.49**
OP470	4	370	1 5/16 x 2 5/32 x 3 3/4	**2.64**
OP570	5	370	1 5/16 x 2 5/32 x 4 3/8	**3.42**
OP7x570	7.5	370	2 5/32 x 2 27/32 x 3 1/32	**5.34**
OP1070	10	370	2 5/32 x 2 27/32 x 3 25/32	**6.00**
OP1570	15	370	2 5/32 x 2 27/32 x 4 21/32	**7.47**
OP17570	17.5	370	2 5/32 x 2 27/32 x 5 3/16	**7.83**
OP240	2	440	1 5/16 x 2 5/32 x 2 1/4	**3.00**
OP340	3	440	1 5/16 x 2 5/32 x 3 1/8	**3.24**
OP440	4	440	1 5/16 x 2 5/32 x 3 3/4	**3.57**
OP540	5	440	1 5/16 x 2 5/32 x 4 3/4	**4.38**
OP7x40	7.5	440	2 5/32 x 2 27/32 x 3 13/32	**5.82**
OP1044	10	440	2 5/32 x 2 27/32 x 4 5/32	**6.30**
OP1540	15	440	2 5/32 x 2 27/32 x 6 1/4	**8.70**

TYPE OPR RECTANGULAR

OPR2070	20	370	2 5/32 x 2 27/32 x 6 1/4	**$ 9.60**
OPR2570	25	370	2 5/32 x 2 27/32 x 6 1/4	**11.76**
OPR2570B	25	370	2 27/32 x 4 9/16 x 4 3/16	**13.23**
OPR3070	30	370	2 5/32 x 2 27/32 x 6 1/4	**13.62**
OPR3570	35	370	2 27/32 x 4 9/16 x 6 1/4	**15.30**
OPR4070	40	370	2 27/32 x 4 9/16 x 6 3/4	**20.85**
OPR4570	45	370	2 27/32 x 4 9/16 x 8	**23.76**
OPR2040	20	440	2 5/32 x 2 27/32 x 6 3/4	**12.39**
OPR2040B	20	440	2 27/32 x 4 9/16 x 4 3/16	**12.45**
OPR2540	25	440	2 27/32 x 4 9/16 x 4 3/16	**16.05**
OPR3040	30	440	2 27/32 x 4 9/16 x 6 1/4	**18.45**
OPR4040	40	440	2 27/32 x 4 9/16 x 6 3/4	**24.18**
OPR5040	50	440	3 3/4 x 4 9/16 x 6 1/2	**31.32**

AC CAPACITOR HARDWARE

Mall. No.	Description	Capacitor Size, In.	Net Each
HB-2	Horiz. bracket (plastic cases)	3 1/64*	**15c**
HB-4	Horiz. bracket (plastic cases)	3 21/32*	**18c**
HB-8	Horiz. bracket (plastic cases)	4 21/32*	**21c**
VR-1	Vertical mounting clamp†	1-1 1/16	**9c**
VR-3	Vertical mounting clamp†	1 3/8-1 7/16	**9c**
VR-4	Vertical mounting clamp†	1 1/2-1 9/16	**12c**
VR-6	Vertical mounting clamp†	1 3/4-1 13/16	**15c**
VR-8	Vertical mounting clamp†	2-2 1/16	**18c**
VR-10	Vertical mounting clamp†	2 1/2-2 9/16	**21c**
OB-1	Mtg. clamp for OP capacitors	....	**12c**
OC-1	Terminal cover (rubber) for OP's	#	**12c**
PSUA	Pkge. 10 screw or solder terminal adapters		**30c**
274	Pair 12″ leads; quick disconnect terminals		**27c**
515	Pair 12″ leads; 1 quick-disc. term; 1 eyelet		**27c**

*Capacitor length: all others diameter. †For round capacitors. #1 9/16″ x 15/16″ x 1 1/8″.

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MALLORY

P.R. MALLORY & CO. INC.
INDIANAPOLIS 6, IND.

CERAMIC CAPACITORS
RMC DISCAPS® • Specials

RMC
0068
25U

For radio, TV and industrial uses in general purpose or temperature compensating applications. Heavy-duty, dual shielded, bypass, high and low voltage discs are free from failure under adverse heat, humidity and voltage overloads. Durez phenolic insulating vacuum wax.

50- AND 100-VOLT

	50 WVDC		100 WVDC	
Cap., μf	Mall. No.	Net Ea.	Mall. No.	Net Ea.
.005	TA-250*	24c	BT-250*	24c
.01	TA-110*	24c	BT-110†	24c
.02	TA-120†	24c	BT-120§	24c
.025	TA-125†	24c	BT-125§	24c
.05	TA-150‡	39c	BT-150#	30c
.1	TA-010‡	57c	BT-010#	54c

Dia., *11/32″. †1/2″. ‡5/8″. §9/16″. #3/4″.

TEMPERATURE COMPENSATING

Rated 1000 WVDC. Tol. .25 μμf, CNO types 1-4.7 μμf; ±0.5 μμf, CN-7 types, 2.2-10 μμf; ±5% all other values.

	"O" Temp. Comp.		N750 Negative Temp. Comp.	
Cap., μμf	Mall. No.	Net Ea.	Mall. No.	Net Ea.
1	CNO-510*	30c	....	......
1.5	CNO-515*	30c	....	......
2.2	CNO-222*	30c	CN7-522*	30c
3.3	CNO-533*	30c	CN7-533*	30c
4.7	CNO-547*	30c	CN7-547*	30c
5	....	......	CN7-550*	30c
6.8	CNO-568*	30c	CN7-568*	30c
10	CNO-410*	30c	CN7-410*	30c
12	CNO-412*	30c	CN7-412*	30c
15	CNO-415*	30c	CN7-415*	30c
18	CNO-418†	30c	CN7-418*	30c
20	....	......	CN7-420*	30c
22	CNO-422†	30c	CN7-422*	30c
25	CNO-425†	30c	....	......
27	CNO-427†	30c	CN7-427*	30c
33	CNO-433‡	30c	CN7-433*	30c
39	CNO-439‡	30c	CN7-439*	30c
47	CNO-447‡	30c	CN7-447*	30c
50	CNO-450‡	33c	....	......
56	CNO-456‡	33c	CN7-456*	30c
68	CNO-468‡	33c	CN7-468*	30c
75	CNO-475§	33c	CN7-475‡	30c
82	CNO-482§	33c	CN7-482‡	30c
100	CNO-310#	33c	CN7-310‡	30c
120	CNO-312•	36c	CN7-312‡	30c
150	CNO-315•	36c	CN7-315‡	30c
180	CNO-318#	36c	CN7-318§	33c
200	CNO-320#	42c	CN7-320#	33c
220	CNO-322▲	42c	CN7-322#	33c
270	CNO-327▲	48c	CN7-327#	33c
330	....	......	CN7-333•	33c

Dia.: *1/4″. †5/16″. ‡1/2″. §5/8″. #3/4″. •7/8″. ▲15/16″.

TEMPERATURE STABILIZING

Rated 1000 WVDC. Tol., ±10%.

Mall. No. JL-	Cap., μμf	Net Ea.	Mall. No. JL-	Cap., μμf	Net Ea.
310*	100	30c	212#	1200	30c
315†	150	30c	215#	1500	30c
322†	220	30c	218#	1800	30c
333†	330	30c	220•	2000	30c
347‡	470	30c	222•	2200	30c
356‡	560	30c	233■	3300	30c
368‡	680	30c	239■	3900	30c
375‡	750	30c	247▲	4700	33c
382§	820	30c	250▲	5000	33c
210#	1000	30c			

Dia.: *7/32″. †9/32″. ‡23/64″. §15/16″. #17/32″. •5/8″. ■47/64″. ▲7/8″.

BYPASS, GENERAL PURPOSE

Rated 1000 WVDC except B2X110, 600 WVDC. Tol., GMV* to 10K; +80%, −20%, 15K and 20K values; ±20%, dual capacitors.

Mall. No.	Cap., μμf	Net Ea.	Mall. No.	Cap., μμf	Net Ea.
B-315*	150	15c	B-233‡	3300	15c
B-318*	180	15c	B-240‡	4000	15c
B-322*	220	15c	B-247§	4700	18c
B-327*	270	15c	B-250§	5000	18c
B-333*	330	15c	B-256§	5600	18c
B-339*	390	15c	B-260§	6000	18c
B-347*	470	15c	B-268#	6800	18c
B-350*	500	15c	B-282#	8200	18c
B-356*	560	15c	B-110•	10K	18c
B-368*	680	15c	B-115■	15K	18c
B-382*	820	15c	B-120■	20K	18c
B-210*	1000	15c	B2X210▲	2x.001	30c
B-212*	1200	15c	B2X215†	2x.0015	30c
B-215†	1500	15c	B2X220†	2x.002	30c
B-218†	1800	15c	B2X230†	2x.003	30c
B-220†	2000	15c	B2X250#	2x.005	30c
B-222†	2200	15c	B2X110#	2x.01	30c
B-227†	2700	15c			

Dia.: *9/32″. †3/8″. ‡9/16″. §19/32″. #5/8″. •3/4″. ■29/32″. ▲5/16″.

RMC CERAMIC DISCAPS®

AC LINE AND BUFFER

Rated 1400 WVDC. Tol., GMV*.

Mall. No. UAC-	Cap., μμf	Net. Ea.	Mall. No. UAC-	Cap., μμf	Net Ea.
210*	.001	21c	260‡	.006	21c
220†	.002	21c	270‡	.007	21c
222†	.0022	21c	275‡	.0075	21c
230†	.003	21c	280‡	.008	21c
233†	.0033	21c	110§	.01	21c
240†	.004	21c	120§	.02	24c
247‡	.0047	21c	2X110§	2x.01	27c
250‡	.005	21c			

Dia.: *3/8″. †9/16″. ‡13/16″. §29/32″.

GENERAL PURPOSE

Rated 1000 WVDC except, 20K-50K values rated 600 WVDC. Tol., ±0.25 μμf, 3.3 and 5.0 μμf; ±5%, 6.8 and 8.0 μμf; ±10%, 10-2200 μμf; ±20%, 2500-40K μμf; −20%, +80%, 50K μμf.

Mall. No. GP-	Cap., μμf	Net Ea.	Mall. No. GP-	Cap., μμf	Net Ea.
533*	3.3	15c	336*	360	15c
550*	5.0	15c	339*	390	15c
568*	6.8	15c	340*	400	15c
580*	8.0	15c	347*	470	15c
410*	10	15c	350*	500	15c
412*	12	15c	356*	560	15c
415*	15	15c	360*	600	15c
418*	18	15c	368*	680	15c
420*	20	15c	375†	750	15c
422*	22	15c	382†	820	15c
425*	25	15c	210†	1000	15c
427*	27	15c	212‡	1200	15c
430*	30	15c	215‡	1500	15c
433*	33	15c	216‡	1600	15c
439*	39	15c	218‡	1800	15c
447*	47	15c	220‡	2000	15c
450*	50	15c	222‡	2200	15c
456†	56	15c	225‡	2500	15c
468†	68	15c	227‡	2700	15c
475†	75	15c	230‡	3000	15c
482†	82	15c	233‡	3300	15c
491†	91	15c	239‡	3900	15c
310†	100	15c	240‡	4000	15c
312†	120	15c	243‡	4300	15c
313†	130	15c	247§	4700	15c
315*	150	15c	250§	5000	18c
318*	180	15c	256#	5600	18c
320*	200	15c	268#	6800	18c
322*	220	15c	275#	7500	18c
324*	240	15c	110#	10K	18c
325*	250	15c	115#	15K	18c
327*	270	15c	120•	20K	18c
330*	300	15c	130•	30K	36c
333*	330	15c	140•	40K	39c
335*	350	15c	150•	50K	42c

Dia.: *1/4″. †5/16″. ‡1/2″. §9/16″. #5/8″. •15/16″.

HIGH VOLTAGE

Tol., GMV* except values 100-470 μμf, ±20%.

2000 AND 3000 WVDC

	2000 WVDC		3000 WVDC	
Cap., μμf	Mall. No. 2HV-	Net Ea.	Mall. No. 3HV-	Net Ea.
100	310*	21c	....	......
120	312*	21c	....	......
150	315*	21c	....	......
220	322†	21c	322†	24c
270	327§	21c	327†	24c
330	333‡	21c	333†	24c
470	347‡	21c	347†	24c
560	356*	21c	356†	24c
680	368*	21c	368†	24c
750	375*	21c	375†	24c
820	382*	21c	382†	24c
1000	210*	33c	210†	24c
1200	212‡	33c	212§	24c
1500	215‡	33c	215§	24c
1800	218‡	33c	218§	24c
2200	222‡	33c	222§	24c
3300	233§	33c	233§	24c
3900	239§	33c	239§	24c
4700	247§	33c	247§	24c
6800	268§	42c	....	......
10K	110§	42c	....	......

6000 WVDC

Mall. No. 6HV-	Cap., μμf	Net Ea.	Mall. No. 6HV-	Cap., μμf	Net Ea.
310†	100	30c	347§	470	30c
312†	120	30c	356§	560	30c
315†	150	30c	368§	680	30c
322†	220	30c	750§	750	30c
327§	270	30c	210§	1K	30c
333§	330	30c			

Dia.: *5/8″. †3/4″. †9/16″. §7/8″.
*Guaranteed Minimum Value.

TYPE SM

Rated 500 WVDC. Tol., −20%, +80% except SM-210 and SM-215, GMV*.

Mallory Number	Cap., μμf	Dia., In.	Net Each
SM-210	.001	1/4	12c
SM-215	.0015	9/32	12c
SM-250	.005	3/8	12c
SM-110	.01	1/2	12c
SM-120	.02	11/16	18c

DEFLECTION YOKE

Tolerance, ±10%.

2000 AND 3000 WVDC

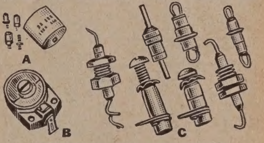
	2000 WVDC		3000 WVDC	
Cap., μμf	Mall. No. 2DY-	Net Ea.	Mall. No. 3DY-	Net Ea.
4.7	547*	21c	547†	24c
6.8	568*	21c	568†	24c
10	410*	21c	410†	24c
12	412*	21c	412†	24c
15	415*	21c	415†	24c
22	422†	21c	422‡	24c
27	427†	21c	427‡	24c
33	433†	21c	433§	24c
39	439†	21c	439§	24c
47	447†	21c	447§	24c
56	456‡	21c	456§	24c
68	468‡	21c	468§	24c
82	482‡	21c	482§	24c
100	310§	21c	310#	24c

6000 WVDC

Mall. No. 6DY-	Cap., μμf	Net Ea.	Mall. No. 6DY-	Cap., μμf	Net Ea.
547#	4.7	33c	427#	27	33c
568#	6.8	33c	433•	33	33c
410#	10	33c	439•	39	33c
412#	12	33c	447•	47	33c
415#	15	33c	456•	56	33c
422#	22	33c	468•	68	33c

Dia.: *1/4″. †5/16″. ‡1/2″. §5/8″. #3/4″. •7/8″.

SPECIAL CERAMIC CAPACITORS



UNIVERSAL HIGH VOLTAGE CERAMIC CAPACITORS (FIG. A)

Filter high voltage power supplies in TV sets, etc. Hi-voltage, high insulation resistant ceramic. Four universal screw-in terminals. Capacity, 500 μμf. Tol., −20%, +50%.

Mallory Number	WV DC	Flash Volts	Size, In. H. x Dia.	Net Ea.
HV20035U	20K	30K	1.068x.950″	$1.11
HV30035U	30K	40K	1.381x1.375″	1.80

CERAMIC TRIMMERS (FIG. B)

Small and stable for high frequency FM and TV uses. Fired silver electrodes; ceramic rotator and base. Sealed against dust. Solder lug terminals. Two-hole screw mounting. Single or dual units available. Constant capacity change on 360° rotator. Size: 21/32″ x 27/32″ x 3/8″, single units. Rated 600 v. DC.

Mallory Number	Cap. Range μμf	Temp. Coef.	Net Each
ST-5515-Z	1.5 to 7	Zero	$1.05
ST-553-Z	3 to 12	Zero	.90
ST-554-N	4 to 30	Neg. 500*	1.05
ST-557-N	7 to 45	Neg. 500*	1.05

*Parts/Million/°C.

FEED-THRU CAPACITORS (FIG. C)

For TV bypass. Wire terminals as tie points. Body solders to chassis or mounted by hex nut. **Type CT:** Silvered steatite trimmer. **Type FC:** Feed-thru for bypassing RF. Wire terminals.

Mallory Number	Cap., μf	WVD DC	Size, In.	Net Ea.
CT565*	.5 to 3	500	7/32x1/2	30c
CT551*	1 to 4	500	7/32x1/2	30c
CT552*	2 to 6	500	7/32x5/8	30c
CT250A†	1000	600	7/64x3/4	30c
CT254A†	1000	600	17/64x13/16	30c
CT280A†	1000	600	3/16x15/16	45c
CT282A‡	1000	600	7/32x1 1/32	60c
FC5215‡	1500	500	7/32x3/4	60c

Tol.: *±0.5 μμf. †GMV*. ‡±20%.

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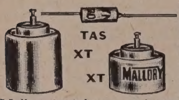
MALLORY TANTALUM CAPACITORS

P.R. MALLORY & CO. INC.
INDIANAPOLIS 6, IND.



Mallory offers the industry's best selection of tantalum capacitors in three general types: Sintered anode wet slug; sintered anode solid electrolyte; and, foil. Standard temperature range, −55° C to +85° C, with some types offering +200° C operation. **Catalog System:** New 13-digit system is used to specify Mallory tantalum capacitors. Each number is significant and completely identifies the item. The first three digits indicate type (HAT, TAP, etc.). Capacity is shown in µµf with fourth and fifth digits showing significant number (10) and sixth digit showing numbers of zeros (5). Tolerance is indicated by the seventh digit (W). Digits eight, nine and ten show WVDC at +85° C (016). Eleventh digit indicates polarity (P); twelfth, insulation (1); and thirteenth, case size or configuration (A). Thus, HAT105W016P1A is: HAT type, 1 µf, −0 +100% tolerance, 16 WVDC polarized, Mylar* insulation, axial leads. Please refer to bulletins shown for exact details. For your convenience, old catalog numbers are also shown. **Note:** Standard ratings available from distributor stock are shown in following tables. Other ratings available from factory stock.

TYPE HAT MICRO-MINIATURE

Micro-miniature sintered anode wet slug with double end seal for transistorized circuit applications. Temperature range, −55° C to +85° C; capacity tolerance, −0 +100% (W); polarized (P); Mylar* insulation (1); axial leads (A) standard. Available in other ratings, smaller size and with other lead configurations. Ask for Bulletin 4-43D.

Cap., µf	WVDC at 85° C	Mallory Catalog No.	Old Number	Net Ea. 1-24*
1	16	**HAT105W016P1A**	HAT1-16	**$1.02**
2	8	**HAT205W008P1A**	HAT2-8	**1.02**
4	4	**HAT405W004P1A**	HAT4-4	**1.02**
8	2	**HAT805W002P1A**	HAT8-2	**1.02**
10	1	**HAT106W001P1A**	HAT10-1	**1.02**

TYPE TNT SUBMINIATURE

Subminiature, sintered anode wet slug with epoxy seal lead protection. Temperature range, −55° C to +85° C; capacity tolerance, −15 +75% (U); polarized (P); uninsulated (O) standard. Two case sizes (A and B). Available in other ratings and with Mylar* (1) or vinyl (3) insulation. Ask for Bulletin 4-38B.

Cap., µf	WVDC at +85° C	Mallory Catalog No.	Old Number	Net Ea. 1-24*
2	50	**TNT205U050POA**	STNT-2	**$1.87**
4	50	**TNT405U050POA**	STNT-4	**1.87**
6	35	**TNT605U035POA**	STNT-6	**1.87**
12	15	**TNT126U015POA**	STNT-12	**1.87**
25	6	**TNT256U006POA**	STNT-25	**1.87**
40	3	**TNT406U003POA**	STNT-40	**1.87**
8	50	**TNT805U050POB**	TNT8-50	**1.87**
15	30	**TNT156U030POB**	TNT15-30	**2.00**
25	15	**TNT256U015POB**	TNT25-12	**2.00**
50	6	**TNT506U006POB**	TNT50-6	**2.00**
80	3	**TNT806U003POB**	TNT80-3	**2.00**

TYPE TAP MINIATURE

Miniature, sintered anode wet slug with epoxy seal lead protection. Temperature range: −55° C to +85° C. Capacity tolerance: −15%, +75% (U) standard; −15% +50% (T) available on special order at same price; ±10% (K) and −10% +20% (X) available on special order at additional charge. Polarized (P); uninsulated (O) standard Two sizes shown (A and B). Available in other ratings, a third size (C), and with Mylar* (1) or vinyl (3) insulation. Ask for Bulletin 4-52.

Cap., µf	WVDC at +85° C	Mallory Catalog No.	Old Number	Net Ea. 1-24*
2	90	**TAP205U090POA**	TAP90-2	**$2.00**
3.5	75	**TAP355U075POA**	TAP75-3.5	**2.00**
4	60	**TAP405U060POA**	TAP60-4	**2.00**
5	50	**TAP505U050POA**	TAP50-5	**2.00**
6	40	**TAP605U040POA**	TAP40-6	**2.00**
8	30	**TAP805U030POA**	TAP30-8	**2.00**
10	25	**TAP106U025POA**	TAP25-10	**2.00**
12	20	**TAP126U020POA**	TAP20-12	**2.00**
15	15	**TAP156U015POA**	TAP15-15	**2.00**
20	10	**TAP206U010POA**	TAP10-20	**2.00**
30	6	**TAP306U006POA**	TAP6-30	**2.00**
11	90	**TAP116U090POB**	TAP211-90	**3.75**
15	75	**TAP156U075POB**	TAP215-75	**3.75**
20	60	**TAP206U060POB**	TAP220-60	**3.75**
25	50	**TAP256U050POB**	TAP225-50	**3.75**
30	40	**TAP306U040POB**	TAP230-40	**3.75**
40	30	**TAP406U030POB**	TAP240-30	**3.75**
70	15	**TAP706U015POB**	TAP270-15	**3.75**
100	10	**TAP107U010POB**	TAP2100-10	**3.75**
140	6	**TAP147U006POB**	TAP2140-6	**3.75**

*Registered Dupont trademark.

TYPE MTF (FORMERLY M-2 SERIES)

Sintered anode wet slug; hermetically sealed (glass to metal). Meet all requirements of MIL-C-3965B. Temperature range, −55° C to +85° C with no derating (operation to +150° C with slight derating); capacity tolerance, −15% +50% (T); polarized (P); uninsulated (O); 0.5" length and axial leads (H) standard. Available in other ratings and with screw neck (J), neck and tab (K) or welded screw (L) on special order. Ask for Bulletin 4-41B.

Cap., µf	WVDC at +85° C	Mallory Catalog No.	Old Number	Net Ea. 1-24*
11	90	**MTF116T090POH**	M2-11	**$6.76**
15	75	**MTF156T075POH**	M2-15	**6.76**
20	60	**MTF206T060POH**	M2-20	**6.76**
25	50	**MTF256T050POH**	M2-25	**6.76**
30	40	**MTF306T040POH**	....	†
40	30	**MTF406T030POH**	M2-40	**6.76**
70	15	**MTF706T015POH**	M2-70	**6.76**
100	10	**MTF107T010POH**	M2-100	**6.76**
140	6	**MTF147T006POH**	M2-140	**6.76**

†Special order from factory stock; prices on application.

TYPE XTM-XTK HIGH TEMPERATURE

High temperature miniature sintered anode wet slug; hermetically sealed (glass to metal). Temperature range, −55° C to +85° C with no derating (operation to +175° C with slight derating); capacity tolerance, −15% +50% (T); polarized (P); uninsulated (O); axial leads (A) standard. Available with Mylar* (1) (125° C limit), vinyl (3) (85° C limit), or teflon (4) insulation on special order at additional charge. Available in many other ratings and sizes (XTK) and a wide variety of terminals and mounting lugs. Ask for Bulletin 4-49A.

Cap., µf	WVDC at +85° C	Mallory Catalog No.	Old Number	Net Ea. 1-24*
4	340	**XTM405T340POA**	XTM-4	**$17.03**
5	255	**XTM505T255POA**	XTM-5	**13.40**
8	170	**XTM805T170POA**	XTM-8	**10.34**
16	90	**XTM166T090POA**	XTM-16	**6.56**
25	60	**XTM256T060POA**	XTM-25	**6.56**
40	35	**XTM406T035POA**	XTM-40	**6.56**
70	18	**XTM706T018POA**	....	†
100	10	**XTM107T010POA**	....	†
140	8	**XTM147T008POA**	....	†

†Special order from factory stock; prices on application.

TYPE XTL-XTH-XTO HIGH TEMPERATURE

High temperature, sintered anode wet slug; hermetically sealed (glass to metal). The industry standard; individually inspected and coded. Temperature range, −55° C to +85° C with no derating (operation to +200° C with derating); capacity tolerance, −15% +75% (U); polarized (P); uninsulated (O); flat bottom case with positive turret terminal (A) standard. Available with Mylar* (1), vinyl (3), or teflon (4) insulation at extra cost. Available with reverse polarity (R) with case positive. Wide range of terminals and mounting lugs available at extra cost; (B) shown below, is standard positive terminal with negative solder lug on bottom; (K) is threaded neck with standard bottom. Note: XTO series is replacement only; use XTH or XTL for new designs. Ask for Bulletin 4-31D.

Cap., µf	WVDC at +85° C	Mallory Catalog No.	Old Number	Net Ea. 1-24*
3.5	640	**XTL355U630POA**	XTL-3.5	**$39.62**
4	540	**XTL405U540POA**	XTL-4	**34.50**
5	450	**XTL505U450POA**	XTL-5	**28.10**
6	360	**XTL605U360POA**	XTL-6	**22.65**
6	360	**XTL605U360POB**	XTL-6A	**22.70**
6	360	**XTL605U360POK**	XTLS-6	**23.00**
8	270	**XTL805U270POA**	XTL-8	**18.15**
8	270	**XTL805U270POB**	XTL-8A	**18.20**
12	180	**XTL126U180POA**	XTL-12	**12.83**
12	180	**XTL126U180POK**	XTLS-12	**13.18**
25	90	**XTL256U090POA**	XTL-25	**8.19**
40	60	**XTL406U060POA**	XTL-40	**8.19**
40	60	**XTL406U060POB**	XTL-40A	**8.24**
40	60	**XTL406U060POK**	XTLS-40	**8.47**
75	30	**XTL756U030POA**	XTL-75	**8.19**
120	18	**XTL127U018POA**	XTL-120	**8.19**
7	630	**XTH705U630POA**	XTH-7	**47.16**
8	540	**XTH805U540POA**	XTH-8	**40.32**
8	540	**XTH805U540POB**	XTH-8A	**40.37**
10	450	**XTH106U450POA**	XTH-10	**33.71**
12	360	**XTH126U360POA**	XTH-12	**27.21**
12	360	**XTH126U360POB**	XTH-12A	**27.26**
12	360	**XTH126U360POK**	XTHS-12	**27.56**
16	270	**XTH166U270POA**	XTH-16	**20.94**
25	180	**XTH256U180POA**	XTH-25	**14.75**
50	90	**XTH506U090POA**	XTH-50	**9.25**
80	60	**XTH806U060POA**	XTH-80	**9.25**
130	35	**XTH137U035POA**	XTH-125	**9.25**
150	30	**XTH157U030POA**	XTH-150	**9.25**
240	18	**XTH247U018POA**	XTH-240	**9.25**
240	18	**XTH247U018POK**	XTHS-240	**9.60**

★ O.E.M. PRICES. ADDITIONAL DISCOUNTS IN LARGER QUANTITIES AVAILABLE ON REQUEST. FOR COMPLETE SPECIFICATIONS ON OTHER CONFIGURATIONS, ASK FOR THE BULLETINS SPECIFIED FOR EACH TYPE.

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MALLORY
P R MALLORY & CO Inc

TANTALUM CAPACITORS

P.R. MALLORY & CO. INC.
INDIANAPOLIS 6, IND.

TYPE XTV HIGH TEMPERATURE, HIGH CAPACITY

High temperature, high capacity, sintered anode wet slug; hermetically sealed (glass to metal). Temperature range, −55° C to +85° C with no derating (operation to +175° C with derating); capacity tolerance, −15% +50% (T); polarized (P); uninsulated (O); flat bottom case with positive terminal (A) standard. Available with Mylar* (1), vinyl (3) or teflon (4) insulation at extra cost. Very wide range of terminals and mounting lugs available at extra cost. Ask for Bulletin 4-39E.

Cap., µf	WVDC at +85° C	Mallory Catalog No.	Old Number	Net Each 1-24*
18	630	XTV186T630POA	XTV-18	$122.85
20	540	XTV206T540POA	XTV-20	105.30
25	450	XTV256T450POA	XTV-25	88.83
30	360	XTV306T360POA	XTV-30	71.55
40	270	XTV406T270POA	XTV-40	54.68
60	180	XTV606T180POA	XTV-60	38.88
75	270	XTV756T270POA	....	†
110	180	XTV117T180POA	....	†
120	90	XTV127T090POA	XTV-120	24.30
150	270	XTV157T270POA	....	†
200	60	XTV207T060POA	XTV-200	24.30
220	90	XTV227T090POA	XTV-220	41.31
230	180	XTV237T180POA	....	†
290	40	XTV297T040POA	XTV-290	24.30
350	60	XTV357T060POA	XTV-350	41.31
370	30	XTV377T030POA	XTV-370	24.30
450	90	XTV457T090POA	XTV-450	54.00
500	40	XTV507T040POA	XTV-500	41.31
650	30	XTV657T030POA	XTV-650	41.31
700	60	XTV078T060POA	XTV-700	54.00
750	60	XTV757T060POA	XTV-750	54.00
1000	40	XTV108T040POA	XTV-1000	54.00
1300	30	XTV138T030POA	XTV-1300	54.00

†Special order from factory stock; prices on application.

TYPE TAM PLASTIC ENCAPSULATED

Flexible, plastic encapsulated, sintered pellet anode with solid electrolyte. For printed circuit applications. Temperature range, −55° C to +85° C; capacity tolerance, ±20% (M); polarized (P); Mallory plastic encapsulation (5); radial grid spaced leads; size C only. Ask for Bulletin 4-47A.

Cap., µf	WVDC at +85° C	Mallory Catalog No.	Old Number	Net Ea. 1-24*
6.8	25	TAM685M025P5C	TAM6P8-25	$1.82
10	25	TAM106M025P5C	TAM10-25	1.82
15	25	TAM156M025P5C	TAM15-25	1.82
22	15	TAM226M015P5C	TAM22-15	1.82
33	10	TAM336M010P5C	TAM33-10	1.82
39	10	TAM396M010P5C	TAM39-10	1.82
56	6	TAM566M006P5C	TAM56-6	1.82

TYPE TAF METAL-CASED FOIL

Tantalum foil in corrosion-resistant metal case with plastic end seals. Temperature range, −55° C to +85° C; capacity tolerance, ±20% (M); polarized (P) or non-polarized (N); uninsulated (O); axial leads; five case sizes (A, B, C, D, E) standard. Available with Mylar* (1) insulation at extra cost. Ratings shown are available from distributor stock; many more available from factory stock. Ask for Bulletin 4-48.

POLARIZED

Cap., µf	WVDC at +85° C	Mallory Catalog No.	Old Number	Net Ea. 1-24*
.5†	150	TAF504M150POA	TAFP5-150	$4.90
.8†	100	TAF804M100POA	TAFP8-100	4.90
1†	75	TAF105M075POA	TAF1-75	4.90
1	150	TAF105M150POB	TAF1-150	7.42
1.2	60	TAF125M060POA	TAF1P2-60	4.90
1.5†	50	TAF155M050POA	TAF1P5-50	4.90
2†	150	TAF205M150POB	TAF2-150	7.42
2.5†	30	TAF255M030POA	TAF2P5-30	4.90
3	25	TAF305M025POA	TAF3-25	4.90
3†	100	TAF305M100POB	TAF3-100	7.42
4†	75	TAF405M075POB	TAF4-75	7.42
4.5†	15	TAF455M015POA	TAF4P5-15	4.90
5	60	TAF505M060POB	TAF5-60	7.42
6†	10	TAF605M010POA	TAF6-10	4.90
6†	50	TAF605M050POB	TAF6-50	7.42
8†	6	TAF805M006POA	TAF8-6	4.90
10†	3	TAF106M003POA	TAF10-3	4.90
10†	30	TAF106M030POB	TAF10-30	7.42
12	25	TAF126M025POB	TAF12-25	7.42
18†	15	TAF186M015POB	TAF18-15	7.42
25†	10	TAF256M010POB	TAF25-10	7.42
30†	6	TAF306M006POB	TAF30-6	7.42
35	6	TAF356M006POB	TAF35-6	7.42
50†	3	TAF506M003POB	TAF50-3	7.42

†MIL-C-3965/3A ratings.

NON-POLARIZED

Cap., µf	WVDC at +85° C	Mallory Catalog No.	Old Number	Net Ea. 1-24*
.5	75	TAF504M075NOA	TAFNP5-75	$4.90
.6	60	TAF604M060NOA	TAFNP6-60	4.90
.8	50	TAF804M050NOA	TAFNP8-50	4.90
2	75	TAF205M075NOB	TAFN2-75	7.42
2.5	15	TAF255M015NOA	TAFN2P5-15	4.90
2.5	60	TAF255M060NOB	TAFN2P5-60	7.42
3	10	TAF305M010NOA	TAFN3-10	4.90
3	50	TAF305M050NOB	TAFN3-50	7.42
5	6	TAF305M006NOA	TAFN5-6	4.90
10	15	TAF106M015NOB	TAFN10-15	7.42
16	10	TAF166M010NOB	TAFN16-10	7.42
25	6	TAF256M006NOB	TAFN25-6	7.42

*Registered Dupont trademark.

TYPE TAS HERMETICALLY SEALED MINIATURE

Miniature sintered anode, solid electrolyte; hermetically sealed (glass to metal). Temperature range, −80° C to +85° C with no derating (derate 33% for +125° C operation); capacity tolerance, ±20% (M); polarized (P); uninsulated (O); five case sizes (A, B, C, F, G) standard. Available in ±10% tolerance (K) at extra cost. Available with Mylar* (1) or rigid fiber sleeve (2) at extra cost. Ask for Bulletin 4-40D.

Cap., µf	WVDC at +85° C	Mallory Catalog No.	Old Number	Net Ea. 1-24*
.33	6	TAS334M006POA	TASP33-6	$2.68
.33	10	TAS334M010POA	TASP33-10	2.68
.33	15	TAS334M015POA	TASP33-15	2.68
.33	25	TAS334M025POA	TASP33-25	2.68
.33	35	TAS334M035POA	TASP33-35	2.68
.47	6	TAS474M006POA	TASP47-6	2.68
.47	10	TAS474M010POA	TASP47-10	2.68
.47	15	TAS474M015POA	TASP47-15	2.68
.47	25	TAS474M025POA	TASP47-25	2.68
.47	35	TAS474M035POA	TASP47-35	2.68
.68	6	TAS684M006POA	TASP68-6	2.68
.68	10	TAS684M010POA	TASP68-10	2.68
.68	15	TAS684M015POA	TASP68-15	2.68
.68	25	TAS684M025POA	TASP68-25	2.68
.68	35	TAS684M035POA	TASP68-35	2.68
1	6	TAS105M006POA	TAS1-6	2.68
1	10	TAS105M010POA	TAS1-10	2.68
1	15	TAS105M015POA	TAS1-15	2.68
1	25	TAS105M025POA	TAS1-25	2.68
1	35	TAS105M035POA	TAS1-35	2.68
1.5	6	TAS155M006POA	TAS1P5-6	2.68
1.5	10	TAS155M010POA	TAS1P5-10	2.68
1.5	15	TAS155M015POA	TAS1P5-15	2.68
1.5	25	TAS155M025POA	TAS1P5-25	2.68
1.5	35	TAS155M035POA	TAS1P5-35	2.68
2.2	6	TAS225M006POA	TAS2P2-6	2.68
2.2	10	TAS225M010POA	TAS2P2-10	2.68
2.2	15	TAS225M015POA	TAS2P2-15	2.68
2.2	25	TAS225M025POA	TAS2P2-25	2.68
2.2	35	TAS225M035POB	TAS2P2-35	2.77
3.3	6	TAS335M006POA	TAS3P3-6	2.68
3.3	10	TAS335M010POA	TAS3P3-10	2.68
3.3	15	TAS335M015POA	TAS3P3-15	2.68
3.3	25	TAS335M025POB	TAS3P3-25	2.77
3.3	35	TAS335M035POB	TAS3P3-35	2.77
4.7	6	TAS475M006POA	TAS4P7-6	2.68
4.7	10	TAS475M010POA	TAS4P7-10	2.68
4.7	15	TAS475M015POB	TAS4P7-15	2.77
4.7	25	TAS475M025POB	TAS4P7-25	2.77
4.7	35	TAS475M035POB	TAS4P7-35	2.77
6.8	6	TAS685M006POA	TAS6P8-6	2.68
6.8	10	TAS685M010POC	TAS6P8-10	2.84
6.8	15	TAS685M015POC	TAS6P8-15	2.84
6.8	25	TAS685M025POC	TAS6P8-25	2.84
6.8	35	TAS685M035POC	TAS6P8-35	2.84
10	6	TAS106M006POC	TAS10-6	2.84
10	10	TAS106M010POC	TAS10-10	2.84
10	15	TAS106M015POC	TAS10-15	2.84
10	25	TAS106M025POC	TAS10-25	2.84
10	35	TAS106M035POF	TAS10-35	4.66
15	6	TAS156M006POC	TAS15-6	2.84
15	10	TAS156M010POC	TAS15-10	2.84
15	15	TAS156M015POC	TAS15-15	2.84
15	25	TAS156M025POC	TAS15-25	2.84
15	35	TAS156M035POF	TAS15-35	4.66
22	6	TAS226M006POC	TAS22-6	2.84
22	10	TAS226M010POC	TAS22-10	2.84
22	15	TAS226M015POC	TAS22-15	2.84
22	25	TAS226M025POF	TAS22-25	4.66
22	35	TAS226M035POF	TAS22-35	4.66
33	6	TAS336M006POC	TAS33-6	2.84
33	10	TAS336M010POC	TAS33-10	2.84
33	15	TAS336M015POF	TAS33-15	4.66
33	25	TAS336M025POF	TAS33-25	4.66
33	35	TAS336M035POG	TAS33-35	8.65
47	6	TAS476M006POC	TAS47-6	2.84
47	10	TAS476M010POF	TAS47-10	4.66
47	15	TAS476M015POF	TAS47-15	4.66
47	25	TAS476M025POF	TAS47-25	4.66
47	35	TAS476M035POG	TAS47-35	8.65
68	6	TAS686M006POF	TAS68-6	4.66
68	10	TAS686M010POF	TAS68-10	4.66
68	15	TAS686M015POF	TAS68-15	4.66
68	25	TAS686M025POG	TAS68-25	8.65
68	35	TAS686M035POG	TAS68-35	8.65
100	6	TAS107M006POF	TAS100-6	4.66
100	10	TAS107M010POF	TAS100-10	4.66
100	15	TAS107M015POG	TAS100-15	8.65
100	25	TAS107M025POG	TAS100-25	8.65
150	6	TAS157M006POF	TAS150-6	4.66
150	10	TAS157M010POG	TAS150-10	8.65
150	15	TAS157M015POG	TAS150-15	8.65
220	6	TAS227M006POG	TAS220-6	8.65
220	10	TAS227M010POG	TAS220-10	8.65
330	6	TAS337M006POG	TAS330-6	8.65

★O.E.M. PRICES. ADDITIONAL DISCOUNTS IN LARGER QUANTITIES AVAILABLE ON REQUEST. FOR COMPLETE SPECIFICATIONS ON OTHER CONFIGURATIONS, ASK FOR THE BULLETINS SPECIFIED FOR EACH TYPE.

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PLANET SALES CORPORATION

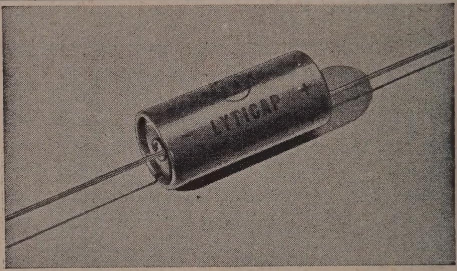
BLOOMFIELD, NEW JERSEY

Universal Replacement Type Capacitors

"LYTICAP"

Single Section Electrolytics — Type "L"

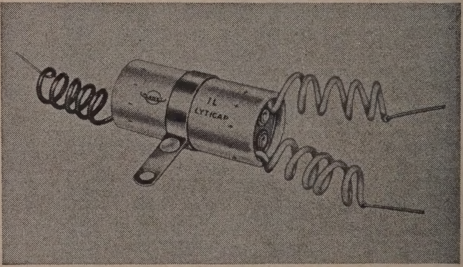
Hermetically sealed in aluminum tubes, covered with red Kraftboard insulating jackets — tinned brass leads, guaranteed for one year.



CAT. NO.	MFD.	SIZE*	LIST PRICE
	500 WVDC		
L-5-500	5	¾ x 1⅝	$1.25
L-10-500	10	⅞ x 2 1/16	1.35
L-20-500	20	1 x 2⅜	1.60
L-30-500	30	1 x 2 11/16	1.75
	450 WVDC		
L-4-450	4	⅝ x 1⅝	1.15
L-8-450	8	¾ x 1⅝	1.25
L-10-450	10	¾ x 1⅝	1.30
L-12-450	12	⅞ x 1⅝	1.35
L-16-450	16	⅞ x 2 1/16	1.40
L-20-450	20	1 x 2 1/16	1.55
L-30-450	30	1 x 2⅜	1.70
L-40-450	40	1 x 2 11/16	1.80
L-50-450	50	1¼ x 2 11/16	2.10
L-60-450	60	1¼ x 2 11/16	2.40
L-80-450	80	1⅜ x 2 11/16	2.80
L-100-450	100	1⅜ x 2 11/16	3.20
	350 WVDC		
L-8-350	8	⅝ x 1⅝	1.20
L-16-350	16	⅞ x 1⅝	1.40
L-20-350	20	⅞ x 1⅝	1.45
L-30-350	30	⅞ x 2 1/16	1.65
L-40-350	40	1 x 2 1/16	1.75
	250 WVDC		
L-5-250	5	⅝ x 1⅝	1.00
L-10-250	10	⅝ x 1⅝	1.20
L-20-250	20	¾ x 1⅝	1.35
L-24-250	24	¾ x 1⅝	1.35
L-30-250	30	¾ x 1⅝	1.45
L-40-250	40	⅞ x 1¾	1.55
	150 WVDC		
L-5-150	5	⅝ x 1⅛	$1.00
L-8-150	8	½ x 1⅝	1.05
L-10-150	10	½ x 1⅝	1.05
L-16-150	16	⅝ x 1⅝	1.15
L-20-150	20	⅝ x 1⅝	1.20
L-30-150	30	¾ x 1⅝	1.30
L-40-150	40	¾ x 1⅝	1.35
	150 WVDC (Cont'd)		
L-50-150	50	¾ x 2 1/16	1.40
L-80-150	80	⅞ x 2 1/16	1.60
L-100-150	100	⅞ x 2⅜	1.75
L-150-150	150	1 x 2 11/16	1.90
L-200-150	200	1 1/16 x 3 15/16	2.20
	50 WVDC		
L-1-50	1	½ x 1⅛	.90
L-2-50	2	½ x 1⅛	.90
L-3-50	3	½ x 1⅛	.90
L-5-50	5	½ x 1⅛	1.00
L-10-50	10	½ x 1⅛	1.00
L-25-50	25	½ x 1⅝	1.05
L-50-50	50	⅝ x 1⅝	1.20
L-100-50	100	¾ x 1⅝	1.40
L-150-50	150	⅞ x 1⅝	1.55
L-250-50	250	1 x 2 1/16	1.75
L-500-50	500	1 x 3	2.75
	25 WVDC		
L-10-25	10	½ x 1⅛	1.00
L-25-25	25	½ x 1⅝	1.00
L-50-25	50	⅝ x 1⅝	1.10
L-100-25	100	⅝ x 1⅝	1.35
L-250-25	250	⅞ x 2 1/16	1.70
L-500-25	500	1 x 2⅜	2.30
	15 WVDC		
L-1000-15	1000	1 x 3	2.30
	12 WVDC		
L-100-12	100	⅝ x 1 9/16	1.20
L-250-12	250	¾ x 2 1/16	1.45
L-500-12	500	⅞ x 2⅜	1.70
	6 WVDC		
L-500-6	500	¾ x 1⅝	1.55
L-1000-6	1000	⅞ x 2 1/16	1.90
L-1500-6	1500	⅞ x 2⅜	2.10
L-2000-6	2000	1 x 2⅜	2.30
	3 WVDC		
L-500-3	500	⅝ x 1⅝	1.55
L-1000-3	1000	⅞ x 2 1/16	1.80
L-1500-3	1500	⅞ x 2 1/16	2.10
L-2000-3	2000	1 x 2⅜	2.30

Dual Section Electrolytics — Type "IL"

Hermetically sealed in aluminum tubes with completely flexible leads. U/L Approved, plastic coated leads are rivetted directly to the condenser end disc, eliminating the use of rigid terminal risers, allowing capacitor to fit into smaller space and eliminating lead breakage. IL capacitors have wrap around mounting strap and are common negative, guaranteed for one year.

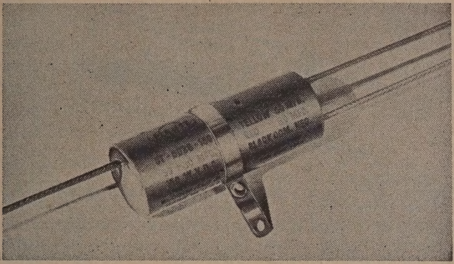


CAT. NO.	MFD.	SIZE*	LIST PRICE
	450 WVDC		
IL-2x8-450	8+ 8	⅞ x 2 1/16	$1.70
IL-2x20-450	20+20	1 x 2 11/16	2.50
IL-2x30-450	30+30	1¼ x 2 11/16	3.00
IL-2x40-450	40+40	1⅜ x 2 11/16	3.40
	150 WVDC		
IL-2x20x150	20+20	¾ x 1⅝	1.65
IL-2x30-150	30+30	⅞ x 1⅝	1.80
IL-4020-150	40+20	⅞ x 1⅝	1.75
IL-2x40-150	40+40	⅞ x 2 1/16	1.85
IL-5030-150	50+30	⅞ x 2 1/16	1.95
IL-2x50-150	50+50	1 x 2 1/16	2.10
IL-8040-150	80+40	1 x 2⅜	2.25

* Dimensions are for metal tubes. Add 1/16" to diameter and ⅛" to length for over-all dimensions over cardboard insulating tube.

PLANET SALES CORPORATION

BLOOMFIELD, NEW JERSEY



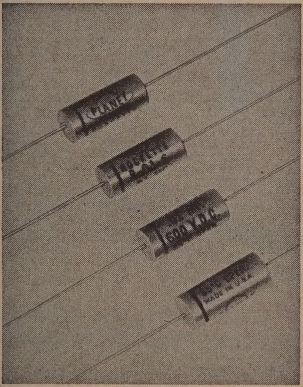
Universal Replacement Type Capacitors

Cardboard Tube Electrolytics — Type "CT"

Constructed in strong red cardboard tubes, wax impregnated — long insulated stranded leads of U/L approved wire — high temperature wax end-fill — wrap around mounting strap. Guaranteed for one year.

CAT. NO.	MFD.	WVDC	SIZE	LIST PRICE
DUAL UNITS — COMMON NEGATIVE				
CT-2x20-150	20+20	150	¾ x 2½	$1.65
CT-2x30-150	30+30	150	⅞ x 2½	1.80
CT-4020-150	40+20	150	⅞ x 2½	1.75
CT-2x40-150	40+40	150	1 x 2½	1.85
CT-5030-150	50+30	150	1 x 2½	1.95
CT-2x50-150	50+50	150	1 x 3	2.10
CT-8040-150	80+40	150	1 x 3¼	2.25
CTC-100+50-150	100+50	150	1 x 3⅜	2.50

CAT. NO.	MFD.	WVDC	SIZE	LIST PRICE
TRIPLE UNITS — COMMON NEGATIVE				
CT-3x20-150	20+20+20	150	1 x 2½	$2.20
CT-302520-150	30+25+30	150	1 x 2½	2.25
CT-3x30-150	30+30+30	150	1 x 3	2.35
CT-402020-150	40+20+20	150	1 x 3	2.25
CT-403020-150	40+30+20	150	1 x 3	2.35
CT-404020-150	40+40+20	150	1 x 3	2.40
CT-3x40-150	40+40+40	150	1 x 3¼	2.45
CT-503020-150	50+30+20	150	1 x 3	2.45
CT-804020-150	80+40+20	150	1 x 3⅝	2.75
CT-302	30+20/20	150/25	1 x 2½	2.10
CT-303	40+30/20	150/25	1 x 3	2.20
CT-304	50+50/20	150/25	1 x 3¼	2.50
CT-305	50+30/20	150/25	1 x 3	2.35
CTC-306	100+50/30	150/25	1⅛ x 3½	2.85



All Purpose Paper Capacitors

"ROCKETTES"

Planet ROCKETTES are impregnated and jacketed with a HARD-as-ROCK plastic which will not dry out, shrink away from the leads nor develop fissures nor cracks, thus guaranteeing against the entrance of moisture and guaranteeing good shelf life and long service life. The coiled heads of the leads are securely soldered to the foil, which is imbedded in the same plastic used as an impregnant, making it impossible for them to work loose or pull out. ROCKETTES have exceptionally high insulation resistance which is maintained proportionately over the entire temperature range of —30° to +85° C.

CAT. NO.	MFD.	SIZE	LIST PRICE
600 WVDC			
R-001-6	.001	11/32 x 1	$ .25
R-002-6	.002	11/32 x 1	.25
R-003-6	.003	⅜ x 1	.25
R-004-6	.004	⅜ x 1	.25
R-0047-6	.0047	⅜ x 1	.25
R-005-6	.005	⅜ x 1	.25
R-006-6	.006	⅜ x 1	.25
R-01-6	.01	7/16 x 1	.30
R-02-6	.02	7/16 x 1¼	.30
R-03-6	.03	7/16 x 1½	.35
R-04-6	.04	15/32 x 1½	.35
R-047-6	.047	½ x 1⅝	.40
R-05-6	.05	17/32 x 1⅝	.40
R-1-6	.1	11/16 x 1⅝	.45

CAT. NO.	MFD.	SIZE	LIST PRICE
600 WVDC (Cont'd)			
R-2-6	.2	13/16 x 2	.55
R-25-6	.25	13/16 x 2	.55
R-5-6	.5	15/16 x 2⅛	.80
1600 WVDC			
R-001-16	.001	5/16 x 1⅛	.55
R-002-16	.002	⅜ x 1⅛	.55
R-003-16	.003	7/16 x 1¼	.55
R-005-16	.005	½ x 1¼	.55
R-0075-16	.0075	9/16 x 1¼	.60
R-008-16	.008	9/16 x 1¼	.60
R-01-16	.01	9/16 x 1½	.60
R-02-16	.02	9/16 x 1¾	.60
R-05-16	.05	13/16 x 2	.70

All Prices Subject to Change Without Notice

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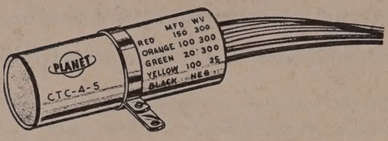
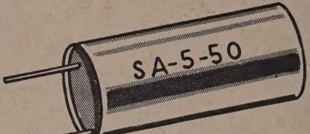


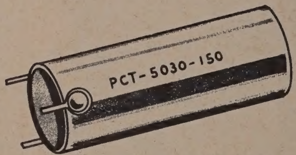
Type "CTC" . . . cardboard tube electrolytics especially designed for exact replacement in television sets . . . one end closed . . . long insulated leads out other end . . . sealed with high melting point wax . . . guaranteed for one year . . . individually packaged.

CAT. NO.	MFD.	WVDC	SIZE	LIST PRICE
CTC-1-5	300	150	1⅜ x 3⅞	$2.55
CTC-1-10	150	200	1½ x 3¾	3.95
CTC-1-15	200	200	1⅜ x 3⅜	2.90
CTC-1-20	140	300	1⅜ x 3½	3.15
CTC-1-25	200	300	1½ x 4	3.95
CTC-2-1	10/100	100/3	¾ x 1¾	1.90
CTC-2-5	200+5	150	1 x 3⅞	2.65
CTC-2-6	200+5	200	1⅜ x 3⅜	3.55
CTC-2-15	250+50	150	1⅜ x 3	3.25
CTC-2-20	80+120	200	1⅜ x 3	3.85
CTC-2-24	200+100	300/50	1¼ x 4½	4.30
CTC-2-25	150+100	300	1⅜ x 4½	5.35
CTC-3-1	30/1000+1000	100/15	1⅜ x 3½	3.60
CTC-3-2	60+60+60	300	1⅜ x 3½	4.70
CTC-3-3	250+120/50	150/25	1⅜ x 3⅞	4.40
CTC-3-4	250+200+10	150	1⅜ x 3⅝	4.60
CTC-3-5	5/80+40	450/400	1⅜ x 4⅛	4.55
CTC-4-5	150+100+20/100	300/25	1⅝ x 5¼	7.65
CTC-4-10	120+40+40/10	300/250	1⅜ x 4⅝	6.20
CTC-4-15	140/5/200+30	350/300/200	1⅝ x 4⅜	7.65
CTC-4-20	80+60/40/20	350/300/150	1⅝ x 4½	5.90
CTC-4-22	60+40+4	350	1⅜ x 3¼	3.85
CTC-4-25	10/80/40/100	450/300/250/50	1⅜ x 4⅛	4.80
CTC-4-26	10/80+40/100	450/300/50	1⅜ x 4⅛	4.95
CTC-4-30	20/120/40/100	450/300/250/50	1½ x 4⅜	6.15
CTC-4-35	10/80/40+40	450/300/250	1⅜ x 4⅜	4.95
CTC-4-36	10/80+40+40	450/300	1⅜ x 4⅜	5.25
CTC-4-40	40+40+20+20	450	1½ x 4⅜	5.45
CTC-5-5	40+20+20+20/50	300/75	1⅜ x 3	5.00



Type "SA" . . . small single section electrolytics for printed circuit boards . . . hermetically sealed in aluminum tubes covered with red kraftboard insulating jackets . . . extra heavy tinned terminals anchored for proper spacing by a high melting point wax . . . for 85°C operation . . . individually packaged. Recommended for TV, radio and industrial applications . . . guaranteed for one year.

CAT. NO.	MFD.	WVDC	SIZE	LIST PRICE
		SINGLES		
SA-8-3	8	3	9/16 x 1 7/16	$1.05
SA-50-6	50	6	11/16 x 1¾	1.05
SA-100-6	100	6	9/16 x 1 7/16	1.30
SA-5-10	5	10	9/16 x 1 7/16	1.05
SA-25-10	25	10	9/16 x 1 7/16	1.10
SA-10-25	10	25	9/16 x 1 7/16	1.10
SA-50-25	50	25	11/16 x 2⅛	1.20
SA-100-25	100	25	23/32 x 2	1.45
SA-1-50	1	50	9/16 x 1 7/16	1.00
SA-4-50	4	50	9/16 x 1 7/16	1.10
SA-10-50	10	50	9/16 x 1 7/16	1.10
SA-25-50	25	50	19/32 x 2	1.15
SA-50-50	50	50	11/16 x 2⅛	1.30
SA-100-50	100	50	27/32 x 2	1.50



Type "PCT" . . . constructed in strong red cardboard tubes, wax impregnated, one end closed, printed circuit board terminals.

Type "PCTL" . . . has insulated lead out top providing for low voltage section.

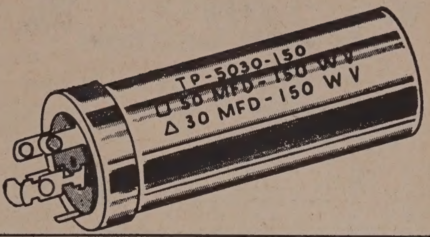
For 65°C operation . . . recommended for table and clock radios . . . individually packaged . . . guaranteed for one year.

CAT. NO.	MFD.	WVDC	SIZE	LIST PRICE
		DUALS		
PCT-2-5	50+30	150	1 x 2½	1.95
PCT-2-10	50+50	150	1 x 3	2.10
PCT-2-15	75+30	150	1 x 3	2.20
PCT-2-20	100+50	150	1 x 3⅝	2.50
		TRIPLES		
PCTL-3-5	40+20/5	150/25	1 x 2¾	2.20
PCTL-3-10	60+20/5	150/25	1 x 3	2.40

PLANET SALES CORPORATION
BLOOMFIELD, NEW JERSEY

Type "TP" . . . twist-prong can electrolytics with mounting ring and solder lug terminals. The mounting ring is grounded by two spot welded connections to the negative tab . . . for 85°C operation . . . complete with metal grounding plate . . . individually packaged. Guaranteed for one year.

Type "PTP" . . . same as Type "TP" except made with printed circuit board terminals.



CAT. NO.	MFD.	WVDC	SIZE	LIST PRICE
SINGLES				
TP-1-5	2000	12	1 x 3½	$3.25
PTP-1-10	1000	15	1 x 2½	2.55
PTP-1-15	50	150	1 x 2½	1.65
TP-1-20	80	150	1 x 2	1.85
PTP-1-25	100	150	1 x 2½	2.00
TP-1-30	120	150	1 x 3	2.15
TP-1-31	120	150	1⅜ x 2½	2.15
PTP-1-35	140	150	1 x 3½	2.15
TP-1-40	150	150	1⅜ x 2½	2.15
TP-1-45	150	150	1 x 3	2.15
TP-1-50	200	150	1⅜ x 2½	2.45
TP-1-55	300	150	1⅜ x 3	2.80
PTP-1-60	150	165	1 x 3½	2.35
PTP-1-65	375	165	1⅜ x 3½	4.25
PTP-1-70	80	175	1 x 2½	1.95
TP-1-75	125	350	1⅜ x 3½	3.90
TP-1-80	10	450	1 x 2	1.55
TP-1-85	20	450	1 x 2	1.80
TP-1-90	40	450	1 x 3	2.05
TP-1-95	80	450	1⅜ x 3	3.05
DUALS				
PTP-2-5	500+150	15	1 x 2	$3.25
PTP-2-10	250+250	16	1 x 2	2.50
PTP-2-15	70+30	150	1 x 2⅛	2.20
TP-2-20	50+50	150	1 x 2½	2.15
PTP-2-25	50+30	150	1 x 2	2.00
TP-2-30	50+30	150	1 x 2	2.00
TP-2-35	40+40	150	1 x 2	1.90
TP-2-40	20+20	150	1 x 2	1.70
TP-2-45	100+80	200	1⅜ x 2½	3.35
TP-2-50	200+5	200	1⅜ x 2½	3.40
TP-2-55	30+30	250	1 x 2½	2.75
TP-2-60	200+15	250	1⅜ x 2½	4.00
TP-2-65	30+10	300	1 x 3	2.40
TP-2-70	60/10	300/200	1 x 3	3.15
TP-2-75	125/100	350/10	1⅜ x 3½	5.20

CAT. NO.	MFD.	WVDC	SIZE	LIST PRICE
TP-2-80	5/100	350/50	1 x 2	$1.90
PTP-2-85	10/10	350/50	1 x 2	2.00
TP-2-90	100/80	350/175	1⅜ x 3½	4.60
TP-2-95	100+50	350	1⅜ x 3½	5.80
TP-2-100	100+100	350	1⅜ x 4	6.15
TP-2-105	140+20	350	1⅜ x 4	4.30
TP-2-110	30+10	400	1 x 3	2.95
TP-2-115	10+10	450	1 x 2	1.90
TP-2-120	20+20	450	1 x 3	2.55
TP-2-125	40+40	450	1⅜ x 3	3.45
TRIPLES				
TP-3-5	90+40/400	150/10	1 x 3½	$5.25
PTP-3-10	70+30/10	150/25	1 x 2½	2.55
TP-3-15	40+40+40	150	1 x 2½	2.60
PTP-3-20	50+25+150	150	1⅜ x 2½	3.75
TP-3-25	50+50+50	150	1 x 3	3.00
TP-3-30	40+20+20	250	1 x 3	2.90
TP-3-35	30+10/20	300/25	1 x 3	4.15
PTP-3-40	60+10/25	300/25	1⅜ x 2	4.85
PTP-3-45	30/25/100	350/25/6	1 x 2½	4.65
PTP-3-50	125/5/100	350/150/10	1⅜ x 3½	6.60
PTP-3-51	60/200+300	300/150	1⅜ x 4	5.00
TP-3-55	20+20/20	350/25	1 x 2½	2.90
TP-3-60	100+100/25	350/25	1⅜ x 4½	7.00
TP-3-65	80+40/100	350/50	1⅜ x 4	6.50
TP-3-70	10/40+40	350/200	1 x 3	3.25
TP-3-75	80+40+40	350	1⅜ x 4	7.95
TP-3-80	30+10/20	400/25	1 x 3	2.85
TP-3-85	40+40+40	450	1⅜ x 3½	4.90
QUADS				
PTP-4-5	250+30+20/100	150/10	1⅜ x 3½	$5.30
PTP-4-9	60+100/100/100	350/150/10	1⅜ x 5	8.50
PTP-4-10	100+60/60/40	350/200/75	1⅜ x 4½	8.50
TP-4-15	40+40+10/100	450/50	1⅜ x 3½	5.45
TP-4-20	20+20+20+20	450	1⅜ x 3	4.50
TP-4-25	30+30+30+30	450	1⅜ x 4	5.65
TP-4-30	40+40+40+40	450	1⅜ x 4	6.45

All Prices Subject to Change Without Notice

Plastic Capacitors, INC.

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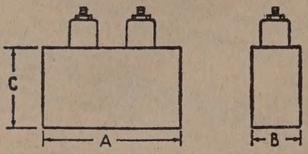
Mfrs. of
- Plastic Film Capacitors
- Pulse Forming Networks
- High Voltage Power Supplies
- Paper Dielectric Capacitors

New TYPE LK *New*
DC FILTER CAPACITORS



Type LK capacitors are an entirely new design which have been proved by rigorous testing in the laboratory and by usage in the field for several years. This is the first listing to be published.

Type LK capacitors are smaller and have a reliability factor which is unexcelled. Their primary usage is for DC filtering and DC blocking applications.

Temperature Range is minus 65°C to 105°C. With full rated voltate from –65°C to 85°C.
Life 2500 hours at rated voltage at 85°C.
Case is the CP70 style terne plate metal, primed and finished with a synthetic enamel.
ENVIRONMENTAL and other testing may be performed per MIL-C-25A, Characteristic E. Type LK exceeds the best characteristics of paper capacitors in a much smaller size. Comparison of sizes will show that the volume is much less than required for MIL-C-25A equivalents in Characteristic F and are better than characteristic E quality.

PART NUMBER	CAP. MFD	VOLTS DC	CASE SIZE A	B	C
LK10-504	0.5	1000	1 3/4	1	2 1/8
LK10-105	1.0	1000	1 3/4	1	2 1/8
LK10-205	2	1000	1 3/4	1	3 1/2
LK10-405	4	1000	1 3/4	1	5 3/4
LK10-605	6	1000	2 1/2	1 3/16	5
LK10-805	8	1000	2 1/2	1 3/16	6 1/4
LK10-106	10	1000	3 3/4	1 1/4	5
LK10-126	12	1000	3 3/4	1 1/4	5 3/4
LK10-156	15	1000	3 3/4	1 3/4	5 1/4
LK10-206	20	1000	3 3/4	1 3/4	6 1/4
LK20-104	0.1	2000	1 3/4	1	2 1/8
LK20-254	.25	2000	1 3/4	1	2 1/8
LK20-504	.5	2000	1 3/4	1	2 1/8
LK20-105	1.0	2000	1 3/4	1	3 1/4
LK20-205	2	2000	2 1/2	1 3/16	3 1/2
LK20-405	4	2000	2 1/2	1 3/16	5 1/2
LK20-605	6	2000	3 3/4	1 1/4	5
LK20-805	8	2000	3 3/4	1 3/4	6 1/4
LK20-106	10	2000	3 3/4	1 3/4	5 1/4
LK20-126	12	2000	3 3/4	1 3/4	6 1/4
LK20-156	15	2000	3 3/4	2 1/4	6
LK30-104	0.1	3000	1 3/4	1	2 1/8
LK30-254	.25	3000	1 3/4	1	2 1/2
LK30-504	.5	3000	1 3/4	1	3 1/4
LK30-105	1.0	3000	1 3/4	1	5 1/4
LK30-205	2	3000	2 1/2	1 3/16	5 1/2
LK30-405	4	3000	3 3/4	1 1/4	6 1/4
LK30-605	6	3000	3 3/4	1 3/4	6 1/4
LK30-805	8	3000	3 3/4	2 1/4	6 1/2
LK30-106	10	3000	3 3/4	3 3/16	5 3/4
LK40-503	.05	4000	1 3/4	1	2 1/8
LK40-104	0.1	4000	1 3/4	1	2 1/4
LK40-254	.25	4000	1 3/4	1	2 3/4
LK40-504	.5	4000	1 3/4	1	4
LK40-105	1.0	4000	2 1/2	1 3/16	4
LK40-205	2	4000	2 1/2	1 3/16	6 3/4
LK40-405	4	4000	3 3/4	1 3/4	6
LK40-605	6	4000	3 3/4	2 1/4	6 1/2
LK40-805	8	4000	3 3/4	3 3/16	6
LK40-106	10	4000	4 9/16	3 3/4	5 1/2

PART NUMBER	CAP. MFD	VOLTS DC	CASE SIZE A	B	C
LK 50-503	.05	5000	1 3/4	1	2 1/8
LK 50-104	0.1	5000	1 3/4	1	2 1/8
LK 50-254	.25	5000	1 3/4	1	3
LK 50-504	.5	5000	1 3/4	1	4 3/4
LK 50-105	1.0	5000	2 1/2	1 3/16	5
LK 50-205	2	5000	3 3/4	1 1/4	6
LK 50-405	4	5000	3 3/4	2 1/4	6 1/4
LK 50-605	6	5000	3 3/4	3 3/16	6 1/2
LK 50-805	8	5000	4 9/16	3 3/4	6 1/4
LK 50-106	10	5000	4 9/16	3 3/4	8
LK 60-503	.05	6000	3 3/4	1 1/4	2 1/4
LK 60-104	0.1	6000	3 3/4	1 1/4	2 1/4
LK 60-254	.25	6000	3 3/4	1 1/4	2 1/2
LK 60-504	.5	6000	3 3/4	1 1/4	3 3/4
LK 60-105	1.0	6000	3 3/4	1 1/4	6 1/2
LK 60-205	2	6000	3 3/4	2 1/4	6 1/4
LK 60-405	4	6000	4 9/16	3 3/4	6
LK 60-605	6	6000	4 9/16	3 3/4	8 1/4
LK 60-805	8	6000	4 9/16	3 3/4	10 1/4
LK 60-106	10	6000	8	4	9 1/4
LK 80-503	.05	8000	3 3/4	1 1/4	2 1/4
LK 80-104	0.1	8000	3 3/4	1 1/4	2 1/2
LK 80-254	.25	8000	3 3/4	1 1/4	3 3/4
LK 80-504	.5	8000	3 3/4	1 1/4	5 3/4
LK 80-105	1.0	8000	3 3/4	1 3/4	7
LK 80-205	2	8000	3 3/4	3 3/16	7
LK 80-405	4	8000	4 9/16	3 3/4	10
LK 80-605	6	8000	8	4	9 1/4
LK 80-805	8	8000	13 1/2	4 1/8	7
LK 80-106	10	8000	13 1/2	4 1/8	9 1/4
LK100-503	.05	10KV	3 3/4	1 3/4	3 1/4
LK100-104	0.1	10KV	3 3/4	1 3/4	3 1/4
LK100-254	.25	10KV	3 3/4	1 3/4	3 3/4
LK100-504	.5	10KV	3 3/4	1 3/4	5 3/4
LK100-105	1.0	10KV	3 3/4	2 1/4	7 1/4
LK100-205	2	10KV	4 9/16	3 3/4	6 3/4
LK100-405	4	10KV	8	4	9 1/4
LK100-605	6	10KV	13 1/2	4 1/8	7
LK100-805	8	10KV	13 1/2	4 1/8	9 1/4
LK100-106	10	10KV	13 1/2	4 1/8	11

HIGH VOLTAGE POWER PACKS

HV STANDARD TYPE have as their major feature special tube wells which permit easy access for replacement of the rectifier tubes.
118 V 60 cycles input.
The **HV STANDARD TYPE** is designed for sea level to 10,000 feet operation in the temperature range of minus 40°C to plus 70°C.
They must be operated in an upright position.

The height indicated is the height including the terminals.

We do not guarantee rectifier tube life.

PART NUMBER	OUTPUT KV	MA.	CASE SIZE L	W	OVERALL HEIGHT	NET PRICE
HV50-502	0-5	5	6 5/8	4 3/8	7 1/4	$ 89.40
HV100-102	0-10	1	7 1/2	5	7 1/4	108.00
HV100-502	0-10	5	8 1/4	6	8 1/4	120.00
HV150-102	0-15	1	7 1/2	5	8	118.80
HV150-502	0-15	5	8 1/4	6	8	130.80
HV200-102	0-20	1	7 1/2	5	8 1/2	138.00
HV200-502	0-20	5	10 1/4	7	12 3/4	191.40
HV300-102	0-30	1	8 3/4	6 3/4	11	207.00
HV300-502	0-30	5	10 1/4	7	12 3/4	222.00
HV500-502	0-50	5	12 1/2	11	17 1/2	426.00
HV750-202	0-75	2	19	11 1/2	20	744.00

HV SELENIUM RECTIFER TYPE

HV SELENIUM RECTIFIER TYPE is smaller than the **HV SEALED TUBE.**
INPUT 118 volts 60 to 400 cycles. **HV SELENIUM RECTIFIER TYPE** is designed to avoid rectifier type failures by the use of long life selenium rectifiers with an estimated life of 20,000 hours at 50°C temperature. Lower ambient temperature will increase life.

PART NUMBER	OUTPUT KV	MA.	CASE SIZE L	W	H	NET PRICE
HV20-202S	2	2	3 3/4	3 3/16	5	$ 45.80
HV50-302S	0-5	3	3 3/4	4 9/16	5 1/2	70.60
HV100-102S	0-12	1	3 3/4	4 9/16	7 1/2	102.30
HV150-102S	0-15	1	3 3/4	4 9/16	8 1/2	134.00

HV SEALED TUBE TYPE

HV SEALED TUBE TYPE is smaller than the **HV STANDARD TYPE. INPUT** 118 volts 60 to 400 cycles.

PART NUMBER	OUTPUT KV	MA.	CASE SIZE L	W	H	NET PRICE
HV20-202H	2	2	3 3/4	3 3/16	5 1/2	$ 54.00
HV50-302H	5	3	3 3/4	4 9/16	6	74.40
HV100-102H	0-12	1	3 3/4	4 9/16	8	93.60
HV150-102H	0-15	1	3 3/4	4 9/16	9	108.00

Plastic Capacitors, INC.

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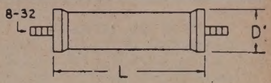
Mfrs. of
- Plastic Film Capacitors
- Pulse Forming Networks
- High Voltage Power Supplies
- Paper Dielectric Capacitors



GLASS CAPS TYPE OF Voltage rated for operation from –65°C to 85°C. Glass style container with 8-32x3/8" axial studs, except 19/32 diameter which has #18x2½" hot tinned copper wire. This capacitor is capable of passing environment at and electrical tests of MIL-L-25A characteristic E terminal D.

PART NUMBER	CAP. MFD	VOLTS DC	DIMENSIONS LGTH.	DIA.	LIST PRICE
OF20-502	.005	2000	1 3/16	19/32	$3.50
OF20-103	.01	2000	1 3/16	19/32	3.50
OF20-203	.02	2000	1 9/16	19/32	3.60
OF20-503	.05	2000	1 3/4	3/4	3.90
OF20-104	0.1	2000	2 1/4	3/4	4.00
OF20-254	0.25	2000	2 3/4	29/32	4.50
OF30-502	.005	3000	1 3/16	19/32	4.30
OF30-103	.01	3000	1 9/16	19/32	4.50
OF30-203	.02	3000	1 3/4	3/4	5.10
OF30-503	.05	3000	2 1/4	3/4	5.50
OF30-104	0.1	3000	1 3/4	1 1/8	6.00
OF30-254	0.25	3000	2	1 3/8	6.60
OF40-502	.005	4000	1 3/16	19/32	5.90
OF40-103	.01	4000	1 3/16	3/4	6.10
OF40-203	.02	4000	1 3/4	3/4	6.40
OF40-503	.05	4000	2	13/16	6.50
OF40-104	0.1	4000	2	1 1/8	7.40
OF40-254	0.25	4000	2 1/4	1 5/8	8.10
OF50-502	.005	5000	1 5/8	19/32	6.50
OF50-103	.01	5000	1 3/4	3/4	6.80
OF50-203	.02	5000	2 1/4	3/4	7.20
OF50-503	.05	5000	2 1/4	29/32	7.60
OF50-104	0.1	5000	2 1/4	1 3/8	8.50
OF50-254	0.25	5000	3	1 5/8	9.40
OF80-202	.002	8000	1 3/4	19/32	6.80
OF80-502	.005	8000	1 3/4	3/4	7.00
OF80-103	.01	8000	2 1/4	3/4	7.50
OF80-203	.02	8000	2 3/4	29/32	8.60
OF80-503	.05	8000	2 3/4	1 3/8	11.00
OF80-104	0.1	8000	3 5/8	1 5/8	12.50
OF100-102	.001	10 KV	1 5/8	19/32	7.20
OF100-202	.002	10 KV	1 5/8	3/4	7.40
OF100-502	.005	10 KV	1 3/4	13/16	8.50
OF100-103	.01	10 KV	2 1/4	29/32	9.20
OF100-203	.02	10 KV	2 3/4	1 1/8	11.40
OF100-503	.05	10 KV	2 3/4	1 5/8	14.60
OF100-603	.06	10 KV	3	1 5/8	15.50
OF150-102	.001	15 KV	2 1/4	3/4	13.80
OF150-202	.002	15 KV	2 1/4	3/4	14.60
OF150-502	.005	15 KV	2 3/4	1 1/8	17.00
OF150-103	.01	15 KV	3 3/4	1 1/8	20.00
OF150-203	.02	15 KV	4 1/4	1 3/8	22.00
OF150-503	.05	15 KV	7	1 5/8	26.00
OF200-501	.0005	20 KV	3 1/2	19/32	18.00
OF200-102	.001	20 KV	3 1/2	3/4	19.00
OF200-202	.002	20 KV	3 1/2	13/16	21.00
OF200-502	.005	20 KV	3 1/2	1 1/8	22.50
OF200-103	.01	20 KV	4 1/2	1 1/8	24.00
OF200-203	.02	20 KV	4 1/2	1 5/8	27.00
OF300-201	.0002	30 KV	4 9/16	19/32	21.00
OF300-501	.0005	30 KV	4 9/16	19/32	21.00
OF300-102	.001	30 KV	5	3/4	23.50
OF300-202	.002	30 KV	5	29/32	26.00
OF300-502	.005	30 KV	5	1 3/8	28.00
OF300-103	.01	30 KV	6 1/2	1 5/8	35.00
OF400-101	.0001	40 KV	5 3/4	3/4	22.50
OF400-201	.0002	40 KV	5 3/4	3/4	22.50
OF400-501	.0005	40 KV	5 3/4	3/4	22.50
OF400-102	.001	40 KV	6 1/2	13/16	26.00
OF400-202	.002	40 KV	6 1/2	1 1/8	28.00
OF400-502	.005	40 KV	6 1/2	1 5/8	33.00
OF500-101	.0001	50 KV	8 1/4	3/4	23.50
OF500-201	.0002	50 KV	8 1/4	3/4	23.50
OF500-501	.0005	50 KV	8 1/4	3/4	24.50
OF500-102	.001	50 KV	8 1/4	13/16	28.00
OF500-202	.002	50 KV	8 1/4	1 1/8	31.50
OF500-502	.005	50 KV	10 3/4	1 3/8	36.00
OF600-101	.0001	60 KV	10	3/4	24.50
OF600-201	.0002	60 KV	10	3/4	24.50
OF600-501	.0005	60 KV	10	3/4	28.00
OF600-102	.001	60 KV	10	29/32	34.00
OF600-202	.002	60 KV	10	1 3/8	36.50
OF600-502	.005	60 KV	11 1/2	1 5/8	41.50

RF AND PULSE GLASS CAPS The plastic films used in the manufacture of RF and PULSE GLASS CAPS have very low losses. These capacitors will handle large peak currents such as encountered in a 25 ohm type E plus forming network charged to the peak pulse voltage at a repetition rate of 1000 PPS.

TYPE TF VOLTAGE RATED FOR –65°C TO 125°C

PART NUMBER	CAP. MFD	VOLTS DC	PP VOLTS	DIMENSIONS LGTH.	DIA.	LIST PRICE
TF40-501	.0005	4000	3500	1 5/8	19/32	$13.10
TF40-102	.001	4000	3500	1 5/8	3/4	13.10
TF40-202	.002	4000	3500	1 5/8	13/16	14.20
TF40-502	.005	4000	3500	1 5/8	1 1/8	15.40
TF40-103	.01	4000	3500	2 1/8	1 1/8	21.10
TF40-203	.02	4000	3500	2 1/8	1 5/8	24.20
TF60-101	.0001	6000	5000	2 1/8	3/4	15.20
TF60-201	.0002	6000	5000	2 1/8	3/4	15.20
TF60-501	.0005	6000	5000	2 1/8	3/4	15.20
TF60-102	.001	6000	5000	2 1/8	3/4	15.20
TF60-202	.002	6000	5000	2 1/8	13/16	16.80
TF60-502	.005	6000	5000	2 1/8	1 3/8	18.60
TF60-103	.01	6000	5000	2 5/8	1 3/8	24.10
TF80-101	.0001	8000	7000	2 7/8	3/4	16.10
TF80-201	.0002	8000	7000	2 7/8	3/4	16.10
TF80-501	.0005	8000	7000	2 7/8	3/4	16.10
TF80-102	.001	8000	7000	2 7/8	13/16	21.20
TF80-202	.002	8000	7000	2 7/8	1 1/8	22.40
TF80-502	.005	8000	7000	2 7/8	1 5/8	29.00
TF80-103	.01	8000	7000	3 7/8	1 1/8	36.90
TF120-101	.0001	12 KV	10 KV	3 1/8	3/4	16.90
TF120-201	.0002	12 KV	10 KV	3 1/8	3/4	16.90
TF120-501	.0005	12 KV	10 KV	3 1/8	13/16	16.90
TF120-102	.001	12 KV	10 KV	3 1/8	29/32	22.50
TF120-202	.002	12 KV	10 KV	3 7/8	1 1/8	29.70
TF120-502	.005	12 KV	10 KV	4 7/8	1 3/8	40.20
TF180-101	.0001	18 KV	15 KV	4 1/4	3/4	18.00
TF180-201	.0002	18 KV	15 KV	4 1/4	3/4	18.00
TF180-501	.0005	18 KV	15 KV	4 1/4	1 1/8	25.20
TF180-102	.001	18 KV	15 KV	5 3/4	1 1/8	35.20
TF180-202	.002	18 KV	15 KV	5 3/4	1 3/8	44.10

TYPE HG VOLTAGE RATED FOR –65°C TO 65°C

PART NUMBER	CAP. MFD	VOLTS DC	P P VOLTS	DIMENSIONS LGTH.	DIA.	LIST PRICE
HG25-103	.01	2500	1500	1	1 1/8	$6.50
HG25-203	.02	2500	1500	1 1/2	1 1/8	7.10
HG25-503	.05	2500	1500	2	1 3/8	8.60
HG25-104	0.1	2500	1500	2 1/2	1 5/8	11.40
HG35-502	.005	3500	2500	1	1 1/8	7.50
HG35-103	.01	3500	2500	1	1 5/8	8.10
HG35-203	.02	3500	2500	1 1/2	1 3/8	8.50
HG35-503	.05	3500	2500	2 1/2	1 5/8	11.60
HG50-502	.005	5000	3000	2	1 1/8	10.50
HG50-103	.01	5000	3000	2	1 3/8	11.50
HG50-203	.02	5000	3000	3	1 3/8	12.50
HG50-503	.05	5000	3000	6	1 3/8	18.50
HG70-202	.002	7000	5000	2	29/32	11.00
HG70-502	.005	7000	5000	2	1 5/8	14.20
HG70-103	.01	7000	5000	4	1 1/8	17.00
HG70-203	.02	7000	5000	4	1 5/8	18.60
HG100-102	.001	10 KV	7000	3	29/32	12.00
HG100-202	.002	10 KV	7000	3	1 1/8	13.50
HG100-502	.005	10 KV	7000	6	1 1/8	21.00
HG100-103	.01	10 KV	7000	6	1 3/8	24.00
HG140-102	.001	14 KV	10 KV	4	29/32	15.30
HG140-202	.002	14 KV	10 KV	4	1 3/8	20.00
HG140-502	.005	14 KV	10 KV	8	1 1/8	24.00
HG140-103	.01	14 KV	10 KV	8	1 5/8	27.00
HG200-201	.0002	20 KV	15 KV	5 3/4	3/4	17.00
HG200-501	.0005	20 KV	15 KV	5 3/4	29/32	20.00
HG200-102	.001	20 KV	15 KV	5 3/4	1 1/8	22.50
HG200-202	.002	20 KV	15 KV	5 3/4	1 5/8	24.50
HG250-201	.0002	25 KV	20 KV	7 1/4	3/4	20.00
HG250-501	.0005	25 KV	20 KV	7 1/4	29/32	25.00
HG250-102	.001	25 KV	20 KV	7 1/4	1 3/8	31.00
HG250-202	.002	25 KV	20 KV	7 1/4	1 5/8	35.00

THE ABOVE ARE PARTIAL LISTINGS. WRITE FOR COMPLETE ENGINEERING INFORMATION.

Plastic Capacitors, INC.

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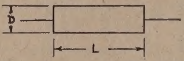
Mfrs. of
- Plastic Film Capacitors
- Pulse Forming Networks
- High Voltage Power Supplies
- Paper Dielectric Capacitors

TYPE AM LISTING

METALLIZED MYLAR* has several advantages that are outstanding. The self-healing characteristics are well-known and extend the useful life of the capacitor. The second, and most over-looked feature, is the possibility of making full use of the highest volts-per-mil rating of the film by eliminating all the weak dielectric areas. This results in ex-small size without sacrificing life, reliability and economy.



Size is given for grounded case style. If floating case is required add 1/16" to "L" dimension.

200 VOLTS D.C.

BASIC PART NO.	CAP MFD	SIZE CIRCUIT A OR F	
		D	L
AM2-103	0.01	0.174	9/16
AM2-123	.012	.174	9/16
AM2-153	.015	.174	9/16
AM2-183	.018	.174	9/16
AM2-223	.022	.187	9/16
AM2-273	.027	.187	9/16
AM2-333	.033	.235	9/16
AM2-393	.039	.235	9/16
AM2-473	.047	.235	9/16
AM2-563	.056	.235	3/4
AM2-683	.068	.235	3/4
AM2-823	.082	.235	3/4
AM2-104	0.1	.235	3/4
AM2-124	.12	.312	3/4
AM2-154	.15	.312	3/4
AM2-184	.18	.312	3/4
AM2-224	.22	.312	3/4
AM2-274	.27	.400	3/4

METALLIZED MYLAR* CAPACITORS

200 VOLTS D.C. (Cont.)

BASIC PART NO.	CAP MFD	SIZE CIRCUIT A OR F	
		D	L
AM2-334	.33	.400	3/4
AM2-394	.39	.400	3/4
AM2-474	.47	.400	1 1/16
AM2-564	.56	.400	1 1/16
AM2-684	.68	.400	1 1/16
AM2-824	.82	.562	1 1/16
AM2-105	1.0	.562	1 1/16
AM2-155	1.5	.562	1 1/4
AM2-205	2.0	.670	1 1/4
AM2-305	3.0	.670	1 1/2
AM2-405	4.0	.670	1 3/4
AM2-505	5.0	.750	1 3/4
AM2-805	8.0	1.0	1 3/4
AM2-106	10.0	1.0	2 1/4

300 VOLTS D.C.

AM3-103	0.01	0.174	9/16
AM3-123	.012	.174	9/16
AM3-153	.015	.174	9/16
AM3-183	.018	.174	9/16
AM3-223	.022	.187	9/16
AM3-273	.027	.187	9/16
AM3-333	.033	.235	9/16
AM3-393	.039	.235	3/4
AM3-473	.047	.235	3/4
AM3-563	.056	.235	3/4
AM3-683	.068	.312	3/4
AM3-823	.082	.312	3/4
AM3-104	0.10	.312	3/4
AM3-124	.12	.400	3/4
AM3-154	.15	.400	3/4
AM3-184	.18	.400	3/4
AM3-224	.22	.400	1 1/16
AM3-274	.27	.400	1 1/16
AM3-334	.33	.400	1 1/16
AM3-394	.39	.400	1 1/16
AM3-474	.47	.562	1 1/16
AM3-564	.56	.562	1 1/16
AM3-684	.68	.562	1 1/16
AM3-824	.82	.562	1 1/16
AM3-105	1.0	.562	1 1/4

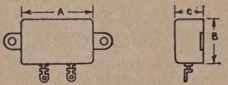
300 VOLTS D.C. (Cont.)

BASIC PART NO.	CAP MFD	SIZE CIRCUIT A OR F	
		D	L
AM4-184	.18	.400	1 1/4
AM4-224	.22	.400	1 1/4
AM4-274	.27	.562	1 1/16
AM4-334	.33	.562	1 1/16
AM4-394	.39	.562	1 1/4
AM4-474	.47	.562	1 1/4
AM4-564	.56	.670	1 1/4
AM4-684	.68	.670	1 1/4
AM4-824	.82	.750	1 1/4
AM4-105	1.0	.750	1 3/8
AM4-155	1.5	1.00	1 1/4
AM4-205	2.0	1.00	1 3/4
AM4-305	3.0	1.00	2 1/4
AM4-405	4.0	1.00	2 1/2
AM3-155	1.5	.670	1 1/4
AM3-205	2.0	.750	1 1/4
AM3-305	3.0	.750	1 3/4
AM3-405	4.0	1.00	1 3/8
AM3-505	5.0	1.00	1 3/4
AM3-705	7.0	1.00	2 1/4

400 VOLTS D.C.

AM4-103	0.01	0.187	3/4
AM4-123	.012	.235	3/4
AM4-153	.015	.235	3/4
AM4-183	.018	.235	3/4
AM4-223	.022	.235	3/4
AM4-273	.027	.312	3/4
AM4-333	.033	.312	3/4
AM4-393	.039	.312	3/4
AM4-473	.047	.312	3/4
AM4-563	.056	.400	3/4
AM4-683	.068	.400	3/4
AM4-823	.082	.400	3/4
AM4-104	0.10	.400	1 1/16
AM4-124	.12	.400	1 1/16
AM4-154	.15	.400	1 1/16

BATH TUB CONTAINER



TYPE AB Capacitors are metallized Mylar* elements hermetically sealed in a bathtub style container. The self-healing and clearing characteristics make possible the smallest high quality capacitor for the given rating.

200 VOLTS D.C.

PART NUMBER	CAP. MFD.	CASE SIZE A	B	C
AB2-504	0.5	1 1/8	1	13/16
AB2-105	1.0	1 1/8	1	13/16
AB2-205	2.0	1 1/8	1	13/16
AB2-405	4.0	1 3/4	1	3/4
AB2-505	5.0	1 3/4	1	3/4
AB2-605	6 0	1 3/4	1 1/4	7/8
AB2-805	8.0	1 3/4	1 1/4	7/8
AB2-106	10.0	2	1 3/4	7/8
AB2-126	12.0	2	1 3/4	7/8
AB2-156	15.0	2	1 3/4	7/8
AB2-206	20.0	2	2	1 1/8
AB2-306	30.0	2	2	1 1/4

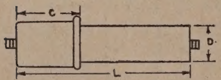
300 VOLTS D.C.

PART NUMBER	CAP. MFD.	CASE SIZE A	B	C
AB3-504	0.5	1 1/8	1	13/16
AB3-105	1.0	1 1/8	1	13/16
AB3-205	2.0	1 3/4	1	3/4
AB3-405	4.0	1 3/4	1 1/4	7/8
AB3-505	5.0	2	1 3/4	7/8
AB3-605	6.0	2	1 3/4	7/8
AB3-805	8.0	2	1 3/4	7/8
AB3-106	10.0	2	2	1 1/8
AB3-126	12.0	2	2	1 1/8
AB3-156	15.0	2	2	1 1/4

400 VOLTS D.C.

PART NUMBER	CAP MFD.	CASE SIZE A	B	C
AB4-104	0.1	1 1/8	1	13/16
AB4-254	0.25	1 1/8	1	13/16
AB4-504	0.5	1 1/8	1	13/16
AB4-105	1.0	1 3/4	1	3/4
AB4-205	2.0	1 3/4	1 1/4	7/8
AB4-405	4.0	2	1 3/4	7/8
AB4-505	5.0	2	2	1 1/8
AB4-605	6.0	2	2	1 1/8
AB4-805	8.0	2	2	1 1/4

TYPE OT
TUBULAR TO 120KV



Type OT capacitors are designed for long life at high voltage in the medium temperature range. Type OT capacitors are the smallest and most economical capacitors available for high voltage DC filtering.

CASE is hermetically sealed and designed for operation under oil. Many of the lower voltage units may be operated in air. Many capacitance values at stated voltages are available in two physical sizes, providing the design engineer flexibility in placement of parts and circuit wiring.

MOUNTING. Must be mounted vertically, corona cap at top.

TEMPERATURE RANGE. Type OT capacitors will give long life in the temperature range of −40°C to 55°C with the rated voltage applied.

TERMINALS and mounting studs are axial 3/8-16x3/4" long.

*DU PONT. POLYESTER FILM

PART NUMBER	CAP MFD.	KILO-VOLTS	D ±1/16	L ±1/8
OT100-104	.1	10	2 1/8	5
OT100-254	.25	10	2 3/4	5 3/4
OT100-504	.5	10	3 3/4	8 5/8
OT200-203	.02	20	1 1/2	7 5/8
OT200-503	.05	20	2 1/8	7 5/8
OT200-104	.1	20	2 3/4	8 7/8
OT200-254	.25	20	2 3/4	14 1/2
OT200-254A	.25	20	3 3/4	9 3/4
OT200-504	.5	20	3 3/4	12 3/4
OT300-103	.01	30	1 1/2	8 5/8
OT300-203	.02	30	2 1/8	8
OT300-203A	.02	30	1 1/2	11 5/8
OT300-503	.05	30	2 3/4	10 3/8
OT300-104	0.1	30	2 3/4	13 7/8
OT300-104A	0.1	30	3 3/4	9 3/8
OT300-254	.25	30	3 3/4	18
OT400-502	.005	40	1 1/2	9 3/4
OT400-103	.01	40	1 1/2	12 3/4
OT400-203	.02	40	1 1/2	18 3/4
OT400-203A	.02	40	2 1/8	11 3/4
OT400-503	.05	40	2 1/8	19 3/4
OT400-503A	:05	40	2 3/4	13 3/4
OT400-104	0.1	40	3 3/4	14 3/4
OT500-202	.002	50	1 1/2	8
OT500-502	.005	50	1 1/2	11 1/2
OT500-103	.01	50	1 1/2	16 1/2
OT500-103A	.01	50	2 1/8	11 1/2
OT500-203	.02	50	2 3/4	11 1/2
OT500-503	.05	50	2 3/4	17 3/4
OT500-503A	.05	50	3 3/4	11 1/2
OT500-104	0.1	50	3 3/4	19
OT600-202	.002	60	1 1/2	10 3/8
OT600-502	.005	60	1 1/2	14 7/8
OT600-502A	.005	60	2 1/8	11 7/8

PART NUMBER	CAP MFD.	KILO-VOLTS	D ±1/16	L ±1/8
OT600-103	.01	60	2 1/8	14 7/8
OT600-103A	.01	60	2 3/4	11 7/8
OT600-203	.02	60	2 3/4	14 7/8
OT600-203A	.02	60	3 3/4	10 3/8
OT600-503	.05	60	3 3/4	16 3/8
OT600-104	0.1	60	3 3/4	27 1/4
OT800-102	.001	80	1 1/2	13
OT800-202	.002	80	1 1/2	15
OT800-502	.005	80	1 1/2	22
OT800-502A	.005	80	2 1/8	15
OT800-103	.01	80	2 1/8	21
OT800-103A	.01	80	2 3/4	15
OT800-203	.02	80	2 3/4	21
OT800-203A	.02	80	3 3/4	15
OT800-503	.05	80	3 3/4	27 1/2
OT1000-501	.0005	100	1 1/2	15 5/8
OT1000-102	.001	100	1 1/2	15 5/8
OT1000-202	.002	100	1 1/2	20 5/8
OT1000-202A	.002	100	2 1/8	15 5/8
OT1000-502	.005	100	2 1/8	20 5/8
OT1000-502A	.005	100	2 3/4	15 5/8
OT1000-103	.01	100	2 3/4	20 5/8
OT1000-103A	.01	100	3 3/4	15 5/8
OT1000-203	.02	100	3 3/4	20 5/8
OT1000-303	.03	100	3 3/4	25 3/8
OT1200-501	.0005	120	1 1/2	18 1/4
OT1200-102	.001	120	1 1/2	18 1/4
OT1200-202	.002	120	1 1/2	24 1/4
OT1200-202A	.002	120	2 1/8	18 1/4
OT1200-502	.005	120	2 3/4	21 1/4
OT1200-103	.01	120	2 3/4	27 1/4
OT1200-103A	.01	120	3 3/4	27 1/4
OT1200-203	.02	120	3 3/4	27 1/4

Plastic Capacitors, INC.

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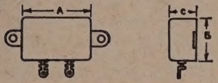
Mfrs. of
- Plastic Film Capacitors
- Pulse Forming Networks
- High Voltage Power Supplies
- Paper Dielectric Capacitors

POLYSTYRENE CAPACITORS

TYPE PX — CLOSE TOLERANCE

BATH TUB CONTAINER



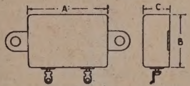
TYPE PX Capacitors are close tolerance polystyrene capacitors housed in hermetically sealed bathtub containers. Terminals are solder lugs mounted on glass solder-seal bushings. Extended foil (non-inductive) construction is used.

CAPACITANCE TOLERANCE available is plus or minus 1%, 0.5%, 0.25% or 0.1%. Add the suffix "E" and the numbers 1 for 1%, 05 for 5%, 025 for 0.25% and 01 for 0.1% capacitance tolerance to the part number required.

PART NUMBER	CAP. MFD.	VOLTS DC	CONTAINER SIZE A	B	C
PX05-124	.12	50	1 1/8	1	13/16
PX05-154	.15	50	1 1/8	1	13/16
PX05-224	.22	50	1 1/8	1	13/16
PX05-254	.25	50	1 3/4	1	3/4
PX05-304	.30	50	1 3/4	1	3/4
PX05-334	.33	50	1 3/4	1	3/4
PX05-404	.40	50	1 3/4	1	3/4
PX05-474	.47	50	1 3/4	1 1/4	7/8
PX05-504	.50	50	1 3/4	1 1/4	7/8
PX05-604	.60	50	1 3/4	1 1/4	7/8
PX05-684	.68	50	1 3/4	1 1/4	7/8
PX05-804	.80	50	1 3/4	1 1/4	7/8
PX05-824	.82	50	1 3/4	1 1/4	7/8
PX05-105	1.0	50	2	1 3/4	7/8

PART NUMBER	CAP. MFD.	VOLTS DC	CONTAINER SIZE A	B	C
PX05-205	2	50	2	2	1 1/8
PX05-305	3	50	2	2	1 1/4
PX05-405	4	50	2	2	1 1/2
PX1-803	.08	100	1 1/8	1	13/16
PX1-823	.082	100	1 1/8	1	13/16
PX1-104	0.1	100	1 1/8	1	13/16
PX1-124	.12	100	1 3/4	1	3/4
PX1-154	.15	100	1 3/4	1	3/4
PX1-204	.20	100	1 3/4	1	3/4
PX1-224	.22	100	1 3/4	1 1/4	7/8
PX1-254	.25	100	1 3/4	1 1/4	7/8
PX1-304	.30	100	1 3/4	1 1/4	7/8
PX1-334	.33	100	1 3/4	1 1/4	7/8
PX1-404	.40	100	1 3/4	1 1/4	7/8
PX1-474	.47	100	2	1 3/4	7/8
PX1-504	.50	100	2	1 3/4	7/8
PX1-604	.60	100	2	1 3/4	7/8
PX1-804	.80	100	2	1 3/4	7/8
PX1-824	.82	100	2	2	1 1/8
PX1-105	1.0	100	2	2	1 1/8
PX1-205	2	100	2	2	1 1/2
PX2-303	.03	200	1 1/8	1	13/16
PX2-333	.033	200	1 1/8	1	13/16
PX2-403	.04	200	1 1/8	1	13/16
PX2-473	.047	200	1 1/8	1	13/16
PX2-503	.05	200	1 1/8	1	13/16
PX2-603	.06	200	1 1/8	1	13/16
PX2-683	.068	200	1 1/8	1	13/16
PX2-803	.08	200	1 3/4	1	3/4
PX2-823	.082	200	1 3/4	1	3/4
PX2-104	0.1	200	1 3/4	1	3/4
PX2-124	.12	200	1 3/4	1 1/4	7/8
PX2-154	.15	200	1 3/4	1 1/4	7/8
PX2-204	.20	200	1 3/4	1 1/4	7/8
PX2-224	.22	200	1 3/4	1 1/4	7/8
PX2-254	.25	200	1 3/4	1 1/4	7/8
PX2-304	.30	200	2	1 3/4	7/8
PX2-334	.33	200	2	1 3/4	7/8
PX2-404	.40	200	2	1 3/4	7/8
PX2-474	.47	200	2	1 3/4	7/8
PX2-504	.50	200	2	2	1 1/8
PX2-604	.60	200	2	2	1 1/8
PX2-684	.68	200	2	2	1 1/8
PX2-804	.80	200	2	2	1 1/8
PX2-824	.82	200	2	2	1 1/8
PX2-105	1.0	200	2	2	1 1/4
PX4-102	.001	400	1 1/8	1	13/16
PX4-122	.0012	400	1 1/8	1	13/16
PX4-152	.0015	400	1 1/8	1	13/16
PX4-202	.002	400	1 1/8	1	13/16
PX4-222	.222	400	1 1/8	1	13/16
PX4-302	.003	400	1 1/8	1	13/16
PX4-332	.0033	400	1 1/8	1	13/16
PX4-402	.004	400	1 1/8	1	13/16
PX4-472	.0047	400	1 1/8	1	13/16
PX4-502	.005	400	1 1/8	1	13/16
PX4-602	.006	400	1 1/8	1	13/16
PX4-682	.0068	400	1 1/8	1	13/16
PX4-802	.008	400	1 1/8	1	13/16
PX4-822	.0082	400	1 1/8	1	13/16
PX4-103	.01	400	1 1/8	1	13/16
PX4-123	.012	400	1 1/8	1	13/16
PX4-153	.015	400	1 1/8	1	13/16
PX4-203	.02	400	1 1/8	1	13/16
PX4-223	.022	400	1 1/8	1	13/16
PX4-303	.03	400	1 3/4	1	3/4
PX4-333	.033	400	1 3/4	1	3/4
PX4-403	.04	400	1 3/4	1	3/4
PX4-473	.047	400	1 3/4	1 1/4	7/8
PX4-503	.05	400	1 3/4	1 1/4	7/8
PX4-603	.06	400	1 3/4	1 1/4	7/8
PX4-683	.068	400	1 3/4	1 1/4	7/8
PX4-803	.08	400	1 3/4	1 1/4	7/8
PX4-823	.082	400	1 3/4	1 1/4	7/8
PX4-104	0.1	400	2	1 3/4	7/8
PX4-124	.12	400	2	1 3/4	7/8
PX4-154	.15	400	2	1 3/4	7/8
PX4-204	.2	400	2	2	1 1/8
PX4-224	.22	400	2	2	1 1/8
PX4-254	.25	400	2	2	1 1/8
PX4-304	.3	400	2	2	1 1/4

TYPE PA

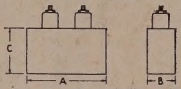


TYPE PA capacitors are non-inductive (extended foil) polystyrene capacitors, hermetically sealed in hot-tinned or terne-plate steel bathtub containers. Terminals are solder lugs mounted in compression type glass solder-seal bushings.

CAPACITANCE TOLERANCE is 5% as standard and 2% upon request. For 1% tolerance and less, see listings on types PV, PW, and PX.

PART NUMBER	CAP. MFD.	VOLTS DC	CONTAINER SIZE A	B	C
PA05-304	.3	50	1 1/8	1	13/16
PA05-404	.4	50	1 1/8	1	13/16
PA05-504	.5	50	1 1/8	1	13/16
PA05-604	.6	50	1 3/4	1	3/4
PA05-804	.8	50	1 3/4	1	3/4
PA05-105	1.0	50	2	1 3/4	7/8
PA05-205	2.0	50	2	2	1 1/8
PA05-305	3.0	50	2	2	1 1/2
PA1-204	0.2	100	1 1/8	1	13/16
PA1-254	.25	100	1 1/8	1	13/16
PA1-304	.3	100	1 3/4	1	3/4
PA1-404	.4	100	1 3/4	1	3/4
PA1-504	.5	100	1 3/4	1 1/4	7/8
PA1-604	.6	100	1 3/4	1 1/4	7/8
PA1-804	.8	100	2	1 3/4	7/8
PA1-105	1.0	100	2	1 3/4	7/8
PA1-205	2	100	2	2	1 1/8
PA2-104	0.1	200	1 1/8	1	13/16
PA2-204	.2	200	1 3/4	1	3/4
PA2-254	.25	200	1 3/4	1	3/4
PA2-304	.3	200	1 3/4	1 1/4	7/8
PA2-404	.4	200	1 3/4	1 1/4	7/8
PA2-504	.5	200	2	1 3/4	7/8
PA2-604	.6	200	2	1 3/4	7/8
PA2-804	.8	200	2	2	1 1/8
PA2-105	1.0	200	2	2	1 1/8
PA4-603	.06	400	1 1/8	1	13/16
PA4-803	.08	400	1 3/4	1	3/4
PA4-104	0.1	400	1 3/4	1	3/4
PA4-204	.2	400	2	1 3/4	7/8
PA4-254	.25	400	2	1 3/4	7/8
PA4-304	.3	400	2	1 3/4	7/8
PA4-404	.4	400	2	2	1 1/8
PA4-504	.5	400	2	2	1 1/8
PA4-604	.6	400	2	2	1 1/4
PA6-103	.01	600	1 1/8	1	13/16
PA6-203	.02	600	1 1/8	1	13/16
PA6-303	.03	600	1 1/8	1	13/16
PA6-403	.04	600	1 1/8	1	13/16
PA6-503	.05	600	1 1/8	1	13/16
PA6-603	.06	600	1 3/4	1	3/4
PA6-803	.08	600	1 3/4	1	3/4
PA6-104	0.1	600	1 3/4	1 1/4	7/8
PA6-204	.2	600	2	1 3/4	1 1/8
PA6-254	.25	600	2	2	1 1/8
PA6-304	.3	600	2	2	1 1/8
PA6-404	.4	600	2	2	1 1/4
PA6-504	.5	600	1 1/8	1 1/4	1 1/2

TYPE PD



TYPE PD capacitors are housed in hermetically sealed fabricated CP70 style containers and meet the most stringent environmental conditions. Windings are extended foil (non-inductive) construction.

CAPACITANCE TOLERANCE Standard tolerance is 5%. Also available are 2%, 1% and 0.5% tolerances.

PART NUMBER	CAP. MFD.	VOLTS DC	CONTAINER SIZE A	B	C
PD05-205	2	50	1 3/4	1	2 1/4
PD05-305	3	50	1 3/4	1	2 1/2
PD05-405	4	50	2 1/2	1 3/16	2 1/4
PD05-505	5	50	2 1/2	1 3/16	2 1/2
PD05-605	6	50	3 3/4	1 1/4	2 1/4
PD05-805	8	50	3 3/4	1 1/4	2 1/2
PD05-106	10	50	3 3/4	1 3/4	2 1/4
PD1-105	1	100	1 3/4	1	2 1/4
PD1-205	2	100	2 1/2	1 3/16	2 1/4
PD1-305	3	100	2 1/2	1 3/16	3
PD1-405	4	100	3 3/4	1 1/4	2 1/2
PD1-505	5	100	3 3/4	1 1/4	3
PD1-605	6	100	3 3/4	1 3/4	2 1/2
PD1-805	8	100	3 3/4	2 1/4	2 1/2
PD1-106	10	100	3 3/4	2 1/4	3
PD2-105	1	200	1	1 3/4	3
PD2-205	2	200	2 1/2	1 3/16	3
PD2-305	3	200	3 3/4	1 1/4	3
PD2-405	4	200	3 3/4	1 1/4	3 1/2
PD2-505	5	200	3 3/4	1 3/4	3 1/2
PD2-605	6	200	3 3/4	1 3/4	3 1/2
PD2-805	8	200	3 3/4	2 1/4	3 1/2
PD2-106	10	200	3 3/4	3 3/16	3 1/2
PD4-254	.25	400	1 3/4	1	2 1/4
PD4-504	.5	400	2 1/2	1 3/16	2 1/4
PD4-105	1.0	400	3 3/4	1 1/4	2 1/2
PD4-205	2	400	3 3/4	1 1/4	4
PD4-305	3	400	3 3/4	1 3/4	4
PD4-405	4	400	3 3/4	2 1/4	4
PD4-505	5	400	3 3/4	3 3/16	4
PD4-605	6	400	3 3/4	3 3/16	4
PD4-805	8	400	3 3/4	4 9/16	4
PD4-106	10	400	3 3/4	3 3/16	7 1/2
PD6-254	.25	600	1 3/4	1	2 1/2
PD6-504	.5	600	1 3/4	1	4
PD6-105	1.0	600	2 1/2	1 3/16	4
PD6-205	2	600	3 3/4	1 3/4	4
PD6-305	3	600	3 3/4	2 1/4	4
PD6-405	4	600	3 3/4	3 3/16	4
PD6-505	5	600	3 3/4	4 9/16	3 1/2
PD6-605	6	600	3 3/4	4 9/16	4
PD6-805	8	600	3 3/4	3 3/16	7 1/2
PD6-106	10	600	3 3/4	4 9/16	6 1/2

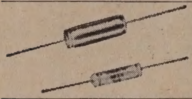
OHMITE® RESISTORS • RHEOSTATS • TAP SWITCHES
RELAYS • TANTALUM CAPACITORS
VARIABLE TRANSFORMERS • RF CHOKES

TAN-O-MITE® TANTALUM CAPACITORS

SERIES TF TANTALUM FOIL TYPE

Polar and Non-Polar Types—Plain & Etched —55°C to +85°C

The only type available in polar or non-polar units. Also in plain or etched foil. Polar units will withstand reversals up to 3.75 VDC. Temperature range —55°C to +85°C. Capacitance tolerance plain foil ±20%; etched foil less than 50 volts, —15 +75%; 50-99 volts, —15 +50%; 100-150 volts, —15 +30%. Considerably better leakage and power factor than wire type units. Meets MIL-C-3965B, Styles CL24, 25, 34, 35. Also available with plastic insulating sleeve .007" thick. 1½" leads.



Case	D	L
J	3/16"	11/16"
K	9/32"	7/8"
L	3/8"	1 7/16"
N	3/8"	2 1/8"
P	3/8"	2 3/4"

SERIES TF STOCK VALUES

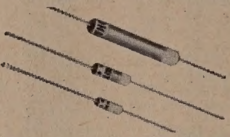
PLAIN		D.C. Volts	ETCHED		PLAIN		D.C. Volts	ETCHED		PLAIN		D.C. Volts	ETCHED	
Mfd.	Cs. Size		Mfd.	Cs. Size	Mfd.	Cs. Size		Mfd.	Cs. Size	Mfd.	Cs. Size		Mfd.	Cs. Size
10†	J	3			70*	N	15	250*	N	0.6*	J	60	2*	J
50†	K	3			100*	P	15	350*	P	2.5*	K	60	7.5*	K
10*	J	3.75					25	10	J	8.5*	L	60	25*	L
45*	K	3.75			3	J	25	40	K	17*	N	60	50*	N
140*	L	3.75			12	K	25	120	L	24*	P	60	67*	P
280*	N	3.75			35	L	25	125	L	1	J	75	3	J
400*	P	3.75			70	N	25	250	N	4	K	75	12	K
8	J	6			100	P	25	350	P	14	L	75	30	L
30	K	6			1.5*	J	25	5*	J	28	N	75	70	N
35	K	6			6*	K	25	20*	K	40	P	75	100	P
100	L	6			20*	L	25	70*	L	0.5*	J	75	1.5*	J
200	N	6			40*	N	25	140*	N	2*	K	75	6*	K
300	P	6			60*	P	25	200*	P	7*	L	75	15*	L
7*	J	6			2.5	J	30	8	J	14*	N	75	35*	N
25*	K	6			10	K	30	32	K	20*	P	75	50*	P
85*	L	6			30	L	30	110	L	0.8	J	100	2	J
175*	N	6			60	N	30	220	N	3	K	100	8	K
250*	P	6			85	P	30	300	P	10	L	100	25	L
6	J	10			1.4*	J	30	4.5*	J	20	N	100	50	N
25	K	10			5.5*	K	30	18*	K	30	P	100	70	P
80	L	10			18*	L	30	60*	L	0.4*	J	100	1*	J
160	N	10			36*	N	30	120*	N	1.5*	K	100	4*	K
220	P	10			45*	P	30	170*	P	5*	L	100	12*	L
4*	J	10			1.5	J	50	4.5	J	10*	N	100	25*	N
16*	K	10			6	K	50	18	K	15*	P	100	35*	P
55*	L	10			20	L	50	60	L	0.5	J	150		
110*	N	10			40	N	50	100	N	2	K	150		
150*	P	10			55	P	50	150	P	4	L	150		
4.5	J	15			0.8*	J	50	2.5*	J	7	L	150	1	J
10	K	15	15	J	3*	K	50	10*	K	8	N	150	4	K
18	K	15	60	K	10*	L	50	30*	L	12	N	150	13	L
55	L	15	200	L	20*	N	50	60*	N	14	N	150	25	N
110	N	15	400	N	30*	P	50	80*	P	20	P	150	36	P
160	P	15	580	P	1.25	J	60	4	J	0.25*	J	150	0.5*	J
		15	10*	J	5	K	60	15	K	1*	K	150	2*	K
2.5*	J	15	40*	K	17	L	60	50	L	3.5*	L	150	6*	L
10*	K	15	120*	L	34	N	60	88	N	7*	N	150	12*	N
35*	L	15	125*	L	48	P	60	125	P	10*	P	150	18*	P

*Non-Polar units. †Polar or Non-Polar.

SERIES TW TANTALUM WIRE TYPE

Polar Type Only —55°C to +85°C

The smallest subminiature electrolytic capacitors available. —55°C +85°C. 2" leads. Insulated with Mylar plastic sleeve. Polar type units used in DC circuits where capacitance value can exceed nominal circuit requirements considerably (standard tolerance is —0 +100%). Wide use in hearing aids and other subminiature apparatus.



Case	D	L
TK	.060	.150
TJ	.060	.190
HK	.075	.150
HJ	.075	.190
S	.080	.234
M	.100	.218
B	.134	.375
C	.134	.562
E	.134	.812

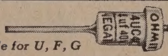
SERIES TW STOCK VALUES

Mfd.	DCWV	Stock No.*	Net 1-24	Mfd.	DCWV	Stock No.*	Net 1-24
0.1	20	R1TJ20	**$1.61**	4	3	4HJ3	**$1.61**
	60	R1M60	**1.61**		4	4S4	**1.61**
0.2	20	R2TK20	**1.61**		20	4B20	**1.68**
	150	R2E150	**2.79**	5	30	5C30	**2.07**
0.5	10	R5TK10	**1.61**		60	5E60	**2.79**
	16	R5TJ16	**1.61**	6	1.25	6HJ1R25	**1.61**
	20	R5S20	**1.61**	8	1.25	8S1R25	**1.61**
	80	R5B80	**1.77**		4	8M4	**1.61**
1.0	4	1TK4	**1.61**	10	8	10B8	**1.68**
	8	1HK8	**1.61**		16	10C16	**1.68**
	10	1HJ10	**1.61**		30	10E30	**2.79**
	20	1M20	**1.61**	15	1.25	15M1R25	**1.61**
	60	1B60	**1.77**				
	80	1C80	**2.07**	20	2	20B2	**1.68**
2	1.25	2TK1R25	**1.61**	25	6	25C6	**1.68**
	4	2HJ4	**1.61**				
	8	2S8	**1.61**	30	10	30E10	**2.34**
	40	2B40	**1.77**	50	2	50C2	**1.68**
3	1.25	3HK1R25	**1.61**	60	4	60E4	**2.34**
	80	3E80	**2.79**				
	4	3HJ4	**1.61**	75	2	75E2	**2.34**

*Middle letters in Cat. No. indicate case size.

Case Size		1-24 Quantity Net Prices Foil Units*	
COM'L	MIL	PLAIN	ETCHED
J	C1	4.90	4.90
K	C2	7.42	8.16
L	C3	11.76	14.21
N	C4	16.49	23.14
P	C5	22.05	30.84

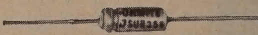
*For insulating sleeve add 10c.



Style for U, F, G

SERIES TS TANTALUM SLUG TYPE

Polar Type — 85°C & 125°C Ratings



Style for SU

Utilizes a porous anode of sintered tantalum. 1½" leads. For polar applications, these capacitors offer the best characteristics of all three types. Meets MIL-C-3965B, Styles CL44, 45, 64, 65. Stocked in two shapes. Hat shaped sizes (uninsulated dimensions); Size U, 15/32 x 5/16 dia.; F, 11/16 x 15/32 dia.; G, 49/64 x 37/64 dia. Also straight cylindrical shape SU, 15/32 x 3/16 dia. Also available with plastic insulating sleeve .015" thick.

Size	1-24 Quantity Net Prices Slug Units*			
	85°C		125°C	
	T Tol.†	S	T Tol.†	S
U, SU	3.15	3.50	4.40	4.90
F	6.90	7.70	9.65	10.80
G	8.55	9.50	12.00	13.30

*For insulating sleeve add 10c. For prices on MIL-C-3965B units, consult factory.
†T Tolerance = —15+50%; S tol. = —15+20%; M tol. = ±20%. See* table right.

SERIES TS STOCK VALUES †

Mfd.	DC Volts 85°C	DC Volts 125°C	Size	Mfd.	DC Volts 85°C	DC Volts 125°C	Size	Mfd.	DC Volts 85°C	DC Volts 125°C	Size	Mfd.	DC Volts 85°C	DC Volts 125°C	Size
30	6		U	15	15		U	5	50		U	15	75		F
30	6		SU	15	15		SU	5	50		SU	15		50	F
30		4	U	15		10	U	5		33	U	40	75		G
68*	6		SU	33*	15		SU	10*	50		SU	40		50	G
140	6		F	70	15		F	25	50		F	2.5	100		U
140		4	F	70		10	F	25		33	F	2.5	100		SU
330	6		G	170	15		G	60	50		G	2.5		70	U
330		4	G	170		10	G	60		33	G	4.7*	100		SU
25	8		U	10	25		U	4	60		U	11	100		F
25	8		SU	10	25		SU	4	60		SU	11		70	F
25		5	U	10		17	U	4		40	U	30	100		G
56*	8		SU	22*	25		SU	8.2*	60		SU	30		70	G
20	10		U	8	30		U	20	60		F	1.7	125		U
20	10		SU	8	30		SU	20		40	F	1.7	125		SU
20		7	U	8		20	U	50	60		G	1.7		85	U
47*	10		SU	15*	30		SU	50		40	G	9	125		F
100	10		F	40	30		F	3.5	75		U	9		85	F
100		7	F	40		20	F	3.5	75		SU	25	125		G
250	10		G	100	30		G	3.5		50	U	25		85	G
250		7	G	100		20	G	6.8*	75		SU				

*M Tolerance, See Factory for Prices.
†See Tolerances Under Price Table left.

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

TYPE TM TWIST-MOUNT ELECTROLYTICS

Designed for 85° C operation. Available in single, dual, triple and quadruple capacitors units. Assembled in aluminum containers providing protection against moisture. Easy to mount, low leakage, long shelf life. Highly dependable. For use in applications where high temperatures, voltage, surges, and ripple currents are encountered; as in radio and television receivers, amplifiers and similar equipment. Packaged in new Vu-Pak especially designed for the new Pyramid Capac-O-Mat.

Stock No. TMS	Former Stock No. TMS	Capacity	Voltage	Dia-meter	Length	List
1010	1	1000	6	1⅜	2	2.35
1020	2	2000	6	1⅜	2	2.50
1030	3	3000	10	1⅜	2½	3.60
1040	4	1000	15	1	2½	2.50
1050	5	2000	15	1⅜	2½	3.40
1060	6	3000	15	1⅜	3	3.45
1070	7	4000	15	1⅜	3½	3.70
1080	8	50	25	1	2	1.65
1090	9	100	25	1	2	1.60
1100	73	250	25	1	2	1.90
1110	10	500	25	1	2	2.50
1120	11	1000	25	1⅜	2	3.50
1130	12	100	50	1	2	1.65
1140	13	150	50	1	2	1.80
1150	14	250	50	1	2½	1.95
1160	15	500	50	1⅜	2	2.60
1170	16	1000	50	1⅜	3½	3.70
1180		1500	50	1⅜	4	3.80
1190	17	20	150	1	2	1.75
1200	18	30	150	1	2	1.50
1210	19	40	150	1	2	1.95
1220	20	50	150	1	2	1.60
1230	21	80	150	1	2	1.80
1240	22	100	150	1	2	1.95
1250	23	120	150	1	2½	2.10
1260	76	120	150	1⅜	2	2.10
1270	24	140	150	1	3	2.10
1280	25	150	150	1	3	2.10
1285		150	150	1⅜	2	2.10
1290	26	200	150	1⅜	2½	2.40
1300	27	300	150	1⅜	3	2.75
1310	77	40	175	1	2	1.65
1320	78	50	175	1	2	1.70
1330	79	80	175	1	2	1.90
1340	80	100	175	1	2	2.05
1350	81	120	175	1	2½	2.15
1360	82	140	175	1	3	2.20
1370	83	150	175	1	3	2.20
1380	84	200	175	1⅜	2½	2.50
1390	85	300	175	1⅜	3	2.85
1400		160	200	1⅜	2½	3.10
1410	74	5	250	1	2	1.35
1420	28	15	250	1	2	1.90
1430	29	20	250	1	2	1.55
1440	30	30	250	1	2	2.10
1450	31	40	250	1	2	1.75
1460	32	60	250	1	2½	2.50
1470	33	80	250	1	3	2.65
1480	34	150	250	1⅜	2½	3.05
1490	75	200	250	1⅜	3½	3.60
1500	35	15	300	1	2	1.95
1510	36	30	300	1	2	2.15
1520	37	40	300	1	2½	1.85
1530	38	50	300	1	2½	2.50
1540	39	80	300	1	3	2.50
1550	40	100	300	1	3	2.85
1560	41	125	300	1⅜	3	3.45
1570	42	150	300	1⅜	3	3.45
1580	89	200	300	1⅜	3½	2.85
1590		250	300	1⅜	4	5.50
1600	43	15	350	1	2	2.00
1610	44	30	350	1	2½	1.85
1620	45	40	350	1	2½	1.95
1630	46	50	350	1	3	2.05
1640		60	350	1	3	2.15
1650	47	80	350	1⅜	2½	2.80
1660	48	125	350	1⅜	3	3.90
1670	86	300	350	1⅜	5	5.75
1680	49	10	400	1	2	1.85
1690	50	20	400	1	2	2.15
1700	51	40	400	1	3	3.10
1710	52	80	400	1⅜	2½	3.65
1720		4	450	1	2	1.35
1730	53	10	450	1	2	1.50
1740	54	15	450	1	2	1.65
1750	55	20	450	1	2	1.80
1760	56	30	450	1	2½	1.90
1770	57	40	450	1	3	2.00
1780	58	50	450	1	3	2.30
1790	59	60	450	1⅜	2½	2.55
1800	60	80	450	1⅜	3	3.00
1810	61	100	450	1⅜	3	3.40
1820		125	450	1⅜	3½	3.80
1830	62	150	450	1⅜	4	4.20
1840	87	200	450	1⅜	5	6.00
1850	88	250	450	1⅜	5	6.75
1860	66	10	500	1	2	1.65
1870	67	20	500	1	2½	1.80
1880	68	30	500	1	3	1.95
1890	69	40	500	1	3½	2.45
1900	70	80	500	1⅜	3½	3.15
1910	71	90	500	1⅜	3½	3.45
1920	72	10	525	1	2	1.70

Stock No. TMD	Former Stock No. TMD	Capacity	Voltage	Dia-meter	Length	List
2005	64	250-1000	10-6	1⅜	2	2.80
2010	1	1000-500	10-10	1⅜	2	4.00
2015	2	1000-1000	15-15	1	3	4.35
2020		1000-1000	15-15	1⅜	2	4.35
2025	109	500-100	16-16	1	2	3.85
2030	3	40-40	25-25	1	2	1.95
2035		100-70	25-25	1	2	1.75
2040	4	150-50	25-25	1	2	2.35
2045	5	50-50	50-50	1	2	1.65
2050	107	100-100	50-50	1	2	2.05
2055	94	50-500	150-5	1	3	2.40
2060	65	50-150	150-25	1	2	2.70
2065		150-100	150-25	1⅜	2	2.65
2070	66	40-20	150-50	1	2	2.50
2075	6	20-20	150-150	1	2	1.65
2080	7	30-15	150-150	1	2	2.15
2085	8	30-30	150-150	1	2	1.80
2090	9	40-20	150-150	1	2	1.80
2095	10	40-30	150-150	1	2	1.80
2100	11	40-40	150-150	1	2	1.85
2105	12	50-30	150-150	1	2	1.95
2110	13	50-50	150-150	1	2	2.10
2115	14	60-20	150-150	1	2	2.45
2120	15	60-60	150-150	1	2½	2.30
2125		70-30	150-150	1	2½	2.15
2130		75-75	150-150	1	2½	2.55
2135	16	80-40	150-150	1	2½	2.25
2140	17	80-50	150-150	1	2½	2.35
2145	18	80-80	150-150	1	3	2.60
2150	87	100-30	150-150	1⅜	2½	2.75
2155	19	100-100	150-150	1⅜	2½	4.00
2160		125-100	150-150	1⅜	2½	3.30
2165		200-5	150-150	1⅜	2½	2.65
2170	20	200-125	150-150	1⅜	3	3.70
2180		200-150	150-150	1⅜	3½	3.70
2185	21	200-200	150-150	1⅜	3	3.95
2190	105	100-100	175-175	1⅜	2½	3.10
2195	106	200-200	175-175	1⅜	3	4.10
2200		60-60	200-200	1	3	3.35
2205	22	60-60	200-200	1⅜	2	3.35
2210		100-100	200-200	1⅜	3	3.45
2215	67	40-20	250-25	1	2	2.00
2220	68	40-25	250-50	1	2	2.05
2225	69	100-150	250-50	1⅜	3	3.60
2230	23	10-10	250-250	1	2	2.10
2235	24	20-20	250-250	1	2	1.85
2240	25	30-30	250-250	1	2	2.70
2245	26	40-20	250-250	1	2½	2.70
2250	27	40-40	250-250	1	3	2.45
2255	28	150-150	250-250	1⅜	4	5.10
2260	88	200-200	250-250	1⅜	4	6.00
2265		35-500	300-6	1	2½	2.75
2270		10-40	300-50	1	2	1.65
2275	111	150-100	300-150	1⅜	4	5.60
2280	97	60-10	300-200	1	3	3.10
2285	96	200-5	300-200	1⅜	3	3.50
2290	98	20-60	300-250	1	3	3.40

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

TYPE TM TWIST-MOUNT ELECTROLYTICS (Con't.)

Stock No. TMD	Former Stock No. TMD	Capacity	Voltage	Dia-meter	Length	List
2295	29	20-20	300-300	1	2	2.05
2300	30	30-30	300-300	1⅜	2½	2.45
2310		40-30	300-300	1	3	2.60
2315	31	40-40	300-300	1⅜	2½	3.70
2320	32	60-60	300-300	1⅜	2½	4.20
2325	104	80-40	300-300	1⅜	3	4.40
2330	33	80-80	300-300	1⅜	3	4.00
2340	110	80-200	300-300	1⅜	4½	5.45
2350	34	120-20	300-300	1⅜	3	3.95
2355		120-40	300-300	1⅜	3	4.30
2360	70	20-20	350-25	1	2	2.35
2365	71	40-25	350-25	1	2½	2.90
2370		15-15	350-350	1	2	2.20
2375	35	20-20	350-350	1	2½	2.85
2380	36	30-20	350-350	1	3	3.20
2385	37	30-30	350-350	1	3	2.85
2390	38	40-40	350-350	1⅜	2½	2.95
2395	39	50-30	350-350	1⅜	2½	3.10
2400		60-30	350-350	1⅜	2½	3.10
2405		80-20	350-350	1⅜	2½	3.45
2410		80-40	350-350	1⅜	3	4.05
2415	40	80-80	350-350	1⅜	3	4.65
2420		90-40	350-350	1⅜	3	4.25
2425	108	100-60	350-350	1⅜	4	4.75
2430	89	100-80	350-350	1⅜	3½	4.90
2435		100-100	350-350	1⅜	4	6.10
2440	90	160-10	350-350	1⅜	3½	4.25
2445		35-100	400-50	1	3	2.55
2450	99	40-100	400-50	1	3½	3.35
2455		100-30	400-50	1⅜	3	3.85
2460		80-80	400-200	1⅜	3½	3.90
2465	100	60-80	400-250	1⅜	3½	4.85
2470	41	15-15	400-400	1	2	2.75
2475	42	30-10	400-400	1	2	2.90
2480	43	40-40	400-400	1⅜	3	3.40
2485	44	60-60	400-400	1⅜	3	5.45
2490	45	80-10	400-400	1⅜	3	4.20
2495		80-60	400-400	1⅜	3	4.65
2500	91	120-40	400-400	1⅜	4	5.20
2510	72	10-20	450-25	1	2	1.65
2515	73	20-20	450-25	1	2	2.45
2520	74	40-20	450-25	1	3	3.00
2525	75	80-20	450-25	1⅜	3	4.20
2530	101	20-25	450-50	1	2½	2.80
2535		40-100	450-50	1	3½	2.75
2540		50-100	450-50	1⅜	2½	2.95
2545	76	80-50	450-50	1⅜	3	3.45
2550		80-100	450-50	1⅜	3	3.70
2555	102	100-50	450-50	1⅜	3	3.75
2560	77	20-100	450-100	1⅜	2	3.60
2565	78	30-40	450-150	1⅜	2	3.60
2570		30-200	450-150	1⅜	3	3.45
2575		20-50	450-250	1	3	2.75
2580	103	20-200	450-250	1⅜	3	4.50
2585		40-10	450-300	1	3	2.55
2590	79	20-80	450-350	1⅜	3	4.50
2595	80	40-10	450-350	1⅜	2	2.55
2600	46	4-4	450-450	1	2	1.55
2605		5-5	450-450	1	2	1.65
2610	47	10-10	450-450	1	2	1.85
2615	48	15-15	450-450	1	2½	2.20
2620	49	20-10	450-450	1	2½	2.20
2625	50	20-20	450-450	1	3	2.50
2630		30-10	450-450	1	3	2.35
2635	51	30-15	450-450	1	3	3.25
2640	52	30-30	450-450	1⅜	2½	3.00
2645	53	40-20	450-450	1⅜	2½	3.20
2650	54	40-40	450-450	1⅜	3	3.40
2655		50-50	450-450	1⅜	3	3.80
2660	55	60-20	450-450	1⅜	3	3.50
2665	56	60-40	450-450	1⅜	3	3.90
2670		60-60	450-450	1⅜	3½	4.45
2675	57	80-10	450-450	1⅜	3	3.55
2680		80-20	450-450	1⅜	3	3.85
2685		80-30	450-450	1⅜	3½	4.15
2690	58	80-40	450-450	1⅜	3½	5.00
2695	59	80-80	450-450	1⅜	4	4.75
2700		100-40	450-450	1⅜	4	4.80
2705		20-100	475-400	1⅜	3½	4.45
2710		15-15	475-475	1	2½	2.30
2715		30-10	475-475	1	3	2.55
2720		40-10	475-475	1⅜	2½	3.05
2725		80-50	474-475	1⅜	4	5.15
2730	81	80-50	500-50	1⅜	3½	4.70
2735	82	60-80	500-150	1⅜	3½	4.65
2740	83	40-50	500-200	1⅜	2½	4.15
2745	84	15-20	500-300	1	2½	2.85
2750	85	20-100	500-300	1⅜	3	4.85
2755	60	10-10	500-500	1	2½	1.90
2760	61	20-20	500-500	1⅜	2½	2.80
2765		30-10	500-500	1⅜	2½	2.55
2770		30-30	500-500	1⅜	3	3.20
2775	92	40-10	500-500	⅜	3	3.15
2780	62	40-40	500-500	1⅜	3½	4.25
2785	63	60-40	500-500	1⅜	3½	4.55
2790	93	80-50	500-500	1⅜	3½	5.10

Stock No. TMT	Former Stock No. TMT	Capacity	Voltage	Dia-meter	Length	List
3003	1	20-20-20	25-25-25	1	2	1.90
3006	2	40-40-40	25-25-25	1	2	3.15
3009	3	30-30-30	50-50-50	1	2	3.20
3012	49	100-50-25	100-25-25	1	3	2.65
3015	50	20-250-100	150-15-15	1⅜	2	4.30
3018	51	40-25-130	150-25-15	1	3	4.90
3021	166	15-15-1200	150-150-2	1	2	3.10
3024	52	30-20-200	150-150-10	1	2	2.40
3027	53	30-30-200	150-150-10	1	2	3.70
3030		40-20-150	150-150-10	1	2	2.35
3033	54	40-20-250	150-150-10	1	2	4.00
3036	208	80-20-200	150-150-10	1	2½	4.25
3039		80-30-300	150-150-10	1⅜	2	3.10
3042	209	80-60-250	150-150-10	1	3	2.95
3045	168	90-40-400	150-150-10	1	3	5.20
3048		100-80-200	150-150-10	1⅜	2	3.55
3051	55	20-20-20	150-150-25	1	2	3.25
3054	56	30-30-20	150-150-25	1	2	3.40
3057	57	40-20-20	150-150-25	1	2	2.25
3060	58	40-20-100	150-150-25	1	2	3.70
3063	59	40-20-200	150-150-25	1	2½	2.65
3066	60	40-30-20	150-150-25	1	2	3.50
3069	61	40-40-20	150-150-25	1	2	2.35
3072	169	40-40-200	150-150-25	1	3	2.75
3075		40-40-250	150-150-25	1	3	3.10
3078	62	50-30-20	150-150-25	1	2	2.45
3081	63	50-30-100	150-150-25	1	3	2.65
3084	64	50-50-20	150-150-25	1	2½	2.60
3087	65	60-20-20	150-150-25	1	2	3.80
3090	66	60-40-20	150-150-25	1	2½	2.65
3093		60-40-200	150-150-25	1	3	3.00
3096	206	60-60-175	150-150-25	1⅜	2	3.30
3097	67	80-40-20	150-150-25	1	2½	2.75
3100		80-40-300	150-150-25	1⅜	2½	3.60
3103	170	100-40-300	150-150-25	1⅜	2½	3.75
3106	68	120-60-20	150-150-25	1⅜	2½	5.00
3109	204	10-15-15	150-150-150	1	2	2.70
3112	4	20-20-20	150-150-150	1	2	2.25
3115	5	30-30-10	150-150150	1	2	2.80
3118	6	40-20-10	150-150-150	1	2	2.30
3121	7	40-20-20	150-150-150	1	2	2.35
3124	8	40-30-20	150-150-150	1	2	2.45
3127	9	40-40-40	150-150-150	1	2½	2.55
3130	162	50-40-10	150-150-150	1	2	2.50
3133	10	50-50-50	150-150-150	1	3	2.90
3136	11	60-40-20	150-150-150	1	2½	2.70
3139		70-15-150	150-150-150	1	2	2.65
3142	12	70-40-40	150-150-150	1	3	4.00
3145		80-30-10	150-150-150	1	2½	2.70
3148	13	80-40-20	150-150-150	1	2½	2.85
3151	14	80-80-80	150-150-150	1⅜	3	5.60
3154		100-30-10	150-150-150	1	2½	3.00
3160	15	120-80-40	150-150-150	1⅜	3	3.75
3163	163	120-120-40	150-150-150	1⅜	3½	4.00
3166		200-100-60	150-150-150	1⅜	3	4.50
3169		200-150-150	150-150-150	1⅜	3½	7.45
3172	203	120-120-40	175-175-175	1⅜	3½	4.20
3175	171	60-140-200	200-150-150	1⅜	4	4.75
3178	69	30-20-20	200-200-25	1	2	3.40
3181	172	60-5-20	200-200-50	1	3	2.45
3184		80-10-20	200-200-50	1	3	2.75
3187	70	100-10-40	200-200-50	1⅜	2	4.70
3190		30-20-40	200-200-150	1	2½	2.65
3193	71	80-40-50	250-150-50	1⅜	2½	2.30
3196	72	15-15-20	250-250-25	1	2	2.30
3199	73	20-15-20	250-250-25	1	2	3.50
3202	74	30-30-20	250-250-25	1	3	2.75
3205	75	70-70-20	250-250-50	1⅜	3	5.80
3208	173	90-90-20	250-250-50	1⅜	3	4.55
3211	76	40-20-10	250-250-150	1⅜	2	4.10
3214	16	15-15-10	250-250-250	1	2	3.65
3217	17	20-20-10	250-250-250	1	2	3.70
3220		20-20-20	250-250-250	1	2	2.55
3223	18	30-20-10	250-250-250	1	2½	4.00

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

TYPE TM TWIST-MOUNT ELECTROLYTICS (Con't.)

Stock No. TMT	Former Stock No. TMT	Capacity	Voltage	Diameter	Length	List
3226	19	40-20-10	250-250-250	1⅜	2	4.25
3229	20	40-20-20	250-250-250	1	3	2.85
3232		80-10-10	250-250-250	1	3	3.15
3235	21	80-80-60	250-250-250	1⅜	3½	4.85
3238		10-500-500	300-15-15	1⅜	2½	3.85
3241	77	100-60-20	300-150-25	1⅜	3	6.25
3244		20-150-80	300-150-150	1⅜	3	3.95
3247		100-200-30	300-150-150	1⅜	4	5.15
3250	174	100-200-60	300-150-150	1⅜	4	4.95
3253	78	30-30-20	300-250-25	1	3	3.15
3256		100-60-20	300-250-250	1⅜	3½	4.85
3259	175	200-60-20	300-250-250	1⅜	4	5.45
3262	79	20-20-20	300-300-25	1	2½	4.10
3265	80	40-15-20	300-300-25	1	2½	4.40
3268	81	30-30-25	300-300-50	1	3	4.30
3271	210	80-60-40	300-300-50	1⅜	3½	9.65
3274	176	100-10-60	300-300-50	1⅜	2½	4.00
3277	211	125-60-40	300-300-50	1⅜	4	7.30
3280	212	140-100-60	300-300-50	1⅜	3½	9.05
3283		200-20-10	300-300-100	1⅜	4	4.85
3286	177	140-10-200	300-300-150	1⅜	4½	4.90
3289	82	10-10-15	300-300-250	1	2	3.65
3292	22	10-10-10	300-300-300	1	2	2.35
3295	23	40-40-40	300-300-300	1⅜	3	3.90
3298	24	60-20-10	300-300-300	1⅜	2½	3.40
3301	25	80-20-10	300-300-300	1⅜	2½	5.65
3304		80-40-40	300-300-300	1⅜	2½	4.70
3307		120-50-40	300-300-300	1⅜	4	5.80
3310	26	120-60-40	300-300-300	1⅜	4	5.75
3313	178	4-100-40	350-25-25	1	2	3.35
3316	213	200-50-50	350-25-25	1	2	3.75
3319	83	20-50-100	350-100-75	1	3	3.05
3322	84	10-50-100	350-150-50	1	3	2.80
3325	179	125-5-100	350-200-75	1⅜	3½	5.25
3328	85	50-10-500	350-250-5	1⅜	2½	5.50
3331	180	10-80-25	350-300-25	1	3½	5.05
3334	87	30-30-20	350-300-25	1	3	3.10
3337	181	40-40-30	350-300-250	1⅜	2½	4.30
3340	88	10-10-20	350-350-25	1	2	3.35
3343	89	15-10-20	350-350-25	1	2	2.45
3346	90	15-15-20	350-350-25	1	2	4.00
3349		20-5-100	350-350-25	1	3	2.55
3352	91	20-10-20	350-350-25	1	2	2.50
3355	92	20-20-20	350-350-25	1	2½	2.85
3358	93	30-10-20	350-350-25	1	2½	4.55
3361	94	30-20-20	350-350-25	1	3	3.05
3364	95	30-30-20	350-350-25	1⅜	2	3.35
3367	96	40-40-25	350-350-25	1⅜	2½	3.60
3370	97	40-40-50	350-350-25	1⅜	2½	5.60
3373	182	90-40-50	350-350-25	1⅜	3½	7.30
3376		200-10-50	350-350-25	1⅜	4	5.20
3379	98	10-5-150	350-350-50	1	3	4.00
3382	183	20-5-30	350-350-50	1	2	2.45
3385		20-5-150	350-350-50	1	3	2.90
3388		20-10-100	350-350-50	1⅜	2	2.85
3392	214	80-40-100	350-350-50	1⅜	5	5.20
3395	184	150-4-30	350-350-50	1⅜	3½	4.70
3398		30-20-100	350-350-150	1⅜	2½	3.95
3401	99	40-20-10	350-350-150	1	3	3.15
3404	215	30-5-100	350-350-200	1⅜	2½	5.55
3407		80-40-100	350-350-200	1⅜	4	5.40
3410	207	100-60-20	350-350-200	1⅜	4	5.45
3413		20-10-5	350-350-250	1	2	2.50
3417	100	30-10-20	350-350-250	1	3	4.55
3420	86	30-20-10	350-350-250	1	3	4.35
3423	27	10-10-10	350-350-350	1	2	2.40
3426	28	20-20-10	350-350-350	1	3	4.40
3429	205	30-20-10	350-350-350	1⅜	2½	3.20
3432	216	30-30-30	350-350-350	1	2½	3.30
3435	29	60-40-20	350-350-350	1	3	4.20
3438		60-50-50	350-350-350	1⅜	3½	4.85
3441	30	80-60-60	350-350-350	1⅜	4	5.50
3444	164	90-40-20	350-350-350	1⅜	4	5.20
3447	165	100-100-10	350-350-350	1⅜	4	5.70
3450	101	60-40-20	400-300-25	1⅜	3½	6.25
3453	102	10-40-10	400-300-150	1⅜	2	2.90
3456	103	80-20-10	400-300-300	1⅜	3½	6.35
3459	217	10-4-20	400-350-25	1	2	3.45
3462	104	10-50-30	400-350-25	1	3	4.60
3465	105	15-15-40	400-400-25	1	2½	4.15
3468	106	20-20-20	400-400-25	1	3	2.80
3471	107	20-10-40	400-400-50	1	3	3.95
3474	108	30-10-150	400-400-50	1⅜	2½	5.05
3477	185	40-10-200	400-400-50	1⅜	3½	3.85
3480	109	80-40-150	400-400-50	1⅜	4	5.20
3483	186	100-10-20	400-400-50	1⅜	3½	4.45
3486		20-20-10	400-400-350	1	3	2.95
3489		60-30-20	400-400-350	1⅜	3	4.50
3492		80-20-10	400-400-350	1⅜	3	4.25
3495	187	100-10-80	400-400-350	1⅜	4½	6.05
3498	31	10-10-10	400-400-400	1	2½	2.35
3501		90-10-5	400-400-400	1⅜	3	4.35
3504	188	20-500-500	450-25-25	1⅜	3½	5.25
3507	110	30-100-25	450-25-25	1⅜	2	4.40
3510	189	80-100-20	450-50-50	1⅜	3	6.35
3513	111	10-50-100	450-150-25	1	3	4.10
3516	112	40-40-130	450-150-50	1⅜	3	3.65
3519	113	40-100-50	450-150-50	1⅜	2½	5.90
3522		10-50-100	450-150-75	1	3	3.20
3525	114	40-90-50	450-150-150	1⅜	3	3.95
3528	115	20-60-100	450-250-25	1⅜	2½	3.60
3531		10-80-80	450-250-250	1⅜	3	4.10
3534	116	20-40-10	450-250-250	1⅜	2	4.70
3537		80-40-40	450-250-250	1⅜	3½	4.75
3540		10-40-10	450-300-150	1⅜	2	3.10
3543	117	10-40-20	450-300-150	1⅜	2	3.10
3546		5-80-40	450-300-300	1⅜	3	3.10
3549	118	20-15-10	450-300-300	1	3½	4.10
3552	119	10-10-20	450-350-25	1	2	3.40
3555	190	10-100-25	450-350-25	1⅜	3	4.05
3558		30-15-40	450-350-25	1⅜	2	3.15
3561	120	30-40-50	450-350-25	1	4	3.65
3564	121	20-80-100	450-350-50	1⅜	3½	6.70
3567	191	20-80-50	450-350-300	1⅜	3	3.40
3570	122	40-50-50	450-350-300	1⅜	3½	7.25
3573		20-40-10	450-350-350	1⅜	2½	3.45
3576		20-80-10	450-350-350	1⅜	3	4.20
3577		40-80-40	450-350-350	1⅜	3½	5.35
3580	192	50-80-10	450-350-350	1⅜	3½	7.30
3583	123	30-50-40	450-400-25	1⅜	3	5.80
3586		60-80-20	450-400-250	1⅜	4	5.40
3589	124	10-30-30	450-400-300	1⅜	2½	5.00
3592		10-10-10	450-450-25	1	2	2.35
3595	125	10-10-20	450-450-25	1	2	2.35
3598	126	15-15-20	450-450-25	1	2½	4.00
3601		15-15-40	450-450-25	1	2½	2.70
3604	127	20-10-20	450-450-25	1	2½	2.65
3607	128	20-15-20	450-450-25	1	3	4.30
3610	129	20-20-20	450-450-25	1	3	3.00
3613	130	30-30-20	450-450-25	1⅜	2½	3.50
3616		30-30-125	450-450-25	1⅜	3	3.90
3619	131	30-30-150	450-450-25	1⅜	3	4.05
3622	132	40-20-20	450-450-25	1⅜	2½	3.45
3625	133	40-40-20	450-450-25	1⅜	3	3.85
3628	134	40-40-40	450-450-25	1⅜	3	3.90
3631	135	80-10-125	450-450-25	1⅜	3½	4.40
3634	136	80-40-100	450-450-25	1⅜	4	5.00
3637	137	10-10-40	450-450-50	1	2½	2.45
3640	138	20-10-50	450-450-50	1	3	2.80
3643		30-10-150	450-450-50	1⅜	2½	3.45
3646		30-15-150	450-450-50	1⅜	3	3.65
3649	139	30-30-40	450-450-50	1⅜	3	5.45
3652		35-25-150	450-450-50	1⅜	3	3.90
3655	140	40-10-100	450-450-50	1⅜	3	4.25
3658	141	40-40-100	450-450-50	1⅜	3½	4.25
3661		60-40-75	450-450-50	1⅜	3½	4.60
3664		80-20-100	450-450-50	1⅜	3½	4.75
3667	142	10-10-50	450-450-100	1⅜	2	3.95
3670	143	30-20-30	450-450-150	1⅜	2½	5.20
3673	144	40-40-40	450-450-150	1⅜	3½	4.10
3676	145	40-10-80	450-450-200	1⅜	3	3.85
3679		40-10-100	450-450-200	1⅜	3	4.10
3682		40-40-60	450-450-200	1⅜	3	4.40
3685		40-40-100	450-450-200	1⅜	3½	4.90
3688	146	15-10-120	450-450-300	1⅜	3½	7.00
3691	147	15-15-10	450-450-300	1	3	4.25
3694	148	15-5-15	450-450-350	1	3	4.25
3697	149	20-20-60	450-450-350	1⅜	3	7.55
3700	150	40-40-10	450-450-350	1⅜	2	3.30
3703		40-40-80	450-450-350	1⅜	4	5.50
3706	218	50-5-50	450-450-350	1⅜	3	3.65
3709	193	60-40-20	450-450-400	1⅜	3½	5.05
3712	32	10-10-10	450-450-450	1	2½	2.55
3715	33	15-15-10	450-450-450	1	3	4.40
3718		15-15-15	450-450-450	1	3	3.05
3721		20-10-10	450-450-450	1	3	2.85
3724	34	20-20-20	450-450-450	1⅜	2½	3.55
3727		30-10-10	450-450-450	1⅜	2	3.10
3730		30-20-20	450-450-450	1⅜	2½	3.80
3733	35	30-30-30	450-450-450	1⅜	3½	4.30

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

TYPE TM TWIST-MOUNT ELECTROLYTICS (Con't.)

Stock No. TMS	Former Stock No. TMS	Capacity	Voltage	Diameter	Length	List
3736	36	40-10-10	450-450-450	1⅜	3	3.30
3739	37	40-30-20	450-450-450	1⅜	3	4.25
3742	38	40-40-10	450-450-450	1⅜	3	4.10
3745	39	40-40-20	450-450-450	1⅜	3	4.40
3748	40	40-40-40	450-450-450	1⅜	3½	4.85
3751		50-40-30	450-450-450	1⅜	3½	4.85
3754	41	60-20-20	450-450-450	1⅜	3½	4.55
3757	42	60-30-10	450-450-450	1⅜	3	4.45
3760		60-40-20	450-450-450	1⅜	3½	4.95
3763	43	80-40-20	450-450-450	1⅜	4	5.35
3766	194	20-50-20	475-50-25	1	3	2.70
3769		80-80-50	475-150-50	1⅜	3½	4.80
3772	195	10-100-40	475-200-50	1⅜	2½	5.00
3775	196	40-40-100	475-250-100	1⅜	3	6.10
3778	219	5-100-200	475-300-150	1⅜	4	7.75
3781	197	10-100-25	475-350-25	1⅜	3	5.50
3784	220	10-4-100	475-350-50	1	2½	3.85
3787	198	20-10-5	475-350-150	1⅜	2½	4.15
3790	199	10-4-40	475-350-250	1⅜	2	2.70
3793		10-40-100	475-450-200	1⅜	3	4.15
3796	200	10-45-100	475-450-200	1⅜	3	4.20
3799		40-80-10	475-450-450	1⅜	3½	5.45
3802		20-10-100	475-475-50	1⅜	2	3.20
3805		20-10-100	475-475-400	1⅜	3½	5.20
3808		20-20-60	475-475-450	1⅜	3	4.80
3811		30-30-20	475-475-475	1⅜	3	4.40
3814		40-30-10	475-475-475	1⅜	3	4.25
3817		40-30-30	475-475-475	1⅜	3½	5.10
3820	151	10-100-40	500-200-50	1⅜	2½	5.00
3823	152	40-40-100	500-250-50	1⅜	3	6.40
3826	153	20-20-40	500-300-25	1⅜	2	4.60
3829	201	20-40-100	500-300-25	1⅜	2½	5.35
3832	202	10-80-10	500-350-350	1⅜	3	4.85
3835	154	40-40-25	500-400-50	1⅜	3	6.40
3838	155	10-10-100	500-500-50	1	3	4.25
3841	156	20-10-100	500-500-50	1⅜	3	3.25
3844	157	30-10-20	500-500-50	1⅜	2½	4.60
3847	158	40-40-100	500-500-200	1⅜	4	5.75
3850	159	10-10-5	500-500-350	1	2½	3.70
3853	160	20-20-60	500-500-400	1⅜	3½	4.75
3856	45	10-10-10	500-500-500	1	3	2.65
3859		30-20-20	500-500-500	1⅜	3	4.15
3862	46	30-30-20	500-500-500	1⅜	3	4.40
3865	47	40-10-10	500-500-500	1⅜	3	3.85
3868	48	40-40-10	500-500-500	1⅜	4	5.00

Stock No. TMQ	Former Stock No. TMQ	Capacity	Voltage	Diameter	Length	List
4001		50-20-150-30	150-150-15-15	1⅜	2	3.10
4004		20-20-160-40	150-150-25-25	1⅜	2	3.15
4007	20	40-40-40-40	150-150-25-25	1⅜	2	3.05
4010	21	40-40-100-100	150-150-25-25	1⅜	2	5.00
4013		50-40-160-40	150-150-25-25	1⅜	2	3.50
4016	22	30-20-20-200	150-150-150-150	1⅜	2	4.60
4019	23	40-40-20-20	150-150-150-10	1⅜	2	3.15
4022	24	60-40-20-200	150-150-150-10	1⅜	2	3.40
4025	25	20-20-20-20	150-150-150-25	1⅜	2	4.30
4028		30-30-30-40	150-150-150-25	1⅜	2	3.05
4031	26	30-30-30-50	150-150-150-25	1⅜	2	2.90
4034	27	40-20-20-20	150-150-150-25	1⅜	2	2.90
4037	28	40-40-30-20	150-150-150-25	1⅜	2	3.05
4040	29	40-40-40-20	150-150-150-25	1⅜	2	3.10
4043	30	40-40-40-100	150-150-150-25	1⅜	2	5.00
4047	31	40-40-40-160	150-150-150-25	1⅜	2	3.50
4050	124	50-10-40-50	150-150-150-25	1⅜	2	3.20
4053		50-20-20-200	150-150-150-25	1⅜	2	3.45
4056	32	50-30-30-100	150-150-150-25	1⅜	2	3.35
4059	33	50-50-50-20	150-150-150-25	1⅜	2	3.45
4062	125	60-60-10-60	150-150-150-25	1⅜	2	5.20
4065	34	75-75-75-30	150-150-150-25	1⅜	3	4.30
4068	35	80-40-30-100	150-150-150-25	1⅜	2½	5.50
4071		80-40-40-20	150-150-150-25	1⅜	2	3.50
4074	36	80-40-40-40	150-150-150-25	1⅜	2	3.55
4077	37	80-40-40-100	150-150-150-25	1⅜	2½	3.70
4080		100-90-60-200	150-150-150-25	1⅜	3	4.90
4083	126	200-250-10-25	150-150-150-25	1⅜	3½	5.30
4086	188	200-200-100-10	150-150-150-75	1⅜	4	5.90
4089	1	40-40-40-30	150-150-150-150	1⅜	2	3.25
4092	115	100-80-60-40	150-150-150-150	1⅜	3	4.60
4095	38	40-20-10-20	250-250-250-25	1⅜	2	4.15
4098	39	100-40-10-100	250-250-250-50	1⅜	3½	5.10
4101	40	80-60-40-20	250-250-250-150	1⅜	3½	7.60
4104	116	40-40-40-40	250-250-250-250	1⅜	2½	4.60
4107	41	100-40-80-20	300-50-25-25	1⅜	2½	6.80
4110	42	20-150-150-100	300-150-150-30	1⅜	4	5.25
4113	43	10-200-140-30	300-150-150-150	1⅜	4	5.05
4116		10-200-200-30	300-150-150-150	1⅜	4	5.30
4119	127	100-60-10-20	300-200-150-50	1⅜	3	4.80
4122	44	120-20-100-20	300-250-50-25	1⅜	4	7.85
4125	45	200-20-100-20	300-250-50-25	1⅜	5	5.75
4128	189	80-5-60-20	300-300-150-25	1⅜	3	4.25
4131	185	140-10-10-100	300-300-150-50	1⅜	4	5.00
4134	46	100-10-200-30	300-300-150-150	1⅜	4	5.85
4137		150-20-10-250	300-300-250-50	1⅜	4	6.00
4140	47	60-40-20-50	300-300-300-25	1⅜	3½	4.65
4143	129	150-20-10-250	300-300-300-50	1⅜	4	6.00
4146	190	150-30-30-150	300-300-300-50	1⅜	4	4.85
4149	48	40-40-40-20	300-300-300-150	1⅜	3	5.35
4152		120-40-40-10	300-300-300-250	1⅜	4	6.25
4155	2	40-20-10-10	300-300-300-300	1⅜	2	3.90
4158	3	40-40-20-10	300-300-300-300	1⅜	2½	4.50
4161		40-40-30-20	300-300-300-300	1⅜	3	4.80
4164	4	60-40-10-10	300-300-300-300	1⅜	3½	4.50
4167	191	100-20-20-4	300-300-300-300	1⅜	3½	5.25
4170	120	120-40-40-10	300-300-300-300	1⅜	4	5.50
4173	118	200-20-20-20	300-300-300-300	1⅜	4	6.20
4176	49	20-150-80-20	350-150-150-25	1⅜	3	6.80
4179	50	40-50-20-80	350-150-150-50	1⅜	3	6.05
4182	51	15-80-40-200	350-200-200-25	1⅜	3	6.70
4185	130	20-100-100-10	350-200-200-100	1⅜	4	7.45
4188		20-150-10-250	350-300-150-50	1⅜	4	6.05
4191	52	20-40-10-250	350-300-150-150	1⅜	3	4.60
4194		30-30-50-100	350-300-300-75	1⅜	3	5.20
4197	180	160-60-10-4	350-300-300-300	1⅜	4	6.25
4200	131	40-10-100-25	350-350-25-25	1⅜	2½	3.70
4203	132	60-4-100-40	350-350-25-25	1⅜	2½	3.75
4205	133	140-40-50-30	350-350-50-50	1⅜	4	6.35
4208		60-20-80-100	350-350-150-150	1⅜	4	4.85
4211	134	40-10-100-100	350-350-200-50	1⅜	3½	5.25
4214	135	100-60-60-40	350-350-200-75	1⅜	4	6.25
4217	136	60-40-60-20	350-350-200-150	1⅜	3½	5.00
4220	192	100-80-10-20	350-350-300-50	1⅜	4	5.45
4223		20-10-5-10	350-350-350-25	1⅜	2	3.05
4226	54	20-10-5-20	350-350-350-25	1⅜	2	3.05
4229	53	20-10-10-20	350-350-350-25	1⅜	2	3.05
4232		30-10-5-200	350-350-350-25	1⅜	2	3.75
4235	55	30-20-20-20	350-350-350-25	1⅜	2½	6.10
4238	56	40-20-20-25	350-350-350-25	1⅜	2½	6.35
4241	57	40-40-20-20	350-350-350-25	1⅜	3	4.60
4244		40-40-30-10	350-350-350-25	1⅜	3	4.90
4247	58	40-40-40-40	350-350-350-25	1⅜	3	5.15
4250	59	15-15-15-50	350-350-350-50	1⅜	2	5.60
4253	60	40-30-10-50	350-350-350-50	1⅜	3	6.35
4256	61	40-40-40-150	350-350-350-50	1⅜	3½	5.60
4259	137	60-25-25-100	350-350-350-50	1⅜	3½	7.70
4262		60-30-30-150	350-350-350-50	1⅜	3	6.25
4265	181	70-40-10-50	350-350-350-50	1⅜	3	5.20
4268		100-10-10-20	350-350-350-50	1⅜	3½	5.10
4271		100-20-10-20	350-350-350-50	1⅜	3½	5.35
4274	138	100-40-30-50	350-350-350-50	1⅜	4	6.50
4277	193	140-20-10-100	350-350-350-50	1⅜	4	9.20
4280	139	60-30-30-150	350-350-350-75	1⅜	4	5.55
4283	140	90-30-5-100	350-350-350-75	1⅜	3½	6.10
4286		30-10-5-100	350-350-350-200	1⅜	2½	4.50
4289	182	30-20-5-100	350-350-350-200	1⅜	3	4.65
4292	5	10-10-10-10	350-350-350-350	1⅜	2	4.60
4295		40-20-20-10	350-350-350-350	1⅜	2½	4.30
4298		40-40-40-40	350-350-350-350	1⅜	4	5.90
4301	6	80-10-10-10	350-350-350-350	1⅜	3	5.95
4304		80-60-40-20	350-350-350-350	1⅜	4	6.35
4307		90-40-30-30	350-350-350-350	1⅜	4	6.75
4310	194	130-40-20-10	350-350-350-350	1⅜	4½	5.65
4313		40-120-10-150	400-250-250-50	1⅜	4	5.85
4316	141	10-100-10-100	400-300-75-25	1⅜	3	7.00
4319	142	30-40-50-200	400-300-250-150	1⅜	4	8.95
4322	143	80-40-20-10	400-300-300-300	1⅜	4	8.30
4325	144	20-10-10-20	400-350-200-25	1⅜	2	4.75
4328	145	40-80-100-20	400-350-200-50	1⅜	4	5.90
4331	146	40-10-80-10	400-350-250-250	1⅜	3	6.95
4334	195	20-10-80-20	400-350-350-25	1⅜	3	6.55
4337	62	10-50-30-30	400-350-350-25	1⅜	3	6.55
4340		20-50-40-80	400-350-350-50	1⅜	3	4.95
4343	147	50-25-100-20	400-400-50-25	1⅜	3	6.95
4346		50-40-100-100	400-400-50-25	1⅜	4	5.05
4349	183	100-10-30-20	400-400-50-50	1⅜	3½	5.05
4352		20-10-20-25	400-400-200-25	1⅜	2	3.75
4358	148	10-10-40-10	400-400-200-50	1⅜	2	4.75
4361	63	40-10-80-10	400-400-250-250	1⅜	3½	7.00
4364	64	5-5-50-80	400-400-300-250	1⅜	3	6.95
4367		50-20-20-25	400-400-350-25	1⅜	3	4.40
4370	65	60-40-40-10	400-400-350-50	1⅜	3½	8.60
4373	196	100-10-20-20	400-400-350-50	1⅜	3	5.40
4376	184	80-40-10-20	400-400-400-25	1⅜	4	5.25

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

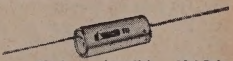
PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

TYPE TM TWIST-MOUNT ELECTROLYTICS (Con't.)

Stock No. TMQ	Former Stock No. TMQ	Capacity	Voltage	Diameter	Length	List
4379	149	80-40-30-40	400-400-400-25	1⅜	4	5.90
4382		90-20-10-50	400-400-400-50	1⅜	4	5.35
4385	150	80-40-30-4	400-400-400-350	1⅜	4	5.85
4388	7	30-30-20-20	400-400-400-400	1⅜	3	7.25
4391	119	40-40-30-30	400-400-400-400	1⅜	4	5.65
4394		50-40-30-20	400-400-400-400	1⅜	4	5.60
4397	8	80-25-10-10	400-400-400-400	1⅜	3½	5.20
4400	151	10-80-40-100	450-200-200-50	1⅜	3	6.35
4403	66	20-80-20-50	450-200-200-50	1⅜	3	4.05
4406	152	40-40-40-20	450-250-250-25	1⅜	3	6.65
4409		60-80-40-20	450-250-250-150	1⅜	4	5.60
4412	153	60-30-100-25	450-300-50-50	1⅜	3½	5.10
4415		10-100-10-100	450-300-75-25	1⅜	3	4.70
4418	154	10-100-10-100	450-300-150-25	1⅜	3	4.80
4421	158	10-40-60-100	450-300-250-50	1⅜	3½	4.50
4424	67	10-100-20-20	450-300-300-25	1⅜	3½	4.90
4427		25-100-10-60	450-300-300-50	1⅜	3	5.25
4430	155	30-100-10-60	450-300-300-50	1⅜	3½	5.25
4433	156	40-40-40-20	450-300-300-150	1⅜	3	4.85
4436		10-100-20-20	450-300-300-200	1⅜	3	5.00
4439	157	10-100-20-20	450-300-300-300	1⅜	3	7.85
4442		10-40-100-100	450-350-250-50	1⅜	3	5.50
4445	68	10-60-40-25	450-450-350-25	1⅜	3½	4.55
4448	69	10-100-10-20	450-350-350-25	1⅜	3	5.20
4451	159	20-80-50-100	450-350-350-50	1⅜	4	5.95
4454	70	30-40-40-10	450-350-350-200	1⅜	3½	7.70
4457	160	40-30-10-10	450-350-350-300	1⅜	3	4.65
4460	71	80-10-30-40	450-400-300-150	1⅜	4	7.85
4463		80-10-40-30	450-400-300-300	1⅜	4	5.75
4466	161	5-60-50-20	450-400-350-25	1⅜	3½	7.55
4469	72	10-10-20-20	450-450-25-25	1⅜	2	4.40
4472		20-15-20-20	450-450-25-25	1⅜	2	3.40
4475	73	20-20-20-20	450-450-25-25	1⅜	2	3.50
4478	74	30-30-125-125	450-450-25-25	1⅜	3	4.80
4481		20-20-60-100	450-450-150-25	1⅜	2½	4.20
4484		40-40-125-125	450-450-150-25	1⅜	4	5.65
4487	75	10-10-60-100	450-450-200-50	1⅜	3	3.80
4490	76	35-25-20-100	450-450-200-50	1⅜	3	4.60
4493		40-40-100-60	450-450-200-200	1⅜	4	6.00
4496	77	20-20-30-30	450-450-350-350	1⅜	3½	6.85
4499	78	40-10-35-10	450-450-350-350	1⅜	3	6.85
4502	79	40-40-30-30	450-450-350-350	1⅜	4	5.85
4505	80	10-10-10-20	450-450-450-25	1⅜	2	3.10
4508	81	10-10-10-100	40-450-450-25	1⅜	2	4.85
4511	82	20-10-10-100	450-450-450-25	1⅜	2	5.50
4514	83	20-20-20-20	450-450-450-25	1⅜	3	4.10
4517	84	30-15-15-40	450-450-450-25	1⅜	2½	6.20
4520	85	30-20-20-20	450-450-450-25	1⅜	3	6.55
4523	86	30-30-10-20	450-450-450-25	1⅜	3	6.50
4526	163	30-30-10-125	450-450-450-25	1⅜	3	4.65
4529	87	30-30-20-20	450-450-450-25	1⅜	3	6.95
4532	88	40-10-10-250	450-450-450-25	1⅜	3	7.00
4535	89	40-20-10-20	450-450-450-25	1⅜	3	6.35
4538	90	40-20-20-20	450-450-450-25	1⅜	3	4.55
4541	91	40-20-20-40	450-450-450-25	1⅜	3	4.60
4544	92	40-30-210-20	450-450-450-25	1⅜	3	4.45
4547		40-40-10-20	450-450-450-25	1⅜	3½	4.65
4550		40-40-20-20	450-450-450-25	1⅜	3½	4.95
4553	164	40-40-40-40	450-450-450-25	1⅜	3½	5.45
4556	93	60-40-10-35	450-450-450-25	1⅜	3½	4.70
4559		60-40-40-10	450-450-450-25	1⅜	4	5.95
4562		60-50-5-20	450-450-450-25	1⅜	4	5.30
4565		80-40-40-40	450-450-450-25	1⅜	4	6.40
4568	94	10-10-10-150	450-450-450-50	1⅜	3	4.50
4571	95	20-20-20-100	450-450-450-50	1⅜	3	4.50
4574	96	30-30-15-30	450-450-450-50	1⅜	3	4.50
4577	97	30-30-15-100	450-450-450-50	1⅜	3½	7.30
4580	98	40-20-10-100	450-450-450-50	1⅜	3½	4.55
4583'	99	40-40-10-25	450-450-450-50	1⅜	3½	4.65
4586		40-40-10-50	450-450-450-50	1⅜	4	4.75
4589		60-40-10-25	450-450-450-50	1⅜	4	5.20
4592	100	40-40-10-100	450-450-450-100	1⅜	3½	5.50
4595	101	60-10-10-20	450-450-450-150	1⅜	3	4.50
4598	102	35-35-10-10	450-450-450-200	1⅜	3	6.85
4601		40-20-10-100	450-450-450-250	1⅜	4	5.80
4604		40-10-10-40	450-450-450-350	1⅜	3	4.70
4607	9	5-5-5-5	450-450-450-450	1⅜	2	2.95
4610	10	10-10-10-10	450-450-450-450	1⅜	2	3.30
4613	11	20-10-10-10	450-450-450-450	1⅜	2½	3.65
4616	12	20-20-20-20	450-450-450-450	1⅜	2½	4.65
4619	13	30-15-15-15	450-450-450-450	1⅜	3	4.40
4622	14	30-30-15-10	450-450-450-450	1⅜	4	7.00
4625		30-30-20-20	450-450-450-450	1⅜	3½	7.00
4628	15	30-30-30-15	450-450-450-450	1⅜	3½	7.90
4631	16	35-35-10-5	450-450-450-450	1⅜	3½	4.55
4634	17	40-10-10-10	450-450-450-450	1⅜	3	4.05
4637	18	40-20-10-10	450-450-450-450	1⅜	3	4.45
4640		40-35-10-10	450-450-450-450	1⅜	3	4.75
4643		40-40-4-4	450-450-450-450	1⅜	3½	4.60
4646		40-40-20-20	450-450-450-450	1⅜	4	5.50
4649		40-40-30-30	450-450-450-450	1⅜	4	6.00
4652	120	40-40-40-40	450-450-450-450	1⅜	4	6.40
4655	121	60-20-20-20	450-450-450-450	1⅜	3½	5.60
4658		60-30-10-2	450-450-450-450	1⅜	3	5.05
4661	122	80-10-10-10	450-450-450-450	1⅜	3½	5.00
4664	165	40-40-50-80	475-250-150-50	1⅜	3½	4.95
4667	103	20-40-100-80	475-300-50-25	1⅜	3	4.40
4670	166	10-100-10-100	475-300-300-25	1⅜	3½	4.85
4673	167	20-80-20-10	475-300-300-300	1⅜	3½	4.95
4676	104	10-40-80-100	475-350-200-50	1⅜	3½	7.15
4679		20-40-80-100	475-350-200-100	1⅜	4	5.40
4682		10-40-80-100	475-350-300-100	1⅜	4	5.50
4685	168	20-40-80-100	475-350-300-100	1⅜	4	5.55
4688	169	10-30-5-80	475-350-350-50	1⅜	2½	5.50
4691	186	10-140-4-100	475-350-350-50	1⅜	4	5.80
4694	187	10-130-20-10	475-350-350-350	1⅜	4	5.95
4697		30-130-10-10	475-350-350-350	1⅜	4	6.35
4700	170	30-130-10-20	475-350-350-350	1⅜	5	6.10
4703	171	10-40-100-10	475-400-50-30	1⅜	2½	4.00
4706	172	10-40-4-100	457-400-350-50	1⅜	2½	4.00
4709	173	10-40-100-10	475-400-350-50	1⅜	2½	4.00
4710		5-70-25-5	475-400-400-400	1⅜	3½	5.00
4713	105	10-10-80-50	475-450-200-60	1⅜	3	5.75
4716	174	25-20-20-100	475-450-300-50	1⅜	3	6.85
4719	106	25-20-40-100	475-450-300-50	1⅜	3	7.40
4722	107	10-60-30-125	475-450-400-50	1⅜	4	5.50
4725		10-50-30-30	475-450-450-25	1⅜	3	4.70
4728		10-40-10-100	475-450-450-50	1⅜	2½	4.25
4731	108	15-15-80-40	475-475-300-50	1⅜	3	4.75
4734	109	40-10-4-40	475-475-350-50	1⅜	3	4.90
4737	175	50-10-30-30	475-475-450-25	1⅜	3	4.75
4740	110	10-5-80-40	475-475-450-50	1⅜	3	7.30
4743	111	40-20-10-10	475-475-475-25	1⅜	3	7.25
4746		20-20-10-10	475-475-475-300	1⅜	2½	4.25
4749		50-30-10-20	475-475-475-300	1⅜	3½	5.55
4752		20-20-10-10	475-475-475-475	1⅜	2	5.20
4755		20-20-20-20	475-475-475-475	1⅜	3	5.05
4758		40-20-10-10	475-475-475-475	1⅜	3	5.05
4761	176	5-100-10-20	500-300-300-150	1⅜	4	8.75
4764	177	30-10-150-30	500-450-50-50	1⅜	3	4.15
4767	112	30-30-10-20	500-500-450-25	1⅜	3½	4.90
4770	113	20-20-10-10	500-500-500-300	1⅜	2½	4.30
4773	114	50-30-10-20	500-500-500-300	1⅜	4	5.60
4776	19	10-10-10-10	500-500-500-500	1⅜	2	3.45
4779	123	40-20-20-20	500-500-500-500	1⅜	4	5.85
4782		40-40-8-8	500-500-500-500	1⅜	4	5.65

TYPE TD TYNEE-DRY ELECTROLYTICS

Tynee-Dry single capacitor units with 3-inch bare-wire leads. Designed for 85° C operation. Each unit sealed in metal tubular case. Supplied with insulating cardboard sleeve. Low leakage. Long shelf life. Top quality in minimum space.



Catalogue No.	Capacity in UF	Dia.*	Length*	List Price
6 Volts DC Working				
TD-50-6	50	½	1⅛	.95
TD-100-6	100	½	1⅛	1.20
TD-250-6	250	⅝	1⅝	1.35
TD-500-6	500	⅝	1⅝	1.55
TD-1000-6	1000	¾	2	1.90
TD-1500-6	1500	¾	2	2.10
TD-2000-6	2000	1	2	2.30

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

TYPE TD TYNEE-DRY ELECTROLYTICS

Catalogue No.	Capacity in UF	Dia.*	Length*	List Price
15 Volts DC Working				
TD-100-15	100	⅝	1¼	1.25
TD-250-15	200	⅝	1⅝	1.55
TD-500-15	500	¾	2	1.75
TD-1000-15	1000	⅞	2	2.30
25 Volts DC Working				
TD-2-25	2	7/16	1⅛	.90
TD-4-25	4	7/16	1⅛	1.00
TD-5-25	5	7/16	1⅛	1.00
TD-10-25	10	7/16	1⅛	1.00
TD-25-25	25	½	1⅛	1.00
TD-50-25	50	⅝	1¼	1.10
TD-100-25	100	⅝	1⅝	1.35
TD-250-25	250	⅞	2	1.70
TD-500-25	500	⅞	2	2.30
50 Volts DC Working				
TD-1-50	1	7/16	1⅛	.90
TD-2-250	2	7/16	1⅛	.90
TD-4-50	4	7/16	1⅛	1.00
TD-5-50	5	7/16	1⅛	1.00
TD-10-50	10	7/16	1⅛	1.00
TD-25-50	25	⅝	1¼	1.05
TD-50-50	50	⅝	1¼	1.20
TD-100-50	100	¾	1⅝	1.40
TD-150-50	150	¾	1⅝	1.55
TD-250-50	250	⅞	1⅝	1.75
TD-500-50	500	1	2½	2.40
150 Volts DC Working				
TD-4-150	4	7/16	1⅛	1.00
TD-8-150	8	⅝	1¼	1.05
TD-10-150	10	⅝	1¼	1.05
TD-12-150	12	⅝	1¼	1.10
TD-16-150	16	⅝	1¼	1.15
TD-20-150	20	⅝	1¼	1.20
TD-30-150	30	⅝	1⅝	1.30
TD-40-150	40	¾	1⅝	1.35
TD-50-150	50	¾	1⅝	1.40
TD-80-150	80	⅞	1⅝	1.60
TD-100-150	100	⅞	2	1.75
TD-150-150	150	1	2½	1.90
TD-200-150	200	1	3	2.20
TD-250-150	250	1	3	2.45
TD-300-150	300	1	3¾	2.55
200 Volts DC Working				
TD-100-200	100	1	3	2.20
TD-150-200	150	1	3½	2.55
TD-200-200	200	1	4	2.85
250 Volts DC Working				
TD-4-250	4	½	1⅛	1.00
TD-8-250	8	⅝	1¼	1.15
TD-10-250	10	⅝	1¼	1.20
TD-12-250	12	⅝	1¼	1.25
TD-16-250	16	⅝	1⅝	1.30
TD-20-250	20	⅝	1⅝	1.35
TD-30-250	30	¾	1⅝	1.45
TD-40-250	40	⅞	1⅝	1.55
TD-60-250	60	⅞	2	1.80
TD-100-250	100	1⅜	3	2.70
300 Volts DC Working				
TD-150-300	150	1	4¼	3.25
TD-200-300	200	1	4¼	3.75
350 Volts DC Working				
TD-8-350	8	⅝	1⅝	1.20
TD-12-350	12	⅝	1⅝	1.30
TD-16-350	16	¾	1⅝	1.40
TD-20-350	20	¾	1⅝	1.45
TD-30-350	30	⅞	2	1.65
TD-40-350	40	1	2	1.75
TD-60-350	60	1	2½	1.95
TD-80-350	80	1	2½	2.15
450 Volts DC Working				
TD-2-450	2	⅝	1¼	1.10
TD-4-450	4	⅝	1¼	1.15
TD-8-450	8	⅝	1⅝	1.25
TD-10-450	10	¾	1⅝	1.30
TD-12-450	12	¾	1⅝	1.35
TD-16-450	16	¾	2	1.40
TD-20-450	20	⅞	2	1.55
TD-30-450	30	1	2	1.70
TD-40-450	40	1	2½	1.80
TD-50-450	50	1	3	2.10
TD-80-450	80	1	3½	2.80
TD-100-450	100	1	4	3.15
500 Volts DC Working				
TD-8-500	8	⅞	1⅝	1.30
TD-10-500	10	⅞	1⅝	1.40
TD-12-500	12	⅞	1⅝	1.40
TD-20-500	20	1	2	1.60
TD-30-500	30	1	2½	1.75
600 Volts DC Working				
TD-8-600	8	⅞	2¾	2.05
TD-10-600	10	⅞	2¾	2.15
TD-12-600	12	1	2¾	2.35
TD-16-600	16	1	3 9/16	2.50
TD-20-600	20	1	3 9/16	2.65
700 Volts DC Working				
TD-8-700	8	⅞	2¾	2.15
TD-10-700	10	1	2¾	2.30
TD-12-700	12	1	3 9/16	2.40
TD-16-700	16	1	3 9/16	2.60

* For sleeve add 1/16" to diameter, 3/16" to length.

TYPE TDL TYNEE-DRY ELECTROLYTICS

Tynee-Dry dual- and triple-capacitor units with 8-inch flexible-wire-insulated leads. Designed for 85° C operation. Each unit sealed in metal tubular case. Supplied with riveted radial mounting bracket over insulating cardboard sleeve. Low leakage. Long shelf life. Top quality in minimum space.

Stock Number	Catalogue Number	Cap. in UF	Size in Inches Dia.	Size in Inches Length	List Price
150 Volts DC Working					
TDLD-1A	TDL-D10-150	10-10	¾	1⅝	1.50
TDLD-3	TDL-D20-150	20-20	¾	1⅝	1.65
TDLD-4	TDL-D30-150	30-30	¾	2	1.80
TDLD-5	TDL-4020-150	40-20	¾	2	1.75
TDLD-6	TDL-4030-150	40-30	¾	2	1.80
TDLD-7	TDL-D40-150	40-40	¾	2	1.85
Dual 150 Volts DC Working					
TDLD-8	TDL-5030-150	50-30	¾	2	1.95
TDLD-9	TDL-D50-150	50-50	⅞	2	2.10
TDLD-10	TDL-8030-150	80-30	⅞	2	2.20
TDLD-11	TDL-8040-150	80-40	1	2	2.25
TDLD-12	TDL-8050-150	80-50	1	2	2.30
TDLD-13	TDL-D80-150	80-80	1	2½	2.60
TDLD-14	TDL-10050-150	100-50	1	3	2.95
TDLD-15	TDL-D100-150	100-100	1	3	3.20
TDLD-16	TDL-2005-150	200-5	1	3½	3.45
Dual 250 Volts DC Working					
TDLD-17	TDL-D8-250	8-8	¾	1⅝	1.60
TDLD-18	TDL-D16-250	16-16	¾	1⅝	1.75
TDLD-19	TDL-D20-250	20-20	¾	2	1.85
TDLD-20	TDL-D30-250	30-30	⅞	2	2.20
TDLD-21	TDL-4020-250	40-20	⅞	2	2.15
TDLD-22	TDL-D40-250	40-40	1	2	2.15
TDLD-23	TDL-8010-250	80-10	1	2	2.55
Dual 450 Volts DC Working					
TDLD-24	TDL-D8-450	8-8	⅞	1⅝	1.70
TDLD-25	TDL-816-450	8-16	⅞	2	2.00
TDLD-26	TDL-D10-450	10-10	⅞	2	2.25
TDLD-27	TDL-D16-450	16-16	1	2	2.20
TDLD-28	TDL-D20-450	20-20	1	2½	2.50
TDLD-29	TDL-D30-450	30-30	1	3	3.00
TDLD-30	TDL-4020-450	40-20	1	3½	2.95
TDLD-31	TDL-D40-450	40-40	1	3½	3.40

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

TYPE TDL TYNEE-DRY ELECTROLYTICS (Con't.)

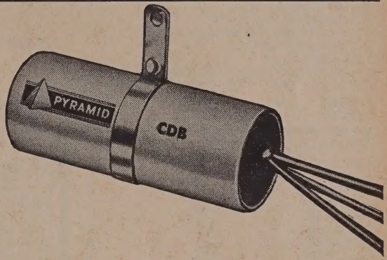
Stock Number	Catalogue Number	Cap. in UF	Size in Inches Dia.	Length	List Price
Triple 150 Volts DC Working					
TDLT-1	TDL-T20-150	20-20-20	1	2	2.15
TDLT-2	TDL-T30-150	30-30-30	1	2	2.30
TDLT-3	TDL-403020-150	40-30-20	1	2	2.35
TDLT-4	TDL-404020-150	40-40-20	1	2	2.35
TDLT-5	TDL-T40-150	40-40-40	1	2	2.45
TDLT-6	TDL-503020-150	50-30-20	1	2	2.40
TDLT-7	TDL-804020-150	80-40-20	1	2	2.75
Triple 250 Volts DC Working					
TDLT-8	TDL-754010-250	75-40-10	1	3	3.45
Triple 450 Volts DC Working					
TDLT-9	TDL-T16-450	16-16-16	1	3	3.10

Stock Number	Number Catalogue	In UF Cap.	Working Volts DC	in Ins. Length	Price List
Triple Mixed Sections Diameter 1"					
TDLT-10	TDL-8332	80-30-300	150-150-10	3	3.05
TDLT-11	TDL-222	20-20-20	150-150-20	2	2.05
TDLT-12	TDL-432	40-30-20	150-150-25	2	2.20
TDLT-13	TDL-442	40-40-20	150-150-25	2	2.15
TDLT-14	TDL-4412	40-40-100	150-150-25	3½	2.45
TDLT-15	TDL-532	50-30-20	150-150-25	2	2.30
TDLT-16	TDL-5312	50-30-100	150-150-25	2½	2.45
TDLT-17	TDL-5322	50-30-200	150-150-25	2½	2.75
TDLT-18	TDL-552	50-50-20	150-150-25	2½	2.50
TDLT-19	TDL-8212	80-20-100	150-150-25	2½	2.75
TDLT-20	TDL-44225	40-40-20	250-250-25	2½	2.90
TDLT-21	TDL-22245	20-20-20	450-450-25	2½	2.90

TYPE CDB CARTRIJ-DRY ELECTROLYTICS

DC dry electrolytic capacitors assembled in wax-filled, impregnated cardboard tubes. 8-inch flexible leads at one end. Assembled mounting strap. Low leakage. Long shelf life.

TEMPERATURE RANGE
—20° +75°C

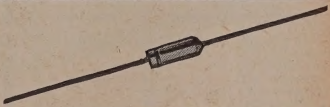


Catalog Number	Cap. in UF	Voltage DC Working	Size in Dia.	Inches Lgth.	List Price
CDB Dual Capacitor (Common Negative)					
CDB-D20-150CN	20-20	150-150	⅞	2	1.65
-D30-150CN	30-30	150-150	1	2	1.80
-D40-150CN	40-40	150-150	1	2¼	1.85
-5030-150CN	50-30	150-150	1	2¼	1.95
-D50-150CN	50-50	150-150	1	2¼	2.10
-D-1014	150-100	300-300	1⅜	4¾	5.55
-816-450CN	8-16	450-450	1	2	2.00
-D20-450CN	20-20	450-450	1	2¾	2.50
CDB Triple Capacitor Units (Common Negative)					
CDBT-1015	200-250-10	150-150-150	1⅜	4⅛	3.95
CDB Triple Capacitor Units (Mixed Sections)					
CDBT-1002	80-30-20	150-150-25	1	2¾	2.75
-1009	100-200-40	300-200-200	1⅜	4½	4.75
-1011	120-40-100	300-250-50	1⅜	4⅛	4.50

Catalog Number	Cap. in UF	Voltage DC Working	Size in Dia.	Inches Lgth.	List Price
CDB Quadruple Capacitor Units (Common Negative)					
CDBQ-1003	20-20-10-10	350-350-350-350	1⅛	3½	4.10
-4422	40-40-20-20	450-450-450-450	1½	4¾	5.45
CDB Quadruple Capacitor (Mixed Sections)					
CDBQ-1013	70-30-30-20	150-150-150-15	1	3½	3.65
-1001	40-40-20-20	150-150-150-25	1	3	3.10
-1008	140-5-200-30	350-350-200-200	1½	5	5.45
-1005	20-120-40-100	450-300-250-50	1½	4½	5.50

TYPE TAK TANTALUM CAPACITORS

Pyramid TAK Tantalum slug capacitors are miniaturized to provide maximum space economy. Pyramid Tantalum capacitors have cylindrical cases and contain a non-corrosive electrolyte. Due to the special construction and materials used in the manufacture of Pyramid Tantalum capacitors, these units are booth seep and vibration proof. In addition this type of capacitor assures long service life and corrosion resistance; made to meet MIL-C-3965 specifications, Style CL-64 and CL-65 (insulated sleeve).
For further information, contact Pyramid Engineering Department, Darlington, So. Car.



Operating temperatures and voltages

Voltage Range	Temperature	Type No.
3V to 100V	—55°C to + 100°C (without de-rating)	TAK
101V to 125V	—55°C to + 85°C (without de-rating)	TAK
3V to 85V	—55°C to + 125°C (without de-rating)	TAK-H

Pyramid TAK capacitors are available in the following tolerances:
From + 50% to — 15%
From + 20% to — 15%
Tolerances as low as from + 5% to —5% are available upon request.

Listed below are maximum capacities and voltages available in various case sizes.

Voltage	D L 7/32 x 3/8	D L 7/32 x 15/32	D L 7/32 x 17/32	D L 9/32 x 11/16	D L 3/8 x 49/64
3	17 mfd.	37 mfd.	75 mfd.	200 mfd.	400 mfd.
6	14	30	65	175	325
8	12	25	55	150	300
10	11	22	50	125	275
12	10	20	45	115	250
15	8	18	40	100	225
20	7	14	35	75	175

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

TYPE TAK TANTALUM CAPACITORS (Con't.)

Voltage	D L 7/32 x 3/8	D L 7/32 x 15/32	D L 7/32 x 17/32	D L 9/32 x 11/16	D L 3/8 x 49/64
25	6	12	30	70	150
30	5	11	25	60	135
40	4.5	9	23	50	120
50	4	8	20	40	100
60	3.5	7	17	35	85
70	3	6	15	30	
75				27	75
80		5	13	25	
85					65

Ratings listed below are available in TAK only.

Capacity	Voltage	Case Size D L
15	75	7/32 x 17/32
2	100	7/32 x 3/8
3.5	100	7/32 x 15/32
11	100	7/32 x 17/32
20	100	9/32 x 11/16
50	100	3/8 x 49/64
1.5	125	7/32 x 3/8
1.7	125	7/32 x 15/32

Values of capacity and voltages falling outside those shown in the above tables can be supplied. In addition plastic sleeves may be added to all sizes listed. For details contact Pyramid Sales Engineering Department.

TYPE TAD SOLID ELECTROLYTE TANTALUM CAPACITOR

True Subminiature Sizes
Solid Tantalum Electrolyte
Hermetically Sealed Metal Cases
No Electrolyte Leakage
Stable Capacitance
Low Dissipation Factor over Temperature Range
—80°C to +85°C 125°C with Derating

6-VDC-Working, 8 VDC-Surge

Catalog Number	Capacity in MFD	Case Size
TAD565M6A2	5.6	A
TAD685M6A2	6.8	A
TAD825M6B2	8.2	B
TAD106M6B2	10.0	B
TAD476M6B2	47.0	B
TAD566M6B2	56.0	B
TAD107M6C2	100.	C
TAD127M6C2	120.	C
TAD157M6C2	150.	C
TAD187M6C2	180.	C
TAD227M6D2	220.	D
TAD337M6D2	330.	D

10 VDC-Working, 12 VDC-Surge

Catalog Number	Capacity in MFD	Case Size
TAD395M10A2	3.9	A
TAD475M10A2	4.7	A
TAD565M10B2	5.6	B
TAD685M10B2	6.8	B
TAD276M10B2	27	B
TAD336M10B2	33	B
TAD396M10B2	39	B
TAD686M10C2	68	C
TAD107M10C2	100	C
TAD227M10D2	220	D

15 VDC-Working, 18 VDC-Surge

Catalog Number	Capacity in MFD	Case Size
TAD275M15A2	2.7	A
TAD335M15A2	3.3	A
TAD395M15B2	3.9	B
TAD475M15B2	4.7	B
TAD186M15B2	18	B
TAD226M15B2	22	B
TAD566M15C2	56	C
TAD826M15D2	82	D

20 VDC-Working, 24 VDC-Surge

Catalog Number	Capacity in MFD	Case Size
TAD125M20A2	1.2	A
TAD155M20A2	1.5	A
TAD185M20A2	1.8	A
TAD225M20A2	2.2	A
TAD275M20B2	2.7	B
TAD335M20B2	3.3	B
TAD106M20B2	10	B
TAD126M20B2	12	B
TAD156M20B2	15	B
TAD336M20C2	33	C
TAD396M20C2	39	C
TAD476M20C2	47	C

35 VDC-Working, 42 VDC-Surge

Catalog Number	Capacity in MFD	Case Size
TAD472M35A2	.0047	A
TAD562M35A2	.0056	A
TAD682M35A2	.0068	A
TAD822M35A2	.0082	A
TAD103M35A2	.01	A
TAD123M35A2	.012	A
TAD153M35A2	.015	A
TAD183M35A2	.018	A
TAD223M35A2	.022	A
TAD273M35A2	.027	A
TAD333M35A2	.033	A
TAD393M35A2	.039	A
TAD473M35A2	.047	A
TAD683M35A2	.068	A
TAD823M35A2	.082	A
TAD104M35A2	.1	A
TAD124M35A2	.12	A
TAD154M35A2	.15	A
TAD184M35A2	.18	A
TAD224M35A2	.22	A

35 VDC-Working, 42 VDC-Surge (continued)

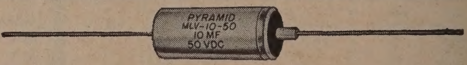
Catalog Number	Capacity in MFD	Case Size
TAD274M35A2	.27	A
TAD334M35A2	.33	A
TAD394M35A2	.39	A
TAD474M35A2	.47	A
TAD564M35A2	.56	A
TAD684M35A2	.68	A
TAD824M35A2	.82	A
TAD105M35A2	1.0	A
TAD125M35B2	1.2	B
TAD155M35B2	1.5	B
TAD185M35B2	1.8	B
TAD225M35B2	2.2	B
TAD275M35B2	2.7	B
TAD335M35B2	3.3	B
TAD395M35B2	3.9	B
TAD475M35B2	4.7	B
TAD565M35B2	5.6	B
TAD685M35B2	6.8	B
TAD825M35C2	8.2	C
TAD106M35C2	10	C
TAD126M35C2	12	C
TAD156M35C2	15	C
TAD186M35C2	18	C
TAD226M35C2	22	C
TAD276M35C2	27	C
TAD336M35D2	33	D
TAD476M35D2	47	D

	Diameter Length
Case Size A	.125 x .250
Case Size B	.173 x .438
Case Size C	.279 x .650
Case Size D	.341 x .750

PYRAMID manufactures a wide range of capacity and voltages. Write for engineering bulletin ET-7 for full information.

TYPE MLV CAPACITORS

Designed for —30°C to +85°C operation.
Features unit Hermetically Sealed with Specially processed rubber
Low Leakage Current
All Welded Construction
Long Shelf and Operating Life
Units supplied with plastic insulated sleeve



3 Volts Working D.C.

Cat. No.	Cap. in mfd.	Dia.*	Length*	List
MLV5-3	3	3/16	11/16	1.25
MLV10-3	10	1/4	11/16	1.25
MLV15-3	15	1/4	11/16	1.25
MLV25-3	25	1/4	11/16	1.25
MLV40-3	40	1/4	11/16	1.25
MLV50-3	50	1/4	11/16	1.25
MLV100-3	100	5/16	11/16	1.40
MLV150-3	150	3/8	11/16	1.45
MLV200-3	200	3/8	13/16	1.50
MLV250-3	250	3/8	15/16	1.60
MLV300-3	300	3/8	15/16	1.65

6 Volts Working D.C.

Cat. No.	Cap. in mfd.	Dia.*	Length*	List
MLV2-6	2	3/16	11/16	1.25
MLV5-6	5	1/4	11/16	1.25
MLV10-6	10	1/4	11/16	1.35
MLV15-6	15	1/4	11/16	1.35
MLV25-6	25	1/4	11/16	1.35
MLV30-6	30	1/4	11/16	1.40
MLV40-6	40	5/16	11/16	1.40
MLV50-6	50	5/16	11/16	1.40
MLV100-6	100	3/8	11/16	1.50
MLV150-6	150	3/8	15/16	1.55
MLV200-6	200	3/8	1¼	1.60

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

TYPE MLV CAPACITORS (Con't.)

Cat. No.	Cap. in mfd.	Dia.*	Length*	List
10 Volts Working D.C.				
MLV10-10	10	¼	11/16	1.35
MLV15-10	15	¼	11/16	1.35
MLV25-10	25	¼	11/16	1.35
MLV50-10	50	⅜	11/16	1.50
MLV100-10	100	⅜	13/16	1.70
MLV200-10	200	⅜	1¼	2.70
12 Volts Working D.C.				
MLV2-12	2	3/16	11/16	1.25
MLV5-12	5	¼	11/16	1.35
MLV10-12	10	¼	11/16	1.35
MLV15-12	15	¼	11/16	1.40
MLV20-12	20	¼	11/16	1.40
MLV25-12	25	¼	11/16	1.40
MLV40-12	40	5/16	11/16	1.45
MLV50-12	50	⅜	11/16	1.55
MLV100-12	100	⅜	13/16	1.75
MLV150-12	150	⅜	1¼	1.90
MLV200-12	200	⅜	1¼	2.05
15 Volts Working D.C.				
MLV5-15	5	¼	11/16	1.40
MLV10-15	10	¼	11/16	1.40
MLV15-15	15	¼	11/16	1.45
MLV25-15	25	5/16	11/16	1.45
MLV35-15	35	5/16	11/16	1.55
MLV50-15	50	⅜	11/16	1.60
MLV100-15	100	⅜	15/16	1.80
MLV150-15	150	⅜	1¼	1.95

Cat. No.	Cap. in mfd.	Dia.*	Length*	List
25 Volts Working D.C.				
MLV5-25	5	¼	11/16	1.40
MLV10-25	10	¼	11/16	1.45
MLV15-25	15	5/16	11/16	1.45
MLV25-25	25	⅜	11/16	1.55
MLV50-25	50	⅜	15/16	1.80
MLV100-25	100	⅜	1½	2.10
50 Volts Working D.C.				
MLV2-50	2	¼	11/16	1.35
MLV5-50	5	¼	11/16	1.45
MLV10-50	10	5/16	11/16	1.50
MLV15-50	15	⅜	11/16	1.50
MLV25-50	25	⅜	13/16	1.50
MLV50-50	50	⅜	1½	1.85
100 Volts Working D.C.				
MLV2-100	2	⅜	11/16	1.40
MLV5-100	5	⅜	15/16	1.50
MLV10-100	10	⅜	15/16	1.55
MLV15-100	15	⅜	1¼	1.55
MLV25-100	25	⅜	1½	1.60
150 Volts Working D.C.				
MLV1-150	1	⅜	15/16	1.40
MLV2-150	2	⅜	15/16	1.45
MLV5-150	5	⅜	15/16	1.55
MLV10-150	10	⅜	1¼	1.60
MLV15-150	15	⅜	1½	1.60

*These units supplied with plastic insulated sleeve to listed dimension add 1/32 to diam. and 1/16 to length.

Pyramid also manufactures subminiature Electrolytics Type MLE for operation at —40°C to +85 — Write to Pyramid Sales Engineering Department for Bulletin EL-6.

Type PBC Pyramid Plastic-Encased Motor-Starting Electrolytic Capacitors

A better replacement for the original motor-starting capacitors of the same type. Assembled in a moulded plastic case for protection against moisture, grease, dirt, etc. Mounted simply and easily on any motor, with PBC Mounting Hardware.

PYRAMID PBC

Catalog No.	Cap. in uf	Size in inches Dia.	Length	List Price
110-125 Volts AC - 60 Cycles				
PBC-1101	43- 53	1 7/16	2¾	2.10
PBC-1102	53- 64	1 7/16	2¾	2.15
PBC-1103	64- 77	1 7/16	2¾	2.25
PBC-1104	72- 88	1 7/16	2¾	2.30
PBC-1105	88- 108	1 7/16	2¾	2.60
PBC-1106	108-130	1 7/16	2¾	2.85
PBC-1107	124-149	1 7/16	2¾	2.95
PBC-1108	130-156	1 7/16	2¾	2.95
PBC-1109	145-175	1 7/16	2¾	3.20
PBC-1110	161-193	1 7/16	3⅜	3.20
PBC-1111	189-227	1 7/16	3⅜	3.25
PBC-1112	216-259	1 13/16	3⅜	3.85
PBC-1113	233-280	1 13/16	3⅜	4.05
PBC-1114	243-292	1 13/16	3⅜	4.65
PBC-1115	270-324	1 13/16	3⅜	4.70
PBC-1116	340-408	1 13/16	3⅜	4.75

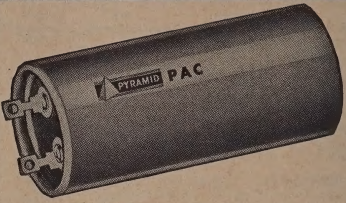
Catalog No.	Cap. in uf	Size in inches Dia.	Length	List Price
PBC-1117	378-440	1 13/16	3⅜	5.55
PBC-1118*	400-480	1 13/16	3⅜	6.00
125 Volts AC - 60 Cycles				
PBC-1201	340-408	1 13/16	4⅜	6.50
PBC-1202	378-440	1 13/16	4⅜	6.75
220 Volts AC - 60 Cycles				
PBC-2201	25- 30	1 7/16	2¾	4.60
PBC-2202	30- 36	1 7/16	3⅜	4.90
PBC-2203	36- 43	1 7/16	3⅜	5.30
PBC-2204	43- 53	1 13/16	3⅜	5.55
PBC-2205	53- 64	1 13/16	3⅜	5.75
PBC-2206	64- 77	1 13/16	3⅜	6.75
PBC-2207	72- 88	1 13/16	3⅜	7.00
PBC-2208	88-108	1 13/16	4⅜	7.65

* 110 Volts AC 60 Cycles Only

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

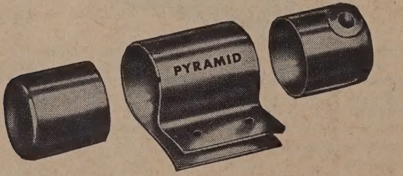
Type PAC Pyramid Metal-Encased Motor-Starting Electrolytic Capacitors

An excellent Universal Motor-Starting Capacitor, assembled in a hermetically-sealed aluminum can, for greater protection, with an insulating outer cardboard sleeve. Easily mounted with PAC Mounting Hardware.



Catalog No.	Cap. in UF	Size in Inches Dia.	Length	List Price
110-125 Volts AC - 60 Cycles				
PAC-1001	21- 25	1	2⅛	2.05
PAC-1002	25- 30	1	2⅛	2.10
PAC-1003	30- 36	1	2⅛	2.10
PAC-1004	36- 43	1	2⅛	2.10
PAC-1005	43- 53	1	2⅛	2.10
PAC-1006	47- 56	1	2⅛	2.10
PAC-1007	53- 64	1	2⅛	2.15
PAC-1008	64- 77	1	2⅛	2.25
PAC-1009	72- 88	1	2⅝	2.35
PAC-1010	88-108	1	2⅝	2.60
PAC-1011	108-130	1⅜	2⅝	2.85
PAC-1012	124-149	1⅜	2⅝	2.95
PAC-1013	130-156	1⅜	2⅝	2.95
PAC-1014	145-175	1⅜	2⅝	3.20
PAC-1015	161-193	1⅜	2⅝	3.25
PAC-1016	189-227	1⅜	2⅝	3.70
PAC-1017	200-240	1⅜	3⅛	3.90
PAC-1018	216-259	1⅜	3⅛	4.05
PAC-1019	233-280	1⅜	3⅛	4.50
PAC-1020	243-292	1⅜	4⅛	4.70
PAC-1021	270-324	1⅜	4⅛	4.75
PAC-1022	324-388	1⅜	4⅛	5.40
PAC-1023	340-408	1⅜	4⅛	5.55
PAC-1024	378-440	1⅜	4⅛	6.00
PAC-1025	400-480	1¾	4⅛	6.05
PAC-1026	430-516	1¾	4⅛	6.95
PAC-1027	460-552	1¾	4⅛	7.60
PAC-1028	540-648	1¾	4⅛	8.25
PAC-1029	590-708	1¾	4⅛	8.85
125 Volts AC - 60 Cycles				
PAC-1031	540-648	2	4⅛	9.65
PAC-1032	590-708	2	4⅛	10.40

Catalog No.	Cap. in UF	Size in Inches Dia.	Length	List Price
220 Volts AC - 60 Cycles				
PAC-2201	21- 25	1⅜	2⅝	4.40
PAC-2202	25- 30	1⅜	2⅝	4.60
PAC-2203	30- 36	1⅜	2⅝	4.90
PAC-2204	36- 43	1⅜	3⅛	5.30
PAC-2205	43- 53	1⅜	3⅛	5.55
PAC-2206	47- 56	1⅜	4⅛	5.65
PAC-2207	53- 64	1⅜	4⅛	6.30
PAC-2208	64- 77	1¾	4⅛	6.75
PAC-2209	72- 88	1¾	4⅛	7.00
PAC-2210	88-108	1¾	4⅛	7.65
PAC-2211	108-130	1¾	4⅛	8.60
PAC-2212	124-149	2	4⅛	11.00
PAC-2213	130-156	2	4⅛	11.30
PAC-2214	145-175	2	4⅛	11.85
330 Volts AC - 60 Cycles				
PAC-3201	21- 25	1⅜	3⅛	4.90
PAC-3202	25- 30	1⅜	4⅛	5.10
PAC-3203	30- 36	1⅜	4⅛	5.35
PAC-3204	36- 43	1¾	4⅛	5.65
PAC-3205	43- 53	1¾	4⅛	5.95
PAC-3206	47- 56	1¾	4⅛	6.50
PAC-3207	53- 64	1¾	4⅛	6.75
PAC-3208	64- 77	2	4⅛	7.85
PAC-3209	72- 88	2	4⅛	8.15



HARDWARE FOR P A C CAPACITORS

END CAP, PLAIN

Catalog No.	Size of Cap.* Dia.	Length	List Price
PACP-2	1⅜"		$.35
PACP-3	1¾"		.35
PACP-4	2"		.40
END CAP W/GROMMET			
PACG-2	1⅜"		$.35
PACG-3	1¾"		.40
PACG-4	2"		.45

MOUNTING BRACKET

Catalog No.	Capacitor Dia.* Length	List Price
PACB-3	1⅜" x 2⅝"	$.60
PACB-4	1⅜" x 3⅛"	.60
PACB-5	1⅜" x 4⅛"	.60
PACB-6	1¾" x 4⅛"	.60
PACB-7	2" x 4⅛"	.60

*Add 1/16" to diameter, and ⅜" to length for insulating sleeve.

HARDWARE FOR P B C CAPACITORS

Catalog No.	Cap. Dia.	List Price
END CAP		
PBC-1 (Id. hole on top)	1 7/16"	$.25
PBC-2 (Id. hole on bot.)	1 7/16"	.25
PBC-3 (Id. hole on top)	1 13/16"	30
PBC-4 (Id. hole on bot.)	1 13/16"	30

Catalog No.	Size of Cap. Dia. Length	List Price
MOUNTING BRACKETS		
PB-2	1 7/16" x 3⅜"	$.35
PB-3	1 13/16" x 3⅜"	.35
PB-4	1 13/16" x 4⅜"	.40

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

Type CQM Computer Quality Electrolytic Capacitors

PYRAMID
CQM

FEATURES

1. High reliability, ideally suited for computer requirements.
2. Highest purity aluminum used.
3. Molded terminals for tight permanent seal.
4. Low leakage current.
5. Long shelf life.
6. Low equivalent series resistance.

Computer circuits require electrolytic capacitors of the highest reliability. Pyramid type CQM capacitors, designed to operate at —20° C. to +65° C., fill this requirement. They are made with electrodes of the highest purity aluminum obtainable (99.99%) and specially formulated electrolytes.

Carefully inspected materials, coupled with controlled manufacturing methods, produce a capacitor capable of meeting the most exacting computer specification.

The capacitors are made in high purity aluminum containers hermetically sealed with molded tops held in place by rolling the can rim securely over a buna rubber gasket. The terminals are molded into the top. These terminals and the buna rubber gasketing insure a tight, permanent seal.

Two types of terminals are available: (1) a screw type terminal with tapped inserts, (CQM); (2) a lug type terminal, with anti-rotational locks, swaged to solid aluminum inserts, (CQML). Internal connections to the aluminum inserts are made with straps of the same high purity aluminum as the electrodes. This feature contributes to low leakage and long shelf life.

Cap. in Mfd.	Inches D x L
5 WVDC	
8,000	1⅜x4⅛
20,000	2 x4⅛
31,000	2½x4⅛
45,000	3 x4⅛
10 WVDC	
6,500	1⅜x4⅛
16,000	2 x4⅛
25,000	2½x4⅛
40,000	3 x4⅛
15 WVDC	
5,500	1⅜x4⅛
13,500	2 x4⅛
21,000	2½x4⅛
33,000	3 x4⅛
25 WVDC	
3,200	1⅜x4⅛
8,000	2 x4⅛
12,500	2½x4⅛
17,000	3 x4⅛
35 WVDC	
2,000	1⅜x4⅛
5,000	2 x4⅛
8,000	2½x4⅛
12,000	3 x4⅛
50 WVDC	
1,600	1⅜x4⅛
4,000	2 x4⅛
6,500	2½x4⅛
10,000	3 x4⅛
100 WVDC	
700	1⅜x4⅛
1,700	2 x4⅛
3,000	2½x4⅛
4,200	3 x4⅛
150 WVDC	
450	1⅜x4⅛
1,000	2 x4⅛
1,800	2½x4⅛
3,000	3 x4⅛
250 WVDC	
250	1⅜x4⅛
600	2 x4⅛
1,000	2½x4⅛
1,600	3 x4⅛
300 WVDC	
200	1⅜x4⅛
400	2 x4⅛
750	2½x4⅛
1,100	3 x4⅛
350 WVDC	
170	1⅜x4⅛
375	2 x4⅛
700	2½x4⅛
1,000	3 x4⅛
400 WVDC	
140	1⅜x4⅛
325	2 x4⅛
575	2½x4⅛
850	3 x4⅛

Types CQMS & CQMLS are units with insulating paper tubes, add 1/16" to diameter and ⅜" to length.

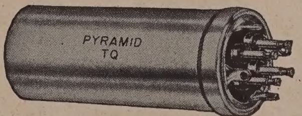
Types CQMV & CQMLV are units with insulating plastic tubes, add 1/16" to diameter and ¼" to length.

Wider range of capacitance available in sizes up to 6" in length

Type TQ Telephone-Quality Electrolytic Capacitors

FEATURES

1. Designed for high reliability electronic equipment, telephone networks, and industrial control systems.
2. Wide temperature range: —20° C. to +85° C.
3. Hermetically sealed aluminum can.
4. Low leakage current.
5. Long life, trouble free operation.
6. Manufactured under quality controlled conditions.
7. Provided with Standard Twist Mount Type mounting feet and insulating washers.



Cap. in Mfd.	WV DC	Inches D x L
SINGLE SECTION		
2000	6	1⅜x2½
1000	15	1 x4
500	25	1 x4
200	50	1 x3½
100	150	1 x4
50	250	1 x3
20	350	1 x2½
50	350	1 x4
20	450	1 x3
50	450	1⅜x3
DUAL SECTION		
50+50	150	1 x4
20+20	250	1 x3½
10+10	450	1 x4
20+20	450	1⅜x3½
40+40	450	1⅜x4
TRIPLE SECTION		
50+50+50	150	1⅜x4
40+40+40	250	1⅜x4
20+20+20	350	1⅜x4
20+20+20	450	1⅜x4

PYRAMID ELECTRIC COMPANY

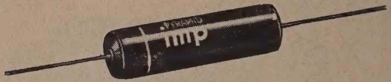
DARLINGTON, S. C.

Type IMP Molded Tubular Paper Capacitors

Noninductive extended-foil section molded in noninflammable thermosetting plastic. High insulation resistance. Excellent power factor. Withstands standard RETMA Humidity-resistance Test. Extremely rugged. Very long life.

Temperature Rating:
—40°C to + 100°C

Standard Tolerance:
.0001- .001 UF: —25% to + 60%
.0011- .009 UF: —20% to + 40%
.01 -1.0 UF: —20% to + 20%



Catalogue Number	Cap. in UF	Diameter	Length	List
200 Volts DC Working				
IMP2-S2	.02	⅜	1¼	.25
IMP2-S47	.047	⅜	1¼	.30
IMP2-S5	.05	⅜	1¼	.30
IMP2-P1	.1	7⁄16	1¼	.35
IMP2-P15	.15	½	1½	.35
IMP2-P25	.25	⅝	1⅞	.45
IMP2-P47	.47	⅝	1⅞	.60
IMP2-P5	.5	⅝	1⅞	.60
IMP2-1	1.	¾	2¼	.85
400 Volts DC Working				
IMP4-S1	.01	5⁄16	1	.25
IMP4-S2	.02	⅜	1¼	.25
IMP4-S22	.022	⅜	1¼	.25
IMP4-S25	.025	⅜	1¼	.25
IMP4-S3	.03	⅜	1¼	.25
IMP4-S4	.04	7⁄16	1¼	.30
IMP4-S47	.047	7⁄16	1¼	.30
IMP4-S5	.05	7⁄16	1¼	.30
IMP4-S68	.068	½	1½	.35
IMP4-P1	.1	½	1½	.35
IMP4-P15	.15	⅝	1⅞	.40
IMP4-P22	.22	⅝	1⅞	.40
IMP4-P25	.25	⅝	1⅞	.45
IMP4-P47	.47	¾	2¼	.60
IMP4-P5	.5	¾	2¼	.60
600 Volts DC Working				
IMP6-T1	.0001	5⁄16	1	.25
IMP6-T25	.00025	5⁄16	1	.25
IMP6-T4	.0004	5⁄16	1	.25
IMP6-T5	.0005	5⁄16	1	.25
IMP6-D1	.001	5⁄16	1	.25
IMP6-D15	.0015	5⁄16	1	.25
IMP6-D2	.002	5⁄16	1	.25
IMP6-D22	.0022	5⁄16	1	.25
IMP6-D3	.003	5⁄16	1	.25
IMP6-D33	.0033	5⁄16	1	.25
IMP6-D4	.004	5⁄16	1	.25
IMP6-D47	.0047	5⁄16	1	.25
IMP6-D5	.005	5⁄16	1	.25
IMP6-D6	.006	⅜	1¼	.30
IMP6-D68	.0068	⅜	1¼	.30
IMP6-D8	.008	⅜	1¼	.30
IMP6-S1	.01	⅜	1¼	.30
IMP6-S15	.015	⅜	1¼	.30
IMP6-S2	.02	7⁄16	1¼	.30
IMP6-S22	.022	7⁄16	1¼	.30
IMP6-S3	.03	7⁄16	1¼	.35
IMP6-S33	.033	½	1½	.35
IMP6-S4	.04	½	1½	.40
IMP6-S47	.047	½	1½	.40
IMP6-S5	.05	½	1½	.40
IMP6-S6	.06	⅝	1⅞	.45
IMP6-S68	.068	⅝	1⅞	.45
IMP6-P1	.1	⅝	1⅞	.45
IMP6-P2	.2	¾	2¼	.55
IMP6-P22	.22	¾	2¼	.55
IMP6-P25	.25	¾	2¼	.55
CT6P5*	.5	15⁄16	2¾	.80

Catalogue Number	Cap. in UF	Diameter	Length	List
1000 Volts DC Working				
IMP10-T5	.0005	5⁄16	1	.50
IMP10-D1	.001	5⁄16	1	.50
IMP10-D15	.0015	5⁄16	1	.50
IMP10-D2	.002	⅜	1¼	.50
IMP10-D22	.0022	⅜	1¼	.50
IMP10-D3	.003	⅜	1¼	.50
IMP10-D4	.004	⅜	1¼	.50
IMP10-D47	.0047	⅜	1¼	.50
IMP10-D5	.005	⅜	1¼	.50
IMP10-D68	.0068	⅜	1¼	.50
IMP10-S1	.01	7⁄16	1¼	.50
IMP10-S15	.015	½	1½	.50
IMP10-S2	.02	½	1½	.50
IMP10-S22	.022	½	1½	.50
IMP10-S3	.03	⅝	1⅞	.50
IMP10-S35	.035	⅝	1⅞	.50
IMP10-S47	.047	⅝	1⅞	.60
IMP10-S5	.05	⅝	1⅞	.60
IMP10-S68	.068	⅝	1⅞	.65
IMP10-P1	.1	¾	2¼	.75
1600 Volts DC Working				
IMP16-T5	.0005	⅜	1¼	.65
IMP16-D1	.001	⅜	1¼	.65
IMP16-D15	.0015	⅜	1¼	.65
IMP16-D2	.002	⅜	1¼	.65
IMP16-D22	.0022	⅜	1¼	.65
IMP16-D3	.003	7⁄16	1¼	.65
IMP16-D33	.0033	7⁄16	1¼	.65
IMP16-D4	.004	7⁄16	1¼	.65
IMP16-D47	.0047	7⁄16	1¼	.65
IMP16-D5	.005	7⁄16	1¼	.65
IMP16-D6	.006	½	1½	.65
IMP16-D68	.0068	½	1½	.65
IMP16-D7	.007	½	1½	.65
IMP16-D75	.0075	½	1½	.65
IMP16-D8	.008	½	1½	.65
IMP16-S1	.01	½	1½	.70
IMP16-S15	.015	⅝	1⅞	.70
IMP16-S2	.02	⅝	1⅞	.70
IMP16-S22	.022	⅝	1⅞	.70
IMP16-S3	.03	⅝	1⅞	.70
IMP16-S4	.04	⅝	1⅞	.70
IMP16-S5	.05	¾	2¼	.70
*CT16-S68	.068	15⁄16	2⅞	.80
*CT16-P1	.1	15⁄16	2⅞	.85
6,000 Volts DC Working				
*CT60-T5	.0005	⅝	2	1.30
*CT60-D1	.001	⅝	2	1.30
*CT60-D5	.005	13⁄16	2¼	1.30
10,000 Volts DC Working				
*CT100-D1	.001	¾	2⅝	1.50
*CT100-T5	.0005	⅝	2	1.50
12,500 Volts DC Working				
*CT125-T25	.00025	¾	2⅝	1.70
*CT125-T5	.0005	¾	2⅝	1.70

* Supplied in ceramic-case units.

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

Type 111 "Gold Standard" Molded Mylar* Capacitors

Noninductive polyester film extended foil section, molded in a noninflammable thermosetting plastic case. Very high insulation resistance. Excellent power factor. Greatly reduced sizes. Dielectric impervious to moisture. Extremely rugged with a very long life.

Temperature Rating: —40°C to + 100°C
Standard Tolerance: ± 20%

PYRAMID
111

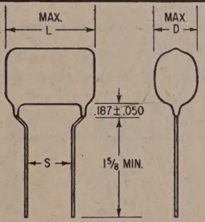
Catalog Number	Cap. in Mfd.	Size in Inches Dia.	Size in Inches Length	List Price
200 Volts DC Working				
111-2S2	.02	5/16	1	.25
111-2S47	.047	3/8	1 1/4	.25
111-2S5	.05	3/8	1 1/4	.25
111-2P1	.1	3/8	1 1/4	.35
111-2P15	.15	7/16	1 1/4	.35
111-2P22	.22	1/2	1 1/2	.40
111-2P25	.25	1/2	1 1/2	.45
111-2P47	.47	5/8	1 7/8	.60
111-2P5	.5	5/8	1 7/8	.60
111-2-1	1.0	3/4	2 1/4	.95
400 Volts DC Working				
111-4S1	.01	5/16	1	.25
111-4S15	.015	5/16	1	.25
111-4S2	.02	3/8	1 1/4	.25
111-4S22	.022	3/8	1 1/4	.30
111-4S333	.033	3/8	1 1/4	.30
111-4S47	.047	3/8	1 1/4	.30
111-4S5	.05	3/8	1 1/4	.30
111-4S68	.068	7/16	1 1/4	.35
111-4P1	.1	1/2	1 1/2	.35
111-4P15	.15	1/2	1 1/2	.40
111-4P22	.22	5/8	1 7/8	.50
111-4P25	.25	5/8	1 7/8	.55
111-4P33	.33	5/8	1 7/8	.65
111-4P47	.47	3/4	2 1/4	.80
111-4P5	.5	3/4	2 1/4	.85
111-4P68	.68	3/4	2 1/4	1.15
111-6T1	.0001	5/16	1	.25
111-6T25	.00025	5/16	1	.25
111-6T4	.0004	5/16	1	.25
111-6T5	.0005	5/16	1	.25
111-6D1	.001	5/16	1	.25
111-6D15	.0015	5/16	1	.25
111-6D2	.002	5/16	1	.25
111-6D22	.0022	5/16	1	.25
111-6D3	.003	5/16	1	.25
111-6D33	.0033	5/16	1	.25
111-6D4	.004	5/16	1	.25
111-6D47	.0047	5/16	1	.25
111-6D5	.005	5/16	1	.25
111-6D6	.006	5/16	1	.25
111-6D68	.0068	5/16	1	.30
111-6S1	.01	5/16	1	.30
111-6S15	.015	3/8	1 1/4	.30
111-6S2	.02	3/8	1 1/4	.30
111-6S22	.022	3/8	1 1/4	.30
111-6S3	.03	7/16	1 1/4	.35
111-6S33	.033	7/16	1 1/4	.35
111-6S4	.04	7/16	1 1/4	.35
111-6S47	.047	7/16	1 1/4	.40
111-6S5	.05	7/16	1 1/4	.40
111-6S6	.06	7/16	1 1/4	.40
111-6S68	.068	17/32	1 1/4	.40
111-6P1	.1	5/8	1 7/8	.45
111-6P15	.15	5/8	1 7/8	.55
111-6P2	.2	3/4	2 1/4	.65
111-6P22	.22	3/4	2 1/4	.65
111-6P25	.25	3/4	2 1/4	.75
111-6P33	.33	3/4	2 1/4	.90

Type 151 Gold-Dip Mylar* Capacitors

A new Mylar Plastic Dipped Capacitor engineered for highest reliability and especially designed for printed board circuitry as well as conventional application. Pyramid Gold-Dip Capacitors Type 151 features:

- ▲ New reliable Dipped Plastic Coating
- ▲ New Moisture Resistance
- ▲ —55°C to plus 110°C operation
- ▲ High insulation resistance
- ▲ 10% capacity tolerance*

* Closer tolerances available on special order. Contact your Authorized Pyramid Stocking Distributor.



.05 MFD ± 10%
GOLD DIP
600 VDC

Catalog Number	Capacity in Mfds.	D	L	S	List
200 Volts DC Working					
151-2P1	.1	5/8	1 1/4	23/32	.35
151-2P15	.15	5/8	1 1/4	23/32	.35
151-2P22	.22	11/16	1 11/32	27/32	.40
151-2P25	.25	11/16	1 11/32	27/32	.45
151-2P47	.47	7/8	1 9/16	1 3/32	.60
151-2P5	.5	7/8	1 9/16	1 3/32	.60
400 Volts DC Working					
151-4S1	.01	7/16	3/4	1/4	.25
151-4S15	.015	7/16	3/4	1/4	.25
151-4S2	.02	1/2	7/8	7/16	.25
151-4S22	.022	1/2	7/8	7/16	.30
151-2P5	.5	7/8	1 9/16	1 3/32	.60
151-4S33	.033	1/2	7/8	7/16	.30
151-4S47	.047	5/8	1 1/4	23/32	.30
151-4S5	.05	5/8	1 1/4	23/32	.30
151-4S68	.068	5/8	1 1/4	23/32	.35
151-4P1	.1	5/8	1 1/4	23/32	.35
151-4P15	.15	11/16	1 11/32	27/32	.40
151-4P22	.22	7/8	1 9/16	1 3/32	.50
151-4P25	.25	7/8	1 9/16	1 3/32	.55
600 Volts DC Working					
151-6D1+	.001	7/16	3/4	1/4	.25
151-6D15+	.0015	7/16	3/4	1/4	.25
151-6D2+	.002	7/16	3/4	1/4	.25
151-6D22+	.0022	7/16	3/4	1/4	.25
151-6D3+	.003	7/16	3/4	1/4	.25
151-6D33+	.0033	7/16	3/4	1/4	.25
151-6D4+	.004	7/16	3/4	1/4	.25
151-6D47+	.0047	7/16	3/4	1/4	.25
151-6D5+	.005	7/16	3/4	1/4	.25
151-6D6	.006	7/16	3/4	1/4	.25
151-6D68	.0068	7/16	3/4	1/4	.30
151-6S1	.01	1/2	7/8	7/16	.30
151-6S15	.015	1/2	7/8	7/16	.30
151-6S2	.02	1/2	7/8	7/16	.30
151-6S22	.022	1/2	7/8	7/16	.30
151-6S3	.03	5/8	1 1/4	23/32	.35
151-6S33	.033	5/8	1 1/4	23/32	.35
151-6S4	.04	5/8	1 1/4	23/32	.35
151-6S47	.047	5/8	1 1/4	23/32	.40
151-6S5	.05	5/8	1 1/4	23/32	.40
151-6S6	.06	11/16	1 11/32	27/32	.40
151-6S68	.068	11/16	1 11/32	27/32	.40
151-6P1	.1	11/16	1 11/32	27/32	.45
151-6P15	.15	7/8	1 9/16	1 3/32	.55
151-6P2	.2	7/8	1 9/16	1 3/32	.65
151-6P22	.22	7/8	1 9/16	1 3/32	.65
151-6P25	.25	7/8	1 9/16	1 3/32	.75

+ Indicates Tolerance of + 20%

* DuPont Reg.

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

Type 107 Mylar Wrapped Mylar ® Capacitors

Noninductive polyester film extended foil section, assembled in a rugged Mylar wrapper case. The ends are filled with thermosetting Pyroset resin. Heavily tinned leads are firmly embedded in the resin and will not pull out. Sizes are greatly reduced. Very high insulation resistance, dielectric impervious to moisture.

PYRAMID
MYLAR
107

Temperature Range:

—30°C. to + 110°C

Standard Tolerance.

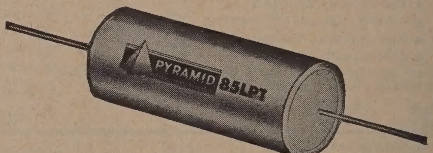
.001 to .0047 Mfd. ±30%
.005 to 1.0 Mfd. ±20%
(Closer tolerances available.)

Catalog No.	Capacity	Diameter	Length
150 VDC Working			
107V103	.01	.156	½
107V153	.015	.187	½
107V223	.022	.203	⅝
107V333	.033	.218	⅝
107V473	.047	.234	¾
107V683	.068	.265	¾
107V104	.1	.281	⅞
107V154	.15	.328	⅞
107V224	.22	.328	1
107V334	.33	.375	1⅛
107V474	.47	.468	1¼
107V684	.68	.562	1¼
107V105	1.00	.593	1½
107V155	1.5	.718	1¾
107V205	2.00	.812	1¾
200 VDC Working			
107C102	.001	.156	½
107C152	.0015	.156	½
107C222	.0022	.156	½
107C332	.0033	.156	½
107C472	.0047	.156	½
107C682	.0068	.156	½
107C103	.01	.171	½
107C153	.015	.203	½
107C223	.022	.250	⅝
107C333	.033	.250	¾
107C473	.047	.296	¾
107C683	.068	.343	¾
107C104	.1	.375	⅞
107C154	.15	.453	⅞
107C224	.22	.438	1⅛
107C334	.33	.484	1⅛
107C474	.47	.546	1¼
107C684	.68	.609	1⅝
107C105	1.	.671	1¾
107C155	1.5	.828	1¾
107C205	2.	.875	1⅞
400 VDC Working			
107E102	.001	.156	⅝
107E152	.0015	.156	⅝
107E222	.0022	.156	⅝
107E332	.0033	.156	⅝
107E472	.0047	.187	⅝
107E682	.0068	.218	⅝
107E103	.01	.250	⅝
107E153	.015	.296	⅝
107E223	.022	.312	¾
107E333	.033	.312	⅞
107E473	.047	.343	⅞
107E683	.068	.375	1
107E104	.1	.421	1
107E154	.15	.468	1¼
107E224	.22	.546	1⅜
107E334	.33	.593	1⅝
107E474	.47	.671	1⅝
107E684	.68	.796	1⅜
107E105	1.	.812	2
107E155	1.5	.921	2¼
107E205	2.	1.093	2¼
600 VDC Working			
107F102	.001	.156	¾
107F152	.0052	.171	¾
107F222	.0022	.187	¾
107E332	.0033	.203	¾
107F472	.0047	.234	¾
107F682	.0068	.265	¾
107F103	.01	.312	¾
107F153	.015	.312	⅞
107F223	.022	.375	⅞
107F333	.033	.406	1
107F473	.047	.453	1
107F683	.068	.531	1
107F104	.1	.562	1⅜
107F154	.15	.671	1⅜
107F224	.22	.718	1⅝
107F334	.33	.756	2
107F474	.47	.859	2
107F684	.68	1.016	2
107F105	1.	1.125	2½
107F155	1.5	1.234	3
107F205	2.	1.421	3

Available ±10% tolerance (K) 107F205K 2.0 mfd. 600V ±10 ±20% tolerance (M) 107F205M 2.0 mfd. 600V ±20

Type 85 LPT Pyramid Miniature Tubular Paper Capacitors

Catalog No.	Cap. in UF	Size in Inches Diameter	Size in Inches Length	List Price
200 Volts DC Working				
85LPT2-D5	.005	¼	⅝	.35
85LPT2-D6	.006	¼	⅝	.35
85LPT2-S1	.01	¼	⅝	.40
85LPT2-S2	.02	9/32	13/16	.45
85LPT2-S5	.05	5/16	1	.50
85LPT2-P1	.1	13/32	1	.60
85LPT2-P15	.15	15/32	1⅛	.60
85LPT2-P2	.2	15/32	1⅛	.65
85LPT2-P25	.25	17/32	1⅛	.70
85LPT2-P5	.5	⅝	1½	.80
400 Volts DC Working				
85LPT4-D3	.003	¼	⅝	.35
85LPT4-D4	.004	¼	⅝	.35
85LPT4-D5	.005	¼	13/16	.35
85LPT4-D6	.006	¼	13/16	.35
85LPT4-S1	.01	5/16	13/16	.40
85LPT4-S2	.02	5/16	1	.45
85LPT4-S5	.05	13/32	1	.50
85LPT4-P1	.1	15/32	1⅛	.65
85LPT4-P15	.15	⅝	1⅛	.65
85LPT4-P2	.2	⅝	1⅛	.70
85LPT4-P25	.25	⅝	1½	.75
85LPT4-P5	.5	⅝	2 5/16	.85
600 Volts DC Working				
85LPT6-T1	.0001	¼	⅝	.35
85LPT6-T5	.0005	¼	⅝	.35
85LPT6-D1	.001	¼	⅝	.35
85LPT6-D2	.002	¼	⅝	.35
85LPT6-D3	.003	9/32	13/16	.35
85LPT6-D4	.004	9/32	13/16	.35
85LPT6-D5	.005	9/32	13/16	.40
85LPT6-D6	.006	5/16	13/16	.40
85LPT6-S1	.01	5/16	1	.45
85LPT6-S2	.02	11/32	1	.50
85LPT6-S5	.05	15/32	1⅛	.55
85LPT6-P1	.1	⅝	1⅛	.70
85LPT6-P15	.15	⅝	1¾	.75
85LPT6-P2	.2	⅝	1¾	.80
85LPT6-P25	.25	⅝	2	.80



Noninductive extended-foil section assembled in phenolic-impregnated cardboard tube. Plastic end-seals. Withstands standard RETMA Humidity-resistance Test. Sturdy construction permits continuous operation at rated DC voltage, yet retains all the advantages of extremely small size.

Temperature Rating:
—40°C. to +85°C.

Standard Tolerance:
.0001- .001 UF: —25% to +60%
.0011- .009 UF: —20% to +40%
.01 -1.0 UF: —20% to +20%

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

Pyramid Glasseal Capacitors For Military and Commercial Application CP04 and CP05 to Mil-C-25A (Inserted Tabs.)

Pyramid Glasseal capacitors are subminiature metal cased tubular units which have been designed to meet severe and rigid operating requirements, especially where an important design consideration is limited space.

"Glasseals" have proven themselves to be unsurpassed in reliability over the entire operating temp. range from —55° C to + 125° C.

AVAILABLE IN
FOLLOWING CASE
STYLES:
CP10
CP11

PYRAMID
GLASSEAL

Mil No.	Pyramid Equiv.	
CP04A1E	PGIM	Case Floating
CP04A1K	PGIX	Case Floating
CP04A3E	PGM	Case Grounded
CP04A3K	PGX	Case Grounded

Mil No.	Pyramid Equiv.	
CP05A1E	PGIMV	Case Floating
CP05A1K	PGIXV	Case Floating
CP05A3E	PGMV	Case Grounded
CP05A3K	PGXV	Case Grounded

NOTE: The capacitors listed in this table have a capacitance tolerance of ±10%. For ±20% units, change the last letter in the catalog number from K to M.

		TYPE CP04AI* Plain Metal Case			TYPE CP05AI* Metal Case with Insulating Sleeve		
µF	WVDC	Char. E —55°C to +85°C	Char. K —55°C to +125°C	Size D. x L.	Char. E —55°C to +85°C	Char. K —55°C to +125°C	Size D. x L.
.001	600	CP04A1EF102K	CP04A1KF102K	.235 x ¾	CP05A1EF102K	CP05A1KF102K	.298 x 13/16
.0015	600	CP04A1EF152K	CP04A1KF152K	.235 x ¾	CP05A1EF152K	CP05A1KF152K	.298 x 13/16
.0022	600	CP04A1EF222K	CP04A1KF222K	.235 x ¾	CP05A1EF222K	CP05A1KF222K	.298 x 13/16
.0033	600	CP04A1EF332K	CP04A1KF332K	.235 x ¾	CP05A1EF332K	CP05A1KF332K	.298 x 13/16
.0047	600	CP04A1EF472K	CP04A1KF472K	.235 x ¾	CP05A1EF472K	CP05A1KF472K	.298 x 13/16
.0068	600	CP04A1EF682K	CP04A1KF682K	.235 x ¾	CP05A1EF682K	CP05A1KF682K	.298 x 13/16
.01	400	CP04A1EE103K	CP04A1KE103K	.235 x ¾	CP05A1EE103K	CP05A1KE103K	.298 x 13/16
	600	CP04A1EF103K	CP04A1KF103K	.312 x ⅞	CP05A1EF103K	CP05A1KF103K	.375 x 15/16
.015	200	CP04A1EC153K	CP04A1KC153K	.235 x ¾	CP05A1EC153K	CP05A1KC153K	.298 x 13/16
	600	CP04A1EF153K	CP04A1KF153K	.312 x ⅞	CP05A1EF153K	CP05A1KF153K	.375 x 15/16
.022	200	CP04A1EC223K	CP04A1KC223K	.235 x ¾	CP05A1EC223K	CP05A1KC223K	.298 x 13/16
	600	CP04A1EF223K	CP04A1KF223K	.312 x ⅞	CP05A1EF223K	CP05A1KF223K	.375 x 15/16
.033	100	CP04A1EB333K	CP04A1KB333K	.235 x ¾	CP05A1EB333K	CP05A1KB333K	2.98 x 13/16
	400	CP04A1EE333K	CP04A1KE333K	.312 x ⅞	CP05A1EE333K	CP05A1KE333K	.375 x 15/16
	600	CP04A1EF333K	CP04A1KF333K	.400 x ⅞	CP05A1EF333K	CP05A1KF333K	.463 x 15/16
.047	200	CP04A1EC473K	CP04A1KC473K	.312 x ⅞	CP05A1EC473K	CP05A1KC473K	.375 x 15/16
	400	CP04A1EE473K	CP04A1KE473K	.400 x ⅞	CP05A1EE473K	CP05A1KE473K	.463 x 15/16
	600	CP04A1EF473K	CP04A1KF473K	.400 x 1⅛	CP05A1EF473K	CP05A1KF473K	.463 x 15/16
.068	200	CP04A1EC683K	CP04A1KC683K	.312 x ⅞	CP05A1EC683K	CP05A1KC683K	.375 x 15/16
	400	CP04A1EE683K	CP04A1KE683K	.400 x 1⅛	CP05A1EE683K	CP05A1KE683K	.463 x 1 3/16
	600	CP04A1EF683K	CP04A1KF683K	.400 x 1⅜	CP05A1EF683K	CP05A1KF683K	.463 x 1 7/16
.1	100	CP04A1EB104K	CP04A1KB104K	.312 x ⅞	CP05A1EB104K	CP05A1KB104K	.375 x 15/16
	200	CP04A1EC104K	CP04A1KC104K	.400 x ⅞	CP05A1EC104K	CP05A1KC104K	.463 x 15/16
	400	CP04A1EE104K	CP04A1KE104K	.400 x 1⅜	CP05A1EE104K	CP05A1KE104K	.463 x 1 7/16
	600	CP04A1EF104K	CP04A1KF104K	.562 x 1⅛	CP05A1EF104K	CP05A1KF104K	.625 x 1 3/16
.15	100	CP04A1EB154K	CP04A1KB154K	.400 x ⅞	CP05A1EB154K	CP05A1KB154K	.463 x 15/16
	200	CP04A1EC154K	CP04A1KC154K	.400 x 1⅛	CP05A1EC154K	CP05A1EC154K	.463 x 1 3/16
	400	CP04A1EE154K	CP04A1KE154K	.562 x 1⅛	CP05A1EE154K	CP05A1KE154K	.625 x 1 3/16
	600	CP04A1EF154K	CP04A1KF154K	.562 x 1⅜	CP05A1EF154K	CP05A1KF154K	.625 x 1 7/16
.22	100	CP04A1EB224K	CP04A1KB224K	.400 x 1⅜	CP05A1EB224K	CP05A1KB224K	.463 x 1 3/16
	200	CP04A1EC224K	CP04A1KC224K	.400 x 1⅜	CP05A1EC224K	CP05A1KC224K	.463 x 1 7/16
	400	CP04A1EE224K	CP04A1KE224K	.562 x 1⅜	CP05A1EE224K	CP05A1KE224K	.625 x 1 7/16
	600	CP04A1EF224K	CP04A1KF224K	.562 x 1⅞	CP05A1EF224K	CP05A1KF224K	.625 x 1 15/16
.33	100	CP04A1EB334K	CP04A1KB334K	.400 x 1⅜	CP05A1EB334K	CP05A1KB334K	.463 x 1 7/16
	200	CP04A1EC334K	CP04A1KC334K	.562 x 1⅛	CP05A1EC334K	CP05A1KC334K	.625 x 1 3/16
	400	CP04A1EE334K	CP04A1KE334K	.562 x 1⅞	CP05A1EE334K	CP05A1KE334K	.625 x 1 15/16
	600	CP04A1EF334K	CP04A1KF334K	.670 x 1⅞	CP05A1EF334K	CP05A1KF334K	.733 x 1 15/16
.47	100	CP04A1EB474K	CP04A1KB474K	.562 x 1⅛	CP05A1EB474K	CP05A1KB474K	.625 x 1 3/16
	200	CP04A1EC474K	CP04A1KC474K	.562 x 1⅜	CP05A1EC474K	CP05A1KC474K	.625 x 1 7/16
	400	CP04A1EE474K	CP04A1KE474K	.670 x 1⅞	CP05A1EE474K	CP05A1KE474K	.733 x 1 15/16
	600	CP04A1EF474K	CP04A1KF474K	.750 x 2⅛	CP05A1EF474K	CP05A1KF474K	.813 x 2 3/16
.68	100	CP04A1EB684K	CP04A1KB684K	.562 x 1⅜	CP05A1EB684K	CP05A1KB684K	.625 x 1 7/16
	200	CP04A1EC684K	CP04A1KC684K	.562 x 1⅞	CP05A1EC684K	CP05A1KC684K	.625 x 1 15/16
	400	CP04A1EE684K	CP04A1KE684K	.750 x 2⅛	CP05A1EE684K	CP05A1KE684K	.813 x 2 3/16
	600	CP04A1EF684K	CP04A1KF684K	1.0 x 1⅞	CP05A1EF684K	CP05A1KF684K	1.063 x 1 15/16
1.0	100	CP04A1EB105K	CP04A1KB105K	.562 x 1⅞	CP05A1EB105K	CP05A1KB105K	.625 x 1 15/16
	200	CP04A1EC105K	CP04A1KC105K	.670 x 1⅞	CP05A1EC105K	CP05A1KC105K	.733 x 1 15/16
	400	CP04A1EE105K	CP04A1KE105K	1.0 x 1⅞	CP05A1EE105K	CP05A1KE105K	1.063 x 1 15/16

*For case grounded reduce L dimension by 1/16".

Above listing are ratings listed in Mil-C-25A. Other values are available in Pyramid Commercial Equivalents. For wide variety of case styles and mountings write for catalog Page 4.

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

Pyramid Glasseal Capacitors For Military and Commercial Application (Con't.)
CP08 and CP09 to Mil-C-25A (Extended Foil)

Mil No.		Pyramid Equiv.	Mil No.		Pyramid Equiv.
CP08A1E	EPGIM	Case Floating	CP09A1E	EPGIMV	Case Floating
CP08A1K	EPGIX	Case Floating	CP09A1K	EPGIXV	Case Floating
CP08A3E	EPGM	Case Grounded	CP09A3E	EPGMV	Case Grounded
CP08A3K	EPGX	Case Grounded	CP09A3K	EPGXV	Case Grounded

NOTE: The capacitors listed in this table have a capacitance tolerance of ±10%. For ±20% units, change the last letter in the catalog number from K to M.

		TYPE CP08AI Plain Metal Case			TYPE CP09AI Metal Case with Insulating Sleeve		
μF	WVDC	Char. E —55°C to +85°C	Char. K —55°C to +125°C	Size D. x L.	Char. E —55°C to +85°C	Char. K —55°C to +125°C	Size D. x L.
.001	600	CP08A1EF102K	CP08A1KF102K	.235 x ¾	CP09A1EF102K	CP09A1KF102K	.298 x 13/16
.0015	600	CP08A1EF152K	CP08A1KF152K	.235 x ¾	CP09A1EF152K	CP09A1KF152K	.298 x 13/16
.0022	600	CP08A1EF222K	CP08A1KF222K	.235 x ¾	CP09A1EF222K	CP09A1KF222K	.298 x 13/16
.0033	400	CP08A1EE332K	CP08A1KE332K	.235 x ¾	CP09A1EE332K	CP09A1KE332K	.298 x 13/16
	600	CP08A1EF332K	CP08A1KF332K	.312 x ⅞	CP09A1EF332K	CP09A1KF332K	.375 x 15/16
.0047	200	CP08A1EC472K	CP08A1KC472K	.235 x ¾	CP09A1EC472K	CP09A1KC472K	.298 x 13/16
	600	CP08A1EF472K	CP08A1KF472K	.312 x ⅞	CP09A1EF472K	CP09A1KF472K	.375 x 15/16
.0068	200	CP08A1EC682K	CP08A1KC682K	.235 x ¾	CP09A1EC682K	CP09A1KC683K	.298 x 13/16
	600	CP08A1EF682K	CP08A1KF682K	.312 x ⅞	CP09A1EF682K	CP09A1KF682K	.375 x 15/16
.01	100	CP08A1EB103K	CP08A1KB103K	.235 x ¾	CP09A1EB103K	CP09A1KB103K	.298 x 13/16
	600	CP08A1EF103K	CP08A1KF103K	.312 x ⅞	CP09A1EF103K	CP09A1KF103K	.375 x 15/16
.015	100	CP08A1EB153K	CP08A1KB153K	.235 x ¾	CP09A1EB153K	CP09A1KB153K	.298 x 13/16
	400	CP08A1EE153K	CP08A1KE153K	.312 x ⅞	CP09A1EE153K	CP09A1KE153K	.375 x 15/16
	600	CP08A1EF153K	CP08A1KF153K	.400 x ⅞	CP09A1EF153K	CP09A1KF153K	.463 x 15/16
.022	200	CP08A1EC223K	CP08A1KC223K	.312 x ⅞	CP09A1EC223K	CP09A1KC223K	.375 x 15/16
	600	CP08A1EF223K	CP08A1KF223K	.400 x ⅞	CP09A1EF223K	CP09A1KF223K	.463 x 15/16
.033	200	CP08A1EC333K	CP08A1KC333K	.312 x ⅞	CP09A1EC333K	CP09A1KC333K	.375 x 15/16
	400	CP08A1EE333K	CP08A1KE333K	.400 x ⅞	CP09A1EE333K	CP09A1KE333K	.463 x 15/16
	600	CP08A1EF333K	CP08A1KF333K	.400 x 1⅛	CP09A1EF333K	CP09A1KF333K	.463 x 1 3/16
.047	100	CP08A1EB473K	CP08A1KB473K	.312 x ⅞	CP09A1EB473K	CP09A1KB473K	.375 x 15/16
	200	CP08A1EC473K	CP08A1KC473K	.400 x ⅞	CP09A1EC473K	CP09A1KC473K	.463 x 15/16
	400	CP08A1EE473K	CP08A1KE473K	.400 x 1⅛	CP09A1EE473K	CP09A1KE473K	.463 x 1 3/16
	600	CP08A1EF473K	CP08A1KF473K	.400 x 1⅜	CP09A1EF473K	CP09A1KF473K	.463 x 1 7/16
.068	200	CP08A1EC683K	CP08A1KC683K	.400 x ⅞	CP09A1EC683K	CP09A1KC683K	.463 x 15/16
	400	CP08A1EE683K	CP08A1KE683K	.400 x 1⅜	CP09A1EE683K	CP09A1KE683K	.463 x 1 7/16
	600	CP08A1EF683K	CP08A1KF683K	.562 x ⅛	CP09A1EF683K	CP09A1KF683K	.625 x 1 3/16
.1	100	CP08A1EB104K	CP08A1KB104K	.400 x ⅞	CP09A1EB104K	CP09A1KB104K	.463 x 15/16
	200	CP08A1EC104K	CP08A1KC104K	.400 x 1⅛	CP09A1EC104K	CP09A1KC104K	.463 x 1 3/16
	400	CP08A1EE104K	CP08A1KE104K	.562 x 1⅛	CP09A1EE104K	CP09A1KE104K	.625 x 1 3/16
	600	CP08A1EF104K	CP08A1KF104K	.562 x 1⅜	CP09A1EF104K	CP09A1KF104K	.625 x 1 7/16
.15	100	CP08A1EB154K	CP08A1KB154K	.400 x 1⅛	CP09A1EB154K	CP09A1KB154K	.463 x 1 3/16
	200	CP08A1EC154K	CP08A1KC154K	.400 x 1⅜	CP09A1EC154K	CP09A1KC154K	.463 x 1 7/16
	400	CP08A1EE154K	CP08A1KE154K	.562 x 1⅜	CP09A1EE154K	CP09A1KE154K	.625 x 1 7/16
	600	CP08A1EF154K	CP08A1KF154K	.562 x 1⅝	CP09A1EF154K	CP09A1KF154K	.625 x 1 11/16
.22	100	CP08A1EB224K	CP08A1KB224K	.400 x 1⅜	CP09A1EB224K	CP09A1KB224K	.463 x 1 7/16
	200	CP08A1EC224K	CP08A1KC224K	.562 x 1⅛	CP09A1EC224K	CP09A1KC224K	.625 x 1 3/16
	400	CP08A1EE224K	CP08A1KE224K	.562 x 1⅝	CP09A1EE224K	CP09A1KE224K	.625 x 1 11/16
	600	CP08A1EF224K	CP08A1KF224K	.670 x 1⅝	CP09A1EF224K	CP09A1KF224K	.733 x 1 11/16
.33	100	CP08A1EB334K	CP08A1KB334K	.562 x 1⅛	CP09A1EB334K	CP09A1KB334K	.625 x 1 3/16
	200	CP08A1EC334K	CP08A1KC334K	.562 x 1⅜	CP09A1EC334K	CP09A1KC334K	.625 x 1 7/16
	400	CP08A1EE334K	CP08A1KE334K	.670 x 1⅝	CP09A1EE334K	CP09A1KE334K	.733 x 1 11/16
	600	CP08A1EF334K	CP08A1KF334K	.750 x 2⅛	CP09A1EF334K	CP09A1KF334K	.813 x 2 3/16
.47	100	CP08A1EB474K	CP08A1KB474K	.562 x 1⅜	CP09A1EB474K	CP09A1KB474K	.625 x 1 7/16
	200	CP08A1EC474K	CP08A1KC474K	.562 x 1⅝	CP09A1EC474K	CP09A1KC474K	.625 x 1 11/16
	400	CP08A1EE474K	CP08A1KE474K	.750 x 2⅛	CP09A1EE474K	CP09A1KE474K	.813 x 2 3/16
	600	CP08A1EF474K	CP0BA1KF474K	.750 x 2⅜	CP09A1EF474K	CP09A1KF474K	.813 x 2 7/16
.68	100	CP08A1EB684K	CP08A1KB684K	.562 x 1⅝	CP09A1EB684K	CP09A1KB684K	.625 x 1 11/16
	200	CP08A1EC684K	CP08A1KC684K	.670 x 1⅝	CP09A1EC684K	CP09A1KC684K	.733 x 1 11/16
1.0	100	CP08A1EB105K	CP08A1KB105K	.670 x 1⅝	CP09A1EB105K	CP09A1KB105K	.733 x 1 11/16
	200	CP08A1EC105K	CP08A1KC105K	.750 x 2⅛	CP09A1EC105K	CP09A1KC105K	.813 x 2 3/16

* For case grounded reduce L dimension by 1/16".

Above listings are ratings listed in Mil-C-25A. For complete listing of Hermetically Sealed Capacitor write for catalog Pg. 4.

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

Type MTR Pyramid Kraft-Tube Hi-Temp Metallized Paper Capacitor

Assembled in a special kraft tube. Impregnated in solid thermosetting resin. Plastic end-seals. Overall coating of highly moisture resistant wax. 1⅝ inch minimum lead length. Self healing. Low r-f impedance. Excellent power factor over a very wide temperature range.

Temperature Rating: —40°C. to +100°C.
Standard Tolerance: —20% to +30%.

Catalog Number	Cap. in UF	Size in inches Diameter	Length
200 Volts DC Working			
MTR2-S1	.01	¼	25/32
MTR2-S2	.02	¼	25/32
MTR2-S3	.03	¼	25/32
MTR2-S5	.05	¼	25/32
MTR2-P1	.1	5/16	25/32
MTR2-P25	.25	7/16	25/32
MTR2-P5	.5	7/16	1⅛
MTR2-1	1.0	9/16	1⅛
MTR2-2	2.0	⅝	1 7/16
400 Volts DC Working			
MTR4-S1	.01	¼	25/32
MTR4-S2	.02	5/16	25/32
MTR4-S3	.03	5/16	25/32
MTR4-S5	.05	⅜	25/32
MTR4-P1	.1	13/32	1⅛
MTR4-P25	.25	9/16	1⅛
MTR4-P5	.5	21/32	1 7/16
MTR4-1	1.0	¾	1 13/16
MTR4-2	2.0	⅞	2⅜
600 Volts DC Working			
MTR6-S1	.01	¼	25/32
MTR6-S2	.02	5/16	25/32
MTR6-S3	.03	⅜	25/32
MTR6-S5	.05	7/16	25/32
MTR6-P1	.1	7/16	1⅛
MTR6-P25	.25	⅝	1⅛
MTR6-P5	.5	¾	1 7/16
MTR6-1	1.0	⅞	1 13/16
MTR6-2	2.0	1	2⅜

Pyramid type MPGR Metal-Can-Hi-Temp Metalized Paper Capacitors

Assembled in hermetically sealed metal tubular case. Impregnated in solid thermosetting resin. Glass-to-metal end-seals. 1⅝ inch minimum lead length. Self-healing. Low r-f impedance. Excellent power factor over a very wide temperature range.

PYRAMID MPGR

Standard Tolerance: ± 20%
Temperature Rating: —55°C. to + 125°C.
Derating: 0% at + 100°C. 25% at + 125°C.

MPGR Variations

MPGR Basis type with grounded case.
MPGIR With floating case. To order: add I after MPG—1/16" to length.
MPGRV With insulating plastic sleeve. To order: add V after MPGR—1/16" to Diameter—⅛" to Length.

3MPGR With threaded end Bushing. To order: add 3 before MPGR.
6MPGR With soldered transverse bracket. To order: add 6 before MPGR.
7MPGR With soldered tangential bracket. To order: add 7 to MPGR.

MPGR Capacitors, Grounded Case

Catalog Number	Cap. in UF	Size in inches Diameter	Length
200 Volts DC Working			
MPGR2-S1	.01	.235	¾
MPGR2-S15	.015	.235	¾
MPGR2-S2	.02	.235	¾
MPGR2-S22	.022	.235	¾
MPGR2-S33	.033	.235	¾
MPGR2-S4	.04	.235	¾
MPGR2-S47	.047	.235	¾
MPGR2-S5	.05	.235	¾
MPGR2-S68	.068	.312	¾
MPGR2-P1	.1	.312	¾
MPGR2-P15	.15	.312	1 1/16
MPGR2-P2	.2	.312	1 1/16
MPGR2-P22	.22	.312	1 1/16
MPGR2-P25	.25	.312	1 1/16
MPGR2-P33	.33	.400	1 1/16
MPGR2-P47	.47	.400	1 1/16
MPGR2-P5	.5	.400	1 1/16
MPGR2-P68	.68	.500	1 1/16
MPGR2-1	1.0	.562	1 1/16
MPGR2-2	2.0	.562	1¾
400 Volts DC Working			
MPGR4-S1	.01	.235	¾
MPGR4-S15	.015	.235	¾
MPGR4-S2	.02	.235	¾
MPGR4-S22	.022	.235	¾
MPGR4-S33	.033	.312	¾
MPGR4-S4	.04	.312	¾
MPGR4-S47	.047	.312	¾
MPGR4-S5	.05	.312	⅞
MPGR4-S68	.068	.312	1 1/16
MPGR4-P1	.1	.400	1 1/16
MPGR4-P15	.15	.500	1 1/16
MPGR4-P2	.2	.500	1 1/16
MPGR4-P22	.22	.500	1 1/16
MPGR4-P25	.25	.500	1 1/16
MPGR4-P33	.33	.562	1¼
MPGR4-P47	.47	.562	1¾
MPGR4-P5	.5	.562	1¾
MPGR4-P68	.68	.670	1¾
MPGR4-1	1.0	.670	2¼
MPGR4-2	2.0	1.000	1¾
600 Volts DC Working			
MPGR6-S1	.01	.235	¾
MPGR6-S15	.015	.312	¾
MPGR6-S2	.02	.312	¾
MPGR6-S22	.022	.312	¾
MPGR6-S33	.033	.400	¾
MPGR6-S4	.04	.400	¾
MPGR6-S47	.047	.400	¾
MPGR6-S5	.05	.400	¾
MPGR6-S68	.068	.400	1 1/16
MPGR6-P1	.1	.400	1 1/16
MPGR6-P15	.15	.500	1 1/16
MPGR6-P2	.2	.562	1¼
MPGR6-P22	.22	.562	1¼
MPGR6-P25	.25	.562	1¼
MPGR6-P33	.33	.562	1¾
MPGR6-P47	.47	.670	1¾
MPGR6-P5	.5	.670	1¾
MPGR6-P68	.68	.670	2¼
MPGR6-1	1.0	.750	2¼
MPGR6-1.5	1.5	1.000	2¼

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

Pyramid Type MPTIK Metal-Tube Metallized Paper Capacitors

Assembled in hermetically sealed metal tubular case. Spun-over synthetic rubber and discs. Basic Type MPTIK impregnated in microcrystalline mineral wax. Basic Type MPTIM impregnated in mineral oil. 1⅝ inch minimum lead length. Self-healing. Low r-f impedance. Excellent power factor over a wide temperature range.

PYRAMID
MPTIK

Temperature Rating: —55°C. to + 85°C.
Derating: 0% at + 55°C. 30% at + 85°C.
Standard Tolerance: —20% to + 30%

MPTIK, MPTIM VARIATIONS

MPTIK-MPTIM Basic types with floating case. To order: see Catalog Listing. Example: MPTIM1.5-3.

MPTK-MPTM With grounded case. To order: delete Letter I after MPT—subtract ⅛" from Length. Example: MPTK1.5-3

MPTIKV-MPTIMV With insulating plastic sleeve. To order: add V after MPTIK or MPTIM—1⁄16" to Diameter—⅛" to Length. Example: MPTIKV1.5-3

4MPTIK-4MPTIM With riveted radial bracket. To order: add 4 before MPTIK or MPTIM—Example: 4MPTIK1.5-3

4MPTIKV-4MPTIMV With insulating plastic sleeve and riveted radial bracket. To order: add 4 before and V after MPTIK or MPTIM—Example: 4MPTIKV1.5-3

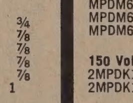
7MPTIK-7MPTIM With soldered tangential bracket. To order: add 7 before MPTIK or MPTIM—Example: 7MPTIK1.5-3

MPTIK-MPTIM CAPACITORS, FLOATING CASE

Catalog Number	Cap. in UF	Size in inches Diameter	Size in inches Length
150 Volts DC Working			
MPTIK1.5-3	3.0	¾	1 15/16
MPTIK1.5-4	4.0	⅞	1 15/16
MPTIK1.5-6	6.0	1	1 15/16
200 Volts DC Working			
MPTIK2-S5	.05	⅜	29/32
MPTIK2-P1	.1	⅜	29/32
MPTIK2-P25	.25	½	29/32
MPTIK2-P5	.5	½	1¼
MPTIK2-1	1.0	⅝	1⅜
MPTIK2-2	2.0	⅝	1 15/16
400 Volts DC Working			
MPTIM4-S3	.03	⅜	29/32
MPTIM4-S5	.05	7/16	29/32
MPTIM4-P1	.1	7/16	1¼
MPTIM4-P25	.25	⅝	1¼
MPTIM4-P5	.5	⅝	1 15/16
MPTIM4-1	1.0	¾	2 7/16
MPTIM4-2	2.0	1	2 7/16
600 Volts DC Working			
MPTIM6-S1	.01	⅜	29/32
MPTIM6-S2	.02	⅜	29/32
MPTIM6-S3	.03	7/16	29/32
MPTIM6-S5	.05	½	29/32
MPTIM6-P1	.1	½	1⅜
MPTIM6-P25	.25	⅝	1⅜
MPTIM6-P5	.5	¾	1 15/16
MPTIM6-1	1.0	13/16	2 7/16
MPTIM6-2	2.0	1⅛	2 7/16

Pyramid Type MPDK Bathtub-Type Metallized Paper Capacitors

Assembled in hermetically sealed tinned bath-type case. Lug-type terminal seals. Basic type MPDK impregnated in microcrystalline mineral wax. Basic Type MPDM impregnated in mineral oil. Self-healing. Low r-f impedance. Excellent power factor over a wide temperature range. (For High-temperature type MPDR).



MPDK, MPDM Variations

MPDK-MPDM Basic types with terminals on side. Example: MPDK1.5.3

MPDKT-MPDMT With terminals on top. To order: add T after MPDK or MPDM. Example: MPDKT1.5-3

MPDKB-MPDMB With terminals on bottom. To order: add B after MPDK or MPDM. Example MPDKB1.5-3

Temperature Rating: —55°C. to + 85°C.
Derating: 0% at + 55°C. 30% at + 85°C.
Standard Tolerance: ± 20%

MPDK-MPDM Single — Capacitor Units

Catalog Number	Cap. in UF	Size in inches Length	Size in inches Width	Size in inches Height
150 Volts DC Working				
MPDK1.5-3	3.0	1 13/16	1	¾
MPDK1.5-4	4.0	1 13/16	1	⅞
MPDK1.5-6	6.0	1 13/16	1¼	⅞
MPDK1.5-8	8.0	2	1¾	⅞
MPDK1.5-10	10.0	2	1¾	⅞
MPDK1.5-12	12.0	2	2	1
200 Volts DC Working				
MPDK2-P5	.5	1 13/16	1	¾
MPDK2-1	1.0	1 13/16	1	¾
MPDK2-2	2.0	1 13/16	1	¾
400 Volts DC Working				
MPDM4-P25	.25	1 13/16	1	¾
MPDM4-P5	.5	1 13/16	1	¾
MPDM4-1	1.0	1 13/16	1	⅞
MPDM4-2	2.0	2	1¾	⅞
MPDM4-4	4.0	2	2	1⅛
600 Volts DC Working				
MPDM6-P1	.1	1 13/16	1	¾
MPDM6-P25	.25	1 13/16	1	¾
MPDM6-P5	.5	1 13/16	1	¾
MPDM6-1	1.0	1 13/16	1¼	⅞
MPDM6-2	2.0	2	2	1

MPDK-MPDM Dual Capacitor Units

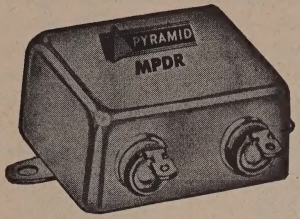
Catalog Number	Cap. in UF	Size in inches Length	Size in inches Width	Size in inches Height
150 Volts DC Working				
2MPDK1.5-4	4.0-4.0	2	1¾	⅞
2MPDK1.5-6	6.0-6.0	2	2	1
200 Volts DC Working				
2MPDK2-1	1.0-1.0	1 13/16	1	¾
2MPDK2-2	2.0-2.0	1 13/16	1	⅞
400 Volts DC Working				
2MPDM4-P25	.25-.25	1 13/16	1	¾
2MPDM4-P5	.5-.5	1 13/16	1	⅞
2MPDM4-1	1.0-1.0	2	1¾	⅞
2MPDM4-2	2.0-2.0	2	2	1⅛
600 Volts DC Working				
2MPDM6-P1	.1-.1	1 13/16	1	¾
2MPDM6-P25	.25-.25	1 13/16	1	¾
2MPDM6-P5	.5-.5	1 13/16	1¼	⅞
2MPDM6-1	1.0-1.0	2	2	1

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

Pyramid Type MPDR Bath-Tub Hi-Temp Metalized paper Capacitors

Assembled in hermetically sealed tinned bathtub type case. Impregnated in solid thermosetting resin. Vitrified ceramic (or glass) lug-type terminal seals. Self-healing. Low r-f impedance. Excellent power factor over a very wide temperature range.

Catalog Number	Cap. in UF	Size in Inches Length	Width	Height
150 Volts DC Working				
MPDR1.5-3	3.0	1¹³⁄₁₆	1	¾
MPDR1.5-4	4.0	1¹³⁄₁₆	1	⅞
MPDR1.5-5	5.0	1¹³⁄₁₆	1	⅞
MPDR1.5-6	6.0	1¹³⁄₁₆	1¼	⅞
MPDR1.5-8	8.0	2	1¾	¾
MPDR1.5-10	10.0	2	1¾	¹³⁄₁₆
MPDR1.5-12	12.0	2	2	⅞
200 Volts DC Working				
MPDR2-P5	.5	1¹³⁄₁₆	1	¾
MPDR2-1	1.0	1¹³⁄₁₆	1	¾
MPDR2-2	2.0	1¹³⁄₁₆	1	¾
400 Volts DC Working				
MPDR4-P25	.25	1¹³⁄₁₆	1	¾
MPDR4-P5	.5	1¹³⁄₁₆	1	¾
MDPR4-1	1.0	1¹³⁄₁₆	1	⅞
MPDR4-2	2.0	2	1¾	¾
MPDR4-3	3.0	2	1¾	1
MPDR4-4	4.0	2	2	1
600 Volts DC Working				
MPDR6-P1	.1	1¹³⁄₁₆	1	¾
MPDR6-P25	.25	1¹³⁄₁₆	1	¾
MPDR6-P5	.5	1¹³⁄₁₆	1	¾
MPDR6-1	1.0	1¹³⁄₁₆	1¼	⅞
MPDR6-2	2.0	2	2	⅞



Temperature Rating: —55°C. to +125°C.

Derating: 0% at +100°C. 25% at+125°C.

Standard Tolerance: ±20%.

MPDR Variations

MPDR with terminals on side.

MPDRT with terminals on top.

MPDRB with terminals on bottom.

Type MPGK Metal-Can Metallized Paper Capacitors

Assembled in hermetically sealed metal tubular case. Glass-to-metal end-seals. Basic Type MPGK impregnated in micro-crystalline mineral wax. Basic Type MPGM impregnated in mineral oil. 1⅝ inch minimum lead length. Self-healing. Low r-f impedance. Excellent power factor over a wide temperature range. (For High-temperature Type MPGR)

PYRAMID MPGK

Temperature Rating: —55°C. to + 85°C.
Derating: 0% at +55°C. 30% at + 85°C.
Standard Tolerance: ± 20%.

MPGK, MPGM Variations

MPGK-MPGM Basic types with grounded case. Example MPGK1.5-3

MPGIK-MPGIM With floating case. To order: add letter I after MPG and add ¹⁄₁₆" to length.

MPGKV-MPGMV With insulating plastic sleeve. To order: add V after MPGK or MPGM add ¹⁄₁₆" to Diameter and ⅛" to length. Example: MPGKV1.5-3

3MPGK-3MPGM With threaded end Bushing. To order: add 3 before MPGK or MPGM Example: 3MPGK1.5-3

6MPGK-6MPGM With soldered transverse bracket. To order: add 6 before MPGK or MPGM Example: 6MPGK1.5-3

7MPGK-PMPGM With soldered tangential bracket. To order: add 7 before MPGK or MPGM Example: 7MPGK1.5-3

MPGK-MPGM Capacitors, Grounded Case

Catalog No.	Cap. in UF	Size in Inches Dia.	Length
150 Volts DC Working			
MPGK1.5-3	3.0	.750	1¾
MPGK1.5-4	4.0	1.000	1¾
MPGK1.5-6	6.0	1.000	1¾
MPGK1.5-8	8.0	1.000	2
200 Volts DC Working			
MPGK2-S1	.01	.235	¾
MPGK2-S2	.02	.235	¾
MPGK2-S3	.03	.235	¾
MPGK2-S4	.04	.235	¾
MPGK2-S47	.047	.235	¾
MPGK2-S5	.05	.235	¾
MPGK2-S68	.068	.312	¾
MPGK2-P1	.1	.312	¾
MPGK2-P15	.15	.312	⅞
MPGK2-P2	.2	.312	1¹⁄₁₆
MPGK2-P22	.22	.312	1¹⁄₁₆
MPGK2-P25	.25	.312	1¹⁄₁₆
MPGK2-P33	.33	.400	1¹⁄₁₆
MPGK2-P47	.47	.400	1¹⁄₁₆
MPGK2-P5	.5	.400	1¹⁄₁₆
MPGK2-P68	.68	.500	1¹⁄₁₆
MPGK2-1	1.0	.562	1¹⁄₁₆
MPGK2-1.5	1.5	.562	1⅜
MPGK2-2	2.0	.562	1¾
400 Volts DC Working			
MPGM4-S1	.01	.235	¾
MPGM4-S2	.02	.235	¾
MPGM4-S22	.022	.235	¾
MPGM4-S3	.03	.312	¾
MPGM4-S33	.033	.312	¾
MPGM4-S4	.04	.312	¾
MPGM4-S47	.047	.400	¾
MPGM4-S5	.05	.400	¾
MPGM4-S68	.068	.400	1¹⁄₁₆
MPGM4-P1	.1	.400	1¹⁄₁₆
MPGM4-P15	.15	.500	1¹⁄₁₆
MPGM4-P2	.2	.500	1¹⁄₁₆
MPGM4-P22	.22	.562	1¹⁄₁₆
MPGM4-P25	.25	.562	1¹⁄₁₆
MPGM4-P33	.33	.562	1¼
MPGM4-P47	.47	.562	1¾
MPGM4-P5	.5	.562	1¾
MPGM4-P68	.68	.670	1¾
MPGM4-1	1.0	.670	2¼
MPGM4-2	2.0	1.000	2¼
600 Volts DC Working			
MPGM6-S1	.01	.235	¾
MPGM6-S15	.015	.312	¾
MPGM6-S2	.02	.312	¾
MPGM6-S22	.022	.312	¾
MPGM6-S3	.03	.312	¾
MPGM6-S33	.033	.400	¾
MPGM6-S4	.04	.400	¾
MPGM6-S47	.047	.400	¾
MPGM6-S5	.05	.400	¾
MPGM6-S68	.068	.400	1¹⁄₁₆
MPGM6-P1	.1	.500	1¹⁄₁₆
MPGM6-P15	.15	.500	1¹⁄₁₆
MPGM6-P2	.2	.562	1¼
MPGM6-P22	.22	.562	1¼
MPGM6-P25	.25	.562	1¼
MPGM6-P33	.33	.562	1¾
MPGM6-P47	.47	.670	1¾
MPGM6-P5	.5	.670	1¾
MPGM6-P68	.68	.670	2¼
MPGM6-1	1.0	.750	2¼
MPGM6-1.5	1.5	1.000	2¼

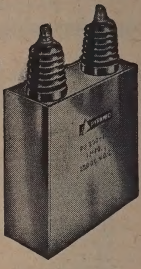
PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

Pyramid Type PJ High-Voltage Oil-Paper Capacitors
6000 thru 25,000 Volt Series

Section assembled in container of heavy gage steel, welded oil tight and hot tinned. Mineral oil impregnated and mineral oil filled. Case and terminals are bonded together. Low leakage current and negligible capacity change over wide range of operating temperature. For higher voltage and other information write to Pyramid Sales Engineering Department.

Temperature Range:
—55°C. to +85°C.
Capacity Tolerance:
±10%

Available In:	Cat. No.
6000 Volts DC Working	PJ 60
7500 Volts DC Working	PJ 75
10000 Volts DC Working	PJ 100
12500 Volts DC Working	PJ 125
15000 Volts DC Working	PJ 150
20000 Volts DC Working	PJ 200
25000 Volts DC Working	PJ 250



Pyramid Type PLM High-Voltage Oil-Paper Capacitors

Section assembled in lacquer-finished terneplate case. Mineral-oil impregnated and filled. Ceramic terminal insulators with screw studs. Designed for heavy-duty continuous service. Fulfills the exacting requirements of power-supply and filter applications. Meets electrical requirements of MIL-C-25A. For higher voltage ratings and other information, write Pyramid Sales Engineering Dept.

Temperature Rating:
—55°C. to +85°C.
Standard Tolerance:
±10%

PLM Variations

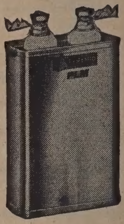
PLM Basic type similar to MIL Type CP70. Example: PLM6-P5.

PLMF Similar to CP70 with CP07F footed bracket. To order: add F after PLM. Example: PLMF6-P5.

PLMS Similar to CP70 with CP07S spade bracket. To order: Add S after PLM. Example: PLMS6-P5.

PLMU With universal mounting bracket. To order: add U after PLM. Example: PLMU6-P5.

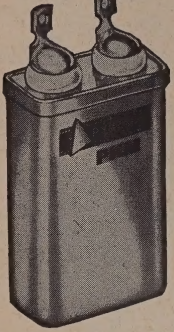
PLMR With solder-lug MIL type B terminals (furnished only through 2,000 VDCW rating). To order: add R after PLM. Example: PLMR6-P5.

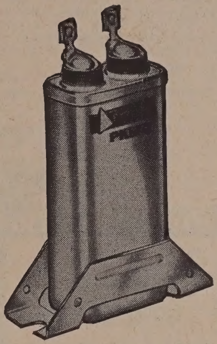


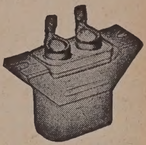
Catalog Number	Cap. in UF	Case Size in inches		
		Length	Width	Height
600 Volts DC Working				
PLM6-P5	.5	1 13/16	1 1/16	1⅝
PLM6-1	1.0	1 13/16	1 1/16	2¼
PLM6-2	2.0	1 13/16	1 1/16	3¼
PLM6-3	3.0	1 13/16	1 1/16	4¾
PLM6-4	4.0	2½	1 3/16	3½
PLM6-5	5.0	2½	1 3/16	4¼
PLM6-6	6.0	2½	1 3/16	4¾
PLM6-8	8.0	3¾	1¼	4¼
PLM6-10	10.0	3¾	1¾	4
1000 Volts DC Working				
PLM10-P1	.1	1 13/16	1 1/16	1⅝
PLM10-P25	.25	1 13/16	1 1/16	1⅝
PLM10-P5	.5	1 13/16	1 1/16	2¼
PLM10-1	1.0	1 13/16	1 1/16	2⅞
PLM10-2	2.0	1 13/16	1 1/16	4¾
PLM10-3	3.0	2½	1 3/16	4¼
PLM10-4	4.0	3¾	1¼	3⅞
PLM10-5	5.0	3¾	1¼	4¾
PLM10-6	6.0	3¾	1¾	4
PLM10-8	8.0	3¾	1¾	4¾
PLM10-10	10.0	3¾	2¼	4¾
PLM10-12	12.0	3¾	2¼	5⅛
PLM10-15	15.0	3¾	3 3/16	4¾
1,500 Volts DC Working				
PLM15-P5	.5	1 13/16	1 1/16	2⅞
PLM15-1	1.0	1 13/16	1 1/16	4¾
PLM15-2	2.0	2½	1 3/16	4¾
PLM15-3	3.0	3¾	1¼	4¾
PLM15-4	4.0	3¾	1¾	4¼
PLM15-5	5.0	3¾	2¼	4½
PLM15-6	6.0	3¾	2¼	4¾
PLM15-8	8.0	3¾	2½	5¾
PLM15-10	10.0	3¾	3 3/16	5½
PLM15-12	12.0	4 9/16	3¾	4¾
PLM15-15	15.0	4 9/16	3¾	6
2,000 Volts DC Working				
PLM20-P1	.1	1 13/16	1 1/16	2¼
PLM20-P25	.25	1 13/16	1 1/16	2⅞
PLM20-P5	.5	1 13/16	1 1/16	3⅞
PLM20-1	1.0	2½	1 3/16	4¼
PLM20-2	2.0	3¾	1¼	4¾
PLM20-3	3.0	3¾	1¾	4¾
PLM20-4	4.0	3¾	2¼	5⅛
PLM20-5	5.0	3¾	3 3/16	4¾
PLM20-6	6.0	3¾	3 3/16	5½
PLM20-8	8.0	4 9/16	3¾	5⅛
PLM20-10	10.0	4 9/16	3¾	6½
PLM20-12	12.0	4 9/16	3¾	7½
2,500 Volts DC Working				
PLM25-P5	.5	2½	1 3/16	3⅞
PLM25-1	1.0	3¾	1¾	3¼
PLM25-2	2.0	3¾	2¼	4¾
PLM25-4	4.0	4 9/16	3¾	4⅜
PLM25-10	10.0	4 9/16	3¾	8½
3,000 Volts DC Working				
PLM30-1	.1	1 13/16	1 1/16	2⅞
PLM30-P25	.25	2½	1 3/16	3½
PLM30-P5	.5	2½	1 3/16	4¾
PLM30-1	1.0	3¾	2¼	4½
PLM30-2	2.0	3¾	3 3/16	4¾
PLM30-4	4.0	4 9/16	3¾	6½
4,000 Volts DC Working				
PLM40-P1	.1	3¾	2¼	2¾
PLM40-P25	.25	3¾	2¼	2¾
PLM40-P5	.5	3¾	2¼	4¾
PLM40-1	1.0	3¾	3 3/16	4¾
PLM40-2	2.0	4 9/16	3¾	6
PLM40-4	4.0	4 9/16	3¾	9⅝
5,000 Volts DC Working				
PLM50-P5	.5	3¾	2¼	5⅛
PLM50-1	1.0	4 9/16	3¾	5⅛
PLM50-2	2.0	4 9/16	3¾	9⅝

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

Pyramid Type PKM Small-Base Oil-Paper Capacitors







Section assembled in hermetically sealed tincoated container. Mineral-oil impregnated and filled. Lug-type terminal seals. Suitable for use in compact equipment. Meets electrical requirements of MIL-C-25A.

Temperature Rating: —55°C to + 85°C.
Standard Tolerance: —10% to + 20%

PKM VARIATIONS

PKM Basic type similar to MIL Type CP61.
Example: PKM4-S5

PKMF Similar to CP61 with CP06F footed bracket.
To order: add F after PKM. Example: PKMF4-S5

PKMS Similar to CP61 with CP06S spade bracket.
To order: add S after PKM. Example: PKMS4-S5

PKMT Similar to CP63 with channel bracket on end opposite terminals.
To order: add T after PKM. Example: PKMT4-S5

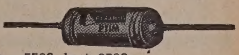
PKMB Similar to CP65 with channel bracket on same end as terminals.
To order: add B after PKM. Example: PKMB4-S5

PKMT, PKMB Channel Bracket Dimensions:
Overall Length: 2 5/16".
Overall Width: 49/64" (max.).
Length between Mounting Slot Centers: 1 15/16".
Mounting Slot Width: 5/32".

Catalog Number	Cap. in UF	Size in inches Length	Width	Height
400 Volts DC Working				
PKM4-S5	.05	1 5/16	47/64	1 1/16
PKM4-P1	.1	1 5/16	47/64	1 1/16
PKM4-P25	.25	1 5/16	47/64	1 3/8
PKM4-P5	.5	1 5/16	47/64	1 5/8
PKM4-1	1.0	1 5/16	47/64	2 1/2
600 Volts DC Working				
PKM6-S5	.05	1 5/16	47/64	1 1/16
PKM6-P1	.1	1 5/16	47/64	1 1/16
PKM6-P25	.25	1 5/16	47/64	1 5/8
PKM6-P5	.5	1 5/16	47/64	2
PKM6-1	1.0	1 5/16	47/64	2 3/4
1,000 Volts DC Working				
PKM10-S5	.05	1 5/16	47/64	1 1/16
PKM10-P1	.1	1 5/16	47/64	1 3/8
PKM10-P25	.25	1 5/16	47/64	2
PKM10-P5	.5	1 5/16	47/64	2 1/2

Pyramid Type PTIM Metal Tubular Oil-Paper Capacitors

Noninductively wound section assembled in hermetically sealed metal tubular case. Mineral-oil impregnated and filled. Neoprene-Bakelite end-discs. Meets electrical requirements of MIL-C25A.



Temperature Rating: —55°C. to + 85°C.
Standard Tolerance: —10% to + 20%

PTIM Variations

PTIM Basic Type similar to MIL Type CP25.
Example: PTIM6-D3.

PTIMV (CP26) With insulating plastic sleeve. To order: add V after PTIM—1/16" to Diameter 1/8" to length.
Example: PTIMV6-D3.

4PTIM (CP27) With riveted radial bracket. To order: add 4 before PTIM. Example: 4PTIM6-D3.

4PTIMV (CP28) With insulating plastic sleeve and riveted radial bracket. To order: add 4 before and V after PTIM. Example: 4PTIMV6-D3.

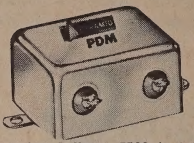
7PTIM (CP29) With soldered tangential bracket. To order: add 7 before PTIM. Example: 7PTIM6-D3.

Catalog Number	Cap. in UF	Size in inches Dia.	Lgth.
600 Volts DC Working			
PTIM6-D3	.003	7/16	1 1/8
PTIM6-D5	.005	7/16	1 1/8
PTIM6-D6	.006	7/16	1 1/8
PTIM6-S1	.01	7/16	1 1/8
PTIM6-S2	.02	9/16	1 1/8
PTIM6-S5	.05	5/8	1 1/8
PTIM6-P1	.1	5/8	1 5/8
PTIM6-P25	.25	3/4	2 1/16
PTIM6-P5	.5	1	2 1/16
1,000 Volts DC Working			
PTIM10-D3	.003	9/16	1 1/8
PTIM10-D5	.005	9/16	1 1/8
PTIM10-D6	.006	9/16	1 1/8
PTIM10-S1	.01	9/16	1 1/8
PTIM10-S2	.02	5/8	1 1/8
PTIM10-S5	.05	5/8	1 5/8
PTIM10-P1	.1	3/4	1 7/8
PTIM10-P25	.25	1	2 1/16
PTIM10-P5	.5	1	3 1/8
1,600 Volts DC Working			
PTIM16-D3	.003	43/64	1 1/8
PTIM16-D5	.005	43/64	1 1/8
PTIM16-D6	.006	43/64	1 1/8
PTIM16-S1	.01	43/64	1 7/16
PTIM16-S2	.02	43/64	1 7/16
PTIM16-S5	.05	43/64	2 1/16
PTIM16-P1	.1	1	2 1/16

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

Pyramid Type PDM Bathtub-Type Oil-Paper Capacitors

Section assembled in hermetically sealed tin coated drawn-shell container. Mineral-oil impregnated and filled. Lug-type terminal seals. Meets electrical requirements of MIL-C-25A.



Temperature Rating: —55°C. to + 85°C.
Standard Tolerance: —10% to + 20%

PDM Variations

PDM Similar to MIL Type CP53, with terminals on side. Example: PDM4-S5

PDMT (CP54) With terminals on top. To order: add T after PDM. Example: PDMT4-S5

PDMB (CP55) With terminals on the bottom. To order: add B after PDM. Example: PDMB4-S5

PDM SINGLE-CAPACITOR UNITS

Catalog Number	Cap. in UF	Size in inches Length	Width	Height
400 Volts DC Working				
PDM4-S5	.05	1 13/16	1	¾
PDM4-P1	.1	1 13/16	1	¾
PDM4-P25	.25	1 13/16	1	¾
PDM4-P5	.5	1 13/16	1	15/16
PDM4-1	1.0	2	1¾	15/16
PDM4-2	2.0	2	2	1 3/16*
600 Volts DC Working				
PDM6-S5	.05	1 13/16	1	¾
PDM6-P1	.1	1 13/16	1	¾
PDM6-P25	.25	1 13/16	1	¾
PDM6-P5	.5	1 13/16	1	1
PDM6-1	1.0	2	1¾	1
PDM6-2	2.0	2	2	1 3/16*
1,000 Volts DC Working				
PDM10-S5	.05	1 13/16	1	¾
PDM10-P1	.1	1 13/16	1	¾
PDM10-P25	.25	1 13/16	1	13/16
PDM10-P5	.5	2	1¾	⅞
PDM10-1	1.0	2	2	1⅛*

PDM DUAL-CAPACITOR UNITS

Catalog Number	Cap. in UF	Size in inches Length	Width	Height
400 Volts DC Working				
2PDM4-S5	.05-.05	1 13/16	1	¾
2PDM4-P1	.1-.1	1 13/16	1	¾
2PDM4-P25	.25-.25	1 13/16	1	1
2PDM4-P5	.5-.5	2	1¾	15/16
2PDM4-1	1.0-1.0	2	2	1 3/16*
600 Volts DC Working				
2PDM6-S5	.05-.05	1 13/16	1	¾
2PDM6-P1	.1-.1	1 13/16	1	¾
2PDM6-P25	.25-.25	1 13/16	1	1
2PDM6-P5	.5-.5	2	1¾	15/16
2PDM6-1	1.0-1.0	2	2	1 13/16
1,000 Volts DC Working				
2PDM10-S5	.05-.05	1 13/16	1	¾
2PDM10-P1	.1-.1	1 13/16	1	⅞
2PDM10-P25	.25-.25	2	1¾	⅞
2PDM10-P5	.5-.5	2	2	1⅛*

PDM TRIPLE-CAPACITOR UNITS

Catalog Number	Cap. in UF	Size in inches Length	Width	Height
400 Volts DC Working				
3PDM4-P1	.1-.1-.1	1 13/16	1	13/16
3PDM4-P25	.25-.25-.25	2	1¾	⅞
3PDM4-P5	.5-.5-.5	2	2	1
600 Volts DC Working				
3PDM6-P1	.1-.1-.1	1 13/16	1	13/16
3PDM6-P25	.25-.25-.25	2	1¾	⅞
3PDM6-P5	.5-.5-.5	2	2	1
1,000 Volts DC Working				
3PDM10-P1	.1-.1-.1	2	1¾	⅞
3PDM10-P25	.25-.25-.25	2	2	1⅛*

* Add 1/16" to Height for units with top or bottom terminals.

Type 227 Metallized Paper—Mylar Metal-Tubular Glass—Sealed Capacitors

To MIL-C-18312 A

Part Number	Capacity	Voltage	Dia.	Length
227A1V305M	3	100	.750	1⅞
227A1V405M	4	100	.750	1⅞
227A1V605M	6	100	1.00	1 27/32
227A1C104M	.10	200	.312	27/32
227A1C224M	.22	200	.312	1⅛
227A1C474M	.47	200	.400	1⅛
227A1C105M	1.0	200	.562	1⅛
227A1C155M	1.5	200	.562	1 27/32
227A1C205M	2.0	200	.562	1 27/32
227A1E223M	.022	400	.235	27/32
227A1E473M	.047	400	.312	27/32
227A1E104M	.10	400	.400	1⅛
227A1E224M	.22	400	.500	1⅛
227A1E474M	.47	400	.562	1 27/32
227A1E105M	1.0	400	.670	2 5/16
227A1F103M	.01	600	.235	27/32
227A1F223M	.022	600	.312	27/32
227A1F473M	.047	600	.400	27/32
227A1F104M	.1	600	.400	1⅛
227A1F224M	.22	600	.562	1 11/32
227A1F474M	.47	600	.610	1 27/32
227A1F105M	1.0	600	.750	2 5/16

Note: Type 227 is available in all Mil Styles, Plastic and Mylar insulating sleeving, Tolerances, and also Special Ratings. Write Pyramid Electric for your special requirements.

PYRAMID ELECTRIC COMPANY
DARLINGTON, S. C.

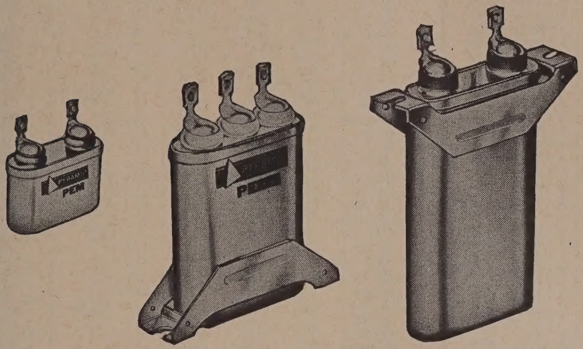
Pyramid Type PEM Small-Base Oil-Paper Capacitors

Section assembled in hermetically sealed tin coated container. Mineral-oil impregnated and filled. Lug-type terminal seals. Suitable for use in compact equipment. Meets electrical requirements of MIL-C-25A.

PEM Variations

- PEM Basic type. To order: see Catalog Listing. Example: PEM6-S5
- PEMT Similar to MIL Type CP67, with channel bracket on end opposite terminals. To order: add T after PEM. Example: PEMT6-S5
- PEMB Similar to CP69, with channel bracket on same end as terminals. To order: add B after PEM. Example: PEMB6-S5

Standard Tolerance: —10% to +20%.
Temperature Rating: —55°C. to + 85°C.



PEMT, PEMB Channel Bracket Dimensions:

Overall Length: 2 7/16″.

Overall Width: 41/64″ (max.).

Length between Mounting Slot Centers: 2⅛″.

Mounting Slot Width: 5/32″.

PEM SINGLE-CAPACITOR UNITS

Catalog Number	Cap. in UF	Size in inches Length	Width	Height
600 Volts DC Working				
PEM6-S5	.05	1 13/16	⅝	1 1/16
PEM6-P1	.1	1 13/16	⅝	1 1/16
PEM6-P25	.25	1 13/16	⅝	1½
PEM6-P5	.5	1 13/16	⅝	2
PEM6-1	1.0	1 13/16	⅝	2½
1,000 Volts DC Working				
PEM10-S5	.05	1 13/16	⅝	1 1/16
PEM10-P1	.1	1 13/16	⅝	1 1/16
PEM10-P25	.25	1 13/16	⅝	1½
PEM10-P5	.5	1 13/16	⅝	2½

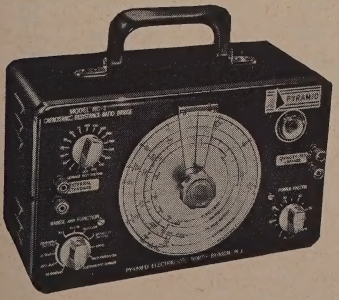
PEM DUAL-CAPACITOR UNITS

Catalog Number	Cap. in UF	Size in inches Length	Width	Height
600 Volts DC Working				
2PEM6-S5	.05-.05	1 13/16	⅝	1 1/16
2PEM6-P1	.1-.1	1 13/16	⅝	1½
2PEM6-P25	.25-.25	1 13/16	⅝	2
2PEM6-P5	.5-.5	1 13/16	⅝	2½
1,000 Volts DC Working				
2PEM10-S5	.05-.05	1 13/16	⅝	1 1/16
2PEM10-P1	.1-.1	1 13/16	⅝	1½
2PEM10-P25	.25-.25	1 13/16	⅝	2½

PEM TRIPLE-CAPACITOR UNITS

Catalog Number	Cap. in UF	Size in inches Length	Width	Height
600 Volts DC Working				
3PEM6-S5	.05-.05-.05	1 13/16	⅝	1 1/16
3PEM6-P1	.1-.1-.1	1 13/16	⅝	1½
3PEM6-P25	.25-.25-.25	1 13/16	⅝	2½
1,000 Volts DC Working				
3PEM10-S5	.05-.05-.05	1 13/16	⅝	1½
3PEM10-P1	.1-.1-.1	1 13/16	⅝	2

Pyramid Model RC-1 New Resistance-Capacity-Ratio Bridge Tester



NEW! THIS FINE INSTRUMENT IS EQUIPPED TO TEST LEAKAGE IN LOW VOLTAGE ELECTROLYTICS USED IN TRANSISTORIZED CIRCUITS.

PYRAMID MODEL RC-1 FEATURES:

- Special 3 volt amplifier for checking low voltage electrolytics used in miniaturized equipment such as transistor radios, etc.
- Capacity Ranges—from 10 mmfd. to 2000 mfd.
- Resistance—from .5 ohms to 200 megohms in 4 ranges.
- Ratio test—provides quick reactance or resistance ratio between any two capacitors, inductors or resistors—range: .05 to 1 and 20 to 1. It can be used also to determine turns ratio of transformer windings within this range.
- Leakage Tests—handles all types of capacitors at rated voltages between 0 and 500V DC.
- Power Factor—0 to 60% (on capacitors from .1 mfd to 2000 mfd).
- Capacitor Test Voltages—variable between 0 and 500V DC in 17 steps.

Shipping Weight: 11 lbs. Overall Dimensions: Length 6½″, Height 7⅞″, Depth 6″.

Dealer Net **$38.60**

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE DCM

energy storage electrolytic

The SANGAMO Type DCM capacitor is a high quality, electrolytic capacitor specially designed for use as an energy storage component in DC circuitry where peak power requirements exceed the maximum output of the associated power supply. The Type DCM is enclosed in an aluminum can and is normally furnished with a cardboard insulating sleeve. Aluminum terminal assemblies that include a #10-32 machine screw are permanently fixed in the molded cover. A pressure sensitive vent is provided as a safety mechanism in each cover. A footed, wrap-around mounting bracket is available at extra cost per unit.

Catalog Number	Capacitance in Mfds.	Working Volts DC	Diameter In Inches	Length In Inches	List Price
125M/5	125,000	5	3 1/16	6	39.25
2M/6	2,000	6	1 7/16	2 1/2	5.10
1M/10	1,000	10	1 7/16	2 1/2	4.65
10M/10	10,000	10	1 7/16	4 1/2	12.00
25M/10	25,000	10	2 9/16	4 1/2	22.50
3M/15	3,000	15	1 7/16	3 1/2	7.55
* 6M/15	6,000	15	1 7/16	4 1/2	10.00
10M/15	10,000	15	1 13/16	4 1/2	12.60
13M500/15	13,500	15	1 13/16	4 1/2	15.45
* 20M/15	20,000	15	2 9/16	4 1/2	21.50
† 25M/15	25,000	15	2 9/16	4 1/2	25.75
25M/15A	25,000	15	2 1/16	6	25.75
33M/15	33,000	15	2 9/16	4 1/2	26.50
33M/15	35,000	15	3 1/16	4 1/2	26.70
2M/25	2,000	25	1 7/16	3 1/2	7.45
3M/25	3,000	25	1 7/16	3 1/2	8.70
* 4M500/25	4,500	25	1 7/16	4 1/2	10.50
8M/25	8,000	25	1 13/16	4 1/2	14.40
† * 10M/25	10,000	25	2 1/16	4 1/2	17.00
10M/25A	10,000	25	1 13/16	4 1/2	17.00
* 15M/25	15,000	25	2 9/16	4 1/2	24.00
† * 25M/25	25,000	25	3 1/16	4 1/2	26.40
25M/25A	25,000	25	2 9/16	4 1/2	26.40
10M/30	10,000	30	2 1/16	4 1/2	17.10
* 20M/30	20,000	30	3 1/16	4 1/2	25.00
25M/30	25,000	30	3 1/16	4 1/2	30.25
7C50/50	750	50	1 7/16	3 1/2	6.85
1M/50	1,000	50	1 7/16	3 1/2	7.60
1M500/50	1,500	50	1 7/16	3 1/2	8.70
2M/50	2,000	50	1 7/16	4 1/2	9.00
2M500/50	2,500	50	1 7/16	4 1/2	9.60
3M/50	3,000	50	1 13/16	4 1/2	12.36
4M/50	4,000	50	1 13/16	4 1/2	12.90
4M250/50	4,250	50	1 13/16	4 1/2	13.10
5M/50	5,000	50	2 1/16	4 1/2	16.75
7M500/50	7,500	50	2 9/16	4 1/2	20.55
† * 8M/50	8,000	50	2 9/16	4 1/2	20.70
8M/50A	8,000	50	2 1/16	6	20.70
* 10M/50	10,000	50	2 9/16	4 1/2	27.00
8M/55	8,000	55	2 9/16	4 1/2	20.70
10M/55	10,000	55	2 9/16	4 1/2	27.00
2M/60	2,000	60	1 7/16	4 1/2	11.45
1M/75	1,000	75	1 7/16	4 1/2	9.50
5M/75	5,000	75	2 9/16	4 1/2	24.05
6M/75	6,000	75	3 1/16	4 1/2	24.50
5M/90	5,000	90	2 9/16	4 1/2	24.60
8C/100	800	100	1 7/16	4 1/2	9.45
† 1M500/100	1,500	100	2 1/16	4 1/2	11.40
1M500/100A	1,500	100	1 13/16	4 1/2	11.40
† 3M/100	3,000	100	2 9/16	4 1/2	22.15
3M/100A	3,000	100	2 1/16	6	22.15
† 3M500/100	3,500	100	3 1/16	4 1/2	22.80
3M500/100A	3,500	100	2 9/16	4 1/2	22.80
† * 4M/100	4,000	100	3 1/16	4 1/2	23.45
4M/100A	4,000	100	2 9/16	4 1/2	23.45
7C/150	700	150	1 7/16	4 1/2	10.15
1M/150	1,000	150	1 13/16	4 1/2	11.45
1M250/150	1,250	150	1 13/16	4 1/2	12.30
† * 2M/150	2,000	150	2 9/16	4 1/2	19.70
2M/150A	2,000	150	2 1/16	6	19.70
* 3M/150	3,000	150	2 9/16	4 1/2	24.60
3M500/150	3,500	150	3 1/16	4 1/2	27.00
3C/200	300	200	1 7/16	4 1/2	8.10
7C50/200	750	200	1 13/16	4 1/2	12.65
1M/200	1,000	200	2 1/16	4 1/2	17.22
† * 1M500/200	1,500	200	2 9/16	4 1/2	18.00
1M500/200A	1,500	200	2 1/16	6	18.00
4C25/250	425	250	1 13/16	4 1/2	10.15
† 1M/250	1,000	250	2 9/16	4 1/2	23.10
1M/250A	1,000	250	2 1/16	6	23.10
1M200/250	1,200	250	2 9/16	4 1/2	23.40
2C20/300	220	300	1 7/16	4 1/2	9.90
1M/300	1,000	300	2 9/16	4 1/2	26.40
1M100/300	1,100	300	3 1/16	4 1/2	30.00
1C/350	100	350	1 7/16	3 1/2	8.70
7C/350	700	350	2 9/16	4 1/2	18.05
* 1M/350	1,000	350	3 1/16	4 1/2	27.60
3C/450	300	450	2 1/16	4 1/2	14.85
† 5C/450	500	450	2 9/16	4 1/2	18.90
5C/450A	500	450	2 1/16	6	18.90
6C/450	600	450	2 9/16	4 1/2	20.90
* 8C/450	800	450	3 1/16	4 1/2	27.00

* Popular Stock Items.

NOTE—Letter "A" added to catalog number indicates new case sizes available after February 1, 1960.

† This case size to be discontinued when present stocks are exhausted.

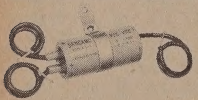
MOUNTING BRACKETS FOR TYPE DCM

Capacitor Diameter in Inches	List Price
1 7/16	.40
1 13/16	.55
2 1/16	.60
2 9/16	.80
3 1/16	1.00

NOTE—Capacitor dimensions include insulating sleeve.

NOTE—All units are supplied with screw terminals.

NOTE—Mounting brackets are furnished at extra cost.



TYPE FMD-FMT

electrolytic

Sangamo Types FMD and FMT electrolytic capacitors are now supplied in smaller case sizes and with additional popular values available.

These capacitors are specially designed for rugged television requirements where +85°C operating temperatures are encountered. They are similar in design to the Type MT in every respect except leads. The Type FM is constructed with flexible, insulated wire leads and stud terminals which eliminates the problem of crossed wires and the necessity of using insulating sleeves.

DUAL SECTIONS

Catalog Number	Capacitance in Mfds.	Working Volts DC	Diameter In Inches	Length In Inches	List Price
FMD-0210	10-10	25	7/8 x	1 1/16	1.40
FMD-0510	10-10	50	7/8 x	1 1/16	1.40
FMD-1508	8-8	150	7/8 x	1 1/16	1.50
FMD-1520	20-20	150	3/4 x	1 9/16	1.65
FMD-305	30-20	150	7/8 x	1 9/16	1.70
FMD-1530	30-30	150	7/8 x	1 9/16	1.80
FMD-302	40-20	150	‡7/8 x	1 9/16	1.75
FMD-304	40-30	150	‡7/8 x	1 13/16	1.80
FMD-1540	40-40	150	‡7/8 x	1 13/16	1.85
FMD-301	50-30	150	‡7/8 x	1 13/16	1.95
FMD-1550	50-50	150	‡7/8 x	1 13/16	2.10
FMD-303	80-40	150	‡ 1 x	1 13/16	2.20
*FMD-306	80-50	150	1 x	1 13/16	2.35
*FMD-15100	100-100	150	1 x	2 7/8	3.20
*FMD-309	200-5	150	1 x	2 7/8	3.25
FMD-2520	20-20	250	‡7/8 x	1 13/16	1.85
*FMD-307	80-10	250	1 x	2 7/8	2.55
FMD-4508	8-8	450	7/8 x	1 13/16	1.70
FMD-308	8-16	450	1 x	1 13/16	2.00
FMD-4510	10-10	450	‡7/8 x	2 1/16	1.85
FMD-4520	20-20	450	1 x	2 7/8	2.50
FMD-4530	30-30	450	1 x	3 3/16	3.00
FMD-4540	40-40	450	1 x	3 11/16	3.40

TRIPLE SECTIONS

Catalog Number	Capacitance in Mfds.	Working Volts DC	Diameter In Inches	Length In Inches	List Price
FMT-1520	20-20-20	150	7/8 x	1 9/16	2.20
FMT-1530	30-30-30	150	7/8 x	2 5/16	2.35
FMT-310	40-20-20	150	‡ 1 x	1 13/16	2.25
FMT-312	40-30-20	150	‡ 1 x	1 13/16	2.35
*FMT-313	40-40-20	150	1 x	2 1/16	2.35
FMT-1540	40-40-40	150	‡ 1 x	1 13/16	2.45
FMT-315	50-30-20	150	‡ 1 x	1 13/16	2.35
FMT-339	80-40-20	150	‡ 1 x	2 5/16	2.75
FMT-317	20-20/20	150/25	7/8 x	1 9/16	2.05
FMT-321	40-20/20	150/25	1 x	1 13/16	2.15
FMT-323	40-30/20	150/25	1 x	1 13/16	2.20
FMT-327	50-30/20	150/25	1 x	1 13/16	2.35
FMT-331	50-30/100	150/25	1 x	2 5/16	2.55
*FMT-332	50-30/200	150/25	1 x	2 1/16	2.75
FMT-333	80-40/20	150/25	‡ 1 x	2 5/16	2.65

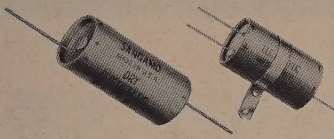
NOTE: Dimensions are for metal cases. Add 1/16" to diameter and 3/16" to length for cardboard insulating sleeve.

NOTE: All units are supplied with mounting straps attached.

NOTE: ‡ indicates new case size.
* indicates new item.

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS



TYPES MT - MTD *electrolytic*

Sangamo MT and MTD electrolytic capacitors are now supplied in smaller case sizes with additional popular values available. The MTH designation that was previously used for high-capacity, low-voltage units has been discontinued. These high-capacity, low-voltage capacitors are now listed under an MT number. Mounting straps are provided on all capacitors of 7/8″ and 1″ diameter.

These capacitors are specially designed for television and other electronic equipment when operation at +85°C is required. They are sealed in aluminum containers and encased in heavy insulating sleeves on which polarity is clearly marked.

SINGLE SECTION

Catalog Number	Capacitance in Mfds.	Working Volts DC	Diameter In Inches	Length In Inches	List Price
*MT-101	200	3	1/2 x 1	1/16	1.25
*MT-103	500	3	5/8 x 1	5/16	1.50
*MT-105	1000	3	3/4 x 1	9/16	1.75
MT-107	100	6	‡1/2 x 1	1/16	1.20
MT-109	250	6	‡1/2 x 1	5/16	1.35
MT-111	500	6	‡5/8 x 1	5/16	1.55
MT-113	1000	6	‡3/4 x 1	9/16	1.90
MT-115	1500	6	‡3/4 x 1	13/16	2.10
*MT-117	2000	6	7/8 x 2	1/16	2.30
MT-119	100	12	‡1/2 x 1	5/16	1.20
MT-121	250	12	‡5/8 x 1	5/16	1.45
MT-123	500	12	‡3/4 x 1	5/16	1.70
*MT-125	1000	12	7/8 x 2	1/16	2.25
MT-127	100	15	‡1/2 x 1	5/16	1.25
MT-129	250	15	‡5/8 x 1	5/16	1.55
MT-131	500	15	‡3/4 x 1	5/16	1.75
*MT-133	1000	15	7/8 x 2	1/16	2.30
*MT-135	2000	15	1 x 2	7/8	3.20
MT-0210	10	25	‡1/2 x 1	1/16	1.00
MT-0220	20	25	1/2 x 1	1/16	1.00
MT-0225	25	25	‡1/2 x 1	1/16	1.05
MT-0250	50	25	‡1/2 x 1	1/16	1.10
MT-02100	100	25	‡5/8 x 1	1/16	1.35
MT-02250	250	25	‡3/4 x 1	5/16	1.70
MT-02500	500	25	‡3/4 x 1	13/16	2.30
*MT-0501	1	50	1/2 x 1	1/16	.90
MT-0502	2	50	‡1/2 x 1	1/16	.95
MT-0504	4	50	‡1/2 x 1	1/16	1.00
MT-0510	10	50	‡1/2 x 1	1/16	1.00
MT-0520	20	50	‡1/2 x 1	1/16	1.05
MT-0525	25	50	‡1/2 x 1	1/16	1.05
MT-0550	50	50	‡5/8 x 1	1/16	1.20
MT-05100	100	50	‡5/8 x 1	9/16	1.40
*MT-05150	150	50	3/4 x 1	9/16	1.55
*MT-05250	250	50	7/8 x 1	9/16	1.75
MT-1504	4	150	‡1/2 x 1	1/16	1.00
MT-1508	8	150	‡1/2 x 1	1/16	1.00
MT-1510	10	150	‡1/2 x 1	1/16	1.05
MT-1512	12	150	‡1/2 x 1	5/16	1.10
MT-1516	16	150	‡5/8 x 1	1/16	1.15
MT-1520	20	150	‡5/8 x 1	1/16	1.20
*MT-1525	25	150	5/8 x 1	5/16	1.25
MT-1530	30	150	‡5/8 x 1	5/16	1.30
MT-1540	40	150	‡5/8 x 1	9/16	1.35
MT-1550	50	150	‡3/4 x 1	5/16	1.40
*MT-1560	60	150	3/4 x 1	9/16	1.45
MT-1580	80	150	‡3/4 x 1	13/16	1.60
MT-15100	100	150	‡7/8 x 1	9/16	1.75
MT-15150	150	150	‡ 1 x 1	9/16	1.90
*MT-15200	200	150	1 x 2	5/16	2.20
*MT-15300	300	150	1 x 2	7/8	2.55
MT-2504	4	250	‡1/2 x 1	1/16	1.00
MT-2508	8	250	‡5/8 x 1	1/16	1.15
*MT-2510	10	250	5/8 x 1	5/16	1.20
MT-2512	12	250	‡5/8 x 1	5/16	1.25
MT-2516	16	250	‡5/8 x 1	9/16	1.30

SINGLE SECTION (Cont.)

Catalog Number	Capacitance in Mfds.	Working Volts DC	Diameter In Inches	Length In Inches	List Price
MT-2520	20	250	‡5/8 x 1	13/16	1.35
MT-2530	30	250	‡3/4 x 1	13/16	1.45
MT-2540	40	250	‡7/8 x 1	9/16	1.55
MT-25100	100	250	‡ 1 x 2	5/16	2.40
*MT-3504	4	350	5/8 x 1	1/16	1.05
MT-3508	8	350	‡5/8 x 1	9/16	1.20
*MT-3510	10	350	5/8 x 1	13/16	1.25
MT-3516	16	350	‡3/4 x 1	13/16	1.40
*MT-3520	20	350	7/8 x 1	9/16	1.50
*MT-3530	30	350	1 x 1	13/16	1.65
*MT-3540	40	350	1 x 2	1/16	1.75
*MT-3560	60	350	1 x 2	7/8	1.95
MT-4502	2	450	5/8 x 1	1/16	1.10
MT-4504	4	450	5/8 x 1	5/16	1.15
MT-4508	8	450	‡3/4 x 1	5/16	1.25
MT-4510	10	450	3/4 x 1	9/16	1.30
MT-4512	12	450	‡3/4 x 1	13/16	1.35
MT-4516	16	450	‡3/4 x 2	5/16	1.40
MT-4520	20	450	‡7/8 x 1	13/16	1.55
MT-4530	30	450	‡ 1 x 1	13/16	1.70
MT-4540	40	450	‡ 1 x 2	5/16	1.85
MT-4550	50	450	1 x 2	7/8	2.10
*MT-4560	60	450	1 x 3	3/16	2.35
MT-4580	80	450	1 x 3	11/16	2.80
MT-4710	10	475	‡3/4 x 1	13/16	1.35
MT-4720	20	475	‡7/8 x 2	5/16	1.60
*MT-5008	8	500	7/8 x 1	9/16	1.30
*MT-5010	10	500	7/8 x 1	9/16	1.40
*MT-5016	16	500	7/8 x 2	1/16	1.50
*MT-5020	20	500	1 x 1	13/16	1.60

DUAL SECTION

Catalog Number	Capacitance in Mfds.	Working Volts DC	Diameter In Inches	Length In Inches	List Price
MTD-1520	20-20	150	‡7/8 x 1	1/16	1.65
MTD-1530	30-30	150	7/8 x 1	9/16	1.75
MTD-302	40-20	150	‡7/8 x 1	9/16	1.75
MTD-304	40-30	150	‡7/8 x 1	13/16	1.85
MTD-1540	40-40	150	‡7/8 x 1	13/16	1.95
MTD-301	50-30	150	‡7/8 x 1	13/16	1.95
MTD-1550	50-50	150	‡7/8 x 2	1/16	2.10
MTD-303	80-40	150	‡7/8 x 2	1/16	2.25
MTD-2520	20-20	250	‡7/8 x 1	13/16	1.85
MTD-3520	20-20	350	1 x 2	7/8	2.25
MTD-4508	8-8	450	‡7/8 x 1	9/16	1.70
MTD-4510	10-10	450	‡7/8 x 1	13/16	1.85
MTD-4520	20-20	450	1 x 2	7/8	2.50
MTD-4530	30-30	450	1 x 3	3/16	3.00
MTD-4540	40-40	450	1 x 3	11/16	3.40

NOTE: Dimensions are for metal cases. Add 1/16″ to diameter and 3/16″ to length for cardboard insulating sleeve.

NOTE: ‡ indicates new case size.
* indicates new item.

NOTE: Mounting straps furnished on 7/8″ and 1″ diameter capacitors. Machine screw hole is .156 inches diameter.

TYPE MMT *electrolytic*

SANGAMO Type MMT miniature tubular electrolytic capacitors are designed for use in miniaturized equipment and are ideally suited to meet the precise operating requirements of low voltage circuits. They are small in physical size and are self supporting by means of reinforced bare tinned copper wire leads. The Type MMT capacitors are contained in drawn aluminum tubes encased in fitted cardboard insulating sleeves on which the polarity is clearly marked.

Catalog Number	Capacitance Mfds.	Working Voltage DC	Diameter In Inches	Length In Inches	List Price
MMT-325	25	3	3/8	1 1/16	$ .85
MMT-350	50	3	3/8	1 1/16	.95
MMT-605	5	6	3/8	1 1/16	.80
MMT-625	25	6	3/8	1 1/16	.85
MMT-650	50	6	3/8	1 1/16	.95
MMT-680	80	6	1/2	1 1/16	.90
MMT-0210	10	25	3/8	1 1/16	1.00
MMT-0220	20	25	3/8	1 1/16	1.00
MMT-0240	40	25	1/2	1 1/16	1.00
MMT-0250	50	25	1/2	1 5/16	1.10
MMT-0505	5	50	3/8	1 1/16	1.00

Catalog Number	Capacitance Mfds.	Working Voltage DC	Diameter In Inches	Length In Inches	List Price
MMT-0510	10	50	3/8	1 1/16	1.00
MMT-0520	20	50	1/2	1 1/16	1.00
MMT-0530	30	50	1/2	1 5/16	1.05
MMT-1505	5	150	3/8	1 1/16	1.00
MMT-1508	8	150	1/2	1 1/16	1.00
MMT-1510	10	150	1/2	1 5/16	1.05
MMT-3003	3	300	1/2	1 1/16	1.00
MMT-4501	1	450	3/8	1 1/16	1.00
MMT-4502	2	450	1/2	1 1/16	1.00
MMT-4503	3	450	1/2	1 5/16	1.00

NOTE—Dimensions are for metal cases. Add 1/16 inch to diameter and 3/16 inch to length for cardboard insulating sleeves.

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE CS
electrolytic

SANGAMO Type CS electrolytic capacitors are contained in wax-filled cardboard tubes with insulated leads approximately 8 inches in length extending from both ends of the unit. Coding information necessary to identify the individual sections is clearly stamped on the tube. Each unit is supplied with a mounting strap of which the machine screw hole is .156 inches diameter.

DUAL SECTIONS (Common Negative)

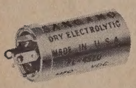
Catalog Number	Capacitance in Mfds.	Working Volts D.C.	Diam. In Inches	Length In Inches	List Price
CSD-0210	10-10	25	5/8 x	2 3/8	$1.40
CSD-0510	10-10	50	5/8 x	2 3/8	1.40
CSD-1508	8-8	150	5/8 x	2 3/8	1.50
CSD-1516	16-16	150	3/4 x	2 1/2	1.80
CSD-1520	20-20	150	3/4 x	2 1/2	1.65
CSD-500	30-20	150	7/8 x	2 1/2	1.70
CSD-1530	30-30	150	7/8 x	2 1/2	1.80
CSD-505	40-20	150	1 x	2 1/2	1.75
CSD-506	40-30	150	1 x	2 1/2	1.80
CSD-1540	40-40	150	1 x	2 1/2	1.85
CSD-512	50-30	150	1 x	2 1/2	1.95
CSD-1550	50-50	150	1 x	3	2.10
CSD-2516	16-16	250	1 x	2 1/2	1.75
CSD-4508	8-8	450	1 x	2 1/2	1.70
CSD-522	8-16	450	1 x	2 7/8	2.00
CSD-4520	20-20	450	1 x	3 5/8	2.50

DUAL SECTIONS (Separate)

Catalog Number	Capacitance in Mfds.	Working Volts D.C.	Diam. In Inches	Length In Inches	List Price
CSS-1520	20-20	150	1 x	2 1/2	$2.05
CSS-4508	8-8	450	1 x	3 1/8	2.15
CSS-4516	16-16	450	1 1/4 x	3 1/8	2.80

TRIPLE SECTIONS (Common Negative)

CST-1520	20-20-20	150	1 x	2 7/8	$2.20
CST-523	40-20-20	150	1 x	2 7/8	2.25
CST-524	40-30-20	150	1 x	2 7/8	2.35
CST-1540	40-40-40	150	1 x	3 1/8	2.45
CST-526	20-20-20	150-150-25	1 x	2 1/2	2.05
CST-527	40-20-20	150-150-25	1 x	2 7/8	2.15
CST-528	40-30-20	150-150-25	1 x	2 7/8	2.25
CST-532	50-30-20	150-150-25	1 x	2 7/8	2.35
CST-533	50-30-100	150-150-25	1 x	3 1/8	2.55
CST-534	80-40-20	150-150-25	1 x	3 1/8	2.60
CST-535	12-12-20	450-450-25	1 x	2 7/8	2.30
CST-537	20-20-20	450-450-25	1 1/4 x	3 1/8	2.90



TYPE PL
electrolytic

The SANGAMO Type PL "Twist-tab" electrolytic capacitors are specially designed for all television and electronic applications requiring long life and dependable performance at 85°C and under conditions of extreme ripple currents and high surge voltages. They are sealed in round aluminum cans and have twist-prong tabs for washer or direct chassis mounting. The capacitor element tabs are securely clamped and staked to the terminal lugs, providing permanent, low resistance connections. In all cases the aluminum can is negative and the mounting ring provides the negative electrical connection. The Type PL has been especially engineered for the rigid TV replacement applications found in all of the leading television receivers manufactured in the industry.

SINGLE SECTION

Stock Number	Catalog Number	Capacity Mfd.	Working Volts DC	Can Size	List Price	Stock Number	Catalog Number	Capacity Mfd.	Working Volts DC	Can Size	List Price
*S-005	PL-7001	2000	6	1⅜x2	2.55	S-165	PL-3015	15	300	1 x2	2.00
S-006	PL-7001.1	5000	6	1⅜x3½	3.00	S-167	PL-3020	20	300	1 x2	2.05
S-008	PL-7001.2	10000	6	1⅜x3½	5.75	S-170	PL-3030	30	300	1 x2	2.05
S-010	PL-7002	1000	10	1 x3	3.20	S-175	PL-3050	50	300	1 x2½	2.05
S-011	PL-7002.1	1200	10	1 x3	3.45	S-180	PL-3060	60	300	1 x3	2.10
S-013	PL-7002.2	5000	10	1⅜x3½	3.95	*S-185	PL-3080	80	300	1 x3	2.55
S-015	PL-700	3000	10	1⅜x3	2.90	*S-190	PL-30100	100	300	1⅜x3	2.90
*S-020	PL-701	1000	15	1 x3	2.55	*S-195	PL-30125	125	300	1⅜x3	3.50
*S-025	PL-703	2000	15	1⅜x3	3.45	*S-200	PL-30150	150	300	1⅜x3½	3.50
S-027	PL-704	5600	15	1⅜x5	4.25	S-201	PL-30200	200	300	1⅜x4	4.50
*S-030	PL-0240	40	25	1 x2	1.35	S-203	PL-3510	10	350	1 x2	1.90
S-035	PL-02100	100	25	1 x2	1.60	S-205	PL-3520	20	350	1 x2	1.90
*S-040	PL-02500	500	25	1 x3	2.55	*S-210	PL-3530	30	350	1 x2½	1.90
*S-045	PL-705	1000	25	1⅜x3	3.55	*S-215	PL-3540	40	350	1 x2½	2.00
S-050	PL-0525	25	50	¾x2	1.70	*S-220	PL-3550	50	350	1 x3	2.10
*S-055	PL-05150	150	50	1 x2	1.80	*S-225	PL-3580	80	350	1⅜x2½	2.85
S-057	PL-05250	250	50	1 x2½	2.50	*S-230	PL-35125	125	350	1⅜x3	3.65
*S-060	PL-05500	500	50	1⅜x3	2.65	*S-232	PL-35150	150	350	1⅜x3	3.95
S-065	PL-1520	20	150	1 x2	1.55	S-234	PL-4020	20	400	1 x2	2.20
*S-070	PL-1530	30	150	1 x2	1.55	S-235	PL-4050	50	400	1⅜x2½	2.75
S-075	PL-1540	40	150	1 x2	1.60	S-240	PL-4080	80	400	1⅜x2½	2.95
*S-080	PL-1550	50	150	1 x2	1.65	S-241	PL-40100	100	400	1⅜x3	3.05
*S-085	PL-1580	80	150	1 x2	1.85	S-245	PL-4504	4	450	1 x2	1.50
*S-090	PL-15100	100	150	1 x3	2.00	*S-250	PL-4510	10	450	1 x2	1.55
*S-095	PL-15120	120	150	1⅜x2	2.10	S-255	PL-4515	15	450	1 x2	1.70
*S-100	PL-15140	140	150	1⅜x2½	2.15	*S-260	PL-4520	20	450	1 x2	1.80
*S-105	PL-15150	150	150	1⅜x2½	2.15	*S-265	PL-4530	30	450	1 x2½	1.95
*S-110	PL-15200	200	150	1⅜x3	2.45	*S-270	PL-4540	40	450	1 x3	2.05
*S-115	PL-15300	300	150	1⅜x3½	2.80	*S-275	PL-4550	50	450	1 x3½	2.35
S-120	PL-2040	40	200	1 x2	1.70	*S-277	PL-4560	60	450	1⅜x2½	2.60
S-125	PL-2515	15	250	1 x2	1.55	*S-280	PL-4580	80	450	1⅜x3	3.05
*S-130	PL-2520	20	250	1 x2	1.60	*S-285	PL-45100	100	450	1⅜x3½	3.45
S-135	PL-2530	30	250	1 x2	1.70	*S-290	PL-45125	125	450	1⅜x4	3.85
*S-140	PL-2540	40	250	1 x2	1.80	S-292	PL-4720	20	475	1⅜x2	2.30
S-145	PL-2550	50	250	1 x2½	1.95	S-295	PL-4730	30	475	1 x3	2.50
S-150	PL-2560	60	250	1 x2½	2.05	*S-300	PL-4740	40	475	1⅜x2	2.50
S-155	PL-2580	80	250	1 x3	2.15	S-305	PL-4790	90	475	1⅜x3½	4.40
*S-160	PL-25150	150	250	1⅜x3	3.10						

*Items listed with asterisk indicate popular items which are readily available from stock.

(Use Index Page 1 for Quick, Easy Location of ALL Products)

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

DOUBLE SECTION

Stock Number	Catalog Number	Capacity Mfd.	Working Volts DC	Can Size	List Price
D-005	PLD-7057	250-50	6	1 x2	2.50
D-010	PLD-7059	100-100	10	1 x2	1.75
D-012	PLD-7059.1	285-285	15	1 x2	2.65
*D-015	PLD-706	1000-1000	15	1⅜x2½	4.40
D-020	PLD-0240	40-40	25	1 x2	2.00
D-025	PLD-7065	150-50	25	1 x2	2.40
D-023	PLD-7066	500-500	30	1⅜x2½	5.50
*D-030	PLD-0550	50-50	50	1 x2	1.70
D-035	PLD-7067	100-25	50	1 x2	2.30
D-038	PLD-7068	650-50	50	1⅜x2½	3.80
*D-040	PLD-1520	20-20	150	1 x2	1.70
D-045	PLD-707	30-15	150	1 x2	2.20
*D-050	PLD-1530	30-30	150	1 x2	1.85
*D-055	PLD-712	40-20	150	1 x2	1.85
*D-052	PLD-713	40-30	150	1 x2	1.85
*D-060	PLD-1540	40-40	150	1 x2	1.90
*D-065	PLD-716	50-30	150	1 x2	2.00
*D-070	PLD-1550	50-50	150	1 x2½	2.15
D-075	PLD-7163	60-20	150	1 x3	2.50
*D-080	PLD-1560	60-60	150	1 x3	2.35
*D-085	PLD-7165	80-40	150	1 x3	2.30
D-086	PLD-71653	100-30	150	1 x2½	2.80
D-087	PLD-15120	120-120	150	1⅜x2½	3.35
*D-088	PLD-71656	200-5	150	1⅜x2½	2.70
*D-090	PLD-7166	200-125	150	1⅜x3½	3.75
*D-095	PLD-15200	200-200	150	1⅜x4	4.00
D-096	PLD-17100	100-100	175	1⅜x2½	3.25
*D-097	PLD-2060	60-60	200	1⅜x3	2.55
D-099	PLD-2080	80-80	200	1⅜x2½	3.05
*D-100	PLD-20100	100-100	200	1⅜x3	3.50
D-105	PLD-2510	10-10	250	1 x2	1.70
*D-110	PLD-2520	20-20	250	1 x2	1.90
*D-115	PLD-2540	40-40	250	1 x3	2.50
D-120	PLD-3010	10-10	300	1 x2	2.20
D-125	PLD-3015	15-15	300	1 x2	2.40
D-130	PLD-3040	40-40	300	1⅜x2½	3.00
D-132	PLD-71661	50-10	300	1⅜x2	2.90
D-133	PLD-3050	50-50	300	1⅜x2½	3.35
D-135	PLD-3060	60-60	300	1⅜x3	3.55
D-140	PLD-7167	80-40	300	1⅜x3	3.55
*D-145	PLD-3080	80-80	300	1⅜x3½	4.05
D-147	PLD-7168	100-60	300	1⅜x3½	4.00
D-148	PLD-30100	100-100	300	1⅜x3½	4.10
*D-150	PLD-715	120-20	300	1⅜x3½	3.80
*D-155	PLD-3515	15-15	350	1 x2	2.25
D-160	PLD-3520	20-20	350	1 x2½	2.30
D-165	PLD-7175	30-20	350	1 x3	2.60
*D-166	PLD-3530	30-30	350	1 x3	2.90
D-167	PLD-3540	40-40	350	1⅜x2½	4.00
*D-170	PLD-7177	50-30	350	1⅜x2½	3.15
*D-175	PLD-3580	80-80	350	1⅜x4	4.70
*D-176	PLD-7178	90-40	350	1⅜x3	4.30
D-177	PLD-7179	100-40	350	1⅜x3	5.75
*D-178	PLD-7179.1	100-60	350	1⅜x3½	4.80
D-180	PLD-4015	15-15	400	1 x2½	2.80
D-182	PLD-7179.2	20-40	400	1 x3½	3.05
D-183	PLD-7179.3	25-20	400	1 x3	2.80
D-185	PLD-4040	40-40	400	1⅜x3	4.00
D-190	PLD-4060	60-60	400	1⅜x3½	4.40
D-195	PLD-717	80-10	400	1⅜x3	4.25
D-197	PLD-717.1	80-20	400	1⅜x3	4.55
D-198	PLD-717.2	100-20	400	1⅜x3	5.50
*D-200	PLD-4510	10-10	450	1 x2	1.90
D-205	PLD-718	15-10	450	1 x3	2.05
*D-207	PLD-4515	15-15	450	1 x2½	2.25
*D-210	PLD-7185	20-10	450	1 x3	2.25
*D-215	PLD-4520	20-20	450	1 x3	2.55
D-220	PLD-7186	25-20	450	1 x3	2.65
*D-225	PLD-4530	30-30	450	1⅜x2½	3.05
*D-230	PLD-7187	40-20	450	1⅜x2½	3.05
*D-235	PLD-4540	40-40	450	1⅜x3	3.45
*D-240	PLD-7188	60-40	450	1⅜x3	3.95
*D-245	PLD-719	80-10	450	1⅜x3	3.60
*D-250	PLD-7193	80-30	450	1⅜x4	4.20
*D-255	PLD-7195	80-40	450	1⅜x4	4.35
D-260	PLD-4720	20-20	475	1 x3	3.35
D-265	PLD-4740	40-40	475	1⅜x3	5.40
D-266	PLD-7195.1	45-40	475	1⅜x3	5.40
*D-280	PLD-7196	500/50	5/150	1 x3	2.45
*D-285	PLD-7197	250/1000	10/6	1⅜x2	2.85
D-286	PLD-7197.1	1000/2000	10/6	1⅜x3	4.50
D-290	PLD-7198	40/20	150/25	1 x2	2.15
D-295	PLD-7199	40/150	150/25	1 x2	2.05
*D-300	PLD-71995	150/100	150/25	1⅜x2½	2.70
D-301	PLD-71996	150/50	150/50	1 x3	2.80
D-302	PLD-71998	150/100	150/50	1⅜x2½	2.50
D-305	PLD-71997	40/25	250/25	1 x2½	2.00
D-306	PLD-71999	10/10	300/25	1 x2	2.25
D-310	PLD-720	20/20	300/25	1 x2	2.30
D-315	PLD-7201	20/60	300/350	1⅜x2½	3.55
D-320	PLD-7202	20/20	350/25	1 x2	2.40
D-322	PLD-72025	80/100	350/50	1⅜x3	5.65
D-325	PLD-7203	20/30	350/250	1 x3	2.90
D-330	PLD-7204	60/80	350/250	1⅜x3½	4.30
D-335	PLD-72045	20/10	350/300	1 x2	2.55
D-340	PLD-7205	30/30	350/300	1 x3	3.30
D-341	PLD-7205.1	100/20	400/50	1⅜x3½	3.90
D-342	PLD-7206	40/100	400/50	1⅜x2	3.90
*D-343	PLD-7206.1	100/30	400/50	1⅜x3½	3.90
*D-344	PLD-7206.2	80/80	400/200	1⅜x3½	3.95
D-344.1	PLD-7206.4	50/20	400/350	1⅜x2½	3.85
D-344.2	PLD-7206.5	100/80	400/350	1⅜x4	3.95
*D-345	PLD-7207	10/20	450/25	1 x2	1.70
D-350	PLD-7209	20/20	450/25	1 x2½	2.50
D-355	PLD-7215	40/20	450/25	1 x3	3.05
D-360	PLD-725	80/10	450/25	1⅜x3	4.25
D-365	PLD-726	80/50	450/50	1⅜x3	3.50
D-370	PLD-7261	20/100	450/100	1⅜x2½	3.65
D-375	PLD-7263	30/40	450/150	1⅜x2	3.65
D-380	PLD-7265	40/150	450/150	1⅜x3	4.30
D-385	PLD-7267	80/50	450/150	1⅜x3	4.70
D-386	PLD-7268	20/150	450/250	1⅜x3	3.85
D-390	PLD-721	20/80	450/350	1⅜x3½	4.55
D-395	PLD-7217	25/15	450/350	1 x3	3.20
*D-400	PLD-722	40/10	450/350	1⅜x2	2.60
D-405	PLD-7225	40/20	450/350	1⅜x2½	3.55
D-410	PLD-727	20/100	475/300	1⅜x3½	4.95

TRIPLE SECTION

Stock Number	Catalog Number	Capacity Mfd.	Working Volts DC	Can Size	List Price
*T-005	PLT-0220	20-20-20	25	1 x2	1.95
T-007	PLT-0225	25-25-25	25	1 x2	2.05
*T-010	PLT-0240	40-40-40	25	1 x2	2.15
T-012	PLT-0525	25-25-25	50	1 x2	3.10
T-015	PLT-0530	30-30-30	50	1 x2	3.25
*T-020	PLT-1520	20-20-20	150	1 x2	2.30
T-022	PLT-7301	30-15-15	150	1 x2	3.35
T-025	PLT-730	30-30-10	150	1 x2	3.55
T-027	PLT-7302	30-30-15	150	1⅜x2	3.60
*T-030	PLT-7305	40-20-10	150	1 x2	2.35
*T-035	PLT-731	40-20-20	150	1 x2	2.40
*T-040	PLT-738	40-30-20	150	1 x2	2.50
*T-045	PLT-1540	40-40-40	150	1 x3	2.60
*T-050	PLT-1550	50-50-50	150	1 x3	3.00
T-052	PLT-7381	60-40-40	150	1 x3	4.00
*T-055	PLT-7385	80-40-20	150	1 x3	2.90
T-057	PLT-7386	80-50-20	150	1 x3	2.95
T-060	PLT-1580	80-80-80	150	1⅜x3	5.65
*T-065	PLT-7387	120-80-40	150	1⅜x3½	3.80
T-067	PLT-7388	100-40-10	200	1⅜x3	4.80
T-070	PLT-739	10-15-15	250	1 x2	3.70
T-075	PLT-7393	20-20-10	250	1 x2½	3.75
*T-076	PLT-7394	20-20-20	250	1 x2½	2.60
T-080	PLT-7395	30-15-10	250	1 x2½	4.05
T-081	PLT-7396	30-30-20	250	1 x3	4.15
T-085	PLT-7397	40-20-10	250	1⅜x2	4.00
*T-090	PLT-740	40-20-20	250	1 x3	2.90
*T-095	PLT-3010	10-10-10	300	1 x2	2.40
T-100	PLT-3020	20-20-20	300	1 x3	3.65
T-101	PLT-7401	40-20-20	300	1⅜x2	3.85
T-102	PLT-3040	40-40-40	300	1⅜x2½	4.25
T-105	PLT-3510	10-10-10	350	1 x2	4.20
T-106	PLT-3515	15-15-15	350	1 x2½	4.40
T-107	PLT-3520	20-20-20	350	1 x3	4.50
T-108	PLT-3540	40-40-40	350	1⅜x3	4.90
*T-110	PLT-7407	60-40-20	350	1⅜x3	4.25

* Items listed with asterisk indicate popular items which are readily available from stock.

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE PL *electrolytic*—continued . . .

TRIPLE SECTION

Stock Number	Catalog Number	Capacity Mfd.	Working Volts DC	Can Size	List Price
T-111	PLT-7408	60-40-40	350	1⅜x3	7.05
*T-115	PLT-7409	80-60-60	350	1⅜x5	5.55
*T-120	PLT-4010	10-10-10	400	1 x2½	2.40
T-121	PLT-74091	40-100-10	400	1⅜x4½	5.95
T-122	PLT-74092	80-40-30	400	1⅜x4	5.95
*T-125	PLT-4510	10-10-10	450	1 x2½	2.60
T-130	PLT-741	15-15-10	450	1 x3	4.45
*T-131	PLT-4515	15-15-15	450	1 x3	3.10
*T-135	PLT-7412	20-10-10	450	1 x3	2.90
*T-140	PLT-4520	20-20-20	450	1⅜x2½	3.60
*T-145	PLT-7413	30-20-20	450	1⅜x3	3.85
T-150	PLT-7414	30-30-20	450	1⅜x3	5.45
*T-155	PLT-4530	30-30-30	450	1⅜x3	4.35
*T-160	PLT-74145	40-30-20	450	1⅜x3	4.30
*T-165	PLT-7415	40-40-10	450	1⅜x3	4.15
*T-170	PLT-4540	40-40-40	450	1⅜x3½	4.90
*T-175	PLT-7417	60-30-10	450	1⅜x3	4.50
T-176	PLT-7418	80-40-10	450	1¾x4	7.60
*T-180	PLT-7419	80-40-20	450	1⅜x4	5.40
T-185	PLT-4710	10-10-10	475	1 x3	4.05
*T-190	PLT-742	30-30-20	475	1⅜x3	4.45
T-195	PLT-4730	30-30-30	475	1⅜x3½	6.60
T-197	PLT-7421	40-35-10	475	1⅜x3	6.85
T-207	PLT-7427	40-40/350	150/10	1 x2½	5.75
T-208	PLT-7428	80-40/50	150/10	1 x3	4.20
T-210	PLT-745	20/250-100	150/15-15	1⅜x2	4.35
T-212	PLT-7451	50-30/150	150/25	1 x2½	4.30
T-213	PLT-7452	250-60/10	150/25	1⅜x3	4.60
T-215	PLT-746	100/50/25	150/50/25	1 x3	4.50
T-220	PLT-747	30-20/100	150-150/6	1 x2	3.60
T-225	PLT-7471	30-20/100	150-150/10	1 x2	3.60
T-230	PLT-7473	30-30/200	150-150/10	1 x2	3.75
*T-235	PLT-7475	40-20/150	150-150/10	1 x2	2.40
T-240	PLT-7477	40-20/200	150-150/10	1 x2	3.75
*T-242	PLT-7479	100-80/200	150-150/10	1⅜x2½	3.60
T-245	PLT-748	20-20/20	150-150/25	1 x2	3.30
T-250	PLT-750	30-20/20	150-150/25	1 x2	3.40
T-255	PLT-751	30-30/20	150-150/25	1 x2	3.45
*T-260	PLT-749	40-20/20	150-150/25	1 x2	2.30
T-265	PLT-7517	40-20/100	150-150/25	1 x2½	3.75
*T-270	PLT-7519	40-20/200	150-150/25	1 x2½	2.70
T-275	PLT-752	40-30/20	150-150/25	1 x2	3.55
T-280	PLT-7521	40-30/25	150-150/25	1 x2½	3.55
*T-285	PLT-7525	40-40/20	150-150/25	1 x2½	2.40
T-290	PLT-7526	40-40/40	150-150/25	1 x2½	3.95
*T-295	PLT-7527	50-30/20	150-150/25	1 x2	2.50
*T-300	PLT-753	50-30/100	150-150/25	1 x2½	2.70
*T-305	PLT-754	50-50/20	150-150/25	1 x2½	2.65
T-310	PLT-7541	60-40/25	150-150/25	1 x3	3.85
T-315	PLT-7543	120-60/20	150-150/25	1⅜x2½	5.05
*T-317	PLT-7542	60-5/20	200/50	1 x2½	2.50
*T-318	PLT-7544	80-10/20	200/50	1 x3	2.80
T-320	PLT-7545	30-20/20	200-200/25	1 x2½	3.85
T-325	PLT-7547	100-10/40	200-200/50	1⅜x2½	4.75
T-326	PLT-755	30-30/30	250-250/25	1 x2½	4.60
T-327	PLT-7551	40/100-20	250/50	1⅜x2	4.20
T-329	PLT-7553	40-40/80	250/150	1⅜x2½	4.95
*T-330	PLT-757	15-15/20	250-250/25	1 x2	2.35
T-335	PLT-7575	20-15/20	250-250/25	1 x2	3.55
*T-340	PLT-758	30-30/20	250-250/25	1 x2½	2.80
T-345	PLT-7585	70-70/20	250-250/50	1⅜x3	5.85
T-350	PLT-7587	40-20/10	250-250/150	1⅜x2	4.15
T-355	PLT-7588	40-40/10	250-250/200	1⅜x3	4.45
T-360	PLT-759	80-80/60	250-250/200	1⅜x3½	6.75
T-365	PLT-7593	30/20/20	250/350/25	1 x3	4.20
T-366	PLT-7594	40/500-100	300/25-25	1⅜x3	3.95
T-370	PLT-7595	100/60/20	300/150/25	1⅜x3	6.30
T-375	PLT-7597	100/60-20	300/250-250	1⅜x3½	7.35
T-377	PLT-7598	10-10/20	300-300/25	1 x2	4.00
T-378	PLT-761	10-10/10	300-300/15	1 x2	3.85
T-379	PLT-7611	10-100/20	300-300/25	1⅜x3	5.95
T-380	PLT-762	20-20/20	300-300/25	1 x2½	4.15
T-381	PLT-7621	20-20/100	300-300/25	1 x3	5.95
T-382	PLT-7622	30-10/20	300-300/25	1 x3	4.15
T-385	PLT-763	40-15/20	300-300/25	1 x3	4.45
T-390	PLT-7631	40-20/20	300-300/25	1⅜x2	4.65
T-395	PLT-7632	30-30/25	300-300/50	1 x3	4.35
T-396	PLT-76321	40-20/50	300-300/50	1 x3	5.95
*T-397	PLT-7634	200-20/10	300-300/100	1⅜x4	4.90
T-400	PLT-7635	10-10/15	300-300/250	1 x2	3.70
T-401	PLT-7637	30-30/30	350-350/25	1⅜x2	4.75
T-402	PLT-76371	60-5/20	350-350/50	1 x3	4.70
T-403	PLT-76372	80-40/20	350-350/25	1⅜x3	5.60
T-404	PLT-76373	10-5/30	350-350/50	1 x2½	3.20
T-405	PLT-7633	20/100/100	350/100/50	1⅜x3	4.50
T-410	PLT-7636	10/50/100	350/100/75	1 x3	4.30
T-415	PLT-7638	10/50/100	350/150/50	1 x3½	4.30
*T-417	PLT-76382	125/5/100	350/200/75	1⅜x3½	5.30
T-420	PLT-76385	20/30/20	350/250/25	1 x3	4.20
T-425	PLT-760	30/20-10	350/250-250	1 x3	4.50
T-428	PLT-7602	60-30/40	350-350/300	1⅜x3	7.45
*T-430	PLT-7639	30/30/20	350/300/25	1 x3	3.15
T-432	PLT-76391	80/20/25	350/300/25	1⅜x2½	4.75
T-435	PLT-7605	20/40/10	350/300/150	1 x3½	4.75
T-440	PLT-764	40/20/10	350/300/200	1⅜x2	4.95
T-445	PLT-7645	30/20/20	350/300/250	1 x3	4.95
T-450	PLT-765	10-10/20	350-350/25	1 x2	4.90
*T-455	PLT-7655	10-15/20	350-350/25	1 x2	2.50
T-460	PLT-766	15-15/20	350-350/20	1 x2½	4.05
*T-465	PLT-7665	20-10/20	350-350/25	1 x2½	2.55
*T-470	PLT-7671	20-20/20	350-350/25	1 x2½	2.80
T-475	PLT-7672	30-10/20	350-350/25	1 x2½	4.60
*T-480	PLT-767	30-20/20	350-350/25	1 x3	3.10
*T-485	PLT-7674	30-30/20	350-350/25	1⅜x2½	3.40
T-490	PLT-76745	40-40/50	350-350/25	1⅜x2½	5.65
T-495	PLT-7675	10-5/150	350-350/50	1 x3	4.05
T-500	PLT-76755	40-20/10	350-350/100	1⅜x2	4.30
*T-502	PLT-7676	100-60/20	350-350/200	1⅜x4	5.50
*T-505	PLT-7677	20-10/5	350-350/250	1 x2½	2.55
T-510	PLT-7679	30-10/20	350-350/250	1 x3	4.60
T-515	PLT-768	60/40/20	400/300/25	1⅜x3	6.30
T-520	PLT-7681	10/40/10	400/300/150	1⅜x2	4.35
T-525	PLT-7682	80/20-10	400/300-300	1⅜x3½	6.40
T-527	PLT-7684	60/40-20	400/350-350	1⅜x3½	6.50
*T-528	PLT-7685	100-10/80	400-400/350	1⅜x4	6.10
T-530	PLT-7687	10/50/30	400/350/25	1 x3½	4.65
T-535	PLT-7688	40/10/100	400/350/50	1⅜x3	6.75
T-536	PLT-76882	80/20/100	400/350/50	1⅜x3½	6.75
T-537	PLT-76885	100/10/20	400/350/50	1⅜x3½	6.75
T-538	PLT-76883	100/10/10	400/350/300	1⅜x3½	6.80
T-540	PLT-7689	60/20-20	400/350-350	1⅜x3	5.70
T-545	PLT-769	15-15/40	400-400/25	1 x2½	4.20
*T-550	PLT-770	20-20/20	400-400/25	1 x3	2.85
T-551	PLT-7705	40-10/200	400-400/50	1⅜x2½	5.50
T-552	PLT-7704	80-40/100	400-400/50	1⅜x4	5.40
T-553	PLT-7706	60-10/10	400-400/50	1⅜x2½	5.30
T-555	PLT-7707	40-20/20	400-400/300	1⅜x3½	5.60
T-556	PLT-7708	10/20-10	450/25-25	1 x2	3.25
T-557	PLT-7709	10-30/20	450-450/25	1 x3	3.90
T-558	PLT-77091	20-20/50	450-450/25	1 x3	4.15
T-559	PLT-77092	30-10/20	450-450/25	1 x3	3.60
T-560	PLT-771	30/100-25	450/25-25	1⅜x2	4.45
T-561	PLT-7711	80/100/20	450/50/50	1⅜x3½	5.60
*T-565	PLT-7712	40/40/130	450/150/50	1⅜x3	3.65
T-570	PLT-7714	40/100/50	450/150/50	1⅜x3	5.95
*T-575	PLT-7715	40/90-50	450/150-150	1⅜x3½	4.00
*T-580	PLT-77152	20/80/50	450/200/50	1⅜x2½	3.40
*T-585	PLT-7716	20/60/100	450/250/25	1⅜x2½	3.65
T-590	PLT-77165	20/80/10	450/250/200	1⅜x3	5.80
*T-595	PLT-77168	10/80-80	450/250-250	1⅜x4	4.15
T-600	PLT-7717	20/40-10	450/250-250	1⅜x2	4.75
*T-602	PLT-7718	5/80-40	450/300-300	1⅜x3	4.15
T-605	PLT-7719	20/15-10	450/300-300	1 x3½	4.30
T-607	PLT-77191	80/80-10	450/300-300	1⅜x4	5.70
T-608	PLT-77192	80/20/20	450/300/50	1⅜x3½	4.70
T-610	PLT-772	10/10/20	450/350/25	1 x2	3.45
T-615	PLT-773	10/10/50	450/350/25	1 x3	3.60
T-620	PLT-7735	20/80/100	450/350/50	1⅜x3½	6.10
T-625	PLT-774	15/20/20	450/350/250	1⅜x2	4.45
T-630	PLT-7745	20/80/10	450/350/300	1⅜x3	6.00
T-631	PLT-7746	40/50/50	450/350/300	1⅜x3½	6.30
T-632	PLT-7747	60/40-20	450/350-350	1⅜x3½	6.90
T-633	PLT-7748	4/40/40	450/400/300	1⅜x2½	5.70
T-635	PLT-775	10/30/30	450/400/300	1⅜x2½	5.05
*T-640	PLT-776	10-10/10	450-450/25	1 x2½	2.40
*T-645	PLT-777	10-10/20	450-450/25	1 x2½	2.40
T-650	PLT-779	15-15/20	450-450/25	1 x3	4.05
*T-655	PLT-778	20-10/20	450-450/25	1 x3	2.70
T-660	PLT-780	20-15/20	450-450/25	1 x3	4.35
*T-665	PLT-782	20-20/20	450-450/25	1 x3	3.05
T-670	PLT-7825	30-20/20	450-450/25	1⅜x2½	4.35
*T-675	PLT-783	30-30/20	450-450/25	1⅜x2½	3.55
*T-680	PLT-7831	40-40/20	450-450/25	1⅜x3	3.90
*T-685	PLT-7832	40-40/40	450-450/25	1⅜x3	3.95

* Items listed with asterisk indicate popular items which are readily available from stock.

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE PL *electrolytic*—continued . . .

TRIPLE SECTION

Stock Number	Catalog Number	Capacity Mfd.	Working Volts DC	Can Size	List Price
*T-690	PLT-7834	80-40/100	450-450/25	1⅜x4	5.10
*T-695	PLT-7835	10-10/40	450-450/50	1 x2½	2.75
*T-700	PLT-7837	20-10/50	450-450/50	1 x3	2.85
T-701	PLT-78371	20-20/50	450-450/50	1 x3	5.10
*T-702	PLT-78372	30-10/150	450-450/50	1⅜x2½	3.50
T-703	PLT-78374	20-10/100	450-450/50	1⅜x2	5.10
T-705	PLT-78375	30-30/40	450-450/50	1⅜x3	5.50
T-710	PLT-78377	40-10/40	450-450/50	1⅜x2½	4.90
T-715	PLT-7839	40-40/40	450-450/50	1⅜x3	5.10
*T-720	PLT-78395	40-40/100	450-450/50	1⅜x3½	4.30
T-722	PLT-78397	80-10/100	450-450/50	1⅜x3½	5.20
*T-725	PLT-784	40-40/40	450-450/150	1⅜x3½	4.15
*T-730	PLT-785	40-10/80	450-450/200	1⅜x3	3.90
*T-735	PLT-7855	40-10/100	450-450/200	1⅜x3½	4.15
*T-740	PLT-7857	40-40/100	450-450/200	1⅜x4	4.95
T-742	PLT-7858	40-40/40	450-450/250	1⅜x3½	5.75

Stock Number	Catalog Number	Capacity Mfd.	Working Volts DC	Can Size	List Price
T-745	PLT-7859	15-10/120	450-450/300	1⅜x3½	6.70
T-750	PLT-786	15-15/10	450-450/300	1 x3	4.30
T-755	PLT-7865	15-5/15	450-450/350	1 x3	4.30
T-760	PLT-787	20-20/60	450-450/350	1⅜x3½	6.20
T-765	PLT-789	40-10/10	450-450/350	1⅜x3	4.95
*T-768	PLT-7893	20/50/20	475/ 50/25	1 x2½	2.75
T-770	PLT-7895	10/100/40	475/200/50	1⅜x2½	5.35
T-772	PLT-7896	40/40/100	475/250/50	1⅜x3	6.45
T-775	PLT-7897	40/40-10	475/250	1⅜x3	6.00
T-780	PLT-790	20/20/40	475/300/25	1⅜x2	4.65
T-781	PLT-7901	10/ 4/100	475/350/50	1 x2½	3.90
T-782	PLT-791	40/80-10	475/300-300	1⅜x3½	6.25
T-785	PLT-792	40/40/25	475/400/50	1⅜x3	6.45
T-790	PLT-793	40/20-20	475/450-450	1⅜x3	6.75
T-795	PLT-794	20-20/60	475-475/400	1⅜x3½	6.90

QUADRUPLE SECTION

Stock Number	Catalog Number	Capacity Mfd.	Working Volts DC	Can Size	List Price
*Q-005	PLQ-797	40-40-40-30	150	1⅜x2	3.30
Q-006	PLQ-7971	60-50-30-20	150	1⅜x2	5.10
Q-007	PLQ-7972	80-50-20-20	150	1⅜x2	5.55
Q-008	PLQ-7973	100-100-100-100	175	1⅜x4	7.00
Q-009	PLQ-7974	50-40-30-20	200	1⅜x2½	5.25
*Q-010	PLQ-798	40-40-20-10	300	1⅜x3½	4.55
Q-011	PLQ-79811	100-40-20-20	300	1⅜x4	6.50
Q-011.1	PLQ-79821	40-40-20-20	350	1⅜x3	6.10
*Q-012	PLQ-3540	40-40-40-40	350	1⅜x3½	6.00
Q-015	PLQ-7981	30-30-20-20	400	1⅜x3½	7.30
*Q-017	PLQ-7982	50-40-30-20	400	1⅜x4	5.65
Q-020	PLQ-7983	80-10-10-10	400	1⅜x3½	7.05
*Q-025	PLQ-7984	80-25-10-10	400	1⅜x4	5.25
*Q-027	PLQ-4505	5- 5- 5- 5	450	1⅜x2	3.00
*Q-030	PLQ-4510	10-10-10-10	450	1⅜x2	3.35
*Q-035	PLQ-7986	20-10-10-10	450	1⅜x2½	3.70
*Q-040	PLQ-4520	20-20-20-20	450	1⅜x3	4.70
*Q-045	PLQ-799	30-15-15-15	450	1⅜x3	4.45
Q-046	PLQ-7991	30-20-20-10	450	1⅜x3	6.90
Q-050	PLQ-800	30-30-15-10	450	1⅜x3½	7.05
*Q-051	PLQ-8001	30-30-20-20	450	1⅜x3½	5.20
*Q-055	PLQ-8002	40-10-10-10	450	1⅜x3	4.15
Q-060	PLQ-8004	40-20-10-10	450	1⅜x3	7.20
*Q-061	PLQ-8005	40-40-20-20	450	1⅜x4	5.55
*Q-065	PLQ-4540	40-40-40-40	450	1⅜x5	6.45
*Q-066	PLQ-80051	60-20-20-20	450	1⅜x3½	5.65
Q-067	PLQ-8006	70-10-10-5	450	1⅜x3	7.15
Q-070	PLQ-4710	10-10-10-10	475	1⅜x2	5.25
*Q-075	PLQ-801	40-20-10-10	475	1⅜x3	5.10
Q-076	PLQ-8014	20/150-150-150	50/25	1⅜x2	3.85
Q-080	PLQ-8012	40-40/100-100	150/25	1⅜x2	5.05
Q-085	PLQ-8013	30-20-20/200	150/10	1⅜x2	4.65
*Q-090	PLQ-8015	60-40-20/200	150/10	1⅜x3	3.45
*Q-095	PLQ-802	30-30-30/40	150/25	1⅜x2	3.10
*Q-096	PLQ-8021	40-20-20/20	150/25	1⅜x2	2.95
*Q-100	PLQ-803	40-40-30/20	150/25	1⅜x2	3.10
*Q-105	PLQ-8035	40-40-40/20	150/25	1⅜x2	3.15
Q-110	PLQ-804	40-40-40/100	150/25	1⅜x2	5.05
*Q-115	PLQ-805	50-50-50/20	150/25	1⅜x2	3.55
Q-116	PLQ-80501	75-75-75/30	150/25	1⅜x2½	5.55
*Q-120	PLQ-8050	80-40-40/40	150/25	1⅜x3	3.60
*Q-125	PLQ-80502	80-40-40/100	150/25	1⅜x2½	3.75
Q-126	PLQ-80503	200/140/50-30	150/150/50	1⅜x3½	6.70
Q-130	PLQ-8011	150-150/20/100	150/300/50	1⅜x3½	6.85
Q-131	PLQ-80504	50-40/30-20	175/150	1⅜x2½	5.10
Q-135	PLQ-8051	40-20-10/20	200/25	1⅜x2	4.80
Q-136	PLQ-80506	60-20-5/50	200/50	1⅜x2	5.15
Q-137	PLQ-80507	40-20-20/25	250/25	1⅜x2½	6.00
*Q-140	PLQ-8052	100-40-10/100	250/50	1⅜x3½	5.15
Q-145	PLQ-8054	80-60/40-20	250/150	1⅜x3½	6.15
Q-146	PLQ-80541	40-20-20/25	300/25	1⅜x2½	5.50
Q-147	PLQ-80542	40-30-20/50	300/25	1⅜x3	6.25
Q-148	PLQ-80543	40-40/25-25	300/25	1⅜x2½	6.25
Q-149	PLQ-80544	60-5/50-20	300/50	1⅜x2½	6.25
Q-150	PLQ-8055	100/40/80-20	300/50/25	1⅜x3½	4.55
*Q-152	PLQ-8056	10/200-140-30	300/150	1⅜x3½	5.10
Q-153	PLQ-80561	100/50-50/60	300/150-150/50	1⅜x3½	5.95
*Q-154	PLQ-8056.5	100/60/10/20	300/200/150/50	1⅜x3	4.85
Q-155	PLQ-8057	120/20/20/100	300/250/25/50	1⅜x4	5.80
Q-160	PLQ-8059	200/20/20/100	300/250/25/50	1⅜x5	5.80

Stock Number	Catalog Number	Capacity Mfd.	Working Volts DC	Can Size	List Price
*Q-162	PLQ-80593	100-10/200-30	300-300/150-150	1⅜x4	5.90
Q-163	PLQ-80595	100-10/200/30	300-300/200/150	1⅜x5	6.75
Q-164	PLQ-80596	140-5/200-30	300/150	1⅜x4½	7.20
Q-165	PLQ-806	10-10-10/20	300-300-300/25	1⅜x2	4.45
*Q-170	PLQ-808	60-40-20/50	300-300-300/25	1⅜x3½	4.70
*Q-175	PLQ-8085	40-40-40/20	300-300-300/150	1⅜x3	4.90
Q-180	PLQ-809	15/80-40/200	350/200-200/25	1⅜x3	6.75
Q-181	PLQ-8091	40/40/40-40	350/300/250-250	1⅜x3	6.75
Q-185	PLQ-810	40/40-20/20	350/300-300/25	1⅜x3	6.75
*Q-186	PLQ-8101	60-4/100-40	350-350/25-25	1⅜x2½	3.80
Q-186.5	PLQ-81011	40-40/4-4	350-350/50-50	1⅜x2½	5.25
Q-187	PLQ-8102	80-20/20/100	350-350/200/50	1⅜x3	6.95
Q-187.5	PLQ-81021	100-60/60/40	350-350/200/75	1⅜x4½	6.80
*Q-188	PLQ-8103	60-40/60/20	350-350/200/150	1⅜x3½	5.05
Q-189	PLQ-8104	50-30/8/20	350-350/250/200	1⅜x2½	6.75
Q-190	PLQ-8105	30-30/15/20	350-350/300/25	1⅜x3	6.00
Q-191	PLQ-8106	30-30/50/100	350-350/300/75	1⅜x3	6.25
Q-195	PLQ-811	10-10/10-10	350-350/300-300	1⅜x2	4.65
*Q-200	PLQ-8113	20-10-5/10	350-350-350/25	1⅜x2	3.10
Q-205	PLQ-8115	20-10-5/20	350-350-350/25	1⅜x2	4.60
Q-206	PLQ-81151	40-20-10/25	350-350-350/25	1⅜x2½	5.70
Q-210	PLQ-8116	40-20-20/25	350-350-350/25	1⅜x2½	6.40
*Q-215	PLQ-8117	40-40-40/40	350-350-350/25	1⅜x3½	5.20
*Q-220	PLQ-8119	40-40-40/150	350-350-350/50	1⅜x4	5.65
Q-220.5	PLQ-811911	50-40-20/100	350-350-350/50	1⅜x3	7.75
Q-221	PLQ-81191	60-25-25/100	350-350-350/50	1⅜x3	7.75
*Q-221.2	PLQ-811912	100-20-10/20	350-350-350/50	1⅜x3	5.40
*Q-221.5	PLQ-81191.5	100-40-30/50	350-350-350/50	1⅜x4	6.55
Q-222	PLQ-81192	90-30-5/100	350-350-350/75	1⅜x3½	7.25
Q-222.1	PLQ-811921	20-10-5/60	350-350-350/200	1⅜x2	5.50
Q-222.2	PLQ-811922	100-40/10-10	350-350/350-350	1⅜x3½	6.40
Q-222.3	PLQ-811923	50/20/100/25	400/200/50/25	1⅜x2½	7.00
Q-223	PLQ-81193	10/40-10/10	400/200-200/50	1⅜x2	5.05
Q-224	PLQ-81194	10/100/10/100	400/300/75/25	1⅜x3	7.05
Q-225	PLQ-81195	80/40-20-10	400/300-300-300	1⅜x4	7.95
Q-230	PLQ-81197	20/40/100-10	400/350/50-50	1⅜x3	6.30
Q-231	PLQ-81198	100/10/60-60	400/350/200-200	1⅜x4	7.20
Q-235	PLQ-812	40/10/80-10	400/350/250-250	1⅜x3½	7.00
Q-237	PLQ-8123	80/40-10/10	400/350-350/25	1⅜x3½	7.00
Q-240	PLQ-8125	10-10/25-25	400-400/25-25	1⅜x2	4.20
Q-241	PLQ-8126	50-40/100/100	400-400/50/25	1⅜x4	7.65
*Q-242	PLQ-81261	100-10/30-20	400-400/50-50	1⅜x3½	5.10
Q-245	PLQ-8127	40-10/80-10	400-400/250-250	1⅜x3½	7.05
Q-246	PLQ-8128	50-20/20/25	400-400/350/25	1⅜x3	6.70
Q-247	PLQ-8129	40-10/40/20	400-400/350/50	1⅜x3	7.65
Q-248	PLQ-813	100-10/20/20	400-400/350/50	1⅜x3½	7.90
Q-250	PLQ-814	20-20-20/20	400-400-400/25	1⅜x2½	5.80
*Q-251	PLQ-8141	80-40-30/40	400-400-400/25	1⅜x4	5.95
Q-251.1	PLQ-81411	40-20-20/50	400-400-400/50	1⅜x2½	7.75
Q-252	PLQ-8142	30/20-20/4	400/400-400/100	1⅜x2½	5.80
Q-253	PLQ-8143	10/80-50/100	450/200-200/50	1⅜x3	6.40
*Q-255	PLQ-8145	20/80-20/50	450/200-200/50	1⅜x3	4.10
Q-260	PLQ-8147	40/40-40/20	450/250-250/25	1⅜x3	6.70
Q-265	PLQ-8149	10/10/60/100	450/300/200/50	1⅜x2½	6.60
Q-270	PLQ-815	20/15-15/20	450/350-350/25	1⅜x2	5.70
*Q-275	PLQ-8152	10/60-40/25	450/350-350/25	1⅜x3½	4.60
*Q-280	PLQ-8154	10/100-10/20	450/350-350/25	1⅜x3½	5.20

* Items listed with asterisk indicate popular items which are readily available from stock.

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE PL *electrolytic*—continued . . .

QUADRUPLE SECTION

Stock Number	Catalog Number	Capacity Mfd.	Working Volts DC	Can Size	List Price
Q-282	PLQ-8155	20/80-50/100	450/350-350/50	1⅜x4	6.90
Q-285	PLQ-8156	30/40-40/10	450/350-350/200	1⅜x3½	7.75
Q-287	PLQ-8157	40/30/15/50	450/350/300/50	1⅜x3	6.55
Q-290	PLQ-8158	80/10/30/40	450/400/300/150	1⅜x4	7.90
Q-295	PLQ-8159	10-10/20-20	450-450/25-25	1⅜x2	4.45
*Q-300	PLQ-816	20-15/20-20	450-450/25-25	1⅜x2	3.45
Q-301	PLQ-8161	20-20/20-15	450-450/25-25	1⅜x2	4.45
Q-305	PLQ-817	20-20/20-20	450-450/25-25	1⅜x2	4.55
Q-306	PLQ-8171	20-10/40/500	450-450/200/50	1⅜x3½	7.25
*Q-307	PLQ-8172	35-25/20/100	450-450/200/50	1⅜x3	4.65
Q-308	PLQ-8173	20-10/40/100	450-450/250/50	1⅜x2½	7.05
Q-310	PLQ-8175	40-40/10/50	450-450/300/50	1⅜x3	7.05
Q-315	PLQ-818	20-20/30-30	450-450/300-300	1⅜x3	6.75
Q-320	PLQ-819	40-10/35-10	450-450/350-350	1⅜x3½	6.90
*Q-325	PLQ-8195	40-40/30-30	450-450/350-350	1⅜x4	5.90
*Q-330	PLQ-820	10-10-10/20	450-450-450/25	1⅜x2	3.15
Q-335	PLQ-8202	20-10-10/100	450-450-450/25	1⅜x2½	5.55
*Q-340	PLQ-8205	20-20-20/20	450-450-450/25	1⅜x2½	4.15
Q-345	PLQ-82055	30-20-20/20	450-450-450/25	1⅜x3	6.60
Q-350	PLQ-82057	30-30-10/20	450-450-450/25	1⅜x3	6.55
Q-355	PLQ-8206	30-30-20/20	450-450-450/25	1⅜x3	7.00
*Q-360	PLQ-8207	40-10-10/250	450-450-450/25	1⅜x3	4.70
Q-365	PLQ-82075	40-15-10/20	450-450-450/25	1⅜x3	6.15
*Q-370	PLQ-8208	40-20-20/20	450-450-450/25	1⅜x3	4.60
*Q-375	PLQ-8209	40-20-20/40	450-450-450/25	1⅜x3	4.65
*Q-380	PLQ-821	40-30-10/20	450-450-450/25	1⅜x3	4.50
*Q-385	PLQ-8215	40-40-10/20	450-450-450/25	1⅜x3	4.70
*Q-390	PLQ-8216	40-40-40/40	450-450-450/25	1⅜x4	5.50
*Q-395	PLQ-8217	20-20-20/100	450-450-450/50	1⅜x3	4.55
*Q-400	PLQ-822	30-30-15/30	450-450-450/50	1⅜x3	4.55
*Q-405	PLQ-8225	40-20-10/100	450-450-450/50	1⅜x3½	4.60
*Q-410	PLQ-8226	40-40-10/25	450-450-450/50	1⅜x3½	4.70
*Q-415	PLQ-8227	40-40-10/100	450-450-450/100	1⅜x4	5.55
Q-420	PLQ-823	10-10-10/10	450-450-450/150	1⅜x2	4.75
Q-425	PLQ-8235	20-10-10/10	450-450-450/150	1⅜x3	4.85
Q-426	PLQ-8236	40-30-30/5	450-450-450/150	1⅜x3	5.10
*Q-430	PLQ-824	60-10-10/20	450-450-450/150	1⅜x3	4.55
Q-432	PLQ-824.5	35-35-10/10	450-450-450/200	1⅜x3	6.90
*Q-435	PLQ-8240	40/40/50/80	475/250/150/50	1⅜x3½	5.00
Q-436	PLQ-82401	10/140-4/100	475/300-300/50	1⅜x4	7.00
*Q-440	PLQ-8241	20/40/100/80	475/300/50/25	1⅜x3	4.45
Q-442	PLQ-82415	10/40/100/10	475/400/50/25	1⅜x2½	6.00
Q-445	PLQ-8242	10/10/80/50	475/450/200/60	1⅜x3	5.80
*Q-446	PLQ-82421	10/40/4/100	475/400/350/50	1⅜x2½	4.05
*Q-450	PLQ-8243	25/20/20/100	475/450/300/50	1⅜x3	4.60
Q-455	PLQ-8244	25/20/40/100	475/450/300/50	1⅜x3½	7.45
*Q-460	PLQ-8246	10/60/30/125	475/450/400/50	1⅜x4	5.55
*Q-465	PLQ-8247	15-15/80/40	475-475/300/50	1⅜x3	4.80
*Q-467	PLQ-8248	40-10/4/40	475-475/350/300	1⅜x3	4.95
Q-470	PLQ-8249	10-5/80/40	475-475/450/50	1⅜x3½	7.35
Q-475	PLQ-8250	30-30-10/20	475-475-475/25	1⅜x3	6.85
Q-480	PLQ-825	40-20-10/10	475-475-475/25	1⅜x3	7.30
*Q-485	PLQ-826	20-20-10/10	475-475-475/300	1⅜x2½	4.30

* Items listed with asterisk indicate popular items which are readily available from stock.

NOTE—Each unit is supplied with a bakelite and metal mounting plate.

NOTE—Cardboard insulating sleeves supplied at extra cost.

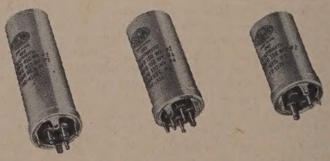
TYPE KCT CARDBOARD INSULATING SLEEVES

for TYPE PL CAPACITORS

Catalog Number	Can Size In Inches		List Price
	Diameter	Length	
KCT-1	1	2	.06
KCT-2	1	2 1/2	.06
KCT-3	1	3	.06
KCT-4	1	4	.06
KCT-5	1 3/8	2	.06
KCT-6	1 3/8	2 1/2	.06
KCT-7	1 3/8	3	.06
KCT-8	1 3/8	3 1/2	.06
KCT-9	1 3/8	4	.06

TYPE TR *high reliability electrolytics*

Catalog Number	Capacitance Mfds.	Working Voltage DC	Diameter In Inches	Length In Inches	List Price
SINGLE SECTION					
TR-620	2000	6	1 3/8	2 1/2	$ 8.75
TR-0110	1000	15	1	4	8.25
TR-02500	500	25	1	4	8.50
TR-05200	200	50	1	3 1/2	7.95
TR-15100	100	150	1	4	8.40
TR-2550	50	250	1	3	7.55
TR-3520	20	350	1	2 1/2	7.30
TR-3550	50	350	1	4	8.00
TR-4520	20	450	1	3	7.60
TR-4550	50	450	1	3	8.75
DUAL SECTIONS					
TRD-1550	50-50	150	1	4	8.90
TRD-2520	20-20	250	1	3 1/2	8.85
TRD-4510	10-10	450	1	4	8.50
TRD-4520	20-20	450	1 3/8	3 1/2	9.55
TRD-4540	40-40	450	1 3/8	4	10.70
TRIPLE SECTIONS					
TRT-1550	50-50-50	150	1 3/8	4	10.35
TRT-2540	40-40-40	250	1 3/8	4	10.75
TRT-3520	20-20-20	350	1 3/8	4	10.45
TRT-4520	20-20-20	450	1 3/8	4	11.05



SANGAMO Type TR "High Reliability" electrolytic capacitors are specially designed and manufactured for applications requiring an extremely high level of reliability over long periods of time. The Type TR is ideally suited for low-frequency filter, by-pass and coupling applications in communications equipment, electronic industrial controls, laboratory test instruments, computers and similar equipment where a high degree of reliability over a period of 10 years is essential to the operation of the equipment in which it is used. The SANGAMO Type TR "High Reliability" capacitors are designed to operate throughout the temperature range from —20°C to +85°C.

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE EM
motor starting

The SANGAMO Type EM Motor Starting Capacitor is contained in an aluminum can and is supplied with a heavy cardboard insulating sleeve. Designed for heavy-duty motor starting applications, the Type EM will give maximum performance under extreme environmental conditions. The connecting terminals are lug type with threaded holes containing a #6-32 machine screw. Connecting wires can be secured with the screw or the screw removed and the wires soldered.

110 VOLTS AC

Catalog Number	Capacitance Mfds.	Diameter In Inches	Length In Inches	List Price
†EMS11021E	21-25	1	2 1/8	$ 2.05
†EMS11025E	25-30	1	2 1/8	2.10
†EMS11030E	30-36	1	2 1/8	2.10
†EMS11036E	36-43	1	2 1/8	2.10
†EMS11043E	43-53	1	2 1/8	2.10
†EMS11047E	47-56	1	2 1/8	2.10
†EMS11053E	53-64	1	2 1/8	2.15
†EMS11064E	64-77	1	2 1/8	2.25
†EMS11072E	72-88	1	2 5/8	2.30
EMS11088E	88-108	1 3/8	2 5/8	2.65
EMS11108E	108-130	1 3/8	2 5/8	2.85
EMS11124E	124-149	1 3/8	2 5/8	2.95
EMS11130E	130-156	1 3/8	2 5/8	2.95
EMS11145E	145-175	1 3/8	2 5/8	3.20
EMS11161E	161-193	1 3/8	3 1/8	3.25
EMS11189E	189-227	1 3/8	3 1/8	3.75
†EMS11216E	216-259	1 3/8	3 1/8	4.05
†EMS11233E	233-280	1 3/8	3 1/8	4.50
†EMS11243E	243-292	1 3/8	4 1/8	4.70
†EMS11270E	270-324	1 3/8	4 1/8	4.75
†EMS11340E	340-408	1 3/8	4 1/8	5.65
†EMS11378E	378-440	1 3/8	4 1/8	6.00
EMS11400E	400-480	1 3/4	4 1/8	6.05
EMS11430E	430-516	1 3/4	4 1/8	6.95
EMS11460E	460-552	1 3/4	4 1/8	7.60
†EMS11540E	540-648	1 3/4	4 1/8	8.20
EMS11590E	590-708	2	4 1/8	8.80

125 VOLTS AC

Catalog Number	Capacitance Mfds.	Diameter In Inches	Length In Inches	List Price
†EMS12021E	21-25	1	2 1/8	$ 2.25
†EMS12025E	25-30	1	2 1/8	2.25
†EMS12030E	30-36	1	2 1/8	2.30
†EMS12036E	36-43	1	2 1/8	2.30
†EMS12043E	43-53	1	2 5/8	2.30
†EMS12047E	47-56	1	2 5/8	2.35
†EMS12053E	53-64	1	2 5/8	2.40
EMS12064E	64-77	1 3/8	2 5/8	2.50
EMS12072E	72-88	1 3/8	2 5/8	2.60
EMS12088E	88-108	1 3/8	2 5/8	2.75
EMS12108E	108-130	1 3/8	2 5/8	3.15
EMS12124E	124-149	1 3/8	2 5/8	3.25
EMS12130E	130-156	1 3/8	2 5/8	3.25
†EMS12145E	145-175	1 3/8	2 5/8	3.65
EMS12161E	161-193	1 3/8	3 1/8	3.85
EMS12189E	189-227	1 3/8	3 1/8	4.30
†EMS12216E	216-259	1 3/8	4 1/8	4.65
†EMS12233E	233-280	1 3/8	4 1/8	5.00
†EMS12243E	243-292	1 3/8	4 1/8	5.20
†EMS12270E	270-324	1 3/4	4 1/8	5.40
EMS12340E	340-408	1 3/4	4 1/8	6.50
EMS12378E	378-440	1 3/4	4 1/8	6.70
EMS12400E	400-480	1 3/4	4 1/8	6.80
EMS12430E	430-516	1 3/4	4 1/8	8.10
EMS12460E	460-552	1 3/4	4 1/8	8.95
EMS12540E	540-648	2	4 1/8	9.60
EMS12590E	590-708	2	4 1/8	10.35

160 VOLTS AC

Catalog Number	Capacitance Mfds.	Diameter In Inches	Length In Inches	List Price
EMS16021E	21-25	1 3/8	2 5/8	$ 2.90
EMS16025E	25-30	1 3/8	2 5/8	2.95
EMS16030E	30-36	1 3/8	2 5/8	3.00
EMS16036E	36-43	1 3/8	2 5/8	3.05
EMS16043E	43-53	1 3/8	2 5/8	3.15
†EMS16047E	47-56	1 3/8	2 5/8	3.20
EMS16053E	53-64	1 3/8	3 1/8	3.45
†EMS16064E	64-77	1 3/8	4 1/8	3.70
†EMS16072E	72-88	1 3/8	4 1/8	3.85
†EMS16088E	88-108	1 3/4	4 1/8	4.60
†EMS16108E	108-130	1 3/4	4 1/8	4.90
EMS16124E	124-149	1 3/4	4 1/8	5.55
EMS16130E	130-156	1 3/4	4 1/8	5.65
EMS16145E	145-175	1 3/4	4 1/8	5.95
EMS16161E	161-193	1 3/4	4 1/8	6.80
EMS16189E	189-227	2	4 1/8	7.65
EMS16216E	216-259	2	4 1/8	7.95
EMS16233E	233-280	2	4 1/8	8.40
EMS16243E	243-292	2 1/2	4 1/8	8.70
EMS16270E	270-324	2 1/2	4 1/8	9.60

220 VOLTS AC

Catalog Number	Capacitance Mfds.	Diameter In Inches	Length In Inches	List Price
EMS22021E	21-25	1 3/8	2 5/8	$ 4.40
EMS22025E	25-30	1 3/8	2 5/8	4.60
EMS22030E	30-36	1 3/8	2 5/8	4.95
EMS22036E	36-43	1 3/8	3 1/8	5.25
EMS22043E	43-53	1 3/8	3 1/8	5.55
†EMS22047E	47-56	1 3/8	4 1/8	5.65
†EMS22053E	53-64	1 3/8	4 1/8	5.75
†EMS22064E	64-77	1 3/4	4 1/8	6.70
†EMS22072E	72-88	1 3/4	4 1/8	7.00
†EMS22088E	88-108	1 3/4	4 1/8	7.60
†EMS22108E	108-130	1 3/4	4 1/8	8.45
†EMS22124E	124-149	1 3/4	4 1/8	9.00
†EMS22130E	130-156	1 3/4	4 1/8	9.40
EMS22145E	145-175	2	4 1/8	10.00
EMS22161E	161-193	2	4 1/8	11.10

320 VOLTS AC

Catalog Number	Capacitance Mfds.	Diameter In Inches	Length In Inches	List Price
†EMS32021E	21-25	1 3/8	4 1/8	$ 4.90
†EMS32025E	25-30	1 3/8	4 1/8	5.05
†EMS32030E	30-36	1 3/8	4 1/8	5.35
†EMS32036E	36-43	1 3/4	4 1/8	5.65
†EMS32043E	43-53	1 3/4	4 1/8	5.90
†EMS32047E	47-56	1 3/4	4 1/8	6.50
†EMS32053E	53-64	1 3/4	4 1/8	6.70
EMS32064E	64-77	2	4 1/8	7.80
EMS32072E	72-88	2	4 1/8	8.10
EMS32088E	88-108	2 1/2	4 1/8	9.85
EMS32108E	108-130	2 1/2	4 1/8	11.75

NOTE: When units are supplied with sleeve, add 5/8" to length and 1/16" to diameter for overall dimensions.

NOTE: † indicates new case size.

TYPE MJ
motor starting

The SANGAMO Type MJ Motor Starting capacitor is contained in a black plastic case and is supplied, at extra cost, with a plastic end cap. Designed for heavy-duty motor starting applications, the Type MJ will give maximum performance under extreme environmental conditions. The connecting terminals are lug type with threaded holes containing a #6-32 machine screw. Connecting wires can be secured with the screw or the screw removed and the wires soldered.

110 VOLTS AC

Catalog Number	Capacitance Mfds.	Diameter In Inches	Length In Inches	List Price
MJS11021E	21-25	1 7/16	2 3/4	$ 2.05
MJS11025E	25-30	1 7/16	2 3/4	2.10
MJS11030E	30-36	1 7/16	2 3/4	2.10
MJS11036E	36-43	1 7/16	2 3/4	2.10
MJS11043E	43-53	1 7/16	2 3/4	2.10
MJS11047E	47-56	1 7/16	2 3/4	2.10
MJS11053E	53-64	1 7/16	2 3/4	2.15
MJS11064E	64-77	1 7/16	2 3/4	2.25
MJS11072E	72-88	1 7/16	2 3/4	2.30
MJS11088E	88-108	1 7/16	2 3/4	2.65
MJS11108E	108-130	1 7/16	2 3/4	2.85
MJS11124E	124-149	1 7/16	2 3/4	2.95
MJS11130E	130-156	1 7/16	2 3/4	2.95
†MJS11145E	145-175	1 7/16	2 3/4	3.20
MJS11161E	161-193	1 7/16	3 3/8	3.25
MJS11189E	189-227	1 7/16	3 3/8	3.75
MJS11216E	216-259	1 13/16	3 3/8	4.05
MJS11233E	233-280	1 13/16	3 3/8	4.50
MJS11243E	243-292	1 13/16	3 3/8	4.70
MJS11270E	270-324	1 13/16	3 3/8	4.75
MJS11340E	340-408	1 13/16	3 3/8	5.65
MJS11378E	378-440	1 13/16	3 3/8	6.00
†MJS11400E	400-480	1 13/16	4 3/8	6.05
†MJS11430E	430-516	1 13/16	4 3/8	6.95
†MJS11460E	460-552	1 13/16	4 3/8	7.60
†MJS11540E	540-648	1 13/16	4 3/8	8.20
MJS11590E	590-708	2 1/16	4 3/8	8.80

125 VOLTS AC

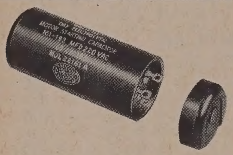
Catalog Number	Capacitance Mfds.	Diameter In Inches	Length In Inches	List Price
MJS12021E	21-25	1 7/16	2 3/4	$ 2.25
MJS12025E	25-30	1 7/16	2 3/4	2.25
MJS12030E	30-36	1 7/16	2 3/4	2.30
MJS12036E	36-43	1 7/16	2 3/4	2.30
MJS12043E	43-53	1 7/16	2 3/4	2.30
MJS12047E	47-56	1 7/16	2 3/4	2.35
MJS12053E	53-64	1 7/16	2 3/4	2.40
MJS12064E	64-77	1 7/16	2 3/4	2.50
MJS12072E	72-88	1 7/16	2 3/4	2.60
MJS12088E	88-108	1 7/16	2 3/4	2.75
MJS12108E	108-130	1 7/16	2 3/4	3.15
MJS12124E	124-149	1 7/16	2 3/4	3.25
MJS12130E	130-156	1 7/16	3 3/8	3.25
MJS12145E	145-175	1 7/16	3 3/8	3.65
MJS12161E	161-193	1 7/16	3 3/8	3.85
MJS12189E	189-227	1 7/16	3 3/8	4.30
MJS12216E	216-259	1 13/16	3 3/8	4.65
MJS12233E	233-280	1 13/16	3 3/8	5.00
MJS12243E	243-292	1 13/16	3 3/8	5.20
MJS12270E	270-324	1 13/16	3 3/8	5.40
MJS12340E	340-408	1 13/16	3 3/8	6.50
MJS12378E	378-440	1 13/16	3 3/8	6.70
†MJS12400E	400-480	1 13/16	4 3/8	6.80
MJS12430E	430-516	2 1/16	3 3/8	8.10
MJS12460E	460-552	2 1/16	3 3/8	8.95
MJS12540E	540-648	2 1/16	4 3/8	9.60
MJS12590E	590-708	2 1/16	4 3/8	10.35

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE MJ CAPACITOR (continued)

Catalog Number	Capacitance Mfds.	Diameter In Inches	Length In Inches	List Price
160 VOLTS AC				
MJS16021E	21-25	1 7/16	2 3/4	$ 2.90
MJS16025E	25-30	1 7/16	2 3/4	2.95
MJS16030E	30-36	1 7/16	2 3/4	3.00
MJS16036E	36-43	1 7/16	2 3/4	3.05
MJS16043E	43-53	1 7/16	2 3/4	3.15
MJS16047E	47-56	1 7/16	2 3/4	3.20
MJS16053E	53-64	1 7/16	3 3/8	3.45
†MJS16064E	64-77	1 7/16	3 3/8	3.70
†MJS16072E	72-88	1 7/16	3 3/8	3.85
MJS16088E	88-108	1 13/16	3 3/8	$ 4.60
MJS16108E	108-130	1 13/16	3 3/8	4.90
†MJS16124E	124-149	1 13/16	3 3/8	5.55
†MJS16130E	130-156	1 13/16	3 3/8	5.65
†MJS16145E	145-175	1 13/16	3 3/8	5.95
†MJS16161E	161-193	1 13/16	4 3/8	6.80
†MJS16189E	189-227	1 13/16	4 3/8	7.65
†MJS16216E	216-259	1 13/16	4 3/8	7.95
†MJS16233E	233-280	1 13/16	4 3/8	8.10
†MJS16243E	243-292	1 13/16	4 3/8	8.25
MJS16270E	270-324	2 9/16	4 3/8	8.65



TYPE MJ END-CAP

Diam. In Inches	List Price
1 7/16	.25
1 13/16	.30
2 1/16	.35
2 9/16	.35

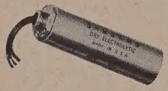
Catalog Number	Capacitance Mfds.	Diameter In Inches	Length In Inches	List Price
220 VOLTS AC				
MJS22021E	21-25	1 7/16	2 3/4	$ 4.40
MJS22025E	25-30	1 7/16	2 3/4	4.60
MJS22030E	30-36	1 7/16	2 3/4	4.95
MJS22036E	36-43	1 7/16	3 3/8	5.25
MJS22043E	43-53	1 7/16	3 3/8	5.55
†MJS22047E	47-56	1 7/16	3 3/8	5.65
MJS22053E	53-64	1 13/16	3 3/8	5.75
MJS22064E	64-77	1 13/16	3 3/8	6.70
MJS22072E	72-88	1 13/16	3 3/8	7.00
MJS22088E	88-108	1 13/16	3 3/8	7.60
†MJS22108E	108-130	1 13/16	4 3/8	7.80
†MJS22124E	124-149	1 13/16	4 3/8	8.25
†MJS22130E	130-156	1 13/16	4 3/8	8.55
MJS22145E	145-175	2 1/16	4 3/8	10.00
MJS22161E	161-193	2 1/16	4 3/8	10.95

Catalog Number	Capacitance Mfds.	Diameter In Inches	Length In Inches	List Price
320 VOLTS AC				
MJS32021E	21-25	1 13/16	3 3/8	$ 4.90
MJS32025E	25-30	1 13/16	3 3/8	5.05
MJS32030E	30-36	1 13/16	3 3/8	5.35
†MJS32036E	36-43	1 13/16	4 3/8	5.65
†MJS32043E	43-53	1 13/16	4 3/8	5.90
†MJS32047E	47-56	1 13/16	4 3/8	6.50
†MJS32053E	53-64	1 13/16	4 3/8	6.70
MJS32064E	64-77	2 1/16	4 3/8	7.80
MJS32072E	72-88	2 1/16	4 3/8	8.10
MJS32088E	88-108	2 9/16	4 3/8	10.15
MJS32108E	108-130	2 9/16	4 3/8	12.40

NOTE: To include end cap in overall length, add .512 inches to capacitor length.

NOTE: † indicates new case size.

TYPE SL *electrolytic*



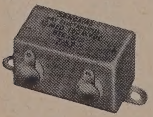
The SANGAMO Type SL electrolytic capacitor is designed primarily as a direct replacement unit. The Type SL is assembled in a round aluminum can with threaded neck to provide easy mounting to a chassis with the aid of a pal nut that is supplied. The Type SL is completely insulated from the container; the negative connections being made to one of the insulated leads extending through the threaded neck of the can.

Catalog Number	Capacity In Mfds.	Working Voltage DC	Diam. In Inches	Length In Inches	List Price
SINGLE SECTION					
SL-2512	12	250	1	x 2 1/2	$1.75
SL-2525	25	250	1	x 3 1/2	1.95
SL-4508	8	450	1 3/8	x 2 1/2	2.20
SL-4512	12	450	1 3/8	x 2 1/2	2.40
SL-4516	16	450	1 3/8	x 2 1/2	2.45
SL-4520	20	450	1 3/8	x 2 1/2	2.70
SL-4530	30	450	1 3/8	x 3 1/2	3.00
SL-4540	40	450	1 3/8	x 4 1/4	3.15
MULTIPLE SECTION (Common Negative)					
SLD-4508	8-8	450	1 3/8	x 3 1/2	3.00
SLD-4516	16-16	450	1 3/8	x 3 1/2	3.55
SLT-4508	8-8-8	450	1 3/8	x 3 1/2	5.00
HIGH VOLTAGE SECTIONS (series wound)					
SL-6004	4	600	1 3/8	x 3 1/2	2.95
SL-6008	8	600	1 3/8	x 4 1/4	3.15
SL-6016	16	600	1 3/8	x 4 1/4	3.75

TYPE TS *electrolytic*

Ideally suited for all applications where quick capacitor changes are required, the SANGAMO Type TS units are equipped with a four-pin octal base mounting for use with standard octal base tube sockets. The special design of the bakelite octal base insures that the aluminum container will not contact the mounting surface. The base pins are molded in the bakelite base and nickel-plated to prevent corrosion and insure good contact with the socket terminals.

Catalog Number	Capacitance In Mfds.	Working Voltage DC	Diam. In Inches	Length In Inches	List Price
SINGLE SECTION					
TS-1520	20	150	1 5/32	x 2 1/2	$3.95
TS-1540	40	150	1 5/32	x 2 1/2	4.10
TS-4510	10	450	1 5/32	x 2 1/2	4.05
TS-4520	20	450	1 5/32	x 2 1/2	4.30
TS-4540	40	450	1 3/8	x 2 1/2	4.55
TS-4580	80	450	1 3/8	x 4 1/4	5.55
DUAL SECTIONS					
TSD-1520	20-20	150	1 5/32	x 2 1/2	$4.20
TSD-1540	40-40	150	1 5/32	x 2 1/2	4.40
TSD-4510	10-10	450	1 5/32	x 2 1/2	4.40
TSD-4520	20-20	450	1 3/8	x 2 1/2	5.05
TRIPLE SECTIONS					
TST-4510	10-10-10	450	1 5/32	x 2 1/2	5.10
TST-901	20-20-20	450-450-25	1 3/8	x 2 1/2	5.55



TYPE BTE *electrolytic*

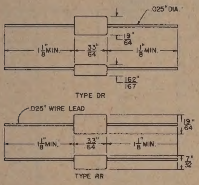
The SANGAMO Type BTE electrolytic capacitor is ideally suited for filter and bypass circuits. The Type BTE cartridges are first sealed in aluminum cases and then encased in corrosion-resistant, hot tinned steel cases which provide a complete hermetic seal under extreme weather conditions. All units are equipped with compression type silicone rubber sealed terminals. Mounting flanges with 3/16" holes are provided at each end.

Catalog Number	Capacitance in Mfds.	Working Voltage DC	Dimensions In Inches W L H	List Price
BTE-0225	25	25	1 x 1 13/16 x 15/16	$4.50
BTE-0250	50	25	1 x 1 13/16 x 15/16	4.60
BTE-0275	75	25	1 x 1 13/16 x 15/16	4.75
BTE-0525	25	50	1 x 1 13/16 x 15/16	4.55
BTE-0550	50	50	1 x 1 13/16 x 15/16	4.70
BTE-1510	10	150	1 x 1 13/16 x 15/16	4.65
BTE-1520	20	150	1 x 1 13/16 x 15/16	4.70
BTE-2510	10	250	1 x 1 13/16 x 15/16	4.70
BTE-2512	12	250	1 x 1 13/16 x 15/16	4.75
BTE-3508	8	350	1 x 1 13/16 x 15/16	4.75
BTE-4504	4	450	1 x 1 13/16 x 15/16	5.50

SANGAMO CAPACITORS

MICA CAPACITORS

TYPE DR-RR
silvered mica



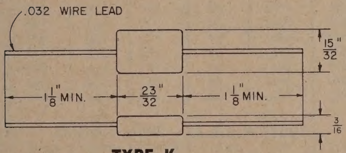
SANGAMO Mica Capacitors are designed for use in electronic circuits where frequency stability and minimum losses must be maintained. These capacitors are fabricated from the finest India Ruby mica which is rigidly tested to provide the long life, and high factor of safety specified for these units.

TYPE DR-RR
(125°C)
500 W.V.D.C. 1000 T.V.D.C.

Catalog Number	Capacity Mmfds.	List Price Tolerance 5% J	2% G	1% F
		$	$	$
DR-1410	10	.40		
DR-1412	12	.40		
DR-1415	15	.40		
DR-1418	18	.40		
DR-1420	20	.40		
DR-1422	22	.40		
DR-1424	24	.40		
DR-1427	27	.40	.46	
DR-1430	30	.40	.46	
DR-1433	33	.40	.46	
DR-1436	36	.40	.46	
DR-1439	39	.40	.46	
DR-1443	43	.40	.46	
DR-1447	47	.40	.46	
DR-1450	50	.40	.46	.50
DR-1451	51	.40	.46	.50
DR-1456	56	.40	.46	.50
DR-1462	62	.40	.46	.50
DR-1468	68	.40	.46	.50
DR-1475	75	.40	.46	.50
DR-1482	82	.45	.52	.56
DR-1491	91	.45	.52	.56
DR-1310	100	.45	.52	.56
DR-1311	110	.45	.52	.56
DR-1312	120	.45	.52	.56
DR-1313	130	.45	.52	.56
DR-1315	150	.45	.52	.56
DR-1316	160	.50	.58	.63
DR-1318	180	.50	.58	.63
DR-1320	200	.50	.58	.63
DR-1322	220	.55	.63	.69
DR-1324	240	.55	.63	.69
DR-1325	250	.55	.63	.69
DR-1327	270	.60	.69	.75
DR-1330	300	.60	.75	.81
RR-1333	330	.65	.75	.81
RR-1336	360	.70	.81	.88
RR-1339	390	.70	.81	.88
*RR-06343	430	.75	.92	1.00
*RR-06347	470	.80	.92	1.00
*RR-06350	500	.80	.92	1.00
*RR-06351	510	.80	.92	1.00

NOTE: * Voltage rating 300 WVDC—(TVDC-600V)
NOTE: Standard Tolerance ±5%, but not less than ±1.0 mmf.
NOTE: Normally supplied in "C" characteristic, available in other characteristics on request.

TYPE K-KR
mica



TYPE K
(125°C)
500 W.V.D.C. 1000 T.V.D.C.

Catalog Number	Capacity Mmfds.	List Price Tolerance M ±20%	K ±10%	J ±5%
K-1550	5	$0.30	$	$
K-1410	10	.30		
K-1412	12	.30	.33	
K-1415	15	.30	.33	
K-1418	18	.30	.33	
K-1420	20	.30	.33	.38
K-1422	22	.30	.33	.38
K-1424	24	.30	.33	.38
K-1427	27	.30	.33	.38
K-1430	30	.30	.33	.38
K-1433	33	.20	.22	.25
K-1436	36	.20	.22	.25
K-1439	39	.20	.22	.25
K-1443	43	.20	.22	.25
K-1447	47	.20	.22	.25
K-1450	50	.20	.22	.25
K-1451	51	.20	.22	.25
K-1456	56	.20	.22	.25
K-1462	62	.20	.22	.25
K-1468	68	.20	.22	.25
K-1475	75	.20	.22	.25
K-1482	82	.20	.22	.25
K-1491	91	.20	.22	.25
K-1310	100	.20	.22	.25
K-1312	120	.20	.22	.25
K-1313	130	.25	.28	.31
K-1315	150	.25	.28	.31
K-1316	160	.25	.28	.31
K-1318	180	.25	.28	.31
K-1320	200	.25	.28	.31
K-1322	220	.25	.28	.31
K-1324	240	.30	.33	.38
K-1325	250	.30	.33	.38
K-1327	270	.30	.33	.38
K-1330	300	.30	.33	.38
K-1333	330	.30	.33	.38
K-1336	360	.30	.33	.38
K-1339	390	.30	.33	.38
K-1340	400	.30	.33	.38
K-1343	430	.30	.33	.38
K-1347	470	.30	.33	.38
K-1350	500	.30	.33	.38
K-1351	510	.30	.33	.38
K-1356	560	.35	.39	.44
K-1360	600	.35	.39	.44
K-1362	620	.35	.39	.44
K-1368	680	.35	.39	.44
K-1370	700	.35	.39	.44
K-1375	750	.35	.39	.44
K-1380	800	.35	.39	.44
K-1382	820	.40	.44	.50
K-1390	900	.45	.50	.56
K-1391	910	.45	.50	.56
K-1210	1000	.45	.50	.56

NOTE: Standard Tolerance ±20% but not less than ±1.0 mmf.
NOTE: Normally supplied in "B" characteristic, available in other characteristics on request.

SANGAMO CAPACITORS

MICA CAPACITORS

TYPE KR *Silvered Mica* (continued)

TYPE KR
(125°C)
500 W.V.D.C. 1000 T.V.D.C.

Catalog Number	Capacity Mmfds.	List Price Tolerance J ±5%	 G ±2%	 F ±1%
		$0.	$0.	$0.
KR-1410	10	.40		
KR-1412	12	.40		
KR-1415	15	.40		
KR-1418	18	.40		
KR-1420	20	.40		
KR-1422	22	.40		
KR-1424	24	.40		
KR-1427	27	.40		
KR-1430	30	.40		
KR-1433	33	.40		
KR-1436	36	.40		
KR-1439	39	.40		
KR-1443	43	.40		
KR-1447	47	.40		
KR-1450	50	.40	.46	
KR-1451	51	.40	.46	
KR-1456	56	.40	.46	
KR-1462	62	.40	.46	
KR-1468	68	.40	.46	
KR-1475	75	.40	.46	
KR-1482	82	.40	.46	
KR-1491	91	.40	.46	
KR-1310	100	.40	.46	.50
KR-1311	110	.45	.52	.56
KR-1312	120	.45	.52	.56
KR-1313	130	.45	.52	.56
KR-1316	160	.45	.52	.56
KR-1318	180	.45	.52	.56
KR-1320	200	.45	.52	.56
KR-1322	220	.45	.52	.56
KR-1324	240	.55	.63	.69
KR-1325	250	.55	.63	.69
KR-1327	270	.55	.63	.69
KR-1333	330	.55	.63	.69
KR-1336	360	.55	.63	.69
KR-1339	390	.65	.75	.81
KR-1340	400	.65	.75	.81
KR-1343	430	.65	.75	.81
KR-1347	470	.70	.81	.88
KR-1350	500	.70	.81	.88
KR-1351	510	.70	.81	.88
KR-1356	560	.75	.86	.94
KR-1360	600	.75	.86	.94
KR-1362	620	.75	.86	.94
KR-1368	680	.80	.92	1.00
KR-1370	700	.80	.92	1.00
KR-1375	750	.80	.92	1.00
KR-1380	800	.80	.92	1.00
KR-1382	820	.85	.98	1.06
KR-1390	900	.85	.98	1.06
KR-1391	910	.85	.98	1.06
KR-1210	1000	.90	1.04	1.13
KR-1211	1100	.90	1.04	1.13
KR-1212	1200	1.00	1.15	1.25
KR-1213	1300	1.00	1.15	1.25
KR-1215	1500	1.10	1.27	1.38

NOTE: Standard Tolerance ±5%, but not less than ±1.0 mmf.
NOTE: Normally supplied in "C" characteristic, available in other characteristics on request.

TYPE KR (High Voltage)
2500 W.V.D.C. 5000 T.V.D.C.

Catalog Number	Capacity Mmfds.	M ±20%	List Price Tolerance K ±10%	 J ±5%	 G ±2%	 F ±1%
KR-5415	15	$0.35	$0.40	$0.	$0.	$0.
KR-5418	18	.35	.40			
KR-5420	20	.35	.40	.50		
KR-5422	22	.35	.40	.50		
KR-5424	24	.35	.40	.50		
KR-5427	27	.35	.40	.50		
KR-5430	30	.40	.46	.60		
KR-5433	33	.40	.46	.60		
KR-5436	36	.40	.46	.60		
KR-5439	39	.40	.46	.60		
KR-5443	43	.40	.46	.60		
KR-5447	47	.40	.46	.70		
KR-5450	50	.40	.46	.70	.81	
KR-5451	51	.40	.46	.70	.81	
KR-5456	56	.40	.46	.70	.81	
KR-5462	62	.40	.46	.70	.81	
KR-5468	68	.45	.52	.80	.92	
KR-5475	75	.50	.58	.90	1.04	
KR-5482	82	.50	.58	.90	1.04	
KR-5491	91	.50	.58	.90	1.04	
KR-5310	100	.55	.66	1.00	1.15	1.25
KR-5311	110	.60	.72	1.10	1.27	1.38
KR-5312	120	.60	.72	1.20	1.38	1.50
KR-5315	150	.65	.78	1.30	1.50	1.63
KR-5316	160	.70	.84	1.40	1.61	1.75
KR-5318	180	.70	.84	1.40	1.61	1.75

1500 W.V.D.C. 3000 T.V.D.C.

KR-3475	75	$0.35	$0.40	$0.55	$0.63	$0.
KR-3482	82	.35	.40	.55	.63	
KR-3491	91	.40	.46	.60	.69	
KR-3310	100	.40	.46	.60	.69	.75
KR-3311	110	.40	.46	.60	.69	.75
KR-3312	120	.40	.46	.60	.69	.75
KR-3313	130	.40	.46	.60	.69	.75
KR-3315	150	.40	.46	.70	.81	.88
KR-3316	160	.40	.46	.70	.81	.88
KR-3318	180	.40	.46	.70	.81	.88
KR-3320	200	.45	.52	.80	.92	1.00
KR-3322	220	.45	.52	.80	.92	1.00
KR-3324	240	.45	.52	.80	.92	1.00
KR-3325	250	.55	.66	1.00	1.15	1.25
KR-3327	270	.55	.66	1.00	1.15	1.25
KR-3330	300	.60	.72	1.10	1.27	1.38
KR-3333	330	.60	.72	1.10	1.27	1.38
KR-3336	360	.60	.72	1.15	1.32	1.44
KR-3339	390	.65	.78	1.15	1.32	1.44
KR-3343	430	.65	.78	1.15	1.32	1.44
KR-3347	470	.70	.84	1.25	1.44	1.56

1000 W.V.D.C. 2000 T.V.D.C.

KR-2312	120	$0.35	$0.40	$0.50	$0.58	$0.63
KR-2313	130	.35	.40	.50	.58	.63
KR-2315	150	.35	.40	.50	.58	.63
KR-2316	160	.35	.40	.55	.63	.69
KR-2318	180	.35	.40	.55	.63	.69
KR-2320	200	.40	.46	.55	.63	.69
KR-2322	220	.40	.46	.60	.69	.75
KR-2324	240	.40	.46	.60	.69	.75
KR-2325	250	.40	.46	.65	.75	.81
KR-2327	270	.40	.46	.65	.75	.81
KR-2330	300	.45	.52	.70	.81	.88
KR-2333	330	.45	.52	.70	.81	.88
KR-2336	360	.45	.52	.70	.81	.88
KR-2339	390	.45	.52	.70	.81	.88
KR-2343	430	.50	.58	.75	.86	.94
KR-2347	470	.50	.58	.75	.86	.94
KR-2350	500	.50	.58	.75	.86	.94
KR-2351	510	.50	.58	.75	.86	.94
KR-2356	560	.55	.66	.80	.92	1.00
KR-2362	620	.55	.66	.85	.98	1.06
KR-2368	680	.60	.72	.90	1.04	1.13

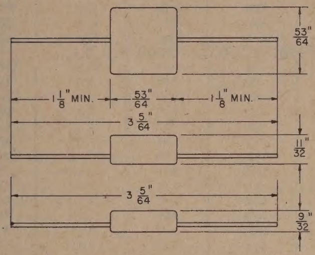
NOTE: Standard Tolerance ±5%, but not less than ±1.0 mmf.
NOTE: Normally supplied in "C" characteristic, available in other characteristics on request.

SANGAMO CAPACITORS

MICA CAPACITORS

TYPE C-CR

SANGAMO
U.S.A.



TYPE C

(125°C)

500 W.V.D.C. 1000 T.V.D.C.

Catalog Number	Capacity Mmfd.	List Price Tolerance M ±20%	K ±10%	J ±5%
	9/32" MAX. THICKNESS			
C-1347	470	$0.30	$0.36	$0.39
C-1350	500	.30	.36	.39
C-1351	510	.30	.36	.39
C-1356	560	.30	.36	.39
C-1362	620	.30	.36	.39
C-1368	680	.30	.36	.39
C-1375	750	.30	.36	.39
C-1380	800	.30	.36	.39
C-1382	820	.30	.36	.39
C-1390	900	.30	.36	.39
C-1391	910	.30	.36	.39
C-1210	1000	.35	.39	.44
C-1211	1100	.35	.39	.44
C-1212	1200	.35	.39	.44
C-1213	1300	.35	.39	.44
C-1215	1500	.40	.44	.50
C-1216	1600	.40	.44	.50
C-1218	1800	.45	.50	.56
C-1220	2000	.45	.50	.56
C-1222	2200	.45	.50	.56
C-1224	2400	.50	.55	.63
C-1225	2500	.50	.55	.63
C-1227	2700	.50	.55	.63
C-1230	3000	.60	.66	.75
C-1233	3300	.60	.66	.75
	11/32" MAX. THICKNESS			
C-1236	3600	.60	.66	.75
C-1239	3900	.65	.75	.85
C-1240	4000	.65	.75	.85
C-1243	4300	.65	.75	.85
C-1247	4700	.65	.75	.85
C-1250	5000	.70	.81	.91
C-1251	5100	.70	.81	.91
C-1256	5600	.70	.81	.91
C-1260	6000	.70	.81	.91
C-1262	6200	.90	1.04	1.17
*C-06268	6800	.95	1.05	1.19
*C-06275	7500	1.00	1.10	1.25
*C-06280	8000	1.00	1.10	1.25
*C-06282	8200	1.15	1.27	1.44
*C-06290	9000	1.15	1.27	1.44
*C-06110	10000	1.40	1.54	1.75
*C-06112	12000	1.60	1.76	2.00
*C-06115	15000	2.00	2.20	2.50

NOTE: *300 WVDC—(600 TVDC)
NOTE: Standard Tolerance ±20%
NOTE: Normally supplied in "B" characteristic.

TYPE CR

(125°C)

500 W.V.D.C. 1000 T.V.D.C.

Catalog Number	Capacity Mmfd.	List Price Tolerance J ±5%	G ±2%	F ±1%
	9/32" MAX. THICKNESS			
CR-1347	470	$0.70	$0.81	$0.88
CR-1350	500	.70	.81	.88
CR-1351	510	.70	.81	3
CR-1356	560	.75	.86	.94
CR-1362	620	.75	.86	.94
CR-1368	680	.80	.92	1.00
CR-1375	750	.80	.92	1.00
CR-1380	800	.80	.96	1.04
CR-1382	820	.85	.98	1.06
CR-1390	900	.90	1.04	1.13
CR-1391	910	.90	1.04	1.13
CR-1210	1000	1.00	1.15	1.25
CR-1211	1100	1.00	1.15	1.25
CR-1212	1200	1.15	1.32	1.44
CR-1213	1300	1.15	1.32	1.44
CR-1215	1500	1.25	1.44	1.56
CR-1216	1600	1.25	1.44	1.56
CR-1218	1800	1.25	1.44	1.56
CR-1220	2000	1.35	1.55	1.69
CR-1222	2200	1.35	1.55	1.69
CR-1224	2400	1.60	1.84	2.00
CR-1225	2500	1.60	1.84	2.00
CR-1227	2700	1.80	2.07	2.25
CR-1230	3000	1.90	2.19	2.38
CR-1233	3300	1.90	2.19	2.38
	11/32" MAX. THICKNESS			
CR-1236	3600	2.00	2.30	2.50
CR-1239	3900	2.00	2.30	2.50
CR-1240	4000	2.00	2.30	2.50
CR-1243	4300	2.10	2.42	2.63
CR-1247	4700	2.10	2.42	2.63
CR-1250	5000	2.15	2.47	2.69
CR-1251	5100	2.15	2.47	2.69
CR-1256	5600	2.25	2.59	2.81
CR-1260	6000	2.30	2.65	2.90
CR-1262	6200	2.40	2.76	3.00
*CR-06268	6800	2.65	3.05	3.31
*CR-06275	7500	2.80	3.22	3.50
*CR-06280	8000	2.80	3.22	3.50
*CR-06282	8200	3.00	3.45	3.75
*CR-06290	9000	3.00	3.45	3.75
*CR-06110	10000	3.50	4.03	4.38
*CR-06112	12000	4.25	4.89	5.31
*CR-06115	15000	5.00	5.75	6.25

NOTE: *300 WVDC—(600 TVDC)
NOTE: Standard Tolerance ±5%, but not less than ±1.0 mmf.
NOTE: Normally supplied in "C" characteristic, available in other characteristics on request.

TYPE CR *(HIGH VOLTAGE)*

3000 W.V.D.C. 6000 T.V.D.C.

Catalog Number	Capacity Mmfd.	List Price Tolerance J ±5%	G ±2%	F ±1%
	11/32" MAX. THICKNESS 125°C			
CR-6312	120	1.40	1.61	1.72
CR-6315	150	1.40	1.61	1.72
CR-6316	160	1.40	1.61	1.72
CR-6318	180	1.45	1.67	1.81
CR-6320	200	1.45	1.67	1.81
CR-6324	240	1.50	1.72	1.87
CR-6325	250	1.50	1.72	1.87
CR-6327	270	1.50	1.72	1.87
CR-6330	300	1.62	1.87	2.04
CR-6333	330	1.62	1.87	2.04
CR-6336	360	1.87	2.16	2.35
CR-6339	390	2.00	2.30	2.50
CR-6343	430	2.00	2.30	2.50
CR-6347	470	2.00	2.30	2.50
CR-6350	500	2.13	2.45	2.66
CR-6351	510	2.13	2.45	2.66
CR-6356	560	2.25	2.57	2.81
CR-6352	620	2.37	2.74	2.98
CR-6368	680	2.63	3.03	3.30
CR-6375	750	2.76	3.15	3.44

SANGAMO CAPACITORS

MICA CAPACITORS

TYPE CR *(HIGH VOLTAGE)* continued

Catalog Number	Capacity Mmfd.	List Price Tolerance J ±5%	G ±2%	F ±1%
CR-6382	820	2.87	3.32	3.60
CR-6391	910	3.37	3.87	4.23
CR-6210	1000	3.50	4.01	4.37
CR-6211	1100	3.50	4.01	4.37
CR-6212	1200	3.75	4.32	4.70
CR-6213	1300	4.12	4.75	5.15
CR-6215	1500	4.62	5.25	5.80

2500 W.V.D.C. 5000 T.V.D.C.

Catalog Number	Capacity Mmfd.	J ±5%	G ±2%	F ±1%
CR-5324	240	$1.20	$1.38	$1.50
CR-5325	250	1.20	1.38	1.50
CR-5327	270	1.20	1.38	1.50
CR-5330	300	1.30	1.50	1.63
CR-5333	330	1.30	1.50	1.63
CR-5336	360	1.50	1.73	1.88
CR-5390	390	1.60	1.84	2.00
CR-5343	430	1.60	1.84	2.00
CR-5347	470	1.60	1.84	2.00
CR-5350	500	1.70	1.96	2.13
CR-5351	510	1.70	1.96	2.13
CR-5356	560	1.80	2.07	2.25
CR-5362	620	1.90	2.19	2.38
CR-5368	680	2.10	2.42	2.63
CR-5375	750	2.20	2.53	2.75
CR-5382	820	2.30	2.65	2.88
CR-5391	910	2.70	3.10	3.38
CR-5210	1000	2.80	3.22	3.50
CR-5211	1100	2.80	3.22	3.50
CR-5212	1200	3.00	3.45	3.75
CR-5213	1300	3.30	3.80	4.13
CR-5215	1500	3.70	4.20	4.63
CR-5216	1600	4.00	4.60	5.00
CR-5218	1800	4.30	4.80	5.20
CR-5220	2000	4.60	5.20	5.60

2000 W.V.D.C. 4000 T.V.D.C.

Catalog Number	Capacity Mmfd.	J ±5%	G ±2%	F ±1%
CR-4343	430	1.25	1.44	1.56
CR-4347	470	1.25	1.44	1.56
CR-4350	500	1.35	1.55	1.69
CR-4351	510	1.35	1.55	1.69
CR-4356	560	1.44	1.66	1.80
CR-4362	620	1.53	1.76	1.91
CR-4368	680	1.87	2.16	2.35
CR-4375	750	1.87	2.16	2.35
CR-4382	820	2.12	2.45	2.66
CR-4391	910	2.25	2.57	2.81

Catalog Number	Capacity Mmfd.	List Price Tolerance J ±5%	G ±2%	F ±1%
CR-4210	1000	2.25	2.57	2.81
CR-4211	1100	2.37	2.74	2.97
CR-4212	1200	2.76	3.16	3.44
CR-4213	1300	2.87	3.31	3.59
CR-4215	1500	3.25	3.73	4.06
CR-4216	1600	3.25	3.73	4.06
CR-4218	1800	3.62	4.17	4.54
CR-4220	2000	4.00	4.57	5.00
CR-4222	2200	4.25	4.90	5.30
CR-4224	2400	4.50	5.16	5.63

1500 W.V.D.C. 3000 T.V.D.C.

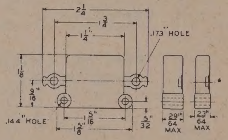
Catalog Number	Capacity Mmfd.	J ±5%	G ±2%	F ±1%
CR-3368	680	$1.50	$1.73	$1.88
CR-3375	750	1.50	1.73	1.88
CR-3382	820	1.70	1.96	2.13
CR-3391	910	1.80	2.07	2.25
CR-3210	1000	1.80	2.07	2.25
CR-3211	1100	1.90	2.19	2.38
CR-3212	1200	2.20	2.53	2.75
CR-3213	1300	2.30	2.65	2.88
CR-3215	1500	2.60	2.99	3.25
CR-3216	1600	2.60	2.99	3.25
CR-3218	1800	2.90	3.34	3.63
CR-3220	2000	3.20	3.68	4.00
CR-3222	2200	3.40	3.91	4.25
CR-3224	2400	3.60	4.14	4.50
CR-3227	2700	4.00	4.60	5.00
CR-3223	3000	4.40	5.06	5.50
CR-3233	3300	4.60	5.29	5.75

1000 W.V.D.C. 2000 T.V.D.C.

Catalog Number	Capacity Mmfd.	J ±5%	G ±2%	F ±1%
CR-2211	1100	$1.20	$1.38	$1.50
CR-2212	1200	1.30	1.50	1.63
CR-2213	1300	1.30	1.50	1.63
CR-2215	1500	1.50	1.73	1.88
CR-2216	1600	1.60	1.84	2.00
CR-2218	1800	1.60	1.84	2.00
CR-2220	2000	1.70	1.96	2.13
CR-2222	2200	1.90	2.19	2.38
CR-2224	2400	2.10	2.42	2.63
CR-2227	2700	2.10	2.42	2.63
CR-2223	3000	2.30	2.65	2.88
CR-2233	3300	2.40	2.76	3.00

NOTE: Standard tolerance ±5%, but not less than ±1.0 mmf.
NOTE: Normally supplied in "C" characteristic, available in other characteristics on request.

TYPE H *mica*



600 W.V.D.C.—1200 T.V.D.C.

Catalog Number	Capacitance Mfds.	List Price
H-T1450	.00005	$1.20
H-T1310	.0001	1.20
H-T1320	.0002	1.20
H-T1325	.00025	1.20
H-T1330	.0003	1.20
H-T1340	.0004	1.20
H-T1350	.0005	1.20
H-T1210	.001	1.20
H-T1215	.0015	1.20
H-T1220	.002	1.30
H-T1225	.0025	1.30
H-T1230	.003	1.45
H-T1240	.004	1.50
H-T1250	.005	1.55
H-T1260	.006	1.80

Catalog Number	Capacitance Mfds.	List Price
H-T1270	.007	1.85
H-T1280	.008	1.90
H-T1110	.01	2.15
*H-K1115	.015	2.65
*H-K1120	.02	3.05
*H-K1125	.025	3.60
*H-K1130	.03	4.45

1200 W.V.D.C.—2500 T.V.D.C.

Catalog Number	Capacitance Mfds.	List Price
H-T2450	.00005	1.60
H-T2310	.0001	1.60
H-T2320	.0002	1.60
H-T2325	.00025	1.60
H-T2330	.0003	1.60
H-T2340	.0004	1.60
H-T2350	.0005	1.60
H-T2210	.001	1.80
H-T2215	.0015	2.30
H-T2220	.002	2.40
H-T2225	.0025	2.80
H-T2230	.003	3.05
*H-K2240	.004	3.05
*H-K2250	.005	3.30
*H-K2260	.006	3.30
*H-K2280	.008	3.85
*H-K2110	.01	5.10

(Use Index Page 1 for Quick, Easy Location of ALL Products)

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

SANGAMO CAPACITORS

MICA CAPACITORS

TYPE H *mica* — continued . . .

2500 W.V.D.C.—5000 T.V.D.C.

Catalog Number	Capacitance Mfds.	List Price
H-T5450	.00005	1.90
H-T5310	.0001	1.90
H-T5320	.0002	1.90
H-T5325	.00025	2.20
H-T5330	.0003	2.25
H-T5340	.0004	2.30
H-T5350	.0005	2.40
H-T5210	.001	2.80
H-T5215	.0015	3.55
*H-K5220	.002	4.15
*H-K5230	.003	4.90
*H-K5240	.004	5.65
*H-K5250	.005	6.40

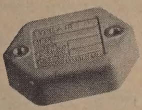
NOTE—* 29/64 inches thick.

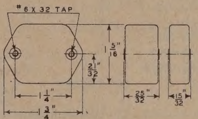
NOTE—For meter mounting bracket, add letter "E" to type designation. (Example: HE-T1450). Add $.20 to List Price and specify case size.

NOTE—Standard tolerance ±10%. B Characteristic unless otherwise specified.

NOTE—For 5% Tolerance add 10% to list prices.
For 2% Tolerance add 50% to list price.

TYPE A *mica*





Catalog Number	Capacitance Mfds.	List Price

600 W.V.D.C.—1200 T.V.D.C.

Catalog Number	Capacitance Mfds.	List Price
A-T1450	.00005	$1.45
A-T1310	.0001	1.45
A-T1315	.00015	1.45
A-T1320	.0002	1.45
A-T1325	.00025	1.45
A-T1350	.0005	1.45
A-T1210	.001	1.45
A-T1220	.002	1.65
A-T1225	.0025	1.70
A-T1230	.003	1.85
A-T1240	.004	2.00
A-T1250	.005	2.10
A-T1260	.006	2.20
A-T1280	.008	2.45
A-T1110	.01	2.80
A-T1115	.015	3.05
A-T1120	.02	3.55
A-T1125	.025	4.35
A-T1130	.03	4.55
*A-K1140	.04	5.85
*A-K1150	.05	7.10
*A-K1160	.06	8.05

1200 W.V.D.C.—2500 T.V.D.C.

Catalog Number	Capacitance Mfds.	List Price
A-T2450	.00005	1.60
A-T2310	.0001	1.60
A-T2315	.00015	1.60
A-T2320	.0002	1.60
A-T2325	.00025	1.60
A-T2350	.0005	1.60
A-T2210	.001	1.90
A-T2220	.002	2.50
A-T2225	.0025	2.80
A-T2230	.003	2.95
A-T2240	.004	3.10
A-T2250	.005	3.30
A-T2260	.006	3.45
A-T2280	.008	4.10
A-T2110	.01	4.70
*A-K2115	.015	5.80
*A-K2120	.02	7.05
*A-K2125	.025	7.90
*A-K2130	.03	8.10

2500 W.V.D.C.—5000 T.V.D.C.

Catalog Number	Capacitance Mfds.	List Price
A-T5450	.00005	1.90
A-T5310	.0001	1.90
A-T5325	.00025	2.15
A-T5350	.0005	2.55
A-T5210	.001	2.90
A-T5220	.002	4.25
A-T5225	.0025	4.60
A-T5230	.003	5.10
A-T5240	.004	5.65
*A-K5250	.005	6.20
*A-K5260	.006	6.35
*A-K5280	.008	6.85
*A-K5110	.01	7.30
*A-K5115	.015	8.05

NOTE—* indicates 25/32 overall thickness.

NOTE—Stand-off insulators are available if desired. Add $.20 to List Price.

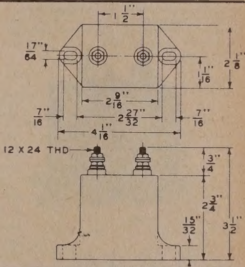
NOTE—If .144 inch clearance holes are desired, designate by adding letter "A" to Type Number. (Example: AA-T1450).

NOTE—Standard Tolerance ±10%. B characteristic unless otherwise specified.

NOTE—For 5% Tolerance add 10% to list price.
For 2% Tolerance add 50% to list price.

TYPE E *mica*

SANGAMO
TYPE E
MICA CAPACITOR

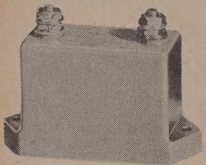


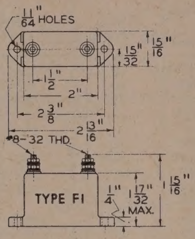
Catalog Number	Capacitance Mfds.	Test Volts D.C.	List Price
E-1245	.00005	12500	$18.00
E-1231	.0001	12500	18.00
E-12325	.00025	12500	18.00
E-1235	.0005	12500	18.00
E-1221	.001	12500	18.00
E-12215	.0015	12500	21.00
E-1222	.002	12500	25.00
E-1022	.002	10000	26.00
E-1023	.003	10000	27.00
E-1024	.004	10000	29.00
E-1025	.005	10000	32.40
E-721	.001	7000	16.10
E-722	.002	7000	21.00
E-723	.003	7000	23.00
E-711	.01	7000	34.00
E-3524	.004	3500	21.00
E-3525	.005	3500	21.30
E-3511	.01	3500	32.40
E-3512	.02	3500	32.40
E-3515	.05	3500	37.60
E-215	.05	2000	32.20
E-201	.1	2000	37.60

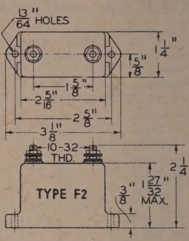
NOTE—Available in ±20% tolerance only. This type capacitor specifically designed for amateur use only. Not recommended for commercial applications.

SANGAMO CAPACITORS

MICA CAPACITORS







TYPES F1-F2-F3 *mica*

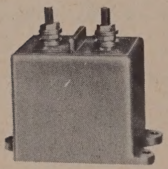
Types F1, F2, and F3 capacitors, the smallest of the Sangamo line of transmitting types, possess a range of voltage and current ratings suitable for many applications. They are housed in low loss molded bakelite cases. The mica and foil sections are permanently clamped, vacuum impregnated, and installed in the case in such a manner as to provide stable characteristics and adequate moisture proofing.

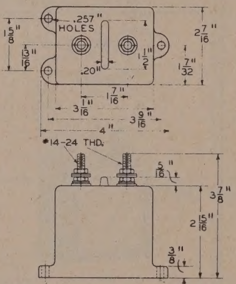
TYPE F1

Catalog Number	Capacitance Mfds.	Peak Working Voltage D.C.	List Price
F1-331	.0001	3000	$12.60
F1-332	.0002	3000	12.60
F1-3325	.00025	3000	12.60
F1-335	.0005	3000	12.60
F1-321	.001	3000	12.60
F1-322	.002	3000	12.60
F1-223	.003	2000	12.60
F1-224	.004	2000	12.60
F1-225	.005	2000	12.60
F1-226	.006	2000	12.60
F1-1528	.008	1500	12.60
F1-111	.01	1000	12.60
F1-112	.02	1000	14.30
F1-0215	.05	250	14.30
F1-0201	.1	250	15.10

TYPE F2

Catalog Number	Capacitance Mfds.	Peak Working Voltage D.C.	List Price
F2-531	.0001	5000	$17.30
F2-5325	.00025	5000	17.30
F2-535	.0005	5000	17.30
F2-536	.0006	5000	17.30
F2-521	.001	5000	17.30
F2-522	.002	5000	17.30
F2-523	.003	5000	17.30
F2-325	.005	3000	17.30
F2-326	.006	3000	17.30
F2-211	.01	2000	17.30
F2-212	.02	2000	17.30
F2-1515	.05	1500	17.30
F2-0501	.1	500	19.20
F2-0202	.2	250	25.25
F2-02025	.25	250	27.90





TYPE F3

Catalog Number	Capacitance Mfds.	Peak Working Voltage D.C.	List Price
F3-8325	.00025	8000	$35.25
F3-835	.0005	8000	35.25
F3-821	.001	8000	39.25
F3-822	.002	8000	39.25
F3-825	.005	8000	48.60
F3-811	.01	8000	55.20
F3-415	.05	4000	61.85
F3-201	.1	2000	48.60
F3-06025	.25	600	44.60
F3-0605	.5	600	52.55
F3-0410	1.0	400	81.85

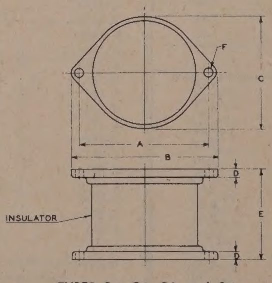
NOTE—Standard tolerance ±5%.

NOTE—B Characteristic in stock only.

NOTE—For ±2% tolerance, add 20% to List Price.

TYPES G1-G2-G3-G4 *mica*

Type G ceramic cased capacitors are intended for service where highest voltage and R.F. Current ratings are required, such as in commercial transmitting or induction heating applications. All possible steps are taken in design and manufacturing operations to insure permanence of quality. Current ratings of these four sizes as well as detailed information on the Type G5 will be supplied upon request. Terminal plates are designed to permit any usual connecting or mounting practices.



TYPES G1, G2, G3, and G4

TYPE G MICA CAPACITOR DIMENSIONS - INCHES

Type	A	B	C	D	E	F
G1	3 1/4	3 13/16	2 13/16	1/4	2 1/2	17/64
G2	4 1/4	5	3 1/2	1/4	3	.272
G3	5 3/4	6 1/2	5	3/8	4	.377
G4	5 3/4	6 1/2	5	3/8	5 3/4	.377
G5	8	9	6 3/4	1/2	10	13/32

NOTE: Standard tolerance all Type G Capacitors ±5%, B characteristic.

SANGAMO CAPACITORS

MICA CAPACITORS

TYPES G1-G2-G3-G4 mica (continued)

TYPE G1

Catalog Number	Capacitance Mfds.	Peak Working Voltage D.C.	List Price
G1-641	.00001	6000	$ 35.45
G1-645	.00005	6000	38.20
G1-631	.0001	6000	40.60
G1-632	.0002	6000	40.60
G1-634	.0004	6000	44.35
G1-635	.0005	6000	46.65
G1-621	.001	6000	46.65
G1-6215	.0015	6000	48.90
G1-622	.002	6000	48.90
G1-623	.003	6000	50.60
G1-624	.004	6000	50.60
G1-625	.005	6000	50.60
G1-526	.006	5000	51.45
G1-511	.01	5000	51.45
G1-4115	.015	4000	51.45
G1-312	.02	3000	51.45

TYPE G2

Catalog Number	Capacitance Mfds.	Peak Working Voltage D.C.	List Price
G2-1031	.0001	10000	$ 65.55
G2-10315	.00015	10000	65.55
G2-1032	.0002	10000	65.55
G2-10325	.00025	10000	65.55
G2-1035	.0005	10000	65.55
G2-1021	.001	10000	65.55
G2-10212	.0012	10000	65.55
G2-10215	.0015	10000	65.55
G2-1022	.002	10000	65.55
G2-823	.003	8000	65.55
G2-824	.004	8000	65.55
G2-525	.005	5000	65.55
G2-526	.006	5000	69.15
G2-511	.01	5000	69.15
G2-4115	.015	4000	69.15
G2-312	.02	3000	69.15

TYPE G3

Catalog Number	Capacitance Mfds.	Peak Working Voltage D.C.	List Price
G3-2045	.00005	20000	$110.90
G3-2031	.0001	20000	121.00
G3-2032	.0002	20000	131.10
G3-20325	.00025	20000	131.10
G3-2033	.0003	20000	131.10
G3-2035	.0005	20000	137.15
G3-2038	.0008	20000	137.15
G3-2021	.001	20000	141.15
G3-15215	.0015	15000	143.20
G3-1522	.002	15000	143.20
G3-1523	.003	15000	151.25
G3-1524	.004	15000	151.25
G3-1025	.005	10000	151.25
G3-1026	.006	10000	151.25
G3-1028	.008	10000	151.25
G3-1011	.01	10000	151.25
G3-512	.02	5000	151.25
G3-313	.03	3000	151.25

TYPE G4

Catalog Number	Capacitance Mfds.	Peak Working Voltage D.C.	List Price
G4-3043	.00003	30000	$167.90
G4-3045	.00005	30000	167.90
G4-3031	.0001	30000	210.30
G4-30315	.00015	30000	210.30
G4-30325	.00025	30000	221.16
G4-3035	.0005	30000	221.16
G4-3038	.0008	30000	221.16
G4-3021	.001	30000	229.10
G4-25215	.0015	25000	229.10
G4-2022	.002	20000	229.10
G4-2023	.003	20000	229.10
G4-2024	.004	20000	234.35
G4-1525	.005	15000	242.00
G4-2025	.005	20000	238.00
G4-1526	.006	15000	252.25
G4-1228	.008	12000	260.00
G4-1011	.01	10000	272.44
G4-612	.02	6000	272.44
G4-514	.04	5000	272.44

M63

M23

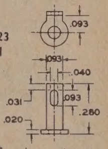
M72

TYPE M
silvered mica button® capacitors

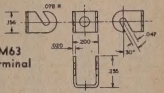
Small and light in weight SANGAMO Type M Silvered Mica button capacitors are designed particularly for application in high frequency circuits. Their high "Q" is indicative of their low loss. These units meet all requirements for V.H.F. and U.H.F. applications and are constructed to be electrically and mechanically stable. The silver plated case design performs the dual purpose of shielding and being the low potential terminal. The high potential terminal through the center of the capacitor allows 360 degrees electrical current distribution, resulting in extremely low series inductance and more efficient performance in high frequency applications. Normally furnished in characteristic "D" in 500 working volts D.C.

Catalog Number	Capacitance Mfds.	Capacitance Tolerance	List Price	Catalog Number	Capacitance Mfds.	Capacitance Tolerance	List Price
M-415K	15	10%	$1.55	M-325K	250	10%	1.55
M-415J	15	5%	1.95	M-325J	250	5%	1.95
M-425K	25	10%	1.55	M-330K	300	10%	1.65
M-425J	25	5%	1.95	M-330J	300	5%	2.10
M-450K	50	10%	1.55	M-340K	400	10%	1.70
M-450J	50	5%	1.95	M-340J	400	5%	2.15
M-310K	100	10%	1.55	M-350K	500	10%	1.80
M-310J	100	5%	1.95	M-350J	500	5%	2.30
M-315K	150	10%	1.55	M-375K	750	10%	2.60
M-315J	150	5%	1.95	M-375J	750	5%	3.35
M-320K	200	10%	1.55	M-210K	1000	10%	3.15
M-320J	200	5%	1.95	M-210J	1000	5%	3.95

M72 M23
Terminal

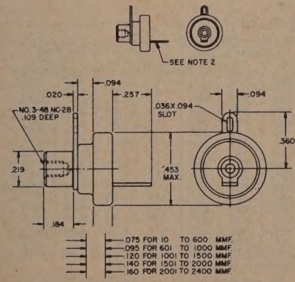

.093
.093
.040
.031
.093
.280
.020

M63
Terminal

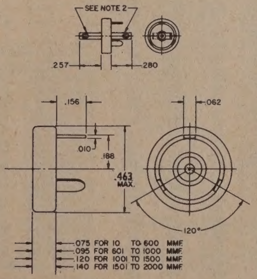

.078 R
.156
.020
.200
.047
30°
.235

NOTE 1—For complete Catalog Number add 23 for Type 23, 63 for Type 63 and 72 for Type 72. Example: M23415K.

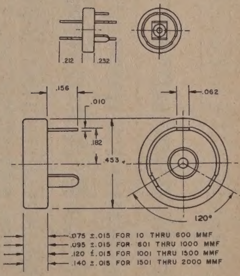
NOTE 2—Types M23, M63 and M72 are provided with terminals as shown. For other terminal configurations and a complete listing of SANGAMO Button Type Capacitors, refer to Engineering Catalog 2311-A.


SEE NOTE 2
.094
.020
.257
.094
NO. 3-48 NC-2B
.109 DEEP
.036X.094
SLOT
.360
.219
.453
MAX.
.184
.075 FOR 10 TO 600 MMF.
.095 FOR 601 TO 1000 MMF.
.120 FOR 1001 TO 1500 MMF.
.140 FOR 1501 TO 2000 MMF.
.160 FOR 2001 TO 2400 MMF.

TYPE M72


SEE NOTE 2
.257
.280
.156
.062
.010
.188
.463
MAX.
120°
.075 FOR 10 TO 600 MMF
.095 FOR 601 TO 1000 MMF
.120 FOR 1001 TO 1500 MMF
.140 FOR 1501 TO 2000 MMF

TYPE M23


.212
.232
.156
.062
.010
.182
.453
120°
.075 ±.015 FOR 10 THRU 600 MMF
.095 ±.015 FOR 601 THRU 1000 MMF
.120 ±.015 FOR 1001 THRU 1500 MMF
.140 ±.015 FOR 1501 THRU 2000 MMF

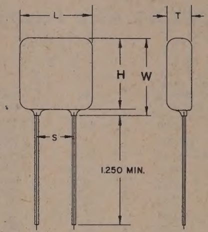
TYPE M63

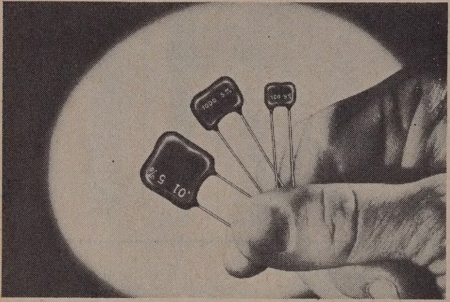
SANGAMO CAPACITORS

MICA CAPACITORS

TYPE D | Resin-coated silvered mica capacitors

Sangamo Type D mica capacitors combine the excellent electrical performance characteristics of silvered mica with a multi-layer, protective case of high moisture-resistant thermo-setting resins. Sangamo Type D capacitors will exceed the applicable performance requirements of Military and EIA specifications.





Type	Dim. S ±0.030	Wire Size
D-15	0.234	0.025 diam. (#22 AWG) brass, solder coated
D-19	0.344	0.032 diam. (#20 AWG) brass, solder coated
D-30	0.438	0.032 diam. (#20 AWG) brass, solder coated

TYPE D-15 (125°C)

500 WVDC—1000 TVDC

Catalog Number	Capacitance In MMF	Maximum Dimensions in Inches L	W	T	H	Tolerance and List Price ±10%	±5%	±2%	±1%
D151510	1	.445	.349	.160	.449	.25			
D151520	2	.445	.349	.160	.449	.25			
D151530	3	.445	.349	.160	.449	.25			
D151550	5	.445	.349	.160	.449	.25			
D151410	10	.445	.350	.161	.450	.25	.28		
D151412	12	.445	.350	.161	.450	.25	.28		
D151415	15	.446	.351	.162	.451	.25	.28		
D151418	18	.446	.351	.162	.451	.25	.28		
D151420	20	.446	.351	.163	.451	.25	.28		
D151422	22	.446	.351	.163	.451	.25	.28		
D151424	24	.446	.352	.164	.452	.25	.28		
D151427	27	.446	.352	.164	.453	.25	.28	.33	
D151430	30	.447	.353	.164	.453	.25	.28	.33	
D151433	33	.447	.353	.165	.454	.25	.28	.33	
D151436	36	.447	.354	.165	.454	.25	.28	.33	
D151439	39	.448	.355	.166	.445	.25	.28	.33	
D151443	43	.448	.355	.166	.455	.25	.28	.33	
D151447	47	.448	.355	.167	.455	.25	.28	.33	
D151450	50	.449	.356	.167	.456	.25	.28	.33	.40
D151451	51	.449	.356	.168	.456	.25	.28	.33	.40
D151456	56	.449	.356	.168	.456	.25	.28	.33	.40
D151462	62	.449	.356	.169	.456	.25	.28	.33	.40
D151468	68	.449	.357	.170	.457	.25	.28	.33	.40
D151475	75	.450	.358	.171	.458	.25	.28	.33	.40
D151482	82	.450	.359	.172	.459	.25	.28	.33	.40
D151491	91	.451	.360	.173	.460	.25	.28	.33	.40
D151310	100	.451	.360	.175	.460	.25	.28	.33	.40
D151311	110	.452	.361	.177	.461	.30	.33	.39	.48
D151312	120	.452	.362	.178	.462	.30	.33	.39	.48
D151313	130	.454	.366	.181	.466	.30	.33	.39	.48
D151315	150	.455	.367	.183	.467	.30	.33	.39	.48
D151316	160	.455	.367	.184	.467	.35	.39	.46	.56
D151318	180	.456	.370	.187	.470	.35	.39	.46	.56
D151320	200	.457	.372	.190	.472	.35	.39	.46	.56
D151322	220	.458	.374	.193	.474	.40	.44	.52	.64
D151324	240	.460	.378	.196	.478	.40	.44	.52	.64
D151325	250	.461	.379	.199	.480	.40	.44	.52	.64
D151327	270	.462	.381	.202	.482	.45	.50	.59	.72
D151330	300	.463	.384	.205	.484	.45	.50	.59	.72
D151333	330	.465	.390	.210	.490	.50	.55	.65	.80
D151336	360	.467	.391	.214	.491	.50	.55	.65	.80
D151339	390	.470	.395	.220	.495	.55	.61	.72	.88
D1506343	430*	.459	.367	.194	.467	.55	.61	.72	.88
D1506347	470*	.460	.368	.196	.468	.60	.66	.78	.96
D1506350	500*	.460	.368	.197	.468	.60	.66	.78	.96
D1506351	510*	.461	.369	.200	.469	.60	.66	.78	.96
D1506356	560*	.462	.370	.202	.470	.65	.72	.85	1.04
D1506362	620*	.464	.372	.206	.472	.70	.77	.91	1.12
D1506368	680*	.466	.374	.210	.474	.75	.83	.98	1.20
D1506375	750*	.468	.376	.216	.476	.80	.88	1.04	1.28
D1506382	820*	.470	.378	.220	.478	.85	.94	1.11	1.36

NOTE—Asterisk denotes 300 WVDC units.

NOTE—Values from 1 to 20 mmf are supplied in "C" characteristic.
Values from 22 to 51 mmf are supplied in "E" characteristic.
Values from 56 mmf and above are supplied in "F" characteristic.

NOTE—Minimum tolerance ±0.5 mmf.

TYPE D-19 (125°C)

500 WVDC—1000 TVDC

Catalog Number	Capacitance In MMF	Maximum Dimensions in Inches L	W	T	H	Tolerance and List Price ±10%	±5%	±2%	±1%
D191310	100	.662	.476	.178	.576	.25	.28	.30	.38
D191311	110	.662	.476	.178	.576	.30	.33	.36	.45
D191312	120	.662	.476	.178	.576	.30	.33	.36	.45
D191313	130	.662	.476	.178	.576	.30	.33	.36	.45
D191315	150	.663	.477	.179	.577	.30	.33	.36	.45
D191316	160	.663	.477	.179	.577	.30	.33	.36	.45
D191318	180	.663	.477	.179	.577	.30	.33	.36	.45
D191320	200	.664	.478	.180	.578	.30	.33	.36	.45
D191322	220	.664	.478	.180	.578	.30	.33	.36	.45
D191324	240	.664	.478	.180	.578	.35	.39	.42	.53
D191325	250	.665	.479	.181	.579	.35	.39	.42	.53
D191327	270	.665	.479	.181	.579	.40	.44	.48	.60
D191330	300	.665	.479	.182	.580	.40	.44	.48	.60
D191333	330	.666	.480	.182	.580	.40	.44	.48	.60
D191336	360	.666	.480	.183	.581	.45	.50	.54	.68
D191339	390	.667	.481	.184	.581	.45	.50	.54	.68
D191343	430	.668	.482	.185	.582	.45	.50	.54	.68
D191347	470	.668	.482	.185	.582	.50	.55	.60	.75
D191350	500	.669	.483	.187	.583	.50	.55	.60	.75
D191351	510	.670	.483	.188	.583	.50	.55	.60	.75
D191356	560	.670	.484	.189	.584	.55	.61	.66	.83
D191362	620	.672	.485	.190	.585	.55	.61	.66	.83
D191368	680	.673	.487	.193	.587	.60	.66	.72	.90
D191375	750	.674	.488	.195	.588	.60	.66	.72	.90
D191382	820	.675	.489	.196	.589	.60	.66	.72	.90
D191391	910	.676	.489	.197	.590	.65	.72	.78	.98
D191210	1000	.676	.490	.197	.590	.70	.77	.84	1.05
D191211	1100	.678	.492	.199	.592	.70	.77	.84	1.05
D191212	1200	.680	.494	.202	.594	.75	.83	.90	1.13
D191213	1300	.682	.496	.205	.596	.80	.88	.96	1.20
D191215	1500	.684	.498	.209	.598	.85	.94	1.02	1.28
D191216	1600	.686	.500	.211	.600	.90	.99	1.08	1.35
D191218	1800	.690	.504	.215	.604	1.00	1.10	1.20	1.50
D191220	2000	.692	.506	.219	.606	1.10	1.21	1.32	1.65
D1906222	2200*	.687	.501	.211	.601	1.20	1.32	1.44	1.80
D1906224	2400*	.689	.503	.214	.603	1.30	1.43	1.56	1.95
D1906225	2500*	.690	.505	.216	.605	1.35	1.49	1.62	2.03
D1906227	2700*	.692	.507	.220	.607	1.40	1.54	1.68	2.10
D1906230	3000*	.695	.510	.223	.610	1.50	1.65	1.80	2.25

NOTE—Asterisk denotes 300 WVDC units.

NOTE—All capacitance values are supplied in "F" characteristic.

NOTE—Minimum tolerance ±0.5 mmf.

TYPE D-30 (125°C)

500 WVDC—1000 TVDC

Catalog Number	Capacitance In MMF	Maximum Dimensions in Inches L	W	T	H	Tolerance and List Price ±10%	±5%	±2%	±1%
D301243	4300	.850	.850	.245	.950	1.60	1.76	1.92	2.08
D301247	4700	.853	.853	.250	.953	1.70	1.87	2.04	2.21
D301250	5000	.855	.855	.253	.955	1.75	1.93	2.10	2.28
D301251	5100	.858	.858	.258	.958	1.75	1.93	2.10	2.28
D301256	5600	.860	.860	.260	.960	1.80	1.98	2.16	2.34
D301262	6200	.863	.863	.265	.963	1.90	2.09	2.28	2.47
D301268	6800	.865	.865	.268	.965	2.10	2.31	2.52	2.73
D301275	7500	.870	.870	.275	.970	2.30	2.53	2.76	2.99
D301282	8200	.870	.870	.275	.970	2.50	2.75	3.00	3.25
D301291	9100	.875	.875	.283	.975	2.70	2.97	3.24	3.51
D301110	10000	.879	.879	.290	.979	3.00	3.30	3.60	3.90
D3006112	12000*	.860	.860	.284	.960	3.50	3.85	4.20	4.55
D3006113	13000*	.863	.863	.290	.963	3.75	4.13	4.50	4.88
D3006115	15000*	.868	.868	.302	.968	4.25	4.68	5.10	5.53
D3006116	16000*	.870	.870	.307	.970	4.50	4.95	5.40	5.85
D3006118	18000*	.875	.875	.319	.975	5.00	5.50	6.00	6.50
D3006120	20000*	.880	.880	.330	.980	5.50	6.05	6.60	7.15

NOTE—Asterisk denotes 300 WVDC units.

NOTE—All capacitance values are supplied in "F" characteristic.

NOTE—Minimum tolerance ±0.5 mmf.

SANGAMO CAPACITORS

PAPER CAPACITORS

TYPE S *Subminiature hermetically sealed metal tubular paper dielectric capacitors*

SANGAMO Types SBA and SDA are designed to meet the demands for a subminiaturized, high quality, hermetically sealed paper tubular capacitor. These units are encased in brass tubular cases finished with a high tin content alloy. Hermetic sealing is accomplished by using glass-to-metal, solder-seal terminals.

TYPE SBA

CONSTRUCTION: Inserted Tab—No Insulating Sleeve
OPERATING TEMPERATURE: —55°C to +125°C
CIRCUIT: O—| |—O

Catalog Number	Capacitance Mfds.	Working Voltage D.C.	Diameter In Inches	Length In Inches	List Price
SBA1K01102M	.001	100	.235	3/4	$2.60
SBA1K01152M	.0015	100	.235	3/4	2.60
SBA1K01222M	.0022	100	.235	3/4	2.60
SBA1K01332M	.0033	100	.235	3/4	2.60
SBA1K01472M	.0047	100	.235	3/4	2.60
SBA1K01682M	.0068	100	.235	3/4	2.60
SBA1K01103M	.01	100	.235	3/4	2.65
SBA1K01153M	.015	100	.235	3/4	2.65
SBA1K01223M	.022	100	.235	3/4	2.65
SBA1K01333M	.033	100	.235	3/4	2.70
SBA1K01473M	.047	100	.312	7/8	2.80
SBA1K01683M	.068	100	.312	7/8	2.85
SBA1K01104M	.1	100	.312	7/8	2.90
SBA1K01154M	.15	100	.400	7/8	2.95
SBA1K01224M	.22	100	.400	1 1/8	3.00
SBA1K01334M	.33	100	.400	1 3/8	3.10
SBA1K01474M	.47	100	.562	1 1/8	3.35
SBA1K01684M	.68	100	.562	1 3/8	3.55
SBA1K01105M	1.0	100	.562	1 7/8	3.80
SBA1K02102M	.001	200	.235	3/4	2.70
SBA1K02152M	.0015	200	.235	3/4	2.70
SBA1K02222M	.0022	200	.235	3/4	2.70
SBA1K02332M	.0033	200	.235	3/4	2.75
SBA1K02472M	.0047	200	.235	3/4	2.75
SBA1K02682M	.0068	200	.235	3/4	2.75
SBA1K02103M	.01	200	.235	3/4	2.75
SBA1K02153M	.015	200	.235	3/4	2.75
SBA1K02223M	.022	200	.235	3/4	2.75
SBA1K02333M	.033	200	.312	7/8	2.85
SBA1K02473M	.047	200	.312	7/8	2.95
SBA1K02683M	.068	200	.312	7/8	2.95
SBA1K02104M	.1	200	.400	7/8	3.00
SBA1K02154M	.15	200	.400	1 1/8	3.05
SBA1K02224M	.22	200	.400	1 3/8	3.20
SBA1K02334M	.33	200	.562	1 1/8	3.40
SBA1K02474M	.47	200	.562	1 3/8	3.65
SBA1K02684M	.68	200	.562	1 7/8	3.85
SBA1K02105M	1.0	200	1.0	1 7/8	4.20
SBA1K04102M	.001	400	.235	3/4	2.80
SBA1K04152M	.0015	400	.235	3/4	2.80
SBA1K04222M	.0022	400	.235	3/4	2.80
SBA1K04332M	.0033	400	.235	3/4	2.80
SBA1K04472M	.0047	400	.235	3/4	2.80
SBA1K04682M	.0068	400	.235	3/4	2.80
SBA1K04103M	.01	400	.235	3/4	2.85
SBA1K04153M	.015	400	.312	7/8	2.95
SBA1K04223M	.022	400	.312	7/8	2.95
SBA1K04333M	.033	400	.312	7/8	3.00
SBA1K04473M	.047	400	.400	7/8	3.05
SBA1K04683M	.068	400	.400	1 1/8	3.15
SBA1K04104M	.1	400	.400	1 3/8	3.25
SBA1K04154M	.15	400	.562	1 1/8	3.40
SBA1K04224M	.22	400	.562	1 3/8	3.65
SBA1K04334M	.33	400	.562	1 7/8	3.80
SBA1K04474M	.47	400	.670	1 7/8	4.20
SBA1K04684M	.68	400	.750	2 1/8	4.50
SBA1K04105M	1.0	400	1.0	1 7/8	5.00
SBA1K06102M	.001	600	.235	3/4	2.80
SBA1K06152M	.0015	600	.235	3/4	2.80
SBA1K06222M	.0022	600	.235	3/4	2.80
SBA1K06332M	.0033	600	.235	3/4	2.85
SBA1K06472M	.0047	600	.235	3/4	2.85
SBA1K06682M	.0068	600	.235	3/4	2.85
SBA1K06103M	.01	600	.312	7/8	2.95
SBA1K06153M	.015	600	.312	7/8	3.00
SBA1K06223M	.022	600	.312	7/8	3.00
SBA1K06333M	.033	600	.400	7/8	3.10
SBA1K06473M	.047	600	.400	1 1/8	3.15
SBA1K06683M	.068	600	.400	1 3/8	3.30
SBA1K06104M	.1	600	.562	1 1/8	3.50
SBA1K06154M	.15	600	.562	1 3/8	3.60
SBA1K06224M	.22	600	.562	1 7/8	3.90
SBA1K06334M	.33	600	.670	1 7/8	4.30
SBA1K06474M	.47	600	.750	2 1/8	4.60
SBA1K06684M	.68	600	1.0	1 7/8	4.80

NOTE: Standard tolerance 20% (M). For 10% tolerance, add 10% to list price and change last letter of catalog number to K.

NOTE: If insulating sleeve is required, add 5% to list price and change catalog number to SBB.

TYPE SDA

CONSTRUCTION: Extended Foil—No Insulating Sleeve
OPERATING TEMPERATURE: —55°C to +125°C
CIRCUIT: O—| |—O

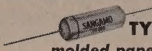
Catalog Number	Capacitance Mfds.	Working Voltage D.C.	Diameter In Inches	Length In Inches	List Price
SDA1K01102M	.001	100	.235	3/4	$2.70
SDA1K01152M	.0015	100	.235	3/4	2.70
SDA1K01222M	.0022	100	.235	3/4	2.70
SDA1K01332M	.0033	100	.235	3/4	2.75
SDA1K01472M	.0047	100	.235	3/4	2.75
SDA1K01682M	.0068	100	.235	3/4	2.75
SDA1K01103M	.01	100	.235	3/4	2.80
SDA1K01153M	.015	100	.235	3/4	2.85
SDA1K01223M	.022	100	.312	7/8	2.95
SDA1K01333M	.033	100	.312	7/8	2.95
SDA1K01473M	.047	100	.312	7/8	3.00
SDA1K01683M	.068	100	.400	7/8	3.00
SDA1K01104M	.1	100	.400	7/8	3.05
SDA1K01154M	.15	100	.400	1 1/8	3.10
SDA1K01224M	.22	100	.400	1 3/8	3.25
SDA1K01334M	.33	100	.562	1 1/8	3.45
SDA1K01474M	.47	100	.562	1 3/8	3.70
SDA1K01684M	.68	100	.562	1 5/8	3.85
SDA1K01105M	1.0	100	.670	1 5/8	4.30
SDA1K02102M	.001	200	.235	3/4	2.80
SDA1K02152M	.0015	200	.235	3/4	2.80
SDA1K02222M	.0022	200	.235	3/4	2.80
SDA1K02332M	.0033	200	.235	3/4	2.85
SDA1K02472M	.0047	200	.235	3/4	2.85
SDA1K02682M	.0068	200	.235	3/4	2.85
SDA1K02103M	.01	200	.312	7/8	2.95
SDA1K02153M	.015	200	.312	7/8	3.00
SDA1K02223M	.022	200	.312	7/8	3.00
SDA1K02333M	.033	200	.312	7/8	3.05
SDA1K02473M	.047	200	.400	7/8	3.10
SDA1K02683M	.068	200	.400	7/8	3.15
SDA1K02104M	.1	200	.400	1 1/8	3.15
SDA1K02154M	.15	200	.400	1 3/8	3.30
SDA1K02224M	.22	200	.562	1 1/8	3.50
SDA1K02334M	.33	200	.562	1 3/8	3.75
SDA1K02474M	.47	200	.562	1 5/8	3.95
SDA1K02684M	.68	200	.670	1 5/8	4.30
SDA1K02105M	1.0	200	.750	2 1/8	4.50
SDA1K04102M	.001	400	.235	3/4	2.90
SDA1K04152M	.0015	400	.235	3/4	2.90
SDA1K04222M	.0022	400	.235	3/4	2.90
SDA1K04332M	.0033	400	.235	3/4	2.95
SDA1K04472M	.0047	400	.312	7/8	3.00
SDA1K04682M	.0068	400	.312	7/8	3.10
SDA1K04103M	.01	400	.312	7/8	3.10
SDA1K04153M	.015	400	.312	7/8	3.10
SDA1K04223M	.022	400	.400	7/8	3.15
SDA1K04333M	.033	400	.400	7/8	3.20
SDA1K04473M	.047	400	.400	1 1/8	3.25
SDA1K04683M	.068	400	.400	1 3/8	3.35
SDA1K04104M	.1	400	.562	1 1/8	3.50
SDA1K04154M	.15	400	.562	1 3/8	3.75
SDA1K04224M	.22	400	.562	1 5/8	3.90
SDA1K04334M	.33	400	.670	1 5/8	4.30
SDA1K04474M	.47	400	.750	2 1/8	4.55
SDA1K06102M	.001	600	.235	3/4	2.90
SDA1K06152M	.0015	600	.235	3/4	2.95
SDA1K06222M	.0022	600	.235	3/4	2.95
SDA1K06332M	.0033	600	.312	7/8	3.00
SDA1K06472M	.0047	600	.312	7/8	3.05
SDA1K06682M	.0068	600	.312	7/8	3.10
SDA1K06103M	.01	600	.312	7/8	3.10
SDA1K06153M	.015	600	.400	7/8	3.20
SDA1K06223M	.022	600	.400	7/8	3.25
SDA1K06333M	.033	600	.400	1 1/8	3.25
SDA1K06473M	.047	600	.400	1 3/8	3.40
SDA1K06683M	.068	600	.562	1 1/8	3.60
SDA1K06104M	.1	600	.562	1 3/8	3.75
SDA1K06154M	.15	600	.562	1 5/8	4.00
SDA1K06224M	.22	600	.670	1 5/8	4.40
SDA1K06334M	.33	600	.750	2 1/8	4.60
SDA1K06474M	.47	600	.750	2 3/8	4.90

NOTE: Standard tolerance 20% (M). For 10% tolerance, add 10% to list price and change last letter of catalog number to K.

NOTE: If insulating sleeve is required, add 5% to list price and change catalog number to SDB.

SANGAMO CAPACITORS

PAPER CAPACITORS



TYPE 33-33M

molded paper tubular and

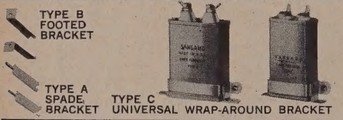
molded MYLAR tubular capacitors

The SANGAMO Type 33, which uses a paper dielectric, and Type 33M, which uses a Mylar* dielectric, are molded in thermosetting plastic to provide more stable capacitance values, high moisture resistance, excellent seal and operation up to +85°C. The Type 33 can be satisfactorily operated at 100°C when the voltage is derated to 50% of the 85°C value. The Type 33M can be satisfactorily operated at 125°C when the voltage is derated to 50% of the 85°C value.

				Type 33		Type 33M		
Cat. No. Type 33	**Cat. No. Type 33M**	**Cap. Mfds.**	**Working Volts dc**	**Diam. In Inches**	**Length In Inches**	**Diam. In Inches**	**Length In Inches**	**List Price**
...	33M0121	.001	100	...	...	5/16	1	.25
...	33M0125	.005	100	...	...	5/16	1	.25
...	33M0111	.01	100	...	...	5/16	1	.25
...	33M0112	.02	100	...	...	5/16	1	.25
...	33M01147	.047	100	...	...	5/16	1	.25
...	33M0115	.05	100	...	...	5/16	1	.25
...	33M0101	.1	100	...	...	3/8	1 1/8	.35
...	33M01015	.15	100	...	...	7/16	1 3/16	.35
...	33M01022	.22	100	...	...	7/16	1 1/4	.40
...	33M01025	.25	100	...	...	7/16	1 1/4	.45
...	33M01047	.47	100	...	...	9/16	1 5/8	.60
...	33M0105	.5	100	...	...	9/16	1 5/8	.60
...	33M0110	1.0	100	...	...	5/8	2	.90
330221	33M0221	.001	200	5/16	1	5/16	1	.25
330225	33M0225	.005	200	5/16	1	5/16	1	.25
330211	33M0211	.01	200	3/8	1 1/8	5/16	1	.25
330212	33M0212	.02	200	3/8	1 1/8	5/16	1	.25
3302147	33M02147	.047	200	7/16	1 1/4	3/8	1 1/8	.25
330215	33M0215	.05	200	7/16	1 1/4	3/8	1 1/8	.25
330201	33M0201	.1	200	1/2	1 1/2	7/16	1 3/16	.35
3302015	33M02015	.15	200	9/16	1 5/8	7/16	1 1/4	.35
3302022	33M02022	.22	200	9/16	2	1/2	1 1/2	.40
3302025	33M02025	.25	200	5/8	2	1/2	1 1/2	.45
3302047	33M02047	.47	200	3/4	2	9/16	2	.60
330205	33M0205	.5	200	3/4	2	9/16	2	.60
...	33M0210	1.0	200	...	...	3/4	2	.90
330421	33M0421	.001	400	5/16	1	5/16	1	.25
330425	33M0425	.005	400	5/16	1	5/16	1	.25
330411	33M0411	.01	400	3/8	1 1/8	5/16	1	.25
330412	33M0412	.02	400	7/16	1 3/16	3/8	1 1/8	.25
3304122	33M04122	.022	400	7/16	1 3/16	3/8	1 1/8	.30
3304147	33M04147	.047	400	15/32	1 1/2	7/16	1 1/4	.30
330415	33M0415	.05	400	15/32	1 1/2	7/16	1 1/4	.30
3304168	33M04168	.068	400	1/2	1 1/2	15/32	1 1/2	.35
330401	33M0401	.1	400	9/16	1 5/8	1/2	1 1/2	.35
3304015	33M04015	.15	400	9/16	2	9/16	1 5/8	.40
330402	33M0402	.2	400	5/8	2	9/16	2	.40
3304022	33M04022	.22	400	5/8	2	9/16	2	.40
3304025	33M04025	.25	400	5/8	2	9/16	2	.40
...	33M0405	.5	400	...	...	3/4	2	.60
330635	33M0635	.0005	600	5/16	1	5/16	1	.25
330621	33M0621	.001	600	5/16	1	5/16	1	.25
3306215	33M06215	.0015	600	5/16	1	5/16	1	.25
330622	33M0622	.002	600	5/16	1	5/16	1	.25
3306222	33M06222	.0022	600	5/16	1	5/16	1	.25
3306225	33M06225	.0025	600	5/16	1	5/16	1	.25
330623	33M0623	.003	600	5/16	1	5/16	1	.25
3306233	33M06233	.0033	600	5/16	1	5/16	1	.25
330624	33M0624	.004	600	5/16	1	5/16	1	.25
3306247	33M06247	.0047	600	5/16	1	5/16	1	.25
330625	33M0625	.005	600	5/16	1	5/16	1	.25
330626	33M0626	.006	600	3/8	1 1/8	5/16	1	.25
3306268	33M06268	.0068	600	3/8	1 1/8	5/16	1	.30
330628	33M0628	.008	600	7/16	1 3/16	5/16	1	.30
330611	33M0611	.01	600	7/16	1 3/16	3/8	1 1/8	.30
3306115	33M06115	.015	600	7/16	1 3/16	3/8	1 1/8	.30
330612	33M0612	.02	600	7/16	1 1/4	7/16	1 3/16	.30
3306122	33M06122	.022	600	7/16	1 1/4	7/16	1 3/16	.30
3306125	33M06125	.025	600	15/32	1 1/2	7/16	1 3/16	.35
330613	33M0613	.03	600	15/32	1 1/2	7/16	1 1/4	.35
3306133	33M06133	.033	600	15/32	1 1/2	7/16	1 1/4	.35
330614	33M0614	.04	600	1/2	1 1/2	15/32	1 1/2	.35
3306147	33M06147	.047	600	1/2	1 1/2	15/32	1 1/2	.40
330615	33M0615	.05	600	1/2	1 1/2	15/32	1 1/2	.40
330616	33M0616	.06	600	9/16	1 5/8	9/16	1 5/8	.40
3306168	33M06168	.068	600	9/16	1 5/8	9/16	1 5/8	.45
330601	33M0601	.1	600	9/16	2	9/16	2	.45
3306015	33M06015	.15	600	5/8	2	5/8	2	.50
330602	33M0602	.2	600	3/4	2	3/4	2	.55
3306022	33M06022	.22	600	3/4	2	3/4	2	.55
3306025	33M06025	.25	600	3/4	2	3/4	2	.55

NOTE—Standard capacitance tolerance for Type 33:
.0005 Mfd. to .01 Mfd. +60%, —20%
.01 Mfd. to .15 Mfd. +20%, —20%
.15 Mfd. and up +20%, —10%

NOTE: Standard capacitance tolerance for Type 33M values: .047 Mfds. and above 10%.



TYPE 71

paper

SANGAMO Type 71 paper dielectric capacitors are impregnated with Diaclor—a specially compounded, chemically pure, chlorinated dielectric oil. It possesses a high dielectric constant, high resistivity, low power factor, high dielectric strength and is non-explosive. Each unit is contained in a lead coated steel case and finished with grey lacquer paint over a zinc chromate under-coat.

Catalog Number	Capacitance Mfds.	Working Voltage D.C.	Height In Inches	Width In Inches	Thickness In Inches	List Price
7106-.5	.5	600	1 5/8	1 13/16	1 1/16	$ 4.70
7106-1	1	600	2	1 13/16	1 1/16	5.80
7106-2	2	600	2 3/4	1 13/16	1 1/16	7.15
7106-4	4	600	2 7/8	2 1/2	1 3/16	9.10
7106-6	6	600	3 3/4	2 1/2	1 3/16	11.30
7106-8	8	600	3 1/4	3 3/4	1 1/4	13.50
7106-10	10	600	3 7/8	3 3/4	1 1/4	15.15
7110-.1	.1	1000	1 5/8	1 13/16	1 1/16	4.15
7110-.25	.25	1000	1 5/8	1 13/16	1 1/16	4.70
7110-.5	.5	1000	2	1 13/16	1 1/16	4.95
7110-1	1	1000	2 1/8	1 13/16	1 1/16	6.35
7110-2	2	1000	3 7/8	1 13/16	1 1/16	8.25
7110-4	4	1000	4 1/8	2 1/2	1 3/16	10.45
7110-6	6	1000	3 7/8	3 3/4	1 1/4	14.05
7110-8	8	1000	4 5/8	3 3/4	1 1/4	15.15
7110-10	10	1000	4 1/4	3 3/4	1 3/4	16.80
7110-12	12	1000	3 7/8	3 3/4	2 1/4	18.15
7110-15	15	1000	4 5/8	3 3/4	2 1/2	20.10
7115-.5	.5	1500	2 1/4	1 13/16	1 1/16	6.35
7115-1	1	1500	3 1/4	1 13/16	1 1/16	7.45
7115-2	2	1500	3 5/8	2 1/2	1 3/16	10.20
7115-4	4	1500	4 1/4	3 3/4	1 1/4	14.05
7115-6	6	1500	4 1/2	3 3/4	1 3/4	17.05
7115-8	8	1500	4 5/8	3 3/4	2 1/2	20.90
7115-10	10	1500	4 1/8	3 3/4	3 3/16	25.05
7115-12	12	1500	4 3/4	3 3/4	3 3/16	27.25
7115-15	15	1500	4 1/4	3 3/4	4 9/16	30.00
7120-.1	.1	2000	1 5/8	1 13/16	1 1/16	6.60
7120-.25	.25	2000	2	1 13/16	1 1/16	7.15
7120-.5	.5	2000	2 7/8	1 13/16	1 1/16	7.45
7120-1	1	2000	3 1/4	2 1/2	1 3/16	9.10
7120-2	2	2000	3 3/4	3 3/4	1 1/4	10.75
7120-4	4	2000	3 3/4	3 3/4	2 1/4	15.15
7120-6	6	2000	4 3/4	3 3/4	2 1/2	20.10
7120-8	8	2000	4 3/4	3 3/4	3 3/16	25.05
7120-10	10	2000	4 3/4	3 3/4	4 9/16	30.55
7120-12	12	2000	5 1/8	3 3/4	4 9/16	33.30
7125-5	.5	2500	2 7/8	2 1/2	1 3/16	11.55
7125-1	1	2500	5 1/8	3 3/4	2 1/4	13.20
7125-2	2	2500	3 1/4	3 3/4	1 1/4	21.45
7125-4	4	2500	4 3/4	3 3/4	1 3/4	30.00
7125-10	10	2500	6	3 3/4	4 9/16	75.10
7130-.1	.1	3000	2	2 1/2	1 3/16	14.05
7130-.25	.25	3000	2 1/2	2 1/2	1 3/16	14.85
7130-.5	.5	3000	3 3/4	2 1/2	1 3/16	16.80
7130-1	1	3000	4 1/4	3 3/4	1 1/4	20.10
7130-2	2	3000	4 1/2	3 3/4	2 1/4	25.05
7130-4	4	3000	4 1/4	3 3/4	4 9/16	36.85
7140-.1	.1	4000	3 1/4	3 3/4	1 3/4	18.50
7140-.25	.25	4000	3 1/4	3 3/4	1 3/4	20.00
7140-.5	.5	4000	3 1/2	3 3/4	1 3/4	22.50
7140-1	1	4000	4 1/4	3 3/4	2 1/4	29.25
7140-2	2	4000	5 1/2	3 3/4	3 3/16	38.50
7140-4	4	4000	7	3 3/4	4 9/16	60.00
7150-.1	.1	5000	3 1/4	3 3/4	1 3/4	19.25
7150-.25	.25	5000	3 1/4	3 3/4	1 3/4	22.00
7150-.5	.5	5000	4 1/4	3 3/4	2 1/4	24.50
7150-1	1	5000	4 1/4	3 3/4	4 9/16	34.00
7150-2	2	5000	5 3/4	3 3/4	4 9/16	51.00
7160-.1	.1	6000	3 1/4	3 3/4	1 3/4	27.50
7160-.25	.25	6000	4 1/4	3 3/4	1 3/4	32.00
7160-.5	.5	6000	5 1/8	3 3/4	2 1/4	45.00
7160-1	1	6000	5	3 3/4	4 9/16	49.00
7175-.1	.1	7500	3 7/8	3 3/4	1 3/4	29.00
7175-.25	.25	7500	4 1/2	3 3/4	2 1/4	34.50
7175-.5	.5	7500	6	3 3/4	3 3/16	57.00

NOTE—All units supplied with spade type mounting bracket. Universal wrap-around or footed bracket may be substituted. Designate Bracket by adding Type Letter to Catalog Number. Example: 7106C-.5.

NOTE—All units 1500 W.V.D.C. and below are supplied with riveted silicone rubber bushing solder terminals. All units above 1500 W.V.D.C. are supplied with ceramic pillar terminals with removable solder lugs.

NOTE—Standard tolerance ±10%.

SANGAMO CAPACITORS

PAPER CAPACITORS

TYPES 40-41-42-43 *paper*

SANGAMO Types 40 and 41 paper dielectric capacitors are ideal for use in high voltage filter applications. Enclosed in aluminum containers with a threaded neck, they mount to the chassis by means of an insulating washer and pal nut. In the Type 40, one connection is provided by an insulated terminal and the other is provided by the case and washer with a solder lug. In the Type 41, both terminals are completely insulated from the case. The Type 40 and 41 are impregnated with Diaclor to provide an F characteristic. Types 42 and 43 are physically identical to Types 40 and 41 respectively, except mineral oil is used as an impregnant to derive an E characteristic and the case length is larger.

Catalog Number	Capacitance Mfds.	Working Volts D.C.	Diameter In Inches	Length In Inches Type 40-41	Length In Inches Type 42-43	List Price
TYPE 40-42						
4_06-1	1	600	1 1/2	1 5/8	2	$3.95
4_06-2	2	600	1 1/2	2 3/8	2 7/8	4.60
4_06-4	4	600	1 1/2	3 5/8	5 1/4	6.50
4_10-1	1	1000	1 1/2	2 3/8	2 7/8	4.50
4_10-2	2	1000	1 1/2	3 5/8	5	6.00
4_15-.25	.25	1500	1 1/2	1 5/8	2	4.85
4_15-.5	.5	1500	1 1/2	2 3/8	2 7/8	5.25
4_15-1	1	1500	1 1/2	3 3/8	4 1/2	6.10
TYPE 41-43						
4_06-1	1	600	1 1/2	1 5/8	2	4.70
4_06-2	2	600	1 1/2	2 3/8	2 7/8	5.40
4_06-4	4	600	1 1/2	3 5/8	5 1/4	7.10
4_10-1	1	1000	1 1/2	2 3/8	2 7/8	5.00
4_10-2	2	1000	1 1/2	3 5/8	5	6.30
4_15-.25	.25	1500	1 1/2	1 5/8	2	5.65
4_15-.5	.5	1500	1 1/2	2 3/8	2 7/8	5.85
4_15-1	1	1500	1 1/2	3 3/8	4 1/2	6.30

NOTE—Complete Catalog Number includes type designation. Example: 4206-1

NOTE—Standard Tolerance +20%, —10%

TYPE 50 *paper*

The SANGAMO Type 50 paper dielectric capacitors are impregnated with mineral oil and hermetically sealed in drawn metal cans. They may be operated under severe humidity conditions at temperatures between —55°C and +85°C. They are non-inductively wound, supplied in fractional capacitance values and will provide efficient and continuous operation in coupling and bypass circuits.

TYPE 50 PAPER

Catalog Number	Capacitance Mfds.	Length In Inches	Width In Inches	Height In Inches	List Price
600 W.V.D.C.					
5006-.05	.05	1 13/16	1	3/4	$2.90
5006-.1	.1	1 13/16	1	3/4	2.95
5006-.25	.25	1 13/16	1	3/4	3.10
5006-.5	.5	1 13/16	1	1	3.30
5006-1	1.0	2	1 3/4	7/8	3.75
*5006-2	2.0	2	2	1 1/8	5.00
5006-2x.05	.05-.05	1 13/16	1	3/4	3.65
5006-2x.1	.1-.1	1 13/16	1	3/4	3.70
5006-2x.25	.25-.25	1 13/16	1	7/8	3.75
5006-2x.5	.5-.5	2	1 3/4	7/8	4.30
*5006-2x1	1.0-1.0	2	2	1 1/8	5.30
5006-3x.1	.1-.1-.1	1 13/16	1	3/4	4.20
5006-3x.25	.25-.25-.25	2	1 3/4	7/8	4.75
*5006-3x.5	.5-.5-.5	2	2	1 1/8	5.75
1000 W.V.D.C.					
5010-.05	.05	1 13/16	1	3/4	3.05
5010-.1	.1	1 13/16	1	3/4	3.15
5010-.25	.25	1 13/16	1	7/8	3.25
5010-.5	.5	2	1 3/4	7/8	3.55
*5010-1	1.0	2	2	1 1/8	4.40
5010-2x.05	.05-.05	1 13/16	1	3/4	3.85
5010-2x.1	.1-.1	1 13/16	1	7/8	4.00
5010-2x.25	.25-.25	2	1 3/4	7/8	4.20
*5010-2x.5	.5-.5	2	2	1 1/8	5.45
5010-3x.1	.1-.1-.1	2	1 3/4	7/8	4.60
*5010-3x.25	.25-.25-.25	2	2	1 1/8	5.50

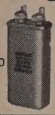
NOTE: *For bottom or top terminal, case size becomes 2" x 2" x 1 1/4".

NOTE: Standard capacity tolerance: +20%-10%.

NOTE: Units supplied with side terminals unless otherwise specified.

NOTE: For top terminals add the letters "RT" following the catalog number.

NOTE: For bottom terminals add the letters "RB" following the catalog number.



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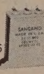


66

68

TYPES 60-62-64-66-68

SANGAMO Type 60, 62, 64, 66, and 68 noninductively wound paper capacitors are impregnated with mineral oil and hermetically sealed in drawn metal cans. The mineral oil assures dependable service between the wide temperature range of −55°C and +85°C. The standard capacitance tolerance is +20%, −10%. Mounting brackets are supplied as shown.

TYPE 60-62-64

Catalog Number	Capacitance Mfds.	Length In Inches Add .75" Max. for terminals	Width In Inches	Thickness In Inches	List Price Type 60	List Price Type 62-64
600 W.V.D.C.						
6_V06.01	.01	1 1/16	1 5/16	.725	$3.40	$3.80
6_V06-.05	.05	1 1/16	1 5/16	.725	3.45	3.85
6_V06-.1	.1	1 3/8	1 5/16	.725	3.70	4.10
6_V06-.25	.25	1 5/8	1 5/16	.725	3.90	4.30
6_V06-.5	.5	2	1 5/16	.725	4.30	4.60
6_V06-1.0	1.0	2 3/4	1 5/16	.725	4.75	5.15
6_V06-2.0	2.0	2 1/4	1 3/16	1.188	6.00	6.40
1000 W.V.D.C.						
6_V10-.05	.05	1 3/8	1 5/16	.725	3.50	3.90
6_V10-.1	.1	1 3/8	1 5/16	.725	3.60	4.00
6_V10-.25	.25	2	1 5/16	.725	4.00	4.40
6_V10-.5	.5	2 3/4	1 5/16	.725	4.10	4.50
6_V10-1.0	1.0	2 1/4	1 3/16	1.188	5.00	5.40

NOTE—Complete Catalog Number will include Type designation. Example: 62V06-.01.

NOTE—Type 60 without bracket; Type 62 with channel bracket, 2 terminals at the top. Type 64 with channel bracket, 2 terminals at the bottom.

NOTE—Type 60 can be furnished with spade (S) or footed (F) bracket. When ordering, state type of bracket desired following Catalog Number. Add $.40 to list price.

NOTE—Overall bracket dimensions for Type 62-64: Length 2 5/16", width .766". Mounting screw slots center-to-center 1 15/16.

TYPE 66-68

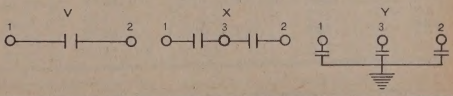
Catalog Number	Capacitance Mfds.	Length In Inches Add .75" Max. for terminals	Width In Inches	Thickness In Inches	List Price
600 W.V.D.C.					
6_V06-.05	.05	1 1/16	1 3/4	.580	$3.55
6_V06-.1	.1	1 1/16	1 3/4	.580	3.60
6_V06-.25	.25	1 1/2	1 3/4	.580	3.90
6_V06-.5	.5	2	1 3/4	.580	4.15
6 V06-1.0	1.0	2 3/4	1 3/4	.580	4.75
6 X06-2X.05	.05-.05	1 1/16	1 3/4	.580	3.75
6 X06-2X.1	.1-.1	1 1/2	1 3/4	.580	4.65
6 X06-2X.25	.25-.25	2	1 3/4	.580	4.70
6 X06-2X.5	.5-.5	2 3/4	1 3/4	.580	5.45
6 Y06-3X.05	.05-.05-.05	1 1/2	1 3/4	.580	5.30
6 Y06-3X.1	.1-.1-.1	1 1/2	1 3/4	.580	5.60
6 Y06-3X.25	.25-.25-.25	2 3/4	1 3/4	.580	5.80
1000 W.V.D.C.					
6_V10-.05	.05	1 1/16	1 3/4	.580	3.75
6 V10-.1	.1	1 1/2	1 3/4	.580	4.00
6 V10-.25	.25	2	1 3/4	.580	4.10
6 V10-.5	.5	2 3/4	1 3/4	.580	4.45
6 X10-2X.05	.05-.05	1 1/2	1 3/4	.580	4.35
6 X10-2X.1	.1-.1	2	1 3/4	.580	4.90
6 X10-2X.25	.25-.25	2 3/4	1 3/4	.580	5.15
6 Y10-3X.05	.05-.05-.05	1 1/2	1 3/4	.580	5.75
6 Y10-3X.1	.1-.1-.1	2 1/2	1 3/4	.580	6.20

NOTE—Overall bracket dimensions for Type 66-68: Length 2 7/16", width .640". Mounting screw slots center-to-center 2 1/8.

NOTE—Complete Catalog Number will include Type designation. Example: 66V06-.05.

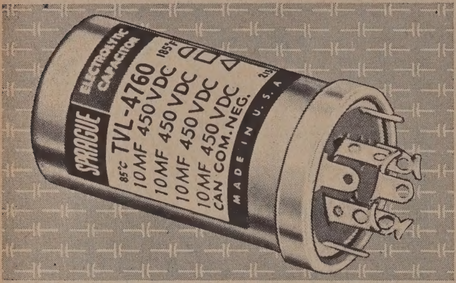
NOTE—Type 66 with channel bracket and the terminals at the top; Type 68 with channel bracket and the terminals at the bottom.

NOTE—Letter V, X and Y denote electrical circuit as follows:



SPRAGUE CAPACITORS

TVL TWIST-LOK® ELECTROLYTICS



- Hermetically Sealed in Aluminum Cans for Long Life and Dependable Performance in TV, Radio and Hi-Fi
- Designed for 85°C (185°F) Operation
- Stand Up Under Extremely High Temperatures Often Encountered in TV, Hi-Fi, and Auto Radio Cabinets
- Withstand High Surge Voltages
- Ideal for High Ripple Selenium Rectifier Circuits
- Can Be Safely Mounted "Above Ground" Using Phenolic Mounting Plate and Insulating Tube
- Easy to Mount—Unit Locks Firmly in Place with a Twist of the Tabs

Bold type indicates popular items and light type indicates less popular items. An asterisk (*) indicates that the item is not usually carried in distributor's stock but is available on order to the factory. These items usually may be readily replaced by more popular items.

µF	WVDC	Dia. x Length	Cat. No.	List
SINGLE UNITS				
.5Ω@15.75 KC	3N.P.	1 x 2	TVL-1010	$3.90
1Ω@60 CPS	3N.P.	1⅜ x 2½	TVL-1015	7.20
10Ω@30 CPS	3N.P.	1⅜ x 3	TVL-1020	3.40
*1000	6	1⅜ x 2	TVL-1112	3.65
2000	**6**	**1⅜ x 2**	**TVL-1115**	**3.75**
*1000	10	1 x 2½	TVL-1125	3.30
*3000	10	1⅜ x 2½	TVL-1140	6.20
225	**15**	**¾ x 2**	**TVL-1160**	**1.70**
1000	**15**	**1 x 2½**	**TVL-1165**	**2.60**
*1500	15	1 x 3	TVL-1167	4.10
2000	**15**	**1⅜ x 2**	**TVL-1168**	**4.00**
3000	**15**	**1⅜ x 3**	**TVL-1170**	**5.00**
4000	**15**	**1⅜ x 3½**	**TVL-1173**	**6.35**
* 25	25	¾ x 2	TVL-1207	1.90
40	**25**	**¾ x 2**	**TVL-1210**	**1.45**
* 50	25	1 x 2	TVL-1211	2.20
* 100	25	¾ x 2	TVL-1215	2.05
500	**25**	**1 x 2**	**TVL-1220**	**2.40**
1000	**25**	**1⅜ x 2**	**TVL-1230**	**3.60**
4	50	¾ x 2	TVL-1305	1.85
25	50	¾ x 2	TVL-1308	1.90
100	**50**	**¾ x 2**	**TVL-1317**	**1.70**
150	**50**	**¾ x 2½**	**TVL-1320**	**1.80**
250	**50**	**1 x 2½**	**TVL-1324**	**2.25**
500	**50**	**1⅜ x 2½**	**TVL-1330**	**2.75**
1000	**50**	**1⅜ x 3½**	**TVL-1338**	**4.30**
1500	**50**	**1⅜ x 4**	**TVL-1341**	**5.05**
* 10	150	1 x 2	TVL-1403	2.15
* 20	150	1 x 2	TVL-1405	2.20
* 25	150	1 x 2	TVL-1407	2.25
30	**150**	**1 x 2**	**TVL-1408**	**1.80**
* 40	150	1 x 2	TVL-1412	2.35
50	**150**	**1 x 2**	**TVL-1415**	**1.80**
* 60	150	1 x 2	TVL-1417	2.45
80	**150**	**1 x 2½**	**TVL-1420**	**2.25**
* 80	150	1⅜ x 2	TVL-1421	3.05
100	**150**	**1 x 2½**	**TVL-1423**	**2.05**
* 110	150	1 x 3	TVL-1424	2.75
120	**150**	**1 x 2½**	**TVL-1425**	**2.15**
120	**150**	**1⅜ x 2½**	**TVL-1426**	**2.65**
140	**150**	**1 x 3**	**TVL-1428**	**2.35**
150	**150**	**1 x 3**	**TVL-1429**	**2.30**
150	**150**	**1⅜ x 3**	**TVL-1430**	**2.85**
200	**150**	**1⅜ x 4**	**TVL-1431**	**2.90**
300	**150**	**1⅜ x 3½**	**TVL-1434**	**3.40**
* 40	200	1 x 2	TVL-1460	2.40
160	**200**	**1⅜ x 3**	**TVL-1473**	**3.20**
* 15	250	1 x 2	TVL-1505	2.25
20	**250**	**1 x 2**	**TVL-1509**	**$1.65**
* 30	250	1 x 2	TVL-1516	2.40
40	**250**	**1 x 2**	**TVL-1519**	**2.30**
* 50	250	1 x 2½	TVL-1522	2.65
60	250	1 x 3	TVL-1525	2.80
* 80	250	1 x 3½	TVL-1530	3.00
100	**250**	**1 x 3**	**TVL-1535**	**2.85**
150	**250**	**1⅜ x 2½**	**TVL-1540**	**3.70**
200	**250**	**1⅜ x 3½**	**TVL-1547**	**3.70**
15	300	1 x 2	TVL-1560	2.30
* 30	300	1 x 2	TVL-1563	2.50
* 50	300	1 x 2½	TVL-1567	2.80
60	300	1 x 3	TVL-1570	2.95
80	**300**	**1 x 3½**	**TVL-1573**	**2.45**
100	**300**	**1 x 4**	**TVL-1578**	**2.70**
125	**300**	**1⅜ x 3½**	**TVL-1580**	**3.60**
150	**300**	**1⅜ x 3½**	**TVL-1584**	**3.65**
250	**300**	**1⅜ x 4**	**TVL-1590**	**5.05**
* 10	350	1 x 2	TVL-1605	2.25
15	350	1 x 2	TVL-1608	2.35
* 20	350	1 x 2	TVL-1612	2.45
30	**350**	**1 x 2**	**TVL-1617**	**2.10**
40	**350**	**1 x 2**	**TVL-1621**	**2.25**
50	**350**	**1 x 2**	**TVL-1622**	**2.30**
60	**350**	**1 x 3**	**TVL-1624**	**2.55**
80	**350**	**1⅜ x 2**	**TVL-1630**	**3.50**
125	**350**	**1⅜ x 3½**	**TVL-1638**	**3.50**
*140	350	1⅜ x 3	TVL-1641	5.15
150	**350**	**1⅜ x 4**	**TVL-1642**	**3.60**
* 10	400	1 x 2	TVL-1655	2.35
* 20	400	1 x 2	TVL-1660	2.55
* 40	400	1⅜ x 2	TVL-1663	3.50
* 50	400	1⅜ x 2½	TVL-1666	3.80
* 80	400	1⅜ x 3	TVL-1675	4.55
*100	400	1⅜ x 3½	TVL-1679	5.10
4	**450**	**1 x 2**	**TVL-1702**	**1.75**
10	**450**	**1 x 2**	**TVL-1705**	**1.60**
15	**450**	**1 x 2**	**TVL-1709**	**1.90**
20	**450**	**1 x 2**	**TVL-1714**	**2.00**
25	450	1 x 2	TVL-1716	2.75
30	**450**	**1 x 2½**	**TVL-1720**	**2.20**
40	**450**	**1 x 3**	**TVL-1725**	**2.40**
50	**450**	**1 x 3**	**TVL-1728**	**2.80**
60	**450**	**1⅜ x 2½**	**TVL-1730**	**3.35**
80	**450**	**1⅜ x 2½**	**TVL-1735**	**3.60**
100	**450**	**1⅜ x 3**	**TVL-1750**	**4.05**
125	**450**	**1⅜ x 4**	**TVL-1760**	**4.90**
* 20	475	1 x 2½	TVL-1807	2.75
* 30	475	1 x 3	TVL-1810	3.05

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SPRAGUE CAPACITORS

TVL TWIST-LOK ELECTROLYTICS, continued

μF	WVDC	Dia.x Lgth.	Cat. No.	List
40	**475**	**1⅜ x 2**	**TVL-1820**	**$3.05**
*90	475	1⅜ x 3½	TVL-1850	5.55
10	**500**	**1 x 2**	**TVL-1940**	**1.85**
20	**500**	**1 x 2½**	**TVL-1943**	**2.15**
30	**500**	**1 x 3**	**TVL-1947**	**2.45**
40	**500**	**1 x 3½**	**TVL-1950**	**2.70**
80	**500**	**1⅜ x 3**	**TVL-1958**	**4.55**
90	**500**	**1⅜ x 3½**	**TVL-1960**	**4.50**
15	525	1⅜ x 3	TVL-1980	4.65

DUAL UNITS

μF	WVDC	Dia.x Lgth.	Cat. No.	List
.5Ω @ 15.75 KC— 2.5Ω @ 60 CPS		1⅜ x 2	TVL-2010	$7.10
1000-500	6N.P.-6N.P.	1⅜ x 2	TVL-2120	9.10
250-1000	**10-6**	**1⅜ x 2**	**TVL-2140**	**3.45**
200-40	10-10	1 x 2	TVL-2151	2.70
1000-1000	**15-15**	**1 x 3½**	**TVL-2160**	**4.20**
1000-1000	**15-15**	**1⅜ x 2½**	**TVL-2161**	**4.45**
250-250	16-16	1 x 2	TVL-2170	3.05
500-100	16-16	1 x 2	TVL-2175	3.20
* 20-20	25-25	1 x 2	TVL-2207	2.50
* 40-40	25-25	1 x 2	TVL-2210	2.55
100-70	**25-25**	**1 x 2**	**TVL-2224**	**2.20**
150-50	25-25	1 x 2	TVL-2230	2.80
500-500	25-25	1⅜ x 2	TVL-2233	5.05
1000-500	25-25	1⅜ x 2½	TVL-2239	6.15
50-50	**50-50**	**1 x 2**	**TVL-2320**	**2.05**
100-25	50-50	1 x 2	TVL-2324	2.70
100-100	**50-50**	**1 x 2**	**TVL-2326**	**2.25**
50-500	**150-5**	**1 x 3**	**TVL-2404**	**2.55**
* 40-20	150-25	1 x 2	TVL-2408	2.65
40-150	150-25	1 x 2	TVL-2409	2.95
50-150	150-25	1 x 2½	TVL-2410	3.00
150-100	**150-25**	**1⅜ x 2½**	**TVL-2411**	**3.25**
* 40-20	150-50	1 x 2	TVL-2412	2.70
20-10	150-150	1 x 2	TVL-2414	2.55
20-20	**150-150**	**1 x 2**	**TVL-2415**	**2.00**
30-15	150-150	1 x 2	TVL-2418	2.65
30-20	150-150	1 x 2	TVL-2420	2.70
30-30	**150-150**	**1 x 2**	**TVL-2422**	**2.10**
40-20	**150-150**	**1 x 2**	**TVL-2425**	**2.10**
40-30	**150-150**	**1 x 2**	**TVL-2427**	**2.10**
40-40	**150-150**	**1 x 2½**	**TVL-2428**	**2.20**
50-30	**150-150**	**1 x 2½**	**TVL-2432**	**2.20**
50-50	**150-150**	**1 x 2½**	**TVL-2435**	**2.30**
60-20	150-150	1 x 2	TVL-2436	2.85
60-60	**150-150**	**1 x 3½**	**TVL-2438**	**2.55**
70-30	**150-150**	**1 x 2½**	**TVL-2439**	**2.40**
75-75	**150-150**	**1 x 3**	**TVL-2440**	**2.65**
80-40	**150-150**	**1⅜ x 2½**	**TVL-2442**	**2.35**
80-50	**150-150**	**1 x 2½**	**TVL-2442.1**	**2.55**
80-60	150-150	1 x 3	TVL-2442.2	3.25
80-80	**150-150**	**1⅜ x 2**	**TVL-2442.4**	**3.10**
100-30	150-150	1 x 2½	TVL-2442.7	3.15
*100-100	150-150	1⅜ x 2½	TVL-2443	4.15
125-100	**150-150**	**1⅜ x 2½**	**TVL-2443.3**	**3.45**
150-80	**150-150**	**1⅜ x 2½**	**TVL-2443.5**	**3.45**
*150-150	150-150	1⅜ x 3	TVL-2443.7	4.75
200-5	**150-150**	**1⅜ x 3**	**TVL-2444**	**3.50**
200-125	**150-150**	**1⅜ x 3½**	**TVL-2445**	**3.95**
200-150	**150-150**	**1⅜ x 4**	**TVL-2446**	**4.10**
200-200	**150-150**	**1⅜ x 4**	**TVL-2447**	**4.15**
60-125	200-25	1 x 2	TVL-2453	3.15
30-10	200-50	1 x 2	TVL-2455	2.65
*100-100	200-50	1⅜ x 2½	TVL-2458	4.05
* 40-40	200-200	1 x 3	TVL-2460	3.10
60-60	**200-200**	**1 x 3**	**TVL-2461**	**2.75**
60-60	**200-200**	**1⅜ x 2**	**TVL-2462**	**3.10**
100-100	**200-200**	**1⅜ x 3**	**TVL-2464**	**3.85**
200-5	**200-200**	**1⅜ x 2**	**TVL-2470**	**4.05**
40-350	250-15	1⅜ x 2	TVL-2502	$3.80
* 40-25	250-25	1 x 2½	TVL-2505	2.90
50-100	250-50	1⅜ x 2	TVL-2507	3.75
* 80-100	250-50	1⅜ x 2½	TVL-2508	4.10
100-150	**250-50**	**1⅜ x 3**	**TVL-2509**	**3.60**
* 40-25	250-150	1 x 2½	TVL-2509.7	3.00
* 10-10	250-250	1 x 2	TVL-2510	2.60
20-20	**250-250**	**1 x 2**	**TVL-2515**	**2.15**
* 30-30	250-250	1 x 2½	TVL-2517	3.05
* 40-20	250-250	1 x 3	TVL-2519	3.10
40-40	**250-250**	**1 x 2**	**TVL-2520**	**2.90**
150-40	250-250	1⅜ x 3	TVL-2534	5.05
150-150	**250-250**	**1⅜ x 4**	**TVL-2535**	**4.85**
200-200	**250-250**	**1⅜ x 4**	**TVL-2538**	**5.95**
35-500	**300-6**	**1 x 2½**	**TVL-2552**	**2.75**
20-20	300-25	1 x 2	TVL-2555	2.70
20-100	300-25	1 x 2½	TVL-2556	2.90
10-40	**300-50**	**1 x 2**	**TVL-2557**	**2.10**
80-100	300-50	1⅜ x 3	TVL-2559	4.40
80-100	300-150	1⅜ x 2½	TVL-2560	4.65
60-10	300-200	1 x 3½	TVL-2561	3.40
20-60	300-250	1 x 3½	TVL-2563	3.40
* 10-10	300-300	1 x 2	TVL-2565	2.65
* 15-15	300-300	1 x 2	TVL-2568	2.80
40-30	**300-300**	**1 x 3**	**TVL-2574**	**2.75**
* 40-40	300-300	1⅜ x 2½	TVL-2575	4.10
* 50-50	300-300	1⅜ x 2½	TVL-2576	4.35
* 60-20	300-300	1⅜ x 2½	TVL-2578	4.10
60-60	300-300	1⅜ x 2½	TVL-2579	4.65
* 75-75	300-300	1⅜ x 3	TVL-2580	5.10
* 80-40	300-300	1⅜ x 2½	TVL-2582	4.65
* 80-60	300-300	1⅜ x 3½	TVL-2584	5.00
80-80	**300-300**	**1⅜ x 3**	**TVL-2585**	**4.20**
120-20	**300-300**	**1⅜ x 3½**	**TVL-2588**	**4.00**
120-40	**300-300**	**1⅜ x 3½**	**TVL-2589**	**4.25**
20-20	350-25	1 x 2	TVL-2604	2.80
40-20	350-25	1 x 2½	TVL-2605	3.15
* 80-100	350-50	1⅜ x 3	TVL-2607	4.65
20-100	350-75	1 x 2½	TVL-2608	3.10
5-75	350-150	1 x 2½	TVL-2610	2.95
* 40-10	350-200	1⅜ x 2	TVL-2612	3.70
20-30	350-250	1 x 3	TVL-2615	3.10
* 40-10	350-250	1 x 3	TVL-2617	3.25
* 60-80	350-250	1⅜ x 3½	TVL-2618	5.00
* 20-10	350-300	1 x 2	TVL-2620	2.90
* 30-30	350-300	1 x 3½	TVL-2621	3.40
* 60-20	350-300	1⅜ x 2½	TVL-2623	4.30
15-15	**350-350**	1 x 2	**TVL-2625**	**2.25**
* 20-20	350-350	1 x 3	TVL-2626	3.15
* 30-20	350-350	1 x 3½	TVL-2627	3.35
30-30	**350-350**	**1 x 3**	**TVL-2628**	**2.65**
50-30	**350-350**	**1⅜ x 2½**	**TVL-2630**	**3.50**
60-30	**350-350**	**1⅜ x 3**	**TVL-2631**	**3.65**
80-4	350-350	1⅜ x 2½	TVL-2632	4.45
80-20	**350-350**	**1⅜ x 3**	**TVL-2633**	**3.80**
80-40	**350-350**	**1⅜ x 3**	**TVL-2634**	**4.10**
80-80	**350-350**	**1⅜ x 4**	**TVL-2635**	**4.70**
90-40	**350-350**	**1⅜ x 3**	**TVL-2637**	**4.25**
*100-40	350-350	1⅜ x 3	TVL-2638	5.45
100-60	**350-350**	**1⅜ x 3½**	**TVL-2639**	**4.70**
100-100	**350-350**	**1⅜ x 4**	**TVL-2641**	**5.05**
160-10	**350-350**	**1⅜ x 3**	**TVL-2643**	**4.80**
35-100	**400-50**	**1 x 3**	**TVL-2651**	**2.80**
* 40-100	400-50	1⅜ x 2	TVL-2653	4.10
100-30	**400-50**	**1⅜ x 3**	**TVL-2655**	**4.35**
80-80	**400-200**	**1⅜ x 3½**	**TVL-2656**	**4.45**
* 60-80	400-250	1⅜ x 4	TVL-2657	5.35
* 15-15	400-400	1 x 2½	TVL-2660	3.10
* 30-10	400-400	1 x 3	TVL-2663	3.35

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TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

SPRAGUE CAPACITORS

TVL TWIST-LOK ELECTROLYTICS, continued

µF	WVDC	Dia.x Lgth.	Cat. No.	List
60-60	400-400	1⅜ x 4	TVL-2668	$5.90
75-75	400-400	1⅜ x 4	TVL-2670	6.60
* 80-10	400-400	1⅜ x 3½	TVL-2672	5.15
* 80-20	400-400	1⅜ x 3	TVL-2673	5.35
* 80-40	400-400	1⅜ x 4	TVL-2675	5.90
80-60	**400-400**	**1⅜ x 3**	**TVL-2677**	**5.05**
120-40	**400-400**	**1⅜ x 4**	**TVL-2679**	**5.45**
10-20	**450-25**	**1 x 2**	**TVL-2701**	**2.15**
20-20	450-25	1 x 2	TVL-2702	2.95
20-100	450-25	1 x 2½	TVL-2703	3.15
40-20	450-25	1 x 3	TVL-2704	3.55
* 80-10	450-25	1⅜ x 3	TVL-2705	5.15
* 80-20	450-25	1⅜ x 3	TVL-2706	5.15
10-100	450-50	1 x 2½	TVL-2708	2.95
30-25	450-50	1 x 2½	TVL-2708.3	3.25
40-50	450-50	1 x 3½	TVL-2708.8	3.65
40-100	**450-50**	**1 x 3½**	**TVL-2709**	**3.00**
50-100	**450-50**	**1⅜ x 2½**	**TVL-2709.3**	**3.65**
80-50	**450-50**	**1⅜ x 3**	**TVL-2710**	**4.00**
80-100	**450-50**	**1⅜ x 3**	**TVL-2711**	**4.35**
10-50	450-100	1⅜ x 2	TVL-2712	3.40
20-100	450-100	1⅜ x 2	TVL-2713	3.90
30-40	450-150	1⅜ x 2	TVL-2714	3.95
30-200	**450-150**	**1⅜ x 3**	**TVL-2715**	**4.00**
40-150	450-150	1⅜ x 3	TVL-2716	4.95
80-50	450-150	1⅜ x 3	TVL-2717	5.40
80-60	450-150	1⅜ x 3½	TVL-2718	5.50
* 80-40	450-200	1⅜ x 3	TVL-2720	5.45
20-50	**450-250**	**1 x 3**	**TVL-2722**	**2.80**
40-10	**450-300**	**1 x 3**	**TVL-2724**	**2.90**
10-100	450-350	1⅜ x 3½	TVL-2727	5.05
* 20-80	450-350	1⅜ x 3½	TVL-2730	5.00
25-15	450-350	1 x 3	TVL-2732	3.35
40-10	**450-350**	**1⅜ x 2**	**TVL-2735**	**3.30**
* 40-20	450-350	1⅜ x 2½	TVL-2736	4.35
* 40-40	450-350	1⅜ x 3	TVL-2737	4.75
30-20	450-400	1 x 3	TVL-2741	3.70
5-5	**450-450**	**1 x 2**	**TVL-2748**	**2.15**
10-10	**450-450**	**1 x 2**	**TVL-2750**	**2.25**
* 15-10	450-450	1 x 2½	TVL-2752	3.05
15-15	**450-450**	**1 x 2½**	**TVL-2753**	**2.55**
20-10	**450-450**	**1 x 2½**	**TVL-2754**	**2.45**
20-20	**450-450**	**1 x 3**	**TVL-2755**	**2.65**
30-10	**450-450**	**1 x 3**	**TVL-2757**	**2.80**
* 30-10	450-450	1⅜ x 2	TVL-2757.2	4.00
30-15	450-450	1⅜ x 2	TVL-2758	4.10
30-30	**450-450**	**1⅜ x 2½**	**TVL-2759**	**3.45**
40-5	450-450	1 x 3	TVL-2760	3.60
* 40-15	450-450	1⅜ x 2½	TVL-2761	4.40
40-20	**450-450**	**1⅜ x 2½**	**TVL-2762**	**3.65**
40-40	**450-450**	**1⅜ x 3**	**TVL-2764**	**3.90**
* 50-40	450-450	1⅜ x 3	TVL-2766	5.40
50-50	**450-450**	**1⅜ x 3**	**TVL-2767**	**4.30**
60-20	**450-450**	**1⅜ x 3**	**TVL-2768**	**4.10**
60-40	**450-450**	**1⅜ x 3½**	**TVL-2770**	**4.55**
60-60	**450-450**	**1⅜ x 3½**	**TVL-2772**	**4.75**
80-10	**450-450**	**1⅜ x 3**	**TVL-2776**	**4.30**
80-20	**450-450**	**1⅜ x 3**	**TVL-2776.5**	**4.30**
80-30	**450-450**	**1⅜ x 4**	**TVL-2777**	**4.80**
80-40	**450-450**	**1⅜ x 3½**	**TVL-2778**	**5.00**
100-40	**450-450**	**1⅜ x 4**	**TVL-2780**	**5.45**
10-20	475-25	1 x 2	TVL-2802	2.75
75-50	475-50	1⅜ x 3	TVL-2804	5.45
40-80	475-200	1⅜ x 2½	TVL-2807	4.85
20-100	475-300	1⅜ x 3½	TVL-2810	5.10
* **20-100**	**475-400**	**1⅜ x 4**	**TVL-2813**	**4.85**
40-40	475-400	1⅜ x 3	TVL-2815	5.20
15-15	**475-475**	**1 x 2½**	**TVL-2820**	**2.55**
30-10	**475-475**	**1 x 3**	**TVL-2824**	**2.80**
40-10	**475-475**	**1⅜ x 2½**	**TVL-2827**	**3.60**
* 40-40	475-475	1⅜ x 3	TVL-2830	$5.50
* 60-40	475-475	1⅜ x 4	TVL-2840	6.20
* 80-40	475-475	1⅜ x 4	TVL-2850	6.80
80-50	**475-475**	**1⅜ x 4**	**TVL-2851**	**5.45**
80-50	500-50	1⅜ x 3½	TVL-2907	6.05
60-80	500-150	1⅜ x 3	TVL-2916	5.65
40-50	500-200	1⅜ x 3	TVL-2920	4.85
15-20	500-300	1 x 2½	TVL-2922	3.25
20-100	500-300	1⅜ x 3	TVL-2924	5.15
* 40-40	500-400	1⅜ x 3	TVL-2926	5.40
4-4	500-500	1 x 2½	TVL-2931	2.70
10-10	**500-500**	**1 x 2½**	**TVL-2933**	**2.95**
20-20	**500-500**	**1⅜ x 2½**	**TVL-2935**	**2.55**
30-10	**500-500**	**1⅜ x 3**	**TVL-2936**	**3.55**
30-30	**500-500**	**1⅜ x 3**	**TVL-2937**	**3.90**
40-25	500-500	1⅜ x 3	TVL-2939	5.35
40-40	**500-500**	**1⅜ x 3**	**TVL-2940**	**4.50**
60-40	**500-500**	**1⅜ x 3½**	**TVL-2944**	**5.35**

TRIPLE UNITS

1500-1500-1500	3-3-3	1 x 3½	TVL-3015	$8.40
40-500-500	25-10-10	1 x 2½	TVL-3202	4.75
20-20-20	**25-25-25**	**1 x 2**	**TVL-3210**	**2.25**
40-40-40	25-25-25	1 x 2	TVL-3230	3.50
30-30-30	50-50-50	1 x 2	TVL-3320	3.50
20-250-100	150-15-15	1⅜ x 2	TVL-3403	4.55
40-25-130	150-25-15	1 x 3	TVL-3404	3.80
50-100-20	150-50-25	1 x 3	TVL-3405	4.00
100-50-25	150-50-25	1 x 3	TVL-3407	4.20
15-15-1200	**150-150-2**	**1 x 2**	**TVL-3410**	**3.20**
30-20-100	150-150-6	1 x 2	TVL-3412	3.70
20-20-100	150-150-10	1 x 2	TVL-3413	3.65
20-20-250	150-150-10	1 x 2	TVL-3413.2	3.85
30-30-200	150-150-10	1 x 2	TVL-3413.3	3.90
40-20-150	**150-150-10**	**1 x 2**	**TVL-3413.4**	**2.55**
* 40-20-200	150-150-10	1 x 2½	TVL-3413.5	3.95
40-20-250	150-150-10	1 x 2½	TVL-3413.6	4.00
40-40-100	150-150-10	1 x 2½	TVL-3413.7	3.95
* 40-40-250	150-150-10	1 x 2½	TVL-3413.8	4.15
* 80-20-200	150-150-10	1⅜ x 2	TVL-3414	4.85
80-30-300	**150-150-10**	**1⅜ x 2**	**TVL-3414.2**	**3.40**
90-40-400	150-150-10	1⅜ x 2½	TVL-3414.5	5.40
100-20-200	150-150-10	1⅜ x 2½	TVL-3414.6	5.05
100-80-200	**150-150-10**	**1⅜ x 2½**	**TVL-3414.7**	**3.65**
60-40-400	150-150-15	1⅜ x 2	TVL-3414.8	5.20
80-20-100	150-150-15	1⅜ x 2	TVL-3414.9	4.70
* 20-20-20	150-150-25	1 x 2	TVL-3415	3.55
20-20-200	150-150-25	1 x 3	TVL-3416	4.05
30-20-20	150-150-25	1 x 2	TVL-3417	3.60
30-30-20	150-150-25	1 x 2	TVL-3419	3.70
40-20-20	**150-150-25**	**1 x 2½**	**TVL-3422**	**2.50**
40-20-100	150-150-25	1 x 3	TVL-3423	3.95
40-20-200	**150-150-25**	**1 x 2½**	**TVL-3423.2**	**2.95**
* 40-30-20	150-150-25	1 x 2	TVL-3424	3.75
* 40-30-25	150-150-25	1 x 2½	TVL-3425	3.80
40-40-20	**150-150-25**	**1 x 2**	**TVL-3426**	**2.60**
40-40-200	**150-150-25**	**1 x 3**	**TVL-3426.3**	**2.90**
40-40-250	**150-150-25**	**1 x 3**	**TVL-3426.4**	**3.00**
50-30-20	**150-150-25**	**1 x 2½**	**TVL-3426.7**	**2.55**
50-30-100	**150-150-25**	**1 x 3**	**TVL-3427**	**2.70**
50-30-200	150-150-25	1⅜ x 2	TVL-3428	4.95
50-30-300	150-150-25	1 x 3	TVL-3429	4.60
50-50-20	**150-150-25**	**1 x 3**	**TVL-3430**	**2.65**
50-50-200	150-150-25	1 x 3	TVL-3430.7	4.45
60-20-20	150-150-25	1 x 2	TVL-3431	3.80
60-40-200	**150-150-25**	**1 x 3**	**TVL-3431.3**	**3.00**
60-60-100	150-150-25	1⅜ x 2	TVL-3431.4	4.95
80-20-20	150-150-25	1 x 3	TVL-3431.5	4.00
80-30-300	150-150-25	1⅜ x 2	TVL-3431.8	5.40

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SPRAGUE CAPACITORS

TVL TWIST-LOK ELECTROLYTICS, continued

μF	WVDC	Dia.x Lgth.	Cat. No.	List
80-40-20	**150-150-25**	**1 x 2½**	**TVL-3432**	**$2.75**
80-40-300	**150-150-25**	**1⅜ x 2½**	**TVL-3432.4**	**3.60**
120-60-20	150-150-25	1⅜ x 2½	TVL-3432.6	5.25
* 10-10-10	150-150-150	1 x 2	TVL-3432.8	3.40
20-20-20	**150-150-150**	**1 x 2**	**TVL-3433**	**2.45**
30-30-10	**150-150-150**	**1 x 2**	**TVL-3435**	**2.45**
40-20-10	**150-150-150**	**1 x 2**	**TVL-3436**	**2.45**
40-20-20	**150-150-150**	**1 x 2½**	**TVL-3437**	**2.60**
40-30-20	**150-150-150**	**1 x 2**	**TVL-3438**	**2.55**
40-40-40	**150-150-150**	**1 x 3½**	**TVL-3440**	**2.70**
50-20-20	150-150-150	1 x 2½	TVL-3440.4	3.85
50-40-10	**150-150-150**	**1 x 2½**	**TVL-3441**	**2.65**
50-50-10	150-150-150	1⅜ x 2	TVL-3441.7	4.65
50-50-50	**150-150-150**	**1 x 3**	**TVL-3442**	**3.15**
50-50-50	150-150-150	1⅜ x 3	TVL-3442.1	5.05
60-40-20	**150-150-150**	**1 x 3**	**TVL-3443**	**2.70**
60-40-30	150-150-150	1⅜ x 2	TVL-3443.1	4.75
60-50-50	150-150-150	1⅜ x 2	TVL-3443.2	5.00
70-15-15	**150-150-150**	**1 x 2½**	**TVL-3443.3**	**2.65**
70-40-40	**150-150-150**	**1 x 3**	**TVL-3443.4**	**2.90**
80-20-20	150-150-150	1 x 3	TVL-3443.6	4.15
80-30-10	**150-150-150**	**1 x 3**	**TVL-3443.8**	**2.75**
80-40-20	**150-150-150**	**1 x 3**	**TVL-3444**	**2.85**
80-80-80	150-150-150	1⅜ x 3	TVL-3446	5.65
100-30-10	**150-150-150**	**1 x 3**	**TVL-3447**	**2.85**
120-80-40	**150-150-150**	**1⅜ x 3½**	**TVL-3448**	**3.80**
120-120-40	**150-150-150**	**1⅜ x 3**	**TVL-3448.2**	**4.05**
150-50-25	150-150-150	1⅜ x 3	TVL-3449	5.55
200-100-60	**150-150-150**	**1⅜ x 3½**	**TVL-3450**	**4.65**
*200-140-60	150-150-150	1⅜ x 4	TVL-3451	6.90
200-150-150	**150-150-150**	**1⅜ x 4**	**TVL-3452**	**5.05**
* 80-40-50	200-100-50	1⅜ x 2½	TVL-3460	5.10
40-40-20	200-150-25	1 x 3	TVL-3461	4.00
60-200-140	**200-150-150**	**1⅜ x 4**	**TVL-3461.4**	**5.00**
* 20-20-20	200-200-25	1 x 2	TVL-3462	3.65
* 30-20-20	200-200-25	1 x 2	TVL-3463	3.75
30-20-40	200-200-25	1 x 2	TVL-3464	3.80
60-5-20	**200-200-50**	**1 x 2½**	**TVL-3467**	**3.00**
80-10-20	**200-200-50**	**1 x 3**	**TVL-3471**	**2.65**
80-40-100	200-200-50	1⅜ x 3	TVL-3472	5.50
* 90-90-20	200-200-50	1⅜ x 3	TVL-3474	5.80
*100-10-40	200-200-50	1⅜ x 2	TVL-3475	5.05
30-20-40	**200-200-150**	**1 x 2½**	**TVL-3477**	**2.70**
* 20-20-20	200-200-200	1 x 2½	TVL-3480	3.85
30-20-20	200-200-200	1 x 2½	TVL-3481	3.90
50-30-30	200-200-200	1⅜ x 2	TVL-3485	4.95
* 40-40-20	250-150-25	1⅜ x 2	TVL-3504	4.70
80-40-50	**250-150-50**	**1⅜ x 2½**	**TVL-3506**	**3.60**
* 15-20-20	250-150-150	1 x 2	TVL-3507	3.70
60-40-20	250-200-25	1⅜ x 2	TVL-3508	5.10
15-15-20	**250-250-25**	**1 x 2**	**TVL-3510**	**2.45**
* 20-15-20	250-250-25	1 x 2½	TVL-3511	3.75
30-30-20	**250-250-25**	**1 x 3**	**TVL-3513**	**2.70**
60-60-25	250-250-25	1 x 3½	TVL-3514	4.90
* 70-70-20	250-250-50	1⅜ x 3	TVL-3515	5.85
90-90-20	**250-250-50**	**1⅜ x 3**	**TVL-3516**	**4.25**
* 40-20-10	250-250-150	1⅜ x 2	TVL-3517	4.70
40-40-10	250-250-200	1⅜ x 2	TVL-3520	5.00
* 80-80-60	250-250-200	1⅜ x 3½	TVL-3525	6.70
15-15-10	250-250-250	1 x 2	TVL-3530	3.75
20-20-10	250-250-250	1 x 2	TVL-3531	3.85
20-20-20	**250-250-250**	**1 x 2**	**TVL-3532**	**2.65**
30-15-10	250-250-250	1 x 2½	TVL-3534	3.95
30-15-15	250-250-250	1 x 2	TVL-3535	4.00
* 30-20-10	250-250-250	1 x 2	TVL-3537	4.00
40-20-10	250-250-250	1 x 2½	TVL-3539	4.15
40-20-20	**250-250-250**	**1 x 3½**	**TVL-3540**	**2.90**
80-10-10	**250-250-250**	**1 x 3**	**TVL-3543**	**3.05**
80-80-60	**250-250-250**	**1⅜ x 3**	**TVL-3545**	**4.55**

μF	WVDC	Dia.x Lgth.	Cat. No.	List
10-500-500	**300-15-15**	**1⅜ x 2½**	**TVL-3553**	**$3.80**
20-10-10	300-75-25	1 x 2	TVL-3555	3.60
100-60-20	300-150-25	1⅜ x 3	TVL-3560	6.15
20-150-80	**300-150-150**	**1⅜ x 3**	**TVL-3560.2**	**3.95**
100-150-30	300-150-150	1⅜ x 4	TVL-3560.4	7.05
100-200-30	**300-150-150**	**1⅜ x 4**	**TVL-3560.6**	**4.95**
100-200-60	**300-150-150**	**1⅜ x 4**	**TVL-3560.5**	**5.20**
* 20-80-10	300-250-200	1⅜ x 2½	TVL-3561	5.40
16-20-20	300-250-250	1 x 3	TVL-3561.3	4.05
* 40-80-40	300-250-250	1⅜ x 3	TVL-3561.5	6.20
60-30-30	300-250-250	1⅜ x 2½	TVL-3561.7	5.70
100-60-20	**300-250-250**	**1⅜ x 4**	**TVL-3562**	**4.55**
200-60-20	**300-250-250**	**1⅜ x 4**	**TVL-3563**	**6.00**
* 20-20-20	300-300-25	1 x 2½	TVL-3565	3.95
40-15-20	300-300-25	1 x 3	TVL-3570	4.25
* 40-20-20	300-300-25	1⅜ x 2	TVL-3573	4.90
140-10-100	300-300-25	1⅜ x 3½	TVL-3573.3	6.80
30-30-25	300-300-50	1 x 3	TVL-3573.6	4.35
100-10-60	**300-300-50**	**1⅜ x 2½**	**TVL-3574**	**4.00**
125-20-100	300-300-50	1⅜ x 3	TVL-3574.5	6.75
125-60-40	300-300-50	1⅜ x 4	TVL-3574.6	7.30
200-20-10	**300-300-100**	**1⅜ x 4**	**TVL-3575**	**5.25**
40-40-20	300-300-150	1⅜ x 2	TVL-3577	5.35
10-10-15	300-300-250	1 x 2	TVL-3578	3.75
10-10-10	**300-300-300**	**1 x 2**	**TVL-3580**	**2.55**
60-20-10	**300-300-300**	**1⅜ x 2**	**TVL-3581**	**3.60**
* 80-20-10	300-300-300	1⅜ x 2½	TVL-3582	5.75
80-40-40	**300-300-300**	**1⅜ x 2½**	**TVL-3583**	**4.40**
120-50-40	**300-300-300**	**1⅜ x 4**	**TVL-3585**	**5.10**
160-60-20	300-300-300	1⅜ x 4	TVL-3587	8.10
200-140-20	300-300-300	1⅜ x 4	TVL-3589	10.10
4-100-40	350-25-25	1 x 2	TVL-3603	3.65
5-100-40	350-25-25	1 x 2	TVL-3604	3.65
40-100-25	350-50-25	1⅜ x 2	TVL-3604.3	5.10
10-50-100	350-100-75	1 x 3	TVL-3605	4.15
20-50-100	**350-100-75**	**1 x 3**	**TVL-3606**	**2.90**
10-10-250	350-150-15	1 x 2½	TVL-3607	3.90
10-50-100	**350-150-50**	**1 x 3½**	**TVL-3608**	**2.80**
40-80-500	350-200-25	1⅜ x 3½	TVL-3609	6.95
125-5-100	**350-200-75**	**1⅜ x 3½**	**TVL-3610**	**4.75**
50-10-500	350-250-5	1⅜ x 2½	TVL-3611	5.65
50-10-1000	350-250-5	1⅜ x 2½	TVL-3611.2	6.25
* 20-30-20	350-250-25	1 x 3	TVL-3612	4.10
30-20-100	350-250-50	1 x 3	TVL-3613	4.45
* 30-20-10	350-250-250	1 x 3½	TVL-3615	4.30
10-80-25	350-300-25	1 x 4	TVL-3617	5.60
30-30-20	**350-300-25**	**1 x 3**	**TVL-3620**	**2.60**
30-50-20	350-300-25	1⅜ x 2½	TVL-3621	5.45
10-40-5	350-300-150	1 x 2½	TVL-3618	4.15
20-40-10	350-300-150	1 x 3½	TVL-3619	4.45
* 40-20-10	350-300-200	1⅜ x 2	TVL-3623	5.15
10-10-1400	350-350-3	1⅜ x 3	TVL-3626	6.00
* 10-10-20	350-350-25	1 x 2	TVL-3628	3.70
15-10-20	**350-350-25**	**1 x 2½**	**TVL-3630**	**2.55**
* 15-15-20	350-350-25	1 x 2½	TVL-3632	3.90
20-5-30	350-350-25	1 x 2	TVL-3633	3.80
20-5-100	**350-350-25**	**1 x 3**	**TVL-3633.3**	**2.70**
20-10-20	**350-350-25**	**1 x 2½**	**TVL-3634**	**2.60**
20-20-20	**350-350-25**	**1 x 2**	**TVL-3635**	**2.75**
30-10-20	350-350-25	1 x 2½	TVL-3635.5	4.15
30-20-20	**350-350-25**	**1 x 2**	**TVL-3636**	**2.90**
30-20-40	350-350-25	1 x 3	TVL-3636.2	4.40
30-30-20	**350-350-25**	**1⅜ x 2**	**TVL-3636.3**	**3.45**
40-5-30	350-350-25	1⅜ x 2	TVL-3636.4	4.90
40-40-50	350-350-25	1⅜ x 2½	TVL-3636.5	5.70
90-40-50	350-350-25	1⅜ x 3½	TVL-3636.7	6.90
200-10-50	**350-350-25**	**1⅜ x 4**	**TVL-3636.8**	**5.75**
10-5-30	350-350-50	1 x 2	TVL-3637	3.60
* 10-5-150	350-350-50	1 x 3	TVL-3638	4.05
20-5-150	**350-350-50**	**1 x 3**	**TVL-3638.1**	**3.25**

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SPRAGUE CAPACITORS

TVL TWIST-LOK ELECTROLYTICS, continued

μF	WVDC	Dia.x Lgth.	Cat. No.	List
20-10-100	**350-350-50**	**1⅜ x 2½**	**TVL-3638.2**	**$3.25**
80-10-40	350-350-50	1⅜ x 3	TVL-3638.3	6.00
80-10-100	350-350-50	1⅜ x 3	TVL-3638.4	6.20
150-4-30	**350-350-50**	**1⅜ x 3½**	**TVL-3638.5**	**4.90**
* 30-20-100	350-350-75	1⅜ x 2½	TVL-3629	5.35
* 40-20-10	350-350-100	1⅜ x 2	TVL-3638.6	5.20
30-20-100	**350-350-150**	**1⅜ x 2½**	**TVL-3638.7**	**3.80**
40-20-10	350-350-100	1 x 3	TVL-3638.8	4.55
* 40-40-100	350-350-200	1⅜ x 3½	TVL-3638.9	6.70
80-40-100	**350-350-200**	**1⅜ x 4**	**TVL-3639**	**5.05**
100-60-20	**350-350-200**	**1⅜ x 4**	**TVL-3639.2**	**5.15**
20-10-5	**350-350-250**	**1 x 2½**	**TVL-3639.4**	**2.60**
* 30-10-20	350-350-250	1 x 3	TVL-3639.5	4.35
20-20-10	350-350-350	1 x 3	TVL-3639.7	4.30
30-20-10	**350-350-350**	**1 x 2½**	**TVL-3639.8**	**3.00**
50-50-50	350-350-350	1⅜ x 3½	TVL-3639.9	7.20
60-40-20	**350-350-350**	**1⅜ x 4**	**TVL-3640**	**4.35**
60-40-40	350-350-350	1⅜ x 3½	TVL-3640.2	7.05
60-50-50	**350-350-350**	**1⅜ x 4**	**TVL-3641**	**4.95**
* 80-40-40	350-350-350	1⅜ x 4	TVL-3641.5	7.45
80-60-60	**350-350-350**	**1⅜ x 4**	**TVL-3642**	**5.55**
90-40-20	**350-350-350**	**1⅜ x 4**	**TVL-3645**	**4.85**
40-200-60	400-200-200	1⅜ x 4	TVL-3653	7.75
10-5-40	400-300-25	1 x 2	TVL-3655	3.65
* 60-40-20	400-300-25	1⅜ x 3½	TVL-3663	6.45
* 80-20-10	400-300-300	1⅜ x 3½	TVL-3667	6.80
10-50-30	400-350-25	1 x 3½	TVL-3670	4.70
* 80-20-100	400-350-50	1⅜ x 3½	TVL-3671	7.00
*100-10-20	400-350-50	1⅜ x 3½	TVL-3672	7.10
20-15-10	400-350-350	1 x 3	TVL-3673	4.35
* 15-15-40	400-400-25	1 x 3	TVL-3675	4.20
20-20-20	**400-400-25**	**1 x 3**	**TVL-3678**	**2.95**
* 20-10-40	400-400-50	1 x 3	TVL-3682	4.20
* 30-10-150	400-400-50	1⅜ x 2½	TVL-3682.4	5.50
* 80-40-100	400-400-50	1⅜ x 4	TVL-3683	7.75
80-40-150	**400-400-50**	**1⅜ x 4**	**TVL-3684**	**5.25**
100-10-20	**400-400-50**	**1⅜ x 3½**	**TVL-3685**	**4.80**
20-20-20	400-400-100	1 x 3	TVL-3686	4.50
* 20-10-10	400-400-350	1 x 3	TVL-3687	4.30
20-10-40	400-400-350	1 x 4	TVL-3687.2	5.00
20-20-10	**400-400-350**	**1 x 3**	**TVL-3687.4**	**3.05**
60-30-20	**400-400-350**	**1⅜ x 3**	**TVL-3688**	**4.50**
80-20-10	**400-400-350**	**1⅜ x 3**	**TVL-3689**	**4.80**
100-10-80	**400-400-350**	**1⅜ x 4**	**TVL-3689.3**	**5.90**
10-10-10	**400-400-400**	**1 x 2½**	**TVL-3690**	**2.75**
90-10-5	**400-400-400**	**1⅜ x 3**	**TVL-3696**	**4.60**
* 10-20-10	450-25-25	1 x 2	TVL-3701	3.60
30-20-20	450-25-25	1 x 3	TVL-3702	4.30
30-100-25	450-25-25	1⅜ x 2	TVL-3703	5.15
10-100-20	450-50-25	1 x 3	TVL-3703.5	3.95
* 80-100-20	450-50-50	1⅜ x 3	TVL-3704	6.90
* 10-50-100	450-150-25	1 x 3	TVL-3705	4.20
40-40-130	**450-150-50**	**1⅜ x 3**	**TVL-3706**	**3.95**
40-50-100	450-150-50	1⅜ x 2½	TVL-3706.4	5.85
40-100-50	450-150-50	1⅜ x 3	TVL-3707	6.10
10-50-100	**450-150-75**	**1 x 3**	**TVL-3707.4**	**2.90**
20-50-100	450-150-75	1⅜ x 2	TVL-3707.5	5.25
40-90-50	**450-150-150**	**1⅜ x 3**	**TVL-3708**	**4.15**
20-80-50	450-200-50	1⅜ x 2½	TVL-3709	5.50
20-60-100	**450-250-25**	**1⅜ x 2½**	**TVL-3711**	**3.85**
10-60-60	450-250-250	1⅜ x 3	TVL-3711.8	5.85
10-80-80	**450-250-250**	**1⅜ x 4**	**TVL-3712**	**4.35**
* 20-40-10	450-250-250	1⅜ x 2	TVL-3713	5.15
* 20-60-40	450-250-250	1⅜ x 3	TVL-3713.2	5.90
80-40-40	**450-250-250**	**1⅜ x 4**	**TVL-3713.4**	**5.10**
10-40-10	**450-300-150**	**1⅜ x 2**	**TVL-3713.7**	**3.30**
30-10-10	450-300-150	1 x 3	TVL-3714	4.45
5-80-40	**450-300-300**	**1⅜ x 3**	**TVL-3714.7**	**4.10**
10-100-20	450-300-300	1⅜ x 3	TVL-3715	6.30
20-15-10	450-300-300	1 x 3½	TVL-3716	4.35
* 10-10-20	450-350-25	1 x 2½	TVL-3719	3.80
* 10-10-50	450-350-25	1 x 3	TVL-3721	$3.90
30-15-40	**450-350-25**	**1⅜ x 2**	**TVL-3722.3**	**3.50**
30-40-50	**450-350-25**	**1 x 4**	**TVL-3723**	**3.50**
* 20-80-100	450-350-50	1⅜ x 3½	TVL-3722	6.65
* 15-20-20	450-350-250	1⅜ x 2	TVL-3724	5.00
20-15-10	450-350-300	1 x 3	TVL-3724.1	4.35
40-50-50	450-350-300	1⅜ x 4	TVL-3724.2	7.25
20-15-15	450-350-350	1 x 3	TVL-3724.3	4.50
20-40-10	**450-350-350**	**1⅜ x 2½**	**TVL-3724.4**	**4.30**
20-80-10	**450-350-350**	**1⅜ x 3**	**TVL-3724.5**	**4.35**
40-80-40	**450-350-350**	**1⅜ x 3½**	**TVL-3724.7**	**5.20**
50-80-10	450-350-350	1⅜ x 3½	TVL-3724.8	7.50
* 60-20-20	450-350-350	1⅜ x 3½	TVL-3725	6.80
* 60-40-20	450-350-350	1⅜ x 3½	TVL-3725.2	7.20
10-30-150	450-400-5	1 x 3	TVL-3725.5	4.60
30-50-40	450-400-25	1⅜ x 3	TVL-3725.6	6.45
60-80-20	**450-400-250**	**1⅜ x 4**	**TVL-3720**	**5.65**
10-30-30	450-400-300	1⅜ x 2½	TVL-3726	5.60
10-30-40	450-400-300	1⅜ x 2½	TVL-3726.1	5.75
4-40-40	450-400-300	1⅜ x 2½	TVL-3728	5.85
10-10-10	**450-450-25**	**1 x 2½**	**TVL-3729**	**2.60**
10-10-20	**450-450-25**	**1 x 2**	**TVL-3731**	**2.60**
15-15-20	450-450-25	1 x 3	TVL-3733	4.25
15-15-40	**450-450-25**	**1 x 2½**	**TVL-3734**	**2.85**
20-10-20	**450-450-25**	**1 x 3**	**TVL-3735**	**2.85**
* 20-15-20	450-450-25	1 x 3½	TVL-3737	4.45
20-20-20	**450-450-25**	**1 x 3**	**TVL-3739**	**3.05**
30-30-20	**450-450-25**	**1⅜ x 2½**	**TVL-3741**	**3.90**
30-30-125	**450-450-25**	**1⅜ x 3**	**TVL-3743**	**4.15**
40-20-20	**450-450-25**	**1⅜ x 2½**	**TVL-3743.7**	**3.90**
40-40-20	**450-450-25**	**1⅜ x 2½**	**TVL-3744**	**4.35**
40-40-40	**450-450-25**	**1⅜ x 3**	**TVL-3744.2**	**4.40**
80-10-125	**450-450-25**	**1⅜ x 3½**	**TVL-3745**	**4.75**
80-40-100	**450-450-25**	**1⅜ x 4**	**TVL-3746**	**5.45**
10-10-40	**450-450-50**	**1 x 2½**	**TVL-3749**	**2.65**
20-10-50	**450-450-50**	**1 x 3**	**TVL-3751**	**2.95**
20-20-100	450-450-50	1⅜ x 2½	TVL-3751.4	5.50
30-10-150	**450-450-50**	**1⅜ x 2½**	**TVL-3752**	**3.80**
30-15-150	**450-450-50**	**1⅜ x 3**	**TVL-3753**	**3.85**
30-30-40	450-450-50	1⅜ x 3	TVL-3753.6	6.00
35-25-150	**450-450-50**	**1⅜ x 3**	**TVL-3753.3**	**4.25**
* 40-10-40	450-450-50	1⅜ x 2½	TVL-3754	5.65
40-10-100	**450-450-50**	**1⅜ x 3**	**TVL-3754.2**	**4.60**
40-30-25	450-450-50	1⅜ x 2½	TVL-3754.5	6.20
40-40-100	**450-450-50**	**1⅜ x 3½**	**TVL-3755**	**4.60**
60-40-75	**450-450-50**	**1⅜ x 4**	**TVL-3756**	**5.00**
80-20-100	**450-450-50**	**1⅜ x 4**	**TVL-3757**	**5.05**
30-30-125	450-450-75	1⅜ x 3	TVL-3757.3	6.40
10-10-50	450-450-100	1⅜ x 2	TVL-3757.5	4.80
* 30-20-30	450-450-150	1⅜ x 2½	TVL-3757.7	5.70
40-40-40	**450-450-150**	**1⅜ x 3½**	**TVL-3758**	**4.55**
40-10-80	**450-450-200**	**1⅜ x 3**	**TVL-3761**	**4.15**
40-10-100	**450-450-200**	**1⅜ x 3½**	**TVL-3762**	**4.40**
40-40-60	**450-450-200**	**1⅜ x 3½**	**TVL-3763**	**5.25**
40-40-100	**450-450-200**	**1⅜ x 4**	**TVL-3764**	**5.20**
15-10-120	450-450-300	1⅜ x 3½	TVL-3765	6.85
* 15-15-10	450-450-300	1 x 3½	TVL-3766	4.40
15-5-15	450-450-350	1 x 3	TVL-3768	4.20
* 20-20-60	450-450-350	1⅜ x 3½	TVL-3770	6.55
* 40-10-10	450-450-350	1⅜ x 3	TVL-3772	5.80
40-40-60	450-450-350	1⅜ x 4	TVL-3773	7.90
40-40-80	**450-450-350**	**1⅜ x 4**	**TVL-3774**	**5.55**
* 60-20-40	450-450-350	1⅜ x 4	TVL-3775	7.45
10-10-10	**450-450-450**	**1 x 3**	**TVL-3776**	**2.80**
* 15-15-10	450-450-450	1 x 3½	TVL-3778	4.55
15-15-15	**450-450-450**	**1 x 3**	**TVL-3778.2**	**3.15**
20-10-10	**450-450-450**	**1 x 3**	**TVL-3779**	**2.65**
20-20-20	**450-450-450**	**1⅜ x 2½**	**TVL-3780**	**3.90**
30-10-10	**450-450-450**	**1⅜ x 2**	**TVL-3780.5**	**3.65**
30-20-20	**450-450-450**	**1⅜ x 3**	**TVL-3781**	**4.15**

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SPRAGUE CAPACITORS

TVL TWIST-LOK ELECTROLYTICS, continued

μF	WVDC	Dia.x Lgth.	Cat. No.	List
30-30-10	450-450-450	1⅜ x 3	TVL-3781.5	$6.20
30-30-30	**450-450-450**	**1⅜ x 3½**	**TVL-3782**	**4.55**
40-10-10	**450-450-450**	**1⅜ x 3**	**TVL-3783**	**3.95**
40-30-20	**450-450-450**	**1⅜ x 3**	**TVL-3784**	**4.55**
40-40-10	**450-450-450**	**1⅜ x 2½**	**TVL-3785**	**4.55**
40-40-20	**450-450-450**	**1⅜ x 3**	**TVL-3786**	**4.70**
40-40-40	**450-450-450**	**1⅜ x 3½**	**TVL-3787**	**5.20**
*50-30-30	450-450-450	1⅜ x 3½	TVL-3787.7	7.50
50-40-30	**450-450-450**	**1⅜ x 3½**	**TVL-3788**	**5.15**
60-10-10	450-450-450	1⅜ x 3	TVL-3788.5	6.50
60-20-20	**450-450-450**	**1⅜ x 3**	**TVL-3789**	**4.80**
60-30-10	**450-450-450**	**1⅜ x 3**	**TVL-3790**	**4.75**
60-40-20	**450-450-450**	**1⅜ x 3½**	**TVL-3791**	**5.20**
*80-40-10	450-450-450	1⅜ x 4	TVL-3792	8.20
80-40-20	**450-450-450**	**1⅜ x 4**	**TVL-3793**	**5.70**
20-50-20	**475-50-25**	**1 x 3**	**TVL-3801**	**2.80**
80-80-50	**475-150-50**	**1⅜ x 4**	**TVL-3801.5**	**5.20**
10-100-40	475-200-50	1⅜ x 2½	TVL-3800	5.40
40-40-100	475-250-50	1⅜ x 3	TVL-3802	6.30
*40-40-100	475-250-100	1⅜ x 3	TVL-3803	6.55
*40-40-10	475-250-250	1⅜ x 3½	TVL-3804	6.20
20-20-40	475-300-25	1⅜ x 2	TVL-3805	5.05
*40-40-100	475-300-50	1⅜ x 3½	TVL-3805.3	6.50
*40-80-10	475-300-300	1⅜ x 3½	TVL-3806	7.05
10-100-25	475-350-25	1⅜ x 3	TVL-3806.4	6.50
10-4-100	475-350-50	1 x 2½	TVL-3806.6	4.00
20-10-5	475-350-150	1 x 2½	TVL-3806.8	4.25
10-4-40	**475-350-250**	**1⅜ x 2**	**TVL-3807**	**3.25**
20-20-10	475-350-350	1 x 3	TVL-3809	4.65
40-40-25	475-400-50	1⅜ x 3	TVL-3813	6.65
10-45-100	475-450-50	1⅜ x 3	TVL-3815	6.10
40-40-20	475-450-50	1⅜ x 3	TVL-3815.2	6.80
10-40-100	**475-450-200**	**1⅜ x 3**	**TVL-3815.3**	**4.40**
40-20-20	475-450-450	1⅜ x 3	TVL-3815.6	6.75
40-80-10	**475-450-450**	**1⅜ x 4**	**TVL-3816**	**2.90**
40-40-500	475-475-10	1⅜ x 3½	TVL-3816.2	7.75
10-10-5	475-475-25	1 x 2½	TVL-3816.3	4.00
10-10-100	475-475-25	1 x 3	TVL-3816.4	4.25
20-10-20	475-475-25	1 x 3	TVL-3816.5	4.45
10-10-150	475-475-50	1 x 3	TVL-3816.7	4.50
20-10-20	475-475-50	1 x 3	TVL-3816.8	4.45
20-10-100	**475-475-50**	**1⅜ x 2**	**TVL-3817**	**3.55**
25-10-20	475-475-50	1 x 3	TVL-3818	4.60
20-10-100	**475-475-400**	**1⅜ x 4**	**TVL-3819**	**5.35**
*20-20-60	475-475-400	1⅜ x 3½	TVL-3820	7.20
20-20-60	**475-475-450**	**1⅜ x 4**	**TVL-3822**	**2.25**
*10-10-10	475-475-475	1 x 3	TVL-3835	4.40
30-30-10	475-475-475	1⅜ x 3	TVL-3839	6.60
30-30-20	**475-475-475**	**1⅜ x 3**	**TVL-3840**	**4.65**
*40-10-10	475-475-475	1⅜ x 3	TVL-3841	6.20
40-20-20	475-475-475	1⅜ x 3	TVL-3842	6.95
40-30-10	**475-475-475**	**1⅜ x 3**	**TVL-3842.6**	**4.65**
40-30-30	**475-475-475**	**1⅜ x 4**	**TVL-3843**	**5.15**
*40-35-10	475-475-475	1⅜ x 3	TVL-3844	7.15
10-80-10	500-150-150	1 x 3½	TVL-3902	4.35
10-100-40	500-200-50	1⅜ x 2½	TVL-3903	5.45
*40-40-100	500-250-50	1⅜ x 3	TVL-3905	6.55
20-20-40	500-300-25	1⅜ x 2	TVL-3907	5.15
20-40-100	500-300-25	1⅜ x 2½	TVL-3908	5.70
5-100-200	500-300-150	1⅜ x 4	TVL-3908.4	7.40
40-40-25	500-400-50	1⅜ x 3	TVL-3909	6.90
20-40-100	500-450-25	1⅜ x 3	TVL-3910	6.35
80-20-100	500-450-50	1⅜ x 4	TVL-3910.6	8.50
*10-40-40	500-450-450	1⅜ x 3½	TVL-3911	7.00
30-20-20	500-500-25	1⅜ x 2½	TVL-3920	6.15
10-10-100	500-500-50	1 x 3½	TVL-3926	4.45
20-10-100	**500-500-50**	**1 x 4**	**TVL-3928**	**3.25**
30-10-20	500-500-50	1⅜ x 2½	TVL-3930	5.70
40-40-100	**500-500-200**	**1⅜ x 4**	**TVL-3935**	**5.05**
10-10-5	500-500-350	1 x 2½	TVL-3939	4.20
20-20-60	**500-500-400**	**1⅜ x 3½**	**TVL-3942**	**$4.95**
10-10-10	**500-500-500**	**1 x 3**	**TVL-3952**	**3.55**
30-20-20	**500-500-500**	**1⅜ x 3**	**TVL-3956**	**4.65**
40-10-10	**500-500-500**	**1⅜ x 3**	**TVL-3962**	**5.25**
40-40-10	**500-500-500**	**1⅜ x 3½**	**TVL-3965**	**5.30**

QUADRUPLE UNITS

μF	WVDC	Dia.x Lgth.	Cat. No.	List
40-40-40-40	25-25-25-25	1⅜ x 2	TVL-4210	$4.60
5-5-25-100	75-75-25-15	1⅜ x 2	TVL-4351	4.45
50-20-150-30	**150-150-15-15**	**1⅜ x 2**	**TVL-4408**	**3.30**
40-40-50-200	150-150-25-10	1⅜ x 2	TVL-4408.4	5.15
20-20-160-40	**150-150-25-25**	**1⅜ x 2**	**TVL-4409**	**3.35**
40-40-100-100	150-150-25-25	1⅜ x 2	TVL-4410	5.25
40-40-200-100	150-150-25-25	1⅜ x 2	TVL-4410.3	5.50
50-40-160-40	**150-150-25-25**	**1⅜ x 2**	**TVL-4410.7**	**3.55**
80-20-160-40	150-150-25-25	1⅜ x 2	TVL-4411	5.40
80-30-100-40	150-150-25-25	1⅜ x 2	TVL-4411.2	5.30
40-40-100-100	150-150-50-50	1⅜ x 2	TVL-4411.5	5.35
30-20-20-200	150-150-150-10	1⅜ x 2	TVL-4412	4.95
40-40-20-200	**150-150-150-10**	**1⅜ x 2**	**TVL-4413**	**3.45**
50-30-25-200	150-150-150-10	1⅜ x 2	TVL-4413.4	5.20
60-40-20-200	**150-150-150-10**	**1⅜ x 2**	**TVL-4414**	**3.55**
80-80-10-200	150-150-150-10	1⅜ x 2½	TVL-4414.3	5.70
60-20-20-1000	150-150-150-15	1⅜ x 2½	TVL-4414.5	6.50
20-20-20-20	150-150-150-25	1⅜ x 2	TVL-4414.7	4.65
30-20-20-100	150-150-150-25	1⅜ x 2	TVL-4414.8	4.90
30-30-30-40	**150-150-150-25**	**1⅜ x 2**	**TVL-4415**	**3.30**
40-20-20-20	**150-150-150-25**	**1⅜ x 2**	**TVL-4417**	**3.20**
40-30-20-100	150-150-150-25	1⅜ x 2	TVL-4418	5.05
40-40-30-20	**150-150-150-25**	**1⅜ x 2**	**TVL-4420**	**3.35**
40-40-30-120	150-150-150-25	1⅜ x 2	TVL-4420.3	5.25
40-40-40-20	**150-150-150-25**	**1⅜ x 2**	**TVL-4421**	**3.40**
40-40-40-100	150-150-150-25	1⅜ x 2	TVL-4422	5.25
40-40-40-160	**150-150-150-25**	**1⅜ x 2**	**TVL-4423**	**3.60**
50-20-20-200	**150-150-150-25**	**1⅜ x 2**	**TVL-4424**	**3.55**
50-30-30-100	**150-150-150-25**	**1⅜ x 2**	**TVL-4424.5**	**3.45**
50-50-50-20	**150-150-150-25**	**1⅜ x 2**	**TVL-4425**	**3.50**
50-50-50-100	150-150-150-25	1⅜ x 2	TVL-4425.3	5.45
60-30-10-60	150-150-150-25	1⅜ x 2	TVL-4426	5.00
60-40-20-20	150-150-150-25	1⅜ x 2	TVL-4427	5.05
60-60-10-60	150-150-150-25	1⅜ x 2	TVL-4428	5.55
70-40-40-25	150-150-150-25	1⅜ x 2½	TVL-4429	5.35
80-40-30-100	150-150-150-25	1⅜ x 2½	TVL-4430	5.55
80-40-40-20	**150-150-150-25**	**1⅜ x 2**	**TVL-4431**	**3.60**
80-40-40-40	**150-150-150-25**	**1⅜ x 2½**	**TVL-4432**	**3.65**
80-40-40-100	**150-150-150-25**	**1⅜ x 2½**	**TVL-4434**	**3.75**
80-50-50-25	150-150-150-25	1⅜ x 2½	TVL-4435	5.55
80-60-40-100	150-150-150-25	1⅜ x 2½	TVL-4436	5.75
100-90-60-200	**150-150-150-25**	**1⅜ x 3**	**TVL-4437**	**4.40**
125 125-40-100	150-150-150-25	1⅜ x 3	TVL-4438	6.60
250-200-10-25	**150-150-150-50**	**1⅜ x 4**	**TVL-4440**	**5.15**
40-40-40-30	**150-150-150-150**	**1⅜ x 2**	**TVL-4441**	**3.50**
50-40-30-30	150-150-150-150	1⅜ x 2	TVL-4442	5.20
50-50-50-50	150-150-150-150	1⅜ x 2½	TVL-4443	5.65
80-50-20-20	150-150-150-150	1⅜ x 2½	TVL-4444	5.45
100-80-60-40	**150-150-150-150**	**1⅜ x 3**	**TVL-4445**	**4.20**
*40-20-10-20	200-200-200-25	1⅜ x 2	TVL-4470	4.90
40-40-50-80	250-250-150-150	1⅜ x 2½	TVL-4508	6.20
100-40-10-100	**250-250-250-50**	**1⅜ x 3½**	**TVL-4516**	**4.45**
80-60-40-20	250-250-250-150	1⅜ x 4	TVL-4524	6.95
40-40-20-20	250-250-250-250	1⅜ x 2½	TVL-4536	5.80
100-40-80-20	300-50-25-25	1⅜ x 3	TVL-4555	6.35
20-150-150-100	**300-150-150-30**	**1⅜ x 4**	**TVL-4557**	**4.75**
10-200-140-30	**300-150-150-150**	**1⅜ x 3½**	**TVL-4559**	**4.75**
10-200-200-30	**300-150-150-150**	**1⅜ x 4**	**TVL-4559.2**	**5.10**
100-60-10-20	**300-200-150-50**	**1⅜ x 3½**	**TVL-4559.5**	**4.50**
120-20-20-100	300-250-25-30	1⅜ x 3½	TVL-4562	6.95
200-20-100-20	**300-250-50-25**	**1⅜ x 4**	**TVL-4563**	**5.65**
*40-40-40-40	300-250-250-25	1⅜ x 2½	TVL-4560	6.05
100-40-125-50	300-300-150-50	1⅜ x 4	TVL-4560.4	7.80
140-10-10-100	**300-300-150-25**	**1⅜ x 3½**	**TVL-4560.6**	**4.80**

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SPRAGUE CAPACITORS

TVL TWIST-LOK ELECTROLYTICS, continued

μF	WVDC	Dia.x Lgth.	Cat. No.	List
100-10-200-30	**300-300-150-150**	**1¾ x 4**	**TVL-4561**	**5.50**
140-10-200-30	**300-300-150-150**	**1⅜ x 4**	**TVL-4561.3**	**5.70**
150-20-10-250	**300-300-250-50**	**1⅜ x 4**	**TVL-4564**	**5.45**
*10-10-10-20	300-300-300-25	1⅜ x 2	TVL-4565	4.75
40-30-20-50	300-300-300-25	1⅜ x 2½	TVL-4568	5.85
60-40-20-50	**300-300-300-25**	**1⅜ x 3½**	**TVL-4570**	**4.35**
*30-30-15-30	300-300-300-50	1⅜ x 3	TVL-4572	5.65
60-30-10-60	300-300-300-50	1⅜ x 2½	TVL-4573	6.10
150-30-30-150	**300-300-300-50**	**1⅜ x 4**	**TVL-4574**	**5.60**
40-40-40-20	**300-300-300-150**	**1⅜ x 3**	**TVL-4575**	**4.30**
120-40-40-10	**300-300-300-250**	**1⅜ x 4**	**TVL-4577**	**5.30**
40-20-10-10	**300-300-300-300**	**1⅜ x 2**	**TVL-4578**	**3.70**
40-40-20-10	**300-300-300-300**	**1⅜ x 3½**	**TVL-4579**	**4.05**
40-40-30-20	**300-300-300-300**	**1⅜ x 3**	**TVL-4580**	**4.35**
60-40-10-10	**300-300-300-300**	**1⅜ x 2½**	**TVL-4583**	**4.15**
200-20-20-20	**300-300-300-300**	**1⅜ x 4**	**TVL-4590**	**5.85**
20-150-80-20	350-150-150-25	1⅜ x 3	TVL-4603	6.40
60-60-30-160	350-150-150-25	1⅜ x 3	TVL-4603.2	6.60
40-50-20-80	350-150-150-50	1⅜ x 3	TVL-4603.4	5.90
20-60-160-40	350-200-25-25	1⅜ x 2	TVL-4603.6	5.70
15-80-40-200	350-200-200-25	1⅜ x 3	TVL-4603.8	6.30
20-100-100-10	350-200-200-100	1⅜ x 4	TVL-4604	6.85
20-100-100-20	350-200-200-200	1⅜ x 4	TVL-4604.3	7.00
20-40-10-250	350-300-150-50	1⅜ x 3	TVL-4604.5	6.25
20-150-10-250	**350-300-150-50**	**1⅜ x 4**	**TVL-4604.7**	**5.50**
*40-40-20-20	350-300-300-25	1⅜ x 3½	TVL-4605	6.25
30-30-50-100	**350-300-300-75**	**1⅜ x 3**	**TVL-4611**	**4.45**
160-60-10-4	**350-300-300-300**	**1⅜ x 4**	**TVL-4605.5**	**6.00**
40-10-100-25	**350-350-25-25**	**1⅜ x 2**	**TVL-4606**	**3.70**
60-4-100-40	**350-350-25-25**	**1⅜ x 2½**	**TVL-4607**	**3.95**
60-20-80-100	**350-350-150-50**	**1⅜ x 4**	**TVL-4608**	**4.65**
40-20-10-20	350-350-200-25	1⅜ x 2	TVL-4608.5	5.55
80-20-20-200	350-350-200-50	1⅜ x 3½	TVL-4608.7	7.30
60-40-60-20	**350-350-200-150**	**1⅜ x 3½**	**TVL-4609**	**4.65**
80-60-60-10	350-350-200-150	1⅜ x 4	TVL-4609.3	8.00
50-30-8-20	350-350-250-200	1⅜ x 2½	TVL-4609.6	6.20
*15-15-15-15	350-350-300-25	1⅜ x 2	TVL-4610	5.10
*35-35-10-20	350-350-300-25	1⅜ x 2½	TVL-4610.6	5.90
*10-10-10-10	350-350-300-300	1⅜ x 2	TVL-4612	4.95
*10-10-10-20	350-350-350-25	1⅜ x 2	TVL-4618	4.85
20-10-5-10	**350-350-350-25**	**1⅜ x 2**	**TVL-4620**	**3.30**
30-10-5-200	**350-350-350-25**	**1⅜ x 2**	**TVL-4620.3**	**3.90**
*30-20-20-20	350-350-350-25	1⅜ x 2½	TVL-4620.5	5.75
40-20-5-10	350-350-350-25	1⅜ x 2½	TVL-4621	5.65
*40-20-20-25	350-350-350-25	1⅜ x 2½	TVL-4621.3	6.00
40-40-20-20	**350-350-350-25**	**1⅜ x 3**	**TVL-4621.6**	**4.30**
40-40-30-10	**350-350-350-25**	**1⅜ x 3**	**TVL-4622**	**4.45**
40-40-40-40	**350-350-350-25**	**1⅜ x 3**	**TVL-4622.3**	**4.60**
15-15-15-50	350-350-350-50	1⅜ x 2	TVL-4623	5.25
40-30-10-50	350-350-350-50	1⅜ x 3	TVL-4624	6.15
40-40-40-150	**350-350-350-50**	**1⅜ x 4**	**TVL-4628**	**4.95**
50-40-20-100	350-350-350-50	1⅜ x 3	TVL-4628.3	6.90
50-40-40-160	350-350-350-50	1⅜ x 4	TVL-4629	7.65
*60-25-25-100	350-350-350-50	1⅜ x 3½	TVL-4630	7.00
60-30-30-150	**350-350-350-50**	**1⅜ x 3**	**TVL-4630.4**	**4.85**
70-40-10-50	**350-350-350-50**	**1⅜ x 3**	**TVL-4631**	**4.65**
100-10-10-20	**350-350-350-50**	**1⅜ x 3½**	**TVL-4632**	**4.65**
100-20-10-20	**350-350-350-50**	**1⅜ x 3½**	**TVL-4633**	**4.80**
100-40-30-50	**350-350-350-50**	**1⅜ x 4**	**TVL-4634**	**5.45**
140-20-10-100	350-350-350-50	1⅜ x 4	TVL-4634.2	8.30
90-30-5-100	**350-350-350-75**	**1⅜ x 3½**	**TVL-4625**	**4.95**
*80-60-40-20	350-350-350-150	1⅜ x 4	TVL-4634.4	8.35
20-10-5-60	350-350-350-200	1⅜ x 2½	TVL-4634.5	5.55
30-10-5-100	**350-350-350-200**	**1⅜ x 2½**	**TVL-4634.7**	**4.10**
40-20-20-10	**350-350-350-350**	**1⅜ x 2½**	**TVL-4635**	**4.10**
40-40-40-40	**350-350-350-350**	**1⅜ x 4**	**TVL-4635.3**	**5.20**
80-60-40-20	**350-350-350-350**	**1⅜ x 4**	**TVL-4635.7**	**5.75**
90-40-30-30	**350-350-350-350**	**1⅜ x 4**	**TVL-4635.8**	**5.60**

μF	WVDC	Dia.x Lgth.	Cat. No.	List
50-20-100-25	400-200-150-25	1⅜ x 2½	TVL-4636	$6.60
20-20-10-40	400-250-250-25	1⅜ x 2½	TVL-4636.5	5.30
40-120-10-150	**400-250-250-50**	**1⅜ x 4**	**TVL-4637**	**5.15**
*10-100-10-100	400-300-75-25	1⅜ x 3½	TVL-4638	6.60
30-40-50-200	400-300-250-150	1⅜ x 4	TVL-4640	8.00
20-30-20-20	400-300-300-25	1⅜ x 2½	TVL-4640.3	5.70
80-40-20-10	400-300-300-300	1⅜ x 4	TVL-4641	7.85
*20-40-100-10	400-350-50-50	1⅜ x 3	TVL-4650	6.05
20-10-10-20	400-350-200-25	1⅜ x 2	TVL-4652	5.10
40-80-100-25	**400-350-200-50**	**1⅜ x 4**	**TVL-4654**	**5.65**
40-10-80-10	400-350-250-250	1⅜ x 4	TVL-4657	6.95
*10-50-30-30	400-350-350-25	1⅜ x 3	TVL-4658	6.35
35-25-25-20	400-350-350-25	1⅜ x 2½	TVL-4658.4	6.30
*80-40-10-10	400-350-350-25	1⅜ x 4	TVL-4659	7.75
20-50-40-80	**400-350-350-50**	**1⅜ x 3**	**TVL-4660**	**4.65**
30-60-20-100	400-350-350-50	1⅜ x 4	TVL-4661	7.25
10-10-25-25	400-400-25-25	1⅜ x 2	TVL-4662	4.85
20-5-20-20	400-400-25-25	1⅜ x 2	TVL-4662.4	4.95
50-25-100-20	400-400-50-25	1⅜ x 3	TVL-4663	6.75
50-40-100-100	**400-400-50-25**	**1⅜ x 4**	**TVL-4663.2**	**5.00**
80-40-100-20	400-400-50-25	1⅜ x 4	TVL-4663.4	8.15
100-10-30-20	**400-400-50-50**	**1⅜ x 3½**	**TVL-4663.5**	**5.05**
*20-10-10-25	400-400-100-25	1⅜ x 2	TVL-4663.7	5.15
20-10-20-25	**400-400-200-25**	**1⅜ x 2**	**TVL-4663.8**	**3.50**
*10-10-40-10	400-400-200-50	1⅜ x 2	TVL-4664	5.15
*40-30-80-10	400-400-200-200	1⅜ x 3½	TVL-4664.4	7.20
40-10-80-10	400-400-250-250	1⅜ x 3½	TVL-4665	6.95
5-5-50-80	400-400-300-250	1⅜ x 3	TVL-4665.3	6.45
50-20-20-25	**400-400-350-25**	**1⅜ x 3**	**TVL-4665.5**	**4.50**
60-40-40-10	400-400-350-50	1⅜ x 3½	TVL-4666	8.00
*20-20-20-20	400-400-400-25	1⅜ x 2½	TVL-4667	5.95
60-30-30-150	400-400-400-25	1⅜ x 4	TVL-4668	8.15
80-40-10-20	**400-400-400-25**	**1⅜ x 4**	**TVL-4669**	**5.35**
80-40-30-40	**400-400-400-25**	**1⅜ x 4**	**TVL-4670**	**5.80**
90-40-10-40	400-400-400-25	1⅜ x 4	TVL-4670.3	8.45
40-40-40-150	400-400-400-50	1⅜ x 4	TVL-4670.5	8.25
90-20-10-50	**400-400-400-50**	**1⅜ x 4**	**TVL-4670.7**	**5.30**
80-20-10-100	400-400-400-50	1⅜ x 3½	TVL-4671	7.75
80-40-30-4	**400-400-400-350**	**1⅜ x 4**	**TVL-4672**	**5.80**
*30-30-20-20	400-400-400-400	1⅜ x 3	TVL-4672.8	7.10
*40-35-10-10	400-400-400-400	1⅜ x 3	TVL-4673	6.95
50-40-30-20	**400-400-400-400**	**1⅜ x 4**	**TVL-4674**	**5.55**
*80-10-10-10	400-400-400-400	1⅜ x 3½	TVL-4675	7.45
80-25-10-10	**400-400-400-400**	**1⅜ x 4**	**TVL-4680**	**5.30**
*40-40-30-10	450-150-50-50	1⅜ x 3	TVL-4695	6.00
10-80-40-100	450-200-200-50	1⅜ x 3	TVL-4700	6.10
20-80-20-50	**450-200-200-50**	**1⅜ x 3**	**TVL-4701**	**4.05**
60-40-10-80	450-250-150-50	1⅜ x 3½	TVL-4701.5	7.10
*40-40-40-20	450-250-250-25	1⅜ x 3	TVL-4702	6.65
60-80-40-20	**450-250-250-150**	**1⅜ x 4**	**TVL-4702.3**	**5.35**
10-100-10-100	**450-300-75-25**	**1⅜ x 3**	**TVL-4702.6**	**4.40**
*10-10-60-100	450-300-200-50	1⅜ x 3	TVL-4705	5.70
*10-40-40-100	450-300-250-50	1⅜ x 3½	TVL-4703	6.20
30-40-50-200	450-300-250-150	1⅜ x 4	TVL-4703.3	8.10
25-100-10-60	**450-300-300-50**	**1⅜ x 3**	**TVL-4703.5**	**4.75**
40-40-40-20	**450-300-300-150**	**1⅜ x 3**	**TVL-4703.7**	**4.80**
10-100-20-20	**450-300-300-200**	**1⅜ x 3**	**TVL-4704**	**4.55**
10-100-20-20	450-300-300-300	1⅜ x 3	TVL-4705.2	6.95
10-40-80-10	450-350-200-200	1⅜ x 3½	TVL-4705.4	6.40
10-40-100-100	**450-350-250-50**	**1⅜ x 3**	**TVL-4705.5**	**4.70**
40-30-15-50	450-350-300-50	1⅜ x 3	TVL-4705.8	6.60
10-100-10-20	450-350-350-25	1⅜ x 3	TVL-4706	6.95
10-60-40-25	**450-350-350-25**	**1⅜ x 4**	**TVL-4707**	**4.60**
*20-15-15-20	450-350-350-25	1⅜ x 2½	TVL-4708	5.55
20-80-50-100	**450-350-350-50**	**1⅜ x 4**	**TVL-4711**	**5.40**
30-40-40-10	450-350-350-200	1⅜ x 3½	TVL-4708.3	7.10
*80-10-30-40	450-400-300-150	1⅜ x 4	TVL-4710	8.05
80-10-40-30	**450-400-300-300**	**1⅜ x 4**	**TVL-4710.2**	**5.60**
* 5-60-50-20	450-400-350-25	1⅜ x 3½	TVL-4709	7.30
10-40-30-40	450-400-400-25	1⅜ x 3	TVL-4710.4	6.65
80-40-10-150	450-400-400-50	1⅜ x 4	TVL-4710.5	8.85

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SPRAGUE CAPACITORS

TVL TWIST-LOK ELECTROLYTICS, continued

μF	WVDC	Dia.x Lgth.	Cat. No.	List
*10-40-40-100	450-400-400-50	1⅜ x 3½	TVL-4710.7	$7.25
60-40-20-20	450-400-400-400	1⅜ x 4	TVL-4711.3	8.55
10-10-20-20	450-450-25-25	1⅜ x 2	TVL-4711.6	4.90
20-10-100-50	450-450-25-25	1⅜ x 2	TVL-4711.8	5.50
20-15-20-20	**450-450-25-25**	**1⅜ x 2**	**TVL-4712**	**3.65**
30-30-125-125	**450-450-25-25**	**1⅜ x 3**	**TVL-4712.3**	**4.55**
*30-10-150-30	450-450-50-50	1⅜ x 3	TVL-4712.5	6.15
20-20-60-100	**450-450-150-25**	**1⅜ x 2½**	**TVL-4712.7**	**4.15**
40-40-125-125	**450-450-150-25**	**1⅜ x 4**	**TVL-4712.8**	**5.45**
10-10-60-100	**450-450-200-50**	**1⅜ x 3**	**TVL-4713**	**3.90**
35-25-20-100	**450-450-200-50**	**1⅜ x 3**	**TVL-4714**	**4.50**
40-40-100-60	**450-450-200-200**	**1⅜ x 4**	**TVL-4714.3**	**5.70**
10-10-10-50	450-450-300-25	1⅜ x 2	TVL-4716	5.10
*40-40-10-50	450-450-300-50	1⅜ x 3½	TVL-4714.7	7.20
*20-20-30-30	450-450-300-300	1⅜ x 3½	TVL-4715	6.65
*20-20-30-30	450-450-350-350	1⅜ x 3	TVL-4717	6.80
*40-10-35-10	450-450-350-350	1⅜ x 3½	TVL-4718	6.90
40-20-80-10	450-450-350-350	1⅜ x 4	TVL-4719	8.20
40-40-30-30	**450-450-350-350**	**1⅜ x 4**	**TVL-4720**	**5.50**
10-10-10-20	**450-450-450-25**	**1⅜ x 2**	**TVL-4723**	**3.45**
10-10-10-100	450-450-450-25	1⅜ x 2	TVL-4723.3	5.35
15-10-10-20	450-450-450-25	1⅜ x 3	TVL-4723.5	5.45
20-10-10-100	450-450-450-25	1⅜ x 2	TVL-4724	5.70
20-20-20-20	**450-450-450-25**	**1⅜ x 2½**	**TVL-4724.2**	**4.15**
30-15-15-40	450-450-450-25	1⅜ x 2½	TVL-4724.4	6.25
30-20-20-20	450-450-450-25	1⅜ x 3	TVL-4724.5	6.55
30-30-10-20	450-450-450-25	1⅜ x 3	TVL-4724.7	6.55
30-30-10-125	**450-450-450-25**	**1⅜ x 3**	**TVL-4725**	**4.55**
*30-30-20-20	450-450-450-25	1⅜ x 3	TVL-4725.4	6.90
40-10-10-250	450-450-450-25	1⅜ x 3	TVL-4726	6.85
40-15-10-25	450-450-450-25	1⅜ x 3	TVL-4729	6.40
40-20-10-20	450-450-450-25	1⅜ x 3	TVL-4730	6.55
40-20-20-20	**450-450-450-25**	**1⅜ x 3**	**TVL-4731**	**4.60**
40-20-20-40	**450-450-450-25**	**1⅜ x 3**	**TVL-4732**	**4.65**
40-30-10-20	**450-450-450-25**	**1⅜ x 3½**	**TVL-4734**	**4.60**
40-40-10-20	**450-450-450-25**	**1⅜ x 3½**	**TVL-4736**	**4.85**
40-40-20-20	**450-450-450-25**	**1⅜ x 3½**	**TVL-4737**	**5.05**
40-40-40-40	**450-450-450-25**	**1⅜ x 3**	**TVL-4739**	**5.65**
50-40-5-20	450-450-450-25	1⅜ x 3	TVL-4739.3	7.35
60-40-40-10	**450-450-450-25**	**1⅜ x 4**	**TVL-4739.4**	**5.95**
60-50-5-20	**450-450-450-25**	**1⅜ x 4**	**TVL-4739.5**	**5.40**
80-40-40-40	**450-450-450-25**	**1⅜ x 4**	**TVL-4739.6**	**6.40**
10-10-10-150	450-450-450-50	1⅜ x 2½	TVL-4739.7	5.65
20-20-20-100	**450-450-450-50**	**1⅜ x 2½**	**TVL-4740**	**4.30**
30-30-15-30	**450-450-450-50**	**1⅜ x 3**	**TVL-4742**	**4.50**
30-30-15-100	450-450-450-50	1⅜ x 3½	TVL-4742.2	7.05
40-20-10-100	**450-450-450-50**	**1⅜ x 3½**	**TVL-4743**	**4.60**
40-40-10-25	**450-450-450-50**	**1⅜ x 3**	**TVL-4745**	**4.80**
40-40-10-50	**450-450-450-50**	**1⅜ x 4**	**TVL-4746**	**4.95**
60-40-10-25	**450-450-450-50**	**1⅜ x 4**	**TVL-4746.5**	**5.35**
40-40-10-100	**450-450-450-100**	**1⅜ x 3½**	**TVL-4747**	**5.20**
*10-10-10-10	450-450-450-150	1⅜ x 2	TVL-4750	5.20
60-10-10-20	**450-450-450-150**	**1⅜ x 3**	**TVL-4753**	**4.65**
*35-35-10-10	450-450-450-200	1⅜ x 3½	TVL-4755	7.00
40-10-10-100	450-450-450-200	1⅜ x 4	TVL-4755.4	7.30
40-40-30-10	450-450-450-200	1⅜ x 4	TVL-4756	8.00
*30-10-10-10	450-450-450-250	1⅜ x 2½	TVL-4756.3	5.95
*40-10-10-40	450-450-450-250	1⅜ x 3½	TVL-4756.6	6.80
40-20-10-100	**450-450-450-250**	**1⅜ x 4**	**TVL-4757**	**5.30**
60-10-10-40	450-450-450-250	1⅜ x 3½	TVL-4757.5	7.40
40-10-10-40	**450-450-450-350**	**1⅜ x 3**	**TVL-4758**	**4.70**
40-20-20-20	450-450-450-350	1⅜ x 3	TVL-4758.4	7.25
40-40-10-10	450-450-450-350	1⅜ x 3½	TVL-4759	7.40
5-5-5-5	**450-450-450-450**	**1⅜ x 2**	**TVL-4759.7**	**3.20**
10-10-10-10	**450-450-450-450**	**1⅜ x 2**	**TVL-4760**	**3.55**
20-10-10-10	**450-450-450-450**	**1⅜ x 2**	**TVL-4761**	**3.90**
20-20-20-20	**450-450-450-450**	**1⅜ x 3**	**TVL-4763**	**4.55**
25-20-20-20	450-450-450-450	1⅜ x 3½	TVL-4763.4	7.05
30-15-15-15	**450-450-450-450**	**1⅜ x 3**	**TVL-4766**	**4.45**
30-20-20-10	450-450-450-450	1⅜ x 3	TVL-4767	$6.85
30-30-15-10	450-450-450-450	1⅜ x 3½	TVL-4769	7.05
30-30-20-20	**450-450-450-450**	**1⅜ x 3**	**TVL-4769.4**	**5.05**
30-30-30-15	450-450-450-450	1⅜ x 4	TVL-4770	7.75
35-35-10-5	**450-450-450-450**	**1⅜ x 3½**	**TVL-4771**	**4.70**
40-10-10-10	**450-450-450-450**	**1⅜ x 3**	**TVL-4771.3**	**4.35**
40-20-20-10	450-450-450-450	1⅜ x 3	TVL-4771.6	7.15
40-35-10-10	**450-450-450-450**	**1⅜ x 3**	**TVL-4771.8**	**4.90**
40-40-4-4	**450-450-450-450**	**1⅜ x 3½**	**TVL-4772**	**4.80**
40-40-20-20	**450-450-450-450**	**1⅜ x 4**	**TVL-4773**	**5.50**
40-40-30-30	**450-450-450-450**	**1⅜ x 4**	**TVL-4774**	**5.90**
40-40-40-40	**450-450-450-450**	**1⅜ x 4**	**TVL-4775**	**6.45**
60-20-20-20	**450-450-450-450**	**1⅜ x 4**	**TVL-4778**	**5.35**
60-30-10-2	**450-450-450-450**	**1⅜ x 3**	**TVL-4779**	**5.00**
70-10-10-5	450-450-450-450	1⅜ x 3	TVL-4780	7.30
80-10-10-10	**450-450-450-450**	**1⅜ x 4**	**TVL-4783**	**5.30**
40-40-50-80	**475-250-150-50**	**1⅜ x 3½**	**TVL-4793**	**4.65**
20-40-100-80	**475-300-50-25**	**1⅜ x 3**	**TVL-4800**	**4.15**
10-100-10-100	**475-300-300-25**	**1⅜ x 3½**	**TVL-4802**	**4.55**
20-80-20-10	**475-300-300-300**	**1⅜ x 3½**	**TVL-4801**	**4.65**
*10-40-80-100	475-350-200-100	1⅜ x 3½	TVL-4802.6	6.90
20-40-80-100	**475-350-200-100**	**1⅜ x 4**	**TVL-4802.7**	**4.80**
10-40-80-100	**475-350-300-100**	**1⅜ x 4**	**TVL-4802.8**	**5.05**
10-30-5-80	475-350-350-50	1⅜ x 2½	TVL-4803	5.60
10-140-4-100	**475-350-350-50**	**1⅜ x 4**	**TVL-4803.3**	**5.45**
10-130-20-10	**475-350-350-350**	**1⅜ x 4**	**TVL-4803.4**	**5.45**
20-60-40-10	475-350-350-350	1⅜ x 3½	TVL-4803.7	7.40
30-130-10-10	**475-350-350-350**	**1⅜ x 4**	**TVL-4803.8**	**5.80**
10-40-100-10	475-400-50-25	1⅜ x 2½	TVL-4804	6.05
10-40-4-100	**475-400-350-50**	**1⅜ x 2½**	**TVL-4805**	**4.10**
5-70-25-5	**475-400-400-400**	**1⅜ x 3½**	**TVL-4805.5**	**4.90**
10-10-80-50	475-450-200-60	1⅜ x 3	TVL-4806	6.00
25-20-20-100	475-450-300-50	1⅜ x 3	TVL-4809	6.50
25-20-40-100	475-450-300-50	1⅜ x 3½	TVL-4810	6.90
10-60-30-125	**475-450-400-50**	**1⅜ x 4**	**TVL-4811**	**5.30**
10-50-30-30	**475-450-450-25**	**1⅜ x 3**	**TVL-4813**	**4.85**
10-40-10-100	**475-450-450-50**	**1⅜ x 2½**	**TVL-4814**	**4.35**
15-15-80-40	**475-475-300-50**	**1⅜ x 3**	**TVL-4815**	**4.80**
50-30-20-20	475-475-300-300	1⅜ x 4	TVL-4816	8.10
40-10-4-40	**475-475-350-300**	**1⅜ x 3**	**TVL-4817**	**4.60**
20-10-20-100	**475-475-450-25**	**1⅜ x 2½**	**TVL-4818**	**4.15**
10-5-80-40	475-475-450-50	1⅜ x 3½	TVL-4819	7.60
30-30-10-20	475-475-475-25	1⅜ x 3	TVL-4821	6.95
*40-20-10-10	475-475-475-25	1⅜ x 3	TVL-4822	6.95
80-30-10-20	475-475-475-25	1⅜ x 4	TVL-4824	8.95
20-20-10-10	**475-475-475-300**	**1⅜ x 2½**	**TVL-4826**	**4.20**
50-30-10-20	**475-475-475-300**	**1⅜ x 3½**	**TVL-4827**	**5.75**
*10-10-10-10	475-475-475-475	1⅜ x 2	TVL-4830	5.65
20-20-10-10	**475-475-475-475**	**1⅜ x 2½**	**TVL-4832**	**4.30**
20-20-20-20	**475-475-475-475**	**1⅜ x 3**	**TVL-4834**	**4.85**
40-10-10-10	475-475-475-475	1⅜ x 3	TVL-4838	6.90
40-20-10-10	**475-475-475-475**	**1⅜ x 3**	**TVL-4840**	**4.85**
10-100-30-100	500-300-300-25	1⅜ x 3½	TVL-4910	7.25
5-100-10-200	500-300-300-150	1⅜ x 4	TVL-4912	7.90
20-80-20-10	500-300-300-300	1⅜ x 3½	TVL-4914	7.10
30-10-150-30	**500-450-50-50**	**1⅜ x 3**	**TVL-4917**	**4.35**
10-10-10-10	**500-500-500-500**	**1⅜ x 2**	**TVL-4940**	**3.95**
40-40-8-8	**500-500-500-500**	**1⅜ x 4**	**TVL-4944**	**5.70**

CLOSED-TOP INSULATING TUBES

Tightly-fitting closed-top tubes made of black Kraft-Board.

Order with capacitors as required. List Price $.10 each

Cat. No.	Description
HKT-1	For 1 x 2 can
HKT-2	For 1 x 2½ can
HKT-3	For 1 x 3 can
HKT-4	For 1 x 4 can
HKT-5	For 1⅜ x 2 can
HKT-6	For 1⅜ x 2½ can
HKT-7	For 1⅜ x 3 can
HKT-8	For 1⅜ x 3½ can
HKT-9	For 1⅜ x 4 can

MOUNTING PLATES

List Price $.10 If Bought Separately

36-17	Metal	1
36-18	Metal	1⅜
36-20	Phenolic	1
36-21	Phenolic	1⅜

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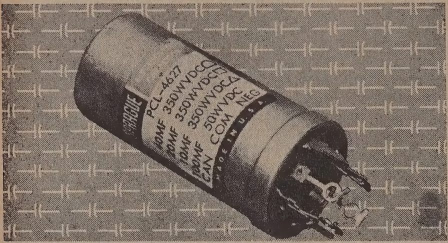
SPRAGUE CAPACITORS

PCL PRINT-LOK® ELECTROLYTICS

WITH UNIVERSAL PRINTED WIRING BOARD MOUNTING BASE



- Universal Printed Circuit Version of Famous Sprague Twist-Lok®. No Makeshift Mounting Adapters Required—No Possibility of High Resistance Contacts—No Possibility of Damaging Capacitor While Installing Adapters—No Extra Height Problems as With Adapters
- Fit all Printed Circuit Mountings or Standard Twist Base Mountings With a Touch of the Plfers
- Withstand High Surge Voltages, High Ripple Currents and Extremely High Temperatures (85°-150°F)
- Superior Electrically and Mechanically to Competitive Units
- Hermetically Sealed in Aluminum Cans for Long Life and Dependable Performance

μF	WVDC	D. x L.	Cat. No.	List
140	150	1 x 2½	PCL-1428	$2.35
375	165	1⅜ x 3½	PCL-1440	4.65
160	200	1⅜ x 2½	PCL-1473	3.10
20	450	1 x 2	PCL-1714	2.10
250-250	16-16	1 x 2	PCL-2170	2.45
800-250	16-16	1 x 2½	PCL-2180	3.05
50-30	150-150	1 x 2	PCL-2432	2.80
80-30	150-150	1 x 2	PCL-2441	2.45
80-40	150-150	1 x 2½	PCL-2442	2.50
200-5	150-150	1⅜ x 2½	PCL-2444	3.35
2-20	300-25	1 x 2	PCL-2553	2.00
10-10	300-50	1 x 2	PCL-2556.8	2.05
150-100	300-150	1⅜ x 4	PCL-2560.3	4.60
10-10	300-300	1⅜ x 3½	PCL-2565	2.55
70-30-100	150-150-10	1 x 2	PCL-3411	2.70
80-60-250	150-150-10	1 x 2½	PCL-3414.3	3.05
80-60-400	150-150-10	1 x 3	PCL-3414.4	3.20
90-40-400	150-150-10	1 x 3	PCL-3414.5	3.15
80-20-20	150-150-25	1 x 2½	PCL-3415.5	2.65

μF	WVDC	D. x L.	Cat. No.	List
40-20-20	150-150-25	1 x 2	PCL-3422	$2.45
70-30-20	150-150-25	1 x 2½	PCL-3431.1	2.65
30-30-30	150-150-150	1 x 2	PCL-3435.1	2.55
40-40-20	150-150-150	x 2	PCL-3439	2.60
50-30-20	150-150-150	1 x 2	PCL-3440.5	2.60
50-40-30	150-150-150	1 x 2½	PCL-3441.2	2.75
60-60-40	150-150-150	1⅜ x 2	PCL-3443.5	3.35
70-15-15	150-150-150	1 x 2	PCL-3443.3	2.60
10-10-20	300-50-25	1 x 2	PCL-3554	2.30
150-60-200	300-200-150	1⅜ x 4	PCL-3560.8	5.75
150-100-30	300-300-300	1⅜ x 4	PCL-3586	5.85
125-5-100	350-150-10	1⅜ x 3½	PCL-3606.5	4.55
40-30-20	400-350-300	1⅜ x 2½	PCL-3672.5	4.00
290-30-10-100	150-150-150-10	1⅜ x 3½	PCL-4414.4	4.55
50-40-10-50	150-150-150-25	1⅜ x 2	PCL-4424.6	3.35
100-40-10-50	150-150-150-25	1⅜ x 2	PCL-4436.5	3.55
60-60-40-10	150-150-150-150	1⅜ x 2	PCL-4443.5	3.60
100-60-60-40	350-350-200-75	1⅜ x 4	PCL-4608.9	5.70
40-20-10-100	350-350-350-50	1⅜ x 2½	PCL-4627	4.00
40-30-20-20	400-350-350-350	1⅜ x 2½	PCL-4708.5	4.55

SCREWBASE 'LYTICS

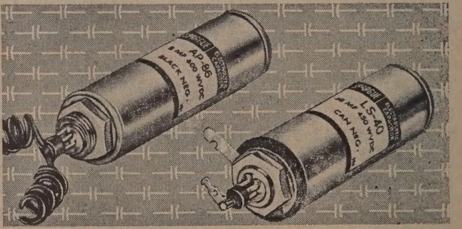
Type PLS—The Capacitor Sections Have Separate Positive Leads and a Common Negative Lead

Types LS and SC—Lug Connection is Positive, Can is Negative

Type CL—The Can is Insulated from the Sections . . . There are Separate Positive and Negative Leads

Type WR—These Capacitors are Designed to Replace Wet Electrolytics . . . They Will Withstand Extremely High A-C Ripple . . . Have Lug Terminals .

Type AP—Sections are Connected in Series . . . Insulated Leads



TYPE PLS—450 WVDC, 525 V Surge

μF	Diam. x Length	Cat. No.	List
4	1⅜ x 2 7/16	PLS-4	$2.00
8	1⅜ x 2 7/16	PLS-8	2.20
12	1⅜ x 2 7/16	PLS-12	2.40
16	1⅜ x 2 7/16	PLS-16	2.45
20	1⅜ x 2 7/16	PLS-20	2.70
25	1⅜ x 3 7/16	PLS-25	2.90
30	1⅜ x 2 15/16	PLS-30	3.00
40	1⅜ x 3 7/16	PLS-40	3.15
4+8	1⅜ x 2 15/16	PLS-48	2.95
8+8	1½ x 2 15/16	PLS-88	3.00
8+16	1½ x 2 15/16	PLS-816	3.30
16+16	1½ x 3 15/16	PLS-216	3.55
8+8+8	1½ x 2 15/16	PLS-888	5.00

TYPE LS—450 WVDC, 525 V Surge

μF	Diam. x Length	Cat. No.	List
8	1⅜ x 2 15/16	LS-8	$2.20
12	1⅜ x 2 15/16	LS-12	2.40
16	1⅜ x 2 15/16	LS-16	2.45
20	1⅜ x 2 15/16	LS-20	2.70
25	1⅜ x 3 7/16	LS-25	2.90
30	1⅜ x 3 7/16	LS-30	3.00
40	1⅜ x 3 15/16	LS-40	3.15
8+8	1⅜ x 2¼	LS-88	3.00

TYPE CL—475 WVDC, 600 V Surge

μF	Diam. x Length	Cat. No.	List
8	1⅜ x 4 7/16	CL-8	2.75
16	1½ x 4 7/16	CL-16	3.15
8+8	1½ x 4 15/16	CL-88	4.10

TYPE SC—475 WVDC, 600 V Surge

μF	Diam. x Length	Cat. No.	List
4	1 x 3 7/16	SC-4	$2.55
8	1⅜ x 4 7/16	SC-8	2.75
12	1⅜ x 4 7/16	SC-12	2.95
16	1½ x 4 7/16	SC-16	3.15
8+8	1⅜ x 4¼	SC-88	4.10

TYPE WR—500 WVDC, 600 V Surge

μF	Diam. x Length	Cat. No.	List
8	1⅜ x 2 7/16	WR-8	2.85
16	1⅜ x 2 7/16	WR-16	3.30
25	1⅜ x 2 15/16	WR-25	3.75

TYPE AP—600 WVDC, 800 V Surge

μF	Diam. x Length	Cat. No.	List
4	1 x 4 7/16	AP-46	2.95
8	1⅜ x 4 7/16	AP-86	3.15
16	1½ x 4 7/16	AP-16	3.75

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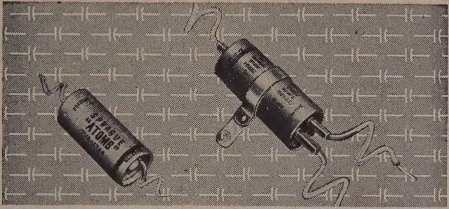
SPRAGUE CAPACITORS

ATOM® ELECTROLYTICS



- The Smallest Dependable Dry Electrolytic—The Only Small Size Capacitor Designed for 85°C (185°F) operation In Voltages To 450 WVDC
- Whether For AC-DC Sets, Auto Radios, Home Radio-phono Combinations, Or TV Sets, The SPRAGUE Line Will Handle All Your Replacement Requirements—No Dual Inventory Problems
- Small Enough To Fit Anywhere, Work Anywhere
- Have Low Leakage And Long Shelf Life
- Will Withstand High Temperatures, High Ripple Currents, High Surge Voltages
- Metal Case Construction with Outer Kraft-Board Insulating Case

SINGLE UNITS

μF	WVDC	Diam. x Length*	Cat. No.	List
50	6	3/8 x 1 1/4	TVA-1100	$1.20
100	6	1/2 x 1 1/8	TVA-1101	1.45
250	6	5/8 x 1 7/16	TVA-1102	1.85
500	6	5/8 x 2 3/16	TVA-1103	2.10
1000	6	11/16 x 2 3/16	TVA-1104	2.60
1500	6	13/16 x 2 11/16	TVA-1105	2.85
2000	6	13/16 x 2 15/16	TVA-1106	3.15
100	12	9/16 x 1 3/16	TVA-1130	1.50
250	12	5/8 x 1 11/16	TVA-1131	2.00
500	12	3/4 x 1 11/16	TVA-1132	2.30
1000	12	13/16 x 2 3/16	TVA-1133	3.05
100	15	5/8 x 1 3/16	TVA-1160	1.50
250	15	5/8 x 1 11/16	TVA-1161	2.15
500	15	11/16 x 2 3/16	TVA-1162	2.40
1000	15	7/8 x 2 3/16	TVA-1163	3.10
2	25	3/8 x 1 1/4	TVA-1201	1.15
5	25	3/8 x 1 1/4	TVA-1203	1.20
10	25	3/8 x 1 1/4	TVA-1204	1.25
25	25	3/8 x 1 1/4	TVA-1205	1.30
50	25	9/16 x 1 3/16	TVA-1206	1.35
100	25	9/16 x 1 11/16	TVA-1207	1.70
250	25	3/4 x 1 11/16	TVA-1208	2.30
500	25	7/8 x 2 3/16	TVA-1209	3.10
1	50	3/8 x 1 1/4	TVA-1300	1.15
2	50	3/8 x 1 1/4	TVA-1301	1.15
5	50	3/8 x 1 1/4	TVA-1303	1.20
10	50	3/8 x 1 1/4	TVA-1304	1.25
20	50	7/16 x 1 3/8	TVA-1305.5	1.25
25	50	7/16 x 1 3/8	TVA-1306	1.30
50	50	9/16 x 1 11/16	TVA-1308	1.50
100	50	3/4 x 1 11/16	TVA-1310	1.75
150	50	3/4 x 1 11/16	TVA-1311	1.90
250	50	15/16 x 1 11/16	TVA-1312	2.40
500	50	1 x 1 15/16	TVA-1315	3.20
4	150	3/8 x 1 1/4	TVA-1402	1.25
5	150	3/8 x 1 1/4	TVA-1403	1.25
8	150	3/8 x 1 3/4	TVA-1405	1.30
10	150	3/8 x 1 3/4	TVA-1406	1.35
12	150	1/2 x 1 5/8	TVA-1407	1.35
16	150	9/16 x 1 11/16	TVA-1409	1.45
20	150	9/16 x 1 11/16	TVA-1410	1.45
25	150	5/8 x 1 11/16	TVA-1411	1.55
30	150	5/8 x 1 11/16	TVA-1412	1.60
40	150	3/4 x 1 11/16	TVA-1413	1.70
50	150	13/16 x 1 11/16	TVA-1414	1.75
60	150	7/8 x 1 11/16	TVA-1415	1.85
80	150	7/8 x 1 15/16	TVA-1418	2.00
100	150	7/8 x 2 3/16	TVA-1420	2.15
150	150	1 x 2 3/16	TVA-1422	2.35
200	150	1 x 3 13/16	TVA-1423	2.70
300	150	1 3/8 x 3 7/8	TVA-1425†	3.60
200	200	1 3/8 x 3 3/8	TVA-1480†	3.60
4	250	7/16 x 1 5/8	TVA-1501	1.40
8	250	1/2 x 1 5/8	TVA-1503	1.55
10	250	9/16 x 1 11/16	TVA-1504	1.60
12	250	9/16 x 1 11/16	TVA-1505	$1.65
16	250	5/8 x 1 11/16	TVA-1507	1.75
20	250	11/16 x 1 11/16	TVA-1508	1.85
30	250	11/16 x 2 3/16	TVA-1510	2.00
40	250	3/4 x 2 3/16	TVA-1511	2.15
50	250	3/4 x 2 3/16	TVA-1512	2.35
60	250	13/16 x 2 3/16	TVA-1513	2.45
140	300	1 3/8 x 3 3/8	TVA-1575†	4.00
4	350	1/2 x 1 5/8	TVA-1601	1.40
8	350	5/8 x 1 11/16	TVA-1603	1.60
10	350	11/16 x 1 11/16	TVA-1604	1.70
12	350	11/16 x 1 11/16	TVA-1605	1.75
16	350	3/4 x 1 11/16	TVA-1607	1.90
20	350	13/16 x 1 11/16	TVA-1608	1.95
30	350	13/16 x 2 3/16	TVA-1610	2.25
40	350	7/8 x 2 7/16	TVA-1611	2.30
60	350	1 x 2 7/16	TVA-1613	2.65
10	400NP	1 1/16 x 2 1/16	TVAN-1650	2.25
1	450	7/16 x 1 1/8	TVA-1700	1.50
2	450	7/16 x 1 5/8	TVA-1701	1.50
4	450	9/16 x 1 11/16	TVA-1702	1.55
8	450	11/16 x 1 11/16	TVA-1704	1.75
10	450	11/16 x 1 11/16	TVA-1705	1.75
12	450	3/4 x 1 11/16	TVA-1706	1.85
16	450	3/4 x 2 3/16	TVA-1708	1.95
20	450	3/4 x 2 3/16	TVA-1709	2.10
30	450	7/8 x 2 3/16	TVA-1711	2.35
40	450	7/8 x 2 11/16	TVA-1712	2.40
50	450	7/8 x 3 3/16	TVA-1713	2.85
60	450	1 x 3 11/16	TVA-1714	3.35
80	450	1 x 3 11/16	TVA-1716	4.25
100	450	1 3/8 x 4 1/8	TVA-1718†	4.90
10	475	3/4 x 1 15/16	TVA-1802	1.85
20	475	7/8 x 2 7/16	TVA-1804	2.15
8	500	7/8 x 1 11/16	TVA-1902	1.80
10	500	7/8 x 1 11/16	TVA-1903	1.85
16	500	15/16 x 2 3/16	TVA-1905	2.05
20	500	1 x 2 3/16	TVA-1906	2.15
8	600	1 x 3 1/16	TVA-1962	3.95
10	600	1 x 3 1/16	TVA-1963	4.75
16	600	1 x 4 1/16	TVA-1965	5.40
20	600	1 x 4 1/16	TVA-1966	5.60

DUAL UNITS (COMMON NEGATIVE—3 LEADS)

μF	WVDC	Diam. x Length*	Cat. No.	List
10-10	25-25	7/8 x 1 7/16	TVA-2210	2.10
10-10	50-50	7/8 x 1 7/16	TVA-2315	2.15
8-8	150-150	7/8 x 1 7/16	TVA-2415	2.15
16-16	150-150	7/8 x 1 7/16	TVA-2420	2.25
20-12	150-150	7/8 x 1 7/16	TVA-2425	2.25
20-20	150-150	7/8 x 1 7/16	TVA-2428	2.30
30-20	150-150	7/8 x 1 11/16	TVA-2421	2.40
30-30	150-150	7/8 x 1 11/16	TVA-2434	2.45
40-20	150-150	7/8 x 1 11/16	TVA-2438	2.45
40-30	150-150	7/8 x 1 15/16	TVA-2442	2.50
40-40	150-150	7/8 x 1 15/16	TVA-2445	2.55
50-30	150-150	7/8 x 1 15/16	TVA-2450	2.55
50-50	150-150	7/8 x 2 7/16	TVA-2453	2.70

Add 1/16" to diameter and 1/8" to length to allow for outer insulating tube on all units except those marked (†) which are of Kraft-Board construction.

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SPRAGUE CAPACITORS

ATOM ELECTROLYTICS, continued

μF	WVDC	Diam. x Length*	Cat. No.	List
80-30	150-150	7/8 x 2 7/16	TVA-2460	$2.75
80-40	150-150	7/8 x 2 7/16	TVA-2461	2.80
80-50	150-150	7/8 x 2 15/16	TVA-2462	2.85
100-100	150-150	1 3/8 x 3 3/8	TVA-2464†	3.25
200-5	150-150	1 x 3 7/8	TVA-2467†	3.40
20-20	250-250	7/8 x 1 15/16	TVA-2515	2.55
40-10	250-250	7/8 x 2 3/16	TVA-2520	2.70
80-10	250-250	15/16 x 3 3/16	TVA-2525	4.55
120-80	250-250	1 3/8 x 3 7/8	TVA-2535†	4.50
140-5	350-350	1 1/4 x 3 7/8	TVA-2640†	4.80
80-100	450-50	1 3/8 x 4 3/8	TVA-2711†	4.90
8-8	450-450	7/8 x 1 11/16	TVA-2720	2.55
10-10	450-450	7/8 x 1 15/16	TVA-2722	2.65
16-8	450-450	7/8 x 2 3/16	TVA-2725	2.85
20-20	450-450	7/8 x 2 15/16	TVA-2730	3.45
30-30	450-450	1 x 3 3/16	TVA-2735	4.20
40-40	450-450	1 x 3 15/16	TVA-2740	5.20
50-30	450-450	1 x 3 15/16	TVA-2743	5.50

DUAL UNITS (SEPARATE SECTIONS—4 LEADS)

μF	WVDC	Diam. x Length*	Cat. No.	List
20-20	150-150	1 x 2 3/8	TU-220 †	2.30
40-20	150-150	1 1/16 x 2 5/8	TU-420 †	2.40
16-16	250-250	1 x 2 7/8	TU-216 †	2.45
8-8	450-450	1 1/16 x 3 3/8	TU-88 †	2.60
16-16	450-450	1 3/8 x 3 1/8	TU-1616†	3.20
120-120	150-150	1 1/8 x 5	TU-2120	6.40

TRIPLE UNITS

μF	WVDC	D. x L.	Cat. No.	List
30-30-100	150-150-12	7/8 x 1 15/16	TVA-3419	3.80
20-20-20	150-150-25	7/8 x 1 7/16	TVA-3415	3.60
40-20-20	150-150-25	7/8 x 1 11/16	TVA-3422.9	3.70
40-30-20	150-150-25	7/8 x 1 15/16	TVA-3423	3.80
40-40-20	150-150-25	7/8 x 2 3/16	TVA-3425	3.85
40-40-100	150-150-25	7/8 x 2 7/16	TVA-3427	4.05
50-30-20	150-150-25	7/8 x 2 3/16	TVA-3430	3.85
50-30-100	150-150-25	7/8 x 2 7/16	TVA-3432	$4.05
50-30-200	150-150-25	1 x 2 3/16	TVA-3433	4.25
50-50-20	150-150-25	15/16 x 2 3/16	TVA-3436	4.00
80-20-100	150-150-25	1 1/4 x 2 7/8	TVA-3437†	3.05
80-40-20	150-150-25	1 x 1 15/16	TVA-3437.1	4.05
250-120-50	150-150-25	1 3/8 x 3 7/8	TVA-3437.6†	5.10
20-20-20	150-150-150	7/8 x 1 11/16	TVA-3440	3.70
30-30-30	150-150-150	7/8 x 2 3/16	TVA-3444	3.90
40-30-20	150-150-150	7/8 x 2 3/16	TVA-3448	3.90
40-40-40	150-150-150	1 x 2 7/16	TVA-3451	4.05
40-40-20	150-150-150	7/8 x 2 7/16	TVA-3450	3.95
50-30-20	150-150-150	1 x 2 7/16	TVA-3453	3.95
80-40-20	150-150-150	1 x 2 15/16	TVA-3455	4.20
250-200-10	150-150-150	1 3/8 x 3 5/8	TVA-3460†	5.55
80-10-100	300-250-50	1 3/8 x 3 3/8	TVA-3556†	4.25
120-40-10	300-300-250	1 1/4 x 3 1/8	TVA-3563†	4.85
140-5-200	350-350-200	1 1/2 x 5 1/8	TVA-3620†	6.90
5-80-40	450-400-400	1 3/8 x 4 1/8	TVA-3712†	5.25
12-12-20	450-450-25	1 x 1 15/16	TVA-3716	4.00
20-20-20	450-450-25	1 x 2 7/16	TVA-3718	4.45
40-40-20	450-450-25	1 x 3 15/16	TVA-3720	5.50

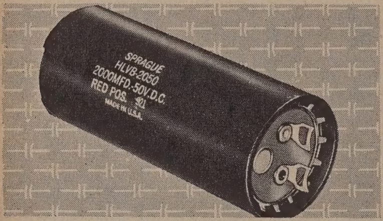
QUADRUPLE UNITS

μF	WVDC	D. x L.	Cat. No.	List
120-40-40-10	300-300-300-250	1 3/8 x 4 5/8	TVA-4584†	5.90
140-5-200-30	350-300-200-150	1 1/2 x 4 7/8	TVA-4576†	7.40
140-5-200-30	350-300-200-200	1 1/2 x 5 1/8	TVA-4607†	7.45
80-60-40-20	350-350-300-150	1 1/2 x 4 5/8	TVA-4618†	6.00
80-10-40-100	400-400-300-50	1 3/8 x 4 1/8	TVA-4659†	5.75
10-80-40-100	450-300-250-50	1 3/8 x 4 1/8	TVA-4705†	5.20
20-120-40-100	450-300-250-50	1 3/8 x 4 3/8	TVA-4706†	6.25
10-80-40-40	450-300-250-250	1 3/8 x 4 3/8	TVA-4708†	5.35
10-20-20-10	450-300-300-300	1 3/8 x 3 1/8	TVA-4712†	3.75
20-20-20-10	450-450-450-450	1 3/8 x 3 5/8	TVA-4742†	4.85
40-20-20-10	450-450-450-450	1 3/8 x 4 3/8	TVA-4748†	5.50
40-40-20-20	450-450-450-450	1 1/2 x 4 1/4	TVA-4750†	6.45

QUINTUPLE UNITS

μF	WVDC	D. x L.	Cat. No.	List
40-20-20-20-50	300-300-300-300-50	1 3/8 x 4	TVA-5100†	4.85

*Add 1/16″ to diameter and 1/8″ to length to allow for outer insulating tube on all units except those marked (†) which are of Kraft-Board construction.



HLVB HIGH-MF ELECTROLYTICS

- Very High Capacitance Ratings Available
- Designed for Low Voltage Filter Circuits
- Housed in Molded Bakelite Case
- Mount Easily, Securely, With Hardware Listed Below

μF	WVDC	Diam. x Length	Cat. No.	List
500	6	1 7/16 x 2 3/4	HLVB-56	$3.05
1000	6	1 7/16 x 2 3/4	HLVB-106	3.40
1500	6	1 7/16 x 2 3/4	HLVB-156	3.60
2000	6	1 7/16 x 2 3/4	HLVB-206	3.80
4000	10	1 7/16 x 2 3/8	HLVB-4010	4.75
6000	10	1 7/16 x 2 3/8	HLVB-6010	7.50
10000	10	1 13/16 x 4 3/8	HLVB-10010	8.25
500	12	1 7/16 x 2 3/4	HLVB-512	3.20
1000	12	1 7/16 x 2 3/4	HLVB-1012	3.75
1500	12	1 7/16 x 2 3/4	HLVB-1512	3.95
2000	12	1 7/16 x 2 3/4	HLVB-2012	4.15
500	15	1 7/16 x 2 3/4	HLVB-515	3.25
1000	15	1 7/16 x 2 3/4	HLVB-1015	3.80
1500	15	1 7/16 x 2 3/4	HLVB-1515	4.00
2000	15	1 7/16 x 2 3/4	HLVB-2015	4.70
4000	15	1 7/16 x 4 3/8	HLVB-4015	7.10
6000	15	1 13/16 x 4 3/8	HLVB-6015	8.05
6000	20	2 1/16 x 4 3/8	HLVB-6020	8.65
500	25	1 7/16 x 2 3/4	HLVB-525	3.80
1000	25	1 7/16 x 2 3/4	HLVB-1025	4.85
2000	25	1 7/16 x 4 3/8	HLVB-2025	5.75
4000	25	1 13/16 x 4 3/8	HLVB-4025	7.95
500	50	1 7/16 x 3 3/8	HLVB-550	4.25
1000	50	1 13/16 x 3 3/8	HLVB-1050	7.00
2000	50	1 13/16 x 4 3/8	HLVB-2050	9.10
3000	50	1 13/16 x 4 3/8	HLVB-3050	11.50
4000	50	2 1/16 x 4 3/8	HLVB-4050	$12.50
1000	150	1 13/16 x 4 3/8	HLVB-10150	10.50
500	200	1 13/16 x 4 3/8	HLVB-5200	9.80

HLVB MOUNTING HARDWARE

BRACKETS

Capacitor Size Dia. x Length	Cat. No.	List Price
1 7/16 x 2 3/4	ABB-1	$.30
1 7/16 x 3 3/8	ABB-2	.35
1 13/16 x 3 3/8	ABB-2	.35
1 13/16 x 4 3/8	ABB-3	.40
2 1/16 x 4 3/8	ABB-3	.40

END CAPS

Cap. Diam.	Cat. No.	List Price
1 7/16	ABC-2	$.25
1 13/16	ABC-4	.30
2 1/16	ABC-6	.35

VERTICAL MOUNTING CLAMPS

Cap. Diam.	Cat. No.	List Price
1 11/16	CMC-22A	$.25
1 13/16	CMC-28A	.30
2 1/16	CMC-32	.60

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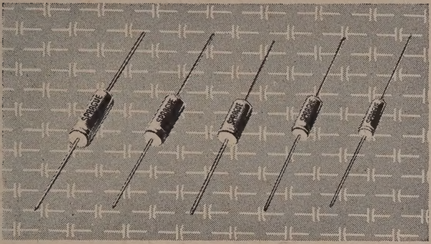
SPRAGUE CAPACITORS

TE LITTL-LYTIC® ELECTROLYTICS



- Ultra-Small—Excellent, Dependable Replacement Units for Transistorized Equipment Presently on the Market
- Reliability at Reasonable Prices
- All-Welded Construction—No Pressure Joints to Cause "Open" or Intermittent Circuits
- No Corrosion as with Competitive Units
- Extremely Low Leakage Current, Long Shelf Life
- Withstand Temperatures Up to 85°C (185°F)
- Furnished with Clear Plastic Outer Insulating Sleeves

µF	D. x L.*	Cat. No.	List
	1 WVDC		
5	¼ x 11/16	TE-1010	$1.50
	3 WVDC		
1	¼ x 11/16	TE-1050	1.50
2	¼ x 11/16	TE-1051	1.50
3	¼ x 11/16	TE-1052	1.50
4	¼ x 11/16	TE-1052.1	1.50
5	¼ x 11/16	TE-1052.2	1.50
6	¼ x 11/16	TE-1052.3	1.50
8	¼ x 11/16	TE-1052.5	1.50
10	¼ x 11/16	TE-1053	1.50
15	¼ x 11/16	TE-1053.5	1.50
20	¼ x 11/16	TE-1054	1.55
25	¼ x 11/16	TE-1055	1.55
35	¼ x 11/16	TE-1056	1.55
40	¼ x 11/16	TE-1057	1.55
50	¼ x 11/16	TE-1058	1.55
75	5/16 x 11/16	TE-1059	1.60
100	5/16 x 11/16	TE-1059.5	1.80
110	⅜ x 11/16	TE-1060	1.80
150	⅜ x 11/16	TE-1061	1.80
200	⅜ x 13/16	TE-1064	1.80
250	⅜ x 15/16	TE-1065	1.80
300	⅜ x 15/16	TE-1066	1.90
400	⅜ x 1¼	TE-1067	2.05
500	⅜ x 1½	TE-1068	2:15
	6 WVDC		
1	¼ x 11/16	TE-1080	1.50
2	¼ x 11/16	TE-1081	1.50
3	¼ x 11/16	TE-1082	1.50
4	¼ x 11/16	TE-1083	1.50
5	¼ x 11/16	TE-1084	1.50
6	¼ x 11/16	TE-1085	1.50
8	¼ x 11/16	TE-1086	1.50
10	¼ x 11/16	TE-1087	1.50
15	¼ x 11/16	TE-1089	1.55
20	¼ x 11/16	TE-1090	1.55
25	¼ x 11/16	TE-1091	1.55
30	¼ x 11/16	TE-1092	1.55
35	¼ x 11/16	TE-1093	1.55
40	¼ x 11/16	TE-1095	1.60
50	5/16 x 11/16	TE-1100	1.60
60	5/16 x 11/16	TE-1101	1.80
75	⅜ x 11/16	TE-1101.5	1.80
100	⅜ x 11/16	TE-1102	1.80
150	⅜ x 15/16	TE-1103	1.80
200	⅜ x 1¼	TE-1104	1.85
250	⅜ x 1¼	TE-1105	1.90
300	⅜ x 1½	TE-1106	2.00

µF	D. x L.*	Cat. No.	List
	10 WVDC		
10	¼ x 11/16	TE-1114	$1.55
15	¼ x 11/16	TE-1116	1.55
25	¼ x 11/16	TE-1118	1.60
50	⅜ x 11/16	TE-1119	1.80
100	⅜ x 13/16	TE-1119.3	1.80
200	⅜ x 1¼	TE-1119.6	2.00
	12 WVDC		
1	¼ x 11/16	TE-1120	1.50
2	¼ x 11/16	TE-1121	1.50
3	¼ x 11/16	TE-1122	1.50
4	¼ x 11/16	TE-1123	1.50
5	¼ x 11/16	TE-1127	1.50
6	¼ x 11/16	TE-1127.1	1.50
8	¼ x 11/16	TE-1127.3	1.50
10	¼ x 11/16	TE-1128	1.55
15	¼ x 11/16	TE-1129	1.55
20	¼ x 11/16	TE-1130	1.55
25	¼ x 11/16	TE-1131	1.60
35	5/16 x 11/16	TE-1132	1.60
50	⅜ x 11/16	TE-1133	1.80
75	⅜ x 13/16	TE-1134	1.80
100	⅜ x 13/16	TE-1135	1.80
150	⅜ x 1¼	TE-1136	1.90
200	⅜ x 1¼	TE-1137	2.00
250	⅜ x 1½	TE-1138	2.10
	15 WVDC		
1	¼ x 11/16	TE-1148	1.50
2	¼ x 11/16	TE-1149	1.50
3	¼ x 11/16	TE-1150	1.50
4	¼ x 11/16	TE-1151	1.50
5	¼ x 11/16	TE-1152	1.50
6	¼ x 11/16	TE-1153	1.50
8	¼ x 11/16	TE-1154	1.55
10	¼ x 11/16	TE-1155	1.55
15	¼ x 11/16	TE-1156	1.55
20	¼ x 11/16	TE-1157	1.55
25	5/16 x 11/16	TE-1157.1	1.60
30	5/16 x 11/16	TE-1158	1.60
35	⅜ x 11/16	TE-1159	1.60
50	⅜ x 11/16	TE-1160	1.80
75	⅜ x 13/16	TE-1161	1.80
100	⅜ x 15/16	TE-1162	1.80
150	⅜ x 1¼	TE-1163	1.90
200	⅜ x 1½	TE-1164	2.10

µF	D. x L.*	Cat. No.	List
	25 WVDC		
1	¼ x 11/16	TE-1200	$1.50
2	¼ x 11/16	TE-1201	1.50
3	¼ x 11/16	TE-1201.1	1.50
4	¼ x 11/16	TE-1201 2	1.50
5	¼ x 11/16	TE-1202	1.55
6	¼ x 11/16	TE-1203	1.55
8	¼ x 11/16	TE-1203.5	1.55
10	¼ x 11/16	TE-1204	1.55
15	5/16 x 11/16	TE-1205	1.60
20	⅜ x 11/16	TE-1206	1.80
25	⅜ x 11/16	TE-1207	1.80
35	⅜ x 13/16	TE-1208	1.80
50	⅜ x 15/16	TE-1209	1.80
75	⅜ x 1¼	TE-1210	1.90
100	⅜ x 1½	TE-1211	1.95
	50 WVDC		
1	¼ x 11/16	TE-1300	1.70
2	¼ x 11/16	TE-1301	1.70
3	¼ x 11/16	TE-1302	1.70
4	¼ x 11/16	TE-1302.1	1.70
5	¼ x 11/16	TE-1303	1.70
6	5/16 x 11/16	TE-1303.1	1.75
8	5/16 x 11/16	TE-1303.3	1.75
10	5/16 x 11/16	TE-1304	1.75
15	⅜ x 11/16	TE-1304.2	1.75
20	⅜ x 13/16	TE-1305	1.80
35	⅜ x 1¼	TE-1306	1.85
50	⅜ x 1½	TE-1307	1.90
	100 WVDC		
1	⅜ x 15/16	TE-1400	1.75
2	⅜ x 15/16	TE-1401	1.75
3	⅜ x 15/16	TE-1402	1.75
4	⅜ x 15/16	TE-1403	1.75
5	⅜ x 15/16	TE-1404	1.75
6	⅜ x 15/16	TE-1405	1.75
8	⅜ x 15/16	TE-1406	1.75
10	⅜ x 15/16	TE-1407	1.75
15	⅜ x 1¼	TE-1408	1.80
20	⅜ x 1½	TE-1409	1.85
	150 WVDC		
1	⅜ x 15/16	TE-1500	1.85
2	⅜ x 15/16	TE-1501	1.85
3	⅜ x 15/16	TE-1502	1.85
4	⅜ x 15/16	TE-1503	1.85
5	⅜ x 15/16	TE-1504	1.85
6	⅜ x 1¼	TE-1505	1.85
8	⅜ x 1¼	TE-1506	1.85
10	⅜ x 1¼	TE-1507	1.85
12	⅜ x 1½	TE-1508	1.90

*Add 1/16" to dimensions to allow for insulating sleeve.

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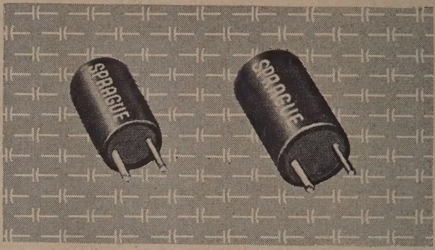
SPRAGUE CAPACITORS

VL VERTI-LYTIC* ELECTROLYTICS

- For Replacement of Units of this Type Found on Printed Wiring Boards in Original Equipment
- Sections Housed in Sturdy, Pre-Molded Phenolic Cases
- Resin End Fill Will Not Contaminate Electrolyte—Protects Against Drying or Entrance of External Moisture
- Low Leakage Current and Long Shelf Life
- Polarity Easily Determined by Larger Diameter of Negative Lead



*Trademark

µF	WVDC	D. x L.	Cat. No.	List
1	3	⅜ x ¾	VL-1031	$1.45
2	3	⅜ x ¾	VL-1032	1.45
3	3	⅜ x ¾	VL-1033	1.45
4	3	⅜ x ¾	VL-1034	1.45
5	3	⅜ x ¾	VL-1035	1.45
6	3	⅜ x ¾	VL-1036	1.45
8	3	⅜ x ¾	VL-1037	1.45
10	3	⅜ x ¾	VL-1038	1.45
15	3	⅜ x ¾	VL-1039	1.45
20	3	⅜ x ¾	VL-1040	1.45
25	3	⅜ x ¾	VL-1041	1.45
35	3	⅜ x ¾	VL-1043	1.50
50	3	⅜ x ¾	VL-1045	1.55
75	3	⅜ x ¾	VL-1048	1.70
100	3	⅜ x ⅞	VL-1051	1.75
150	3	7/16 x ⅞	VL-1055	1.75
200	3	7/16 x ⅞	VL-1059	1.80
250	3	½ x ⅞	VL-1063	1.95
290	3	½ x ⅞	VL-1067	2.00
1	6	⅜ x ¾	VL-1080	1.45
2	6	⅜ x ¾	VL-1081	1.45
3	6	⅜ x ¾	VL-1082	1.45
4	6	⅜ x ¾	VL-1083	1.45
5	6	⅜ x ¾	VL-1084	1.45
6	6	⅜ x ¾	VL-1085	1.45
8	6	⅜ x ¾	VL-1086	1.45
10	6	⅜ x ¾	VL-1087	1.45
15	6	⅜ x ¾	VL-1088	1.45
20	6	⅜ x ¾	VL-1089	1.45
25	6	⅜ x ¾	VL-1090	1.45
35	6	⅜ x ¾	VL-1092	1.50
50	6	⅜ x ¾	VL-1094	1.55
75	6	⅜ x ⅞	VL-1097	1.70
100	6	7/16 x ⅞	VL-1100	1.75
150	6	½ x ⅞	VL-1104	1.90
200	6	½ x ⅞	VL-1108	1.95
1	12	⅜ x ¾	VL-1120	1.45
2	12	⅜ x ¾	VL-1121	1.45
3	12	⅜ x ¾	VL-1122	1.45
4	12	⅜ x ¾	VL-1123	1.45
5	12	⅜ x ¾	VL-1124	1.50
6	12	⅜ x ¾	VL-1125	1.50
8	12	⅜ x ¾	VL-1126	1.50
10	12	⅜ x ¾	VL-1127	1.50
15	12	⅜ x ¾	VL-1128	1.55
20	12	⅜ x ¾	VL-1129	1.55
25	12	⅜ x ¾	VL-1130	1.55
35	12	⅜ x ¾	VL-1132	1.55
50	12	⅜ x ⅞	VL-1134	1.65

µF	WVDC	D. x L.	Cat. No.	List
75	12	7/16 x ⅞	VL-1137	$1.75
100	12	½ x ⅞	VL-1140	1.90
140	12	½ x ⅞	VL-1144	1.95
1	15	⅜ x ¾	VL-1160	1.45
2	15	⅜ x ¾	VL-1161	1.45
3	15	⅜ x ¾	VL-1162	1.45
4	15	⅜ x ¾	VL-1163	1.45
5	15	⅜ x ¾	VL-1164	1.50
6	15	⅜ x ¾	VL-1165	1.50
8	15	⅜ x ¾	VL-1166	1.50
10	15	⅜ x ¾	VL-1167	1.50
15	15	⅜ x ¾	VL-1168	1.55
20	15	⅜ x ¾	VL-1169	1.55
25	15	⅜ x ¾	VL-1170	1.55
35	15	⅜ x ⅞	VL-1172	1.55
50	15	7/16 x ⅞	VL-1174	1.65
75	15	½ x ⅞	VL-1177	1.80
90	15	½ x ⅞	VL-1180	1.95
1	25	⅜ x ¾	VL-1200	1.50
2	25	⅜ x ¾	VL-1201	1.50
3	25	⅜ x ¾	VL-1202	1.55
4	25	⅜ x ¾	VL-1203	1.65
5	25	⅜ x ¾	VL-1204	1.65
6	25	⅜ x ¾	VL-1205	1.65
8	25	⅜ x ¾	VL-1206	1.65
10	25	⅜ x ¾	VL-1207	1.65
15	25	⅜ x ¾	VL-1208	1.65
20	25	⅜ x ⅞	VL-1209	1.65
25	25	⅜ x ⅞	VL-1210	1.65
35	25	7/16 x ⅞	VL-1212	1.75
50	25	½ x ⅞	VL-1215	1.75
70	25	½ x ⅞	VL-1218	1.95
1	50	⅜ x ¾	VL-1300	1.50
2	50	⅜ x ¾	VL-1301	1.50
3	50	⅜ x ¾	VL-1302	1.55
4	50	⅜ x ¾	VL-1303	1.65
5	50	⅜ x ¾	VL-1304	1.65
6	50	⅜ x ¾	VL-1305	1.65
8	50	⅜ x ¾	VL-1306	1.65
10	50	⅜ x ⅞	VL-1307	1.65
15	50	7/16 x ⅞	VL-1308	1.65
20	50	7/16 x ⅞	VL-1309	1.65
25	50	½ x ⅞	VL-1310	1.65
100-30	6-6	7/16 x 1⅛	VL-2150	2.10
50-50	10-10	½ x ⅞	VL-2250	1.95
80-80	10-10	½ x ⅞	VL-2350	2.20
100-100-60	8-8-8	½ x 1⅜	VL-3320	3.45
50-50-15	10-10-3	½ x ⅞	VL-3350	3.00

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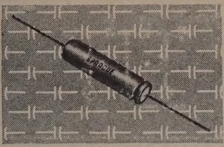
SPRAGUE CAPACITORS

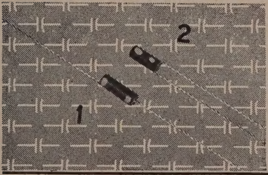
TYPE 40D MINIATURE EXTENDED-LIFE 85°C ELECTROLYTICS



- THE MOST RELIABLE TUBULAR ALUMINUM ELECTROLYTIC MANUFACTURED
- Premium quality. Service life of 10 years in actual circuit applications under typical operating conditions
- Special design and processing techniques result in ultra low leakage currents and high stability
- All critical terminations are welded to prevent open circuits even after extended service in the millivolt range
- Operating Temperature: −40°C to +85°C
- Units listed here have thermoplastic insulating sleeves; for rigid phenolic sleeve, change end of catalog number from A2 to A1; for bare metal tubes, delete last letter and digit
- Capacitance tolerance: −10, +100%
- Writ for Engineering Bulletin No. 3205 to compare this outstanding capacitor with any other unit on the market

μF	D. x L.	Catalog Number
3 VOLTS D-C WORKING		
1	5/16 x 3/4	40D100A2
2	5/16 x 3/4	40D101A2
3	5/16 x 3/4	40D102A2
4	5/16 x 3/4	40D103A2
5	5/16 x 3/4	40D104A2
6	5/16 x 3/4	40D105A2
8	5/16 x 3/4	40D106A2
10	5/16 x 3/4	40D107A2
15	5/16 x 3/4	40D108A2
20	5/16 x 3/4	40D109A2
25	5/16 x 3/4	40D110A2
35	3/8 x 3/4	40D111A2
50	7/16 x 3/4	40D112A2
75	7/16 x 3/4	40D113A2
100	7/16 x 7/8	40D114A2
150	7/16 x 1	40D115A2
200	7/16 x 1 5/16	40D116A2
225	7/16 x 1 5/16	40D117A2
250	7/16 x 1 9/16	40D118A2
300	7/16 x 1 9/16	40D119A2
6 VOLTS D-C WORKING		
1	5/16 x 3/4	40D120A2
2	5/16 x 3/4	40D121A2
3	5/16 x 3/4	40D122A2
4	5/16 x 3/4	40D123A2
5	5/16 x 3/4	40D124A2
6	5/16 x 3/4	40D125A2
8	5/16 x 3/4	40D126A2
10	5/16 x 3/4	40D127A2
15	5/16 x 3/4	40D128A2
20	3/8 x 3/4	40D129A2
25	3/8 x 3/4	40D130A2
35	7/16 x 3/4	40D131A2
50	7/16 x 3/4	40D132A2
75	7/16 x 7/8	40D133A2
100	7/16 x 1	40D134A2
150	7/16 x 1 5/16	40D135A2
175	7/16 x 1 5/16	40D136A2
200	7/16 x 1 9/16	40D137A2
250	7/16 x 1 9/16	40D138A2
12 VOLTS D-C WORKING		
1	5/16 x 3/4	40D139A2
2	5/16 x 3/4	40D140A2
3	5/16 x 3/4	40D141A2
4	5/16 x 3/4	40D142A2
5	5/16 x 3/4	40D143A2
6	5/16 x 3/4	40D144A2
8	5/16 x 3/4	40D145A2
10	5/16 x 3/4	40D146A2
15	5/16 x 3/4	40D147A2
20	3/8 x 3/4	40D148A2
25	3/8 x 3/4	40D149A2
35	7/16 x 3/4	40D150A2
50	7/16 x 7/8	40D151A2
75	7/16 x 1	40D152A2
100	7/16 x 1	40D153A2
150	7/16 x 1 5/16	40D154A2
200	7/16 x 1 9/16	40D155A2
15 VOLTS D-C WORKING		
1	5/16 x 3/4	40D156A2
2	5/16 x 3/4	40D157A2
3	5/16 x 3/4	40D158A2
4	5/16 x 3/4	40D159A2
5	5/16 x 3/4	40D160A2
6	5/16 x 3/4	50D161A2
8	5/16 x 3/4	40D162A2
10	5/16 x 3/4	40D163A2
15	3/8 x 3/4	40D164A2
20	7/16 x 3/4	40D165A2
25	7/16 x 3/4	40D166A2
35	7/16 x 7/8	40D167A2
50	7/16 x 7/8	40D168A2
75	7/16 x 1	40D169A2
100	7/16 x 1 5/16	40D170A2
150	7/16 x 1 9/16	40D171A2
25 VOLTS D-C WORKING		
1	5/16 x 3/4	40D172A2
2	5/16 x 3/4	40D173A2
3	5/16 x 3/4	40D174A2
4	5/16 x 3/4	40D175A2
5	5/16 x 3/4	40D176A2
6	3/8 x 3/4	40D177A2
8	3/8 x 3/4	40D178A2
10	7/16 x 3/4	40D179A2
15	7/16 x 3/4	40D180A2
20	7/16 x 7/8	40D181A2
25	7/16 x 1	40D182A2
35	7/16 x 1	40D183A2
50	7/16 x 1 5/16	40D184A2
75	7/16 x 1 9/16	40D185A2
50 VOLTS D-C WORKING		
1	5/16 x 3/4	40D186A2
2	3/8 x 3/4	40D187A2
3	3/8 x 3/4	40D188A2
4	7/16 x 3/4	40D189A2
5	7/16 x 3/4	40D190A2
6	7/16 x 3/4	40D191A2
8	7/16 x 7/8	40D192A2
10	7/16 x 7/8	40D193A2
15	7/16 x 1	40D194A2
20	7/16 x 1 5/16	40D195A2
25	7/16 x 1 9/16	40D196A2
30	7/16 x 1 9/16	40D197A2
100 VOLTS D-C WORKING		
1	7/16 x 1	40D198A2
2	7/16 x 1	40D199A2
3	7/16 x 1	40D200A2
4	7/16 x 1	40D201A2
5	7/16 x 1	40D202A2
6	7/16 x 1	40D203A2
8	7/16 x 1	40D204A2
10	7/16 x 1 5/16	40D205A2
15	7/16 x 1 9/16	40D206A2
18	7/16 x 1 9/16	40D207A2
150 VOLTS D-C WORKING		
1	7/16 x 1	40D208A2
2	7/16 x 1	40D209A2
3	7/16 x 1	40D210A2
4	7/16 x 1	40D211A2
5	7/16 x 1	40D212A2
6	7/16 x 1 5/16	40D213A2
8	7/16 x 1 5/16	40D214A2
10	7/16 x 1 9/16	40D215A2

TYPE 160D HEARING AID TANTALEX® CAPACITORS



- Especially designed for hearing aid applications—Meet the need for tiny, leakproof, high capacitance capacitors with long, trouble-free service life.
- Solid, non-corrosive electrolyte—nothing to leak!
- Long shelf and service life.
- Insulated with polyester tubes and epoxy end seals. Moisture proof!
- Operating temperature range: —55°C to +65°C
- Standard capacitance tolerance: —0%, +100%

.065 D. x .150 L.			
		Cat. No.	
μF	WVDC	Fig. 1	Fig. 2
3.0	2	160D28	160D628
2.0	4	160D27	160D627
1.5	4	160D29	160D629
1.0	8	160D25	160D625
0.8	8	160D41	160D641
0.5	15	160D30	160D630

.065 D. x .150 L.			
		Cat. No.	
μF	WVDC	Fig. 1	Fig. 2
0.4	15	160D31	160D631
0.2	15	160D32	160D632
0.15	15	160D33	160D633
0.1	15	160D34	160D634
0.05	15	160D35	160D635
8.0	2	160D19	160D619

.065 D. x .190 L.			
		Cat. No.	
μF	WVDC	Fig. 1	Fig. 2
5.0	4	160D36	160D636
4.0	4	160D10	160D610
2.0	8	160D20	160D620
1.5	8	160D37	160D637
1.0	15	160D21	160D621
0.8	15	160D38	160D638

.065 D. x .240 L.			
		Cat. No.	
μF	WVDC	Fig. 1	Fig. 2
10.0	2	160D22	160D622
8.0	4	160D18	160D618
5.0	8	160D39	160D639
4.0	8	160D24	160D624
2.0	15	160D23	160D623
1.5	15	160D40	160D640

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SPRAGUE CAPACITORS

PHOTOFLASH ELECTROLYTICS and ACCESSORIES

Build your own Electronic Flash!

Now you can build up-to-the-minute electronic photoflash units using the very latest low voltage circuits. These units are comparable to commerically manufactured gear in size, weight, and efficiency, yet can be built for considerably less than ready-made units. Your electronic flash eliminates flash bulb costs, too, and it stops action with better results. Sprague Booklet C-703 gives you step-by-step instructions for building four different models. Every detail is clearly illustrated and explained, making it easy to put one together in several hours. Photoflash accessories, listed below, are fully described and illustrated in this invaluable guide. These special items, plus a few standard parts and miscellaneous material, are all you need to build this outfit.

Description	Cat. No.	Dealer's Net
Sprague Photoflash Booklet	C-703	$ .35
Plug-in base with built-in trigger coil, 100 w-s nominal rating, Kemlite Type DX, for 450 V operation	FA-100	12.00
Reflector for Type DX lamp as used with vertical adapter	FA-101	2.75
Vertical adapter for medium Edison base sockets with cable	FA-102	2.60
Jaidinger miniature relay for 5-25 m-s delay synchronization from 3 to 4½ V cell flashguns	FA-103	3.50
"U" lamp, 100 w-s nominal rating, wafer base, for 450 V operation, Kemlite "U-5W", interchangeable with GE FT-105	FA-104	7.50
Reflector for Kemlite U-5W or GE FT-105	FA-105	3.50
4 volt vibrator, Oak V-6815, for 225 to 450 V voltage doubler power supplies. (See March, 1952 P. S. A. Journal for details).	FA-106	8.50

SPRAGUE
FF-1
525 MFD. 450 W.V.D.C.

- Ultra-low Leakage for Either Dry Battery or A-C Operated Power Supplies—Eliminate Rectifier Burnouts
- Weighs Only 11 oz.
- One-half the Size of Competitive Capacitors which Have More Than Twice the Leakage Current
- Highly Stable Film Formation Assures Long Life
- 525 MF, 450 WVDC, 53 Watt Seconds 2⅛" Diam. x 4⁷⁄₁₆" long

Cat. No. **FF-1,** List price **$22.50**

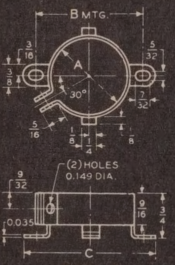

FIG. 1

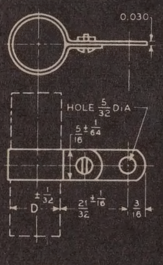

FIG. 3

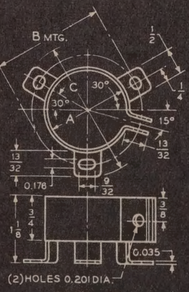

FIG. 2

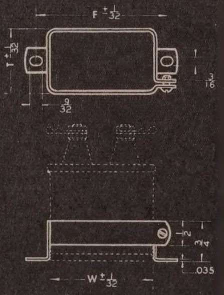

FIG. 4

CAPACITOR HARDWARE

- Sprague Mounting Clamps and Straps Provide Quick, Dependable Means for Securing a Wide Variety of Capacitors and Resistors to a Mounting Surface
- All Clamps and Straps are Made from Plated Steel

VERTICAL MOUNTING CLAMPS FOR CYLINDRICAL CAPACITORS

Catalog No.	A Diameter	B Mounting	Figure No.	List Price
CMC-16	1	1⁷⁄₁₆	1	$0.25
CMC-20	1¼	1¹¹⁄₁₆	1	.25
CMC-22	1⅜	1²⁵⁄₃₂	1	.25
CMC-22A	1⅜	1²⁵⁄₃₂	2	.25
CMC-24	1½	1¹⁵⁄₁₆	1	.30
CMC-28	1¾	2³⁄₁₆	1	.40
CMC-28A	1¾	2³⁄₁₆	2	.40
CMC-32	2	2½	2	.60
CMC-40	2½	3	2	.60

WRAP AROUND CLAMPS FOR RECTANGULAR CAPACITORS

Catalog No.	Dimensions T	W	F	Figure No.	List Price
RMC-17	1¹⁄₁₆	1¹³⁄₁₆	2¼	4	$0.50
RMC-19	1³⁄₁₆	2½	3	4	.50
RMC-20	1¼	3¾	4⅜	4	.50
RMC-28	1¾	3¾	4⅜	4	.50
RMC-36	2¼	3¾	4⅜	4	.55
RMC-40	2½	3¾	4⅜	4	.55
RMC-51	3³⁄₁₆	3¾	4⅜	4	.60
RMC-73	4⁹⁄₁₆	3¾	4⅜	4	.65

MOUNTING STRAPS FOR TUBULAR CAPACITORS

Catalog No.	Tube Diameter	Figure No.	List Price	Catalog No.	Tube Diameter	Figure No.	List Price
TMS-4	¼"	3	$0.06	TMS-14	⅞"	3	$0.06
TMS-5	⁵⁄₁₆"	3	.06	TMS-15	¹⁵⁄₁₆"	3	.06
TMS-6	⅜"	3	.06	TMS-16	1"	3	.10
TMS-7	⁷⁄₁₆"	3	.06	TMS-17	1¹⁄₁₆"	3	.10
TMS-8	½"	3	.06	TMS-18	1⅛"	3	.10
TMS-9	⁹⁄₁₆"	3	.06	TMS-19	1³⁄₁₆"	3	.10
TMS-10	⅝"	3	.06	TMS-20	1¼"	3	.15
TMS-11	¹¹⁄₁₆"	3	.06	TMS-21	1⁵⁄₁₆"	3	.15
TMS-12	¾"	3	.06	TMS-22	1⅜"	3	.15
TMS-13	¹³⁄₁₆"	3	.06				

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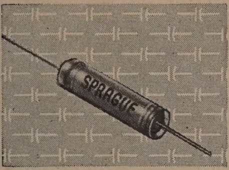
SPRAGUE CAPACITORS

85° C FOIL TANTALEX® CAPACITORS



- For applications where small physical size, stable electrical characteristics, and long service life are important.
- Type 110D and 112D also available marked to meet MIL-C-3965B. Order by complete military type designation.
- High capacitance stability even at low operating temperatures, unlike aluminum-foil electrolytics
- Extremely low leakage current
- New end-seal design with virtually leak-proof TFE-fluorocarbon elastomer seal
- Type 110D is of polarized plain-foil construction—Type 111D is non-polarized, with plain foil—Type 112D is of polarized etched-foil construction—Type 113D is of non-polarized etched-foil construction
- Standard capacitance tolerance: Types 110D and 111D, ±20%; Type 112D and 113D +75, −15%
- Standard units have outer plastic insulating wrap over case. For bare metal case, end Cat. No. in "0" instead of "1"

TYPE 110D
POLARIZED PLAIN-FOIL

3 WORKING VOLTS D-C

µF	Size Code	Catalog Number
10	D	110D106X0003D1
55	G	110D556X0003G1
160	J	110D167X0003J1
350	M	110D357X0003M1
440	P	110D447X0003P1

6 WORKING VOLTS D-C

µF	Size Code	Catalog Number
8	D	110D805X0006D1
30	G	110D306X0006G1
35	G	110D356X0006G1
100	J	110D107X0006J1
200	M	110D207X0006M1
300	P	110D307X0006P1

10 WORKING VOLTS D-C

µF	Size Code	Catalog Number
6	D	110D605X0010D1
25	G	110D256X0010G1
80	J	110D806X0010J1
160	M	110D167X0010M1
220	P	110D227X0010P1

15 WORKING VOLTS D-C

µF	Size Code	Catalog Number
4.5	D	110D455X0015D1
18	G	110D186X0015G1
55	J	110D556X0015J1
110	M	110D117X0015M1
160	P	110D167X0015P1

25 WORKING VOLTS D-C

µF	Size Code	Catalog Number
3	D	110D305X0025D1
12	G	110D126X0025G1
35	J	110D356X0025J1
70	M	110D706X0025M1
100	P	110D107X0025P1

30 WORKING VOLTS D-C

µF	Size Code	Catalog Number
2.5	D	110D255X0030D1
10	G	110D106X0030G1
30	J	110D306X0030J1
60	M	110D606X0030M1
85	P	110D856X0030P1

50 WORKING VOLTS D-C

µF	Size Code	Catalog Number
1.5	D	110D155X0050D1
6	G	110D605X0050G1
20	J	110D206X0050J1
40	M	110D406X0050M1
55	P	110D556X0050P1

60 WORKING VOLTS D-C

µF	Size Code	Catalog Number
1.2	D	110D125X0060D1
5	G	110D505X0060G1
17	J	110D176X0060J1
34	M	110D346X0060M1
48	P	110D486X0060P1

75 WORKING VOLTS D-C

µF	Size Code	Catalog Number
1	D	110D105X0075D1
4	G	110D405X0075G1
14	J	110D146X0075J1
28	M	110D286X0075M1
40	P	110D406X0075P1

100 WORKING VOLTS D-C

µF	Size Code	Catalog Number
.8	D	110D804X0100D1
3	G	110D305X0100G1
10	J	110D106X0100J1
20	M	110D206X0100M1
30	P	110D306X0100P1

150 WORKING VOLTS D-C

µF	Size Code	Catalog Number
.5	D	110D504X0150D1
1	G	110D105X0150G1
2	G	110D205X0150G1
7	J	110D705X0150J1
14	M	110D146X0150M1
20	P	110D206X0150P1

TYPE 111D
NON-POLARIZED PLAIN-FOIL

6 WORKING VOLTS N.P.

µF	Size Code	Catalog Number
5	D	111D505X0006D1
25	G	111D256X0006G1
85	J	111D856X0006J1
170	M	111D177X0006M1
250	P	111D257X0006P1

10 WORKING VOLTS N.P.

µF	Size Code	Catalog Number
3	D	111D305X0010D1
16	G	111D166X0010G1
55	J	111D556X0010J1
110	M	111D117X0010M1
150	P	111D157X0010P1

15 WORKING VOLTS N.P.

µF	Size Code	Catalog Number
2.5	D	111D255X0015D1
10	G	111D106X0015G1
35	J	111D356X0015J1
70	M	111D706X0015M1
100	P	111D107X0015P1

25 WORKING VOLTS N.P.

µF	Size Code	Catalog Number
1.5	D	111D155X0025D1
6	G	111D605X0025G1
20	J	111D206X0025J1
40	M	111D406X0025M1
60	P	111D606X0025P1

30 WORKING VOLTS N.P.

µF	Size Code	Catalog Number
1.4	D	111D145X0030D1
5.5	G	111D555X0030G1
18	J	111D186X0030J1
36	M	111D366X0030M1
45	P	111D456X0030P1

50 WORKING VOLTS N.P.

µF	Size Code	Catalog Number
.8	D	111D804X0050D1
3	G	111D305X0050G1
10	J	111D106X0050J1
20	M	111D206X0050M1
30	P	111D306X0050P1

60 WORKING VOLTS N.P.

µF	Size Code	Catalog Number
.6	D	111D604X0060D1
2.5	G	111D255X0060G1
8.5	J	111D855X0060J1
17	M	111D176X0060M1
24	P	111D246X0060P1

75 WORKING VOLTS N.P.

µF	Size Code	Catalog Number
.5	D	111D504X0075D1
2	G	111D205X0075G1
7	J	111D705X0075J1
14	M	111D146X0075M1
20	P	111D206X0075P1

100 WORKING VOLTS N.P.

µF	Size Code	Catalog Number
.4	D	111D404X0100D1
1.5	G	111D155X0100G1
5	J	111D505X0100J1
10	M	111D106X0100M1
15	P	111D156X0100P1

150 WORKING VOLTS N.P.

µF	Size Code	Catalog Number
.25	D	111D254X0150D1
1	G	111D105X0150G1
3.5	J	111D355X0150J1
7	M	111D705X0150M1
10	P	111D106X0150P1

TYPE 112D
POLARIZED ETCHED-FOIL

15 WORKING VOLTS D-C

µF	Size Code	Catalog Number
15	D	112D156C7015D1
60	G	112D606C7015G1
200	J	112D207C7015J1
400	M	112D407C7015M1
580	P	112D587C7015P1

25 WORKING VOLTS D-C

µF	Size Code	Catalog Number
10	D	112D106C7025D1
40	G	112D406C7025G1
120	J	112D127C7025J1
250	M	112D257C7025M1
350	P	112D357C7025P1

30 WORKING VOLTS D-C

µF	Size Code	Catalog Number
8	D	112D805C7030D1
32	G	112D326C7030G1
110	J	112D117C7030J1
220	M	112D227C7030M1
300	P	112D307C7030P1

50 WORKING VOLTS D-C

µF	Size Code	Catalog Number
4.5	D	112D455C7050D1
18	G	112D186C7050G1
60	J	112D606C7050J1
100	M	112D107C7050M1
150	P	112D157C7050P1

60 WORKING VOLTS D-C

µF	Size Code	Catalog Number
4	D	112D405C7060D1

75 WORKING VOLTS D-C

µF	Size Code	Catalog Number
3	D	112D305C7075D1
12	G	112D126C7075G1
30	J	112D306C7075J1
70	M	112D706C7075M1
100	P	112D107C7075P1

100 WORKING VOLTS D-C

µF	Size Code	Catalog Number
2	D	112D205C7100D1
8	G	112D805C7100G1
25	J	112D256C7100J1
50	M	112D506C7100M1
70	P	112D706C7100P1

150 WORKING VOLTS D-C

µF	Size Code	Catalog Number
1	D	112D105C7150D1
4	G	112D405C7150G1
13	J	112D136C7150J1
25	M	112D256C7150M1
36	P	112D366C7150P1

TYPE 113D
NON-POLARIZED ETCHED-FOIL

15 WORKING VOLTS N.P.

µF	Size Code	Catalog Number
10	D	113D106C7015D1
40	G	113D406C7015G1
120	J	113D127C7015J1
250	M	113D257C7015M1
350	P	113D357C7015P1

25 WORKING VOLTS N.P.

µF	Size Code	Catalog Number
5	D	113D505C7025D1
20	G	113D206C7025G1
70	J	113D706C7025J1
140	M	113D147C7025M1
200	P	113D207C7025P1

30 WORKING VOLTS N.P.

µF	Size Code	Catalog Number
4.5	D	113D455C7030D1
18	G	113D186C7030G1
60	J	113D606C7030J1
120	M	113D127C7030M1
170	P	113D177C7030P1

50 WORKING VOLTS N.P.

µF	Size Code	Catalog Number
2.5	D	113D255C7050D1
10	G	113D106C7050G1
30	J	113D306C7050J1
60	M	113D606C7050M1
80	P	113D806C7050P1

75 WORKING VOLTS N.P.

µF	Size Code	Catalog Number
1.5	D	113D155C7075D1
6	G	113D605C7075G1
15	J	113D156C7075J1
35	M	113D356C7075M1
50	P	113D506C7075P1

100 WORKING VOLTS N.P.

µF	Size Code	Catalog Number
1	D	113D105C7100D1
4	G	113D405C7100G1
12	J	113D126C7100J1
25	M	113D256C7100M1
35	P	113D356C7100P1

150 WORKING VOLTS N.P.

µF	Size Code	Catalog Number
.5	D	113D504C7150D1
2	G	113D205C7150G1
6	J	113D605C7150J1
12	M	113D126C7150M1
18	P	113D186C7150P1

SIZE CODE

Code	Diam x Length
D	13/64 x 3/4
G	19/64 x 15/16
J	25/64 x 1 1/2
M	25/64 x 2 3/16
P	25/64 x 2 13/16

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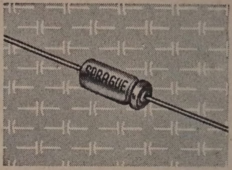
SPRAGUE CAPACITORS

TYPE 109D SINTERED-ANODE TANTALEX® CAPACITORS

- Intended for applications where superior quality and reliable design in military equipment is required
- May be operated to 85°C at rated voltage and to 105°C with 15% voltage derating
- Will meet 2000 cycle missile vibration requirements
- Double spun TFE-fluorocarbon elastomer high temperature end seals
- Sintered-anode permits higher capacitance
- Exhibit optimum characteristics with respect to frequency and temperature-coefficient of capacitance
- Unusual stability due to chemical inertness of tantalum oxide film to the specific electrolytes used
- Standard units have outer plastic insulating sleeves. For bare metal case, end Cat. No. in "0" instead of "2"



GROUP I: +20, −15% CAPACITANCE TOLERANCE

µF	Size Code	Catalog Number
6 WORKING VOLTS D-C		
27	C	109D276C2006C2
30	C	109D306C2006C2
120	F	109D127C2006F2
140	F	109D147C2006F2
290	T	109D297C2006T2
330	T	109D337C2006T2
8 WORKING VOLTS D-C		
22	C	109D226C2008C2
25	C	109D256C2008C2
100	F	109D107C2008F2
120	F	109D127C2008F2
260	T	109D267C2008T2
290	T	109D297C2008T2
10 WORKING VOLTS D-C		
18	C	109D186C2010C2
20	C	109D206C2010C2
85	F	109D856C2010F2
100	F	109D107C2010F2
220	T	109D227C2010T2
250	T	109D257C2010T2
15 WORKING VOLTS D-C		
13	C	109D136C2015C2
15	C	109D156C2015C2
55	F	109D556C2015F2
70	F	109D706C2015F2
150	T	109D157C2015T2
170	T	109D177C2015T2
25 WORKING VOLTS D-C		
9	C	109D905C2025C2
10	C	109D106C2025C2
45	F	109D456C2025F2
50	F	109D506C2025F2
100	T	109D107C2025T2
110	T	109D117C2025T2
30 WORKING VOLTS D-C		
7	C	109D705C2030C2
8	C	109D805C2030C2
35	F	109D356C2030F2
40	F	109D406C2030F2
80	T	109D806C2030T2
100	T	109D107C2030T2
50 WORKING VOLTS D-C		
4.5	C	109D455C2050C2
5	C	109D505C2050C2
22	F	109D226C2050F2
25	F	109D256C2050F2
55	T	109D556C2050T2
60	T	109D606C2050T2
60 WORKING VOLTS D-C		
3.6	C	109D365C2060C2
4	C	109D405C2060C2
18	F	109D186C2060F2
20	F	109D206C2060F2
45	T	109D456C2060T2
50	T	109D506C2060T2
75 WORKING VOLTS D-C		
3	C	109D305C2075C2
3.5	C	109D355C2075C2
13	F	109D136C2075F2
15	F	109D156C2075F2
35	T	109D356C2075T2
40	T	109D406C2075T2
100 WORKING VOLTS D-C		
2,5	C	109D255C2100C2
10	F	109D106C2100F2
11	F	109D116C2100F2
27	T	109D276C2100T2
30	T	109D306C2100T2

GROUP II: ±20% CAPACITANCE TOLERANCE

µF	Size Code	Catalog Number
6 WORKING VOLTS D-C		
66	C	109D666X0006C2
270	F	109D277X0006F2
560	T	109D567X0006T2
8 WORKING VOLTS D-C		
56	C	109D566X0008C2
220	F	109D227X0008F2
430	T	109D437X0008T2
10 WORKING VOLTS D-C		
47	C	109D476X0010C2
180	F	109D187X0010F2
390	T	109D397X0010T2
15 WORKING VOLTS D-C		
33	C	109D336X0015C2
120	F	109D127X0015F2
270	T	109D277X0015T2
25 WORKING VOLTS D-C		
22	C	109D226X0025C2
100	F	109D107X0025F2
180	T	109D187X0025T2
30 WORKING VOLTS D-C		
15	C	109D156X0030C2
68	F	109D686X0030F2
150	T	109D157X0030T2
50 WORKING VOLTS D-C		
10	C	109D106X0050C2
47	F	109D476X0050F2
82	T	109D826X0050T2
60 WORKING VOLTS D-C		
8.2	C	109D825X0060C2
37	F	109D376X0060F2
68	T	109D686X0060T2
75 WORKING VOLTS D-C		
6.8	C	109D685X0075C2
33	F	109D336X0075F2
56	T	109D566X0075T2
100 WORKING VOLTS D-C		
4.7	C	109D475X0100C2
22	F	109D226X0100F2
43	T	109D436X0100T2

TYPE 130D, 125°C SINTERED-ANODE TANTALEX® CAPACITORS

- No derating required for 125°C operation
- For applications demanding superior quality and high reliability
- This design will meet the 2000 cycle military missile vibration requirements
- Double spun TFE-fluorocarbon elastomer high temperature end seals
- Sintered-anode permits higher capacitance
- Lowest leakage current of any type of tantalum capacitor
- Optimum characteristics with respect to frequency and temperature-coefficient of capacitance
- Standard units have plastic film insulating tube. For bare metal cases, end catalog number in "0" instead of "2"

µF	WVDC	Size Code	Catalog Number
GROUP 1: +20%, −15% CAP. TOL.			
30	4	C	130D306C2004C2
140	4	F	130D147C2004F2
25	5	C	130D256C2005C2
20	7	C	130D206C2007C2
100	7	F	130D107C2007F2
15	10	C	130D156C2010C2
70	10	F	130D706C2010F2
10	15	C	130D106C2015C2
8	20	C	130D805C2020C2
40	20	F	130D406C2020F2
5	30	C	130D505C2030C2
25	30	F	130D256C2030F2
4	40	C	130D405C2040C2
20	40	F	130D206C2040F2
3.5	50	C	130D355C2050C2
15	50	F	130D156C2050F2
2.5	70	C	130D255C2070C2
11	70	F	130D116C2070F2
GROUP II: ±20% CAP. TOL.			
68	4	C	130D686X0004C2
270	4	F	130D277X0004F2
47	7	C	130D476X0007C2
180	7	F	130D187X0007F2
33	10	C	130D336X0010C2
120	10	F	130D127X0010F2
22	15	C	130D226X0015C2
15	20	C	130D156X0020C2
68	20	F	130D686X0020F2
10	30	C	130D106X0030C2
47	30	F	130D476X0030F2
6.8	50	C	130D685X0050C2
33	50	F	130D336X0050F2
4.7	70	C	130D475X0070C2
22	70	F	130D226X0070F2

SIZE CODE

Code	Diam.	Length
C	13/64	33/64
F	19/64	45/64
T	25/64	53/64

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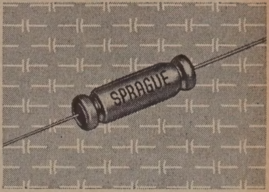
SPRAGUE CAPACITORS

125°C FOIL TANTALEX® CAPACITORS

- Ideal where small physical size, stable electrical characteristics, and long service and shelf life are important.
- Type 120D and 122D available marked to meet MIL-C-3965B. Order by complete military type designation.
- Capacitance remains stable at low operating temperatures—may be used where aluminum-foil electrolytics are inoperable
- Extremely low leakage current
- Standard capacitance tolerance: ±20%
- May often replace, where circuit parameters permit, aluminum electrolytics, paper capacitors, and metallized paper capacitors, resulting in substantial saving of weight and space
- Double synthetic-rubber and TFE-Fluorocarbon elastomer combination seals ensure reliable service life at 125°C
- Standard units have outer plastic insulating wrap over case. For bare metal case, end Cat. No. in "0" instead of "1"



TYPE 120D POLARIZED PLAIN-FOIL

µF	Size Code	Catalog Number
10 WORKING VOLTS D-C		
4.5	E	120D455X0010E1
18	H	120D186X0010H1
55	K	120D556X0010K1
110	N	120D117X0010N1
160	Q	120D167X0010Q1
15 WORKING VOLTS D-C		
3	E	120D305X0015E1
12	H	120D126X0015H1
35	K	120D356X0015K1
70	N	120D706X0015N1
100	Q	120D107X0015Q1
30 WORKING VOLTS D-C		
1.5	E	120D155X0030E1
6	H	120D605X0030H1
20	K	120D206X0030K1
40	N	120D406X0030N1
55	Q	120D556X0030Q1
50 WORKING VOLTS D-C		
1	E	120D105X0050E1
4	H	120D405X0050H1
14	K	120D146X0050K1
28	N	120D286X0050N1
40	Q	120D406X0050Q1
65 WORKING VOLTS D-C		
.8	E	120D804X0065E1
3	H	120D305X0065H1
10	K	120D106X0065K1
20	N	120D206X0065N1
30	Q	120D306X0065Q1
100 WORKING VOLTS D-C		
.5	E	120D504X0100E1
2	H	120D205X0100H1
7	K	120D705X0100K1
14	N	120D146X0100N1
20	Q	120D206X0100Q1
150 WORKING VOLTS D-C		
.35	E	120D354X0150E1
1.5	H	120D155X0150H1
5	K	120D505X0150K1
10	N	120D106X0150N1
15	Q	120D156X0150Q1

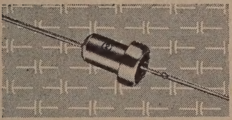
TYPE 121D NON-POLARIZED PLAIN-FOIL

µF	Size Code	Catalog Number
10 WORKING VOLTS N.P.		
2.5	E	121D255X0010E1
10	H	121D106X0010H1
35	K	121D356X0010K1
70	N	121D706X0010N1
100	Q	121D107X0010Q1
15 WORKING VOLTS N.P.		
1.5	E	121D155X0015E1
6	H	121D605X0015H1
20	K	121D206X0015K1
40	N	121D406X0015N1
60	Q	121D606X0015Q1
30 WORKING VOLTS N.P.		
.8	E	121D804X0030E1
3	H	121D305X0030H1
10	K	121D106X0030K1
20	N	121D206X0030N1
30	Q	121D306X0030Q1
50 WORKING VOLTS N.P.		
.5	E	121D504X0050E1
2	H	121D205X0050H1
7	K	121D705X0050K1
14	N	121D146X0050N1
20	Q	121D206X0050Q1
65 WORKING VOLTS N.P.		
.4	E	121D404X0065E1
1.5	H	121D155X0065H1
5	K	121D505X0065K1
10	N	121D106X0065N1
15	Q	121D156X0065Q1
100 WORKING VOLTS N.P.		
.25	E	121D254X0100E1
1.0	H	121D105X0100H1
3.5	K	121D355X0100K1
7	N	121D705X0100N1
10	Q	121D106X0100Q1
150 WORKING VOLTS N.P.		
.15	E	121D154X0150E1
.75	H	121D754X0150H1
2.5	K	121D255X0150K1
5.0	N	121D505X0150N1
7.5	Q	121D755X0150Q1

TYPE 122D POLARIZED ETCHED-FOIL

µF	Size Code	Catalog Number
15 WORKING VOLTS D-C		
9	E	122D905C7015E1
37	H	122D376C7015H1
120	K	122D127C7015K1
250	N	122D257C7015N1
350	Q	122D357C7015Q1
30 WORKING VOLTS D-C		
4.5	E	122D455C7030E1
18	H	122D186C7030H1
60	K	122D606C7030K1
100	N	122D107C7030N1
150	Q	122D157C7030Q1
50 WORKING VOLTS D-C		
3	E	122D305C7050E1
12	H	122D126C7050H1
30	K	122D306C7050K1
70	N	122D706C7050N1
100	Q	122D107C7050Q1
65 WORKING VOLTS D-C		
2	E	122D205C7065E1
8	H	122D805C7065H1
25	K	122D256C7065K1
50	N	122D506C7065N1
70	Q	122D706C7065Q1
100 WORKING VOLTS D-C		
1	E	122D105C7100E1
4	H	122D405C7100H1
13	K	122D136C7100K1
25	N	122D256C7100N1
36	Q	122D366C7100Q1

TYPE 131D and 132D - "CUP TYPE" TANTALEX® CAPACITORS



- —55°C to 85°C operation at full rating. 100°C operation with 15% derating
- Stable in performance characteristics over entire temperature range
- Large capacitance in small physical size
- Extremely low leakage
- 132D designed to withstand severe military vibration tests. Available marked to meet MIL-C-3965B. Order by complete military type designation.
- 131D for industrial electronics is similar to 132D but designed for static use in ground equipment. Write for Engineering Bulletin No. 3710a for complete details.

µF	Size Code	Catalog Number —15, +20% Tol.	Catalog Number —15, +50% Tol.
6 WORKING VOLTS D-C			
30	U	132D306C2006U0	132D306C7006U0
140	V	132D147C2006V0	132D147C7006V0
320	T	132D327C2006T0	132D327C7006T0
8 WORKING VOLTS D-C			
25	U	132D256C2008U0	132D256C7006U0
10 WORKING VOLTS D-C			
20	U	132D206C2010U0	132D206C7010U0
100	V	132D107C2010V0	132D107C7010V0
250	T	132D257C2010T0	132D257C7010T0
15 WORKING VOLTS D-C			
15	U	132D156C2015U0	132D156C7015U0
70	V	132D706C2015V0	132D706C7015V0
170	T	132D177C2015T0	132D177C7015T0
25 WORKING VOLTS D-C			
10	U	132D106C2025U0	132D106C7025U0
30 WORKING VOLTS D-C			
8	U	132D805C2030U0	132D805C7030U0
40	V	132D406C2030V0	132D406C7030V0
100	T	132D107C2030T0	132D107C7030T0
50 WORKING VOLTS D-C			
5	U	132D505C2050U0	132D505C7050U0
25	V	132D256C2050V0	132D256C7050V0
60	T	132D606C2050T0	132D606C7050T0
60 WORKING VOLTS D-C			
4	U	132D405C2060U0	132D405C7060U0
20	V	132D206C2060V0	132D206C7060V0
50	T	132D506C2060T0	132D506C7060T0
75 WORKING VOLTS D-C			
3.5	U	132D355C2075U0	132D355C7075U0
15	V	132D156C2075V0	132D156C7075V0
40	T	132D406C2075T0	132D406C7075T0
100 WORKING VOLTS D-C			
2	U	132D205C2100U0	132D205C7100U0
11	V	132D116C2100V0	132D116C7100V0
30	T	132D306C2100T0	132D306C7100T0
125 WORKING VOLTS D-C			
1.7	U	132D175C2125U0	132D175C7125U0
9	V	132D905C2125V0	132D905C7125V0
25	T	132D256C2125T0	132D256C7125T0

SIZE CODE

Code	Diam. x Length	Code	Diam. x Length	Code	Diam. x Length	Code	Diam. x Length
E	13/64 x 13/16	K	25/64 x 1 5/8	Q	25/64 x 2 15/16	V	11/16 x 15/32
H	19/64 x 1 3/32	N	25/64 x 2 5/16	U	15/32 x 5/16	T	49/64 x 37/64

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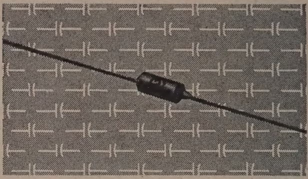
SPRAGUE CAPACITORS

TYPE 150D SOLID-ELECTROLYTE TANTALEX® CAPACITORS

- Combine True Miniaturization with Electrical and Performance Characteristics Previously Unobtainable in Electrolytic Capacitors
- Hermetically Sealed in Subminiature Metal Cases
- Solid Electrolyte Cannot Leak or Corrode, Even if Hermetic Seal is Accidentally Broken
- Exhibit Stable Capacitance and Low Dissipation Factor over Wide Temperature Range of −80°C to +85°C
- Temperature Coefficient of Capacitance is Unusually low and Linear—Nominally 600 ppm/°C
- Standard Units have Plastic Insulating Sleeves. For Bare Metal Case, end Cat. No. in "0" instead of "2"



6 WVDC — 8 VDC SURGE

µF	Size Code	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.
.22	A	150D224X0006A2	150D224X9006A2
.27	A	———	150D274X9006A2
.33	A	150D334X0006A2	150D334X9006A2
.39	A	———	150D394X9006A2
.47	A	150D474X0006A2	150D474X9006A2
.56	A	———	150D564X9006A2
.68	A	150D684X0006A2	150D684X9006A2
.82	A	———	150D824X9006A2
1.0	A	150D105X0006A2	150D105X9006A2
1.2	A	———	150D125X9006A2
1.5	A	150D155X0006A2	150D155X9006A2
1.8	A	———	150D185X9006A2
2.2	A	150D225X0006A2	150D225X9006A2
2.7	A	———	150D275X9006A2
3.3	A	150D335X0006A2	150D335X9006A2
3.9	A	———	150D395X9006A2
4.7	A	150D475X0006A2	150D475X9006A2
5.6	A	———	150D565X9006A2
6.8	A	150D685X0006A2	150D685X9006A2
8.2	B	———	150D825X9006B2
10	B	150D106X0006B2	150D106X9006B2
12	B	———	150D126X9006B2
15	B	150D156X0006B2	150D156X9006B2
18	B	———	150D186X9006B2
22	B	150D226X0006B2	150D226X9006B2
27	B	———	150D276X9006B2
33	B	150D336X0006B2	150D336X9006B2
39	B	———	150D396X9006B2
47	B	150D476X0006B2	150D476X9006B2
56	B	———	150D566X9006B2
60	B	150D606X0006B2	———
68	R	150D686X0006R2	———
100	R	150D107X0006R2	———
120	R	150D127X0006R2	———
150	R	150D157X0006R2	———
180	R	150D187X0006S2	———
220	S	150D227X0006S2	———
330	S	150D337X0006S2	———

10 WVDC — 13 VDC SURGE

µF	Size Code	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.
.22	A	150D224X0010A2	150D224X9010A2
.27	A	———	150D274X9010A2
.33	A	150D334X0010A2	150D334X9010A2
.39	A	———	150D394X9010A2
.47	A	150D474X0010A2	150D474X9010A2
.56	A	———	150D564X9010A2
.68	A	150D684X0010A2	150D684X9010A2
.82	A	———	150D824X9010A2
1.0	A	150D105X0010A2	150D105X9010A2
1.2	A	———	150D125X9010A2
1.5	A	150D155X0010A2	150D155X9010A2
1.8	A	———	150D185X9010A2
2.2	A	150D225X0010A2	150D225X9010A2
2.7	A	———	150D275X9010A2
3.3	A	150D335X0010A2	150D335X9010A2
3.9	A	———	150D395X9010A2
4.7	A	150D475X0010A2	150D475X9010A2
5.6	B	———	150D565X9010B2
6.8	B	150D685X0010B2	150D685X9010B2
8.2	B	———	150D825X9010B2
10	B	150D106X0010B2	150D106X9010B2
12	B	———	150D126X9010B2
15	B	150D156X0010B2	150D156X9010B2
18	B	———	150D186X9010B2
22	B	150D226X0010B2	150D226X9010B2
27	B	———	150D276X9010B2
33	B	150D336X0010B2	150D336X9010B2
39	B	———	150D396X9010B2
40	B	150D406X0010B2	———
68	R	150D686X0010R2	———
100	R	150D107X0010R2	———
120	R	150D127X0010R2	———
150	S	150D157X0010S2	———
220	S	150D227X0010S2	———

15 WVDC — 18 VDC SURGE

µF	Size Code	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.
.22	A	150D224X0015A2	150D224X9015A2
.27	A	———	150D274X9015A2
.33	A	150D334X0015A2	150D334X9015A2
.39	A	———	150D394X9015A2
.47	A	150D474X0015A2	150D474X9015A2
.56	A	———	150D564X9015A2
.68	A	150D684X0015A2	150D684X9015A2
.82	A	———	150D824X9015A2
1.0	A	150D105X0015A2	150D105X9015A2
1.2	A	———	150D125X9015A2
1.5	A	150D155X0015A2	150D155X9015A2
1.8	A	———	150D185X9015A2
2.2	A	150D225X0015A2	150D225X9015A2
2.7	A	———	150D275X9015A2
3.3	A	150D335X0015A2	150D335X9015A2
3.9	B	———	150D395X9015B2
4.7	B	150D475X0015B2	150D475X9015B2
5.6	B	———	150D565X9015B2
6.8	B	150D685X0015B2	150D685X9015B2
8.2	B	———	150D825X9015B2
10	B	150D106X0015B2	150D106X9015B2
12	B	———	150D126X9015B2
15	B	150D156X0015B2	150D156X9015B2
18	B	———	150D186X9015B2
22	B	150D226X0015B2	150D226X9015B2
33	R	150D336X0015R2	———
47	R	150D476X0015R2	———
68	R	150D686X0015R2	———
100	S	150D107X0015S2	———
150	S	150D157X0015S2	———

20 WVDC — 23 VDC SURGE

µF	Size Code	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.
.0047	A	150D472X0020A2	150D472X9020A2
.0056	A	———	150D562X9020A2
.0068	A	150D682X0020A2	150D682X9020A2
.0082	A	———	150D822X9020A2
.01	A	150D103X0020A2	150D103X9020A2
.012	A	———	150D123X9020A2
.015	A	150D153X0020A2	150D153X9020A2
.018	A	———	150D183X9020A2
.022	A	150D223X0020A2	150D223X9020A2
.027	A	———	150D273X9020A2
.033	A	150D333X0020A2	150D333X9020A2
.039	A	———	150D393X9020A2
.047	A	150D473X0020A2	150D473X9020A2
.056	A	———	150D563X9020A2
.068	A	150D683X0020A2	150D683X9020A2
.082	A	———	150D823X9020A2
.1	A	150D104X0020A2	150D104X9020A2
.12	A	———	150D124X9020A2
.15	A	150D154X0020A2	150D154X9020A2
.18	A	———	150D184X9020A2
.22	A	150D224X0020A2	150D224X9020A2
.27	A	———	150D274X9020A2
.33	A	150D334X0020A2	150D334X9020A2
.39	A	———	150D394X9020A2
.47	A	150D474X0020A2	150D474X9020A2
.56	A	———	150D564X9020A2
.68	A	150D684X0020A2	150D684X9020A2
.82	A	———	150D824X9020A2
1.0	A	150D105X0020A2	150D105X9020A2
1.2	A	———	150D125X9020A2
1.5	A	150D155X0020A2	150D155X9020A2
1.8	A	———	150D185X9020A2
2.2	A	150D225X0020A2	150D225X9020A2
2.7	B	———	150D275X9020B2
3.3	B	150D335X0020B2	150D335X9020B2
3.9	B	———	150D395X9020B2
4.7	B	150D475X0020B2	150D475X9020B2
5.6	B	———	150D565X9020B2
6.8	B	150D685X0020B2	150D685X9020B2
8.2	B	———	150D825X9020B2
10	B	150D106X0020B2	150D106X9020B2
12	B	———	150D126X9020B2
15	B	150D156X0020B2	150D156X9020B2
22	R	150D226X0020R2	———
33	R	150D336X0020R2	———
47	R	150D476X0020R2	———
68	S	150D686X0020S2	———
100	S	150D107X0020S2	———

35 WVDC — 40 VDC SURGE

µF	Size Code	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.
.0047	A	150D472X0035A2	150D472X9035A2
.0056	A	———	150D562X9035A2
.0068	A	150D682X0035A2	150D682X9035A2
.0082	A	———	150D822X9035A2
.01	A	150D103X0035A2	150D103X9035A2
.012	A	———	150D123X9035A2
.015	A	150D153X0035A2	150D153X9035A2
.018	A	———	150D183X9035A2
.022	A	150D223X0035A2	150D223X9035A2
.027	A	———	150D273X9035A2
.033	A	150D333X0035A2	150D333X9035A2
.039	A	———	150D393X9035A2
.047	A	150D473X0035A2	150D473X9035A2
.056	A	———	150D563X9035A2
.068	A	150D683X0035A2	150D683X9035A2
.082	A	———	150D823X9035A2
.10	A	150D104X0035A2	150D104X9035A2
.12	A	———	150D124X9035A2
.15	A	150D154X0035A2	150D154X9035A2
.18	A	———	150D184X9035A2
.22	A	150D224X0035A2	150D224X9035A2
.27	A	———	150D274X9035A2
.33	A	150D334X0035A2	150D334X9035A2
.39	A	———	150D394X9035A2
.47	A	150D474X0035A2	150D474X9035A2
.56	A	———	150D564X9035A2
.68	A	150D684X0035A2	150D684X9035A2
.82	A	———	150D824X9035A2
1.0	A	150D105X0035A2	150D105X9035A2
1.2	B	———	150D125X9035B2
1.5	B	150D155X0035B2	150D155X9035B2
1.8	B	———	150D185X9035B2
2.2	B	150D225X0035B2	150D225X9035B2
2.7	B	———	150D275X9035B2
3.3	B	150D335X0035B2	150D335X9035B2
3.9	B	———	150D395X9035B2
4.7	B	150D475X0035B2	150D475X9035B2
5.6	B	———	150D565X9035B2
6.8	B	150D685X0035B2	150D685X9035B2
10	R	150D106X0035R2	———
15	R	150D156X0035R2	———
22	R	150D226X0035R2	———
33	S	150D336X0035S2	———
47	S	150D476X0035S2	———

Code	Diam. x Length	Code	Diam. x Length
A	.104" x .312"	R	.285" x .759"
B	.190" x .500"	S	.347" x .859"

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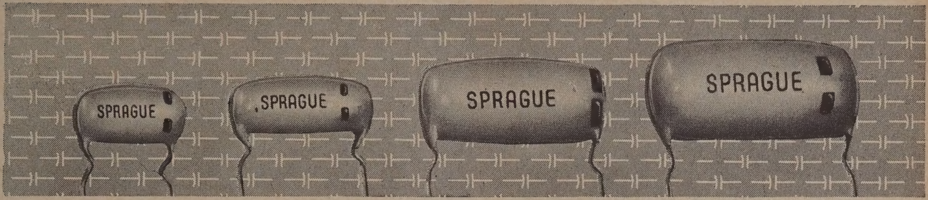
SPRAGUE CAPACITORS

DIFILM® ORANGE DROP® DIPPED TUBULARS

STANDARD RATINGS



- Especially Made for Exact, Original Replacement
- Dual Dielectric (Mylar®-paper) Solidly Impregnated With Exclusive HCX®—Produces Rock-Hard Capacitor Section
- Double Dipped in Bright Orange Epoxy Resin—Beats Heat and Humidity
- Outperforms Any Other Dipped Tubular Capacitor
- Won't Leak or Drip
- Also Available in Handy Sprague Kleer-Pak® Boxes

μF	D. x L.	Cat. No.	List
200 VOLTS D-C			
.02	3/8 x 7/8	2PS-S20	$.35
.022	25/64 x 7/8	2PS-S22	.35
.047	29/64 x 7/8	2PS-S47	.40
.05	15/32 x 7/8	2PS-S50	.40
.1	31/64 x 1 3/16	2PS-P10	.45
.15	9/16 x 1 3/16	2PS-P15	.50
.2	19/32 x 1 5/16	2PS-P20	.60
.22	39/64 x 1 5/16	2PS-P22	.60
.25	5/8 x 1 5/15	2PS-P25	.60
.33	5/8 x 1 5/8	2PS-P33	.70
.47	45/64 x 1 5/8	2PS-P47	.75
.5	23/32 x 1 5/8	2PS-P50	.80
400 VOLTS D-C			
.01	13/32 x 11/16	4PS-S10	$.30
.015	29/64 x 11/16	4PS-S15	.30
.02	13/32 x 7/8	4PS-S20	.35
.22	27/64 x 7/8	4PS-S22	.35
.25	7/16 x 7/8	4PS-S25	.35
.03	29/64 x 7/8	4PS-S30	.40
.033	15/32 x 7/8	4PS-S33	.40
.04	27/64 x 1 3/16	4PS-S40	.45
.047	29/64 x 1 3/16	4PS-S47	.45
.05	29/64 x 1 3/16	4PS-S50	.45
.056	31/64 x 1 3/16	4PS-S56	.45
.068	33/64 x 1 3/16	4PS-S68	.45
.075	33/64 x 1 3/16	4PS-S75	.50
.1	37/64 x 1 3/16	4PS-P10	.50
.15	39/64 x 1 5/16	4PS-P15	.60
.2	19/32 x 1 5/8	4PS-P20	.75
.22	39/64 x 1 5/8	4PS-P22	.75
.25	41/64 x 1 5/8	4PS-P25	.75
600 VOLTS D-C			
.001	21/64 x 11/16	6PS-D10	$.30
.0012	21/64 x 11/16	6PS-D12	.30
.0015	21/64 x 11/16	6PS-D15	.30
.0018	21/64 x 11/16	6PS-D18	.30
.002	21/64 x 11/16	6PS-D20	.30
.0022	21/64 x 11/16	6PS-D22	.30
.0025	21/64 x 11/16	6PS-D25	.30
.0027	11/32 x 11/16	6PS-D27	.30
.003	11/32 x 11/16	6PS-D30	.30
.0033	23/64 x 11/16	6PS-D33	.30
.0039	3/8 x 11/16	6PS-D39	$.30
.004	3/8 x 11/16	6PS-D40	.30
.0047	25/64 x 11/16	6PS-D47	.30
.005	25/64 x 11/16	6PS-D50	.30
.0056	25/64 x 11/16	6PS-D56	.30
.006	13/32 x 11/16	6PS-D60	.30
.0068	13/32 x 11/16	6PS-D68	.30
.0075	23/64 x 7/8	6PS-D75	.30
.008	23/64 x 7/8	6PS-D80	.30
.0082	3/8 x 7/8	6PS-D82	.30
.01	25/64 x 7/8	6PS-S10	.35
.012	25/64 x 7/8	6PS-S12	.35
.015	27/64 x 7/8	6PS-S15	.35
.02	31/64 x 7/8	6PS-S20	.40
.022	31/64 x 7/8	6PS-S22	.40
.025	17/32 x 7/8	6PS-S25	.40
.027	7/16 x 1 3/16	6PS-S27	.40
.03	7/16 x 1 3/16	6PS-S30	.40
.033	15/32 x 1 3/16	6PS-S33	.40
.035	15/32 x 1 3/16	6PS-S35	.45
.039	31/64 x 1 3/16	6PS-S39	.45
.04	1/2 x 1 3/16	6PS-S40	.45
.047	17/32 x 1 3/16	6PS-S47	.45
.05	17/32 x 1 3/16	6PS-S50	.45
.056	35/64 x 1 3/16	6PS-S56	.45
.06	9/16 x 1 3/16	6PS-S60	.50
.068	37/64 x 1 3/16	6PS-S68	.50
.075	9/16 x 1 5/16	6PS-S75	.55
.082	37/64 x 1 5/16	6PS-S82	.55
.1	5/8 x 1 5/16	6PS-P10	.55
.15	43/64 x 1 5/8	6PS-P15	.70
.2	3/4 x 1 5/8	6PS-P20	.80
.22	25/32 x 1 5/8	6PS-P22	.80
.25	13/16 x 1 5/8	6PS-P25	.80
1000 VOLTS D-C			
.001	21/64 x 11/16	10PS-D10	.30
.0015	11/32 x 11/16	10PS-D15	.30
.002	3/8 x 11/16	10PS-D20	.30
.0022	3/8 x 11/16	10PS-D22	.30
.003	11/32 x 7/8	10PS-D30	.30
.004	3/8 x 7/8	10PS-D40	.30
.0047	13/32 x 7/8	10PS-D47	.30
.005	13/32 x 7/8	10PS-D50	.30

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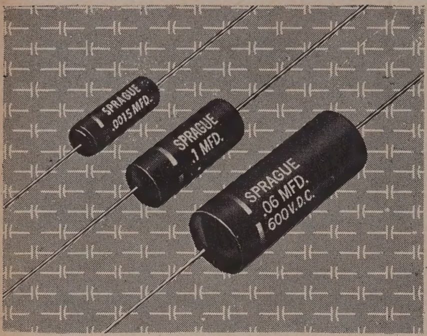
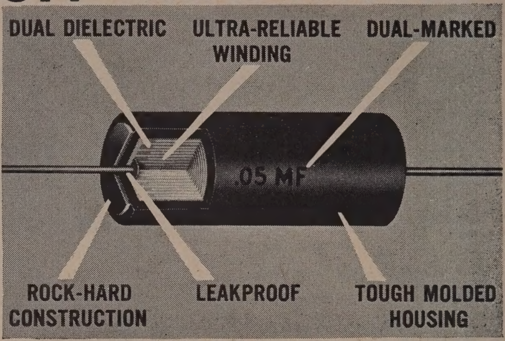
SPRAGUE CAPACITORS

DIFILM® BLACK BEAUTY® MOLDED TUBULARS





- Developed especially for long life under high humidity and temperature operating conditions
- Dual dielectric (Mylar®-paper) combines best features of both Mylar® polyester film and Paper capacitors
- Exclusive HCX® solid impregnant construction produces rock-hard capacitor section
- Won't leak or drip
- No derating for 105°C operation

LOOK FOR THE RED MARKINGS
ON THE BLACK CASE

- Mica-filled, non-flammable molded case. Won't crack when dropped; soldering won't harm it
- Every capacitor marked twice. No twisting the case to read ratings.
- Also Available in Handy Sprague Kleer-Pak® Boxes
- Capacitance Tolerance: ±10% from .001 μF up

The World's Best Molded Tubular at No Extra Cost!

μF	D. x L.	Cat. No.	List
200 WVDC			
.02	⅜ x 1¼	2TM-S20	$.35
.022	⅜ x 1¼	2TM-S22	.35
.047	7⁄16 x 1¼	2TM-S47	.35
.05	7⁄16 x 1¼	2TM-S50	.40
.1	½ x 1½	2TM-P10	.40
.15	½ x 1½	2TM-P15	.40
.22	⅝ x 1⅞	2TM-P22	.60
.25	⅝ x 1⅞	2TM-P25	.65
.47	¾ x 2¼	2TM-P47	1.15
.5	¾ x 2¼	2TM-P50	1.25
1.0	¾ x 2¼	2TM-M1	1.55
400 WVDC			
.01	⅜ x 1¼	4TM-S10	$.35
.015	⅜ x 1¼	4TM-S15	.35
.02	⅜ x 1¼	4TM-S20	.35
.022	⅜ x 1¼	4TM-S22	.35
.025	7⁄16 x 1¼	4TM-S25	.35
.03	7⁄16 x 1¼	4TM-S30	.35
.04	7⁄16 x 1¼	4TM-S40	.40
.047	7⁄16 x 1¼	4TM-S47	.40
.05	7⁄16 x 1¼	4TM-S50	.40
.068	½ x 1½	4TM-S68	.40
.1	½ x 1½	4TM-P10	.45
.15	⅝ x 1⅞	4TM-P15	.60
.2	⅝ x 1⅞	4TM-P20	.65
.22	⅝ x 1⅞	4TM-P22	.65
.25	¾ x 2¼	4TM-P25	.95
.47	¾ x 2¼	4TM-P47	1.15
.5	¾ x 2¼	4TM-P50	1.25
1.0	1 x 2½	4TM-M1	2.30

μF	D. x L.	Cat. No.	List
600 WVDC			
.0001	5⁄16 x 1	6TM-T10	$.30
.00025	5⁄16 x 1	6TM-T25	.30
.0004	5⁄16 x 1	6TM-T40	.35
.0005	5⁄16 x 1	6TM-T50	.35
.001	5⁄16 x 1	6TM-D10	.30
.0015	5⁄16 x 1	6TM-D15	.30
.002	5⁄16 x 1	6TM-D20	.30
.0022	5⁄16 x 1	6TM-D22	.30
.0025	5⁄16 x 1	6TM-D25	.30
.003	5⁄16 x 1	6TM-D30	.35
.0033	5⁄16 x 1	6TM-D33	.35
.004	⅜ x 1¼	6TM-D40	.35
.0047	⅜ x 1¼	6TM-D47	.35
.005	⅜ x 1¼	6TM-D50	.35
.006	⅜ x 1¼	6TM-D60	.35
.0068	⅜ x 1¼	6TM-D68	.35
.008	⅜ x 1¼	6TM-D80	.35
.01	⅜ x 1¼	6TM-S10	.35
.015	⅜ x 1¼	6TM-S15	.35
.02	7⁄16 x 1¼	6TM-S20	.40
.022	7⁄16 x 1¼	6TM-S22	.40
.03	7⁄16 x 1¼	6TM-S30	.40
.033	7⁄16 x 1¼	6TM-S33	.40
.035	7⁄16 x 1¼	6TM-S35	.45
.04	½ x 1½	6TM-S40	.45
.047	½ x 1½	6TM-S47	.45
.05	½ x 1½	6TM-S50	.50
.06	½ x 1½	6TM-S60	.50
.068	½ x 1½	6TM-S68	.50
.1	⅝ x 1⅞	6TM-P10	.60
.15	⅝ x 1⅞	6TM-P15	.80

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SPRAGUE CAPACITORS

DIFILM BLACK BEAUTY MOLDED TUBULARS, continued

μF	D. x L.	Cat. No.	List
600 WVDC (Cont.)			
.2	¾ x 2¼	6TM-P20	$1.10
.22	¾ x 2¼	6TM-P22	1.10
.25	¾ x 2¼	6TM-P25	1.45
.47	¾ x 2¼	6TM-P47	1.95
.5	1 x 2½	6TM-P50	1.95
1.0	1 x 2½	6TM-M1	2.60
1000 WVDC			
.0005	⁵⁄₁₆ x 1	10TM-T50	$.40
.001	⁵⁄₁₆ x 1	10TM-D10	.40
.0015	⁵⁄₁₆ x 1	10TM-D15	.40
.002	⅜ x 1¼	10TM-D20	.40
.0022	⅜ x 1¼	10TM-D22	.40

μF	D. x L.	Cat. No.	List
.003	⅜ x 1¼	10TM-D30	$.40
.004	⅜ x 1¼	10TM-D40	.45
.0047	⅜ x 1¼	10TM-D47	.45
.005	⅜ x 1¼	10TM-D50	.45
.0068	⅜ x 1¼	10TM-D68	.45
.01	⁷⁄₁₆ x 1¼	10TM-S10	.45
.015	½ x 1½	10TM-S15	.50
.02	½ x 1½	10TM-S20	.60
.022	½ x 1½	10TM-S22	.60
.03	⅝ x 1⅞	10TM-S30	.65
.035	⅝ x 1⅞	10TM-S35	.70
.047	⅝ x 1⅞	10TM-S47	.70
.05	⅝ x 1⅞	10TM-S50	.75
.068	⅝ x 1⅞	10TM-S68	.80
.1	¾ x 2¼	10TM-P10	1.20

MINERAL-OIL BLACK BEAUTY MOLDED TUBULARS

- Similar in appearance to Difilm Black Beauty Capacitors except all paper dielectric, impregnated with mineral oil for best high voltage performance
- Maximum Operating Temperature: 85°C

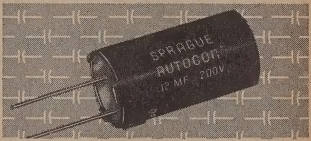
1600 WVDC (Buffer)			
.0005	⅜ x 1¼	MB-T5	$.90
.001	⅜ x 1¼	MB-D1	.90
.0015	⅜ x 1¼	MB-D15	.90
.002	⅜ x 1¼	MB-D2	.90
.0022	⅜ x 1¼	MB-D22	.90
.003	⁷⁄₁₆ x 1¼	MB-D3	.90
.0033	⁷⁄₁₆ x 1¼	MB-D33	.95
.004	⁷⁄₁₆ x 1¼	MB-D4	.90
.0047	⁷⁄₁₆ x 1¼	MB-D47	.95
.005	⁷⁄₁₆ x 1¼	MB-D5	.95
.006	½ x 1½	MB-D6	.95
.0068	½ x 1½	MB-D68	$.95
.007	½ x 1½	MB-D7	.95
.0075	½ x 1½	MB-D75	.95
.008	½ x 1½	MB-D8	.95
.01	½ x 1½	MB-S1	.95
.015	⅝ x 1⅞	MB-S15	1.05
.02	⅝ x 1⅞	MB-S2	1.10
.022	⅝ x 1⅞	MB-S22	1.05
.03	⅝ x 1⅞	MB-S3	1.10
.04	⅝ x 1⅞	MB-S4	1.10
.05	¾ x 2⅛	*TR-15	1.20
2 x .015	¾ x 2	*TR-215	.80

*Supplied in waxed cardboard units

6000 WVDC			
.0005	½ x 1½	TVM-356	$1.35
.001	½ x 1½	TVM-216	1.40
.005	⅝ x 1⅞	TVM-256	1.50
10,000 WVDC			
.0005	⅝ x 1⅞	TVM-351	1.55
12,500 WVDC			
.00025	⅝ x 1⅞	12TVM-325	1.70

AUTOCON® MOLDED TUBULAR CAPACITORS

- Generous 1" Lead Lengths make Autocons Universal Replacements for All Single-Ended Original Equipment Types
- Impregnated with HCX, on Exclusive New Solid Dielectric Material.
- High Insulation Resistance, Low Power Factor
- Extremely Flat Temperature-Capacitance Curve
- Premolded Thermosetting Plastic Shell with Plastic Resin Endseal for Protection Against Humidity
- Index Key on Shell Identifies Outside Foil Lead
- "Standoff" Feet Prevent Dust and Moisture Traps. Also Prevent Printed Chassis Wiring Shorts



μF	WVDC	Diam.	Length	Cat. No.	List
.001	200	⅜	1⅜	2SE-D10	$.30
.0015	200	⅜	1⅜	2SE-D15	.30
.0022	200	3/3	1⅜	2SE-D22	.30
.0033	200	⅜	1⅜	2SE-D33	.30
.0047	200	⅜	1⅜	2SE-D47	.30
.0068	200	⅜	1⅜	2SE-D68	.30
.01	200	⅜	1⅜	2SE-S10	.30
.015	200	⅜	1⅜	2SE-S15	.30
.022	200	⅜	1⅜	2SE-S22	.35
.033	200	⅜	1⅜	2SE-S33	.35
.047	200	⁷⁄₁₆	1⅜	2SE-S47	.35
.068	200	⁷⁄₁₆	1⅜	2SE-S68	.35
.1	200	½	1½	2SE-P10	.40
.15	200	⅝	1⅞	2SE-P15	.45
.22	200	⅝	1⅞	2SE-P22	.50
.33	200	⅝	1⅞	2SE-P33	.55
.47	200	¾	1⅞	2SE-P47	.65
.001	400	⅜	1⅜	4SE-D10	.30
.0015	400	⅜	1⅜	4SE-D15	.30
.0022	400	⅜	1⅜	4SE-D22	.30
.0033	400	⅜	1⅜	4SE-D33	.30
.0047	400	⅜	1⅜	4SE-D47	.30
.0068	400	⅜	1⅜	4SE-D68	.30
.01	400	⅜	1⅜	4SE-S10	.30

μF	WVDC	Diam.	Length	Cat. No.	List
.015	400	⅜	1⅜	4SE-S15	$.30
.022	400	⁷⁄₁₆	1⅜	4SE-S22	.35
.033	400	⁷⁄₁₆	1⅜	4SE-S33	.35
.047	400	½	1¼	4SE-S47	.35
.068	400	½	1½	4SE-S68	.40
.1	400	⅝	1¼	4SE-P10	.45
,15	400	⅝	1⅞	4SE-P15	.50
.22	400	⅝	1⅞	4SE-P22	.55
.33	400	¾	1⅞	4SE-P33	.65
.001	600	⅜	1⅜	6SE-D10	.30
.0015	600	⅜	1⅜	6SE-D15	.30
.0022	600	⅜	1⅜	6SE-D22	.30
.0033	600	⅜	1⅜	6SE-D33	.30
.0047	600	⅜	1⅜	6SE-D47	.30
.0068	600	⅜	1⅜	6SE-D68	.30
.01	600	⅜	1⅜	6SE-S10	.35
.015	600	⁷⁄₁₆	1⅜	6SE-S15	.35
.022	600	⁷⁄₁₆	1⅜	6SE-S22	.40
.033	600	½	1¼	6SE-S33	.40
.047	600	½	1½	6SE-S47	.45
.068	600	⅝	1⅞	6SE-S68	.50
.1	600	⅝	1⅞	6SE-P10	.55
.15	600	¾	1⅞	6SE-P15	.60

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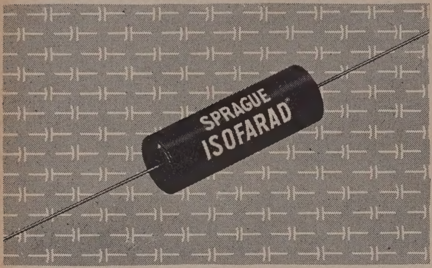
SPRAGUE CAPACITORS

BF ISOFARAD® PLASTIC FILM CAPACITORS



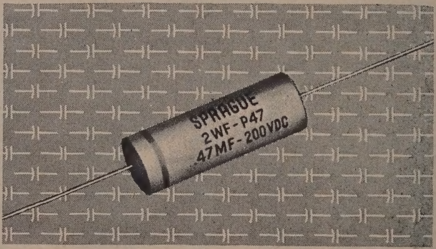
For Applications Where the Best in Tubulars is None too Good

- Isofarad Quality is a Must in Color TV Synchroguide Circuits, Horizontal and Vertical Oscillators, Bridge and Parallel T Circuits and Other Tuned Circuit Applications Requiring Close Tolerance and Zero Temperature Coefficient of Capacitance
- Superior to Silvered Mica Capacitors in Most Applications, Yet Considerably Less Expensive
- Constant Capacitance—Will Not Change More Than ±0.5% from Room Temperature to +80°C at Maximum Rated Voltage
- For Operation to **500 WVDC**—Will Withstand Operating Temperatures to 85°C (185°F)
- **Capacitance Tolerance ±5%**

μF	Dia. x Length	Cat. No.	List
.001	⅜ x 1	5BF-D10	$ .75
.0012	⅜ x 1	5BF-D12	.75
.0015	⅜ x 1	5BF-D15	.75
.0018	⅜ x 1	5BF-D18	.75
.0022	⅜ x 1	5BF-D22	.75
.0027	⅜ x 1	5BF-D27	.75
.0033	⅜ x 1	5BF-D33	.75
.0039	⅜ x 1	5BF-D39	.80
.0047	⅜ x 1	5BF-D47	.80
.0056	⅜ x 1¼	5BF-D56	.80
.0068	⅜ x 1¼	5BF-D68	.80
.0082	7/16 x 1¼	5BF-D82	.80
.01	7/16 x 1¼	5BF-S10	.90
.012	½ x 1¼	5BF-S12	.90
.015	½ x 1¼	5BF-S15	1.25
.018	½ x 1½	5BF-S18	1.25
.022	½ x 1½	5BF-S22	$1.50
.027	⅝ x 1⅞	5BF-S27	1.50
.033	⅝ x 1⅞	5BF-S33	1.80
.039	⅝ x 1⅞	5BF-S39	1.80
.047	⅝ x 1⅞	5BF-S47	2.10
.056	⅝ x 1⅞	5BF-S56	2.10
.068	⅝ x 1⅞	5BF-S68	2.65
.082	¾ x 2¼	5BF-S82	3.60
.1	¾ x 2¼	5BF-P10	3.60
.12	⅞ x 2½	5BF-P12	4.90
.15	⅞ x 2½	5BF-P15	4.90
.18	⅞ x 2½	5BF-P18	6.75
.22	⅞ x 2½	5BF-P22	6.75
.27	1 x 2½	5BF-P27	8.25
.33	1 x 2½	5BF-P33	8.25

WF YELLOW-JACKET® FILMITE® 'E' CAPACITORS

- Excellent for Use in Transistorized Circuits and Low-Voltage Electron Tube Circuits
- Extended Foil Type Sections, Wound from Selected, Ultra-Thin Polyester Film and Thin Gauge Aluminum Foil
- Outer Plastic Film Wrap and Resin End Seals Protect Against Moisture and Humidity
- "Smaller Than Small"—These Capacitors Will Fit Anywhere
- Rated at **200 WVDC**—Capacitance Tolerance ±10%
- Designed for Operation to 85°C (185°F)



μF	Dia. x Length	Cat. No.	List
.01	13/64 x 11/16	2WF-S10	$ .95
.012	13/64 x 11/16	2WF-S12	.95
.015	13/64 x 11/16	2WF-S15	.95
.018	13/64 x 11/16	2WF-S18	.95
.022	13/64 x 11/16	2WF-S22	.95
.027	7/32 x 11/16	2WF-S27	.95
.033	7/32 x 11/16	2WF-S33	1.00
.039	¼ x 11/16	2WF-S39	1.00
.047	¼ x 11/16	2WF-S47	1.00
.056	¼ x 13/16	2WF-S56	1.00
.068	¼ x 13/16	2WF-S68	1.00
.082	5/16 x 13/16	2WF-S82	1.00
.1	5/16 x 13/16	2WF-P10	1.05
.12	23/64 x 13/16	2WF-P12	$1.05
.15	23/64 x 13/16	2WF-P15	1.05
.18	23/64 x 1 1/16	2WF-P18	1.10
.22	23/64 x 1 1/16	2WF-P22	1.10
.27	15/32 x 1 3/16	2WF-P27	1.10
.33	15/32 x 1 3/16	2WF-P33	1.10
.39	35/64 x 1 3/16	2WF-P39	1.20
.47	35/64 x 1 3/16	2WF-P47	1.20
.56	35/64 x 1 9/16	2WF-P56	1.50
.68	35/64 x 1 9/16	2WF-P68	1.50
.82	19/32 x 1 13/16	2WF-P82	1.50
1.0	19/32 x 1 13/16	2WF-M1	1.50

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SPRAGUE CAPACITORS

EP ESTAR® MIDGET® TUBULARS

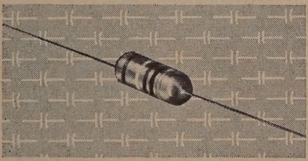
- Amazingly Small in Size Without Any Sacrifice in Performance—The Smallest Reliable Paper Tubular
- Will Fit Tight Spots in Pocket Radios, Auto Radios and Other Small Electronic Assemblies that Require High Temperature Operation, Good Humidity Performance, and Minimum Size at a Moderate Cost
- Sprague's HCX, a Solid, Synthetic Impregnant, Makes these Capacitors Leakproof

SPRAGUE
.5 100
MFD. VDC

- Designed for 85°C (185°F) Operation with No Voltage Derating Necessary
- Replace Units Formerly Catalogued under 68P

µF	WVDC	D. x L.	Cat. No.	Former Cat. No.	List
.25	100	17/32 x 1 1/8	1EP-P25	68P19	$.70
.5	100	21/32 x 1 1/8	1EP-P50	68P20	.80
.005	200	1/4 x 11/16	2EP-D50	68P11	.35
.006	200	1/4 x 11/16	2EP-D60	68P12	.35
.01	200	9/32 x 11/16	2EP-S10	68P14	.40
.02	200	9/32 x 13/16	2EP-S20	68P15	.45
.05	200	5/16 x 1	2EP-S50	68P16	.50
.1	200	13/32 x 1	2EP-P10	68P17	.60
.2	200	15/32 x 1 1/8	2EP-P20	68P18	.65
.25	200	17/32 x 1 1/8	2EP-P25	68P24	.70
.5	200	5/8 x 1 3/8	2EP-P50	68P25	.80
.001	400	1/4 x 11/16	4EP-D10	68P1	.35
.003	400	1/4 x 11/16	4EP-D30	68P3	.35
.004	400	1/4 x 11/16	4EP-D40	68P4	.35
.005	400	1/4 x 13/16	4EP-D50	68P5	.35
.006	400	1/4 x 13/16	4EP-D60	68P6	.35
.01	400	5/16 x 13/16	4EP-S10	68P8	.40
.02	400	5/16 x 1	4EP-S20	68P9	.45
.05	400	13/32 x 1	4EP-S50	68P10	$.50
.1	400	15/32 x 1 1/8	4EP-P10	68P21	.65
.2	400	5/8 x 1 1/8	4EP-P20	68P38	.70
.25	400	5/8 x 1 3/8	4EP-P25	68P22	.75
.5	400	5/8 x 2 5/16	4EP-P50	68P23	.85
.001	600	1/4 x 11/16	6EP-D10	68P26	.35
.002	600	1/4 x 11/16	6EP-D20	68P27	.35
.003	600	9/32 x 11/16	6EP-D30	68P28	.35
.004	600	9/32 x 13/16	6EP-D40	68P29	.35
.005	600	9/32 x 13/16	6EP-D50	68P30	.40
.006	600	5/16 x 13/16	6EP-D60	68P31	.40
.008	600	5/16 x 1	6EP-D80	68P32	.40
.01	600	5/16 x 1	6EP-S10	68P33	.45
.02	600	11/32 x 1	6EP-S20	68P34	.50
.05	600	15/32 x 1 1/8	6EP-S50	68P35	.55
.1	600	5/8 x 1 1/8	6EP-P10	68P36	.70
.2	600	5/8 x 1 11/16	6EP-P20	68P40	.80
.25	600	5/8 x 2	6EP-P25	68P37	.80

TYPE 65P PROKAR® MOLDED TUBULARS



- For Applications Requiring Small Paper Capacitors for Continuous Operation at High Temperatures
- No Voltage Derating Required for 125°C Operation
- Impregnated with an Exclusive Sprague Organic Material which Polymerizes to Form a Solid Capacitor Section
- Sections Molded in Mineral-Filled High-Temperature Plastic —All cases are 1 1/16″ long
- Capacitance Tolerance of these Capacitors is ±5%

µF	WVDC	Diam.	Cat. No.
.01	200	.175	65P10352
.015	200	.195	65P15352
.02	200	.250	65P20352
.022	200	.250	65P22352
.03	200	.250	65P30352
.033	200	.250	65P33352
.039	200	.375	65P39352
.047	200	.375	65P47352
.051	200	.375	65P51352
.056	200	.375	65P56352
.062	200	.375	65P62352
.082	200	.375	65P82352
.091	200	.375	65P91352
.1	200	.375	65P10452
.001	300	.175	65P10253
.0015	300	.175	65P15253
.002	300	.175	65P20253
.0039	300	.175	65P39253
.0047	300	.175	65P47253
.0051	300	.175	65P51253
.0056	300	.175	65P56253
.0068	300	.175	65P68253
.0082	300	.195	65P82253
.0091	300	.195	65P91253

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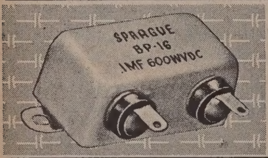
SPRAGUE CAPACITORS

TYPE 102P, 103P 'THRU-PASS' CAPACITORS

- Designed for Radio Interference Reduction in Radar and Communication Equipment
- Performance Closer to That of Theoretically Ideal Capacitor than Any Other Paper Capacitor Ever Made
- Three-Terminal Feed-Thru Design—Connect in a Circuit in Same Manner as Low-Pass Filter
- Hermetically Sealed, with Glass-to-Metal Solder-Seal Terminals
- Impregnated with Vitamin Q, for High Insulation Resistance and Minimum Capacitance Change with Temperature
- Type 102P is Designed for Operation from −55°C to +85°C; Type 103P for −55°C to +125°C
- Capacitors listed below have wire leads. For tab terminals, which are also available, see your Sprague Industrial Distributor.

SPRAGUE
THRUPASS

µF	Size Diam. x Lgth.	Catalog Number 85°C	 125°C
	100 WVDC		
.001	.400 x ¾	102P101	103P101
.0047	.400 x ¾	102P106	103P106
.01	.400 x ¾	102P111	103P111
.047	.400 x ¾	102P116	103P116
.1	.400 x ⅞	102P121	103P121
.22	.400 x 1⅜	102P126	103P126
.33	.562 x 1⅛	102P131	103P131
.47	.562 x 1⅜	102P136	103P136
.68	.562 x 1⅞	102P141	103P141
1.00	.670 x 1⅞	102P145	103P145
	200 WVDC		
.001	.400 x ¾	102P102	103P102
.0047	.400 x ¾	102P107	103P107
.01	.400 x ¾	102P112	103P112
.047	.400 x ⅞	102P117	103P117
.1	.400 x 1⅛	102P122	103P122
.22	.562 x 1⅛	102P127	103P127
.33	.562 x 1⅝	102P132	103P132
.47	.562 x 1⅞	102P137	103P137
.68	.670 x 1⅞	102P142	103P142
1.00	.760 x 2⅛	102P146	103P146
	300 WVDC		
.001	.400 x ¾	102P103	103P103
.0047	.400 x ¾	102P108	103P108
.01	.400 x ¾	102P113	103P113
	300 WVDC (Continued)		
.047	.400 x 1⅛	102P118	103P118
.1	.400 x 1⅜	102P123	103P123
.22	.562 x 1⅜	102P128	103P128
.33	.562 x 1⅞	102P133	103P133
.47	.670 x 1⅞	102P138	103P138
.68	.750 x 2⅛	102P143	103P143
	400 WVDC		
.001	.400 x ¾	102P104	103P104
.0047	.400 x ¾	102P109	103P109
.01	.400 x ¾	102P114	103P114
.047	.400 x 1⅜	102P119	103P119
.1	.562 x 1⅛	102P124	103P124
.22	.562 x 1⅞	102P129	103P129
.33	.670 x 1⅞	102P134	103P134
.47	.750 x 2⅛	102P139	103P139
.68	.750 x 2⅜	102P144	103P144
	600 WVDC		
.001	.400 x ¾	102P105	103P105
.0047	.400 x ¾	102P110	103P110
.01	.400 x ¾	102P115	103P115
.047	.400 x 1⅜	102P120	103P120
.1	.562 x 1⅜	102P125	103P125
.22	.670 x 1⅞	102P130	103P130
.33	.750 x 2⅛	102P135	103P135
.47	.750 x 2⅜	102P140	103P140



BP BATHTUB CAPACITORS

- For Applications Where Severe Operating Conditions Are Encountered
- Hermetically Sealed for Extra Protection
- Seamless Drawn Metal Can
- Oil-Filled and Oil-impregnated for Long, Dependable Service Life
- Convenient Mounting Ears are Integral Part of Metal Container

µF	L. x W. x H.	Cat. No.	List
	400 WVDC		
.1	1 13/16 x 1 x ¾	BP-1	$2.20
.25	1 13/16 x 1 x ¾	BP-25	2.50
.5	1 13/16 x 1 x ⅞	BP-50	2.65
1.0	2 x 1¾ x ⅞	BP-10	3.15
.1 +.1	1 13/16 x 1 x ¾	BP-21	3.30
.25+.25	1 13/16 x 1 x ⅞	BP-225	3.60
.5 +.5	2 x 1¾ x ⅞	BP-250	4.15
.1 +.1+.1	1 13/16 x 1 x ¾	BP-31	4.00
	600 WVDC		
.05	1 13/16 x 1 x ¾	BP-56	2.90
.1	1 13/16 x 1 x ¾	BP-16	2.95
.25	1 13/16 x 1 x ¾	BP-256	3.10
.5	1 13/16 x 1 x ⅞	BP-506	3.30
1.0	2 x 1¾ x ⅞	BP-106	3.75
2.0	2 x 2 x 1⅛	BP-206	5.00
.05+.05	1 13/16 x 1 x ¾	BP-2056	3.65
.1 + .1	1 13/16 x 1 x ¾	BP-216	$3.70
.25+ .25	1 13/16 x 1 x ⅞	BP-2256	3.75
.5 + .5	2 x 1¾ x ⅞	BP-2506	4.30
1.0 +1.0	2 x 2 x 1⅛	BP-116	5.30
.1 + .1 +.1	1 13/16 x 1 x ¾	BP-316	4.20
.25+ .25+.25	2 x 1¾ x ⅞	BP-3256	4.75
.5 + .5 +.5	2 x 2 x 1⅛	BP-356	5.75
	1000 WVDC		
.05	1 13/16 x 1 x ¾	BP-51	3.05
.1	1 13/16 x 1 x ¾	BP-11	3.15
.25	1 13/16 x 1 x ¾	BP-251	3.25
.5	2 x 1¾ x ⅞	BP-501	3.55
1.0	2 x 2 x 1⅛	BP-101	4.40
.05+.05	1 13/16 x 1 x ¾	BP-2051	3.85
.1 +.1	1 13/16 x 1 x ¾	BP-211	4.00
.25+.25	2 x 1¾ x ⅞	BP-2251	4.20
.5 +.5	2 x 2 x 1⅛	BP-2501	5.45
.1 +.1 +.1	1 13/16 x 1 x ⅞	BP-311	4.60
.25+.25+.25	2 x 2 x 1⅛	BP-3251	5.50

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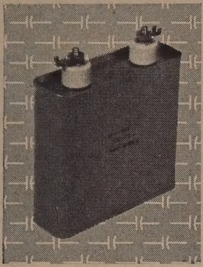
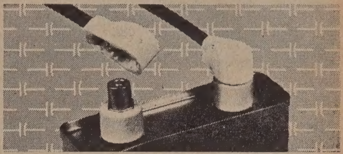
SPRAGUE CAPACITORS



CR RECTANGULAR OILS

- Hermetically Sealed in Rugged Rectangular Metal Cans
- Oil-Impregnated and Oil-Filled
- Extremely High Insulation Resistance
- Will Withstand High Surge Voltages and High Ambient Temperatures
- Widely used in transmitter power supplies and other high-voltage applications
- Furnished With Adapters (as shown below) to Fit Standard Transmitting Tube Grid Caps



µF	WVDC	T. x W. x L.	Cat. No.	List
.5	600	1 1/16 x 1 13/16 x 2 1/4	CR-056	$4.70
1.0	600	1 1/16 x 1 13/16 x 2 1/4	CR-16	5.80
2.0	600	1 1/16 x 1 13/16 x 2 7/8	CR-26	7.15
3.0	600	1 1/16 x 1 13/16 x 3 1/4	CR-36	8.25
4.0	600	1 3/16 x 2 1/2 x 3 1/2	CR-46	9.10
6.0	600	1 3/16 x 2 1/2 x 4 3/4	CR-66	11.30
8.0	600	1 1/4 x 3 3/4 x 3 7/8	CR-86	13.50
10.0	600	1 1/4 x 3 3/4 x 4 3/4	CR-106	15.15
.1	1000	1 1/16 x 1 13/16 x 1 5/8	CR-011	4.15
.25	1000	1 1/16 x 1 13/16 x 2 1/4	CR-0251	4.70
.5	1000	1 1/16 x 1 13/16 x 2 1/4	CR-051	4.95
1.0	1000	1 1/16 x 1 13/16 x 2 1/4	CR-11	6.35
2.0	1000	1 1/16 x 1 13/16 x 3 7/8	CR-21	8.25
4.0	1000	1 3/16 x 2 1/2 x 4 3/4	CR-41	10.45
8.0	1000	1 1/4 x 3 3/4 x 4 3/4	CR-81	15.15
10.0	1000	1 3/4 x 3 3/4 x 4 3/4	CR-101	16.80
12.0	1000	2 1/4 x 3 3/4 x 4 1/2	CR-121	18.15
15.0	1000	2 1/2 x 3 3/4 x 4 3/4	CR-151	20.10
.5	1500	1 1/16 x 1 13/16 x 2 7/8	CR-0515	6.35
1.0	1500	1 1/16 x 1 13/16 x 3 7/8	CR-115	7.45
2.0	1500	1 3/16 x 2 1/2 x 4 1/4	CR-215	10.20
4.0	1500	1 1/4 x 3 3/4 x 4 3/4	CR-415	14.05
5.0	1500	1 1/4 x 3 3/4 x 4 3/4	CR-515	15.15
8.0	1500	2 1/2 x 3 3/4 x 4 3/4	CR-815	20.90
10.0	1500	3 3/16 x 3 3/4 x 4 3/4	CR-1015	25.05
.1	2000	1 3/16 x 2 1/2 x 2 1/2	CR-012	6.60
.25	2000	1 3/16 x 2 1/2 x 2 1/2	CR-0252	7.15
.5	2000	1 3/16 x 2 1/2 x 2 7/8	CR-052	7.45
1.0	2000	1 3/16 x 2 1/2 x 3 1/2	CR-12	9.10
2.0	2000	1 1/4 x 3 3/4 x 4 1/4	CR-22	10.75
3.0	2000	1 1/4 x 3 3/4 x 4 3/4	CR-32	$13.20
4.0	2000	2 1/4 x 3 3/4 x 3 7/8	CR-42	15.15
6.0	2000	3 3/16 x 3 3/4 x 4 1/2	CR-62	20.10
10.0	2000	4 9/16 x 3 3/4 x 4 3/4	CR-102	30.55
.1	2500	1 3/16 x 2 1/2 x 2 1/2	CR-0125	10.15
.5	2500	1 1/4 x 3 3/4 x 3 1/4	CR-0525	11.55
1.0	2500	1 3/4 x 3 3/4 x 3 1/4	CR-125	13.20
2.0	2500	1 3/4 x 3 3/4 x 4 3/4	CR-225	21.45
4.0	2500	4 9/16 x 3 3/4 x 4 3/8	CR-425	30.00
.1	3000	1 3/16 x 2 1/2 x 2 1/2	CR-013	14.05
.25	3000	1 3/16 x 2 1/2 x 2 7/8	CR-0253	14.85
.5	3000	1 3/16 x 2 1/2 x 4 1/4	CR-053	16.80
1.0	3000	2 1/4 x 3 3/4 x 3 7/8	CR-13	20.10
2.0	3000	3 3/16 x 3 3/4 x 4 1/2	CR-23	25.05
4.0	3000	4 9/16 x 3 3/4 x 4 3/4	CR-43	36.85
.1	4000	2 1/4 x 3 3/4 x 2 3/4	CR-014	18.00
.25	4000	2 1/4 x 3 3/4 x 2 3/4	CR-0254	20.00
.5	4000	2 1/4 x 3 3/4 x 3 7/8	CR-054	23.00
1.0	4000	2 1/4 x 3 3/4 x 5 1/8	CR-14	29.00
2.0	4000	4 9/16 x 3 3/4 x 5 1/8	CR-24	39.00
.2	5000	1 3/4 x 3 3/4 x 3 7/8	CR-025	20.00
.5	5000	2 1/4 x 3 3/4 x 4 1/2	CR-055	25.00
1.0	5000	4 9/16 x 3 3/4 x 4 3/8	CR-15	34.00
2.0	5000	4 9/16 x 3 3/4 x 6	CR-25	52.00
.1	6000	2 1/4 x 3 3/4 x 3 3/8	CR-0160	27.00
.2	6000	1 3/4 x 3 3/4 x 4 1/4	CR-0260	30.00
1.0	6000	4 9/16 x 3 3/4 x 7 1/2	CR-160	49.00
.1	7500	2 1/4 x 3 3/4 x 3 7/8	CR-0175	29.00
.2	7500	1 3/4 x 3 3/4 x 4 3/4	CR-0275	33.00

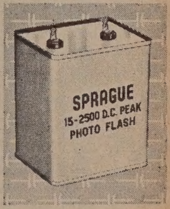
SCREWBASE PC OILS

- Oil-Impregnated
- Oil-Filled
- Screwbase Can For Easy Single Hole Mounting
- Small Size—Will Fit Tight Spaces

µF	WVDC	Diam x Lgth.	Cat. No.	List
2	600	1 1/2 x 2 7/8	PC-26	$5.40
3	600	1 1/2 x 3 1/2	PC-36	6.15
4	600	1 1/2 x 4 1/2	PC-46	7.10
1	1000	1 1/2 x 2 7/8	PC-11	5.00
2	1000	1 1/2 x 4 1/2	PC-21	6.30
0.5	1500	1 1/2 x 2 3/8	PC-515	5.85
1	1500	1 1/2 x 3 7/8	PC-115	6.30

PQ PHOTOFLASH CAPACITORS

DESIGNED EXPRESSLY FOR PHOTOFLASH USE—NOT COMPARABLE TO STANDARD HEAVY-DUTY CAPACITORS SUCH AS THE CR TRANSMITTING TYPES



- Oil-Impregnated and Oil Filled
- Very High Insulation Resistance
- Uniform Energy Storage
- Hermetically Sealed
- Smallest Possible Construction, without Any Sacrifice in Dependability

µF	DC Peak* Volts	Watt/Sec. Total	Dimensions T. x W. x H.	Weight lbs.	Cat. No.	List Price
10	2500	31	2 1/4 x 3 3/4 x 4 1/2	1 3/4	PQ-2510	$17.00
15	2500	47	3 3/16 x 3 3/4 x 4 5/8	2 1/2	PQ-2515	20.00
25	2500	78	4 9/16 x 3 3/4 x 5 1/4	4 1/4	PQ-2525	26.50
35	2500	109	4 9/16 x 3 3/4 x 7	6	PQ-2535	32.50
15	3000	67	3 3/16 x 3 3/4 x 4 7/8	3	PQ-315	24.50
25	4000	200	4 9/16 x 3 3/4 x 9 1/4	7 1/4	PQ-425	42.50

*Do not exceed Peak Voltage Rating under highest line voltage condition.

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SPRAGUE CAPACITORS

VITAMIN Q® SUBMINIATURE PAPER CAPACITORS

These capacitors are the most widely used of all paper capacitors in commercial and military electronic equipment. Hermetically sealed in metal cases, they are electrically and mechanically designed to meet stringent operating requirements.

Impregnated with Vitamin Q, a substantially linear, controlled molecular weight, hydrocarbon polymer, which is exclusive with Sprague, these dependable capacitors are available for operation in two temperature ranges: —55°C to +85°C and —55°C to +125°C. Because of their Vitamin Q impregnation, these subminiature capacitors have a higher insulation resistance and longer life than comparable units with ordinary oils.

Sprague Subminiature paper capacitors exceed the performance requirements of military specification MIL-C-25A. A limited number of the ratings shown here are listed in the military specification and should be ordered by their MIL type designation where equipment specifications so require. (See page after next)

Listed below are the most popular insulated section (ungrounded case) capacitors. For information on other types, ratings, and tolerances, as well as on wax-impregnated units for absolute minimum size, consult your Sprague Industrial Distributor.

NOTE: The capacitors listed in this table have a capacitance tolerance of ±10%. For ±20% units, change the 4th digit following the letter 'P' in the catalog number from 9 to 0.

µF	WVDC	INSERTED TAB CONSTRUCTION					EXTENDED FOIL CONSTRUCTION				
		TYPE 91P (85°C)		TYPE 96P (125°C)		Size D. x L.	TYPE 191P (85°C)		TYPE 196P (125°C)		Size D. x L.
		Plain Metal Case	Metal case with Insulating Sleeve*	Plain Metal Case	Metal case with Insulating Sleeve*		Plain Metal Case	Metal case with Insulating Sleeve*	Plain Metal Case	Metal case with Insulating Sleeve*	
.001	100	91P10291S2	91P10291S4	96P10291S2	96P10291S4	.175 x ¾	191P10291S2	191P10291S4	196P10291S2	196P10291S4	.175 x ¾
	200	91P10292S2	91P10292S4	96P10292S2	96P10292S4	.235 x ¾	191P10292S2	191P10292S4	196P10292S2	196P10292S4	.235 x ¾
	300	91P10293S2	91P10293S4	96P10293S2	96P10293S4	.235 x ¾	191P10293S2	191P10293S4	196P10293S2	196P10293S4	.235 x ¾
	400	91P10294S2	91P10294S4	96P10294S2	96P10294S4	.235 x ¾	191P10294S2	191P10294S4	196P10294S2	196P10294S4	.235 x ¾
	600	91P10296S2	91P10296S4	96P10296S2	96P10296S4	.235 x ¾	191P10296S2	191P10296S4	196P10296S2	196P10296S4	.235 x ¾
.0015	100	91P15291S2	91P15291S4	96P15291S2	96P15291S4	.175 x ¾	191P15291S2	191P15291S4	196P15291S2	196P15291S4	.175 x ¾
	200	91P15292S2	91P15292S4	96P15292S2	96P15292S4	.235 x ¾	191P15292S2	191P15292S4	196P15292S2	196P15292S4	.235 x ¾
	300	91P15293S2	91P15293S4	96P15293S2	96P15293S4	.235 x ¾	191P15293S2	191P15293S4	196P15293S2	106P15293S4	.235 x ¾
	400	91P15294S2	91P15294S4	96P15294S2	96P15294S4	.235 x ¾	191P15294S2	191P15294S4	196P15294S2	196P15294S4	.235 x ¾
	600	91P15296S2	91P15296S4	96P15296S2	96P15296S4	.235 x ¾	191P15296S2	191P15296S4	196P15296S2	196P15296S4	.235 x ¾
.0022	100	91P22291S2	91P22291S4	96P22291S2	96P22291S4	.175 x ¾	191P22291S2	191P22291S4	196P22291S2	196P22291S4	.175 x ¾
	200	91P22292S2	91P22292S4	96P22292S2	96P22292S4	.235 x ¾	191P22292S2	191P22292S4	196P22292S2	196P22292S4	.235 x ¾
	300	91P22293S2	91P22293S4	96P22293S2	96P22293S4	.235 x ¾	191P22293S2	191P22293S4	196P22293S2	196P22293S4	.235 x ¾
	400	91P22294S2	91P22294S4	96P22294S2	96P22294S4	.235 x ¾	191P22294S2	191P22294S4	196P22294S2	196P22294S4	.235 x ¾
	600	91P22296S2	91P22296S4	96P22296S2	96P22296S4	.235 x ¾	191P22296S2	191P22296S4	196P22296S2	196P22296S4	.235 x ¾
.0033	100	91P33291S2	91P33291S4	96P33291S2	96P33291S4	.175 x ¾	191P33291S2	191P33291S4	196P33291S2	196P33291S4	.175 x ¾
	200	91P33292S2	91P33292S4	96P33292S2	96P33292S4	.235 x ¾	191P33292S2	191P33292S4	196P33292S2	196P33292S4	.235 x ¾
	300	91P33293S2	91P33293S4	96P33293S2	96P33293S4	.235 x ¾	191P33293S2	191P33293S4	196P33293S2	196P33293S4	.235 x ¾
	400	91P33294S2	91P33294S4	96P33294S2	96P33294S4	.235 x ¾	191P33294S2	191P33294S4	196P33294S2	196P33294S4	.235 x ¾
	600	91P33296S2	91P33296S4	96P33296S2	96P33296S4	.235 x ¾	191P33296S2	191P33296S4	196P33296S2	196P33296S4	.312 x ⅞
.0047	100	91P47291S2	91P47291S4	96P47291S2	96P47291S4	.175 x ¾	191P47291S2	191P47291S4	196P47291S2	196P47291S4	.175 x ¾
	200	91P47292S2	91P47292S4	96P47292S2	96P47292S4	.235 x ¾	191P47292S2	191P47292S4	196P47292S2	196P47292S4	.235 x ¾
	300	91P47293S2	91P47293S4	96P47293S2	96P47293S4	.235 x ¾	191P47293S2	191P47293S4	196P47293S2	196P47293S4	.235 x ¾
	400	91P47294S2	91P47294S4	96P47294S2	96P47294S4	.235 x ¾	191P47294S2	191P47294S4	196P47294S2	196P47294S4	.312 x ⅞
	600	91P47296S2	91P47296S4	96P47296S2	96P47296S4	.235 x ¾	191P47296S2	191P47296S4	196P47296S2	196P47296S4	.312 x ⅞
.0068	100	91P68291S2	91P68291S4	96P68291S2	96P68291S4	.175 x ¾	191P68291S2	191P68291S4	196P68291S2	196P68291S4	.195 x ¾
	200	91P68292S2	91P68292S4	96P68292S2	96P68292S4	.235 x ¾	191P68292S2	191P68292S4	196P68292S2	196P68292S4	.235 x ¾
	300	91P68293S2	91P68293S4	96P68293S2	96P68293S4	.235 x ¾	191P68293S2	191P68293S4	196P68293S2	196P68293S4	.312 x ⅞
	400	91P68294S2	91P68294S4	96P68294S2	96P68294S4	.235 x ¾	191P68294S2	191P68294S4	196P68294S2	196P68294S4	.312 x ⅞
	600	91P68296S2	91P68296S4	96P68296S2	96P68296S4	.235 x ¾	191P68296S2	191P68296S4	196P68296S2	196P68296S4	.312 x ⅞
.01	100	91P10391S2	91P10391S4	96P10391S2	96P10391S4	.175 x ¾	191P10391S2	191P10391S4	196P10391S2	196P10391S4	.235 x ¾
	200	91P10392S2	91P10392S4	96P10392S2	96P10392S4	.235 x ¾	191P10392S2	191P10392S4	196P10392S2	196P10392S4	.312 x ⅞
	300	91P10393S2	91P10393S4	96P10393S2	69P10393S4	.235 x ¾	191P10393S2	191P10393S4	196P10393S2	196P10393S4	.312 x ⅞
	400	91P10394S2	91P10394S4	96P10394S2	96P10394S4	.235 x ¾	191P10394S2	191P10394S4	196P10394S2	196P10394S4	.312 x ⅞
	600	91P10396S2	91P10396S4	96P10396S2	96P10396S4	.312 x ⅞	191P10396S2	191P10396S4	196P10396S2	196P10396S4	.312 x ⅞
.015	100	91P15391S2	91P15391S4	96P15391S2	96P15391S4	.175 x ¾	191P15391S2	191P15391S4	196P15391S2	196P15391S4	.235 x ¾
	200	91P15392S2	91P15392S4	96P15392S2	96P15392S4	.235 x ¾	191P15392S2	191P15392S4	196P15392S2	196P15392S4	.312 x ⅞
	300	91P15393S2	91P15393S4	96P15393S2	96P15393S4	.235 x ¾	191P15393S2	191P15393S4	196P15393S2	196P15393S4	.312 x ⅞
	400	91P15394S2	91P15394S4	96P15394S2	96P15394S4	.312 x ⅞	191P15394S2	191P15394S4	196P15394S2	196P15394S4	.312 x ⅞
	600	91P15396S2	91P15396S4	96P15396S2	96P15396S4	.312 x ⅞	191P15396S2	191P15396S4	196P15396S2	196P15396S4	.400 x ⅞

*On Style 4 units (metal case with insulating sleeve) add .0625" to Diameter and 1/16" to Length.

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SPRAGUE CAPACITORS

VITAMIN Q® SUBMINIATURE PAPER CAPACITORS, continued

μF	WVDC	INSERTED TAB CONSTRUCTION					EXTENDED FOIL CONSTRUCTION				
		TYPE 91P (85°C)		TYPE 96P (125°C)		Size D. x L.	TYPE 191P (85°C)		TYPE 196P (125°C)		Size D. x L.
		Plain Metal Case	Metal case with Insulating Sleeve*	Plain Metal Case	Metal case with Insulating Sleeve*		Plain Metal Case	Metal case with Insulating Sleeve*	Plain Metal Case	Metal case with Insulating Sleeve*	
.022	100	91P22391S2	91P22391S4	96P22391S2	96P22391S4	.195 x ¾	191P22391S2	191P22391S4	196P22391S2	196P22391S4	.312 x ⅞
	200	91P22392S2	91P22392S4	96P22392S2	96P22392S4	.235 x ¾	191P22392S2	191P22392S4	196P22392S2	196P22392S4	.312 x ⅞
	300	91P22393S2	91P22393S4	96P22393S2	96P22393S4	.312 x ⅞	191P22393S2	191P22393S4	196P22393S2	196P22393S4	.312 x ⅞
	400	91P22394S2	91P22394S4	96P22394S2	96P22394S4	.312 x ⅞	191P22394S2	191P22394S4	196P22394S2	196P22394S4	.400 x ⅞
	600	91P22396S2	91P22396S4	96P22396S2	96P22396S4	.312 x ⅞	191P22396S2	191P22396S4	196P22396S2	196P22396S4	.400 x ⅞
.033	100	91P33391S2	91P33391S4	96P33391S2	96P33391S4	.235 x ¾	191P33391S2	191P33391S4	196P33391S2	196P33391S4	.312 x ⅞
	200	91P33392S2	91P33392S4	96P33392S2	96P33392S4	.312 x ⅞	191P33392S2	191P33392S4	196P33392S2	196P33392S4	.312 x ⅞
	300	91P33393S2	91P33393S4	96P33393S2	96P33393S4	.312 x ⅞	191P33393S2	191P33393S4	196P33393S2	196P33393S4	.400 x ⅞
	400	91P33394S2	91P33394S4	96P33394S2	96P33394S4	.312 x ⅞	191P33394S2	191P33394S4	196P33394S2	196P33394S4	.400 x ⅞
	600	91P33396S2	91P33396S4	96P33396S2	96P33396S4	.400 x ⅞	191P33396S2	191P33396S4	196P33396S2	196P33396S4	.400 x 1⅛
.047	100	91P47391S2	91P47391S4	96P47391S2	96P47391S4	.312 x ⅞	191P47391S2	191P47391S4	196P47391S2	196P47391S4	.312 x ⅞
	200	91P47392S2	91P47392S4	96P47392S2	96P47392S4	.312 x ⅞	191P47392S2	191P47392S4	196P47392S2	196P47392S4	.400 x ⅞
	300	91P47393S2	91P47393S4	96P47393S2	96P47393S4	.312 x ⅞	191P47393S2	191P47393S4	196P47393S2	196P47393S4	.400 x ⅞
	400	91P47394S2	91P47394S4	96P47394S2	96P47394S4	.400 x ⅞	191P47394S2	191P47394S4	196P47394S2	196P47394S4	.400 x 1⅛
	600	91P47396S2	91P47396S4	96P47396S2	96P47396S4	.400 x 1⅛	191P47396S2	191P47396S4	196P47396S2	196P47396S4	.400 x 1⅜
.068	100	91P68391S2	91P68391S4	96P68391S2	96P68391S4	.312 x ⅞	191P68391S2	191P68391S4	196P68391S2	196P68391S4	.400 x ⅞
	200	91P68392S2	91P68392S4	96P68392S2	96P68392S4	.312 x ⅞	191P68392S2	191P68392S4	196P68392S2	196P68392S4	.400 x ⅞
	300	91P68393S2	91P68393S4	96P68393S2	96P68393S4	.400 x ⅞	191P68393S2	191P68393S4	196P68393S2	196P68393S4	.400 x 1⅛
	400	91P68394S2	91P68394S4	96P68394S2	96P68394S4	.400 x 1⅛	191P68394S2	191P68394S4	196P68394S2	196P68394S4	.400 x 1⅜
	600	91P68396S2	91P68396S4	96P68496S2	96P68396S4	.400 x 1⅜	191P68396S2	191P68396S4	196P68396S2	196P68396S4	.562 x 1⅛
.1	100	91P10491S2	91P10491S4	96P10491S2	96P10491S4	.312 x ⅞	191P10491S2	191P10491S4	196P10491S2	196P10491S4	.400 x ⅞
	200	91P10492S2	91P10492S4	96P10492S2	96P10492S4	.400 x ⅞	191P10492S2	191P10492S4	196P10492S2	196P10492S4	.400 x 1⅛
	300	91P10493S2	91P10493S4	96P10493S2	96P10493S4	.400 x 1⅛	191P10493S2	191P10493S4	196P10493S2	196P10493S4	.400 x 1⅜
	400	91P10494S2	91P10494S4	96P10494S2	96P10494S4	.400 x 1⅜	191P10494S2	191P10494S4	196P10494S2	196P10494S4	.562 x 1⅛
	600	91P10496S2	91P10496S4	96P10496S2	96P10496S4	.562 x 1⅛	191P10496S2	191P10496S4	196P10496S2	196P10496S4	.562 x 1⅜
.15	100	91P15491S2	91P15491S4	96P15491S2	96P15491S4	.400 x ⅞	191P15491S2	191P15491S4	196P15491S2	196P15491S4	.400 x 1⅛
	200	91P15492S2	91P15492S4	96P15492S2	96P15492S4	.400 x 1⅛	191P15492S2	191P15492S4	196P15492S2	196P15492S4	.400 x 1⅜
	300	91P15493S2	91P15493S4	96P15493S2	96P15493S4	.400 x 1⅜	191P15493S2	191P15493S4	196P15493S2	196P15493S4	.562 x 1⅛
	400	91P15494S2	91P15494S4	96P15494S2	96P15494S4	.562 x 1⅛	191P15494S2	191P15494S4	196P15494S2	196P15494S4	.562 x 1⅜
	600	91P15496S2	91P15496S4	96P15496S2	96P15496S4	.562 x 1⅜	191P15496S2	191P15496S4	196P15496S2	196P15496S4	.562 x 1⅝
.22	100	91P22491S2	91P22491S4	96P22491S2	96P22491S4	.400 x 1⅛	191P22491S2	191P22491S4	196P22491S2	196P22491S4	.400 x 1⅜
	200	91P22492S2	91P22492S4	96P22492S2	96P22492S4	.400 x 1⅜	191P22492S2	191P22492S4	196P22492S2	196P22492S4	.562 x 1⅛
	300	91P22493S2	91P22493S4	96P22493S2	96P22493S4	.562 x 1⅛	191P22493S2	191P22493S4	196P22493S2	196P22493S4	.562 x 1⅜
	400	91P22494S2	91P22494S4	96P22494S2	96P22494S4	.562 x 1⅜	191P22494S2	191P22494S4	196P22494S2	196P22494S4	.562 x 1⅝
	600	91P22496S2	91P22496S4	96P22496S2	96P22496S4	.562 x 1⅞	191P22496S2	191P22496S4	196P22496S2	196P22496S4	.670 x 1⅝
.33	100	91P33491S2	91P33491S4	96P33491S2	96P33491S4	.400 x 1⅜	191P33491S2	191P33491S4	196P33491S2	196P33491S4	.562 x 1⅛
	200	91P33492S2	91P33492S4	96P33492S2	96P33492S4	.562 x 1⅛	191P33492S2	191P33492S4	196P33492S2	196P33492S4	.562 x 1⅜
	300	91P33493S2	91P33493S4	96P33493S2	96P33493S4	.562 x 1⅜	191P33493S2	191P33493S4	196P33493S2	196P33493S4	.562 x 1⅝
	400	91P33494S2	91P33494S4	96P33494S2	96P33494S4	.562 x 1⅞	191P33494S2	191P33494S4	196P33494S2	196P33494S4	.670 x 1⅝
	600	91P33496S2	91P33496S4	96P33496S2	96P33496S4	.670 x 1⅞	191P33496S2	191P33496S4	196P33496S2	196P33496S4	.750 x 2⅛
.47	100	91P47491S2	91P47491S4	96P47491S2	96P47491S4	.562 x 1⅛	191P47491S2	191P47491S4	196P47491S2	196P47491S4	.562 x 1⅜
	200	91P47492S2	91P47492S4	96P47492S2	96P47492S4	.562 x 1⅜	191P47492S2	191P47492S4	196P47492S2	196P47492S4	.562 x 1⅝
	300	91P47493S2	91P47493S4	96P47493S2	96P47493S4	.562 x 1⅞	191P47493S2	191P47493S4	196P47493S2	196P47493S4	.670 x 1⅝
	400	91P47494S2	91P47494S4	96P47494S2	96P47494S4	.670 x 1⅞	191P47494S2	191P47494S4	196P47494S2	196P47494S4	.750 x 2⅛
	600	91P47496S2	91P47496S4	96P47496S2	96P47496S4	.750 x 2⅛	191P47496S2	191P47496S4	196P47496S2	196P47496S4	.750 x 2⅝
.68	100	91P68491S2	91P68491S4	96P68491S2	96P68491S4	.562 x 1⅜	191P68491S2	191P68491S4	196P68491S2	196P68491S4	.562 x 1⅝
	200	91P68492S2	91P68492S4	96P68492S2	96P68492S4	.562 x 1⅞	191P68492S2	191P68492S4	196P68492S2	196P68492S4	.670 x 1⅝
	300	91P68493S2	91P68493S4	96P68493S2	96P68493S4	.670 x 1⅞	191P68493S2	191P68493S4	196P68493S2	196P68493S4	.750 x 2⅛
1.0	100	91P10591S2	91P10591S4	96P10591S2	96P10591S4	.562 x 1⅞	191P10591S2	191P10591S4	196P10591S2	196P10591S4	.670 x 1⅝
	200	91P10592S2	91P10592S4	96P10592S2	96P10592S4	.670 x 1⅞	191P10592S2	191P10592S4	196P10592S2	196P10592S4	.750 x 2⅛

*On Style 4 units (metal case with insulating sleeve) add .0625″ to Diameter and 1/16″ to Length.

CHOICE OF INSERTED TAB OR EXTENDED FOIL CONSTRUCTION

In the past, inserted tab capacitors have not been recommended for low-voltage applications (e.g., below 10 volts) but recent improvements in design now make it possible to recommend them for operation at all voltages from 1 to rated, in nearly all applications.

From the application standpoint, the principal difference between the two construction types is that, at resonance, losses are likely to be lower in the extended foil type. This is because the resistive component of impedance is likely to be higher at resonance in the inserted tab type of construction. Unless unusual circuit requirements make the losses at resonance a critical factor, the inserted tab construction is recommended, primarily because of the smaller size of the capacitor roll.

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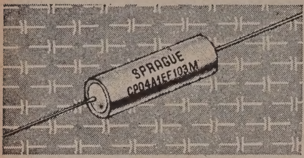
SPRAGUE CAPACITORS

MIL-C-25A CAPACITORS — TYPES CP04 and CP05



- Impregnation with Vitamin Q assures capacitors exceed MIL-C-25A performance requirements.
- Inserted tab construction for applications where minimum size is necessary.
- Positive hermetic closure of the metal cases assured by glass-to-metal solder-seal terminals.
- Type CP04 has plain metal case—Type CP05 has insulating sleeve.
- Available in Characteristic E (—55°C to +85°C) or Characteristic K (—55°C to +125°C).
- Only popular insulated section (ungrounded case) capacitors are listed. For information on grounded case units, consult your Sprague Industrial Distributor.

NOTE: The capacitors listed in this table have a capacitance tolerance of ±10%. For ±20% units, change the last letter in the catalog number from K to M.

µF	WVDC	TYPE CP04 Plain Metal Case			TYPE CP05 Metal Case with Insulating Sleeve		
		Char. E —55°C to +85°C	Char. K —55°C to +125°C	Size D. x L.	Char. E —55°C to +85°C	Char. K —55°C to +125°C	Size D. x L.
.001	600	CP04A1EF102K	CP04A1KF102K	.235 x 3/4	CP05A1EF102K	CP05A1KF102K	.298 x 13/16
.0015	600	CP04A1EF152K	CP04A1KF152K	.235 x 3/4	CP05A1EF152K	CP05A1KF152K	.298 x 13/16
.0022	600	CP04A1EF222K	CP04A1KF222K	.235 x 3/4	CP05A1EF222K	CP05A1KF222K	.298 x 13/16
.0033	600	CP04A1EF332K	CP04A1KF332K	.235 x 3/4	CP05A1EF332K	CP05A1KF332K	.298 x 13/16
.0047	600	CP04A1EF472K	CP04A1KF472K	.235 x 3/4	CP05A1EF472K	CP05A1KF472K	.298 x 13/16
.0068	600	CP04A1EF682K	CP04A1KF682K	.235 x 3/4	CP05A1EF682K	CP05A1KF682K	.298 x 13/16
.01	400	CP04A1EE103K	CP04A1KE103K	.235 x 3/4	CP05A1EE103K	CP05A1KE103K	.298 x 13/16
	600	CP04A1EF103K	CP04A1KF103K	.312 x 7/8	CP05A1EF103K	CP05A1KF103K	.375 x 15/16
.015	200	CP04A1EC153K	CP04A1KC153K	.235 x 3/4	CP05A1EC153K	CP05A1KC153K	.298 x 13/16
	600	CP04A1EF153K	CP04A1KF153K	.312 x 7/8	CP05A1EF153K	CP05A1KF153K	.375 x 15/16
.022	200	CP04A1EC223K	CP04A1KC223K	.235 x 3/4	CP05A1EC223K	CP05A1KC223K	.298 x 13/16
	600	CP04A1EF223K	CP04A1KF223K	.312 x 7/8	CP05A1EF223K	CP05A1KF223K	.375 x 15/16
.033	100	CP04A1EB333K	CP04A1KB333K	.235 x 3/4	CP05A1EB333K	CPO5A1KB333K	.298 x 13/16
	400	CP04A1EE333K	CP04A1KE333K	.312 x 7/8	CP05A1EE333K	CP05A1KE333K	.375 x 15/16
	600	CP04A1EF333K	CP04A1KF333K	.400 x 7/8	CP05A1EF333K	CP05A1KF333K	.463 x 15/16
.047	200	CP04A1EC473K	CP04A1KC473K	.312 x 7/8	CP05A1EC473K	CP05A1KC473K	.375 x 15/16
	400	CP04A1EE473K	CP04A1KE473K	.400 x 7/8	CP05A1EE473K	CP05A1KE473K	.463 x 15/16
	600	CP04A1EF473K	CP04A1KF473K	.400 x 1 1/8	CP05A1EF473K	CP05A1KF473K	.463 x 15/16
.068	200	CP04A1EC683K	CP04A1KC683K	.312 x 7/8	CP05A1EC683K	CP05A1KC683K	.375 x 15/16
	400	CP04A1EE683K	CP04A1KE683K	.400 x 1 1/8	CP05A1EE683K	CP05A1KE683K	.463 x 1 3/16
	600	CP04A1EF683K	CP04A1KF683K	.400 x 1 3/8	CP05A1EF683K	CP05A1KF683K	.463 x 1 7/16
.1	100	CP04A1EB104K	CP04A1KB104K	.312 x 7/8	CP05A1EB104K	CP05A1KB104K	.375 x 15/16
	200	CP04A1EC104K	CP04A1KC104K	.400 x 7/8	CP05A1EC104K	CP05A1KC104K	.463 x 15/16
	400	CP04A1EE104K	CP04A1KE104K	.400 x 1 3/8	CP05A1EE104K	CP05A1KE104K	.463 x 1 7/16
	600	CP04A1EF104K	CP04A1KF104K	.562 x 1 1/8	CP05A1EF104K	CP05A1KF104K	.625 x 1 3/16
.15	100	CP04A1EB154K	CP04A1KB154K	.400 x 7/8	CP05A1EB154K	CP05A1KB154K	.463 x 15/16
	200	CP04A1EC154K	CP04A1KC154K	.400 x 1 1/8	CP05A1EC154K	CP05A1KC154K	.463 x 1 3/16
	400	CPO4A1EE154K	CP04A1KE154K	.562 x 1 1/8	CP05A1EE154K	CP05A1KE154K	.625 x 1 3/16
	600	CP04A1EF154K	CP04A1KF154K	.562 x 1 3/8	CP05A1EF154K	CP05A1KF154K	.625 x 1 7/16
.22	100	CP04A1EB224K	CP04A1KB224K	.400 x 1 3/8	CP05A1EB224K	CP05A1KB224K	.463 x 1 3/16
	200	CP04A1EC224K	CP04A1KC224K	.400 x 1 3/8	CP05A1EC224K	CP05A1KC224K	.463 x 1 7/16
	400	CP04A1EE224K	CP04A1KE224K	.562 x 1 3/8	CP05A1EE224K	CP05A1KE224K	.625 x 1 7/16
	600	CP04A1EF224K	CP04A1KF224K	.562 x 1 7/8	CP05A1EF224K	CP05A1KF224K	.625 x 1 15/16
.33	100	CP04A1EB334K	CP04A1KB334K	.400 x 1 3/8	CP05A1EB334K	CP05A1KB334K	.463 x 1 7/16
	200	CP04A1EC334K	CP04A1KC334K	.562 x 1 1/8	CP05A1EC334K	CP05A1KC334K	.625 x 1 3/16
	400	CP04A1EE334K	CP04A1KE334K	.562 x 1 7/8	CP05A1EE334K	CP05A1KE334K	.625 x 1 15/16
	600	CP04A1EF334K	CP04A1KF334K	.670 x 1 7/8	CP05A1EF334K	CP05A1KF334K	.733 x 1 15/16
.47	100	CP04A1EB474K	CP04A1KB474K	.562 x 1 1/8	CP05A1EB474K	CP05A1KB474K	.625 x 1 3/16
	200	CP04A1EC474K	CP04A1KC474K	.562 x 1 3/8	CP05A1EC474K	CP05A1KC474K	.625 x 1 7/16
	400	CP04A1EE474K	CP04A1KE474K	.670 x 1 7/8	CP05A1EE474K	CP05A1KE474K	.733 x 1 15/16
	600	CP04A1EF474K	CP04A1KF474K	.750 x 2 1/8	CP05A1EF474K	CP05A1KF474K	.813 x 2 3/16
.68	100	CP04A1EB684K	CP04A1KB684K	.562 x 1 3/8	CP05A1EB684K	CP05A1KB684K	.625 x 1 7/16
	200	CP04A1EC684K	CP04A1KC684K	.562 x 1 7/8	CP05A1EC684K	CP05A1KC684K	.625 x 1 15/16
	400	CP04A1EE684K	CP04A1KE684K	.750 x 2 1/8	CP05A1EE684K	CP05A1KE684K	.813 x 2 3/16
	600	CP04A1EF684K	CP04A1KF684K	1.0 x 1 7/8	CP05A1EF684K	CP05A1KF684K	1.063 x 1 15/16
1.0	100	CP04A1EB105K	CP04A1KB105K	.562 x 1 7/8	CP05A1EB105K	CP05A1KB105K	.625 x 1 15/16
	200	CP04A1EC105K	CP04A1KC105K	.670 x 1 7/8	CP05A1EC105K	CP05A1KC105K	.733 x 1 15/16
	400	CP04A1EE105K	CP04A1KE105K	1.0 x 1 7/8	CP05A1EE105K	CP05A1KE105K	1.063 x 1 15/16

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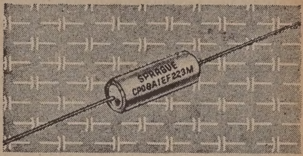
SPRAGUE CAPACITORS

MIL-C-25A CAPACITORS — TYPES CP08 and CP09

- Vitamin Q impregnation assures performance above and beyond MIL-C-25A requirements.
- Positive hermetic closure of the metal cases with glass-to-metal solder-seal terminals.
- Available in Characteristic E (—55°C to +85°C) or Characteristic K (—55°C to +125°C).
- Type CP08 has plain metal case— Type CP09 has insulating sleeve.
- Extended foil (so-called non-inductive section) construction.
- Listed below are popular insulated section (ungrounded case) capacitors. Consult your Sprague Industrial Distributor for information on grounded case units.



NOTE: The capacitors listed in this table have a capacitance tolerance of ±10%. For ±20% units, change the last letter in the catalog number from K to M.

μF	WVDC	TYPE CP08 Plain Metal Case			TYPE CP09 Metal Case with Insulating Sleeve		
		Char. E —55°C to +85°C	Char. K —55°C to +125°C	Size D. x L.	Char. E —55°C to +85°C	Char. K —55°C to +125°C	Size D. x L.
.001	600	CP08A1EF102K	CP08A1KF102K	.235 x ¾	CP09A1EF102K	CP09A1KF102K	.298 x 13/16
.0015	600	CP08A1EF152K	CP08A1KF152K	.235 x ¾	CP09A1EF152K	CP09A1KF152K	.298 x 13/16
.0022	600	CP08A1EF222K	CP08A1KF222K	.235 x ¾	CP09A1EF222K	CP09A1KF222K	.298 x 13/16
.0033	400	CP08A1EE332K	CP08A1KE332K	.235 x ¾	CP09A1EE332K	CP09A1KE332K	.298 x 13/16
	600	CP08A1EF332K	CP08A1KF332K	.312 x ⅞	CP09A1EF332K	CP09A1KF332K	.375 x 15/16
.0047	200	CP08A1EC472K	CP08A1KC472K	.235 x ¾	CP09A1EC472K	CP09A1KC472K	.298 x 13/16
	600	CP08A1EF472K	CP08A1KF472K	.312 x ⅞	CP09A1EF472K	CP09A1KF472K	.375 x 15/16
.0068	200	CP08A1EC682K	CP08A1KC682K	.235 x ¾	CP09A1EC682K	CP09A1KC682K	.298 x 13/16
	600	CP08A1EF682K	CP08A1KF682K	.312 x ⅞	CP09A1EF682K	CP09A1KF682K	.375 x 15/16
.01	100	CP08A1EB103K	CP08A1KB103K	.235 x ¾	CP09A1EB103K	CP09A1KB103K	.298 x 13/16
	600	CP08A1EF103K	CP08A1KF103K	.312 x ⅞	CP09A1EF103K	CP09A1KF103K	.375 x 15/16
.015	100	CP08A1EB153K	CP08A1KB153K	.235 x ¾	CP09A1EB153K	CP09A1KB153K	.298 x 13/16
	400	CP08A1EE153K	CP08A1KE153K	.312 x ⅞	CP09A1EE153K	CP09A1KE153K	.375 x 15/16
	600	CP08A1EF153K	CP08A1KF153K	.400 x ⅞	CP09A1EF153K	CP09A1KF153K	.463 x 15/16
.022	200	CP08A1EC223K	CP08A1KC223K	.312 x ⅞	CP09A1EC223K	CP09A1KC223K	.375 x 15/16
	600	CP08A1EF223K	CP08A1KF223K	.400 x ⅞	CP09A1EF223K	CP09A1KF223K	.463 x 15/16
.033	200	CP08A1EC333K	CP08A1KC333K	.312 x ⅞	CP09A1EC333K	CP09A1KC333K	.375 x 15/16
	400	CP08A1EE333K	CP08A1KE333K	.400 x ⅞	CP09A1EE333K	CP09A1KE333K	.463 x 15/16
	600	CP08A1EF333K	CP08A1KF333K	.400 x 1⅛	CP09A1EF333K	CP09A1KF333K	.463 x 1 3/16
.047	100	CP08A1EB473K	CP08A1KB473K	.312 x ⅞	CP09A1EB473K	CP09A1KB473K	.375 x 15/16
	200	CP08A1EC473K	CP08A1KC473K	.400 x ⅞	CP09A1EC473K	CP09A1KC473K	.463 x 15/16
	400	CP08A1EE473K	CP08A1KE473K	.400 x 1⅛	CP09A1EE473K	CP09A1KE473K	.463 x 1 3/16
	600	CP08A1EF473K	CP08A1KF473K	.400 x 1⅜	CP09A1EF473K	CP09A1KF473K	.463 x 1 7/16
.068	200	CP08A1EC683K	CP08A1KC683K	.400 x ⅞	CP09A1EC683K	CP09A1KC683K	.463 x 15/16
	400	CP08A1EE683K	CP08A1KE683K	.400 x 1⅜	CP09A1EE683K	CP09A1KE683K	.463 x 1 7/16
	600	CP08A1EF683K	CP08A1KF683K	.562 x 1⅛	CP09A1EF683K	CP09A1KF683K	.625 x 1 3/16
.1	100	CP08A1EB104K	CP08A1KB104K	.400 x ⅞	CP09A1EB104K	CP09A1KB104K	.463 x 15/16
	200	CP08A1EC104K	CP08A1KC104K	.400 x 1⅛	CP09A1EC104K	CP09A1KC104K	.463 x 1 3/16
	400	CP08A1EE104K	CP08A1KE104K	.562 x 1⅛	CP09A1EE104K	CP09A1KE104K	.625 x 1 3/16
	600	CP08A1EF104K	CP08A1KF104K	.562 x 1⅜	CP09A1EF104K	CP09A1KF104K	.625 x 1 7/16
.15	100	CP08A1EB154K	CP08A1KB154K	.400 x 1⅛	CP09A1EB154K	CP09A1KB154K	.463 x 1 3/16
	200	CP08A1EC154K	CP08A1KC154K	.400 x 1⅜	CP09A1EC154K	CP09A1KC154K	.463 x 1 7/16
	400	CP08A1EE154K	CP08A1KE154K	.562 x 1⅜	CP09A1EE154K	CP09A1KE154K	.625 x 1 7/16
	600	CP08A1EF154K	CP08A1KF154K	.562 x 1⅝	CP09A1EF154K	CP09A1KF154K	.625 x 1 11/16
.22	100	CP08A1EB224K	CP08A1KB224K	.400 x 1⅜	CP09A1EB224K	CP09A1KB224K	.463 x 1 7/16
	200	CP08A1EC224K	CP08A1KC224K	.562 x 1⅛	CP09A1EC224K	CP09A1KC224K	.625 x 1 3/16
	400	CP08A1EE224K	CP08A1KE224K	.562 x 1⅝	CP09A1EE224K	CP09A1KE224K	.625 x 1 11/16
	600	CP08A1EF224K	CP08A1KF224K	.670 x 1⅝	CP09A1EF224K	CP09A1KF224K	.733 x 1 11/16
.33	100	CP08A1EB334K	CP08A1KB334K	.562 x 1⅛	CP09A1EB334K	CP09A1KB334K	.625 x 1 3/16
	200	CP08A1EC334K	CP08A1KC334K	.562 x 1⅜	CP09A1EC334K	CP09A1KC334K	.625 x 1 7/16
	400	CP08A1EE334K	CP08A1KE334K	.670 x 1⅝	CP09A1EE334K	CP09A1KE334K	.733 x 1 11/16
	600	CP08A1EF334K	CP08A1KF334K	.750 x 2⅛	CP09A1EF334K	CP09A1KF334K	.813 x 2 3/16
.47	100	CP08A1EB474K	CP08A1KB474K	.562 x 1⅜	CP09A1EB474K	CP09A1KB474K	.625 x 1 7/16
	200	CP08A1EC474K	CP08A1KC474K	.562 x 1⅝	CP09A1EC474K	CP09A1KC474K	.625 x 1 11/16
	400	CP08A1EE474K	CP08A1KE474K	.750 x 2⅛	CP09A1EE474K	CP09A1KE474K	.813 x 2 3/16
	600	CP08A1EF474K	CPO8A1KF474K	.750 x 2⅜	CP09A1EF474K	CPO9A1KF474K	.813 x 2 7/16
.68	100	CP08A1EB684K	CP08A1KB684K	.562 x 1⅝	CP09A1EB684K	CP09A1KB684K	.625 x 1 11/16
	200	CP08A1EC684K	CP08A1KC684K	.670 x 1⅝	CP09A1EC684K	CP09A1KC684K	.733 x 1 11/16
1.0	100	CP08A1EB105K	CP08A1KB105K	.670 x 1⅝	CP09A1EB105K	CP09A1KB105K	.733 x 1 11/16
	200	CP08A1EC105K	CP08A1KC105K	.750 x 2⅛	CP09A1EC105K	CP09A1KC105K	.813 x 2 3/16

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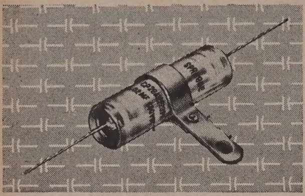
SPRAGUE CAPACITORS

MIL-C-25A CAPACITORS — TYPES CP26 and CP28



- Impregnated with specially processed mineral oil to exceed performance requirements of Spec. MIL-C-25A
- Type CP26 has outer insulating sleeve— Type CP28 has insulating sleeve plus radial mounting bracket
- Hermetically sealed for protection against leakage and contamination
- Meet temperature characteristic E (−55°C to +85°C operation)
- Capacitor sections are insulated from metal cases

NOTE: Capacitors listed below have a capacitance tolerance of ±10%. For ±20% units, change last letter in catalog number from K to M.

TYPE CP26 (without Mounting Bracket)

μF	Volts	Diam. x Length	Cat. No.
.006	600	½ x 1 5/16	CP26A1EF602K
.01	600	½ x 1 5/16	CP26A1EF103K
.02	600	½ x 1 13/16	CP26A1EF203K
.05	600	11/16 x 1 11/16	CP26A1EF503K
.5	200	1 1/16 x 2 5/16	CP26A1EC504K

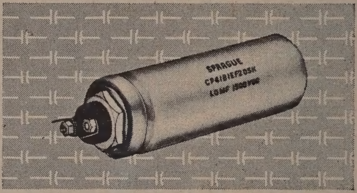
TYPE CP28 (Radial Mounting Bracket)

μF	Volts	Diam. x Length	Cat. No.
.1	600	11/16 x 2 1/16	CP28A1EF104K
.25	600	1 1/16 x 2 5/16	CP28A1EF254K
.5	600	1 1/16 x 2 13/16	CP28A1EF504K

MIL-C-25A CAPACITORS — TYPES CP40 and CP41

- Designed and manufactured for service life and performance characteristics exceeding MIL requirements
- Type CP40 has screw and nut connection on positive terminal, can is negative—Type CP41 has two solder lug terminals, with capacitor section insulated from metal case
- Impregnated with specially processed mineral oil for characteristic E operation—Will withstand wide temperature variations (−55°C to +85°C)
- Hermetically sealed in metal cases, with threaded screw necks for mounting purposes

NOTE: Capacitors listed below have a capacitance tolerance of ±10%. For ±20% units, change last letter in catalog number from K to M.

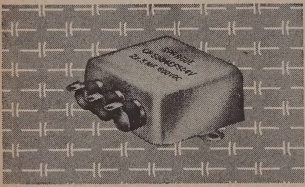


TYPE CP40 (One Terminal)

μF	Volts	Diam. x Length	Cat. No.
2.0	600	1½ x 3⅜	CP40C2EF205K
4.0	600	1½ x 5¼	CP40C2EF405K

TYPE CP41 (Two Terminals)

μF	Volts	Diam. x Length	Cat. No.
2.0	600	1½ x 3⅜	CP41B1EF205K
4.0	600	1½ x 5¼	CP41B1EF405K



MIL-C-25A CAPACITORS—TYPE CP53

- Impregnated with specially processed mineral oil to exceed performance requirements of MIL-C-25A
- Hermetically sealed, with silicone rubber compression terminals
- −55°C to +85°C operation
- Drawn metal cases have mounting flanges as integral part of containers
- Single and dual capacitance units have insulated sections—triple capacitance units have grounded cases

NOTE: Capacitors listed below have capacitance tolerances of +20%, −10%(V) or ±10%(K). For ±20% units, change last letter in catalog number from K to M or V to M.

μF	Volts	L. x W. x H.	Cat. No.
		Single Capacitance	
.05	600	1 13/16 x 1 x ¾	CP53B1EF503K
.05	1000	1 13/16 x 1 x ¾	CP53B1EG503K
.1	600	1 13/16 x 1 x ¾	CP53B1EF104K
.1	1000	1 13/16 x 1 x ¾	CP53B1EG104K
.25	600	1 13/16 x 1 x ¾	CP53B1EF254K
.25	1000	1 13/16 x 1 x ⅞	CP53B1EG254K
.5	400	1 13/16 x 1 x ⅞	CP53B1EE504K
.5	600	1 13/16 x 1 x 1	CP53B1EF504K
.5	1000	2 x 1¾ x ⅞	CP53B1EG504K
1.0	600	2 x 1¾ x 1	CP53B1EF105K
1.0	1000	2 x 2 x 1⅛	CP53B1EG105K
2.0	100	2 x 1¾ x ⅞	CP53B1EB205K
2.0	200	2 x 2 x 1	CP53B1EC205K
2.0	600	2 x 2 x 1⅛	CP53B1EF205K
4.0	100	2 x 2 x 1⅛	CP53B1EB405K

μF	Volts	L. x W. x H.	Cat. No.
		Dual Capacitance	
.05+ .05	600	1 13/16 x 1 x ¾	CP53B4EF503V
.05+ .05	1000	1 13/16 x 1 x ¾	CP53B4EG503V
.1 + .1	600	1 13/16 x 1 x ¾	CP53B4EF104V
.1 + .1	1000	1 13/16 x 1 x ⅞	CP53B4EG104V
.25+ .25	600	1 13/16 x 1 x 1	CP53B4EF254V
.25+ .25	1000	2 x 1¾ x ⅞	CP53B4EG254V
.5 + .5	600	2 x 1¾ x 1	CP53B4EF504V
.5 + .5	1000	2 x 2 x 1⅛	CP53B4EG504V
1.0 +1.0	600	2 x 2 x 1⅛	CP53B4EF105V
		Triple Capacitance	
.05+.05+.05	600	1 13/16 x 1 x ¾	CP53B5EF503V
.1 +.1 +.1	600	1 13/16 x 1 x ⅞	CP53B5EF104V
.5 +.5 +.5	600	2 x 2 x 1⅛	CP53B5EF504V

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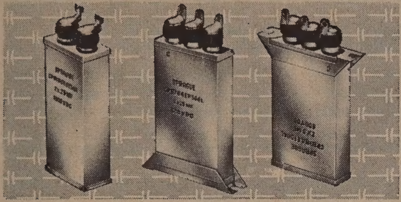
SPRAGUE CAPACITORS



CP61, CP67, CP69, CP91
MIL-C-25A CAPACITORS

- Mineral Oil Impregnated for Minimum Capacitance Change with Temperature
- Hermetically Sealed in Drawn Metal Cases
- Have Silicone Rubber Compression Terminals for Positive Prevention Against Entrance of Moisture or Leakage of Impregnant
- Designed and Manufactured for Service Life Beyond Specification Requirements
- Units Listed are Most Popular Ratings. Complete Military Line Available from Sprague
- CP61 and CP91 require separate mounting brackets. CP67 and CP69 have integral channel brackets

NOTE: These units have capacitance tolerances of ±10% (K) or +20, −10% (V). For ±20% units, change the last letter in the catalog number from K to M or V to M.

TYPE CP 61

CAP. µF	VOLTS DC	CAT. NO.	SIZE	Mounting Brackets* CAT. NO.
.05	600	CP61B1EF503K	1 5/16 x 11/16 x 1 1/16	CP06-FA1
.1	600	CP61B1EF104K	1 5/16 x 11/16 x 1 3/8	CP06-FA2
.25	600	CP61B1EF254K	1 5/16 x 11/16 x 1 5/8	CP06-FA3
1.0	600	CP61B1EF504K	1 5/16 x 11/16 x 2 1/2	CP06-FA5
.1 + .1	600	CP61B6EF104V	1 5/16 x 11/16 x 1 5/8	CP06-FA3
.25 + .25	600	CP61B6EF254V	1 5/16 x 11/16 x 2	CP06-FA4
.5 + .5	600	CP61B6EF504V	1 5/16 x 11/16 x 2 3/4	CP06-FA6

TYPE CP 91

CAP. µF	VOLTS DC	CAT. NO.	SIZE	Mounting Brackets* CAT. NO.
.05	600	CP91B1EF503K	1 5/16 x 5/8 x 1 1/16	CP091-FB1
.1	600	CP91B1EF104K	1 5/16 x 5/8 x 1 3/8	CP091-FB2
.25	600	CP91B1EF254K	1 5/16 x 5/8 x 1 5/8	CP091-FB3
.5	600	CP91B1EF504K	1 5/16 x 5/8 x 2	CP091-FB4
1.0	600	CP91B1EF105K	1 5/16 x 5/8 x 2 3/4	CP091-FB6
.1 + .1	600	CP91B6EF104V	1 5/16 x 5/8 x 1 5/8	CP091-FB3
.25 + .25	600	CP91B6EF254V	1 5/16 x 5/8 x 2	CP091-FB4
.5 + .5	600	CP91B6EF504V	1 5/16 x 5/8 x 2 3/4	CP091-FB6

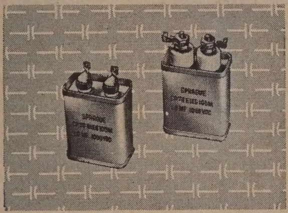
TYPE CP 67 Terminals opposite channel bracket

CAP. µF	VOLTS DC	CAT. NO.	SIZE	Mounting Brackets* CAT. NO.
.1	600	CP67B1EF104K	1 3/4 x 41/64 x 1 1/16	Integral Channel Brackets
.25	600	CP67B1EF254K	1 3/4 x 41/64 x 1 1/2	
.5	600	CP67B1EF504K	1 3/4 x 41/64 x 2	
1.0	600	CP67B1EF105K	1 3/4 x 41/64 x 2 3/4	

TYPE CP 69 Terminals on same end as channel bracket

CAP. µF	VOLTS DC	CAT. NO.	SIZE	Mounting Brackets* CAT. NO.
.05	600	CP69B1EF503K	1 3/4 x 41/64 x 1 1/16	Integral Channel Brackets
.1	600	CP69B1EF104K	1 3/4 x 41/64 x 1 1/16	
.25	600	CP69B1EF254K	1 3/4 x 41/64 x 1 1/2	
.5	600	CP69B1EF504K	1 3/4 x 41/64 x 2	
1.0	600	CP69B1EF105K	1 3/4 x 41/64 x 2 3/4	

*Footed Brackets are listed; for spade type change F in catalog No. to S



MIL-C-25A CAPACITORS—TYPE CP70

- Ruggedly Constructed for Exacting Heavy-Duty Applications
- Long Life and Reliable Service under High Ambient Temperatures
- Terminals have Ceramic Pillar Insulators (E) or Rubber Compression Seals (B)
- Impregnated with a Specially Processed Mineral Oil to Withstand Severe Operating Conditions
- Char. F Units Recommended primarily for ground equipment where no low temperatures are encountered
- Units Listed are Most Popular Ratings. Complete Military Line Available from Sprague

NOTE: These units have a capacitance tolerance of ±10%. For ±20% tolerance, change the last letter in the catalog number from K to M.

CAP. µF	Volts DC	Char. E (E Term.)		Char. F (B Term.)		Char. E (B Term.)	
		Cat. No.	W x T x H	Cat. No.	W x T x H	Cat. No.	W x T x H
.1	1000	CP70E1EG104K	1 13/16 x 1 1/16 x 1 5/8	———	———	———	———
.1	2000	CP70E1EJ104K	2 1/2 x 1 3/16 x 2 1/2	———	———	———	———
.25	1000	CP70E1EG254K	1 13/16 x 1 1/16 x 2 1/4	———	———	———	———
.25	2000	CP70E1EJ254K	2 1/2 x 1 3/16 x 2 1/2	———	———	———	———
.5	600	CP70E1EF504K	1 13/16 x 1 1/16 x 2 1/4	———	———	———	———
.5	1000	CP70E1EG504K	1 13/16 x 1 1/16 x 2 1/4	———	———	CP70B1EG504K	1 13/16 x 1 1/16 x 2 1/4
.5	1500	CP70E1EH504K	1 13/16 x 1 1/16 x 2 7/8	———	———	———	———
.5	2000	CP70E1EJ504K	2 1/2 x 1 3/16 x 2 7/8	———	———	———	———
.5	2500	CP70E1EK504K	2 1/2 x 1 3/16 x 3 7/8	———	———	———	———
1.0	600	CP70E1EF105K	1 13/16 x 1 1/16 x 2 1/4	———	———	CP70B1EF105K	1 13/16 x 1 1/16 x 2 1/4
1.0	1000	CP70E1EG105K	1 13/16 x 1 1/16 x 2 7/8	———	———	CP70B1EG105K	1 13/16 x 1 1/16 x 2 7/8
1.0	1500	CP70E1EH105K	1 13/16 x 1 1/16 x 4 3/4	———	———	———	———
1.0	2000	CP70E1EJ105K	2 1/2 x 13/16 x 4 3/4	———	———	———	———
1.0	2500	CP70E1EK105K	3 3/4 x 1 3/4 x 3 7/8	———	———	———	———
2.0	600	CP70E1EF205K	1 13/16 x 1 1/16 x 3 1/4	CP70B1FF205K	1 13/16 x 1 1/16 x 2 7/8	CP70B1EF205K	1 13/16 x 1 1/16 x 3 1/4
2.0	1000	CP70E1EG205K	1 13/16 x 1 1/16 x 4 3/4	CP70B1FG205K	1 13/16 x 1 1/16 x 3 7/8	CP70B1EG205K	1 13/16 x 1 1/16 x 4 3/4
2.0	1500	CP70E1EH205K	2 1/2 x 1 3/16 x 4 3/4	———	———	CP70B1EH205K	2 1/2 x 1 3/16 x 4 3/4
2.0	2000	CP70E1EJ205K	3 3/4 x 1 1/4 x 4 3/4	———	———	———	———
2.0	2500	CP70E1EK205K	3 3/4 x 2 1/4 x 4 3/4	———	———	———	———
4.0	600	CP70E1EF405K	2 1/2 x 1 3/16 x 3 7/8	CP70B1FF405K	2 1/2 x 1 3/16 x 3 1/2	CP70B1EF405K	2 1/2 x 1 3/16 x 3 7/8
4.0	1000	CP70E1EG405K	3 3/4 x 1 1/4 x 3 7/8	CP70B1FG405K	2 1/2 x 1 3/16 x 4 3/4	CP70B1EG405K	3 3/4 x 1 1/4 x 3 7/8
4.0	1500	CP70E1EH405K	3 3/4 x 1 3/4 x 4 1/4	———	———	CP70B1EH405K	3 3/4 x 1 3/4 x 4 1/4
4.0	2000	CP70E1EJ405K	3 3/4 x 2 1/4 x 5 1/8	———	———	———	———
4.0	2500	CP70E1EK405K	4 9/16 x 3 3/4 x 4 3/8	———	———	———	———
6.0	600	CP70E1EF605K	3 3/4 x 1 1/4 x 3 7/8	CP70B1FF605K	2 1/2 x 1 3/16 x 4 3/4	CP70B1EF605K	3 3/4 x 1 1/4 x 3 7/8
6.0	1000	CP70E1EG605K	3 3/4 x 1 3/4 x 4	CP70B1FG605K	3 3/4 x 1 1/4 x 4 3/4	CP70B1EG605K	3 3/4 x 1 3/4 x 4
6.0	1500	CP70E1EH605K	3 3/4 x 2 1/4 x 4 3/4	———	———	CP70B1EH605K	3 3/4 x 2 1/4 x 4 3/4
8.0	600	CP70E1EF805K	3 3/4 x 1 1/4 x 4 1/4	CP70B1FF805K	3 3/4 x 1 1/4 x 3 7/8	CP70B1EF805K	3 3/4 x 1 1/4 x 4 1/4
8.0	1000	CP70E1EG805K	3 3/4 x 1 3/4 x 4 3/4	CP70B1FG805K	3 3/4 x 1 3/4 x 3 7/8	CP70B1EG805K	3 3/4 x 1 3/4 x 4 3/4
8.0	1500	CP70E1EH805K	3 3/4 x 2 1/2 x 5 3/4	———	———	CP70B1EH805K	3 3/4 x 2 1/2 x 5 3/4
10.0	600	CP70E1EF106K	3 3/4 x 1 3/4 x 4	CP70B1FF106K	3 3/4 x 1 1/4 x 4 3/4	CP70B1EF106K	3 3/4 x 1 3/4 x 4
10.0	1000	CP70E1EG106K	3 3/4 x 2 1/4 x 4 3/4	CP70B1FG106K	3 3/4 x 1 3/4 x 4 3/4	CP70B1EG106K	3 3/4 x 2 1/4 x 4 3/4
10.0	1500	CP70E1EH106K	3 3/4 x 3 3/16 x 5 1/2	———	———	CP70B1EH106K	3 3/4 x 3 3/16 x 5 1/2
12.0	1000	CP70E1EG126K	3 3/4 x 2 1/4 x 5 1/8	———	———	CP70B1EG126K	3 3/4 x 2 1/4 x 5 1/8
15.0	1000	CP70E1EG156K	3 3/4 x 3 3/16 x 4 3/4	———	———	———	———

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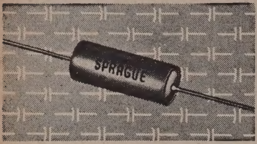
SPRAGUE CAPACITORS

118P DIFILM® METALLIZED CAPACITORS



- The best of their type which it is possible to produce in the present state of the art
- Rated for operation at 125°C WITHOUT VOLTAGE DERATING
- Unique dual dielectric—a combination of metallized paper and of polyester film, impregnated with special high-temperature mineral wax
- Subjected to stringent quality control during manufacture
- Higher insulation resistance than any other metallized paper capacitors—at 125°C, minimum product of insulation resistance and capacitance is 10 megohm-microfarads for 200 V units or 40 megohm-microfarads for 400 and 600 V units
- Capacitor sections are effectively of non-inductive construction, resulting in capacitors unmatched in performance quality by any other metallized capacitors •
- Hermetically sealed, with glass-to-metal solder-seal terminals
- Have unusual self-healing characteristics, in the rare event of capacitor dielectric breakdown
- May be used at extremely low voltages where metallized paper construction has previously been unsatisfactory
- For complete performance characteristics, see Engineering Bulletin 2211A
- Capacitors listed below are ungrounded case (insulated section) units without outer insulating sleeves. For information on other styles consult your Sprague Industrial Distributor

		Catalog Number	
µF	Diam. x Length	±20% Tol.	±10% Tol.
	200 WVDC		
.01	.235 x ¾	118P10302S2	118P10392S2
.012	.235 x ¾		118P12392S2
.015	.235 x ¾	118P15302S2	118P15392S2
.018	.235 x ¾		118P18392S2
.022	.235 x ¾	118P22302S2	118P22392S2
.027	.235 x ¾		118P27392S2
.033	.235 x ¾	118P33302S2	118P33392S2
.039	.312 x ⅞		118P39392S2
.047	.312 x ⅞	118P47302S2	118P47392S2
.056	.312 x ⅞		118P56392S2
.068	.312 x ⅞	118P68302S2	118P68392S2
.082	.312 x ⅞		118P82392S2
.1	.312 x ⅞	118P10402S2	118P10492S2
.12	.312 x 1⅛		118P12492S2
.15	.312 x 1⅛	118P15402S2	118P15492S2
.18	.400 x ⅞		118P18492S2
.22	.400 x ⅞	118P22402S2	118P22492S2
.27	.400 x 1⅛		118P27492S2
.33	.400 x 1⅛	118P33402S2	118P33492S2
.39	.500 x 1⅛		118P39492S2
.47	.500 x 1⅛	118P47402S2	118P47492S2
.56	.500 x 1⅛		118P56492S2
.68	.500 x 1⅛	118P68402S2	118P68492S2
.82	.562 x 1⅛		118P82492S2
1.0	.562 x 1⅛	118P10502S2	118P10592S2
1.5	.562 x 1⅝	118P15502S2	118P15592S2
2.0	.670 x 1⅝	118P20502S2	118P20592S2
3.0	.670 x 1⅞	118P30502S2	118P30592S2
4.0	.750 x 1⅞	118P40502S2	118P40592S2
5.0	1.000 x 1⅞	118P50502S2	118P50592S2
6.0	1.000 x 1⅞	118P60502S2	118P60592S2
8.0	1.000 x 1⅞	118P80502S2	118P80592S2
10.0	1.000 x 2⅜	118P10602S2	118P10692S2
12.0	1.000 x 2⅝	118P12602S2	118P12692S2
	400 WVDC		
.01	.312 x ⅞	118P10304S2	118P10394S2
.012	.312 x ⅞		118P12394S2
.015	.312 x ⅞	118P15304S2	118P15394S2
.018	.312 x ⅞		118P18394S2
.022	.312 x ⅞	118P22304S2	118P22394S2
.027	.312 x 1⅛		118P27394S2
.033	.312 x 1⅛	118P33304S2	118P33394S2
.039	.400 x 1⅛		118P39394S2
.047	.400 x 1⅛	118P47304S2	118P47394S2
.056	.400 x 1⅛		118P56394S2
.068	.400 x 1⅛	118P68304S2	118P68394S2
.082	.500 x 1⅛		118P82394S2
.1	.500 x 1⅛	118P10404S2	118P10494S2
.12	.500 x 1⅛		118P12494S2
.15	.500 x 1⅛	118P15404S2	118P15494S2
.18	.562 x 1⅜		118P18494S2
.22	.562 x 1⅜	118P22404S2	118P22494S2
.27	.562 x 1⅝		118P27494S2
.33	.562 x 1⅝	118P33404S2	118P33494S2
.39	.670 x 1⅝		118P39494S2
.47	.670 x 1⅝	118P47404S2	118P47494S2
.56	.670 x 1⅞		118P56494S2
.68	.670 x 1⅞	118P68404S2	118P68494S2
.82	.750 x 1⅞		118P82494S2
1.0	.750 x 1⅞	118P10504S2	118P10594S2
1.5	1.000 x 1⅞	118P15504S2	118P15594S2
2.0	1.000 x 1⅞	118P20504S2	118P20594S2
3.0	1.000 x 2⅝	118P30504S2	118P30594S2
	600 WVDC		
.01	.312 x ⅞	118P10306S2	118P10396S2
.012	.312 x ⅞		118P12396S2
.015	.312 x ⅞	118P15306S2	118P15396S2
.018	.312 x 1⅛		118P18396S2
.022	.312 x 1⅛	118P22306S2	118P22396S2
.027	.312 x 1⅛		118P27396S2
.033	.312 x 1⅛	118P33306S2	118P33396S2
.039	.400 x 1⅛		118P39396S2
.047	.400 x 1⅛	118P47306S2	118P47396S2
.056	.400 x 1⅛		118P56396S2
.068	.400 x 1⅛	118P68306S2	118P68396S2
.082	.500 x 1⅛		118P82396S2
.1	.500 x 1⅛	118P10406S2	118P10496S2
.12	.562 x 1⅛		118P12496S2
.15	.562 x 1⅛	118P15406S2	118P15496S2
.18	.562 x 1⅜		118P18496S2
.22	.562 x 1⅜	118P22406S2	118P22496S2
.27	.562 x 1⅝		118P27496S2
.33	.562 x 1⅝	118P33406S2	118P33496S2
.39	.670 x 1⅝		118P39496S2
.47	.670 x 1⅝	118P47406S2	118P47496S2
.56	.670 x 1⅞		118P56496S2
.68	.670 x 1⅞	118P68406S2	118P68496S2
.82	1.000 x 1⅞		118P82496S2
1.0	1.000 x 1⅞	118P10506S2	118P10596S2
1.5	1.000 x 1⅞	118P15506S2	118P15596S2
2.0	1.000 x 2⅛	118P20506S2	118P20596S2
2.5	1.000 x 2⅝	118P25506S2	118P25596S2

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SPRAGUE CAPACITORS

121P METALLIZED PAPER CAPACITORS

- Designed to operate at 125°C WITHOUT VOLTAGE DERATING—extremely important in military and industrial equipment where higher temperatures are encountered
- Quality of these capacitors is surpassed only by Type 118P units described on opposite page
- High insulation resistance—at 85°C, minimum product of insulation resistance and capacitance is 20 megohm-microfarads. At 125°C, minimum product is 1.0 megohm-microfarads
- Hermetically sealed with glass-to-metal solder-seal terminals—capacitor cases are of corrosion resistant materials—similar in appearance to Type 118P
- May be operated at low voltages, unlike many other metallized capacitors
- For complete performance data, see Engineering Bulletin 2210
- Capacitors listed below are ungrounded case (insulated section) units without outer insulating sleeves. For information on other styles consult your Sprague Industrial Distributor

150 WVDC

μF	Diam. x Length	Catalog Number	
		±20% Tol.	±10% Tol.
1.5	.562 x 1⅛	121P15501R5S2	121P15591R5S2
2.0	.562 x 1⅜	121P20501R5S2	121P20591R5S2
2.5	.562 x 1⅝	121P25501R5S2	121P25591R5S2
3.0	.670 x 1⅜	121P30501R5S2	121P30591R5S2
3.5	.670 x 1⅝	121P35501R5S2	121P35591R5S2
4.0	.670 x 1⅝	121P40501R5S2	121P40591R5S2
5.0	.670 x 1⅞	121P50501R5S2	121P50591R5S2
6.0	.750 x 1⅞	121P60501R5S2	121P60591R5S2
8.0	.750 x 2⅜	121P80501R5S2	121P80591R5S2
10	.750 x 2⅝	121P10601R5S2	121P10691R5S2
12	1.000 x 1⅞	121P12601R5S2	121P12691R5S2
14	1.000 x 2⅛	121P14601R5S2	121P14691R5S2
16	1.000 x 2⅜	121P16601R5S2	121P16691R5S2
18	1.000 x 2⅝	121P18601R5S2	121P18691R5S2

200 WVDC

μF	Diam. x Length	Catalog Number	
		±20% Tol.	±10% Tol.
.047	.235 x ¾	121P47302S2	121P47392S2
.056	.312 x ⅞		121P56392S2
.068	.312 x ⅞	121P68302S2	121P68392S2
.082	.312 x ⅞		121P82392S2
.1	.312 x ⅞	121P10402S2	121P10492S2
.12	.312 x ⅞		121P12492S2
.15	.312 x ⅞	121P15402S2	121P15492S2
.18	.312 x 1⅛		121P18492S2
.22	.312 x 1⅛	121P22402S2	121P22492S2
.27	.400 x 1⅛		121P27492S2
.33	.400 x 1⅛	121P33402S2	121P33492S2
.39	.400 x 1⅛		121P39492S2
.47	.400 x 1⅛	121P47402S2	121P47492S2
.56	.500 x 1⅛		121P56492S2
.68	.500 x 1⅛	121P68402S2	121P68492S2
.82	.562 x 1⅛		121P82492S2
1.0	.562 x 1⅛	121P10502S2	121P10592S2
1.5	.562 x 1⅜	121P15502S2	121P15592S2
2.0	.562 x 1⅞	121P20502S2	121P20592S2
2.5	.670 x 1⅝	121P25502S2	121P25592S2
3.0	.670 x 1⅞	121P30502S2	121P30592S2
3.5	.750 x 1⅞	121P35502S2	121P35592S2
4.0	.750 x 1⅞	121P40502S2	121P40592S2
5.0	.750 x 2⅛	121P50502S2	121P50592S2
6.0	.750 x 2⅜	121P60502S2	121P60592S2
8.0	1.000 x 1⅞	121P80502S2	121P80592S2
10	1.000 x 2⅛	121P10602S2	121P10692S2
12	1.000 x 2⅝	121P12602S2	121P12692S2

400 WVDC

μF	Diam. x Length	Catalog Number	
		±20% Tol.	±10% Tol.
.01	.235 x ¾	121P10304S2	121P10394S2
.012	.312 x ⅞		121P12394S2
.015	.312 x ⅞	121P15304S2	121P15394S2
.018	.312 x ⅞		121P18394S2
.022	.312 x ⅞	121P22304S2	121P22394S2
.027	.312 x ⅞		121P27394S2
.033	.312 x ⅞	121P33304S2	121P33394S2
.039	.312 x 1⅛		121P39394S2
.047	.312 x 1⅛	121P47304S2	121P47394S2
.056	.312 x 1⅛		121P56394S2
.068	.312 x 1⅛	121P68304S2	121P68394S2
.082	.400 x 1⅛		121P82394S2
.1	.400 x 1⅛	121P10404S2	121P10494S2
.12	.400 x 1⅜		121P12494S2
.15	.400 x 1⅜	121P15404S2	121P15494S2
.18	.500 x 1⅛		121P18494S2
.22	.500 x 1⅛	121P22404S2	121P22494S2
.27	.562 x 1⅜		121P27494S2
.33	.562 x 1⅜	121P33404S2	121P33494S2
.39	.562 x 1⅝		121P39494S2
.47	.562 x 1⅝	121P47404S2	121P47494S2
.56	.670 x 1⅝		121P56494S2
.68	.670 x 1⅝	121P68404S2	121P68494S2
.82	.670 x 1⅞		121P82494S2
1.0	.670 x 1⅞	121P10504S2	121P10594S2
1.5	.750 x 2⅜	121P15504S2	121P15594S2
2.0	1.000 x 1⅞	121P20504S2	121P20594S2
2.5	1.000 x 2⅛	121P25504S2	121P25594S2
3.0	1.000 x 2⅜	121P30504S2	121P30594S2
3.5	1.000 x 2⅝	121P35504S2	121P35594S2

600 WVDC

μF	Diam. x Length	Catalog Number	
		±20% Tol.	±10% Tol.
.001	.235 x ¾	121P10206S2	121P10296S2
.0012	.235 x ¾		121P12296S2
.0015	.235 x ¾	121P15206S2	121P15296S2
.0018	.235 x ¾		121P18296S2
.0022	.235 x ¾	121P22206S2	121P22296S2
.0027	.235 x ¾		121P27296S2
.0033	.235 x ¾	121P33206S2	121P33296S2
.0039	.235 x ¾		121P39296S2
.0047	.235 x ¾	121P47206S2	121P47296S2
.0056	.312 x ⅞		121P56296S2
.0068	.312 x ⅞	121P68206S2	121P68296S2
.0082	.312 x ⅞		121P82296S2
.01	.312 x ⅞	121P10306S2	121P10396S2
.012	.312 x ⅞		121P12396S2
.015	.312 x ⅞	121P15306S2	121P15396S2
.018	.312 x 1⅛		121P18396S2
.022	.312 x 1⅛	121P22306S2	121P22396S2
.027	.312 x 1⅛		121P27396S2
.033	.312 x 1⅛	121P33306S2	121P33396S2
.039	.400 x 1⅛		121P39396S2
.047	.400 x 1⅛	121P47306S2	121P47396S2
.056	.400 x 1⅛		121P56396S2
.068	.400 x 1⅛	121P68306S2	121P68396S2
.082	.500 x 1⅛		121P82396S2
.1	.500 x 1⅛	121P10406S2	121P10496S2
.12	.562 x 1⅛		121P12496S2
.15	.562 x 1⅛	121P15406S2	121P15496S2
.18	.562 x 1⅜		121P18496S2
.22	.562 x 1⅜	121P22406S2	121P22496S2
.27	.562 x 1⅞		121P27496S2
.33	.562 x 1⅞	121P33406S2	121P33496S2
.39	.670 x 1⅞		121P39496S2
.47	.670 x 1⅞	121P47406S2	121P47496S2
.56	.670 x 1⅞		121P56496S2
.68	.670 x 1⅞	121P68406S2	121P68496S2
.82	.750 x 2⅜		121P82496S2
1.0	.750 x 2⅜	121P10506S2	121P10596S2
1.5	1.000 x 2⅛	121P15506S2	121P15596S2
2.0	1.000 x 2⅜	121P20506S2	121P20596S2

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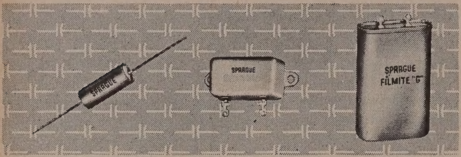
SPRAGUE CAPACITORS

METAL-CLAD FILM CAPACITORS



Polystyrene film dielectric capacitors have the lowest dielectric absorption of all film capacitors. The exceptionally high insulation resistance will generally exceed 10,000,000 megohm-microfarads. They have extremely low power factor, close capacitance tolerance, high capacitance stability with temperature change and high operating temperatures. The unusual properties of these capacitors make them particularly suitable for circuit applications demanding such characteristics. All capacitors listed here are hermetically sealed in metal cases

114P STYRACON® TUBULARS

Specially processed polystyrene film dielectric ● Operating temperature range, —55°C to +85°C ● High insulation resistance ● Low dielectric absorption (under .05%) ● High capacitance stability (less than ±.2% drift) ● Extremely low power factor (high Q) ● Units listed below have capacitance tolerance of ±5%. For ±20%, change 8th digit in catalog number from 5 to 0; For ±10% change to 9; For ±2% change to 2; For ±1% change to 1 ● Units listed below have plastic insulating sleeves. For plain metal case, change last digit in catalog number from 4 to 2

200 WVDC		
μF	Diam. x Length	Cat. No.
.001	.235 x 7/8	114P10252S4
.0015	.235 x 7/8	114P15252S4
.0022	.235 x 7/8	114P22252S4
.0033	.312 x 7/8	114P33252S4
.0047	.312 x 7/8	114P47252S4
.0068	.400 x 7/8	114P68252S4
.01	.400 x 1 1/8	114P10352S4
.0015	.400 x 1 1/8	114P15352S4
.022	.400 x 1 3/8	114P22352S4
.033	.562 x 1 1/8	114P33352S4
.047	.562 x 1 3/8	114P47352S4
.068	.562 x 1 5/8	114P68352S4
.1	.670 x 1 5/8	114P10452S4
.15	.750 x 2 1/8	114P15452S4
.22	.750 x 2 1/8	114P22452S4
.33	1.000 x 2 1/8	114P33452S4
.47	1.000 x 2 1/8	114P47452S4

400 WVDC		
μF	Diam. x Length	Cat. No.
.001	.235 x 7/8	114P10254S4
.0015	.312 x 7/8	114P15254S4
.0022	.312 x 7/8	114P22254S4
.0033	.312 x 7/8	114P33254S4
.0047	.400 x 7/8	114P47254S4
.0068	.400 x 1 1/8	114P68254S4
.01	.400 x 1 1/8	114P10354S4
.015	.400 x 1 3/8	114P15354S4
.022	.562 x 1 1/8	114P22354S4
.033	.562 x 1 3/8	114P33354S4
.047	.562 x 1 5/8	114P47354S4
.068	.670 x 1 5/8	114P68354S4
.1	.750 x 2 1/8	114P10454S4
.15	.750 x 2 1/8	114P15454S4
.22	1.000 x 2 1/8	114P22454S4
.33	1.000 x 2 1/8	114P33454S4
.47	1.000 x 2 5/8	114P47454S4

600 WVDC		
μF	Diam. x Length	Cat. No.
.001	.400 x 7/8	114P10256S4
.0015	.400 x 1 1/8	114P15256S4
.0022	.400 x 1 1/8	114P22256S4
.0033	.400 x 1 1/8	114P33256S4
.0047	.400 x 1 1/8	114P47256S4
.0068	.400 x 1 1/8	114P68256S4
.01	.400 x 1 3/8	114P10356S4
.015	.400 x 1 3/8	114P15356S4
.022	.562 x 1 3/8	114P22356S4
.033	.562 x 1 5/8	114P33356S4
.047	.670 x 1 5/8	114P47356S4
.068	.750 x 2 1/8	114P68356S4
.1	.750 x 2 1/8	114P10456S4
.15	1.000 x 2 1/8	114P15456S4
.22	1.000 x 2 5/8	114P22456S4

111P STYRACON® BATHTUBS

Same electrical characteristics as Type 114P ● Drawn metal bathtub cases ● Listed units have capacitance tolerance of ±5%. For ±20%, change last letter in catalog number from J to M; For ±10% change to K; For ±2% change to G; For ±1% change to F

μF	WVDC	L. x W. x H.	Cat. No.
1.5	50	2 x 1 3/4 x 1	111P7J
2.0	50	2 x 2 x 1 1/4	111P8J
3.0	50	2 x 2 x 1 1/2	111P9J
5.0	50	2 5/16 x 2 1/16 x 2 1/8	111P10J
1.0	100	2 x 1 3/4 x 7/8	111P11J
2.0	100	2 x 2 x 1 1/2	111P12J
3.0	100	2 5/16 x 2 1/16 x 2 1/8	111P13J
.68	200	2 x 1 3/4 x 1	111P14J
1.0	200	2 x 2 x 1 1/4	111P15J
2.0	200	2 5/16 x 2 1/16 x 2 1/8	111P16J
.68	400	2 x 2 x 1 1/4	111P17J
1.0	400	2 x 2 x 1 1/2	111P18J
1.5	400	2 5/16 x 2 1/16 x 2 1/8	111P19J
.33	600	2 x 1 3/4 x 1	111P20J
.47	600	2 x 2 x 1 1/8	111P21J
.68	600	2 x 2 x 1 1/2	111P22J
1.0	600	2 5/16 x 2 1/16 x 2 1/8	111P4J

139P FILMITE 'F' TUBULARS

For circuit applications requiring constant capacitance with varying operating temperatures ● Practically zero capacitance change at tempertures from —10°C to +85°C. May be operated at +125°C with not more than 2.5% capacitance change ● Operating temperature: —55°C to +125°C ● Insulation resistance and dielectric absorption characteristics approach those of polystyrene capacitors ● Listed units have capacitance tolerance of ±5%. For ±20% change 8th digit in catalog number from 5 to 0; for ±10%, change to 9; for ±2%, change to 2 ● Write for Engineering Bulletin No. 2560 for complete details

200 WVDC		
μF	Diam. x Length	Cat. No.
.001	.235 x 3/4	139P10252S4
.0015	.235 x 3/4	139P15252S4
.0022	.235 x 3/4	139P22252S4
.0033	.312 x 7/8	139P33252S4
.0047	.312 x 7/8	139P47252S4
.0068	.312 x 7/8	139P68252S4
.01	.312 x 1	129P10352S4
.015	.400 x 7/8	139P15352S4
.022	.400 x 1	139P22352S4
.033	.400 x 1 1/4	139P33352S4
.047	.500 x 1 1/8	139P47352S4
.068	.562 x 1 1/8	139P68352S4
.1	.670 x 1 5/8	139P10452S4
.15	.750 x 1 7/8	139P15452S4
.22	.750 x 2 1/8	139P22452S4
.33	1.000 x 1 7/8	139P33452S4
.47	1.000 x 2 3/8	139P47452S4

400 WVDC		
μF	Diam. x Length	Cat. No.
.001	.235 x 3/4	139P10254S4
.0015	.235 x 3/4	139P15254S4
.0022	.312 x 7/8	139P22254S4
.0033	.312 x 7/8	139P33254S4
.0047	.312 x 7/8	139P47254S4
.0068	.312 x 1	139P68254S4
.01	.400 x 7/8	139P10354S4
.015	.400 x 1	139P15354S4
.022	.400 x 1 1/4	139P22354S4
.033	.562 x 1 1/8	139P33354S4
.047	.562 x 1 1/4	139P47354S4
.068	.670 x 1 5/8	139P68354S4
.1	.750 x 1 7/8	139P10454S4
.15	.750 x 2 1/8	139P15454S4
.22	1.000 x 1 7/8	139P22454S4
.33	1.000 x 2 3/3	139P33454S4

600 WVDC		
μF	Diam. x Length	Cat. No.
.001	.235 x 3/4	139P10256S4
.0015	.312 x 7/8	139P15256S4
.0022	.312 x 7/8	139P22256S4
.0033	.312 x 7/8	139P33256S4
.0047	.312 x 1	139P47256S4
.0068	.400 x 1	139P68256S4
.01	.400 x 1 1/8	139P10356S4
.015	.400 x 1 3/8	139P15356S4
.022	.562 x 1 1/8	139P22356S4
.033	.562 x 1 3/8	139P33356S4
.047	.670 x 1 5/8	139P47356S4
.068	.750 x 1 7/8	139P68356S4
.1	.750 x 2 1/8	139P10456S4
.15	1.000 x 1 7/8	139P15456S4
.22	1.000 x 2 3/8	139P22456S4

140P FILMITE 'F' BATHTUBS

Same electrical characteristics as Type 139P ● Drawn metal bathtub cases ● Listed units have capacitance tolerance of ±5%. For ±20%, change last letter in catalog number from J to M; For ±10% change to K; For ±2% change to G; For ±1% change to F

μF	WVDC	L. x W. x H.	Cat. No.
.68	200	2 x 2 x 1	140P1J
1.0	200	2 x 2 x 1 1/2	140P2J
.47	400	2 x 2 x 1	140P3J
.68	400	2 x 2 x 1 1/2	140P4J
1.0	400	2 5/16 x 2 1/16 x 1 3/4	140P5J
.33	600	2 x 2 x 1	140P6J
.47	600	2 x 2 x 1 1/2	140P7J
.68	600	2 5/16 x 2 1/16 x 1 3/4	140P8J
1.0	600	2 5/16 x 2 1/16 x 2 1/8	140P9J

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SPRAGUE CAPACITORS

FILM CAPACITORS, continued

127P FILMITE 'E' TUBULARS

Operating temperature range, —55°C to +150°C ● Even at 150°C, insulation resistance is higher than that of best paper capacitors ● These capacitors use polyester-film dielectric ● Dissipation factor will not exceed 1.3% ● Extended foil construction for low series resistance ● Units listed below have capacitance tolerance of ±10%. For ±20%, change 8th digit in catalog number from 9 to 0; for 5% change to 5 ● Units listed below have plastic insulating sleeves. For plain metal case, change last digit in catalog number from 4 to 2

μF	Diam. x Length	Cat. No.
	200 WVDC	
.0068	.235 x 13/16	127P68292S4
.01	.235 x 13/16	127P10392S4
.015	.235 x 13/16	127P15392S4
.022	.235 x 13/16	127P22392S4
.033	.312 x 15/16	127P33392S4
.047	.312 x 15/16	127P47392S4
.068	.312 x 15/16	127P68392S4
.1	.400 x 15/16	127P10492S4
.15	.400 x 1 1/16	127P15492S4
.22	.400 x 1 5/16	127P22492S4
.33	.400 x 1 9/16	127P33492S4
.47	.562 x 1 1/8	127P47492S4
.68	.562 x 1 3/8	127P68492S4
1.00	.562 x 1 7/8	127P10592S4
	400 WVDC	
.0033	.235 x 13/16	127P33294S4
.0047	.235 x 13/16	127P47294S4
.01	.312 x 15/16	127P10394S4
.015	.312 x 15/16	127P15394S4
.022	.312 x 1 1/16	127P22394S4
.033	.400 x 15/16	127P33394S4
.047	.400 x 1 1/16	127P47394S4
.068	.400 x 1 5/16	127P68394S4
.1	.400 x 1 9/16	127P10494S4
.15	.562 x 1 1/4	127P15494S4
.22	.562 x 1 1/2	127P22494S4
.33	.562 x 1 7/8	127P33494S4
.47	.670 x 1 7/8	127P47494S4
.68	.750 x 2 1/8	127P68494S4
1.00	.750 x 2 5/8	127P10594S4

μF	Diam. x Length	Cat. No.
	600 WVDC	
.001	.235 x 13/16	127P10296S4
.0015	.235 x 13/16	127P15296S4
.0022	.235 x 13/16	127P22296S4
.0047	.312 x 15/16	127P47296S4
.0068	.312 x 15/16	127P68296S4
.01	.312 x 1 1/16	127P10396S4
.015	.400 x 15/16	127P15396S4
.022	.400 x 1 1/16	127P22396S4
.033	.400 x 1 5/16	127P33396S4
.047	.400 x 1 9/16	127P47396S4
.068	.562 x 1 1/4	127P68396S4
.1	.562 x 1 1/2	127P10496S4
.15	.562 x 1 7/8	127P15496S4
.22	.670 x 1 7/8	127P22496S4
.33	.750 x 2 1/8	127P33496S4
.47	.750 x 2 5/8	127P47496S4
.68	1.000 x 2 1/8	127P68496S4
	1000 WVDC	
.001	.312 x 15/16	127P102910S4
.0015	.312 x 15/16	127P152910S4
.0022	.312 x 15/16	127P222910S4
.0033	.312 x 15/16	127P332910S4
.0047	.400 x 15/16	127P472910S4
.0068	.400 x 1 1/16	127P682910S4
.01	.400 x 1 5/16	127P103910S4
.015	.400 x 1 9/16	127P153910S4
.022	.562 x 1 1/4	127P223910S4
.033	.562 x 1 1/2	127P333910S4
.047	.562 x 1 7/8	127P473910S4
.068	.670 x 1 7/8	127P683910S4
.1	.750 x 2 1/8	127P104910S4
.15	1.000 x 1 7/8	127P154910S4
.22	1.000 x 2 3/8	127P224910S4

μF	Diam. x Length	Cat. No.
	1700 WVDC	
.001	.400 x 15/16	127P102917S4
.0015	.400 x 15/16	127P152917S4
.0022	.400 x 15/16	127P222917S4
.0033	.400 x 1 1/16	127P332917S4
.0047	.400 x 1 3/16	127P472917S4
.0068	.400 x 1 7/16	127P682917S4
.01	.562 x 1 1/8	127P103917S4
.015	.562 x 1 1/4	127P153917S4
.022	.562 x 1 5/8	127P223917S4
.033	.670 x 1 7/8	127P333917S4
.047	.750 x 1 7/8	127P473917S4
.068	.750 x 1 1/8	127P683917S4
.1	1.000 x 1 7/8	127P104917S4
.15	1.000 x 2 3/8	127P154917S4
	2500 WVDC	
.001	.562 x 7/8	127P102925S4
.0015	.562 x 7/8	127P152925S4
,0022	.562 x 1	127P222925S4
.0033	.562 x 1 1/8	127P332925S4
.0047	.562 x 1 1/8	127P472925S4
.0068	.562 x 1 3/8	127P682925S4
.01	.562 x 1 7/8	127P103925S4
.015	.670 x 1 5/8	127P153925S4
.022	.750 x 1 7/8	127P223925S4
.033	.750 x 2 3/8	127P333925S4
.047	1.000 x 1 7/8	127P473925S4
.068	1.000 x 2 5/8	127P683925S4

141P FILMITE 'G' TUBULARS

TFE fluorocarbon film dielectric ● Operating temperature range, −55°C to +200°C ● Unusually high insulation resistance (in excess of 100,000 megohm-microfarads at 25°C) ● Low dielectric absorption ● Low dissipation factor (less than .02%) ● Excellent humidity resistance ● Small capacitance change with temperature ● Units listed below have capacitance tolerance of ±10%. For ±20%, change 8th digit in catalog number from 9 to 0; For ±5% change to 5; For ~~±2%~~ change to 2; For ±1% change to 1 ● Units listed below have plastic insulating sleeves. For plain metal case, change last digit in catalog number from 4 to 2

μF	Diam. x Length	Cat. No.
	200 WVDC	
.0015	.235 x 13/16	141P15292S4
.0039	.312 x 15/16	141P39292S4
.0047	.312 x 15/16	141P47292S4
.0082	.400 x 15/16	141P82292S4
.01	.400 x 15/16	141P10392S4
.012	.400 x 1 3/16	141P12392S4
.015	.400 x 1 3/16	141P15392S4
.018	.400 x 1 5/16	141P18392S4
.022	.400 x 1 5/16	141P22392S4
.027	.562 x 1 1/8	141P27392S4
.033	.562 x 1 1/8	141P33392S4
.039	.562 x 1 1/4	141P39392S4
.047	.562 x 1 1/4	141P47392S4
.056	.562 x 1 1/2	141P56392S4
.068	.562 x 1 1/2	141P68392S4
.082	.562 x 1 7/8	141P82392S4
.1	.562 x 1 7/8	141P10492S4

μF	Diam. x Length	Cat. No.
	400 WVDC	
.1	.670 x 1 7/8	141P10494S4
.12	.750 x 2 1/8	141P12494S4
.15	.750 x 2 1/8	141P15494S4
.18	1.000 x 1 7/8	141P18494S4
.22	1.000 x 1 7/8	141P22494S4
.27	1.000 x 2 3/8	141P27494S4
.33	1.000 x 2 3/8	141P33494S4
	600 WVDC	
.001	.235 x 13/16	141P10296S4
.0012	.312 x 15/16	141P12296S4
.0015	.312 x 15/16	141P15296S4
.0018	.312 x 15/16	141P18296S4
.0022	.312 x 15/16	141P22296S4
.0027	.312 x 15/16	141P27296S4
.0033	.312 x 15/16	141P33296S4
.0039	.400 x 15/16	141P39296S4
.0047	.400 x 15/16	141P47296S4

μF	Diam. x Length	Cat. No.
.0056	.400 x 15/16	141P56296S4
.0068	.400 x 15/16	141P68296S4
.0082	.400 x 1 3/16	141P82296S4
.01	.400 x 1 3/16	141P10396S4
.012	.400 x 1 5/16	141P12396S4
.015	.400 x 1 5/16	141P15396S4
.018	.562 x 1 1/8	141P18396S4
.022	.562 x 1 1/8	141P22396S4
.027	.562 x 1 1/4	141P27396S4
.033	.562 x 1 1/4	141P33396S4
.039	.562 x 1 1/2	141P39396S4
.047	.562 x 1 1/2	141P47396S4
.056	.562 x 1 7/8	141P56396S4
.068	.562 x 1 7/8	141P68396S4
.082	1.000 x 1 7/8	141P82396S4
.1	1.000 x 1 7/8	141P10496S4
.12	1.000 x 2 3/8	141P12496S4
.15	1.000 x 2 3/8	141P15496S4

142P FILMITE 'G' OVALS

Same electrical characteristics as Type 141P ● Drawn metal oval cases ● Listed units have capacitance tolerance of ±5%. For ±20%, change last letter in catalog number from J to M; For ±10% change to K; For ±2% change to G; For ±1% change to F

μF	WVDC	W. x T. x H.	Cat. No.
.68	200	2 5/32 x 1 5/16 x 2 1/8	142P1J
1.0	200	2 5/32 x 1 5/16 x 2 3/4	142P2J
.68	400	2 5/32 x 1 5/16 x 2 1/2	142P3J
1.0	400	2 5/32 x 1 5/16 x 3 3/8	142P4J
.33	600	2 5/32 x 1 5/16 x 2 5/8	142P5J
.47	600	2 5/32 x 1 5/16 x 3 1/2	142P6J

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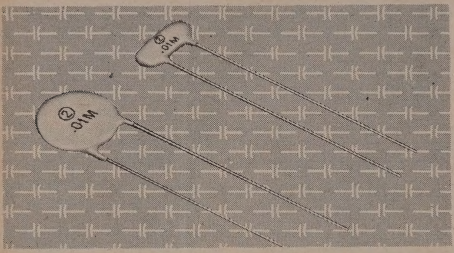
SPRAGUE CAPACITORS

CERA-MITE® CERAMIC CAPACITORS



- Tiny, Tough, Dependable In Every Application
- Low Self-inductance Of Silvered Flat-plate Design Means Very High By-pass Efficiency In All TV Circuits
- Flat-plate Construction Permits Higher Self-resonant Frequency Than Tubular Ceramic Or Molded Mica Capacitors
- Tough Moisture-proof Coating Protects Against Short-circuiting And Assures Good Performance Under Severe Conditions Of Humidity And Vibration
- Cera-mite Capacitors Easily Fit Into Tight Spaces, Even Across Subminiature Tube Sockets
- Designed For 85°C (185°F) Continuous Operation

GENERAL APPLICATION TYPES

- Excellent Where Temperature Coefficient Is Not Important, Such As By-pass and Coupling Applications
- Ideal For Replacing Older Types Of General Application Capacitors Such as Molded Micas Tubular Ceramics, and Paper Tubulars

μμF	Cat. No.	List
500 WVDC (plates) Std. Tolerance ±20%		
470	5GAB-T47	$.35
.001 μF	5GAB-D10	.35
.0022	5GAB-D22	.45
.0047	5GAB-D47	.45
.01	5GAB-S10	.65
.022	5GAB-S22	.65
.047	5GAB-S47	.70
.1	5GAB-P10	.75
.15	5GAB-P15	.80
1000 WVDC (discs) Std. Tolerance ±20%		
5	5GA-V50	$.25
6	5GA-V60	.25
7.5	5GA-V75	.25
8	5GA-V80	.25
10	5GA-Q10	.25
12	5GA-Q12	.25
15	5GA-Q15	.25
18	5GA-Q18	.25
20	5GA-Q20	.25
22	5GA-Q22	.25
25	5GA-Q25	.25
27	5GA-Q27	.25
30	5GA-Q30	.25
33	5GA-Q33	.25
39	5GA-Q39	.25
47	5GA-Q47	.25
50	5GA-Q50	.25
56	5GA-Q56	.25
68	5GA-Q68	.25
75	5GA-Q75	.25
82	5GA-Q82	.25
91	5GA-Q91	.25
100	5GA-T10	.25
120	5GA-T12	.25
130	5GA-T13	.25
150	5GA-T15	.25
180	5GA-T18	.25
200	5GA-T20	$.25
220	5GA-T22	.25
240	5GA-T24	.25
250	5GA-T25	.25
270	5GA-T27	.25
300	5GA-T30	.25
330	5GA-T33	.25
350	5GA-T35	.25
360	5GA-T36	.25
390	5GA-T39	.25
400	5GA-T40	.25
470	5GA-T47	.25
500	5GA-T50	.25
560	5GA-T56	.25
600	5GA-T60	.25
680	5GA-T68	.25
750	5GA-T75	.25
800	5GA-T80	.25
820	5GA-T82	.25
.001 μF	5GA-D10	.25
.0012	5GA-D12	.25
.0013	5GA-D13	.25
.0015	5GA-D15	.25
.0016	5GA-D16	.25
.0018	5GA-D18	.25
.002	5GA-D20	.25
.0022	5GA-D22	.25
.0025	5GA-D25	.25
.0027	5GA-D27	.25
.003	5GA-D30	.25
.0033	5GA-D33	.25
.0039	5GA-D39	.25
.004	5GA-D40	.25
.0043	5GA-D43	.30
.0047	5GA-D47	.30
.005	5GA-D50	.30
.01	5GA-S10	.30
.015	5GA-S15	$.30
.02	5GA-S20	.30
3000 WVDC (discs) Std. Tolerances: 1.5 μμF ±.25 μμF thru 5μμF ±.5 μμF thru 68 μμF ±10% thru .002 μF ±20%		
1.5	30GA-V15	$.40
3.3	30GA-V33	.40
4.7	30GA-V47	.40
5	30GA-V50	.40
6	30GA-V60	.40
6.8	30GA-V68	.40
7.5	30GA-V75	.40
8.2	30GA-V82	.40
10	30GA-Q10	.40
12	30GA-Q12	.40
15	30GA-Q15	.40
18	30GA-Q18	.40
20	30GA-Q20	.40
22	30GA-Q22	.40
25	30GA-Q25	.40
27	30GA-Q27	.40
30	30GA-Q30	.40
33	30GA-Q33	.40
39	30GA-Q39	.40
47	30GA-Q47	.40
50	30GA-Q50	.40
56	30GA-Q56	.40
60	30GA-Q60	.40
62	30GA-Q62	.40
68	30GA-Q68	.40
75	30GA-Q75	.40
82	30GA-Q82	.40
100	30GA-T10	.40
120	30GA-T12	.40
150	30GA-T15	.40
180	30GA-T18	.40
200	30GA-T20	.40
220	30GA-T22	.40
250	30GA-T25	.40
270	30GA-T27	.40
300	30GA-T30	.40
330	30GA-T33	.40
390	30GA-T39	.40
400	30GA-T40	.40
470	30GA-T47	.40
500	30GA-T50	$.40
560	30GA-T56	.40
680	30GA-T68	.40
750	30GA-T75	.40
820	30GA-T82	.40
.0022	30GA-D22	.40
.0025	30GA-D25	.40
.003	30GA-D30	.40
.0033	30GA-D33	.40
.0039	30GA-D39	.40
.004	30GA-D40	.40
.0047	30GA-D47	.40
.005	30GA-D50	.45
.006	30GA-D60	.45
.0068	30GA-D68	.45
.008	30GA-D80	.45
.0082	30GA-D82	.45
.01	30GA-S10	.45
.001 μF	30GA-D10	.40
.0012	30GA-D12	.40
.0015	30GA-D15	.40
.002	30GA-D20	.40
6000 WVDC (discs) Std. Tolerance ±20%		
1.5	60GA-V15	$.50
4.7	60GA-V47	.50
6.8	60GA-V68	.50
8.2	60GA-V82	.50
10	60GA-Q10	.50
12	60GA-Q12	.50
15	60GA-Q15	.50
18	60GA-Q18	.50
20	60GA-Q20	.50
22	60GA-Q22	.50
25	60GA-Q25	.50
27	60GA-Q27	.50
30	60GA-Q30	.50
33	60GA-Q33	.50
39	60GA-Q39	.50
47	60GA-Q47	.50
50	60GA-Q50	.50
56	60GA-Q56	.50
60	60GA-Q60	.50
68	60GA-Q68	.50
75	60GA-Q75	.50
82	60GA-Q82	.50
100	60GA-T10	$.50
120	60GA-T12	.50
150	60GA-T15	.50
180	60GA-T18	.50
200	60GA-T20	.50
220	60GA-T22	.50
250	60GA-T25	.55
270	60GA-T27	.55
300	60GA-T30	.55
330	60GA-T33	.55
390	60GA-T39	.55
400	60GA-T40	.55
470	60GA-T47	.55
500	60GA-T50	.55
560	60GA-T56	.55
680	60GA-T68	.55
750	60GA-T75	.55
820	60GA-T82	.55
.001 μF	60GA-D10	.60
.0012	60GA-D12	.60
.0015	60GA-D15	.60
.0022	60GA-D22	.60
7500 WVDC (discs) Std. Tolerances: 4.7 μF ±.5 μμF thru 18 μF ±10% thru 470 μF ±20%		
4.7	75GA-V47	$.50
8.2	75GA-V82	.50
10	75GA-Q10	.50
12	75GA-Q12	.50
15	75GA-Q15	.50
18	75GA-Q18	.50
20	75GA-Q20	.50
22	75GA-Q22	.50
30	75GA-Q30	.50
33	75GA-Q33	.50
47	75GA-Q47	.50
56	75GA-Q56	.50
100	75GA-T10	.50
470	75GA-T47	.65

*High-K Types

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SPRAGUE CAPACITORS

CERA-MITE CERAMIC CAPACITORS, continued

HIGH-K TYPES

- Designed for By-Pass and Coupling Applications Where Additional Capacitance Will Not Affect Circuit Operation
- Smallest Physical Size
- 5HK-S15 thru 5HK-P10, 5HK-2S20, **500 WVDC**, Capacitance Tolerance +80-20%
- All Other 5HK are **1000 WVDC**, Capacitance Tolerance GMV

µF	Cat. No.	List
SINGLE UNITS		
.001	5HK-D10	$.25
.0015	5HK-D15	.25
.002	5HK-D20	.25
.0022	5HK-D22	.25
.0025	5HK-D25	.25
.0033	5HK-D33	.25
.004	5HK-D40	.25
.0047	5HK-D47	.25
.005	5HK-D50	.25
.0068	5HK-D68	.25
.01	5HK-S10	.30
.015	5HK-S15	.40
.02	5HK-S20	.60
.022	5HK-S22	$.65
.025	5HK-S25	.65
.03	5HK-S30	.65
.05	5HK-S50	.70
.1	5HK-P10	1.60
DUAL UNITS		
2 x .001	5HK-2D10	$.40
2 x .0015	5HK-2D15	.40
2 x .002	5HK-2D20	.40
2 x .0022	5HK-2D22	.40
2 x .004	5HK-2D40	.45
2 x .0047	5HK-2D47	.45
2 x .01	5HK-2S10	.50
2 x .02	5HK-2S20	.70

TEMPERATURE-STABLE TYPES

- Used where minimum capacitance change with temperature is an important consideration
- Rated at **1000 WVDC**
- Standard capacitance tolerance ±10%

µµF	Cat. No.	List
5	10TS-V50	$.25
6	10TS-V60	.25
6.8	10TS-V68	.25
7.5	10TS-V75	.25
8	10TS-V80	.25
10	10TS-Q10	.25
12	10TS-Q12	.25
15	10TS-Q15	.25
18	10TS-Q18	.25
20	10TS-Q20	.25
22	10TS-Q22	.25
25	10TS-Q25	.25
27	10TS-Q27	.25
30	10TS-Q30	.25
33	10TS-Q33	.25
39	10TS-Q39	.25
47	10TS-Q47	.25
50	10TS-Q50	.25
56	10TS-Q56	.25
68	10TS-Q68	.25
75	10TS-Q75	.25
82	10TS-Q82	.25
91	10TS-Q91	.25
100	10TS-T10	$.25
120	10TS-T12	.25
130	10TS-T13	.25
150	10TS-T15	.25
180	10TS-T18	.25
200	10TS-T20	.25
220	10TS-T22	.25
240	10TS-T24	.25
250	10TS-T25	.25
270	10TS-T27	.25
300	10TS-T30	.25
330	10TS-T33	.25
350	10TS-T35	.25
360	10TS-T36	.25
390	10TS-T39	.25
400	10TS-T40	.25
470	10TS-T47	.25
500	10TS-T50	.25
560	10TS-T56	.25
600	10TS-T60	.25
680	10TS-T68	.25
750	10TS-T75	.25
800	10TS-T80	.25
820	10TS-T82	.25
.001µF	10TS-D10	$.25
.0012	10TS-D12	.25
.0013	10TS-D13	.25
.0015	10TS-D15	.25
.0016	10TS-D16	.25
.0018	10TS-D18	.25
.002	10TS-D20	.25
.0022	10TS-D22	.25
.0025	10TS-D25	.25
.0027	10TS-D27	.25
.003	10TS-D30	.25
.0033	10TS-D33	.25
.0039	10TS-D39	.25
.004	10TS-D40	.25
.0043	10TS-D43	.30
.0047	10TS-D47	.30
.005	10TS-D50	.30
.0056	10TS-D56	.30
.0068	10TS-D68	.30
.0075	10TS-D75	.30
.01	10TS-S10	.30
.015	10TS-S-15	.30
.02	10TS-S20	.30

NPO TYPES

- Zero Temperature-coefficient Capacitors used Where Capacitance Change with Temperature is Undesirable
- Superior to Silvered-mica Types in Stability, High "Q", and Insulation Resistance
- Rated at **1000 WVDC**
- Standard Capacitance Tolerance of 5µµF and up: ±5%. On 4.7µµF and below: ±.25µµF
- Units listed below are discs

µµF	Cat. No.	List
1	10TCC-V10	$.50
1.2	10TCC-V12	.50
1.5	10TCC-V15	.50
1.8	10TCC-V18	.50
2.2	10TCC-V22	.50
2.7	10TCC-V27	.50
3.3	10TCC-V13	.50
3.9	10TCC-V39	.50
4.7	10TCC-V47	.50
5	10TCC-V50	.50
5.6	10TCC-V56	.50
6.8	10TCC-V68	.50
8.2	10TCC-V82	.50
10	10TCC-Q10	.50
12	10TCC-Q12	.50
15	10TCC-Q15	.50
18	10TCC-Q18	.50
20	10TCC-Q20	.50
22	10TCC-Q22	.50
25	10TCC-Q25	.50
27	10TCC-Q27	$.50
30	10TCC-Q30	.50
33	10TCC-Q33	.50
39	10TCC-Q38	.55
47	10TCC-Q47	.55
50	10TCC-Q50	.55
56	10TCC-Q56	.55
68	10TCC-Q68	.55
75	10TCC-Q75	.55
82	10TCC-Q82	.55
100	10TCC-T10	.55
120	10TCC-T12	.60
150	10TCC-T15	.60
175	10TCC-T175	.50
180	10TCC-T18	.60
200	10TCC-T-20	.70
220	10TCC-T22	.70
270	10TCC-T27	.80
300	10TCC-T30	.80
330	10TCC-T33	.80

TEMPERATURE-COMPENSATING TYPES

- Negative Temperature Coefficient is 150 ppm/°C for N150 types, 220 ppm/°C for N220, 330 ppm/°C for N330, and 750 ppm/°C for N750 types Eliminate oscillator drift in TV, f-m, v-h-t, and a-m receivers
- Rated at **1000 WVDC**
- Standard Capacitance Tolerance of 5µµF and up; ±5%. On 4.7µµF and below: ±.25µµF

µµF	Cat. No.	List
N150		
5	10TCP-V50	$.50
6.8	10TCP-V68	.50
8.2	10TCP-V82	.50
10	10TCP-Q10	.50
12	10TCP-Q12	.50
15	10TCP-Q15	.50
18	10TCP-Q18	.50
22	10TCP-Q22	.50
27	10TCP-Q27	.50
33	10TCP-Q33	.50
39	10TCP-Q39	.55
47	10TCP-Q47	.55
56	10TCP-Q56	.55
68	10TCP-Q68	.55
82	10TCP-Q82	.55
100	10TCP-T10	.55
120	10TCP-T12	.60
150	10TCP-T15	.60
N220		
3	10TCR-V30	.50
3.3	10TCR-V33	.50
3.9	10TCR-V39	.50
4.7	10TCR-V47	.50
5	10TCR-V50	.50
5.6	10TCR-V56	.50
6.8	10TCR-V68	.50
8.2	10TCR-V82	.50
10	10TCR-Q10	.50
12	10TCR-Q12	.50
15	10TCR-Q15	$.50
18	10TCR-Q18	.50
22	10TCR-Q22	.50
27	10TCR-Q27	.50
33	10TCR-Q33	.50
39	10TCR-Q39	.55
47	10TCR-Q47	.55
56	10TCR-Q56	.55
68	10TCR-Q68	.55
82	10TCR-Q82	.55
100	10TCR-T10	.55
120	10TCR-T12	.60
150	10TCR-T15	.60
N330		
10	10TCS-Q10	.50
12	10TCS-Q12	.50
15	10TCS-Q15	.50
18	10TCS-Q18	.50
22	10TCS-Q22	.50
27	10TCS-Q27	.50
33	10TCS-Q33	.50
39	10TCS-Q39	.55
47	10TCS-Q47	.55
56	10TCS-Q56	.55
68	10TCS-Q68	.55
82	10TCS-Q82	.55
100	10TCS-T10	.55
120	10TCS-T12	.60
150	10TCS-T15	.60
N750		
2.2	10TCU-V22	$.50
3.3	10TCU-V33	.50
5	10TCU-V50	.50
10	10TCU-Q10	.50
12	10TCU-Q12	.50
15	10TCU-Q15	.50
18	10TCU-Q18	.50
20	10TCU-Q20	.50
22	10TCU-Q22	.50
25	10TCU-Q25	.50
27	10TCU-Q27	.50
33	10TCU-Q33	.50
39	10TCU-Q39	.50
47	10TCU-Q47	.50
56	10TCU-Q56	.50
68	10TCU-Q68	.50
75	10TCU-Q75	.50
82	10TCU-Q82	.50
100	10TCU-T10	.50
120	10TCU-T12	.50
150	10TCU-T15	.50
180	10TCU-T18	.50
200	10TCU-T20	.50
220	10TCU-T22	.50
270	10TCU-T27	.50
330	10TCU-T33	.50
390	10TCU-T39	.60
470	10TCU-T47	.70
560	10TCU-T56	.80
680	10TCU-T68	.80

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SPRAGUE CAPACITORS

CERA-MITE CERAMIC CAPACITORS, continued

DISC CERAMICS FOR AC APPLICATIONS

- Rated at **125 VAC**
- Std. Tolerance ±20%
- The Only Ceramic Capacitor Which Meets Underwriter's Laboratories, Inc., Requirements for AC Line Bypass Application

μF	Cat. No.	List
.001	125L-D10	$.25
.0015	125L-D15	.25
.002	125L-D20	.25
.0047	125L-D47	.30
.005	125L-D50	.30
.01	125L-S10	.30
.015	125L-S15	.50
.02	125L-S20	.50
2 x .005	125L-2D50	.50
2 x .01	125L-2S10	.55

DISC CERAMICS FOR BUFFER APPLICATIONS

- Rated at **2000 WVDC**
- Std. Tolerance ±20%

μF	Cat. No.	List
.001	BL-D10	$.35
.002	BL-D20	.35
.003	BL-D30	.35
.004	BL-D40	.35
.005	BL-D50	.35
.006	BL-D60	.35
.007	BL-D70	.35
.0075	BL-D75	.35
.008	BL-D80	.35
.01	BL-S10	.35

MINIATURIZED DISC TYPES FOR TRANSISTORIZED CIRCUITRY

- High-K Type for Coupling and Bypass

μF	Volts	Cat. No.	List
.005	50	TG-D50	$.45
.01	50	TG-S10	.65
.02	50	TG-S20	.65
.025	50	TG-S25	.65
.03	50	TG-S30	.65
.05	50	TG-S50	.70
.1	50	TG-P10	.90
.005	200	TH-D50	.45
.01	200	TH-S10	.65
.02	200	TH-S20	.65
.025	200	TH-S25	.65
.03	200	TH-S30	.65
.05	200	TH-S50	.70
.1	200	TH-P10	.90

TV YOKE CAPACITORS

- 30 TCY rated at **3000 WVDC**
- 50 TCY rated at **5000 WVDC**
- Std. Tolerance ±10%

μF	Cat. No.	List
50	30TCY-Q50	$.40
75	30TCY-Q75	.40
100	30TCY-T10	.40
135	30TCY-T135	.40
150	30TCY-T15	.40
180	30TCY-T18	.40
50	50TCY-Q50	.50
75	50TCY-Q75	.50
100	50TCY-T10	.50
135	50TCY-T15	.50
150	50TCY-T15	.50
180	50TCY-T18	.50

MONOLYTHIC® CERAMIC CAPACITORS

DEVELOPED FOR USE IN TRANSISTOR CIRCUITRY AND MINIFIED ELECTRONIC EQUIPMENT

3c 431 9 BH1

STYLE NUMBER
BH-1=Axial Lead, Silicone Coated
BH-3=Radial Lead, Phenolic Coated

CAPACITANCE TOLERANCE
9 = ± 10%
5 = ± 5%

CAPACITANCE IN μμF
First Two Digits = Significant Figure
Third Digit = Number of Zeros

SPRAGUE TYPE NUMBER
3C - - - BH1 or BH2 L = .390 W = .202 T = .109
4C - - - BH1 or BH2 L = .515 W = .296 T = .156
4C - - - BH3 L = .535 W = .350 T = .261

- Special Monolythic Construction for Very High Resonant Frequencies
- Small Physical Size: N030, See Table; Hi-K Type, ½ x ½ x 3/16 inch.
- N030 Temperature Ratings; at 200 VDC, 85°C: at 100 VDC, 125°. Hi-K Type —55 to +85°C.
- Temperature Characteristics: N030 —0° —60 PPM/0°C: Hi-K Type, E1, Characteristic Z5U.
- Excellent Humidity Resistance is Assured by the Solid Homogeneous Block Construction.

TYPE N030

μμF	% Tol.	CAT. NO.
56	5	3C5605BH1 or BH2
68	5	3C6805BH1 or BH2
68	10	3C6809BH1 or BH2
82	5	3C8205BH1 or BH2
100	5	3C1015BH1 or BH2
100	10	3C1019BH1 or BH2
120	5	3C1215BH1 or BH2
150	5	3C1515BH1 or BH2
150	10	3C1519BH1 or BH2
180	5	3C1815BH1 or BH2
220	5	3C2215BH1 or BH2
220	10	3C2219BH1 or BH2
270	5	3C2715BH1 or BH2
330	5	3C3315BH1 or BH2
330	10	3C3319BH1 or BH2
390	5	3C3915BH1 or BH2
470	5	3C4715BH1 or BH2
470	10	3C4719BH1 or BH2
560	5	3C5615BH1 or BH2
680	5	3C6815BH1 or BH2
680	10	3C6819BH1 or BH2
820	5	4C8215BH1 or BH2
1000	5	4C1025BH1 or BH2
1000	10	4C1029BH1 or BH2
1200	5	4C1225BH1 or BH2
1500	5	4C1525BH1 or BH2
1500	10	4C1529BH1 or BH2
1800	5	4C1825BH1 or BH2
2200	5	4C2225BH3
2200	10	4C2229BH3
2700	5	4C2725BH3
3300	5	4C3325BH3
3300	10	4C3329BH3
3900	5	4C3925BH3
4700	5	4C4725BH3
4700	10	4C4729BH3

HIGH-K TYPE

MFD	VOLTS	CAT. NO.
.1	25	5C7
.15	25	5C8
.22	25	5C9
.33	25	5C10
.47	25	5C11
.68	25	5C12
1.0	25	5C13
1.5	25	5C14
2.2	25	5C15
.1	50	5C50
.15	50	5C51
.22	50	5C52
.33	50	5C53
.47	50	5C54

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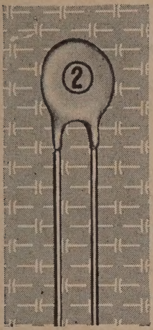
SPRAGUE CAPACITORS

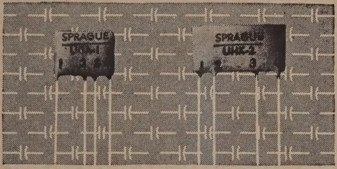


HYPERCON® CERAMIC DISCS

- Ultra-miniature ceramic discs ideal for use in transistorized circuitry
- Designed for by-pass and coupling applications but particularly well-suited for any low voltage use where high capacitance and low power factor are important considerations
- Superior to electrolytic capacitors of similar capacitance values because of the very low power factor of Hypercon Capacitors
- Capacitance Tolerance: GMV

μF	Cat. No.	List
	3 VOLTS D-C	
.1	HY-120	$.60
.22	HY-125	.35
.47	HY-130	.35
1.0	HY-135	.35
2.2	HY-150	.35
	10 VOLTS D-C	
.047	HY-310	.30
.1	HY-320	.30
.22	HY-325	.50
.47	HY-330	.60

"UNIVERSAL" CERAMIC CAPACITORS

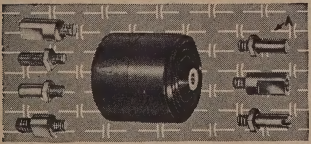


- Another EXCLUSIVE Sprague Development Designed for the Convenience of Dealers and Service Technicians
- Intended for Field or Shop Use as Replacements for Conventional Capacitors Which Cannot Be Immediately Obtained
- These Remarkable New Units are Ceramic Plate Capacitors with four leads. By Using Certain Leads for Terminals, Soldering Certain Leads Together, and Cutting Off Certain Leads, Many Ratings May Be Obtained
- UGA-1 and UGA-2 Are General Application Types Intended for Bypass and Coupling Applications. Ideal for Replacing Older G-A Types, such as Molded Micas, Tubular Ceramics, Paper Tubulars
- UHK-1 and UHK-2 Are High-K Types for Use Where Minimum Capacitance is Required. Can Also Be Used for Bypass and Coupling Where Additional Capacitance Is Not Important
- "Universal" Ceramics Come Complete With Simple Instructions on How To Make Up Desired Ratings

"UNIVERSAL" CERAMICS CAN BE QUICKLY CONVERTED TO RATINGS (μF) SHOWN IN TABLE BELOW

UGA-1	UGA-2	UHK-1	UHK-2
.0004	.0006	.001	.0025
.00047	.00068	.0015	.0033
.0005	.00075	.002	.004
.00056	.0008	.0022	.0047
.0006	.00082	.0025	.005
.00068	.001	.0033	.0068
.00075	.0012	.004	.01
.0008	.0013		.015
.00082	.0015		
.001	.0016		
.0012	.0018		
.0013	.002		
	.0022		
	.0025		
	.0027		

Cat. No.	Type	Ratings Available	Capacitance (Range μF)	Tolerance	WVDC	L.xW.xT.	List
UGA-1	G-A	12	.0004 to .0013	±20%	500	25/32x5/8x5/32	$.50
UGA-2	G-A	15	.0006 to .0027	±20%	500	1 1/8x5/8x5/32	.60
UHK-1	High-K	7	.001 to .004	gmv	500	25/32x5/8x5/32	.50
UHK-2	High-K	8	.0025 to .015	gmv	500	1 1/8x5/8x5/32	.60



HIGH-VOLTAGE DOORKNOB CERAMICS

- Capacitor Body has Female Threads for Interchangeable Screw-in Terminals.
- Molded in Non-Flammable, Moisture-resistant, Thermosetting Plastic.
- Molded Guard Rings Lengthen Surface Creepage Path.
- 20DK-T5 Comes Complete with 7 Terminals, as illustrated. (Packaged 2 per plastic box, with 14 terminals.)
- 30DK-T5 is Supplied with 2 Terminals, as per Style Marked "A".

μμF	KV	Diam. x Length	Cat. No.	List
500	20	1 x 31/32	20DK-T5	$1.85
500	30	1 5/16 x 1 1/4	30DK-T5	3.00

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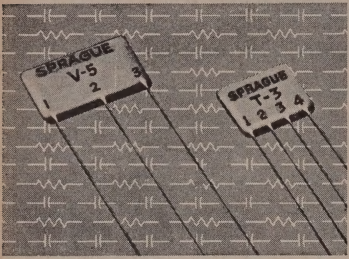
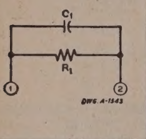
SPRAGUE CAPACITORS

BULPLATE® and MULTI-COMP® PRINTED CIRCUITS


SPRAGUE
V-5
1
2
3
SPRAGUE
T-3
1 2 3 4

- Bulplates (rectangular plates) and Multi-comps (circular discs) are especially designed to save space and reduce assembly time
- Combinations of resistors and capacitors of maximum compactness
- Integral connections are "printed" and brought out to external leads which are anchored to the basic ceramic plate
- Completed units are protected by a tough moisture-proof coating
- Maximum voltage to be applied across these units is 250 volts d-c, except on D-1 which is rated at 100 volts d-c
- Types ACI-1, ACI-2, ACI-3, ACI-4, PRC-1, PRC-3, PRC-4, PRC-5, PRC-6, V-14, and V-15 are Multi-comp disc-type units—All others are Bulplate rectangular plates

1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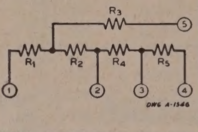
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R₁
R₂
R₄
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④
DWG. A-1546

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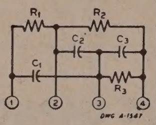
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R₃
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③
④
DWG. A-1547

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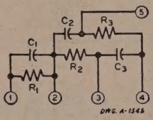
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DWG. A-1545

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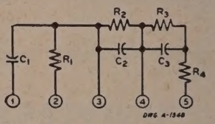
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R₄
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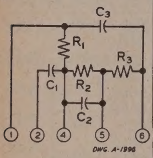
④
⑤
DWG. A-1548

6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C₂
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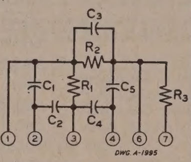
④
⑤
⑥
DWG. A-1996

7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C₄
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②
③
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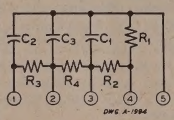
⑥
⑦
DWG. A-1995

8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R₁
R₃
R₄
R₂
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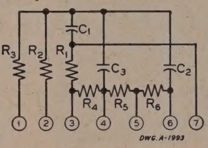
②
③
④
⑤
DWG. A-1994

9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C₃
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DWG. A-1993

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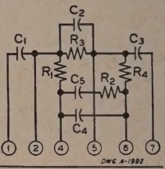
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C₅
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C₄
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②
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⑥
⑦
DWG. A-1992

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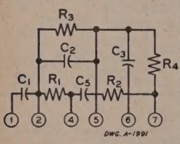
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C₂
C₃
R₄
C₁
R₁
C₅
R₂
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②
④
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⑦
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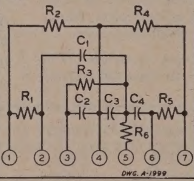
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R₄
C₁
R₃
R₁
C₂
C₃
C₄
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③
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⑤
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⑦
DWG. A-1999

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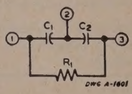
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R₁
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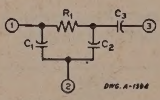
14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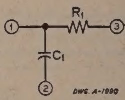
C₁
C₂
②
DWG. A-1584

15


R₁
①
③
C₁
②
DWG. A-1990

ANTENNA-CHASSIS ISOLATION

Fig.	C_1 ($\mu\mu$F)	R_1 (MΩ)	Cat. No.	List Price
1	470	.2 - 1.0	**ACI-1**	$.45
1	4700	.75 - 1.5	**ACI-2**	.60
1	1000	.75 - 1.5	**ACI-3**	.70
1	5000	.2 - 1.0	**ACI-4**	.60
1	.001	330 K	**ACI-8**	.55

PHASE COMPARATOR

Fig.	C_1 ($\mu\mu$F)	C_2 ($\mu\mu$F)	C_3 ($\mu\mu$F)	R_1 (KΩ)	R_2 (KΩ)	R_3 (KΩ)	R_4 (KΩ)	Cat. No.	List Price
5	82	100	1000	680	630	4700	200	**C-1**	$1.25
3	1000	150	150	100	100	100	——	**C-2**	1.25
4	180	150	150	680	390	8.2	——	**C-3**	1.35
5	68	120	1000	100	680	4700	220	**C-4**	1.40
5	82	200	1500	100	680	4700	220	**C-5**	1.55

DIODE FILTER

Fig.	C_1 ($\mu\mu$F)	C_2 ($\mu\mu$F)	C_3 ($\mu\mu$F)	R_1 (KΩ)	Cat. No.	List Price
13	100	100	——	47	**D-1**	$ .70
13	150	150	——	47	**D-2**	.70
13	50	50	——	47	**D-3**	.70
13	100	100	——	100	**D-4**	.70
14	330	680	.01	100	**D-5**	1.25
15	100	——	——	47	**D-7**	.65
16	.001	.004	.01	22	**D-8**	1.10

AUTOMATIC GAIN CONTROL

Fig.	R_1 (KΩ)	R_2 (KΩ)	R_3 (KΩ)	R_4 (KΩ)	R_5 (KΩ)	Cat. No.	List Price
2	71.2	126	389	82	820	**AGC-1**	$1.25

Fig.	C_1 ($\mu\mu$F)	C_2 ($\mu\mu$F)	C_3 ($\mu\mu$F)	C_4 ($\mu\mu$F)	C_5 ($\mu\mu$F)	R_1 (KΩ)	R_2 (KΩ)	R_3 (KΩ)	R_4 (KΩ)	R_5 (KΩ)	R_6 (KΩ)	Cat. No.	List Price
6	82	200	.003	——	——	150	680	1M	——	——	——	**C-6**	$1.45
7	82	100	100	.002	.002	330	1M	1M	——	——	——	**C-7**	1.85
8	100	.01μF	.002	——	——	180	180	1M	22	——	——	**C-8**	2.10
9	330	330	220	——	——	1	120	68	8.2	8.2	1.5	**C-9**	2.20
10	82	220	.001	3900	.05	150	68	680	1.2M	——	——	**C-10**	2.70
11	82	220	.001	——	.05	150	82	680	1.2M	——	——	**C-11**	2.70
12	300	1000	300	300	——	1.5	6.8	.68	6.8	1000	68	**C-12**	2.00

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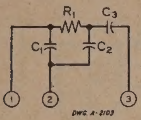
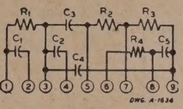
SPRAGUE CAPACITORS

BULPLATE and MULTI-COMP PRINTED CIRCUITS, continued

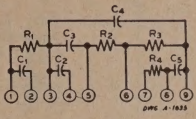
16


R_1
C_3
C_1
C_2
①
②
③
DWG A-2103

17


R_1
C_3
R_2
R_3
C_1
C_2
C_4
R_4
C_5
①
②
③
④
⑤
⑥
⑦
⑧
⑨
DWG. A-1634

18


C_4
R_1
C_3
R_2
R_3
C_1
C_2
R_4
C_5
①
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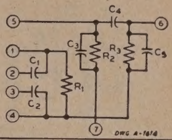
⑤
⑥
⑦
⑧
⑨
DWG A-1635

19


C_4
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C_3
R_3
R_2
C_5
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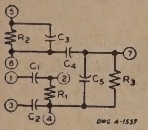
C_1
②
③
R_1
C_2
④
⑦
DWG A-1614

20


⑤
R_2
C_3
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C_1
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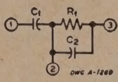
C_5
R_3
R_1
③
C_2
④
DWG A-1537

21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DWG A-1269

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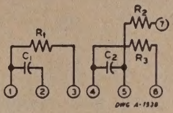
R_2
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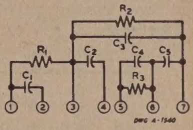
DWG A-1538

23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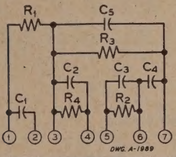
DWG A-1540

24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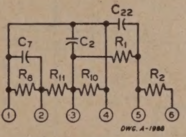
DWG. A-1989

25


C_{22}
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R_1
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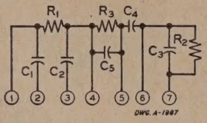
⑥
DWG. A-1988

26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DWG. A-1987

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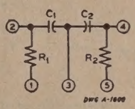
C_1
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②
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R_1
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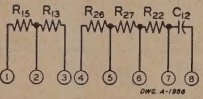
⑤
DWG A-1600

28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R_{26}
R_{27}
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C_{12}
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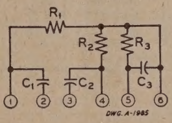
⑧
DWG. A-1986

29


R_1
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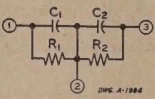
DWG. A-1985

30


C_1
C_2
①
③
R_1
R_2
②
DWG. A-1984

DETECTOR PENTODE COUPLING

Fig.	C_1 (µF)	C_2, C_3 (µµF)	C_4 (µF)	C_5 (µF)	R_1 (MΩ)	R_2 (MΩ)	R_3 (MΩ)	R_4 (MΩ)	Cat. No.	List Price
17	.002	150	.01	.005	10	4.7	1.0	3.3	**DP-1**	$2.00
17	.002	150	.01	.005	4.7	4.7	1.0	2.2	**DP-2**	2.00
18	.005	150	.01	.0005	10	4.7	1.0	3.3	**DP-3**	2.00
17	.001	68	.01	.0025	10	4.7	1.0	3.3	**DP-4**	$1.80
17	.002	150	.01	.005	10	4.7	1.0	3.3	**DP-5**	1.50

DECOUPLING FILTER

Fig.	C_1	C_2	C_3	C_{12}	R_1	R_2	R_3	R_{13}	R_{15}	R_{22}	R_{26}	R_{27}	Cat. No.	List Price
27	.0047	.0047	——	——	1000	1000	——	——	——	——	——	——	**F-1**	$1.00
27	.0047	.0047	——	——	220	820	——	——	——	——	——	——	**F-2**	1.00
28	——	——	——	.01	——	——	——	6.8K	470K	2.2M	12K	120	**F-3**	1.85
29	.001	.001	.0033	——	100K	100K	4.7M	——	——	——	——	——	**F-4**	1.40
30	.0027	.0027	——	——	22K	22K	——	——	——	——	——	——	**F-5**	.60

Fig.	C_1 (µF)	C_2 (µµF)	C_3 (µµF)	C_4 (µF)	C_5 (µµF)	C_7	C_{22}	R_1 (MΩ)	R_2 (KΩ)	R_3 (KΩ)	R_4 (KΩ)	R_5	R_8	R_{10}	R_{11}	Cat. No.	List Price
19	.0022	220	220	.0047	220	——	——	6.8	470	470	——	——	——	——	——	**DT-1**	$1.50
19	.005	220	220	.005	220	——	——	6.8	470	470	——	——	——	——	——	**DT-2**	1.50
19	.002	220	500	.005	500	——	——	6.8	470	470	——	——	——	——	——	**DT-3**	1.50
19	.002	220	250	.005	250	——	——	6.8	470	470	——	——	——	——	——	**DT-4**	1.50
19	.005	220	250	.005	250	——	——	6.8	470	470	——	——	——	——	——	**DT-5**	1.50
19	.005	220	250	.005	250	——	——	10	470	470	——	——	——	——	——	**DT-6**	1.50
19	.005	220	125	.005	250	——	——	6.8	470	470	——	——	——	——	——	**DT-7**	1.55
23	.002	400	220	.00022	5000	——	——	6.8	470	470	——	——	——	——	——	**DT-8**	1.55
20	.002	400	220	.005	220	——	——	6.8	470	470	——	——	——	——	——	**DT-9**	1.25
22	.005	5000	——	——	——	——	——	6.8	470	470	——	——	——	——	——	**DT-10**	1.70
21	.01	50	——	——	——	——	——	4.7	——	——	——	——	——	——	——	**DT-11**	1.25
23	.002	400	220	.005	220	——	——	6.8	470	470	——	——	——	——	——	**DT-12**	1.40
24	.002	400	220	.005	220	——	——	6.8	470	470	575	——	——	——	——	**DT-13**	1.50
25	——	.047	——	——	——	.005	.003	1.5K	150	——	——	2.2M	10M	4.7M	10M	**DT-14**	2.45
26	.005	220	250	.005	250	——	——	6.8	470	470	——	——	——	——	——	**DT-15**	1.60

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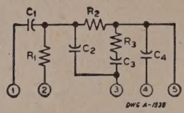
SPRAGUE CAPACITORS

BULPLATE and MULTI-COMP PRINTED CIRCUITS, continued

31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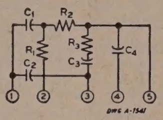
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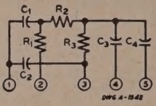
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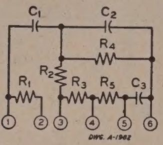
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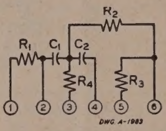
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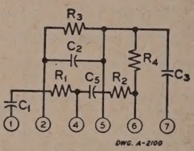
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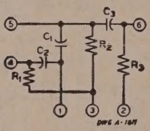
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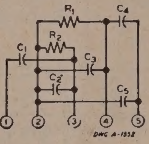
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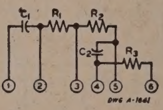
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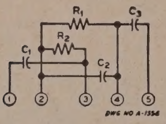
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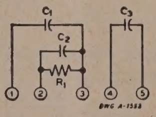
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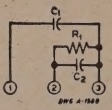
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HORIZONTAL NETWORK

Fig.	C_1 (μF)	C_2 (μF)	C_3 (μμF)	C_4 (μF)	C_5 (μF)	R_1 (KΩ)	R_2 (KΩ)	R_3 (KΩ)	R_4	R_5	Cat. No.	List Price
31	.001	.0015	390	.003	——	10	39	5.6	——	——	**HN-1**	$1.75
32	.001	.002	390	.003	——	15	39	5.6	——	——	**HN-2**	1.70
33	.001	.001	390	.003	——	8.2	39	8.2	——	——	**HN-3**	1.70
34	.002	220μμF	27	——	——	56	3.3M	560	470K	56K	**HN-5**	1.85
35	100μμF	.005	——	——	——	560	470	220	1K	——	**HN-6**	1.50
36	82μμF	220μμF	.001μF	——	.05	150	82	680	1.2M	——	**HN-7**	2.70

PENTODE COUPLING

Fig.	C_1 (μμF)	C_2 (μF)	C_3 (μF)	C_4 (μF)	R_1 (MΩ)	R_2 (MΩ)	R_3 (MΩ)	Cat. No.	List Price
37	47	.0022	.0047	——	4.7	1.0	2.2	**P-1**	$1.60
37	100	.0047	.0047	——	4.7	1.0	2.2	**P-2**	1.60
37	100	.005	.002	——	4.7	1.0	2.2	**P-3**	1.60
38	5000	.00047	.00047	.003	1.5	10	——	**P-4**	1.60
39	6800	.01	——	——	6.8	1.0	.47	**P-5**	1.00
40	5000	.001	.003	——	.39	10	——	**P-6**	1.65
41	5000	.00033	.003	——	10	——	——	**P-7**	1.50
42	5000	.00035	——	——	10	——	——	**P-8**	1.05

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SPRAGUE CAPACITORS

BULPLATE and MULTI-COMP PRINTED CIRCUITS, continued

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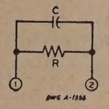
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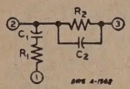
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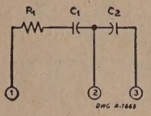
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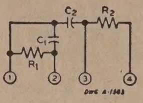
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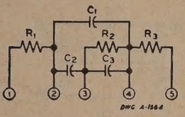
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C3
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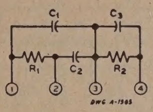
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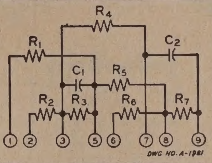
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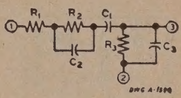
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C3
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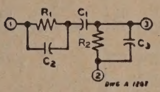
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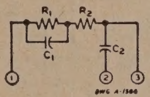
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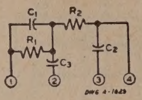
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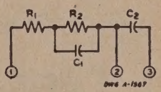
54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DWG A-1567

PARALLEL RESISTOR-CAPACITOR

Fig.	C1 (μμF)	R1 (KΩ)	Cat. No.	List Price
43	56	47	**PRC-1**	$.45
43	330	220	**PRC-2**	.50
43	470	470	**PRC-3**	.40
43	800	22	**PRC-4**	.40
43	330	150	**PRC-5**	.40
43	500	68	**PRC-6**	.40
43	150	15	**PRC-7**	.40
43	.0015μF	4.7M	**PRC-8**	.45
43	100	1.2M	**PRC-9**	.40
43	100	22M	**PRC-10**	.45
43	25	100	**PRC-11**	.40
43	15	68	**PRC-12**	.50
43	.001μF	3.3	**PRC-13**	.40
43	.0047μF	470	**PRC-14**	.40
43	330	1500	**PRC-15**	.45

PARALLEL RESISTOR-CAPACITOR Cont.

Fig.	C1 (μμF)	R1 (KΩ)	Cat. No.	List Price
43	220	2.2	**PRC-16**	$.45
43	.0045μF	6.8	**PRC-17**	.45
43	.01μF	82	**PRC-18**	.80
43	1500	1.75—3.25M	**PRC-19**	.85

RETRACE SUPPRESSION

Fig.	C1 (μF)	C2 (μF)	R1 (KΩ)	R2 (KΩ)	Cat. No.	List Price
44	.005	.01	10	1000	**RS-1**	$1.30
44	.005	.002	10	1000	**RS-2**	1.30
44	.01	.01	2.7	56	**RS-3**	1.30
45	.01	.01	10	——	**RS-4**	1.20
44	.002	.005	10	1M	**RS-5**	1.20
44	.002	.005	10	330	**RS-6**	1.20

SOUND I-F

Fig.	C1 (μμF)	C2 (μμF)	C3 (μμF)	R1 (KΩ)	R2 (KΩ)	R3	R4	R5	R6	R7 (KΩ)	Cat. No.	List Price
46	5000	5000	——	150	220	——	——	——	——	——	**SI-1**	$1.65
46	5000	2000	——	330	27	——	——	——	——	——	**SI-2**	1.30
47	470	5	5	47	33	470	——	——	——	——	**SI-3**	1.25
48	470	470	1500	470	22M	——	——	——	——	——	**SI-4**	1.50
49	.02μF	.05μF	——	100	120	1500	560	9100	1200	39K	**SI-7**	3.40

SYNC TAKEOFF

Fig.	C1 (μF)	C2 (μF)	C3 (μμF)	R1 (KΩ)	R2 (KΩ)	R3 (KΩ)	R4	R5	Cat. No.	List Price
50	.01	.00027	25	10	330	2200	——	——	**ST-1**	$1.50
50	.01	.00027	25	10	220	2200	——	——	**ST-2**	1.50
51	.01	.00027	25	220	2200	——	——	——	**ST-3**	1.50
50	.01	.00027	2.2	10	330	2200	——	——	**ST-4**	1.50
52	.001	.0014	——	4700	220	——	——	——	**ST-5**	1.00
53	.00047	.0008	10000	470	2200	——	——	——	**ST-6**	2.00
54	.00068	.005	——	10	220	——	——	——	**ST-7**	1.00

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BULPLATE and MULTI-COMP PRINTED CIRCUITS, continued

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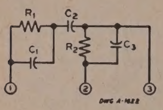
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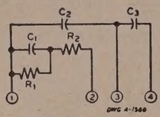
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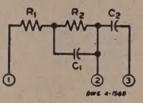
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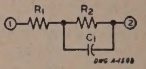
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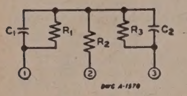
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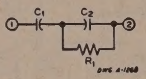
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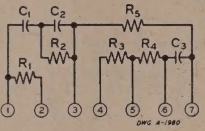
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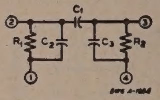
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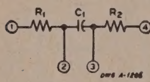
DWG A-1984

63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DWG A-1206

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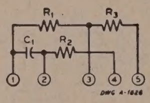
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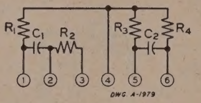
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DWG A-1979

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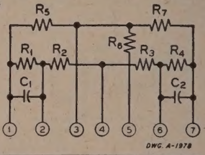
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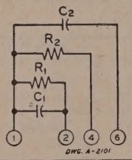
67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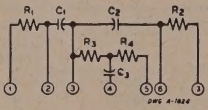
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C₃
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⑥
③
DWG A-1624

SYNC TAKEOFF (Cont.)

Fig.	C_1 (μF)	C_2 (μF)	C_3 (μμF)	R_1 (KΩ)	R_2 (KΩ)	R_3 (KΩ)	R_4	R_5	Cat. No.	List Price
55	.00015	.01	25	470	2200	—	—	—	**ST-8**	$1.50
56	.001	.001	3300	4700	200	—	—	—	**ST-9**	1.25
57	.00068	.005	—	4.7	220	—	—	—	**ST-10**	1.40
58	.00015	—	—	15	270	—	—	—	**ST-11**	1.00
59	.00033	.00033	—	270	2200	560	—	—	**ST-12**	1.25
60	.01	.00015	—	270	—	—	—	—	**ST-13**	1.30
59	.00033	.00033	—	1M	2.2M	270	—	—	**ST-15**	1.25
61	.005	150μμF	.005μF	47K	270	100	100K	2.2M	**ST-16**	2.10

TRIODE COUPLING

Fig.	C_1 (μF)	C_2, C_3 (μμF)	R_1 (KΩ)	R_2 (KΩ)	R_3 (KΩ)	R_4 (KΩ)	R_5	R_6	R_7	Cat. No.	List Price
62	.01	250	500	500	—	—	—	—	—	**T-1**	$1.05
62	.01	250	250	500	—	—	—	—	—	**T-2**	1.05
62	.005	250	500	500	—	—	—	—	—	**T-3**	1.05
62	.005	250	250	500	—	—	—	—	—	**T-4**	1.05
63	.01	—	470	1000	—	—	—	—	—	**T-5**	1.05
62	.01	500	500	500	—	—	—	—	—	**T-6**	1.05
64	.01	—	150	1000	147	—	—	—	—	**T-7**	1.50
65	.01	.01μF	470	47	47	470	—	—	—	**T-8**	1.50
62	680μμF	100μμF	200	470	—	—	—	—	—	**T-9**	1.10
62	.0022	100,470	150	470	—	—	—	—	—	**T-10**	1.10
66	.001	.001μF	470	470	470	470	100K	47K	100K	**T-11**	2.15
66	100μμF	.0047μF	1.5M	470	—	—	—	—	—	**T-12**	1.20

TONE COMPENSATION

Fig.	C_1 (μμF)	C_2 (μμF)	C_3 (μμF)	C_1 (μμF)	R_1 (KΩ)	R_2 (KΩ)	R_3 (KΩ)	R_4, R_5 (KΩ)	Cat. No.	List Price
68	4700	4700	100	—	100	100	470	1.0	**TC-1**	$1.80
69	1500	1500	—	—	4700	4700	4700	—	**TC-2**	1.25
70	3000	400	250	—	4700	4700	4700	—	**TC-3**	1.25
71	200	100	4500	4500	50	50	—	—	**TC-4**	1.25
71	100	50	2500	2500	100	100	—	—	**TC-5**	1.25
72	1000	4000	10000	—	22	—	—	—	**TC-6**	1.00
73	150	4700	2200	—	220	47	47	270	**TC-7**	2.10
74	150	10000	—	—	150	47	27	—	**TC-8**	1.45

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SPRAGUE CAPACITORS

BULPLATE and MULTI-COMP PRINTED CIRCUITS, continued

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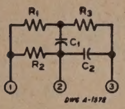
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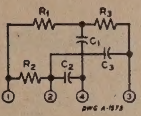
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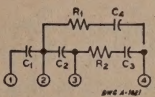
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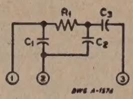
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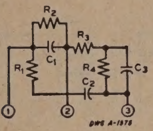
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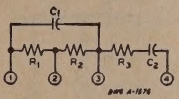
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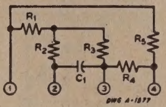
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DWG A-1577

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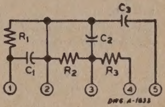
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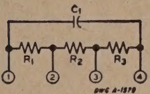
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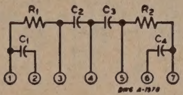
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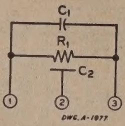
79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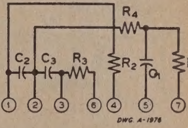
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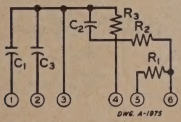
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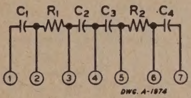
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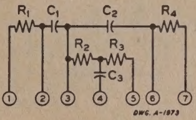
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DWG. A-1973

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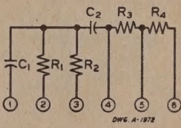
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DWG. A-1972

TONE COMPENSATION (Cont.)

Fig.	C_1 (μμF)	C_2 (μμF)	C_3 (μμF)	C_4 (μμF)	R_1 (KΩ)	R_2 (KΩ)	R_3 (KΩ)	R_4, R_5 (KΩ)	Cat. No.	List Price
75	10	——	——	——	7.3	107	132	150	**TC-9**	$2.00
76	390	2200	5000	——	47	10	10	——	**TC-11**	1.25
77	47	——	——	——	100	100	100	——	**TC-12**	1.50
78	10	900	10	4700	10	22	——	——	**TC-13**	1.70
79	Note—C_1, C_2 & R_1 adjusted for 10 kilocycle resonance								**TC-19**	1.45
80	100	.0039μF	.0039μF	——	1	100	100	70	**TC-20**	2.35
81	150	200	1500	——	47	150	220	——	**TC-21**	1.70
82	750	.003μF	.015μF	.0034μF	120	27	——	——	**TC-22**	1.85
78	68	.001μF	.01μF	.001μF	220	22	——	——	**TC-23**	1.75
83	.0047μF	.0047μF	330μF	——	100	120	1	100	**TC-24**	1.80
84	500	.002μF	——	——	32	150	1.8	47	**TC-25**	2.05
85	270	390	470	.0063μF	150	10M	10M	22M	**TC-26**	2.25
86	330	330	——	——	100	150	270	——	**TC-27**	2.25
87	.01μF	.01μF	——	——	27	27	——	——	**TC-28**	1.25
88	500	200	——	——	40	160	——	——	**TC-29**	.95
89	220	630	——	——	220	62	——	——	**TC-32**	.70
90	.05	10	——	——	3.3M	47	100	1.2M	**TC-33**	2.05
91	33	——	——	——	33	470	——	——	**TC-34**	.95
92	.022μF	.0015μF	.0022μF	220	47	100	10	——	**TC-35**	2.50
93	.0047μF	200	.0047μF	——	100	470	1	100	**TC-36**	2.00
94	220	.0022	.0022	CA=.02 CB=.047	47	100	10	——	**TC-30**	3.25

Fig.	C_1	C_2	C_3	C_4	C_5	C_6	C_7	R_1	R_2	R_3	R_4	Cat. No.	List Price
95	.015	.01	.003	.005	.001	.022	.001	3.3K	33K	47K	15K	**TC-31**	$3.45

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SPRAGUE CAPACITORS

BULPLATE and MULTI-COMP PRINTED CIRCUITS, continued

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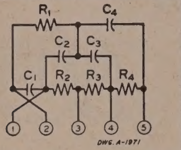
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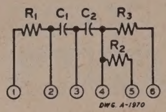
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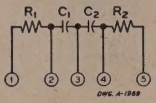
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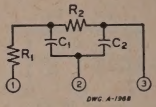
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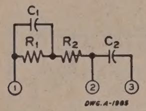
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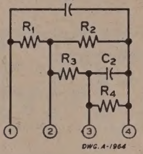
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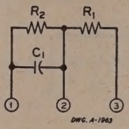
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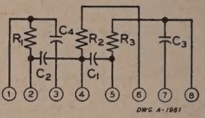
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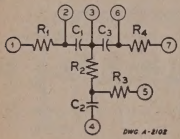
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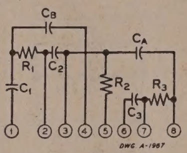
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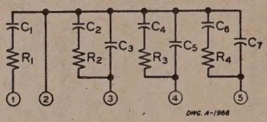
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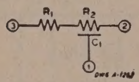
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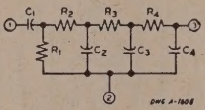
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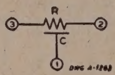
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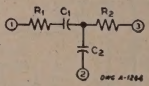
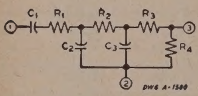
DWG A-1263

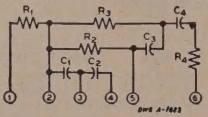
99


R1
C1
R2
①
③
C2
②
DWG A-1264

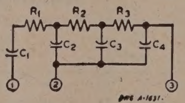
100


C1
R1
R2
R3
①
③
C2
C3
R4
②
DWG A-1500

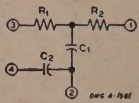
101


R1
R3
C4
R2
C3
C1
C2
R4
①
②
③
④
⑤
⑥
DWG A-1623

102


R1
R2
R3
C1
C2
C3
C4
①
②
③
DWG A-1631

103


R1
R2
③
①
C2
C1
④
②
DWG A-1561

VERTICAL INTEGRATOR

Fig.	C_1 (µF)	C_2 (µF)	C_3 (µF)	C_4 (µF)	C_5 (µµF)	R_1 (KΩ)	R_2 (KΩ)	R_3 (KΩ)	R_4 (KΩ)	R_5 (KΩ)	R_6 (KΩ)	Cat. No.	List Price
96	.012	——	——	——	——	22	16.4	——	——	——	——	**V-1/V-3**	$1.25
97	.01	.002	.005	.005	——	22	22	8.2	8.2	——	——	**V-2**	1.80
98	.012	——	——	——	——	16.4	——	——	——	——	——	**V-4**	1.30
99	.0047	.0047	——	——	——	22	10	——	——	——	——	**V-5**	1.30
100	.004	.01	.01	——	——	10	10	10	1000	——	——	**V-6**	1.25
101	.00018	.00013	.0008	.0008	——	47	47	68	100	——	——	**V-7**	1.25
102	.01	.002	.005	.005	——	22	8.2	8.2	——	——	——	**V-8**	1.50
103	.0025	.00033	——	——	——	33	15	——	——	——	——	**V-9**	.90
104	.00015	.005	.004	.004	——	33	33	90	——	——	——	**V-10**	2.15
105	.00015	.005	.004	——	——	33	33	90	——	——	——	**V-11**	2.10
106	.05	.002	——	——	——	1000	1000	10	——	——	——	**V-12**	4.00
107	.0051	.01	.0022	.001	470	47	33	82	——	——	——	**V-13**	1.90
108	.001	——	——	——	——	70	——	——	——	——	——	**V-14**	.70
108	.001	——	——	——	——	90	——	——	——	——	——	**V-15**	.70
109	.001	.002	——	——	——	82	39	——	——	——	——	**V-16**	1.50
110	.001	.004	.01	——	——	22	——	——	——	——	——	**V-17**	1.25
111	.00025	.01	——	——	——	4700	——	——	——	——	——	**V-18**	1.00
112	.009	.011	.009	.002	——	36	50	19	26	12	56	**V-19**	1.95
113	470	.01	.01	——	——	47	470	1M	——	——	——	**V-21**	1.45
105	.005	.004	150	——	——	22	39	90	——	——	——	**V-22**	2.10
104	.005	.0036	150	600	——	10	33	90	——	——	——	**V-23**	2.25
114	100	800	.0033	——	——	22	68	68	100	——	——	**V-26**	1.60
104	.005	.004	150	600	——	22	27	90	——	——	——	**V-27**	2.25
115	800	2000	——	——	——	68	15	100	——	——	——	**V-28**	1.30

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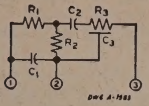
TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

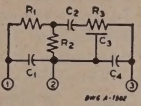
SPRAGUE PRINTED CIRCUITS

BULPLATE and MULTI-COMP PRINTED CIRCUITS, continued

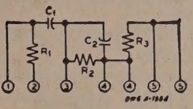
104


R1
C2
R3
R2
C3
C1
①
②
③

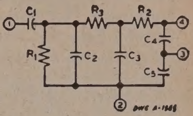
105


R1
C2
R3
R2
C3
C1
C4
①
②
③

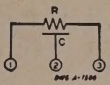
106


C1
R1
C2
R3
R2
①
②
③
④
⑤
⑤

107


C1
R3
R2
R1
C2
C3
C4
C5
①
②
③
④

108



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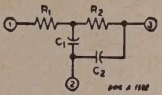
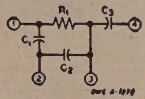
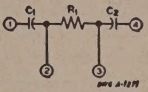

R1
R2
C1
C2
①
②
③

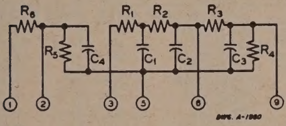
110


R1
C3
C1
C2
①
②
③
④

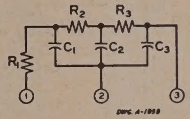
111


C1
R1
C2
①
②
③
④

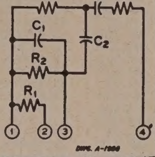
112


R6
R1
R2
R3
R5
C4
C1
C2
C3
R4
①
②
③
⑤
⑥
⑨

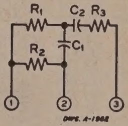
113


R2
R3
C1
C2
C3
R1
①
②
③

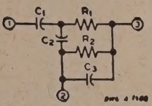
114


R3
C3
R4
C1
C2
R2
R1
①
②
③
④

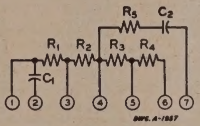
115


R1
C2
R3
R2
C1
①
②
③

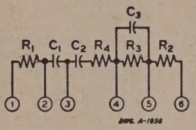
116


C1
R1
C2
R2
C3
①
②
③

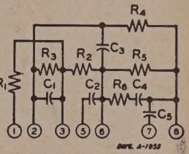
117


R5
C2
R1
R2
R3
R4
C1
①
②
③
④
⑤
⑥
⑦

118


C3
R1
C1
C2
R4
R3
R2
①
②
③
④
⑤
⑥

119


R4
R3
R2
C3
R5
R1
C1
C2
R6
C4
C5
①
②
③
⑤
⑥
⑦
⑧
DWG. A-1955

VERTICAL FEEDBACK

Fig.	C_1 (μF)	C_2 (μF)	C_3 (μF)	R_1 (KΩ)	R_2 (KΩ)	R_3	R_4	R_5	Cat. No.	List Price
116	.001	.001	.002	100	100	——	——	——	**VF-1**	$1.30
117	.01	.01	——	6.8M	510	470K	680K	1K	**VF-2**	1.90
118	.0033	.002	.0047	2.2	2.2	27K	180	——	**VF-3**	1.70

Fig.	C_1	C_2	C_3	C_4	C_5	R_1	R_2	R_3	R_4	R_5	R_6	Cat. No.	List Price
119	.008	68	220	27	.005	8.2K	470K	330K	680K	330K	100K	**VF-4**	$2.70

COMPONENTS FOR EVERY NEED

You will find a Sprague Special purpose item for virtually any application. High capacitance capacitors, noise filters, auto generator capacitors, metal cased midget tubulars, high voltage rectangular oils, screwbase oils and bathtub types for severe operating conditions are some of the standard catalog items which help make the Sprague line the most *complete* line in the industry.

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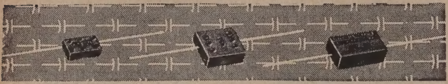
SPRAGUE CAPACITORS

MICA TYPES

- Each Mica Capacitor Section Receives a Radio Frequency Test Before Molding
- Careful Selection and Electrical Grading of Raw Mica Assures Maximum Quality
- Section Foils on Foil Micas are Connected to Terminals through Special Low-resistance R-F Bonds
- R-F Current Tested for Peak Ratings After Impregnation and Molding

TYPE MS & 1FM MICAS



TYPE MS—SILVERED MICA

(Standard Capacity Tolerance ±5%)

MF	Cat. No.	List	MF	Cat. No.	List	MF	Cat. No.	List
500 WVDC, 1000 V Test			.000120	MS-312	$ .45	.001300	MS-213	$ 1.25
			.000130	MS-313	.45	.001500	MS-215	1.35
			.000150	MS-315	.45	.001600	MS-216	1.35
.000005	MS-55	$ .45	.000160	MS-316	.45	.001800	MS-218	1.35
.000010	MS-41	.40	.000180	MS-318	.45	.002000	MS-22	1.35
.000012	MS-412	.40	.000200	MS-32	.45	.002200	MS-222	1.50
.000015	MS-415	.40	.000220	MS-322	.45	.002400	MS-224	1.80
.000018	MS-418	.40	.000240	MS-324	.55	.002500	MS-225	1.80
.000020	MS-42	.40	.000250	MS-325	.55	.002700	MS-227	1.90
.000022	MS-422	.40	.000270	MS-327	.55	.003000	MS-23	2.05
.000024	MS-424	.40	.000300	MS-33	.55	.003300	MS-233	2.05
.000025	MS-425	.40	.000330	MS-333	.55	.003600	MS-236	2.10
.000027	MS-427	.40	.000360	MS-336	.55	.003900	MS-239	2.15
.000030	MS-43	.40	.000390	MS-339	.65	.004000	MS-24	2.15
.000033	MS-433	.40	.000400	MS-34	.65	.004300	MS-243	2.15
.000036	MS-436	.40	.000430	MS-343	.65	.004700	MS-247	2.15
.000039	MS-439	.40	.000470	MS-347	.70	.005000	MS-25	2.25
.000040	MS-44	.40	.000500	MS-35	.70	.005100	MS-251	2.25
.000043	MS-443	.40	.000510	MS-351	.70	.005600	MS-256	2.50
.000047	MS-447	.40	.000560	MS-356	.75	.006000	MS-26	2.40
.000050	MS-45	.40	.000600	MS-36	.80	.006200	MS-262	2.60
.000051	MS-451	.40	.000620	MS-362	.80			
.000056	MS-456	.40	.000680	MS-368	.85	**300 WVDC, 600 V Test**		
.000060	MS-46	.40	.000700	MS-37	.85			
.000062	MS-462	.40	.000750	MS-375	.90	.006800	MS-268	2.60
.000068	MS-468	.40	.000800	MS-38	.95	.007000	MS-27	2.60
.000070	MS-47	.40	.000820	MS-382	.95	.007500	MS-275	2.80
.000075	MS-475	.40	.000900	MS-39	1.00	.008000	MS-28	2.80
.000082	MS-482	.40	.000910	MS-391	1.00	.008200	MS-282	2.80
.000091	MS-491	.40	.001000	MS-21	1.10	.009000	MS-29	3.10
.000100	MS-31	.40	.001100	MS-211	1.20	.009100	MS-291	3.10
.000110	MS-311	.45	.001200	MS-212	1.30	.010000	MS-11	3.40

TYPE 1FM

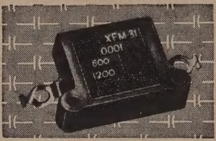
(Standard Capacity Tolerance ± 20%)

MF	Cat. No.	List	MF	Cat. No.	List	MF	Cat. No.	List
500 WVDC 1000 V Test			.000150	1FM-315	$ .20	.001500	1FM-215	$ .30
			.000160	1FM-316	.20	.001600	1FM-216	.30
.000010	1FM-41	$ .25	.000180	1FM-318	.20	.001800	1FM-218	.40
.000012	1FM-412	.25	.000200	1FM-32	.20	.002000	1FM-22	.40
.000015	1FM-415	.25	.000220	1FM-322	.25	.002200	1FM-222	.40
.000018	1FM-418	.25	.000240	1FM-324	.25	.002400	1FM-224	.50
.000020	1FM-42	.25	.000250	1FM-325	.25	.002500	1FM-225	.50
.000022	1FM-422	.25	.000270	1FM-327	.25	.002700	1FM-227	.50
.000024	1FM-424	.25	.000300	1FM-33	.25	.003000	1FM-23	.50
.000027	1FM-427	.25	.000330	1FM-333	.25	.003300	1FM-233	.60
.000030	1FM-43	.25	.000350	1FM-335	.25	.003600	1FM-236	.60
.000033	1FM-433	.25	.000360	1FM-336	.25	.003900	1FM-239	.60
.000036	1FM-436	.25	.000390	1FM-339	.25	.004000	1FM-24	.55
.000039	1FM-439	.25	.000400	1FM-34	.25	.004300	1FM-243	.60
.000040	1FM-44	.25	.000430	1FM-343	.25	.004700	1FM-247	.60
.000043	1FM-443	.20	.000470	1FM-347	.25	.005000	1FM-25	.60
.000047	1FM-447	.20	.000500	1FM-35	.25	.005100	1FM-251	.60
.000050	1FM-45	.20	.000510	1FM-351	.25	.005600	1FM-256	.65
.000051	1FM-451	.20	.000560	1FM-356	.25	.006000	1FM-26	.65
.000056	1FM-456	.20	.000620	1FM-362	.25	.006200	1FM-262	.65
.000062	1FM-462	.20	.000680	1FM-368	.25	**300 WVDC, 600 V Test**		
.000068	1FM-468	.20	.000700	1FM-37	.25	.006800	1FM-268	.85
.000075	1FM-475	.20	.000750	1FM-375	.30	.007000	1FM-27	.85
.000082	1FM-482	.20	.000820	1FM-382	.30	.007500	1FM-275	.85
.000091	1FM-491	.20	.000910	1FM-391	.30	.008000	1FM-28	1.00
.000100	1FM-31	.20	.001000	1FM-21	.30	.008200	1FM-282	1.00
.000110	1FM-311	.20	.001100	1FM-211	.30	.009000	1FM-29	1.00
.000120	1FM-312	.20	.001200	1FM-212	.30	.009100	1FM-291	1.00
.000130	1FM-313	.20	.001300	1FM-213	.30	.010000	1FM-11	1.20

MS and 1FM Dimensions

Catalog Nos.	L x W x T	Catalog Nos.	L x W x T
MS-55 through MS-356	21/32x13/32x7/32	1FM-41 through 1FM-356	51/64x15/32x7/32
MS-36 through MS-236	25/32x25/32x9/32	1FM-362 through 1FM-236	53/64x53/64x9/32
MS-239 through MS-282	25/32x25/32x11/32	1FM-239 through 1FM-282	53/64x53/64x11/32
MS-29 through MS-11	1x5/8x5/16	1FM-29 through 1FM-11	1x5/8x5/16

TYPES XFM, YFM & ZFM



(Standard Capacity Tolerance ±10%)

MF	Cat. No.	List
XFM—600 WVDC, 1200 V TEST		
.00005	XFM-45	$1.20
.0001	XFM-31	1.20
.0002	XFM-32	1.20
.00025	XFM-325	1.20
.0003	XFM-33	1.20
.0004	XFM-34	1.20
.0005	XFM-35	1.20
.001	XFM-21	1.20
.0015	XFM-215	1.20
.002	XFM-22	1.30
.0025	XFM-225	1.30
.003	XFM-23	1.45
.004	XFM-24	1.50
005	XFM-25	1.55
.006	XFM-26	1.80
.007	XFM-27	1.85
.008	XFM-28	1.90
.01	XFM-11	2.15
.02	XFM-12	3.05
.03	XFM-13	4.45

Catalog Nos.	L x W x T
XFM-45 thru XFM-11	1 5/8 x 1 1/8 x 11/32
XFM-12 thru XFM-13	1 5/8 x 1 1/8 x 7/16

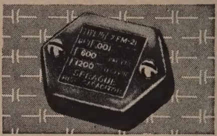
MF	Cat. No.	List
YFM—1200 WVDC, 2500 V TEST		
.00005	YFM-45	1.60
.0001	YFM-31	1.60
.0002	YFM-32	1.60
.00025	YFM-325	1.60
.0003	YFM-33	1.60
.0004	YFM-34	1.60
.0005	YFM-35	1.60
.001	YFM-21	1.80
.0015	YFM-215	2.30
.002	YFM-22	2.40
.0025	YFM-225	2.80
.003	YFM-23	3.05
.004	YFM-24	3.05
.005	YFM-25	3.30
.006	YFM-26	3.30
.007	YFM-27	3.45
.008	YFM-28	3.85
.01	YFM-11	5.10

Catalog Nos.	L x W x T
YFM-45 thru YFM-24	1 5/8 x 1 1/8 x 11/32
YFM-25 thru YFM-11	1 5/8 x 1 1/8 x 7/16

MF	Cat. No.	List
ZFM—2500 WVDC, 5000 V TEST		
.00005	ZFM-45	1.90
.0001	ZFM-31	1.90
.0002	ZFM-32	1.90
.00025	ZFM-325	2.20
.0003	ZFM-33	2.25
.0004	ZFM-34	2.30
.0005	ZFM-35	2.40
.001	ZFM-21	2.80
.0015	ZFM-215	3.55
.002	ZFM-22	4.15
.003	ZFM-23	4.90
.004	ZFM-24	5.65
005	ZFM-25	6.40

Catalog Nos.	L x W x T
ZFM-45 thru ZFM-22	1 5/8 x 1 1/8 x 11/32
ZFM-23 thru ZFM-25	1 5/8 x 1 1/8 x 7/16

TYPES 7FM, 8FM & 9FM



(Standard Capacity Tolerance ±10%

MF	Cat. No.	List
7FM—600 WVDC, 1200 V TEST		
.00005	7FM-45	$1.45
.0001	7FM-31	1.45
.00015	7FM-315	1.45
.0002	7FM-32	1.45
.00025	7FM-325	1.45
.0005	7FM-35	1.45
.001	7FM-21	1.45
.002	7FM-22	1.65
.0025	7FM-225	1.70
.003	7FM-23	1.85
.004	7FM-24	2.00
.005	7FM-25	2.10
.006	7FM-26	2.20
.008	7FM-28	2.45
.01	7FM-11	2.80
.015	7FM-115	3.05
.02	7FM-12	3.55
.03	7FM-13	4.55
.04	7FM-14	5.85
.05	7FM-15	7.10
.06	7FM-16	8.05

Catalog Nos.	L x W x T
7FM-45 thru 7FM-13	1 3/4 x 1 5/16 x 7/16
7FM-14 thru 7FM-16	1 3/4 x 1 5/16 x 3/4

MF	Cat. No.	List
8FM—1200 WVDC, 2500 V TEST		
.00005	8FM-45	1.60
.0001	8FM-31	1.60
.00015	8FM-315	1.60
.0002	8FM-32	1.60
.00025	8FM-325	1.60
.0005	8FM-35	1.60
.001	8FM-21	1.90
.002	8FM-22	2.50
.0025	8FM-225	2.80
.003	8FM-23	2.95
.004	8FM-24	3.10
.005	8FM-25	3.30
.006	8FM-26	3.45
.008	8FM-28	4.10
.01	8FM-11	4.70
.015	8FM-115	5.80
.02	8FM-12	7.05
.025	8FM-125	7.90
.03	8FM-13	8.10

Catalog Nos.	L x W x T
8FM-45 thru 8FM-115	1 3/4 x 1 5/16 x 7/16
8FM-12 thru 8FM-13	1 3/4 x 1 5/16 x 3/4

MF	Cat. No.	List
9FM—2500 WVDC, 5000 V TEST		
.00005	9FM-45	1.90
.0001	9FM-31	1.90
.00025	9FM-325	2.15
.0005	9FM-35	2.55
.001	9FM-21	2.90
.002	9FM-22	4.25
.0025	9FM-225	4.60
.003	9FM-23	5.10
.004	9FM-24	5.65
.005	9FM-25	6.20
.006	9FM-26	6.35
.008	9FM-28	6.85
.01	9FM-11	7.30
.015	9FM-115	8.05

Catalog Nos.	L x W x T
9FM-45 thru 9FM-26	1 3/4 x 1 5/16 x 7/16
9FM-28 thru 9FM-115	1 3/4 x 1 5/16 x 3/4

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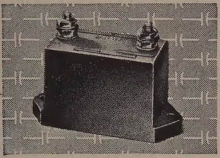
SPRAGUE CAPACITORS

MICA CAPACITORS, continued

TYPES 1MC & 2MC



(Standard Capacity Tolerance ±5%)

TYPE 1MC

Dimensions—2″ L. x 15/16″ W. x 1 19/32″ H.

MF	VAC Peak	Cat. No.	List
.00005	3000	1MC-45	$12.60
.0001	3000	1MC-31	12.60
.00015	3000	1MC-315	12.60
.0002	3000	1MC-32	12.60
.00025	3000	1MC-325	12.60
.0003	3000	1MC-33	12.60
.0004	3000	1MC-34	12.60
.0005	3000	1MC-35	12.60
.0006	3000	1MC-36	12.60
.0007	3000	1MC-37	12.60
.0008	3000	1MC-38	12.60
.001	3000	1MC-21	12.60
.0015	3000	1MC-215	12.60
.002	3000	1MC-22	12.60
.003	2000	1MC-23	12.60
.004	2000	1MC-24	12.60
.005	2000	1MC-25	12.60
.006	2000	1MC-26	12.60
.007	2000	1MC-27	12.60
.008	1500	1MC-28	12.60
.01	1000	1MC-11	12.60
.015	1000	1MC-115	12.60
.02	1000	1MC-12	14.30
.03	500	1MC-13	14.30
.04	500	1MC-14	14.30
.05	250	1MC-15	14.30
.1	250	1MC-1	15.10

TYPE 2MC

Dimensions—2¼″ L. x 1¼″ W. x 1 13/16″ H.

MF	VAC Peak	Cat. No.	List
.00005	5000	2MC-45	17.30
.0001	5000	2MC-31	17.30
.00015	5000	2MC-315	17.30
.0002	5000	2MC-32	17.30
.00025	5000	2MC-325	17.30
.0003	5000	2MC-33	17.30
.0004	5000	2MC-34	17.30
.0005	5000	2MC-35	17.30
.0006	5000	2MC-36	17.30
.0007	5000	2MC-37	17.30
.0008	5000	2MC-38	17.30
.001	5000	2MC-21	17.30
.0015	5000	2MC-215	17.30
.002	5000	2MC-22	17.30
.003	3000	2MC-23	17.30
.004	3000	2MC-24	17.30
.005	3000	2MC-25	17.30
.006	3000	2MC-26	17.30
.007	3000	2MC-27	17.30
.008	2000	2MC-28	17.30
.01	2000	2MC-11	17.30
.015	2000	2MC-115	17.30
.02	2000	2MC-12	17.30
.03	1500	2MC-13	17.30
.04	1500	2MC-14	17.30
.05	1500	2MC-15	17.30
.06	1000	2MC-16	18.60
.07	1000	2MC-17	18.60
.08	500	2MC-18	19.20
.1	500	2MC-1	19.20

TYPES 1CC, 2CC, 3CC & 4CC

(Standard Capacity Tolerance ±5%)

TYPE 1CC

Dimensions—2 13/16″ D. x 2½″ H.

MF	Cat. No.	List
6000 VAC Peak		
.00005	1CC-45	$38.20
.000075	1CC-475	40.00
.0001	1CC-31	40.60
.00015	1CC-315	40.60
.0002	1CC-32	40.60
.00025	1CC-325	40.60
.0003	1CC-33	44.35
.0004	1CC-34	44.35
.0005	1CC-35	46.65
.0006	1CC-36	46.65
.0007	1CC-37	46.65
.0008	1CC-38	46.65
.001	1CC-21	46.65
.0015	1CC-215	48.90
.002	1CC-22	48.90
.003	1CC-23	50.60
.004	1CC-24	50.60
4000 VAC Peak		
.005	1CC-25	50.60
.006	1CC-26	51.45
.007	1CC-27	51.45
.008	1CC-28	51.45
.01	1CC-11	51.45
3000 VAC Peak		
.015	1CC-115	51.45
2000 VAC Peak		
.02	1CC-12	51.45
.025	1CC-125	51.80
1500 VAC Peak		
.03	1CC-13	55.75
.04	1CC-14	58.50
.05	1CC-15	60.75
.06	1CC-16	62.80
1000 VAC Peak		
.07	1CC-17	64.25
.08	1CC-18	65.75
.1	1CC-1	68.50

TYPE 2CC

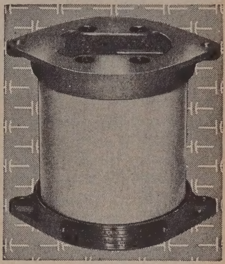
Dimensions—3½″ D. x 3″ H.

MF	Cat. No.	List
10,000 VAC Peak		
.00005	2CC-45	65.55
.000075	2CC-475	65.55
.0001	2CC-31	65.55
.00015	2CC-315	65.55
.0002	2CC-32	65.55
.0003	2CC-33	65.55
.0004	2CC-34	65.55
.0005	2CC-35	65.55
.0006	2CC-36	65.55
.0007	2CC-37	65.55
0008	2CC-38	65.55
.001	2CC-21	65.55
.0015	2CC-215	65.55
.002	2CC-22	65.55
8000 VAC Peak		
.003	2CC-23	65.55
.004	2CC-24	65.55
6000 VAC Peak		
.005	2CC-25	65.55
5000 VAC Peak		
.006	2CC-26	69.15
007	2CC-27	69.15
.008	2CC-28	69.15
.01	2CC-11	69.15
4000 VAC Peak		
.015	2CC-115	$ 69.15
3000 VAC Peak		
.02	2CC-12	69.15
.025	2CC-125	72.00
2000 VAC Peak		
.03	2CC-13	73.50
.04	2CC-14	77.80
.05	2CC-15	80.75
.06	2CC-16	83.00
1500 VAC Peak		
.07	2CC-17	85.00
.08	2CC-18	86.50
.1	2CC-1	90.00

TYPE 3CC

Dimensions—5″ D. x 4″ H.

MF	Cat. No.	List.
20,000 VAC Peak		
.00005	3CC-45	110.90
.000075	3CC-475	121.00
.0001	3CC-31	121.00
00015	3CC-315	131.10
.0002	3CC-32	131.10
.0003	3CC-33	131.10
.0004	3CC-34	137.15
.0005	3CC-35	137.15
.0006	3CC-36	137.15
.0007	3CC-37	137.15
.0008	3CC-38	137.15
.001	3CC-21	141.15
15,000 VAC Peak		
.0015	3CC-215	143.20
.002	3CC-22	143.20
12,000 VAC Peak		
.003	3CC-23	151.25
.004	3CC-24	151.25
10,000 VAC Peak		
.005	3CC-25	151.25
.006	3CC-26	151.25
.007	3CC-27	151.25
.008	3CC-28	151.25
8000 VAC Peak		
.01	3CC-11	151.25
5000 VAC Peak		
.015	3CC-115	151.25
.02	3CC-12	151.25
3000 VAC Peak		
.025	3CC-125	151.25
.03	3CC-13	151.25
.04	3CC-14	151.25
.05	3CC-15	151.25
.06	3CC-16	158.50
2000 VAC Peak		
.07	3CC-17	164.00
.08	3CC-18	172.00
.1	3CC-1	182.00



TYPE 4CC

Dimensions—5″ D. x 5¾″ H.

MF	Cat. No.	List
30,000 VAC Peak		
.0001	4CC-31	$210.30
.00015	4CC-315	210.30
.0002	4CC-32	221.16
.0003	4CC-33	221.16
.0004	4CC-34	221.16
.0005	4CC-35	221.16
.0006	4CC-36	221.16
.0007	4CC-37	221.16
.0008	4CC-38	221.16
.001	4CC-21	229.10
25,000 VAC Peak		
.0015	4CC-215	229.10
20,000 VAC Peak		
.002	4CC-22	229.10
.003	4CC-23	229.10
15,000 VAC Peak		
.004	4CC-24	234.35
.005	4CC-25	242.00
.006	4CC-26	252.25
.007	4CC-27	260.00
12,000 VAC Peak		
.008	4CC-28	260.00
.009	4CC-29	260.00
10,000 VAC Peak		
.01	4CC-11	272.44
8000 VAC Peak		
.015	4CC-115	272.44
6000 VAC Peak		
.02	4CC-12	272.44
.03	4CC-13	272.44
5000 VAC Peak		
.04	4CC-14	272.44
.05	4CC-15	272.44
.06	4CC-16	290.00
4000 VAC Peak		
.07	4CC-17	300.00
3000 VAC Peak		
.08	4CC-18	308.00
.1	4CC-1	326.00

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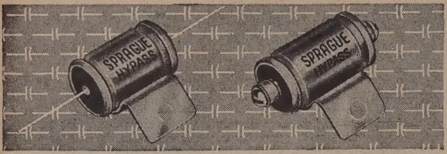
SPRAGUE FILTERS

HYPASS® CAPACITORS

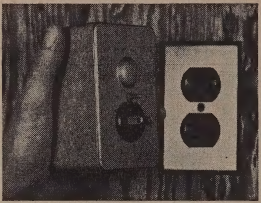


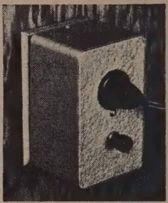
- Exclusive Sprague 3-terminal Network Feed-thru Capacitors
- Bypass V-H-F Currents Where Ordinary Capacitors are ineffective
- Suppress TVI from Short-wave Transmitters, Diathermy Machines, Electronic Heating Apparatus, etc.
- Eliminate Interference caused by Line-conducted Radiation Between Neighboring TV Sets
- Install Leads in Series with Circuit Being Filtered and Ground the Case

μF	Amps.	WVDC	Dia. x Length	Cat. No.	List
.5	40	50	1 x 1 13/16	*48P18	$3.80
.1	20	250(VAC)	11/16 x 1 13/16	*48P9	2.60
.1	20	600	11/16 x 1 13/16	*48P8	2.60
.002	15	600	¼ x 1⅝	46P12	2.15
.005	15	600	¼ x 1⅝	46P8	2.15
.01	20	600	7/16 x 1¼	47P6	2.35
.1	20	600	11/16 x 1 13/16	*†80P3	2.95
.005	20	1000	7/16 x 1¼	47P12	2.40
.01	20	1000	7/16 x 1½	47P13	2.60
.005	20	2500	1 x 1 9/16	47P14	2.90
.01	20	2500	1 x 1 9/16	47P15	3.10
.002	20	5000	1 x 1 9/16	47P16	3.20

*Has female screw terminals
Bulkhead mounting.

TYPE F-400
MIRACLE FILTEROL®



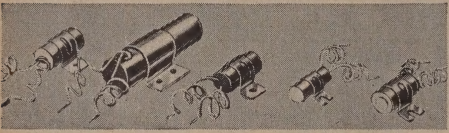


A LINE FILTER THAT REALLY WORKS!

- Effectively Suppresses Radio Interference by Filtering Power Lines of Receivers and Appliances
- Maximum Noise Eliminating Efficiency because of Practically Zero Length of Ground Lead
- Plugs into Standard Duplex Wall Outlet—Captive Screw Fastens Filterol F-400 to Outlet for Safe, Secure Mounting
- Direct Wall-Mounting Provides Neat Installation—No Unsightly Cord—Receiver or Appliance Plugs into Standard Outlet on Face of F-400
- Will Also Operate at Slightly Reduced Efficiency in Older Homes where Wiring is of Knob and Tube or 2-Conductor Non-Metallic Sheathed Cable Type by Using the External Grounding Post Provided for this Purpose
- Handsomely Finished in Tan Hammerloid Baked Enamel
- Rated at 5 Amperes, 125 Volts AC or DC

TYPE F-400 FILTEROL.............$7.45 net

TYPE IF FILTERS



IF-15 IF-11 IF-21 IF-S1 IF-37

IF-15—TRIPLE-SECTION FILTER for small motor-operated devices such as fans, drills, etc. designed to prevent shocks from discharge of filter capacitors.

IF-11—DUAL HIGH-CAPACITY FILTER designed for use on motors over 1 hp up to 220 volts ac-dc. Also used on high-current arcing devices.

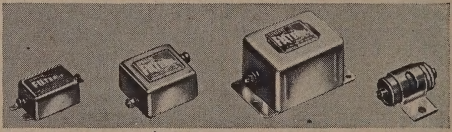
IF-21—COMPACT DUAL FILTER for use on fractional horsepower motors with case grounded to motor frame. Also used across line terminals of motors.

IF-S1—SINGLE SECTION 2-LEAD FILTER for use across make-and-break contacts, such as thermostats, circuit breakers, etc.

IF-37—3-SECTION DELTA-CONNECTED FILTER especially designed for fluorescent fixtures. Also used on governor-type motors. *UL approved.*

Cat. No.	Volts AC or DC	Dia. x Length	List
IF-15	220	1 x 2 3/16	$2.60
IF-11	220	1⅜ x 5¼	7.80
IF-21	220	1 x 2 3/16	1.75
IF-S1	220	¾ x 2 1/16	1.15
IF-37	220	1 x 2 7/16	2.25

FILTEROL® FILTERS



FILTEROL 1 FILTEROL 2 FILTEROL 3 FILTEROL 4

Filterol Types 1, 2, and 3—Designed for connection in series with power supply lines to interference-producing devices . . . A 3-terminal network with the case as one terminal . . . The selected filter should have a rating higher than the continuous operating current of the offending device . . . A single Filterol connected to the high side of the line is usually sufficient . . . In severe cases a Filterol in each leg of the power line may be necessary . . . For three or four-wire systems, a Filterol in each wire is necessary.

Filterol Type 4—A new, exclusive Sprague development incorporating a Sprague HYPASS® Capacitor . . . Provides exceptionally high attenuation at frequencies above 5 megacycles . . . Intended for small devices with continuous current ratings up to 20 amperes.

Cat. No.	Amps.	Volts AC or DC	Size	List
Filterol 1	1	115	⅞ x 1¼ x 1¾	$13.50
Filterol 2	10	115	1⅛ x 2 x 2	14.80
Filterol 3	35	115	1⅞ x 2⅞ x 3⅛	27.40
Filterol 4	20	115	1″ dia. x 1 13/16″ long	3.0

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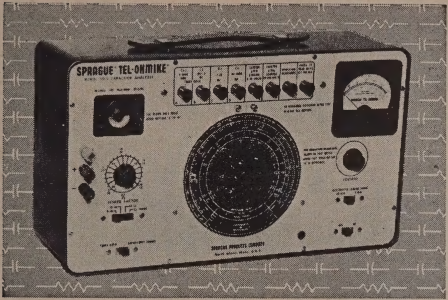
SPRAGUE TEST EQUIPMENT

TO-5 TEL-OHMIKE® CAPACITOR ANALYZER

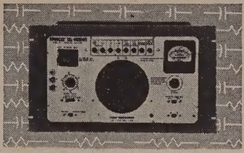


The TO-5 TEL-OHMIKE capacitor analyzer is a must for checking all capacitors except special low voltage transistor types. The TO-5 is a moderately priced instrument with laboratory quality and accuracy—the highest accuracy of any instrument of its type available to the service trade!

MODEL TO-5RM FOR RACK MOUNTING

Electrically identical with the standard instrument, Model TO-5RM has a standard 19" wide x 10½" high panel so that it can be mounted in standard relay racks.

Model TO-5RM......$102.50



- **CAPACITANCE BRIDGE** measures up to 2000 mf in five overlapping ranges. The special 1 mmf to 100 mmf range is exclusive with the Tel-Ohmike.
- **INSULATION RESISTANCE** directly read on large meter up to 20,000 megohms for papers, ceramics, and micas. No guessing with neon lamps.
- **LEAKAGE CURRENT** of electrolytics measured directly on meter, with exact rated voltage up to 600v. applied from continuously adjustable power supply. Two ranges: 0-6-60 ma. No guessing on eye-width or counting lamp blinks!
- **POWER FACTOR** of electrolytics measured by Wien Bridge up to 55% in three ranges.
- **TURNS RATIO SCALE** to measure turns ratio of power and audio transformers.
- **MAGIC-EYE TUBE** simplifies bridge balancing for capacitance and power factor measurements.
- **PUSH-BUTTONS** for instant range selection, also discharge capacitors for safety upon release.
- **MODERN CASE** finished in two-tone gray; measures 8⅞" high, 14⅝" wide, 6⅛" deep. Weight only 12½ pounds.

MODEL TO-5..........115 VAC/50-60 cy..........$92.50 net

Model TO-5X...............115-230 V/25-60 cy............... 98.75 net

LF-1 TRANSIMULATOR®

SPEEDS DESIGN OF TRANSISTOR CIRCUITS BY ELIMINATING BREADBOARD LAYOUT

Bring transistor circuits to life in a matter of minutes with the Sprague LF-1 Transimulator. This new instrument lets you simulate any amplifier stage, a-c or direct-coupled, short of high power audio output; also multivibrator, switching, phasing, push-pull, Class A and B, and many others using cross-coupled Transimulators . . . whether the circuit is common or grounded emitter, base, or collector . . . whether the transistors are PNP, NPN, or Surface Barrier. You can simulate circuits stage-by-stage for cascade operation . . . or use a separate Transimulator for each stage to get simultaneous multi-stage operation.

Bring Circuit Diagrams To Life In Minutes

Everything you need for RC amplifier circuits is built right into the LF-1, including coupling capacitors . . . bias and load resistors . . . battery voltage supplies . . . Base Collector—Voltage Divider stabilization circuits . . . 5-way binding posts for transformer coupling and metering. Whether you're designing audio circuits or switching circuits, you'll get a true picture of operating parameters minutes after you've drawn the circuit diagram . . . without wasting valuable time with breadboard and soldering gun.

Pays For Itself In A Matter Of Weeks

An ideal laboratory instrument, Transimulators are inexpensive enough to justify several on every bench. You can even use the LF-1 to test transistors *in the circuit* . . . the only real proof of design parameters. And a complete step-by-step instruction manual makes operation fast, simple, and easy.

SPRAGUE TRANSIMULATOR
FOR TRANSISTOR CIRCUIT DESIGNING
MODEL LF-1

FEATURES OF THE LF-1 TRANSIMULATOR

- **TRANSISTORS**—PNP and NPN Junction, and Surface Barrier.
- **CIRCUITS**—Common or Grounded Emitter, Base, Collector.
- **RANGE**—Audio, up to 100 kc.
- **TRANSISTOR POWER**—Through medium power audio output.
- **BATTERY SUPPLY**—Separate bias and load. 1.5, 3, 4.5, 6 volts d-c. Polarity Reversing Switch.
- **COUPLING**—2 μf and 20 μF Direct, and Ext. C. posts, on both Input and Output.
- **BIAS RESISTANCE**—Up to 555,000 ohms continuously variable.
- **LOAD RESISTANCE**—Up to 277,500 ohms continuously variable.
- **EMITTER RESISTANCE**—Up to 2,500 ohms variable. Series resistor and bypass capacitor can be added.
- **BASE COLLECTOR STABILITY**—Up to 250,000 ohms variable. Series resistor and bypass capacitor can be added.
- **VOLTAGE DIVIDER STABILITY**—Up to 50,000 ohms variable.
- **5-WAY BINDING POSTS**—For meters, transformer coupling, external supply voltage, degeneration, bypass, coupling, signal input and output, almost any connection required.

$79.50 NET
LESS BATTERIES

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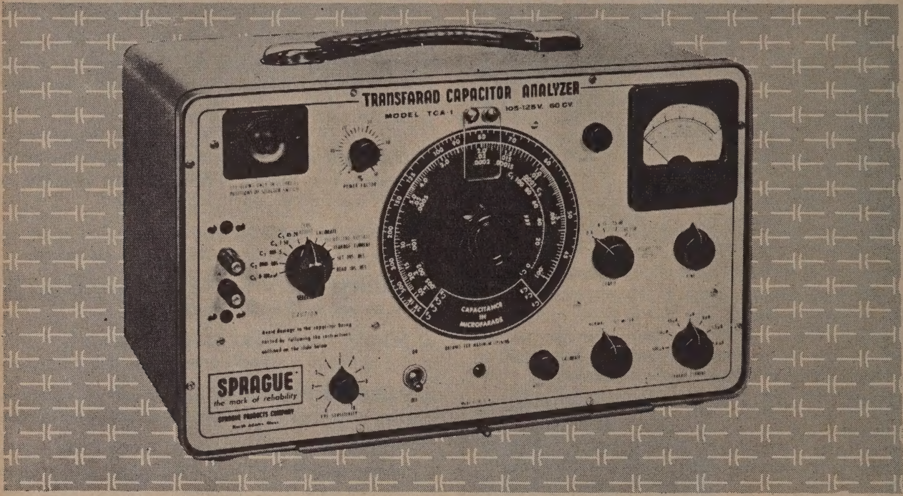
SPRAGUE TEST EQUIPMENT

TCA-1 TRANSFARAD* TRANSISTOR CAPACITOR ANALYZER



THE FIRST ANALYZER SPECIFICALLY DESIGNED TO SAFELY TEST TRANSISTOR CIRCUIT CAPACITORS

CAPACITANCE RANGE		ACCURACY			
Scale	Range of Scale	±2%±1μμF	±3%	±5%	Reading Accuracy is the Determining Factor
C_1	0–100μμF	0–100			
C_2	.0001–.005μF		.00015–.001		.001–.005
C_3	.001–.5μF		.005–.1	.001–.005	.1–.5
C_4	.1–50μF		.5–10	.1–.5	10–50
C_5	45–2000μF		50–200	45–50	200–2000

- **CAPACITANCE BRIDGE** measures 1μμF to 2000μF in five overlapping ranges. Only 0.5 volt is applied to the bridge from a continuously adjustable power supply. The voltage across the capacitor is less than this applied voltage, the amplitude depending on the capacitance being measured. No possibility of overheating or deforming any low voltage capacitor during measurements.

- **INSULATION RESISTANCE** directly read from 50 megohms to 20,000 megohms. Only 25v d-c is applied, permitting measurements on low voltage ceramic, mica, and film capacitors. IR of ceramics rated below 25v may be calculated from leakage current measurements at exact rated voltage.

- **LEAKAGE CURRENT** measured directly on meter at exact rated d-c voltage of capacitor. Sensitive circuit makes full scale measurements from 0.6 μa to 600μa in seven ranges.

The Sprague TCA-1 is specifically designed to safely test capacitors such as tantalum capacitors, low-leakage aluminum electrolytic miniatures, low voltage ceramics and low voltage paper and film capacitors used in transistor and other low voltage circuits. No industrial laboratory or modern electronic service shop can afford to be without one!

MODEL TCA-1 .... $197.50 net

- **POWER FACTOR** measured by Wien bridge from 0 to 5 per cent.

- **MAGIC EYE** null detector in high-gain amplifier has sensitivity control permitting accurate measurement of small capacitors.

- **SHORT-TIME STABILITY** is assured by dual regulation of the power supply. Specially processed etched circuits and complete encapsulation of the critical bridge-null amplifier insure long-time stability.

- **BINDING POSTS** are shielded against strays, assuring greater accuracy during low capacitance measurements.

- **FOR SAFETY** the capacitor under test is automatically discharged after testing. Three wire line cord grounds instrument case.

- **OPERATING PROCEDURES** are clearly shown on convenient pull-out slide.

MODEL TCA-1RM FOR RACK MOUNTING

Electrically identical with the standard instrument Model TCA-1RM has a standard 19″ w. x 10½″ h. panel so that it can be mounted in the conventional relay rack.

MODEL TCA-1RM .... $207.50 net

*Trademark

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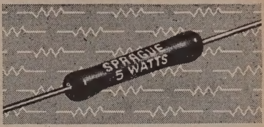
SPRAGUE RESISTORS

IMPROVED AXIAL-LEAD BLUE JACKET® WIREWOUND RESISTORS

- Minified Resistors Designed for Thorough Reliability and Utmost Stability Under Extreme Operating Conditions, Particularly in Miniaturized Equipment
- Matched Coefficient of Expansion Allows Uniform Expansion of Vitreous-Enamel Coating, Ceramic Base and End-Cap: Eliminating Cracks, Crazing and Protects from Corrosive Fumes and Humidity.
- Windings and Leads are Welded to End-Cap for Superior Mechanical Strength.
- Power Ratings are Based on 350° Hot-Spot Temperature
- Resistance Tolerance ±5%
- Characteristic V MIL-Types are Listed Below: Characteristic G is Available in the Following Wattage Ratings: RW59-2.5W, RW57-5W, RW58-8W. To Order, Change V to G in Type Number.



CATALOG NUMBERS—AXIAL-LEAD BLUE JACKET® WIREWOUND RESISTORS

Ohms	2 Watts D x L 3/16 x 3/8	3 Watts D x L 13/64 x 17/32	5 Watts D x L 13/64 x 15/16	7 Watts D x L 5/16 x 1 1/8	10 Watts D x L 5/16 x 1 3/4
1	240E1R05	242E1R05	243E1R05	244E1R05	247E1R05
1.5	240E1R55	242E1R55	243E1R55	244E1R55	247E1R55
2	250E2R05	242E2R05	243E2R05	244E2R05	247E2R05
3	240E3R05	242E3R05	243E3R05	244E3R05	247E3R05
4	240E4R05	242E4R05	243E4R05	244E4R05	247E4R05
5	240E5R05	242E5R05	243E5R05	244E5R05	247E5R05
7.5	240E7R55	242E7R55	243E7R55	244E7R55	247E7R55
10	240E1005	242E1005	243E1005	244E1005	247E1005
12	240E1205	242E1205	243E1205	244E1205	247E1205
15	240E1505	242E1505	243E1505	244E1505	247E1505
18	240E1805	242E1805	—	—	—
20	240E2005	242E2005	243E2005	244E2005	247E2005
22	240E2205	242E2205	—	—	—
25	240E2505	242E2505	243E2505	244E2505	247E2505
27	240E2705	242E2705	—	—	—
30	240E3005	242E3005	243E3005	244E3005	247E3005
33	240E3305	242E3305	—	—	—
35	—	—	243E3505	244E3505	247E3505
39	240E3905	242E3905	—	—	—
40	240E4005	242E4005	243E4005	244E4005	247E4005
47	240E4705	242E4705	—	—	—
50	240E5005	242E5005	243E5005	244E5005	247E5005
56	240E5605	242E5605	—	—	—
68	240E6805	242E6805	—	—	—
75	240E7505	242E7505	243E7505	244E7505	247E7505
82	240E8205	242E8205	—	—	—
100	240E1015	242E1015	243E1015	244E1015	247E1015
120	240E1215	242E1215	243E1215	244E1215	247E1215
150	240E1515	242E1515	243E1515	244E1515	247E1515
180	240E1815	242E1815	—	—	—
200	240E2015	242E2015	243E2015	244E2015	247E2015
220	240E2215	242E2215	243E2215	244E2215	247E2215
250	240E2515	242E2515	243E2515	244E2515	247E2515
270	240E2715	242E2715	—	—	—
300	240E3015	242E3015	243E3015	244E3015	247E3015
330	240E3315	242E3315	—	—	—
350	—	—	243E3515	244E3515	247E3515
390	240E3915	242E3915	—	—	—
400	240E4015	242E4015	243E4015	244E4015	247E4015
450	—	—	243E4515	—	—
470	240E4715	242E4715	—	—	—
500	240E5015	242E5015	243E5015	244E5015	247E5015
560	240E5615	242E5615	—	—	—
600	240E6015	242E6015	242E6015	244E6015	247E6015
680	240E6315	242E6815	—	—	—
700	240E7015	242E7015	243E7015	244E7015	247E7015
750	—	—	243E7515	244E7515	247E7515
800	240E8015	242E8015	243E8015	244E8015	247E8015
820	240E8215	242E8215	—	—	—
900	240E9015	242E9015	243E9015	244E9015	247E9015
1000	240E1025	242E1025	243E1025	244E1025	247E1025
1100	—	—	243E1125	244E1125	247E1125
1200	240E1225	242E1225	243E1225	244E1225	247E1225
1400	240E1425	242E1425	243E1425	244E1425	247E1425
1500	240E1525	242E1525	243E1525	244E1525	247E1525
1800	240E1825	242E1825	243E1825	244E1825	247E1825
2000	240E2025	242E2025	243E2025	244E2025	247E2025
2200	240E2225	242E2225	243E2225	244E2225	247E2225
2500	240E2525	242E2525	243E2525	244E2525	247E2525
2700	240E2725	242E2725	—	—	—
3000	240E3025	242E3025	243E3025	244E3025	247E3025
3300	240E3325	242E3325	—	244E3325	247E3325
3500	240E3525	—	243E3525	244E3525	247E3525
3900	—	242E3925	—	244E3925	247E3925
4000	—	242E4025	243E4025	244E4025	247E4025
4500	—	—	243E4525	244E4525	247E4525
4700	—	242E4725	—	—	—
5000	—	242E5025	243E5025	244E5025	247E5025
5600	—	242E5625	—	—	—
6000	—	242E6025	243E6025	244E6025	247E6025
6800	—	242E6825	—	—	—
7000	—	—	243E7025	244E7025	247E7025
7500	—	242E7525	243E7525	244E7525	247E7525
8000	—	242E8025	243E8025	244E8025	247E8025
8200	—	242E8225	—	—	—
9000	—	242E9025	243E9025	244E9025	247E9025
10000	—	242E1035	243E1035	244E1035	247E1035
11000	—	—	—	244E1135	247E1135
12000	—	—	243E1235	244E1235	247E1235
14000	—	—	243E1435	244E1435	247E1435
15000	—	—	243E1535	244E1535	247E1535
16000	—	—	—	244E1635	247E1635
17000	—	—	—	244E1735	—
18000	—	—	243E1835	244E1835	247E1835
20000	—	—	243E2035	244E2035	247E2035
22000	—	—	243E2235	244E2235	247E2235
25000	—	—	243E2535	244E2535	247E2535
30000	—	—	243E3035	244E3035	247E3035
35000	—	—	—	—	247E3535
40000	—	—	—	—	247E4035
45000	—	—	—	—	247E4535
50000	—	—	—	—	247E5035

MIL CHARACTERISTIC "V" AXIAL-LEAD BLUE JACKET® WIREWOUND RESISTORS

Ohms	3 Watts D x L 1/4 x 1/2	6.5 Watts D x L 3/8 x 1	11 Watts D x L 7/16 x 1 7/8
1.0	RW59V1R0	RW57V1R0	RW58V1R0
1.1	RW59V1R1	RW57V1R1	RW58V1R1
1.2	RW59V1R2	RW57V1R2	RW58V1R2
1.4	RW59V1R4	RW57V1R4	RW58V1R4
1.6	RW59V1R6	RW57V1R6	RW58V1R6
1.8	RW59V1R8	RW57V1R8	RW58V1R8
2.0	RW59V2R0	RW57V2R0	RW58V2R0
2.2	RW59V2R2	RW57V2R2	RW58V2R2
2.5	RW59V2R5	RW57V2R5	RW58V2R5
2.8	RW59V2R8	RW57V2R8	RW58V2R8
3.1	RW59V3R1	RW57V3R1	RW58V3R1
3.5	RW59V3R5	RW57V3R5	RW58V3R5
4.0	RW59V4R0	RW57V4R0	RW58V4R0
4.5	RW59V4R5	RW57V4R5	RW58V4R5
5.0	RW59V5R0	RW57V5R0	RW58V5R0
5.6	RW59V5R6	RW57V5R6	RW58V5R6
6.3	RW59V6R3	RW57V6R3	RW58V6R3
7.1	RW59V7R1	RW57V7R1	RW58V7R1
8.0	RW59V8R0	RW57V8R0	RW58V8R0
9.0	RW59V9R0	RW57V9R0	RW58V9R0
10	RW59V100	RW57V100	RW58V100
11	RW59V110	RW57V110	RW58V110
12	RW59V120	RW57V120	RW58V120
14	RW59V140	RW57V140	RW58V140
16	RW59V160	RW57V160	RW58V160
18	RW59V180	RW57V180	RW58V180
20	RW59V200	RW57V200	RW58V200
22	RW59V220	RW57V220	RW58V220
25	RW59V250	RW57V250	RW58V250
28	RW59V280	RW57V280	RW58V280
31	RW59V310	RW57V310	RW58V310
35	RW59V350	RW57V350	RW58V350
40	RW59V400	RW57V400	RW58V400
45	RW59V450	RW57V450	RW58V450
50	RW59V500	RW57V500	RW58V500
56	RW59V560	RW57V560	RW58V560
63	RW59V630	RW57V630	RW58V630
71	RW59V710	RW57V710	RW58V710
80	RW59V800	RW57V800	RW58V800
90	RW59V900	RW57V900	RW58V900
100	RW59V101	RW57V101	RW58V101
110	RW59V111	RW57V111	RW58V111
120	RW59V121	RW57V121	RW58V121
140	RW59V141	RW57V141	RW58V141
160	RW59V161	RW57V161	RW58V161
180	RW59V181	RW57V181	RW58V181
200	RW59V201	RW57V201	RW58V201
220	RW59V221	RW57V221	RW58V221
250	RW59V251	RW57V251	RW58V251
280	RW59V281	RW57V281	RW58V281
310	RW59V311	RW57V311	RW58V311
350	RW59V351	RW57V351	RW58V351
400	RW59V401	RW57V401	RW58V401
450	RW59V451	RW57V451	RW58V451
500	RW59V501	RW57V501	RW58V501
560	RW59V561	RW57V561	RW58V561
630	RW59V631	RW57V631	RW58V631
710	RW59V711	RW57V711	RW58V711
800	RW59V801	RW57V801	RW58V801
900	RW59V901	RW57V901	RW58V901
1000	RW59V102	RW57V102	RW58V102
1100	RW59V112	RW57V112	RW58V112
1200	RW59V122	RW57V122	RW58V122

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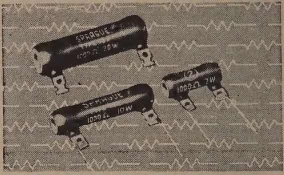
SPRAGUE RESISTORS

MIL CHARACTERISTIC "V" AXIAL-LEAD BLUE JACKET® WIREWOUND RESISTORS, continued

Ohms	3 Watts D x L ¼ x ½	6.5 Watts D x L ⅜ x 1	11 Watts D x L 7/16 x 1⅞	Ohms	3 Watts D x L ¼ x ½	6.5 Watts D x L ⅜ x 1	11 Watts D x L 7/16 x 1⅞	Ohms	3 Watts D x L ¼ x ½	6.5 Watts D x L ⅜ x 1	11 Watts D x L 7/16 x 1⅞
1400	RW59V142	RW57V142	RW58V142	3500	—	RW57V352	RW58V352	9000	—	—	RW58V902
1600	RW59V162	RW57V162	RW58V162	4000	—	—	RW58V402	10000	—	—	RW58V103
1800	RW59V182	RW57V182	RW58V182	4500	—	—	RW58V452	11000	—	—	RW58V113
2000	RW59V202	RW57V202	RW58V202	5000	—	—	RW58V502	12000	—	—	RW58V123
2200	—	RW57V222	RW58V222	5600	—	—	RW58V562	14000	—	—	RW58V143
2500	—	RW57V252	RW58V252	6300	—	—	RW58V632	16000	—	—	RW58V163
2800	—	RW57V282	RW58V282	7100	—	—	RW58V712	18000	—	—	RW58V183
3100	—	RW57V312	RW58V312	8000	—	—	RW58V802	20000	—	—	RW58V203

TAB-TERMINAL BLUE JACKET® WIREWOUND RESISTORS

- ● Withstand Severe Humidity Conditions and Repeated Temperature Cycling
- ● Matched Coefficient of Expansion Allows Uniform Expansion of Vitreous-Enamel Coating, Ceramic Base and Terminal Band; Eliminating Cracks, Crazing and Protects from Corrosive Fumes and Humidity.
- ● Characteristic V MIL-Types are Listed on Next Page. Characteristic G is Available in the Following Wattage Ratings: RW29- 8W, RW30- 8W, RW31-10W, RW32-12W, RW33-18W, RW35-38W, RW36-54W, RW37-78W, RW38-110W, RW47-145W. To Order, Change V to G.



INDUSTRIAL TAB-TERMINAL BLUE JACKET® WIREWOUND RESISTORS

	TAB WITH RADIAL WIRE LEADS			WITH TAB TERMINALS ONLY								
Ohms	5 Watts D x L 5/16 x 1	10 Watts D x L 5/16 x 1¾	20 Watts D x L 9/16 x 2	5 Watts D x L 5/16 x 1	10 Watts D x L 5/16 x 1¾	20 Watts D x L 9/16 x 2	35 Watts D x L ¾ x 3	50 Watts D x L ¾ x 1½	100 Watts D x L ⅛ x 6½	160 Watts D x L 1⅛ x 10½	200 Watts D x L 1⅛ x 8½	Ohms
1	97E1R09	98E1R09	99E1R09	57E1R09	10E1R09	58E1R09	15E1R09	—	—	—	—	1
1.5	97E1R59	98E1R59	—	57E1R59	10E1R59	—	—	—	—	—	—	1.5
2	97E2R09	98E2R09	—	57E2R09	10E2R09	—	15E2R09	22E2R09	—	—	—	2
3	97E3R09	98E3R09	99E3R09	57E3R09	10E3R09	58E3R09	15E3R09	22E3R09	—	—	—	3
4	97E4R09	98E4R09	—	57E4R09	10E4R09	—	15E4R09	22E4R09	24E4R09	—	—	4
5	97E5R09	98E5R09	99E5R09	57E5R09	10E5R09	58E5R09	15E5R09	22E5R09	24E5R09	—	—	5
6	—	—	—	—	—	—	—	—	—	25E6R09	—	6
7	—	—	—	—	—	—	—	—	—	—	26E7R09	7
7.5	97E7R59	98E7R59	—	57E7R59	10E7R59	—	—	—	—	—	—	7.5
10	97E1009	98E1009	99E1009	57E1009	10E1009	58E1009	15E1009	22E1009	24E1009	25E1009	26E1009	10
12	97E1209	98E1209	—	57E1209	10E1209	—	—	—	—	—	—	12
15	97E1509	98E1509	99E1509	57E1509	10E1509	58E1509	15E1509	—	—	25E1509	—	15
20	97E2009	98E2009	—	57E2009	10E2009	—	—	—	—	—	—	20
25	97E2509	98E2509	99E2509	57E2509	10E2509	58E2509	15E2509	22E2509	24E2509	25E2509	26E2509	25
30	97E3009	98E3009	—	57E3009	10E3009	—	—	—	—	—	—	30
35	97E3509	98E3509	—	57E3509	10E3509	—	—	—	—	—	—	35
40	97E4009	98E4009	—	57E4009	10E4009	—	—	—	—	—	—	40
50	97E5005	98E5005	99E5005	57E5005	10E5005	58E5005	15E5005	22E5005	24E5005	25E5005	26E5005	50
75	97E7505	98E7505	99E7505	57E7505	10E7505	58E7505	15E7505	22E7505	24E7505	25E7505	26E7505	75
100	97E1015	98E1015	99E1015	57E1015	10E1015	58E1015	15E1015	22E1015	24E1015	25E1015	26E1015	100
120	97E1215	98E1215	—	57E1215	10E1215	—	—	—	24E1215	—	—	120
150	97E1515	98E1515	99E1515	57E1515	10E1515	58E1515	15E1515	22E1515	24E1515	25E1515	26E1515	150
180	—	—	99E1815	—	—	58E1815	—	—	—	—	—	180
200	97E2015	98E2015	99E2015	57E2015	10E2015	58E2015	15E2015	22E2015	—	25E2015	—	200
220	97E2215	98E2215	—	57E2215	10E2215	—	—	—	—	—	—	220
250	97E2515	98E2515	99E2515	57E2515	10E2515	58E2515	15E2515	22E2515	24E2515	25E2515	26E2515	250
300	97E3015	98E3015	99E3015	57E3015	10E3015	58E3015	15E3015	22E3015	—	—	—	300
350	97E3515	98E3515	99E3515	57E3515	10E3515	58E3515	—	—	—	—	—	350
400	97E4015	98E4015	99E4015	57E4015	10E4015	58E4015	15E4015	22E4015	—	—	—	400
450	97E4515	98E4515	—	57E4515	10E4515	—	—	—	—	—	—	450
500	97E5015	98E5015	99E5015	57E5015	10E5015	58E5015	15E5015	22E5015	24E5015	25E5015	26E5015	500
600	97E6015	98E6015	—	57E6015	10E6015	—	—	—	—	—	—	600
650	—	—	99E6515	—	—	58E6515	—	—	—	—	—	650
700	97E7015	98E7015	99E7015	57E7015	10E7015	58E7015	—	—	—	—	—	700
750	97E7515	98E7515	99E7515	57E7515	10E7515	58E7515	15E7515	22E7515	24E7515	25E7515	26E7515	750
800	97E8015	98E8015	99E8015	57E8015	10E8015	58E8015	15E8015	22E8015	—	—	—	800
850	—	—	99E8515	—	—	58E8515	15E8515	—	—	—	—	850
900	97E9015	98E9015	—	57E9015	10E9015	—	—	—	—	—	—	900
1000	97E1025	98E1025	99E1025	57E1025	10E1025	58E1025	15E1025	22E1025	24E1025	25E1025	26E1025	1000
1100	97E1125	98E1125	—	57E1125	10E1125	—	—	—	—	—	—	1100
1200	97E1225	98E1225	99E1225	57E1225	10E1225	58E1225	15E1225	—	24E1225	—	—	1200
1400	97E1425	98E1425	99E1425	57E1425	10E1425	58E1425	—	—	—	—	—	1400
1500	97E1525	98E1525	99E1525	57E1525	10E1525	58E1525	15E1525	22E1525	24E1525	25E1525	26E1525	1500
1600	97E1625	—	99E1625	57E1625	—	58E1625	—	—	—	—	—	1600
1800	97E1825	98E1825	99E1825	57E1825	10E1825	58E1825	—	—	—	—	—	1800
2000	97E2025	98E2025	99E2025	57E2025	10E2025	58E2025	15E2025	22E2025	24E2025	25E2025	26E2025	2000
2200	97E2225	98E2225	99E2225	57E2225	10E2225	58E2225	—	—	—	—	—	2200
2400	97E2425	—	99E2425	57E2425	—	58E2425	—	—	—	—	—	2400
2500	97E2525	98E2525	99E2525	57E2525	10E2525	58E2525	15E2525	22E2525	24E2525	25E2525	26E2525	2500
2800	—	—	99E2825	—	—	58E2825	—	—	—	—	—	2800
3000	97E3025	98E3025	99E3025	57E3025	10E3025	58E3025	15E3025	22E3025	24E3025	25E3025	26E3025	3000
3500	97E3525	98E3525	99E3535	57E3525	10E3525	58E3525	15E3525	—	24E3525	25E3525	26E3525	3500
4000	97E4025	98E4025	99E4025	57E4025	10E4025	58E4025	15E4025	22E4025	24E4025	25E4025	26E4025	4000
4500	97E4525	98E4525	99E4525	57E4525	10E4525	58E4525	—	—	24E4525	25E4525	26E4525	4500

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SPRAGUE RESISTORS

MIL-R-26C TAB-TERMINAL BLUE JACKET® RESISTORS, continued

Ohms	11 Watts D x L ½ x 1¾	11 Watts D x L 19/32 x 1	14 Watts D x L 19/32 x 1½	17 Watts D x L 19/32 x 2	26 Watts D x L 19/32 x 3	55 Watts D x L 29/32 x 4	78 Watts D x L 1 5/16 x 4	113 Watts D x L 1 5/16 x 6	159 Watts D x L 1 5/16 x 8	210 Watts D x L 1 5/16 x 10½
100	RW29V101	RW30V101	RW31V101	RW32V101	RW33V101	RW35V101	RW36V101	RW37V101	RW38V101	RW47V101
110	RW29V111	RW30V111	RW31V111	RW32V111	RW33V111	RW35V111	RW36V111	RW37V111	RW38V111	RW47V111
120	RW29V121	RW30V121	RW31V121	RW32V121	RW33V121	RW35V121	RW36V121	RW37V121	RW38V121	RW47V121
140	RW29V141	RW30V141	RW31V141	RW32V141	RW33V141	RW35V141	RW36V141	RW37V141	RW38V141	RW47V141
160	RW29V161	RW30V161	RW31V161	RW32V161	RW33V161	RW35V161	RW36V161	RW37V161	RW38V161	RW47V161
180	RW29V181	RW30V181	RW31V181	RW32V181	RW33V181	RW35V181	RW36V181	RW37V181	RW38V181	RW47V181
200	RW29V201	RW30V201	RW31V201	RW32V201	RW33V201	RW35V201	RW36V201	RW37V201	RW38V201	RW47V201
220	RW29V221	RW30V221	RW31V221	RW32V221	RW33V221	RW35V221	RW36V221	RW37V221	RW38V221	RW47V221
250	RW29V251	RW30V251	RW31V251	RW32V251	RW33V251	RW35V251	RW36V251	RW37V251	RW38V251	RW47V251
280	RW29V281	RW30V281	RW31V281	RW32V281	RW33V281	RW35V281	RW36V281	RW37V281	RW38V281	RW47V281
310	RW29V311	RW30V311	RW31V311	RW32V311	RW33V311	RW35V311	RW36V311	RW37V311	RW38V311	RW47V311
350	RW29V351	RW30V351	RW31V351	RW32V351	RW33V351	RW35V351	RW36V351	RW37V351	RW38V351	RW47V351
400	RW29V401	RW30V401	RW31V401	RW32V401	RW33V401	RW35V401	RW36V401	RW37V401	RW38V401	RW47V401
450	RW29V451	RW30V451	RW31V451	RW32V451	RW33V451	RW35V451	RW36V451	RW37V451	RW38V451	RW47V451
500	RW29V501	RW30V501	RW31V501	RW32V501	RW33V501	RW35V501	RW36V501	RW37V501	RW38V501	RW47V501
560	RW29V561	RW30V561	RW31V561	RW32V561	RW33V561	RW35V561	RW36V561	RW37V561	RW38V561	RW47V561
630	RW29V631	RW30V631	RW31V631	RW32V631	RW33V631	RW35V631	RW36V631	RW37V631	RW38V631	RW47V631
710	RW29V711	RW30V711	RW31V711	RW32V711	RW33V711	RW35V711	RW36V711	RW37V711	RW38V711	RW47V711
800	RW29V801	RW30V801	RW31V801	RW32V801	RW33V801	RW35V801	RW36V801	RW37V801	RW38V801	RW47V801
900	RW29V901	RW30V901	RW31V901	RW32V901	RW33V901	RW35V901	RW36V901	RW37V901	RW38V901	RW47V901
1000	RW29V102	RW30V102	RW31V102	RW32V102	RW33V102	RW35V102	RW36V102	RW37V102	RW38V102	RW47V102
1100	RW29V112	RW30V112	RW31V112	RW32V112	RW33V112	RW35V112	RW36V112	RW37V112	RW38V112	RW47V112
1200	RW29V122	RW30V122	RW31V122	RW32V122	RW33V122	RW35V122	RW36V122	RW37V122	RW38V122	RW47V122
1400	RW29V142	RW30V142	RW31V142	RW32V142	RW33V142	RW35V142	RW36V142	RW37V142	RW38V142	RW47V142
1600	RW29V162	RW30V162	RW31V162	RW32V162	RW33V162	RW35V162	RW36V162	RW37V162	RW38V162	RW47V162
1800	RW29V182	RW30V182	RW31V182	RW32V182	RW33V182	RW35V182	RW36V182	RW37V182	RW38V182	RW47V182
2000	RW29V202	RW30V202	RW31V202	RW32V202	RW33V202	RW35V202	RW36V202	RW37V202	RW38V202	RW47V202
2200	RW29V222	RW30V222	RW31V222	RW32V222	RW33V222	RW35V222	RW36V222	RW37V222	RW38V222	RW47V222
2500	RW29V252	RW30V252	RW31V252	RW32V252	RW33V252	RW35V252	RW36V252	RW37V252	RW38V252	RW47V252
2800	RW29V282	—	RW31V282	RW32V282	RW33V282	RW35V282	RW36V282	RW37V282	RW38V282	RW47V282
3100	RW29V312	—	RW31V312	RW32V312	RW33V312	RW35V312	RW36V312	RW37V312	RW38V312	RW47V312
3500	RW29V352	—	RW31V352	RW32V352	RW33V352	RW35V352	RW36V352	RW37V352	RW38V352	RW47V352
4000	RW29V402	—	RW31V402	RW32V402	RW33V402	RW35V402	RW36V402	RW37V402	RW38V402	RW47V402
4500	RW29V452	—	RW31V452	RW32V452	RW33V452	RW35V452	RW36V452	RW37V452	RW38V452	RW47V452
5000	RW29V502	—	RW31V502	RW32V502	RW33V502	RW35V502	RW36V502	RW37V502	RW38V502	RW47V502
5600	RW29V562	—	RW31V562	RW32V562	RW33V562	RW35V562	RW36V562	RW37V562	RW38V562	RW47V562
6300	—	—	RW31V632	RW32V632	RW33V632	RW35V632	RW36V632	RW37V632	RW38V632	RW47V632
7100	—	—	—	RW32V712	RW33V712	RW35V712	RW36V712	RW37V712	RW38V712	RW47V712
8000	—	—	—	RW32V802	RW33V802	RW35V802	RW36V802	RW37V802	RW38V802	RW47V802
9000	—	—	—	RW32V902	RW33V902	RW35V902	RW36V902	RW37V902	RW38V902	RW47V902
10000	—	—	—	RW32V103	RW33V103	RW35V103	RW36V103	RW37V103	RW38V103	RW47V103
11000	—	—	—	—	RW33V113	RW35V113	RW36V113	RW37V113	RW38V113	RW47V113
12000	—	—	—	—	RW33V123	RW35V123	RW36V123	RW37V123	RW38V123	RW47V123
14000	—	—	—	—	RW33V143	RW35V143	RW36V143	RW37V143	RW38V143	RW47V143
16000	—	—	—	—	RW33V163	RW35V163	RW36V163	RW37V163	RW38V163	RW47V163
18000	—	—	—	—	RW33V183	RW35V183	RW36V183	RW37V183	RW38V183	RW47V183
20000	—	—	—	—	—	RW35V203	RW36V203	RW37V203	RW38V203	RW47V203
22000	—	—	—	—	—	RW35V223	RW36V223	RW37V223	RW38V223	RW47V223
25000	—	—	—	—	—	RW35V253	RW36V253	RW37V253	RW38V253	RW47V253
28000	—	—	—	—	—	RW35V283	RW36V283	RW37V283	RW38V283	RW47V283
31000	—	—	—	—	—	RW35V313	RW36V313	RW37V313	RW38V313	RW47V313
35000	—	—	—	—	—	RW35V353	RW36V353	RW37V353	RW38V353	RW47V353
40000	—	—	—	—	—	RW35V403	RW36V403	RW37V403	RW38V403	RW47V403
45000	—	—	—	—	—	—	RW36V453	RW37V453	RW38V453	RW47V453
50000	—	—	—	—	—	—	RW36V503	RW37V503	RW38V503	RW47V503
56000	—	—	—	—	—	—	RW36V563	RW37V563	RW38V563	RW47V563
63000*	—	—	—	—	—	—	—	RW37V633	RW38V633	RW47V633
71000	—	—	—	—	—	—	—	RW37V713	RW38V713	RW47V713
80000	—	—	—	—	—	—	—	RW37V803	RW38V803	RW47V803
90000*	—	—	—	—	—	—	—	RW37V903	RW38V903	RW47V903
100000	—	—	—	—	—	—	—	—	RW38V104	RW47V104
110000	—	—	—	—	—	—	—	—	RW38V114	RW47V114
120000	—	—	—	—	—	—	—	—	RW38V124	RW47V124
140000	—	—	—	—	—	—	—	—	RW38V144	—
160000	—	—	—	—	—	—	—	—	—	RW47V164
180000	—	—	—	—	—	—	—	—	—	RW47V184

MOUNTING HARDWARE FOR TAB TERMINAL BLUE JACKET® RESISTORS

Order Mounting Hardware with Resistors as Required.

Specify Quantity, Resistor, Catalog Number, and Style of Mounting. Hardware not available separately.

THROUGH-BOLT VERTICAL TYPE MOUNTING HARDWARE

Available for sizes up through 50 watts:

Style G—2 Metal flat or centering Washers, Bolt, Nut and Lockwasher

Style H—Style G Hardware plus 2 Mica Washers

Style J—Style G Hardware plus 2 Ceramic Washers

THROUGH-BOLT HORIZONTAL TYPE MOUNTING HARDWARE

Available for all ratings:

Style D—2 Mounting Brackets, 2 Metal Centering Washers (when required), Bolt, Nut and Lockwasher

Style E—Style D Hardware plus 2 Mica Washers

Style F—Style D Hardware plus 2 Ceramic Washers

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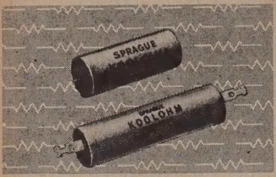
SPRAGUE RESISTORS

IMPROVED INDUSTRIAL AXIAL-LEAD KOOLOHM® WIREWOUND RESISTORS



- New Smaller Size Koolohm® Insulated-Shell Resistors
- New Smaller Size, Insulated-Shell Design for Severe Duty Cycles Encountered in Heavy-Duty Industrial Electric Equipment
- Windings and Leads are Welded to End-Cap for Superior Mechanical Strength
- Ceramic Insulated Wire is Space Wound and Cemented to Prevent Turn-to-Turn Shorting
- Non-Porous Tubular Ceramic Shells Sealed with High-Temperature Silicone Cement Provides Unexcelled Insulation and Mechanical Protection
- Available in Standard or Non-Inductive Types

STANDARD TYPES

Ohms	3 Watts D x L ¼ x 9/16	5 Watts D x L ¼ x 1	7 Watts D x L 15/32 x 1 5/16	10 Watts D x L 15/32 x 1 29/32	14 Watts D x L 15/32 x 1 29/32
1	450E1R05	452E1R05	454E1R05	456E1R05	458E1R05
1.5	450E1R55	452E1R55	454E1R55	456E1R55	458E1R55
2	450E2R05	452E2R05	454E2R05	456E2R05	458E2R05
3	450E3R05	452E3R05	454E3R05	456E3R05	458E3R05
4	450E4R05	452E4R05	454E4R05	456E4R05	458E4R05
5	450E5R05	452E5R05	454E5R05	456E5R05	458E5R05
7.5	450E7R55	452E7R55	454E7R55	456E7R55	458E7R55
10	450E1005	452E1005	454E1005	456E1005	458E1005
12	450E1205	452E1205	454E1205	456E1205	458E1205
15	450E1505	452E1505	454E1505	456E1505	458E1505
18	450E1805	—	—	—	—
20	450E2005	452E2005	454E2005	456E2005	458E2005
22	450E2205	—	—	—	—
25	450E2505	452E2505	454E2505	456E2505	458E2505
27	450E2705	—	—	—	—
30	450E3005	452E3005	454E3005	456E3005	458E3005
33	450E3305	—	—	—	—
35	—	452E3505	454E3505	456E3505	458E3505
39	450E3905	—	—	—	—
40	450E4005	452E4005	454E4005	456E4005	458E4005
47	450E4705	—	—	—	—
50	450E5005	452E5005	454E5005	456E5005	458E5005
56	450E5605	—	—	—	—
68	450E6805	—	—	—	—
75	450E7505	452E7505	454E7505	456E7505	458E7505
82	450E8205	—	—	—	—
100	450E1015	452E1015	454E1015	456E1015	458E1015
120	450E1215	452E1215	454E1215	456E1215	458E1215
150	450E1515	452E1515	454E1515	456E1515	458E1515
180	450E1815	—	—	—	—
200	450E2015	452E2015	454E2015	456E2015	458E2015
220	450E2215	452E2215	454E2215	456E2215	458E2215
250	450E2515	452E2515	454E2515	456E2515	458E2515
270	450E2715	—	—	—	—
300	450E3015	452E3015	454E3015	456E3015	458E3015
330	450E3315	—	—	—	—
350	—	452E3515	454E3515	456E3515	458E3515
390	450E3915	—	—	—	—
400	450E4015	452E4015	454E4015	456E4015	458E4015
450	—	452E4515	—	—	—
470	450E4715	—	—	—	—
500	450E5015	452E5015	454E5015	456E5015	458E5015
560	450E5615	—	—	—	—
600	450E6015	452E6015	454E6015	456E6015	458E6015
680	450E6315	—	—	—	—
700	450E7015	452E7015	454E7015	456E7015	458E7015
750	—	452E7515	454E7515	456E7515	458E7515
800	450E8015	452E8015	454E8015	456E8015	458E8015
820	450E8215	—	—	—	—
900	450E9015	452E9015	454E9015	456E9015	458E9015
1000	450E1025	452E1025	454E1025	456E1025	458E1025
1100	—	452E1125	454E1125	456E1125	458E1125
1200	450E1225	452E1225	454E1225	456E1225	458E1225
1400	450E1425	452E1425	454E1425	456E1425	458E1425
1500	450E1525	452E1525	454E1525	456E1525	458E1525
1800	450E1825	452E1825	454E1825	456E1825	458E1825
2000	450E2025	452E2025	454E2025	456E2025	458E2025
2200	450E2225	452E2225	454E2225	456E2225	458E2225
2500	450E2525	452E2525	454E2525	456E2525	458E2525
2700	450E2725	—	—	—	—
3000	450E3025	452E3025	454E3025	456E3025	458E3025
3300	450E3325	—	454E3325	456E3325	458E3325
3500	—	452E3525	454E3525	456E3525	458E3525
3900	450E3925	—	454E3925	456E3925	458E3925
4000	450E4025	452E4025	454E4025	456E4025	458E4025
4500	—	452E4525	454E4525	456E4525	458E4525
4700	450E4725	—	—	—	—

NON-INDUCTIVE TYPES

3 Watts D x L ¼ x 9/16	5 Watts D x L ¼ x 1	7 Watts D x L 15/32 x 1 5/16	10 Watts D x L 15/32 x 1 29/32	14 Watts D x L 15/32 x 1 29/32	Ohms
451E1R05	453E1R05	455E1R05	457E1R05	459E1R05	1
451E1R55	453E1R55	455E1R55	457E1R55	459E1R55	1.5
451E2R05	453E2R05	455E2R05	457E2R05	459E2R05	2
451E3R05	453E3R05	455E3R05	457E3R05	459E3R05	3
451E4R05	453E4R05	455E4R05	457E4R05	459E4R05	4
451E5R05	453E5R05	455E5R05	457E5R05	459E5R05	5
451E7R55	453E7R55	455E7R55	457E7R55	459E7R55	7.5
451E1005	453E1005	455E1005	457E1005	459E1005	10
451E1205	453E1205	455E1205	457E1205	459E1205	12
451E1505	453E1505	455E1505	457E1505	459E1505	15
451E1805	—	—	—	—	18
451E2005	453E2005	455E2005	457E2005	459E2005	20
451E2205	—	—	—	—	22
451E2505	453E2505	455E2505	457E2505	459E2505	25
451E2705	—	—	—	—	27
451E3005	453E3005	455E3005	457E3005	459E3005	30
451E3305	—	—	—	—	33
—	452E3505	455E3505	457E3505	459E3505	35
451E3905	—	—	—	—	39
451E4005	453E4005	455E4005	457E4005	459E4005	40
451E4705	—	—	—	—	47
451E5005	453E5005	455E5005	457E5005	459E5005	50
451E5605	—	—	—	—	56
451E6805	—	—	—	—	68
451E7505	453E7505	455E7505	457E7505	459E7505	75
451E8205	—	—	—	—	82
451E1015	453E1015	455E1015	457E1015	459E1015	100
451E1215	453E1215	455E1215	457E1215	459E1215	120
451E1515	453E1515	455E1515	457E1515	459E1515	150
451E1815	—	—	—	—	180
—	453E2015	455E2015	457E2015	459E2015	200
—	453E2215	455E2215	457E2215	459E2215	220
—	453E2515	455E2515	457E2515	459E2515	250
—	—	—	—	—	270
—	453E3015	455E3015	457E3015	459E3015	300
—	—	—	—	—	330
—	453E3515	455E3515	457E3515	459E3515	350
—	—	—	—	—	390
—	453E4015	455E4015	457E4015	459E4015	400
—	—	—	—	—	450
—	—	—	—	—	470
—	—	455E5015	457E5015	459E5015	500
—	—	—	—	—	560
—	—	—	457E6015	459E6015	600
—	—	—	—	—	680
—	—	—	457E7015	459E7015	700
—	—	—	457E7515	459E7515	750
—	—	—	457E8015	459E8015	800
—	—	—	—	—	820
—	—	—	457E9015	459E9015	900
—	—	—	457E1025	459E1025	1000

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SPRAGUE RESISTORS

INDUSTRIAL AXIAL-LEAD KOOLOHM® WIREWOUND RESISTORS, continued

STANDARD TYPES cont.

Ohms	3 Watts D x L 1/4 x 9/16	5 Watts D x L 1/4 x 1	7 Watts D x L 15/32 x 1 5/16	10 Watts D x L 15/32 x 1 29/32	14 Watts D x L 15/32 x 1 29/32
5000	450E5025	452E5025	454E5025	456E5025	458E5025
5600	450E5625	—	—	—	—
6000	450E6025	542E6025	454E6025	456E6025	458E5025
6800	450E6825	—	—	—	—
7000	—	452E7025	454E7025	456E7025	458E7025
7500	450E7525	452E7525	454E7525	456E7525	458E7525
8000	450E8025	452E8025	454E8025	456E8025	458E8025
8200	450E8225	—	—	—	—
9000	450E9025	452E9025	454E9025	456E9025	458E9025
10000	450E1035	452E1035	454E1035	456E1035	458E1035
11000	—	—	454E1135	456E1135	458E1135
12000	—	452E1235	454E1235	456E1235	458E1235
14000	—	452E1435	454E1435	456E1435	458E1435
15000	—	452E1535	454E1535	456E1535	458E1535

STANDARD TYPES cont.

3 Watts D x L 1/4 x 9/16	5 Watts D x L 1/4 x 1	7 Watts D x L 15/32 x 1 5/16	10 Watts D x L 15/32 x 1 29/32	14 Watts D x L 15/32 x 1 29/32	Ohms
—	—	454E1635	456E1635	458E1635	16000
—	452E1835	454E1835	456E1835	458E1835	18000
—	452E2035	454E2035	456E2035	458E2035	20000
—	—	454E2235	456E2235	—	22000
—	—	454E2535	456E2535	—	25000
—	—	454E3035	456E3035	—	30000
—	—	454E3535	456E3535	—	35000
—	—	454E4035	456E4035	—	40000
—	—	—	456E4535	—	45000
—	—	—	456E5035	—	50000
—	—	—	456E6035	—	60000
—	—	—	456E7035	—	70000

MIL-R-26C CHARACTERISTIC V AXIAL-LEAD KOOLOHM® RESISTORS

Ohms	7 Watts D x L 15/32 x 1 3/8	14 Watts D x L 15/32 x 2
1.0	RW55V1R0	RW56V1R0
1.1	RW55V1R1	RW56V1R1
1.2	RW55V1R2	RW56V1R2
1.4	RW55V1R4	RW56V1R4
1.6	RW55V1R6	RW56V1R6
1.8	RW55V1R8	RW56V1R8
2.0	RW55V2R0	RW56V2R0
2.2	RW55V2R2	RW56V2R2
2.5	RW55V2R5	RW56V2R5
2.8	RW55V2R8	RW56V2R8
3.1	RW55V3R1	RW56V3R1
3.5	RW55V3R5	RW56V3R5
4.0	RW55V4R0	RW56V4R0
4.5	RW55V4R5	RW56V4R5
5.0	RW55V5R0	RW56V5R0
5.6	RW55V5R6	RW56V5R6
6.3	RW55V6R3	RW56V6R3
7.1	RW55V7R1	RW56V7R1
8.0	RW55V8R0	RW56V8R0
9.0	RW55V9R0	RW56V9R0
10	RW55V100	RW56V100

Ohms	7 Watts D x L 15/32 x 1 3/8	14 Watts D x L 15/32 x 2
11	RW55V110	RW56V110
12	RW55V120	RW56V120
14	RW55V140	RW56V140
16	RW55V160	RW56V160
18	RW55V180	RW56V180
20	RW55V200	RW56V200
22	RW55V220	RW56V220
25	RW55V250	RW56V250
28	RW55V280	RW56V280
31	RW55V310	RW56V310
35	RW55V350	RW56V350
40	RW55V400	RW56V400
45	RW55V450	RW56V450
50	RW55V500	RW56V500
56	RW55V560	RW56V560
63	RW55V630	RW56V630
71	RW55V710	RW56V710
80	RW55V800	RW56V800
90	RW55V900	RW56V900
100	RW55V101	RW56V101
110	RW55V111	RW56V111

Ohms	7 Watts D x L 15/32 x 1 3/8	14 Watts D x L 15/32 x 2
120	RW55V121	RW56V121
140	RW55V141	RW56V141
160	RW55V161	RW56V161
180	RW55V181	RW56V181
200	RW55V201	RW56V201
220	RW55V221	RW56V221
250	RW55V251	RW56V251
280	RW55V281	RW56V281
310	RW55V311	RW56V311
350	RW55V351	RW56V351
400	RW55V401	RW56V401
450	RW55V451	RW56V451
500	RW55V501	RW56V501
560	RW55V561	RW56V561
630	RW55V631	RW56V631
710	RW55V711	RW56V711
800	RW55V801	RW56V801
900	RW55V900	RW56V901
1000	RW55V102	RW56V102
1100	RW55V112	RW56V112
1200	RW55V122	RW56V122

Ohms	7 Watts D x L 15/32 x 1 3/8	14 Watts D x L 15/32 x 2
1400	RW55V142	RW56V142
1600	RW55V162	RW56V162
1800	RW55V182	RW56V182
2000	RW55V202	RW56V202
2200	RW55V222	RW56V222
2500	RW55V252	RW56V252
2800	RW55V282	RW56V282
3100	RW55V312	RW56V312
3500	RW55V352	RW56V352
4000	RW55V402	RW56V402
4500	RW55V452	RW56V452
5000	RW55V502	RW56V502
5600	RW55V562	RW56V562
6300	RW55V632	RW56V632
7100	RW55V712	RW56V712
8000	RW55V802	RW56V802
9000	RW55V902	RW56V902
10000	—	RW56V103
11000	—	RW56V113
12000	—	RW56V123
14000	—	RW56V143
16000	—	RW56V163

COMMERCIAL TAB-TYPE KOOLOHM® WIREWOUND RESISTORS

STANDARD TYPES

Ohms	25 Watts D x L 23/32 x 2 7/8	50 Watts D x L 7/8 x 4	120 Watts D x L 1 1/16 x 8 15/16
5	25KT5R0	50KT5R0	120KT5R0
10	25KT100	50KT100	120KT100
25	25KT250	50KT250	120KT250
50	25KT500	50KT500	120KT500
75	25KT750	50KT750	120KT750
100	25KT101	50KT101	120KT101
150	25KT151	50KT151	120KT151
200	25KT201	50KT201	120KT201
250	25KT251	50KT251	120KT251
390	—	—	120KT391
500	25KT501	50KT501	120KT501
600	25KT601	50KT601	120KT601
750	25KT751	50KT751	120KT751
1000	25KT102	50KT102	120KT102
1500	25KT152	50KT152	120KT152
2000	25KT202	50KT202	120KT202
2500	25KT252	50KT252	120KT252
3000	25KT302	50KT302	120KT302
4000	25KT402	50KT402	120KT402
5000	25KT502	50KT502	120KT502
7500	25KT752	50KT752	120KT752

STANDARD TYPES cont.

Ohms	25 Watts D x L 23/32 x 2 7/8	50 Watts D x L 7/8 x 4	120 Watts D x L 1 1/16 x 8 15/16
10000	25KT103	50KT103	120KT103
12000	25KT123	50KT123	120KT123
15000	25KT153	50KT153	120KT153
20000	25KT203	50KT203	120KT203
25000	25KT253	50KT253	120KT253
40000	25KT403	50KT403	120KT403
50000	25KT503	50KT503	120KT503
75000	25KT753	50KT753	120KT753
100000	25KT104	50KT104	120KT104

NON-INDUCTIVE TYPES

Ohms	25 Watts D x L 23/32 x 2 7/8	50 Watts D x L 7/8 x 4	120 Watts D x L 1 1/16 x 8 15/16
5	25NIT5R0	50NIT5R0	120NIT5R0
10	25NIT100	50NIT100	120NIT100
25	25NIT250	50NIT250	120NIT250
50	25NIT500	50NIT500	120NIT500
75	25NIT750	50NIT750	120NIT750
100	25NIT101	50NIT101	120NIT101
150	25NIT151	50NIT151	120NIT151
200	25NIT201	50NIT201	120NIT201
250	25NIT251	50NIT251	120NIT251
390	—	—	120NIT391

NON-INDUCTIVE TYPES cont.

Ohms	25 Watts D x L 23/32 x 2 7/8	50 Watts D x L 7/8 x 4	120 Watts D x L 1 1/16 x 8 15/16
500	25NIT501	50NIT501	120NIT501
600	25NIT601	50NIT601	120NIT601
750	25NIT751	50NIT751	120NIT751
1000	25NIT102	50NIT102	120NIT102
1500	25NIT152	50NIT152	120NIT152
2000	25NIT202	50NIT202	120NIT202
2500	25NIT252	50NIT252	120NIT252
3000	25NIT302	50NIT302	120NIT302
4000	25NIT402	50NIT402	120NIT402
5000	25NIT502	50NIT502	120NIT502
7500	25NIT752	50NIT752	120NIT752
10000	25NIT103	50NIT103	120NIT103
12000	25NIT123	50NIT123	120NIT123
15000	25NIT153	60NIT153	120NIT153
20000	25NIT203	50NIT203	120NIT203
25000	25NIT253	50NIT253	120NIT253
—	—	50NIT403	120NIT403
—	—	50NIT503	120NIT503
—	—	—	120NIT753
—	—	—	120NIT104

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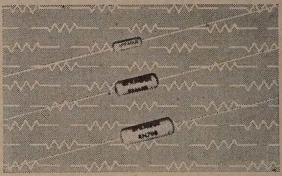
All prices and sizes subject to change without notice.

SPRAGUE RESISTORS

FILMISTOR® MOLDED DEPOSITED CARBON RESISTORS

- High Stability Under Toughest Load and Humidity Conditions
- Close Tolerance: ±1% is Standard
- Molded Case for Positive Moisture Protection
- Meet MIL-R-10509C Characteristic B Specifications
- Low-Contact Resistance, Low-Noise End Terminals
- All Sprague Resistors are Furnished with Standard MIL Markings



NOTE: Order by Sprague Type and MIL-Style as shown, Coding Resistance Value as Described Below:

EXAMPLE:

408E	/ RN75	B	158	4	F
Sprague Type	MIL-Style	Characteristic	Significant Figures	No. of Zeros	±1% Tol.

The Above Indicates 1,580,000 Ohms. For Values Below 100 Ohms, the Last Significant Figure is Replaced by R to Represent the Decimal Point and the Last Number then Becomes a Significant Figure. Example: 408E / RN75B17R4F Would Have Value of 17.4Ω

TYPES, SIZES AND ELECTRICAL RATINGS

Sprague	MIL-Type	Watts	Diam.	Length	Min. Ω	Max. Ω	Max. Volt.	Lead AWG
405E	RN60B	⅛	.135±.005	.400±.010	10	2 meg.	200	No. 22
406E	RN65B	¼	.200±.010	.600±.010	10	1 meg.	300	No. 22
407E	RN70B	½	.250±.010	.750±.010	10	3.16 meg.	350	No. 22
408E	RN75B	1	$.375^{+.010}_{-.010}$	1.062±.020	10	3.11 meg.	500	No. 20
409E	RN80B	2	$.375^{+.010}_{-.010}$	2.220±.020	30.0	10 meg.	750	No. 20

STANDARD RESISTANCE VALUES FOR FILMISTOR RESISTORS

Bold Face Type Indicates Items Most Frequently Stocked by Industrial Distributors

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
10.0	32.4	102	324	1.02 K	3.24 K	10.2 K	32.4 K	**100** K	**316** K	**1.00** meg.	**3.16** meg.
10.2	33.2	105	332	1.05 K	3.32 K	10.5 K	33.2 K	102 K	324 K	1.02 meg.	3.24 meg.
10.5	34.0	107	340	1.07 K	3.40 K	10.7 K	34.0 K	105 K	332 K	1.05 meg.	3.32 meg.
10.7	34.8	**110**	**348**	**1.10** K	**3.48** K	**11.0** K	**34.8** K	107 K	340 K	1.07 meg.	3.40 meg.
11.0	35.7	113	357	1.13 K	3.57 K	11.3 K	35.7 K	**110** K	**348** K	**1.10** meg.	**3.48** meg.
11.3	36.5	115	365	1.15 K	3.65 K	11.5 K	36.5 K	113 K	357 K	1.13 meg.	3.57 meg.
11.5	37.4	118	374	1.18 K	3.74 K	11.8 K	37.4 K	115 K	365 K	1.15 meg.	3.65 meg.
11.8	**38.3**	**121**	**383**	**1.21** K	**3.83** K	**12.1** K	**38.3** K	118 K	374 K	1.18 meg.	3.74 meg.
12.1	39.2	124	392	1.24 K	3.92 K	12.4 K	39.2 K	**121** K	**383** K	**1.21** meg.	**3.83** meg.
12.4	40.2	127	402	1.27 K	4.02 K	12.7 K	40.2 K	124 K	392 K	1.24 meg.	3.92 meg.
12.7	41.2	130	412	1.30 K	4.12 K	13.0 K	41.2 K	127 K	402 K	1.27 meg.	4.02 meg.
13.0	**42.2**	**133**	**422**	**1.33** K	**4.22** K	**13.3** K	**42.2** K	130 K	412 K	1.30 meg.	4.12 meg.
13.3	43.2	137	432	1.37 K	4.32 K	13.7 K	43.2 K	**133** K	**422** K	**1.33** meg.	**4.22** meg.
13.7	44.2	140	442	1.40 K	4.42 K	14.0 K	44.2 K	137 K	432 K	1.37 meg.	4.32 meg.
14.0	45.3	143	453	1.43 K	4.53 K	14.3 K	45.3 K	140 K	442 K	1.40 meg.	4.42 meg.
14.3	**46.4**	**147**	**464**	**1.47** K	**4.64** K	**14.7** K	**46.4** K	143 K	453 K	1.43 meg.	4.53 meg.
14.7	47.5	150	475	1.50 K	4.75 K	15.0 K	47.5 K	**147** K	**464** K	**1.47** meg.	**4.64** meg.
15.0	48.7	154	487	1.54 K	4.87 K	15.4 K	48.7 K	150 K	475 K	1.50 meg.	4.75 meg.
15.4	49.9	158	499	1.58 K	4.99 K	15.8 K	49.9 K	154 K	487 K	1.54 meg.	4.87 meg.
15.8	**51.1**	**162**	**511**	**1.62** K	**5.11** K	**16.2** K	**51.1** K	158 K	499 K	1.58 meg.	4.99 meg.
16.2	52.3	165	523	1.65 K	5.23 K	16.5 K	52.3 K	**162** K	**511** K	**1.62** meg.	**5.11** meg.
16.5	53.6	169	536	1.69 K	5.36 K	16.9 K	53.6 K	165 K	523 K	1.65 meg.	5.23 meg.
16.9	54.9	174	549	1.74 K	5.49 K	17.4 K	54.9 K	169 K	536 K	1.69 meg.	5.36 meg.
17.4	**56.2**	**178**	**562**	1.78 K	**5.62** K	**17.8** K	**56.2** K	174 K	549 K	1.74 meg.	5.49 meg.
17.8	57.6	182	576	1.82 K	5.76 K	18.2 K	57.6 K	**178** K	**562** K	**1.78** meg.	**5.62** meg.
18.2	59.0	187	590	1.87 K	5.90 K	18.7 K	59.0 K	182 K	576 K	1.82 meg.	5.76 meg.
18.7	60.4	191	604	1.91 K	6.04 K	19.1 K	60.4 K	187 K	590 K	1.87 meg.	5.90 meg.
19.1	**61.9**	**196**	**619**	**1.96** K	**6.19** K	**19.6** K	**61.9** K	191 K	604 K	1.91 meg.	6.04 meg.
19.6	63.4	200	634	2.00 K	6.34 K	20.0 K	63.4 K	**196** K	**619** K	**1.96** meg.	**6.19** meg.
20.0	64.9	205	649	2.05 K	6.49 K	20.5 K	64.9 K	200 K	634 K	2.00 meg.	6.34 meg.
20.5	66.5	210	665	2.10 K	6.65 K	21.0 K	66.5 K	205 K	649 K	2.05 meg.	6.49 meg.
21.0	**68.1**	**215**	**681**	**2.15** K	**6.81** K	**21.5** K	68.1 K	210 K	665 K	2.10 meg.	6.65 meg.
21.5	69.8	221	698	2.21 K	6.98 K	22.1 K	**69.1** K	**215** K	**681** K	**2.15** meg.	**6.81** meg.
22.1	71.5	226	715	2.26 K	7.15 K	22.6 K	69.8 K	221 K	698 K	2.21 meg.	6.98 meg.
22.6	73.2	232	732	2.32 K	7.32 K	23.2 K	71.5 K	226 K	715 K	2.26 meg.	7.15 meg.
23.2	**75.0**	**237**	**750**	**2.37** K	**7.50** K	**23.7** K	73.2 K	232 K	732 K	2.32 meg.	7.32 meg.
23.7	76.8	243	768	2.43 K	7.68 K	24.3 K	**75.0** K	**237** K	**750** K	**2.37** meg.	**7.50** meg.
24.3	78.7	249	787	2.49 K	7.87 K	24.9 K	76.8 K	243 K	768 K	2.43 meg.	7.68 meg.
24.9	80.6	255	806	2.55 K	8.06 K	25.5 K	78.7 K	249 K	787 K	2.49 meg.	7.87 meg.
25.5	**82.5**	**261**	**825**	**2.61** K	**8.25** K	**26.1** K	80.6 K	255 K	806 K	2.55 meg.	8.06 meg.
26.1	84.5	267	845	2.67 K	8.45 K	26.7 K	**82.5** K	**261** K	**825** K	**2.61** meg.	**8.25** meg.
26.7	86.6	274	866	2.74 K	8.66 K	27.4 K	84.5 K	267 K	845 K	2.67 meg.	8.45 meg.
27.4	88.7	280	887	2.80 K	8.87 K	28.0 K	86.6 K	274 K	866 K	2.74 meg.	8.66 meg.
28.0	**90.9**	**287**	**909**	**2.87** K	**9.09** K	**28.7** K	88.7 K	280 K	887 K	2.80 meg.	8.87 meg.
28.7	93.1	294	931	2.94 K	9.31 K	29.4 K	**90.9** K	**287** K	**909** K	**2.87** meg.	**9.09** meg.
29.4	95.3	301	953	3.01 K	9.53 K	30.1 K	93.1 K	294 K	931 K	2.94 meg.	9.31 meg.
30.1	97.6	309	976	3.09 K	9.76 K	30.9 K	95.3 K	301 K	953 K	3.01 meg.	9.53 meg.
30.9	**100**	**316**	**1.0** K	**3.16** K	**10.00** K	**31.6** K	97.6 K	309 K	976 K	3.09 meg.	9.76 meg.
31.6											10 meg.

For Applications Requiring the Extra Moisture Protection of Ceramic-Case Filmistors, Substitute the Following Sprague Type Numbers:

Wattage Rating	⅛ W.	¼ W.	½ W.	1 W.	2 W.
Ceramic-Case Filmistor	400E	401E	402E	403E	404E

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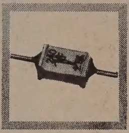
All prices and sizes subject to change without notice.

Vitramon® CAPACITORS

stable • rugged • low loss • miniature
low noise • humidity immunity
wide temperature range

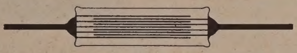
Vitramon® solid state PORCELAIN CAPACITORS

AXIAL-RADIAL


AXIAL

RADIAL

The superior electrical and mechanical characteristics exhibited by Vitramon® capacitors are attributes of their solid state composition — fine silver electrodes molecularly fused within a solid block of high grade porcelain, forming a monolithic unit that requires no case or hermetic seal.



"Layering" of electrodes makes possible a much greater active dielectric area within the same cubic content. Perfect bonding of materials minimizes loss and noise and results in greater stability over a temperature range of —55°C to 200°C.

Vitramon® capacitors are used extensively in guided missiles, jet ignition, proximity fuses, and in radar, servo, guidance, fire control, telemetering, and carrier telephone systems.

STANDARD TYPES AND VALUES

All series A, AR and R are available in the following values from factory or distributor stocks in 10%, 5%, 2% and 1% tolerances.

CY13C - A or - AR
0.5 to 200 mmf at 500 vdc
220 to 300 mmf at 300 vdc

CY17C - A or - AR
220 to 470 mmf at 500 vdc
510 to 1000 mmf at 300 vdc

CY22C - A or - AR
510 to 1000 mmf at 500 vdc
1100 to 2400 mmf at 300 vdc*

CY32C - A or - AR
1100 to 3300 mmf at 500 vdc
3600 to 6800 mmf at 300 vdc**

CY17C - R
300 to 620 mmf at 100 vdc
680 to 1200 mmf at 50 vdc

CY13C - R
0.5 to 22 mmf at 500 vdc
24 to 100 mmf at 300 vdc
110 to 220 mmf at 100 vdc
240 to 510 mmf at 50 vdc

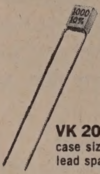
*2200 and 2400 not available in - A Series
**6200 and 6800 not available in - AR Series

HIGH RELIABILITY SPECIFICATION S-1002

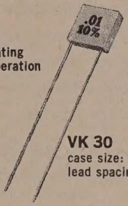
Every VITRAMON® Capacitor purchased against our High Reliability Specification S-1002 is accompanied by a detailed documentation verifying a reliability of better than 0.5% per 1000 hours. Continuous control testing of in-process material for all parameters, including 300,000 unit hours of life tests every six weeks, has consistently demonstrated an A.Q.L. for VITRAMON® Capacitors 12 times higher than Mil Specifications.

VK™ micro-miniature CERAMIC CAPACITORS

47-10,000 mmf
200 vdc without derating
—55°C to 150°C operation



VK 20
case size: 0.2" square
lead spacing: 0.2"



VK 30
case size: 0.3" square
lead spacing: 0.2"

GENERAL CHARACTERISTICS

Temperature Co-efficient: Maximum deviation from 25°C measurement over range of —55°C to +150°C is ± 15%.

Voltage Co-efficient: Negative at the average rate of 0.025% per volt above 25 vdc for values through 680 mmf, and 0.1% per volt above 680 mmf.

Insulation Resistance: Minimum of 1,000 ohmfarads (100,000 megohms) at 25°C and 10 ohmfarads (1,000 megohms) at 150°C.

Dissipation Factor (at 1 kc): Less than 1.5% at 25°C and less than 1.0% at 150°C through 680 mmf; from 820 through 10,000 mmf, DF is less than 2.5% and 1.5% respectively.

Lead Strength: Withstands a force of five pounds exerted in the direction of the leads as required by MIL-C-11015B.

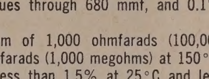
Dip-soldering: All units thermal shock proofed, may be dip-soldered up to the case at 600°F.

Dielectric Strength: A potential of 400% of rated voltage may be applied for 10 seconds at 25°C.

Part Number	Capacity mmf.	Part Number	Capacity mmf.	Part Number	Capacity mmf.
VK20CW470M	47	VK20CW151M	150	VK20CW471M	470
VK20CW560M	56	VK20CW181M	180	VK20CW561M	560
VK20CW680M	68	VK20CW221M	220	VK20CW681M	680
VK20CW820M	82	VK20CW271M	270	VK20CW821M	820
VK20CW101M	100	VK20CW331M	330	VK20CW102M	1000
VK20CW121M	120	VK20CW391M	390	VK30CW122M	1200

Part Number	Capacity mmf.	Part Number	Capacity mmf.
VK30CW152M	1500	VK30CW472M	4700
VK30CW182M	1800	VK30CW562M	5600
VK30CW222M	2200	VK30CW682M	6800
VK30CW272M	2700	VK30CW822M	8200
VK30CW332M	3300	VK30CW103M	10000
VK30CW392M	3900		

ALSO UNCASED FOR COMPLETE ASSEMBLY ENCAPSULATION



Same electrical characteristics as standard "VK" series. Each unit coated with a resilient protective compound. Leads .016 Diam. (nominal); .032 max. recommended hole diam. Dimensions: 47 - 100 mmf, .100" square; 120 - 270 mmf, .130" square; 330 - 1000 mmf, .150" square; 1200 - 3300 mmf, .250" square; 3900 - 10,000 mmf, .265" square. Add suffix "U" to standard part number to identify this unit.

VITRAMON® INCORPORATED

P.O. BOX 544 • BRIDGEPORT 1, CONNECTICUT

THE NEW MIRACLE T. V. TUNER CLEANER

CHEMICALLY ENGINEERED FOR ELECTRONIC TECHNICIANS

HUSH®

COSTS LESS AND RESULTS GUARANTEED

NEW
HUSH
MIRACLE
TV
TUNER CLEANER
Engineered for tuners

Chemically engineered for that tuner and switching mechanism. Hush comes in a 6 oz. pressure can with sufficient pressure to reach all contacts to wash-a-way that dirt, leaving clean and positive contacts, protected with a lasting lubricant film and with no powder residue.

6 oz. ECONOMY SPRAY CAN $2.25
Hush also available in 2 oz., 8 oz. and 32 oz. containers. Net

"Spray It and Forget It"

NEW
EVER
QUIET
CONTROL AND
CONTACT RESTORER
CLEANS
LUBRICATES
PROTECTS
TV-RADIO
AND
ELECTRONIC
CONTACTS

ANOTHER QUALITY PRODUCT

EVER-QUIET now available in a 6 oz. pressure can, chemically engineered with sufficient pressure to reach those out-of-way, hard to get-at controls, push button assemblies, band switches and other electrical contacts.

6 oz. SPRAY CAN $1.59 Net

SINCE 1949 THE ORIGINAL

SUPER EVER-QUIET®

VOLUME CONTROL and CONTACT RESTORER

A Few Drops
Does the Job

79c 2 oz. Net
(32 oz. sizes available)

NEW
EVER
QUIET
CLEANS
LUBRICATES
PROTECTS
TV RADIO
AND
ELECTRONIC
CONTACTS

EVER-QUIET is a free-flowing liquid that leaves no powder residue. Scientifically designed to seep around the shaft and penetrate the control or potentiometer, cleaning the contacts and leaving a safe protecting film.
EVER-QUIET is harmless to metals, wire or carbon.
EVER-QUIET is guaranteed for the uses recommended. Sold with a money back guarantee.

EVER-KLEER T.V. Picture Tubes, Protecting Glass Cleaner

CHEMICAL ELECTRONIC ENGINEERING, INC.

Manufacturers of: HUSH — EVER-QUIET — EVER KLEER — OPTIC KLEER — SURE-N-EASY
MATAWAN, NEW JERSEY

CAIG LABORATORIES

NEW HYDE PARK, LONG ISLAND, NEW YORK

CRAMOLIN®

A NEW CONCEPT ON IMPROVING CONTACT PERFORMANCE

. . . *and here are* 14 REASONS WHY . . .

1. Reduces contact resistances to their minimum values.
2. Reduces sparking of brushes on commutators.
3. Improves performance of contacts and collector rings.
4. Protects against salt air and sulfidic atmosphere and will not absorb moisture.
5. Applied on moving parts, Cramolin will stay on. Cramolin contains a chemical compound which is strongly attracted by metal surfaces and cannot be removed completely, even by high pressure friction.
6. Fungus growth will not develop on Cramolin-films, because Cramolin contains mineral and synthetic ingredients only.
7. Cramolin is not aggressive on baked varnishes, although it may affect some nitro-cellulose lacquers.
8. Max. effective operating temperature range is —34°C to +150°C (these are conservative values, consult us for higher ranges.)
9. Cramolin can be safely used at a relative humidity of 95% and temperatures up to 100°C.
10. Cramolin will perform equally as well under air pressure as well as in a vacuum.
11. Insulation resistance of 10^{13} ohms between contacts at distance of 1 cm on Trolitul (phenol-formaldehyde resin).
12. Tests have indicated that no injurious secondary effects arise.
13. Cramolin may be applied on old contacts without special precautions. All non-metallic layers, dust, resin, etc., will be dissolved and removed at once by rubbing it off, or by operating the contact several times.
14. Under general operating conditions Cramolin should be reapplied after two to three years (on high frequency and low current contacts). In highly corrosive atmosphere (containing acid, sulphide, etc.) reapplication should take place after one year. If the air contains unusual quantities of ammonia, contacts should be cleaned with our modified Cramolin.

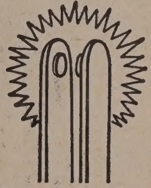
FEATURES

- ANTI-CORROSIVE
- CLEANER
- PRESERVATIVE
- LUBRICANT

FOR BETTER CONTACTS START WITH A CONTACT THAT'S CRAMOLINIZED

LIST PRICES

2 oz.	$1.95
½ pt.	6.75
1 pt.	13.00
1 qt.	25.50



ERSA-MINIATURE SOLDERING IRON

A NEW STREAMLINED LOW TENSION SOLDERING IRON

The power supply for this low voltage (6 volts) iron may come from a battery or a special low voltage transformer.

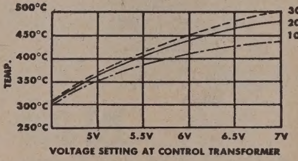
The ERSA MINIATURE with its 5 foot, light-weight, twin-cable, securely molded to the plastic handle and plug, weighs only 3 ounces.

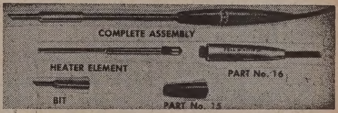
The streamlined handle rests comfortably, like a fountain pen, in the hand and permits tireless operation in production work. The slim shaped heating units of 10, 20 or 30 watts may be interchanged in the same handle, in a matter of seconds to the desired wattage. Heating units are screwed into the handle as easily as one would insert a bulb into a flashlight. This method guarantees reliable and continuous contact performance. The soldering tips are simply pushed on the heating unit, and can just as easily be removed.

A heat-up period of 40 seconds is sufficient to make the ERSA MINIATURE ready for use and has built-in protection against capacitative stray effects from mains which could damage transistors or endanger the operator.

The specially designed Control Transformer Models R10 and R30 will solve the most complicated soldering problems. Both transformer models have a primary voltage regulator for 110, 125, 150, 220 and 240 volts. The secondary voltage is also variable within the range of 5 to 7 volts, thus making it possible to select a temperature range between 300 to 500°C. When not in use, the ERSA MINIATURE iron rests on a special nozzle provided on the transformer. This protects against overheating.

Control Transformer R10 was solely made for use with the ERSA MINIATURE Iron Model 10W. The R30, with a greater output, permits universal use of all the various ERSA MINIATURE irons with their different capacities. Several ERSA MINIATURE irons may be hooked up to total 30 watts.

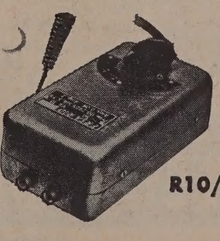




DESCRIPTION	MODEL OR PART NO.	ELECTRIC RATING	WEIGHT APPROX.	PRICE COMPLETE	SPARE HEATER ELEMENTS PART NO.	SPARE HEATER ELEMENTS PRICE	SPARE SOLDERING BITS PART NO.	SPARE SOLDERING BITS PRICE
ERSA-MINIATURE Soldering Iron (Complete Assy.) 6 Volt Rating *	10 W 20 W 30 W	10 WATTS 20 WATTS 30 WATTS	2.65 OZ. 2.65 OZ. 3.0 OZ.	$5.00 5.00 5.00	11-10W 11-20W 11-30W	$3.60 3.60 3.60	12-10 12-20 12-30	$0.50 0.50 0.50
Cable with End of Handle Front of Handle	#16 #15	— —	2.0 OZ. 0.1 OZ.	$3.30 0.35	A Universal Handle Suitable For Elements: #11-10W, #11-20W & #11-30W			
Control Transformer	R10	10 VA	3.5 LB.	$15.00	Use Only With Ersa-Miniature Iron#10W			
Control Transformer	R30	30 VA	5.1 LB.	$25.00	Use Ersa-Miniature Irons#10W, #20W & #30W			

* Overall Length Iron - 8"
Handle Grip is Approx. 4"

Prices & Specifications Subject To Change Without Notice
Prices F.O.B. New Hyde Park, L. I., N. Y.



R10/R30

always insist on . . . **PROVED BRAND NAMES**

ask by name for GENUINE "NOISE" PRODUCTS

FREE with
"NOISE"
VOLUME CONTROL
and CONTACT RESTORER
or
"NOISE"
TUNER-TONIC

now available **FREE!**

5" PLASTIC EXTENDER

with Push Button Assembly

Fastens easily and securely for the finest pin-point applications. Invaluable on all kinds of jobs. Positively won't cause shorts.

ALL "NO-NOISE" PRODUCTS SOLD WITH MONEY BACK GUARANTEE

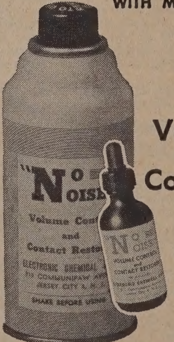
"NOISE"
Tuner-Tonic
with PERMA-FILM
• CLEANS
• RESTORES
• LUBRICATES

"NOISE" Tuner-Tonic with Perma-Film

- Economical — a little does a lot.
- Cleans, lubricates, restores all tuners —including wafer type.
- Non-toxic, non-inflammable.
- Use for TV, radio and FM.

6 oz. Aerosol Can **$3.25**

NET To Servicemen


"NOISE"
Volume Control
and
Contact Restorer
ELECTRONIC CHEMICAL
SHAKE BEFORE USING

"NOISE" Volume Control and Contact Restorer

• Cleans
• Protects • Lubricates

NOT A CARBON TET SOLUTION

2 oz. Bottle	6 oz. Spray Can
$1	$2.25

NET To Servicemen

now! "NOISE" RUBBER COAT SPRAY

- Contains NO Plastic
- Insulates where applied!
- Protects indefinitely!
- Prevents arcing, shorting and corrosion!
- Waterproofs!
- Non-inflammable!

6 oz. Spray Can NET To Servicemen **$3.25**

At Your DISTRIBUTOR Only

ELECTRONIC CHEMICAL Corp.

JERSEY CITY 4, NEW JERSEY

KRYLON® CRYSTAL-CLEAR

ACRYLIC SPRAY COATING

for Television, Radio, Electronic Use

- **prevents corona in high voltage sections**
- **prevents rusting and pitting of antennas**
- **keeps lead-in connections tight**
- **just spray it on — that's all!**

PROTECT IT WITH
KRYLON
CRYSTAL CLEAR
No. 1302
SPRAY COATING
Goes on Clear—Stays Clear
RADIO, TV ELECTRONICS
DRIES IN MINUTES!
GIANT
16-oz.
DISPENSER

Characteristics

Dielectric constant of 3.2 to 3.7 (1000 cycles). Dielectric strength of 400 to 800 (number of volts necessary to cause an electric arc through a Krylon coat one mil thick)

Electrical resistance of 10^{10} ohms/cm^3

6 oz. list price 98¢
Order No. 1300A

16 oz. list price $1.95
Order No. 1302

KRYLON
DULLING SPRAY

KRYLON Dulling Spray

. . . a "must" in TV, movie and photographic studios

- Eliminates glare, bothersome highlights
- Simplifies lighting arrangements
- For both black and white and color use

16 oz. list price, $1.95, Order No. 1310

KRYLON
SILICONE
All-Purpose
SPRAY

KRYLON Silicone All-Purpose Spray

...stops sticking...stops squeaks...repels water ...penetrates deeply...lubricates and protects at the same time.

16 oz. list price, $1.95, Order No. 1325

KRYLON
RUST RELEASE
PENETRATING OIL SPRAY

KRYLON Rust Release Penetrating Oil Spray

. . . instantly, easily frees rusty bolts and nuts that a wrench can't budge . . . and "frozen parts". . . lubricates as it penetrates.

16 oz. list price, $1.69, Order No. 1324

KRYLON
RUST MAGIC
STOPS RUST

KRYLON Rust Magic Metal Primer

...with GL-358...dry in 20 minutes...top coat in 2 hours . . . penetrates through sound rust to bare metal . . . seals the metal pores . . . locks out air and moisture.

16-oz. list price, $1.79, Order No. 1317
(Also available in Brush Type . . . ask your KRYLON Jobber)

PERFECT PAINTING THE "PUSH-BUTTON" WAY

KRYLON® SPRAY PAINTS

No fuss, no muss, no lost time!
DRY in minutes!

KRYLON SPRAY PAINTS PRICE LIST

6-oz. Order No.	16-oz. Order No.	COLOR	LIST PRICE
1401A	1401	Bright Silver (Alum)	All 6-oz. colors, each 98¢
1501A	1501	Glossy White	
1502A	1502	Flat White	
....	1503	Antique Ivory	
1601A	1601	Glossy Black	
1602A	1602	Flat Black	
1603A	1603	Machine Grey	
1604A	1604	Light Grey	
1605A	1605	Dove Grey	
1701A	1701	Bright Gold	
1801A	1801	Chrome Yellow	
....	1802	Pastel Yellow	
1901A	1901	Regal Blue	All 16-oz. colors, each $1.79
1902A	1902	Baby Blue	
....	1903	Champion Blue	
2001A	2001	Hunter Green	
....	2002	Surf Green	
2101A	2101	Cherry Red	
2102A	2102	Baby Pink	
2201A	2201	Bright Copper	
2202A	2202	Brass	
....	2301	O.K. Khaki	
....	2401	Int'l. Orange	
....	2501	Leather Brown	

KRYLON
GLOWING
Fluorescent
SPRAY PAINT
LEMON YELLOW
No. 3104
DRIES IN MINUTES

KRYLON GLOWING Spray Paints

6 brilliant fluorescent colors that make any white surface up to 4 times brighter. Red orange—633 and yellow orange—634 colors are made to conform to Spec. MIL-P-21600 (Aer).

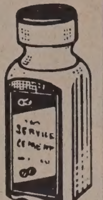
16-oz. can, **$2.79** list price
6-oz. size **$1.19** list price

6-oz. Order No.	16-oz. Order No.	Color
3101A	3101	Red Orange—633
3102A	3102	Yellow Orange—634
3103A	3103	Sunset Gold
3104A	3104	Lemon Yellow
3105A	3105	Cerise
3106A	3106	Green

Other KRYLON spray products you will want to keep handy:
METAL PRIMER • STENCIL INK • HIDE-A-MARK • RUST VETO • CLEANER AND DEGREASER

GC CHEMICALS AND KITS

ELECTRONICS



GC Chemicals (Cements, Thinners, Paints, Oils, Varnishes, etc.), are available in handy 2 oz. bottles with brush-in-cap. Also supplied in larger sizes.

G-C RADIO-TELEVISION SERVICE CEMENT—This high grade cement is specially prepared for Radio, Television and Speaker Work. Unexcelled for cementing and replacing cones on dynamic speakers, repairing rattling or torn cones, cementing voice coils, spiders, etc.
Cat. No. 30-2 2-oz. List **$ .80**

G-C PLASTIC CEMENT—Excellent for cementing broken plastic cabinets, cementing grille cloth in place, cementing dial and glass crystal assemblies, cementing knots in dial, cords, etc.
Cat. No. 32-2A 2-oz. List **$ .80**

G-C "BAKELITE" CEMENT—This cement is especially made for cementing "BAKELITE" to "BAKELITE" and to other materials.
Cat. No. 32-2 2-oz. List **$ .95**

G-C "VINYLITE" CEMENT—This new G-C Cement based upon "VINYLITE" vinyl resins, has great adhesion, high tackiness and extreme flexibility.
Cat. No. 58-2 2-oz. List **$ .80**

G-C HOUSEHOLD and MODEL CEMENT—Fast-drying cement, suitable for many uses. Excellent "Household Cement"; will cement wood, paper, plastics, metal, china, crockery, ceramics, etc.
Cat. No. 45-2 2-oz. List **$.80**

G-C FABRIC AND GRILLE CLOTH CEMENT—For cementing grille cloth and fabrics to either metal, plastic or wood cabinets.
Cat. No. 22-2 2-oz. List **$ .80**

G-C WOOD CABINET GLUE—This is the ordinary well-known wood glue that is used in repair of furniture, chairs, radio cabinets, etc.
Cat. No. 39-2 2-oz. **List $ .80**

G-C No. 28 CEMENT THINNER— This thinner is made of same solvents as G-C Service Cement and makes the best thinner for G-C Service Cement.
Cat. No. 28-2 2-oz. List **$ .75**

G-C RADIO SERVICE SOLVENT—The best solvent for loosening cement on speaker cones, frames, etc., made to dissolve all types of cements. Can also be used as a thinner for G-C Cement and other cements.
Cat. No. 31-2 2-oz. List **$ .75**

G-C No. 29 LACQUER THINNER—Solvent for thinning all lacquers, lacquer enamels, telephone black and gray, touch-up lacquers.
Cat. No. 29-2 2-oz. List **$.75**

G-C No. 67 PAINT THINNER—Excellent for Ruf-Koat, Krome-Koat, B-K Cement, Insulating Varnish and Rubber Cements.
Cat. No. 67-2 2-oz. List **$ .75**

G-C No. 41 Q-DOPE THINNER—Excellent solvent for Polystyrene, Q-Dope and any other Polystyrene Coil Dopes and Cements. Will soften and disolve polystyrene rods, sheets, etc. Clear water-white solvent will not change characteristics of original materials.
Cat. No. 41-2 2-oz. List **$ .75**

G-C RUBBER-TO-METAL & PHONO DRIVE CEMENT Specially prepared for cementing ruber phono and dial drives to shafts and pulleys.
Cat. No. 35-2 2-oz. List **$ .80**

G-C PLIOBOND CEMENT—Bonds anything to anything—iron, steel, plastic, glass, aluminum, cotton, vinyl sheets, stainless steel, etc. A truly universal cement.
Cat. No. 43-2 2-oz. List **$ .80**

G-C ELECTRICAL AND RESISTOR CEMENT—Here's the heat-proof cement that hardens like porcelain, same as used on resistors, flat irons, electrical appliances, etc.
Cat. No. 27-2 2-oz. List **$ .80**

G-C ACRYLIC-PLEXIGLASS CEMENT — Specially prepared for cementing Lucite, Plexiglass and other arcylic materials.
Cat. No. 40-2 2-oz. List **$ .80**

G-C NE-O-PRENE CEMENT—For cementing neoprene rubber to neoprene or neoprene to other products, such as metal, wood, paper, etc.
Cat. No. 52-2 2-oz. List **$ .80**

G-C VINYL PLASTIC FABRIC CEMENT—Made for cementing vinyl plastic sheets together. Ideal for vinyl insulating tubings, patching plastic rain coats, covers, etc.
Cat. No. 16-2 2-oz. List **$ .80**

G-C LABEL CEMENT—Here's a label cement that will make labels stick to anything—metal, glass, wood, tin, etc.
Cat. No. 46-2 2-oz. List **$ .80**

G-C TV HIGH VOLTAGE CORONA DOPE—Prevents corona shorts on high voltage circuits in Television sets.
Cat. No. 47-2 2-oz. List **$1.20**

G-C RED-X TV CORONA DOPE—Prevents corona shorts in high voltage circuits in TV sets. Coat surfaces and sharp corners to stop corona effect.
Cat. No. 50-2 2-oz. List **$1.20**

G-C TV TUBE KOAT—For recoating the outside of TV picture tubes that have become scratched or the surface is peeling.
Cat. No. 49-2 2-oz. List **$1.20**

G-C TV TENNA-KOAT—A clear plastic coating for coating television antenna to minimize the effects of corrosion, so as to maintain strong signal strength.
Cat. No. 24-2 2-oz. List **$1.00**

G-C TV LENS AND TUBE CLEANER—Specially prepared cleaner for cleaning Television lens and tubes.
Cat. No. 216-2 2-oz. List **$ .60**

G-C TV LINE SEAL FOR UHF AND VHF—Outdoor special acrylic sealer for sealing TV wires, terminals, screws, antennas, junction boxes.
Cat. No. 17-2 2-oz. List **$ .80**

G-C PHONO NON-SLIP COMPOUND—Prevents slippage of phono drives on changers, tape recorders, and all types of recorder drives.
Cat. No. 86-2 2-oz. List **$1.50**

G-C RED GLYPTAL INSULATING VARNISH—Most common of all protective insulating coatings, used on all solder connections, high voltage points, anti-corona.
Cat. No. 90-2 2-oz. List **$ .95**

NON-SLIP COMPOUND FOR RADIO DIALS—Powder Compound for treating friction type dial drives such as cords, cabels and belts.
Cat. No. 1210 Non-Slip, 2-oz. List **$ .75**

LIQUID NON-SLIP—Penetrating and fast-drying liquid dressing. Shrinks fibres, prolongs life of cables and belts and prevents slipping.
Cat. No. 1211 ½-oz. List **$ .55**

G-C DE-OX-ID—Cleans and prevents oxidation on sensitive circuit contacts. Use in Television, Radio, Telephone, Relays, Instruments, etc.
Cat. No. 19-1 1-oz. List **$1.10**
19-2 2-oz. **1.60**

G-C CONTACT AND CRYSTAL CLEANER—A fast-evaporating cleaner specially prepared for cleaning contacts and crystals. Cleans easily and will not injure delicate parts, crystals, etc.
Cat. No. 127-2 2-oz. **List $ .75**

NEW G-C ELECTRONIC CONTACT CLEANER—Most popular all-purpose contact cleaner on the market. Fast drying and fast acting. Leaves a non-corrosive film on the contacts that insures long, trouble-free action.
Cat. No. 210-2 2-oz. List **$ .90**

G-C DE-NOIZ ELECTRONIC TV CONTACT AND DETENT CLEANER—Stops Noise on all types of contacts, volume controls, tuners, detents, switches, relays, etc.
Cat. No. 51-1 1-oz. List **$ .95**
51-2 2-oz. **1.60**

G-C CARBON CONTROL CLEANER—Makes it easy to repair most noisy volume controls, tone controls, switches, band switches, push-buttons—in fact, most all types of moving contacts. A special chemical that both removes oxidation and minimizes future trouble by coating the contacts.
Cat. No. 212-2 2-oz. List **$ .75**

G-C CARBON TETRA-CHLORIDE—100% pure Carbon Tetra-Chloride, non-explosive and non-inflammable. For cleaning electrical controls and contacts.
Cat. No. 211-2 2-oz. List **$ .55**

G-C LUBE-REX—The best contact cleaner on the market. Fine for attenuators, push-button switches, all-wave switches, contacts, etc. Cleans contacts and prevents corrosion.
Cat. No. 1209 2-oz. List **$ .80**

G-C GRAFOLINE—Insures proper and lasting repairs for all air-exposed contacts, switches, and wire-wound volume controls—wherever dust and dirt affect the quiet action of adjustable radio parts or controls.
Cat. No. 120-2 2-oz. List **$ .80**

G-C CARBON-X—A practical method to touch up those worn and noisy spots on carbon volume controls.
Cat. No. 1205 2-oz. List **$1.20**

G-C CONTACT DOPE—Ideal contact cleaner for electronic switches, controls and contacts. Specially prepared to resist corrosion and oxidation on contacts.
Cat. No. 1214 2-oz. List **$ .80**

G-C NON-CORROSIVE LIQUID SOLDERING FLUX—Best quality non-corrosive flux for all types of radio and electrical soldering, for copper, brass, steel, nickel, etc.
Cat. No. 42-2 2-oz. List **$ .80**

G-C NON-STICK IRON TIP COMPOUND—Prevents iron tips from burning into soldering irons. Saves tips and irons.
Cat. No. 1201 2-oz. List **$ .75**

G-C Q-DOPE (COIL DOPE)—Specially prepared for coating, doping, sealing, cementing and impregnating coils and paints in "Very High" and "Ultra High" frequency ranges.
Cat. No. 37-2 2-oz. List **$ .80**

G-C LIQUIDOPE—Gives coils a tough protective film that insures firmness and prevents characteristic changes due to weather.
Cat. No. 36-2 2-oz. List **$ .80**

G-C INSULATING & DIPPING VARNISH—Produces a smooth, tough film that is water-proof, oil-proof and non-corrosive. Recommended for treating field coils, noisy or buzzing transformers and choke coils.
Cat. No. 56-2 2-oz. List **$ .90**

G-C FUNGUS VARNISH—Used on all types of Radio, Electronics and Communication equipment to prevent moisture absorption and fungus growth, when equipment is used in hot and humid climates.
Cat. No. 57-2 2-oz. List **$ .95**

G-C STRIP-X—Removes insulating enamel from wires for easy soldering. Use on magnet wire, etc.
Cat. No. 26-2 2-oz. List **$1.00**

G-C RECO-STATIC CHASER—Minimize dust accumulation on records and picture tube. Reduces dust attracting static electricity.
Cat. No. 48-2 2-oz. List **$ .75**

G-C MAG-NETIK RECORDING HEAD CLEANER—Cleans without injury to the recording head that gradually lose their sensitivity if oxide accumulates.
Cat. No. 53-1 1-oz. List **$ .95**
53-2 2-oz. **1.60**

G-C RECOR-LUBE LUBRICANT—Reduces surface noise and excessive wear on all records. Saves the needle. Makes records sound better and last longer.
Cat. No. 125-2 2-oz. List **$ .75**

G-C REK-O-DOPE—Cleans, lubricates and hardens the grooves. Preserves new recordings and records. Renews old records. Insures better tone.
Cat. No. 126-2 2-oz. List **$ .75**

G-C RUF-KOAT—The only finish that will air dry and give you a professional wrinkle job without baking. Colors: Black, Gray and Brown (Specify Color)).
Cat. No. 60-2 2-oz. List **$1.10**

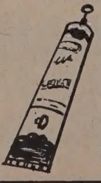
G-C PRINT-KOTE VARNISH—Specially prepared protective insulation coating for printed circuits and components. Will air dry in 5 to 15 minutes or can be baked in 5 minutes at 150° F.
Cat. No. C9-2 2-oz. List **$1.25**

G-C No. 14-2 PRINT-KOTE SILICONE RESIN—After repairing or replacing parts in printed circuits, protect the panel joints and parts. Fast air drying.
Cat. No. 14-2 2-oz. List **$1.95**

G-C No. 13-2 PRINT-KOTE SOLVENT FOR SILICONE RESIN—The only solvent for G-C 14-2 Silicone Resin. Will dissolve and remove silicone resin from printed circuits.
Cat. No. 13-2 2-oz. List **$ .60**

G-C PRINT-KOTE SOLDERING FLUX—Non-corrosive liquid flux for easy soldering and repairing of printed circuits.
Cat. No. 12-2 2-oz. List **$ .75**

G-C CEMENT SAMPLER KIT—A sampler kit containing a complete selection for every application. Kit includes 2-oz. samples of Service, Pli-O-Bond, Acrylic, Plastic, Bakelite, Vinylite, Grille Cloth, Model, Wood, Rubber-to-Metal, Electrical and Resistor, Neoprene, Label and Vinyl Cements. Ideal for research and development.
Cat. No. 345 List **$9.95**



G-C RADIO AND TELEVISION CEMENT—High grade speaker cement in a handy tube for those who prefer to use a tube. Cement can be applied directly from tube on the parts to be cemented without the use of a brush. Also used for television work, sealing nuts, bolts, etc., on antennas, rotators, etc.
Cat. No. 34-2
2-oz. tube List **$ .80**

GC CHEMICALS AND KITS

ELECTRONICS

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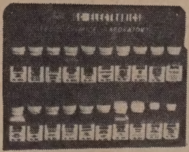
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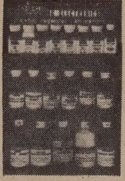
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(A) G-C TV CHEMICAL KIT—A complete kit of essential chemicals needed for servicing TV sets. Complete in a handy metal box you can carry with you on the job or keep in the shop.
Cat. No. 904 TV Chemical Kit List **$10.50**

(B) G-C E.I.A. COLOR CODING KIT—Complete kit of all standard E.I.A. colors: Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Grey and White. Brushes furnished and E.I.A. color chart is on box.
Cat. No. 677 Color Coding Kit List **$2.45**

(C) G-C DIAL AND SIGNAL LIGHT COLORING—Long-lasting coloring for signal systems, radio dials, decorative lighting, etc. Instant drying. Bright, durable colors of Red, Green, Blue, Amber, Purple and solvent.
Cat. No. 66-5 Kit of 5, no purple List **$1.85**
66-6 Kit of 6 **2.20**

(D) G-C DIAL AND APPLIANCE OIL—A fine free-running oil for lubricating dial mechanisms, loosening and freeing controls, shafts, etc. Also use on small motors, appliances, etc.
Cat. No. 1245 4-oz. List **$ .90**

(E) G-C RADIO-TV CHEMICAL LAB—Twenty 2-oz. bottles in permanent rack that can be placed on your bench or hung on the wall. Every needed chemical and cement is included for all kinds of repairs, speakers, coils, contacts, dials, controls, etc.
Cat. No. 997 List **$16.50**

(F) G-C DELUXE RADIO-TV CHEMICAL LAB—For service shop and industrial plant. Complete practical laboratory designed to the needs of all service men in their everyday work. Ideal for the service man, engineer, experimenter, etc.
Cat. No. 998 List **$25.00**

(G) G-C ROOF-SEEL COMPOUND—Eliminate call-backs on roof antenna installations by sealing all contacts or fastenings; to the roof.
Cat. No. 18-16 Pint List **$1.25**

(H) G-C LUMINOUS LITE-KOAT KIT—Long-life, non-poisonous luminous coating that absorbs light in daytime and glows in the dark. Coat or stripe dials, knobs, switch plates, meter boxes, key holes, panels, instruments, hallways, staircases, etc.
Cat. No. 184-0 List **$5.40**

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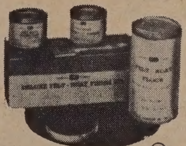
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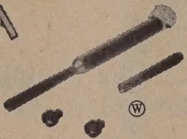
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(J) G-C ELECTRONIC CONTACT CLEANER HYPODERMIC NEEDLE INJECTOR—Here's a handy applicator made on the hypodermic principle to inject cleaners and oils into shafts, controls and tight places.
Cat. No. 8383 List **$ .80**

(K) G-C DE-OX-ID KIT WITH NEEDLE INJECTOR—Kit contains 2 oz. bottle of De-Ox-Id and a hypodermic needle type injector for making it easy to apply.
Cat. No. 8460 List **$2.35**

G-C CONTROL KLEENER—Cleans and lubricates Volume, Brightness, Tone and other controls. Also good for push buttons, switches, contacts and tuners.
Cat. No. 65-16 16-oz. List **$3.25**

(L) G-C NON-TOXIC ELECTRO-TET CLEANER—Chlorothene, one of the least toxic of the Chlorinated Solvents. Closely parallels Carbon Tetrachloride, but much safer. Non-inflammable and fast drying.
Cat. No. 10-G 1 Gallon List **$11.80**

G-C KLEEN-TEX CLEANER—A safe, slow-burning, high flash, inexpensive cleaner for motors, chassis, vacuum cleaners, etc. Removes grease, oil, wax and tars.
Cat. No. 11-G 1-Gallon List **$4.60**

(M) G-C SOLDERING PASTE—New high quality, non-corrosive soldering paste for radio and electrical work.
Cat. No. 1207 2-oz. List **$ .70**

(N) G-C PHONO-TURNTABLE MOTOR & GEAR LUBRICANT—A new special lubricant for phonographs. Formulated so that the lubricant clings to the surface of the parts. Eliminate trouble on phono repairs by using the best.
Cat. No. 1223 2-oz. List **$ .90**

(O) TRANSISTOR Z5 SILICONE COMPOUND—G-C Silicone Compound is applied to transistor and chassis at the factory. IT MUST BE RE-APPLIED to transistor and chassis when replacing transistors.
Cat. No. 8101 1-oz. List **$2.95**

(P) G-C RUF-KOAT WRINKLE VARNISH—The only finish that will air dry and give you a professional wrinkle job without baking. Colors: Black, Gray and Brown (Specify Color).
Cat. No. 60-2 2-oz. List **$1.10**

(Q) RUF-KOAT SPRA-KOAT—In power spray cans.
Cat. No. 60-12 12-oz. Black List **$3.05**
60-13 12-oz. Gray **3.05**

(R) G-C FELT-KOAT FLOCK FINISH SPRAY KITS—The new G-C method of applying flock with the G-C patented gun. It distributes flock evenly and blows each fibre into the undercoat vertically with great power. The flock in reality "flocks to the undercoat in a heavy velvet coat."
Cat. No. 180-2 Deluxe Kit Complete List **$18.50**

(S) G-C FELT-KOAT FLOCK—Genuine rayon flock 1/16" length fibers. Colors available: Brown, Taupe, Blue, Black, Ivory, Red, Green and Gold. Specify Color wanted.
Cat. No. 180-5 Flock, Kit Size, 2-oz. Sifter/Can List **$1.50**
180-7 Flock, 1 lb. Clear Plastic Bag List **$6.00**

(T) G-C FLOCK SIZING UNDERCOAT—A neutral base undercoat. This is first applied to the surface being flocked and then the flock spread over the wet surface.
Cat. No. 180-4 4-oz. List **$1.20**
180-8 8-oz. **1.80**

(U) G-C No. 180-0 DELUXE FELT-KOAT KIT—Complete Flock finishing kit for applying soft, felt-like flock to phono-turntables, cabinets, testers, panels, displays, tool chests, compartments, lamp bases, wire mesh on speakers and microphone grilles. etc. Brown only.
Cat. No. 180-0 Deluxe Kit List **$3.95**

No. 180-1 FELT-KOAT KIT—Here's a handy, inexpensive kit for applying flock to phono turntables, cabinets, lamp bases, speaker grilles, cameras, etc.
Cat. No. 180-1 Regular Kit List **$2.95**

(V) G-C FELT-KOAT SPECIAL FLOCK PATENTED BLOWER GUN—This gun distributes the flock evenly and blows each fibre into the undercoat vertically with great force, thereby giving a smooth, velvet finish.
Cat. No. 180-3 Flock Blower Gun List **$7.50**

(W) G-C CONTROL GUN KIT—Cleans and lubricates noisy volume controls. Constructed of solid aluminum—will not rust.
Cat. No. 9285 List **$7.50**

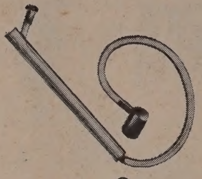
(X) CONTACT BURNISHING TOOL KIT—A complete kit for the servicing of relays, switches, etc. where critical contact points must be kept clean for ideal operating conditions.
Cat. No. 9339 Complete Kit List **$1.25**

FREE CATALOG

shows all GC products. Ask your jobber or write direct.

GENERAL CEMENT

GC ELECTRONICS CHEMICALS AND KITS



(A) NEW REK-O-MAGIC ANTI-STATIC SPRAY—Eliminates abrasive dust that ruins records. Cleans and keeps clean. Easy to use.
Cat. No. 98-12 12 oz. List **$2.25**

(B) DE-OX-ID—Electrical contact cleaner for silver, detent and radar contacts. Use in television, radio, telephone, relays, instruments, etc., the greatest development in electronic contact fluids.
Cat. No. 19-6 6 oz. List **$3.90**

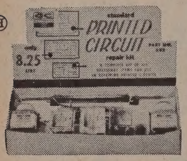
(C) K-27 PRINT-KOTE—T-V Silicone resin for printed circuits. This is the original clear silicone resin as used by manufacturers on all printed circuit sets. It insulates, protects and prevents shorts.
Cat. No. 14-6 6 oz. List **$3.65**

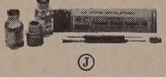
(D) SPRA-KLEEN—Eliminates noise due to dust, dirt and corrosion on electrical contacts the easy way. Just spray onto the contacts or control for a quick, easy job.
Cat. No. 8666 6-oz. List **$1.65**

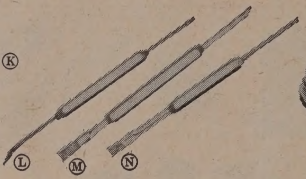
(E) ZERO-MIST SPRA KOAT—Instantly locates defective circuit components of an intermittent nature due to temperature change. Circuits cooled instantly . . . intermittent components isolated.
Cat. No. 8667 16-oz. List **$3.65**

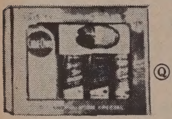
(F) G-C FLEX-SOL SPRA-CAN EXTENSION—The device that adapts Spra-Cans' to ANY use. Now you can reach and clean controls and tuners without removing them from the chassis. Speeds up and simplifies bench work.
Cat. No. 9344 List **$1.15**

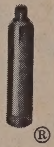
(G) NEW GUN TYPE SPRAY CAN HANDLE—Converts any spray can to a professional spray gun. The easy method of applying paints, service chemicals, cleaners, special finishes, etc. is made even easier!
Cat. No. 9288 List **$1.49**

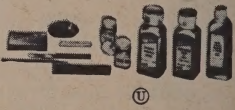












(H) NEW G-C STANDARD PRINTED CIRCUIT KIT—Includes one box each of foil, solder washers, solder wire, one solder probe tool and brush, silicone resin lacquer and solvent, tweezers and complete instructions.
Cat. No. 682 List **$8.25**

(1) G-C MASTER PRINTED CIRCUIT KIT—Includes all items in G-C standard kit plus one Ungar Soldering with one special tip and a 6-oz. spray can G-C No. 14-6 Print-Kote Silicone Resin Spray and complete instructions.
Cat. No. 683 List **$13.95**

(J) G-C No. 680—PRINTED CIRCUIT SILICONE RESIN SERVICE KIT—Here's a complete kit with the materials you need to repair any Printed Circuits in radio and TV sets using Printed Circuits. Used by leading set manufacturers.
Cat. No. 680 List **$9.75**

G-C No. 681—TV PRINTED CIRCUIT SILICONE RESIN SERVICE KIT—No. 681 kit is the same kit as No. 680, except the 21-1 Pure Silver Print is not included in kit.
Cat. No. 681 List **$5.80**

(K) G-C PRINT-KOTE SILICONE RESIN SPRAY—Genuine Silicone Resin as used by leading TV set manufacturers to protect printed circuits. After repairing or replacing parts in printed circuit sets.
Cat. No. 14-6 6-oz. List **$3.65**

(L) G-C No. 9093 PRINT-KOTE SOLDER AID PROBE—Handy, fine point probe specially designed to aid in probing and soldering printed circuits.
Cat. No. 9093 List **$1.65**

(M) G-C No. 9094 PRINT-KOTE BRUSH AND SCRAPER—Fine stainless steel brush and hardened steel scraper are required to scrape and clean the Silicone Resin from printed circuits before any repair can be made.
Cat. No. 9094 List **$1.65**

(N) G-C HEAVY DUTY SOLDERING AID TOOL—One end has a stiff wire brush for cleaning wire and terminal strip before soldering, and the other end is machined to hold the wires while being soldered.
Cat. No. 9088 List **$1.70**

(O) G-C PRINT-KOTE SOLDER—Special non-corrosive flux and low-melting solder combined with Pure Silver.
Cat. No. 9131 11-foot Coil List **$ .85**

(P) G-C SILVER PRINT—Same Pure Silver compounded as used by manufacturers in printed circuit design. Repair those printed circuits, touch up circuit around eyelets, rivets, parts, etc.
Cat. No. 21-1 ½ Troy oz. List **$3.95**
21-2 1 Troy oz. **7.75**

NEW G-C COPPERPRINT—Excellent for repairing printed circuits. A high conductive, fast drying compound to touch up printed circuits.
Cat. No. 20-2 2 oz. List **$2.00**

(Q) G-C TV AND FURNITURE BEAUTY KIT—Famous G-C Creme-O-Wax Furniture Polish. Also Walnut, Light Wood and Mahogany Skratch Stiks and free bottle of Kleer Lens.
Cat. No. 902 List **$2.55**

(R) G-C SKRATCH STIKS—Available for Walnut, Mahogany and Light Wood. Removes scratches on all shades and colors of woods—makes them vanish like magic.
Cat. No. 909-W List **$ .80**

(S) G-C No. 900 MASTER DELUXE CABINET REPAIR KIT—With this Master Repair Kit all repairs can be made even for the most exacting customer. All of the essentials for a really satisfactory repair job are included in this Kit. Our new spirit stains, varnishes and enamels are included in this kit (all spirit solvent).
Cat. No. 900 Master Deluxe Kit List **$14.50**

G-C No. 901 CABINET REPAIR KIT—Here's a kit that is second to none. It is a complete kit that will meet any emergency or do any repair job. With this kit you can repair wood cabinets, as well as plastic and bakelite cabinets, knobs, etc. On dents or nicks you can use the shellac sticks and melt them in with the spatula and alcohol lamp.
Cat. No. 901 List **$9.75**

No. 907 MASTER CABINET TOUCH-UP KIT—A high-grade, complete fast Touch-Up Kit for repairing scratches and dents on radio cabinets and furniture.
Cat. No. 907 Touch-Up Kit List **$7.95**

(T) G-C MAGIC SCRATCH REMOVER KIT—This kit is a combination of 6 shades of Scratch Crayon fillers and Light and Dark Scratch Fluid.
Cat. No. 915 List **$2.75**

Heeger, Inc., Los Angeles 6, California, as national sales administrators, present the following chemicals that have found favor with engineers, laboratory technicians and production in industry, to assist them in procuring the best proven material to enable them to arrive at the best results.

PROPELLON
Patent Applied for ®
Instant Freeze
For Detecting Defective Electrical and Electronic Parts, due to Thermal Intermittance
Propellon gives a much colder freeze and also, quicker than Competitive Brands, so it takes a shorter blast to accomplish Superior results; therefore use Propellon always.
Product of
H.M.H. Industries
Whittier, Calif., U.S.A.
Net Wt. 6 Oz.

From the laboratories of

H. M. H. INDUSTRIES

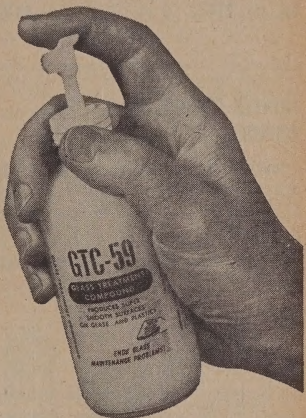
PROPELLON INSTANT FREEZE

Used by electronic engineers and technicians for detecting defective electronic and electrical parts, due to thermal intermittance. Valuable in the laboratory, field testing, service bench or field work, maintenance of equipment and in the electronic and electrical analysis of trouble. Propellon "Instant Freeze" delivers the lowest temperature practical for above uses. Odorless, non-toxic and non-flammable.

The extender facilitates in directing the spray directly onto the area tested. Also aids in getting into inaccessible places.

PACKED IN 6 OZ. CANS WITH 12" EXTENDER FREE WITH EACH CAN

6 OZ. CAN WITH 12" EXTENDER ______________ ea. $1.45


GTC-59
GLASS TREATMENT COMPOUND
PRODUCES SUPER SMOOTH SURFACES ON GLASS AND PLASTICS
ENDS GLASS MAINTENANCE PROBLEMS!

From BEAVER LABORATORIES

GTC-59

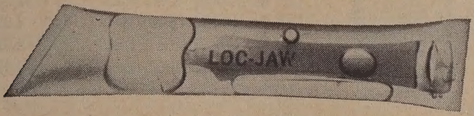
GLASS TREATMENT COMPOUND

Produces super-smooth surfaces on glass and plastics. Water repellent, smear proof and anti-static and imparts a lustrous glaze that stays dust and dirt free 10 times longer.

1. Cleans and degreases in one application.
2. Deposits tough, super-smooth and water repellent protective hard surface.
3. Cancels static fields which attract dirt and dust.
4. Keeps surface free of carbon dust build-up and other foreign matter 10 times longer.

Satisfaction guaranteed.

6 oz. bottle with sprayer___1.00 16 oz. can___2.00 32 oz. can___3.50 Gal. can___12.00



From the laboratories of

HASCOL ENTERPRISES

LOC-JAW

A SCIENTIFICALLY COMPOUNDED ADHERENT FORMULA

"Loc-Jaw" is an "Epoxy" base compound for bonding metal to metal, glass to metal, glass to glass, glass to wood, wood to wood, metal to wood, etc. Properly proportioned, it hermetically seals small parts and connections. After setting, it actively resists salt water and salt air, gasoline, chemicals and solvents of all types and withstands temperatures up to 300° F. Applicable to many industrial uses. Packed in its own plastic container and applicator. Indispensable where an adherent or sealer is needed.

INDIVIDUAL PLASTIC CONTAINER ______________ ea. 50c

BAG OF 10 ______________ per bag 4.50

Liqui-tape
LIQUID INSULATING TAPE
A superior insulator that's faster and easier to use!
JUST BRUSH IT ON
187-41 Hollis Ave., Hollis 23, N.Y.

From BEAVER LABORATORIES

LIQUI-TAPE

LIQUID INSULATING TAPE

A superior insulating compound that's faster and easier to use. This unique product was developed to meet the specialized demands of industry. Close spacing, moisture barriers, mechanical seals and electrical insulation are only a few of the uses for Liqui-Tape. May be applied after hard to get at equipment is installed. Dries to a hard pliable surface that will not crack, chip or peel.

SOME OF MANY USES

Damp proofing, for added insulation, motor winding, electrical connections, sealing compound, tool handles, rust proofing, all terminal connections, cementing compound, shock proofing, anti-corona compound, weather seal.

2 oz. Bottle___$ 1.00 32 oz. Bottle__$10.00
16 oz. Bottle__$ 6.00 Gallon ______$26.75

From HASCOL LABORATORIES

SAL-MET

NON-CORROSIVE FLUX

- **SOLDERS COPPER TO ALUMINUM**
- **ALUMINUM TO ALUMINUM**
- **SOLDERS ALL METALS**

A scientific laboratory non-corrosive flux for soldering all metals. By using "SAL-MET," copper can be soldered to aluminum, aluminum to aluminum, copper to steel, copper to copper; in fact, any metal to metal is possible. No special preparation on material to be soldered. Use conventional solder, applied with quick heat, regular soldering iron, torch or pot.

1 oz. Tubes ______________ ea. .72c
1 lb. Can ______________ ea. $5.65

SAL-MET
SOLDERS ALL METALS
NON-CORROSIVE
FLUX
HASCOL ENTERPRISES

ALL PRICES SUBJECT TO CHANGE

LMB • LOS ANGELES 6, CALIF.

Walsco ELECTRONICS

CHEMICALS

WALSCO SPRAY CHEMICALS

WALSCO FREEZ-MIST

214-12
FREEZ-MIST

Saves hours locating defective intermittent circuit components caused by temperature changes. Walsco Freez-Mist cools instantly pinpointing faulty capacitors, resistors, transistors, cold solder and oxidized junctions, etc. due to temperature variances.

Cat. No. 214-12 16 oz.	List **$3.65**

PRINTED CIRCUIT INSULATING VARNISH

A special formula providing a tough, protective coating for "printed" circuits. May also be used on exposed coil windings, etc. Fast air-drying.

Cat. No. 120-06 6 oz.	List **$3.65**

WALSCO "NO-OX"

Another popular Walsco product in the handy spray can. This amazing cleaner dissolves corrosion quickly and efficiently without the use of drastic solvents. Works by chemical action and not as solvent cleaner.

Cat. No. 100-06 6 oz.	List **$3.50**

WALSCO CONTACTENE

Now in the handy spray cans. Contactene lubricates as it cleans with fast action and is quick drying. Eliminates noise on controls, switches, tuners, etc.

Cat. No. 80-06 6 oz.	List **$1.40**
Cat. No. 80-12 16 oz.	List **2.00**

C-R TUBECOAT

Spray over scratches and peeled off sections of the television picture tube applying a fresh new coating. Easy to use—takes but a few seconds.

Cat. No. 199-06 6 oz.	List **$1.72**
Cat. No. 199-12 16 oz.	List **3.25**

NEW SPRAY CAN HANDLE

Converts any spray can to a professional spray gun. The Walsco spray can handle keeps hands clean, eliminates hand fatigue, yet maintains an even, accurate spray. Readily adaptable to any spray can and easily changed from one can to another.

Cat. No. 150	List **$1.49**

WALSCO ACRY-SPRAY

WALSCO
ALUMINUM
ACRY-SPRAY

This famous Walsco Acrylic Spray for the prevention of corrosion, rust and oxidation on all metals is now available in the new, handy spray cans. Easier to carry, easier to apply, does a better job.

Cat. No. 140-12 Clear Acry Spray—16 oz.	List **$1.99**
Cat. No. 141-12 Aluminum Acry Spray—16 oz.	List **$1.89**

AIR-DRY WRINKLE VARNISH

Just spray it on, let it air-dry and you have a professional factory wrinkle finish without baking. Gives a hard, durable, attractive wrinkle finish to metal, plastic or wood.

Cat. No. 145-06 6 oz., Black	List **$2.25**
Cat. No. 146-06 6 oz., Grey	List **2.25**
Cat. No. 145-12 16 oz., Black	List **3.05**
Cat. No. 146-12 16 oz., Grey	List **3.05**

ANTI-CORONA LACQUER

Just a thin coat sprayed from this can and you have protection from corona discharge up to 15,000 volts. A quick, easy application of Walsco Anti-Corona Lacquer may prevent trouble before it happens.

Cat. No. 195-06 6 oz.	List **$1.72**
Cat. No. 195-12 16 oz.	List **3.25**

WALSCO HAM-R-TONE

A top-quality enamel finish in a handy economical spray can is a combination that guarantees the user satisfaction. This famous Walsco Ham-R-Tone Enamel is now more popular than ever. Gives a professional finish to panels, racks, instruments, chassis and other metal parts in just a few minutes. Air-drying.

Cat. No. 148-06 6 oz., Grey	List **$1.65**
Cat. No. 149-06 6 oz., Blue	List **1.65**

[Walsco] ELECTRONICS

CHEMICALS

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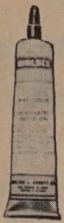
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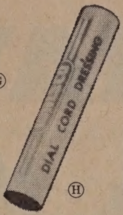
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(A) WALSCO CONTACTENE

Lubricates as it cleans; fast acting, quick drying. Eliminate volume control noise with this specially compounded electronic contact cleaner. Absolutely anti-oxidant.

Cat. No.		List
80-02	2-oz. bottle	$ .90
80-04	4-oz. bottle	1.10
80-08	8-oz. bottle	1.90
80-16	16-oz. can	2.50
80-06	6-oz. spray can	1.40
80-12	16-oz. spray can	2.00

(B) CONTACTENE INJECTOR

A fine surgical-grade steel needle. Designed to be inserted into places where ordinary applicators cannot reach. Makes lubrication of most volume controls and other parts possible without unsoldering or dismantling.

Cat. No. 989 List $ .75

(C) CHLOROTHENE (NON-TOXIC)

An amazing, new powerful solvent for all-purpose cleaning of any electronic component, switch, chassis, etc. Quickly dissolves grease, dirt, oils, tar, and waxes. Safe even indoors, under normal conditions.

Cat. No.		List
113-04	4-oz. bottle	$ .95
113-16	16-oz. bottle	2.20

(D) WALSCO RADIO CEMENT

A fast drying, elastic adhesive that will not become brittle with age. Compounded especially for speaker repair. Not affected by cold or high temperature, moisture or oil.

Cat. No.		List
50-01	1¾ oz. tube	$ .80
50-02	2 oz. bottle	.80
50-04	4 oz. bottle	1.20
50-08	8 oz. bottle	2.10
50-16	1 pt. bottle	3.65

(E) WALSCOLUB-B

Electrically neutral lubricant that prevents corrosion. Walscolub-B makes for smooth, noise-free operation of electrical contacts, band switches, attenuators, push button tuners, remote control switches and other contacts.

Cat. No. 22-01 1¾ oz. tube List $ .90

(F) WALSCO "NO-OX"

A liquid, non-gumming chemical that dissolves corrosion with amazing speed without the use of drastic solvents. Lubricates and protects slide contacts long after application.

Cat. No.		List
100-01	1 oz. bottle	$1.10
100-02	2 oz. bottle	1.60
100-16	1 pt. bottle	12.50
100-33	1 gal. can	55.00
100-34	5 gal. can	225.00
100-06	6 oz. spray can	3.50

(G) WALSCO "LUBRIPLATE"

Super lubricant, grease type, protective. Lubriplate reduces friction loss, prevents rust and corrosion. Extends bearing life 50% . . . increases mechanical efficiency 20% over ordinary lubricant.

Cat. No. 23-02 2 oz. tube List $ .90

(H) DIAL CORD FRICTION STICK

To prevent slipping, simply rub Walsco Friction Stick on dial cord or belt. Increase grip, lengthens life of cord.

Cat. No. 259-01 List $ .35

(J) WALSCO GLYPTAL

An outstanding insulating varnish. Resists heat, oils and acid. High arc resistance makes it essential in electrical and electronic application.

Cat. No.		List
134-02	2 oz. bottle	$ .95
134-08	8 oz. bottle	2.75

(K) WALSCO RED CORONA DOPE

Positively stops high voltage "Corona". Protects against "shorts" in high voltage circuits of TV sets. Completely coat surfaces and sharp corners to stop dangerous corona effect.

Cat. No.		List
198-02	2 oz. bottle	$1.20
198-16	1 pt. can	7.50

AIR-DRY WRINKLE VARNISH

Factory-like wrinkle finish without baking. Can be used on wood or metal. Gives a hard, tough, durable finish. Just one easy-to-apply coat does the job.

Cat. No.		List
146-02	2 oz. jar - Gray	$1.10
145-02	2 oz. jar - Black	1.10
145-33	1 gal. can - Black	22.00
146-33	1 gal. can - Gray	23.50

WALSCO SOLVENT AND THINNERS

TYPE CEMENT	USE SOLVENT	CAT. NO.	QTY.	LIST
Plastic Cement Radio Cement	*Cement Solvent	201-02 201-04 201-08 201-16 201-33	2 oz. 4 oz. 8 oz. 16 oz. 1 gal.	$ .75 1.20 1.35 2.20 8.00
Polystyrene Cement	Polystyrene Solvent	202-02 202-04 202-33	2 oz. 4 oz. 1 gal.	.75 1.10 6.15
Vinylite Cement Plastic Cement Radio Cement Crystallizing Lacquer Fungus Lacquer Telephone Black & Grey Light Bulb Coloring Anti-Corona Lacquer CR-Tubecoat	Lacquer Thinner	203-02 203-08 203-33 203-34	2 oz. 8 oz. 1 gal. 5 gal.	.80 1.40 8.25 35.50
Rubber Cement Wrinkle Varnish Flock Undercoat	Thinner	204-04 204-33	4 oz. 1 gal.	1.10 6.15
Elec. & Resistor Cement Wood Glue Aluma-Flux	Water			

* Cement Solvent should be used to loosen hardened cement on speaker cones, voice coils, etc., Solvent will discolor Plastic and Radio Cements if used as a thinner; Lacquer Thinner is recommended for this purpose.

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& CLEANER
STOPS NOISY OPERATION OF CONTROLS & SWITCHES WITHOUT REMOVAL FROM CHASSIS

QUIETROLE BOTTLE

Size	Cat. No.	Min. Order	Min. Re-order	Distr. Net Resale Price
2 oz.	10-2	24	24	$1.69
4 oz.	10-3	16	8	2.54
8 oz.	10-4	8	6	5.07

Effective Savings on Gross Lot Purchase
10-2 Size

QUIETROLE SPRAY-PACK (CAN)

6 oz.	10-5	12	12	2.79

Mfd. by

QUIETROLE COMPANY, SPARTANBURG, S. C.

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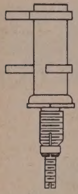
All of the coil forms shown on these pages are available wound to specifications in any quantity. In addition CAMBRIDGE THERMIONIC supplies a complete line of standard wound coils and chokes and coil and choke kits.

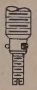
CERAMIC and PHENOLIC COIL FORMS

Tuning slugs supplied assembled; mounting hardware unassembled.



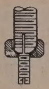
I-a
PERMA-TORQ

Compression spring (pre-assembled) provides permanent locking action.



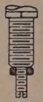
I-b
SPRING LOCK

Locking spring (unassembled) maintains tension against slug screw.



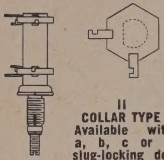
I-c
COMPRESSION LOCK

Locknut (unassembled) securely clamps split mounting stud.

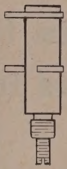


I-d
LOCKNUT

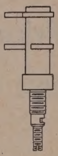
Conventional locknut (jam nut) (unassembled) tightens against mounting stud.



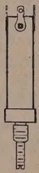
II
COLLAR TYPE
Available with a, b, c or d slug-locking devices.
(see Fig. I)



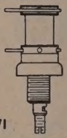
III



IV
Available with b or d slug-locking devices (See Fig. I) and with collars (see Fig. II)



V



VI
CLIP-TERMINAL TYPE
Available with a or b slug-locking devices (see Fig. I)

Part No.	Fig.	Mounting Stud			Height Above Panel	Body OD	Space Between Collars (2C4L, 2C2L)	Collar OD	Tuning Tool	
		Length	Thread	Base Dia.						
LS3*	III	¼	¼-28	none	1⅛	⅜	ring terminals only		1970	ORDER FROM CHARTS I AND II
LS4*	V	⅜	¼-28	9/16	2.0	½	ring terminals only		1970	
LS5†	I-b, II-b	9/32	¼-28	½ hex	1 1/16	.375	⅝	.545	1970	
PLS5†	I-a, II-a	5/16	¼-28	½ hex	1 1/16	.375	⅝	.545	1970	
SLS5†	I-c, II-c	27/64	¼-28	½ hex	1 1/16	.375	⅝	.545	1970	
LS6†	I-b, II-b	9/32	10-32	⅜ hex	55/64	.260	15/32	.430	1971	
PLS6†	I-a, II-a	5/16	10-32	⅜ hex	55/64	.260	15/32	.430	1971	
SLS6†	I-c, II-c	13/32	10-32	⅜ hex	55/64	.260	15/32	.430	1971	
LS7†	I-b, II-b	5/16	¼-28	⅝ hex	1 45/64	.500	1 1/32	.670	1970	
PLS7†	I-a, II-a	5/16	¼-28	⅝ hex	1 45/64	.500	1 1/32	.670	1970	
SLS7†	I-c, II-c	29/64	¼-28	⅝ hex	1 45/64	.500	1 1/32	.670	1970	
LS8†	VI-b	9/32	¼-28	½	23/32	.290	clip terminals only		1971	
PLS8†	VI-a	5/16	¼-28	½	23/32	.290	clip terminals only		1971	
LSM*	IV-d	¼	8-32	5/16	27/32	¼	15/32	.365	1971	
LSML*	IV-b	¼	10-32	5/16	27/32	¼	15/32	.365	1971	
LST†	I-d, II-d	¼	8-32	¼ hex	19/32	.205	9/32	.326	2033	
LSTL†	I-b, II-b	¼	8-32	¼ hex	19/32	.205	9/32	.326	2033	
PLST†	I-a, II-a	¼	8-32	¼ hex	19/32	.205	9/32	.326	2033	
SLST†	I-c, II-c	21/64	8-32	¼ hex	19/32	.205	9/32	.326	2033	
2480†	I-b	5/16	¼-28	⅝ hex	1¼	.500	ring terminals only		1970	ORDER FROM CHART III
2481†	II-b	5/16	¼-28	⅝ hex	1¼	.500	45/64	.670	1970	
2482†	I-c	29/64	¼-28	⅝ hex	1¼	.500	ring terminals only		1970	
2483†	II-c	29/64	¼-28	⅝ hex	1¼	.500	45/64	.670	1970	
2484†	I-a	5/16	¼-28	⅝ hex	1¼	.500	ring terminals only		1970	
2485†	II-a	5/16	¼-28	⅝ hex	1¼	.500	45/64	.670	1970	

* Body Material: phenolic. † Body Material: Ceramic.

CHART I

PART NO. SUFFIX	NUMBER OF SILICONE-FIBERGLAS COLLARS AND SOLDER TERMINALS
-2C4L	2 collars, 2 terminals ea.
-2C2L	2 collars, 1 terminal ea.
-CT2L	top collar only, 2 terminals
-CB2L	bottom collar only, 2 terminals

CHART II

LSM Types LS6 Types LS8 Types	LS3* LS5 Types	LS4 LS7 Types	LST Types	Frequency Range MC
-F	-C	-M	-I	0.2 - 1.5 pwd. iron slug
-E	-B	-K	-H	1 - 20 pwd. iron slug
-O	-N	-Q	-P	20 - 50 pwd. iron slug
-D	-A	-L	-G	30 and up pwd. iron slug
-2018B	-2018C	-2018D	-2018A	100 and up brass slug
-NS	-NS	-NS	-NS	no slug

Notes CHARTS I and II

* For brass load, add L to part no. suffix, as LS3-CL.

Specify slug-locking device, collar and frequency. For example:

PLS6-2C4L/E = Perma-Torq® locking device, 2 collars with 2 terminals ea., 1-20 freq.

LST-CB2L/2018A = locknut type, 1 collar at bottom with 2 terminals, 100 and up freq.

SLS7/NS = compression lock, ring terminals (no collar), no slug.

Note from descriptive chart that LS3, LS4 and LS8 are not available with collars.

CHART III

RING TERMINAL TYPE 2480-2482-2484	COLLAR TYPE 2481 - 2483 - 2485				Frequency Range MC
	2C4L	2C2L	CT2L	CB2L	
-1	-1	-6	-11	-16	0.2 - 1.5 pwd. iron slug
-2	-2	-7	-12	-17	1 - 20 pwd. iron slug
-3	-3	-8	-13	-18	20 - 50 pwd. iron slug
-4	-4	-9	-14	-19	30 and up pwd. iron slug
-5	-5	-10	-15	-20	100 and up brass slug

Notes CHART III

Part number indicates ring-terminal type and slug-locking device.

Indicate ring terminals or type of collar in combination with frequency. For example:

2480-3 — spring lock, ring terminals (no collar), 20-50 freq.

2483-9 — compression lock, 2 collars with 1 terminal each, 30 and up freq.

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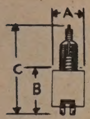
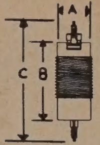
COIL FORMS

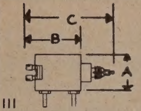
SHIELDED AND PRINTED CIRCUIT COIL FORMS



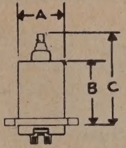
I STUD-MOUNT



II DOUBLE-TUNED



III SQUARE, HORIZONTAL
Also available without pins



IV FLANGE-MOUNT
Also available with fixed tuning

Shielded Coil Forms are supplied with tuning slug assembled; all other parts in bulk. Mounting hardware is included.

Material: Housing LS9, LS10, LS14, brass with nickel plate; LS11 brass with cadmium plate; all others aluminum with alodine finish. Board—Silicone-fiberglas.

Part No. and Body Material				Fig.	A	B	C Max. Extended Length	Max. Flange Dia.	Min. Flange Dia.	Terminals	Winding Area		Freq.	Tuning Tool	Notes
Paper-Phenolic	Poly-penco	Kel-F	Pwd. Iron								Max. Length	Max. OD			
LS9	LS9-1	LS9-2	*	I	7/16	39/64	1 31/64	—	—	2 to 6	11/64	17/64	Chart I	2033	Mounting stud 1/4-28.
LS10	LS10-1	LS10-2	*	I	5/8	57/64	2 7/64	—	—	2 to 6	13/32	29/64	Chart I	1971	Mounting stud 3/8-32.
LS11	LS11-1	LS11-2	*	I	11/32	17/32	1 1/8	—	—	2 to 4	13/64	7/32	Chart I	2375	Mounting stud 12-28.
*	LS14	*	*	II	29/64	1 1/16	1 25/32	—	—	4 to 6	23/32	5/16	Chart I	2375	12-32 thread.
2560	2561	2562	*	III	1/2 sq.	3/4	1 27/64	—	—	2 to 6	11/64	17/64	Chart II	2033	Without pins.
2565	2566	2567	*	III	1/2 sq.	3/4	1 27/64	—	—	2 to 6	11/64	17/64	Chart II	2033	With pins.
2585	2586	2587	*	IV	7/16	35/64	1 5/64	27/32	33/64	2 to 6	11/64	17/64	Chart II	2516	Traverse tuning.
2590	2591	2592	*	IV	5/8	57/64	1 43/64	1.0	45/64	2 to 6	13/32	29/64	Chart II	2516	Traverse tuning.
2595	2596	2597	*	IV	11/32	31/64	1	3/4	27/64	2 to 4	13/64	7/32	Chart II	2516	Traverse tuning.
2665	2666	2667	*	III	3/8 sq.	41/64	1 1/8	—	—	2 to 4	13/64	7/32	Chart II	2375	Without pins.
2670	2671	2672	*	III	3/8 sq.	41/64	1 1/8	—	—	2 to 4	13/64	7/32	Chart II	2375	With pins.
2685	2686	2687	2688	IV	7/16	3/8	—	27/32	33/64	2 to 6	11/64	17/64	Chart II	—	Fixed.
2690	2691	2692	2693	IV	5/8	49/64	—	1.0	45/64	2 to 6	13/32	29/64	Chart II	—	Fixed.
2695	2696	2697	2698	IV	11/32	3/8	—	3/4	27/64	2 to 4	13/64	7/32	Chart II	—	Fixed.

* Not available. See Printed Circuit Coil Form section for LS12.

CHART I

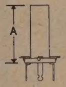
LS9	LS10	LS11	LS14	Frequency Range MC
-T	-F	-X	-X	0.2 - 1.5 pwd. iron slug
-S	-E	-W	-W	1 - 20 pwd. iron slug
-U	-0	-Y	-Y	20 - 50 pwd. iron slug
-R	-D	-V	not avail.	30 and up pwd. iron slug

Specify frequency in combination with number of terminals. For example: LS9-4T = 4 terminals, 0.2-1.5 freq. Note from descriptive chart that not all Shielded Coil Forms are available with all terminal quantities.

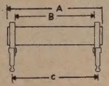
CHART II

2 Terminals	3 Terminals	4 Terminals	5 Terminals	6 Terminals	Frequency Range MC
-1	-5	-9	-13	-17	0.2 - 1.5 pwd. iron slug
-2	-6	-10	-14	-18	1 - 20 pwd. iron slug
-3	-7	-11	-15	-19	20 - 50 pwd. iron slug
-4	-8	-12	-16	-20	30 and up pwd. iron slug

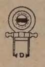
Specify frequency in combination with number of terminals. For example: 2562-15 = 5 terminals, 20-50 freq. Note from descriptive chart that not all Shielded Coil Forms are available with all terminal quantities.



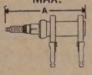
I VERTICAL



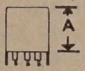
II HORIZONTAL



RIGHT-END VIEW FIGS. II, III



III HORIZONTAL WITH PERMA-TORQ®



IV SHIELDED

NOTE:

Figs. I and II: A Kel-F Locking Insert is available (supplied unassembled). Specify by adding suffix L to part number. For example, 2500L-1, SPCL-11-A-2L.
Fig. IV: Supplied with tuning slug assembled; all other parts in bulk. Mounting hardware is included.

Part No.	Fig.	A Length	Body OD	B Distance Bet. Collars	No. Terms. per Collar	Distance Between Mfg. Terminal Centers C Length	D Width	Freq.	Tuning Tool
2270†	II	5/8	.260	7/16	2	.500	.200	Chart I	2230
2271†	II	5/8	.260	5/8	2	.700	.200	Chart I	2230
2500†	II§	1 21/64	.260	1 1/8	2	1.200	.200	Chart I	2230
2501†	I	5/8	.260	1 collar	5	.404 mtg., dia., 72°		Chart I	2230
2525†	III	1 21/64	.205	21/64	2	.400	.300	Chart II	2033
2530†	III	1 47/64	.260	17/32	2	.600	.300	Chart II	1971
2540†	III	2 11/64	.375	5/8	2	.700	.400	Chart II	1970
2550†	III	3 11/64	.500	1 7/32	2	1.300	.400	Chart II	1970
** SPC-1*	I	3/4	.219	1 collar	2 to 4	.356 mtg. dia., Ch. IV		Chart III	2230
** SPC-2*	I	3/4	.285	1 collar	2 to 4	.426 mtg. dia., Ch. IV		Chart III	—
SPC-11†	I	5/8	.260	1 collar	2 to 6	.404 mtg. dia., Ch. IV		Chart III	2230
SPC-12†	I	13/16	.260	1 collar	2 to 6	.404 mtg. dia., Ch. IV		Chart III	2230
LS12*	IV	9/16	1/2 sq.	no collars	2 to 6	.136 basic circle rad.		Chart III	2375

* Body Material: phenolic. † Body Material: Ceramic. § 2 tuning cores. ** SPC-1 & SPC-2 obsoleted for new design

CHART I

Dash No.	Frequency Range MC
-1	0.2 - 1.5 pwd. iron core
-2	1 - 20 pwd. iron core
-3	20 - 50 pwd. iron core
-4	30-150 pwd. iron core
-5	100 and up brass core
-NS	no core

CHART II

Dash No.	Frequency Range MC
-1	0.2 - 1.5 pwd. iron slug
-2	1 - 20 pwd. iron slug
-3	20 - 50 pwd. iron slug
-4	30 and up pwd. iron slug
-5	100 and up brass slug
-NS	no slug

CHART III

SPC-1, SPC-11, SPC-12	SPC-2	LS12	Frequency Range MC
-F	-G	-C	0.2 - 1.5 pwd. iron core
-A-	-B	-B	1 - 20 pwd. iron core
-C	-D	-D	20 - 50 pwd. iron core
-I	-J	not avail.	30 - 150 pwd. iron core
-NS	-NS	not avail.	no core

Specify frequency in combination with number of terminals. For example: SPC-1-A-2L = 1-20 freq., 2 terminals. LS12-4B = 4 terminals, 1-20 freq.

CHART IV

No. Terminals	Spacing
2	180°
3	90°
4	90°
5	60°
6	60°

CAMBRIDGE THERMIONIC CORPORATION

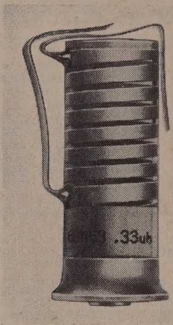
CAMBRIDGE 38, MASSACHUSETTS

ELECTRONIC DISTRIBUTOR DIVISION

ERIE RESISTOR CORPORATION — ERIE, PA.

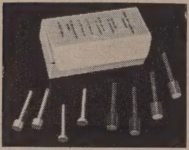
National Distributors of Corning Glass Works Electronic Components

CORNING STANDARD INDUCTORS



Ten standard value metallized glass inductances ranging from .05 uh. to 1.30 uh. Unexcelled for high frequency tuning applications requiring temperature stability and low loss. Operating temperature range −55°C to +125°C. Temperature coefficient zero to plus 20ppm/°C. Tolerance ±10%.

CORNING STANDARD INDUCTORS
TECHNICAL DATA



Two each of these four different types of cores: 1) red dot, 5.0 permeability; 2) blue dot, 9.2 permeability; 3) 1/4" brass; 4) 3/32" brass.

NOW . . . LOW COST INDUCTORS

Determine the exact inductance values you need quickly and inexpensively with this handy new test kit available only from Corning distributors. The kit consists of 10 standard value glass inductors which you can modify to specific odd values with four different types of cores.

These glass inductors are ruggedly built to take repeated handling in test labs or on production lines. The only inductors made without wires, the coil consists of a silver oxide film fired to the glass, then copper-plated and tin-dipped. It can't shift or work loose.

See your Corning distributor now for this new cost-cutting, time-saving Standard Inductor Kit. Low price is only $24.95 (net) including mounting hardware and complete technical data book.

ELECTRICAL CHARACTERISTICS

Inductance Range	.05 to 2 microhenries
Stability	Conductors fired into glass; coil can't change under shock, vibration, temperature cycling.
Operating Temperatures	−55°C to 125°C
Q Factor	120 to 200, depending on frequency and inductance value.
Temperature Coefficient	Zero to plus 20ppm/°C (without cores).
Tolerance	±10%
Maximum DC Current Capacity	One ampere.
Power Factor	.27% at 1 mc and 20°C.
Dielectric Constant	4.7 at 1 mc and 20°C

MECHANICAL CHARACTERISTICS

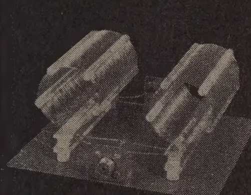
Coil Form Material	Corning Glass Works Code 7720 glass.
Coil Form OD	.460-inch, ±.010-inch.
Coil Form ID	.375-inch minimum.
Coil Form Length	1.250-inch.
Weight	4.556 grams.
Metallizing	Fired-on silver, copper plated, flash tin plated.
Terminals	3/32 x .005 x 1 1/4-inch hot tinned copper.
Solder	60/40.
Bushings	Brass, silver plated.
Mountings	6-32 screw in skirted D flat flange.
Depth Behind Chassis	1 9/32, ± 1/32-inch.
Thermal Expansion	36 x 10^{-7}/°C; 20 x 10^{-7}/°F.

Individual inductors of standard values without or with choice of cores are available with D flat or split bushing.

air dux

AIR WOUND COILS

Illumitronic Engineering has developed a complete, versatile series of air core inductors designed especially for the amateur rig, or for prototypes of RF transmission equipment. These coils may be used for pi output circuits, conventional LC output circuits, interstage and oscillator circuits. The series consists of a standard coil type, a variable pitch type, and an indented type, in a range of diameters from ½ inch to 3 inches. All Air Dux® coils are constructed of tinned (silver or formvar) copper wire wound on large low loss polystyrene rods for the highest mechanical strength and lowest electrical losses.

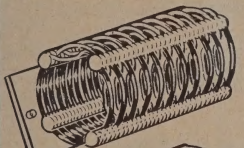


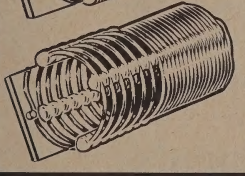
air dux® BALUN

Unbalanced coax lines used on most transmitters can be matched to balanced lines of either 75 or 300 ohms impedance by using the B2009 air dux coils. May be used with transmitters and receivers without adjustment over the frequency range of 80 through 10 meters, and will handle power inputs up to 200 watts.

NO.	DESCRIPTION	NET EA.
B2009	Coil with hardware	3.36
MB2009	Mounting plate	1.95

Two coils required.
Coax connector not included.



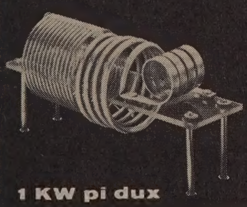


indented pi dux®

Cat.No.	Dia	TPI	Wire Size	Length of Coil	L uh.	Net
816A	1	16	18	3 3/16	18.0	1.25
1014A	1¼	14	18	2 25/32	18.3	1.50
1212A	1½	12	16	2¾	18.3	1.70
1411A	1¾	11	14	2⅝	18.0	1.90
1609A	2	9	14	3	18.1	2.10
2007A	2½	7	12	3¼	18.6	2.60
2406A	3	6	10	3 5/16	18.7	3.25

vari-pitch pi dux®

Cat.No.	Dia	TPI	Wire Size	Length of Coil	L uh.	Net
820D10	1	20 & 10	18	3¼	18.0	1.25
1212D6	1½	12 & 6	14	3 13/16	18.6	2.00
1608D6	2	8 & 6	12	4⅛	18.1	2.70
2008D5	2½	8 & 5	12	3¾	18.2	3.25
2408D4	3	8 & 4	10	3¾	18.6	3.95



1 KW pi dux

2 new pi dux assemblies

The 500 and 1000 watt pi dux assemblies are compact yet conservatively rated. The high frequency coil sections are silver plated for high tank circuit efficiency. A complete technical sheet is included with each assembly.

#195-1 500 watt pi dux Assembly net 5.95
#195-2 1 KW pi dux Assembly net 14.50

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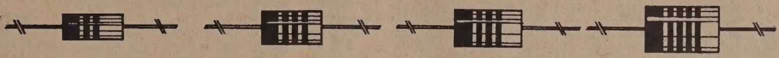
MIL-SPEC MOLDED CHOKES

MILLER MOLDED COILS CONFORM TO MIL-C-15305A



"MICRO MITE" SERIES 9210

Mold Size: .155 ± .010 diameter; .375 ± .010 length.
Leads: AWG ≠ 22 TCW; 1.44 ± .125 length.
Power Rating: ½ Watt Max. at 90° C.

PART NO.	L @ UH	Q MIN.	TEST FREQ. (Mc)	Fo MIN. (Mc)	Rdc. MAX.	MA. MAX.	CORE MTL.	LIST PRICE
9210-54	36 ± 5%	50	2.5	10.5	2.50	320	IRON	$1.50
9210-56	39 ± 5%	50	2.5	10.3	2.60	315	IRON	1.50
9210-58	43 ± 5%	50	2.5	10.3	2.65	310	IRON	1.50
9210-60	47 ± 5%	50	2.5	10.0	2.70	305	IRON	1.50
9210-62	51 ± 5%	50	2.5	9.7	2.75	300	IRON	1.50
9210-64	56 ± 5%	50	2.5	9.5	2.80	295	IRON	1.50
9210-66	62 ± 5%	45	2.5	9.0	2.95	290	IRON	1.50
9210-68	68 ± 5%	45	2.5	8.7	3.25	285	IRON	1.50
9210-70	75 ± 5%	45	2.5	8.5	3.40	275	IRON	1.50
9210-72	82 ± 5%	45	2.5	8.0	3.55	270	IRON	1.50
9210-74	91 ± 5%	45	2.5	7.7	3.70	265	IRON	1.50
9210-76	100 ± 5%	45	2.5	7.7	4.00	260	IRON	1.60
9210-78	110 ± 5%	60	.790	7.3	4.45	255	IRON	1.60
9210-80	120 ± 5%	65	.790	6.7	4.65	250	IRON	1.60
9210-82	130 ± 5%	65	.790	6.7	4.95	240	IRON	1.60
9210-84	150 ± 5%	65	.790	6.5	5.30	235	IRON	1.60
9210-86	160 ± 5%	65	.790	6.5	5.90	230	IRON	1.65
9210-88	180 ± 5%	65	.790	6.3	6.20	225	IRON	1.65
9210-90	200 ± 5%	65	.790	6.0	6.60	215	IRON	1.65
9210-92	220 ± 5%	65	.790	5.5	7.20	210	IRON	1.65
9210-94	240 ± 5%	65	.790	5.3	7.60	205	IRON	1.65

"MICRO MITE" SERIES 9220

MOLD SIZE	MOLD DIAMETER	MOLD LENGTH	LEAD SIZE	LEAD LENGTH	MAX. WATT AT 90° C.
A	.190 ± .010	.440 ± .010	AWG 22	1.44 ± .125	½
B	.215 ± .010	.560 ± .010	AWG 21	1.44 ± .125	½
C	.240 ± .010	.740 ± .010	AWG 20	1.44 ± .125	½

PART No.	L @ UH	Q MIN.	TEST FREQ. (Mc)	Fo MIN. (Mc)	Rdc. MAX.	MA. MAX.	MOLD SIZE	CORE MTL.	LIST PRICE
9220-00	270 ± 5%	65	.790	4.7	7.8	205	A	IRON	$1.75
9220-02	300 ± 5%	65	.790	4.5	8.3	200	A	IRON	1.75
9220-04	330 ± 5%	65	.790	4.5	8.7	195	A	IRON	1.75
9220-06	360 ± 5%	65	.790	4.0	9.0	190	A	IRON	1.90
9220-08	390 ± 5%	65	.790	4.0	9.5	185	A	IRON	1.90
9220-10	430 ± 5%	65	.790	4.0	10.0	180	A	IRON	1.90
9220-12	470 ± 5%	65	.790	3.7	10.5	175	A	IRON	1.90
9220-14	500 ± 5%	65	.790	3.7	11.0	170	A	IRON	1.90
9220-16	560 ± 5%	65	.790	3.3	11.5	165	A	IRON	2.00
9220-18	620 ± 5%	60	.790	3.0	12.5	160	A	IRON	2.00
9220-20	680 ± 5%	60	.790	3.0	13.0	155	A	IRON	2.00
9220-22	750 ± 5%	55	.790	3.0	14.0	150	A	IRON	2.00
9220-24	820 ± 5%	55	.790	2.8	14.5	145	A	IRON	2.10
9220-26	910 ± 5%	55	.790	2.7	15.0	140	A	IRON	2.10
9220-28	1000 ± 5%	55	.790	2.6	16.0	135	A	IRON	2.10
9220-30	1100 ± 5%	60	.250	2.7	20.0	135	B	IRON	2.25
9220-32	1200 ± 5%	60	.250	2.7	21.0	130	B	IRON	2.25
9220-34	1300 ± 5%	60	.250	2.6	21.5	130	B	IRON	2.25
9220-36	1500 ± 5%	65	.250	2.3	23.5	125	B	IRON	2.25
9220-38	1600 ± 5%	65	.250	2.2	24.5	120	B	IRON	2.25
9220-40	1800 ± 5%	65	.250	2.2	26.0	120	B	IRON	2.25
9220-42	2000 ± 5%	65	.250	2.0	27.5	115	B	IRON	2.25
9220-44	2200 ± 5%	70	.250	2.0	28.5	110	B	IRON	2.25
9220-46	2400 ± 5%	70	.250	1.9	30.0	110	B	IRON	2.25
9220-48	2700 ± 5%	70	.250	1.9	31.5	105	B	IRON	2.25
9220-50	3000 ± 5%	70	.250	1.8	33.5	100	B	IRON	2.25
9220-52	3300 ± 5%	70	.250	1.6	36.0	100	B	IRON	2.25
9220-54	3600 ± 5%	70	.250	1.5	37.5	95	B	IRON	2.25
9220-56	3900 ± 5%	80	.250	1.5	41.0	95	C	IRON	2.35
9220-58	4300 ± 5%	80	.250	1.5	43.0	90	C	IRON	2.35
9220-60	4700 ± 5%	80	.250	1.4	45.0	90	C	IRON	2.35
9220-62	5000 ± 5%	80	.250	1.3	46.0	85	C	IRON	2.35
9220-64	5600 ± 5%	80	.250	1.3	49.5	85	C	IRON	2.50
9220-66	6200 ± 5%	80	.250	1.2	51.5	80	C	IRON	2.50
9220-68	6800 ± 5%	80	.250	1.2	54.0	80	C	IRON	2.50
9220-70	7500 ± 5%	80	.250	1.2	57.0	80	C	IRON	2.50
9220-72	8200 ± 5%	80	.250	1.1	59.5	75	C	IRON	2.65
9220-74	9100 ± 5%	80	.250	1.0	64.0	75	C	IRON	2.65
9220-76	10000 ± 5%	80	.250	1.0	66.5	75	C	IRON	2.65

MILLER SERIES 9310

Mold Size: .155 ± .010 diameter; .375 ± .010 length.
Leads: AWG ≠22 TCW; 1.437 ± .125 length.
Power Rating: ¼ Watt Max. at 90° C.

PART NO.	L @ UH	Q MIN.	TEST FREQ. (Mc)	Fo MIN (Mc)	Rdc. MAX.	MA. MAX.	CORE MTL.	LIST PRICE
9310-00	.15 ± 20%	50	25	525	.03	2630	PHENOLIC	$1.00
9310-02	.22 ± 20%	45	25	450	.05	2235	PHENOLIC	1.00
9310-04	.33 ± 20%	45	25	390	.09	1490	PHENOLIC	1.00
9310-06	.47 ± 20%	45	25	310	.12	1340	PHENOLIC	1.00
9310-08	.68 + 20%	55	25	250	.14	1165	PHENOLIC	1.00
9310-10	.82 ± 20%	55	25	220	.22	930	PHENOLIC	1.00
9310-12	1.00 ± 10%	50	25	200	.25	875	PHENOLIC	1.00
9310-14	1.20 ± 10%	35	7.9	180	.42	675	PHENOLIC	1.00
9310-16	1.50 ± 10%	35	7.9	160	.50	600	PHENOLIC	1.00
9310-18	1.80 ± 10%	35	7.9	150	.65	500	PHENOLIC	1.00
9310-20	2.20 ± 10%	35	7.9	135	.95	400	PHENOLIC	1.00
9310-22	2.70 ± 10%	35	7.9	120	1.20	370	PHENOLIC	1.00
9310-24	3.30 ± 10%	35	7.9	110	2.00	325	PHENOLIC	1.10
9310-26	3.90 ± 10%	35	7.9	100	2.30	300	PHENOLIC	1.10
9310-28	4.70 ± 10%	35	7.9	90	2.60	270	PHENOLIC	1.10
9310-30	5.60 ± 10%	45	7.9	60	.32	780	IRON	1.10
9310-32	6.80 ± 10%	50	7.9	55	.50	600	IRON	1.10
9310-34	8.20 ± 10%	50	7.9	50	.60	540	IRON	1.10
9310-36	10.0 ± 10%	55	7.9	45	.90	460	IRON	1.10
9310-38	12.0 ± 10%	65	2.5	42	1.10	375	IRON	1.10
9310-40	15.0 ± 10%	65	2.5	40	1.30	350	IRON	1.10
9310-42	18.0 ± 10%	75	2.5	34	2.25	300	IRON	1.10
9310-44	22.0 ± 10%	75	2.5	30	2.50	275	IRON	1.10
9310-46	24.0 ± 5%	60	2.5	26	2.50	275	IRON	1.25
9310-48	27.0 ± 5%	60	2.5	25	2.60	260	IRON	1.25
9310-50	30.0 ± 5%	65	2.5	19	2.80	245	IRON	1.25
9310-52	33.0 ± 5%	65	2.5	19	2.90	230	IRON	1.25

MILLER SERIES 9320

Mold Size: 0.185 ± .010 diameter; 0.437 ± .010 length.
Leads: AWG ≠22 TCW; 1.437 ± .125 length. Power Rating: ⅓ Watt Max. at 90° C.

PART NO.	L @ UH	Q MIN.	TEST FREQ. (Mc)	Fo MIN. (Mc)	Rdc. MAX.	MA. MAX.	CORE MTL.	LIST PRICE
9320-00	.15 ± 20%	65	25	600	.03	3400	PHENOLIC	$1.00
9320-02	.22 ± 20%	60	25	470	.04	2950	PHENOLIC	1.00
9320-04	.33 ± 20%	60	25	390	.05	2500	PHENOLIC	1.00
9320-06	.47 ± 20%	60	25	320	.08	1875	PHENOLIC	1.00
9320-08	.68 ± 20%	65	25	240	.12	1400	PHENOLIC	1.00
9320-10	1.00 ± 10%	60	25	190	.25	900	PHENOLIC	1.00
9320-12	1.50 ± 10%	40	7.9	150	.50	720	PHENOLIC	1.00
9320-14	2.20 ± 10%	40	7.9	130	.90	460	PHENOLIC	1.00
9320-16	2.70 ± 10%	40	7.9	120	1.10	450	PHENOLIC	1.00
9320-18	3.30 ± 10%	35	7.9	68	.12	1300	IRON	1.10
9320-20	3.90 ± 10%	35	7.9	62	.16	1130	IRON	1.10
9320-22	4.70 ± 10%	40	7.9	58	.22	915	IRON	1.10
9320-24	5.60 ± 10%	40	7.9	50	.30	900	IRON	1.10
9320-26	6.80 ± 10%	40	7.9	45	.40	800	IRON	1.10
9320-28	8.20 ± 10%	40	7.9	43	.45	770	IRON	1.10
9320-30	10.0 ± 10%	40	7.9	40	.60	690	IRON	1.10
9320-32	12.0 ± 10%	55	2.5	35	.85	480	IRON	1.10
9320-34	15.0 ± 10%	60	2.5	30	1.20	480	IRON	1.10
9320-36	22.0 ± 10%	65	2.5	24	2.00	375	IRON	1.10
9320-38	27.0 ± 10%	70	2.5	22	2.80	300	IRON	1.10

MILLER SERIES 9330

Mold Size: 0.215 ± .010 diameter; 0.560 ± .010 length.
Leads: AWG ≠22 TCW; 1.437 ± .125 length. Power Rating: ½ Watt Max. at 90° C.

PART NO.	L @ UH	Q MIN.	TEST FREQ. (Mc)	Fo MIN. (Mc)	Rdc. MAX.	MA. MAX.	CORE MTL.	LIST PRICE
9330-00	.47 ± 20%	70	25	280	.06	2000	PHENOLIC	$1.10
9330-02	.68 ± 20%	70	25	240	.07	1275	PHENOLIC	1.10
9330-04	1.00 ± 10%	70	25	200	.13	1180	PHENOLIC	1.10
9330-06	1.50 ± 10%	45	7.9	160	.28	1080	PHENOLIC	1.10
9330-08	2.20 ± 10%	45	7.9	135	.50	700	PHENOLIC	1.10
9330-10	2.70 ± 10%	45	7.9	120	.65	660	PHENOLIC	1.10
9330-12	3.30 ± 10%	45	7.9	105	1.00	600	PHENOLIC	1.10
9330-14	3.90 ± 10%	45	7.9	100	1.20	460	PHENOLIC	1.10
9330-16	4.70 ± 10%	45	7.9	90	1.80	350	PHENOLIC	1.10
9330-18	5.60 ± 10%	35	7.9	55	.13	1500	IRON	1.25
9330-20	6.80 ± 10%	35	7.9	50	.20	1250	IRON	1.25
9330-22	8.20 ± 10%	35	7.9	44	.22	1190	IRON	1.25
9330-24	10.0 ± 10%	35	7.9	42	.26	990	IRON	1.25
9330-26	12.0 ± 10%	45	2.5	34	.45	800	IRON	1.25
9330-28	15.0 ± 10%	45	2.5	32	.52	730	IRON	1.25
9330-30	18.0 ± 10%	50	2.5	28	.70	680	IRON	1.25
9330-32	22.0 ± 10%	60	2.5	24	1.00	640	IRON	1.25
9330-34	27.0 ± 10%	65	2.5	22	1.30	550	IRON	1.25
9330-36	33.0 ± 10%	65	2.5	20	1.50	510	IRON	1.25
9330-38	39.0 ± 10%	70	2.5	18	2.00	440	IRON	1.25

MILLER SERIES 9340

Mold Size: 0.280 ± .010 diameter; 0.900 ± .010 length.
Leads: AWG ≠21 TCW; 1.437 ± .125 length. Power Rating: 1 Watt Max. at 90° C.

PART NO.	L @ UH	Q MIN.	TEST FREQ. (Mc)	Fo MIN. (Mc)	Rdc. MAX.	MA. MAX.	CORE MTL.	LIST PRICE
9340-00	1.2 ± 10%	60	7.9	170	.08	2800	PHENOLIC	$1.30
9340-02	1.5 ± 10%	65	7.9	160	.10	2600	PHENOLIC	1.30
9340-04	2.2 ± 10%	65	7.9	125	.17	1980	PHENOLIC	1.30
9340-06	2.7 ± 10%	65	7.9	115	.23	1600	PHENOLIC	1.30
9340-08	3.3 ± 10%	65	7.9	100	.32	1275	PHENOLIC	1.25
9340-10	3.9 ± 10%	65	7.9	95	.45	1145	PHENOLIC	1.25
9340-12	4.7 ± 10%	65	7.9	90	.60	950	PHENOLIC	1.25
9340-14	5.6 ± 10%	65	7.9	80	.80	860	PHENOLIC	1.25
9340-16	6.8 ± 10%	65	7.9	75	1.10	775	PHENOLIC	1.25
9340-18	8.2 ± 10%	65	7.9	68	1.50	590	PHENOLIC	1.25
9340-20	10.0 ± 10%	65	7.9	60	2.00	510	PHENOLIC	1.25
9340-22	12.0 ± 10%	40	2.5	53	2.70	425	PHENOLIC	1.25
9340-24	15.0 ± 10%	40	2.5	50	3.30	410	PHENOLIC	1.25
9340-26	18.0 ± 10%	40	2.5	45	4.20	350	PHENOLIC	1.25
9340-28	22.0 ± 10%	50	2.5	25	.30	1330	IRON	1.40
9340-30	27.0 ± 10%	50	2.5	22	.36	1240	IRON	1.40
9340-32	33.0 ± 10%	60	2.5	20	.56	1060	IRON	1.40
9340-34	39.0 ± 10%	60	2.5	18	.65	760	IRON	1.40
9340-36	47.0 ± 10%	65	2.5	16	1.10	750	IRON	1.40
9340-38	56.0 ± 10%	60	2.5	14	1.20	700	IRON	1.40
9340-39	68.0 ± 10%	75	2.5	13	1.85	600	IRON	1.40
9340-40	82.0 ± 10%	80	2.5	13	2.20	550	IRON	1.40
9340-42	100.0 ± 10%	80	2.5	12	2.60	530	IRON	1.40
9340-44	120.0 ± 10%	100	.790	10	4.00	425	IRON	1.40

MILLER SERIES 9350

COIL DIMENSIONS	A	B	C	D	LEAD DIMENSIONS
DIAMETER ± .010	.250	.310	.375	.468	AWG 20, 21, 22 TCW
LENGTH ± .010	.560	560	625	.687	1.437 ± .125
MAX. WATT. AT 90° C.	¾	¾	1	1⅓	

PART No.	L @ UH	Q MIN.	TEST FREQ. (Mc)	Fo MIN (Mc)	Rdc. MAX.	MA. MAX.	MOLD SIZE	CORE MTL.	LIST PRICE
9350-00	47 ± 10%	18	2.5	9.5	5.9	275	A	PHENOLIC	$1.70
9350-02	56 ± 10%	18	2.5	9.0	6.4	225	A	PHENOLIC	1.70
9350-04	68 ± 10%	45	2.5	6.8	3.3	330	A	IRON	1.80
9350-06	82 ± 10%	40	2.5	6.3	3.5	310	A	IRON	1.80
9350-08	100 ± 10%	35	2.5	5.8	3.8	300	A	IRON	1.80
9350-10	120 ± 10%	60	.790	5.0	4.7	290	A	IRON	1.80
9350-12	150 ± 10%	60	.790	4.6	5.3	280	A	IRON	1.80
9350-14	180 ± 10%	60	.790	3.4	5.5	275	B	IRON	1.85
9350-16	220 ± 10%	60	.790	3.2	5.9	265	B	IRON	1.85
9350-18	270 ± 10%	60	.790	3.0	6.6	255	B	IRON	1.85
9350-20	330 ± 10%	55	.790	2.7	7.8	245	B	IRON	1.85
9350-22	390 ± 10%	55	.790	2.5	8.7	235	B	IRON	1.85
9350-24	470 ± 10%	50	.790	2.3	9.0	230	C	IRON	1.85
9350-26	560 ± 10%	45	.790	2.1	10.0	215	C	IRON	1.85
9350-28	680 ± 10%	45	.790	2.0	11.2	205	C	IRON	1.85
9350-30	820 ± 10%	40	.790	1.8	13.0	195	C	IRON	1.85
9350-32	1000 ± 10%	35	.790	1.7	14.5	185	C	IRON	1.85
9350-34	1500 ± 10%	55	.250	2.0	22.0	180	D	IRON	1.90
9350-36	2000 ± 10%	55	.250	1.7	26.0	165	D	IRON	1.90
9350-38	2500 ± 10%	55	.250	1.5	30.0	150	D	IRON	1.90
9350-40	5000 ± 10%	50	.250	1.0	65.0	105	D	IRON	2.00
9350-42	10000 ± 10%	40	.250	0.8	70.0	105	D	FERRITE	2.50

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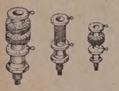
Industrial Adjustable R.F. Coils

Ceramic Adjustable R.F. Coils



The forms used in this series feature terminal rings machined from the ceramic form material. Coils wound on these forms exhibit high Q and good stability. The adjusting core is held rigidly at any setting through the use of a newly designed tension device on the bushing.

Sub Miniature Adjustable R.F. Coils

Dimensions (form) 7/32″ dia. x 19/32″ long

Part No.	L Max. ± 5%	L Min. ± 10%	List Price
40A000CBI	Coil Form w/hdw. and Core		$1.75
40A107CBI	.125 uh	.091 uh	2.55
40A157CBI	.188 uh	.124 uh	2.55
40A227CBI	.220 uh	.184 uh	2.55
40A337CBI	.413 uh	.265 uh	2.55
40A477CBI	.587 uh	.327 uh	2.60
40A687CBI	.850 uh	.482 uh	2.60
40A827CBI	1.02 uh	.630 uh	2.75
40A106CBI	1.25 uh	.730 uh	2.75
40A156CBI	1.88 uh	1.06 uh	2.75
40A226CBI	2.75 uh	1.50 uh	2.80
40A336CBI	4.13 uh	2.15 uh	2.80
40A476CBI	5.87 uh	3.00 uh	2.90
40A686CBI	8.50 uh	4.40 uh	2.90
40A826CBI	10.2 uh	5.25 uh	2.90
40A105CBI	12.5 uh	8.06 uh	3.00
40A155CBI	18.8 uh	11.9 uh	3.00
40A225CBI	27.5 uh	17.1 uh	3.10
40A335CBI	41.3 uh	26.6 uh	3.10
40A475CBI	58.7 uh	39.0 uh	3.25
40A685CBI	85.0 uh	58.0 uh	3.25
40A825CBI	102 uh	69.0 uh	3.50
40A104CBI	125 uh	84.0 uh	3.50
40A000CBI	Bulk pack per 100		150.00

Miniature Adjustable R.F. Coils

Dimensions (form) ¼″ dia. x 13/16″ long

Part No.	L Max. ± 5%	L Min. ± 10%	List Price
41A000CBI	Coil Form w/hdw. and Core		$1.85
41A106CBI	1.25 uh	.69 uh	2.75
41A156CBI	1.87 uh	1.20 uh	2.75
41A226CBI	2.75 uh	1.42 uh	2.75
41A336CBI	4.10 uh	2.00 uh	2.80
41A476CBI	5.80 uh	2.80 uh	2.80
41A686CBI	8.50 uh	4.00 uh	2.80
41A826CBI	10.0 uh	4.50 uh	2.85
41A105CBI	12.5 uh	6.50 uh	2.85
41A155CBI	18.7 uh	10.8 uh	2.85
41A225CBI	27.5 uh	15.2 uh	2.85
41A335CBI	41.0 uh	26.0 uh	2.90
41A475CBI	58.0 uh	32.5 uh	2.90
41A685CBI	85.0 uh	48.5 uh	3.00
41A825CBI	100 uh	61.0 uh	3.00
41A104CBI	125 uh	65.0 uh	3.10
41A154CBI	187 uh	110 uh	3.10
41A224CBI	275 uh	160 uh	3.25
41A334CBI	410 uh	253 uh	3.25
41A474CBI	580 uh	390 uh	3.40
41A684CBI	850 uh	560 uh	3.50
41A824CBI	1.00 mh	670 uh	3.60
41A103CBI	1.25 mh	700 uh	3.75
41A000CBI	Bulk pack per 100		165.00

Standard Adjustable R.F. Coils

Dimensions (form) ⅜″ dia. x 1″ long

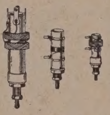
Part No.	L Max. ± 5%	L Min. ± 10%	List Price
42A000CBI	Coil Form w/hdw. and Core		$1.90
42A106CBI	1.25 uh	.68 uh	2.75
42A156CBI	1.87 uh	1.00 uh	2.75
42A226CBI	2.75 uh	1.35 uh	2.75
42A336CBI	4.10 uh	2.12 uh	2.80
42A476CBI	5.80 uh	2.40 uh	2.80
42A686CBI	8.50 uh	3.60 uh	2.85
42A826CBI	10.0 uh	4.45 uh	2.85
42A105CBI	12.5 uh	6.05 uh	3.00
42A155CBI	18.7 uh	9.40 uh	3.00
42A225CBI	27.5 uh	12.9 uh	3.05
42A335CBI	41.0 uh	18.8 uh	3.05
42A475CBI	58.0 uh	27.5 uh	3.30
42A685CBI	85.0 uh	37.5 uh	3.30
42A825CBI	100 uh	45.0 uh	3.40
42A104CBI	125 uh	54.0 uh	3.55
42A154CBI	187 uh	92.0 uh	3.55
42A224CBI	275 uh	123 uh	3.55
42A334CBI	410 uh	200 uh	3.60
42A474CBI	580 uh	300 uh	3.60
42A684CBI	850 uh	430 uh	3.60
42A824CBI	1.00 mh	510 uh	3.70
42A103CBI	1.25 mh	780 uh	3.70
42A153CBI	1.87 mh	1.10 mh	3.75
42A223CBI	2.20 mh	1.66 mh	3.75
42A333CBI	4.10 mh	2.40 mh	3.75
42A473CBI	5.80 mh	3.46 mh	3.80
42A683CBI	8.50 mh	5.25 mh	3.80
42A823CBI	10.0 mh	6.00 mh	3.95
42A102CBI	12.5 mh	9.20 mh	3.95
42A000CBI	Bulk pack per 100		170.00

Jumbo Adjustable R.F. Coils

Dimensions (form) ½″ dia. x 1-7/16″ long

Part No.	L Max. ± 5%	L Min. ± 10%	List Price
43A000CBI	Coil Form w/hdw. and Core		$2.00
43A105CBI	12.5 uh	5.70 uh	2.95
43A155CBI	18.7 uh	9.00 uh	2.95
43A225CBI	27.5 uh	12.0 uh	2.95
43A335CBI	41.0 uh	17.0 uh	3.00
43A475CBI	58.0 uh	25.0 uh	3.00
43A685CBI	85.0 uh	38.0 uh	3.40
43A825CBI	100 uh	42.0 uh	3.40
43A104CBI	125 uh	65.0 uh	3.40
43A154CBI	187 uh	95.0 uh	3.60
43A224CBI	275 uh	138 uh	3.60
43A334CBI	410 uh	205 uh	3.60
43A474CBI	580 uh	240 uh	3.65
43A684CBI	850 uh	370 uh	3.65
43A824CBI	1.00 mh	450 uh	3.65
43A103CBI	1.25 mh	600 uh	3.65
43A153CBI	1.87 mh	900 uh	3.75
43A223CBI	2.75 mh	1.30 mh	3.75
43A333CBI	4.10 mh	1.95 mh	3.80
43A473CBI	5.80 mh	2.90 mh	3.80
43A683CBI	8.50 mh	4.30 mh	3.85
43A823CBI	10.0 mh	5.10 mh	3.85
43A102CBI	12.5 mh	6.50 mh	3.90
43A152CBI	18.7 mh	9.80 mh	3.90
43A222CBI	27.5 mh	13.0 mh	3.95
43A332CBI	41.0 mh	20.0 mh	3.95
43A472CBI	58.0 mh	29.0 mh	4.00
43A682CBI	85.0 mh	42.0 mh	4.10
43A822CBI	100 mh	50.0 mh	4.20
43A101CBI	125 mh	66.0 mh	4.50
43A000CBI	Bulk pack per 100		180.00

Resinite Adjustable R.F. Coils



Resinite is a phenolic impregnated tubing which can be certified to MIL-P-79B type PBG. This material combines good mechanical and electrical characteristics along with the noncorrosive properties of cellulose acetate.

Miniature Adjustable R.F. Coils

Dimensions (form) ¼″ dia. x 13/16″ long

Part No.	L Max. ± 5%	L Min. ± 10%	List Price
20A000RBI	Coil Form w/hdw. and Core		$ .95
20A107RBI	.125 uh	.079 uh	1.30
20A157RBI	.187 uh	.119 uh	1.30
20A227RBI	.275 uh	.170 uh	1.30
20A337RBI	.410 uh	.240 uh	1.35
20A477RBI	.580 uh	.310 uh	1.35
20A687RBI	.850 uh	.430 uh	1.35
20A827RBI	1.00 uh	.580 uh	1.35
20A106RBI	1.25 uh	.679 uh	1.35
20A156RBI	1.87 uh	.900 uh	1.35
20A226RBI	2.75 uh	1.60 uh	1.35
20A336RBI	4.10 uh	2.00 uh	1.35
20A476RBI	5.80 uh	2.80 uh	1.40
20A686RBI	8.50 uh	3.80 uh	1.40
20A826RBI	10.0 uh	4.70 uh	1.40
20A105RBI	12.5 uh	6.40 uh	1.40
20A155RBI	18.7 uh	9.20 uh	1.40
20A225RBI	27.5 uh	12.0 uh	1.40
20A335RBI	41.0 uh	19.0 uh	1.40
20A475RBI	58.0 uh	27.0 uh	1.40
20A685RBI	85.0 uh	37.0 uh	1.40
20A825RBI	100 uh	53.0 uh	1.40
20A104RBI	125 uh	65.0 uh	1.40
20A154RBI	187 uh	92.0 uh	1.40
20A224RBI	275 uh	140 uh	1.45
20A334RBI	410 uh	215 uh	1.45
20A474RBI	580 uh	310 uh	1.45
20A684RBI	850 uh	450 uh	1.45
20A824RBI	1.00 mh	620 uh	1.45
20A103RBI	1.25 mh	830 uh	1.45

Standard Adjustable R.F. Coils

Dimensions (form) ⅜″ dia. x 1⅛″ long

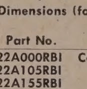
Part No.	L Max. ± 5%	L Min. ± 10%	List Price
21A000RBI	Coil Form w/hdw. and Core		$1.00
21A106RBI	1.25 uh	0.68 uh	1.35
21A156RBI	1.87 uh	1.00 uh	1.35
21A226RBI	2.75 uh	1.35 uh	1.35
21A336RBI	4.10 uh	2.12 uh	1.35
21A476RBI	5.80 uh	2.40 uh	1.35
21A686RBI	8.50 uh	3.60 uh	1.40
21A826RBI	10.0 uh	4.45 uh	1.40
21A105RBI	12.5 uh	6.05 uh	1.40
21A155RBI	18.7 uh	9.40 uh	1.40
21A225RBI	27.5 uh	12.9 uh	1.40
21A335RBI	41.0 uh	18.8 uh	1.40
21A475RBI	58.0 uh	27.5 uh	1.45
21A685RBI	85.0 uh	37.5 uh	1.45
21A825RBI	100 uh	45.0 uh	1.45
21A104RBI	125 uh	54.0 uh	1.45
21A154RBI	187 uh	92.0 uh	1.50
21A224RBI	275 uh	123 uh	1.50
21A334RBI	410 uh	200 uh	1.55
21A474RBI	580 uh	300 uh	1.55
21A684RBI	850 uh	430 uh	1.60
21A824RBI	1.00 mh	510 uh	1.60
21A103RBI	1.25 mh	780 uh	1.65
21A153RBI	1.87 mh	1.10 mh	1.65
21A223RBI	2.75 mh	1.66 mh	1.70
21A333RBI	4.10 mh	2.40 mh	1.70
21A473RBI	5.80 mh	3.46 mh	1.85
21A683RBI	8.50 mh	5.25 mh	2.00
21A823RBI	10.0 mh	6.00 mh	2.15
21A102RBI	12.5 mh	9.20 mh	2.25

Jumbo Adjustable R.F. Coils

Dimensions (form) ½″ dia. x 1⅞″ long

Part No.	L Max. ± 5%	L Min. ± 10%	List Price
22A000RBI	Coil Form w/hdw. and Core		$1.25
22A105RBI	12.5 uh	5.70 uh	1.85
22A155RBI	18.7 uh	9.0 uh	1.85
22A225RBI	27.5 uh	12.0 uh	1.90
22A335RBI	41.0 uh	17.0 uh	1.90
22A475RBI	58.0 uh	24.5 uh	1.95
22A685RBI	85.0 uh	38.0 uh	1.95
22A825RBI	100 uh	41.0 uh	2.00
22A104RBI	125 uh	65.0 uh	2.00
22A154RBI	187 uh	94.0 uh	2.05
22A224RBI	275 uh	138 uh	2.05
22A334RBI	410 uh	205 uh	2.10
22A474RBI	580 uh	290 uh	2.10
22A684RBI	850 uh	430 uh	2.15
22A824RBI	1.00 mh	595 uh	2.15
22A103RBI	1.25 mh	760 uh	2.20
22A153RBI	1.87 mh	1.04 mh	2.20
22A223RBI	2.75 mh	1.56 mh	2.20
22A333RBI	4.10 mh	2.30 mh	2.25
22A473RBI	5.80 mh	3.40 mh	2.25
22A683RBI	8.50 mh	5.00 mh	2.25
22A823RBI	10.0 mh	4.20 mh	2.30
22A102RBI	12.5 mh	5.30 mh	2.30
22A152RBI	18.7 mh	8.20 mh	2.45
22A222RBI	27.5 mh	12.7 mh	2.45
22A332RBI	41.0 mh	17.8 mh	2.50
22A472RBI	58.0 mh	27.5 mh	2.55
22A682RBI	85.0 mh	42.0 mh	2.60
22A822RBI	100.0 mh	51.0 mh	2.75

Economy Adjustable R.F. Chokes



Through the use of a recently developed Nylon molding process we are able to offer an inexpensive line of adjustable chokes. They can be adjusted from either the top or bottom. This lends a degree of flexibility to your design. Mounting is achieved by means of a metal clip in a $\frac{5}{16}$″ hole.

Dimensions: ⅜″ x 1⅜″ long.

Cat. No.	Microhenries	List Price
4200	Form only	$ .90
4202	1- 2.5	1.45
4203	2- 5.5	1.50
4204	5- 12	1.55
4205	10- 25	1.60
4206	20- 55	1.75
4207	50-140	1.80
4208	120-330	1.85
4209	310-860	1.90

#4200 complete with hardware and core

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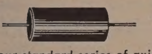
Industrial R.F. Chokes and Filters

Encapsulated R.F. Chokes



The following series of R.F. chokes range in value from 0.1 uh to 50 mh. Basically identical to our standard series of axial lead R.F. chokes bearing the equivalent number, these coils are encapsulated in epoxy resin and conform to MIL-C-15305A.

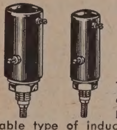
Part No.	Inductance ±5%	Resistance ±10%	Current MA	List Price
4580-E	0.1 uh.	.01	300	$1.90
4582-E	0.15 uh.	.012	300	1.90
4584-E	0.22 uh.	.017	300	1.90
4586-E	0.33 uh.	.019	300	1.90
4588-E	0.47 uh.	.022	300	1.90
4590-E	0.68 uh.	.03	300	1.90
4592-E	0.75 uh.	.033	300	1.90
4594-E	0.82 uh.	.035	300	1.90
4602-E	1.0 uh.	.05	300	1.90
4604-E	1.5 uh.	.08	300	1.90
4606-E	2.4 uh.	.16	300	1.90
4608-E	3.9 uh.	.5	300	1.90
4609-E	5.5 uh.	.69	300	1.95
4610-E	6.2 uh.	.75	300	1.95
4611-E	8.2 uh.	1.12	300	1.95
4612-E	10.0 uh.	1.5	200	1.95
4622-E	10.0 uh.	.06	300	2.00
4624-E	15.0 uh.	.12	300	2.00
4626-E	24.0 uh.	.28	300	2.05
4628-E	39.0 uh.	.65	300	2.05
4629-E	55.0 uh.	.92	300	2.05
4630-E	62.0 uh.	1.0	300	2.05
4631-E	82.0 uh.	1.6	300	2.05
4632-E	100.0 uh.	2.0	200	2.05
4642-E	0.10 mh.	4.1	125	2.25
4644-E	0.15 mh.	5.0	125	2.25
4646-E	0.24 mh.	6.6	125	2.25
4648-E	0.39 mh.	8.7	125	2.35
4649-E	0.55 mh.	10.0	125	2.35
4650-E	0.62 mh.	11.0	125	2.35
4651-E	0.75 mh.	13.0	125	2.35
4652-E	1.0 mh.	15.0	125	2.35
4662-E	1.0 mh.	7.0	125	2.40
4664-E	1.5 mh.	9.0	125	2.45
4666-E	2.4 mh.	12.0	125	2.60
4668-E	3.9 mh.	17.0	125	2.70
4669-E	5.5 mh.	22.0	125	2.85
4670-E	6.2 mh.	33.0	100	2.85
4671-E	8.2 mh.	45.0	100	2.95
4672-E	10.0 mh.	47.0	50	3.45
6302-E	2.5 mh.	8.3	200	2.75
6304-E	5.0 mh.	13.5	200	2.90
6306-E	10.0 mh.	28.0	125	3.10
6308-E	25.0 mh.	70.0	75	3.40
6310-E	50.0 mh.	110.0	75	3.75

Single Pi R.F. Coils

These fixed inductors are wound on a mineral filled phenolic form which has axial leads. The coils are impregnated with an R.F. varnish to assure against moisture absorption.

Part No.	L±5%	Q @ F	Fo. Mc	List Price
72F105AP	10 uh	29	16.3	$1.00
72F125AP	12 uh	27	14.85	1.00
72F155AP	15 uh	26	14.2	1.00
72F185AP	18 uh	25	12.3	1.00
72F225AP	22 uh	23	12	1.00
72F275AP	27 uh	22	11.2	1.00
72F335AP	33 uh	21	10.1	1.00
72F395AP	39 uh	19	9.35	1.00
72F475AP	47 uh	18	9.0	1.00
72F565AP	56 uh	16.5	8.1	1.00
72F685AP	68 uh	15.5	7.6	1.00
72F825AP	82 uh	15	7.26	1.00
72F104AP	100 uh	25	6.65	1.15
72F124AP	120 uh	24	6.3	1.15
72F154AP	150 uh	23	5.75	1.15
72F184AP	180 uh	22	5.45	1.15
72F224AP	220 uh	22	5.04	1.25
72F274AP	270 uh	21	4.47	1.25
72F334AP	330 uh	20.5	7.2	1.35
72F394AP	390 uh	20	3.9	1.35
72F474AP	470 uh	19	3.6	1.40
72F564AP	560 uh	18.4	3.35	1.40
72F684AP	680 uh	18	3.03	1.40
72F824AP	820 uh	17	2.85	1.40
72F103AP	1000 uh	35	2.45	1.40

Encapsulated Adjustable R.F. Coils



This series of encapsulated coils offer the maximum possible performance from an adjustable type of inductor. The coil is wound on an epoxy form which is placed inside an epoxy cup and this area filled with epoxy resin. In this manner a complete seal against moisture is achieved and good mechanical stability is assured.

Part No.	L Max. ± 5%	L Min. ± 10%	List Price
50A106EBI	1.25 uh	0.62 uh	$5.25
50A156EBI	1.87 uh	0.98 uh	5.25
50A226EBI	2.75 uh	1.26 uh	5.25
50A336EBI	4.10 uh	1.82 uh	5.30
50A476EBI	5.87 uh	2.56 uh	5.30
50A686EBI	8.50 uh	3.80 uh	5.30
50A826EBI	10.2 uh	4.40 uh	5.30
50A105EBI	12.5 uh	5.40 uh	5.40
50A155EBI	18.8 uh	7.80 uh	5.40
50A225EBI	27.5 uh	11.7 uh	5.50
50A335EBI	41.3 uh	18.8 uh	5.50
50A475EBI	58.7 uh	26.5 uh	5.55
50A685EBI	85.0 uh	36.0 uh	5.55
50A825EBI	102 uh	44.0 uh	5.60
50A104EBI	125 uh	63.0 uh	5.60
50A154EBI	187 uh	92.0 uh	5.65
50A224EBI	275 uh	130 uh	5.65
50A334EBI	410 uh	200 uh	5.70
50A474EBI	580 uh	280 uh	5.70
50A684EBI	850 uh	400 uh	5.75
50A824EBI	1.00 mh	540 uh	5.75
50A103EBI	1.25 mh	770 uh	5.80
50A153EBI	1.87 mh	950 uh	5.80
50A223EBI	2.75 mh	1.58 uh	5.85
50A333EBI	4.13 mh	2.40 mh	5.85
50A473EBI	5.80 mh	3.35 mh	5.95
50A683EBI	8.50 mh	5.20 mh	5.95
50A823EBI	10.00 mh	6.20 mh	5.95

Sub-Miniature R.F. Chokes

An extremely versatile series of iron core R.F. chokes designed to meet the industries' demand for high reliability, ultra-miniature components. The coils are ideally suited to network and filter design, delay lines, and computer applications. Rated at 50 milliamperes.

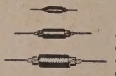
Part No	L ± 5%	Q @ F	List Price
70F106AI	1 uh	52 @ 7.9 Mc.	$ .85
70F126AI	1.2 uh	55 @ 7.9 Mc.	.85
70F156AI	1.5 uh	61 @ 7.9 Mc.	.85
70F186AI	1.8 uh	49 @ 7.9 Mc.	.85
70F226AI	2.2 uh	60 @ 7.9 Mc.	.85
70F276AI	2.7 uh	49 @ 7.9 Mc.	.85
70F336AI	3.3 uh	60 @ 7.9 Mc.	.85
70F396AI	3.9 uh	56 @ 7.9 Mc.	.85
70F476AI	4.7 uh	58 @ 7.9 Mc.	.85
70F566AI	5.6 uh	56 @ 7.9 Mc.	.85
70F826AI	8.2 uh	51 @ 7.9 Mc.	.85
70F105AI	10 uh	61 @ 2.5 Mc.	1.00
70F125AI	12 uh	65 @ 2.5 Mc.	1.00
70F155AI	15 uh	65 @ 2.5 Mc.	1.00
70F185AI	18 uh	66 @ 2.5 Mc.	1.00
70F225AI	22 uh	64 @ 2.5 Mc.	1.00
70F275AI	27 uh	62 @ 2.5 Mc.	1.00
70F335AI	33 uh	63 @ 2.5 Mc.	1.00
70F395AI	39 uh	61 @ 2.5 Mc.	1.00
70F475AI	47 uh	60 @ 2.5 Mc.	1.00
70F565AI	56 uh	57 @ 2.5 Mc.	1.00
70F825AI	82 uh	55 @ 2.5 Mc.	1.00
70F104AI	100 uh	50 @ 790 kc.	1.00
70F154AI	150 uh	55 @ 790 kc.	1.00
70F224AI	220 uh	57 @ 790 kc.	1.00
70F334AI	330 uh	59 @ 790 kc.	1.00
70F474AI	470 uh	59 @ 790 kc.	1.15
70F684AI	680 uh	55 @ 790 kc.	1.15
70F824AI	820 uh	53 @ 790 kc.	1.15
70F103AI	1.00 mh	50 @ 790 kc.	1.15
70F153AI	1.50 mh	50 @ 250 kc.	1.15
70F223AI	2.20 mh	50 @ 250 kc.	1.25
70F333AI	3.30 mh	70 @ 250 kc.	1.25
70F473AI	4.70 mh	68 @ 250 kc.	1.25
70F683AI	6.80 mh	64 @ 250 kc.	1.25
70F823AI	8.20 mh	60 @ 250 kc.	1.50
70F102AI	10.0 mh	60 @ 250 kc.	1.50

Printed Circuit Air Core R.F. Chokes

The following R.F. Chokes have been designed to offer a wide range of inductance values for use in printed circuit applications. Our standard stock of these coils is impregnated with a high grade coil varnish to prevent moisture absorption. On special orders we can supply these items treated with fungus resistant material, or encapsulated in epoxy resin to meet MIL-C-15305-A.

Part No.	Inductance ±5% @ 1000 CPS	DC Resistance ±10%	Current	List Price
970	1.0 mh.	17.2 ohms	125 ma.	$ .85
971	1.2 mh.	19.8 ohms	125 ma.	.85
972	1.5 mh.	21.8 ohms	125 ma.	.85
973	1.8 mh.	24.7 ohms	125 ma.	.90
974	2.2 mh.	27.4 ohms	125 ma.	.90
975	2.7 mh.	31.2 ohms	125 ma.	.90
976	3.3 mh.	34.8 ohms	125 ma.	.95
977	3.9 mh.	38.9 ohms	125 ma.	.95
978	4.7 mh.	43.2 ohms	125 ma.	.95
979	5.6 mh.	48.0 ohms	125 ma.	.95
980	6.8 mh.	53.6 ohms	125 ma.	1.00
981	8.2 mh.	60.8 ohms	100 ma.	1.00
982	10.0 mh.	68.0 ohms	100 ma.	1.10
983	12.0 mh.	77.0 ohms	100 ma.	1.15
984	15.0 mh.	87.7 ohms	100 ma.	1.20
985	18.0 mh.	97.9 ohms	100 ma.	1.25
986	22.0 mh.	108.0 ohms	75 ma.	1.40
987	27.0 mh.	121.0 ohms	75 ma.	1.45
988	33.0 mh.	209 ohms	75 ma.	1.55
989	39.0 mh.	231 ohms	75 ma.	1.60
990	47.0 mh.	263 ohms	50 ma.	1.65
991	56.0 mh.	292 ohms	50 ma.	1.70
992	68.0 mh.	326 ohms	50 ma.	1.80
993	82.0 mh.	368 ohms	50 ma.	1.90
994	100.0 mh.	394 ohms	50 ma.	2.00

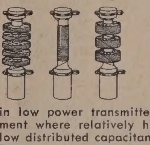
Frequency Selective R.F. Chokes



Designed for maximum efficiency and highest impedance at specific operating frequencies this group of R.F. chokes eliminates the designers task of attempting to choose the best coil for a particular application from miscellaneous and often insufficient design data. Designed to cover the major Amateur, Industrial, and Citizens bands the coils will also operate efficiently at frequencies approximating the recommended frequencies.

Part No.	L	Freq. Mc	List Price
RFC-3.5	160 uh	1.8-5	$1.50
RFC-7	84 uh	3-13	1.25
RFC-14	55 uh	7-20	1.15
RFC-21	39 uh	15-30	1.00
RFC-28	24 uh	25-40	1.00
RFC-50	8.2 uh	30-90	1.00
RFC-144	2-4 uh	15-180	.85
RFC-220	.82 uh	160-340	.85
RFC-420	.22 uh	325-500	.85

Ceramic Form R.F. Chokes



A series of high quality fixed coils wound on a silicone impregnated steatite form. The coils are the standoff type and are mounted by a single 6-32 screw. They find primary application in low power transmitters and associated equipment where relatively high current capacity and low distributed capacitance are important.

Part Number	L	Rated Current	List Price
4552	0.25 mh.	150 ma.	$1.15
4553	0.50 mh.	150 ma.	1.15
4554	1.0 mh.	150 ma.	1.25
4555	2.5 mh.	150 ma.	1.40
4556	5.0 mh.	150 ma.	1.45
4557	0.25 mh.	300 ma.	1.25
4558	0.50 mh.	300 ma.	1.25
4559	1.0 mh.	300 ma.	1.50
4560	2.5 mh.	300 ma.	1.65
4561	5.0 mh.	300 ma.	1.75

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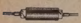
Miller

Radio Frequency Chokes

R.F. Chokes with Axial Leads

These chokes cover an inductance range from .1 microhenry to 10 millihenries in 5 decades with 8 coils per decade. Inductance values increase in steps of approximately 50%. Either single layer or 3-pi universal windings are used to insure low distributed capacity. Chokes are wound on low-loss molded phenolic or powdered iron core forms and are impregnated with a moisture- and fungus-resistant varnish. The type of powdered iron used allows the chokes to operate at all frequencies up into the ultra-high frequency region.

Dimensions: Phenolic form $\frac{3}{16}$″ diameter x ¾″ long. Iron core form $\frac{7}{32}$″ diameter x ⅞″ long. Leads are 1½″ long. Inductance tolerance: plus or minus 5%.



Phenolic Form
Single Layer Windings

Cat. No.	uh.	Ohms	ma	List Price
4580	0.1	.01	300	$ .65
4582	0.15	.012	300	.65
4584	0.22	.017	300	.65
4586	0.33	.019	300	.65
4588	0.47	.022	300	.65
4590	0.68	,03	300	.65
4592	0.75	.033	300	.65
4594	0.82	.035	300	.65
4602	1.	.05	300	.65
4604	1.5	.08	300	.65
4606	2.4	.16	300	.65
4608	3.9	.5	300	.65
4609	5.5	.69	300	.70
4610	6.2	.75	300	.70
4611	8.2	1.12	300	.70
4612	10	1.5	200	.70

Iron Core Form
Single Layer Windings

Cat. No.	uh.	Ohms	ma	List Price
4622	10	.06	300	$ .75
4624	15	.12	300	.75
4626	24	.28	300	.80
4628	39	.65	300	.80
4629	55	.92	300	.85
4630	62	1.0	300	.85
4631	82	1.6	300	.85
4632	100	2.0	200	.85

Phenolic Form
3-Section Windings

Cat. No.	mh.	Ohms	ma	List Price
4642	0.1	4.1	125	$ .85
4644	0.15	5	125	.85
4646	0.24	6.6	125	.85
4648	0.39	8.7	125	.95
4649	0.55	10	125	.95
4650	0.62	11	125	.95
4651	0.75	13	125	.95
4652	1.0	15	125	.95

Iron Core Form
3-Section Windings

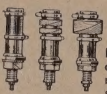
Cat. No.	mh.	Ohms	ma	List Price
4662	1	7	125	$ 1.00
4664	1.5	9	125	1.05
4666	2.4	12	125	1.15
4668	3.9	17	125	1.25
4669	5.5	22	125	1.40
4670	6.2	33	100	1.40
4671	8.2	45	100	1.70
4672	10	47	50	1.95

Ferrite Core R.F. Chokes

A new series of R.F. Chokes taking advantage of the high permeability of ferrite cores. These chokes combine high inductance and low D.C. resistance with a small physical size.

Dimensions of core: ¼″ diameter x ⅞″ long. 1½″ long axial leads.

Cat. No.	mh.	Ohms	ma	List Price
6302	2.5	8.3	200	$1.25
6304	5	13.5	200	1.40
6306	10	28	125	1.65
6308	25	70	75	1.90
6310	50	110	75	2.20



Adjustable Ceramic Forms and R.F. Coils

Permeability tuned coils wound on silicone impregnated ceramic forms. Hardware necessary for assembly is supplied.

Standard Adjustable Ceramic Form and R.F. Coils

Dimensions (form): ⅜″ diameter x 1$\frac{1}{16}$″ long.

Cat. No.	Microhenries	List Price
4400	Form only	$1.80
4403	0.9- 1.6	2.45
4404	1.5- 3.2	2.50
4405	3.1- 6.8	2.55
4406	6.7- 15	2.65
4407	14.8- 31	2.75
4408	30 - 69	2.80
4409	68 - 130	2.90
4410	126 - 250	2.95
4411	245 - 475	3.00
4412	450 - 800	3.05
4413	750 -1400	3.10
4414	1300 -2100	3.10

#4400 comes complete with hardware and core*

#4400 Bulk packed per 100 List Price $155.00

Miniature Adjustable R.F. Coils

Dimensions (form): ¼″ diameter x ⅞″ long.

Cat No.	Microhenries	List Price
4500	Form only	$1.65
4501	.4- .8	2.25
4502	1.0- 1.6	2.25
4503	1.6- 2.8	2.35
4504	2.8- 5	2.40
4505	5 - 9	2.50
4506	9 - 16	2.60
4507	16 - 24	2.70
4508	24 - 35	2.75
4509	35 - 60	2.80
4511	60 -120	2.85
4512	110 -200	2.90
4513	190 -330	2.95
4514	320 -500	3.00
4514-1	480 -800	3.10

#4500 comes complete with hardware and core*

#4500 Bulk packed per 100 List Price $125.00

Sub-Miniature Adjustable R.F. Coils

Dimensions (form): $\frac{3}{16}$″ diameter x ⅝″ long.

Cat No.	Microhenries	List Price
4300	Form only	$1.65
4301	0.17- 0.27	2.25
4302	0.27- 0.41	2.25
4303	0.40- 0.65	2.35
4304	0.64- 0.95	2.40
4305	0.94- 1.55	2.50
4306	1.5 - 2.57	2.60
4307	2.5 - 4.40	2.70
4308	4.3 - 7.15	2.75
4309	7.1 - 12.5	2.80
4310	12.4 - 20.3	2.85
4311	20.1 - 32.8	2.90
4312	32.5 - 51.5	2.95
4313	51. -102.	3.00
4314	101. -180.	3.00
4315	178. -300.	3.00

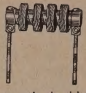
#4300 comes complete with hardware and core*

#4300 Bulk packed per 100 List price $125.00

Quantity orders can be wound to your specific requirements with extended inductances and Q values other than those shown. Your inquiries invited.

*When ordering forms alone, the type of core should be specified by the addition of a suffix taken from the following.

Suffix	Frequency Range of Core Material
Y	50-1000 kc.
R	1- 30 Mc.
W	30- 300 Mc.



Multiple Pi Chokes

These Multiple Pi duo-lateral chokes have a low distributed capacity of 1.2-1.3 mmf. The current carrying capacity is comparatively high for this type of choke. Inductance tol. ± 5%.

Cat. No.	Mh.	Ohms	MA	List Price
4531-0	.25	8	200	$1.15
4531	.5	12	200	1.15
4531-1	1	17	200	1.15
4532	1.5	21	200	1.20
4537	2.5	28	200	1.25
4538	5	42	125	1.45
4539	7.5	82	125	1.65
4540	10	95	125	1.80
4541	25	160	125	2.15

#4537 Bulk packed per 100 — List Price $95.00

R.F. Chokes wound to closer tolerances if required in lots of 100 pieces or more at slightly higher prices.

Unshielded Chokes

These single section R.F. Chokes are ideally suited for general purpose applications in receiver and filter circuit. Solder lug terminals and single hole mounting. Inductance tol. ± 5%.

Air Core Type

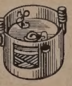
Dimensions: 1⅛″ diameter x ⅝″.

Cat. No.	MH	Ohms	MA	List Price
610	.25	8	125	$ .90
620	.75	17	125	.90
630	1.50	21	125	1.00
640	2.50	28	125	1.15
650	5.0	41	125	1.15
660	7.5	53	125	1.20
670	10	67	125	1.25
670-T	10	67	125	1.35
680	12.5	74	125	1.30
690	15.0	83	125	1.35
691	20	100	125	1.45
691-T	20	100	125	1.50
592	30.0	120	100	1.50
693	60	200	100	1.70
693-T	60	200	100	2.00
694	80.0	230	100	1.85

Iron Core Type

These chokes are similar in construction to the No. 600 series except that they are wound on powdered iron cores. Inductance tol. ± 5%.

Cat. No.	MH	Ohms	MA	List Price
951	.5	6.8	125	$1.20
952	1.0	10.9	125	1.30
953	2.5	19.5	125	1.40
954	5.0	23.0	125	1.60
955	7.5	37.0	125	1.70
956	10.0	45.0	125	1.80
957	25.0	78.0	100	2.00
958	50.0	130.0	100	2.25
959	75.0	200.0	100	2.50
960	100.0	210.0	100	2.80
961	150.0	268.0	100	3.00



Shielded Chokes

Single section wound R.F. Chokes assembled in round aluminum shield with two spade bolts for mounting. Solder lug terminals.

Iron Core Type

Dimensions: 1¼″ dia. x 1″ high.

Cat. No.	MH	Ohms	MA	List Price
851	.5	8.6	125	$1.75
852	1.0	11.5	125	1.85
853	2.5	22.0	125	1.90
854	5.0	31.0	125	2.00
855	7.5	42.0	125	2.10
856	10.0	47.0	125	2.25
857	25.0	100.0	125	2.50
Dimensions: 1⅝″ dia. x 1″ high.				
858	50.0	160.0	100	2.60
859	75.0	222.0	100	2.85
860	100.0	348.0	100	3.10
861	150.0	520.0	100	3.50

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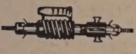
Miller Television Components

24 MC Unshielded Picture I.F. Transformers

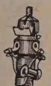


For use as replacement units in television receivers where unshielded coils are called for and standard circuitry is employed. Mounting clip to fit 5/16″ hole in chassis.

Shielded I.F. trans. are 3/4″ sq. x 2″ high.
Maximum Dimensions: 2½″ long.

Cat. No.	Description	Trap	List Price
6245	25.5 MC First I.F.	27.25 MC	$2.85
6246	22 MC Second I.F.	21.2 MC	2.85
6247	21.25 MC Cathode Trap		2.85
6248	24.5 MC Video Det. I.F.		1.75
6249	21-25 MC Bifilar Wound I.F.		1.75
6250	25-29 MC Bifilar Wound I.F.		1.75
6251	21-25 MC Bifilar I.F. Shielded		2.50
6252	25-29 MC Bifilar I.F. Shielded		2.50
6253	21-25 MC Bifilar I.F.	20-23 MC	3.25
6254	25-29 MC Bifilar I.F.	24-29 MC	3.25

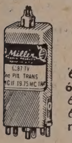
Picture I.F. Inductors Unshielded



Dimensions: ½″ max. o.d. x 1½″ long.

Cat. No.	Description	Freq.	List Pr.
6188	3rd Pix I.F. Trans.	25.2 MC	$1.50
6189	Video Detector I.F. Trans.	23.4 MC	1.50
6193	Cathode Sound Trap	21.25 MC	2.25
6171	Tunable Choke	21-25 MC	1.45
6171A	Tunable Choke	25-29 MC	1.45

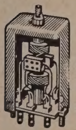
21.25 MC Television I.F. Transformers



Dimensions:
6185-6186-6187 7/8″ Sq. x 2¼″ high
6170, 6190 and 6191 7/8″ sq. x 2¼″ hi
6184 and 6192 1⅛″x1⅛″x2½″ high.
6261 and 6262 3/4″ sq. x 2″ high clip mtg.

	Item	Freq.	List Pr.
6185	21.8 MC Conv. I.F. Trans.	21.25 MC	$3.10
6186	25.3 MC 1st Pix I.F. Trans.	27.25 MC	3.10
6187	22.3 MC 2nd Pix I.F. Trans.	19.75 MC	2.50
6190	1st Sound I.F. Trans.	21.25 MC	$2.75
6191	2nd Sound I.F. Trans.	21.25 MC	2.75
6192	Sound Disc. Trans.	21.25 MC	3.30
6184	Sound Ratio Det. Trans.	21.25 MC	3.85
6170	Sound Disc. Trans.	21.25 MC	3.80
6261	Sound Disc. Trans.	21.25 MC	3.75
6262	Sound Ratio Det. Trans.	21.25 MC	3.75

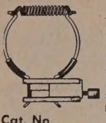
4.5 MC Intercarrier Sound Components



Dimensions 1466-67-68: 1⅛″x1⅛″ x2⅛″ high.
#1469, 1470 and 1480 Unshielded, Mounting hole 5/16″
1470-A and 1481 3/4″ x 3/4″ x 2″ hi
#1498 1⅜″ x 1⅜″ x 2½″high
1483-84-95-86-87 7/8″ Sq. x 2¼″ high

Cat. No.	Item	Freq.	List Pr.
1466	Input or Inter. I.F. Trans.	4.5 MC	$3.00
1467	Sound Discrim. Trans.	4.5 MC	3.50
1468	Sound Ratio Det. Trans.	4.5 MC	3.75
1469	Sound Pick Off Coil	4.5 MC	1.50
1470	Sound Trap Unshielded	4.5 MC	1.50
1470-A	Sound Trap Shielded	4.5 MC	1.90
1480	Quadrature Coil	4.5 MC	1.50
1481	Quadrature Coil Sh'l'd.	4.5 MC	1.95
1482IFT	Sound I.F. Trap	4.5 MC	2.25
1483IF	Sound I.F.	4.5 MC	3.00
1484RD	Sound Ratio Det	4.5 MC	3.50
1485RD	Sound Ratio Det	4.5 MC	3.50
1486RD	Sound Ratio Det	3.5 MC	3.50
1487RD	Sound Ratio Det	4.5 MC	3.50
1498	Sound Ratio Det. Trans.	4.5 MC	3.75

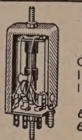
Adjustable Ion Trap



Due to its adjustable feature, which allows the magnetic field to be varied between 32-55 gausses, this trap will, in most instances, replace the older style ion traps having a specific magnetic field.

Cat. No.	Description	List Price
6295	Adjustable Ion Trap	$1.50

"40 MC" TV Picture I.F. Transformers

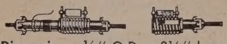


Converter transformer and 1st pix I.F. grid transformer have 75-ohm link winding.

Dimensions
6215-16-17-18 7/8″ Sq. x 2¼″ high
6240 1⅛″ Sq. x 2⅜″ high

	Description	Trap	List Pr.
6215	Converter I.F. Trans.		$2.75
6216	1st Pix I.F. Grid Trans.	39.25 MC	3.30
6217	1st Pix I.F. Plate Trans.	41.25 MC	3.30
6218	2nd Pix I.F. Grid Trans.	47.25 MC	3.10
6240	Video Detector with Diode	43.7 MC	7.50

Unshielded



Dimensions: ½″ O.D. x 2¼″ long.

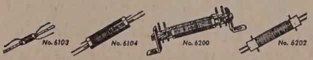
6219	3rd-4th & 5th I.F.	41.75-45.75 MC	$1.50
6220	41-45 MC Converter I.F.		1.50
6221	43.5 MC First I.F.	41.25 MC	2.95
6222	45.5 MC Second I.F.	47.25 MC	2.95
6223	40.0 MC Third I.F.	39.25 MC	2.95
6224	44 MC Fourth I.F.		1.55
6225	41-45 MC I.F., Single Winding		1.70
6226	Hi Q Trap	40-46 MC	1.55

Video Peaking Coils, Filament Choke

No. 6175 Filament Choke—9/32″ dia. x 7/8″ long; Video Peaking Coils—3/16″ dia. x ½″ long.

Cat. No.	Use	—uhy	Resistor	List Price
6175	Filament	0.8	None	$.85
6152	Peaking	20	None	.85
6176	Peaking	36	None	.85
6110	Peaking	60	None	.85
6172	Peaking	73	None	.85
6177	Peaking	93	None	.85
6112	Peaking	100	None	.85
6178	Peaking	120	22K	.85
6153	Peaking	120	None	.85
6120	Peaking	155	None	.85
6179	Peaking	180	39K	.85
6180	Peaking	180	None	.85
6154	Peaking	200	None	.85
6173	Peaking	250	22K	.85
6181	Peaking	250	None	.85
6130	Peaking	275	None	.85
6155	Peaking	300	None	.85
6132	Peaking	330	None	.85
6134	Peaking	375	None	.85
6136	Peaking	420	None	.85
6138	Peaking	470	None	.85
6174	Peaking	500	None	.85
6144	Peaking	550	None	.85
6146	Peaking	600	None	.85
6148	Peaking	700	None	.85
6156	Peaking	800	None	.85
6157	Peaking	950	None	.85

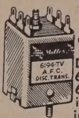
Antenna Matching Coils (Balun)



When two of these coils are connected in parallel at one end and in series at the other end, a 75 ohm to 300 ohm impedance matching transformer is obtained. This impedance match holds over the entire television range from channel 2 to 13 thus including the F.M. channels.

Cat. No.	Description	Size	List Price
6103	Ant. Matching Coil	¼″x1½″	$1.55
6104	Ant. Matching Coil	5/16″x1¾″	1.15
6200	Ant. Matching Coil	⅜″x2½″	2.25
6202	Ant. Matching Coil	5/16″x1¾″	2.25

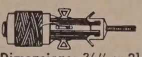
Horizontal Oscillator & Sync. Control Coils



Dimensions: 1 7/16″x1 7/16″x2½″ high. 6212 Unshielded, Mounting hole 5/16″ 6211 and 6324 Unshielded, Mountinghole 7/16″—6183 may be reversed in shield for top or bottom mounting. 6183-A coils reversed on form to tune Horiz. Osc. through chassis.

Cat. No	Item	List Price
6194	Osc. & A.F.C. Discrim. Trans.	$3.10
6182	Osc. and Sync. Control Coil	2.50
6183	Osc. and Sync. Stabilizer Coil	3.25
6210	Sync. Stabilizer Coil 16-42 mh	2.50
6211	Sync. Stabilizer tapped 16-42 mh	2.50
6212	Horiz. Osc. tapped 12-35 mh	2.50
6324	Horiz. Osc. tapped 60-130 mh	2.50
6183-A	Horiz. Osc. coil position reversed	3.25

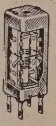
Linearity & Width Controls



Dimensions: 3/4″ x 2½″ Max.
The coils will mount in either a 5/16″ or 7/16″ hole with adapter supplied.

Cat. No.	Inductance Range Millihenries	List Price
6313	.5-5	$2.00
6314	2.5-17	1.90
6315	4-30	2.00
6316	4-30 (2.8-6.5 AGC)	2.75
6317	3.2-9 (.17-1.31 AGC)	2.50
6318	.3-3	1.70
6319	15-60	2.50
6320	.3-3 Tapped	1.75
6321	1-5 Tapped	2.00
6322	1.5-10	1.90
6323	.5-5 Tapped	1.75
6324	60-130 Tapped	2.50
6325	4.2-30 (.78-1.37 AGC)	2.50
6326	2.5-19 Parallel (.18-1.7 Series)	3.50
6327	4-30 Parallel (.225-2.4 Series)	3.50
6328	9-24 (.19-1.1 AGC)	2.50
6329	2.2-10 Tapped	2.25
6330	45-215	2.75
6331	4-30 Parallel (.080-.7 Series)	3.25
6195	.185-1	1.50
6196	.054-.245	1.25
6196-A	.054-.5 Tapped	1.45
6197	.55-2.3 Tapped	1.45
6198	.17-.61	1.25
6199-A	1.3-4.1 Tapped	1.55
6199-B	.5-1.7	1.50

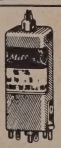
Miniature 44 MC Picture Trans.



Converter and 1st pix I.F. Grid transformer have 75 ohm link winding.
Dimensions: 3/4″ Square x 2″ high.

	Description	Trap	List Pr.
6230	Converter I.F.		$2.75
6231	44 MC First I.F.		2.75
6232	42.5 MC Second I.F.	41.25 MC	2.40
6233	45.5 MC Third I.F.	47.25 MC	2.90
6234	44 MC Fourth I.F.		2.25

Color T.V. Components



Dimensions
6022-6027-6028 Unshielded
6024 7/8″ Sq. x 1⅞″ high
6021-6023-6026 7/8″ Sq. x 2⅜″ high
6025 1⅛″ Sq. x 2¼″ high

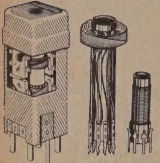
	Description	Frequency	Price
6021	Chrome Bandpass Transformer	3.58 Mc	$3.25
6022	Chroma Bandpass Coil	3.58 Mc	2.35
6023	Burst Transformer	3.58 Mc	5.00
6024	Output Transformer	3.58 Mc	4.00
6025	Sync and Phase Det	3.58 Mc	7.00
6026	Chroma Reference Osc	3.58 Mc	5.00
6027	Trap	3.58 Mc	2.50
6028	Chroma Sync Take Off	3.58 MC	2.50

For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

Miller

Intermediate Frequency Transformers

Exact Replacements for Original Equipment



The following parts have been manufactured as exact replacements for the set manufacturers shown. In cases where the manufacturer has incorporated in either the physical or electrical design an innovation which has resulted in a special part, the only way to assure top performance is to use an exact replacement item.

Admiral

Cat. No.	O.E.M. Part No.	List Price
1471-A	72B185-2	$2.75
1472-A	72C132-19	1.95

Bendix

Cat. No.	O.E.M. Part No.	List Price
6501	2090237-1	3.75
6502	2090237-2	3.75
6503	2090237-3	3.75
6504	2090237-4	3.75
6505	2090237-5	3.75
6506	2090239-1	3.50
6507	2090239-2	3.50
6508	2090239-3	3.50

General Electric and Hotpoint

Cat. No.	O.E.M. Part No.	List Price
12-C11	RTL-143 and 163	2.70
12-C13	RTL-172	2.90
6206-PC	RTD-026 (WT56X38)	4.95
6207-PC	RTD-025 (WT56X37)	4.15
6208-PC	RTD-020	4.25
6209-G1	RTD-024 (WT56X36)	4.75

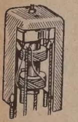
Philco

Cat. No.	O.E.M. Part No.	List Price
6209-P1	32-4721	9.50
6209-P2	32-4689-1, 2	4.75
6209-P3	32-4735-1, 2	4.75

Westinghouse

Cat. No.	O.E.M. Part No.	List Price
12-C14	235V025H-11, 2 (V157661)	3.50
68 Osc	230V039H-01 (V15764-1)	2.75
6204-W3	V12128-1, 2, 3	6.75

Midget I.F. Transformers



Dimensions:
1⅛″ square x 2″ high.
#6/32 spade bolt mounting.

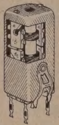
Air Core Transformers

Cat. No.	Freq.	KC Range	Use	List Price
112-H1	262	250-275	Input	$3.00
112-H2	262	250-275	Interstage	3.00
112-H3	262	250-275	Full-Wave	3.00
112-H4	262	250-275	Half-Wave	3.00
112-H6	262	250-275	Output Stage & Filter	3.25
112-C1	455	450-475	Input	3.00
112-C2	455	450-475	Interstage	3.00
112-C3	455	450-475	Full-Wave	3.00
112-C4	455	450-475	Half-Wave	3.00
112-W1	1500	1400-1600	Input	3.00
112-W2	1500	1400-1600	Interstage	3.00
112-W3	1500	1400-1600	Full-Wave	3.00
112-W4	1500	1400-1600	Half-Wave	3.00

Iron Core Transformers

Cat. No.	Freq.	KC Range	Use	List Price
012-K1	175	165-185	Input	$3.20
012-K2	175	165-185	Interstage	3.20
012-K3	175	165-185	Full-Wave	3.20
012-K4	175	165-185	Half-Wave	3.20
012-H1	262	250-275	Input	3.10
012-H2	262	250-275	Interstage	3.10
012-H3	262	250-275	Full-Wave	3.10
012-H4	262	250-275	Half-Wave	3.10
012-C1	455	450-475	Input	3.10
012-C2	455	450-475	Interstage	3.10
012-C3	455	450-475	Full-Wave	3.10
012-C4	455	450-475	Half-Wave	3.10

Miniature J-Tran Top Tuned I.F. Transformers



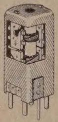
The standard J-TRAN series of miniature I.F. transformers has hollow hexagonal-hole cores and thereby, with the aid of a suitable tuning tool (#182), permits either double or single ended tuning. The transformer is mounted with a unique snap fastener which is permanently attached to the shield.

Dimensions: ¾″ by ¾″ by 2″ high.

*(With diode filter capacitors)

Cat. No.	Item	List Price
14-H1	262 kc Input I.F.	$2.90
14-H2	262 kc Output I.F.	2.90
14-H6	262 kc Output I.F.*	3.00
14-C1	455 kc Input I.F.	2.70
14-C2	455 kc Output I.F.	2.70
14-C6	455 kc Output I.F.*	2.85
14-C7	455 kc Input I.F. Battery Radios	2.70
14-C8	455 kc Output I.F. Battery Radios	2.70
14-C9	455 kc Input I.F. AC-DC Radios	2.70
14-C10	455 kc Output I.F. AC-DC Radios	2.70
6270	4.5 Mc Input or Interstage	2.90
6271	4.5 Mc Ratio Detector	4.95

Miniature Printed Circuit Top Tuned I.F. Transformers



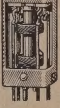
The printed circuit series of miniature J-TRAN I.F. transformers is similar to the standard J-TRAN shown in that both cores may be tuned from either end of the shield.

Dimensions: ¾″ by ¾″ by 2″ high.

*(With diode filter capacitors)

Cat. No.	Item	List Price
16-PH1	262 kc Input I.F.	$2.85
16-PH2	262 kc Output I.F.	2.85
16-PH6	262 kc Output I.F.*	3.00
16-PC1	455 kc Input I.F.	2.75
16-PC2	455 kc Output I.F.	2.75
16-PC6	455 kc Output I.F.*	2.90
16-PC7	455 kc Input I.F. Battery Radios	2.75
16-PC8	455 kc Output I.F. Battery Radios	2.75
16-PC9	455 kc Input I.F. AC-DC Radios	2.75
16-PC10	455 kc Output I.F. AC-DC Radios	2.75
6270-PC	4.5 Mc Input or Interstage	2.90
6271-PC	4.5 Mc Ratio Detector	4.95

Universal I.F. Transformers



For general replacement purposes in auto receivers and many types of household and portable receivers.

Dimensions: 1¼″ square x 2½″ high.

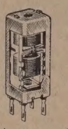
Cat. No.	Freq.	KC Range	Use	List Price
312-H1	262	250-275	Input	$2.85
312-H2	262	250-275	Interstage	2.85
312-H4	262	250-275	Output	2.85
312-H6	262	250-275	Output & Filter	3.25
312-C1	455	440-470	Input	2.85
312-C2	455	440-470	Interstage	2.85
312-C4	455	440-475	Output	2.85
312-C6	455	440-470	Output & Filter	3.25

Type No. 412 Iron Core Transformers

Dimensions: 1¼″ square x 2½″ high.

Cat. No.	Freq.	KC Range	Use	List Price
412-H1	262	250-275	Input	$2.85
412-H2	262	250-275	Interstage	2.85
412-H4	262	250-275	Output	2.85
412-C1	455	440-470	Input	2.85
412-C2	455	440-470	Interstage	2.85
412-C4	455	440-470	Output	2.85

Miniature I.F. Transformers



Designed for experimental use and for general replacement in "personal" radio receivers, this series of shell core permeability tuned transformers are becoming increasingly popular. Tuning from top and bottom of the shield. Transformers are available for all standard I.F. frequencies.

*(With diode filter capacitors)

Dimensions: ¾″ by ¾″ by 2″ high.

Cat. No.	Item	List Price
12-H1	262 KC Input I.F. Trans	$2.90
12-H2	262 KC Output I.F. Trans.	2.90
12-H6	262 KC Output I.F. Trans.*	3.00
12-C1	455 KC Input I.F. Trans.	2.70
12-C2	455 KC Output I.F. Trans.	2.70
12-C6	455 KC Output I.F. Trans. *	2.85
12-C7	455 KC Input I.F. Battery	2.70
12-C8	455 KC Output I.F. Battery	2.70
12-C9	455 KC Input I.F. AC-DC	2.70
12-C10	455 KC Output I.F. AC-DC	2.70
12-C12	455 KC Tapped Pri. I.F. Trans.	3.25
12-C45	455 KC Discriminator	3.95
13-W1	1500 KC Input or Interstage	2.75
13-W2	1500 KC Output I.F. Trans.	2.75
1463	10.7 MC Input or Interstage	3.25
1464	10.7 MC Discriminator	3.75
1465	10.7 MC Ratio Detector	3.90
1464-WB	10.7 MC Disc. 900 KC. P/P	3.75
1465-WB	10.7 MC Ratio Det. 800 KC. P/P	3.90
6203	4.5 MC Input or Interstage	3.30
6204	4.5 MC Discriminator	3.75
6205	4.5 MC Ratio Detector	3.75
6260	21.25 MC I.F. Trans.	4.25
6261	21.25 MC Discriminator	3.75
6262	21.25 MC Radio Detector	3.75
6230	TV Converter I.F.	2.75
6231	TV 44 MC First I.F. Trap	2.75
6232	TV 42.5 MC Second I.F. 41.25 MC	2.40
6233	TV 45.5 MC Third I.F. 47.25 MC	2.90
6234	TV 44 MC Fourth I.F.	2.25

Miniature Printed Circuit I.F. Trans.

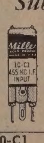
Same as our regular miniature I.F. transformers shown above, except for terminals and mounting. Supplied in all standard frequencies.

*(With diode filter capacitors)

Dimensions: ¾″ sq. x 2″ high.

Cat. No.	Item	List Price
13-PH1	262 KC Input I.F. Trans.	$2.85
13-PH2	262 KC Output I.F. Trans.	2.85
13-PH6	262 KC Output I.F. Trans. *	3.00
13-PC1	455 KC Input I.F. Trans.	2.75
13-PC2	455 KC Output I.F. Trans.	2.75
13-PC6	455 KC Output I.F. Trans. *	2.90
13-PC7	455 KC Input I.F. Trans. Battery	2.75
13-PC8	455 KC Output I.F. Trans.Battery	2.75
13-PC9	455 KC Input I.F. Trans. AC-DC	2.75
13-PC10	455 KC Output I.F. Trans.AC-DC	2.75
6203-PC	4.5 MC Input or Interstage	3.30
6204-PC	4.5 MC Discriminator Trans.	3.75
6205-PC	4.5 MC Ratio Detector Trans.	3.75
1463-PC	10.7 MC Input or Interstage	3.25
1464-PC	10.7 MC Discriminator Trans.	3.75
1465-PC	10.7 MC Ratio Detector Trans.	3.90
6230-PC	TV 44 MC Converter I.F. Trans.	3.10
6231-PC	TV 44 MC First I.F. Trans. Trap	3.10
6232-PC	TV 42.5 MC Second I.F. 41.25 MC	2.80
6233-PC	TV 45.5 MC Third I.F. 47.25 MC	3.10
6234-PC	TV 44 MC Fourth I.F. Trans.	2.75

Sub-Miniature I.F. Trans.



Through the use of a Ferrite shell core material these Sub-Miniature I.F. Transformers offer the gain and bandwidth characteristics previously obtained in only larger I.F. assemblies. (For Battery or AC-DC Radios.)

Dimensions: ½″ sq. x 1½″ high.

	Item	List Price
10-C1	455 KC Input I.F. Trans.	$2.80
10-C2	455 KC Output I.F. Trans.	2.80

For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

Miller

Radio Frequency Coils

Miniature Adjustable R.F. Coils

These high Q adjustable iron core coils are for general replacement use.

	Dimensions:
70-A and 70-RF	½″ dia x 1½″ long
69-Osc and 70-Osc	½″ dia x 1⅛″ long
67-Osc	⅜″ dia x 1⅝″ long
71-RF	¾″ dia x 1¾″ long

Cat. No.	Use	Freq. Range	List Price
67-OSC	Oscillator Stage	540-1600 kc	$1.95
	Autodyne type Oscillator		
69-OSC	Oscillator Stage	540-1600 kc	1.75
	Capacity coupled type		
70-A	Antenna Stage	540-1600 kc	1.75
70-RF	R.F. Stage	540-1600 kc	1.75
70-OSC	Oscillator Stage	540-1600 kc	1.75
71-RF	R.F. Coil	540-1600 kc	2.75

Universal Adjustable Oscillator Coil

These adjustable iron core oscillator coils are for general replacement use.

Dimensions: ⅝″ x 1½″ high.

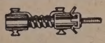
Cat. No.	Use	Freq. Range	List Pr.
71-OSC	Oscillator Stage	R.F. 500-1800 KC (I.F. 100-550 KC)	$2.50

High-Q Ferrite Antenna Coil

Supplied with mounting bracket

Dimensions: ⅜″ diameter x 2¼″ long.

Cat. No.	Use	Freq. Range	List Pr.
6300	Antenna Stage	540-1700 KC	$1.40



Adjustable FM R.F. Coils

Dimensions: ½″ O.D. x 1⅝″ long.

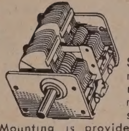
Cat No.	Item	List Price
1447	88-108 MC Antenna Coil	$1.85
1448	88-108 MC R.F. Coil	1.85
1449	88-108 MC Osc. Coil (10.7 MC I.F.)	1.85

Unshielded High-Q R.F. Coils

A complete line of Unshielded Permeability tuned coils for replacement use or as the front end components in new receiver design. These #5495 series coils can be shielded in our #S-32 shields (1⅛″ sq.) with very little loss in Q. Mounting is by means of a single ¼″ hole. **Dimensions (form): ⅜″ x 2″.**

Ranges shown are for use with a 365 mmfd. variable tuning condenser.

Cat. No.	Use	List Price
Long Wave Coils (140-420 KC)		
X-5495-A	Antenna Stage	$2.50
X-5495-RF	RF Stage	2.50
X-5495-C	Standard Osc. 455 KC	2.50
X-5496-C	Tapped Osc. 455 KC	2.50
Broadcast Band Coils (540-1700 KC)		
A-5495-A	Antenna Stage	$2.50
A-5495-RF	RF Stage	2.50
A-5495-C	Standard Osc. 455 KC	2.50
A-5496-C	Tapped Osc. 455 KC	2.50
Medium Wave Coils (1.7-5.5 MC)		
B-5495-A	Antenna Stage	$2.50
B-5495-RF	RF Stage	2.50
B-5495-C	Standard Osc. 455 KC	2.50
B-5496-C	Tapped Osc. 455 KC	2.50
Short Wave Broadcast Coils (5-18 MC)		
C-5495-A	Antenna Stage	$2.50
C-5495-RF	RF Stage	2.50
C-5495-C	Standard Osc. 455 KC	2.50
C-5496-C	Tapped Osc. 455 KC	2.50
High Frequency Coils (12-36 MC)		
D-5495-A	Antenna Stage	$2.50
D-5495-RF	RF Stage	2.50
D-5495-C	Standard Osc. 455 KC	2.50
D-5496-C	Tapped Osc. 455 KC	2.50



Midget Variable Condensers

Split outer plates on the rotors permit accurate alignment. High frequency trimmers are provided on the short side of the condenser. Mounting is provided by tapped holes in the frame of the condenser. Counter-clock rotation for capacity increase. Shaft dia. is ¼″x1″ long. Capacity range—10 to 365 mmf.

Cat. No.	Sections	Dimensions	List Price
2111	1	1⅛″ x 1 3/16″ x 1⅝″	$3.25
2112	2	2 3/16″ x 1 13/16″ x 1⅝″	4.00
2113	3	3 3/16″ x 1 13/16″ x 1⅝″	5.50

AdjustablePadderCondensers

Used as adjustable oscillator padding condenser in super-het receivers to insure proper three-point tracking. They also find application as the horizontal drive control in television receivers. ¼″ single hole mounting.

Dimensions: ⅞″ x 1″ x ⅜″ thick.

Cat. No.	Capacity Range	List Price
160-A	360-1000 mmfd.	$1.40
160-B	50-400 mmfd.	1.25
160-C	200-600 mmfd.	1.40
160-D	10-160 mmfd.	1.10
160-E	25-280 mmfd.	1.20

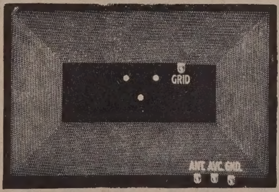
Adjustable R.F. Coils

Particularly recommended for aircraft, marine and mobile equipment and general custom receiver construction. Coils are designed for use with standard 365 mmfd. tuning condenser.

Dimensions: 1⅛″ square x 2″ high.

Cat. No.	Use	I.F. Freq.	List Pr.
Broadcast Band 540-1700 KC			
A-320-A	Antenna		$2.50
A-320-RF	Interstage		2.50
A-320-M	2-coil Osc.	132 KC	2.50
A 320-C	2-coil Osc.	455 KC	2.50
A-321-M	Tapped Osc.	132 KC	2.50
A-321-C	Tapped Osc.	455 KC	2.50
Marine & Aircraft Band 2100-6300 KC			
B-320-A	Antenna		$2.50
B-320-RF	Interstage		2.50
B-320-M	2-coil Osc.	132 KC	2.50
B-320-C	2-coil Osc.	455 KC	2.50
B-321-M	Tapped Osc.	132 KC	2.50
B-321-C	Tapped Osc.	455 KC	2.50
Short Wave Band 6.0-18 MC			
C-320-A	Antenna		$2.50
C-320-RF	Interstage		2.50
C-320-C	2-coil Osc.	455 KC	2.50
C-321-C	Tapped Osc.	455 KC	2.50

Loop Antenna



The Miller No. 703A Loop Antenna utilizes the patented "Air Loop" construction which provides high Q and mechanical rigidity. The Q of the loop is 150 at 790 KC and is substantially uniform throughout the standard broadcast band. Secondary inductance 253 microhenries. Inductance may be reduced as necessary by removing turns from the inside terminal.

Dimensions: 8⅛″ wide x 5⅜″ high x ⅛″ thick.

Cat. No.	Frequency Range	List Price
703A	540-1700 KC	$3.25

Miniature Hi-Q Coils

Cup core construction for high Q. Permeability tuning to adjust inductance. Antenna and oscillator coils have tapped windings, R.F. coil features impedance coupling.

Dimensions of shield: ¾″ sq. x 1⅜″ high.

Cat. No.	Use	Freq. Range	List Price
A-123-A	Antenna Stage	535—1700 kc	$2.50
A-123-RF	R.F. Stage	535—1700 kc	2.50
A-123-C	Osc. Stage	455 kc.—.0004 Pad	2.50

Universal Replacement Coils

(Permeability Tuned)

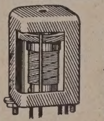
This series of variable inductance iron core coils are well suited for general replacement. Adjusted to cover the standard broadcast band with a tuning condenser having a maximum capacity of between 250 and 450 mmfd. The oscillator coils may be used with any I.F. amplifier operating in the 100 to 550 KC range.

Unshielded Dimensions: ⅞″ diameter x 2″ hi "L" mtg. bracket.

Cat. No.	Use	Freq. Range	List Pr.
72-A	Antenna Stage	500-1800 KC	$2.75
72-RF	R.F. Stage	500-1800 KC	2.75
72-OSC	Oscillator Stage (see text above)		2.75

Shielded Dimensions: 1⅜″ square x 2½″ hi

Cat. No.	Use	Freq. Range	List Pr.
73-A	Antenna Stage	500-1800 KC	$3.20
73-RF	R.F. Stage	500-1800 KC	3.20
73-OSC	Oscillator Stage (see text above)		3.20



Standard Bank Wound Coils

High gain general purpose coils featuring high impedance coupled antenna and R.F. units with progressive wound litz wire secondaries (except oscillator coils). For use with standard 365 mmfd tuning condenser. All windings are thoroughly impregnated with tropicalized R.F. lacquer.

Dimensions: 1⅜″ square x 2½″ high.

Cat. No.	Use	Freq. Range	List Pr.
44-A	Antenna Stage	540-1700 KC	$1.75
44-RF	R.F. Stage	540-1700 KC	1.75
44-BP	Band-Pass Stage	540-1700 KC	1.75

Cat. No.	I.F. Freq.	Series Pad	List Price
44-H	262 KC	.0006 "	1.75
44-C	455 KC	.0004 "	1.75

Tapped osc. coils (for 6SA7 and similar tubes)

Cat. No.	I.F. Freq.	Series Pad	List Price
41-H	262 KC	.0006 "	1.75
41-C	455 KC	.0004 "	1.75

Unshielded

Dimensions: ⅝″ diameter (form) x 2⅛″ high.

Cat. No.	Use	Freq. Range	List Pr.
43-A	Antenna Stage	540-1700 KC	$1.50
43-RF	R.F. Stage	540-1700 KC	1.50
43-BP	Band-Pass Stage	540-1700 KC	1.50

Cat. No.	I.F. Freq.	Series Pad	List Price
43-H	262 KC	.0006 "	1.50
43-C	455 KC	.0004 "	1.50

Tapped osc. coils (for 6SA7 and similar tubes)

Cat. No.	I.F. Freq.	Series Pad	List Price
45-H	262 KC	.0006 "	1.50
45-C	455 KC	.0004 "	1.50

Electric Shaver Filter

This filter contains an inductive-capacitive circuit consisting of two duo-lateral wound chokes and a non-inductive condenser, giving complete freedom from radio interference. Most electric shavers act as miniature transmitters and feed interference energy into the house wiring and it is then picked up by the radio receiver. **Dimensions:** 1⅛″ diameter x 3″ long.

Cat. No.	Volts	Watts	Finish	List Price
7817	115	50	Black	$4.00
7817-I	115	50	Ivory	4.00

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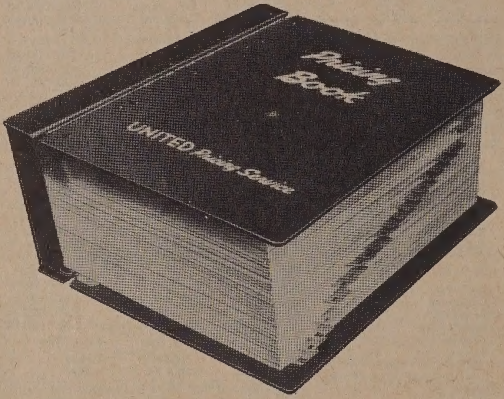

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GLEN COVE, LONG ISLAND, NEW YORK

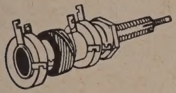
ADJUSTABLE COILS and COIL FORMS
Cover Every Frequency Range from Audio to 200mc

These high quality coils enable engineers and experimenters to save valuable development time by filling a vast number of requirements with standard components from stock. All coils have the following features:

- *All metal parts plated to MIL specifications.*
- *Built-in "perma-tune" tension for smooth "stay-put" tuning.*
- *Litz wound higher inductance ranges.*
- *Two extra terminals for tie points or additional winding.*
- *Moisture and fungus resistant impregnant per MIL-V-173-A.*
- *Color coded ranges.*

COILS ON CERAMIC FORM PER JAN-I-10

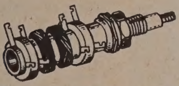
Subminiature 1100 Series



- ⅝″ above mounting surface
- Mounting — 11/64″ hole
- For R.F. and I.F. applications

Part No.	Nominal Microhenries	Average Q
1100-A	0.9- 1.4	45 @ 7.9 mc
1100-B	1.4- 1.9	50 @ 7.9 mc
1100-C	1.9- 2.6	55 @ 7.9 mc
1100-D	2.6- 3.7	65 @ 7.9 mc
1100-E	3.7- 5.5	65 @ 7.9 mc
1100-F	5.5- 7.4	70 @ 7.9 mc
1100-G	7.4-12.5	64 @ 5.0 mc
1100-H	12.5-18.0	72 @ 5.0 mc
1100-I	18.0-28.0	74 @ 5.0 mc
1100-J	28.0-38.0	72 @ 5.0 mc
1100-K	38.0-55.0	75 @ 2.5 mc

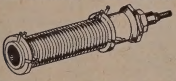
Miniature 1000 Series



- ⅞″ above mounting surface
- Mounting — #10 hole
- For R.F. and I.F. applications

Part No.	Nominal Microhenries	Average Q
1000-A	1.0- 1.6	70 @ 7.9 mc
1000-B	1.6- 2.7	80 @ 7.9 mc
1000-C	2.7- 4.5	85 @ 7.9 mc
1000-D	4.5- 8.5	85 @ 7.9 mc
1000-E	8.5-14.5	75 @ 2.5 mc
1000-F	14.5-22	65 @ 2.5 mc
1000-G	22-29	65 @ 2.5 mc
1000-H	29-55	85 @ 2.5 mc
1000-I	55-110	80 @ 2.5 mc
1000-J	110-185	85 @ .79 mc
1000-K	185-305	85 @ .79 mc
1000-L	305-515	85 @ .79 mc
1000-M	515-820	85 @ .79 mc
1000-N	820-1100	75 @ .79 mc

Transmitter 1300 Series

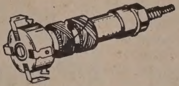


- 1¾″ above mounting surface
- Mounting — ¼″ hole
- For low power tansmitters and high Q receiver circuits

Part No.	Nominal Microhenries	Average Q
1300-A		For use from 90-200 mc
1300-B		For use from 40-90 mc
1300-C		For use from 20-40 mc
1300-D	0.7- 1.1	130 @ 20 mc
1300-E	1.1- 1.7	150 @ 18 mc
1300-F	1.7- 2.7	150 @ 16 mc
1300-G	2.7- 4.5	150 @ 14 mc
1300-H	4.5- 6.8	150 @ 12 mc
1300-I	6.8-10.8	150 @ 10 mc
1300-J	10.8-17.0	150 @ 7 mc
1300-K	17.0-29.0	125 @ 5 mc
1300-L	29.0-45.0	125 @ 4 mc
1300-M	45.0-75.0	125 @ 3 mc

COILS ON MICA FILLED FORMS PER MIL-P-14-D

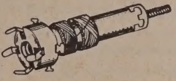
Standard 120 Series



- 1¼″ above mounting surface
- Mounting #10 hole
- For R.F. and I.F. applications

Part No.	Nominal Microhenries	Average Q
120-A	2-3	75 @ 7.9 mc
120-B	3-5	85 @ 7.9 mc
120-C	5-9	90 @ 7.9 mc
120-D	9-18	75 @ 7.9 mc
120-E	18-36	75 @ 2.5 mc
120-F	36-64	75 @ 2.5 mc
120-G	64-105	90 @ 2.5 mc
120-H	105-200	90 @ 2.5 mc
120-I	200-500	90 @ .79 mc
120-J	500-1000	90 @ .79 mc
120-K	1000-2000	70 @ .79 mc

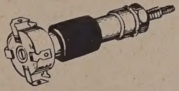
Printed Circuit P-120 Series



- Snaps into single 0.4″ hole for dip soldering
- 1¼″ long

Part No.	Nominal Microhenries	Average Q
P-120-A	2-3	75 @ 7.9 mc
P-120-B	3-5	85 @ 7.9 mc
P-120-C	5-9	90 @ 7.9 mc
P-120-D	9-18	75 @ 7.9 mc
P-120-E	18-36	75 @ 2.5 mc
P-120-F	36-64	75 @ 2.5 mc
P-120-G	64-105	90 @ 2.5 mc
P-120-H	105-200	90 @ 2.5 mc
P-120-I	200-500	90 @ .79 mc
P-120-J	500-1000	90 @ .79 mc
P-120-K	1000-2000	70 @ .79 mc

Shielded, Encapsulated SE-120

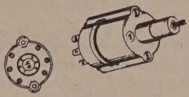


- Magnetic shielding cup
- Ruggedized construction
- 1¼″ long

Part No.	Nominal Microhenries	Average Q
SE-120-A	2-3	75 @ 7.9 mc
SE-120-B	3-5	85 @ 7.9 mc
SE-120-C	5-9	90 @ 7.9 mc
SE-120-D	9-18	75 @ 7.9 mc
SE-120-E	18-36	75 @ 2.5 mc
SE-120-F	36-64	75 @ 2.5 mc
SE-120-G	64-105	90 @ 2.5 mc
SE-120-H	105-200	90 @ 2.5 mc
SE-120-I	200-500	90 @ .79 mc
SE-120-J	500-1000	90 @ .79 mc

ENCAPSULATED CUP-CORE COILS

Audio and Ultrasonic 700 Series

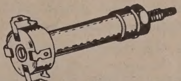


- 1½″ above mounting surface
- Mounting Centers — Two #6 holes spaced 1¼″
- Magnetically shielded—High Q
- For standard or printed circuits

Part No.	Nominal Millihenries	Average Q
700-A	1.5-3	120 @ 200 kc
700-B	3-7	120 @ 150 kc
700-C	7-13	110 @ 100 kc
700-D	13-25	110 @ 60 kc
700-E	25-50	110 @ 40 kc
700-F	50-100	125 @ 20 kc
700-G	100-250	125 @ 20 kc
700-H	250-500	125 @ 5 kc
700-I	500-1000	125 @ 5 kc

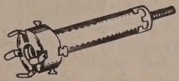
COIL FORMS

F-120



- Mica filled MIL-P-14-D forms
- All metal parts MIL spec. plated
- For use at .2 mc to 30 mc
- 1¼″ above mounting surface

PF-120



- Similar to above except for printed circuitry

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Please send for data sheets describing our toroidal coils and wide band video or R F transformers.

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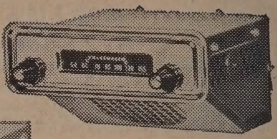
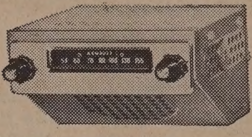


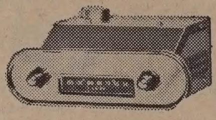
• VOLKSWAGEN



• RENAULT

• ATR Karadio
(Illustrates Under-dash Mounting)

OTHER MODELS AVAILABLE



• LARK

• RAMBLER

The ATR Customized Karadio is a compact, new, self-contained airplane-styled radio for small import and compact American cars. This economical unit is perfect for all small cars because it can be easily and inexpensively installed in-dash or under-dash on most any make or model automobile—and its powerful 8-tube performance provides remarkable freedom from engine, static, and road noises. ATR Karadios are built to look and fit like original equipment with sleek, modern styling and solid, single-unit construction. They offer many customized features and provide highest quality fidelity—yet cost far less than comparably designed units. The ATR Customized Karadio comes complete with speaker and ready to install . . . and is the ideal way to add fun and value to your small import or American automobile!

FEATURES

- **HAND WIRED — NO PRINTED CIRCUITRY**
- Finger-tip control to adjust tone as you desire.
- Automatic volume control to keep signals strong and steady.
- Its powerful 6-tube circuit (actual 8-tube performance) outperforms most larger and bulkier sets!
- Is ATR Vibrator-operated!

For performance, dependability, and economy—the ATR Karadio is the finest, most versatile auto radio ever designed!

SPECIFICATIONS

- Large, easy-to-read illuminated dial.
- Extra large Alnico 5 Magnet PM Speaker.
- 6-Tube Superheterodyne Circuit (utilizes 2 dual purpose tubes) with 8-Tube Performance . . . pulls in those distant stations, with good tone and volume.
- Uses tube-type rectifier for longer uninterrupted service.
- No battery polarity input problem.
- 3-Section Super "Magne-Wave" Tuner.
- Increased sensitivity assures more powerful reception at greater distances.
- 6 or 12 volt storage battery operation, low battery drain.

Neutral Gray-Tan, baked enamel finish. Overall size, 7" deep, 4" high, and 6½" wide. Net weight, radio set, 6 lbs.

***For Your Convenience* . . "IN ONE COMPLETE PACKAGE . .**

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BORGWARD	6-volt	BDAZR	8 lbs.	$35.67
BUICK				
1958-'54	12-volt	BKBYR	8 lbs.	35.67
† CHEVROLET				
1958	12-volt	CTCXR	8 lbs.	35.67
1956-'55	12-volt	CTDWR	8 lbs.	37.21
1954-'53	6-volt	CTEVR	8 lbs.	35.67
CORVAIR	12-volt	CRFUR	10 lbs.	40.39
DKW	6-volt	DWGTR	8 lbs.	35.67
ENGLISH FORD				
1957-'59 Consul Zephyr Zodiac	12-volt	EFHSR	9 lbs.	36.72
1960 Consul Zephyr Zodiac Mark III	12-volt	EFIRR	9 lbs.	36.02
† FALCON	12-volt	FNJQR	8 lbs.	37.49
† FORD				
1960	12-volt	FDKPR	8 lbs.	37.49
1959-'57	12-volt	FDLOR	8 lbs.	35.67
1954	6-volt	FDMNR	8 lbs.	35.67
GOLIATH				
1959	6-volt	GHNMR	8 lbs.	35.67
1960	6-volt	GHOLR	8 lbs.	35.67
KARMEN-GHIA	6-volt	KGPKR	8 lbs.	36.23
LARK				
1959-'60	12-volt	LKQJR	8 lbs.	37.21
MERCURY				
1958-'57	12-volt	MYRIR	8 lbs.	35.67
MG-MGA	12-volt	MGSHR	8 lbs.	35.67
MORRIS-MINOR	12-volt	MMHSR	7 lbs.	33.57
OPEL	6-volt	OLTGR	8 lbs.	35.67
PEUGEOT	12-volt	PTUFR	8 lbs.	35.67
† PLYMOUTH				
1959	12-volt	PHVER	9 lbs.	37.63
1956	12-volt	PHWDR	8 lbs.	37.49
1955	6-volt	PHXCR	8 lbs.	37.49
RAMBLER				
1958-'59	12-volt	RRYBR	8 lbs.	36.02
RENAULT				
1955-'59	6-volt	RTAZR	8 lbs.	35.67
1955-'59	12-volt	RTBYR	8 lbs.	35.67
1959-'60				
SIMCA				
Aronde 1957-'59	12-volt	SACXR	8 lbs.	36.02
Elysec 1959-'60	12-volt	EEDWR	8 lbs.	36.02
VOLKSWAGEN				
1939-'57	6-volt	VNEVR	8 lbs.	37.21
1958-'60	6-volt	VNFUR	8 lbs.	36.23
VOLVO				
1957-'60	6-volt	VOGTR	8 lbs.	35.67
UNIVERSAL MODEL				
K-1279-12	12-volt	KOUBR	7 lbs.	$33.57
K-1279-6	6-volt	KOVCR	7 lbs.	33.57

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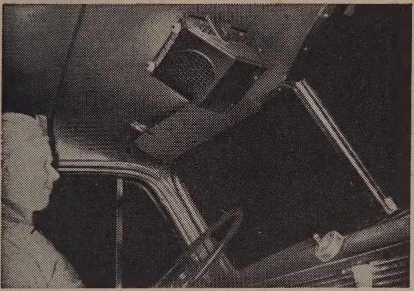
1. All KARADIO Models above equipped with tone control, trim plate kit, and speaker. If antenna is desired, additional pricing would be as follows: List Price, $2.95; dealer price, $2.07. Antenna shipping weight—1 lb.
2. *When ordering radio sets, please be sure to specify make of car, as above, together with battery voltage and code number to avoid any possible mistakes. Auto radio sets when so ordered will automatically be supplied with the Model K-1279 or K-1280 KARADIO for the battery voltage system required depending on whether built-in speaker or external speaker is needed. Each radio will be packaged in one (1) carton complete wherever practical to facilitate handling.
3. †Requires filing or drilling mounting holes for tuning or volume control shafts necessary to mount radio in dash.
4. Net weight each radio above—6½ lbs. shipping weight as indicated above.

ATR TRUCK Karadio

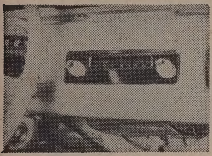
most versatile truck-auto-boat radio ever designed!

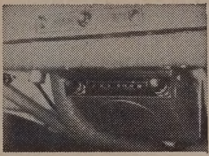


ATR TRUCK KARADIO is perfect for your truck! New self-contained, single-unit overhead airplane-style radio can be easily installed in the cab roof of any make or model truck, or if you prefer, in-dash or under-dash.

EASY TO INSTALL

1. Drill one 5/8" hole in ceiling.
2. Tighten antenna with lock-nut assembly and connect one wire.





The ATR KARADIO is ideal for small import cars or compact American cars! Unit is completely self-contained—extremely compact! Can be mounted in-dash or under-dash—wherever space permits!

FEATURES

- The in-line position of the speaker in this compact 6-pound radio permits more sound to reach the listener, so that the volume need not be turned up to the point of distortion even when driving fast.
- A fixed-length antenna (optional equipment) connected to the receiver by a 12-inch lead permits proper matching of the antenna to the receiver under all conditions, thus increasing the set's sensitivity.
- Finger-tip tone control to adjust tone as you desire.
- Automatic volume control to keep signals strong and steady.
- Its powerful 6-tube circuit (actual 8-tube performance) outperforms most larger and bulkier sets!
- The life of the radio has been increased considerably due to specially designed yoke-type flat-spring-mounting and excellent ventilation.
- The ATR Karadio is simple to service—merely take off two easily accessible thumb nuts and remove the entire set.
- The unit can be installed quickly and easily—drill ONE hole . . . connect ONE wire, and the set is ready for use.
- Overhead mounting adds extra safety to driving, because the driver never has to take his eyes off the road to tune or adjust the set.
- Yoke-type tilt bracket mount permits radio to be adjusted to curvature of any cab or as desired by driver.
- Sturdy lock-nut and washers hold radio set mount securely to cab top through 5/8" hole drilled in ceiling.
- 33" stainless steel antenna bends in any direction.
- Set is peaked to maximum efficiency with given length of aerial.
- Antenna lead only 12" in length.

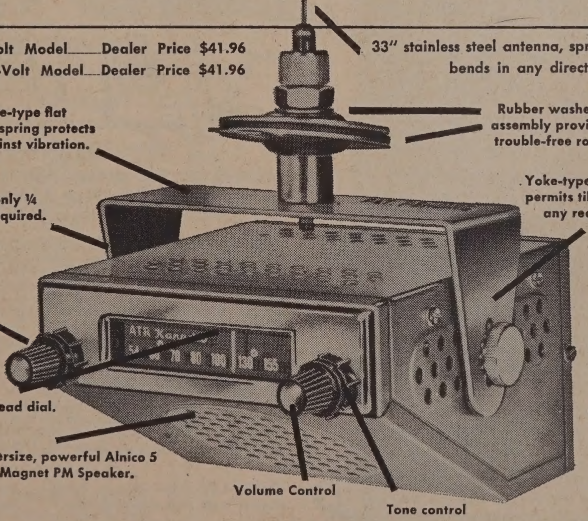
For performance, dependability, and economy—the ATR Karadio is the finest, most versatile truck-auto-boat radio ever designed!

SPECIFICATIONS

- Large, easy-to-read dial.
- Extra large Alnico 5 Magnet PM Speaker.
- 6-Tube Superheterodyne Circuit (utilizes 2 dual purpose tubes) with 8-Tube Performance . . . pulls in those distant stations.
- Uses tube-type rectifier for longer uninterrupted service.
- No battery polarity input problem.
- 3-Section Super "Magne-Wave" Tuner.
- Increased sensitivity assures more powerful reception at greater distances.
- 6 or 12 volt storage battery operation, low battery drain.

Neutral Gray-Tan, baked enamel finish. Overall size, 7" deep, 4" high, and 6½" wide. Net weight, radio set, 6 lbs., shipping weight, complete with antenna, 10½ pounds.

TR-1279-6A, 6-Volt Model____Dealer Price $41.96
TR-1279-12A, 12-Volt Model__Dealer Price $41.96

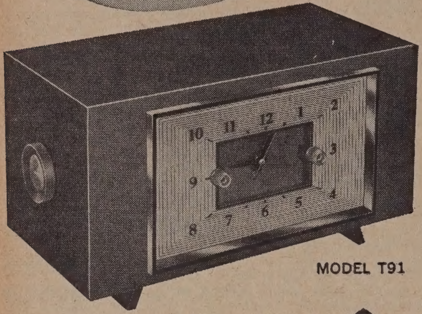

33" stainless steel antenna, spring mounted bends in any direction.
Yoke-type flat bracket-spring protects set against vibration.
Rubber washer and lock-nut assembly provides watertight, trouble-free roof installation.
Short antenna lead only ¼ the length normally required.
Yoke-type bracket-mount permits tilting of radio to any required angle.
Finger-Tip Tuning Control
ATR Karadio
Large, easy-to read dial.
Oversize, powerful Alnico 5 Magnet PM Speaker.
Volume Control
Tone control

Hand Wired
No Printed Circuitry

AVAILABLE WITH OR WITHOUT ANTENNA, AS DESIRED.

FOR 6-VOLT OR 12-VOLT BATTERY SYSTEM.

ATR Ultra Modern TABLE RADIOS



MODEL T91

CLOCK RADIO WITH BUILT-IN SALES APPEAL

Excitingly styled clock radio—trim, modern cabinet in ebony or ivory plastic . . . rich gold-color trim and clock numerals. Powerful 5-tubes AM radio chassis with built-in "Magna-Plate" antenna. Full-toned 4" PM speaker. Popular features include: *Musical Alarm*—radio turns on automatically at any pre-set time; *Sleep Selector*—lulls user to sleep, turns radio off automatically during 60 minute period after retiring; *Automatic Appliance Timer*—outlet on back of radio times any electric appliance automatically (up to 1100 watts). Cabinet 10½ in. wide, 5 in. high, 5⅛ in. deep. Wt. approx. 8 lbs. A WONDERFUL TONIC FOR NEW SALES . . . BIGGER PROFITS!

Model T-91 Clock Radio, Black ____________ Dealer Price $22.45
Model T-91 Clock Radio, Ivory ____________ Dealer Price $23.15

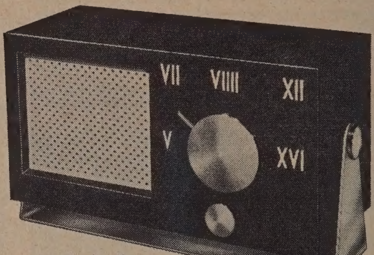
CLOCK SPECIFICATIONS ON MODEL T91 ONLY

- Genuine Telechron Movement . . . Accurate, Quiet, and Long-Lived.
- Self-Starting . . . Never Needs Winding, Oiling, or Regulating.
- Simplified Clock Controls for Radio and Sleep Switch.
- 1100 Watt Controlled Appliance Outlet.
- Automatic Buzzer Alarm Sounds Approximately 10 Minutes After Sleep-Switch Turns On Radio.
- Gold-Plated Bezel and Numerals on Large Bone-White Dial. Dial Size 4¼" x 7¼"
- UL Approved

GENERAL SPECIFICATIONS PERTAINING TO ALL ATR TABLE RADIOS

- **Advanced Super-heterodyne Circuit**—Increased selectivity and sensitivity with improved tube types . . . High audio output . . . Automatic volume control . . . two gang variable condenser.
- **Sealed Alnico 5 PM Dynamic Speaker**—Full range frequency . . . Power without distortion . . . Balanced tone quality.
- **Automatic Volume Control**—Maintains uniform volume on local and long distance reception.
- **Genuine Magna-Wand Ferrite Antenna**—Magna-Wand used in conjunction with Hi-Q Iron Core IF Coils for extreme sensitivity and selectivity . . . High signal-to-noise ratio.
- **Power Line Noise Filter**—Minimum interference from household appliances, motors, etc.
- **Wave Band:** 540 to 1600 KC
- **Tubes**—
  - 12BA6—456 KC IF Amplifier
  - 12AV6—2nd detector-1st Audio
  - 50C5—Audio Power Output
  - 12BE6—Mixer
  - 35W4—Rectifier
- **Power Supply:** 115 Volts, 60 Cycles AC
- **Cabinet**—Beautiful compression molded bakelite with shadow box effect dial and complementing golden knobs and trim. Resistant to heat.

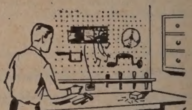
• HAND WIRED — NO PRINTED CIRCUITRY ATR



MODEL T87

for Kitchen

for Den



for Workshop

ATR "TILT-A-STAND" RADIO
MOUNT ON THE WALL—UNDER A SHELF—OR SET ON A TABLE
PERFECT for every room in YOUR home

A NEW HIGH IN RADIO USEFULNESS . . . It rotates a full 360° on a beautiful golden pedestal. Pedestal is notched for screws, giving unlimited mounting possibilities. THE HANDIEST RADIO EVER! The gleaming molded bakelite cabinet is enhanced by a contrasting recessed grill and rich golden dial pointer and controls. Distinctive dial with large Roman numerals.

Excitingly new and different . . . radio is mounted on sturdy, gleaming brass-finished stand. Radio tilts up or down easily to any desired angle. Keyhole slot in stand makes this versatile performer easy to mount on wall out of way of small hands. Perfect for den, kitchen, or bedroom. Power-packed 5-tubes chassis. Built-in loop antenna. Automatic volume control. Full 4" Alnico 5 speaker Distinctive Roman numerals on dial. Size: 9½" W x 4" D x 5¾" H. AC/DC. U.L. approved. Weight 5½ lbs.

Model T-87 (Tilt-A-Stand), Black ___ Dealer Price $17.47
Model T-87 (Tilt-A-Stand), Red _____ Dealer Price $18.10

(Use Index Page 1 for Quick, Easy Location of ALL Products)

FOR THOSE WHO WANT THE FINEST!

ATR TV

15 FULL-DOOR and 12 OPEN FACE DE LUXE CONSOLE TELEVISION SETS . . . to choose from!

FEATURING THE ULTIMATE IN HIGH-QUALITY, AUTHENTICALLY-STYLED, FINE-FURNITURE CABINETS AND THE FULL-TRANSFORMER SUPER-POWERED ATR No. 2600 CHASSIS.

Includes push-pull high-fidelity audio system; dual extended-range, large permanent magnet speakers; spot-light tuning; giant 265 square inches 90° aluminized 21″ picture tube; and super VHF tuner for high sensitivity fringe area reception.

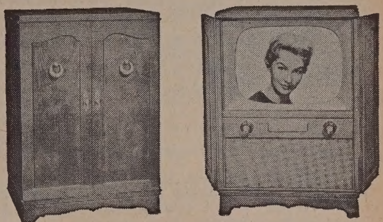
The Biltmore

by ATR

Pictured·
Model
26007 LD-4
in mahogany

Distinctively styled in genuine walnut, mahogany or blonde Korina. Hand rubbed to a gleaming, hard finish of lasting beauty. Features the superb No. 2600 ATR chassis. Dimensions: 24½″ wide, 36½″ high and 20″ deep. Concealed casters for mobility.

- UNSURPASSED IN BEAUTY
- UNEQUALLED IN PERFORMANCE
- UNMATCHED IN QUALITY CONSTRUCTION



Provincial by ATR

Model No. 26002
(Illustrated)

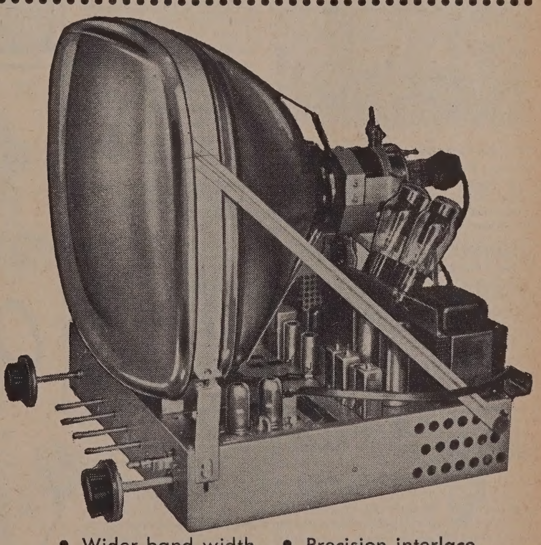
Cabinet has concealed casters for easy mobility. Available in 18th Century Mahogany, Early American Antique Maple and French Provincial in Cherrywood with Fruitwood finish. Dimensions: 24½″ wide, 36½″ high, and 20″ deep. Rich finishes are applied and hand rubbed to smooth lustrous beauty.

● ●

ATR TV

SUPER-POWERED ATR No. 2600 FULL-TRANSFORMER CHASSIS

For Maximum Dependability and Performance



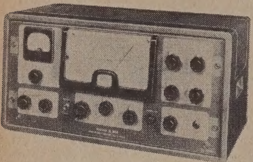
SPECIALLY DESIGNED BY ATR FOR MOVIE-CLEAR, SHARPEST PICTURES WITH MAXIMUM PICTURE STABILITY . . . DESIGN AND CONSTRUCTION INCLUDE EXTRA VALUE FEATURES THAT MAKE FOR QUALITY PLUS . . .

- 18,000 volts of quality picture power
- Super-powered full-transformer 26 tube chassis
- Extended-range speakers of heavy duty construction
- Automatic gain control
- 4-Stage 41 MC IF amplifier
- Interference rejector
- Push-pull audio system
- Permanent-magnet focus
- Higher gain video amplifier
- Wider band width
- Precision interlace
- Highest quality components including molded capacitors
- Improved dependable long life ATR circuitry
- Front tuning of all important control functions

GELOSO AMATEUR EQUIPMENT

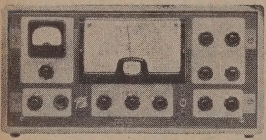
AMERICAN GELOSO ELECTRONICS, INC. NEW YORK 10, N.Y.

GELOSO AMATEUR RADIO GEAR, built by Europe's largest integrated electronics manufacturer, is world-famous among leading "ham" operators and builders. Precision engineered by pioneer "ham" radio designer John Geloso, each rugged, custom-designed transmitter and receiver is tested and approved to assure long, reliable service. Write today for a free brochure on the complete GELOSO "ham" line. In U.S.: 251 Park Ave. S., New York 10, N. Y. In Canada: Canadian Geloso Electronics, Ltd., 700 Weston Rd., Toronto 9, Ontario. (All prices slightly higher in Canada.)



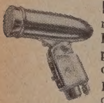
RECEIVER G-209. Internationally acclaimed for its sturdy chassis design and performance, this conservatively engineered receiver boasts *standard American tubes,* substantially lower cost and the following: double-conversion superhet • six bands, 10-80 meters • stable AM or single-side-band reception • accurate calibration • absolute frequency stability • 110-280 v. power-supply adjustability • handsome grey hammer-tone finish • *guaranteed.* Only **$249.50** net.

SPECIFICATIONS: Sensitivity: Better than 1μv for 1 w. a.f. output. **Signal-to-Noise Ratio:** Better than 6 db at 1 μv. **Selectivity:** 5 positions: Normal; Xtal 1; Xtal 2; Xtal 3; Xtal 4. **Reception of Single-Side-Band Signals:** Upper as well as lower side-band, with carrier re-insertion. **Self-Adjustive Noise Limiter:** Effective with a.m., c.w., or s.s.b. signals. **Audio Power Output:** 2.5 w. **Antenna Input:** Circuit for balanced and unbalanced antenna input. **Output Circuit:** 3.2 and 500Ω, receptacle for headphones (any type). **Switches:** Main (power) and standby. **Tubes:** 12; plus 1 voltage stabilizer; 1 current stabilizer; 2 selenium rectifiers; 4 crystals. **Power:** 110-220 vac, 50-60 cycles, 90 w. **Dim.:** 20½" x 10½" x 10¼". **Panel:** (For rack mtg.) 19" x 8¾". **Shp. Wgt.:** 52 lbs. (Incl. tubes).

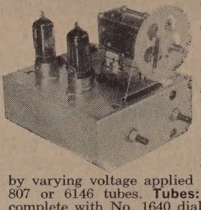


TRANSMITTER G-212/TR. Matching the G-209 receiver in size and appearance, this rugged transmitter offers: *standard American tubes* • six bands, 10-80 meters • choice of "CW" or full plate-modulated phone transmission • "pi"-network for standard antennas • 60 w. output power • absolute frequency stability • accurate calibration • versatile self-contained dual power supplies adjustable from 110-280 v. • famous Geloso 4/104 VFO built in • *fully guaranteed.* Only **$239.50** net. **Also available with 75 w. power output, completely TVI suppressed, in Model G-222/TR: only $259.50 net.**

SPECIFICATIONS: Power Line Requirements: 110-280 vac, 50 to 60 cycles. **Power Consumption:** "Phone" operation (plate-and-screen modulation, up to 100%): 270 w; "CW" operation (cathode keying of driver stage): 105 to 180 w; standby: 32 w. **Tubes:** 8, plus 4 selenium rectifiers. **Output Circuit:** "pi"-section coupler, adapted for single-wire fed antennas or coaxial cables, impedances from 40 to 1000Ω. Provision made for Rapid "Zero-Beat" Frequency Adjustment. **External Connections:** Antenna and Mike; shielded male plugs for coax included. **Dim.:** 20½" x 10½" x 10¼" **Front Panel:** (For rack mtg.): 19" x 8¾". **Shp. Wgt.** 63 lbs. (incl. tubes).



MODEL M60, 61. Professional quality dynamic microphone, precisely designed for studio and hi-fi use. Features molded anigroscopic diaphragm bearing a movable coil immersed in a constant magnetic field produced by an Alnico V permanent magnet. Mike is equalized by means of properly calibrated and dampened acoustic resonators. **Diaphragm:** Shock and moisture proof, wind and dust resistant. **On-Off Switch:** Built-in. **Freq. Resp.:** Perfectly flat, 60-14,000 cps. **Sensitivity:** –54 db. **Output Impedances:** M60: 250 Ω; M61: approx. 150,000 Ω. **Max. Dim., Mike Head Assembly:** 4⅜" x 1⅜" x 3¾" (including fixture). **Shp. Wgt.:** 2 lbs. including 5′ of heavy-duty shielded cable. Also available with 25′ of heavy-duty shielded cable. **List Price: $60,** with Jewel Box styrene case. Available in choice of goldplated ("G") or in chrome ("S") finishes (specify when ordering), and with adjustable floor and table stands and line matching transformer.

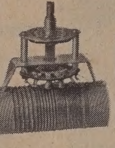


VARIABLE FREQUENCY OSCILLATORS (VFO'S). *Assembled, wired, tested and calibrated; ready for easy installation in transmitters of your own design.*

MODEL 4/102. 5 bands (80-10 m). Variable tuning condenser adjustment of trimmer condensers and variable inductances assure exact calibration. Plate tuning circuit of driver has coil for each frequency range, adjustable to center of range in use. Output produced by driver may be adjusted within certain limits by varying voltage applied to screen grid of this tube. Drives two 807 or 6146 tubes. **Tubes:** 3. **Wgt.:** 1½ lbs. **Price** (less tubes, complete with No. 1640 dial): **$29.95.**

MODEL 4/103. Combines VFO and fixed frequency crystal to serve specific contact requirements. VFO oscillates in 18 Mc. region, is multiplied in consecutive stages to produce final frequency in 144-148 Mc. band. Crystal oscillates on 12 Mc., is multiplied in consecutive stages to produce fixed, final frequency of 144 Mc. **R.F. Power Output:** Sufficient to excite 832 or 2E26 tube. **Tubes:** 4. **Approx. Shp. Wgt.:** 1½ lbs. **Price:** (less crystal and tubes, complete with No. 1647 dial assy): **$29.95.**

MODEL 4/104. 6 bands (80-10m). An integral part of the G 212/TR and G 222/TR transmitters. **Tubes:** 2. **R.F. Power Output:** Sufficient to drive one 807 or 6146, in a.m. or "CW" operation, under class "C" operating conditions, C.C.S. or I.C.A.S. **Shp. Wgt.:** 1½ lbs. **Price:** (less tubes, complete with No. 1646 dial assy.) **$29.95.**

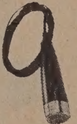


"PI" TUNING COIL (MODELS 4/111, 4/112). These easily installed "pi" network coils mount 6-position tap switch, use ceramic winding form to assure low loss. **Coil:** 1¾" x 3¾", mounts to 3¼" depth. **Shp. Wgt.:** 9 oz. **Price: $4.95. 4/111:** (use with two 807 or 6146 tubes in parallel) covers 80-10 meter bands. **4/112:** (use with one 807 or 6146 tube) handles up to 60 w. **Frequency Range:** same as VFO 4/104.

CALIBRATED VFO DIALS: MODELS: 1640 (VFO 4/102), 1647 (4/103), 1646 (4/104). Especially designed to fit VFO's and match their frequency bands. Furnished with appropriate VFO but available separately. **Dim.:** 8" x 5¼" x 1". **Shp. Wgt.:** ½ lb. **Price: $4.95.**

MICROPHONES

MODEL M-1110. High-performance crystal microphone. Ideal for use with home tape recorders, p.a. systems, paging, conference use, etc. Rugged diecast housing attractively styled and finished in brilliant chrome plate trimmed with ebony Bakelite. **Freq. Resp.:** 30-8,000 cps. **Output:** (–54 db). Supplied complete with built-in swivel desk-stand (B-72) and 8′ of heavy-duty shielded cable. Also available without B-72 for mounting on floor stand. **Approx. Shp. Wgt.:** 20 oz. **List Price: $19.95.**



MODEL M51. Budget-priced, high-performance, crystal microphone. Finished in ebony Bakelite, trimmed with chrome. Furnished complete with 8′ of heavy-duty shielded cable. **Freq. Resp.:** 30-8000 cps., with high output (–54 db.) Internal elements insulated; built-in blast filter provided. **Shp. Wgt.:** 12 oz. (approx). **List Price: $14.95.**

MODEL M40. Hand "Push-Button" microphone, rubber-insulated and shock-proof, with 12-foot rubber-insulated cable, wired to actuate relay in a transmitter. Frequency response curve is practically linear, 40-7000 cps. Extremely sensitive: –53 db. Maximum distortion only 3% with 100-microbar pressure. Push-button mike: press to talk, release to listen, lock for long talks. **Shp. Wgt.:** ½ lb. **List Price: $11.95.**

MODEL M62, 63. Dynamic diaphragm unit is identical to that of M60 and M61 microphones. M62 and M63 are adapted for special services such as newscasts or interviews which require light, easy-to-handle and highly efficient microphones. In ebony Bakelite with chrome trim. **Freq. Resp.:** Linear 60-14,000 cps. **Sensitivity:** –54 db. **Output Impedances:** M62: 250 Ω; M63: approx. 150,000 Ω. **Diaphragm:** Non-warping, water-repellent, dustproof and windproof. **Max. Dim. Mike Head Assembly:** 8⅜" x 1⅜" **Shp. Wgt.:** 1¾ lbs., including 5′ of heavy-duty shielded cable and case. (Also available with 25′ heavy shielded cable.) **List Price: $48** with Jewel Box styrene case.

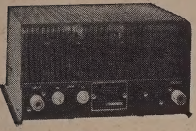
BLONDER-TONGUE

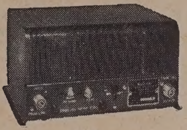
LABORATORIES, INC.
NEWARK 2, NEW JERSEY

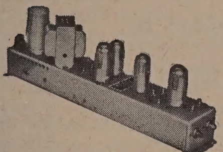
BLONDER TONGUE
10th
Anniversary Line

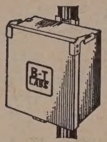
TENTH
ANNIVERSARY LINE
OF RECEPTION IMPROVING
TV PRODUCTS

MASTERLINE TV SYSTEM COMPONENTS


MLA-b


MAC


MCS-b


MRH-A

(proven dependable in installations from coast to coast)

VHF AMPLIFIER Model MLA-b. Professional head-end and line amplification for any TV distribution system. 40 db all-channel gain, ±0.5 db channel flatness, 1.7 volts output per band, separate 20 db gain control and 6 db tilt controls, and 75 ohm solderless coax fittings. **$142.50 list.**

AUTOMATIC GAIN CONTROL Model MAC. Controls signal fluctuations in any type of Master system. Regulates any TV amplifier having at least 16 db gain and 0.6-2.5 volts output per band. New 75 ohm solderless coax fitting. **$121.50 list.**

VHF SINGLE CHANNEL AMPLIFIER WITH AGC Model MCS-b. Ideal wherever the need exists for greater signal strength and/or to provide uniform output from one or more TV channels. The unit has high gain (more than 50 db, channels 2 thru 6; more than 35 db channels 7 thru 13) high rejection of adjacent channels, AGC and its own built-in power supply. MCSB amplifiers may be cascaded for one channel, or used for separate channels and their outputs mixed. (specify VHF channel). **$134.50 list.**

RADIATION-PROOF HOUSING Model MRH-A. Weatherproof and radiation-proof enclosure for Master TV equipment has perforated mounting surface and adjustable support brackets. Maximum ventilation, front-opening sealed door and sturdy hasp. Iridite-finish, cadmium-plated steel. **$62.50 list.**

VHF AND UHF CONVERTER-AMPLIFIERS

***(Specify input and output channels)**

VHF CONVERTER-AMPLIFIER Model MVC*. Converts a specified VHF "high" channel to a specified VHF "low" channel. Crystal controlled. Gain: in excess of 33 db ±½ db. Input and output 75-ohm coax fittings. Output and all-channel mixing network. Self-powered. Available on special order only. **$400 list.**

VHF CONVERTER-AMPLIFIER Model MLC*. Converts a specified VHF "low" channel to a specified VHF "low" channel. Crystal controlled. Flat within ±½ db over 6 Mc. bandwidth. Input and output 75 ohm coax fittings. Output and all-channel mixing network. Self powered. Available on special order only. **$400 list.**

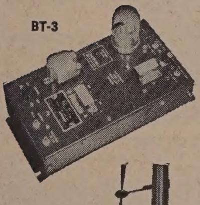
UHF CONVERTER-AMPLIFIER Model MUC*. Converts a specified UHF channel to a specified VHF channel. Crystal controlled. Gain from 15 to 25 db. Flat within ±½ db over 6 Mc. bandwidth. Input for 300 ohms and output. All-channel mixing network, self powered. Available on special order only. **$400 list.**

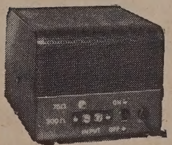
MIXER AMPLIFIER Model MA4-1. Special housing and power supply for one or two UC-1 UHF converter strips. Mixes outputs of UC-1 and also provides mixing for CB amplifiers. Precise 75 and 300 ohm terminals. **$78.75 list.**

UHF CONVERTER STRIP Model UC-1. Single channel UHF converter for MA4-1, over 15 db gain on any fixed UHF to fixed VHF channel. 300 ohm input. Specify both UHF and VHF channels. **$125 list.**

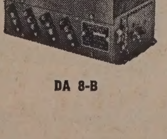
MASTER AND HOME SYSTEM COMPONENTS

BT-3




HAB

CB


DA 8-B

NEW ALL-TRANSISTOR BROADBAND TV/FM AMPLIFIER Model BT-3. Provides maximum gain, low noise — a new high in reliability, high output capabilities with minimum operating costs — draws only 2% of the power required to operate a vacuum tube amplifier with comparable gain. Can be used in large master antenna systems or in small home systems. It provides 18 — 15 db gain on channels 2 to 6; 19 db gain on channels 7 to 13; 15 — 9 db on FM. A battery plug permits you to power it with a battery when mounted away from any power sources. Separate low and high band inputs permit use of separate low and high band antennas. Also has a combined input for single broadband antenna. Easy installation with solderless 75-ohm coaxial fittings at input and output. **$99.50 list.**

TV/FM AMPLIFIER Model HAB. High gain VHF television and FM amplifier provides more than 23 db ±1 db gain on all channels from 2 to 13 as well as the FM band. Ideal amplifier for home systems or preamplifier for large and small Master systems. Uses 6DJ8-premium frame-grid tube and 6EW6 tube to provide highest possible signal-to-noise ratio. Features exclusive stripless 300 ohm terminals and new 75 ohm solderless cable connectors for input and output. **$69.50 list.**

DISTRIBUTION AMPLIFIER Model DA8-B. Provides 8 isolated TV set outlets from 1 75-ohm or 300-ohm input. Each outlet handles 75-ohm or 300-ohm line and delivers 10 db gain on all VHF channels to each TV set. Gain control covers 20 db range. Self-powered. **$94.50 list.**

VHF TV SINGLE-CHANNEL ANTENNA MOUNTED TV AMPLIFIER Model CB. Enclosed in a weatherproof housing, this versatile performer can be used in the home as a pre-amp or booster to increase the signal strength for a single-weak channel. Can also be used in series with as many as 12 other CB amplifiers, one for each channel, as a powerful multi-channel system. Employs frame-grid tube circuitry for maximum gain and minimum noise, gain 17 db, channel 2 to 6; 15 db channel 7 to 13. 300 ohm 'no-strip' terminals at input; two solderless coax connectors at output. Swing-down chassis allows quick, convenient servicing. **$52.50 list.**

BLONDER TONGUE

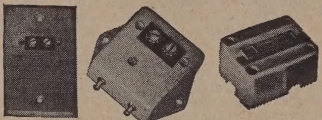
BLONDER-TONGUE

LABORATORIES, INC.
NEWARK 2, NEW JERSEY

10th Anniversary Line

TENTH
ANNIVERSARY LINE
OF RECEPTION IMPROVING
TV PRODUCTS

"EXACT MATCH" TV SYSTEM ACCESSORIES



A complete line of tapoffs and splitters for 75 ohm, 300 ohm, or mixed impedance systems. Flush mount, or wall mount, indoors, or outdoors . . . these accessories are easily mounted and are equipped with solderless connectors. RG59/U coaxial cable may be plugged directly into a new type of solderless fitting and may be used with a quick disconnect ("Q-D"). Flat 300 ohm transmission line need not be stripped, but is inserted directly into stripless connectors and secured in place by tightening two screws.

MODEL	TYPE OF MOUNTING	IMPEDANCE		ISOLATION	INSERTION LOSS	LIST PRICE
		INPUT	OUTPUT			
75 and 300 ohm feed throughs						
TF-771	flush	75	75	none	negligible	$2.70
TF-331	flush	300	300	none	negligible	1.75
75 ohm solderless tapoffs						
TF-771B	flush	75	75	17 db	less than 1 db	3.95
TS-771B	surface	75	75	17 db	less than 1 db	4.30
TF-772B	flush	75	(2) 75	17 db	less than 1 db	5.85
TO2-75 (no Q-D fitting)	surface	75	(2) 75	17 db	0.5	7.20
300 ohm stripless tapoffs						
A-331A	surface	300	300	11 db	less than 1.5 db	2.65
TF-731B	flush	75	300	17 db	less than 1 db	3.00
TS-731B	surface	75	300	17 db	less than 1 db	4.30
TO2-300	surface	75	(2)300	17 db	1 db	7.20
75 ohm solderless splitters						
TS-772 (indoor)	surface	75	(2) 75	14 db	3.5 db	5.20
TS-774 (indoor)	surface	75	(4) 75	11 db	6.5 db	7.20
75 to 300 ohm matching devices						
TF-731	flush	75	300	—	negligible	4.30
TS-731	surface	75	300	—	negligible	3.40
TM	surface	75	300	—	negligible	3.30

CABLE TAPOFFS

OUTDOOR SPLICELESS 75-OHM CABLE TAPOFFS FOR RG11/U CABLE

Three piece assembly provides both primary and secondary messenger connection.

MT-11-12	12 db isolation, 1.2 db insertion loss	**$4.95 list**
MT-11-17	17 db isolation, 0.6 db insertion loss	**$4.95 list**
MT-11-23	23 db isolation, 0.3 db insertion loss	**$4.95 list**

'QUICK-DISCONNECT' SOLDERLESS COAX CONNECTORS

Easy to use, eliminate bulk and are economical in system installation. Can be connected and disconnected as easily as plugging in a tube, if desired. Complete assembly **39¢.**

CRIMPING PLIERS MODEL CR-1

New Blonder-Tongue 'Q-D' connectors provide for a strong permanent installation by clamping a holding ring over the wire and fitting once a connection is made. Conventional tools can be used, however, a specially designed crimping pliers has been provided. **$6.75** net.

CABLE STRIPPER MODEL S-1

Rotary cutter stripper for coax cable and non-metallic tubing up to ½ inch. **$1.85** list.

CABLE CONNECTORS

RADIATION-PROOF COAX CABLE COUPLERS MODEL CL SERIES

Facilitates feedthrough connections in all types of shielded and non-shielded enclosures as well as providing for connections in an extension line fashion. All 3 types fit into the AC-1000 bushing.

Model	Function	
CL-1111	Couples two RG-11/U cables together	**$2.50 list**
CL-1159	Couples RG-11/U to RG-59/U cable	**$2.25 list**
CL-5959	Couples two RG-59/U cables together	**$2.00 list**

CABLE COUPLER MODEL MC

Correct 75-ohm match in splicing, adapting or terminating RG-11/U and/or RG-59/U cable. Thru-connection for Model MRH-A. Used with B-T Connectors and Terminating Plugs. **$2.50** list.

TERMINATING PLUG MODEL MTP-75

Correctly terminates cable fitted with Model MC Cable Coupler. **$2.50** list.

SOLDERLESS CONNECTORS MODEL P-11S

Matched 75-ohm male fitting for use with RG-11/U size cable. Each **$1.55** list.

SOLDERLESS CONNECTORS MODEL P-59S

Matched 75-ohm male fitting for use with RG-59/U size cable. Each **$1.55** list.

FEDDTHROUGH PANEL BUSHING MODEL AC-1000

Fits into any hole size from 5/8 to 11/16 for any enclosure or panel up to 1/8" thick to accommodate the CL series of feedthrough couplers, or provides feedthrough for RG-11/U transmission line without couplers. **$3.80** list.

MASTERLINE EXACT-MATCH SYSTEM ACCESSORIES

BALUN **Model MB**
Precise impedance match between 75-ohm coax and 300-ohm antenna line. Has 75-ohm coax fittings and 300-ohm screw terminals. Weather-protected. **$9.20 list**

DIRECTIONAL COUPLER **Model MDC-2**
Two isolated outlets for TV sets or branch lines. Only 3 db forward loss. Minimum isolation: 14 db. One 75-ohm input and two 75-ohm output fittings. Weatherprotected. **$13 list**

DIRECTIONAL COUPLER **Model MDC-4**
Four isolated outlets for TV sets or branch lines. Only 6 db forward loss. Minimum isolation: 20 db. One 75-ohm input and four 75-ohm output fittings. Weather-protected. **$28 list**

DUPLEXERS
Pair remotely controls TV amplifiers or permits two-way audio or AM transmission. Single line for VHF TV, plus AC, AM or audio (0 to 2 mc). Weather-protected.

Model MDX-300 (300 ohms) pair	**$25.20 list**
Model MDX-75 (75 ohms) pair	**$27.80 list**

FM WAVE TRAP **Model MWT-1**
Eliminates FM interference at the antenna, in the line or at the TV set. Attenuates any FM channel more than 25 db. 75-ohm coax fittings. Weather-protected. **$14.95 list**

ALL-CHANNEL EQUALIZER **Model ME-1**
Graduated attenuation from 17 db on Channel 2 to 1 db on Channel 13. Balances signals through 1000 ft. of RG-11/U or 500 ft. of RG-59/U. 75-ohm coax fittings, in and out. Weather-protected. **$16 list**

LOW-BAND EQUALIZER **Model ME-2**
Graduated attenuation from 9 db on Channel 2 to less than 1 db on Channel 6. Balances signals through 2000 ft. of RG-11/U or 1000 ft. of RG-59/U. 75-ohm coax fittings, in and out. Weather-protected. **$16 list**

POWER LINE FILTER **Model MLF**
Provides 60 db RF isolation between amplifier and power line. Two AC power outlets, one power cable input connector. Mounts in MRH-A. **$20.25 list**

VHF ATTENUATOR **Model MAT**
Uniform all-channel attenuation from 0 to 45 db in steps of 3 db. 75-ohm coax fittings, in and out. **$23.50 list**

BLONDER-TONGUE
LABORATORIES, INC.
NEWARK 2, NEW JERSEY

TENTH
ANNIVERSARY LINE
OF RECEPTION IMPROVING
TV PRODUCTS

HOME VHF AND UHF TV ACCESSORIES

NEW! POWER BOOSTER Model BTA. A remarkable low-cost, single-tube TV/FM booster provides sharp, clear reception in weak signal areas. Gain: 7 to 9 db, channels 2-13; 4 to 8 db, FM band. Exclusive stripless terminals for 300-ohm twin lead.

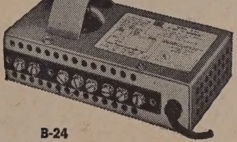
TV POW'R BOOSTER Model B-24. It's a booster — or an amplified coupler. Perfect for low-cost home installation. Ideal for one and two set homes. Provides up to 10 db gain on all VHF channels for one set operation, up to 5 db gain on two sets and unity gain on four sets used with A-104, 4-set coupler. Couples one or two sets to one antenna, insuring isolation between sets. Employs frame-grid circuitry for highest signal-to-noise ratio. Exclusive stripless terminals for 300 ohm twin lead. **$24.95** list.

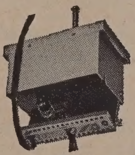
VHF TV ANTENNA BOOSTER Model AB-2. All-channel VHF booster mounted at the antenna, is housed in weatherproof housing, and can be located 500 ft. from remote on-off control at TV set. Provides more than 8 db gain on all VHF channels. Single down lead carries AC power up to the amplifier and also conducts the amplified signal to the set. Uses frame-grid 6JD8 tube for highest signal-to-noise ratio. Convenient swing down case simplifies maintenance. Employs 300 ohm, stripless terminals. **$53.95** list.

FM ANTENNA BOOSTER Model AB-FM. Pulls in distant FM stations and boosts 15.5 db over the 88-108 mc FM band. Has its own separate remote on-off control. Can be located up to 600 ft. from the receiver. Uses frame-grid 6ER5 tube for highest signal-to-noise ratio. **$53.95** list.

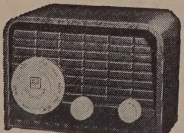
CLASS "A" UHF CONVERTER Model 99-R. Supplies UHF reception for VHF receivers in primary signal areas. Tunes complete UHF range from 470 to 890 mc with IF output on channel 5 or 6. Features three section tuners; 300 ohm stripless VHF and UHF terminals, and drift-compensated circuitry. **$22.95** list.

ULTRAVERTER UHF CONVERTER Model BTU-2S. Deluxe two-tube converter with low noise frame-grid IF amplifier. For all UHF receiving areas, specially fringe and translator applications. Output on channel 5 or 6. Features stripless 300 ohm terminals, speed and fine tuning knobs, shielded three section "ultra tuner." **$39.95** list.

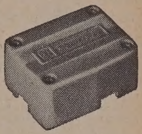

B-24


AB-2

99-R


BTU-2S

BLONDER-TONGUE 'EXACT-MATCH' COUPLERS



In a matter of seconds, these couplers with stripless terminals provide a low loss, matched installation for superior multi-set performance. Ideal for outside or indoor mounting, color TV and FM.

TWO-SET COUPLER MODEL A-102

Delivers more signal to each TV or FM set, with greater inter-set isolation than other couplers. Original B-T circuit, with phase cancellation feature, automatically defeats interfering signals — no ghosts, no smears.

Isolation: 10-20 db Loss: 3.5 db **$3.50 list.**

FOUR-SET COUPLER MODEL A-104

Directional coupler with flat response from 50-220 mc. Feeds 4 VHF receivers from one antenna, or mixes 4 antennas into one line.

Isolation: 12-20 db Loss: 7.5 db **$4.95 list.**

HI-LO ANTENNA COUPLER MODEL A-105

Combines high and low band VHF antennas, or provides separate high and low output from a common line or antenna.

Isolation: 21 db Loss: 1 db **$3.95 list.**

UHF-VHF ANTENNA COUPLER MODEL A-107

Combines UHF and VHF antennas, or provides separate VHF and UHF output from a common line of antenna.

Isolation: 15 db Loss: 2 db **$3.95 list.**

OUTDOOR MOUNTING KIT MODEL A-100

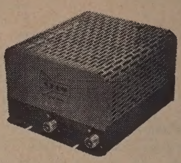
Provides hardware, bracket and strap assembly for mast mounting of A-102, A-104, A-105, A-107. **$1.10** list.

Write for detailed information on B-T products or for free expert sales engineering services to assist you in planning any master TV or industrial TV system.

Community Engineering Corporation

State College, Pa. — Electronic Equipment for Television Systems —

The CECOPRINT AMPLIFIER — A printed-circuit wide band distributed amplifier. Advanced printed wiring techniques plus quantity production brings you this low noise, rugged, reliable distributed amplifier for CATV, hotel, motel, apartment house, cable theatre, educational or other closed circuit television systems — at low cost. The CECOprint is an excellent amplifier for laboratory or other uses where wide band distributed amplifier is required. Twelve channel operation, continuous operation in spite of tube failure, long tube life, no tuning adjustments necessary, top quality TV reception in color or black and white, unexcelled cascadability

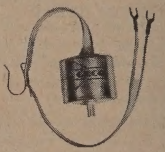


CECOPRINT AMPLIFIER ↑

SPECIFICATIONS: All models have a four-stage, three section, distributed low pass circuit; twelve 6AK5 tubes; self-contained power supply, silicon rectifiers, power input 117 v ac, 46 watts; frequency response plus or minus 1.5 db; noise figure 8.5 db at 80 mc; output level 40 db/mv; input level, any single or multiple channel, 0 to 15 db; manual gain control with 30 db range on 10-90 models, and 20 db range on 216 model. Overload point is not effected by setting of gain control. Unit has UHF connectors Input and Output for trunk line; enclosure is sheet steel, grey, perforated metal cover; dimensions 6¾"w X 7⅛" l X 4" h. Model 10-90E is an equalized version with 6 db tilt over low VHF band.

MODEL 10-90	MODEL 10-90E	MODEL 216
10 to 90 mc.	10 to 90 mc.	54 to 216 mc.
40 db gain	40 db gain Ch. 6	20 db gain
Net — $139.50	Equalized	Net — $139.50
	Net — $149.50	

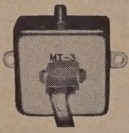
CECO MATCHING TRANSFORMERS — Features perfect impedance matching between 72 ohm unbalanced and 300 ohm balanced line, provides complete isolation between line and ac-dc receivers, gives 6 db additional signal to TV set. Flatness of plus or minus 1 db across entire band. Shielded. Powdered iron transformer. All channels 2 to 13 (54 to 216 mc.)



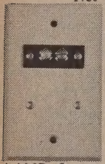
MODEL MT-1 ↑
Fastens to back of TV set with hook, has ten inch lead with spade terminals for easy hook-up to set, and solderless connectors for RG-59/U cable.
Net Price $3.00.

MODEL MT-2 →
Surface mounting, twin lead screw terminals, solderless connectors for RG-59/U cable.
Net Price $3.00.

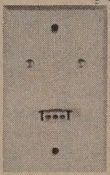
MODEL MT-3 →
Surface mounting—AMP-lok† receptacle and plug with 5 ft. twin lead for simple effective disconnect. Solderless connector for RG-59/U cable.
Net Price $3.25.



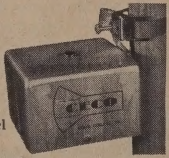
MODEL MT-4 →
Surface mounting, switch for selecting either RG-59/U input (solderless connector) or twin lead input (300 ohm screw terminal from antenna). Screw terminals 300 ohm output to set.
Net Price $3.50.



← **MODEL MT-5***
Wall plate for single gang plaster ring or box, coax bushing for RG-59/U input, screw terminals for output to set.
Net Price $3.00.



← **MODEL MT-6***
Wall plate same as MT-5 except has AMP-lok† receptacle for 300 ohm output. Plug with 6 ft. twin lead. Net Price $3.75.



← **MODEL MT-OD**
For antenna or mast mounting. Weatherproof construction, aluminum enclosure. Screw terminals for 300 ohm input, UHF receptacle for 75 ohm output. Mast clamp included. Net Price $7.50.

† AMP, Incorporated.

* For models marked with asterisk, specify stainless steel (SS), brown wrinkle on steel (BW) or ivory wrinkle on steel (IW).

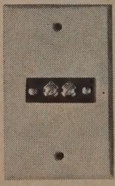
CECO WALL PLATES — Mounts on single gang plaster ring or outlet box. Mounting holes are standard. Available in stainless steel (specify SS), brown wrinkle on steel (specify BW), or ivory wrinkle on steel (specify IW).

Model No.	*Feature*	*Net Price*
*WP-P**	AMP-lok† receptacle with plug for 300 ohm twin lead	$1.00
*WP-S**	Screw terminals for 300 ohm twin lead	1.00
*WP-SL**	Solderless connector receptacle for RG-59/U coax	1.10
*WP-UHF**	UHF SO-239 receptacle	1.50
*WP-BNC**	BNC UG-290/U receptacle	2.25

WP - P - IW

CECO TAPOFF WALL PLATES (with Matching Transformer) — Wall plates with coax bushings for RG-59/U IN and OUT on rear. CECO matching transformer for 300 ohm output on front. Tap attenuation values of 0, 15, 20, 25, or 30 db. Same high quality matching transformer used in all CECO MT's.

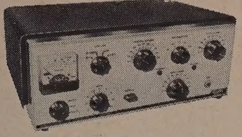
Model No.	*Feature*	*Net Price*
*TWP-P** #	AMP-lok† receptacle with plug for 300 ohm twin lead. Similar in external appearance to MT-6	$3.75
*TWP-S** #	Screw terminals for 300 ohm twin lead. Similar in external appearance to MT-5	3.50



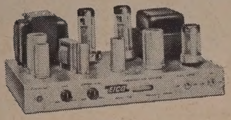
WP - S - IW

* Specify SS, BW, or IW   # Specify attenuation desired, 0, 15, 20, 25, 30 db.   † AMP, Incorporated.

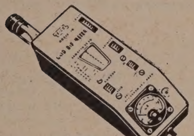
Now your best buy in Transistor Radios & Ham Gear is EICO®



720



730



710

90-WATT CW TRANSMITTER No. 720

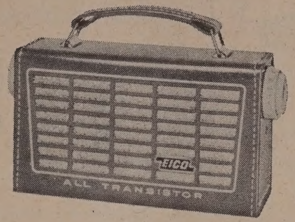
KIT $79.95 **Wired $119.95**

Conservative, highly efficient design plus stability, safety, and excellent parts quality. Covers 80 thru 40, 20, 15, 11, 10 meters (popular operating bands) with one knob band-switching. 6146 final amplifier for full "clean" 90 W input, protected by clamper tube circuit. 6CL6 Colpitts oscillator, 6AQ5 buffer-multiplier, GZ34 rectifier. "Novice limit" calibration on meter keeps novice inside the FCC-required 75W limit. No shock hazard at key. Wide range, hi-efficiency pi-network matches antennas 50 to 1000 ohms, minimizes harmonics. EXT plate modulation terminals for AM phone modulation with 65W input. Excellent as basic exciter to drive a power amplifier stage to maximum allowable input of 1KW. Very effective TVI suppression. Ingenious new "low silhouette" design for complete shielding and "living room" attractiveness. Finest quality, conservatively rated parts, copper-plated chassis, ceramic switch insulation. 5″ H, 15″ W, 9½″ D.

UNIVERSAL MODULATOR-DRIVER
No. 730

KIT $49.95 **WIRED $79.95** **Cover E-5 $4.50**

Superb, truly versatile modulator at low cost. Can deliver 50 watts of undistorted audio signal for phone operation, more than sufficient to modulate **100%** the EICO #720 CW Transmitter or any xmitter whose RF amplifier has a plate input power of up to 100W. Multimatch output xfmr matches most loads between 500-10,000 ohms. Unique over-modulation indicator permits easy monitoring, precludes need for plate meter. Low level speech clipping and filtering with peak speech frequency range circuitry. Low distortion feedback circuit, premium quality audio power pentodes, indirectly heated cathode rectifier. Balance & bias adjust controls. Inputs for crystal or dynamic mikes, phone patch, etc. Excellent deluxe driver for high-power class B modulation. ECC83/12AX7 speech amplifier, 6AL5 speech clipper, 6AN8 amplifier driver, 2-EL34/6CA7 power output, EM84 over-modulation indicator, GZ34 rectifier. Finest quality, conservatively rated parts, copper-plated chassis. 6″ H, 14″ W, 8″ D.



RA6

GRID DIP METER No. 710

KIT $29.95 WIRED $49.95 including complete set of coils for full band coverage.

Exceptionally versatile, stable, rugged, compact. Basically a VFO with a microammeter in its grid circuit: determines frequency of other oscillators or tuned circuits; sensitivity control and phone jack facilitate "zero beat" listening. Also excellent absorption wave meter. Ham uses: pretuning and neutralizing xmitters, power indication, locating parasitic oscillations, antenna adj., correcting TVI, general de-bugging with xmitter power off, determining C,L,Q. Electronic servicing uses: alignment of traps, filters, IF's, peaking compensation networks; as signal or marker generator. Easy to hold & thumb-tune with one hand. Continuous coverage of 400 kc-250 mc (broadcast, FM, ham, TV bands) in 7 ranges with pre-wound coils of ±0.5% accuracy. 500 ua meter movement. 6AF4(A) or 6T4 Colpitts oscillator. Xmfr-operated selenium rectifier. 2¼″ H, 2-9/16″ W, 6⅞″ L. Brushed satin deep-etched aluminum panel; grey wrinkle steel case.

6-TRANSISTOR PORTABLE RADIO RA6

KIT: $29.95* **WIRED: $49.95***

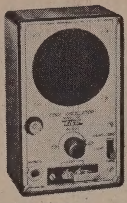
"This new portable . . . is among the finest we have seen to date." — ELECTRONICS WORLD LAB TESTED

Modern transistor superheterodyne portable receiver with unusual selectivity and sensitivity. Big set tone quality in handy carrying size; simulated leather case. Pre-aligned RF and IF coils; 4″ x 6″ PM speaker driven by 250 mw push-pull output stage; 1:6 vernier tuning; high impedance earphone jack (eliminates drain on output stage); built-in rod-type antenna for good reception in all locations. No printed wiring boards. Plug-in sockets for all transistors. 8½″ long 4½″ high, 2½″ deep. Requires 9 volt battery N.E.D.A. type 1602. Shipping weight—3 lbs.
*Less 9V battery, F.E.T. included.

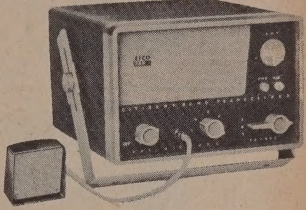
CODE PRACTICE OSCILLATOR
MODEL 706

KIT: $8.95 with battery **WIRED: $12.95**

Invaluable for learning Code. Efficient speaker provides clean, loud signal. Pitch control, for pleasing tone; phone jack for private use; choice of tone, flashing light, or both together. Transistor oscillator provides years of trouble-free service.



706



760, -1, -2

CITIZENS BAND TRANSCEIVER
Meets FCC regulations*

	KIT	WIRED
Model 760: 117 VAC only	**$59.95**	**$89.95**
Model 761: 117 VAC and 6 VDC Including mounting bracket	**69.95**	**99.95**
Model 762: 117 VAC and 12 VDC Including mounting bracket	**69.95**	**99.95**

***EICO premounts, prewires, pretunes, and seals the ENTIRE transmitter oscillator circuit to conform to FCC regulations (Section 19.71 subdivision D). EICO thus gives you the transceiver in kit form that you can build and put on the air without the supervision of a Commercial Radio-Telephone Licensee.**

• SUPERHETERODYNE (**not** regenerative) receiver with RF stage for high sensitivity—with the selectivity you need for reliable operation. Continuously tunable over **all** 23 Citizens Band Channels. • Exclusive built-in **Super-Hush®** noise limiter minimizes background noise when the receiver is left on in anticipation of a call, without the risk of missing a weak signal entailed in the use of a "squelch" circuit in the presence of high ambient noises. • Built-in AVC automatically boosts gain on weak signals. • Built-in 3″ x 5″ oval PM speaker and detachable ceramic-element microphone. • 5-Watt (maximum permissible power as defined by FCC) crystal-controlled transmitter—can transmit on any of the 23 Citizens Band channels.

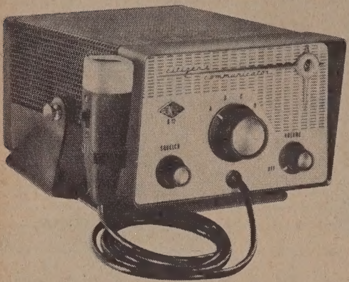
• Station license available to any citizen over 18—no exams or special skill required. FCC license application form supplied free. • As simple to operate as an intercom—no skill or experience required. • Variable "pi" network permits matching to most popular antennas. • Covers up to 20 miles depending on terrain and antenna height. • Unique **Posi-Lock®** mounting bracket permits 360° rotation and positive lock at 30° intervals. • Supplied complete with 7 tubes and one crystal (extra crystals available). • Superb modern design—baked enamel steel cover and cast metal frame. Lithographed aluminum panel color keyed to blend with modern interior decor in both home and car. (Rich brown with beige, white and silver accents). Directly attached base-loaded portable whip & ground plane (roof) antennas available.

ELECTRONIC INSTRUMENT CO., Inc. • Long Island City 1, N. Y.

ALL PRICES 5% HIGHER IN THE WEST

GONSET COMMUNICATIONS EQUIPMENT

CITIZENS BAND 2-WAY RADIO



G-12 CITIZENS COMMUNICATOR FOR 11-METER CITIZENS BAND

A complete 4-channel station for virtually unlimited business or private use in car . . . truck . . . tractor . . . boat . . . plane. Operates within 26.965 to 27.235 mc. Easy to obtain station license—only simple FCC form to fill out . . . no exam or special skills required. No tuning . . . four crystal-controlled channels (transmitter/receiver) selectable by front panel switch for highest stability, reliability. G-12 features 5-watts input power . . . easy press-to-talk operation, ANL, superhet receiver with RF stage, adjustable squelch, built-in speaker, transmitter tune indicator. Fully FCC type accepted. Employs latest electronic design techniques. Is rugged, compact . . . only 4½"H, 7"W, by 10"D., weighs 11 lbs. Has gimball mount, built-in 12VDC/117VAC (or 6VDC/117VAC optional) power supply for fixed or mobile service.

G-12 Citizens Communicator, 12VDC/117VAC. Includes mike and trans/rec. crystals for one channel...Model #3316

G-12 Citizens Communicator, 6VDC/116VAC.........................Model #3329

G-11 CITIZENS COMMUNICATOR

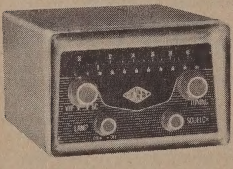
G-11 is a complete single channel 2-way radio station for Class D service on 11 meter Citizens Band. Business or personal use permitted. Unit is FCC type accepted. Compact 6¾"W, 5¼"H, 6¾"D. Both transmitter and receiver are crystal controlled. Receiver is sensitive, selective superhet . . . has RF stage, ANL, adjustable squelch, built-in speaker. Transmitter has 5 watts input. Self-contained power supply . . . available with either 115 VAC, 6 VDC, or 12 VDC power supplies. (Specify). G-11 is complete with press-to-talk microphone, precision quartz crystals (transmitter/receiver) for one channel.

CITIZENS BAND ANTENNAS—11 METERS

CITIZENS BAND BEAM ANTENNA—26.965-27.235 mc range for point-to-point Model #3302

CITIZENS BAND GROUND PLANE ANTENNA KIT 26.965-27.235 mc range. Includes transmission line, guy wire, hardware for roof mounting.........................Model #3296

CITIZENS BAND MOBILE ANTENNA—26.965-27.235 mc range. Coil loaded whip antenna (similar to cowl-mounted broadcast antenna)..............................Model #3297

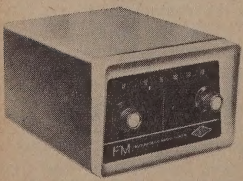


12 VOLT 30-50 MC FM CONVERTERS

Operate with existing 12 volt auto radio to provide excellent mobile FM reception. Exclusive GONSET design permits simple, non-technical installation in minutes. No adjustments or alterations to auto set. Just plug converter into car radio and clip power lead to 12 volt "accessory" post under dash. Converters have adjustable squelch and dial lamp on-off switch. General appearance similar to Model #3311.

FM, 30-40 mc.................Model #3247

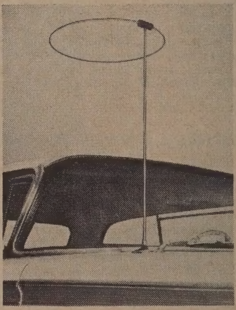
FM, 40-50 mc.................Model #3251



12 VOLT, 88-108 MC FM TUNER

Now . . . full fidelity FM reception in your car. New converter operates with existing auto set and antenna, brings all well-known advantages of FM. Easy to operate, only two controls, no fussy tuning. Just locate signal on dial. Unique "locking" circuit then positively and correctly tunes FM station to full fidelity.

Installation is simple, non-technical. No alterations or adjustments to auto set. Converter connects to 12 volt battery source, plugs into antenna connection of auto radio. For 12 volt DC (negative ground) operation only. 88-108 mc FM......................Model #3311



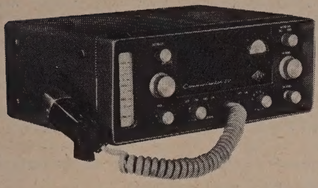
HALO ANTENNA

For operation with 88-108 mc FM tuner. Provides quality reception in weak signal and fringe areas. Easily installed on car or truck cowl. Column is chrome-plated brass, loop is of aluminum. Overall height, 29½"; loop diameter, 16".
Model #3271-A

GONSET *Division of Young Spring & Wire Corporation*

GONSET COMMUNICATIONS EQUIPMENT

COMMUNICATOR IV — 2 METER TRANSCEIVER



Completely new—inside and out. Transmitter power greater than ever at 20 watts input. High level speech clipping and 10 watts of audio insure full "talk power." Transmitter is crystal controlled, offers choice of six frequencies. Broadband circuitry in driver eliminates panel controls. Ceramic microphone supplied has p-t-t switch, coiled cord.

Tubes, transmitter: 6360 (final amp.); 12BY7A (xtal. osc.-tripler); 12BY7A (doub.-driver); 7059 (speech amp.-phase inv.); 2—6BQ5's (P-P modulators). TUBES, receiver: 6ER5 (R. F. amp); 6ER5 (1st mixer); 6J6 (overtone xtal osc.-multipler); 6AV6 (2nd mixer); 6C4 (tunable osc.); 6BE6 (3rd conv.); 6BA6 (2nd IF); 6AV6 (det.-AVC-1st Audio Amp.); 6AL5 (ANL-squelch); OB2 (Volt. Reg.).

Receiver uses latest frame grid VHF tubes in RF and mixer for low noise figure of 4-5 . . . triple conversion with crystal-controlled first conversion . . . excellent sensitivity, selectivity. Also ANL, adjustable squelch, "S" meter, slide-rule-type dial, panel speaker. Built-in power supply operates on both 117V AC and 12V DC, DC supply transistorized . . . eliminates vibrator. Power cables supplied for shift from AC to DC. Size, 5"H, 13"W, 9½"D. Weight: 21.8 lbs.

2 Meter Communicator IV

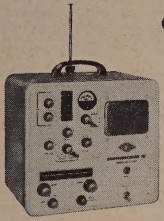
(12VDC and 115VAC) . . . Model #3341

CD COMMUNICATOR IV, OCDM, 2 meters. Civil Defense (FCDA Certification U-70). Model 3341 with model 3361 kit, complete. (Specify frequency) . . . . Model #3341-CD

UNIVERSAL MOUNTING BRACKET KIT . . . Model #3365

CD KIT FOR 2 METERS . . . converts standard Communicator IV to meet C-D requirements. (FCDA Certification U-70). Consists of yellow carrying case, telescoping antenna with 90° RF connector, C-D and FCDA decals, crystal certificate. (specify frequency) . . . . . . Model #3361

COMMUNICATOR III FOR 6 METERS



Meets fully the varied requirements of amateur, civil defense, CAP, airport and many other services operating on VHF. Communicator III is a complete station—has transmitter, receiver and power supply in single cabinet. Power supply operates on 6 and 12 VDC and 115VAC (all three). Only one vibrator used. Simple interior strapping speeds DC voltage change. Silicon diodes eliminate rectifier tubes in power supply, save current drain.

Tunable, calibrated receiver utilizes low-noise 6BZ8 tube in sensitive "cascode" circuit. Special gang-tuned circuits provide high image rejection. Receiver has ANL, squelch, earphone provisions, switchable panel meter indicates receiver signal level, also exciter or final output. 2E26 in transmitter delivers 6-8 watts output. 6L6GB provides ample AM modulation. Gang-tuned circuits reduce spurious responses to negligible values. Switch allows choice of six crystal-controlled transmitter frequencies (also operates with external VFO). Cabinets are 10¾"W, 10"H, 8¼"D, finished in Alpine White with Gunmetal Blue knobs.

6 Meter Communicator III (6-12VDC, 115VAC) . . . . . . Model #3136

Zipper Carrying Bag holds unit, mike, antenna, coax, other Accessories. Heavy canvas padded. Blue color . . . . . . Model #3217

Telescoping Antenna, Communicator III series . . . . Model #3152

C-D COMMUNICATOR III FOR 6 METERS

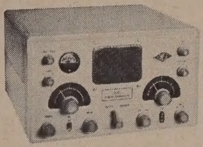
Communicator III model designed to meet Civil Defense requirements (FCDA Certification U-68). Mechanically and electrically similar to standard Communicator III except cabinet is finished in bright yellow with appropriate CD markings.

6 Meter CD Communicator III (6-12VDC, 115VAC) Model #3136-CD

Zipper Carrying Bag for above, yellow color, with CD insignia . . . . Model #3218-CD

2-Meter Ground Plane Antenna . . . . Model #1621

6 AND 10 METER FIXED-STATION COMMUNICATORS



G-50 6-METER COMMUNICATOR G-50 is a complete station "package" for 6 meter operation. Receiver is highly sensitive, selective superhet with "S" meter, ANL, adjustable squelch, panel mounted speaker. Transmitter uses 6146 in pi-network final at 40-50 watts input. Frequency control is by crystal or built-in, highly stable VFO. Latter gangs with multiplying stages, eliminates excitation controls. Dial is calibrated 50-54 mcs. Modulator uses two 6L6GB's. Compact housing, 7½"H, 13"W, and 12½"D, contains receiver, transmitter and power supply.
115 VAC operation only . . . . Model #3221

6-METER CD COMMUNICATOR Similar in general appearance to standard amateur model but is certified as meeting applicable specifications under FCDA item number U-68. Cabinet is same size as amateur model, is finished in CD yellow and has appropriate CD markings. Microphone and one quartz crystal included. (Specify frequency) . . . . Model #3300-CD

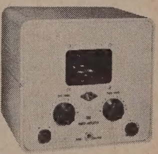
G-28 10-METER COMMUNICATOR G-28 is a complete station "package" for 10 meter operation. Receiver is highly sensitive and selective double-conversion superhet—has "S" meter, ANL, adjustable squelch, panel-mounted speaker. Transmitter uses 6146 in pi network final at 50 watts input. Frequency control is by crystal or built-in, highly stable VFO. Latter gangs with multiplying stages, eliminates excitation controls. Dial is calibrated, 28 to 29.7 mcs. Modulator uses two 6L6GB's. Compact housing, 7½"H, 13"W and 12½"D, contains receiver, transmitter and AC power supply. 115 VAC operation only . . . . Model #3204

10-METER C-D COMMUNICATOR Similar in general characteristics and appearance to standard amateur model but is certified as meeting applicable specifications under FCDA item number U-66. Cabinet is same size as amateur model, is finished in C-D yellow and has appropriate C-D markings. Price includes microphone and one quartz crystal. (Specify frequency).
Model #3299-CD

RF LINEAR AMPLIFIERS FOR 2-METER COMMUNICATOR III STANDARD AND CD MODELS

Matches Communicator III cabinet. For use on 2-meters to increase Communicator III output to 50, 60 watts. No alterations required on Communicator. Tune-up is easy, foolproof, without danger to tubes. Switching Communicator to "transmit" automatically activates amplifier including internal antenna relay. Amplifier uses two 826 VHF triodes with forced-air cooling. Heavy duty power supply utilizes two 5U4GB rectifiers. Cabinet is finished in Alpine White with Gunmetal Blue knobs.

Model #3211-CD (FCDA Certification U-70)
2-Meter CD Linear Amplifier. Yellow cabinet for Civil Defense use

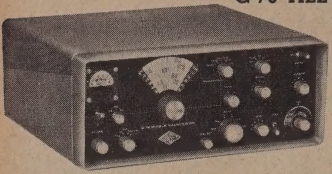


2-Meter Linear Amplifier Model #3211

GONSET *Division of Young Spring & Wire Corporation*

GONSET COMMUNICATIONS EQUIPMENT

G-76 ALL-BAND TRANSCEIVER FOR FIXED OR MOBILE SERVICE...



The G-76 is an entirely new unit consisting of transmitter and receiver in a single compact housing. Provides AM or CW operation on 3.5-7-14-21-28-50 mc. amateur bands. The G-76 incorporates proved design features of the famed Gonset G-66/G-77 "Twin Sparklers", adds many new advances for top fixed-station and mobile operation.

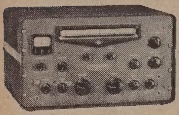
Receiver is dual conversion, 1st IF at 2065 kc; 2nd IF at 262 kc. Features include BFO for SSB and CW reception, and ANL. Unit has excellent selectivity and sensitivity. Transmitter and receiver oscillators temperature compensated. Transmitter has stable, VFO for all bands except 50 mc. Crystal-control is optional. Power input of transmitter is 100 watts AM phone, 120 watts CW. Final tube is 6DQ5 operating into pi-network output. Control is push-to-talk, or T-R switch on panel. Meter facilitates tuning. Dimensions: 12½"W, 5"H, 10½"D..Model #3338

G-76 Power Supply and External Speaker unit—For 115 VAC power source. Speaker unit and supply in single matching cabinet. Model #3349

G-76 Power Supply, transistorized—for 12VDC power source..................Model #3350

UNIVERSAL MOUNTING BRACKET KIT...........Model #3365

GSB-100 SSB TRANSMITTER

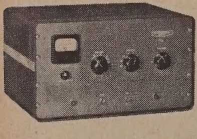


GSB-100 is a complete, self-contained SSB transmitter for operation on 80-40-20-15-10 meter bands. This transmitter is rated at 100 watts PEP input, operates on SSB with selectable sidebands, phase modulation, AM and CW.

Output circuit utilizes pi-network. The new GONSET FILTER-PHASING network gives high sideband rejection, uses a quartz crystal band-elimination filter for carrier suppression of more than 60 db. This filter avoids critical carrier balancing.

Frequency control is by fixed quartz crystal and built-in VFO. Latter features exceptional stability. Unit gives full 600 kcs within all amateur bands, 80 through 10. Highly effective voice-operated control system, (VOX) is provided. Heavy duty 115 VAC power supply is built-in................................Model #3233

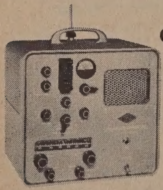
GSB-101 SSB RF LINEAR AMPLIFIER



Model #3262

Grounded grid linear amplifier is rated at 1000 watts peak input power. It is designed to operate with GSB-100 or similar SSB transmitters supplying 75-100 watts peak power drive. Amplifier is self-contained, includes power supply, pi-network output, antenna changeover relay. Provides bandswitched operation on 80-40-20-15-11 and 10 meters. Attractively styled. Same size cabinet and same general appearance as GSB-100 transmitter.

GROUND-TO-AIR COMMUNICATOR



Effective, 2-way VHF station in convenient, portable package. "Three way" power supply permits operation from 115 VAC mains or from 6 or 12 VDC vehicular battery. Xtal-controlled transmitter supplies full 6-7 watts output power with AC or DC power sources.

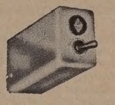
Superhet receiver has 6BZ8 low-noise RF in "cascode" circuit, selective IF, noise clipper, adjustable squelch. Receiver is tunable, 112 to 132 mcs. Simple, non-technical operation. Same size and weight as comparable Communicator III models. Can be used with integral whip or remote antenna with 52 ohm coaxial line.

Ground-to-Air Communicator, with microphone, one crystal and canvas carrying case. (6-12 VDC, 115VAC).......Model #3139-GA

GPP-1 HYBRID BALANCED PHONE PATCH

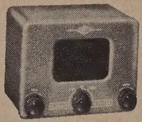
GPP-1 provides the ideal "patch" between amateur station transmitting/receiving equipment and land line telephone circuits. Adjustable hybrid balancing permits optimum balance for any particular set of conditions. Panel meter indicates correct balance, also switches to show line level under patch conditions, thereby avoiding line overload and crosstalk. No power required . . . simple to install, operate. Only 4½"H, 6"W, 6¼"D. Model #3273

NOISE CLIPPER



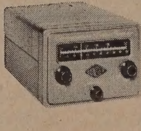
A "must" for every mobile installation operating above 2 or 3 mc to reduce ignition interference. Works with all AM receivers using conventional diode detectors, easy to install. Complete instructions furnished....Model #3001

MONITONE



For use as a code practice oscillator and as an effective monitor for phone and CW xmtrs. Has audio oscillator controlled by external circuit, provides audible tone on panel speaker or earphones. Separate pitch and volume controls. Uses RF pickup from xmtr. for operation as effective CW or phone monitor. Operates from 115 VAC with isolating circuitry so that neither keying nor earphone leads are "hot" to ground.............Model #3022

AM COMMUNICATIONS MONITOR RECEIVER



Economically-priced AM receiver for communications monitoring and emergency applications in the VHF region. Complete with AC power supply, speaker, "built-in" antenna, calibrated slide rule dial. Has 8 tubes plus rectifier. Oscillator is temperature compensated, has low radiation. Excellent AVC, and adjustable squelch. 108-135 mc range. Model #3156-B

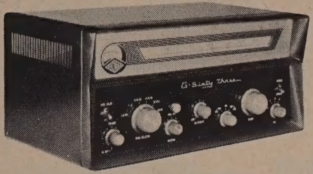
AIRPORT COMMUNICATOR

112-132 mc. fixed frequency communicator for airport use. Complete station package—transmitter, receiver and power supply in one compact unit. Simple to operate. Furnished with mike and transmitter/receiver crystals for one channel. Model #3111-GA

GONSET *Division of Young Spring & Wire Corporation*

GONSET COMMUNICATIONS EQUIPMENT

G-63 ALL-BAND RECEIVER



Entirely new, covers 80-40-20-15-10 and 6 meters. Has excellent sensitivity and signal-to-noise ratio . . . on all bands . . . is really "live" on 6 meters. Highly stable, low-frequency drift. Each amateur band fully spread across full-vision drum dial. G-63 has two second detectors. Product-type for SSB/CW, Diode-type for AM.

G-63 utilizes double-conversion with 1st IF at 2065 for low image . . . 2nd IF at 263 with multiple tuned band-pass circuits for steep-shoulder response. Peaking-type "Q" multiplier permits IF response for CW to be varied down to 100 cps. Included are AVC, ANL, "S" meter, provisions for crystal calibrator. Cabinet is attractively finished in gunmetal gray with panel in black with satin aluminum trim.

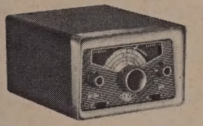
Frequency range: 3.5-4.0 mcs, 7-7.3 mcs, 14-14.35 mcs, 21-21.45 mcs, 28-29.7 mcs, 50-54 mcs. Tubes: 6BZ6 (RF), ½—6U8A (1st conv.), ½—6U8A (HF osc.), 6BE6 (2nd conv.), 6BA6 (1st IF amp.), 6BA6 (2nd IF amp.), 6AL5 (2nd det. AVC-ANL), 6BE6 (product det. BFO). ½—12AX7 (1st AF), 6AQ5 (output aud.), 543GT (rect.), OB2 (volt. reg.). Model #3260

CABINET ENCLOSED SPEAKER

Handsome, modern speaker unit for use with G-43 and G-63 all-band receivers. Model #3285

Plug-in crystal Calibrator for G-63 and G-43 receivers.................Model #3269

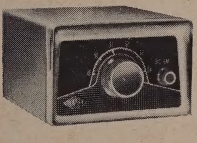
SUPER 12, SIX-BAND CONVERTER



Super 12 provides coverage of 6 amateur bands: 10, 15-20, 40 and 75 meters plus 19 and 49 meters for coverage of international shortwave broadcasts. Calibrated dial scale uses various colors to aid in identification of bands. Planetary drive provides vernier tuning.

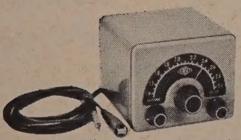
Sensivity and stability are excellent. Antenna trimmer on panel maximizes antenna in use. BC-HF switch permits instant return to standard BC. Super-12 is attractive . . . blends well with instrument panel of modern cars. Compact size facilitates mounting. Highest quality components and precision workmanship ensure long, trouble-free operation. Installation is simple, non-technical—no alteration or internal connections to existing broadcast receiver. Converter simply patches into antenna input connector of car radio . . . attaches to 12 volt accessory post under dash. Install in minutes with ease. 12 volts DC only................Model #3261

6 METER CONVERTER



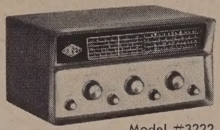
Provides excellent 6 meter reception when operated with conventional automobile broadcast receivers or with communications or broadcast-type home receivers. Has full-vision calibrated dial. Is compact, simple to install. Switch connects filaments for 6 or 12V. Built-in Gonset noise clipper can be connected to receivers not having such provisions.
Model #3275

12 VOLT, POLICE-MARINE CONVERTER



For mobile reception of maritime and police bands, 1600 to 3000 kcs. Operates in conjunction with existing auto set on any car having 12 volt battery system. Installation is simple, rapid. No alteration of auto set. Cable and plug supplied fits antenna receptacle of auto set. Attaches to 12 VDC accessory post behind dash for operating voltage. Size: 3½''H, 4''W, 4''D. For operation on 12 VDC only.
Model #3163

G-33 ALL-BAND RECEIVER

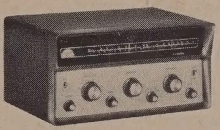


Model #3222

G-33 is similar in construction and general appearance to G-43, has simplifications to provide greater economies. Tunes .54-1.6 mcs; 1.8-6 mcs; 6-13 mcs; and 13-34 mcs. Bandspread dial has calibrated scales for amateur bands. 1650 kc I-F results in greatly-improved image rejection. 3 double tuned Hi-Q transformers provide excellent I-F selectivity.

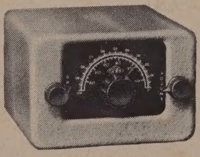
Panel controls include: Main tuning, band-spread tuning, band-switch, audio volume, antenna trimmer, sensitivity, function selector. Tubes: 6BE6 (conv), 6BA6 (1st I-F), 6BA6 (2nd I-F, BFO), 6AV6 (det, AVC, 1st audio), 6CM6 (2nd audio), 6X4 (rectifier).

G-43 ALL-BAND RECEIVER



G-43 all-band receiver features modern, attractive styling, excellent performance, 6-band coverage: .54-1.6 mcs; 1.8-5.7 mcs; 5.7-13 mcs; 13-20 mcs; 20-25 mcs; and 25-30 mcs.
6 band coverage gives better stability, easier tuning. Drum dial shows only band in use, logging scale. Calibration on band 6 provides for use of VHF converters. IF has 6 double-tuned Hi-Q transformers at 1650 kcs. for desirable selectivity. Panel controls include main tuning, band-spread tuning, bandswitch, audio volume, sensitivity, antenna trimmer, ANL on-off, phone-CW, standby-receive, "S" meter, provision for crystal calibrator. Tubes: 6BE6 (conv); 6BA6 (1st IF); 6BA6 (2nd IF); 6AU6 (3rd IF); 6AL5 (det, AVC, ANL); 12AX7 (1st Audio, BFO); 6CM6 (2nd Audio); 6X4 (rect.).........Model #3241

MOBILE FM TUNERS



Gonset tuners provide an inexpensive yet sensitive and stable receiver when used in conjunction with ordinary auto, home or communication receivers. Features include squelch and noise clipper, I. F. and low-level audio. Very compact . . . mount on steering post or under dash. 50 ohm input, simple connection to receiver. Factory wired for 12 VDC. Can be strapped for 6 VDC.

40-50 mc FM........#3010

152-162 mc FM............#3012

STEERING POST MOUNTING BRACKET

For right or left-hand mounting on steering post. May be rotated to mount converter above or below the steering post for the most convenient operating position. Mounting straps and hardware provided......Model #3006

GONSET *Division of Young Spring & Wire Corporation*

Cesco

AMATEUR – INDUSTRIAL – CITIZENS BAND EQUIPMENT

REFLECTOMETERS, MINIBRIDGE, PHONE PATCHES

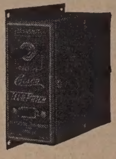
CM-52,
CM-75

Phase Unit Control
CM-52-2 and CM-75-2

CM-52-2 and
CM-75-2 Special

CL-52-72

"Original"



"Supreme"
"Regency"

STANDING WAVE REFLECTOMETERS

MODELS CM-52 AND CM-75

Employs mutual inductance and capacity coupling between linear conductors for continuous measurement of standing waves on transmission lines. For continuous line insertion 25 to 1,000 watts, at frequencies from 3 to 200 mc. Will operate on power input of 10 watts, 7 mc and up. Requires only five watts output, 100 mc and up. Line insertion loss, less than 1 db at 30 mc. Ideal for inserting into coax feed lines at antenna for visual reading in SWR while making antenna adjustments; SWR observed immediately, at all times, without adjustment of Reflectometer. No balancing adjustments, no reversing. Prevents false loading from antenna tuner, match box, pi network, etc. Reduces line reflection, making possible increased radiated power. Relative power output. Uses 0-100 μa meter calibrated directly in standing wave ratio and relative power. Each unit hand calibrated and perfectly balanced. Includes loading control and forward to reflected power reversing toggle switch. With 83-1R (SO-239) connectors at each end. Gray hammertone aluminum case, 3" w. x 2⅛" d. x 5¼" h. Shipped with key-type mounting on back and full instructions.

Cesco Model CM-52 (52-ohm coax line) or CM-75 (75-ohm coax line)—Net Each.................... **$29.95**

Cesco Model CM-75 Equipped With UG-58U Connector—Net Each.................................... **$34.95**

MODELS CM-52-2 AND CM-75-2

Dual units identical electrically to CM-52 and CM-75 but built in two units for remote control. Comes with 10 ft. cable and plug wired to control and indicator unit. Either 52-ohm or 75-ohm phase unit may be used with control and indicator unit; permits purchasing second phase unit separately, when desired. **Size:** Control Unit, 3⅞" w. x 2⅞" x 2¾" with sloping panel; Phase Unit, 2¼" w. x 2¼" d. x 5¼" h.

Cesco Model CM-52-2 (52-ohm coax line) or CM-75-2 (75-ohm coax line)—Net Each.................... **$34.95**

Cesco Model CM-75-2 Equipped With UG-58U Connector—Net Each.................................... **$39.95**

Cesco Model CM-52-2 or CM-75-2 Phase Unit—Less control unit. Net Each.................................... **$12.95**

Cesco Model CM-52-2 or CM-75-2 Special—Same as standard dual unit except with control panel for Collins grille or built-in installation. Net Each............................ **$34.95**

MODEL CL-52-72 MINIBRIDGE

Resistive type unit for observing standing waves when adjusting antenna matching networks. For use on 52, 72 or 75 ohm coax lines and small amounts of RF excitation or grid dip oscillator. Requires use of external indicator, such as 0-100 μa meter (as in Simpson multi-meter); meter can be run remote to tower for SWR observation while making antenna adjustments. Hammertone gray aluminum case, 2⅛" w. x 1½" d. x 4⅛" h. Complete with instructions, SWR graph and antenna tuning procedures.

Cesco Model CL-52-72—Net Each.................................... **$12.95**

TELEPHONE PATCHES

"ORIGINAL" TEL-O-PATCH

High quality sound receiving and transmitting unit for low-Z lines in amateur and experimental use. Undistorted voice reproduction with perfect intelligibility at 100% modulation. Eliminates feedback, hum, noise, etc. Designed for high gain input but can be adapted to low gain input. Works on any receiver with an output impedance of 500-5,000 ohms. Mounts on receiver or operating desk by means of reversible mounting plate. Provides standard phone jack output; Amphenol 75-PC1M connector for input. **Size:** 2" w. x 4" d. x 4" h. Complete with instructions, diagrams, mounting screws.

Cesco "Original" Tel-O-Patch—Net Each.......... **$14.95**

"SUPREME" TEL-O-PATCH

Combination phone patch and transmit-receive control. For use with custom and commercial equipment. Undistorted voice reproduction at 100% modulation. For any receiver with output impedance of 500-5,000 ohms, and for high gain transmitter inputs (can be adapted to low gain). Separate On-Off control; standard phone jack output; Amphenol 75-PC1M mike connector input; Amphenol 4-contact plug and socket for transmit-receive control; reversible mounting plate. **Size:** 2" w. x 4" d. x 4" h. Complete with instructions, diagram, mounting screws.

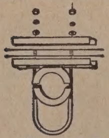
Cesco "Supreme" Tel-O-Patch—Net Each.......... **$24.95**

"REGENCY" TEL-O-PATCH

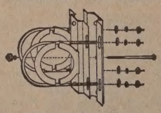
For use with units such as 32V-KW1-75A, Globe King, B & W, Ranger, Valient 500, or similar high quality equipment with push-to-talk operation, No modifying, ready for use. Eliminates feedback, hum, noise; voice reproduction undistorted at 100% modulation. For any receiver with 500-5,000 ohms output impedance and for high gain input; can be converted to low gain. Lever-action telephone type switch controls both transmitter and modulation; separate On-Off switch. **Size:** 2" w. x 4" d. x 4" h. Complete with 3' cord and 80MC2M plug, installation instructions, diagram, and mounting screws (mounting plate is reversible).

Cesco "Regency" Tel-O-Patch—Net Each.......... **$24.95**

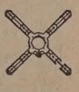
ANTENNA MOUNTING AND MATCHING ACCESSORIES



"Oxen Yoke"



Boom Mounting



Quad Mount

"OXEN YOKE" BEAM ANTENNA CLAMP

For element sizes ¾" to 1½" in diameter and booms 1½" to 3" in diameter. All components are completely interchangeable, permitting element and boom selection to your requirements. For continuous or cut elements at center; all channel lock assembly. Always specify element size and boom size when ordering. Net Each.................................... **$2.29**

UNIVERSAL BOOM MOUNTING

For boom sizes 1½" to 3" in diameter and 1¼" or 1½" masts. Complete mounting consists of two mast plates (1¼" or 1½"), two boom yokes, two "U" bolts. Specify mast and boom sizes when ordering. Net Each........................ **$5.95**

QUAD MOUNT

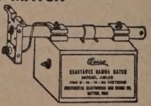
One-piece, durable, aluminum alloy cast spider for mounting quad arms to boom. Angle shaped spiders permit use of bamboo or aluminum tubing of 1" to 1½" diameter. Clamp-type, 2" diameter hub can be adjusted after assembly. Boom drilling not required. Net Each............................ **$6.95**

HEAVY DUTY UNIVERSAL BOOM MOUNTING

(NOT ILLUSTRATED)

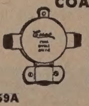
For water pipe or tubing mast, 2" to 3" O.D. All channel lock assembly. For single or stacked arrays. Consists of one mounting plate, four yokes and four "U" bolts. (Specify mast or pipe size when ordering.) Net Each.................... **$8.95**

REACTANCE GAMMA MATCH



For matching unbalanced 6, 10, 15 and 20 meter coax lines to balanced antennas. Tune in five minutes. Gamma unit becomes part of gamma line. Will fit Cesco Oxen Yoke clamp; provision for mounting to boom with other clamps. Complete with instructions on installation and tuning. Net Each........ **$14.95**

COAX DIPOLE DRI-FIT CONNECTOR



Ideal connector for dipole antennas. Completely moisture-proof, one-piece aluminum alloy construction. Handles power to maximum legal limits. Can be installed easily in a few minutes. For use with coaxial cables RG-8, RG-58, RG-11 or RG-59, or with 300-ohm twin lead. Has eye pull up for inverted V's. Weight, 2 oz. Net Each..... **$2.95**

448X-59A

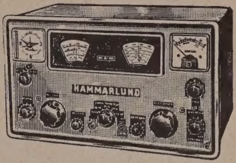
HAMMARLUND

COMMUNICATIONS EQUIPMENT

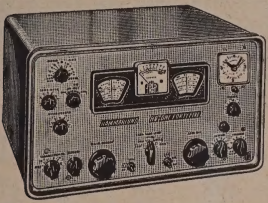
HQ-110

Favorite for hams. Dual conversion, 12-tube superheterodyne. Tunes 6, 10, 15, 20, 40, 80, and 160 meter bands. Electrical bandspread tuning. S meter. Q multiplier. Separate linear detector. Separate BFO for stability. Crystal-controlled 2nd conversion. Built-in 100 KC crystal calibrator. Adjustable dial calibration. Automatic noise limiter. Clock-timer optional.

HQ-100



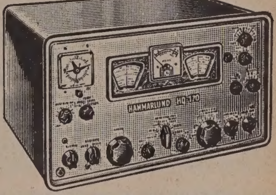
A general-coverage receiver in the modest-price range. Continuous tuning from 540 KCS to 30 MCS. Outstanding sensitivity and selectivity. Electrical bandspread directly calibrated. Q multiplier. Voltage and temperature regulated. S meter. Exclusive Auto-Response. Automatic noise limiter. 10-tube superheterodyne circuit. Clock-timer optional.



HQ-145

General - coverage receiver for SWL and hams. Tunes from 540 KCS to 30.0 MCS. Electrical bandspread in all ham bands in frequency range. Dual conversion from 10.0 MCS to 30.0 MCS. 60 db slot filter and six-position filter crystal-controlled. 11-tube superheterodyne with automatic noise limiter. High sensitivity. Optional 100 KC calibrator and clock-timer.

HQ-170



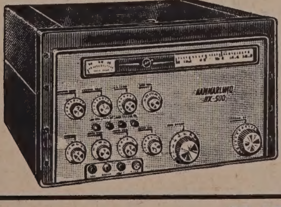
World's finest ham receiver. Exceptional SSB performance. 17-tube superheterodyne with dual and triple conversion. Tunes 6, 10, 15, 20, 40, 80 and 160 meter ham bands. 60 db adjustable notch filter. Separate vernier tuning. Selectable upper, lower or both sidebands. 100 KCS calibrator. Selectable AVC.

HC-10 SSB CONVERTER

Provides finest SSB performance with any standard, stable receiver. Connects in seconds. Built in audio output. Does not affect normal operation of receiver. Provides choice of upper, lower or both sidebands. Adjustable notch filter up to 60 db. Selectable passband width. Vernier tuning. Automatic noise limiter.

HQ-180

A general - coverage SSB receiver providing professional performance at amateur price. 18-tube superheterodyne 540 KCS to 30 MCS coverage. Bandspread. H.F. Crystal filter. Slot filter. Separate linear detector. Tuned IF amplifier. Selectable sideband. B.F.O. control. Selectable fast attack AVC. Crystal calibrator. Automatic noise limiter. Everything for the finest in general-coverage SSB reception.



HX-500 SSB TRANSMITTER

An advanced design 100-watt transmitter for amateur or commercial use. Covers 3.5, 7, 14, 21 and 28 to 30 MCS bands. Separate dial scale for each band. All crystals included. Read-out to 200 cps or better. Stability after warmup better than 100 cps. Choice of upper, lower or both sidebands, CW, FM, FSK for RTTY, plus 40 cps. identification keyed shift. Excellent suppression of unwanted responses and frequencies. Automatic VOX/anti-VOX system. The finest amateur transmitter ever offered.

SP-600 COMMUNICATIONS RECEIVER

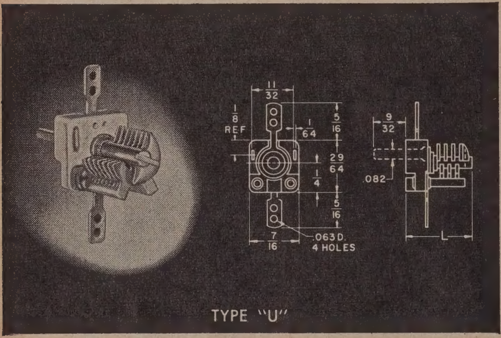
A commercial/military quality receiver tuning from 540 KCS to 54 MCS in six bands. Operation on any one of 6 crystal-controlled fixed frequencies. Stability .001% at 54 MCS. Extremely high image rejection. Ideal for diversity or point-to-point reception. Also available in other frequency ranges for laboratory, military, and other communications reception.

E. F. Johnson Company

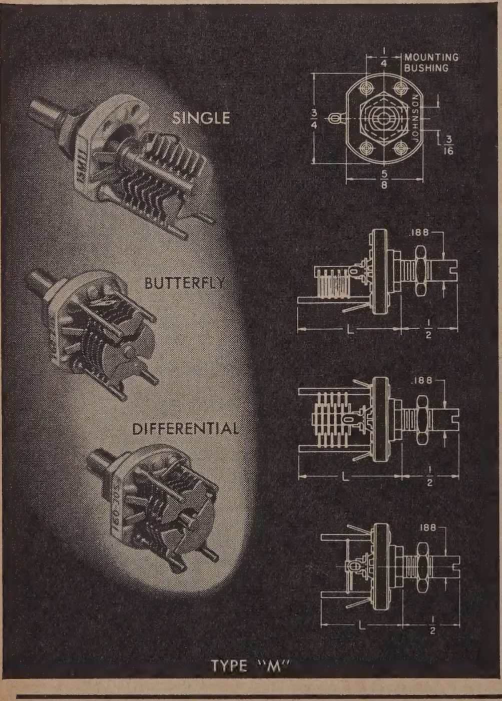
WASECA, MINNESOTA

AIR VARIABLE CAPACITORS—GENERAL INFORMATION

The capacitors on the following pages represent Johnson's complete line of sub-miniature, miniature, medium and heavy duty air variable capacitors. All standard units are in stock, and readily available for fast delivery. Units can also be produced to your specifications for specialized applications. When ordering, be sure to include catalog number as well as plates per section, plate spacing, capacity per section, breakdown ratings, and any variations from standard which are desired.



TYPE "U"



TYPE "M"

TYPE "U" CAPACITORS

This tiny Type "U" sub-miniature air variable capacitor requires less than 0.2 square inch of space for chassis or panel mounting. Rotor and stator are precision-machined from one piece of solid brass for outstanding mechanical stability and uniformity. Unit offers high "Q", high torque-to-mass ratio, and low temperature coefficient — provides absolute freedom from moisture entrapment found in trimmer capacitors of the enclosed or solid dielectric type. All metal parts are silver plated — ceramic is steatite Grade L-4 or better. Exceptionally uniform delta C and voltage characteristics. Breakdown ratings 850 volts DC. on .010" plate spacing 189-1 thru 189-6; 1300 volts on .016" spacing on 189-26 thru 189-28. Extra heavy end rotor plate protects against accidental damage during handling. No special tools required for installation — slotted end accommodates large screwdriver for quick adjustment. Double pierced, wide terminals facilitate wire or printed circuit use. Specials are available in production quantities.

Cat. No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Plates per Sec.	L	Net Price
189-1	3.5	1.2	4	29/64"	$0.50
189-2	5.4	1.3	6	1/2"	.52
189-3	7.3	1.4	8	35/64"	.54
189-4	9.1	1.5	10	19/32"	.56
189-5	11	1.7	12	5/8"	.58
189-6	13	1.8	14	43/64"	.60
189-26	4.1	1.3	6	1/2"	.75
189-27	6.7	1.6	10	5/8"	.85
189-28	8.9	1.8	14	3/4"	.95

TYPE "M" CAPACITORS

These small Type "M" miniature air variable capacitors are excellent for use in compact equipment. Bridge type stator terminal provides an extremely low inductance path to both stator supports. Soldered plate construction, oversize bearing, and heavily anchored stator supports insure extreme rigidity. Large beryllium copper compression rotor contact provides steady torque — and rotor stays "put" where set. Rotor contact and all other metal parts are nickel plated — steatite insulator is DC-200 treated. Mounting bushing threaded with 1/4-32 flats to prevent turning — mounting nut furnished. Peak voltage 1250 volts on .017" spaced units; 850 volts on 160-130 which is spaced .013". 3/16" diameter shaft* slotted for screwdriver adjustment. Available in production quantities with the following features: locking bearings; 180° stop; various shaft extensions; high torque; silver or other platings.

*Instrument type tuning knob to fit 3/16" shaft available. (See page on knobs and dials.)

SINGLE SECTION

Cat. No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Plates per Sec.	L	Net Price
160-102	5	1.5	5	45/64"	$1.00
160-104	8.7	1.8	9	13/16"	1.05
160-107	14.2	2.3	15	1"	1.20
160-110	19.6	2.7	21	1 11/64"	1.35
160-130	32	3	28	1 17/64"	1.40

BUTTERFLY

Cat. No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Plates per Sec.	L	Net Price
160-203	3.1	1.5	5	45/64"	$1.40
160-205	5.1	1.8	9	13/16"	1.60
160-208	8	2.2	16	1"	1.80
160-211	10.8	2.7	22	1 11/64"	2.00

DIFFERENTIAL

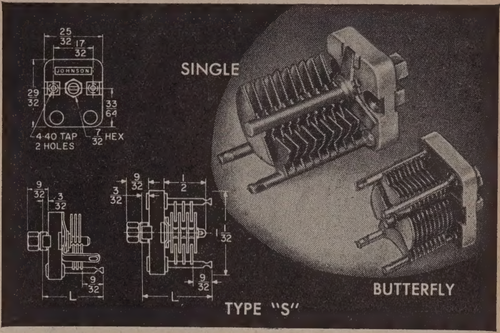
Cat. No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Plates per Sec.	L	Net Price
160-303	5.0	1.5	5	45/64"	$1.45
160-305	8.7	1.8	9	13/16"	1.65
160-308	14.2	2.3	15	1"	1.85
160-311	19.6	2.7	21	1 11/64"	2.10

E. F. Johnson Company

WASECA, MINNESOTA

TYPE "S" CAPACITORS

Midway in physical size between the Type "M" and "K" capacitors, the Type "S" is compact in design—rugged in construction. Unit is equipped with DC-200 treated steatite insulator, and nickel-plated brass plates. The "S" capacitor has a plate spacing of .013" with a peak voltage rating of 850 volts. Other spacings; single hole mounting types; straight shaft; screwdriver shaft; or locking-type screwdriver shaft available on special order in production quantities. Available in Single Section and Butterfly Types.



SINGLE SECTION

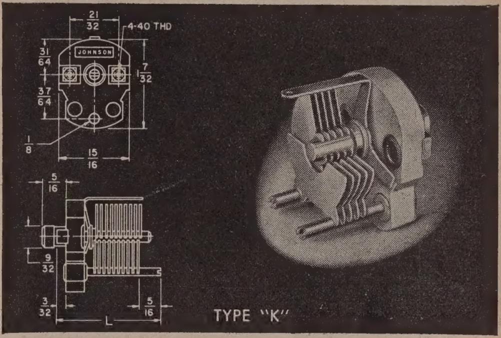
Cat. No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Plates per Sec.	L	Net Price
148-1	15	2.3	6	53/64"	$1.10
148-2	25	2.6	10	15/16"	1.15
148-3	35	2.9	14	1 1/32"	1.20
148-4	50	3.2	19	1 9/64"	1.30
148-5	75	3.9	29	1 13/32"	1.45
148-6	100	4.5	38	1 43/64"	1.65

BUTTERFLY

Cat. No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Plates per Sec.	L	Net Price
148-201	9	1.8	9	53/64"	$1.45
148-202	14	2.1	15	15/16"	1.55
148-203	20	2.4	21	1 1/32"	1.70
148-204	27	2.8	28	1 9/64"	1.90
148-205	42	3.6	43	1 13/32"	2.20
148-206	54	4.4	57	1 43/64"	2.50

TYPE "K" CAPACITORS

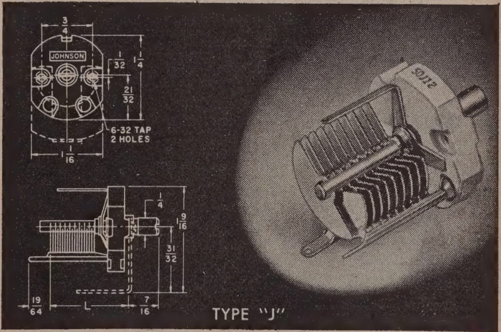
Widely used for military and many commercial applications, the Type "K" capacitor has a DC-200 impregnated steatite insulator, slotted stator contacts, and extra-rigid soldered plate construction. Peak voltage rating is 1000 volts with a plate spacing of .015" — plates are nickel-plated brass. The Type "K" capacitor is available in production quantities to meet MIL-C-92A specifications — other capacities and variations for specialized military and commercial applications are also available in production quantities. Butterfly and Differential Types will soon be available.



Cat. No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Plates per Sec.	L	Net Price
158-1	10	2.9	3	7/8"	$1.25
158-2	25	3.7	7	1"	1.35
158-3	50	4.6	14	1 3/16"	1.55
158-4	75	5.5	20	1 3/8"	1.70
158-5	100	6.4	27	1 5/8"	1.85

TYPE "J" CAPACITORS

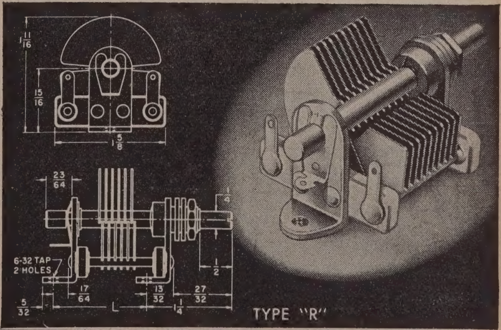
A heavy duty miniature type, the Type "J" capacitor has wider spacing (.025") than most small air variables, yet it occupies little more space. The Type "J" is especially useful for small space plate tank circuits in low power stages where standard miniatures have insufficient plate spacing. Unit is equipped with a DC-200 treated steatite insulator and has soldered plate construction. Peak voltage rating is 1200 volts. Mounting brackets and 6-32 screws provided.



Cat. No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Plates per Sec.	L	Net Price
157-1	8	2.6	3	19/32"	$1.85
157-2	17	3.3	6	23/32"	1.95
157-3	29	3.6	10	7/8"	2.10
157-4	52	4.9	19	1 1/4"	2.35
157-5	73	6	26	1 17/32"	2.65
157-6	102	7	36	1 31/32"	3.00

TYPE "R" CAPACITORS

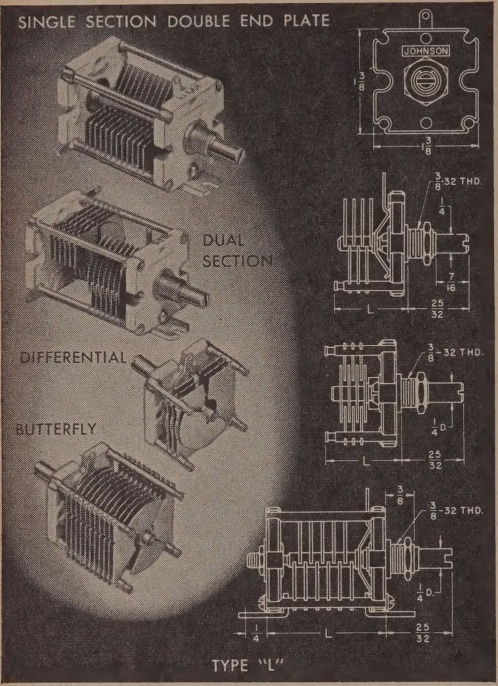
This rugged Johnson version of a popular standardized capacitor, has extra-heavy steatite stator support insulators and soldered .023" thick brass plates. All metal parts are heavily nickel-plated for resistance to corrosion. Sturdy brass end frames offer excellent rigidity. Double bearing construction and silver-plated beryllium copper wiping contacts provide smooth, reliable performance. Peak voltage rating is 1200 volts — available with .024", .036", .050", .071", or .095" plate spacings, as well as special platings and shaft lengths in production quantities. Bearing threaded 3/8"-32. Also available without mounting feet for panel mounting applications.



Cat. No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Plates per Sec.	L	Net Price
149-1	20	5	3	1 7/32"	$2.25
149-2	35	6	5	1 7/32"	2.35
149-3	50	6.5	7	1 7/32"	2.45
149-4	80	8	11	1 7/32"	2.60
149-5	102	8.5	14	1 13/32"	2.75
149-6	140	13.5	19	1 19/32"	2.95

E. F. Johnson Company

WASECA, MINNESOTA



TYPE "L"

TYPE "L" CAPACITORS

These high quality, ceramic soldered Type "L" capacitors are an ideal choice for applications requiring extreme stability and strength. Rotor bearings and stator support rods are actually soldered directly to the heavy 3/16" thick steatite insulator, making these capacitors practically impervious to shock and vibration. Special split-sleeve tension bearing and silver-plated beryllium copper contact provide constant torque and smooth capacity variation. Heavy brass soldered plates and large diameter tie rods provide excellent rigidity. Removable chassis mounting brackets can be used to mount auxiliary equipment. Plating is heavy nickel – plate spacing .030". Peak voltage rating is 1500 volts. Also available with .020", .060", and .080" spacing as well as special platings, shaft lengths and stator terminal locations in production quantities. Bearings threaded 3/8-32", mounting nut provided. Models with 6-32 tapped mounting posts soldered to end frame also available on special order.

SINGLE SECTION

Cat. No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Plates per Sec.	L	Net Price
		Single End Plate			
167-1	11	2.8	3	¾"	$1.60
167-2	27	3.5	7	61/64"	1.70
167-3	51	4.6	13	1¼"	1.90
167-4	75	5.7	19	1 9/16"	2.10
		Double End Plate			
167-11	99	6.8	25	2 1/32"	3.30
167-12	202	11.6	51	2 21/64"	4.20

BUTTERFLY

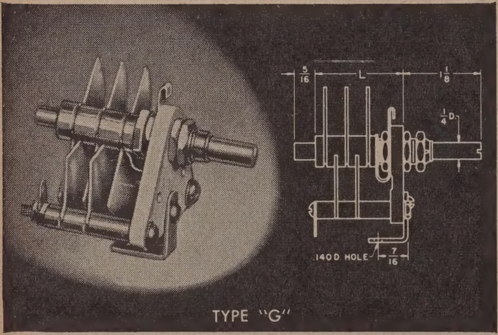
Cat. No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Plates per Sec.	L	Net Price
167-21	10.5	2.8	5	55/64"	1.95
167-22	26	4.3	12	1¼"	2.25
167-23	51	6.8	23	1¾"	2.75

DIFFERENTIAL

Cat. No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Plates per Sec.	L	Net Price
167-31	11	2.8	3	¾"	2.00
167-32	27	3.5	7	61/64"	2.20
167-33	51	4.6	13	1¼"	2.50

DUAL SECTION

Cat. No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Plates per Sec.	L	Net Price
167-51	27	5.0	7	1⅝"	3.60
167-52	51	6.5	13	2 15/64"	4.05
167-53	99	9.8	25	3 7/16"	4.95

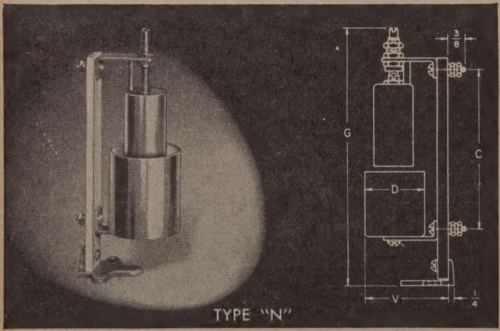


TYPE "G"

TYPE "G" CAPACITORS

A wide range of capacities and spacings make this popular capacitor adaptable to many applications. The Type "G" is especially useful as a neutralizing capacitor for medium and low power stages, and is also widely used for grid and plate tuning at high and ultra-high frequencies. The Type "G" capacitor is constructed with a single steatite insulator, .032" rounded aluminum plates, universal mounting bracket, locking nut, and front and rear shaft extensions. Peak voltage ratings are: 2000 volts with .045" spacing; 4500 volts with .125" spacing; and 7000 volts with .225" spacing.

Cat. No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Spacing	Plates per Sec.	L	Net Price
165-2	52	5	.045"	9	1 5/16"	$3.50
165-4	13	4.7	.125"	5	1 21/64"	3.15
165-5	23	6.4	.125"	9	1 61/64"	3.50
165-6	5.7	3.5	.225"	3	1 7/32"	3.30
165-7	12	6	.225"	7	2 15/64"	4.15



TYPE "N"

TYPE "N" CAPACITORS

The Type "N" capacitor requires very little mounting area, and offers extremely high voltage rating in proportion to its size. Fine adjustment with uniform voltage rating throughout the full capacity range. Plates are aluminum cups supported by a steatite frame with a cast aluminum mounting bracket. Peak RF breakdown ratings at 2 mc.: .125" spacing, 8500 volts; .250" spacing, 11,500 volts; .375" spacing, 14,500 volts.

Cat. No.	Cap. per Sec. Max.	Cap. per Sec. Min.	D	C	G	V	Spacing	Net Price
159-125	11.0	1.1	1⅜	3⅛	6 13/32	1 15/16	.125"	$7.30
159-250	10.6	1.4	1 47/64"	3¾	7 17/32	2 9/32	.250"	8.45
159-375	10.7	1.7	2⅜	5 19/32	8 23/32	2 15/16	.375"	10.50

TYPE "C" AND "D" CAPACITORS

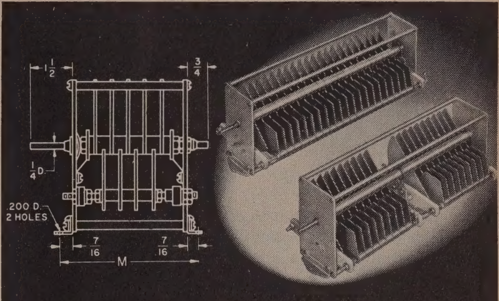
Heavy .051" aluminum plates and 5/16" diameter aluminum tie rods; large, laminated rotor brushes; ¼" cadmium-plated steel shafts; laminated phosphor bronze contact springs; and steatite insulation. Type "C" – overall width: 5½" – height: 5 13/32" – height bottom to shaft center: 3 3/32". Type "D" – overall width: 4¼" – height: 4" – height bottom to shaft center: 2 5/32". Dual types have center rotor connection for better balance. End frames tapped 8-32, 3 holes, for panel mounting – brackets furnished for chassis mounting.

Cat. No.	Pk. Voltage	Cap./Sec. Max.	Cap./Sec. Min.	Air Gap	Plates per Sec.	M	Net Price
TYPE C SINGLE SECTION							
152-1	7000	252	34	.175"	24	7 11/16"	$17.95
152-2	7000	496	56	.175"	47	13 1/16"	21.80
152-6	11000	103	30	.350"	17	9 15/32"	13.65
152-8	13000	51	24	.500"	10	8 9/16"	11.90
152-9	13000	102	42	.500"	21	14 7/32"	15.95
TYPE C DUAL SECTION							
152-501	4500	204	21	.125"	15	9 15/32"	18.75
152-502	4500	290	26	.125"	21	11 3/16"	21.95
152-503	7000	198	27	.175"	19	13 1/16"	21.80
152-504	7000	305	37	.175"	29	17 21/32"	27.20
152-505	9000	147	30	.250"	19	15 23/32"	23.65
152-507	11000	50	18	.350"	8	11 3/16"	15.95
152-509	11000	103	32	.350"	17	17 21/32"	23.20
TYPE D SINGLE SECTION							
153-6	3500	496	36	.080"	39	7 11/16"	16.50
153-8	4500	146	23	.125"	17	5 21/32"	10.40
153-11	7000	98	23	.175"	15	5 21/32"	10.15
153-12	7000	151	31	.175"	23	7 11/16"	11.95
153-13	7000	244	45	.175"	37	11 3/16"	15.20
153-15	9000	53	20	.250"	10	5 21/32"	9.35
153-16	9000	73	25	.250"	14	6 11/16"	10.35
153-17	9000	99	30	.250"	19	8 9/16"	11.55
153-18	9000	149	43	.250"	29	11 3/16"	13.90
TYPE D DUAL SECTION							
153-501	3500	95	13	.080"	8	5 21/32"	11.60
153-502	3500	147	15	.080"	12	6 11/16"	13.35
153-503	3500	202	19	.080"	16	8 9/16"	15.95
153-504	3500	291	24	.080"	23	10 11/32"	18.35
153-505	3500	496	38	.080"	39	14 7/32"	25.40
153-506	4500	155	24	.125"	17	10 11/32"	16.60
153-507	4500	198	27	.125"	23	13 1/16"	18.60
153-508	7000	52	15	.175"	8	6 11/16"	11.95
153-509	7000	72	17	.175"	11	8 9/16"	13.70
153-510	7000	97	22	.175"	15	10 11/32"	15.55
153-511	7000	151	31	.175"	23	14 7/32"	19.95
153-513	9000	52	19	.250"	10	10 11/32"	14.25
153-514	9000	97	30	.250"	19	15 23/32"	19.10

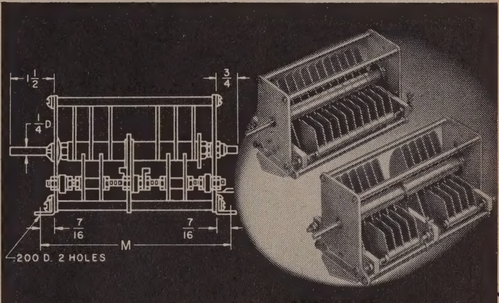
TYPE "E" AND "F" CAPACITORS

Large amount of capacity per cubic inch and extremely low capacity to chassis. Heavy aluminum plates .032" thick with rounded edges and large ¼" tie rods; stainless steel shafts; sturdy phosphor bronze contact springs; and center rotor contact on dual types. End frames tapped 8-32, 3 holes for panel mounting – brackets furnished for chassis mounting.

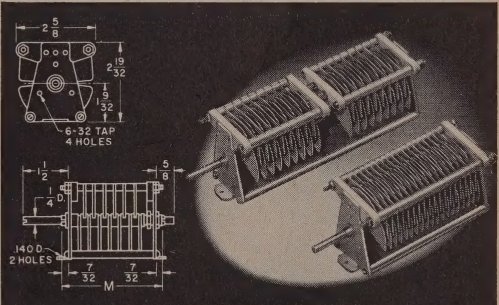
Cat. No.	Pk. Voltage	Cap./Sec. Max.	Cap./Sec. Min.	Air Gap	Plates per Sec.	M	Net Price
TYPE E SINGLE SECTION							
154-1	2000	244	12	.045"	23	3 7/32"	$ 6.65
154-2	2000	353	15	.045"	33	3 31/32"	7.60
154-3	2000	488	19	.045"	45	4 29/32"	8.75
154-7	3000	100	11	.075"	15	3"	5.95
154-8	3000	154	14	.075"	23	3⅞"	6.75
154-9	3000	251	20	.075"	37	5⅜"	8.25
154-10	3000	347	25	.075"	51	6⅞"	9.70
154-11	4500	38	9	.125"	9	2¾"	5.40
154-12	4500	53	11	.125"	12	3 13/32"	5.80
154-13	4500	74	13	.125"	17	4 1/32"	6.30
154-14	4500	101	16	.125"	23	4 31/32"	6.90
154-15	4500	145	20	.125"	33	6 17/32"	7.85
154-16	4500	241	32	.125"	55	10"	10.50
TYPE E DUAL SECTION							
154-502	2000	312	13	.045"	29	7 3/32"	12.30
154-503	3000	52	8	.075"	8	4 17/32"	8.35
154-504	3000	72	8	.075"	11	4 31/32"	8.85
154-505	3000	99	10	.075"	15	5 13/16"	9.70
154-506	3000	153	13	.075"	23	7½"	11.35
154-507	3000	196	15	.075"	29	8 13/16"	13.25
154-508	4500	52	10	.125"	12	6 19/32"	8.95
154-509	4500	74	12	.125"	17	7⅞"	10.20
154-510	4500	100	15	.125"	23	9 23/32"	11.60
TYPE F SINGLE SECTION							
155-1	2000	35	7	.045"	6	1 29/32"	4.95
155-2	2000	54	8	.045"	9	2 1/16"	5.20
155-3	2000	66	8	.045"	11	2 7/32"	5.35
155-4	2000	106	10	.045"	17	2 11/16"	5.85
155-5	2000	154	12	.045"	25	3 5/16"	6.50
155-6	2000	252	17	.045"	41	4 17/32"	7.75
155-8	3000	52	9	.075"	13	2¾"	5.50
155-9	3000	67	11	.075	17	3 5/32"	5.90
155-10	3000	99	14	.075"	25	4 1/32"	6.50
155-11	3000	148	18	.075"	37	5 5/16"	7.65
TYPE F DUAL SECTION							
155-501	2000	53	7	.045"	9	3 15/16"	7.95
155-502	2000	66	7	.045"	11	4¼"	8.45
155-503	2000	104	9	.045"	17	5 5/32"	9.45
155-504	2000	153	11	.045"	25	6 13/32"	10.95
155-505	2000	202	14	.045"	33	7⅝"	12.20
155-506	3000	51	8	.075"	13	5¼"	8.80
155-507	3000	66	10	.075"	17	6⅛"	9.80
155-508	3000	99	13	.075"	25	7⅞"	11.10



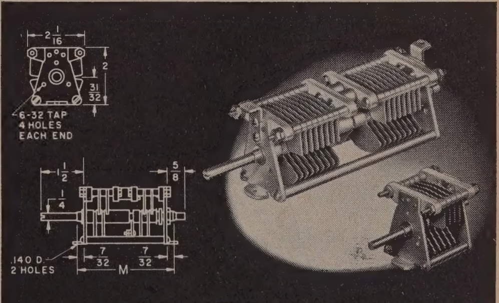
TYPE "C" SINGLE AND DUAL



TYPE "D" SINGLE AND DUAL



TYPE "E" SINGLE AND DUAL



TYPE "F" SINGLE AND DUAL

E. F. Johnson Company

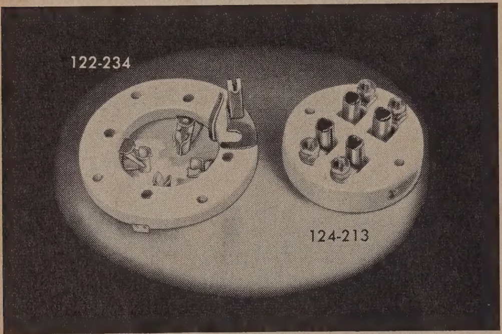
WASECA, MINNESOTA

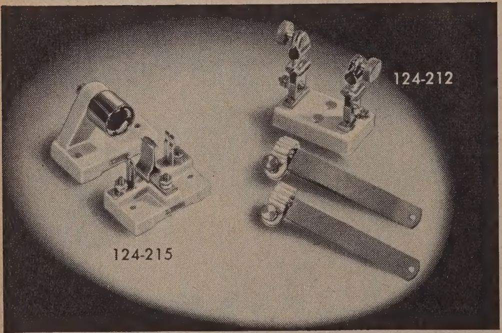
TUBE SOCKETS — GENERAL INFORMATION

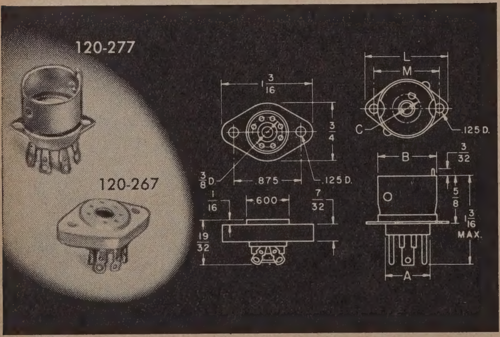
In order to simplify the selection of sockets and to provide complete specifications for standard, industrial and military requirements, wherever applicable, all Johnson tube sockets have been categorized under a socket standardization program.

By reducing the number of variations in special socket types, it is possible to maintain stocks of military and industrial type sockets as well as standard sockets, permitting shorter delivery cycles on quantity orders. Specifications for the three variations of each socket type are listed within each section of descriptive matter.

Detailed specifications covering the complete Johnson tube socket line have been prepared for Engineering Department use — should you desire a copy of Socket Standardization Booklet 536, please make your request on company letterhead.







SOCKET FOR EIMAC 152TL AND 304TL

Glazed porcelain base with contacts for either series or parallel filaments. Standard and Industrial type socket has .0001 nickel-plating. Military type socket has .0005 silver-plating.

Cat. No.	Type	Net Price
124-213-1	Standard	$1.85
124-213-200	Military	2.30

SOCKET FOR EIMAC 750TL, 1500T, 2000T, 2-2000A AND 2-450A

This socket is designed for use with tubes such as the 750TL, 1500T, 2000T, 2-2000A and Eimac's High Vacuum Rectifier 2-450A. For detailed specifications, write for further information.

Cat. No.	Type	Net Price
124-214-1	Standard	Prices on request
124-214-200	Military	

SOCKET FOR 5D21, 705A, 715A AND 715B

Designed for Western Electric tubes 5D21, 705A, 715A and 715B. Heavy steatite base, glazed top and sides, grade L4. Special locking device retains tube in socket. Contacts are .0003 silver-plated on Standard and Industrial types; .001 silver-plated on Military types. Post and single lock is .0003 nickel-plated on all three types.

Cat. No.	Type	Net Price
122-234-1	Standard	$2.20
122-234-100	Industrial	2.20
122-234-200	Military	2.75

250 WATT SOCKET

This two unit socket is designed for use with "250 watt" tubes such as the 204A and 849. Anode cap E.I.A. numbers C1-8, C1-9, and C1-10; cathode mounting E.I.A. base numbers A3-20, A3-21, A3-23. Bases are glazed porcelain and contacts are phosphor bronze, nickel-plated.

Cat. No.	Net Price
124-215	$5.95

SOCKET FOR 833 AND 833A

A special socket assembly for the 833 and 833A consisting of a steatite base which supports the tube and a pair of heat radiating tube cap connectors. Knurled thumb nuts on the socket base makes tube installation fast and easy. Base is designed to minimize strain on the tube envelope and prevent breakage. Heat radiating plate connectors have 4⅜" flexible laminated leads. One pair included with each socket.

Cat. No.	Net Price
124-212	$8.10

Heat radiating plate connectors, aluminum, 4⅜" flexible laminated leads. Available separately.

Cat. No.	Net Price
119-843	$1.35

MINIATURE SOCKETS

Wafer type, all steatite socket for miniature 7 pin tubes such as the 1RS, 1S5, 6CB6, etc. E.I.A. base number E7-1. Contacts are silver-plated phosphor bronze.

Cat. No.	Net Price
120-267	$0.41

Standard shield base type 7 pin miniature socket. E.I.A. base number E7-1. Two piece steatite construction with silver-plated phosphor bronze contacts, hot tin-dipped terminal ends. Shield base is nickel-plated brass.

Cat. No.	Pins	L	M	C	A	B	Net Price
120-277	7	$1\frac{7}{64}$"	⅞"	.375"	.625"	.770"	$0.59

E. F. Johnson Company

WASECA, MINNESOTA

SOCKETS FOR 4X150A, 4X150D, 4X250B, 4CX250B, 4X250F, 7034, 7035

Designed for use with high power transmitting tubes, these sockets are available in many designs — with or without, low inductance screen grid by-pass capacitors. Basic socket is molded of low dielectric loss-factor Kel-F plastic. Control grid contact "guide" is machined for greater alignment accuracy, and tapped for 6-32 machine screw. All contacts are low-resistance silver-plated beryllium copper. Tube pin contacts are heat treated to provide positive contact pressure as well as extended life. Annealed soldering tabs may be easily bent or formed. **Additional specifications and information on this group of sockets are available on Data Sheet 755.**

Rugged light weight basic socket with silver-plated brass mounting saddle. Cathode terminals insulated. Four elongated .140" x .234" mounting holes to accommodate mounting circle diameters from $2\frac{27}{64}$" to $2\frac{39}{64}$". Mounts below chassis through $1\frac{21}{32}$" diameter hole.

Cat. No.	Net Price
124-107-1	**$5.50**

Same as 124-107-1 except cathode terminals grounded. Four mounting holes .136" diameter on circle of $2\frac{17}{32}$" diameter.

Cat. No.	Net Price
124-108-1	**$5.85**

Low cost, light weight basic socket without metal mounting ring. Cathode terminals insulated. Mounts under chassis $1\frac{21}{32}$" diameter hole.

Cat. No.	Net Price
124-109-1	**$5.00**

Basic socket with mounting ring and low-inductance 2700 mmf. screen grid by-pass capacitor; cathode terminals insulated. Mounts above chassis through $2\frac{1}{2}$" diameter hole with 3 clips drilled for 6-32 screws. Provision for mounting socket skirt directly to 1.625" O.D. outer conductor of coaxial-type line.

Cat. No.	Net Price
124-110-1	**$12.50**

High quality heat resistant steatite chimney for use with 124-107-1, 124-108-1, 124-109-1, 124-110-1, 124-112-1, and 124-114-1 sockets. Tapered construction directs air flow through tube cooling fins. Maximum base diameter $2\frac{9}{32}$".

Cat. No.	Net Price
124-111-1	**$0.40**

Same as 124-110-1 except cathode terminals grounded.

Cat. No.	Net Price
124-112-1	**$13.00**

1450 mmf. circular silvered-mica screen grid by-pass capacitor mounted within a low-loss silicone resin sealed silver-plated drawn brass housing. Low inductance silver-plated beryllium copper screen grid contact fingers are heat treated to provide positive contact pressure as well as extended life. Capacitor dielectric strength tested at 1000 volts DC. Unique design permits replacement of screen grid by-pass capacitor by merely removing 4 mounting screws; socket rewiring unnecessary. Fully complies with MIL-C-10950A. For use with 124-107-1, 124-108-1, 124-109-1, 124-114-1, and similar sockets.

Cat. No.	Net Price
124-113-1	**$5.00**

Same as 124-108-1, less metal mounting saddle. Very low inductance grounding of cathode terminals No. 2, 4, 6, and 8 by means of heavy, integral combination grounding and mounting lugs. Mounts below chassis in $1\frac{21}{32}$" diameter hole.

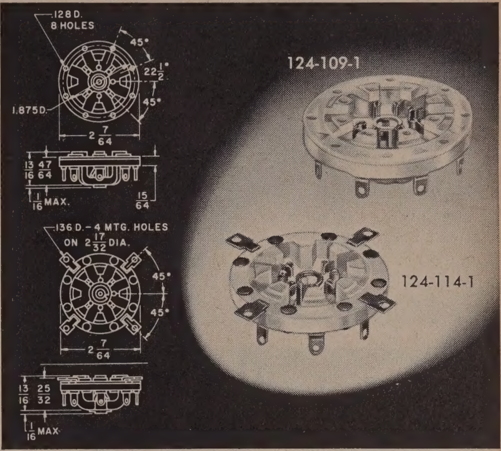
Cat. No.	Net Price
124-114-1	**$5.65**

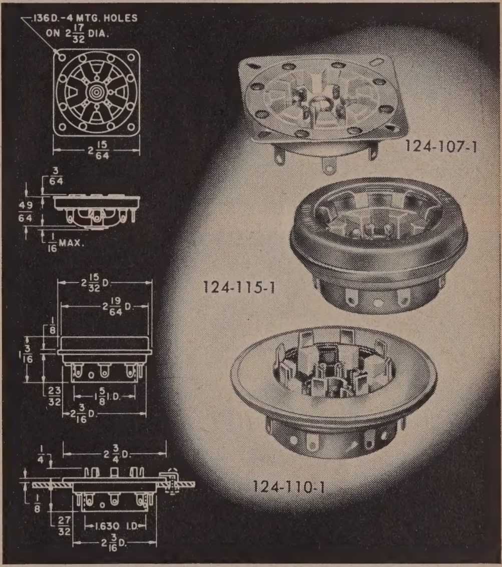
Brand new — the 124-115-1 is a basic socket with mounting ring and smaller low-inductance 1100 mmf. screen grid by-pass capacitor. Requires less mounting space than other screen grid by-pass type sockets. Withstands 1500 volts DC under applicable test specifications. Cathode terminals insulated. Recessed silver-plated beryllium copper screen grid contacts provide positive electrical contact and low inductance. Mounts above chassis through $2\frac{1}{2}$" diameter hole with 3 clips drilled for 6-32 screws. Provision for mounting socket skirt directly to 1.625" O.D. outer conductor of coaxial-type line.

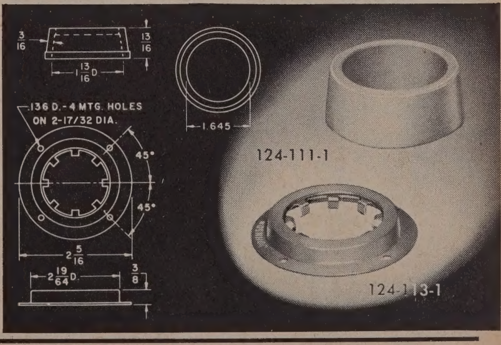
Cat. No.	Net Price
124-115-1	**$13.00**

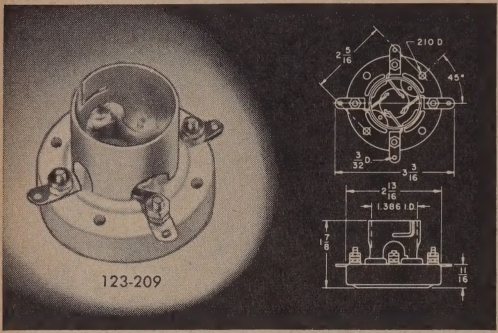
Same as 124-115-1, except cathode terminals grounded.

Cat. No.	Net Price
124-116-1	**$13.50**









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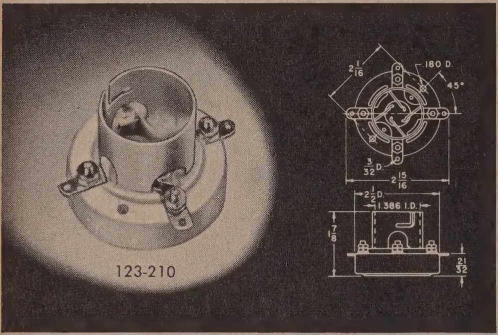

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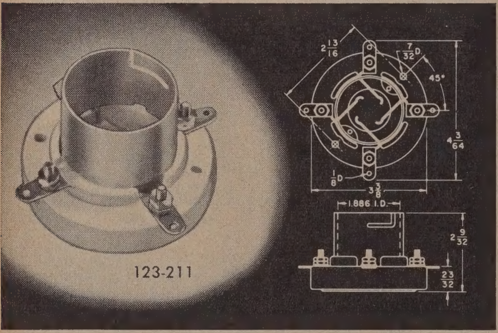

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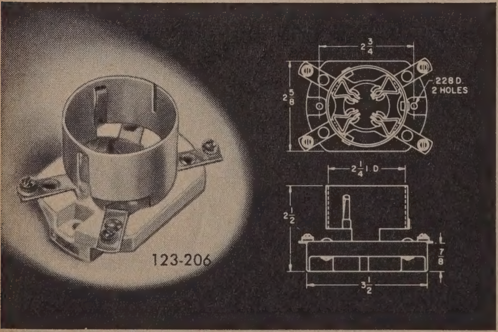


123-206

BAYONET SOCKETS— GENERAL SPECIFICATIONS

(Shown Below)

Standard (Designated -1) A commercial grade socket for general requirements. Porcelain bases, glazed top and sides—phosphor bronze contacts, cadmium-plated .0002. Nickel-plated hardware. Etched aluminum bayonet shells.

Industrial (Designated -100) Superior in quality to the Standard types, Industrial types have glazed steatite bases, DC-200 treated. Phosphor bronze or beryllium copper contacts, .0005 silver-plated. Aluminum bayonet shells, iridite No. 14 treated, except 123-206-100 brass, nickel-plated. Fungus resistant cushion washers under contacts.

Military (Designated -200) Top quality for military requirements. Glazed L-4 steatite bases, DC-200 treated. Beryllium copper contacts .0005 silver-plated. Hot tin-dipped terminals, brass bayonet shells, .0003 nickel-plated. Threaded hardware .0002 nickel-plated, unthreaded hardware .0003. Fungus resistant cushion washers under contacts.

WAFER SOCKETS—GENERAL SPECIFICATIONS

(Shown on Facing Page)

Standard (Designated -1) A commercial grade socket for general requirements. Glazed steatite base is DC-200 treated—contacts are plated brass with steel springs. Shielded types have etched aluminum shields.

Industrial (Designated -100) Superior in quality to the standard types, Industrial types have glazed steatite bases, DC-200 treated. Contacts are phosphor bronze with beryllium copper springs, .0005 silver-plated. Shields on shielded types are iridite No. 14 treated aluminum. Fungus resistant cushion washers under contacts.

Military (Designated -200) Top quality for military requirements. Glazed steatite bases, DC-200 impregnated. Phosphor bronze contacts and beryllium copper springs, silver-plated .001—hot tin-dipped solder terminals. Fungus resistant glass base melamine cushion washers—iridite No. 14 treated aluminum shields on shielded types. Entire socket protected for 200 hour salt spray test.

HEAVY DUTY MEDIUM 4 PIN BAYONET

This rugged bayonet socket has been designed for use with medium 4-pin bayonet base tubes, such as the 866A or 811A, E.I.A. Base No. A4-10. Designed with extra heavy side wiping contacts and extended creepage paths to resist high voltage breakdown. Dual purpose terminals are designed for solder or threaded stud connection—nuts furnished. Four mounting holes in base.

Cat. No.	Type	Net Price
123-209-1	Standard	$1.50
123-209-100	Industrial	3.30
123-209-200	Military	3.95

MEDIUM 4 PIN BAYONET

A compact, economical socket for medium 4 pin bayonet based tubes, E.I.A. Base No. A4-10. Phosphor bronze side wiping contacts and extended creepage paths. Dual purpose terminals are designed for solder or threaded stud connection—nuts furnished. Two mounting holes in base.

Cat. No.	Type	Net Price
123-210-1	Standard	$1.45
123-210-100	Industrial	3.25
123-210-200	Military	3.90

JUMBO 4 PIN BAYONET

A popular "50 watt" socket for medium power bayonet based tubes such as the 872A, 211, and others with E.I.A. Base No. A4-29. Double wiping filament contacts will handle heavy current. Dual purpose terminals are designed for solder or threaded stud connection—nuts furnished. Two mounting holes in base.

Cat. No.	Type	Net Price
123-211-1	Standard	$1.95
123-211-100	Industrial	3.90
123-211-200	Military	4.80

SUPER JUMBO 4 PIN SOCKET

A heavy duty industrial type socket designed for high voltages and/or heavy current. Will accommodate tubes such as the 8008, 5C22, FG104, GL146, and others with E.I.A. Base No. A4-18. Special high current insertion type spring contacts—three heavy retaining springs in nickel-plated brass shell hold tube securely. Steatite base with two mounting holes recessed to prevent flashover. Designed with screw terminals—screws furnished.

Cat. No.	Type	Net Price
123-206-100	Industrial	$4.30
123-206-200	Military	4.85

STANDARD WAFER SOCKETS

Insulated with Grade L-4 steatite, or better. Countersunk rivets and bossed mounting holes to permit sub-panel mounting. Brass contacts with cadmium-plated steel springs. Locating grooves facilitate tube insertion.

Cat. No.	Type	A	B	C	E	For Tube	Net Price
122-224-1	Standard	9/16"	1/4"	1 11/16"	7/8"	4 Pin	$0.69
122-224-100	Industrial	9/16"	1/4"	1 11/16"	7/8"	4 Pin	.79
122-224-200	Military	9/16"	1/4"	1 11/16"	7/8"	4 Pin	.93
122-225-1	Standard	9/16"	1/4"	1 11/16"	59/64"	5 Pin	.76
122-225-100	Industrial	9/16"	1/4"	1 11/16"	59/64"	5 Pin	.89
122-225-200	Military	9/16"	1/4"	1 11/16"	59/64"	5 Pin	1.05
122-226-1	Standard	9/16"	1/4"	1 11/16"	59/64"	6 Pin	.94
122-226-100	Industrial	9/16"	1/4"	1 11/16"	59/64"	6 Pin	1.10
122-226-200	Military	9/16"	1/4"	1 11/16"	59/64"	6 Pin	1.30
122-227-1	Standard	9/16"	1/4"	1 13/16"	31/32"	7 Pin	.90
122-227-100	Industrial	9/16"	1/4"	1 13/16"	31/32"	7 Pin	1.10
122-227-200	Military	9/16"	1/4"	1 13/16"	31/32"	7 Pin	1.35
122-228-1	Standard	15/32"	3/16"	1 11/16"	57/64"	Octal	.97
122-228-100	Industrial	15/32"	3/16"	1 11/16"	57/64"	Octal	1.20
122-228-200	Military	15/32"	3/16"	1 11/16"	57/64"	Octal	1.45

SUPER JUMBO 4 PIN SOCKET

Heavy duty steatite insulated 4 pin wafer—for super jumbo base tubes such as the 8008, and many rectifier and thyratron types with E.I.A. Base Nos. A4-15, A4-16, and A4-18. Long, parallel contacts are designed to withstand high currents.

Cat. No.	Type	A	B	L	Net Price
122-244-1	Standard	11/16"	9/32"	2 5/8"	$1.60
122-244-100	Industrial	11/16"	9/32"	2 5/8"	1.80
122-244-200	Military	11/16"	9/32"	2 5/8"	2.15

GIANT 5 PIN SOCKET

Large steatite wafer socket designed for tubes such as the 4-125A, 4-250A, and RK-48 with E.I.A. Base No. A5-19. Tube seal ventilation is provided by one central and five ventilating holes located between contacts. Contacts designed to withstand heavy current.

Cat. No.	Type	Net Price
122-275-1	Standard	$1.90
122-275-100	Industrial	2.20
122-275-200	Military	2.60

GIANT 7 PIN SOCKET

A rugged wafer socket for tubes such as the 4E27, HK257, and 813 with E.I.A. Base No. A7-17. Contacts are designed with maximum surface area against tube prongs. 3/4" ventilating hole in base provides tube seal cooling.

Cat. No.	Type	A	B	L	Net Price
122-237-1	Standard	9/16"	1/4"	2 5/8"	$1.20
122-237-100	Industrial	9/16"	1/4"	2 5/8"	1.40
122-237-200	Military	9/16"	1/4"	2 5/8"	1.60

SEPTAR SOCKETS

Designed for 7 pin tubes such as the 7094, with E.I.A. Base No. E7-2. Each socket is furnished with a separate aluminum shield ring.

Cat. No.	Type	A	B	L	Net Price
122-247-1	Standard	17/32"	1/4"	2 5/8"	$1.45
122-247-100	Industrial	17/32"	1/4"	2 5/8"	1.65
122-247-200	Military	17/32"	1/4"	2 5/8"	1.90
122-248-1	Standard	17/32"	1/4"	2 3/8"	1.30
122-248-100	Industrial	17/32"	1/4"	2 3/8"	1.50
122-248-200	Military	17/32"	1/4"	2 3/8"	1.75

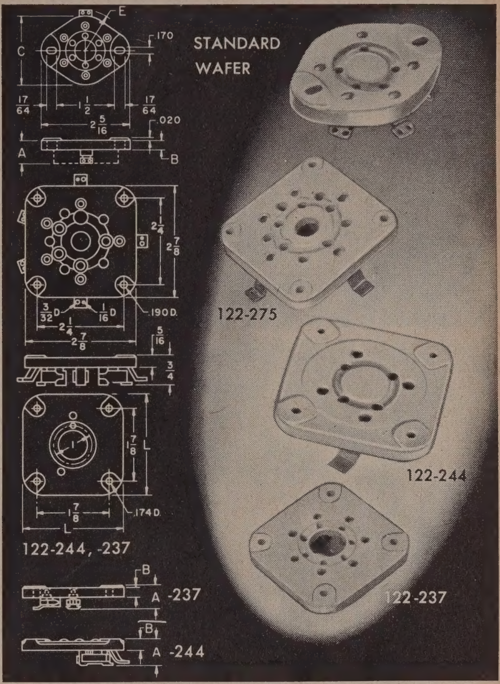
VHF SEPTAR SOCKETS

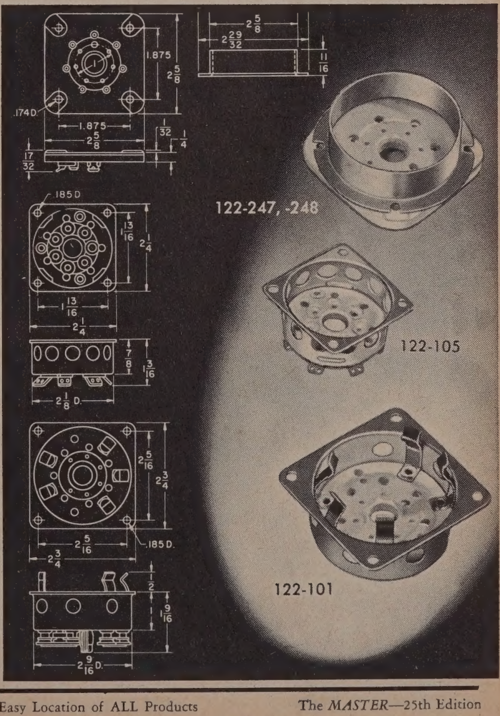
The 122-105 VHF septar socket takes 1/3 less space than previously available types—permits compact design when using tubes with medium button septar bases such as the 5894, 6524, and 6252 with E.I.A. Base No. E7-20. Base is Grade L-4 steatite, glazed top and sides—underside DC-200 impregnated. Molded recesses in base for each contact prevents turning. Contact cushion washers of fungus resistant glass base melamine. Aluminum shell submounts tube for maximum input and output shielding. 3/8" holes provide adequate ventilation.

Cat. No.	Type	Net Price
122-105-100	Industrial	$1.45
122-105-200	Military	1.70

The 122-101 VHF septar socket is a 7 pin socket designed for tubes with medium molded flare septar base such as the 826, 832, 4D32, PL6549, PL6569 with E.I.A. Base No. E7-2. Industrial type has 5 tube retainer springs—military type has 7 retainer springs. Equipped with ventilated shield. Provision for mounting button mica capacitors directly to the socket—special terminals permit direct mounting of grid coils—two holes provided for mounting of bus bar neutralizing leads.

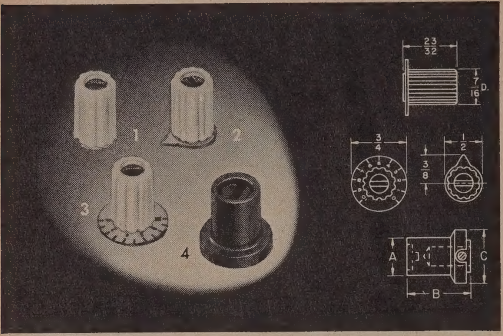
Cat. No.	Type	Net Price
122-101-100	Industrial	$2.35
122-101-200	Military	2.65

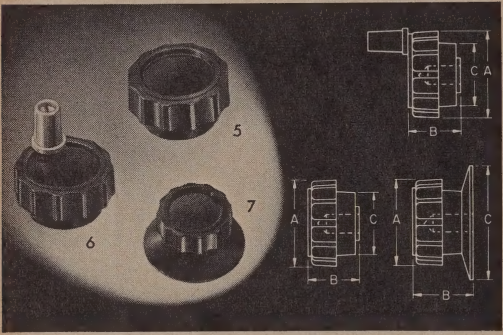


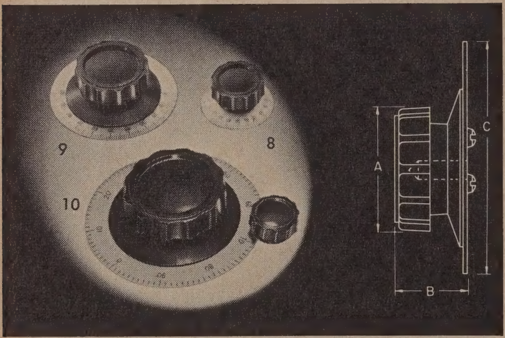


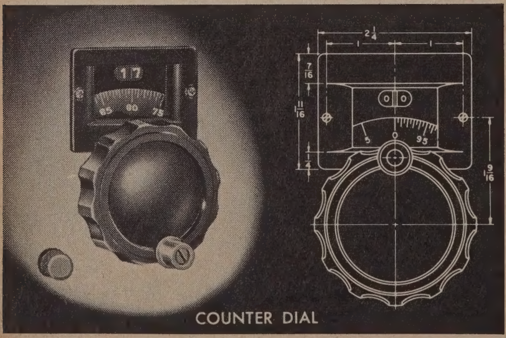
E. F. Johnson Company

WASECA, MINNESOTA









COUNTER DIAL

This distinctive line of matching knobs and dials offers excellent gripping surface and attractive, functional styling. Black phenolic molded parts (meet MIL-P-14) used on all knobs except collet group. Metal dials and pointers are etched satin aluminum, anodized finish – nomenclature deeply etched and filled for maximum legibility. All types have accurately centered brass inserts for ¼" shafts, except instrument and collet knobs. Variations such as special shaft sizes, scales, or indicators are available in production quantities.

COLLET KNOBS

Available in 13 bright colors, these new molded knobs and dials for ⅛" shafts offer fresh, modern styling and tough, shock-proof, high quality nylon body. Ideal for laboratory and test instruments, radio transmitters, etc. Ridged gripping surface – positive, comfortable "feel." Collet and nickel-plated locking screw provide firm internal attachment.

COLLET KNOB COLOR CODING

Available in 13 colors. The fifth and sixth digits in the catalog number (i.e. 01, 02, 03, etc.) indicate color as shown below. Use these numbers when ordering.

BASIC KNOB

Cat. No.	Color	Illustration	Net Price
116-401	White (13 colors available—see below)	1	$0.18

Cat. No.	Color	Cat. No.	Color	Cat. No.	Color
116-402	Red	116-406	Orange	116-410	Dk. Blue
116-403	Black	116-407	Yellow	116-411	Ivory
116-404	Dk. Green	116-408	Brown	116-412	Violet
116-405	Lt. Blue	116-409	Lt. Green	116-413	Grey

POINTER KNOB

116-501	White (13 colors available—see above)	2	$0.27

DIAL KNOB 10-0/180°

116-551	White (13 colors available—see above)	3	$0.38

DIAL KNOB 10-0/270°

116-601	White (13 colors available—see above)	3	$0.38

INSTRUMENT KNOB

Popular black phenolic knob for ¼" shafts (116-214-1) or for 3/16" shafts (116-214-2). May be finger-operated or mounted to project thru panel for screwdriver adjustment.

Cat. No.	Illus.	A	B	C	Net Price
116-214-1	4	½"	⅞"	¾"	$0.33
116-214-2	4	½"	⅞"	¾"	.33

KNOBS

116-220	5	1⅛"	⅝"	13/16"	$0.32
116-260	5	1⅝"	¾"	1⅛"	.45
116-280	5	2⅜"	15/16"	1¾"	.59

SPINNER KNOBS

For multi-turn devices such as variable inductors, potentiometers, etc. Spinner handle is machined aluminum and projects 9/16" from knob.

116-226	6	1⅛"	⅝"	13/16"	$0.64
116-266	6	1⅝"	¾"	1⅛"	.73
116-286	6	2⅜"	15/16"	1¾"	.89

SKIRTED KNOBS

Phenolic skirts with indicator mark. (May be white filled).

116-221	7	1⅛"	49/64"	1½"	$0.69
116-261	7	1⅝"	57/64"	2 1/16"	.85
116-281	7	2⅜"	1 5/64"	3"	.98

DIALS

Etched, beveled satin aluminum skirts with anodized finish and deeply etched and filled contrasting markings.

Cat. No.	Illus.	Calibration	A	B	C	Net Price
116-222-1	8	100-0 over 180°	1⅛"	¾"	1½"	$0.69
116-222-2	8	10-0 over 300°	1⅛"	¾"	1½"	.69
116-222-3	8	7-1 over 180°	1⅛"	¾"	1½"	.69
116-222-4	8	ON-OFF over 60°	1⅛"	¾"	1½"	.69
116-222-5	8	Line indicator	1⅛"	¾"	1½"	.69
116-222-6	8	0-100 over 180°	1⅛"	¾"	1½"	.69

The following knobs have phenolic skirts and etched satin aluminum calibrated dial scales. Indicator button furnished.

116-262	9	0-100 over 180°	1⅝"	59/64"	2¾"	$1.95
116-282	9	0-100 over 180°	2⅜"	1 7/64"	4"	2.95

VERNIER DIALS

Friction vernier etched satin aluminum dials with calibrated dial scales. Vernier knobs are the same as 116-220 above but have a friction driving wheel and bearing for mounting on panels to ¼" thick. 116-265 has 3 to 1 vernier; 116-285 has 5 to 1.

Cat. No.		Calibration	A	B	C	Net Price
116-265	10	0-100 over 180°	1⅝"	1 5/64"	2¾"	$3.50
116-285	10	0-100 over 180°	2⅜"	1 15/64"	4"	4.60

COUNTER DIAL

Positively calibrated drive for rotary variable inductors and other multi-turn devices. Records up to 99 turns. Vernier dial calibrated 0-100 over 360° for accurate return to any setting. Built-in dial lock, "spinner knob," and attractive black phenolic escutcheon. Furnished with mounting template.

116-208-1	With dial lock, escutcheon and 2⅜" spinner knob	$11.10
116-208-4	Same as above without dial lock	9.80

ESCUTCHEON PLATE

Black phenolic escutcheon shown on counter dial. Provides neat "window" for back-of-panel dial mounting. One edge of escutcheon suitable for attaching standard etched name plate. Opening 1¼" wide x ⅞" high. Furnished with No. 2 screws.

116-201	$0.65

SHAFT COUPLINGS

This group of flexible and rigid couplings is designed for coupling shafts ¼" to ¼"; ¼" to ⅜"; and ⅜" to ⅜".
The 104-250 and 104-251 series couplings are steatite insulated and will adjust to both axial and angular shaft mis-alignment. Spring material is plated phosphor bronze.

Cat. No.	DC Breakdown	Type	Overall Length	Max. Diameter	Couples Shafts	Net Price
104-250	4000	Flexible	1⅛"	1¹¹⁄₃₂"	¼" to ¼"	$0.88
104-250-3	4000	Flexible	1³⁄₁₆"	1¹¹⁄₃₂"	¼" to ⅜"	1.00
104-251	8000	Flexible	1½"	2⁷⁄₃₂"	⅜" to ⅜"	1.40
104-251-2	8000	Flexible	1½"	2⁷⁄₃₂"	¼" to ¼"	1.40
104-251-3	8000	Flexible	1¼"	2⁷⁄₃₂"	¼" to ⅜"	1.40

The 104-252 is a rigid coupling with steatite insulation.

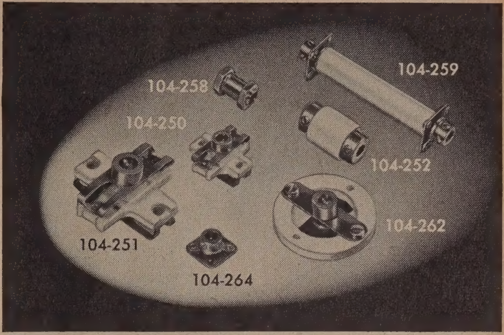
104-252	7000	Rigid	1¼"	¹¹⁄₁₆"	¼" to ¼"	.80

The 104-258 is an all-metal, rigid coupling with locking nuts for friction fits to shafts.

104-258	......	Rigid	¾"	⁹⁄₁₆"	¼" to ¼"	.33

The 104-259, 104-262, and 104-264 will adjust to minor angular shaft misalignment. The 104-259 and the 104-252 have steatite insulation, and the 104-264 has bakelite insulation.

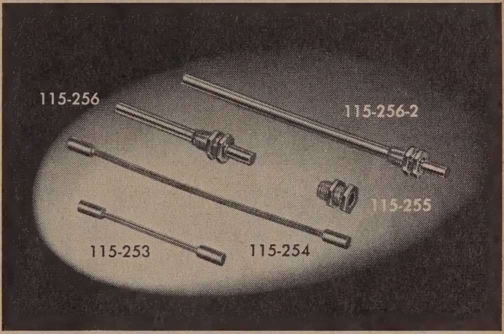
104-259	8000	Semi-Flex.	3⅜"	1¹⁄₃₂"	¼" to ¼"	1.60
104-262	5000	Semi-Flex.	⅞"	2"	¼" to ¼"	1.20
104-264	750	Semi-Flex.	¾"	1¹⁄₃₂"	¼" to ¼"	.65



FLEXIBLE SHAFTS

These phosphor bronze, non-rusting flexible shafts have ¼" brass hubs and are available in two lengths. Permit out of line or up to 90° angular control — capable of withstanding torque in either direction with minimum backlash.

Cat. No.		Net Price
115-253	3" Flexible Shaft	$0.50
115-254	6" Flexible Shaft	$0.75



PANEL BEARINGS

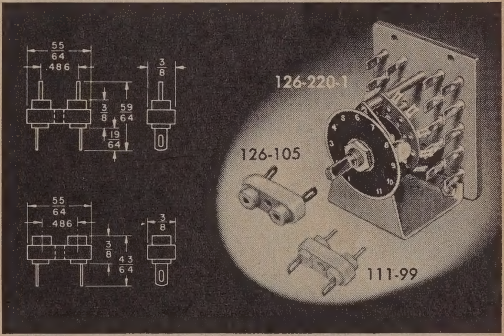
Bearing 115-255 is nickel-plated brass, ²¹⁄₃₂" overall, designed for use on ¼" shafts and panels up to ⅜" thick. The 115-256 and 115-256-2 consist of the bearing plus either 3" or 6" nickel-plated brass shafts and standard ⅜"-32 nut. Shafts extend ½" from the face of the panel bearing. Models with locking nut and special shaft lengths are available on production quantity orders.

Cat. No.		Net Price
115-255	Panel Bearing Only	$0.19
115-256	Bearing and Shaft	.37
115-256-2	Bearing and Shaft	.50

MULTIPLE CRYSTAL SELECTOR

This popular multiple crystal selector will accommodate up to ten type FT-243 crystals (.093" diameter pins spaced .486"). Sturdy base is mica-filled phenolic, 2⅝" x 3⅛"; the switch has 11 positions and includes index plate and universal bracket.

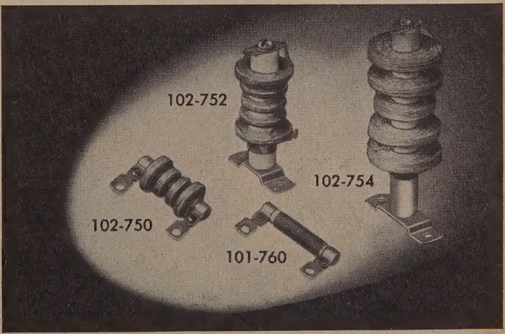
Cat No.		Net Price
126-220-1	Crystal Selector Assembly	$5.80
126-120-1	Crystal Board Only (no switch or bracket)	2.60



CRYSTAL SOCKETS AND CERAMIC PLUG

These steatite sockets and plugs are excellent for low capacity, high voltage, and high temperature operation. Units may be used as crystal sockets, antenna relay connectors, VFO input connectors or antenna plugs. Glazed steatite, Grade L-4 or better, DC-200 impregnated. For pins .051" diameter, ¼" long. Capacity between terminals with socket engaged is less than ⅕ mmf. Mounting hole also provides for attachment of strain relief cord. Rated at 5000 volts breakdown, 10 ampere current carrying capacity. Socket will accept a type HC-6/U crystal holder.

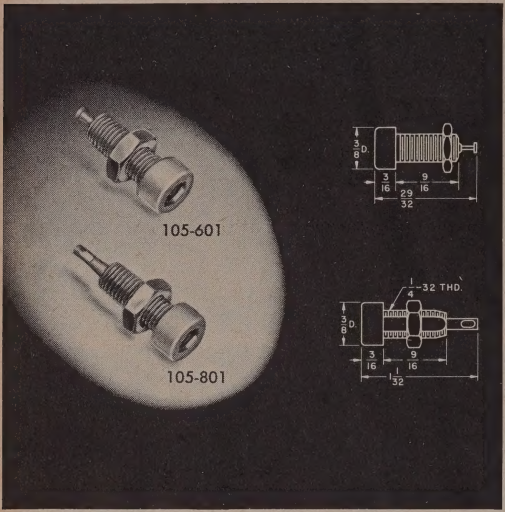
Cat. No.		Net Price
126-105	Crystal socket, silver-plated phosphor bronze contacts	$0.16
126-105-2	Crystal socket, silver-plated beryllium copper contacts	.19
111-99	Ceramic plug, silver-plated brass pins	.21

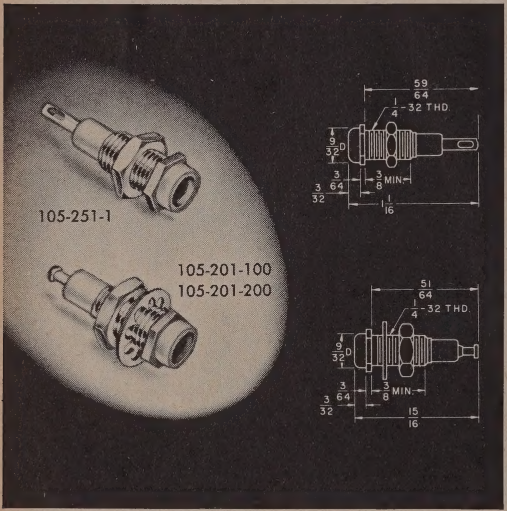


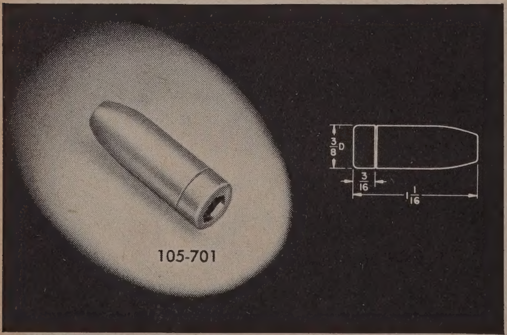
RADIO FREQUENCY CHOKES

This group of RF chokes has high reactance over the entire range for which it is designed. Coils are wound with enamelled silk-covered wire, impregnated with high grade RF lacquer and wound on steatite cores. For intermittent use, the current ratings listed below may be increased.

Cat. No.	Frequency	Current	Induct. (1 mc.)	Ohms DC	Length	Net Price
102-750	1.7 to 30 mc	150 ma	.83 mh	15	1½"	$1.25
102-752	1.7 to 30 mc	500 ma	1.0 mh	5.2	2⅞"	1.95
102-754	1.7 to 30 mc	750 ma	1.9 mh	4	4⁵⁄₁₆"	2.90
101-760	VHF	250 ma	6.8 uh	.33	1½"	.62







NYLON CONNECTORS—GENERAL INFORMATION

This popular group of connectors is molded of tough, low-loss nylon and will not chip or crack even when subjected to extreme temperature changes. Nylon construction provides high voltage insulation — plugs designed for simplified, solderless connection of up to 16 gauge stranded wire. All types available in 13 bright colors.

DELUXE NYLON TIP JACK

(U.S. Pat. No. 2,704,357)

This deluxe, completely insulated jack has molded nylon body and machined beryllium copper contact. Current rating: 10 amps. Voltage breakdown: 11,000 volts DC. Capacity to 1/8" panel: 2.0 mmf. Contact is silver-plated — recessed in head. Solder terminal is hot tin dipped. Single 1/4"-32 nut furnished for mounting — no auxiliary mounting hardware needed. Mounts in 17/64" dia. circular hole.

Cat. No.	Color	Net Price
105-601	White (13 colors available—see below)	$0.25

Cat. No.	Color	Cat. No.	Color	Cat. No.	Color
105-602	Red	105-606	Orange	105-610	Dk. Blue
105-603	Black	105-607	Yellow	105-611	Ivory
105-604	Dk. Green	105-608	Brown	105-612	Violet
105-605	Lt. Blue	105-609	Lt. Green	105-613	Grey

STANDARD NYLON TIP JACK

This low cost insulated tip jack has a molded nylon body and a formed silver-plated phosphor bronze contact. Current rating: 10 amps. Voltage breakdown: 9,000 volts DC. Capacity to 1/8" panel: 2.0 mmf. Single nut furnished for mounting — no auxiliary mounting hardware needed. Mounts in 17/64" dia. circular, "D" or double-flat hole.

Cat. No.	Color	Net Price
105-801	White (13 colors available—see below)	$0.13

Cat. No.	Color	Cat. No.	Color	Cat. No.	Color
105-802	Red	105-806	Orange	105-810	Dk. Blue
105-803	Black	105-807	Yellow	105-811	Ivory
105-804	Dk. Green	105-808	Brown	105-812	Violet
105-805	Lt. Blue	105-809	Lt. Green	105-813	Grey

METAL-CLAD NYLON TIP JACKS

Shock-proof nylon and metal construction — nickel-plated machined brass jacket protects nylon body and assures positive fastening to mounting surface. Current rating: 10 amps. Internal silver-plated contact recessed in head — accommodates tip plugs of nominal .081" diameter. Mounting nut furnished. Mounts in 17/64" dia. circular hole. Variations of three available grades listed below.

STANDARD

Low cost metal-clad nylon tip jack with formed silver-plated phosphor bronze contact. Voltage breakdown: 8,000 volts DC. Capacity to 1/8" panel: 3.8 mmf.

Cat. No.	Color	Net Price
105-251-1	White (13 colors available—see below)	$0.18

Cat. No.	Color	Cat. No.	Color	Cat. No.	Color
105-252-1	Red	105-256-1	Orange	105-260-1	Dk. Blue
105-253-1	Black	105-257-1	Yellow	105-261-1	Ivory
105-254-1	Dk. Green	105-258-1	Brown	105-262-1	Violet
105-255-1	Lt. Blue	105-259-1	Lt. Green	105-263-1	Grey

INDUSTRIAL

Furnished with nickel-plated phosphor bronze lock washer. Machined beryllium copper contact, silver-plated. Hot tin dipped terminal end. Voltage breakdown: 8,000 volts DC. Capacity to 1/8" panel: 3.8 mmf.

Cat. No.	Color	Net Price
105-201-100	White (13 colors available—see below)	$0.30

Cat. No.	Color	Cat. No.	Color	Cat. No.	Color
105-202-100	Red	105-206-100	Orange	105-210-100	Dk. Blue
105-203-100	Black	105-207-100	Yellow	105-211-100	Ivory
105-204-100	Dk. Green	105-208-100	Brown	105-212-100	Violet
105-205-100	Lt. Blue	105-209-100	Lt. Green	105-213-100	Grey

MILITARY

Complies with MS-16108 of MIL-STD-242A. Heavy nickel-plated brass jacket meets federal specification QQ-N-290. High insulation resistance of nylon body complies with MIL-P-17091. Machined beryllium copper contact, silver-plated. Hot tin dipped terminal end. Supplied with tin-plated phosphor bronze lock washer. Voltage breakdown: 8,000 volts DC. Capacity to 1/8" panel: 3.8 mmf.

Cat. No.	Color	Net Price
105-201-200	White (13 colors available—see below)	$0.35

Cat. No.	Color	Cat. No.	Color	Cat. No.	Color
105-202-200	Red	105-206-200	Orange	105-210-200	Dk. Blue
105-203-200	Black	105-207-200	Yellow	105-211-200	Ivory
105-204-200	Dk. Green	105-208-200	Brown	105-212-200	Violet
105-205-200	Lt. Blue	105-209-200	Lt. Green	105-213-200	Grey

NYLON JACK AND SLEEVE ASSEMBLY

This complete assembly includes a deluxe nylon tip jack as described above, less mounting nut, with an inside threaded, molded nylon insulating sleeve. Ideal for patch cords, this assembly is also excellent for panel mounting where an insulated rear connection of a panel mounted tip jack is desired.

Cat. No.	Color	Net Price
105-701	White (13 colors available—see below)	$0.30

Cat. No.	Color	Cat. No.	Color	Cat. No.	Color
105-702	Red	105-706	Orange	105-710	Dk. Blue
105-703	Black	105-707	Yellow	105-711	Ivory
105-704	Dk. Green	105-708	Brown	105-712	Violet
105-705	Lt. Blue	105-709	Lt. Green	105-713	Grey

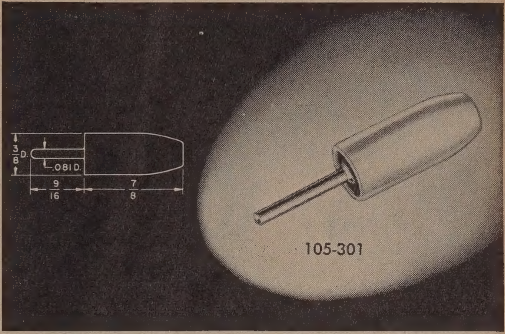
NYLON SOLDERLESS TIP PLUG

(Patent Pending)

Completely insulated, molded nylon sleeve. Recessed metal head prevents exposure of metal surfaces when engaged in any standard tip jack. All metal parts are nickel-plated brass. Designed for solderless connection of up to 16 gauge stranded wire. Fits all standard tip jacks. Current rating: 10 amps.

Cat. No.	Color	Net Price
105-301	White (13 colors available—see below)	$0.16

Cat. No.	Color	Cat. No.	Color	Cat. No.	Color
105-302	Red	105-306	Orange	105-310	Dk. Blue
105-303	Black	105-307	Yellow	105-311	Ivory
105-304	Dk. Green	105-308	Brown	105-312	Violet
105-305	Lt. Blue	105-309	Lt. Green	105-313	Grey



NYLON BANANA PLUGS

(Patent Pending)

Compact, high voltage insulated plug for a wide variety of applications. Designed for fast, solderless connection of up to 16 gauge stranded wire. Body and pin are constructed of one-piece, nickel-plated brass with high grade nickel silver springs. Sleeve is molded nylon. Current rating: 10 amps.

Cat. No.	Color	Net Price
108-301	White (13 colors available—see below)	$0.21

Cat. No.	Color	Cat. No.	Color	Cat. No.	Color
108-302	Red	108-306	Orange	108-310	Dk. Blue
108-303	Black	108-307	Yellow	108-311	Ivory
108-304	Dk. Green	108-308	Brown	108-312	Violet
108-305	Lt. Blue	108-309	Lt. Green	108-313	Grey

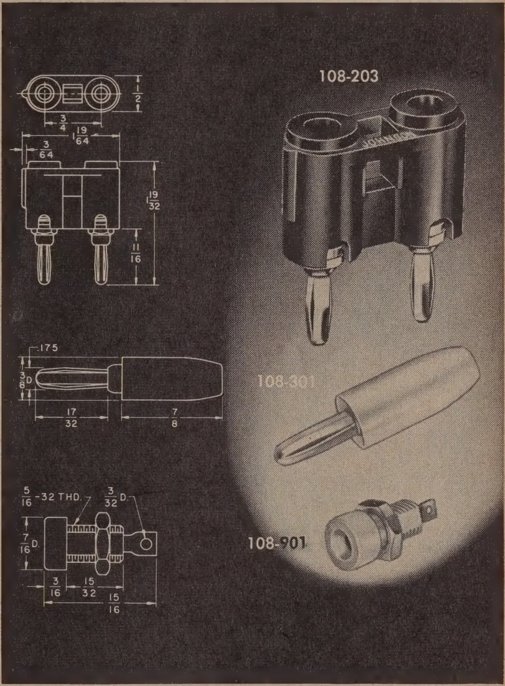
DUAL BANANA PLUG

(Patent Pending)

Extremely versatile with excellent electrical properties, this new solderless dual banana plug provides the perfect answer to a wide range of connector problems. Molded nylon body incorporates polarity indication and strain relief hole for wire leads. Springs are high quality nickel silver — bodies are nickel-plated. Accurately machined brass studs extend the full length of pins for extra strength. Voltage breakdown: 10,000 volts DC. Capacity plug to plug: 1.3 mmf. Current carrying capacity: 15 amps.

Cat. No.	Color	Net Price
108-201	White (13 colors available—see below)	$0.60

Cat. No.	Color	Cat. No.	Color	Cat. No.	Color
108-202	Red	108-206	Orange	108-210	Dk. Blue
108-203	Black	108-207	Yellow	108-211	Ivory
108-204	Dk. Green	108-208	Brown	108-212	Violet
108-205	Lt. Blue	108-209	Lt. Green	108-213	Grey



NYLON BANANA JACK

Completely insulated, molded nylon body with cadmium-plated insert. Accommodates banana plugs of nominal .175" diameter. Voltage breakdown: 12,500 volts DC. Capacity to 1/16" panel: 2.4 mmf. nominal. Mounts in 21/64" diameter circular, "D", or double flat hole (1/4" across flats). Single nut furnished for mounting — no other mounting hardware needed.

Cat. No.	Color	Net Price
108-901	White (13 colors available—see below)	$0.14

Cat. No.	Color	Cat. No.	Color	Cat. No.	Color
108-902	Red	108-906	Orange	108-910	Dk. Blue
108-903	Black	108-907	Yellow	108-911	Ivory
108-904	Dk. Green	108-908	Brown	108-912	Violet
108-905	Lt. Blue	108-909	Lt. Green	108-913	Grey

NYLON "SIX-WAY" BINDING POST

(U.S. Pat. No. 2,806,999)

Compact, completely insulated, pre-assembled 6-way binding post. Molded nylon body with silver-plated shank. Thumb nut is self-captivated and cannot be removed. Connection is made at the solder stud, or a lug may be slipped over threaded portion and secured with a nut. Single nut furnished for mounting — no other mounting hardware needed. Single banana plug will fit in hole in top of binding post. Insulation resistance greater than 200 meg. after MIL-T-5422B humidity test. Voltage breakdown: 8000 volts DC. Capacity to 1/8" panel: 3.3 mmf. Current carrying capacity: 15 amps. Mounts in 21/64" diameter circular hole, "D", or double flat hole (1/4" across flats).

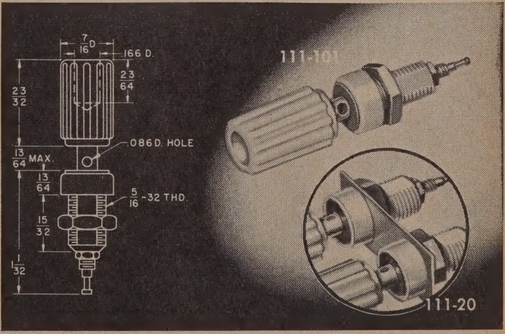
Cat. No.	Color	Net Price
111-101	White (13 colors available—see below)	$0.30

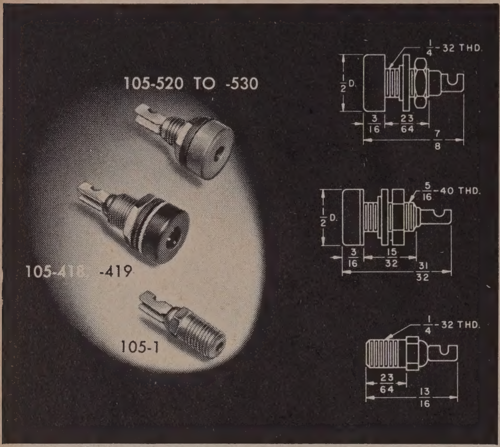
Cat. No.	Color	Cat. No.	Color	Cat. No.	Color
111-102	Red	111-106	Orange	111-110	Dk. Blue
111-103	Black	111-107	Yellow	111-111	Ivory
111-104	Dk. Green	111-108	Brown	111-112	Violet
111-105	Lt. Blue	111-109	Lt. Green	111-113	Grey

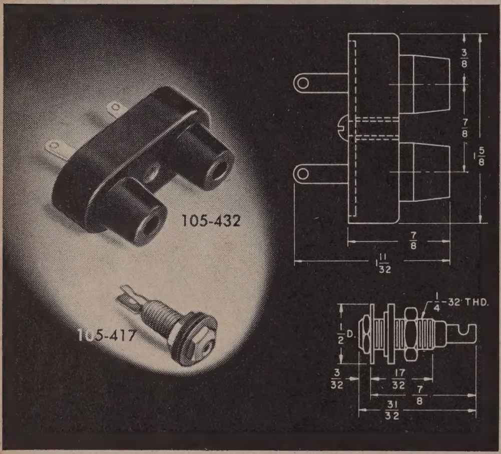
MOUNTING PLATE

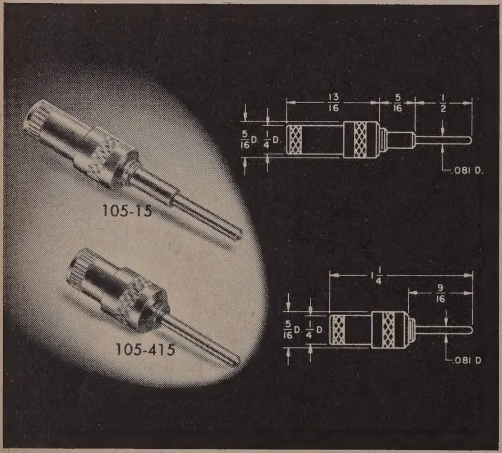
Pre-punched, this etched aluminum mounting plate permits simple, accurate mounting of either two nylon binding posts, or two nylon banana jacks in 21/64" diameter holes on exact 3/4" centers.

Cat. No.	Net Price
111-20	$0.02









PLASTIC HEAD TIP JACKS

This group of general purpose tip jacks is available in ten different colors. Large wiring terminal with solder barrier — nickel-plated body. With extruded shoulder bushing and nickel-plated hex nut. Mounts in 3/8″ dia. circular hole. Maximum panel thickness, 5/32″ where insulating washers are used, 1/4″ where omitted.

Cat. No.	Color	Net Price
105-520	Red	$0.18
105-521	Black	.18
105-522	Dark Green	.18
105-524	Brown	.18
105-525	Light Blue	.18
105-526	Orange	.18
105-527	Yellow	.18
105-528	Light Green	.18
105-529	Dark Blue	.18
105-530	Ivory	.18

HEAVY DUTY TIP JACKS

These two jacks are similar to the types described above, except that the plastic head is molded around the nickel-plated brass body. Contacts are beryllium copper, cadmium-plated.

Cat. No.	Color	Net Price
105-418	Red	$0.25
105-419	Black	.25

HEADLESS TIP JACK

This economical headless tip jack has been designed for use on insulated mounting surfaces. Body has hex shoulder for tightening. Contact is beryllium copper, cadmium-plated.

Cat. No.	Net Price
105-1	$0.11

SHORTING TYPE TWIN TIP JACK

Circuit closes automatically when tips are removed. Jacks are spaced 7/8″. Molded black plastic body.

Cat. No.	Net Price
105-432	$0.53

HEX HEAD TIP JACK

Brass nickel-plated body with cadmium-plated, beryllium copper contact. Threaded 1/4″-32. Furnished complete with extruded washer, flat washer, and nickel-plated nut. For mounting in 3/8″ diameter hole.

Cat. No.	Net Price
105-417	$0.18

SOLDERLESS PHONE TIP PLUGS

These solderless phone tip plugs have knurled nickel-plated brass body and sleeve — construction permits leads to be firmly secured without soldering. The 105-15 has a 3/16″ pin with the last 1/2″ of tip .081″ diameter. The 105-415 is generally the same as the 105-15, except tip is 9/16″ long and .081″ diameter throughout its entire length. Both types are designed for use with all standard tip jacks.

Cat. No.	Net Price
105-15	$0.18
105-415	.17

STANDARD BANANA PLUGS

This group of standard banana plugs has accurately machined brass studs which extend the full length of the plugs, providing extra strength. Springs are nickel-silver — highly resistant to corrosion. Bodies and hardware .0001 nickel-plated. All banana plugs listed below, are available with beryllium copper springs and nickel, cadmium, or silver plating, when desired. A wide selection of miniature solder-type plugs is also available on special order — however quantities in special platings or plugs should be sufficiently large for economical production runs. Solder terminal and nut or screw furnished.

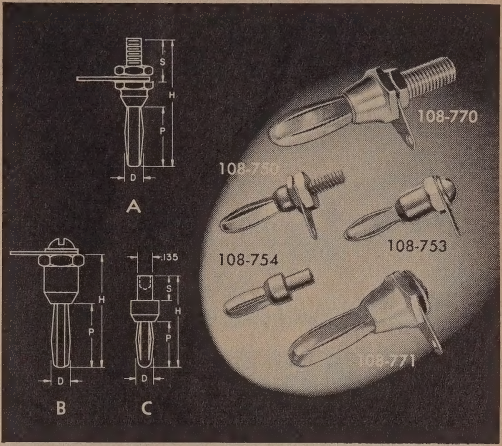
Cat. No.	Dwg.	S	P	D	H	Thread	Net Price
10 -750	A	⅜"	17/32"	.175"	1⅛"	6-32	$0.13
108-750-2	A	¾"	17/32"	.175"	1½"	6-32	.14
108-753	B	...	17/32"	.175"	15/16"	6-32	.14

This banana plug is similar to the standard types listed above, except that it is designed for riveting. Springs are beryllium copper, cadmium-plated.

Cat. No.	Dwg.	S	P	D	H	Thread	Net Price
108-754	C	7/32"	13/32"	.155"	13/16"	....	.09

Jumbo type banana plugs with accurately machined brass studs extending full length of the pins. Nickel-silver springs. Bodies and hardware .0001 nickel-plated. With solder lug and nut or screw.

Cat. No.	Dwg.	S	P	D	H	Thread	Net Price
108-770	A	⅝"	¾"	.300"	1 25/32"	¼"-28	.30
108-771	B	...	¾"	.300"	1⅛"	10-32	.34



STANDARD INSULATED BANANA PLUGS

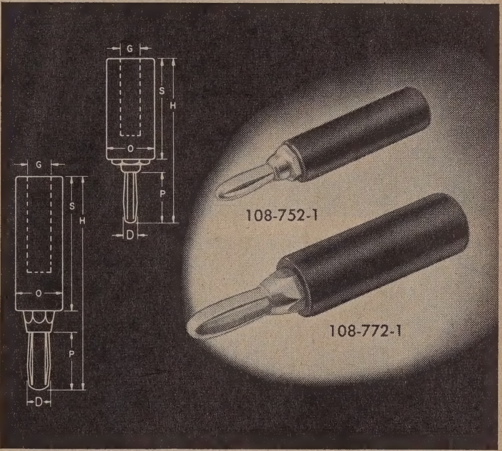
These standard size insulated banana plugs are equipped with plastic handles, brass nickel-plated bodies, and nickel-silver springs. The 108-752-1 has a black plastic handle — the 108-752-2 has a red plastic handle.

Cat. No.	S	P	D	H	G	O	Net Price
108-752-1	1⅜"	17/32"	.175"	2⅛"	7/32"	7/16"	$0.36
108-752-2	1⅜"	17/32"	.175"	2⅛"	7/32"	7/16"	.36

JUMBO INSULATED BANANA PLUGS

These jumbo size insulated banana plugs are similar in design to the standard types listed above, but are somewhat larger in size. With brass nickel-plated bodies, and nickel-silver springs. The 108-772-1 has a black plastic handle — the 108-772-2 has a red plastic handle.

Cat. No.	S	P	D	H	G	O	Net Price
108-772-1	1¾"	¾"	.300"	2 25/32"	⅜"	⅝"	$0.48
108-772-2	1¾"	¾"	.300"	2 25/32"	⅜"	⅝"	.48



STANDARD BANANA JACKS

High quality machined brass banana jack. Nickel-plated. Furnished complete with solder terminal and nut.

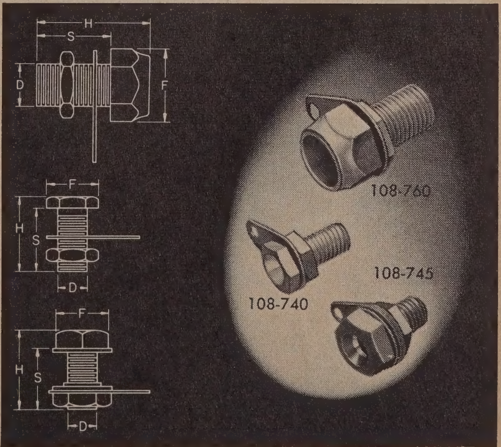
Cat. No.	F	D	S	H	Hole Dia.	Thread	Net Price
108-740	⅜"	¼"	17/32"	⅝"	.166"	¼"-28	$0.12

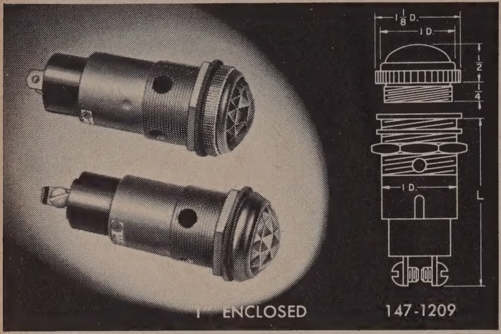
High quality machined brass banana jacks with plastic head molded to body. Nickel-plated. Furnished complete with solder terminal and nut. The 108-745-1 is equipped with red plastic head — the 108-745-2 is equipped with black plastic head.

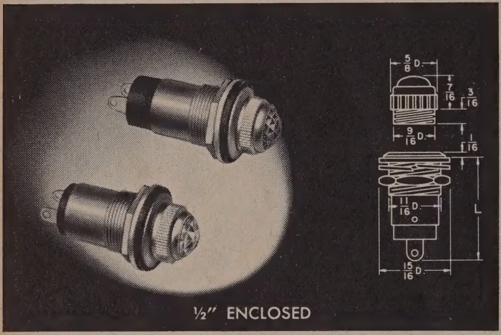
Cat. No.	F	D	S	H	Hole Dia.	Thread	Net Price
108-745-1	7/16"	¼"	31/64"	21/32"	.166"	¼"-28	.22
108-745-2	7/16"	¼"	31/64"	21/32"	.166"	¼"-28	.22

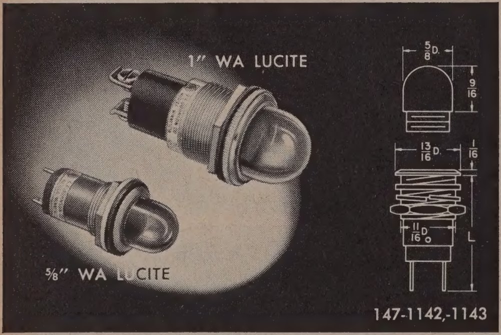
This jumbo banana jack will accommodate plugs such as the 108-770 and the 108-771 listed above. Machined brass, nickel-[illegible]. Furnished complete with solder terminal and nut.

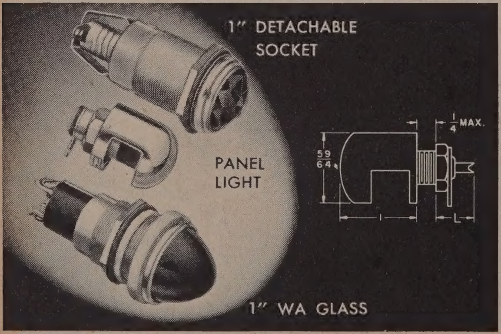
Cat. No.	F	D	S	H	Hole Dia.	Thread	Net Price
108-760	9/16"	⅜"	21/32"	1"	.277"	⅜"-32	.31











PILOT LIGHTS — GENERAL INFORMATION

The pilot lights listed on these pages have been classified by the E. F. Johnson Company as "PREFERRED TYPES", and are immediately available at parts distributors throughout the country. Specials, including types meeting military specifications are available in production quantities.

When ordering: -1 indicates clear jewel (ie. 147-1000-1); -2, red; -3, green; -4, amber; -5, blue; and -6, opal. Green and blue not recommended for use with neon lamps.

For detailed specifications covering the complete Johnson pilot light line, request Catalog 750a using your company letterhead.

1" ENCLOSED — FACETED AND SMOOTH GLASS JEWELS

U.L. approved. Friction type jewel holder, chrome-plated brass. Nickel-plated brass body — porcelain insulation. Bulb replaceable from front panel. Solder terminals. Two lengths available, for 110 volt S6 lamp or shorter T4½ lamps such as the NE-45. Mounting nut and fibre washer furnished. 147-1032 has phenolic housing to MIL-P14-CFG, and screw terminals. 147-1000 and 147-1032 have faceted jewel; 147-1004 has smooth jewel for maximum visibility with neon bulb.

Cat. No.	Length Behind Panel	Bulb Shape	Lamp Base	Net Price
147-1000	2½"	S6	Candelabra Screw	**$1.12**
147-1004	2³⁄₁₆"	T4½	Candelabra Screw	**1.10**
147-1032	2¾"	S6	Candelabra Screw	**1.38**

U.L. approved. Threaded jewel holder, knurled brass, chrome-plated. Nickel-plated brass body. 147-1200 has porcelain insulation and solder terminals. 147-1209 has phenolic insulation and screw terminals. Mounting nut and fibre washer furnished. Faceted jewel.

Cat. No.	Length Behind Panel	Bulb Shape	Lamp Base	Net Price
147-1200	2½"	S6	Candelabra Screw	**1.39**
147-1209	2¾"	S6	Candelabra Screw	**1.49**

½" ENCLOSED — FACETED GLASS JEWEL

U.L. approved. Threaded jewel holder, knurled brass, nickel-plated. Two lengths available, for T3¼ or G3½ bulbs. Threaded jewel holder removable — bulb replaceable from front panel. Solder terminals. Mounting nut, fibre washer, and lock washer furnished.

Cat. No.	Length Behind Panel	Bulb Shape	Lamp Base	Net Price
147-1110	1⁹⁄₁₆"	T3¼	Miniature Bayonet	**$0.84**
147-1112	1⅜"	G3½	Miniature Bayonet	**.84**

ENCLOSED TYPES — WIDE ANGLE LUCITE LENS

U.L. approved. For standard and new high intensity neon, or low power incandescent bulbs. Wide angle visibility. 1" types have chrome-plated threaded lens holders — ⅝" types have threaded lucite lens cap, which may be removed from bezel on housing for bulb replacement. 147-1217 has screw terminals — all others have solder terminals. Mounting nut and fibre washer furnished.

1" ENCLOSED

Cat. No.	Length Behind Panel	Bulb Shape	Lamp Base	Net Price
147-1217	1¹⁵⁄₁₆"	T4½	Candelabra Screw	**$1.57**
147-1218	1½"	T3¼	Miniature Bayonet	**1.21**

⅝" ENCLOSED

Cat. No.	Length Behind Panel	Bulb Shape	Lamp Base	Net Price
147-1142	1⅜"	T3¼	Miniature Bayonet	**.75**
147-1143*	1⅜"	T3¼	Miniature Bayonet	**.98**
147-1144**	1⅜"	T3¼	Miniature Bayonet	**.98**
147-1153†	1⅜"	T3¼	Miniature Bayonet	**.98**
147-1154‡	1⅜"	T3¼	Miniature Bayonet	**.98**

*Built with 180,000 ohm resistor for NE51
**Built with 100,000 ohm resistor for NE51
†Built with 33,000 ohm resistor for NE51H, longer life
‡Built with 18,000 ohm resistor for NE51H, brighter glow

1" ENCLOSED — WIDE ANGLE "BULLSEYE" GLASS LENS

U.L. approved. Threaded jewel holder, knurled brass, chrome-plated. Excellent visibility from any angle. Bulb replaceable from front panel. Phenolic insulation — screw terminals. Mounting nut and fibre washer furnished.

Cat. No.	Length Behind Panel	Bulb Shape	Lamp Base	Net Price
147-1600	2⅛"	S6	Candelabra Screw	**$1.69**

1" DETACHABLE SOCKET

Economical semi-enclosed assembly with chrome-plated jewel bezel. Friction fit jewel holder easily removable from front panel. Socket portion detaches from panel bushing, without disconnecting wiring. Body and jacket nickel-plated. Fibre washer and nut furnished. Faceted jewels.

Cat No.	Length Behind Panel	Bulb Shape	Lamp Base	Net Price
147-800	1¹¹⁄₁₆"	G3½, T3¼	Miniature Screw	**$0.79**
147-802	2³⁄₁₆"	T4½	Candelabra Screw	**.78**
147-804	1¹¹⁄₁₆"	G3½, T3¼	Miniature Bayonet	**.79**

PANEL LIGHT

For front panel illumination. Polished nickel-plated hood, easily removable for lamp replacement — rotates to any position.

Cat. No.	Bulb Shape	Lamp Base	Net Price
147-330	T3¼, G3½	Miniature Screw	**$0.82**
147-329	T3¼, G3½	Miniature Bayonet	**.91**

E. F. Johnson Company

WASECA, MINNESOTA

OPEN PILOT LIGHTS — HORIZONTAL MOUNTING

Designed to permit bulb replacement from front panel. Heavy gauge nickel-plated brackets — special bushing and mounting nut serve as jewel receptacle and mounting for bracket.

1" HORIZONTAL OPEN — FACETED GLASS JEWEL

Friction fit chrome-plated jewel holder. For panels to ⅜" thick. 1" mounting hole required.

Cat. No.	Length Behind Panel	Bulb Shape	Lamp Base	Net Price
147-100	1½"	G3½, T3¼	Miniature Screw	$0.66
147-103	2¹⁄₁₆"	S6	Candelabra Screw	.67
147-106	1½"	G3½, T3¼	Miniature Bayonet	.69

½" HORIZONTAL OPEN — FACETED GLASS JEWEL

Threaded, nickel-plated jewel holder. For panels to 7/32" thick. 11/16" mounting hole required.

Cat. No.	Length Behind Panel	Bulb Shape	Lamp Base	Net Price
147-400	1¼"	G3½, T3¼	Miniature Screw	$0.52
147-403	1½"	G3½, T3¼	Miniature Bayonet	.55

⅝" HORIZONTAL OPEN — LUCITE LENS

Wide angle visibility — low cost. Use with standard or new high intensity neon, or incandescent lamps with 3 watts or less dissipation. 11/16" mounting hole required.

Cat. No.	Length Behind Panel	Bulb Shape	Lamp Base	Net Price
147-406	1¼"	T3½	Miniature Bayonet	$0.46
147-407*	1¼"	NE51	Miniature Bayonet	.73
147-437†	1¼"	NE51H	Miniature Bayonet	.73
147-438‡	1¼"	NE51H	Miniature Bayonet	.73

*Built with 180,000 ohm resistor for NE51
†Built with 33,000 ohm resistor for NE51H, longer life
‡Built with 18,000 ohm resistor for NE51H, brighter glow

OPEN PILOT LIGHTS — VERTICAL MOUNTING

For use where bulb is accessible from behind panel. Solder terminals. Fastens with nut on rear of panel.

⅝" VERTICAL OPEN — FACETED GLASS JEWEL

Chrome-plated. 11/16" mounting hole required.

Cat. No.	Length Behind Panel	Bulb Shape	Lamp Base	Net Price
147-200	1⅛"	G3½	Miniature Screw	$0.54
147-203	1³⁄₁₆"	S6	Candelabra Screw	.55
147-206	1"	G3½	Miniature Bayonet	.58

½" VERTICAL OPEN — FACETED GLASS JEWEL

Polished nickel-plated. 7/16" mounting hole required.

Cat. No.	Length Behind Panel	Bulb Shape	Lamp Base	Net Price
147-300	1³⁄₁₆"	G3½	Miniature Screw	$0.33
147-303	1¼"	S6	Candelabra Screw	.34
147-306	1"	G3½	Miniature Bayonet	.36

⅜" VERTICAL OPEN — FACETED GLASS JEWEL

Polished nickel-plated. 9/32" mounting hole required.

Cat. No.	Length Behind Panel	Bulb Shape	Lamp Base	Net Price
147-500	1⅛"	G3½	Miniature Screw	$0.28
147-503	1"	G3½	Miniature Bayonet	.31

JEWEL — BUSHING AND JEWEL ASSEMBLIES

1" FACETED JEWEL AND BUSHING ASSEMBLY

Friction fit jewel holder. Chrome-plated bezel fits into threaded brass nickel-plated bushing. Furnished with fibre compression washer and nut. 1" mounting hole required.

Cat. No.	Net Price
147-100	$0.49

½" FACETED JEWEL AND BUSHING ASSEMBLY

Threaded knurled brass jewel holder, nickel-plated. Includes jewel assembly and threaded bushing with mounting nut. 11/16" mounting hole required.

147-410 .... $0.38

½" FACETED JEWEL

Threaded jewel assembly. Nickel-plated bezel. Mounting nut furnished. 7/16" mounting hole required.

147-310 .... $0.20

⅜" MINIATURE FACETED GLASS JEWEL

Miniature threaded jewel assembly with nut. Nickel-plated bezel. 9/32" mounting hole required.

147-510 .... $0.14

⅝" LUCITE LENS

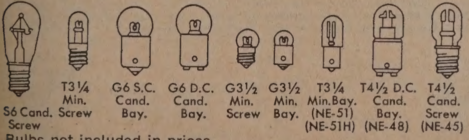
Lucite lens threaded 9/16"-27 as shown on 147-406 and 407.

147-10 .... $0.10

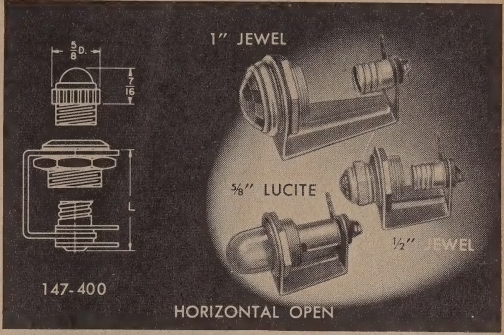
DIAL LIGHT BRACKETS

Socket shells are of extra heavy, drawn seamless construction. Tin-plated terminals—all other parts heavily nickel-plated. Heavy gauge contact springs on bayonet types.

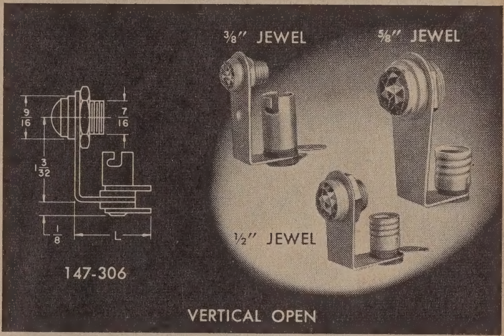
Cat. No.	Socket	Net Price	Cat. No.	Socket	Net Price
147-600	Min. Screw (Bkt. down)	$0.12	147-621	Cand. Screw (Bkt. up)	$0.13
147-601	Min. Screw (Bkt. up)	.12	147-630	Min. Bay. (Clip down)	.16
147-610	Min. Bay. (Bkt. down)	.14	147-631	Min. Bay. (Clip up)	.16
147-611	Min. Bay. (Bkt. up)	.14	147-640	Min. Screw (Clip down)	.14
147-620	Cand. Screw (Bkt. down)	.13	147-641	Min. Screw (Clip up)	.14



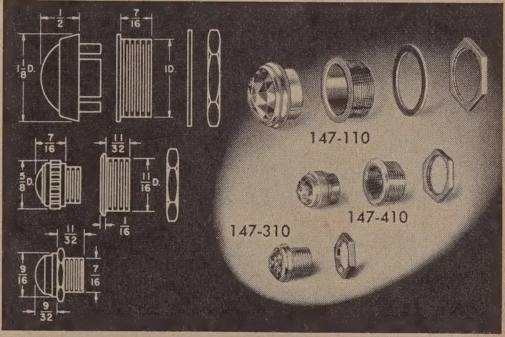
Bulbs not included in prices.

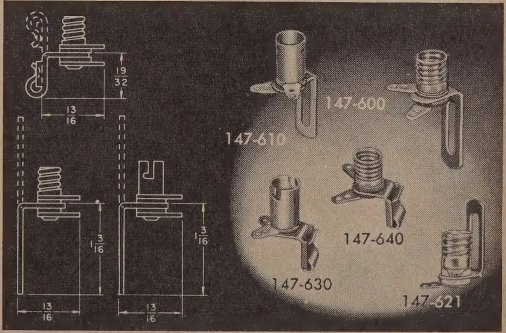


HORIZONTAL OPEN



VERTICAL OPEN





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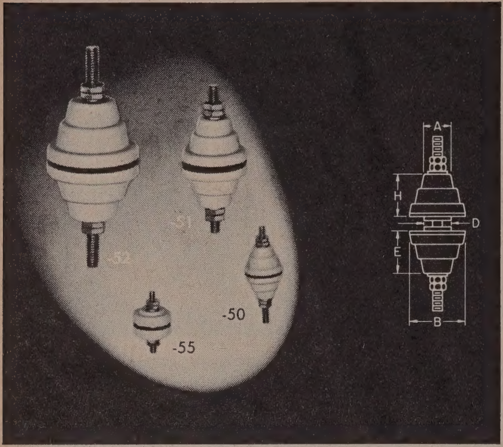
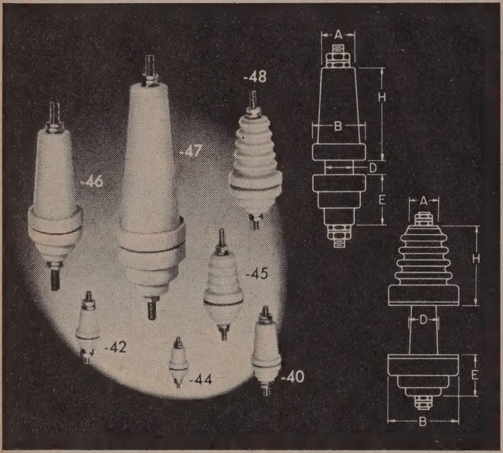
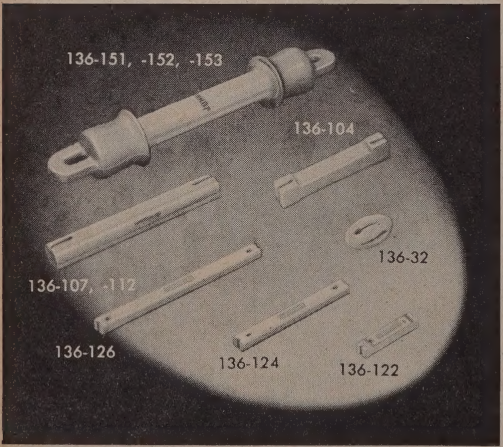






INSULATORS — GENERAL INFORMATION

These high quality steatite and porcelain insulators have heavily glazed surfaces and are furnished with heavy nickel-plated brass hardware suitable for exposed applications. Types designated -2 have jack to accommodate Johnson or other standard banana plugs.

INSULATED THRU-PANEL BUSHINGS

This group of thru-panel bushing assemblies consists of a pair of identical steatite insulators along with cushion washers and hardware. The 135-55 assembly has interlocking insulators which are self-centering in mounting hole and may be used on very thin panels.

Cat. No.	H	B	D	A	Hardware	Net Price
135-50	½″	¾″	15/32″	⅜″	6-32	$0.33
135-51	13/16″	1¼″	27/32″	⅝″	10-32	.54
135-52	1⅛″	1¾″	1 7/32″	⅞″	¼″-20	.78
135-55	¼″	¾″	15/32″	½″	6-32	.31

THRU-PANEL INSULATORS

Available in steatite or porcelain types, these high voltage insulators are compression mounted by means of a stud throughout the entire length of the unit. Extrusion of insulator base extends thru mounting hole, increasing the breakdown rating. Units have flat mounting surfaces and are furnished with cushion washer. Types with jacks have terminal permitting connection above, as well as below panel.

STEATITE

Cat. No.	H	B	D	E	A	Hardware	Net Price
135-40	1¼″	15/16″	7/16″	½″	19/32″	10-32	$0.35
135-40-2	1¼″	15/16″	7/16″	½″	19/32″	108-740 Jack	.45
135-42	⅞″	¾″	13/32″	⅜″	½″	10-32	.35
135-42-2	⅞″	¾″	13/32″	⅜″	½″	108-740 Jack	.45
135-44	⅝″	⅝″	5/16″	5/16″	⅜″	6-32	.27

PORCELAIN

Cat. No.	H	B	D	E	A	Hardware	Net Price
135-45	1⅜″	1¼″	½″	11/16″	⅝″	10-32	$0.47
135-45-2	1⅜″	1¼″	½″	11/16″	⅝″	108-740 Jack	.57
135-46	2¾″	1⅝″	11/16″	1″	15/16″	¼″-20	1.30
135-46-2	2¾″	1⅝″	11/16″	1″	15/16″	108-760 Jack	1.50
135-47	4½″	2⅛″	31/32″	1½″	1 1/16″	¼″-20	1.85
135-47-2	4½″	2⅛″	31/32″	1½″	1 1/16″	108-760 Jack	2.15
135-48	2″	1⅝″	11/16″	⅞″	¾″	10-32	.70
135-48-2	2″	1⅝″	11/16″	⅞″	¾″	108-740 Jack	.83

ANTENNA STRAIN INSULATORS

The 136-151, 136-152, and 136-153 have heavy 1½″ diameter wet process porcelain insulator with specially sealed end bells of non-corrosive aluminum alloy. Porcelain is glazed to prevent moisture absorption. Numbers 136-107 and 136-112 are wet process, 1″ diameter glazed porcelain. Number 136-104 is dry process, glazed ⅝″ square. The 136-32 is a compression type strain insulator for aircraft or guy wire applications — made of dry process glazed porcelain.

		Length		
Cat. No.	Breaking Strength	Net	Overall	Net Price
136-151	5000 lbs.	8″	15½″	$ 9.50
136-152	5000 lbs.	12″	19½″	10.50
136-153	5000 lbs.	20″	25½″	14.70
136-104	400 lbs.	..	4″	.26
136-107	800 lbs.	..	7″	1.18
136-112	800 lbs.	..	12″	1.25
136-32	....	..	1½″	.12

FEEDER INSULATORS

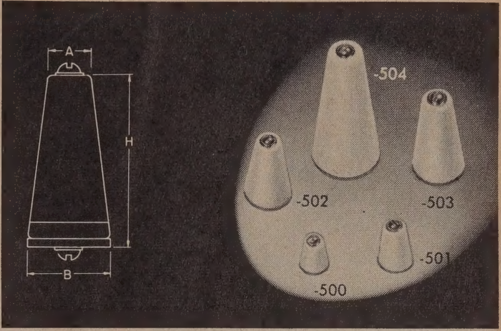
The 136-122, 136-124, and 136-126 are conventional feeder spreaders for constructing high efficiency open-wire antenna feeders and transmission lines. Insulators are made of high grade, low absorption porcelain, silicone impregnated for moisture resistance. Insulators have ⅜″ x ½″ cross section. The 136-122 has extra notches for 1½″ line spacing.

Cat. No.	Length	Net Price
136-122	2″	$0.17
136-124	4″	.24
136-126	6″	.32

STEATITE CONE INSULATORS

Constructed of grade L-4 or better steatite. Deep, clean threads are tapped directly into the ceramic. Insulators are furnished complete with two nickel-plated machine screws, nickel-plated brass washers, and a cork cushion washer.

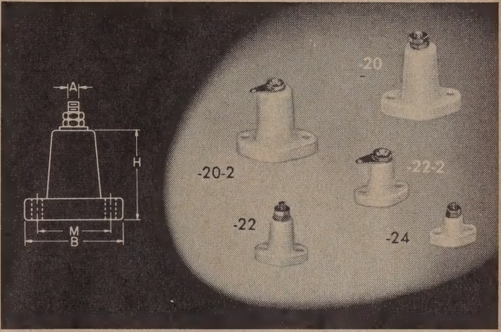
Cat. No.	H	B	A	Hardware	Net Price
135-500	⅝"	⅝"	7/16"	6-32	$0.23
135-501	1"	¾"	½"	8-32	.31
135-502	1½"	1"	½"	8-32	.51
135-503	2"	1⅛"	⅝"	10-32	.71
135-504	3"	1½"	¾"	10-32	1.20



STEATITE STAND-OFF INSULATORS

Sturdy and economical, these glazed steatite insulators have relatively large mounting surfaces. Two hole mounting permits substantial lateral loads. Hardware includes screw, flat washer, and two nuts. Parts designated -2 have a standard banana jack and a solder lug mounted on the top of the insulator. Jacks have .166" inside diameter to fit standard banana plugs.

Cat. No.	H	B	M	A	Hardware	Net Price
135-20	1 9/16"	1¾"	1 5/16"	¾"	10-32	$0.25
135-20-2	1 9/16"	1¾"	1 5/16"	¾"	108-740 Jack	.30
135-22	1"	1 5/32"	13/16"	15/32"	8-32	.19
135-22-2	1"	1 5/32"	13/16"	15/32"	108-740 Jack	.23
135-24	⅝"	1"	11/16"	⅜"	6-32	.15



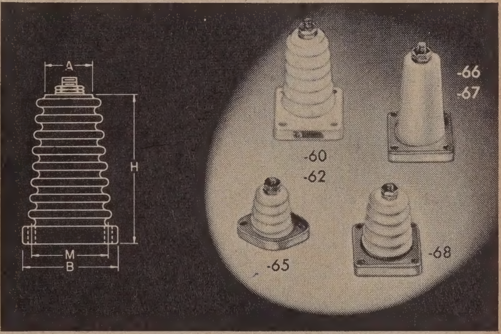
PORCELAIN STAND-OFF INSULATORS

These ribbed porcelain insulators feature square mounting bases with four mounting holes. Porcelain is dense molded and glazed, except on mounting surfaces.

Cat. No.	H	B	M	A	Hardware	Net Price
135-60	4½"	2½"	1⅞"	1 3/16"	¼"-20	$0.98
135-62	2¾"	1⅞"	1⅜"	⅞"	¼"-20	.60

This group of surface mounting porcelain insulators have drawn and etched aluminum bases. The 135-65, 135-65-2, 135-68 and 135-68-2 are ribbed – the 135-66, 135-66-2, 135-67, and 135-67-2 have smooth surfaces. Types 135-65-2 and 135-68-2 have standard .166" inside diameter banana jacks; types 135-66-2 and 135-67-2 have .277" inside diameter jacks to fit jumbo banana plugs.

Cat. No.	H	B	M	A	Hardware	Net Price
135-65	1⅜"	1⅞"	1½"	⅝"	10-32	$0.30
135-65-2	1⅜"	1⅞"	1½"	⅝"	108-740 Jack	.39
135-66	2¾"	1¾"	1⅜"	15/16"	¼"-20	.87
135-66-2	2¾"	1¾"	1⅜"	15/16"	108-760 Jack	.98
135-67	4½"	2¼"	1¾"	1 1/16"	¼"-20	.98
135-67-2	4½"	2¼"	1¾"	1 1/16"	108-760 Jack	1.25
135-68	2"	1¾"	1⅜"	23/32"	10-32	.46
135-68-2	2"	1¾"	1⅜"	23/32"	108-740 Jack	.54



LEAD-IN BUSHINGS

These versatile bushings consist of single porcelain insulators less all hardware except cushion washer. Mounting flanges and threaded lead-in rods are listed below.

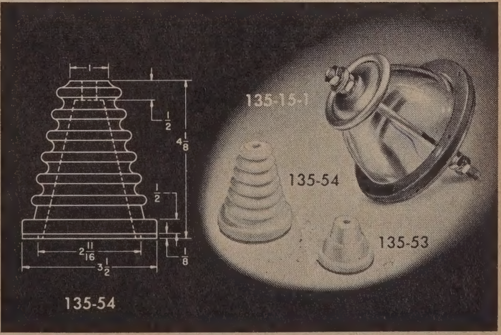
Cat. No.	H	B	A	Net Price
135-53	1¾"	2½"	1 1/16"	$0.29
135-54	4"	3½"	1"	.79

Threaded rod for use with lead-in bushings 135-53 and 135-54. Rod threaded overall ¼"-20. Complete assembly includes rod, 4 brass washers, and 4 nuts. All parts are heavily nickel-plated.

Cat. No.	Length	Net Price
115-240	8"	$0.57
115-241	10"	.71
115-242	15"	.88

Stamped aluminum mounting flanges for lead-in bushings 135-53 and 135-54. Flanges have three mounting holes spaced 120 degrees apart.

Cat. No.	For Bushing No.	Net Price
135-90	135-53	$0.34
135-91	135-54	.84



FEED-THRU BOWL ASSEMBLIES

Bowls are constructed of electrical glass, 6 15/16" maximum diameter, 4⅜" high. Steel mounting flange is 7¾" diameter. Stud is threaded ½"-13. Cork gaskets and spun aluminum corona shields are included in fittings. Feed-thru bowl assemblies can also be furnished with special hollow studs.

Cat. No.		Stud	Max. Wall Thickness	Net Price
135-15-1	One bowl and fittings	10¼"	...	$15.40
135-15-3	Two bowls and fittings	16"	4"	27.10
135-15-7	Two bowls and fittings	24"	12"	27.60
135-15-11	Glass bowl only, less fittings	.....	...	8.65

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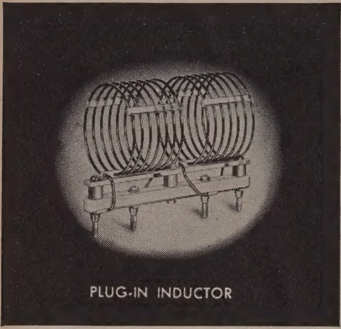
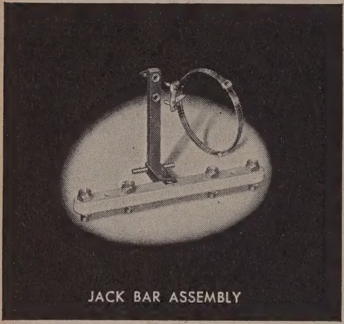
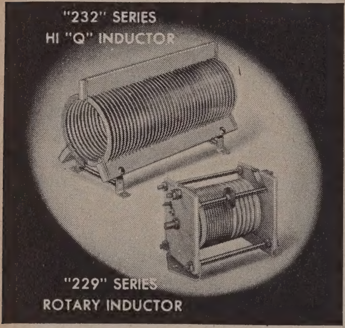
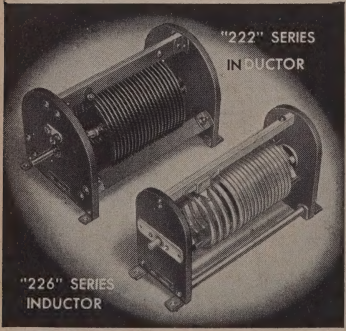








SWINGING LINK INDUCTORS

Swinging link inductors for amateur bands 160 thru 6 meters; 150, 500 and 1000 watt sizes. Polystyrene insulation, steatite bases and heavy wire sizes. HCS-Inductors match high voltage, low current tubes. LCS-Inductors match low voltage, high current tubes. Complete assembly includes inductors for bands desired, Jack Bar, Link Arm Assembly and Plug-in Links required for matching to line or antenna coupler.

Cat. No.	Type No.	Wire Size	Cap.*mmf.	Height	Width	Net Price
			1,000 watts			
238-106	1000HCS160	10	99	5 11/16"	4 13/32"	$9.80
238-107	1000LCS160	10	140	5 11/16"	4 13/32"	9.80
238-101	1000HCS80	10	46	5"	3 23/32"	8.90
238-102	1000LCS80	10	73	5"	3 23/32"	8.90
238-103	1000HCS40	10	24	5"	3 23/32"	7.80
238-104	1000LCS40	8	55	5"	3¾"	7.80
238-105	1000HCS20	8	19	4⅞"	3¾"	7.50
238-111	1000LCS20	.250"	26	5⅛"	4"	7.50
238-112	1000H/LCS14	.250"	19	4⅞"	3½"	6.60
238-113	1000H/LCS10	.250"	18	4⅞"	3½"	6.00
			500 watts			
238-125	500HCS160	14	100	4 7/32"	3⅛"	6.95
238-126	500LCS160	14	148	4 7/32"	3⅛"	6.95
238-121	500HCS80	14	45	3 23/32"	2⅝"	6.75
238-122	500LCS80	12	76	3¾"	2 21/32"	6.75
238-123	500HCS40	12	27	3¾"	2 21/32"	6.50
238-124	500LCS40	10	50	3 25/32"	2 23/32"	6.50
238-131	500HCS20	6	25	3 13/16"	2 13/16"	5.25
238-132	500LCS20	6	37	3 13/16"	2 13/16"	5.25
238-133	500H/LCS14	6	19	3 11/16"	2 9/16"	4.95
238-134	500H/LCS10	6	19	3 9/16"	2 5/16"	4.50
238-135	500H/LCS6	6	18	3 9/16"	2 5/16"	4.50
			150 watts			
238-147	150HCS160	18	102	4 3/16"	3 1/16"	4.65
238-148	150LCS160	16	151	4 7/32"	3 3/32"	4.65
238-141	150HCS80	16	51	4 7/32"	2 19/32"	4.40
238-142	150LCS80	16	68	4 7/32"	2 19/32"	4.40
238-143	150HCS40	14	28	3 23/32"	2⅝"	4.15
238-144	150LCS40	12	57	3¾"	2 21/32"	4.15
238-145	150HCS20	12	21	3½"	2 13/32"	3.95
238-146	150LCS20	12	32	3½"	2 13/32"	3.95
238-151	150H/LCS14	8	19	3 21/32"	2½"	3.20
238-152	150H/LCS10	8	19	3 21/32"	2½"	2.95
238-153	150H/LCS6	8	16	3 13/32"	2"	2.95

*Total circuit capacity to effect resonance at low frequency end of band.

To determine split-stator capacitor, subtract tube output and wiring capacity (usually 5 to 20 mmf.) from total capacity in chart; then double result for capacity per section needed.

PLUG-IN SWINGING LINKS

Select the link to match your line, coupler or output filter for optimum power transfer.

Cat. No.	Type No.	No. Turns	Net Price	Cat. No.	Type No.	No. Turns	Net Price
238-181	150/500SL12	12	$1.80	238-191	1000SL10	10	$2.50
238-182	150/500SL5	5	1.15	238-192	1000SL5	5	1.35
238-183	150/500SL2	2	1.00	238-193	1000SL2	2	1.20

SWINGING LINK ARM ASSEMBLIES

238-179	150/500SLA—for 150/500 watt inductors	$1.60
238-180	1000SLA—for 1000 watt inductors	1.80

JACK BAR ASSEMBLIES

238-171	150JBS—150 watt, 3¾" x 9/16" x ⅜"	$1.15
238-172	500JBS—500 watt, 5¾" x ⅝" x ⅜"	1.40
238-173	1000JBS—1000 watt, 7½" x ⅞" x ½"	2.50

INDUCTORS

"232" SERIES "HI-Q" COILS—¼" x .054" RIBBON—7 AMPS.

Copper strip, cadmium plated. Glass bonded mica support bars. Uses clip 235-804.

Cat. No.	Inductance	Mounting Dimensions	Overall Dimensions L	W	H	Net Price
232-610	31 uh	3¼" x 6"	7 31/32"	3⅝"	4⅝"	11.50
232-620	84 uh	3¾" x 7⅛"	9 3/32"	4½"	6"	14.80
232-622	41 uh	3¼" x 4⅝"	6 19/32"	3¾"	5⅜"	11.35
232-624	20 uh	3¼" x 4¼"	6 7/32"	3¾"	5⅜"	8.85
232-626	10 uh	3¼"-x 3"	4 31/32"	3⅝"	4⅝"	7.35

"229" SERIES WIRE WOUND VARIABLE INDUCTORS

Efficient, all steatite insulated variable inductors for amateur transmitters or low power commercial equipment. Variable pitch, tinned copper wire windings on grooved steatite forms. ¼" shafts extend ½" on both ends. Length dimension is over mounting feet.

Cat. No.	Inductance	Current In Amps	Mounting Dimensions	Overall Dimensions L	W	H	Wire Size	Net Price
229-201	10 uh	3	3 15/16"	4⅜"	2½"	2 31/32"	No. 14	$9.50
229-202	18 uh	5	5 15/32"	5 29/32"	2½"	2 31/32"	No. 12	10.50
229-203	28 uh	5	6 23/32"	7 5/32"	2½"	2 31/32"	No. 12	11.50

"222" SERIES VARIABLE INDUCTORS—½" x .090" RIBBON—15 AMPS.

Excellent for medium power RF equipment where high current operation is required in minimum space. Heavy nickel plated copper ribbon windings and silver plated beryllium copper contacts with solid silver buttons. Glass bonded mica end frames and support bars. ⅜" shafts extend 1¾" front and rear. Length dimension is over mounting feet—does not include shaft extensions.

Cat. No.	Type No.	Inductance	Mounting Dimensions	Overall Dimensions L	W	H	Net Price
222-1	4224MS4	25 uh	5¾" x 10⅜"	11⅛"	6½"	6⅝"	$48.25
222-2	4275MS4	50 uh	6¾" x 11⅝"	12⅜"	7½"	7⅝"	60.00
222-3	4084MS6	5 uh	5¾" x 7⅞"	8⅝"	6½"	6⅝"	40.25
222-5	4134MS6	10 uh	5¾" x 9¾"	10½"	6½"	6⅝"	44.00
222-7	4325MS4	62.5 uh	6¾" x 12⅞"	13⅝"	7½"	7⅝"	63.00

"226" SERIES VARIABLE INDUCTORS—¼" x ⅛" RIBBON—10 AMPS.

Popular for commercial and amateur use, these moving coil type inductors easily handle well over a kilowatt of plate modulated RF energy to 30 mc. Heavy silver plated conductors and silver plated contact bars and contacts. Glass bonded mica end frames and support bars. ⅜" shafts extend ¾" front and rear. Length dimension is over mounting feet, does not include shaft extensions.

226-1	22.5 uh	3" x 12¾"	13½"	4"	6½"	$63.85
226-3	13.5 uh	3" x 10¾"	11½"	4"	6½"	58.30
226-5	8 uh	3" x 9¼"	10"	4"	6½"	51.20

Net

E. F. Johnson Company

WASECA, MINNESOTA

"200" SERIES FIXED COILS

Economical—compact—edgewise copper windings. Airwound with slotted, glass bonded mica supports. Construction provides exceptional current carrying capacity for size.

"200" FIXED COILS—¼" x .054" RIBBON—10 AMPERES

Cat. No.	Type No.	Inductance	Mounting Dimensions	Overall Dimensions L	W	H	Net Price
200-101	2224N4	26 uh	2" x 8⅛"	8¾"	5⁹⁄₁₆"	5⅜"	$14.10
200-107	2105N4	13 uh	2" x 5⅛"	5¾"	6⅝"	6½"	10.70
200-114	2284N3	45 uh	2" x 7⅞"	8½"	5⁹⁄₁₆"	5⅜"	17.90
200-105	2455N3	120 uh	2" x 11¹⁄₆₄"	11⁴¹⁄₆₄"	5⁹⁄₁₆"	5⁹⁄₁₆"	24.90
200-407	2497N4	200 uh	3" x 14¹³⁄₁₆"	15⁷⁄₁₆"	7½"	7½"	36.10

"200" FIXED COILS—⅜" x .072" RIBBON—15 AMPERES

Cat. No.	Type No.	Inductance	Mounting Dimensions	Overall Dimensions L	W	H	Net Price
200-205	3164N5	15 uh	2" x 7⅝"	8¼"	5¹¹⁄₁₆"	5⁹⁄₁₆"	$13.90
200-206	3275N4	50 uh	2" x 9⅜"	10"	6⅞"	6¹¹⁄₁₆"	21.80
200-211	3336N5	73 uh	2½" x 12¹⁵⁄₁₆"	13⁹⁄₁₆"	7¹¹⁄₁₆"	7¹¹⁄₁₆"	27.10
200-213	3376N4	102 uh	2½" x 11⅞"	12½"	7¹¹⁄₁₆"	7¹¹⁄₁₆"	30.40

"200" FIXED COILS—½" x .090" RIBBON—20 AMPERES

Cat. No.	Type No.	Inductance	Mounting Dimensions	Overall Dimensions L	W	H	Net Price
200-301	4205N6	25 uh	2" x 10⅝"	11⅜"	7⅛"	7"	$27.90
200-302	4346N5	78 uh	2½" x 13¾"	14½"	8"	8"	38.40
200-303	4275N4	50 uh	2" x 9⅞"	10⅝"	7⅛"	7"	31.40
200-306	4164N5	15 uh	2" x 8⅛"	8⅞"	6⁵⁄₁₆"	6"	20.00
200-308	4366N4	100 uh	2½" x 12⅛"	12⅞"	8"	8"	40.50

Other standard inductance values available on special order.

"202" SERIES FIXED COILS

Large surface area ¼", ⅜" and ½" copper tubing wound coils provide low resistance and working temperatures for continuous high current applications. Simple, rugged "airwound" design with glass bonded mica support bars.

"202" FIXED COILS—¼" TUBING—20 AMPERES

Cat. No.	Type No.	Inductance	Mounting Dimensions	Overall Dimensions L	W	H	Net Price
202-101	2166NT8	21 uh	2½" x 14⅜"	15⅛"	6½"	6¾"	$32.10
202-401	2308NT8	76 uh	2¼" x 21⅛"	21⅞"	8½"	8½"	61.20
202-402	2328NT6	102 uh	2¼" x 18⁵⁄₃₂"	18²⁹⁄₃₂"	8½"	8½"	58.00

"202" FIXED COILS—⅜" TUBING—30 AMPERES

Cat. No.	Type No.	Inductance	Mounting Dimensions	Overall Dimensions L	W	H	Net Price
202-201	3106NT12	10 uh	2½" x 13⅞"	14⅝"	6¾"	7½"	$31.60
202-502	32410NT12	64 uh	2½" x 24¹⁄₁₆"	24¹³⁄₁₆"	10¾"	10¾"	76.65
202-507	3148NT12	24 uh	2¼" x 16⁹⁄₁₆"	17⁵⁄₁₆"	8¾"	8¾"	46.20

"202" FIXED COILS—½" TUBING—40 AMPERES

Cat. No.	Type No.	Inductance	Mounting Dimensions	Overall Dimensions L	W	H	Net Price
202-601	4127NT14	12 uh	1½" x 16¹⁷⁄₃₂"	17⁹⁄₃₂"	8"	8"	$45.75
202-602	41410NT14	30 uh	2½" x 18⁹⁄₃₂"	19¹⁄₃₂"	11"	11"	67.00
202-604	4147NT14	18 uh	1½" x 18⁹⁄₃₂"	19¹⁄₃₂"	8"	8"	51.00

CLIPS FOR TAPPING "200", "202", AND "232" SERIES INDUCTORS

Cat. No.	Type No.	Fits Winding	Net Price
235-804	LC4	¼" x .054"	$0.26
235-807	LC7	⅜" x .072"	.45
235-808	LC8	½" x .090"	.65
235-824	RC4	¼" tubing	1.55
235-826	RC6	⅜" tubing	1.65
235-828	RC8	½" tubing	1.94
235-860	WC1	No. 20 to No. 12 Wire	.12

"224" SERIES VARIABLE INDUCTORS

For high power RF applications, the 224 series copper tubing inductors are especially designed to handle heavy current in continuous duty. Contact wheel is heavily silver plated for optimum electrical efficiency. Inductors have cast aluminum end frames and glass bonded mica support bars. ⅜" shafts extended 2¼" from end frames at each end. Overall length dimension includes mounting feet.

"224" VARIABLE INDUCTORS—⅜" TUBING—30 AMPERES

Cat. No.	Type No.	Inductance	Mounting Dimensions	Overall Dimensions L	W	H	Net Price
224-3	3168MST10	30 uh	8½" x 19⅛"	20⅝"	12"	12⅛"	$156.50
224-4	3108MST12	14.5 uh	8½" x 16⅝"	18⅛"	12"	12⅛"	148.00
224-6	32111MST12	75 uh	8½" x 24⅞"	26⅜"	12"	12⅛"	172.50

"224" VARIABLE INDUCTORS—½" TUBING—40 AMPERES

Cat. No.	Type No.	Inductance	Mounting Dimensions	Overall Dimensions L	W	H	Net Price
224-1	41410MST14	30 uh	8½" x 21⅜	22⅞"	12"	12⅛"	$185.00
224-2	4128MST14	16.5 uh	8½" x 19⅝	21⅛"	12"	12⅛"	158.00
224-5	41711MST14	50 uh	8½" x 24"	25½"	12"	12⅛"	189.75

R. F. CONTACTORS

Contactors for switching high voltage, high current RF or DC. Operated by momentarily energized 220 VAC solenoids (may also be connected for 110 VAC), toggle action contacts snap into position; no holding current is required. Extremely compact for voltage ratings; overall dimensions of 145-100 series 7⅞" long, 6½" wide, 5½" high; of 145-200 series, 10½" long, 8¼" wide, 6³⁄₁₆" high. Four auxiliary micro snap switches (10 amp. at 220 VAC), actuated by contact armature. Two control solenoid voltage, two may be used to operate signaling devices or for other related functions.

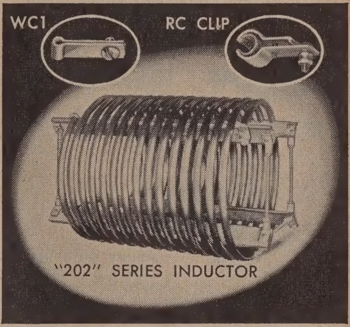
Cat. No.	Type	Peak Voltage	Current	Net Price
145-101-13	SPDT	17000	25 amp.	$106.00
145-102-13	DPDT	17000	25 amp.	116.00
145-201-13	SPDT	22000	25 amp.	125.00
145-202-13	DPDT	22000	25 amp.	134.00

EXPLANATION OF TYPE NUMBERS

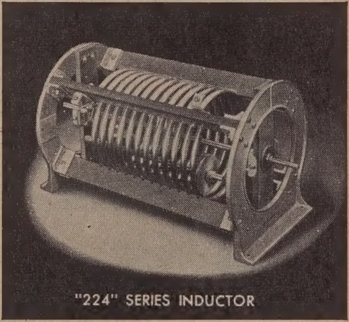
4	20	5	N	6
Strip width or dia. of tubing in ⅛ inches	No. of turns	Inside dia. of winding in inches	E. F. Johnson Co. type designation	Pitch of winding in ¹⁄₁₆ inches

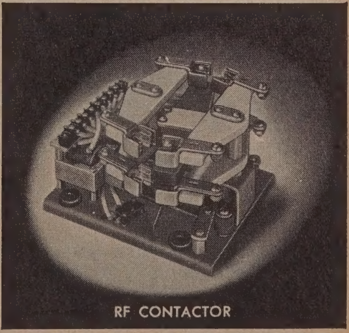
NOTE: Except on amateur inductors, current ratings shown are nominal for broadcast frequencies; will increase at lower frequency—decrease at higher frequencies.
For complete information and specifications on Johnson Industrial and Broadcast RF Components—write for your copy of Catalog 535.

"200" SERIES INDUCTOR



"202" SERIES INDUCTOR

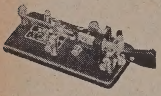

"224" SERIES INDUCTOR


RF CONTACTOR

E. F. Johnson
Keys and Practice Sets

DELUXE SEMI-AUTOMATIC KEYS — Adjustable from lowest to highest speeds, this handsomely finished semi-automatic key has a smooth, easy action. Vibrator, posts, circuit closing switch, and all machine parts heavily chrome plated. Five adjustments with lock nuts—molded plastic paddles adjust separately to best height. Steel base 6¼″x3½″x½″—complete with adjustable weight and rubber feet.

Cat. No.		Amateur Net
114-500	⅛″ contacts, black wrinkle base	$17.95
114-501	¼″ contacts, polished chrome base	20.65



SPECIAL SEMI-AUTOMATIC KEY — Many operating features—attractively finished, black wrinkle enamel base. All hardware and vibrator heavily chrome plated. Same vibrator as on deluxe key. Easy action, adjustable from lowest to highest speeds. ⅛″ coin silver contacts—circuit closing switch—rubber mounting feet.

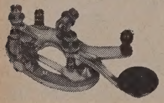
Cat. No.		Amateur Net
114-520	Special Model, Semi-Automatic	$13.95

HEAVY DUTY KEYS—Heavy die cast base, chrome plated key arm. Well insulated for heavy duty service. Large ¼″ coin silver contacts. Improved Navy-type knob. Adjustable steel bearings and spring design give light keying touch.

Cat. No.		Amateur Net
114-320	Black wrinkle enamel base	$4.70
114-321	Polished chrome plated base	5.85

STANDARD KEYS — Heavy die cast base. Smooth adjustable bearings. Provision for plugging in semi-automatic keys. ⅛″ coin silver contacts. A high quality key at a low cost.

Cat. No.		Amateur Net
114-310	Black wrinkle, no switch	$3.10
114-310-3	Black wrinkle with switch	3.90
114-311	Chrome plated, no switch	5.20
114-311-3	Chrome plated with switch	6.10



HIGH SPEED STANDARD KEYS—Fully adjustable spring tension, contact spacing and bearings. Brass base and binding posts—instrument lacquer finish. .072″ platinor contacts.

Cat. No.		Amateur Net
114-100	R48 Key, satin brass, no switch	$5.95
114-100-3	M100 Key, satin brass with switch	6.85

PRACTICE KEY—An inexpensive practice key—perfect in design for the average beginner. All the metal parts are nickel plated. Furnished with an adjustable key arm, spring and smooth action bearings. Contacts are of ⅛″ coin silver.

Cat. No.		Amateur Net
114-300	Molded phenolic base	$2.25

PHENOLIC BASE KEYS—High quality key with adjustable bearings. Improved spring-pigtail connection. ⅛″ coin silver contacts—nickel plated metal parts.

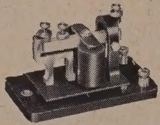
Cat. No.		Amateur Net
114-301	Molded phenolic base, no switch	$2.50

CORD AND WEDGE—Cord and wedge for easy attachment of semi-automatic key across circuit-closing switch of a standard hand key. Used almost universally by railroad telegraphers—ideal for amateur service where both hand key and semi-automatic are used.

Cat. No.		Amateur Net
114-380	Cord and wedge	$1.15

PRACTICE SET — Constant frequency buzzer and key on a 4″ x 6″ molded bakelite base. Buzzer tone is fully adjustable. Coin silver contacts. Uses two dry cells or "C" battery. Connect singly or in pairs for code practice.

Cat. No.		Amateur Net
114-450	Practice Set	$4.90
	Buzzer only as used on set above.	
114-400	Buzzer	$1.85



TELEGRAPH SOUNDER — Designed for instant response, brass sounder provides clear, resonant tone. Steel bar frame, black enamel finish. Brass bridge and adjustment screws, instrument lacquer finish. Sounder plate is black lacquered steel. Mahogany finished wood base, brass binding posts and rubber mounting feet.

Cat. No.		Amateur Net
114-112	Sounder (4 ohms)	$9.95
114-113	Sounder (20 ohms)	10.45

LEARNER SET — Telegraph practice set. Bar frame steel, brass bridge and adjustment screws. Brass lacquer finish. Brass sounding bar—black lacquered steel sounder plate. Adjustable black nickel-plated key arm. High impact polystyrene base, black matte finish, brass binding posts, rubber feet.

Cat. No.		Amateur Net
114-110	(4 ohms)	$14.95
114-111	(20 ohms)	15.45

PONY RELAY—Polished, plated steel armature—all other metal parts brass with lacquer finish. Heavy duty magnets. Mahogany finish wood sub-base—cast iron black enamel base.

Cat. No.		Amateur Net
114-105	(20 ohms)	$13.80

AMATEUR EQUIPMENT CATALOG 959 — Complete information on all of the world famous Johnson Transmitting Products for amateur and commercial use.

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WASECA • MINNESOTA

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Amateur Equipment

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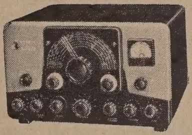
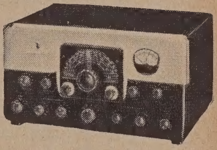
The fortunate amateur who owns Viking equipment enjoys the maximum amount of operating pleasure and performance.

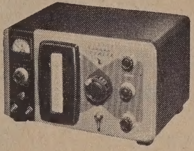
Since the first Viking transmitter was built, amateurs everywhere have looked to the E. F. Johnson Company for leadership in transmitter design.

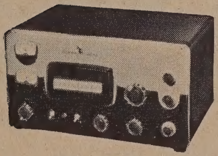
Owning a Viking means more than just having the best transmitter . . . it means more than the DX record you build; it means that your station has arrived.

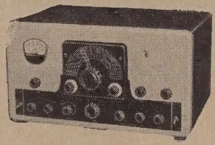
For effective practical design and honest dollar value, Viking transmitters stand ahead of all others. Whether you choose the "Adventurer" as your first transmitter, or the fabulous "Kilowatt" as the "last word," you know beyond a doubt that your transmitter dollar is soundly invested.











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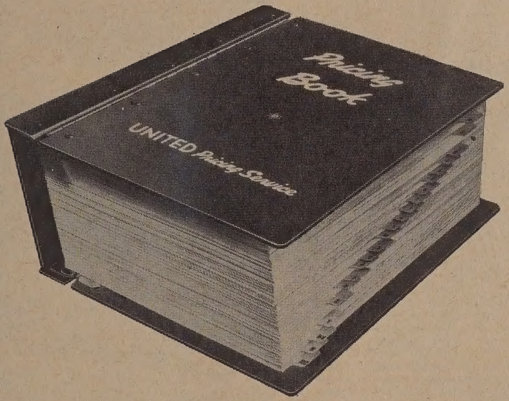

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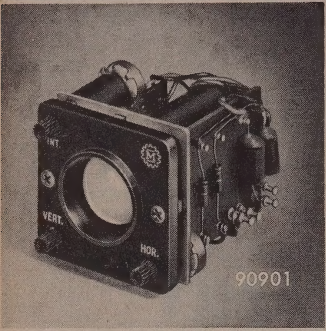
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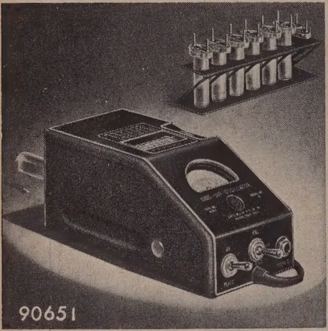
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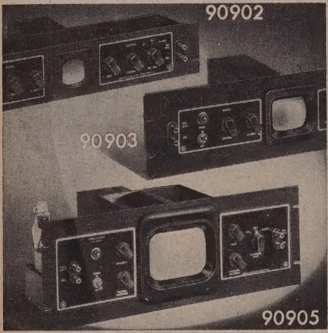


90921

ONE INCH INSTRUMENTATION OSCILLOSCOPE

Miniaturized, packaged panel mounting cathode ray oscilloscope designed for use in instrumentation in place of the conventional "pointer type" moving coil meters uses the 1″ tube. Panel bezel matches in size and type the standard 2″ square meters. Magnitude, phase displacement, wave shape, etc. are constantly visible on scope

No. 90901, 1CP1, less tube. . . . .
No. 90911, 1EP1, less tube. . . . .

POWER SUPPLY FOR OSCILLOSCOPE

750 volts d.c. at 3 ma. and 6.3 volts a.c. at 600 ma. 117 volts 50–60 cycle input. Designed especially for use with No. 90901 and No. 90911 one inch instrumentation oscilloscopes. 4⅝ in. high x 1⅞ x 2⅛. Octal plug for input and output. Entire assembly including rectifier is encapsulated.

No. 90202 Power Supply (complete). . . . .

GRID DIP METER

The No. 90651 MILLEN GRID DIP METER is compact and completely self contained. The AC power supply is of the "transformer" type. The drum dial has seven calibrated uniform length scales from 1.7 MC to 300 MC with generous over laps plus an arbitrary scale for use with special application inductors. Internal terminal strip permits battery operation for antenna measurement.

No. 90651, with tube. . . . .

Additional Inductors for Lower Frequencies

No. 46702—925 to 2000 KC. . . . .
No. 46703—500 to 1050 KC. . . . .
No. 46704—325 to 600 KC. . . . .
No. 46705—220 to 350 KC. . . . .

TONE MODULATOR

The No. 90751 Tone Modulator is a small package, containing a transistor audio oscillator and its mercury battery, which plugs into the 'phone jack of a Grid Dip Meter to modulate the signal at approximately 800 cycles for applications requiring a modulated signal.

Dimensions: only 2¾ x 1 5/16 x 1 5/16 in.
No. 90751, less battery. . . . .

COMPACT OSCILLOSCOPES

The No. 90923 Oscilloscope is an extremely compact (3½ inch high) rack panel type, general purpose oscilloscope, utilizing the type 3XP1, 3XP2, 3XP7, or 3XP11, 3 inch by 1½ inch rectangular face cathode ray tube.

No. 90923, with tubes. . . . .

The No. 90902, No. 90903 and No. 90905 Rack Panel Oscilloscopes, for two, three and five inch tubes, respectively, are inexpensive *basic units* comprising power supply, brilliancy and centering controls, safety features, magnetic shielding, switches, etc. As a transmitter monitor, no additional equipment or accessories are required. The well-known trapezoidal monitoring patterns are secured by feeding modulated carrier voltage from a pickup loop directly to vertical plates of the cathode ray tube and audio modulating voltage to horizontal plates. By the addition of such units as sweeps, pulse generators, amplifiers, servo sweeps, etc., all of which can be conveniently and neatly constructed on companion rack panels, the original basic 'scope unit may be expanded to serve any conceivable industrial or laboratory application.

No. 90902, less tubes. . . . .
No. 90903, less tubes. . . . .
No. 90905, less tubes. . . . .

'SCOPE AMPLIFIER—SWEEP UNIT

Vertical and horizontal amplifiers along with hard-tube, saw tooth sweep generator. Complete with power supply mounted on a standard 5¼″ rack panel.

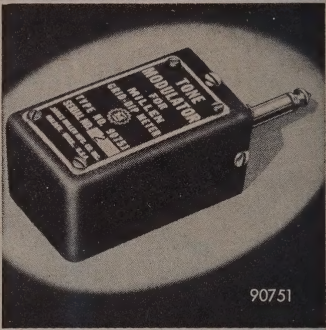
No. 90921, with tubes. . . . .

FLAT FACE OSCILLOSCOPE

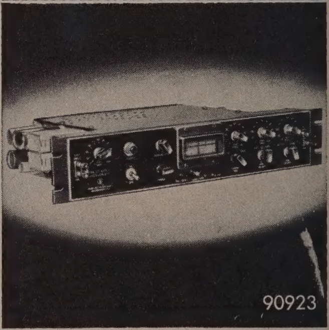
90905-B 5-inch Rack Mounting Basic Oscilloscope features include: balanced deflection, front panel input terminals, rear panel input terminals, astigmatism control, blanking input terminals, flat face precision tolerance Dumont 5ADP1 tube, 1800 or 2500 volts accelerating, good sensitivity, sharp focus, horizontal selector switch, 60 cycle sine wave sweep available, power supply available to operate external equipment, minimum control interaction, rugged construction, light filter. 7 x 19 in. panel.

No. 90905-B Oscilloscope, less tubes. . . . .

90202



90751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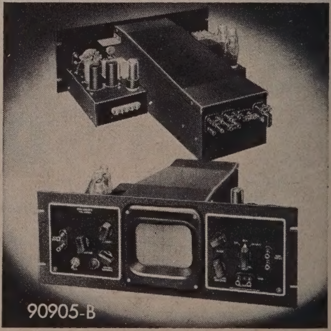
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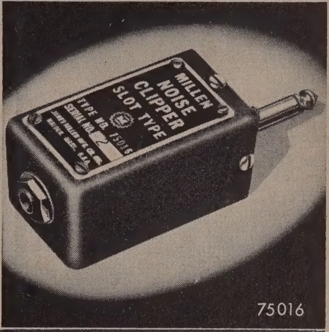
90672



75016

ANTENNA BRIDGE

The Millen 90672 Antenna Bridge is an accurate and sensitive bridge for measuring impedances in the range of 5 to 500 ohms (or 20 to 2000 ohms with balun) at radio frequencies up to 200 mc. The variable element is an especially designed differential variable capacitor capable of high accuracy and permanency of calibration. Readily driven by No. 90651 Grid Dipper.

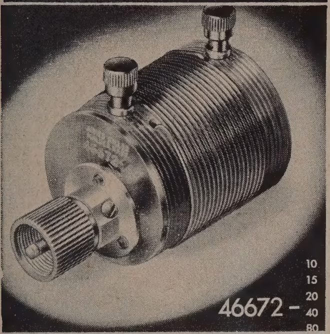
No. 90672....................

AUDIO CLIPPER

The No. 75016 Audio Clipper is a small plug-in symmetrical type clipper with self-contained mercury batteries. It may be used to clip noise for C-W reception as well as for A-M or SSB, or it may be used to clip a sine wave input to form a square wave output.

Dimensions: only 2¾ x 1⁵⁄₁₆ x 1⁵⁄₁₆ in.

No. 75016, less batteries..............



46672 - 10 15 20 40 80

90801

BALUNS

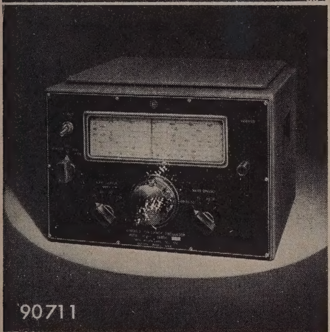
The No. 46672 (1 for each amateur band) wound Balun is an accurate 2 to 1 turns ratio, high Q auto transformer with the residual reactances tuned out and with very tight coupling between the two halves of the total winding. The points of series and parallel resonance are selected so that each Balun provides an accurate 4 to 1 impedance ratio over the entire band of frequencies for which it was designed. Suitable for use with the No. 90672 Antenna Bridge or medium power transmitters.

No. 46672–80/40/20/15/10.........

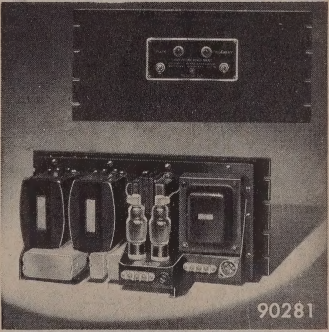
50 WATT EXCITER-TRANSMITTER

Modern design includes features and shielding for TVI reduction, bandswitching for 4–7–14–21–28 megacycle bands, circuit metering. Conservatively rated for use either as a transmitter or exciter for high power PA stages. 5763 oscillator-buffer-multiplier and 6146 power amplifier. Rack mounted.

No. 90801, less tubes............



90711



90281

VARIABLE FREQUENCY OSCILLATOR

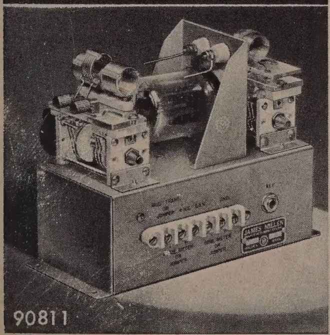
The No. 90711 is a complete transmitter control unit with 6SK7 temperature-compensated, electron coupled oscillator of exceptional stability and low drift, a 6SK7 broad-band buffer or frequency doubler, a 6AG7 tuned amplifier which tracks with the oscillator tuning, and a regulated power supply. Output sufficient to drive a 6146 is available on 160, 80 and 40 meters and reduced output is available on 20 meters. Since the output is isolated from the oscillator by two stages, zero frequency shift occurs when the output load is varied from open circuit to short circuit. The entire unit is unusually solidly built so that no frequency shift occurs due to vibration. The keying is clean and free from annoying chirp, quick drift, jump, and similar difficulties often encountered in keying variable frequency oscillators.

No. 90711, with tubes............

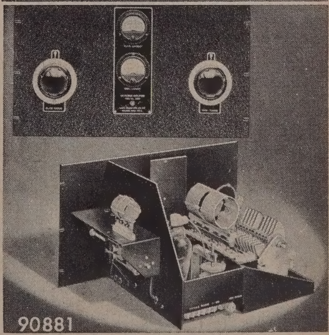
HIGH VOLTAGE POWER SUPPLY

The No. 90281 high voltage power supply has a d.c. output of 700 volts, with maximum current of 235 ma. In addition, a.c. filament power of 6.3 volts at 4 amperes is also available so that this power supply is an ideal unit for use with transmitters, such as the Millen No. 90801, as well as general laboratory purposes. The power supply uses two No. 816 rectifiers. The panel is standard 8¾'' x 19'' rack mounting.

No. 90281, less tubes............



90811



90881

HIGH FREQUENCY RF AMPLIFIER

A physically small unit capable of a power output of 70 to 85 watts on 'Phone or 87 to 110 watts on C-W on 20, 15, 11, 10, 6 or 2 meter amateur bands. Provision is made for quick band shift by means of the No. 48000 series VHF plug-in coils. The No. 90811 unit uses either an 829-B or 3E29.

No. 90811 with 10 meter band coils, less tube......................

RF POWER AMPLIFIER

This 500 watt amplifier may be used as the basis of a high power amateur transmitter. The No. 90881 RF power amplifier is wired for use with the popular "812A" type tubes. Other popular tubes may be used. The amplifier is of unusually sturdy mechanical construction, on a 10½'' relay rack panel. Plug-in inductors are furnished for operation on 10, 20, 40 or 80 meter amateur bands. The standard Millen No. 90801 exciter unit is an ideal driver for the No. 90881 RF power amplifier.

No. 90881, with one set of coils, but less tubes.....................

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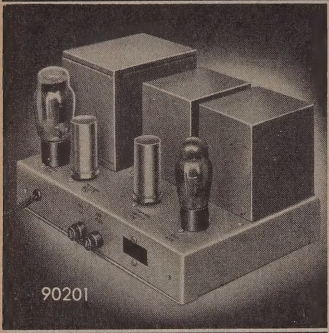
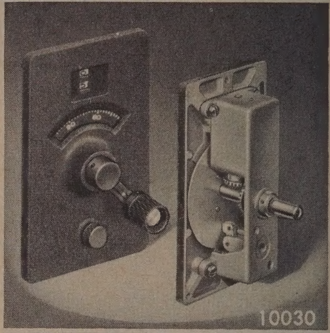


REGULATED POWER SUPPLY

A compact, uncased, regulated power supply, either for table use in the laboratory or for incorporation as an integral part of larger equipment. 250 v.d.c. unregulated at 115 ma. 105 v.d.c. regulated at 35 ma. Minus 105 v.d.c. regulated bias at 4 ma. 6.3 v. a.c. at 4.2 amps.

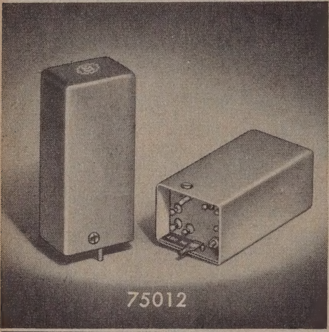
No. 90201, with tubes................



INSTRUMENT DIAL

The No. 10030 is an extremely sturdy instrument type indicator. Control shaft has 1 to 1 ratio. Veeder type counter is direct reading in 99 revolutions and vernier scale permits readings to 1 part in 100 of a single revolution. Has built-in dial lock and ¼″ drive shaft coupling. May be used with multi-revolution transmitter controls, etc., or through gear reduction mechanism for control of fractional revolution capacitors, etc., in receivers or laboratory instruments.

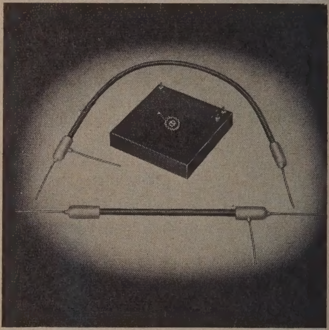
No. 10030........................



PHASE-SHIFT NETWORK

A complete and laboratory aligned pair of phase-shift networks in a single compact 2″ x 1⁷⁄₁₆″ x 4″ case with characteristics so as to provide a phase shift between the two networks of 90° ± 1.3° over a frequency range of 225 cycles to 2750 cycles. Well adapted for use in either single sideband transmitter or receiver. Possible to obtain a 40 db suppression of the unwanted sideband. The No. 75012 precision adjusted phase-shift network eliminates the necessity of complicated laboratory equipment for network adjustment.

No. 75012........................



DELAY LINES

No. 34751—Sealed flexible distributed constants line. Excellent rise time. 1350 ohms, 22 inches per microsecond or 550 ohms, 50 inches per mu.-sec. Delay cut to specifications.

No. 34700—Hermetically sealed encased line. Good rise time. 0–0–45 mu.-sec. 1350 ohm line or 0.22 mu.-sec. 500 ohm line in 1″ x 1″ x 5½″ in case. Also larger standard cases and cases made to order. Special impedances 400 to 2200 ohms.

No. 34600—Lumped delay line built to specifications. Delays 0.05 mu.-sec. to 250 mu.-sec. Impedance 50 ohms to 2000 ohms.

80805-M
80802-E
80802-C
80803-J
80802-B2
80801-B

PHOTO MULTIPLIER SHIELDS
MU-METAL

The photo multiplier tube operates most effectively when perfectly shielded. Careful study has proven that mu-metal provides superior shielding. Millen Mu-Metal shields are available from stock for the most popular tubes.

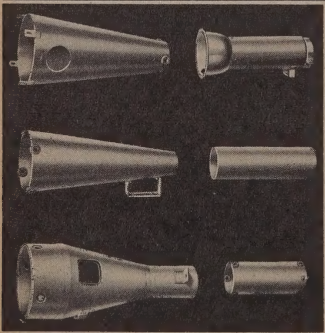
No. 80801B for the 1P21.............
No. 80802B for the 5819, 6217, 6292, 6343..........................
No. 80802C for the 6199, 6291, 6497...
No. 80802E for the 6866.............
No. 80803J for the 6363.............
No. 80805M for the 6364.............

80070 SERIES

BEZELS FOR
CATHODE RAY TUBES

Standard types are of satin finish black plastic. 5″ size has neoprene support cushion and green lucite filter. 3″ and 2″ sizes have integral cushioning.

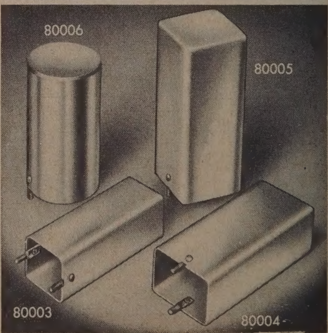
No. 80075—5″....................
No. 80073—3″....................
No. 80072—2″....................
No. 80071—1″....................



CATHODE RAY
TUBE SHIELDS

For many years we have specialized in the design and manufacture of magnetic metal shields of nicoloi and mumetal for cathode ray tubes in our own complete equipment, as well as for applications of all other principal complete equipment manufacturers. Stock types as well as special designs to customers' specifications promptly available.

No. 80045—Nicoloi for 5BP1..........
No. 80055—Nicoloi for 5CP1..........
No. 80043—Nicoloi for 3″ tube........
No. 80042—Nicoloi for 2″ tube........



SHIELD CASES
ALUMINUM

Effective RF shielding for coils and transformers can be provided by Millen Aluminum cans. Available in several sizes from stock.

No. 80003—1⅜″ x 1⅜″ x 4″........
No. 80004—1⅞″ x 1⁷⁄₁₆″ x 4½″.......
No. 80005—2″ x 2″ x 4⅞″.........
No. 80006—2⅛″ round x 4″.........
No. 80007—2¼″ round x 2⅜″ open ends

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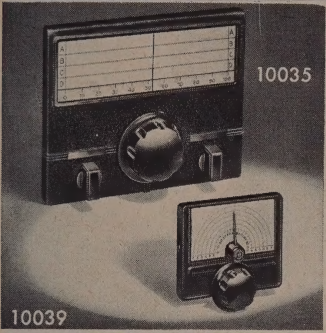


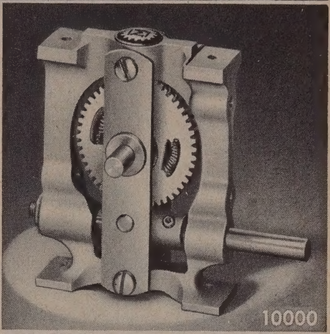
PANEL DIALS

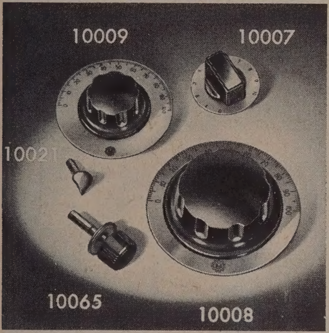
The No. 10035 illuminated panel dial has 12 to 1 ratio; size, 8½" x 6½". Small No. 10039 has 8 to 1 ratio; size, 4" x 3¼". Both are of compact mechanical design, easy to mount and have totally self-contained mechanism, thus eliminating back of panel interference. Provision for mounting and marking auxiliary controls, such as switches, potentiometers, etc., provided on the No. 10035. Standard finish, either size, flat black art metal.

No. 10039........................
No. 10035........................

WORM DRIVE UNIT

Cast aluminum frame may be panel or base mounted. Spring loaded split gears to minimize back lash.
Standard ratio 16/1. Also in 48/1 on request.
No. 10000—(state ratio).............





DIALS AND KNOBS

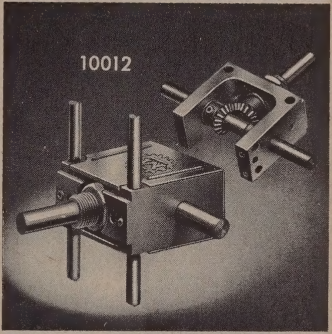
Just a few of the many stock types of small dials and knobs are illustrated herewith. 10007 is 1⅝" diameter, 10009 is 2¾" and 10008 is 3½".

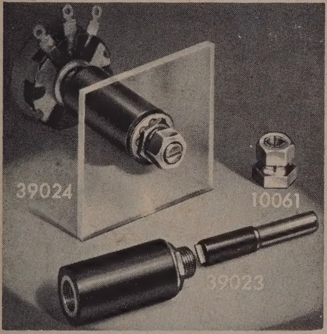
No. 10002........................
No. 10007........................
No. 10008........................
No. 10009........................
No. 10015........................
No. 10018........................
No. 10021........................
No. 10065........................

RIGHT ANGLE DRIVE

Extremely compact, with provisions for many methods of mounting. Ideal for operating potentiometers, switches, etc., that must be located, for short leads, in remote parts of chassis.

No. 10012.........................





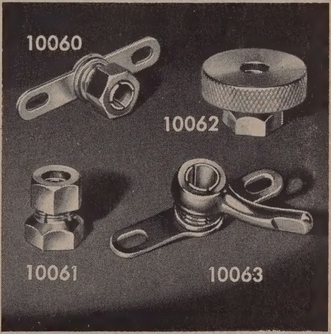
HIGH VOLTAGE INSULATED SHAFT EXTENSION

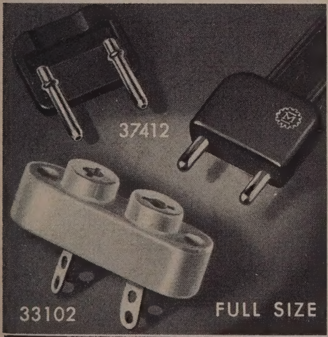
No. 10061 shaft locks and the No. 39023 insulated high voltage potentiometer extension mountings are available as a single integrated unit—the No. 39024. The proper shaft length is independent of the panel thickness. The standard shaft has provision for screw driver adjustment. Special shaft arrangements are available for industrial applications. Extension shaft and insulated coupling are molded as a single unit to provide accuracy of alignment and ease of installation.
No. 39023, non locking type..........
No. 39024, locking type.............

SHAFT LOCKS

In addition to the original No. 10060 and No. 10061 "DESIGNED FOR APPLICATION" shaft locks, we can also furnish such variations as the No. 10062 and No. 10063 for easy thumb operation as illustrated above. The No. 10061 instantly converts any plain "¼ shaft" volume control, condenser, etc. from "plain" to "shaft locked" type. Easy to mount in place of regular mounting nut.

No. 10060.........................
No. 10061.........................
No. 10062.........................
No. 10063.........................





TRANSMISSION LINE PLUG

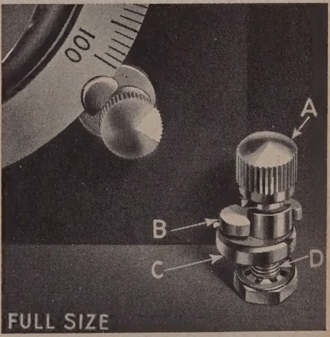
An inexpensive, compact, and efficient polystyrene unit for use with the 300 ohm ribbon type polyethylene transmission lines. Fits into standard Millen No. 33102 (crystal) socket. Pin spacing ½", diameter .095".

No. 37412.........................

DIAL LOCK

Compact, easy to mount, positive in action, does not alter dial setting in operation! Rotation of knob "A" depresses finger "B" and "C" without imparting any rotary motion to Dial. Single hole mounted.

No. 10050.........................



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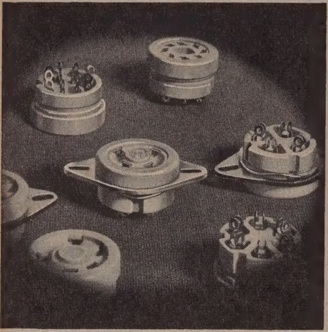
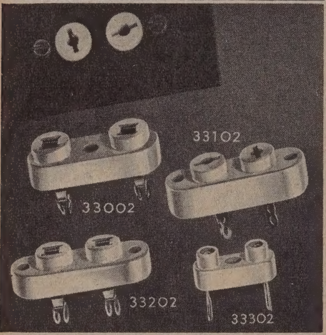
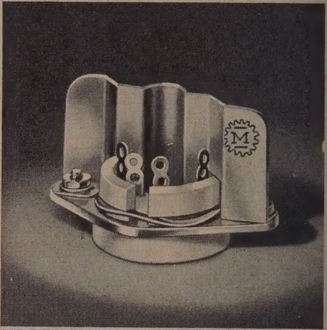
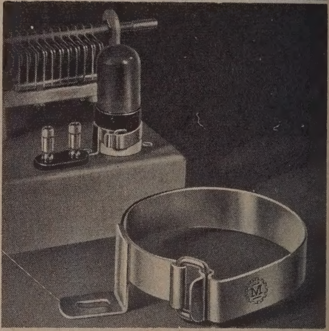








TUBE SOCKETS
DESIGNED FOR APPLICATION

MODERN SOCKETS for MODERN TUBES! Long Flashover path to chassis permits use with transmitting tubes, 866 rectifiers, etc. Long leakage path between contacts. Contacts are type proven by hundreds of millions already in government, commercial and broadcast service, to be extremely dependable. Sockets may be mounted either with or without metal flange. Mounts in standard size chassis hole. All types have barrier between contacts and chassis. All but octal and crystal sockets also have barriers between individual contacts in addition.

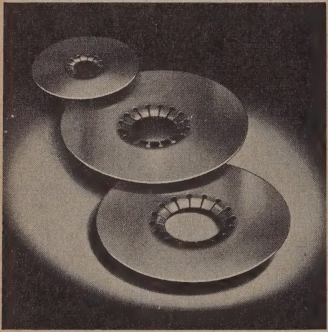
The No. 33888 shield is for use with the 33008 octal socket. Byi ts use, the electrostatic isolation of the grid and plate circuits of single-ended metal tubes can be increased to secure greater stability and gain.

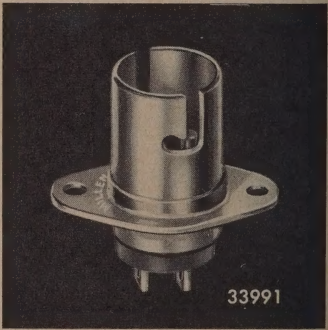
The 33087 tube clamp is easy to use, easy to install, effective in function. Available in special sizes for all types of tubes. Single hole mounting. Spring steel, cadmium plated.

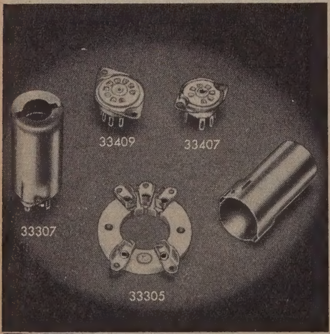
Cavity Socket Contact Discs, 33446 are for use with the "Lighthouse" ultra high frequency tube. This set consists of three different size unhardened beryllium copper multifinger contact discs. Heat treating instructions forwarded with each kit for hardening after spinning or forming to frequency requirements.

Voltage regulator dual contact bayonet socket, 33991 black phenolic insulation and 33992 with low loss high leakage mica filled phenolic insulation.

No. 33004—4 Pin Tube Socket.........
No. 33005—5 Pin Tube Socket.........
No. 33006—6 Pin Tube Socket.........
No. 33008—8 Pin Tube Socket.........
No. 33888—Shield for 33008..........
No. 33087—Tube Clamp..............
No. 33002—Crystal Socket ¾" x .125"..
No. 33102—Crystal Socket .487" x .095"
No. 33202—Crystal Socket ½" x .125"..
No. 33302—Crystal Socket .487" x .050"
No. 33446—Contact Discs.............
No. 33991—Socket for 991............
No. 33992—Socket for 991............
No. 33207—829 Socket...............
No. 33305—Acorn Socket.............
No. 33307—Miniature Socket and Shield, ceramic..................
No. 33309—Noval Socket and Shield, ceramic...................
No. 33405—5 Pin Socket Eimac.........
No. 33407—Miniature Socket only, ceramic
No. 33409—Noval Socket only, ceramic..







STAND-OFF INSULATORS

Steatite insulators are available in a variety of sizes—Listed below are some of the most popular.

No. 31001—Stand-off ½" x 1"........
No. 31002—Stand-off ½" x 2½" ......
No. 31003—Stand-off ¾" x 2"........
No. 31004—Stand-off ¾" x 3½".......
No. 31006—Stand-off 9/32" x ⅞".......
No. 31007—Stand-off ⅜" x 1"........
No. 31011—Cone ¾" x ½" (box of 5)..
No. 31012—Cone 1" x 1"............
No. 31013—Cone 1½" x 1"...........
No. 31014—Cone 2" x 1"............
No. 31015—Cone 3" x 1½"...........

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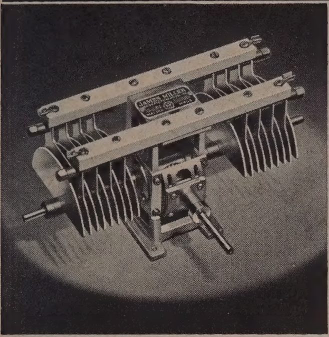
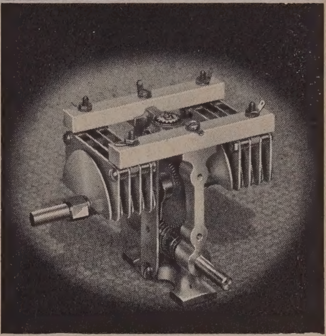
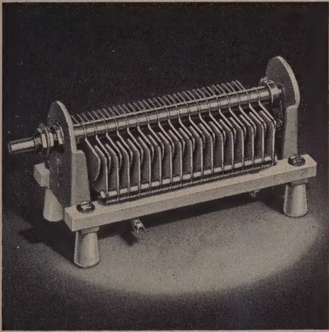


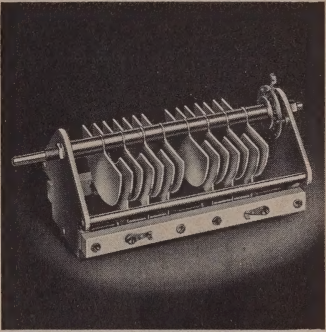


04000 and 11000 SERIES TRANSMITTING CONDENSERS

Another member of the "Designed for Application" series of transmitting variable air capacitors is the 04000 series with peak voltage ratings of 3000, 6000, and 9000 volts. Right angle drive, 1–1 ratio. Adjustable drive shaft angle for either vertical or sloping panels. Sturdy construction, thick, round-edged, polished aluminum plates with 1¾'' radius. Constant impedance, heavy current, multiple finger rotor contactor of new design. Available in all normal capacities.

The 11000 series has 16/1 ratio center drive and fixed angle drive shaft.

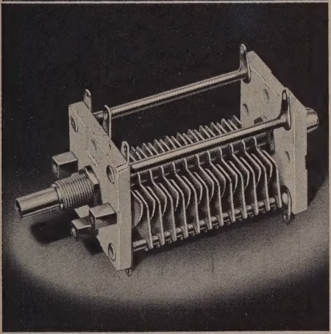


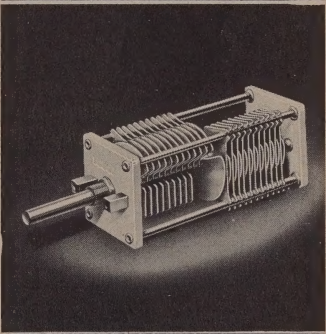


12000 and 16000 SERIES TRANSMITTING CONDENSERS

Rigid heavy channeled aluminum end plates. Isolantite insulation, polished or plain edges. One piece rotor contact spring and connection lug. Compact, easy to mount with connector lugs in convenient locations. Same plate sizes as 11000 series above.

The 16000 series has same plate sizes as 04000 series. Also has constant impedance, heavy current, multiple finger rotor contactor of new design. Both 12000 and 16000 series available in single and double sections and many capacities and plate spacing.





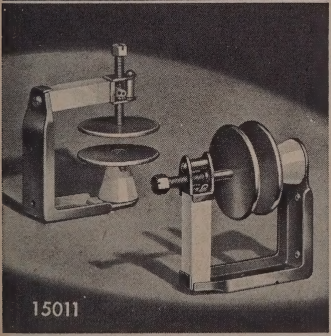
THE 28000–29000 SERIES VARIABLE AIR CAPACITORS

"Designed for Application," double bearings, steatite end plates, cadmium or silver plated brass plates. Single or double section .022'' or .066'' air gap. End plate size: 19/16''x 11/16''. Rotor plate radius: ¾''. Shaft lock, rear shaft extension, special mounting brackets, etc., to meet your requirements. The 28000 series has semi-circular rotor plate shape. The 29000 series has approximately straight frequency line rotor plate shape. Prices quoted on request. Many stock sizes.

NEUTRALIZING CAPACITOR

Designed originally for use in our own No. 90881 Power Amplifier, the No. 15011 disc neutralizing capacitor has such unique features as rigid channel frame, horizontal or vertical mounting, fine thread over-size lead screw with stop to prevent shorting and rotor lock. Heavy rounded-edged polished aluminum plates are 2'' diameter. Glazed Steatite insulation.

No. 15011........................

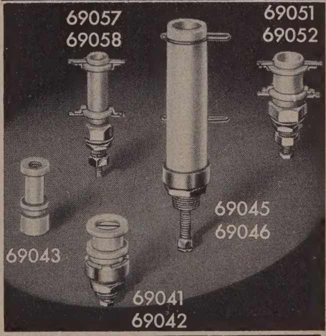


15011

PERMEABILITY TUNED CERAMIC FORMS

In addition to the popular shielded plug-in permeability tuned forms, 74000 series, the 69040 series of ceramic permeability, tuned unshielded forms are available as standard stock items. Winding diameters available from $^3/_{16}$'' to ½'' and winding space from $^{11}/_{32}$'' to 1½''.

No. 69041—(Copper Slug)...........
No. 69042—(Iron Core).............
No. 69043—(Copper Slug)...........
No. 69044—(Iron Core).............
No. 69045—(Copper Slug)...........
No. 69046—(Iron Core).............
No. 69047—(Copper Slug)...........
No. 69048—(Iron Core).............
No. 69051—(Copper Slug)...........
No. 69052—(Iron Core).............
No. 69054—(Iron Core).............
No. 69055—(Copper Slug)...........
No. 69056—(Iron Core).............
No. 69057—Copper Slug)............
No. 69058—(Iron Core).............
No. 69061—(Copper Slug)...........
No. 69062—(Iron Core).............



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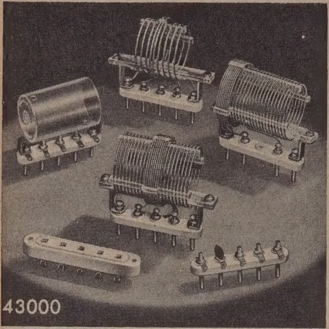
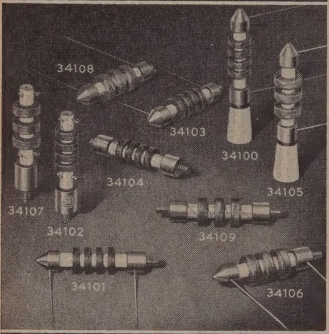
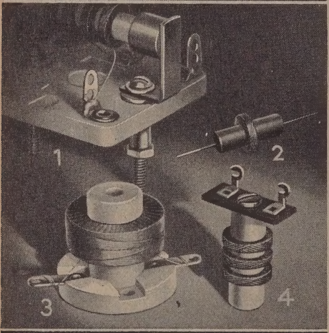
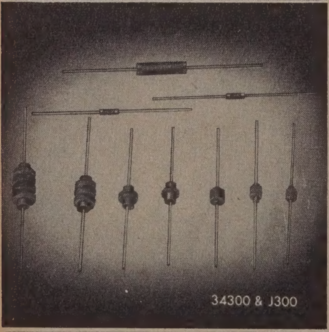

43000






34300 & J300

TRANSMITTING TANK COILS

A full line—all popular wattages for all bands. Send for special catalog sheet.

TUNABLE COIL FORM

Standard octal base of low loss mica-filled bakelite, polystyrene ½'' diameter coil form, heavy aluminum shield, iron tuning slug of high frequency type, suitable for use up to 35 mc. Adjusting screw protrudes through center hole of standard octal socket.

No. 74001, with iron core..............
No. 74002, less iron core..............

RF CHOKES

Many have copied, few have equalled, and none have surpassed the genuine original design Millen Designed for Application series of midget RF Chokes. The more popular styles now in constant production are illustrated herewith. Special styles and variations to meet unusual requirements quickly furnished.

Figures 1 and 4 illustrate special types of RF chokes available on order. The popular 34300 and 34200 series are shown in figures 2 and 3 respectively.

General Specifications: 2.5 mH, 250 mA for types 34100, 34101, 34102, 34103, 34104 and 1 mH, 300 mA for types 34105, 34106, 34107, 34108, 34109.

No. 34100.........................
No. 34101.........................
No. 34102.........................
No. 34103.........................
No. 34104.........................

MIDGET COIL FORMS

Made of low loss mica filled brown bakelite. Guide funnel makes for easy threading of leads through pins.

No. 45000.........................
No. 45004.........................
No. 45005.........................

OCTAL BASE AND SHIELD

Low loss phenolic base with octal socket plug and aluminum shield can 1 7/16 x 1 7/8 x 3 15/16.

No. 74400.........................

MINIATURE POWDERED IRON CORE RF INDUCTANCES

The No. J300—Miniature powdered iron core inductances. 0.107 in dia. x ⅜ in. long. Inductances from 25 microhenries to 2.5 millihenries ± 5%. RETMA standard values plus 25, 50, 150, 250, 350, 500, and 2500 microhenries. Three layer solenoids from 25 to 350 microhenries. ¼ in. wide single pi from 360 to 2500 microhenries. Current rating 50 milliamperes. Special coils on order.

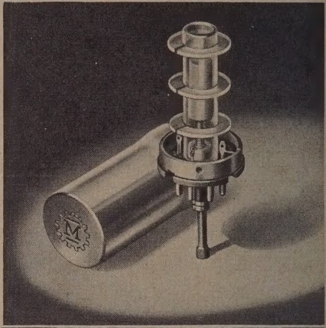
PHENOLIC FORM RF INDUCTANCES

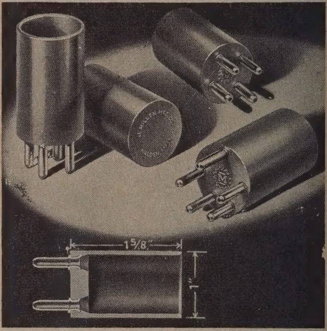
The No. 34300 Inductances—Phenolic coil form with axial leads. Inductances from 1 microhenry to 2.5 millihenries ± 5%. RETMA standard values plus 25, 50, 150, 250, 350, 500, and 2500 microhenries. Solenoids from 1 to 16 microhenries. Single pi from 18 to 300 microhenries. Multiple pi for higher inductances. Forms 7/32'' dia. x 7/16 in. long, 3/16'' x ⅝'', ¼'' x ¾'', and ¼'' x 1''. Current rating 250 milliamperes. Special coils on order.

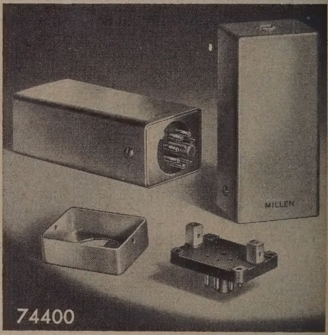
MINIATURE IF TRANSFORMERS

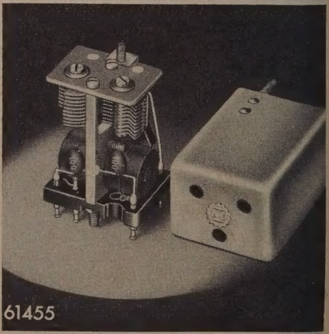
Extremely high Q—approximately 200 Variable Coupling—(under, critical, and over) with all adjustments on top. Small size 1 1/16'' x 1 9/16'' x 1 7/8''. Molded terminal base. Air capacitor tuned. Coils completely enclosed in cup cores. Topped primary and secondary. Rugged construction. High electrical stability.

No. 61455, 455 kc. Universal Trans......
No. 61453, 455 kc. BFO..............
No. 61160, 1600 kc. Universal Trans.....
No. 61163, 1600 kc. BFO.............

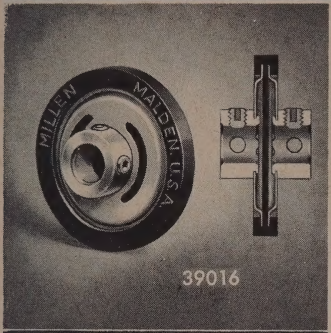


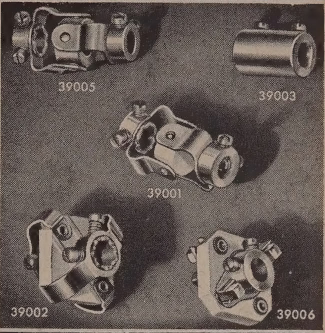



74400


61455

JAMES MILLEN
MALDEN · MASSACHUSETTS



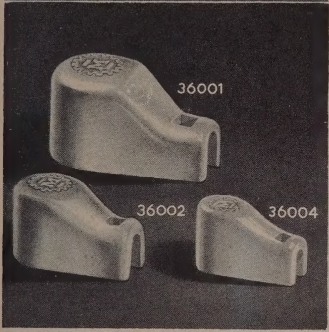


FLEXIBLE COUPLINGS

The No. 39000 series of Millen "Designed for Application" flexible coupling units include, in addition to improved versions of the conventional types, also such exclusive original designs as the No. 39001 insulated universal joint and the No. 39006 "slide-action" coupling (in both steatite and bakelite insulation).

The No. 39006 "slide-action" coupling permits longitudinal shaft motion, eccentric shaft motion and out-of-line operation, as well as angular drive without backlash.

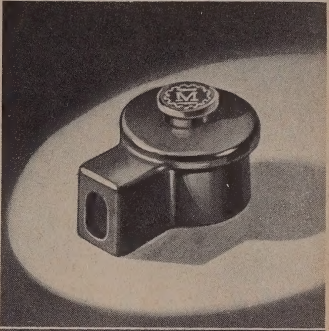
The No. 39005 and 39005-B (high torque) are similar to the No. 39001, but are not insulated. The steatite insulated No. 39001 has a special anti-backlash pivot and socket grip feature. All of the above illustrated units are for 1/4" shaft and are standard production type units. The No. 39016 incorporates features which have long been desired in a flexible coupling. No Back Lash—Higher Flexibility—Higher Breakdown Voltage—Smaller Diameter—Shorter Length—Higher Alignment Accuracy—Higher Resistance to Mechanical Shock—Solid Insulating Barrier Diaphragm—Molded as a Single Unit.



CERAMIC PLATE OR GRID CAPS

Soldering lug and contact one-piece. Lug ears annealed and solder dipped to facilitate each combination "mechanical plus soldered" connection of cable.

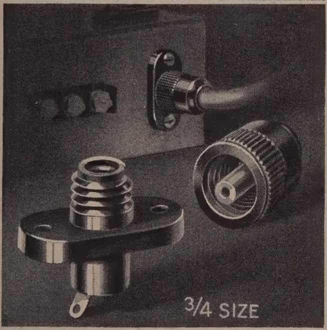
No. 36001—9/16"....................
No. 36002—3/8"....................
No. 36004—1/4"....................



SNAP LOCK PLATE CAP

For Mobile, Industrial and other applications where tighter than normal grip with multiple finger 360° low resistance contact is required. Contact self-locking when cap is pressed into position. Insulated snap button at top releases contact grip for easy removal without damage to tube.

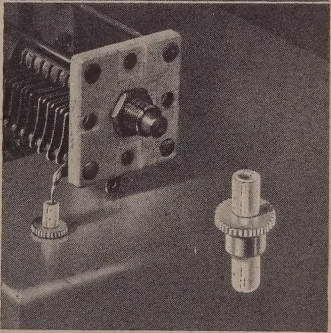
No. 36011—9/16"....................
No. 36012—3/8"....................



SAFETY TERMINAL

Combination high voltage terminal and thru-bushing Tapered contact pin fits firmly into conical socket providing large area, low resistance connection. Pin is swivel mounted in cap to prevent twisting of lead wire.

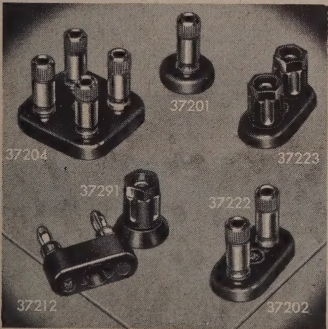
No. 37001, Black or Red..............
No. 37501, Low loss..................



THRU-BUSHING

Efficient, compact, easy to use and neat appearing. Fits 1/4" hole in chassis. Held in place with a drop of solder or a "nick" from a crimping tool.

No. 32150........................

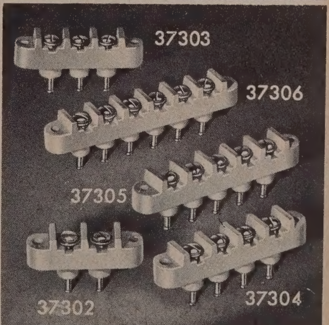


POSTS, PLATES, AND PLUGS

The No. 37200 series, including both insulated and non-insulated binding posts with associated plates and plugs, provide various combinations to meet most requirements. The posts have captive heads and keyed mounting.

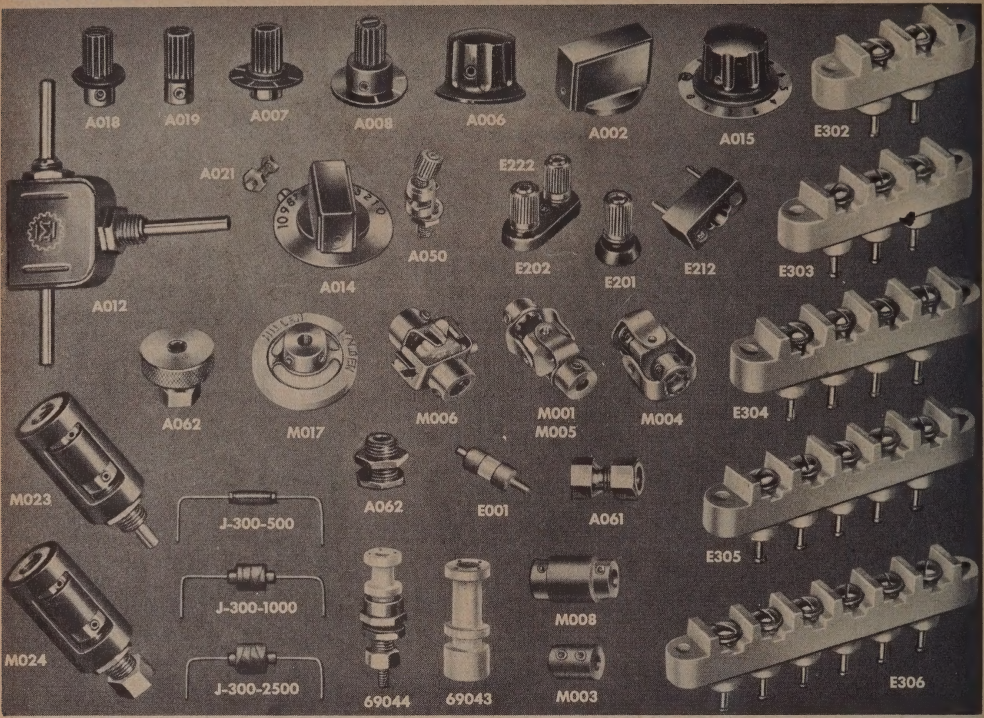
The No. 37291 and No. 37223 are standard in black or red with other colors on special order. No. 37201, No. 37202, and No. 37204 and No. 37222 are available in black, red, or low loss. The No. 37202 is also available in steatite.

No. 37201—Single plates, pr...........
No. 37291—Single plates (tapered), pr...
No. 37202—Dual plates, pr...........
No. 37204—Double dual plates, pr......
No. 37212—Dual plug................
No. 37222—Non-insulated binding post, ea.
No. 37223—Insulated binding posts, ea...



STEATITE TERMINAL STRIPS

Terminal and lug are one piece. Lugs are Navy turret type and are free floating so as not to strain steatite during wide temperature variations. Easy to mount with series of round holes for integral chassis bushings.



MINIATURIZED COMPONENTS

DESIGNED for APPLICATION miniaturized components developed for use in our own equipment such as the 90901 Oscilloscope, are now available for separate sale. Many of these parts are similar, in most details except size, to their equivalents in our standard component parts group. In certain devices where complete miniaturization is not paramount, a combination of standard and miniature components may possibly be used to advantage. For convenience, we have also listed on this page the extremely small sized coil forms from our standard catalog.

CODE	DESCRIPTION
A001	Bar knob for ⅛″ shaft. ½″ high by ¾″ long.
A006	Fluted black plastic knob with brass insert for ⅛″ shaft. ½″ high by ¾″ diameter.
A007	¼″ black plastic dial knob with brass insert for ⅛″ shaft. ⅝″ diameter dial. 9/16″ high.
A008	¼″ black plastic knob. Same as no. A007 except for style.
A012	Right angle drive for ⅛″ shafts. Single hole mounting.
A014	1″ bar dial for ⅛″ shaft. ½″ high. 180° or 280° dials for clockwise or counter-clockwise rotation.
A015	1″ fluted knob dial for ⅛″ shaft. ½″ high. Same dial plates as no. A014.
A017	1⅛″ diameter fluted black plastic knob for ⅛″ shaft.
A018	Knob, same as no. A007 except with ⅜″ diameter skirt.
A019	Knob, same as no. A007, but without dial.
A021	Miniature metal index for miniature dials.
A050	Miniature dial lock.
A061	Shaft lock for ⅛″ diameter shaft. ¼″-32 bushing. Nickle plated brass.
A062	Shaft lock with knurled locking nut.
A066	Shaft bearing for ⅛″ diameter shafts. Nickle plated brass. Fits 17/64″ diameter hole.
E001	Steatite ceramic standoff or tie-point. Integral mounting eyelet. 0.205″ overall diameter.
E201	Black or red plastic binding post plates for No. E222.
E202	Black or red plastic plates for two binding posts spaced ½″.
E212	Black or red plastic plug for two binding posts spaced ½″.
E222	Metal binding post with jack top.
E302A	to E306A Steatite ceramic terminal strips. 5/16″ wide. Terminals spaced ⅜″ on centers. Screw type or solder type thru-terminals.
J300–350 to J300–2500	Complete line of miniature inductances 3.3 to 2500 microhenries. ⅜″ long. Diameter 0.115″ to 0.297″.
M001	Insulated universal joint style flexible coupling for ⅛″ dia shafts.
M003	Solid coupling for ⅛″ dia. shafts. Nickle plated brass.
M004	Universal joint style flexible coupling for ⅛″ diameter shafts. Inverted hubs for short length. Not insulated.
M005	Universal joint style flexible coupling for ⅛″ diameter shafts. External hub for maximum flexibility. Not insulated.
M006	Universal joint style flexible coupling for ⅛″ diameter shafts. Spring finger. Steatite ceramic insulation.
M008	Plastic insulated coupling with nickle plated brass inserts for ⅛″ diameter shafts.
M017	Plastic insulated flexible coupling for ⅛″ diameter shafts. 17/32″ long by 15/16″ diameter. Bronze yoke.
M023	Insulated shaft extension for ¼″-32 bushing and ⅛″ shaft. For mounting sub-miniature potentiometer.
M024	Locking insulated shaft extension similar to no. M023.
69043	Steatite ceramic coil form. Adjustable core. Winding space ¼″ diameter by 13/32″ long. Mounting 4-40 hole.
69044	Steatite ceramic coil form. Adjustable core. Winding space 0.187″ diameter by 3/16″ long. No. 10-32 mounting.

JAMES MILLEN MFG. CO., INC.
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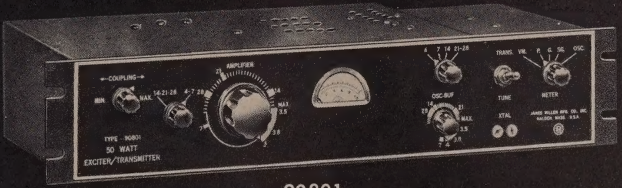
PLATE
FILAMENT
HIGH VOLTAGE POWER SUPPLY

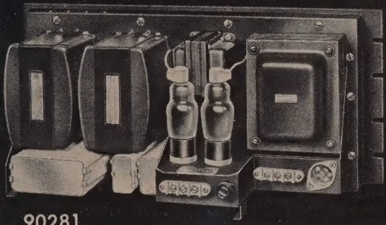
90281

MICROPHONE
GAIN
PLATE CURRENT
MODULATOR
C-W PHONE

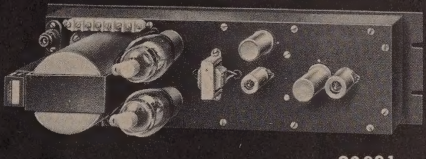
90831



90801



90281



90831

Exciters, Modulators and Power Supplies

EXCITER-TRANSMITTER

The 90801 Exciter-Transmitter is of the most modern design including features and shielding for TVI reduction, band-switching for the 4–7–14–21 and 28 megacycle bands, circuit metering. Conservatively rated for use either as a transmitter or exciter. 5763 oscillator-buffer-multiplier and 6146 power amplifier. 90 watts input for CW. Can be keyed in the oscillator and/or amplifier or by means of keyed external V.F.O. such as the 90711. 67 watts input phone. Rack mounted. 3½" panel height.

No. 90801, less tubes......................................

MODULATOR

The 90831 40 watt modulator designed especially for use with 90801 transmitter. 12AX7 speech amplifier-6C4 voltage amplifier-class AB1 6146's. Suitable for modulating transmitters with power input up to 80 watts. Gain is ample for the use of low level, high impedance crystal or dynamic microphones. Frequency response is adjusted for good communication intelligibility with limited side bands. Modulator incorporates a switch for complete change-over of modulator and transmitter from CW to 'phone. Rack mounted. 5¼" panel height.

No. 90831, less tubes......................................

HIGH VOLTAGE POWER SUPPLY

The 90281 high voltage power supply has a d.c. output of 550 to 700 volts, with maximum current of 235 ma. In addition, a.c. filament power of 6.3 volts at 4 amperes is also available. This power supply is an ideal unit for use with transmitters as well as general laboratory purposes. A single power supply will provide high voltage for both the 90801 Transmitter and the 90831 Modulator. Uses 2 — 816 mercury vapor rectifiers and incorporates a two section filter which results in excellent regulation and very low ripple. Rack mounted. 8¾" panel height.

No. 90281, less tubes......................................

LOW VOLTAGE POWER SUPPLY
(not illustrated)

The 90201 is a compact uncased regulated and general purpose power supply either for table use, in the laboratory or for incorporation as an integral part of larger equipments. It will provide modulator and exciter low voltage as well as bias and heater voltages when used with the 90801 and 90831. Its multiple outputs include 250 volt 125 ma. unregulated — 105 volt 35 ma. regulated-bias voltage of minus 100 volts — 6.3 volt filament power at 4.2 amperes.

Model 90201, with tubes......................................

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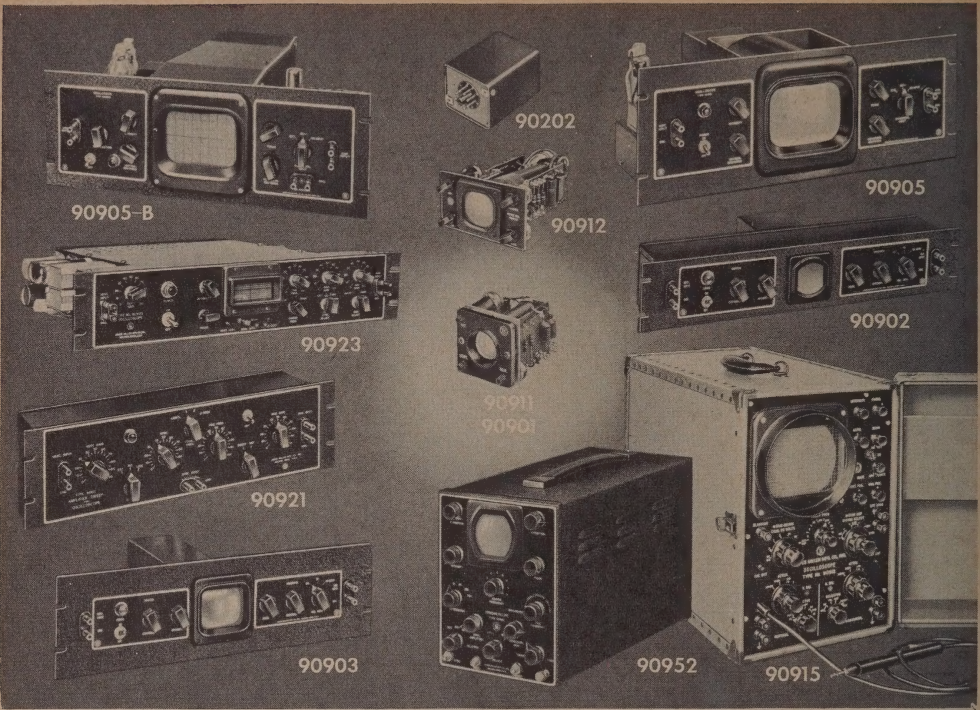

"Designed for Application" • Oscilloscopes and Accessories

The extensive Millen "Designed for Application" line of oscilloscopes and accessories includes five instrumentation oscilloscopes, six rack mounted basic oscilloscopes, an insulated industrial oscilloscope, a miniature synchroscope-oscilloscope, two compact rack mounted complete oscilloscopes, a rack mounted basic oscilloscope for military applications, two amplifier-sweeps, and a plug-in power supply.

INSTRUMENTATION OSCILLOSCOPES

Miniaturized, packaged panel mounting cathode ray oscilloscopes designed for use in instrumentation in place of conventional "pointer type" moving coil meter. Magnitude, phase displacement, wave shape, etc. are readily displayed.

No. 90901 uses type 1CP1 fixed focus one inch cathode ray tube. 2$\frac{11}{32}$″ x 2¾″ panel. Panel bezel matches in size and type the standard 2″ square meters.

No. 90911 uses Type 1EP1 cathode ray tube. Balanced deflection. Blanking input. Sharp focus. Panel matches 2″ square meters. Flat face RCA 1¼″ diameter tube.

No. 90912 uses type 2BP1 two inch cathode ray tube. 3″ x 5″ panel. Sharp focus. Good sensitivity. Accelerating voltage 500 to 875 volts. Min. control interaction.

No. 90912-R uses type 3UP1 2⅛″ x 1$\frac{9}{16}$″ rectangular cathode ray tube.

No. 90913 uses type 3XP1 3″ x 1½″ rectangular cathode ray tube. 1⅛″ x 2¾″ useful scan. Vertical sensitivity 33 volts d.c. per inch at 2000 v. accelerating.

BASIC OSCILLOSCOPES

Rack mounted inexpensive *basic* oscilloscopes including cathode ray tube circuit, power supply; intensity, focus, and centering controls, magnetic shielding, safety features, switches, etc. The *basic* oscilloscopes in their packaged form are entirely adequate for many laboratory as well as industrial and communication uses.

No. 90902 uses type 2BP1 two inch cathode ray tube. 3½″ x 19″ panel. Power supply — 105–125 volts — 60 cycles. Power consumption — 19 watts.

No. 90902-M — Military version of 90902.

No. 90903 uses type 3KP1 three inch cathode ray tube. 5¼″ x 19″ panel. Power supply — 105–125 volts — 60 cycles. Power consumption — 19 watts.

No. 90903-R uses type 3XP1 3″ x 1½″ rectangular cathode ray tube. 3½″ x 19″ panel. Power supply 105–125 volts — 60 cycles.

No. 90905 uses type 5UP1 five inch cathode ray tube. 7″ x 19″ panel. Power supply 105–125 volts — 60 cycles. Power consumption — 32 watts.

No. 90905-B uses type 5ADP1 five inch flat face precision tolerance cathode ray tube. Power supply — 105–125 volts — 60 cycles. Power consumption — 35 watts.

No. 90905-R uses type B1204 4⅝″ x 2⅝″ rectangular cathode ray tube. 3½″ x 19″ panel.

INDUSTRIAL OSCILLOSCOPE

Suitable for use in factory, laboratory, and the field for design, installation, maintenance, and service. Completely insulated front panel and case. Double shielded against magnetic fields. Excellent linearity. Sharp focus over entire 4″ x 4″ useful scan. The vertical and horizontal amplifiers are stable d.c. amplifiers and are identical, thus permitting accurate phase measurements.

No. 90915 uses type 5AQP — 1, 2, 7, or 11 flat face, precision tolerance cathode ray tube. Frequency response of either amplifier D.C. to 100 K.C. + 0–10%.

MINIATURE SYNCHROSCOPE-OSCILLOSCOPE

Compact "field service" Synchroscope or Oscilloscope. 7½″ x 5⅝″ x 13″. Weighs 17 pounds. Synchronizes to internal or external positive or negative pulses. Band width 10 cycles to 1000 KC. Sweep 6 to 300 microseconds per inch. Performance has not been sacrificed in designing this unit for light weight.

RACK MOUNTED OSCILLOSCOPES

Complete with amplifiers and sweep. Good low frequency response and linearity. For monitoring, production test, or laboratory use. Compact.

No. 90923 uses type 3XP1 3″ x 1½″ rectangular cathode ray tube. 3½″ x 19″ panel.

No. 90925 uses type B1204 4⅝″ x 2⅝″ rectangular cathode ray tube. 3½″ x 19″ panel.

PLUG-IN POWER SUPPLY

Compact high voltage power supply for oscilloscopes, etc. 2″ x 2½″ x 5″. Input 117 volts 50/60 cycles at 10 watts. Output 750 volts d.c. at 3 ma. and 6.3 volts a.c. at 600 ma. Supplies accelerating and centering potential for oscilloscopes.

No. 90202 Power Supply for Instrumentation Oscilloscopes.

AMPLIFIER/SWEEP UNITS

Horizontal and vertical amplifiers and sawtooth sweep generator for use with *basic* oscilloscopes. Match MILLEN *basic* oscilloscopes in appearance.

No. 90921 — 6SJ7 amplifiers. 6SN7-GT hard tube sweep. 5¼″ x 19″ rack panel.

No. 90922 — 3½″ x 19″ rack panel. Good low frequency linearity.

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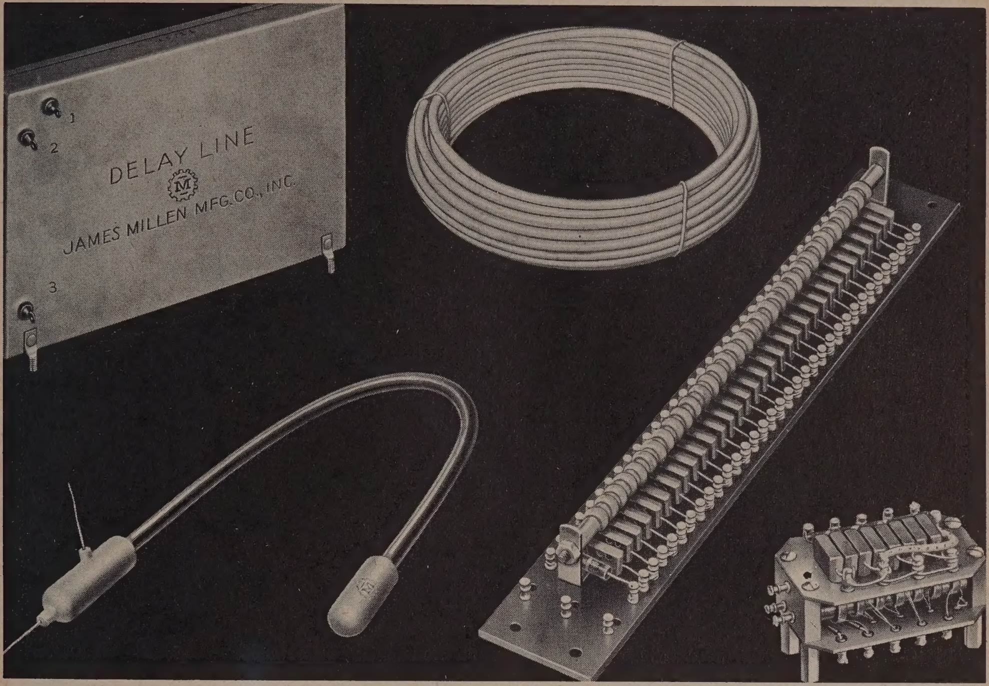

Delay Lines and Networks • *"Designed for Application"*

The James Millen Mfg. Co., Inc. has been producing continuous delay lines and lump constant delay networks since the origination of the demand for these components in pulse formation and other circuits requiring time delay. The most modern of these is the distributed constant delay line designed to comply with the most stringent electrical and mechanical requirements for military, commercial and laboratory equipment.

Distributed-constants delay line is furnished in three forms:

●
1. Bulk line
2. Flexible sealed completed units
3. Cased hermetically sealed completed units

The bulk delay line is approximately 5⁄16 in. diameter and is furnished in random lengths. It is priced "by the foot."

The flexible, sealed, complete lines are furnished with delay time of from 0.1 microseconds to 10 microseconds. The terminals are No. 18 tinned leads, extended through molded end caps. This form of line is particularly useful in applications where space is at a premium, as the line can be tucked around the edges of the chassis, in otherwise waste space. The flexible lines are furnished with terminals on both ends for transmission use or with a dummy molded end replacing one of the terminals for pulse forming lines. Delay time is specified as time required for the transmission through one length of line only.

Care must be used not to coil line around a diameter of less than 4½ in.

The cased lines are mounted in hermetically sealed metal containers with "metal to glass" terminals. Lines of this type can be furnished in values up to approximately 36 microseconds and with multiple sections, in a single case. Delay lines from 0.5 microsecond to 1.5 microseconds 1350 ohm characteristic impedance are mounted in a standard can 4¾ in. long by 4¾ in. high, by 1 in. thick. Delay lines from 0.1 microseconds to 0.5 microseconds are mounted in a standard can 1 inch by 1 inch square and length to accommodate the particular time-delay line requirements. Delay lines 550 ohm impedance from 0.1 microseconds to 0.25 microseconds are also mounted in the standard 1 x 1 inch square can.

Case size, terminal arrangement, mounting feet or lugs, etc., can be furnished to customer's requirements.

Due to the special nature of delay line applications, we list no standard units, but solicit correspondence regarding your exact requirements.

ELECTRICAL CHARACTERISTICS:

Characteristic Impedance: 1350 ohms ± 20% or 550 ohms ± 20%. Special lines of any impedance between 400 ohms and 2000 ohms can be supplied.

Time Delay: Approximately 22 inches per microsecond for 1350 ohm line. Approximately 4.1 feet per microsecond for 550 ohm line.

Frequency Response: 1350 ohm line — When a 1 microsecond square pulse is applied to the line, the leading edge of the pulse after transmission through 4 microseconds of line has a time rise of not more than 0.2 microseconds and the duration of the pulse is less than 1.5 microseconds. (Line terminated by characteristic impedance.) Rise time is a function of delay.

Band Pass: A function of delay.

Attenuation: Approximately 1.0 db. per foot for one microsecond pulse. With a four microsecond delay line terminated in its characteristic impedance and a one microsecond square pulse input, the transmitted pulse height is no less than 35% of the input pulse height.

Test Voltage: 600 volts d.c. between winding and shield, between winding and case and between shield and case.

Leakage Resistance: 100 megohms or more between winding and shield and between winding and case.

Ambient Temperature Range: Minus 50 degrees centigrade to plus 85 degrees centigrade.

Thermal Drift: Less than 0.00038 microseconds per microsecond delay per degree centigrade.

Weight: Approximately 0.6 ounce per foot.

Many special applications require lumped-constant delay line. We are in a position to manufacture such lines to your specifications. The above illustrations are typical examples. Other designs including hermetically sealed units can be supplied.

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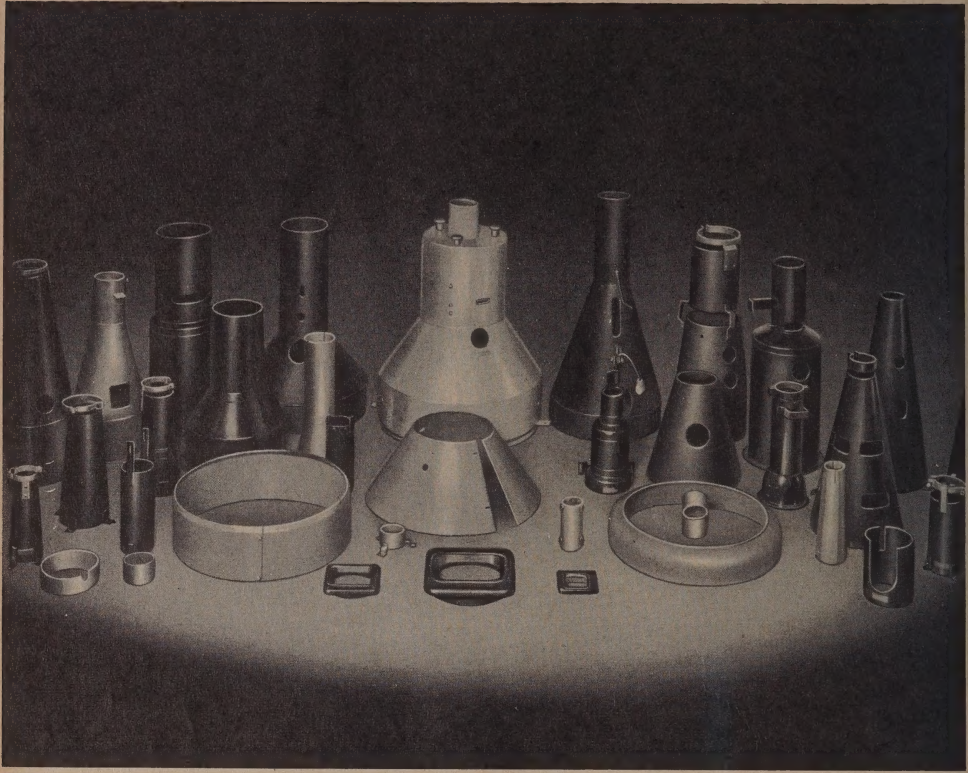
MALDEN, MASSACHUSETTS, U.S.A.



Magnetic Metal Shields

The James Millen Mfg. Co., Inc. has for many years specialized in the production of magnetic metal cathode ray tube shields and bezels for the entire electronic industry, supplying magnetic metal shields to manufacturing companies, laboratories and research organizations. The study of such problems has resulted in the use of two outstanding metals for this purpose: NICOLOI and MUMETAL. It is possible by selecting the proper material, that is, Mumetal or Nicoloi, or the correct combination of these materials, to reduce the effect of undesired magnetic fields.

Mumetal is generally used on equipment requiring the most thorough shielding, and where the trouble-causing field is not of excessive magnitude. Nicoloi is very effective in reducing fields of high flux concentration. Single Nicoloi shields are satisfactory for general purpose application where the ultimate design does not necessitate too critical consideration of the effect of external fields. Where there is a combination of the requirement for optimum shielding and an abnormally high external field, the combination of Nicoloi outer shield and a Mumetal inner shield is used. The Nicoloi outer shield reduces the high field most effectively; and the Mumetal inner shield is then operating under the best condition whereby it reduces the interference from a low field to a minimum. For most applications, however, the single Mumetal shield is entirely adequate and to be recommended.

Both Nicoloi and Mumetal obtain their effectiveness due to the correct selection of alloys on one hand, and the process of annealing so as to relieve stresses and provide the best possible molecular structure for effective shielding, on the other.

Magnetic metal shields can be furnished to meet the most stringent requirements and match the color of the equipment incorporating such shields. Due to the high alloy content neither Nicoloi or Mumetal is subject to corrosion and, in general, it is recommended that a zinc chromate primer and a high heat lacquer be used in finishing the shields. Plating is generally avoided due to the possibility that the shields might become magnetized in the plating process which necessarily is done after annealing. Care is used in the selection of materials used in conjunction with the shields for such purposes as brackets, supports, etc., so as to minimize many operations on the shields after annealing.

Cold rolled or stainless steel brackets are recommended as it is impractical to use brass which would melt under the high annealing temperature. Tube clamps must necessarily be made of spring metal which would lose its temper during annealing. In order to avoid this clamps are mounted on the shields after treatment by means of spun rivets so as to avoid any shock to the shield.

Shields and bezels have been designed to meet the stringent requirements of military, laboratory and industrial uses and still provide units which are economical and can be assembled into the complete equipment without complexity. Our standard shields and bezels are arranged to support the cathode ray tube from the front panel without addition of complicated supports and brackets.

Standard shields and bezels for the more popular tubes are available from stock fo both production and research programs.

Many production programs, however, make desirable shields designed in conjunction with the specialized requirements of the basis apparatus. Our Custom Shield design and fabrication department is at the service of our customers for the development of magnetic metal shields for such specialized application.

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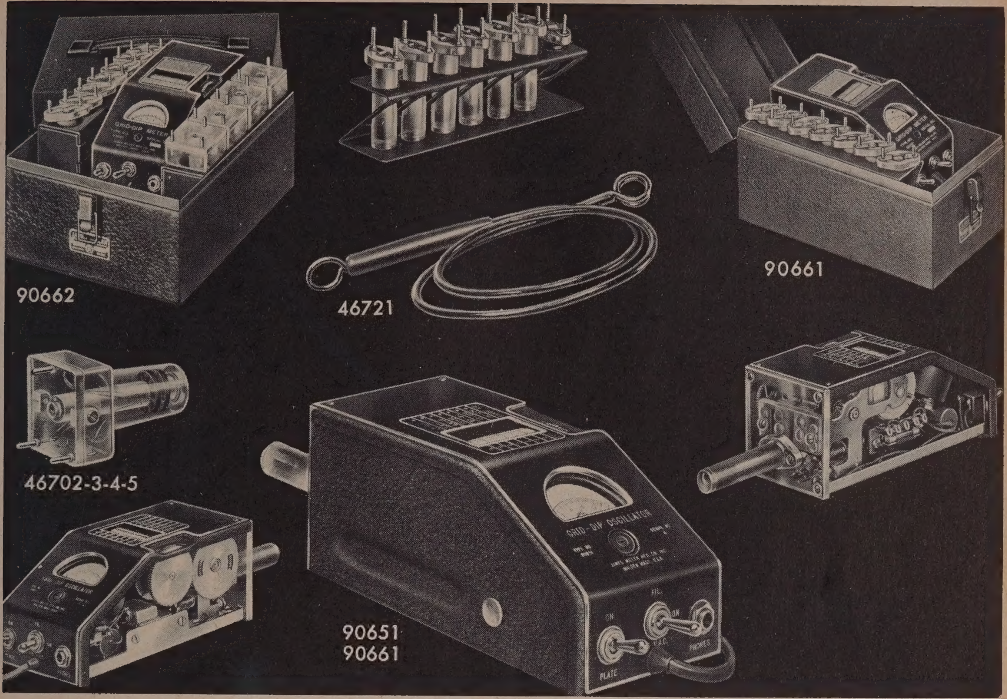

Designed for Application

Grid Dip Meters

Millen Grid Dip Meters are available to meet all various laboratory and servicing requirements.

The 90662 Industrial Grid Dip Meter hand calibrated ± 0.5% for laboratory use with a range from 225 kc. to 300 mc. incorporates features desired for both industrial and laboratory application, including three wire grounding type power cord and suitable carrying case.

The 90661 Industrial Grid Dip Meter is similar to the 90662 except for a reduced range of 1.7 to 300 mc. It likewise incorporates the three wire grounding type cord and metal carrying case.

The 90651 Standard Grid Dip Meter is a somewhat less expensive version of the grid dip meter. The ± 2.0% calibration is adequate for general usage. It is supplied without grounding lead and without carrying case. The range is 1.7 to 300 mc. Extra inductors available extends range to 220 kc.

The Millen Grid Dip Meter is a calibrated stable RF oscillator unit with a meter to read grid current. The frequency determining coil is plugged into the unit so that it may be used as a probe.

These instruments are complete with a built-in transformer type A.C. power supply and internal terminal board to provide connections for battery operation where it is desirable to use the unit on antenna measurements and other usages where A.C. power is not available. Compactness has been achieved without loss of performance or convenience of usage. The incorporation of the power supply, oscillator and probe into a single unit provides a convenient device for checking all types of circuits. The indicating instrument is a standard 2 inch instrument with an easy to read scale. The calibrated dial is a large 205° drum dial which provides seven direct reading scales, plus an additional universal scale, all with the same length and readability. Each range has its individual plug-in probe completely enclosed in a contour fitting polystyrene case for assurance of permanence of calibration as well as to prevent any possibility of mechanical damage or of unintentional contact with the components of the circuit being tested.

The Grid Dip Meters may be used as:

1. A grid Dip Oscillator
2. An Oscillating Detector
3. A Signal Generator
4. An Indicating Absorption Wavemeter

The most common usage of the Grid Dip Meter is as an oscillating frequency meter to determine the resonant frequencies of de-energized tuned circuits.

Size of Grid Dip Meter only (less probe): 7 in. x 3 3/16 in. x 3 3/8 in.

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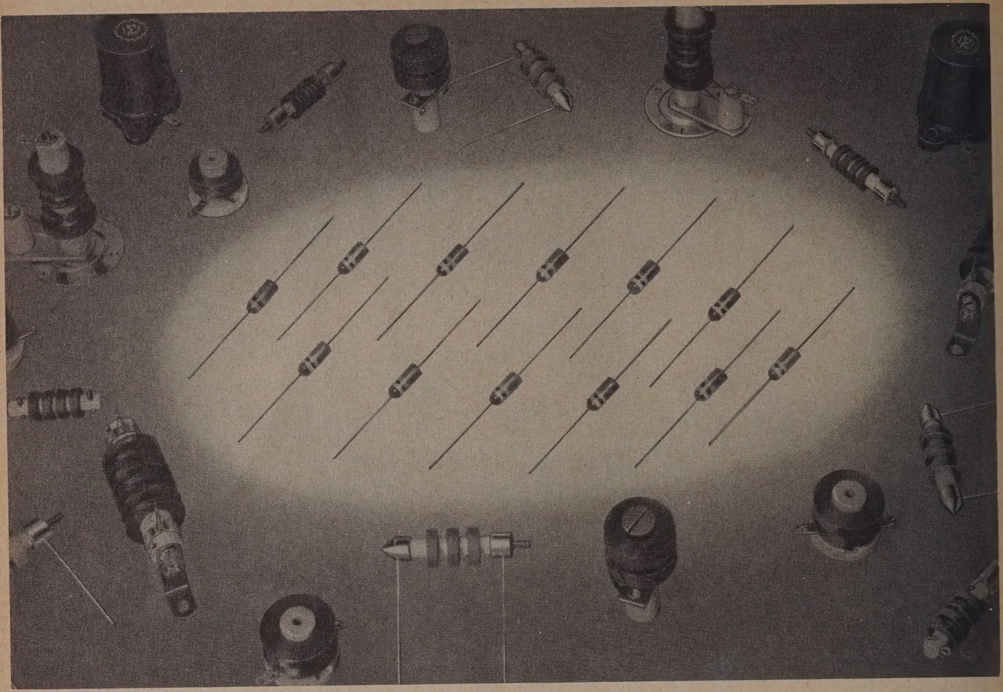

Encapsulated Inductances

Millen DESIGNED for APPLICATION encapsulated coils provide another advance in the r-f inductor field. Modern application requires miniature, heat and cold resistant, hermetically sealed, and abrasion resistant r-f inductor assemblies. The James Millen Manufacturing Company has pioneered many advances in the r-f inductor field, including the now standard 4 pi r-f choke, the axial lead r-f choke, and the miniature r-f choke. Developments have now made possible another advance, the No. 34301 and No. J301 encapsulated inductors—hermetically sealed—miniature size. Ambient temperature minus 55 degrees to plus 100 degrees C.

NO. J301 MINIATURE ENCAPSULATED INDUCTANCES

DESIGNED for APPLICATION miniature inductances are: extremely small (see table at right)—hermetically sealed—wound on axial lead Carbonyl cores—color coded. Coils are available in RETMA standard values plus 25, 50, 150, 250, 350, 500, and 2500 microhenries. Coils are three layer solenoids up to 350 microhenries. From 360 to 2500 microhenries coils are pi-wound. Current rating 50 to 600 milliamperes depending on coil size. Inductance ± 5%. Special coils on order.

NO. 34301 STANDARD ENCAPSULATED INDUCTANCES

Encapsulated DESIGNED for APPLICATION axial lead phenolic form r-f inductances. Hermetically sealed—heat resistant—abrasion proof—color coded. 1 to 350 microhenries available in RETMA standard values plus 25, 50, 150, 250, and 350 microhenries. Inductance ± 5%. Values available in same progression as J301 coils listed in the table at the right. Solenoid winding for 1 to 15 microhenries. Universal pi winding from 20 microhenries to 350 microhenries. Current rating 250 to 1500 milliamperes, depending on coil size. Ambient temperature range—minus 55 degrees to plus 100 degrees Centigrade. Size: 3/8 inches diameter × 7/8 inches long. Special coils on order.

COIL NUMBER	INDUCTANCE MICROHENRIES	DIAMETER INCHES	LENGTH INCHES
J301-25	25	3/16	9/16
J301-33	33	3/16	9/16
J301-47	47	3/16	9/16
J301-50	50	3/16	9/16
J301-82	82	3/16	9/16
J301-100	100	3/16	9/16
J301-120	120	3/16	9/16
J301-150	150	3/16	9/16
J301-200	200	3/16	9/16
J301-220	220	3/16	9/16
J301-250	250	3/16	9/16
J301-300	300	3/16	9/16
J301-330	330	3/16	9/16
J301-350	350	3/16	9/16
J301-360	360	7/32	5/8
J301-390	390	7/32	5/8
J301-430	430	7/32	5/8
J301-470	470	1/4	11/16
J301-500	500	1/4	11/16
J301-510	510	1/4	11/16
J301-560	560	1/4	11/16
J301-620	620	1/4	11/16
J301-680	680	9/32	3/4
J301-750	750	9/32	3/4
J301-820	820	9/32	3/4
J301-910	910	9/32	3/4
J301-1000	1000	9/32	3/4
J301-1200	1200	5/16	13/16
J301-1300	1300	5/16	13/16
J301-1500	1500	5/16	13/16
J301-1800	1800	5/16	13/16
J301-2000	2000	3/8	7/8
J301-2200	2200	3/8	7/8
J301-2400	2400	3/8	7/8
J301-2500	2500	3/8	7/8

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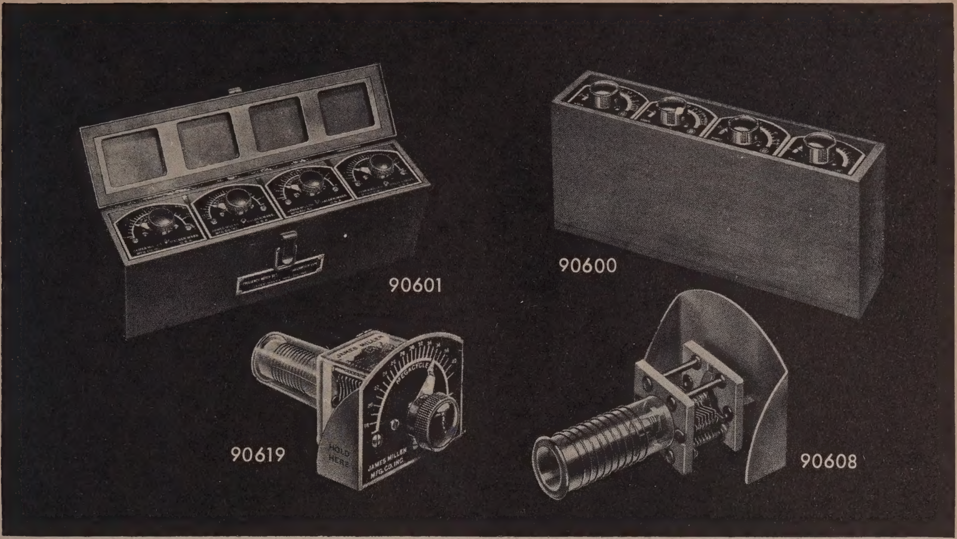

Midget Absorption Frequency Meters

Many amateurs and experimenters do not realize that one of the most useful "tools" of the commercial transmitter designer is a series of very small absorption type frequency meters. These handy instruments can be poked into small shield compartments, coil cans, corners of chassis, etc., to check harmonics; parasitics; oscillator-doubler, etc., tank tuning; and a host of other such applications. Quickly enables the design engineer to find out what is really "going on" in a circuit.

Types 90604 thru 90610 are extremely small and designed primarily for engineering laboratory use where they will be handled with reasonable care. The most useful combination being the group of four under code No. 90600 and covering the total range of from 3.0 to 140 megacycles. When purchased in sets of four under code No. 90600 a convenient carrying and storage case is included. Series 90601 are slightly larger and very much more rugged. They are further protected by a contour fitting transparent polystyrene case to protect against damage and dirt. This latter series is designed primarily for field use and are not quite as convenient for laboratory use as the 90605 thru 90608 types. All types have dials directly calibrated in frequency.

Code	Description	Net Price
90604	Range 160 to 210 mc.	
90605	Range 3.0 to 10 mc.	
90606	Range 9.0 to 23 mc.	
90607	Range 23 to 60 mc.	
90608	Range 50 to 140 mc.	
90609	Range 130 to 170 mc.	
90610	Range 105 to 150 mc.	
90611	Range 1.5 to 3.5 mc.	
90612	Range 3.5 to 8 mc.	
90613	Range 8 to 18.5 mc.	
90614	Range 18 to 41 mc.	
90619	Range 0.35 to 1.0 mc.—Neon Indicator	
90620	Range 0.15 to 0.35 mc.—Neon Indicator	
90625	Range 2 to 6 mc.—Neon Indicator	
90626	Range 5.5 to 15 mc.—Neon Indicator	
90600	Complete set of 90605 thru 90608, in case	
90601	Complete set Field type Frequency Meters in metal carrying case 1.5 to 40 mc.	

DISTRICT SALES OFFICES

NEW YORK
Cooper-DiBlasi
90 Main Street
Port Washington
Long Island

PHILADELPHIA
L. D. Lowery
50 E Wynnewood Rd.
Wynnewood

BALTIMORE-WASHINGTON
L. D. Lowery, Inc.
4508 Annapolis Rd.
Peace Cross
Rte. 1 and Rte. 50
Bladensburg
Maryland

INDIANAPOLIS
V. MacNabb
820 E. 64th Street

SAN FRANCISCO
Moulthrop & Hunter
165—11th Street

CHICAGO
G. G. Ryan
8336 So. Maryland Ave.
E. C. Carlson
6677 N. Northwest Hwy.

BOSTON
Gerber Sales
48 Pearl Street
Brookline

LOS ANGELES
W. Bert Knight
10373 W. Pico Blvd.

KANSAS CITY
J. O. Schmitz
34th & Broadway Aves

CANADA
H. R. Gray
46 Danforth Rd.
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EXPORT
Technical Equipment Co.
155 E. Milton Ave.
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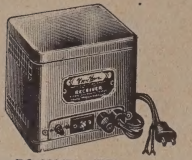
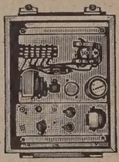
Perma-Power® Radio Control Systems



RC-200(R), (RP)

FOR INDUSTRY, COMMERCE AND HOME: Designed to fulfill the requirements of a highly reliable, low cost radio remote control. Actually a radio-controlled switch, the system includes transmitter, receiver, antenna and mounting hardware. May be used to control any electrical device: Entrance gates; remote lighting; watchman signalling; approach warnings; annunciators; burglar alarms; control pumps and machinery; chimes, etc. **Licensing:** Operate on authorized frequency of 27.255 mc; fully meet all FCC requirements. Free license upon application to FCC. **Reliability:** Top quality, conservatively rated components and rigid inspections assure dependability. Tubes and components selected for life rather than price; heat rise kept below 10° C. **Operating Distance:** From a few feet to over one mile, dependent on antenna and other considerations. **Power Required:** Available for operation from 115 v. AC or 6 or 12 v. DC. Units using 115 v. AC are supplied in U/L approved JIC electrical wiring boxes when fixed locations are specified. Portable units with appliance cords can also be supplied. **Special Controls:** Available for special applications requiring multiple channels (up to 12, non-interfering). Transmitters can be supplied with separate console units with pushbutton selectors; receivers available up to 12 control relays individually controllable from a single 12-channel transmitter or 12 individual transmitters. To order special units, provide a description of intended application on Specification Sheet Number T140.



RC210(R), (RS)

RESIDENTIAL RECEIVER RC200(R)

Lowest cost receiver for non-commercial and residential door control, gate operators, lighting controls, etc. Carefully engineered circuit employs three tubes: 6BA6, 12AU7A, and 2D21. Comes complete with plug-in selector for any one of ten non-interfering channels. Built-in SPST relay rated 3 amps, 115 v. AC. **Operating Distance:** 100 to 1000 ft., depending on transmitter. **Power Required:** 15 watts, 115 v. AC, 50/60 cps. U/L approved power cord and spade terminal leads for relay connection. Snap-on wall mounting bracket supplied. Uses 8 ft. wire antenna. **Size:** 5½″ w. x 4¾″ h. x 4½″ d. Weight, 5 lbs. **$31.50**
Perma-Power Model RC200(R) Receiver—Net Each....................

LIGHT DUTY COMMERCIAL RECEIVER RC200(RP)

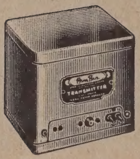
Like Model RC200(R). Highly reliable version for many commercial applications where cost is a limiting factor. Specifications identical to above, but uses high reliability industrial type tubes. **$41.50**
Perma-Power Model RC200(RP) Receiver—Net Each....................

COMMERCIAL/INDUSTRIAL RECEIVER RC210(R)

Highly reliable, premium quality receiver for all remote-control applications. Advanced design, patented selector circuit prevents operation from other signals or electrical disturbances. Provided with plug-in selector for any one of 12 non-interfering channels. Equipped with three high reliability industrial tubes: 5749, 5814A, 5727. Built-in DPDT relay rated 5 amps, 115 v. AC. **Control Distance:** Several hundred feet, using 8 ft. wire antenna and RC200(T) or RC210(T) transmitter. Up to 2000 ft. using folded dipole antenna and RC220(T) transmitter. **Power Required:** 15 watts, 115 v. AC, 50/60 cps. Housed in U/L approved, JIC wiring enclosure. **Size:** 8″ w. x 10″ h. x 4″ d. Wt., 10 lbs.

Perma-Power Model RC210(R) Receiver—With momentary closure of relay while receiving signal. Suitable for use with 3-button door control pushbutton stations (up-down-stop) to open closed door or close open door. Net Each......... **$125.00**

Perma-Power Model RC210(RS) Receiver—With sequence relay for alternate "on-off" switching with received signal. Net Each.............................. **$140.00**



RC200(T), (TP)

LIGHT DUTY MOBILE TRANSMITTER RC200(T)

Compact, sturdy transmitter installs easily under hood of car or truck; fits dashboard on electric trucks, etc. Crytal-controlled transmitter is extremely stable; delivers tone modulated signal; meets all FCC requirements. Plug-in selector provides for any one of ten non-interfering channels to match receivers. Internal switch selects 6 or 12-volt operation. Single 12AU7A tube. Uses wire antenna for concealed mounting under vehicle. **Operating Distance:** 100 to 300 ft. from receiver. **Power Required:** 6 or 12 v. DC, selectable. Pushbutton switch for instrument panel mounting; snap-on mounting bracket. **Size:** 5½″ w. x 4¾″ h. x 4½″ d. Weight, 7 lbs. **$24.50**
Perma-Power Model RC200(T) Transmitter—Net Each...................

RC210(T)
Series

COMMERCIAL/INDUSTRIAL MOBILE TRANSMITTER RC200(TP)

Extra reliable version of above transmitter. Equipped with high reliability industrial type tube (5814A), heavy duty pushbutton and vertical whip antenna. **$44.50**
Perma-Power Model RC200(TP) Transmitter—Net Each..................

FIXED STATION TRANSMITTER SERIES RC210(T)

Highly efficient, premium quality transmitter for commercial and industrial applications. Similar to Model RC200(T), except that it uses high reliability industrial 5814A tube; also features integral vertical-whip antenna. Fully self-contained in rugged U/L approved JIC enclosure. Three models available for full operating flexibility and convenience. Handy, plug-in selector permits use of any one of 12 non-interfering channels. **Power Required:** 15 watts, 115 v. AC, 50/60 cps. **Size:** 8″ w. x 10″ h. x 4″ d. Weight, 10 lbs.

Perma-Power Model RC210(T) Transmitter—With pushbutton on enclosure. **$134.00**
Net Each..

Perma-Power Model RC-210(TB) Transmitter—With terminals provided for external pushbutton. Net Each.. **$134.00**

Perma-Power Model RC210(TBL) Transmitter—With low voltage terminals for external pushbutton. Low voltage transformer and relay; 24 v. AC wiring. Net Each.. **$145.00**

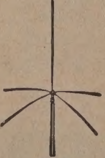
RC220(T)
Series

MAXIMUM DISTANCE FIXED STATION TRANSMITTER SERIES RC220(T)

Higher powered for commercial and industrial uses where distance of operation up to 2000 ft. is required. Specially engineered circuit, similar to Model RC200(T), employs two 5749 high reliability industrial tubes; conservatively rated components provide exceptionally long life. Requires roof-mounted ground plane antenna (below). Housed in U/L approved JIC enclosure. **Power Required:** 25 watts, 115 v. AC, 50/60 cps. **Size:** 8″ w. x 10″ h. x 4″ d. Weight, 10 lbs. **$184.00**
Perma-Power Model RC220(T) Transmitter—Pushbutton on enclosure. Net.

Perma-Power Model RC220(TB) Transmitter—Terminals for external pushbutton. Net Each.. **$184.00**

Perma-Power Model RC220(TBL) Transmitter—For low voltage operation; 24 v. AC wiring. Terminals provided for external pushbutton. Net Each............ **$195.00**



GP-1

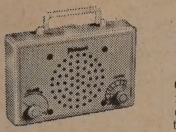
FIXED STATION GROUND PLANE ANTENNA GP-1

Weather-tight, impedance-matched antenna for use with Model RC220(T) transmitter. Easily installed. Radials are tapered, stainless steel rods designed to flex with wind and prevent formation of ice loads. Provided for mounting on 1¼″ pipe mast. Adapter for RG-58A/U coax cable has built-in lightning arrester. Comes complete with all hardware and 100 ft. of coaxial cable (without mast). **$75.00**
Perma-Power Model GP-1 Ground Plane Antenna—Net Each.............

Perma-Power Co. • **CHICAGO 18, ILLINOIS**

Philmore *Guaranteed* ELECTRONIC COMPONENTS

PHILMORE 2-TRANSISTOR RADIO KIT



with 4" ALNICO PM LOUDSPEAKER

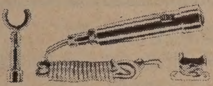
Featuring specially engineered RF coil for vastly increased sensitivity and selectivity.

Completely transistorized, no tubes to burn out. Built-in loop antenna coil, no external aerial or ground required. Powered by single 9-volt "A" battery (RCA VS300, RayOVac 1600, or equivalent). Two transistors and Germanium diode in up-to-date circuit. The tuning range covers broadcast band and police calls. Colorful plastic cabinet 7½x5x2½". Step-by-step instructions included.

Model TR22A (less battery) .... **List Price** $20.45
Plus Federal Excise Tax

Model TCC Leatherette Carrying Case (Optional) .... **List Price $3.40**

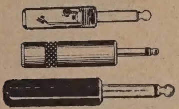
SLIM CRYSTAL MICROPHONE



Popular all-purpose microphone, can be used as a hand mike, lavalier mike, or on desk or floor stand. As lavalier mike it rests comfortably on the chest, permitting free use of hands. Lavalier cords and bracket are included. A chrome finished swivelled mike holder is supplied for desk or floor stand use, threaded ⅝"-27. Detachable 6-ft. shielded plastic cable. Built-in on-off switch. Satin chrome finish. Frequency response 100 to 9000 CPS. Output level —52 db. High impedance. Individually packaged.

No. 100C .... **List Price $7.70**

LONG SLIM PHONE PLUGS



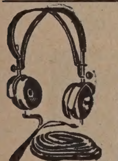
A compact plug for panel mounting space economy. Has two screw type terminals.

Supplied with red or black barrel, or shielded barrel. All parts nickel plated. Fits all standard type jacks.
Length of barrel—1⅝" Diameter of barrel—½"
Overall Length—2⅞"

No. 523W Red or Black Plug (please specify color) **List $.35 ea**

No. 523WS Shielded Plug .... **List $.55 ea**

PHILMORE DOUBLE HEADPHONES



Accurately matched. Each unit consists of "double high flux" magnets. Ruggedly constructed of lightweight metal. Polished bakelite ear caps. Concealed terminal type. Plastic covered adjustable headband and cord 4½ feet long, 2000 ohm impedance.

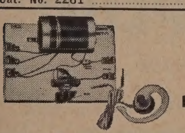
Cat. No. 2260.... **List Price $5.25**

SINGLE HEADPHONES

Same construction, head band is of spring steel. 1000 ohm impedance.

Cat. No. 2261 .... **List Price $2.75**

NEW "SELECTIVE" GERMANIUM DIODE Radio Receiver KIT



Features Variable Capacity Tuning, High "Q" Coil, permanently fixed crystal. Plywood baseboard, with template label. Easy to assemble. All hardware, step-by-step instructions, including earphone.

No. VC-1000 .... **List Price $5.00**
Plus Federal Excise Tax

PHILMORE 11-METER CITIZENS' BAND TRANSCEIVER KIT

Designed with the CITIZEN in mind, this kit is so carefully engineered and assembly instructions are so thoroughly worked out that ANYONE, even without electronic knowledge or skill, can build it — and get superlative results!

NEWLY ENGINEERED TO CONFORM WITH LATEST F.C.C. REGULATIONS

Advanced features include:

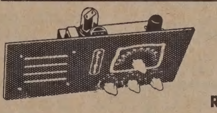
- Any three channels individually switch-selected, with receiver and transmitter frequencies different, if desired, to meet local conditions.
- Interchangeable power supplies for 115V AC or 6/12V DC operation.
- Low flat modern appearance, sleek cabinet perfect for desktop, or on or under dashboard.
- Crystal controlled transmitter.

***COMPLETE KIT* for 115V AC** **$39.95**

INCLUDES MICROPHONE, CRYSTAL AND CABINET

TC11	Transceiver for 115V AC, less antenna	**$39.95**
TC612	Transceiver for interchangeable 6 and 12 V DC, less antenna	**$44.49**
TC15	7-section whip antenna short range	**$ 4.50**
Model PS11	AC Power Supply for both Model TC11 and TC612 Transceiver Kits	**$12.85**
Model PS612	Mobile Power Supply for both Model TC11 and TC612 Transceiver Kits	**$17.50**

3-TUBE (Incl. Rectifier Tube) AC-DC RADIO KIT



More elaborate than the two-tube and much greater in signal strength—permitting use of a 4" P.M. speaker. Simple instructions with pictorial, schematic diagrams. Silk screen panel and gray hammertone finish. Superior in tone and selectivity to many manufactured radios! Uses 1 each 35Z5GT, 50L6GT and 12SJ7 tubes. Completely assembled, you have a TWO-BAND set, covering standard broadcast (550-1700 Kc) and SHORT WAVE (6-18 Mc).

Cat. No. 7001C—Complete with Speaker, less tubes. **List Price $20.00**
Plus Federal Excise Tax

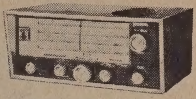
MIDGET TRANSFORMERS FOR TRANSISTORS

These tiny transformers use finest quality cores, made of hydrogen heat processed permalloy. Fine coil wire of 0.025 mm diameter is used. Vacuum impregnated insulation.

		Impedance			List
No.	Type	Primary Ohms	Secondary Ohms	Net Wt. oz.	Price Each
* ST-11	Driver	20,000	1,000	¼	$1.20
* ST-12	Input	100,000	1,000	¼	1.30
† ST-13	Input	200,000	1,000	⅜	1.50
† ST-14	Input	500,000	1,000	½	1.50
† ST-21	Driver	10,000	2,000CT	½	1.30
† ST-31	Output	500CT	3.2	½	1.00
† ST-32	Output	1,000CT	8	½	1.00

* Overall Size: ¾x⅝x13/16".
† Overall Size: 13/16x⅝x¾".

We Proudly Announce . . . NEW PHILMORE COMMUNICATIONS RECEIVER KIT



Precision engineered, budget priced! All-wave receiver designed to meet the demands and budgets of the amateur, novice ham, and short-wave listener. Designed for use either on the bench or in a rack-panel installation. Some advanced features:

1. **Highly sensitive, five-tube superhetrodyne circuit with individual, adjustable coils for each band.**
2. **Full-wave transformer—isolated design for safe, shock-proof operation.**
3. **Four band operation covering all frequencies up to 30 megacycles, and amateur bands from 10 to 160 meters.**
4. **Full electrical bandspread on each band.**
5. **Includes RF Gain Control, AVC Defeat, and Standby-CW Switching.**
6. **Built-in S-meter.**
7. **A built in B.F.O. with fully adjustable tone control for optimum CW reception.**
8. **Built in noise limiter for removing annoying squeals, howls, and static.**
9. **Provisions for use with either singlet or doublet antenna.**
10. **Input jack for external Q multiplier when desired.**
11. **Accessory power socket for operation Q multiplier or other auxiliary equipment.**
12. **Built in speaker with heavy magnet, fully protected and top-mounted so that receiver can be placed between additional gear.**

TUBE COMPLIMENT—(1 each) 6 x 4 Rectifier; 6BE6 Converter and Oscillator; 6AZ8 IF Amplifier and "S" Meter Drive; 6AV6 Detector and Audio Amplifier; 6AQ5 Audio Power Amplifier. Supplied complete with tubes and "S" meter.

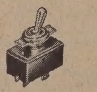
MODEL CR-5AC KIT Complete, less cabinet.
Amateur Net .... **$43.95 (tax incl.)**

OPTIONAL CABINET

A handsome accessory cabinet, made of heavy gauge steel, is available separately. Functional modern design features a glare shielding hood and generous, easy to read control markings.
Size: 15-3/16" wide, 6-9/16" high, 10" deep.

MODEL CR CABINET .... **Amateur Net $7.95**

BAT HANDLE TOGGLE SWITCHES



Supplied with "on-off" plates. Molded bakelite case; rated 3 amp. 250 volts, 6 amp. 125 volts. Complete with two mounting nuts.

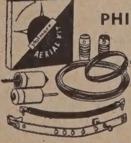
No.	Type	Shank	List Price
219	S.P.S.T.	5/16"	.375
220	S.P.D.T.	5/16"	.40
221	D.P.D.T.	⅜"	.45

TEST LEADS WITH PHONE TIPS

Plastic Test prod handles 3½" long, ⅜" diameter, with extra long prods 1¾" long, Red and Black. Equipped with 48" kinkless plastic covered leads, with insulated phone tips at other end. Phone tips fit standard American phone tip jacks.

No. 456 ....**Per Pair, List $.65**

PHILMORE AERIAL KIT



A complete kit of parts for assembly of a professional antenna. Attractively packaged in a multi-colored display box.

1 coil 50 ft. stranded aerial wire.
1 coil 25 ft. lead-in wire. 2 Nail-it knobs.
1 Ground clamp. 1 Instruction sheet.
1 Lead-in strip. 2 Porcelain insulators.

Cat. No. 2103 .... **List Price $1.65**

PHILMORE MFG. CO. INC. . . . . . . Richmond Hill 18, N. Y.

We will be pleased to send our 40-page 1960 Catalog upon request.

Electronic Communications For Home, Industry And Sport

MOST DRAMATIC DEVELOPMENT IN CITIZENS BAND COMMUNICATION!!!

MODEL #PT—61

VOCALINE

4-channel Portable Transceiver — 1-watt power!

- 14 transistors—2 tubes
- Lightweight—only 8½ lbs. with battery— Size: 10" x 3¾" x 5½"
- Usable with 12 volt auto or boat battery
- Battery pack contains rechargeable dry batteries and built-in charger
- Also usable on AC
- Finest Silent-Aire Squelch
- Highly selective & sensitive receiver
- Rugged, weatherproof transceiver—ideal for heavy duty field and marine use.

NEW MULTI-CHANNEL CONVENIENCE IN CITIZENS BAND RADIO COMMUNICATION:

VOCALINE

COMMAIRE

4-CHANNEL model ED-27M (27 MC.)

$189.50 list price

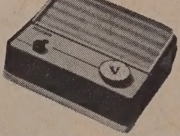
- Selective & Sensitive Receiver
- Patented Silent-Aire Squelch
- Single Crystal Receiver
- Transistorized Power Supply and Unmatched Audio Circuitry
- Convenience of conference-phone flexibility plus uniform performance throughout the entire 22-channel citizens band
- Ideal for business, industry, boating and sports

FOREMOST SINGLE-CHANNEL CITIZENS BAND 2-WAY RADIO ON THE MARKET

model ED-27 (27 MC.)
$179.50 list price

- Highly selective receiver
- Greater speaker volume
- Transistorized DC power supply
- Patented Silent-Aire Squelch circuit
- Excellent sensitivity and selectivity

IDEAL FOR HOME, OFFICE, PLANT



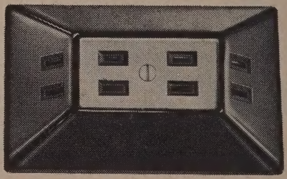
VOCATRON

$109.00 pair
$54.50 each

CC-60 WIRELESS INTERCOM

- No wires needed—just plug in and talk
- Patented new squelch circuit—eliminates squawk
- Compact—3" x 8" x 6"
- Draws less current than a light bulb
- Distinctive and functional appearance

4 SAFE OUTLETS IN ONE!



69c Brown
79c Ivory

PERMA-PLUG*

- Ends messy wiring
- Won't pull out when you pull out the plugs
- U.L. Approved
- Proven seller—attractive display units provided

COMPLETE LINE OF ACCESSORIES, ANTENNAS AVAILABLE.

VOCALINE

COMPANY OF AMERICA
Old Saybrook, Conn.

V-29

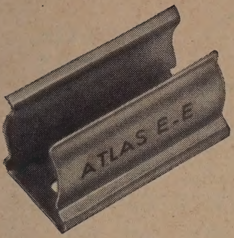
PRICES SUBJECT TO CHANGE WITHOUT NOTICE

(Use Index Page 1 for Quick, Easy Location of ALL Products)

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

When you want the best . . . Specify ATLEE

CLIPS - HOLDERS - INSERTS



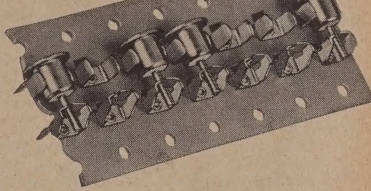
ATLEE COMPONENT HOLDERS

Atlas E-E Part No.	Comp. Diam.	Holder Height	Holder Width	Holder Max. Lgth.	Mtg. Holes No. X Diam. X Spacing	Price (each)
100-200- 1	.175″	.30	.20	⅝″	2 x .071″ x .375	12¢
- 2	.195	.30	.22	⅝	2 x .071 x .375	12¢
- 3	.195	.30	.22	1⅛	3 x .071 x .437	15¢
- 4	.235	.33	.25	⅝	2 x .093 x .312	12¢
- 4A	.260	.34	.28	½	2 x .093 x .250	12¢
- 4A-2	.260	.34	.28	¼	1 x .093	12¢
- 5	.312	.38	.34	¾	2 x .093 x .437	15¢
- 6	.375	.47	.41	1⅛	3 x .103 x .375	15¢
- 6A	.391	.48	.43	⅝	2 x .103 x .312	15¢
- 7	.400	.49	.44	¾	2 x .103 x .375	15¢
- 8	.400	.49	.44	1⅛	3 x .103 x .375	15¢
- 8A	.500	.61	.54	1⅝	3 x .128 x .562	15¢
- 9	.562	.65	.61	1	3 x .128 x .312	18¢
-10	.562	.65	.61	1⅝	3 x .128 x .562	18¢
-11	.670	.83	.72	1⅜	3 x .128 x .437	19¢
-12	.750	.93	.82	2	3 x .144 x .750	26¢
-12A	.875	1.11	.93	4	4 x .144 x 1.00	31¢
-13	1.000	1.18	1.06	1⅞	3 x .144 x .687	28¢
-15	1.125	1.33	1.18	1⅜	3 x .162 x .469	27¢

Provide firm holding under extreme shock and vibration. For capacitors, resistors, relays, wires, cables, tubing, etc. Withstand vibrations of 10 to 500 cycles and 5 to 20 G's for eight hours without resonant frequencies. Structurally designed to derive maximum grip from the component itself. Made of spring steel which flexes under heavy vibration and temperature changes, automatically increasing holding power when most needed. SPECIFICATIONS: SAE #1065 tempered carbon steel, formed in the annealed state, cadmium plated, per QQ-P-416A, Class 2 Type II, able to withstand minimum 50-hour salt spray test, per AN-QQ-S-91. SIZES: 0.175 to 1.125. FILE-O-MATIC REFERENCE: section 19, page 4, for more information.

ATLEE DIODE CLIPS FOR BOARD MOUNTING

For quick, secure mounting of solid-state diodes or similar devices. Component is quickly snapped into place, or removed by a simple twist, without disturbing soldered connections, which are made to integral lugs passing through the mounting surface. Electrical contact is positive under all conditions of shock and vibration. Special design of case-holding and lead-holding clips assures penetration of surface film or oxide, maintains lowest contact resistance. Component security is not changed by repeated insertions and withdrawals, and severe shock and vibration produce no visible shift of the component. Sizes available to accommodate diode or rectifier cases from .245″ to .270″ O.D., in spring-tempered phosphor bronze. Supplied separately in bulk for attachment by eyelets or rivets, or ready mounted in strips.

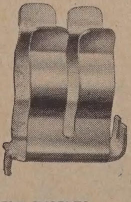


ATLEE FULL CONTACT INSERTS FOR TUBE SHIELDS

MIL-S-19786A Type No.	Use Atlee Full-contact Insert No.	For TS Shield No.	For TR Shield No.	Price each
L0761	102-332-1	TS102U01	TR5-5015	26¢
L0762	102-332-2	TS102U02	TR5-5020	27¢
L0765	102-332-3	TS102U03	TR5-5025	28¢
L0966	102-332-4	TS103U01	TR6-6015	27¢
L0967	102-332-5	TS103U02	TR6-6020	28¢
L0968	102-332-6	TS103U03	TR6-6025	29¢

This new ATLEE development for longer tube life and greater equipment reliability provides twice as much tube contact as other style inserts. Making almost 100% contact with both tube and shield, it assures quick, positive heat dissipation from nearly all the tube surface. It also acts as a tube cushion, reducing microphonics. Easily installed in any TS or TR shield. SPECIFICATIONS: heat treated beryllium copper .002″ thick per QQ-C-553; black matte finish, withstands 50-hour salt spray test; sold in strips of desired length, or in coils by the running foot; standard widths— .75″, .86″, 1″, 1.2″, 1.5″ —other widths on request.

ATLEE TRANSISTOR CLIPS and HEAT SINKS



Available for all types and sizes of transistors. Can be provided coated with Durafilm to provide 500 V.D.C. insulation. Cadmium plated spring steel or silver plated beryllium copper alloy #25, for horizontal or vertical mounting. Silver plated beryllium copper alloy #25 with no-twist lug or solder lug. Bulletin #10 and Application Data Sheet gives proper clip for use with each transistor.

SEND FOR BULLETINS ON THESE OTHER ATLEE PRODUCTS

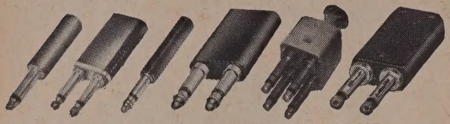
SUBMINIATURE TUBE HOLDERS AND SHIELDS (FILE-O-MATIC REFERENCE: SEC. 19, PGS. 1, 2) — JAN SHIELD INSERTS

ac atlee corporation

WOBURN, MASSACHUSETTS

ADC INCORPORATED

MINNEAPOLIS 7, MINNESOTA



PJ-5 PJ-1 PJ-3 PJ-6 D7200 PJ-327

PLUGS

PJ-5 **Equivalent, PJ-055, WE-47,** fits ¼″ phone jacks. Black plastic shell. Screw terminals. Two conductor. **List $1.30**

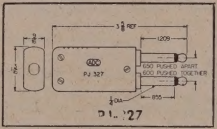
PJ-1 **Equivalent WE-241,** heavy duty die cast frame. Black phenolic shell. Self aligning plug prongs on ⅝″ center for use with all standard jack panels. Two tip conductors, plus sleeve connection common to both sleeves. **List $4.60**

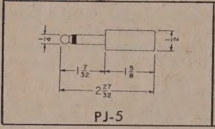
PJ-3 **Equivalent PJ-051, WE-310.** Designed for use with ¼″ tip, ring and sleeve jacks. Molded insulation, red plastic shell. Three conductor. **List $4.00**

PJ-6 **Equivalent WE-213.** Designed for applications requiring two separate 3 conductor circuits. Popularly used with operator's intercom/monitor headsets. Black shell notched for polarity identification. Self aligning plug prongs on 11/16″ centers. **List $16.30**

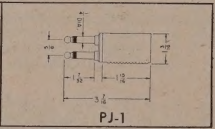
D7200 **Equivalent WE-315B.** Four prong, self aligning plug. Molded insulation. Brass shell notched for polarity is nickel plated and connected to plug stems to provide shielding for tip conductors. For use with four PJ-318 double jacks mounted on ⅝″ centers. Five conductors. **List $24.50**

PJ-327 The PJ-327 Twin Plug provides two electrically independent, 2 conductor plugs in a black phenolic shell which is notched to indicate polarity. Self aligning plug sleeves are on 5/8″ centers. Designed and constructed in accordance with National Military Establishment Specification MIL-P-642A and interchangeable with WE-327. **List Price $4.25**

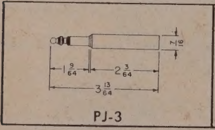




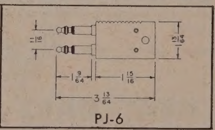
PJ-5



PJ-1

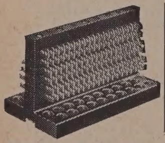


PJ-3



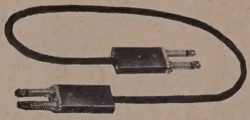
PJ-6

TERMINAL BLOCKS



Type	No. Rows	No. Terminals	List
PJ-101	1	20	$5.75
PJ-102	2	40	7.75
PJ-103	3	60	9.75
PJ-104	4	80	11.75
PJ-105	5	100	13.75
PJ-106	6	120	15.75

Molded of durable black phenolic plastic material. Terminals are .040″ plated brass. Rows of terminals are graduated in length for ease of wiring, and are identified by numbering along the top row. Base 3″ x 6-1/16″.



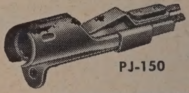
PATCH CORDS

Length	Cord With PJ-1 Plugs	List	Cord With PJ-5 Plugs	List	Replacement Cords Only	List
6-inch	PJ-10½	$11.80	PJ-50½	$5.80	PJ-20½	$1.85
1-foot	PJ-11	12.10	PJ-51	6.05	PJ-21	2.50
2-feet	PJ-12	12.35	PJ-52	6.40	PJ-22	2.75
3-feet	PJ-13	12.65	PJ-53	6.85	PJ-23	2.90
4-feet	PJ-14	13.10	PJ-54	7.40	PJ-24	3.00
5-feet	PJ-15	13.45	PJ-55	7.95	PJ-25	3.15
6-feet	PJ-16	14.05	PJ-56	8.75	PJ-26	4.15
10-feet	PJ-10	14.90	PJ-50	9.70	PJ-20	5.25

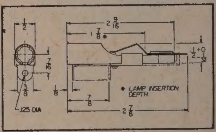
Length	Cord With PJ-3 Plugs	List	Replacement Cords Only	List
2-feet	PJ-82	$14.50	PJ-62	$3.50
4-feet	PJ-84	15.50	PJ-64	4.00
6-feet	PJ-86	16.50	PJ-66	4.70

ADC patch cords have become standards in the communications industry. Unmatched in quality, these shielded cords are made of tinned copper conductor wire with a heavy braided cover reinforced at each end. These cords, as well as cord assemblies with PJ-1 double plugs, PJ-5 or PJ-3 single plugs and standard black patch cords with shields grounded both ends, are considered standard. Unshielded cords or assemblies with shields grounded one end only available on special order. Gray, red, other color cords available on special order.

LAMP SOCKETS



PJ-150



This new type lamp socket has the unique feature of an adjustable mounting tab which allows it to be used as a replacement for any standard lamp socket with a ½″ diameter sleeve on panels from ⅛″ to 7/8″ thick. Designed to accommodate standard switchboard lamps such as WE #2 or equivalents supplied by General Electric or Sylvania. The PJ-150 lamp socket is interchangeable with WE Nos. 49 and 50.

List Price $1.75

LAMP CAPS

This series of 13/32″ diameter lamp caps are made for use with ADC PJ-150 Lamp Sockets and are interchangeable with standard lamp caps such as Stromberg-Carlson #31 and WE #2.

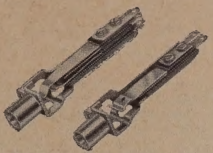
	Color	*Glass Surface*
PJ-151	White	Glossy
PJ-152	Red	Frosted
PJ-153	Green	Frosted

List Price $.35

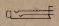
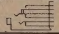
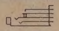
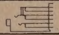
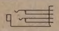
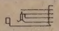
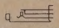
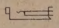
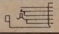
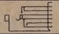
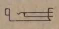
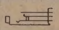
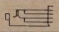
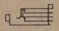
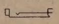
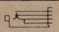
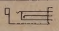
ADC INCORPORATED

MINNEAPOLIS 7, MINNESOTA

JACKS

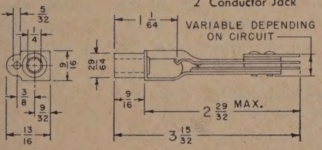


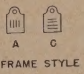
ADC is recognized as a leading supplier of long frame telephone jacks. The unique ADC one piece frame is strong, dimensionally stable, and readily interchangeable both mechanically and electrically with commonly used jacks. Plating withstands 50-hour salt spray tests. Lugs are hot tin dipped. Coin silver contacts are welded to nickel silver springs. Insulation is high grade phenolic.

ADC PART NO.	W.E. EQUIV.	FRAME STYLE	SCHEMATIC CIRCUIT	LIST
PJ238[2]	238A	A		$1.20
PJ240[2]	240 C	C		2.05
PJ241[2]	241A	A		1.70
PJ242[2]	242C	C		2.05
PJ339[2]	239A	A		1.60
PJ226[1]	226A	A		1.70
PJ237[1]	237A	A		1.45
PJ318[1]	218A	A		1.15
PJ336[1]	236C	C		1.90
PJ338[1]	438C	C		2.05
PJ418[1]	218C	C		1.20
PJ115[1]	215A	A		1.50
PJ116[1]	216A	A		1.50
PJ117[1]	217A	A		1.50
PJ123[1]	223A	A		1.05
PJ125[1]	225A	A		1.70
PJ203[1]	303A	A		1.40

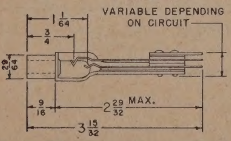
1. Use with all 2 conductor plugs.
2. Use with all 3 conductor ("Tip, Ring and Sleeve") plugs.

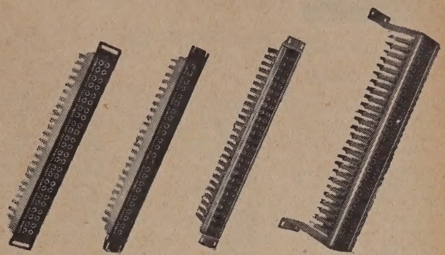
2 Conductor Jack





3 Conductor Jack





PJ-31 PJ-341 · PJ-33 PJ-343 · PJ-30 PJ-340 · PJ-35 PJ-350

JACK PANELS

ADC offers the most complete assortment of jack panels available today. ADC panels are used in television and broadcasting stations, recording studios, industrial paging systems, and communication equipment of all kinds where there is a need to efficiently switch and distribute audio signals. Molded of solid phenolic, reinforced with steel to provide maximum rigidity and strength. Jacks are spaced to permit use of any standard double plug with ⅝" spacing. Mounting brackets and designation strips furnished with each panel. All panels designed to fit standard 19" relay rack. Consult ADC for your standard and special jack panel requirements.

Double panel. Holds 48 jacks. Holes spaced to prevent patching adjacent circuits. Requires 2⅛" panel space.

TYPE	DESCRIPTION	LIST
PJ-31	Double panel, less jacks	$15.75
PJ-341	Double panel, with PJ-318 jacks	71.25

Double panel. Holds 52 jacks — requires 1¾" panel space. Double designation strip. Brackets for flush rack mounting. All jack mounting holes on ⅝" centers.

TYPE	DESCRIPTION	LIST
PJ-30	Double panel, less jacks	$21.50
PJ-340	Double panel, with PJ-318 jacks	82.50

Single panel. Holds 24 jacks. Holes spaced to prevent patching adjacent circuits. Requires 1¾" panel space.

TYPE	DESCRIPTION	LIST
PJ-33	Single panel, less jacks	$14.20
PJ-343	Single panel, with PJ-318 jacks	41.90

Double panel. Same as PJ-30 and PJ-340 except with stand off brackets to hold panel 7" in front of relay rack.

TYPE	DESCRIPTION	LIST
PJ-35	Double panel, less jacks	$26.00
PJ-350	Double panel, with PJ-318 jacks	87.50

ADC INCORPORATED
MINNEAPOLIS 7, MINNESOTA

- *Transformers* • *Filters* • *Reactors* • *Chokes*
- *Plugs & Jacks* • *Jack Panels*

CANNON ELECTRIC COMPANY

MS PLUG SERIES

MS ACCESSORIES

DUST CAPS*
MS25043-8
MS25043-10
MS25043-12
MS25043-14
MS25043-16
MS25043-18
MS25043-20
MS25043-22
MS25043-24
MS25043-28
MS25043-32
MS25043-36

AN JUNCTION SHELL—STRAIGHT

Description	Size
CA2120-1	8S
CA2120-2	10S
CA2120-21	10SL
CA2120-3	12-12S
CA2120-4	14-14S
CA2120-5	16-16S
CA2120-9	18
CA2120-10	20
CA2120-11	22
CA2120-12	24
CA2120-13	28
CA2120-14	32
CA2120-15	36

AN3057A CABLE CLAMPS WITH BUSHING

Description	Size	Description	Size
AN3057-3A	8S-10S	AN3057-12A	20-22
AN3057-4A	10SL, 12, 12S	AN3057-16A	24-28
AN3057-6A	14-14S	AN3057-20A	32
AN3057-8A	16-16S	AN3057-24A	36
AN3057-10A	18		

*NOTE: For dust caps with chain, add letter C immediately following last number. MS25043-20 would then be MS25043-20C.

The MS line of Cannon Plugs is designed to meet Military Specification MIL-C-5015...the military specification covering electrical connectors. Until recently this line was designated as the "AN" line. The complete MS plug consists of two mating units...a plug assembly and receptacle assembly.

MS plugs were designed originally for aircraft but are now used widely in other fields. These plugs, although designed and approved under military specification for use by the armed forces, are ideal for commercial and industrial applications where the same quality and dependability are desired. Industry in general has appreciated the relatively low costs, uniform quality and interchangeability as prescribed in the MIL Spec.

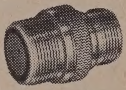
MS plugs are available with from 1 to 100 contacts in 15 different shell diameters ranging from .250 to 2.550 inches. Each plug meets or surpasses the latest Specification MIL-C-5015. Each insert arrangement is available with pin or socket contacts, and will mate with the MS type having the same size and layout.

Shells are high grade aluminum alloy, lightweight and non-magnetic. All metal parts other than contacts are cadmium plated with a chromate conversion finish in dull olive drab.

Contacts are made of the best conductive material commensurate with strength. Socket contacts are full-floating, have a closed entry construction to avoid distortion, and have beryllium copper springs with excellent fatigue properties.

MS3100A

WALL RECEPTACLE

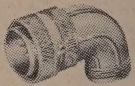


MS3101B

CABLE PLUG

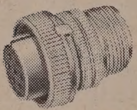
MS3102 A

BOX RECEPTACLE

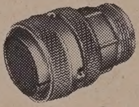


MS3108B

ANGLE 90° PLUG

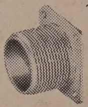


MS3106A



MS3106B

STRAIGHT PLUGS



DUMMY RECEPTACLE

DUST CAP

DUST CAP

JUNCTION SHELL

ACCESSORIES

NOMENCLATURE EXPLANATION

To permit easy, accurate ordering of the thousands of combinations of MS Cannon Plugs, the Military Specification spells out a functional numbering system. To illustrate this system, a typical plug MS3106A16-10P is explained:

MS 3106 A 16 - 10 P

P — INSERT STYLE: P for Pin Contacts and S for Socket Contacts

10 — INSERT ARRANGEMENTS: 1, 2, 3, 4 and up. These code numbers refer to a specific contact arrangement. (Refer to pages 4 and 5 for insert arrangements.)

16 — SHELL SIZE BASED ON COUPLING THREAD DIAMETER: 8S, 10SL, 12S, 12, 14S, 14, 16S, 16, 18, 20, 22, 24, 28, 32, and 36

A — CLASSES: A-solid, B-split

3106 — SHELL TYPE:
3100 Wall Receptacle
3101 Cable Plug
3102 Box Receptacle
3106 Straight Plug
3108 Angle Plug

MS — MS indicates that the Military Specification number has been assigned.

SEE YOUR AUTHORIZED CANNON PLUG DISTRIBUTOR FOR COMPLETE INFORMATION

CANNON ELECTRIC COMPANY

CANNON PLUGS

MS-E AND MS-R PLUG SERIES

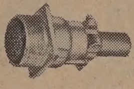
MS-E (formerly called AN-E) and the new MS-R plugs are designed to operate in extreme environmental conditions...such as moisture condensation, corona formations, flashover, and vibration. This environmental sealing is accomplished with a resilient grommet at the rear of the insulator which has internal restrictions in a wire cavity acting like "O" rings around the wire. Insulators are made of resilient material to prevent damage from vibration. Resilient insulators and grommets provide a plug completely sealed from cable to cable, through the mated plugs.

MS-E Cannon Plugs are available in two types: Series ME with external cable clamp, and Series CT with shortened endbells and internal clamping action.

The MS-R Cannon Plugs are identical to the MS-E Series CT. The only difference is the addition of an "O" ring seal about the 3106 and 3108 plug barrels which supplements the interfacial seal.

The shells, endbells, and coupling nuts are of aluminum alloy. They are cadmium plated and converted by chromate treatment to an olive drab finish as required by MIL-C-5015. Insulators and grommets are of a lightweight resilient polychloroprene.

The pin and closed entry socket contacts are machined from copper alloys of high conductivity, and are silver plated.


MS3100E (Series ME)

MS3100R and
MS3100E (Series CT)

WALL RECEPTACLES

MS3102R and
MS3102E (Series CT)

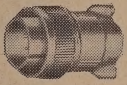
BOX RECEPTACLE

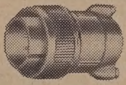
MS3101E (Series ME)

MS3101R and
MS3101E (Series CT)

CABLE PLUGS

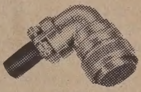
MS3106E (Series ME)


MS3106E (Series CT)
without "O" ring


MS3106R
with "O" ring

STRAIGHT PLUGS

MS3108E (Series CT)
without "O" ring


MS3108R
with "O" ring

ANGLE 90° RECEPTACLES

Insert Number	Total Contacts	Mech'l. Spacing	Service Rating	Contact Size #0	#4	#8	#12	#16	#20
8S-1	1	1/16	A					1	
10SL-3	3	1/16	A					3	
*10SL-4	2	1/16	A					2	
12S-3	2	1/16	A					2	
*14S-2	4		INST.					4	
14S-5	5		INST.					5	
14S-6	6		INST.					6	
14S-7	3	1/16	A					3	
*14S-9	2	1/16	A					2	
16S-1	7	1/16	A					7	
16S-4	2	1/8	D					2	
16S-8	5	1/16	A					5	
16-9	4	1/16	A				2	2	
16-10	3	1/16	A				3		
18-1	10	1/16	A					4	
			INST.					6	
18-4	4	1/8	D					4	

Insert Number	Total Contacts	Mech'l. Spacing	Service Rating	Contact Size #0	#4	#8	#12	#16	#20
18-8	8	1/16	A				1	7	
18-9	7		INST.				2	5	
18-11	5	1/16	A				5		
*18-12	6	1/16	A					6	
*18-19	10	1/16	A					8	2
20-4	4	1/8	D				4		
20-7	8	1/8	D					4	
		1/16	A					4	
20-15	7	1/16	A				7		
20-16	9	1/16	A				2	7	
*20-19	3	1/16	A			3			
20-27	14	1/16	A					6	
			INST.					8	
20-29	17	1/16	A					17	
22-14	19	1/16	A					19	
22-23	8	1/8	D				1		
		1/16	A				7		

Insert Number	Total Contacts	Mech'l. Spacing	Service Rating	Contact Size #0	#4	#8	#12	#16	#20
*24-5	16	1/16	A					16	
24-20	11	1/8	D				2	9	
24-28	24	1/16	INST.					24	
28-11	22	1/16	A				4	18	
28-12	26	1/16	A					26	
*28-15	35	1/16	A				35		
28-17	15	1/4	B					1	
		1/8	D					3	
		1/16	A					11	
28-21	37	1/16	A					37	
32-7	35	1/16	A				7	24	
			INST.					4	
*32-8	30	1/16	A				6	24	
32-13	23	1/8	D				5	18	
32-17	4	1/8	D		4				
36-10	48	1/16	A					48	

*Inactive for new military design but available for replacement or non-military purposes.

NOMENCLATURE EXPLANATION

MS 3106 E 20-27 S (Series ME)
MS 3106 E 20-27 S (Series CT)
MS 3106 R 20-27 S

MS-E Type

INSERT STYLE: P for Pin Contacts and S for Socket Contacts

INSERT ARRANGEMENTS: 1, 2, 3, 4 and up. These code numbers refer to a specific contact arrangement.

SHELL SIZE BASED ON COUPLING THREAD DIAMETER: 8S, 10SL, 12S, 12, 14S, 14, 16S, 16, 18, 20, 22, 24, 28, 32, and 36

CLASSES: E—Environmental Resisting R—Environmental Resisting (lightweight)

SHELL TYPE: 3100—Wall Receptacle 3102—Box Receptacle 3106—Straight Plug
3101—Cable Plug 3103—Potting Receptacle (AER) 3108—Angle Plug

MS indicates that the Military Specification number has been assigned.

SEE YOUR AUTHORIZED CANNON PLUG DISTRIBUTOR FOR COMPLETE INFORMATION

CANNON
PLUGS

CANNON ELECTRIC COMPANY

MORPHO* PLUG SERIES MH

MH1R-12

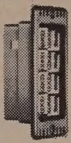
MH1P-12

MH2R-24

MH2P-24

MH3R-36

MH3P-36


MH4R-48

MH4P-48

MORPHO is the trade name of the new Cannon Plug Series MH. MORPHO represents a new concept in the art of plug design and application. A single style hermaphrodite contact is used for both plug and receptacle. The contacts are crimp-type to eliminate soldering. After crimping, the contacts are snapped into the insulator.

Hermaphrodite features are also embodied in the insulators. A single insulator is used for either the plug or the receptacle. Each insulator will accommodate up to 12 contacts. Insulators are designed in modular form so that they may be arranged to provide numerous alternate positions.

Low engagement and disengagement forces of MORPHO will be of special interest to users requiring high density layouts.

Here are some major features of the MORPHO plug:

CONTACTS

MORPHO plugs use a single style of snap-in removable crimp contact. There is no pin and socket contact of the conventional type. Instead, one contact is used for both the plug and receptacle. Contacts are designed for crimping wire sizes #20 through #27.

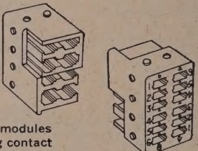
Contact material is a fine grain alloy of phosphor bronze. Standard contact plating is Speculum.

INSULATORS

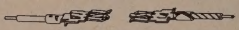
Only one insulator is required for either the plug or receptacle. By reversing one or two identical insulators, they will mate. This is because of the hermaphrodite design of the insulator.

Each insulator module will accommodate up to 12 contacts. Contacts are completely protected within the insulator when installed.

Insulator and shell material is cellulose acetate, series XFB. Cellulose acetate has excellent characteristics in the areas of impact strength, tensile strength, and deformation under load. In addition, it is classed as self-extinguishing by Underwriters' Laboratories.



Insulator modules
showing contact
arrangement


MORPHO multiple-leaf contact

NOMENCLATURE EXPLANATION

MH4P-48
Number of contacts
Shell type: P for plug
R for receptacle
Number of insulator modules
MH "MORPHO" Series

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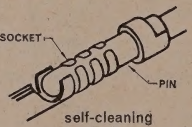
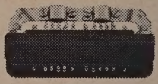
*TRADE NAME OF CANNON ELECTRIC COMPANY PATENTS PENDING

CANNON/**TUCHEL** PLUGS

The "CAT" series of Cannon Plugs introduces a radical departure from traditional contact design. Self-cleaning miniature contacts provide reliable contact action in even the smallest spaces. Extensively used in aircraft, portable instrumentation and other miniature electronic equipment, they offer the smallest construction design consistent with highest electrical performance.



self-cleaning
contacts


PLUG

RECEPTACLE

KQ/KR PLUG SERIES

Cannon Plug KQ/KR is a new miniature designed to the more severe requirements of today's—and tomorrow's—missile and aircraft. Also adaptable to general-duty applications, these new Cannon Plugs fill industry's need for an all-purpose miniature plug.

Special features of the KQ/KR series are: a single receptacle which will accept either of two quick coupling devices—a push-pull or a bayonet-lock mating plug.

High Altitude Performance

Crimp Type Ring-Loc Contacts

Monobloc Insert-Grommet Assembly

KQ6

KRO

KR6

SEE YOUR AUTHORIZED CANNON PLUG DISTRIBUTOR FOR COMPLETE INFORMATION

CANNON ELECTRIC COMPANY

CANNON PLUGS

STANDARD K AND RK PLUG SERIES

The Standard K Series of Cannon Plugs was the first complete plug series designed (in the late 30's) as airborne equipment. They are lightweight, rugged and durable, and are used extensively in many fields outside of the aviation industry.

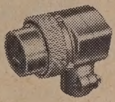
The principal difference between MS and K types is found in the coupling thread...the K line uses acme thread and the MS line uses unified screw threads.

While K and RK are related fittings, their differences prevent mating of a K type with the RK type. Essentially the RK is a reverse coupling version of a standard K. Because of this, different insert housings and coupling means are employed, prohibiting interconnection of the two types.

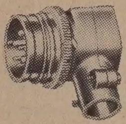
Shell parts are aluminum alloy with standard cadmium finish. Contacts are brass, silver-plated, and are machined from brass rod, with tinned solder pots.

K and RK plugs are available in 7 basic shell types having 8 insert sizes, totalling more than 220 arrangements with a variety of amperage and voltage capacities. They are available with from 1 to 110 contacts in eight size diameters ranging in size from 5/8 to 2-1/4 inches.

K-23


K-23C

RK-24


RK-24C

ANGLE 90° PLUGS

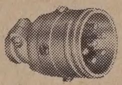
K-31S

K-32SL

RK-31SL

WALL RECEPTACLES

K-21C

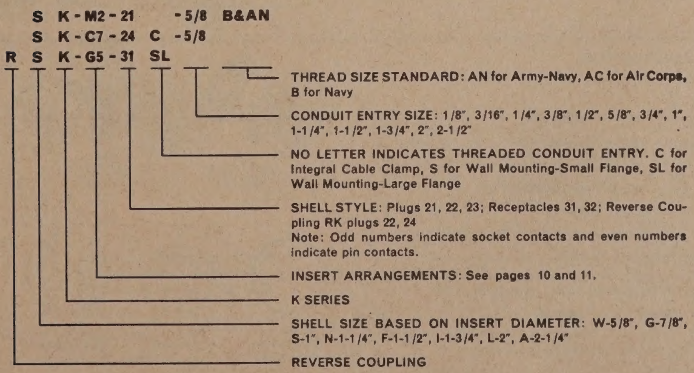

K-22C

RK-22C

STRAIGHT PLUGS

NOMENCLATURE EXPLANATION

With literally thousands of different combinations available in the Standard K Series, a functional nomenclature system was designed to allow fast, accurate identification and ordering ease. To illustrate this system, some typical plugs are explained.


S K-M2-21 -5/8 B&AN
S K-C7-24 C -5/8
R S K-G5-31 SL

THREAD SIZE STANDARD: AN for Army-Navy, AC for Air Corps, B for Navy

CONDUIT ENTRY SIZE: 1/8", 3/16", 1/4", 3/8", 1/2", 5/8", 3/4", 1", 1-1/4", 1-1/2", 1-3/4", 2", 2-1/2"

NO LETTER INDICATES THREADED CONDUIT ENTRY. C for Integral Cable Clamp, S for Wall Mounting-Small Flange, SL for Wall Mounting-Large Flange

SHELL STYLE: Plugs 21, 22, 23; Receptacles 31, 32; Reverse Coupling RK plugs 22, 24
Note: Odd numbers indicate socket contacts and even numbers indicate pin contacts.

INSERT ARRANGEMENTS: See pages 10 and 11.

K SERIES

SHELL SIZE BASED ON INSERT DIAMETER: W-5/8", G-7/8", S-1", N-1-1/4", F-1-1/2", I-1-3/4", L-2", A-2-1/4"

REVERSE COUPLING

SEE YOUR AUTHORIZED CANNON PLUG DISTRIBUTOR FOR COMPLETE INFORMATION

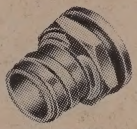
CANNON ELECTRIC COMPANY

MC SUBMINIATURE PLUG SERIES

MC Subminiature Cannon Plugs are small, cylindrical, sealed plugs of exceptional sturdy construction. These plugs have been designed to withstand moderately severe handling and environmental conditions, and incorporate a shell which has maximum strength within its volume limits. Sealing is accomplished by interfacial compression of the resilient insert, the latter affording a high degree of vibration resistance at the same time. The strong coupling nuts utilize a rugged special Acme thread to permit fast, simple engagement and disengagement.

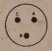
MC-11E MC-12E

STRAIGHT PLUGS

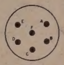


MC-14E
STRAIGHT RECEPTACLE

MC-23E
ANGLE 90° PLUG



8-3
3 CONTACTS



10-6
6 CONTACTS

NOMENCLATURE EXPLANATION

MC - 13E - 10 - 6P N

- N — BARREL POSITION
- P — TYPE OF CONTACTS: P for Pin Contacts and S for Socket Contacts
- 6 — NUMBER OF CONTACTS
- 10 — INSERT SIZE
- E for Resilient Insert
- 13 — SHELL TYPE
- MC — PLUG SERIES

FOR AVAILABILITY OF ANY MC ASSEMBLY, SEE YOUR AUTHORIZED CANNON DISTRIBUTOR

K MINIATURE PLUG SERIES

The K Miniature Series of Cannon Plugs was designed for applications requiring smaller plug types in cylindrical designs with metal shells. They incorporate design features to provide high performance and maximum flexibility. Rigid standardization has been incorporated in this series, allowing interchangeability from the standpoint of usage.

Shells for plugs, receptacles, and endbells are high tensile aluminum alloy, cadmium plate finish with chromate conversion. Insert material is Zytel, except high current types which are melamine. K08 (90°) and K45 (45°) endbells have removable caps for inspection and potting.

K00 K02

BOX RECEPTACLES

K01
FLANGELESS
RECEPTACLE

K03
BARREL ASSEMBLY
AND COUPLING NUT

NOMENCLATURE EXPLANATION

K 00 19L 20 P N

K 10–19 – 20 S N

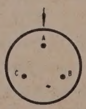
- N — INSERT POSITION
- S — TYPE OF CONTACTS: P for Pin Contacts and S for Socket Contacts
- 20 — NUMBER OF CONTACTS
- 19 — SHELL SIZE
- 10 — SHELL STYLE
- K — PLUG SERIES

FOR AVAILABILITY OF ANY K MINIATURE ASSEMBLY, SEE YOUR AUTHORIZED CANNON DISTRIBUTOR

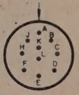
K06
JUNCTION
SHELL

K08
90° JUNCTION
SHELL

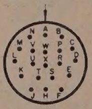
K45
45° JUNCTION
SHELL



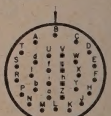
SIZE 16
3 High Volt.
Contacts



SIZE 16
10 Contacts



SIZE 19
20 Contacts



SIZE 21
30 Contacts

SEE YOUR AUTHORIZED CANNON PLUG DISTRIBUTOR FOR COMPLETE INFORMATION

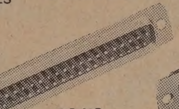
CANNON ELECTRIC COMPANY

JUNCTION SHELLS

90° JUNCTION SHELL

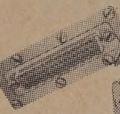
DE-9P

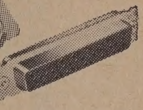
DA-15P

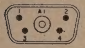

DC-37P

DB-25P

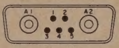
DD-50P


GUIDE PIN PLATE

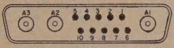

FLOATING MOUNT

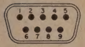


DE-5C1P

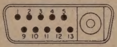


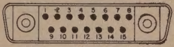
DA-A7C2P


A3 A2 5 4 3 2 1 A1
10 9 8 7 6
DB-13C3P



DE-9P


1 2 3 4 5
9 10 11 12 13
DA-11C1P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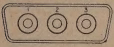
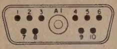
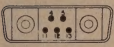
9 10 11 12 13 14 15
DB-17C2P



DA-3C3P


1 2 3 A1 4 5 6
7 8 9 10
DA-A11C1P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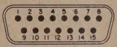
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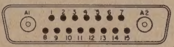
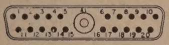
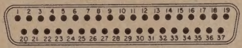
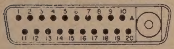
9 10 11 12 13 14 15
DA-15P


A1 1 2 3 4 5 6 7 A2
8 9 10 11 12 13 14 15
DB-A17C2P


1 2 3 4 5 A1 6 7 8 9 10
11 12 13 14 15 16 17 18 19 20
DB-21C1P


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
DC-37P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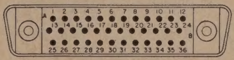
11 12 13 14 15 16 17 18 19 20
DB-B21C1P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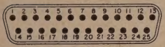
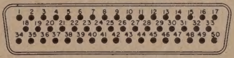
13 14 15 16 17 18 19 20 21 22 23 24
25 26 27 28 29 30 31 32 33 34 35 36
DD-38C2P


1 2 3 4 5 6 7 8 9 10 11 12 13
14 15 16 17 18 19 20 21 22 23 24 25
DB-25P


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
DD-50P

GOLDEN-D/D SUBMINIATURE

D Subminiature plugs are small, lightweight, rectangular plugs in 5 sizes, with 9, 15, 25, 37, or 50 gold-plated contacts. These compact plugs feature steel or brass shells with gold chromate over cadmium finish, and Zytel or Diall insulators. They will withstand a test voltage (60 cps ac rms) of 1300 volts for one minute with no evidence of breakdown. D Subminiatures are available with contact terminations for coaxial cables and taper pins. Solderless, crimp-type, snap-in contacts are supplied in addition to standard solder cup styles.

The GOLDEN-D is an addition to the D Subminiature line. It supplements the standard "D" and is designed for more critical applications. The GOLDEN-D is dimensionally and physically interchangeable with the standard D with the exception of the solder pot and rear insulator extensions, which are slightly longer. The added length provides better contact stability and increased insulator strength. All-new monobloc insulators are incorporated in the GOLDEN-D for increased strength in miniature size. Insert material is forest green Diallyl-phthalate. Miniature socket contacts are closed-entry, providing protection against damage by oversized test probes. Pins and sockets are gold plated for high reliability. Coaxial contacts, except grounded coax, are designed to permit them to be snapped-in to the insulator after they have been secured to the cables. Contacts are also removable. Shell finish on the new GOLDEN-D is golden iridite over cadmium plate. Four GOLDEN-D types are available:

GOLDEN-D with closed-entry contacts
GOLDEN-D with snap-in ungrounded coaxial contacts
GOLDEN-D with grounded coaxial contacts
GOLDEN-D with high voltage contacts

Coaxial contacts are available for both the Standard D Subminiature and GOLDEN-D Series. Accessories for D Subminiature plugs include: Straight Junction Shells, Straight Clamp Type Junction Shells, 90° Junction Shells, Guide Pin Plates, and Floating Mounts.

NOMENCLATURE EXPLANATION

DA – 15S
DAH – 15P – 001
DAM – 15P

CONTACT TERMINAL DESIGN
-**1—Eyelet Type; -**2—Solder Pot Type
MOUNTING FLANGE DESIGN
TYPE OF CONTACTS: P for Pin Contacts and S for Socket Contacts
INSERT ARRANGEMENT
H—HERMETICALLY SEALED VERSION
M—GOLDEN-D SERIES
SHELL SIZE
PLUG SERIES

GSO2 HERMETICALLY SEALED PLUGS

FLANGELESS
TYPE 00

ROUND FLANGE
TYPE 25

SQUARE FLANGE
TYPE 11

HEX FLANGE
TYPE 30

GSO2 Hermetically Sealed Plugs are used wherever instruments are required to be hermetically sealed within a partial vacuum, inert gas, or a constant or controlled pressure.

GSO2 plugs are made with standard MS insert layouts, and with a variety of mounting flanges. These plugs are also available with high-voltage, high-current, and coaxial contacts.

Shells and pin contacts are of steel. Vitreous insulation is used in a manner which creates an hermetic seal and prevents a leakage rate in excess of one micron cubic foot per hour at a pressure differential of 1 atmosphere as tested on a mass spectrometer.

NOMENCLATURE EXPLANATION

GSO2 – 10SL – 3P – 001

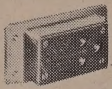
CONTACT TERMINAL DESIGN
-**1—Eyelet Type; -**2—Solder Pot Type
MOUNTING FLANGE DESIGN
CONTACT LAYOUT
SHELL SIZE
PLUG SERIES

FOR AVAILABILITY OF ANY GSO2 ASSEMBLY, SEE
YOUR AUTHORIZED CANNON DISTRIBUTOR

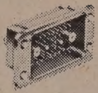
SEE YOUR AUTHORIZED CANNON PLUG DISTRIBUTOR FOR COMPLETE INFORMATION

CANNON ELECTRIC COMPANY

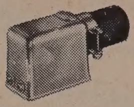
RACK/PANEL **DPD** PLUG SERIES



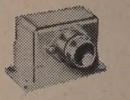
DPD-33S



DPD-34P



DPD-CG-1 1/16 x 1 1/4
JUNCTION SHELL



DPD-34CL-5/8 AN
JUNCTION SHELL

DPD plugs are designed for unit plug-in applications. They are distinguished from other Cannon lines by their rectangular shape and they provide maximum space utilization on rack/panel chassis equipment. One half of the plug is mounted to a radio rack or panel, for instance, and the other half is mounted to the instrument. By this means instruments can be easily removed for inspection and repair.

The DPD is the standard of the DP (Dual Panel) line and accommodates the widest range of contacts in both style and number. They are available with from 2 to 78 contacts in 22 basic insert arrangements, plus variations. A variety of endbells for junction shells are available. The shell is chamfered to facilitate engagement.

Shell material is die-cast aluminum alloy with cadmium plate finish. Insulation is molded melamine or fabricated phenolic. Inserts are retained by insert retaining clips. Retaining clip is metallic and will ground coaxial contacts unless insulation is specified.

DPD LAYOUT NUMBER	Basic Layout	Number of Contacts (Amperes) 10	15	30	40	60	80	C*	T**
-C6	C6							6	
-N10	N10	6					4		
-12C3	12C3	7	2					3	
-M12	M12		12						
-A14	A14	6	4					4	
-G14	A14	6	4					4	
-15C2	15C2		10	3				2	
-A15	15C2		10	3	2				
-B15	15C2		10	3	1			1	
-B18	B18	13	3			2			
-G20	G20		10	2	8				
-B20C2	B20C2	12	6					2	
-23C3	23C3	20						3	
-F23C3	23C3	20						3	
-B28	C28	28							
-C28	C28	22							6
-30	32C2	28			2				
-32	32C2	28			4				
-A32	32C2	30			2				
-32C2	32C2	28			2			2	
-D32C2	32C2	28			2			2	
-E32C2	32C2	28			2			2	
-40	40	40							
-45	45	43		2					
-66	65C1	66							
-78	78	78							

*Coaxial Contacts
**Thermocouple Contacts

NOMENCLATURE EXPLANATION

DPD – 32C2 – 34P – 1G

MOUNTING VARIATION:

1A—4 holes 0.144 diameter, for No. 6 screw

1B—4 holes 0.144 diameter, 100° countersink for No. 6 flat head screw

1G—4 holes 0.152 diameter, 82° countersink for No. 6 flat head screw

1L—4 holes 0.144 diameter, 82° countersink for No. 6 flat head screw

1A SUPPLIED UNLESS OTHERWISE SPECIFIED

CONTACT TYPE: P for Pin Contacts and S for Socket Contacts

SHELL DESIGN: Even numbers generally indicate Pin Insert Assemblies and odd numbers generally indicate Socket Insert Assemblies

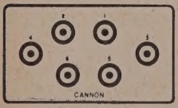
INSERT ARRANGEMENT

PLUG SERIES

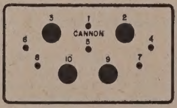
DPD ACCESSORIES

DPD-33	Junction Shell
DPD-34-7/8	Junction Shell
DPD-34CL-5/8 AN	Junction Shell
DPD-CG-1 1/16 x 1 1/4	Junction Shell
DPD-33 and -34	Dust Cap

DPD INSERT ARRANGEMENTS



C6



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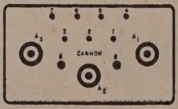
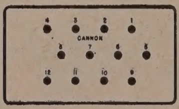
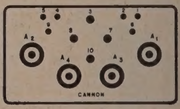


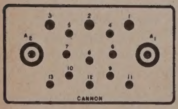
12C3



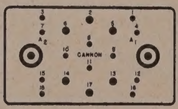
M12



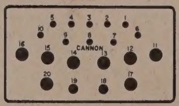
A14



15C2



B20C2



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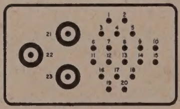
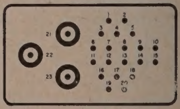


23C3

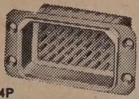


F23C3

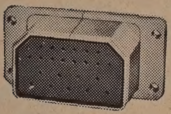
SEE YOUR AUTHORIZED CANNON PLUG DISTRIBUTOR FOR COMPLETE INFORMATION

CANNON ELECTRIC COMPANY

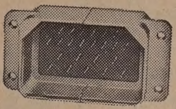
DPA-33S



DPA-34P



DPX-33S



DPX-34P

DPA LAYOUT

Layout Number	Basic Layout	Number of Contacts (Amperage) 5	10	Coax.	HV
24C2	24	22		2	
32	32	32			

DPX LAYOUT

Layout Number	Basic Layout	Number of Contacts (Amperage) 5	10	41	Coax.	HV
C7	C7					7
C7E	C7				7	
13	13		13			
13C1	13HV1	12			1	
13HV1	32C2	12				1
J16C3	B16C3		13		3	
Q16C3	1316C3		13		3	
17	17	17				
23	23	23				
25C3	25C3	22			3	
E25C3	25C3	22			3	
26	26		26			
32	32	29	3			
40	40	40				
40C1	40C1	39			1	

ACCESSORIES

DPA-CG-21/32	Junction Shell
DPA-CG-21/32	90° Junction Shell
DPA-59	Dust Cap
DPA-60	Dust Cap

DPX-CG-25/32	Junction Shell
DPX-CG-25/32	90° Junction Shell

DPA AND DPX MINIATURE PLUGS

In response to a need for a small rectangular rack/panel plug of great strength, Cannon Electric has designed two rugged miniatures, the DPA and DPX. They are similar to the DPD plugs but occupy approximately 35% (for the DPA) and 46% (for the DPX) less area for rack/panel chassis mounting.

The DPA utilizes a one-piece shell construction. The elimination of conventional insert-retaining screws provides a maximum utilization of insert area and results in a new ease of assembly. The insert is held in place by a retaining clip at the rear of the shell.

The DPX has a two-piece split shell construction. Inserts are held in place by means of internal grooves molded into the shell. These grooves accommodate raised shoulders on the insulator, completely embracing and locking the insert assembly. An external assembly ring slips over the shell halves to hold them together. The DPX can be completely assembled without tools.

The standard insert material for the DPA and DPX is melamine. DPA insert layouts accommodate 5 amp and small coaxial contacts. DPX insert layouts accommodate 5 amp, 10 amp, and small coaxial contacts.

NOMENCLATURE EXPLANATION

DPA – 32 – 34 P

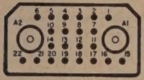
CONTACT TYPE: P for Pin Contacts and S for Socket Contacts

SHELL DESIGN: Even numbers generally indicate Pin Insert Assemblies and odd numbers generally indicate Socket Insert Assemblies

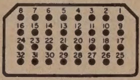
INSERT ARRANGEMENT

PLUG SERIES

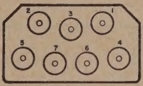
FOR AVAILABILITY OF ANY DPA OR DPX ASSEMBLY, SEE YOUR AUTHORIZED CANNON DISTRIBUTOR



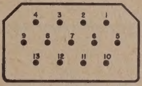
DPA-24C2



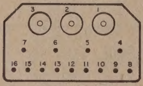
DPA-32



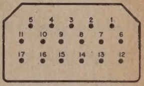
DPX-C7



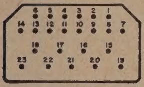
DPX-13



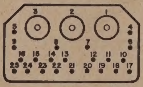
DPX-16C3



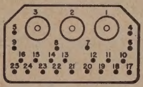
DPX-17



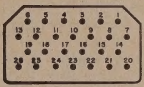
DPX-23



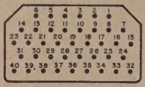
DPX-25C3



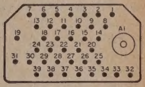
DPX-E25C3



DPX-26

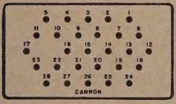


DPX-40



DPX-40C1

DPD INSERT ARRANGEMENTS (cont.)



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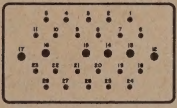
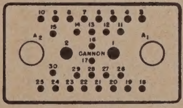


C28



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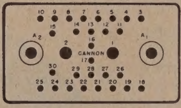

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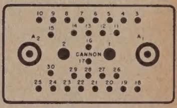
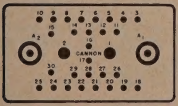
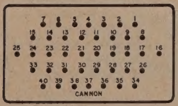


32C2



D32C2



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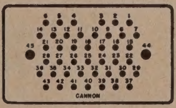

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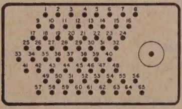

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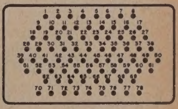

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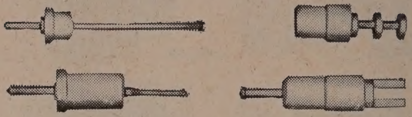
SEE YOUR AUTHORIZED CANNON PLUG DISTRIBUTOR FOR COMPLETE INFORMATION

CANNON ELECTRIC COMPANY

SUBMINIATURE **KWIK-TERM** TERMINALS



Cannon Kwik-Term subminiature terminals are now available for use in conjunction with Radar, TV, HF, UHF, VHF, Microwave, and other "sophisticated" circuits.

Kwik-Terms are easily installed into an electronic chassis by simply pressing them into a pre-punched or pre-drilled hole. The TEFLON material of the insulator when pressed into a slightly smaller mounting hole tends to relieve its own stress. This causes a rivet-type action in the TEFLON which anchors and seals the terminal securely and permanently to the chassis. No nuts, washers, staking or soldering is required.

The following features illustrate the advantages of Cannon Kwik-Terms:

- Ease of assembly even in crowded installations
- Installation in seconds
- Saves weight and space—eliminates terminal boards
- Rugged—Kwik-Terms resist vibration and shock
- Wide variety of terminal configurations and pin lengths
- Kwik-Terms are heat resistant for soldering
- Wide variety of finishes, colors, and soldering lugs can be supplied to order

NOMENCLATURE EXPLANATION

KT – SR – 148 – 1 – *

COLOR CODE: No dash number for Natural Teflon, 2-Red, 3-Black, 4-Brown, 5-Green, 6-Orange, 7-Blue, 8-Yellow, 9-Violet, 10-Grey
MODIFICATION NUMBER
INSULATOR DIAMETER In $\frac{\text{In.}}{1000}$
REVERSE TYPE
TERMINAL STYLE
LINE PREFIX (Kwik-Term)

FEED-THRU TERMINALS

KT-F-148-1
KT-F-148-2
KT-F-148-8
KT-F-148-10
KT-F-148-11
KT-F-148-13
KT-F-148-15
KT-F-148-16
KT-F-171-2
KT-F-171-3
KT-F-171-5
KT-F-171-21
KT-F-185-1

STAND-OFF TERMINALS

KT-S-148-1
KT-S-148-2
KT-S-148-3
KT-S-148-8
KT-S-148-9
KT-S-148-10
KT-S-165-1
KT-S-165-2
KT-S-165-6
KT-S-165-8
KT-S-171-1
KT-S-171-5
KT-S-171-6
KT-S-171-7
KT-S-171-8
KT-S-215-1
KT-SR-148-8

PROBES AND PLUGS

KT-P-185-1
KT-P-185-2
KT-P-185-3

TEST JACKS

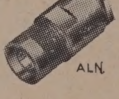
KT-J-185-1
KT-J-185-2
KT-J-185-3
KT-J-185-4

ALRF PLUG SERIES

This new Cannon Plug Series of Aluminum RF Coaxial Plugs and Adapters utilize aluminum as the major portion of material in order to reduce weight. Included in this new series are aluminum variations of the standard N plugs and adapters for Foamflex and Raytherm rigid cables.

The new ALN line is 35% lighter than standard N types. Their electrical performance equals or betters that of the standard N. They have a black anodic finish for maximum corrosion resistance.

AL-A-3495-0 Deburring Tool
ALA-3495-1 Flaring Tool
ALN-PR-M-60
ALN-PR-M-8
ALN-PL-M-8
ALN-PL-M-55
ALN-JB-F-8
ALN-JC-F60
ALN-JC-F-8
ALN-RB-F-0
ALN-PP-F-0
ALN-ALN-ASB-FF
ALN-ALN-AS-FF
3ALN-AT-2FM


ALN

NOMENCLATURE EXPLANATION

ALN – PL * – M – 55

CABLE CODE

0	No callout
8	RG-8/U or 9/U
11	RG-11/U
55	RG-58A/U
59	RG-59, 62, 71/U
60	Foamflex R-2401

MALE (M) OR FEMALE (F) CONTACT
MODIFICATION NUMBER

PLUG STYLE: OR ADAPTER STYLE:

PL—Plug, Standard Nut
PR—Plug, Retractable Nut
JB—Jack, Bulkhead
JC—Jack, Cable
JP—Jack, Panel
RB—Receptacle, Bulkhead
RP—Receptacle, Panel

ASB—Adapter, Straight Bulkhead
AR—Adapter, Right Angle
AS—Adapter, Straight
AT—Adapter, Tee
CC—Dust Cap with Chain
DC—Dust Cap without Chain

COAXIAL SERIES
ALUMINUM LINE

SEE YOUR AUTHORIZED CANNON PLUG DISTRIBUTOR FOR COMPLETE INFORMATION

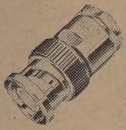
CANNON ELECTRIC COMPANY

CANNON PLUGS

STANDARD **RF** COAXIAL PLUG SERIES

Cannon Electric carries the most complete line of RF plugs in the industry for thousands of military, industrial and commercial applications. These Standard RF Coaxial Plugs have an established reputation as quality RF components, having served the electronics industry for more than 17 years.

These RF plugs are designed to connect and terminate coaxial lines used in radio frequency transmission with a minimum loss of energy. They have been classified by ASESA (Armed Services Electro-Standards Agency, Fort Monmouth, New Jersey) into various series according to their function. The series—BNC, N, C, SC, LC, HN, MB, SM, etc.—also correspond roughly to the size of cables with which the plugs are used.

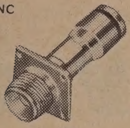

BNC

SM

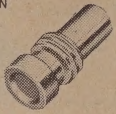
CABLE TERMINATION

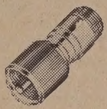
SMD

C


HN

N


REDUCING ADAPTER


ADAPTER BETWEEN SERIES

NUMBER	DESCRIPTION	RG CABLES
	BNC SERIES	
UG-88/U	Plug	55, 58/U
UG-88C/U	Plug	55, 58/U
UG-89/U	Cable Jack	55, 58/U
UG-89B/U	Cable Jack	55, 58/U
CW-123A/U	Cap & Chain	—
CW-155A/U	Cap	—
CW-159/U	Cap & Chain	—
UG-185/U	Receptacle	Small
UG-260/U	Plug	59, 62, 71/U
UG-260B/U	Plug	59, 62, 71/U
UG-261/U	Cable Jack	59, 62, 71/U
UG-261B/U	Cable Jack	59, 62, 71/U
UG-262/U	Panel Jack	59, 62, 71/U
UG-262B/U	Panel Jack	59, 62, 71/U
UG-274/U	Tee Adapter	Small
UG-274A/U	Tee Adapter	Small
UG-290/U	Receptacle	Small
UG-290A/U	Receptacle	Small
UG-291/U	Panel Jack	55, 58/U
UG-291B/U	Panel Jack	55, 58/U
UG-306/U	R. A. Adapter	Small
UG-306A/U	R. A. Adapter	Small
UG-414/U	Str. Adapter	Small
UG-447/U	Panel Recept.	Small
UG-491/U	Str. Adapter	Small
UG-492A/U	Str. Adapter	Small
UG-492B/U	Str. Adapter	Small
UG-535/U	R. A. Adapter	Small
UG-604/U	Bulk. Recept.	Small

NUMBER	DESCRIPTION	RG CABLES
UG-625/U	Bulk. Recept.	Small
UG-657/U	Bulk. Recept.	Small
UG-909/U	Bulk. Jack	55, 58/U
UG-910/U	Bulk. Recept.	59, 62, 71/U
UG-911A/U	Bulk. Recept.	Small
UG-912/U	Bulk. Recept.	Small
UG-913/U	R. A. Plug	55, 58/U
UG-932/U	Hi-Volt. Plug	59, 62, 71/U
UG-1094/U	Bulk. Recept.	Small
UG-1098/U	R. A. Bulk. Recept.	Small
052150-0001	R. A. Plug	59, 62, 71/U
	SM SERIES	
UG-692/U	Plug	59, 62/U
UG-697/U	Recept.	—
UG-699/U	Plug	58/U
	CABLE TERMINATIONS	
MX-1530A/U	Bulkhead	59, 62, 71/U
MX-1684/U	Bulkhead	55, 58/U
	SMD SERIES	
052710-0001	Plug	.174 O.D.
052844-0001	Panel Recept.	Miniature
	C SERIES	
UG-568/U	Panel Recept.	Medium
	HN SERIES	
UG-59A/U	Plug	8, 9, 10/U

NUMBER	DESCRIPTION	RG CABLES
	N SERIES	
UG-18C/U	Plug	5, 6, 21/U
UG-21B/U	Plug	5, 6, 21/U
UG-21D/U	Plug	8, 9, 10/U
UG-22D/U	Panel Jack	8, 9, 10/U
UG-23B/U	Cable Jack	8, 9, 10/U
UG-23D/U	Cable Jack	8, 9, 10/U
UG-27A/U	R. A. Adapter	—
UG-27C/U	R. A. Adapter	—
UG-29B/U	Str. Adapter	—
UG-30D/U	Str. Adapter	—
UG-57B/U	Str. Adapter	—
UG-58A/U	Panel Recept.	Medium
UG-536/U	Plug	55, 58/U
UG-536A/U	Plug	55, 58/U
MX-913/U	Cap & Chain	—
UG-1185/U	Plug	8, 9, 10, 87A, 115, 115A/U
050962-0001	Cap & Chain	—
	REDUCING ADAPTERS	
UG-175/U	For UHF Plugs	55, 58/U
UG-176/U	For UHF Plugs	59, 62, 71/U

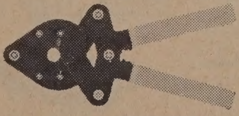
ADAPTERS BETWEEN SERIES

NUMBER	DESCRIPTION	ADAPTS TO
UG-201/U	Str. Adapter	BNC to N
UG-255/U	Str. Adapter	BNC to UHF
UG-273/U	Str. Adapter	BNC to UHF
UG-606/U	Str. Adapter	BNC to N
UG-970/U	R. A. Adapter	UHF to twin UHF
UG-971/U	R. A. Adapter	C to twin UHF

UHF CRIMPEE SERIES

A recent addition to the RF line is the inexpensive, completely solderless UHF "Crimpee" Plug for such applications as mobile communication equipment, ham radio sets, and television master antenna distribution systems. This plug uses a simplified crimping method for rapid assembly. It is to be used as a replacement for standard PL-259 plugs, and the pin contacts are designed to fit standard 50-239 sockets. These constant-impedance plugs mate with the standard UHF Series of RF receptacles. An inexpensive crimp tool CCTUHF-1 is available.

CRIMPEE PLUG
UHF-PR-M-8


CRIMP TOOL
CCTUHF-1

UHF CRIMPEE SERIES

NUMBER	DESCRIPTION	RG CABLES
UHF-PR-M-8	Plug	8, 9/U
UHF-PR-M-11	Plug	11/U
UHF-PR-M-55	Plug	58C/U
UHF-PR-M-59	Plug	59A/U
CCTUHF-1	Crimp Tool	8, 9, 11, 58C, 59A/U

SEE YOUR AUTHORIZED CANNON PLUG DISTRIBUTOR FOR COMPLETE INFORMATION

CANNON ELECTRIC COMPANY

XLR PLUG SERIES

XLR Series of Cannon Plugs is a newly expanded audio series . . . the most modern addition to the long line of Cannon Plugs featured on all top-quality microphones. It's really quiet, too!

New resilient insulator and specialized construction of socket contact assembly protects against disagreeable mechanical interference . . . noise problems encountered with plugs when their cables are moved, pulled, or subjected to shock.

Features streamline design, satin nickel finish, integral cable clamp, neoprene cable relief, and time-tested latchlock. Available with three 15-amp or four 10-amp contacts.

XLR-*-11C

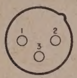
XLR-*-12C

XLR-*-13

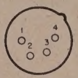
XLR-*-14

XLR-*-15

XLR-*-11C PLUG (Socket Insert)
XLR-*-12C RECEPTACLE (Pin Insert)
XLR-*-13 RECEPTACLE (Socket Insert)
XLR-*-13N RECEPTACLE (Socket Insert)
XLR-*-14 RECEPTACLE (Pin Insert)
XLR-*-14N RECEPTACLE (Pin Insert)
XLR-*-15 RECEPTACLE (Socket Insert)
XLR-*-31 RECEPTACLE (Socket Insert)
XLR-*-32 RECEPTACLE (Pin Insert)
XLR-*-35 SINGLE GANG WALL RECEPT. (Socket Insert)
XLR-*-36 SINGLE GANG WALL RECEPT. (Pin Insert)
XLR-*-42 RECEPTACLE (Pin Insert)
XLR-*-50 ADAPTER RECEPTACLES
XLR BRACKET



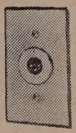
3 CONTACTS



4 CONTACTS

XLR-*50T

XLR-*-32


XLR-*-35

XLR BRACKET WITH XLR-13N RECEPTACLE

XLR-*-42

*Add layout number to complete description

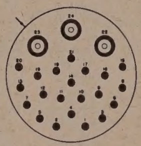
FOR AVAILABILITY OF ANY XLR ASSEMBLY, SEE YOUR AUTHORIZED CANNON DISTRIBUTOR

LK & LKT (TV) PLUG SERIES

The LK and LKT Series of Cannon Plugs are used on television cameras and related equipment, and are a part of the standard K Series. Assemblies with the LK prefix are standard K, those prefixes with LKT have special shells or cable entry construction.

The R24C insert designed for television equipment has the following arrangement of 24 contacts: 3 No. 16 coaxials, 21 No. 14 contacts. Shells are aluminum alloy, cadmium plated; insulators are melamine; and contacts are silver-plated brass.

LK-R24C-31S
LK-R24C-32S
LKT-R24C-21-7/8
LK-R24C-22-7/8T


LK-R24C

LK-R24C-31S

LK-R24C-32S

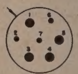
LKT-R24C-22 7/8

SK-M7 PLUG SERIES

SK-M7 Cannon Plugs are a part of the standard K Series and are designed for telephone recording equipment. They are available with 7 contacts: 3 10-amp contacts and 4 30-amp contacts.

SK-M7-32S

SK-M7-21C-1/2

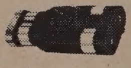

SK-M7

BATTERY PLUG SERIES

Cannon Battery Plugs are sturdy and rugged, with ample insulation and high quality to withstand the rugged field service usually associated with these plugs. They are designed to eliminate the need for separate starting batteries on individual units of power driven equipment. They facilitate removal and installation of storage batteries, and are also used to connect auxiliary power equipment to aircraft electrical systems.

Shell material is molded rubber with spring steel clip material, with cadmium finish.

	No. Contacts	Wire Size	Current Rating Amperes
GB-3-21CF	2 1	310 #10	600A 40A
GB-3-21CFS	2 1	310 #10	600A 40A
GB-3-34CDS	2 1	310 #8	600A 40A
CAO11751-0001	2	210	600A
CAO11749-0001	2	210	600A


GB-3-21CFS PLUG

GB-3-21CF PLUG

CAO11749-0001 RECEPTACLE

CAO11751-0001 PLUG

SEE YOUR AUTHORIZED CANNON PLUG DISTRIBUTOR FOR COMPLETE INFORMATION

CANNON ELECTRIC COMPANY

P PLUG SERIES

P*-CG-11S

P*-CG-12S

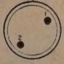
P*-13

P*-35

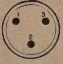
P*-14

P*-CG-15

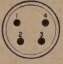
P*-CG-16



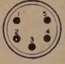
2 CONTACTS



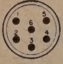
3 CONTACTS



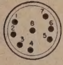
4 CONTACTS



5 CONTACTS



6 CONTACTS


8 CONTACTS

Audio P Cannon Plugs are universally used in sound and related applications. They include a size and type for every requirement, with a high standard of quality. All 90° Plugs have split-shell construction for quick, easy access for wiring or inspection.

Five layouts with from two to six contacts (30 amp) accommodate No. 10 B&S stranded wire. One layout with 8 contacts (15 amp) accommodates No. 14 wire. Shell designs of the P-CG-11S and P-CG-12S cord plugs have such improvements as shorter length, new rubber bushing, improved latch and spring, integral clamp. Shell of plug material is steel, and the integral clamp is zinc. Insulating material is black phenolic.

P*-CG-11S CORD PLUG ++
P*-CG-12S CORD PLUG +-
P*-CG-15 90° CORD PLUG ++
P*-CG-16 90° CORD PLUG +-

P*-13 PANEL RECEPTACLE ++
P*-14 RECEPTACLE +-
P*-35 SINGLE GANG WALL RECEPTACLE ++

++ Socket Insert +- Pin Insert

*Add layout number to complete description

FOR AVAILABILITY OF ANY P ASSEMBLY, SEE YOUR AUTHORIZED CANNON DISTRIBUTOR

TEST JACKS

ZYTEL BODY TEST JACK

METAL BODY TEST JACK

Cannon Electric Test Jacks are compact, lightweight jacks for standard .080-inch diameter test prods. They are available with Zytel bodies and nickel-plated brass bodies.

METAL BODY

SINGLE NUT		45E-4	Brown
45E-1	White	45E-5	Green
45E-2	Red	45E-6	Orange
45E-3	Black	45E-7	Blue

ZYTEL BODY

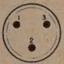
CANNON NO.	COLOR	CANNON NO.	COLOR
052780-0001	White	052784-0001	Blue
052781-0001	Red	052785-0001	Orange
052782-0001	Black	052786-0001	Yellow
052783-0001	Green	052787-0001	Brown

X PLUG SERIES

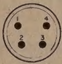
X-3-11

X-3-12

X-3-14



3 CONTACTS

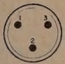


4 CONTACTS

X-3-11 CORD PLUG (Socket Insert)
X-3-12 CORD PLUG (Pin Insert)
X-3-14 WALL RECEPTACLE (Pin Insert)
X-4-11 CORD PLUG (Socket Insert)
X-4-12 CORD PLUG (Pin Insert)

Audio X Cannon Plugs are small, compact plugs providing inexpensive fittings of reliable quality for sound applications, radio, public address systems, and geophysical research. Contacts are so positive that no latching device is needed for ordinary uses. X plugs are available in two insert arrangements: 3 contacts (15-amp), and 4 contacts (3 10-amp and one 15-amp).

XK PLUG SERIES



3 CONTACTS

XK-3-11

XK-3-12

XK-3-11 STRAIGHT CORD PLUG (Socket Insert)
XK-3-12 STRAIGHT CORD PLUG (Pin Insert)

Audio XK Cannon Plugs have the same inserts and are similar in design to the X Series, but equipped with the fast-acting, sturdy Acme Threaded coupling ring. It is, therefore, ideal for use on equipment which is subjected to considerable vibration and tension on cables. XK plugs are available with 3 contacts (15-amp).

UA PLUG SERIES

UA-3-11

UA-3-14

UA-3-31

UA-3-11 PLUG (Socket Insert)
UA-3-12 PLUG (Pin Insert)
UA-3-13 RECEPTACLE (Socket Insert)
UA-3-14 RECEPTACLE (Pin Insert)
UA-3-31 RECEPTACLE (Socket Insert)
UA-3-32 RECEPTACLE (Pin Insert)

Audio UA Cannon Plugs, designed in cooperation with the RETMA Committee, have all the features of P Series plugs plus the following: (1) gold-plated contacts for long life, (2) double protection rubber relief collar and rubber bushings, (3) flat-top polarization for finger-touch action, (4) stronger improved latch lock, (5) steel plug shells and insert barrel.

Insulators are high dielectric phenolic. 15 amp contacts accommodate No. 14 stranded wire.

SEE YOUR AUTHORIZED CANNON PLUG DISTRIBUTOR FOR COMPLETE INFORMATION

COAXIAL CABLE CONNECTORS

BEECH GROVE, INDIANA

BNC SERIES

CABLE PLUG

DAGE NO.	AN NO.	CABLE RG ( )/U
056-1	UG-88/U	55,58
073-1	UG-260/U	59,62,71
359-1	UG-88B/U	55,58
416-1	UG-260A/U	59,62,71
813-1	UG-88C/U	55,58
815-1	UG-260B/U	59,62,71
2030-1	UG-88A/U	55,58
3421-1	UG-260C/U	59,62,71

CABLE JACK

124-1	UG-261/U	59,62,71
130-1	UG-89/U	55, 58
415-1	UG-89B/U	55, 58
417-1	UG-261A/U	59,62,71
814-1	UG-89A/U	55, 58
816-1	UG-261B/U	59,62,71
3420-1	UG-89C/U	55, 58
3422-1	UG-261C/U	59,62,71

SINGLE HOLE MOUNT CABLE JACK

2225-1	UG-910/U	59,62,71
2230-1	UG-909/U	55,58
2461-1	UG-624/U	59,62,71
3441-1	UG-909A/U	55,58
3442-1	UG-910A/U	59,62,71

FLANGE MOUNT CABLE JACK

121-1	UG-262/U	59,62,71
122-1	UG-291/U	55,58
371-1	UG-262A/U	59,62,71
413-1	UG-291A/U	55,58
817-1	UG-291B/U	55,58
1-110-1	UG262B/U	59,62,71
3423-1	UG-262C/U	59,62,71
3425-1	UG-291C/U	55,58

SINGLE HOLE MOUNT JACK RECEPTACLE

DAGE NO.	AN NO.
081-1	UG-625/U
667-1	UG-625A/U
667-2	UG-1094/U
1-400-1	UG-911/U
1-408-1	UG-625B/U

FLANGE MOUNT JACK RECEPTACLE

055-1	UG-290/U
671-1	UG-290A/U

ADAPTER STRAIGHT SINGLE HOLE BULKHEAD FEED THRU (JACK-JACK)

547-1	UG-492/U
1-190-1	UG-492A/U
2201-1	UG-492B/U

PLUG RECEPTACLE RIGHT ANGLE SINGLE HOLE MOUNT

818-1	UG-535A/U
818-2	UG-1098/U
2556-1	UG-1174/U

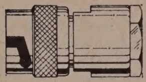
ADAPTER TEE (2 JACK, 1 PLUG ENDS)

134-1	UG-274/U
1-040-1	UG-274A/U
3424-1	UG-274B/U

BINDING POST

501-1	UG-924/U

C SERIES



CABLE PLUG

DAGE NO.	AN NO.	CABLE RG ( )/U
288-1	UG-573A/U	8,9
1-121-1	UG-709A/U	58
1-200-1	UG-943A/U	10,12
1-262-1	UG-626A/U	5,6
3433-1	UG-573B/U	8,9
3434-1	UG-626B/U	5,6

CABLE JACK

DAGE NO.	AN NO.	CABLE
310-1	UG-572/U	8,9
1-604-1	UG-633/U	5,6
3432-1	UG-572A/U	8,9
3439-1	UG-633A/U	5,6

SINGLE HOLE MOUNT CABLE JACK

308-1	UG-570/U	8,9
585-1	UG-939/U	8,9
1-605-1	UG-704/U	55,58
3430-1	UG-570A/U	8,9

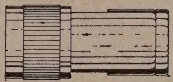
FLANGE MOUNT CABLE JACK

804-1	UG-629/U	5,6
3431-1	UG-571A/U	8,9

SINGLE HOLE MOUNT JACK RECEPTACLE

DAGE NO.	AN NO.
2377-1	UG-634/U
3429-1	UG-569A/U

N SERIES



PLUG

DAGE NO.	AN NO.	CABLE RG ( )/U
037-1	UG-21B/U	8,9
131-1	UG-18B/U	5,6,21
400-1	UG-21C/U	8,9
1-111-1	UG-21D/U	8,9
1-243-1	UG-18A/U	5,6,21
1-244-1	UG-21A/U	8,9
1-624-1	UG-18C/U	5,6,21
2799-1	UG-204C/U	14

JACK

062-1	UG-23B/U	8,9
140-1	UG-20B/U	5,6,21
1-242-1	UG-20A/U	5,6,21
1-246-1	UG-23A/U	8,9
1-247-1	UG-23D/U	8,9
1-490-1	UG-23C/U	8,9
1-527-1	UG-20C/U	5,6,21

FLANGE MOUNT CABLE JACK

047-1	UG-22B/U	8,9
132-1	UG-19B/U	5,6,21
345-1	UG-1052/U	58
1-258-1	UG-22D/U	8,9
1-480-1	UG-22C/U	8,9
1-526-1	UG-19C/U	5,6,21
2328-1	UG-1187/U	8,9
3195-1	UG-1187A/U	8,9
3456-1	UG-1095A/U	55,58
3457-1	UG-1095B/U	55,58

SINGLE HOLE MOUNT CABLE JACK

DAGE NO.	AN NO.	CABLE RG ( )/U
2146-1	UG-160C/U	8,9
2413-1	UG-936A/U	10,12
3039-1	UG-160B/U	8,9

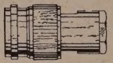
RIGHT ANGLE FLANGE MOUNT JACK RECEPTACLE

DAGE NO.	AN NO.
2466-1	UG-997A/U

FLANGE MOUNT JACK RECEPTACLE

019-1	UG-58A/U

TNC SERIES



CABLE PLUG

DAGE NO.	CABLE RG ( )/U
8000-1	55,58
8004-1	59,62,71

CABLE JACK

8005-1	55,58
8006-1	59,62,71

SINGLE HOLE MOUNT CABLE JACK

8009-1	55,58
8010-1	59,62,71

FLANGE MOUNT CABLE JACK

8007-1	55,58
8008-1	59,62,71

SINGLE HOLE MOUNT JACK RECEPTACLE

DAGE NO.	DATA
8001-1	
8012-1	Herm. Seal

FLANGE MOUNT JACK RECEPTACLE

8011-1	

RIGHT ANGLE SINGLE HOLE MOUNT JACK RECEPTACLE

8016-1	Solder pot

RIGHT ANGLE FLANGE MOUNT JACK RECEPTACLE

8015-1	Solder pot

TRIAXIAL SERIES

CABLE PLUG

DAGE NO.	DATA
2675-1	Polarized
2743-1	Standard

CABLE JACK

2741-1	Standard
2742-1	Polarized

SINGLE HOLE MOUNT CABLE JACK

3107-1	Standard
3197-1	Polarized

FLANGE MOUNT JACK RECEPTACLE

2676-1	Not pressurized

SINGLE HOLE MOUNT JACK RECEPTACLE

2677	Polarized

CABLE JACK (MIN.)

5922-1	P	Coax cable

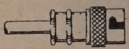
SINGLE HOLE MOUNT JACK RECEPTACLE (MIN.)

5923-1	P	Herm. seal

ADAPTER STRAIGHT SINGLE HOLE BULKHEAD FEED THRU (JACK to JACK) (MIN.)

5924-1	P	Herm. seal

DM SERIES



CABLE PLUG

DAGE NO.	POLARITY	DAGE JACKET DIA. MAX. MIN.
1-300-1	A	.135 .115
1-317-1	B	.135 .115
1-818-1	E	.135 .115
1-940-1	J	.135 .115
1-941-1	L	.135 .115
5149-1	F	.135 .115
5152-1	M	.135 .115
5312-1	K	.135 .115

CABLE JACK

DAGE NO.	POLARITY	OUTER JACKET DIA. MAX. MIN.
1-350-1	A	.135 .115
1-352-1	B	.135 .115
5165-1	E	.135 .115
5166-1	F	.135 .115
5167-1	J	.135 .115
5168-1	K	.135 .115
5169-1	L	.135 .115
5170-1	M	.135 .115

SINGLE HOLE MOUNT JACK RECEPTACLE

DAGE NO.	POLARITY	MT. DIM. Hole DIM.	MT. DIM. Panel TH'K.
1-310-1	B	1	1/8
1-311-1	A	1	1/8
1-707-1	E	2	1/8
1-875-1	F	1	1/8
1-945-1	J	1	1/8
1-946-1	K	1	1/8
5231-1	L	1	1/8
5232-1	M	1	1/8

SOLDER MOUNTED JACK RECEPTACLE

DAGE NO.	POLARITY	HERM. SEAL
1-771-1	B	Yes
1-772-1	F	Yes
1-774-1	A	Yes
1-778-1	E	Yes
1-954-1	J	Yes
1-955-1	L	Yes
5061-1	K	Yes
5062-1	M	Yes

JACK BULK HEAD FEED THRU'S

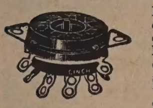
1-699-1	E	Yes
1-957-1	K	Yes
5059-1	L	Yes
5060-1	M	Yes
5208-1	F	Yes
5209-1	J	Yes
5210-1	A	Yes
5211-1	B	Yes

OTHER FITTINGS AVAILABLE. WRITE FOR FREE CATALOG.

CINCH-JONES SALES • DIVISION OF CINCH MANUFACTURING COMPANY

CINCH SOCKETS ARE STANDARD

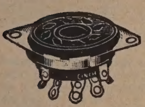
MOLDED OCTAL
1-5/16" MOUNTING CENTERS



Molded from high dielectric black bakelite or mica-filled low loss bakelite. Solder coated brass contacts and sturdy steel press-on type saddle with 4 ground lugs. Mounts in 1" chassis hole.

No.	Description	List Price
8AB	**Black**	**Each $ .14**
8AM	**Mica-Filled**	**Each .20**

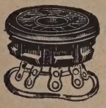
MOLDED OCTAL
1½" MOUNTING CENTERS



Same as 8A series molded octal above except has clinch-on type saddle with 4 ground lugs and mounts in 1⅛" chassis hole. Available in black, mica-filled bakelite, or ceramic.

No.	Description	List Price
8EB	**Black**	**Each $ .15**
8EM	**Mica-Filled**	**Each .21**
8EC	**Ceramic**	**Each .75**

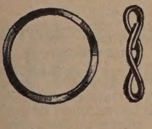
RING MOUNT OCTAL



Molded from high dielectric black bakelite. Solder coated brass contacts. Used extensively on test equipment, public address amplifiers and on other apparatus where sockets are exposed. Molded keyway in side engages key in chassis hole, preventing socket from turning. Mounts in 1 11/64" chassis hole. Crimped retainer ring is furnished with these sockets.

No.	Description		List Price Each
8R1	**For 1/16" Chassis**	**Black**	**$ .30**
8R2	**For 1/8" Chassis**	**Black**	**.30**
8R3	**For 1/16" Chassis**	**Mica-Filled**	**.35**
8R4	**For 3/32" Chassis**	**Black**	**.30**
8R5	**For 3/32" Chassis**	**Mica-Filled**	**.35**
8R6	**For 1/8" Chassis**	**Mica-Filled**	**.35**

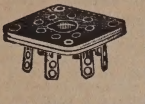
RETAINER RING



A crimped retaining ring formed of spring steel that will securely anchor sockets designed for ring mounting, such as the one above. Standard finish is cadmium.

No.	Description	List Price
8R0	**.020 Spring Steel**	**Each $ .06**

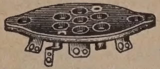
WAFER OCTAL



Laminated bakelite sockets with solder coated brass positive grip contacts. Designed to fit all standard eight prong tubes. Available with 1 5/16" or 1½" mounting centers. Both styles have .136 diameter mounting holes.

No.	Description	List Price
8W1	**1 5/16" Mounting Centers**	**Each $ .14**
8W2	**1½" Mounting Centers**	**Each .14**

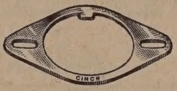
VIBRATOR SOCKET



Laminated bakelite socket with solder coated brass positive grip contacts. Fits Mallory #4549 and 725C vibrators in addition to others. 1½" mounting centers. 140 diameter mounting holes.

No.	List Price
7VS	**$ .35**

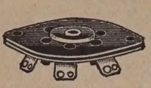
ADAPTOR PLATE



When the hole in the chassis is too large to use the 8R0 retainer ring, then the 8AP adaptor plate is anchored to the chassis and the 8R0 retainer ring holds the ring mounted socket to the adaptor plate.

No.	List Price
8AP	**Each $ .13**

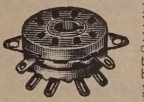
GLASS TUBE SOCKETS



Laminated bakelite sockets with solder coated positive grip brass contacts. 1½" mounting centers. .140 diameter mounting holes. Designed to fit four, five and seven prong tubes.

No.	Description	List Price
4WX	**4 Prong**	**Each $ .15**
5WY	**5 Prong**	**Each .15**
6WZ	**6 Prong**	**Each .16**
7WU	**7 Prong**	**Each .17**
7WA	**7 Prong (Large)**	**Each .17**

MOLDED OCTAL
1½" MOUNTING CENTERS

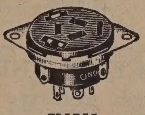


Molded from mica-filled low loss bakelite. Silver plated phosphor bronz contacts with hot tinned tails. Heavy brass saddle nickel plated with 4 ground lugs hot tinned. Conforms to MIL-12883-A Specs.

No.	Description	Mtg. Hole	Mil. Type No.	List Price Each
8JC-2	**Ceramic**	**.156 Dia.**	**TS101C01**	**$1.20**
8JCN-2	**Ceramic**	**6-32 Tap**	**TS101C02**	**1.51**
8JM-2	**Mica**	**.156 Dia.**	**TS101P01**	**.57**
8JMN-2	**Mica**	**6-32 Tap**	**TS101P02**	**.86**

CINCH CAPACITOR "PLUG-IN" SOCKETS

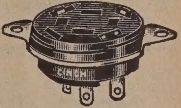
Motion picture, telephone, airborne radio, broadcasting equipment, electric organs, and other electrical equipment need instant replacement when failures in electronic circuits occur at the capacitor connections. Cinch "Know How" has solved this problem.



SMALL

Designed for use with Mallory and Magnavox 1" FP type condensers. Molded from high dielectric black bakelite. Sturdy steel mounting saddle has 4 ground lugs. 1½" mounting centers. 3 recessed center contacts for extended prongs of condenser and two outer contacts flush with surface for short prongs of condenser. All contacts are solder coated for fast, easy soldering.

No.	List Price
2C5	**Each $ .63**

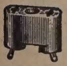


LARGE

Designed for use with Mallory and Magnavox 1⅜" FP type condensers. Molded from high dielectric black bakelite. Sturdy steel saddle has 1 27/32" mounting centers. Four recessed center contacts for extended prongs of condenser and three outer contacts flush with surface for short prongs of condenser. All contacts are solder coated.

No.	List Price
2C7	**Each $ .78**

CRYSTAL SOCKETS

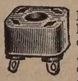


2 PRONG
31/64" CENTERS

Molded from high dielectric black bakelite or mica-filled low loss bakelite. Silver plated beryllium copper contacts on 31/64" centers. .120" diameter recessed mounting hole. Socket body is 25/32" long, 5/16" thick, and 35/64" high. For use with FT243 type crystal.

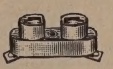
No.	Description	List Price
2KB	**Black**	**Each $ .25**
2KM	**Mica-Filled**	**Each .29**

4 PRONG



Molded from mica-filled low loss bakelite. Silver plated beryllium copper contacts on 31/64" centers. .140 diameter mounting hole recessed 9/64" from surface in 5/16" diameter hole. Socket body is 25/32" long, 45/64" wide, and ½" high. Designed for use with two No. FT243 type crystals.

No.	List Price
2K4	**Each $ .45**



2 PRONG ½" CENTERS

Molded from high dielectric black bakelite or mica-filled low loss bakelite. Silver plated phosphor bronze contacts on ½" centers. No. 4-40 tap mounting hole. 1⅛" long, ⅜" wide and 7/16" high. For No. CR-1 and CR-7 type crystals.

No.	Description	List Price
2K1B	**Black**	**Each $ .51**

Made of ceramic material. Silver plated beryllium copper contacts with hot tinned tails, mounted on .486" centers. ⅛" mounting hole, ⅞" long, ⅜" wide and ⅝" high overall. Similar to above except the tails extend straight down. For No. CR-7 and BH-6 crystals.

No.	Description	List Price
2K2C	**Ceramic**	**Each .32**

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7 PIN MINIATURE SOCKETS AND SHIELDS

MOLDED SADDLE TYPE
Top Mount

Molded from high dielectric black bakelite, mica-filled low loss bakelite, or ceramic material. Cadmium plated steel saddle with ⅞" mounting centers and .093 diameter mounting holes. Solder coated brass contacts. Designed for mounting through top of chassis in ⅝" diameter hole. Will securely hold all standard seven pin miniature tubes.

No.	Description	List Price
7AB1	**Black**	**Each $ .15**
7AM1	**Mica-Filled**	**Each .18**

MOLDED SADDLE TYPE
Bottom Mount

Molded from high dielectric black bakelite or mica-filled low loss bakelite. Cadmium plated steel saddle with ⅞" mounting centers. .093 diameter mounting holes. Solder coated positive grip brass contacts. Designed for mounting through bottom of chassis in ⅝" diameter hole. For use with all standard seven pin miniature tubes.

No.	Description	List Price
7EB	**Black**	**Each $ .15**
7EM	**Mica-Filled**	**Each .18**

MOLDED SADDLE TYPE
Bottom Mount

Molded of mica filled low loss bakelite or ceramic material. Materials and finishes are those required by MIL-12883-A specifications. Saddle has ⅞" mounting centers.

No.	Description	MIL type 12883-A	List Price
7JM-3	**Mica**	**TS102P03**	**Each $ .35**
7JC-3	**Ceramic**	**TS102C03**	**Each .55**

SHIELD BASE TYPE

Shield base is attached to socket body for mounting through top of chassis. Molded from high dielectric black bakelite, mica-filled low loss bakelite or ceramic material. Solder coated brass contacts and center shield. Cadmium plated steel shield base with ⅞" mounting centers. Use No. 7S2, 7S3, or 7S4 shields illustrated below with these sockets.

No.	Description	List Price
7XB1	**Black**	**Each $ .28**
7XM1	**Mica-Filled Bakelite**	**Each .32**
7XC	**Ceramic**	**Each .53**

Molded from mica filled low loss bakelite or ceramic material. Shield base is attached to socket body for mounting through top of chassis. Same type as illustrated at the left. Materials and finishes are required by JAN-S-28A Specifications. Shield base has ⅞" mounting centers.

Use No. 7SJ2, 7SJ3 or 7SJ4 shields as shown below.

No.	Description	JAN Type No.	List Price
7JC-2	**Ceramic**	**TS102C01**	**.52**
7JM-2	**Mica**	**TS102P01**	**.40**
7JMN-1	**Mica**	**TS102P02**	
7JCN-1	**Ceramic**	**TS102C02**	

TUBE SHIELDS — "J" Slot Type

Durable steel shields complete with tube securing spring. "J" slot feature designed to fit securely with Cinch shield base type sockets, such as 7X series shown above. Also fit 7SB type shield bases shown in end column at right. Available in three lengths:

No.	Description	List Price
7S2	**1⅜" Long**	**Each $ .19**
7S3	**1¾"'Long**	**Each .20**
7S4	**2¼"'Long**	**Each .30**

Durable brass nickel plated shields complete with non magnetic stainless steel spring. "J" slot feature designed to fit securely with the shield base type sockets listed above. Materials and finishes are those required by JAN-S-28A Specifications. Available in the sizes listed below.

No.	Description	JAN Type No.	List Price
7SJ2-1	**1⅜" Long**	**TS102U01**	**$ .23**
7SJ3-1	**1¾" Long**	**TS102U02**	**.25**
7SJ4-1	**2¼" Long**	**TS102U03**	**.28**

WAFER TYPE SOCKET

Laminations consist of 1/32" top plate and 3/64" bottom plate made from high grade chocolate XP Bakelite. Solder coated brass contacts and center shield.

No.	Mtg. Centers	Mtg. Hole	List Price
7W2A	**7/8"**	**.093**	**$ .12**
7WL2	**1"**	**.093**	**.12**
7WL4	**1-5/16"**	**.136**	**.14**

SHIELD BASES — Snap-On Type

Base is made of hardened carbon steel supplying adequate spring retentivity on shield. Base has ⅞" mounting centers with mounting holes that coincide with those for miniature 7 pin sockets as established by R. M. A. standards. For use with saddle type sockets with ⅞" mounting centers illustrated on this page.

No.	Description	List Price
7SB3	**11/32" High**	**Each $ .07**

For J Slot Type

Durable steel shield bases designed for use with "J" slot type shields illustrated at left. Available in two sizes: 7/16" high or ⅝" high. Both types have ⅞" mounting centers.

No.	Description	Material	List Price
7SB1	**5/8" High**	**Steel**	**Ea. .09**
7SB2	**5/8" High**	**Brass**	**Ea. .12**

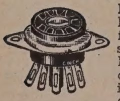
TUBE SHIELD
Snap-On Type

Shield fits over and outside of shield base. Indentation on shield locks into ridge on base of 7SB3 as shown above.

No.	Description	List Price Each
7S1	**1-53/64" High**	**$ .14**

9 PIN MINIATURE SOCKETS AND SHIELDS

MOLDED — SADDLE TYPE
Bottom Mount



Molded from high dielectric black bakelite or mica-filled low loss bakelite. Designed for mounting through bottom of chassis in ¾" diameter hole. 1⅛" mounting centers with .093 diameter mounting holes. Solder coated brass contacts and center shield.

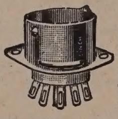
No.	Description	List Price
9EB	**Black**	**Each $ .20**
9EM	**Mica-Filled Bakelite**	**Each .23**

Bottom Mount

Molded of mica filled low loss bakelite or ceramic material. Materials and finishes are those required by MIL-12883-A specifications. Saddle has ⅞" mounting centers.

No.	Description	MIL type 12883-A	List Price
9JM—3	**Mica**	**TS103P03**	**Ea. $ .38**
9JC—3	**Ceramic**	**TS103C03**	**Ea. .58**

SHIELD BASE TYPE



Molded from high dielectric black bakelite, mica-filled low loss bakelite, or ceramic material. One-piece cadmium plated steel shield base and saddle with .093 diameter mounting holes on 1⅛" centers. Solder coated brass contacts and center shield. Mounts through top of chassis in ¾" diameter hole. Use Cinch 9S type shields with these sockets.

No.	Description	List Price
9XB	**Black**	**Each $ .35**
9XM	**Mica**	**Each .39**
9XC	**Ceramic**	**Each .60**

SHIELD BASE

Durable steel shield base designed for use with shields illustrated to right. 1⅛" mounting centers. May be used with any 9 pin wafer or saddle type sockets shown.

No.	List Price
9SB1	**Each $ .12**

MOLDED—SADDLE TYPE
Top Mount

Molded from high dielectric black bakelite or mica-filled low loss bakelite. Designed for mounting through top of chassis in ¾" diameter hole. 1⅛" mounting centers with .093 diameter mounting holes. Solder coated brass contacts and center shield.

No.	Description	List Price
9AB	**Black**	**Each $ .20**
9AM	**Mica-Filled**	**Each .23**

TUBE SHIELDS

Made from durable steel. Complete with tube securing spring. "J" slot feature designed to fit securely with Cinch 9X series shield base type sockets illustrated to the right. Will also fit No. 9SB-1 shield base shown at left. Available in three lengths.

No.	Description	List Price
9S1	**1½" Long**	**Each $ .27**
9S2	**1 15/16" Long**	**Each .27**
9S3	**2⅜" Long**	**Each .46**

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WAFER TYPE

Has two laminations consisting of 1/16" top plate and 3/64" bottom plate made from 1⅛" mounting centers with .093 diameter holes. Solder coated brass contacts and center shield.

No.	Mtg. Centers	List Price
9W1	**1-1/8"**	**Each $ .14**
9W2	**1-5/16"**	**Each .15**

SHIELD BASE TYPE

Molded from mica low loss bakelite or ceramic material. Shield is attached to socket body for mounting through top of chassis. Same type as 9 x Series. Materials and finishes are those required by MIL-12883-A specifications. Use No. 9SJ1, 9SJ2, or 9SJ3 shields listed at right. Phosphor bronze contacts.

No.	Descrption	MIL-12883-A No.	List Price
9JM-2	**Mica**	**TS103P01**	**Ea. $ .45**
9JMN-1	**Mica**	**TS103P02**	**Ea. .38**
9JC-2	**Ceramic**	**TS103C01**	**Ea. .58**
9JCN-1	**Ceramic**	**TS103C02**	**Ea. .58**

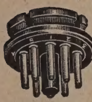
TUBE SHIELDS

Durable brass nickel plated shields with tube securing spring. "J" slot feature designed to fit securely with the shield type sockets listed at left. Materials and finishes are those required by JAN-S-28A specifications. Available in the sizes listed below.

No.	Description	JAN Type No.	List Price
9SJ1-1	**1½" Long**	**TS103U01**	**Ea. $ .28**
9SJ2-1	**1^{15}⁄16" Long**	**TS103U02**	**Ea. .31**
9SJ3-1	**2⅜" Long**	**TS103U03**	**Ea. .33**

MOLDED CONNECTOR PLUGS AND SOCKETS

8 CONTACT PLUG



Molded from high dielectric black Bakelite. Pins are nickel-plated and have tapered ends for easy insertion. Mounts on 1/16" chassis using No. 1018 retaining ring, or can be used with No. 16F cap shown below. Will fit any standard octal socket.

No.	List Price
8PB	**Each $ .34**

11 CONTACT PLUG

Molded from high dielectric black Bakelite. Pins are nickel-plated and have tapered ends for easy insertion. Mounts on 1/16" chassis using No. 1018 retaining ring. Can be used with No. 16F cap shown below. Will fit No. 11RB socket shown at right.

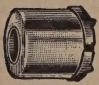
No.	List Price
11PB	**Each $ .41**

11 CONTACT SOCKET

Molded from high dielectric black Bakelite. Solder coated brass contacts. Mounts on 1/16" chassis using No. 1018 retaining ring. Can be used with No. 16F Cap shown below. Used with No. 11PB plug shown at left.

No.	List Price
11RB	**Each $ .44**

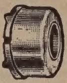
CONNECTOR PLUGS AND SOCKETS



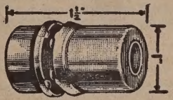
18G

6K2

5K2



18E



Assembled

These low cost plugs and sockets are ideal for a multitude of applications. A "Cinch" where space is at a premium. Complete assembly of plug, socket, male and female shell will close to a compact unit of 1½" long. Polarized—Nickel plated brass tube pins—Solder coated brass contacts. Plugs, sockets and shells have lock feature which prevents turning in shells.

PLUGS

Part No.	No. Prongs	Use Skt. No.	Use Shell No.	List Price
5K2	2	6K2	18E	.09 ea.
5K3	3	6K3	18E	.10 ea.
5K4	4	6K4	18E	.12 ea.
5K5	5	6K5	18E	.13 ea.
5K6	6	6K6	18F	.15 ea.

SOCKETS

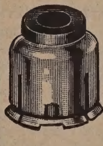
Part No.	No. Prongs	Use Skt. No.	Use Shell No.	List Price
6K2	2	5K2	18G	.08 ea.
6K3	3	5K3	18G	.09 ea.
6K4	4	5K4	18G	.10 ea.
6K5	5	5K5	18G	.12 ea.
6K6	6	5K6	18H	.13 ea.

PLUG CAPS AND SHELLS

For above Battery Plugs and for Connector Plugs and Sockets Shown Above.

Cadmium plated brass shell with rolled edge on 5/16" diameter neck opening. Outside diameter at base .625. Four ⅛" prongs coincide with notches on plugs. Designed for use with Cinch No. 5A1, 5B1, 5AB2, and 5AB3 type battery plugs.

No.	List price
18A-1	**Each $ .04**



Made of steel, cadmium plated. Designed to snap on 8 and 11 prong sockets which are grooved for a 1/16" chassis. There is a screwdriver slot at the bottom to facilitate easy removal. Rubber grommet has a 25/64" dia. hole.

No.	List Price
16F	**Each $ .45**

Cadmium plated brass shells complete with fibre insulator. Available with ⅜" or ½" diameter hole with rolled edge. Inside diameter 31/32". ½" high. For use with Cinch No. 5C1, 5C2, 5AB6, 5AB7, 5AB8, 5K2, 5K3, 5K4, 5K5, and 5K6 type plugs.

No.	Description	List Price
18E	**⅜" Diameter Hole**	**Each $ .09**
18F	**½" Diameter Hole**	**Each .09**

Cadmium plated brass shell complete with fibre insulator. Same as Cinch No. 18B shell except has ½" neck with ⅜" hole riveted to base. For use with same plugs as No. 18B.

No.	List Price
18J-1	**Each $ .13**

Cadmium plated brass shell with 23/64" diameter opening on top of shell. Outside diameter at base .625. Four ⅛" prongs coincide with notches on plugs. ½" high. Designed for use with Cinch No. 5A1, 5B1, 5AB2, and 5AB3 type battery plugs.

No.	List Price
18B-1	**Each $ .04**

Cadmium plated steel shells complete with fibre insulator. Available with ⅜" or ½" diameter hole with rolled edge. Inside diameter 31/32". 29/32" high. For use with Cinch No. 6K2, 6K3, 6K4, 6K5, and 6K6 type sockets.

No.	Description	List Price
18G	**⅜" Diameter Hole**	**Each $ .09**
18H	**½" Diameter Hole**	**Each .09**

STRAP NUTS

NO. 7SN

Cadmium plated brass straps nuts are designed for use in mounting sockets with saddles or shield bases. One strap nut takes the place of two conventional type nuts. Mounting centers ⅞". For 7 contact sockets. **No. 7SN Ea. .28**

Same as No. 7SN except mounting centers are 1⅛" and are for 9 contact sockets. **Ea. .31**

NO. 9SN

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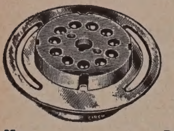
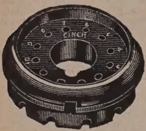


MAGNAL—11 PRONG

Molded from mica-filled low loss bakelite. Socket is 1 23/32" wide and 1 9/64" high. Full floating silver plated beryllium copper contacts designed to insure easy insertion of tubes and yet provided excellent electrical connections. For use with 5BP1 and 2AP1 type cathode ray tubes.

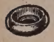
No.	Description	List Price
3M11	**Mica Socket**	**Each $6.00**
3R11	**Steel Mounting Ring**	**Each .40**



DUODECAL — 12 PRONG

No larger in diameter than the tube base and only slightly longer than the tube pin. A new feature incorporates wire strain relief as an integral part of the contact. Molded from high dielectric black bakelite. For use with 10BP4, 2BP1, 5TP4, etc., type tubes. Also RCA 6199 tube.

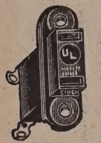
No.	List Price Ea.
3B12	**$ .80**
3M12 Mica	**2.40**



CORONA SHIELDS

Specifically designed for Television and high voltage wiring. These cadmium plated brass shields will provide excellent protection at proper positions in electrical connections. Outside diameter .470. Hole diameter .136. Thickness .172.

No.	List Price
3C1	**Each $ .04**

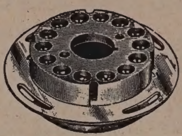


110-250 VOLT SOCKET

(Underwriters Listed)

When space is at a premium use this 110-250 volt 2 prong socket. Rated at 15 Amp., 110 V. or 10 Amp., 250 V. Molded from high dielectric black bakelite. Solder coated brass contacts on ½" centers designed to accept any 2 prong standard electric plug. Mounts in 25/64" x 25/32" hole. .144 diameter mounting holes on 1⅛" centers. Ideal for radio chassis and many other applications.

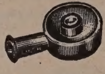
No.	List Price
2R2	**Each $ .25**



DIHEPTAL 14 PRONG

Molded from high dielectric black bakelite or mica-filled low loss bakelite. 2 7/32" wide and 1⅛" high. Possesses same features as Cinch Magnal socket shown at left.

No.	Description	List Price
3B14	**Black Socket**	**Each $1.40**
3M14	**Mica Socket**	**Each 1.80**
3R14	**Steel Mounting Ring**	**Each .40**

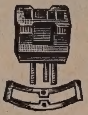


SECOND ANODE CONNECTOR

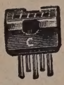
For diheptal based tubes. Cadmium plated brass contact surrounded by rubber insulator ¾" wide and 1 3/16" long. Snaps over .096 diameter prong on side of diheptal tubes.

No.	List Price
3A1	**Each $ .95**

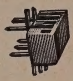
SUB-MINIATURE SOCKETS



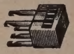
No. 2H3



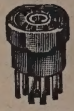
No. 2H5



No. 5PC

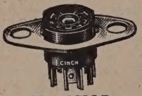


No. 5WC



No. 8SM

Use extensively for hearing aids, radios and other electronic apparatus which require sub-miniature tubes. Molded from mica-filled low loss bakelite with silver plated beryllium copper contacts. Available with 3, 5, 6, 7 or 8 contacts. Four prong tubes use No. 2H5 five prong socket. No. 2H5 can be used as a transistor socket. No. 5PC for printed circuits. No. 5WC for wired circuits.



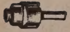
No. 8SM-P

This socket is the same as No. 8SM shown above except that it is furnished with a mounting plate.

No.	Description	List Price
***2H3**	**3 Prong**	**Each $ .325**
***2H5**	**5 Prong**	**Each .37**
***2H6**	**6 Prong**	**Each .49**
***2H7**	**7 Prong**	**Each .52**
5PC	**5 Prong**	**Each .66**
5WC	**5 Prong**	**Each .64**
***8SM**	**8 Prong**	**Each .73**
8SM-P	**8 Prong**	**Each .90**

*Mtg. Ring included.

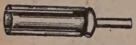
PIN PLUGS — JACKS — CONNECTORS — STRIPS — TERMINALS



PHONO PLUGS

R.C.A. type. For a multitude of applications: record players, auto radios, receivers, recording and reproducing equipment, experimental units, etc. Nickel plated ⅛" diameter tube pin. Available in two lengths: 9/16" and 11/16". Use No. 13A with type 81A and 81B phono jacks. Use No. 13E with type 81E extension jack.

No.	Description	List Price
13A	**9/16" Pin**	**Each $ .07**
13E	**11/16" Pin**	**Each .09**

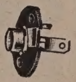


ANTENNA PLUG

Motorola type. Nickel plated ⅛" tube pin extends 17/32" from cadmium plated split brass shall whose 8 cutting edges provide positive grounded connection when inserted into a Cinch No. 81C or 81F connector.

No.	List Price
13B	**Each $ .20**

SINGLE PHONO JACK

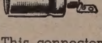


Precision engineered for many uses, such as: R.C.A. type recording units, receivers, and auto sets. Single prong positive grip phono jack mounted on 1/16" chocolate bakelite disc with 11/16" mounting centers Use Cinch No. 13A phono plug with this jack.

No.	List Price
81A	**Each $ .08**

ANTENNA CONNECTOR

Shell Type

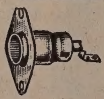


Same as No. 81F on right except without flange. This connector may be soldered in position. Use Cinch No. 13B antenna plug with this jack.

No.	List Price
81C	**Each $ .12**

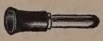
ANTENNA CONNECTOR

Flange Type



Motorola type shielded jack Sturdy steel flange with 15/16" mtg. centers with .136 dia. mtg. holes. Solder coated shell, flange and contact. Can be mounted with screws or rivets. Used extensively on auto radios. Use Cinch No. 13B antenna plug with this jack.

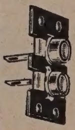
No.	List Price
81F	**Each $ .20**



INSULATED PIN PLUG

Nickel plated ⅛" brass tube pin 9/16" long, assembled to 13/32" long fibre insulator. May be used with Cinch No. 81A and 81B type phono jacks or with No. 49 series contact strips illustrated on page F-35.

No.	List Price
13C-1	**Each $ .09**

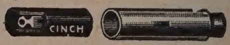


DOUBLE PHONO JACK

Two positive grip phono jacks mounted on 1/16" bakelite panel with 1 3/16" mounting centers. Jacks are spaced on ½" centers. Panel is 1½" x ½". Used on recording units, receivers, etc. Use Cinch No. 13A phono plug with this jack.

No.	List Price
81B	**Each $ .17**

SHIELDED EXTENSION JACK



Cadmium plated brass shell 2 7/16" long with black bakelite insert providing insulation for solder coated brass positive grip contact. Use Cinch No. 13E Phono plug with this jack.

No.	List Price
81E	**Each $ .48**

Use Index Page 1 for Quick, Easy Location of ALL Products

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

CINCH-JONES SALES • DIVISION OF CINCH MANUFACTURING COMPANY

RECESSED PLUG

Recessed subpanel mounting type plug. Underwater approved for 125 Volts 7 amperes. Perfect for current supply for Television sets. 1¼" mounting centers. Overall length 1⅝". Width ⅝". Body depth ¼".

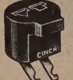
No.	List Prcie Ea.
2RP	$ .25

RECESSED PLUG

Recessed sub-panel mounting type plug similar to No. 2RP except that the contact is one piece. Underwriter Approved for 125 Volts 7 amperes. Same dimensions as 2RP.

No. 2RP-1 **Ea. $ .12**

CETRON TUBE SOCKET



This socket is designed for use with Cetron Tubes CE701 and CE702 in such applications as electric eye doors and motion picture projectors. Contacts are of special alloy spring brass. May be mounted by press fit, gluing or by means of mounting ring 2MR.

	Casting Material	
No. 2B2	Black	Ea. $1.20
No. 2M2	Mica	Ea. 1.75

SINGLE PHONO JACK

Similar to No. 81A except that it has a ceramic bushing and three laminated bakelite insulation plates with brass mounting plate. Mounting holes are 11/64" diameter. Fits No. 13A Phono plug.

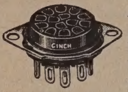
No. 81G **Ea. $ .34**

CONNECTOR PLUG

This plug consists of two prongs mounted on a piece of Bakelite. The prongs are the same as used in No. 2RP-1. Mounting plate is of 1/16" natural XP Bakelite 1⅝" x ¾". The .135 mounting holes are on 1¼" centers. An inexpensive current supply connector for TV sets.

No. 2FP **Ea. $.10**

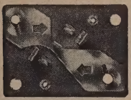
RELAY SOCKET

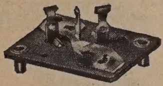


A 14 contact relay socket. Casting is of mica insulation. Contacts are of beryllium copper, silver plated with hot tinned tails. Overall length of top mount saddle 1-11/32". Mounting centers 1¼".

No. 14RS **Ea. $1.00**

POWER TRANSISTOR SOCKETS



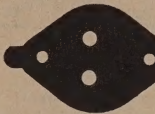


No. 2TS-1 is rectangular in shape. Top and bottom plates are of natural XP Bakelite, vacuum wax impregnated. Contacts are of brass, cadmium plated. Formed thread for 6-20 screw. .104/.110 dia. hole in C R steel plate. Provides easy attachment to a heat sink.

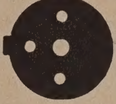
No. 2TS-2 is identical with 24324 except it is equipped with integral eyelets for easy assembly to chassis.

No. 2TS-1	**Ea. $ .15**
No. 2TS-2	**Ea. .18**

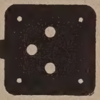
HEAT SINKS



2W—1



2W—2



2W—3

These hard anodized aluminum insulator wafers are for use with Power Transistors. They have high thermal conductivity, high dielectric resistance, high abrasion resistance and high corrosion resistance.

No.	Description	
2W-1	For Motorola transistor 2N-179, 2N-176 and 2N-554.	**Ea. $ .42**
2W-2	For Delco transistor 2N-174.	**Ea. .42**
2W-3	For Texas Instrument transistor 2N-389.	**Ea. .42**

CINCH BATTERY PLUGS

5AB1

6K4

5A1

5A2-1

5A3

5A4

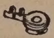
5A5

5B1A

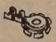
5B2

5D1

5D2



5M



5F

5D

5MFA

5AB4

5AB5

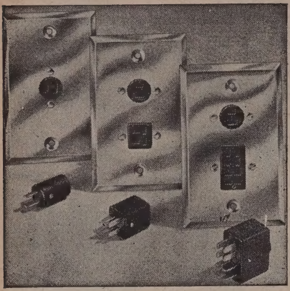
5AB6

5AB7

5AB8

Part Number	Voltage	For Burgess No.	For Eveready No.	For R.C.A. No.	For Philco No.	For Ray-O-Vac No.	List Price
5A1	1½ "A"	4F, 4FL, 6F, 8F, 8FL, TE	741, 742 743, 1052P	VS004, VS005, VS007, VS008	P94, P96, P8F1	P94A, P94L, PX, P96A, P98A, P98L	Ea. $ .05
5A2-1	3 "A"	20F2	X125	VS025	P8024	P9403	Ea. .08
5A3	4½ "A"	G-3	746	VS002	P100	P-83A	Ea. .05
5A4	6 "A"	2F4, 2F4L, F4PI, T5	A509, 718, 744, 747	VS009, VS010 VS011	P4F4R	P694A, P696L, P698A, P698L	Ea. .07
5A5	7½ "A"	G-5	687	VS003		P85A	Ea. .10
5B1A	45 "B" Small	M30, Z30 A30, B30	482, 738, 762	VS012, VS013 VS014, VS015	PR10 P305	430P, P7830 P5303	Ea. .05
5B2-1	45 "B" Large	M30, Z30 A30, B30	482, 738, 762	VS012, VS013 VS014, VS015	P210, P305	430P, P7830, P5303	Ea. .09
5M	67½ "B"	XX30, XX45	455, 467	VS016, VS056		P4367	Ea. .05
5F	67½ "B"	XX30, XX45	455, 467	VS016, VS056		P4367	Ea. .06
5MFA	67½ "B"	XX30, XX45	455, 467	VS016, VS056		P4367	Ea. .38
5D	45 "B"	U30	415	VS086			Ea. .64
5D1	67½ "B"	P45	477	VS218	P149	946	Ea. .29
5D2	90 "B"	N60	490	VS090	P132	4390	Ea. .38
5AB1-1	1½ "A"-90 "B"	17GD60, 5DA60, 6TA60	758	VS022, VS043	P60011L	AB82, 10793	Ea. .12
6K4	9 "A"-90 "B"	G6B60	752	VS047			Ea. .10
5AB2	1½ "A"-63-90 "B"	6FA60, 4GA41, 4GA42		VS037	P60A-4L P41A4G	AB419	Ea. .09
5AB5	6 "A"-90 "B"	D4A60, 2FB60, F4A41		VS046	P41AFL	10896, AB648	Ea. .12
5AB6	7½"A"-90 "B"	G5A42, F5A60		VS038	P87, P841	AB794	Ea. .09
5AB7	9 "A"-90 "B"	F6A60, G6M60	753, 754	VS018, VS019	P841A	AB878, AG994	Ea. .10
5AB8	9 "A"-90 "B"	4FA60					Ea. .09

TELEVISION WALL PLATES



302 SERIES

The 302 series wall plates are made of steel with a heavy chrome plate and provide a convenient junction between antenna lead in and television set. They all fit a standard outlet box. Mounting screws furnished. S-302-WPC provides connection for antenna lead in. S-302-4WPC provides connections for antenna lead in and up to 8 contact rotor.

Jones P-302-FHT plug can be used for the antenna socket and a P-304-FHT or P-308-FHT for the rotor socket.

List Price Each		
S-302-8WPC	**S-302-4WPC**	**S-302-WPC**
$2.99	**$2.78**	**$2.30**

LOW LOSS POLYSTYRENE

This plate covers every requirement for an up-to-date TV connector. Molded of Polystyrene, it assures perfect reception in fringe areas where low loss is of vital importance. One plate provides connections for UHF and VHF and has a knock out provision for the mounting of a standard S-308-AB socket in case a rotor is used. Fits a standard outlet box or can be attached to the wall. Mounting screws for both the plate and socket are furnished. Supplied in brown or Ivory.

Code	Color	List Price Ea.
WPI	**Ivory**	**$1.63**
WPB	**Brown**	**1.63**

No. WPB

POLYSTRENE PLUG

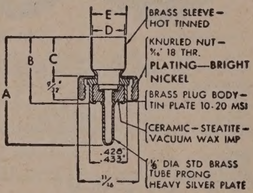
The plug is molded of clear polystyrene and matches the 300 Ohm transmission line assuring maximum performance.

No. TVP-2

List Price **Plug**
$ .37

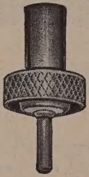
SERIES 101 PLUGS

The entire No. 101 Series of Plugs are identical with the exception of the cable ferrule which is furnished in four sizes as listed below. All metal parts are of brass. These Plugs fit all of the No. 101 Series Sockets. A low loss Plug and Socket ideal for high frequency connections.


E
D
B
C
A
9/32"
.428"
.433"
11/16
BRASS SLEEVE—HOT TINNED
KNURLED NUT—9/16" 18 THR.
PLATING—BRIGHT NICKEL
BRASS PLUG BODY—TIN PLATE 10-20 MSI
CERAMIC—STEATITE—VACUUM WAX IMP
1/8" DIA STD BRASS TUBE PRONG HEAVY SILVER PLATE

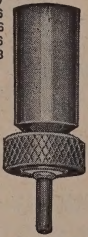
Code No.	A	B	C	D	E	List Price Ea.
P-101-1/4"	1-1/4"	3/4"	15/32"	1/4"	9/32"	**$ .87**
P-101-.290	1-1/4"	3/4"	15/32"	.290	.319	**1.06**
P-101-5/16"	1-11/32"	27/32"	9/16"	5/16"	11/32"	**1.06**
P-101-3/8"	1-3/16"	11/16"	7/16"	3/8"	13/32"	**1.06**
P-101-1/2"	1-7/8"	1-3/8"	1-1/16"	1/2"	9/16"	**1.18**

P-101-1/4"



P-101-5/16"

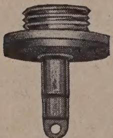
P-101-3/8"



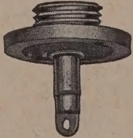
P-101-1/2"

SERIES 101 SOCKETS

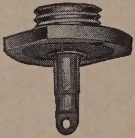
The No. 101 Series Sockets are furnished in three types as shown below. Base is of Brass with Bright Nickel Plated finish. Brass contact is Silver Plated. Insulation of low loss natural color XXX Bakelite. Meets Navy Specifications. The S-101-D is similar to the S-101 except that the Bakelite is recessed in the base. S-101-D Mod. is the same as S-101-D except that two sides of the base are milled as shown. Mounting Holes No. 101—No. 41 drill on 1 1/8" centers. Mounting holes No. 101-D and 101-D Mod. No. 30 drill on 1 3/8" centers.



S-101
List Price Each
$0.77



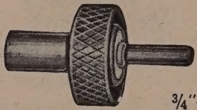
S-101-D
List Price Each
$1.18



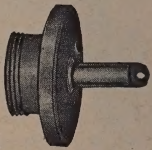
S-101-D Mod
List Price Each
$1.18

(Above Illustrations are Actual Size)

SERIES 201



3/4"—27 thread.



PLUGS

The No. 201 Series Plugs are of the same design as the No. 101 but are of heavier stock and larger. Made in one size only with 3/8" ferrule. All metal parts are of Brass, same finish as No. 101 Series and Wax Impregnated Ceramic insulation. Overall length 1 5/16". Prong diameter 5/32". Fits only the 201 Socket.

Code	List Price Ea.
P-201-3/8	**$1.36**

SOCKETS

The 201 Socket is similar to the S-101-D except larger. Brass base is Bright Nickel Plated. Brass contact is Silver Plated. Insulation is of low loss natural color XXX Bakelite.

Mounting holes — No. 30 drill on 1" centers.

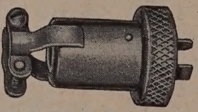
Code	List Price Ea.
S-201	**$1.46**

SERIES 202

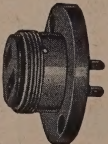
PLUGS SOCKETS

The 202 Series Plugs and Sockets are made in two contacts only. Metal parts are of Brass with Bright Nickel Plate. Insulation is of Molded Bakelite. Phosphor Bronze "Knife Switch" type Socket Contacts engage both sides of flat Plug Contacts—double contact area. Formed Fibre linings in caps. Polarized. Knurled nut has 3/4"—27 thread. Socket Mounting Holes. No. 30 drill on 1" centers.

The S-202-CCT-THR has been added to this series and when used with the P-202-CCT will make an ideal microphone connector.



P-202-CCT—$1.08
(as shown above)
S-202-CCT—$1.10
(Socket instead of Plug)
P-202-FHT—$0.87
(Same as above less Cable Clamps)
S-202-FHT—$0.89
(Same except Socket)



S-202-B—$1.28
(Socket for Base Mtg.)
P-202-B—$1.23
(Same as above except with Plug)

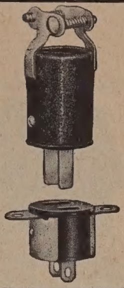
S-202-CCT-THR—$1.46
(as shown above)
Used with **P-202-CCT** as an extension connection

CINCH-JONES SALES • DIVISION OF CINCH MANUFACTURING COMPANY

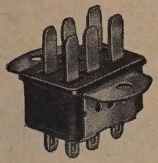
"300" SERIES PLUGS AND SOCKETS

General Specifications

Small in size with good separation between contacts. Made in sizes of 2 to 33 contacts. All Plugs and Sockets are polarized so that Plugs of one size cannot fit into Sockets of another size. Body of Molded Bakelite. Phosphor bronze "knife-switch" type Socket contacts engage both sides of flat Plug contacts—double contact area. Plug prongs are 5/32" wide by 3/64" thick. Formed metal caps are finished in Black Crystal. Fibre linings for caps are also formed. Plugs and Sockets arranged for either cap or panel mounting. Two contact Plugs and Sockets are round as shown at the right, all others are rectangular. Illustrated are the P-302-CCT and S-302-AB. Standard 24 to 33 contact Plugs have a special long polarizing pin in approximate center position to assist in correct insertion and removal.



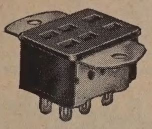
Plug with Angle Brackets



P-306-AB

No.	Contacts	List Price Each
P-302-AB	2	$0.33
P-303-AB	3	.41
P-304-AB	4	.45
P-306-AB	6	.56
P-308-AB	8	.66
P-310-AB	10	.75
P-312-AB	12	.83

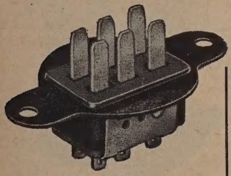
Socket with Angle Brackets



S-306-AB

No.	Contacts	List Price Each
S-302-AB	2	$0.36
S-303-AB	3	.43
S-304-AB	4	.48
S-306-AB	6	.60
S-308-AB	8	.75
S-310-AB	10	.89
S-312-AB	12	1.03

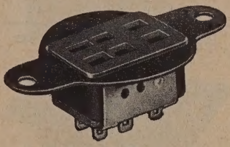
Plug with Flush Plate



P-306-FP

No.	Contacts	List Price Each
P-302-FP	2	$0.58
P-303-FP	3	.63
P-304-FP	4	.69
P-306-FP	6	.77
P-308-FP	8	.88
P-310-FP	10	.97
P-312-FP	12	1.05

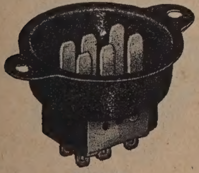
Socket with Flush Plate



S-306-FP

No.	Contacts	List Price Each
S-302-FP	2	$0.59
S-303-FP	3	.66
S-304-FP	4	.71
S-306-FP	6	.81
S-308-FP	8	.97
S-310-FP	10	1.11
S-312-FP	12	1.25

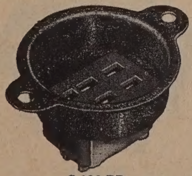
Plug with Recessed Plate



P-306-RP

No.	Contacts	List Price Each
P-302-RP	2	$0.67
P-303-RP	3	.72
P-304-RP	4	.79
P-306-RP	6	.90
P-308-RP	8	1.04
P-310-RP	10	1.20
P-312-RP	12	1.32

Socket with Recessed Plate



S-306-RP

No.	Contacts	List Price Each
S-302-RP	2	$0.69
S-303-RP	3	.76
S-304-RP	4	.81
S-306-RP	6	.98
S-308-RP	8	1.14
S-310-RP	10	1.32
S-312-RP	12	1.50

Plug with Deep Bracket

P-306-DB

No.	Contacts	List Price Each
P-302-DB	2	$0.83
P-303-DB	3	.90
P-304-DB	4	.97
P-306-DB	6	1.05
P-308-DB	8	1.14
P-312-DB	12	1.33

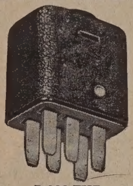
Socket with Deep Bracket

S-306-DB

No.	Contacts	List Price Each
S-302-DB	2	$0.87
S-303-DB	3	.93
S-304-DB	4	.99
S-306-DB	6	1.11
S-308-DB	8	1.25
S-312-DB	12	1.54

The ten contract is not available in this series

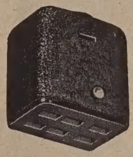
Plug, Flared Hole in Cap



P-306-FHT

No.	Contacts	List Price Each
P-302-FHT	2	$0.56
P-303-FHT	3	.61
P-304-FHT	4	.68
P-306-FHT	6	.77
P-308-FHT	8	.88
P-310-FHT	10	.99
P-312-FHT	12	1.12

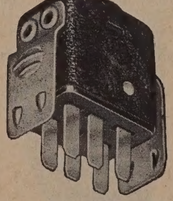
Socket, Flared Hole in Cap



S-306-FHT

No.	Contacts	Each List Price
S-302-FHT	2	$0.58
S-303-FHT	3	.63
S-304-FHT	4	.69
S-306-FHT	6	.81
S-308-FHT	8	.98
S-310-FHT	10	1.13
S-312-FHT	12	1.29

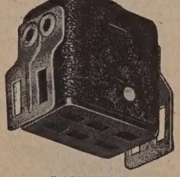
Plug, Flared Hole in Cap and with Latches



P-306-FHT-L

No.	Contacts	List Price Each
P-302-FHT-L	2	$0.76
P-303-FHT-L	3	.81
P-304-FHT-L	4	.89
P-306-FHT-L	6	.98
P-308-FHT-L	8	1.08
P-310-FHT-L	10	1.21
P-312-FHT-L	12	1.32

Socket, Flared Hole in Cap and with Keepers



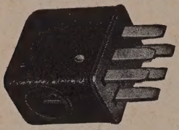
S-306-FHT-K

No.	Contacts	List Price Each
S-302-FHT-K	2	$0.77
S-303-FHT-K	3	.83
S-304-FHT-K	4	.90
S-306-FHT-K	6	1.03
S-308-FHT-K	8	1.20
S-310-FHT-K	10	1.34
S-312-FHT-K	12	1.50

CINCH-JONES SALES • DIVISION OF CINCH MANUFACTURING COMPANY

"300" SERIES PLUGS AND SOCKETS

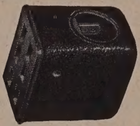
Plug, Flared Hole in End



P-306-FHE

No.	Contacts	List Price Each
P-306-FHE	6	$0.77
P-308-FHE	8	.88
P-310-FHE	10	.99
P-312-FHE	12	1.12

Socket, Flared Hole in End

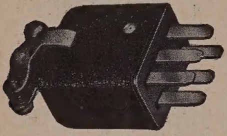


S-306-FHE

No.	Contacts	List Price Each
S-306-FHE	6	$0.81
S-308-FHE	8	.98
S-310-FHE	10	1.13
S-312-FHE	12	1.29

Small size of caps of 302, 303 and 304 will not permit FHE type.

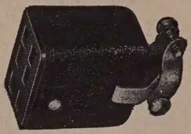
Plug, Cable Clamp in Cap



P-306-CCT

No.	Contacts	List Price Each
P-302-CCT	2	$0.76
P-303-CCT	3	.81
P-304-CCT	4	.89
P-306-CCT	6	.98
P-308-CCT	8	1.08
P-310-CCT	10	1.21
P-312-CCT	12	1.32

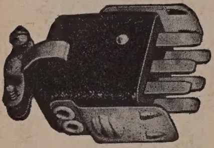
Socket, Cable Clamp in Cap



S-306-CCT

No.	Contacts	List Price Each
S-302-CCT	2	$0.77
S-303-CCT	3	.83
S-304-CCT	4	.90
S-306-CCT	6	1.03
S-308-CCT	8	1.20
S-310-CCT	10	1.34
S-312-CCT	12	1.54

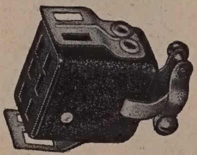
Plug, Cable Clamp in Cap and with Latches



P-306-CCT-L

No.	Contacts	List Price Each
P-302-CCT-L	2	$0.97
P-303-CCT-L	3	1.02
P-304-CCT-L	4	1.10
P-306-CCT-L	6	1.20
P-308-CCT-L	8	1.28
P-310-CCT-L	10	1.40
P-312-CCT-L	12	1.55

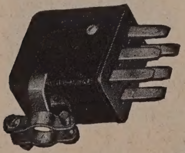
Socket, Cable Clamp in Cap and with Keepers



S-306-CCT-K

No.	Contacts	List Price Each
S-302-CCT-K	2	$0.98
S-303-CCT-K	3	1.04
S-304-CCT-K	4	1.11
S-306-CCT-K	6	1.24
S-308-CCT-K	8	1.39
S-310-CCT-K	10	1.56
S-312-CCT-K	12	1.71

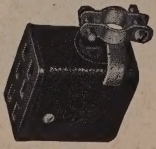
Plug, Cable Clamp in End



P-306-CCE

No.	Contacts	List Price Each
P-306-CCE	6	$0.98
P-308-CCE	8	1.08
P-310-CCE	10	1.21
P-312-CCE	12	1.32

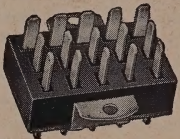
Socket, Cable Clamp in End



S-306-CCE

No.	Contacts	List Price Each
S-306-CCE	6	$1.03
S-308-CCE	8	1.20
S-310-CCE	10	1.34
S-312-CCE	12	1.54

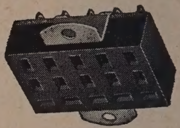
Plug with Angle Brackets



P-315-AB

No.	Contacts	List Price Each
P-315-AB	15	$1.10
P-318-AB	18	1.37
P-321-AB	21	1.72
P-324-AB	24	2.08
P-327-AB	27	2.45
P-330-AB	30	2.81
P-333-AB	33	3.16

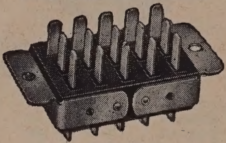
Socket with Angle Brackets



S-315-AB

No.	Contacts	List Price Each
S-315-AB	15	$1.28
S-318-AB	18	1.55
S-321-AB	21	1.91
S-324-AB	24	2.27
S-327-AB	27	2.63
S-330-AB	30	3.01
S-333-AB	33	3.36

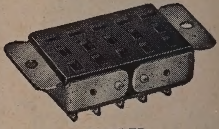
Plug with End Brackets



P-315-EB

No.	Contacts	List Price Each
P-315-EB	15	$1.10
P-318-EB	18	1.37
P-321-EB	21	1.72
P-324-EB	24	2.08
P-327-EB	27	2.45
P-330-EB	30	2.81
P-333-EB	33	3.16

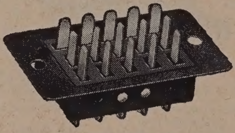
Sockets with End Brackets



S-315-EB

No.	Contacts	List Price Each
S-315-EB	15	$1.28
S-318-EB	18	1.55
S-321-EB	21	1.91
S-324-EB	24	2.27
S-327-EB	27	2.63
S-330-EB	30	3.01
S-333-EB	33	3.36

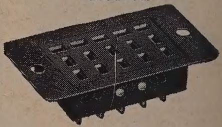
Plug with Shallow Brackets



P-315-SB

No.	Contacts	List Price Each
P-315-SB	15	$1.63
P-318-SB	18	2.01
P-321-SB	21	2.37
P-324-SB	24	2.81
P-327-SB	27	3.16
P-330-SB	30	3.62
P-333-SB	33	3.99

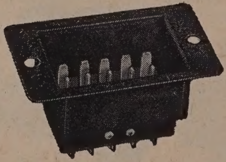
Sockets with Shallow Brackets



S-315-SB

No.	Contacts	List Price Each
S-315-SB	15	$1.83
S-318-SB	18	2.18
S-321-SB	21	2.55
S-324-SB	24	3.01
S-327-SB	27	3.36
S-330-SB	30	3.82
S-333-SB	33	4.18

Plug with Deep Bracket



P-315-DB

No.	Contacts	List Price Each
P-315-DB	15	$1.63
P-318-DB	18	2.01
P-321-DB	21	2.37
P-324-DB	24	2.81
P-327-DB	27	3.16
P-330-DB	30	3.63
P-333-DB	33	3.99

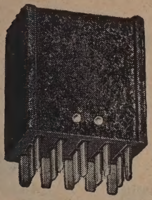
Socket with Deep Bracket

S-315-DB

No.	Contacts	List Price Each
S-315-DB	15	$1.83
S-318-DB	18	2.18
S-321-DB	21	2.55
S-324-DB	24	3.01
S-327-DB	27	3.36
S-330-DB	30	3.82
S-333-DB	33	4.18

"300" SERIES PLUGS AND SOCKETS

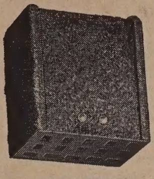
Plug with Flared Hole in Top of Cap



P-315-FHT

No.	Contacts	List Price Each
P-315-FHT	15	$1.45
P-318-FHT	18	1.82
P-321-FHT	21	2.17
P-324-FHT	24	2.63
P-327-FHT	27	3.01
P-330-FHT	30	3.46
P-333-FHT	33	3.82

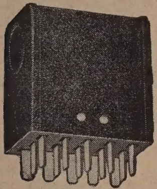
Socket, Flared Hole in Top of Cap



S-315-FHT

No.	Contacts	List Price Each
S-315-FHT	15	$1.63
S-318-FHT	18	2.01
S-321-FHT	21	2.37
S-324-FHT	24	2.83
S-327-FHT	27	3.18
S-330-FHT	30	3.64
S-333-FHT	33	4.00

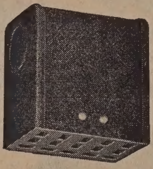
Plug with Flared Hole in End of Cap



P-315-FHE

No.	Contacts	List Price Each
P-315-FHE	15	$1.45
P-318-FHE	18	1.82
P-321-FHE	21	2.17
P-324-FHE	24	2.63
P-327-FHE	27	3.01
P-330-FHE	30	3.46
P-333-FHE	33	3.82

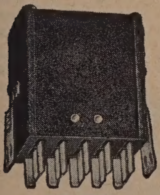
Socket, Flared Hole in End of Cap



S-315-FHE

No.	Contacts	List Price Each
S-315-FHE	15	$1.63
S-318-FHE	18	2.01
S-321-FHE	21	2.37
S-324-FHE	24	2.83
S-327-FHE	27	3.18
S-330-FHE	30	3.64
S-333-FHE	33	4.00

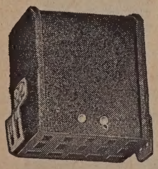
Plug, Flared Hole in Top of Cap with Latches



P-315-FHT-L

No.	Contacts	List Price Each
P-315-FHT-L	15	$1.63
P-318-FHT-L	18	2.01
P-321-FHT-L	21	2.37
P-324-FHT-L	24	2.83
P-327-FHT-L	27	3.18
P-330-FHT-L	30	3.64
P-333-FHT-L	33	4.00

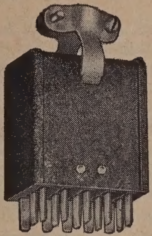
Socket, Flared Hole in Top of Cap and with Keepers



S-315-FHT-K

No.	Contacts	List Price Each
S-315-FHT-K	15	$1.83
S-318-FHT-K	18	2.18
S-321-FHT-K	21	2.55
S-324-FHT-K	24	3.02
S-327-FHT-K	27	3.38
S-330-FHT-K	30	3.83
S-333-FHT-K	33	4.20

Plug, Cable Clamp in Top of Cap



P-315-CCT

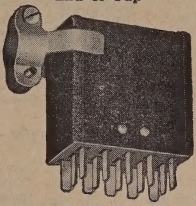
No.	Contacts	List Price Each
P-315-CCT	15	$1.72
P-318-CCT	18	2.08
P-321-CCT	21	2.45
P-324-CCT	24	2.89
P-327-CCT	27	3.28
P-330-CCT	30	3.82
P-333-CCT	33	4.09

Socket, Cable Clamp in Top of Cap

S-315-CCT

No.	Contacts	List Price Each
S-315-CCT	15	$1.91
S-318-CCT	18	2.27
S-321-CCT	21	2.63
S-324-CCT	24	3.10
S-327-CCT	27	3.46
S-330-CCT	30	4.00
S-333-CCT	33	4.28

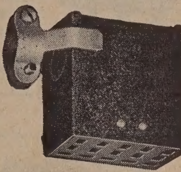
Plug, Cable Clamp in End of Cap



P-315-CCE

No.	Contacts	List Price Each
P-315-CCE	15	$1.72
P-318-CCE	18	2.08
P-321-CCE	21	2.45
P-324-CCE	24	2.89
P-327-CCE	27	3.28
P-330-CCE	30	3.82
P-333-CCE	33	4.09

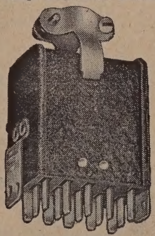
Socket, Cable Clamp in End of Cap



S-315-CCE

No.	Contacts	List Price Each
S-315-CCE	15	1.91
S-318-CCE	18	2.27
S-321-CCE	21	2.63
S-324-CCE	24	3.10
S-327-CCE	27	3.46
S-330-CCE	30	4.00
S-333-CCE	33	4.28

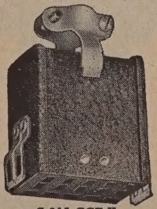
Plug, Cable Clamp in Top of Cap and with Latches



P-315-CCT-L

No.	Contacts	List Price Each
P-315-CCT-L	15	$1.91
P-318-CCT-L	18	2.27
P-321-CCT-L	21	2.63
P-324-CCT-L	24	3.10
P-327-CCT-L	27	3.46
P-330-CCT-L	30	4.00
P-333-CCT-L	33	4.28

Socket, Cable Clamp in Top of Cap and with Keepers



S-315-CCT-K

No.	Contacts	List Price Each
S-315-CCT-K	15	$2.10
S-318-CCT-K	18	2.46
S-321-CCT-K	21	2.83
S-324-CCT-K	24	3.29
S-327-CCT-K	27	3.64
S-330-CCT-K	30	4.19
S-333-CCT-K	33	4.45

CINCH-JONES SALES • DIVISION OF CINCH MANUFACTURING COMPANY

"400" SERIES PLUGS AND SOCKETS

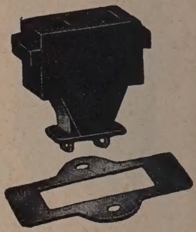
(Formerly "Heavy Duty")

General Specifications

Made in 2, 4, 6, 8, 10 and 12 contacts. All Plugs and Sockets are polarized. Body of molded Bakelite. Phosphor bronze "knife-switch" type Socket contacts engage both sides of flat Plug Contacts—double contact area. Plug prongs are ¼" wide by 1/16" thick. Caps are finished in Black Crystal and equipped with fibre lining. Plugs and Sockets arranged for cap or panel mounting.

Note: Standard angle brackets cannot be attached to S-402-AB due to narrow block and insufficient material for screw threads. A special bracket is supplied (Type 46) See illustration. The Socket fits into this bracket which is attached to panel.

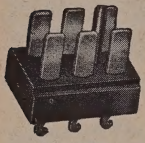
Check the No. 2400 Series Plugs and Sockets listed on pages F-42 and F-43 which are similar to the 400 Series except their design increases the creepage distances and therefore can take higher voltages.



S-402-AB (No. 46 Bracket)

PLUG — Less Angle Brackets

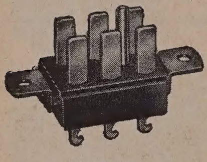
Drilled and Tapped Unless Otherwise Specified



P-406-LAB

Code	Contacts	List Price Each
P-402-LAB	2	$0.46
P-404-LAB	4	.64
P-406-LAB	6	.83
P-408-LAB	8	1.01
P-410-LAB	10	1.22
P-412-LAB	12	1.40

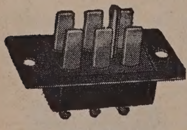
PLUG — With Angle Brackets



P-406-AB

Code	Contacts	List Price Each
P-402-AB	2	$0.83
P-404-AB	4	1.01
P-406-AB	6	1.22
P-408-AB	8	1.40
P-410-AB	10	1.59
P-412-AB	12	1.75

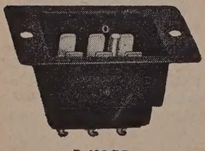
PLUG — With Shallow Bracket for Flush Mounting



P-406-SB

Code	Contacts	List Price Each
P-402-SB	2	$1.01
P-404-SB	4	1.30
P-406-SB	6	1.59
P-408-SB	8	1.86
P-410-SB	10	2.14
P-412-SB	12	2.42

PLUG — With Deep Brackets for Recessed Mounting

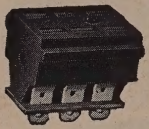


P-406-DB

Code	Contacts	List Price Each
P-402-DB	2	$1.01
P-404-DB	4	1.30
P-406-DB	6	1.59
P-408-DB	8	1.86
P-410-DB	10	2.14
P-412-DB	12	2.42

SOCKET — Less Angle Brackets

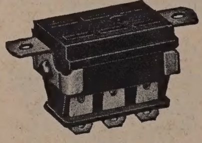
Drilled and Tapped Unless Otherwise Specified



S-406-LAB

Code	Contacts	List Price Each
S-402-LAB	2	$0.57
S-404-LAB	4	.83
S-406-LAB	6	1.24
S-408-LAB	8	1.40
S-410-LAB	10	1.66
S-412-LAB	12	1.94

SOCKET — With Angle Brackets



S-406-AB

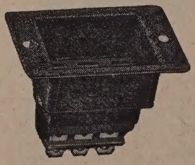
Code	Contacts	List Price Each
S-402-AB	2	$0.94
S-404-AB	4	1.22
S-406-AB	6	1.48
S-408-AB	8	1.75
S-410-AB	10	2.05
S-412-AB	12	2.31

SOCKET — With Shallow Bracket for Flush Mounting

S-406-SB

Code	Contacts	List Price Each
S-402-SB	2	$1.12
S-404-SB	4	1.48
S-406-SB	6	1.86
S-408-SB	8	2.22
S-410-SB	10	2.58
S-412-SB	12	2.95

SOCKET — With Deep Bracket for Recessed Mounting



S-406-DB

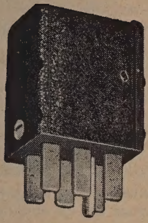
Code	Contacts	List Price Each
S-402-DB	2	$1.12
S-404-DB	4	1.48
S-406-DB	6	1.86
S-408-DB	8	2.22
S-410-DB	10	2.58
S-412-DB	12	2.95

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

CINCH-JONES SALES • DIVISION OF CINCH MANUFACTURING COMPANY

"400" SERIES PLUGS AND SOCKETS

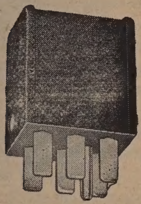
(Formerly "Heavy Duty")



P-406-FHT

PLUG — With Flared Hole in Top

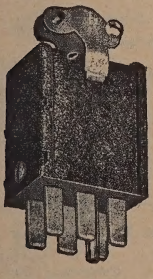
Code No.	Contacts	List Price Each
P-402-FHT	2	$0.94
P-404-FHT	4	1.22
P-406-FHT	6	1.48
P-408-FHT	8	1.75
P-410-FHT	10	2.04
P-412-FHT	12	2.30



P-406-FHE

PLUG — With Flared Hole in End

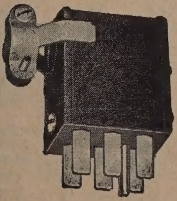
Code No.	Contacts	List Price Each
P-402-FHE	2	$0.94
P-404-FHE	4	1.22
P-406-FHE	6	1.48
P-408-FHE	8	1.75
P-410-FHE	10	2.04
P-412-FHE	12	2.30



P-406-CCT

PLUG — With Cable Clamp in Top

Code No.	Contacts	List Price Each
P-402-CCT	2	$1.30
P-404-CCT	4	1.59
P-406-CCT	6	1.86
P-408-CCT	8	2.12
P-410-CCT	10	2.39
P-412-CCT	12	2.67



P-406-CCE

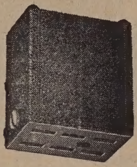
PLUG — With Cable Clamp in End

Code No.	Contacts	List Price Each
P-402-CCE	2	$1.30
P-404-CCE	4	1.59
P-406-CCE	6	1.86
P-408-CCE	8	2.12
P-410-CCE	10	2.39
P-412-CCE	12	2.67

S-406-FHT

SOCKET — With Flared Hole in Top

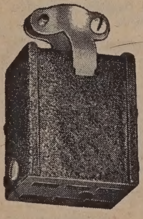
Code No.	Contacts	List Price Each
S-402-FHT	2	$1.03
S-404-FHT	4	1.41
S-406-FHT	6	1.76
S-408-FHT	8	2.14
S-410-FHT	10	2.51
S-412-FHT	12	2.89



S-406-FHE

SOCKET — With Flared Hole in End

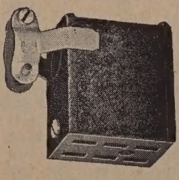
Code No.	Contacts	List Price Each
S-402-FHE	2	$1.03
S-404-FHE	4	1.41
S-406-FHE	6	1.76
S-408-FHE	8	2.14
S-410-FHE	10	2.51
S-412-FHE	12	2.89



S-406-CCT

SOCKET — With Cable Clamp in Top

Code No.	Contacts	List Price Each
S-402-CCT	2	$1.41
S-404-CCT	4	1.76
S-406-CCT	6	2.14
S-408-CCT	8	2.51
S-410-CCT	10	2.89
S-412-CCT	12	3.25



S-406-CCE

SOCKET — With Cable Clamp in End

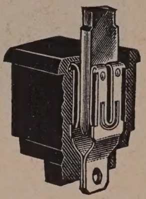
Code No.	Contacts	List Price Each
S-402-CCE	2	$1.41
S-404-CCE	4	1.76
S-406-CCE	6	2.14
S-408-CCE	8	2.51
S-410-CCE	10	2.89
S-412-CCE	12	3.25

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

"2400" SERIES PLUGS AND SOCKETS

The 2400 Series Plugs and Sockets are designed for highest electrical and mechanical efficiency, and although they carry the same rating as the 400 Series, they will actually handle considerably higher currents due to their improved construction.

An entirely new type of socket contact has been designed. Four individual flexing surfaces make positive contact over practically their entire length. Note in the illustration how they exert maximum pressure at every point. Also note unique method of anchoring terminals in the block—they cannot be moved up or down.



This design provides greater contact surface, increased pressure, with smoother action.

Socket contacts are of phosphor bronze, cadmium plated. Male contacts are of heavy brass ¼"x$\frac{1}{16}$", cadmium plated.

Solder connecting side of Plug Body showing Recessed Pockets with Barriers around contacts. Plug contacts are also in Recessed Pockets on opposite side.

Solder connecting side of Socket Body showing Recessed Pockets with Barriers around contacts. Socket contacts are also in Recessed Pockets on opposite side.

The contact to contact, and contact to ground distance has been considerably increased by mounting the contacts into recessed pockets with a Bakelite barrier surrounding and extending above. This method is used on both the top and bottom sides of both plugs and sockets, greatly increasing the leakage path.

The outside dimensions of corresponding plug and socket bodies are the same and can, therefore, be changed from brackets to caps, or vice versa.

Two styles of brackets are furnished "SB" (shallow bracket) for flush mounting and "DB" (deep bracket) for recessed mounting. Caps are furnished with flared hole in top or end, or with cable clamps in top or end. Unless otherwise specified the following size cable entrance holes will be supplied:

2402—⅜"
2404—$\frac{7}{16}$"
2406—$\frac{7}{16}$"
2408—$\frac{9}{16}$"
2410—$\frac{9}{16}$"
2412—⅝"

As noted above, the 2400 Series is furnished in 2, 4, 6, 8, 10, and 12 contacts. All plugs and sockets are polarized.

Plug and socket bodies are of molded Bakelite. The fibre linings in the caps are the same for both plugs and sockets.

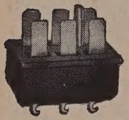
A shoulder extends around the face side of plug and socket presenting a finished appearance when mounted in bracket or cap.

On account of this shoulder extending around the entire face of the body blocks, angle brackets cannot be used with the 2400 Series Plugs or Sockets.

The entire 2400 Series is interchangeable with the 400 Series as 2400 Plugs fit corresponding 400 Sockets, and 400 Plugs fit corresponding 2400 Sockets.

PLUG—Less Mounting Bracket

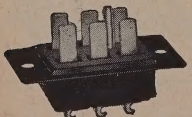
Drilled and Tapped Unless Otherwise Specified



P-2406

Code	Contacts	List Price Each
P-2402	**2**	**$0.63**
P-2404	**4**	**.83**
P-2406	**6**	**1.04**
P-2408	**8**	**1.25**
P-2410	**10**	**1.45**
P-2412	**12**	**1.68**

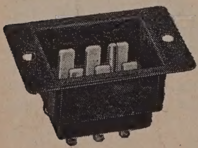
PLUG—With Shallow Bracket for Flush Mounting



P-2406-SB

Code	Contacts	List Price Each
P-2402-SB	**2**	**$1.12**
P-2404-SB	**4**	**1.32**
P-2406-SB	**6**	**1.54**
P-2408-SB	**8**	**1.74**
P-2410-SB	**10**	**1.99**
P-2412-SB	**12**	**2.18**

PLUG—With Deep Bracket for Recessed Mounting



P-2406-DB

Code	Contacts	List Price Each
P-2402-DB	**2**	**$1.23**
P-2404-DB	**4**	**1.42**
P-2408-DB	**6**	**1.62**
P-2408-DB	**8**	**1.84**
P-2410-DB	**10**	**2.06**
P-2412-DB	**12**	**2.29**

SOCKET—Less Mounting Bracket

Drilled and Tapped Unless Oherwise Specified

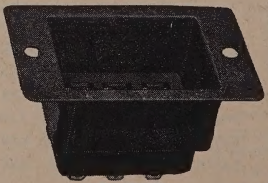
S-2406

Code	Contacts	List Price Each
S-2402	**2**	**$0.72**
S-2404	**4**	**.95**
S-2406	**6**	**1.15**
S-2408	**8**	**1.39**
S-2410	**10**	**1.60**
S-2412	**12**	**1.83**

SOCKET—With Shallow Bracket for Flush Mounting

S-2406-SB

Code	Contacts	List Price Each
S-2402-SB	**2**	**$1.23**
S-2404-SB	**4**	**1.44**
S-2406-SB	**6**	**1.67**
S-2408-SB	**8**	**1.90**
S-2410-SB	**10**	**2.14**
S-2412-SB	**12**	**2.37**

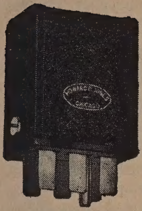


S-2406-DB

SOCKET—With Deep Bracket for Recessed Mounting

Code	Contacts	List Price Each
S-2402-DB	**2**	**$1.31**
S-2404-DB	**4**	**1.55**
S-2406-DB	**6**	**1.74**
S-2408-DB	**8**	**2.00**
S-2410-DB	**10**	**2.24**
S-2412-DB	**12**	**2.46**

"2400" SERIES PLUGS AND SOCKETS



P-2406-FHT

PLUG—With Flared Hole in Top

Code No.	Contacts	List Price Each
P-2402-FHT	2	$1.23
P-2404-FHT	4	1.42
P-2406-FHT	6	1.62
P-2408-FHT	8	1.84
P-2410-FHT	10	2.06
P-2412-FHT	12	2.31

P-2406-FHE

PLUG—With Flared Hole in End

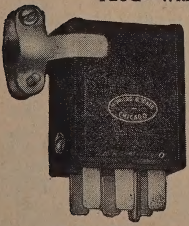
Code No.	Contacts	List Price Each
P-2402-FHE	2	$1.23
P-2404-FHE	4	1.42
P-2406-FHE	6	1.62
P-2408-FHE	8	1.84
P-2410-FHE	10	2.06
P-2412-FHE	12	2.31

P-2406-CCT

PLUG—With Cable Clamp in Top

Code No.	Contacts	List Price Each
P-2402-CCT	2	$1.58
P-2404-CCT	4	1.79
P-2406-CCT	6	2.00
P-2408-CCT	8	2.19
P-2410-CCT	10	2.42
P-2412-CCT	12	2.67

PLUG—With Cable Clamp in End



P-2406-CCE

Code No.	Contacts	List Price Each
P-2402-CCE	2	$1.58
P-2404-CCE	4	1.79
P-2406-CCE	6	2.00
P-2408-CCE	8	2.19
P-2410-CCE	10	2.42
P-2412-CCE	12	2.67

S-2406-FHT

SOCKET—With Flared Hole in Top

Code No.	Contacts	List Price Each
S-2402-FHT	2	$1.31
S-2404-FHT	4	1.55
S-2406-FHT	6	1.74
S-2408-FHT	8	2.00
S-2410-FHT	10	2.24
S-2412-FHT	12	2.46

S-2406-FHE

SOCKET—With Flared Hole in End

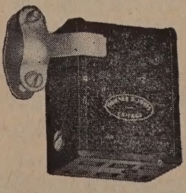
Code No.	Contacts	List Price Each
S-2402-FHE	2	$1.31
S-2404-FHE	4	1.55
S-2406-FHE	6	1.74
S-2408-FHE	8	2.00
S-2410-FHE	10	2.24
S-2412-FHE	12	2.46

S-2406-CCT

SOCKET—With Cable Clamp in Top

Code No.	Contacts	List Price Each
S-2402-CCT	2	$1.70
S-2404-CCT	4	1.90
S-2406-CCT	6	2.11
S-2408-CCT	8	2.35
S-2410-CCT	10	2.59
S-2412-CCT	12	2.83

SOCKET—With Cable Clamp in End



S-2406-CCE

Code No.	Contacts	List Price Each
S-2402-CCE	2	$1.70
S-2404-CCE	4	1.90
S-2406-CCE	6	2.11
S-2408-CCE	8	2.35
S-2410-CCE	10	2.59
S-2412-CCE	12	2.83

CINCH-JONES SALES • DIVISION OF CINCH MANUFACTURING COMPANY

"500" SERIES PLUGS AND SOCKETS

Designed for 3,000 volts and 25 amperes per contact. Circuit characteristics, however, may alter this rating one way or the other.

Long leakage path from terminal to terminal, and terminal to ground. Contacts are brass and phosphor bronze, silver plated. Metal parts of caps and brackets are steel, parkerized (rust-proofed). Plug and socket blocks are interchangeable in caps and brackets.

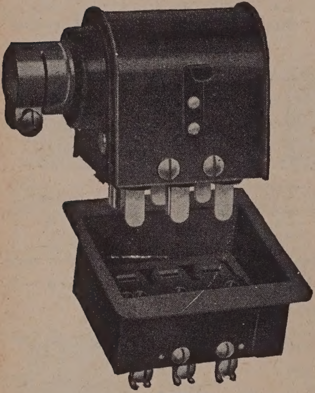
All sizes are polarized in a manner to prevent a smaller plug being inserted in a larger socket. Thus different sizes may be used on one installation without danger of making wrong connections.

Extreme care has been taken to make terminal connections under cap very accessible both for original wiring and subsequent inspection. The cap is insulated with canvas bakelite. Plug prong cross section $\frac{5}{16}''$ x $\frac{3}{32}''$.

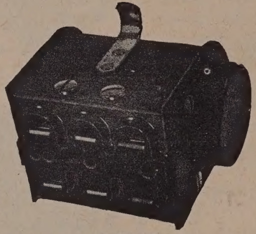
IMPORTANT: For safety with high voltages DEEP BRACKETS should always be used on one plug or socket, when the other plug or socket has a CAP. SHALLOW BRACKETS are for use only in connecting two units, each unit having plug or socket with SHALLOW BRACKET.

Cable entrance: Because of the great variation in type and size of cables, we have considered it best not to supply cable clamps of any kind. The cap end is made to accommodate standard BX clamps which may be obtained at any electrical jobbing house. The cap end will be furnished with round hole from ½" diameter and 1¼" diameter in steps of ⅛", if the size required is given on order. If no size is given, plain cap end with center punch locating center will be shipped.

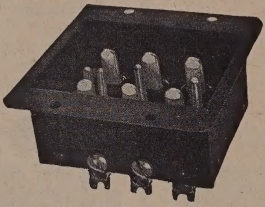
P-506-CE
(Plug with Cap)
(BX Clamp shown but not furnished)



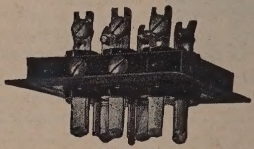
S-506-DB
(Socket with Deep Bracket)



S-506-CE
(Socket with Cap)



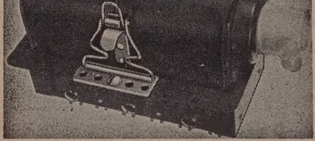
P-506-DB
(Plug with Deep Bracket)



P-506-SB
(Plug with Shallow Bracket)

S-506-SB
(Socket with Shallow Bracket)

LOCKS FOR 500 SERIES PLUGS AND SOCKETS



No. 500-L Locks

Locks shown above are used in connection with any DEEP BRACKET and cap combination.

The locks securely hold the units together, but they can be released instantly.

The mounting plates are made to fit all DEEP BRACKETS, and are fastened by the same screws or rivets that hold the deep brackets to the panel. Can not be used on shallow brackets. Sold in pairs only.

PLUG

With Cap

Code	Contacts	List Price Each
P-502-CE	**2**	**$4.21**
P-504-CE	**4**	**6.06**
P-506-CE	**6**	**7.91**
P-508-CE	**8**	**9.77**
P-510-CE	**10**	**11.62**
P-512-CE	**12**	**13.46**

PLUG

With Deep Bracket

Code	Contacts	List Price Each
P-502-DB	**2**	**$3.71**
P-504-DB	**4**	**5.31**
P-506-DB	**6**	**6.90**
P-508-DB	**8**	**8.51**
P-510-DB	**10**	**10.11**
P-512-DB	**12**	**11.72**

PLUG

With Shallow Bracket

Code	Contacts	List Price Each
P-502-SB	**2**	**$3.71**
P-504-SB	**4**	**5.31**
P-506-SB	**6**	**6.90**
P-508-SB	**8**	**8.51**
P-510-SB	**10**	**10.11**
P-512-SB	**12**	**11.72**

SOCKET

With Cap

Code	Contacts	List Price Each
S-502-CE	**2**	**$4.21**
S-504-CE	**4**	**6.06**
S-506-CE	**6**	**7.91**
S-508-CE	**8**	**9.77**
S-510-CE	**10**	**11.62**
S-512-CE	**12**	**13.46**

SOCKET

With Deep Bracket

Code	Contacts	List Price Each
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S-506-DB	**6**	**6.90**
S-508-DB	**8**	**8.51**
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SOCKET

With Shallow Bracket

Code	Contacts	List Price Each
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S-504-SB	**4**	**5.31**
S-506-SB	**6**	**6.90**
S-508-SB	**8**	**8.51**
S-510-SB	**10**	**10.11**
S-512-SB	**12**	**11.72**

E-Z-HOOKs

A Revolutionary Concept in Test Connectors!

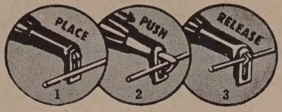
MODERN DESIGN ASSURES SAFER — FASTER — MORE POSITIVE CONNECTIONS

By utilizing a HOOK (the handiest connector ever devised) and an insulated FOOT (to hold it firmly in place) E-Z-HOOKs provide quick, easy connections and eliminate costly delays, shorts and intermittents. POSITIVE GRIP — NO SLIP. E-Z-HOOKs will save many hours in engineering design, bread-boarding, trouble shooting and test set-ups.

HERE'S HOW THE E-Z-HOOK WORKS:

TO ATTACH:

1. Simply place the "foot" on the Test Spot.
2. Exert a slight forward pressure.
3. Release — and you have a vise-like grip that won't slip.



TO RELEASE: Just push slightly and turn.

USE THEM TIME AFTER TIME FOR POSITIVE GRIP — NO SLIP

Every E-Z-HOOK product is fully insulated. A Nylon sliding safety shield provides maximum protection against adjacent shorts and allows positive connections anywhere, even on flat, large or irregular test spots.

EASIEST OF ALL CONNECTORS TO USE: E-Z-HOOKs are self-adjusting for quick, positive connections. Their small, compact design, and sliding action, permits reaching crowded spots — even deep in a chassis. So the hands remain in the open, safe from shocks. Made of durable stainless steel and Nylon* — E-Z-HOOKs are built to last and are fully guaranteed to give satisfactory service. Always use E-Z-HOOKs when you need safe — fast — positive connections.

E-Z-HOOK CLIP TEST CONNECTORS

Specially designed for jumper leads, ground connectors and leads on all types of equipment. Assembly is quick and easy.

E-Z-HOOK Clip

Actual Size

To remove body insulator, simply squeeze at A & B (Fig. 1). Pull firmly on insulator C. This will remove cover from connector (Fig. 2).

Now a positive, trouble-free solder connection can be made to the lead — indicated in Fig. 3. The joint is wrapped as in Fig. 3 — and iron or dip soldered. This method of attaching the lead relieves strain — increasing test lead life. To reassemble, simply slide the two units together. Colors: red, black, blue, green, orange and yellow.

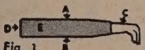


Fig. 1

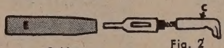


Fig. 2

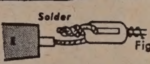


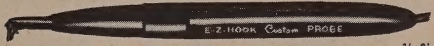
Fig. 3

No. 61-1 E-Z-HOOK CLIP (Standard) ....Net ea. 49c

No. 61-2 E-Z-HOOK CLIP (Gold-plated for guided missile work, etc.)....Net ea. 65c

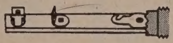
E-Z-HOOK CUSTOM TEST PROBE

Designed with a built-in terminal board for ease in making your own special test probe assemblies.



⅔ Size

The positive grip, plus the sliding safety shield make this ideal for use on Electronic Test Leads. It is fast, efficient and safe. The built-in terminal board with special mounting lugs, makes it easy to make your own special test probe assemblies in minutes. A tenite* screw-on cover protects components and gives easy access to the terminal board. It is ideal for use with scopes, volt-ohm-meters, signal tracers, signal generators, substitution boxes, etc. It saves money in experimenting and servicing because it makes testing faster, easier and safer. Comes in red, green, black, blue, silver and orange.



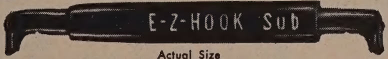
Built-in Terminal Board with Special Mounting Lugs

54-1 E-Z-HOOK CUSTOM PROBE ....Net ea. 1.39

54-2 E-Z-HOOK CUSTOM PROBE (Gold-plated for guided missile work and other special projects) ....Net ea. 1.55

E-Z-HOOK SUB CONNECTOR

Designed for temporary lead connections, substitute checks, experimental hookups, etc.

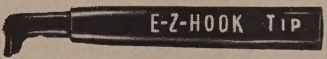


Actual Size

By making connections without soldering you save time, save wear and tear, eliminate solder tacking and reduce salvage. When this dual connector is utilized, burnt insulation, lead twisting and frayed wires are eliminated. Parts and circuitry stay clean and new-looking and Test setups are made easier and faster. Colors: red, black, blue, green, orange and yellow for easy lead identification.

No. 71-1 E-Z-HOOK SUB ....Net ea. 69c

E-Z-HOOK TIP ADAPTER



Actual Size

Designed to convert test prods to self-holding connectors.

Because the tip ADAPTER makes a test prod self-holding, hands are freed. Also, the sliding safety shield permits getting in close without shorting. The tip slips on or off easily, and has a special spring chuck (Fig. 5) to hold it firmly on the prod. Available in red, black, blue, green, orange and yellow.

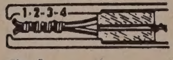


Fig. 5

No. 55-0 E-Z-HOOK TIP . . . NEEDLE POINT (.060")........Net ea. 89c

No. 56-1 E-Z-HOOK TIP . . . STANDARD (.080") ....Net ea. 89c

No. 59-4 E-Z-HOOK TIP . . . BANANA ....Net ea. 69c

E-Z-HOOKs ARE AVAILABLE AT ALL LEADING PARTS DISTRIBUTORS

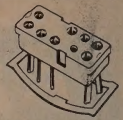
E-Z-HOOK TEST PRODUCTS • • Covington, Ky.

Canadian Representative: Len Finkler, Ltd., Toronto, Ontario

ELCO SALES COMPANY

Philadelphia 24, Pa.

RELAY SOCKET



Contact Material: Beryllium Copper, Silver Plated Gold Flashed

Model	List Price
887	1.05
Ring	List Price
886	.07

JAN SOCKETS AND SHIELDS

Part No.	Description	Designation per MIL/12883A	List Price Each
235 PHSPTD	7-Pin Mica	TS 102P01	.45
238 PHSPTD	7-Pin Ceramic	TS 102C01	.81
169 PHSPTD	9-Pin Mica	TS 103P01	.64
176 PHSPTD	9-Pin Ceramic	TS 103C01	1.05
335 PHSPTD	Octal Mica	TS 101P01	.80
336 PHSPTD	Octal Mica—with Bushings	TS 101P02	1.12
338 PHSPTD	Octal Ceramic	TS 101C01	1.20
337 PHSPTD	Octal Ceramic—with Bushings	TS 101C02	1.54
*983 PHSPTD	7-Pin Mica	TS 102P02	.36
*982 PHSPTD	7-Pin Ceramic	TS 102C02	.59
*987 PHSPTD	7-Pin Mica	TS 102P03	.36
*986 PHSPTD	7-Pin Ceramic	TS 102C03	.59
*985 PHSPTD	9-Pin Mica	TS 103P02	.38
*984 PHSPTD	9-Pin Ceramic	TS 103C02	.62
*989 PHSPTD	9-Pin Mica	TS 103P03	.38
*988 PHSPTD	9-Pin Ceramic	TS 103C03	.62
430 PHSPTD	2-Pin Glazed Ceramic, Crystal Socket	TS 0205C01	.36
121	7-Pin Shield 1⅜″	TS 102U01	.25
120	7-Pin Shield 1¾″	TS 102U02	.25
149	7-Pin Shield 2¼″	TS 102U03	.31
193	9-Pin Shield 1½″	TS 103U01	.31
191	9-Pin Shield 1$^{15}/_{16}$″	TS 103U02	.34
195	9-Pin Shield 2⅜″	TS 103U03	.39

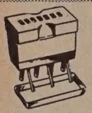
*Saddle Type

CORRUGATED INSERT FOR JAN SHIELDS

Cad. plate, beryllium copper, matte black finish.

Model No.	JAN No.	List Price Ea.
929, 7-pin	TS102U01	.31
930, 7-pin	TS102U02	.35
931, 7-pin	TS102U03	.43
932, 9-pin	TS103U01	.37
933, 9-pin	TS103U02	.45
934, 9-pin	TS103U03	.52

FLAT TYPE SUB-MINIATURE

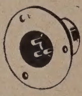


Insulator Material	Model No.	List Price Ea.
5 Pin	770 BC	.44
6 Pin	813 BC	.47
7 Pin	790 BC	.50

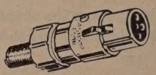
Mica Filled Castings, Beryllium Copper Contacts.

MOUNTING RINGS

5 Pin	756	.03
6 Pin	843	.04
7 Pin	768	.04



"EL" SERIES AUDIO PLUGS, RECEPTACLES



EL2213, Panel Connector, Male

Model	Contacts	Ozs.	List Price Ea.
EL2213-3	3	1	1.20
EL2213-4	4	1	1.70

Mates with EL2214

EL2215, Panel Connector, Male

Model	Contacts	Ozs.	List Price Ea.
EL2215-3	3	2.2	1.55
EL2215-4	4	2.2	2.15

Mates with EL2216

EL2214, Cable Connector, Female

Model	Contacts	Ozs.	List Price Ea.
EL2214-3	3	2	1.55
EL2214-4	4	2	2.15

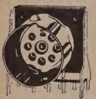
Mates with EL2213 or EL2216

EL2216, Cable Connector, Female

Model	Contacts	Ozs.	List Price Ea.
EL2216-3	3	1.9	1.50
EL2216-4	4	1.9	2.00

Mates with EL2214 or EL2215

RIGHT-ANGLE PRINTED CIRCUIT SOCKETS



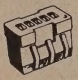
With Continuous Contacts

	Model No.	List Price Ea.
7-Pin Without Shield Bs.	4006-1-EG-1/16	1.28
7-Pin With Shield Base	4007-1-EG-1/16	1.53
9-Pin Without Shield Bs.	4008-1-EG-1/16	1.35
9-Pin With Shield Base	4009-1-EG-1/16	1.67

EG = GLASS FILLED EPOXY BOARD

Sockets can be provided to fit 1/16, 3/32 or 1/8 thick chassis.

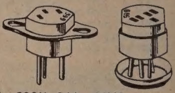
PRINTED CIRCUIT TYPE SUB-MINIATURE



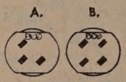
	Model No.	List Price Ea.
3 Pin	786 BC	.46
4 Pin	805 BC	.47
5 Pin	788 BC	.48
6 Pin	815 BC	.51
7 Pin	792 BC	.54

Mica Filled Castings.
Contact Material — Beryllium Copper.

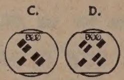
SERIES 3300 COMBINATION TRANSISTOR SOCKETS



For .016″ and .030″ DIA. PINS



For .030″ Dia. Pins

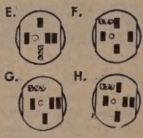


For .016″ Dia. Pins

Model No.	Saddles	Mtg. Ring	List Price Ea.
(A) 3324		757	.42
(A) 3326	Flat	....	.62
(B) 3325		757	.42
(B) 3327	Flat	....	.62
(C) 3315		757	.45
(C) 3318	Flat	....	.65
(D) 3316		757	.45
(D) 3319	Flat	....	.65

Material: Mica

Contacts: Beryllium Copper, Silver Plated and Gold Flashed

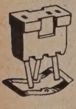


Model No.	Saddles	Mtg. Ring	List Price Ea.
(E) 3301	Flat	....	.60
3303 P.C.		....	.45
(E) 3304		757	.40
3305 P.C.		....	.52
(F) 3306	Flat	....	.60
(F) 3307		757	.40
(G) 3309	Flat	....	.60
(G) 3310		757	.40
(H) 3312	Flat	....	.65
(H) 3313		757	.50

Material: Mica

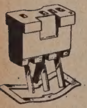
Contacts: Beryllium Silver Plated Flashed Copper, and Gold

TRANSISTOR TYPE SUBMINIATURE SOCKETS



3-Pin Point & Junction Type (Mica Filled Insulator Material)

Model No.	List Price Ea.
799BC	.42

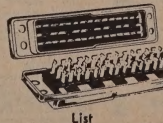


4-Pin Linotetrar Type (Mica Filled Insulator Material)

Model No.	List Price Ea.
803BC	.43

Contact Material—Beryllium Copper, Silver Plated, Gold Flashed.

SERIES 8000 SUBMINIATURE VARICON CONNECTORS



No. Model	List Price Ea.	Model No.	List Price Ea.
8001-16-1-M-5	4.45	8001-40-1-F-5	8.35
8001-16-1-F-5	4.45	8002-48-1-M-5	9.00
8001-40-1-M-5	8.35	8002-48-1-F-5	9.00

This unit offers a maximum number of contacts in a minimum space. Write for Bulletin No. 107. Material: G.P. or Mica.

All 7- and 9-Pin Printed Circuit Sockets Available Upon Request. Send for Elco Sales Company Catalog.

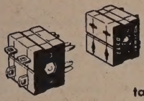
AMERICA'S QUALITY LINE • RADIO, TELEVISION, ELECTRONIC COMPONENTS

ELCO SALES COMPANY

Philadelphia 24, Pa.

Elco Varicon Connectors provide the simplest, quickest, most positive means for connecting electronic or electric circuits. Varicons introduce "Keying Control," making it impossible to connect unmatched parts; may be assembled by you or us from stock parts.

Prices below are for General Purpose Phenolic. Also available in Low-Loss Mica Phenolic, Alkyd, and General Purpose Phenolic in assorted colors, prices furnished upon request. For general specifications of ALL Varicons, refer to description beneath Connector Kit. For any other information regarding these "Miniature Connectors that work like Giants," please write us.

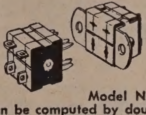


VARICONS

Plain with no hardware

2nd and 3rd digit numerals in Model Nos. designate number of Contacts in Connector.

MALE Model No.	Price	FEMALE Model No.	List Price Ea.
M1022	.29	F1022	.27
M1042	.40	F1042	.38
M1062	.52	F1062	.48
M1082	.63	F1082	.59
M1102	.78	F1102	.71
M1122	.90	F1122	.83
M1142	1.08	F1142	.99
M1162	1.26	F1162	1.16
M1182	1.44	F1182	1.33

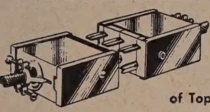


VARICONS

With bracket

Substitute the numeral "2" instead of the numeral "1" in the first digit of the Model Number if a double tier is desired. List price can be computed by doubling the List Price of the appropriate Single Tier VARICON with Bracket and adding .03 ea.

MALE Model No.	Price	FEMALE Model No.	List Price Ea.
M10220	.34	F10220	.32
M10420	.45	F10420	.43
M10620	.57	F10620	.53
M10820	.68	F10820	.64
M11020	.84	F11020	.77
M11220	.96	F11220	.89
M11420	1.14	F11420	1.05
M11620	1.31	F11620	1.22
M11820	1.50	F11820	1.38

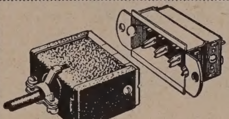


VARICONS

With cover top clamp

Hole can be located on End instead of Top by changing final digit from 4 to 5.

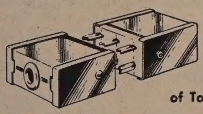
MALE Model No.	Price	FEMALE Model No.	List Price Ea.
M10425	.86	F10425	.84
M10624	.98	F10624	.94
M10824	1.09	F10824	1.05
M11024	1.27	F11024	1.20
M11224	1.44	F11224	1.37
M11424	1.68	F11424	1.59
M11624	1.91	F11624	1.82
M11824	2.15	F11824	2.04
M22024	2.51	F22024	2.39
M22424	3.09	F22424	2.96
M22824	3.67	F22824	3.53
M23224	4.26	F23224	4.09
M23624	4.89	F23624	4.73



VARICONS

With recessed housing

MALE Model No.	Price	FEMALE Model No.	List Price Ea.
M10626	.93	F10626	.88
M10826	1.07	F10826	1.03
M11026	1.27	F11026	1.20
M11226	1.45	F11226	1.38
M11426	1.69	F11426	1.60
M11626	1.92	F11626	1.83
M11826	2.16	F11826	2.05
M22026	2.47	F22026	2.36
M22426	3.06	F22426	2.92
M22826	3.63	F22826	3.50
M23226	4.22	F23226	4.06
M23626	4.85	F23626	4.69



VARICONS

With covers — top hole

Hole can be situated on End instead of Top by changing final digit from 2 to 3.

MALE Model No.	Price	FEMALE Model No.	List Price Ea.
M10423	.67	F10423	.65
M10622	.79	F10622	.75
M10822	.90	F10822	.86
M11022	1.07	F11022	1.00
M11222	1.24	F11222	1.17
M11422	1.48	F11422	1.39
M11622	1.71	F11622	1.62
M11822	1.96	F11822	1.84
M22022	2.24	F22022	2.13
M22422	2.83	F22422	2.69
M22822	3.40	F22822	3.27
M23222	3.94	F23222	3.83
M23622	4.62	F23622	4.46

New Enlarged VARICON KIT

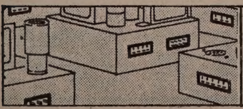
Contains all parts to allow user to make "on the spot" assembly of virtually every type miniature connector in any pin configuration, from 2 contact single tier to 48 contact double tier. Includes Elco's new right-angle Varicon; regular and taper tab male and female contacts; ruggedized end sections; center sections; covers; brackets; cable clamps; screws; nuts; Assembly Instructions; re-ordering sheet. In handsome transparent plastic box.

GVK — 1 (GP) LIST 40.00 Each
GVK — 2 (LL) LIST 50.00 Each

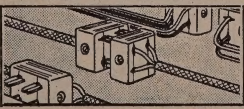
Smaller Kits Also Available GP—1 10.00 • GP—2 13.75

GENERAL SPECIFICATIONS: Current Rating 15 Amps., 115 Volts (in cover); 30 Amps. (in free air) (withstanding voltage between closest terminals 4000 volts); Contact Resistance .0001 ohm. Low Capacitance. All Male & Female components are identical. 300 ohm line spacing. Contacts in use are always under pressure, cannot be overstressed or overstrained.

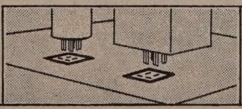
CHASSIS APPLICATIONS



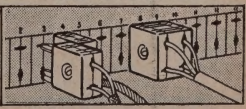
CABLE APPLICATIONS



PLUG-IN APPLICATIONS



PANEL APPLICATIONS

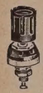


Grayhill INC.

LA GRANGE, ILLINOIS

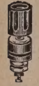
GRAYHILL BINDING POSTS

All metal parts are nickel plated brass. Insulating washers are non-turn "D" style phenolic to MIL-M-14. Integral solder stud plus two hex nuts for solder lug connections. All posts may be used on panels up to 3/16" thick and are shipped completely assembled.



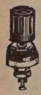
29-3 SCREW TYPE

For ½" dia. mounting hole. ⅝" dia. insulating washers for use in existing equipment or where wider spacing is desirable. Available in red, black, white, yellow, blue, gray, green and brown.



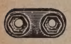
29-1 SCREW TYPE

For ⅜" dia. mounting hole. ½" dia. insulating washers. Allows closer spacing of posts. Available in red and black.

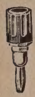


29-33 SPRING LOADED

For ½" mounting hole. ⅝" dia. insulating washers. Spring loaded head gives 24 oz. of contact force. Designed for rapid connections. Available in red, black.



29B11 For use with 29-1 posts. Makes an assembled unit with two posts on ¾" centers. Molded phenolic to MIL-M-14. **29B11-1 (Black) 29B11-2 (Red)**

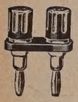


29-41

Binding Plug (screw type) conforms to same standard as the binding posts. Mounted on a standard banana plug.
29-41R (Red) 29-41B (Black)

29-43

Binding Plug (spring loaded). Head gives 24 oz. contact force. Designed for rapid connections. **29-43R (Red) 29-43B (Black)**



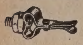
29-42

Twin Binding Plug. Two binding plugs mounted on a molded phenolic base. Banana plugs are on standard ¾" centers. Sold as a completely assembled unit with two screw type heads.

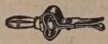
29-44 Same as 29-42 except with spring loaded heads.

TEST CLIPS

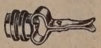
The basic clip is available in 4 types of mounting. Designed for panel mounting on test equipment to allow rapid connections without manual opening and closing of jaws. Hex nut allows for tension adjustment of each clip. Clips are nickel plated brass. Length of test clip (excluding mounting base) is 1⅛".



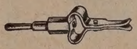
2-0 Threaded stud.



2-1 Banana plug.



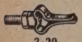
2-4 Threaded stud with insulating washers.



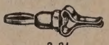
2-6 Pin plug.

MINIATURE TEST CLIPS

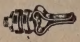
A miniature version of the standard test clip, with the same construction and design, but extends only ¾" above the mounting surface.



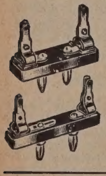
2-20 Threaded Stud



2-21 Banana Plug



2-24 Threaded Stud with Molded Phenolic Insulating Washers

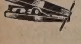


TEST CLIP ADAPTERS

2-2 For testing resistors, capacitors and other pigtail type components. Banana plugs are on standard ¾" centers. All metal parts are nickel plated brass. Mounting board is molded phenolic to MIL-M-14. Hex nut under clip allows for tension adjustment of individual clips. Test clip extends 1⅛" above board.

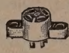
2-7 Similar to the 2-2 except that banana plugs are adjustable from ¾" to 1¼" centers.

INSULATED TEST CLIPS

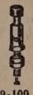


COMPLETELY INSULATED (including hinge pin) eliminating the danger of shorting. Molded parts are phenolic to MIL-M-14. .008" thick silver overlay at point of contact. Terminal is silver plated brass. Contact resistance .0015 ohms. All units tested at 500 volts to insure complete insulation.
16-B (Black) 16-R (Red)

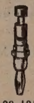
TRANSISTOR SOCKET 22-11



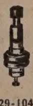
Designed for JETEC 30 packaging. Leads fit on 100 MIL grid for printed circuit. Socket fits through ⅜" drilled or punched hole and may be fastened with rivets or #2 screws. Terminal numbers are molded into bottom of socket and top face has key rib for alignment with transistor tab. Contacts are wrap around type, silver plated beryllium copper with gold flash. Base is molded mica-filled phenolic per MIL-M-14, Type MFE.



29-100 Threaded Stud



29-101 Banana Plug



29-104 Molded phenolic washers

PLUNGER BINDING POST

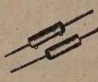
Designed to provide fast positive connections, this post is operated by depressing the plunger, inserting lead, and releasing plunger. Spring pressure assures firm positive contact. Only ¾" overall height above mounting surface. Nickel plated brass parts. Red or black molded phenolic button cap.

SERIES 31 TEST JACKS

Designed for use on printed circuit boards as test points. Accommodates standard phone tip plugs from .081" to .0825" dia. Rivets to board like an eyelet. Rivet dia. is .114". Jack is silver plated brass with gold flash. Retaining ring is cadmium plated spring steel. Extends ¼" above circuit board.
31-1 (for 1/16" board)
31-2 (for 3/32" board)
31-3 (for ⅛" board)

PLASTIC SLEEVES FOR SERIES 31 TEST JACKS

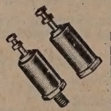
Sleeves snap on and permanently lock in place over test jacks. Molded of thermo-setting plastic. Overall dimensions .24" dia. x .29" high. Available in black, red, green, gray, brown, blue, yellow and white. **31B—(Specify Color)**



COIL FORMS

(Pat. No. 2,653,992)

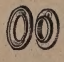
MOLDED OF MICA FILLED PHENOLIC per MIL-M-14, Type MFE with leads of tinned solid copper wire. Available in lengths from ½" to 1" and diameters from ⅛" to ¼". With or without anchoring posts.



STAND OFF INSULATORS

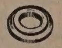
Body of insulator is molded of mica filled phenolic per MIL-M-14, Type MFE. Terminals are silver plated brass. Overall length excluding mounting stud is 15/16". Diameter is 5/16".
18-1 (Female)
18-2 (Male)

MATING INSULATING WASHERS



For jacks with a ⅜" dia. bushing. Washer for rear of panel has indexing hole that corresponds with the non-turn tab of the jack. Front washer fits under hex mounting nut. Sold in pairs.
21B78-1 (Mica-filled phenolic)
21B78-2 (Black elec. grade phenolic)

MOLDED INSULATING WASHERS

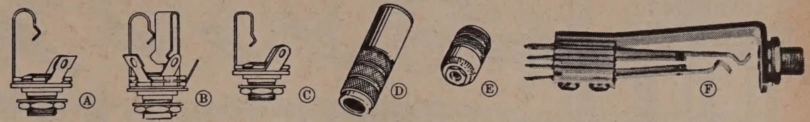


Molded from black electrical grade or mica filled phenolics. Available in eight different sizes for #2 to ⅜" screws. Overall diameters are ⅜", ½", or ⅝".

GC
ELECTRONICS

ELECTROCRAFT COMPONENTS

PHONE JACKS • PHONO PIN PLUGS AND JACKS • CONNECTORS



GC Electrocraft Jacks require a minimum panel space and depth behind panel. Parts are keyed and mechanically interlocked. Springs are made of nickel silver, with phenolic spaces and brass, nickel plated mounting bushings. Panel mounting jacks furnished with nickel plated steel washers and nickel plated brass mounting nut.

PHONE JACKS

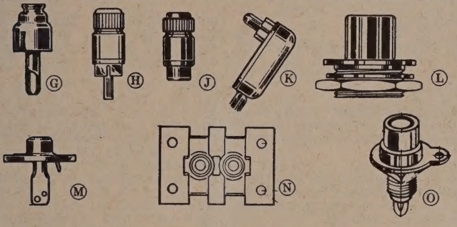
(A) PANEL MOUNTING, TWO-CONDUCTOR PHONE JACKS—Open circuit, 2-conductor.
Cat. No. 33-690 List $ .40
Closed circuit, 2-conductor.
Cat. No. 33-692 List $ .45
Open circuit, 2-conductor, MIL type, JJ-034.
Cat. No. 33-694 List $ .60
Open circuit, 2-conductor .210" ID Sleeve fits plugs 33-630/2.
Cat. No. 33-700 List $ .45
Closed circuit, 2-conductor .210" ID Sleeve—fits plugs 33-630/2.
Cat. No. 33-702 List $ .50

(B) PANEL MOUNTING 3-CONDUCTOR PHONE JACKS—Open circuit, 3-conductor.
Cat. No. 33-708 List $ .55
Single closed circuit, 3-conductor.
Cat. No. 33-710 List $ .75
Open circuit, 3-conductor, MIL type JJ-033.
Cat. No. 33-712 List $ .70

(C) MINIATURE PANEL MOUNTING JACKS—These jacks mate with plugs 33-660 through 33-670. Open circuit, 2-conductor.
Cat. No. 33-720 List $ .40
Closed circuit, 2-conductor.
Cat. No. 33-722 List $ .45

(D & E) CORD MOUNTED JACKS—Often referred to as "extension jacks" or "In-line jacks."
2-conductor, open circuit style, with solder lug terminals and metal (shielded) handle.
Cat. No. 33-730 List $1.40
2-conductor, open circuit style, with solder lug terminals and black plastic handle.
Cat. No. 33-732 Blk List $1.00
2-conductor, open circuit, screw type terminal, with metal (shielded) handle.
Cat. No. 33-734 List $1.55
2-conductor, open circuit, screw type terminals, with black plastic handle.
Cat. No. 33-736 Blk List $1.15
3-conductor, open circuit style, with solder lug terminals and metal (shielded) handle.
Cat. No. 33-740 List $1.80
3-conductor, open circuit style, with screw type terminal and metal (shielded) handle.
Cat. No. 33-742 List $1.95
Miniature type, mates with plugs #33-660 through #33-670, with solder lugs and metal (shielded) handle.
Cat. No. 33-746 List $1.20

(F) LONG FRAME JACKS—2-conductor, open circuit.
Cat. No. 33-750 List $ .75
3-conductor, single closed circuit.
Cat. No. 33-752 List $1.05
3-conductor, single closed circuit ring grounded.
Cat. No. 33-754 List $1.05
2-conductor, open circuit w/insulated break.
Cat. No. 33-756 List $1.05
3-conductor, 2 closed circuit.
Cat. No. 33-758 List $1.20
2-conductor, closed circuit w/insulated make.
Cat. No. 33-760 List $1.20



PHONO PIN PLUGS AND JACKS

These plugs and jacks are universally used for audio connections, phonographs, pre-amplifiers and amplifiers in connection with single conductor shielded cable.

(G) PHONE PLUGS—Solder type.
Cat. No. 33-770 List $ .10

(H) PHONO PLUGS — Combination clamp, solder type, with removable metal (shielded) handle.
Cat. No. 33-772 List $ .50

(J) PHONO JACK, CORD MOUNTED—Combination clamp and solder, terminal; removable metal (shielded) handle.
Cat. No. 33-774 List $ .60

(K) SOLDERLESS PHONO PLUGS—Positive, noise-free pressure connection. Right angle style, designed for regular shielded cable with approximately 3/16" OD.
Grey plastic shell.
Cat. No. 33-776 List $ .45
Black plastic shell.
Cat. No. 33-778 List $ .45
Red plastic shell.
Cat. No. 33-780 List $ .45
Yellow plastic shell.
Cat. No. 33-782 List $ .45
Blue plastic shell.
Cat. No. 33-784 List $ .45

(L) PHONO JACK, SINGLE HOLE MOUNTING—Supplied with washer and mounting nut.
Cat. No. 33-790 List $ .35

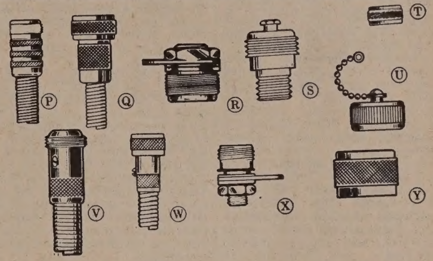
(M) PHONO JACK—Fastens to chassis with 2 rivets or 2 screws.
W/oval, space saving metal mounting plate.
Cat. No. 33-792 List $ .11
With regular round mounting plate.
Cat. No. 33-796 List $ .14

(N) DOUBLE PHONO PIN JACK
Cat. No. 33-800 List $ .21

TRIPLE PHONO PIN JACK
Cat. No. 33-802 List $ .25

(O) SINGLE HOLE PANEL PHONO JACK—Mounts in 9/32" hole, requires only one hole drilled. With washer, nut and solder lug for ground.
Cat. No. 33-804 List $ .30

These ties provide an efficient, time-saving method of cabling and lacing. Made entirely of plastic. May be used in hard-to-reach places. Their use requires no experience.



STANDARD MICROPHONE CONNECTORS

Designed for use with single conductor, shielded microphone cable. Bodies, lock nuts and mounting nuts: brass, nickel plated; contact terminals, brass, hot-tinned; insulation is high-grade phenolic.

(P) CORD MOUNTED MICROPHONE CONNECTORS—Flexible spring protects cable; center conductor solders to contact; braid is clamped securely by set screw.
Male connector.
Cat. No. 33-810 List $ .45

(Q) FEMALE CONNECTOR.
Cat. No. 33-812 List $ .60

(R) PANEL MOUNTED MICROPHONE CONNECTORS—May be insulated with suitable fibre washers; mates with No. 33-812 connector.
Single contact connector.
Cat. No. 33-814 List $ .35

(S) MICROPHONE AND CHASSIS CONNECTOR—Closed circuit type which grounds center contact when cable connector removed.
Cat. No. 33-816 List $ .45

(T) COUPLING NUT—Converts #33-810 male connector to 812 female type.
Cat. No. 33-818 List $ .15

(U) CAP FOR PANEL CONNECTORS—Protects unusued connectors from mechanical damage and dust.
Cat. No. 33-820 List $ .75

(V) MINIATURE MICROPHONE CONNECTORS—Made to the same specifications and of same materials as standard size connectors. Cord mounted male connector.
Cat. No. 33-826 List $ .45

(W) Cord mounted female connector.
Cat. No. 33-828 List $ .60

(X) Panel mounted connector.
Cat. No. 33-830 List $ .35

(Y) COUPLING NUT—Converts male connector #33-826 to female connector #33-828.
Cat. No. 33-832 List $ .10

ELECTROCRAFT CABLE TIES

Made of Polypropylene. Tough and flexible for commercial use and where temperatures do not exceed 175°F. 4¼" long. Sold in vials of 40 ties.

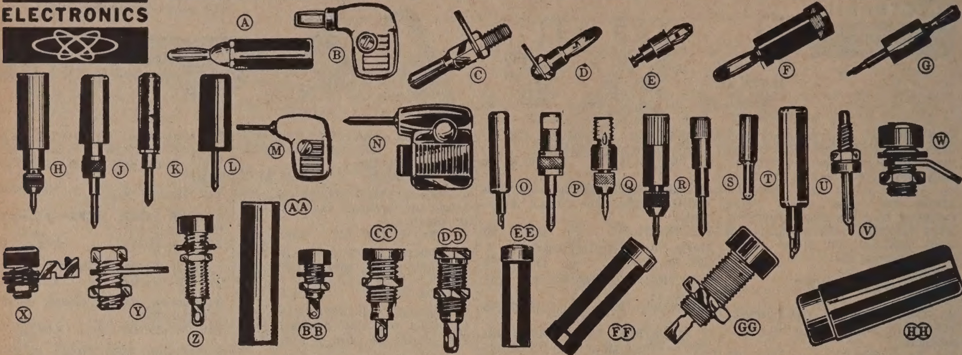
Cat. No. 34-432	Red	List $1.63
Cat. No. 34-436	Yellow	List $1.63
Cat. No. 34-440	Blue	List $1.63

Also available in polypropylene and nylon in 10-inch lengths

GC ELECTRONICS

ELECTROCRAFT COMPONENTS

BANANA PLUGS • TIP PLUGS
MATCHING JACKS



BANANA PLUGS

Electrocraft plugs are carefully designed, accurately molded and machined of best available material and rigidly inspected. Except as otherwise noted, all Banana Plugs are made to standard industry dimensions and mate with jacks with an 0.163" bore. Design provides for sufficient spring tension to assure good holding power and minimum contact reistance.

(A) BANANA PLUG—Four leaved, phosphor bronze, nickel plated spring; hex brass body, separate internal brass stud.
Cat. No. 33-000 Red List $ .38
Cat. No. 33-002 Blk List $ .38

BANANA PLUG—Four leaved, phosphor bronze, nickel plated spring; lead wire connection with set screw through plastic handle.
Cat. No. 33-006 Red List $ .33
Cat. No. 33-008 Blk List $ .33

BANANA PLUG — Unbreakable plastic handle, cross slotted, nickel plated brass body; separate internal brass stud.
Cat. No. 33-012 Red List $ .33
Cat. No. 33-014 Blk List $ .33

BANANA PLUG—cross slotted, nickel plated brass body; lead wire connection with set screw screw through plastic handle.
Cat. No. 33-018 Red List $ .33
Cat. No. 33-026 Blk List $ .45

BANANA PLUG—Miget type, unbreakable plastic handle, four leaved, nickel plated, phosphor bronze spring; lead wire connection solders to drilled body.
Cat. No. 33-024 Red List $ .45
Cat. No. 33-020 Blk. List $ .45

(B) BANANA PLUG—Right angle "Gun" tip (meter plug), molded plastic handle (2 half-shells), four leaved, phosphor bronze, nickel plated springs; lead wire solders to body.
Cat. No. 33-046 Red List $ .65
Cat. No. 33-048 Blk List $ .65

(C) BANANA PLUG—Threaded shank type; slotted nickel plated brass body; supplied with terminal lug and hex nut.
Cat. No. 33-060 List $ .25

(D) BANANA PLUG—Panel mounting type; four leaved, phosphor bronze, nickel plated spring; #6-32 tapped body.
Cat. No. 33-062 List $ .28

BANANA PLUG—Threaded shank type; four leaved, phosphor bronze, nickel plated spring.
Cat. No. 33-064 List $ .28

BANANA PLUG—Panel mounting type; cross slotted, nickel plated brass body, tapped #6-32; supplied with screw and terminal lug.
Cat. No. 33-066 List $ .28

(E) BANANA PLUG — Sub-miniature type, four leaved, beryllium copper, silver plated spring; body rivets to terminal board and wire solders to turret terminal. Fits jacks with .104" ID.
Cat. No. 33-068 List $ .33

(F) BANANA PLUG ADAPTOR—Adapts tip plug to banana plug; insulated handle, standard tip jack one end; other end four leaved banana plug.
Cat. No. 33-072 Red List $ .55
Cat. No. 33-074 Blk List $ .55

(G) BANANA PLUG-KLIPZON ADAPTOR—One end cross slotted; brass, nickel plated banana plug; other end "Klipzon" self holding wire piercing tip.
Cat. No. 33-076 Red List $ .80
Cat. No. 33-078 Blk List $ .80

ADAPTER, KLIPZON TIP TO BANANA PLUG—For connection of test leads terminated with Klipzon prods to equipment with banana jacks.
Cat. No. 33-080 Red List $ .65
Cat. No. 33-082 Blk List $ .65

The following Tip Plugs are, unless otherwise noted, made to the standard industry specifications of .080" pin diameter. Careful machining, close tolerances and the use of brass alloy assures good contact and service ability.

TIP PLUGS

(H) PHONO NEEDLE TIP PLUG—Insulated handle; nickel plated brass body; chuck design to hold .058 phono needle which is easily replaceable. Wire solders to body.
Cat. No. 33-100 Red List $ .28
Cat. No. 33-102 Blk List $ .28

(J) INSULATED TIP PLUG—Solderless type, wire tightens securely under knurled collar. Handle is unbreakable plastic and body is machined brass, nickel plated.
Cat. No. 33-106 Red List $ .28
Cat. No. 33-108 Blk List $ .28

(K) SUB-MINIATURE PHONE TIP PLUG—Standard tip, extra-small diameter, machined bone fibre insulated handle. Wire solders to nickel plated, brass body.
Cat. No. 33-112 Red List $ .33
Cat. No. 33-114 Blk List $ .33

(L) INSULATED SHORT TIP PLUG—Unbreakable plastic handle; wire solders to brass nickel plated body.
Cat. No. 33-118 Red List $ .23
Cat. No. 33-120 Blk List $ .23

(M) RIGHT ANGLE TIP PLUG—Two insulated plastic handle half shells assemble with one screw and nut. Maximum wire insulation 3/64"; wire solders to body.
Cat. No. 33-128 Red List $ .50
Cat. No. 33-130 Blk List $ .50

(N) "TRIGGER-QUIK" TIP PLUG—right angle plug, similar to 33-128 and 33-130. Spring loaded solderless wire connection, "trigger" design. 1 Red and 1 Black plug per pair.
Cat. No. 33-132 Red List $ .70
Cat. No. 33-134 Blk List $ .70
Cat. No. *33-136 Pkg.
per pr. List $1.20
*20 pair per package display.

(O) KLIPZON MINI-PROD—Insulated tip plug can be snapped securely on wires. Incorporates sharp point to pierce insulation; fits standard tip jacks; wire solders to body.
Cat. No. 33-138 Red List $.65
Cat. No. 33-140 Blk List $.65

(P) SOLDERLESS TIP PLUG—All metal. Precision machined brass, nickel plated; wire fastens under knurled collar.
Cat. No. 33-146 List $ .20

(Q) PHONO NEEDLE TIP PLUG—Nickel plated brass body with ¼-20 thread; chuck design to hold phono needle.
Cat. No. 33-148 List $ .25

(R) PUSH-ON NEEDLE CHUCK—Nickel plated brass. Knurled body for press fit into Test Prod handles drilled with ¼" hole.
Cat. No. 33-150 List $ .25

(S) HEAVY DUTY PHONE TIP PLUG—Nickel plated brass; knurled shank for press fit into Test Prod handles, drilled with ¼" hole.
Cat. No. 33-152 List $ .20

(T) STANDARD HOLLOW PHONE TIP—Drawn brass, bright nickel plated.
Cat. No. 33-154 List $ .07

STANDARD SOLID PHONE TIP—Brass, bright nickel plated.
Cat. No. 33-156 List $ .09

(U) KLIPZON MINI-PROD ADAPTOR—Converts standard Tip Plug and Test Prod to self holding Klipzon wire piercing prod.
Cat. No. 33-160 Red List $ .65
Cat. No. 33-162 Blk List $ .65

(V) KLIPZON PANEL MOUNTS—Wire holding patented Klipzon Test Prod with threaded shank (6-32 x ⅜") for panel mount. Designed for test setups.
Cat. No. 33-164 List $ .80

Jack are made to standard industry specifications. On Banana Jacks, the bore is .163" which fits all standard Banana Plugs. Tip Plug Jacks have built in spring contacts and are designed for all standard tip plugs with .080" diameter.

BANANA AND TIP PLUG JACKS

(W) BANANA JACK—Molded phenolic head; nickel plated brass body supplied with tinned solder lug, fibre washer and mounting nut. Mounts in 5/16" hole.
Cat. No. 33-180 Red List $ .25
Cat. No. 33-182 Blk List $ .25

(X) BANANA JACK, HEAVY DUTY—Molded phenolic head; nickel plated brass body; extruded fibre washer, lock washer, heavy duty solder lug and mounting nut.
Cat. No. 33-186 Red List $ .28
Cat. No. 33-188 Blk List $ .28

(Y) BANANA JACK—ALL METAL brass nickel plated body; supplied with solder lug and hex mounting nut. Mounts in ¼" hole; fits panels up to ⅜" thick.
Cat. No. 33-192 List $ .20

(Z) BANANA-TIP JACK COMBINATION—Molded phenolic head; brass nickel plated body. Phosphor bronze spring. Supplied with extruded fibre washer and mounting nut.
Cat. No. 33-194 Red List $ .30
Cat. No. 33-196 Blk List $ .30

(AA) BANANA PLUG SPLICE—Insulated plastic handle, brass insert for coupling 2 standard Banana Plugs.
Cat. No. 33-200 Red List $ .45
Cat. No. 33-202 Blk List $ .45

(BB) STANDARD TIP JACK—Molded phenolic plastic head; nickel plated brass body with phosphor bronze spring; supplied with extruded fibre washer.
Cat. No. 33-210 Red List $ .25
Cat. No. 33-212 Blk List $ .25

(CC) TIP JACK, ALL-INSULATED—Head and body molded of nylon, in one piece; phosphor bronze spring; supplied with mounting nut; mounts in ⅜" hole.
Cat. No. 33-216 Red List $ .33
Cat. No. 33-218 Blk List $ .33

(DD) TIP JACK, ALL METAL—Brass nickel plated body; phosphor bronze spring.
Cat. No. 33-226 List $ .20

(EE) TIP JACK, IN-LINE STYLE—Insulated handle, brass nickel plated body; phosphor bronze spring.
Cat. No. 33-228 Red List $ .38
Cat. No. 33-230 Blk List $ .38

(FF) TIP PLUG SPLICE—Insulated; brass nickel plated body; phosphor bronze springs.
Cat. No. 33-232 Red List $ .50
Cat. No. 33-234 Blk List $ .50

(GG) NYLON TIP JACK—Nylon insulated body wtih machined beryllium copper contact, silver plated contact recessed in head, hot tin dipped solder terminal.
Cat. No. 33-240 Blk List $ .50
Cat. No. 33-242 Red List $ .50

(HH) NYLON JACK AND SLEEVE—Molded nylon inside threaded sleeve and standard nylon tip jack, less mounting nut.
Cat. No. 33-244 Blk List $ .55
Cat. No. 33-246 Red List $ .55

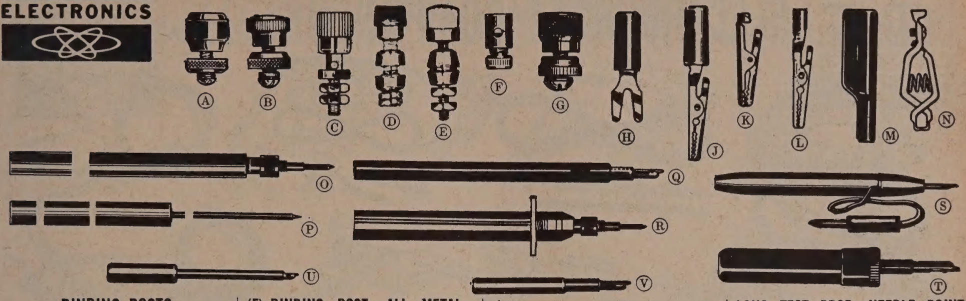
SEND FOR FREE CATALOG

on the complete GC Electrocraft line of Plugs, Jacks, Connectors, Switches and other electronic components.

GC ELECTRONICS

ELECTROCRAFT COMPONENTS

BINDING POSTS•SPADE LUGS•CLIPS
TEST PRODS, LEADS, ADAPTORS



BINDING POSTS

GC-Electrocraft Binding Posts are precision molded, machined and assembled in accordance with practical designs. They provide a convenient means of attaching wire leads to test equipment, instruments, breadboards and experimental devices and are particularly useful where connections often have to be changed.

(A) BINDING POST — Brass nickel plated body; supplied with 8-32 mounting screw and lock washer.
Cat. No. 33-250 Red List **$ .28**
Cat. No. 33-252 Blk List **$ .28**

(B) BINDING POST — Brass nickel plated body supplied with #6-32 mounting screw and lock washer.
Cat. No. 33-254 List **$ .28**

(C) BINDING POST-COMBINATION TYPE—Accepts banana plug, tip plug, bare wire or spade lug. Threaded #8-32 mounting stud ½″ long; supplied with 2 hex nuts.
Cat. No. 33-256 Red List **$ .33**
Cat. No. 33-258 Blk List **$ .33**

BINDING POST-COMBINATION TYPE—Similar in construction to 33-256/8 except with molded shoulder-type plastic washers to insulate post from chassis.
Cat. No. 33-260 Red List **$ .44**
Cat. No. 33-262 Blk List **$ .44**

(D) BINDING POST-INSULATED UNIVERSAL TYPE—Non-removable, molded brass; brass nickel plated body with threaded #8-32 mounting stud.
Cat. No. 33-264 Red List **$ .47**
Cat. No. 33-266 Blk List **$ .47**

(E) HEAVY DUTY BINDING POST—Machined brass nickel plated body; supplied with a thick molded insulating spacer; shoulder keys into chassis mounting hole and positively prevents post from turning.
Cat. No. 33-268 Red List **$ .75**
Cat. No. 33-270 Blk List **$ .75**

HEAVY DUTY BINDING POST—Identical in design to binding post No. 33-268/270, except end of stud milled flat and drilled for solder connection.
Cat. No. 33-272 Red List **$ .75**
Cat. No. 33-274 Blk List..**$ .75**

(F) BINDING POST, ALL METAL—Grass nickel plated body and knurled cap; accepts banana plug, phone tip or wire.
Cat. No. 33-282 List **$ .22**

(G) BINDING POST-ALL METAL — Heavy brass nickel plated body and knurled cap; #8-32 x ½″ mounting screw and lock washer supplied.
Cat. No. 33-284 List **$ .28**

SPADE LUGS, ALLIGATOR AND BATTERY CLIPS

GC-Electrocraft Clips are carefully inspected and made of heavily plated steel (except copper clips). All springs used are made of selected steel or phosphor bronze. Electrocraft Clips constructed for long life.

(H) SPADE LUG PLUG, INSULATED—Molded plastic handle; tapered "fork" fits binding posts and terminal screws up to #10 size.
Cat. No. 33-300 Red List **$ .21**
Cat. No. 33-302 Blk List **$ .21**

(J) ALLIGATOR CLIP-INSULATED HANDLE—⅜″ jaw opening; made of cadmium plated steel with unbreakable plastic handle.
Cat. No. 33-310 Red List **$ .17**
Cat. No. 33-312 Blk List **$ .17**

ALLIGATOR CLIP, SCREW CONNECTION—Molded plastic handle, cadmium plated steel jaws with maximum ⅜″ opening.
Cat. No. 33-314 Red List **$ .19**
Cat. No. 33-316 Blk List **$ .19**

ALLIGATOR CLIP, SOLID COPPER—Identical to #33-314/16, except solid copper for higher current carrying capacity.
Cat. No. 33-318 Red List **$ .22**
Cat. No. 33-320 Blk List **$ .22**

ALLIGATOR CLIP—With extra long insulated handle; cadmium plated steel jaws which open to maximum ⅜″.
Cat. No. 33-322 Red List **$ .39**
Cat. No. 33-324 Blk List **$ .39**

INSULATED ALLIGATOR CLIP ADAPTORS—Completely insulated with black molded plastic.
Cat. No. 33-326 List **$ .80**
Cat. No. 33-328 List **$1.00**

ALLIGATOR CLIP ADAPTOR—Accommodates standard tip plug or banana plug.
Cat. No. 33-330 Red List **$ .70**
Cat. No. 33-332 Blk List **$ .70**

ALLIGATOR CLIP ADAPTOR—Adapts standard tip plug to alligator clip.
Cat. No. 33-334 Red List **$ .56**
Cat. No. 33-336 Blk List..**$ .56**

ALLIGATOR-KLIPZON PROD ADAPTOR—Adapts Klipzon Mini-Prod connectors and standard tip plugs to Alligator clip.
Cat. No. 33-338 Red List **$ .64**
Cat. No. 33-340 Blk List **$ .64**

(K) MINI-GATOR CLIP (MUELLER)—Very small alligator clip for applications where space is a factor.
Cat. No. 33-342 List **$ .15**
Cat. No. 33-344 List **$ .15**

(L) ALLIGATOR CLIP-ALL METAL — Cadmium plated jaws with ⅜″ opening.
Cat. No. 33-346 List **$ .12**

ALLIGATOR CLIP-ALL METAL—For solderless connection of wire by means of a #6-32 binding head screw.
Cat. No. 33-348 List **$ .12**
Cat. No. 33-350 List **$ .17**

(M) ALLIGATOR CLIP INSULATOR—Flexible molded vinyl insulator fits over most standard alligator clips.
Cat. No. 33-360 Red List **$ .12**
Cat. No. 33-362 Blk List **$ .12**

(N) BATTERY CONNECTING & TESTING CLIP—5 amp rating; steel cadmium plated jaws with ½″ spread.
Cat. No. 33-370 List **$ .12**

BATTERY CONNECTING & TESTING CLIP—10 amp rating; steel cadmium plated jaws with 9/16″ spread.
Cat. No. 33-372 List **$ .12**

TEST PRODS AND ADAPTORS

GC-Electrocraft Test Leads and Prods are precision engineered and manufactured in accordance with the latest service and test requirements. Leads and prods can be furnished, with modifications, to meet customer's requirements.

(O) DELUXE TEST PROD 5¼″—Solderless design; wire fits through handle and is fastened to tip with knurled collar.
Cat. No. 33-380 Red List **$ .58**
Cat. No. 33-382 Blk List **$ .58**

LONG TEST PROD, NEEDLE POINT TYPE—Extra safe design due to long unbreakable plastic handle; replaceable phono needle tip.
Cat. No. 33-384 Red List **$, .55**
Cat. No. 33-386 Blk List **$ .55**

THIN HANDLE TEST PROD—With solderless wire connection; extruded plastic handle, press fitted on nickel plated brass test tip.
Cat. No. 33-392 Red Lilst **$ .39**
Cat. No. 33-394 Blk List **$ .39**

(P) LONG REACH TEST PROD—Has 4″ very thin insulated extension beyond handle. Needle point assembly; brass nickel plated.
Cat. No. 33-396 Red List **$ .45**
Cat. No. 33-398 Blk List **$ .45**

(Q) KLIPZON TEST PROD—Klipzon tip clips on wire or chassis; sharp point, easily penetrates insulation or corrosion; thin plastic handle.
Cat. No. 33-400 Red List **$1.10**
Cat. No. 33-402 Blk List**$1.10**

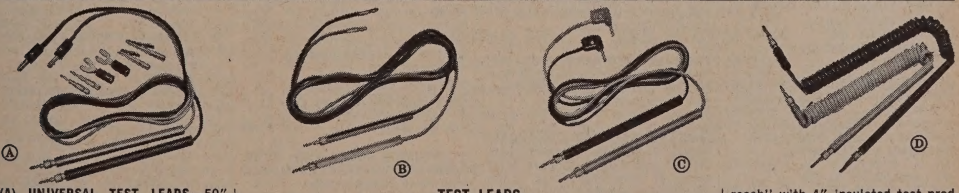
(R) HIGH VOLTAGE TEST PROD—Heavy-duty type; has guard ring to prevent accidental touching of tip; handle accepts wires up to ⅜″ diameter.
Cat. No. 33-408 Red List **$1.25**
Cat. No. 33-410 Blk List **$1.25**

(S) KLIPZON CRYSTAL PROD KIT—Self-holding prod, complete with Germanium Diode and other parts to assemble low capacity crystal probe.
Cat. No. 33-412 Red List **$3.06**
Cat. No. 33-414 Blk. List **$3.06**

(T) KLIPZON JUMBO PROD HANDLE—Tip pierces insulation. Self-holding point clips on wires (up to .220″ diameter); chassis, screws, terminals, etc.
Cat. No. 33-416 Red List **$1.15**
Cat. No. 33-418 Blk List **$1.15**

(U) KLIPZON LONGIE ADAPTOR—Long, slender self-holding point with needle to pierce insulation.
Cat. No. 33-420 Red List **$ .80**
Cat. No. 33-422 Blk List **$ .80**

(V) KLIPZON JUMBO ADAPTOR — Adapts regular tip plug or test prod to self holding Klipzon type.
Cat. No. 33-424 Red List **$1.10**
Cat. No. 33-426 Blk List **$1.10**



TEST LEADS

(A) UNIVERSAL TEST LEADS—50″ flexible cable; one end 6″ break-resistant plastic handle, with solderless tip plug; other end terminated in banana plug; supplied with alligator clip, spade lugs and phono tip plugs, fit the banana plug end.
Cat. No. 33-450 List **$3.00**

UNIVERSAL "NEEDLEPOINT" TEST LEADS—One end 6″ break-resistant Test Prod, with phono needle type test prod; other end terminated with banana plug; furnished with spade lugs, alligator clips and phono tip plug, fit on banana plug.
Cat. No. 33-452 List **$3.00**

(B) "THRIFTY" TEST LEADS — 50″ flexible kink-proof cable; one end 5″ insulated test prods with solderless wire connections; other ends terminated in standard phone tips.
Cat. No. 33-454 List **$1.25**

(C) HEAVY DUTY TEST LEADS—50″ flexible kink-proof cable; 7½″ long, heavy-duty unbreakable test prods, solderless wire connections.
Cat. No. 33-456 List **$1.85**
Cat. No. 33-458 List **$2.10**

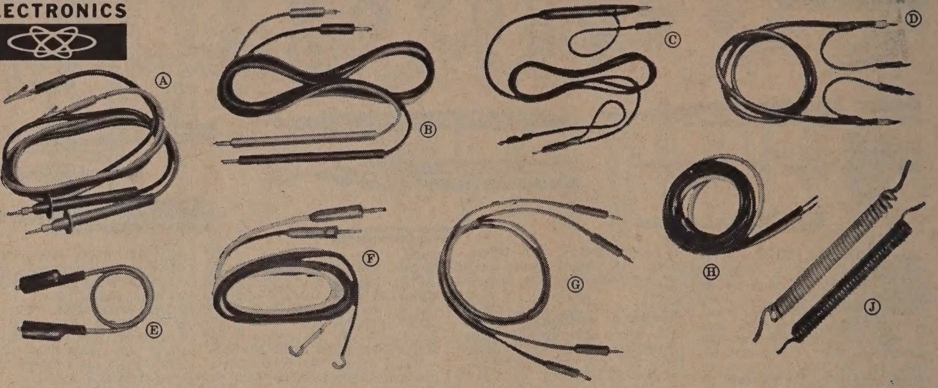
HEAVY DUTY NEEDLE POINT TEST LEADS—50″ flexible, kink-proof cable; 7″ long, heavy duty needle point prods, unbreakable plastic handle.
Cat. No. 33-460 List **$1.95**
Cat. No. 33-462 List **$2.25**

LONG REACH TEST LEADS—50″ flexible, kink-proof cable; one end "long reach" with 4″ insulated test prod, very thin extension; other end terminated in right angle, meter-type insulated tip plug.
Cat. No. 33-464 List **$2.10**

(D) STRETCH TYPE TEST LEADS—Kink-proof, spiral-type 9″ cable; extended length 6 feet; one end 7½″ heavy duty test prods with solderless wire connection; other end insulated, solderless tip plug.
Cat. No. 33-470 List **$4.95**

WRITE for free GC Catalog.

GC ELECTRONICS ELECTROCRAFT COMPONENTS TEST LEADS · PHONE PLUGS



TEST LEADS

(A) HIGH VOLTAGE TEST LEADS—48" heavy insulated high tension wire (22,000/V).
Pair of 1 red, 1 black, with tip plugs.
Cat. No. 33-472 List **$4.00**
Pair of 1 red, 1 black, with insulated spade lugs.
Cat. No. 33-474 List **$4.00**
Pair of 1 red, 1 black, with alligator clips.
Cat. No. 33-476 List **$4.00**

(B) KLIPZON TEST LEADS—48" flexible, kink-proof cable; one end slim handle, self-holding and insulation piercing, other end Klipzon Tip Plugs. Klipzon prods and tips fit standard tip jacks, have sharp needle point to penetrate wire insulation, corrosion. Pair of 1 red and 1 black.
Cat. No. 33-480 List **$3.25**

KLIPZON TEST LEADS—Same as above, but with standard Phone Tip Plugs.
Cat. No. 33-482 List **$2.50**

KLIPZON TEST LEADS—Same as above, but other end insulated banana plug.
Cat. No. 33-484 List **$3.25**

(C) KLIPZON CRYSTAL PROBE—Germanium diode probe with self-holding points, for measuring high frequency voltages; flexible lead wires are terminated on meter end with Klipon tip plug.
Cat. No. 33-486 List **$7.25**

KLIPZON CRYSTAL PROBE — Crystal probe on one end, plus ground lead terminated on each end with tip plug.
Cat. No. 33-488 List **$7.25**

(D) KLIPZON SHIELDED LOW CAPACITY—36" low capacity, coaxial type lead, with self-holding insulation piercing, tip prods.
Cat. No. 33-490 List **$4.95**

(E) ALLIGATOR CLIP JUMPER LEADS—Flexible, kink-proof, lead wires, terminate at each end with fully insulated steel nickel plated alligator clips.
Pair of 1 red and 1 black, 12" long.
Cat. No. 33-500 List **$1.35**
Pair of 1 red and 1 black, 24" long.
Cat. No. 33-502 List **$1.45**
Pair of 1 red and 1 black, 36" long.
Cat. No. 33-504 List **$1.60**
Pair of 1 red and 1 black, 48" long.
Cat. No. 33-506 List **$1.70**

(F) HEAVY DUTY KLIPZON TEST LEADS—48" 16-gauge, heavy insulated lead wires, terminated on one end with Klipzon Jumbo prod handles.
Cat. No. 33-492 List **$4.25**

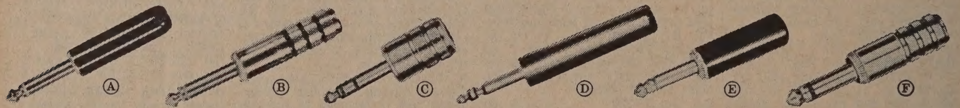
(G) KLIPZON JUMPER LEADS—Flexible, kink-proof cable, with patented tips, which clip on wires and terminals, have sharp insulation and corrosion piercing points.
Cat. No. 33-510 Red, 12" List **$1.00**
Cat. No. 33-512 Black, 12" List **$1.00**
Cat. No. 33-514 Red, 24" List **$1.85**
Cat. No. 33-516 Black, 24" List **$1.85**

(H) TEST LEAD WIRE—Flexible, rubber-coated and kink-resistant replacement wire for test leads.
Package of two, 50" length, red & black, 6000/V insulation.
Cat. No. 33-518 List **$ .80**
Package of two, 48" length, red & black, 22,000/V test leads.
Cat. No. 33-520 List **$1.25**

(J) STRETCH LEAD WIRE — Coiled wire, for all applications. Package contains 1 red and 1 black lead. 9" long—stretches to 6 Ft.
Cat. No. 33-522 List **$3.25**

TEST LEAD PLUG INTERCHANGE KIT

— Contains pairs of alligator clips, banana plugs, spade lugs and phone tips, (1 each in red and black) to adapt standard test leads to many different types.
Cat. No. 33-530
List **$3.75**



PHONE PLUGS

(A) TWO-CONDUCTOR PHONE PLUG, SCREW TERMINALS — Standard size plug. With black plastic handle.
Cat. No. 33-600 Blk List **$ .75**
With red plastic handle.
Cat. No. 33-602 Red List **$ .75**
Metal (shielded) handle.
Cat. No. 33-604 List **$1.05**

(B) TWO-CONDUCTOR PHONE PLUG, COMB. CLAMP & SOLDER LUG TERMINALS—Large "grounding" terminal clamps around cable insulation or shield, and acts as strain relief.
With black plastic handle.
Cat. No. 33-606 Blk List **$ .70**
With red plastic handle
Cat. No. 33-608 Red List **$ .70**
Metal (shielded) handle.
Cat. No. 33-610 List **$1.00**

TWO-CONDUCTOR PHONE PLUG, PLAIN SOLDER PLUGS—Standard size plug. With black plastic handle.
Cat. No. 33-612 Blk List **$ .55**

"STUBBY" SHIELDED TWO-CONDUCTOR PHONE PLUG—Standard phone plug with special, short metal handle.
Cat. No. 33-614 List **$ .90**

STANDARD SHIELDED TWO-CONDUCTOR PHONE PLUG—Regular plug with metal (shielded) handle.
Cat. No. 33-616 List **$1.00**

TWO-CONDUCTOR PHONE PLUG, TYPE PJ-055B—Made in accordance with military specifications; solder terminal and screw connection.
Cat. No. 33-618 List **$1.40**

SHORT FINGER, TWO-CONDUCTOR PHONE PLUG—Special short finger (barrel) type plug to connect microphone or telephone pickup to Revere/Wollensack tape recorders.
Cat. No. 33-620 List **$1.20**

LARGE HANDLE TWO-CONDUCTOR PHONE PLUG — With black plastic handle, 1½" long.
Cat. No. 33-622 Blk List **$ .75**
With red plastic handle, 1½" long.
Cat. No. 33-624 Red List **$. 75**
Metal (shielded) handle, 1" long.
Cat. No. 33-626 List **$1.10**
Metal (shielded) handle, 2¹⁄₁₆" long.
Cat. No. 33-628 List **$1.20**

"THIN FINGER" TWO-CONDUCTOR PHONE PLUGS—"Undersize" finger (barrel) diameter of .206" for applications where polarized input is desired to distinguish between different connections.
With black plastic handle.
Cat. No. 33-630 Blk List **$ .75**
With metal (shielded) handle.
Cat. No. 33-632 List **$1.00**

3-CONDUCTOR PHONE PLUG: COMB. CLAMP AND SOLDER LUG TERMINALS:
With black plastic handle.
Cat. No. 33-640 Blk List **$1.05**
With metal (shielded) handle.
Cat. No. 33-642 List **$.130**

3-CONDUCTOR PHONE PLUG, SCREW TERMINALS—
With black plastic handle.
Cat. No. 33-644 Blk List **$1.20**
With red plastic handle.
Cat. No. 33-646 Red List **$1.20**
With metal (shielded) handle.
Cat. No. 33-648 List **$1.40**

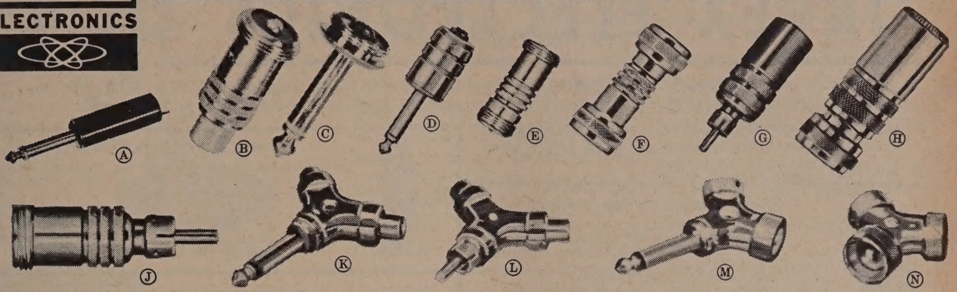
(C) 3-CONDUCTOR PHONE PLUG, LARGE HANDLE—Accommodate large diameter cables, with room in handle for wired-in resistors or capacitors.
Cat. No. 33-650 List **$1.30**

(D) 3-CONDUCTOR PHONE PLUG, TYPE PJ-068—With solder terminals and screw connection.
Cat. No. 33-654 List **$3.60**

(E) MINIATURE PHONE PLUGS: COMB. CLAMP AND SOLDER TERMINALS—Two-conductor style, tested for 500/V breakdown.
With metal (shielded) handle.
Cat. No: 33-660 List **$1.00**
With black plastic handle.
Cat. No. 33-662 Blk List **$ .70**
With red plastic handle.
Cat. No. 33-664 Red List **$ .70**

(F) MINIATURE PHONE PLUGS: COMB. CLAMP AND SCREW TERMINALS—Same plugs as listed above except for different style terminals.
With metal (shielded) handle.
Cat. No. 33-666 List **$1.05**
With black plastic handle.
Cat. No. 33-668 Blk List **$ .75**
With red plastic handle.
Cat. No. 33-670 Red List **$ .75**

GC ELECTRONICS ELECTROCRAFT COMPONENTS ADAPTORS · SWITCHES



ADAPTORS

GC Electronics Adaptors are designed for quickly interchanging various cable connectors; these handy devices are small, yet sturdy and of attractive modern design.

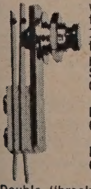
(A) PHONO JACK INPUT, STANDARD PHONE PLUG OUTPUT:
Cat. No. 33-850 List **$1.25**
PHONO JACK INPUT, STANDARD PHONE PLUG OUTPUT, HEAVY DUTY METAL SHIELDED TYPE.
Cat. No. 33-852 List **$1.45**
(B) PHONO JACK INPUT, MALE MICROPHONE CONNECTOR OUTPUT:
Cat. No. 33-854 List **$1.10**
PHONO JACK INPUT, FEMALE MICROPHONE CONNECTOR OUTPUT:
Cat. No. 33-856 List **$1.25**
(C) FEMALE MICROPHONE CONNECTOR INPUT, STANDARD PHONE PLUG OUTPUT:
Cat. No. 33-858 List **$ .50**
(D) MINIATURE PHONE JACK INPUT, STANDARD PHONE PLUG OUTPUT:
Cat. No. 33-860 List **$1.45**
(E) COUPLER, CONNECTS 2 FEMALE MICROPHONE CONNECTORS.
Cat. No. 33-862 List **$ .70**
(F) COUPLER, CONNECTS 2 MALE MICROPHONE CONNECTORS.
Cat. No. 33-864 List **$ .80**
(G) STANDARD PHONE JACK INPUT, PHONO PLUG OUTPUT:
Cat. No. 33-866 List **$1.45**
(H) STANDARD PHONE JACK INPUT, FEMALE MICROPHONE CONNECTOR OUTPUT:
Cat. No. 33-868 List **$1.75**
STANDARD PHONE JACK INPUT, MALE MICROPHONE CONNECTOR OUTPUT:
Cat. No. 33-870 List **$1.65**
(J) MALE MICROPHONE CONNECTOR INPUT, PHONO PLUG OUTPUT:
Cat. No. 33-872 List **$1.25**
(K) "Y" ADAPTOR—Input: 2 phono jacks (in parallel); output: phono plug.
Cat. No. 33-880 List **$1.75**
"Y" ADAPTOR—Input: 2 phono jacks (in parallel); output: single phono jack.
Cat. No. 33-882 List **$1.75**
(L) "Y" ADAPTOR—Input: 2 phono jacks (in parallel); output: standard phone plug.
Cat. No. 33-884 List **$1.90**
(M) "Y" ADAPTOR—Input: 2 male mike connectors (in parallel); output: standard phone plug.
Cat. No. 33-886 List **$1.90**
(N) "Y" ADAPTOR—Input: 2 male microphone connectors (in parallel); output: female microphone connector.
Cat. No. 33-888 List **$1.65**

PUSH-BUTTON SWITCHES

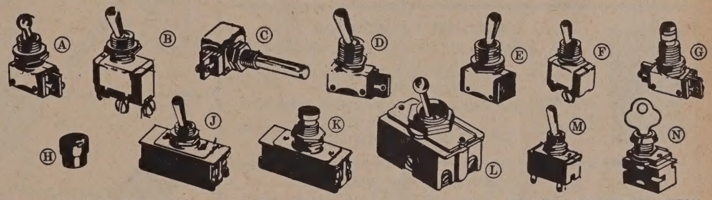
All styles are momentary (non-locking) design, and are made with long-wearing nickel silver springs, carefully adjusted. Insulation is high grade phenolic.

STANDARD SMALL PUSH BUTTON SWITCHES—Can also be supplied with silver contacts for 3 amp, 115/V. AC rating (on special orders in production quantities).
Single "make"; black button.
Cat. No. 34-000 List **$ .90**
Single "make"; red button.
Cat. No. 34-002 List **$ .90**
Single "break"; black button.
Cat. No. 34-004 List **$ .90**
Single "break"; red button.
Cat. No. 34-006 List **$ .90**
Single "break-make"; black button.
Cat. No. 34-008 List **$1.00**
Single "break-make"; red button.
Cat. No. 34-010 List **$1.00**

MINIATURE PUSH BUTTON SWITCHES—Made of the same materials and to the same specifications as standard small switches listed above.
Single "make"; black button.
Cat. No. 34-020 List **$ .90**
Single "make"; red button.
Cat. No. 34-022 List **$ .90**
Single "break" black button.
Cat. No. 34-024 List **$ .90**
Single "break-make"; black button.
Cat. No. 34-026 List **$1.00**



STRAIGHT FRAME PUSH BUTTON SWITCHES — Fine silver contacts with minimum resistance rated at 3 amp, 115/V, AC, non-inductive load. Standard push button is black.
Single "make-break".
Cat. No. 34-032 List **$1.20**
Double "make".
Cat. No. 34-034 List **$1.30**
Double "break".
Cat. No. 34-036 List **$1.30**
Double "break-make"
Cat. No. 34-038. List **$1.55**



ARROW-HART SWITCHES

These switches, made by A. H. & H. for GC Electrocraft, are UL approved. The threaded sleeves are slotted to positively prevent turning of switch if used in keyed hole.

(A) BALL HANDLE TOGGLE SWITCH—Light duty; SPST types rated 3 amps, 250/V; all others 1 amp, 250/V, 3 amps, 125/V, AC-DC.
SPST — ½″ Shank.
Cat. No. 34-050 List **$1.20**
SPST — 1″ Shank.
Cat. No. 34-052 List **$1.45**
SPDT — ½″ Shank.
Cat. No. 34-054 List **$1.50**
SPDT — 1″ Shank.
Cat. No. 34-056 List **$1.85**
DPST — ½″ Shank.
Cat. No. 34-058 List **$2.15**
DPST — 1″ Shank.
Cat. No. 34-060 List **$2.45**
DPDT — ½″ Shank.
Cat. No. 34-062 List **$2.45**
DPDT — 1″ Shank.
Cat. No. 34-064 List **$2.70**

(B) MEDIUM DUTY, NEUTRAL CENTER TOGGLE SWITCH—Rating 10 amps 250/V; 15 amps 125/V; ¾ horsepower.
SPDT — 15⁄32″ Shank.
Cat. No. 34-066 List **$1.65**
DPDT — 15⁄32″ Shank.
Cat. No. 34-068 List **$2.55**

(C) ROTARY SWITCH—Laminated insulation; rating — SPST models, 3 amps, 25/V; all others 1 amp, 250/V-3 amps, 125/V, AC-DC.
SPST — ⅜″ Shank.
Cat. No. 34-070 List **$1.50**
SPST — 1″ Shank.
Cat. No. 34-072 List **$1.85**
SPDT — ⅜″ Shank.
Cat. No. 34-074 List **$1.80**
SPDT — 1″ Shank.
Cat. No. 34-076 List **$1.95**
DPST — 1″ Shank.
Cat. No. 34-078 List **$2.65**
DPDT — ⅜″ Shank.
Cat. No. 34-080 List **$2.75**
DPDT — 1″ Shank.
Cat. No. 34-082 List **$2.75**

ON-OFF PLATE—Fits all switches except slide and small canopy type.

(D) BAT HANDLE TOGGLE SWITCH—Light duty, laminated phenolic insulation. Rating SPST types, 3 amps, 250/V; all others 1 amp, 250/V — 3 amps, 125/V; AC-DC.
SPST — 15⁄32″ Shank.
Cat. No. 34-086 List **$1.20**
SPDT — 15⁄32″ Shank.
Cat. No. 34-088 List **$1.50**
DPST — 15⁄32″ Shank.
Cat. No. 34-090 List **$2.15**
DPDT — 15⁄32″ Shank.
Cat. No. 34-092 List **$2.45**

(E) WIRE LEAD TOGGLE SWITCH—Same switch as series listed above but with 6″ wire leads.
SPST — ½″ Shank.
Cat. No. 34-094 List **$1.55**
SPST — ⅜″ Shank.
Cat. No. 34-096 List **$1.55**

(F) PUSH "ON" — PUSH "OFF" SWITCH—Laminated phenolic insulation; rating 3 amps, 250/V; 6 amps, 125/V, AC-DC. SPST.
Cat. No. 34-098 List **$2.15**

(G) PUSH BUTTON, MOMENTARY SWITCH—2-circuit type; one circuit is normally "on" — the other is "off". Laminated phenolic insulation, rated at 1 amp, 125/V. Solder terminals.
Cat. No. 34-100 List **$1.65**

(H) Red plastic push button for above switch.
Black plastic push button for above switch.
Cat. No. 34-102 List **$ .43**
Cat. No. 34-104 List **$ .43**

(J) MEDIUM DUTY TOGGLE SWITCH—Quick, make and break design, rating 6 amp, 250/V; 12 amp, 125/V; 12 amps, 125/V; 1 HP. DPST.
Cat. No. 34-106 List **$2.25**

(K) HEAVY DUTY PUSH BUTTON SWITCH: MOMENTARY ACTION — Molded plastic housing; rating 6 amps, 25/V; 12 amps, 125/V; 1 HP. Push button switch.
Cat. No. 34-108 List **$3.35**

(L) HEAVY DUTY TOGGLE SWITCH—240/V AC; transmitters, etc. Rating SPDT model 10 amps, 250/V; 15 amps, 125/V; other two types 5 amps, 250/V; 10 amps, 125/V.
DPDT.
Cat. No. 34-110 List **$ 8.20**
3 PDT.
Cat. No. 34-112 List **$12.60**
4 PDT.
Cat. No. 34-114 List **$16.80**

(M) DELUXE TOGGLE SWITCH—1000/V rms — 60 cycle is desired. Rating SPDT model, 1 amp, 250/V; 6 amps, 125/V. All others 3 amp, 250/V; 6 amp, 125/V.
SPST — 15⁄32″ Shank.
Cat. No. 34-120 List **$2.10**
SPDT — 15⁄32″ Shank.
Cat. No. 34-122 List **$2.40**
DPST — 15⁄32″ Shank.
Cat. No. 34-124 List **$3.00**
DPDT — 15⁄32″ Shank.
Cat. No. 34-126 List **$3.25**

(N) LOCK SWITCH—Removable key; sleeve length 27⁄32″; rating 3 amps, 250/V; 6 amps, 125/V.
With key removable in open position only.
Cat. No. 34-150 List **$3.55**
With key removable in open or closed position.
Cat. No. 34-152 List **$3.55**
Key only.
Cat. No. 34-154 List **$ .33**

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

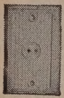
®JAVEX ELECTRONICS

REDLANDS
CALIFORNIA

ALL **JAVEX** products are of highest quality and are guaranteed to SELL. Should any **JAVEX** item fail to give satisfaction in operation or quality, it may be returned for replacement, credit, or full refund.

TV, RADIO, HI-FI, STEREO, AUDIO, ELECTRICAL, ELECTRONIC COMPONENTS UL WHERE NECESSARY, **NEMA STANDARD UNILINE OR SIERRA DESIGN ON ALL WALL PLATES. IVORY OR BROWN.**

SINGLE OUTLET TV WALL PLATE

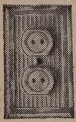


For extreme simplicity, convenience and efficiency in any TV or FM installation using 300 ohm transmission line. Uniline or Sierra design wall plates to match any existing decor. Use with XP-2 or MPX plugs.
Complete with mounting screws. Solderless.
Hi-Side for surface mounting, Regular for wall box installation.

WP-1 .... **LIST PRICE $1.29**

ALSO FURNISHED FOR DOUBLE OUTLET—WP-2, FOR ROTATORS WITH 2 & 4 WIRE—WP-2-4, AND IN 6, 8 & 10 WIRE—WP-6, WP-8, WP-10, WITH SEPARATE PLATE & RECEPTACLE IN DOUBLE TV OUTLET AND ROTATOR COMBINATIONS AS BELOW.

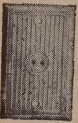
DUPLEX TV RECEPTACLE WITH WALL PLATE



For two 2-wire sockets or one 2-wire and one 4-wire socket. For 2 TV leads or for TV-FM or for TV and rotor. Use with XP-2 and XP-4 or MPX plugs. Complete with mounting screws.

DUX-2-2 .... **LIST PRICE $1.73**
(for two 300-ohm outlets)
DUX-2-4 .... **LIST PRICE $2.03**
(for one 300-ohm & one 4-wire outlet)

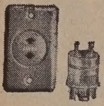
MULTI-SET TV ISOLATOR



MI-50 isolator on a wall plate acting as a single or double TV outlet.
Complete with mounting screws and MPX plugs. Solderless.

MI-TV-1 .... **LIST PRICE $2.97**
(1 outlet)
MI-TV-2 .... **LIST PRICE $3.89**
(2 outlets)

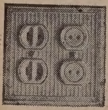
MULTI-SET TV ISOLATOR



Ideal for hotels, motels, and Multi-Set installations, 25-50 TV sets operate on one antenna. Limited only by the signal strength in your locality. One isolator required at each TV set. Complete with Magi plug and mounting screws.
Size 1¼" x 2" x 7/16" high. Solderless.

MI-50 .... **LIST PRICE $2.69**
MPX Magi-Plug Available Separately
LIST PRICE $1.97

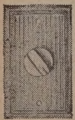
COMPLETE AC-TV WALL PLATES



One TV receptacle plus one AC receptacle of standard UL rating and a 2-gang duplex wall plate. Use with XP-2 and XP-4 or MPX plugs. Complete with mounting screws. Solderless.

AC-TV-2-2 .... **LIST PRICE $2.19**
(two 2-wire TV outlets plus AC outlet)
AC-TV-2-4 .... **LIST PRICE $2.49**
(one 2-wire TV outlet and one 4-wire Rotor outlet plus AC outlet).

VOLUME ('L' PAD) CONTROL



For Hi-Fi and other remote multiple installations where individual loud speaker volume control is necessary. 'L' pad type. 8 & 16 ohm.

CONTROL ONLY
LC-8 .... **LIST PRICE $2.37**
LC-16 .... **LIST PRICE $2.37**

WITH PLATE
LCP-8 .... **LIST PRICE $2.95**
LCP-16 .... **LIST PRICE $2.95**
LCP-dual. 2-L pads, 8 or 16 ohms .... **LIST PRICE $5.66**

ALSO — TENNA-SHINGLES, HIGH VOLTAGE PROBES, CRYSTAL HOLDERS, AC RECEPTACLES, BAKELITE WALL BOXES AND JAVEX MINI-PLATES AND SOCKETS. WRITE FOR CATALOG.

DUPLEX OUTLET RECEPTACLE

This receptacle is supplied in two styles for TV-FM, rotors, etc. Complete with mounting screws. Solderless. Use with XP-2 and XP-4 or MPX plugs.

DU-2-2 .... **LIST PRICE $1.23**
(two 300-ohm outlets)
DU-2-4 .... **LIST PRICE $1.49**
(one 300-ohm & one 4-wire outlet)

COMBINATION SWITCHING & VOLUME ('L' PAD) OUTLET PLATES

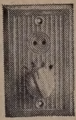


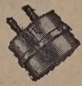
Plate with 4 pos., 2 pole switch.
WPS .... **LIST PRICE $3.29**
4 pos., 2 pole switch and 2 wire outlet.
WPS-1 .... **LIST PRICE $3.49**
WPS-dual. 2-4 pos. 2 pole switches **LIST PRICE $5.66**
WLS .... **LIST PRICE $5.66**
8 & 16 ohm, 4 pos., 2 pole switch, plus L pad.
WPL-1 .... **LIST PRICE $3.95**
8 or 16 ohm 'L' pad plus front outlet jack.

®TENNA-TUBE THRU-WALL

Featuring the new 300-ohm JAVEX Mini-Plates, MWP-2 or MWP-4. Will connect any VHF-UHF lead-in. Will accommodate regular or special twin, RG, ladder, co-axial, oval, and round leads.

TT WITHOUT PLATE .... **LIST PRICE $1.39**
TT-2 WITH PLATE & PLUG .... **LIST PRICE $2.65**
TT-4 WITH PLATE & PLUG FOR 4 WIRE .... **LIST PRICE $2.95**

PLUGS



Cannot be plugged into 110 VAC. True 300-ohm with triple plated red brass octal base pins. Sparkling molded acrylic resin of the most handsome quality. ¾" x ⅝" high, with easy grip sides. Solderless.

XP-2 2 Wire .... **LIST PRICE $ .30**
XP-4 4 Wire .... **LIST PRICE $ .59**
XP-9 9 Wire .... **LIST PRICE $1.69**

2 AND 4 WIRE LINE SPLICERS

S-2 .... **LIST .15** **S-4** .... **LIST .29**

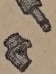
SUPER AC CONNECTOR

BAKELITE FOR 2 WIRE AC SERVICE.
RATED 10 AMPS @ 250 VOLT
SMK-2 .... **LIST PRICE $ .69**

OCTAL PLUG

Fits Octal Sockets. Screw cap. Finest Precision Bakelite Molding.
SP-8 .... **LIST PRICE $ .93**

MINIATURE PHONE PLUG & JACK



Tiniest and finest set for open or closed circuits. Screw on caps, less than ⅜" dia., 1" long overall.
SMJ .... **LIST PRICE $ .93**

TEST LEADS
Red & Black Vinyl In 3 Combinations

Finest quality vinyl, red and black leads in 3 combinations of pin and alligator tips.

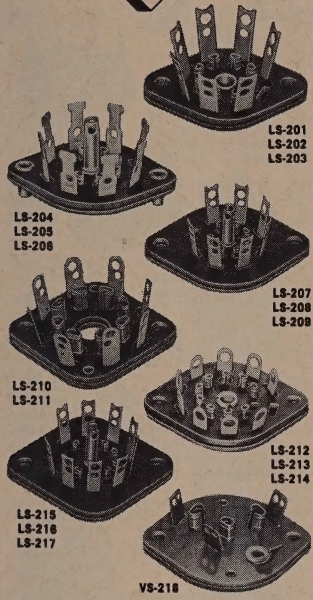
SL-1 Pin tips and prods .... **LIST PRICE $1.69**
SL-3 Pin tip and alligator clips .... **LIST PRICE $1.69**
SL-5 Alligator clips both ends .... **LIST PRICE $1.69**

YOU CAN ALWAYS DEPEND ON A JAVEX PRODUCT

"the mark of quality"

I. H. MFG. CO., INC.

Subsidiary of Industrial Electronic Hardware Corp.
New York 12, N. Y.



SOCKETS LAMINATED

A complete line of laminated sockets and molded sockets for all replacement or OEM purposes. The stringent "I.H." Standard of Quality is your guarantee of top performance in all applications.

MINIATURE LAMINATED WAFER SOCKETS

Tops and bottoms are made from laminated Bakelite wafers. Contacts are Spring Brass, and are Cadmium Plated for easy soldering. A sturdy, inexpensive socket with rugged, reliable performance.

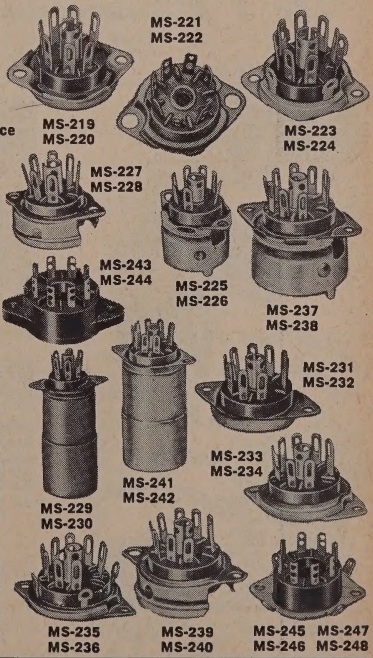
Model Number	Mtg. Ctrs.	Center Shield	Ground Strap	List Price per C
7-PIN MINIATURE LAMINATED WAFER SOCKETS				
LS-201	⅞"	No	No	$11.00
LS-202	⅞"	Yes	No	11.50
LS-203	⅞"	Yes	Yes	12.00
LS-204	1"	No	No	11.00
LS-205	1"	Yes	No	11.50
LS-206	1"	Yes	Yes	12.00
LS-207	1⁵⁄₁₆"	No	No	13 00
LS-208	1⁵⁄₁₆"	Yes	No	13.50
LS-209	1⁵⁄₁₆"	Yes	Yes	14.00
Standard packing: 50 per box				
OCTAL MINIATURE LAMINATED WAFER SOCKETS				
LS-210	1⁵⁄₁₆"	No	No	10.00
LS-211	1½"	No	No	10.00
Standard packing: 50 per box				
NOVAL MINIATURE LAMINATED WAFER SOCKETS				
LS-212	1⅛"	No	No	13.00
LS-213	1⅛"	Yes	No	13.50
LS-214	1⅛"	Yes	Yes	14.00
LS-215	1⁵⁄₁₆"	No	No	14.00
LS-216	1⁵⁄₁₆"	Yes	No	14.50
LS-217	1⁵⁄₁₆"	Yes	Yes	15.00
Standard packing: 50 per box				
VIBRATOR SOCKETS				
VS-218	Three-prong Vibrator socket for use in most auto radios			14.00
Standard packing: 25 per box				

SOCKETS MOLDED

STANDARD MINIATURE MOLDED SOCKETS

Molded from high di-electric general purpose black Bakelite, or low-loss Mica-filled Bakelite. Contacts are Spring Brass, Cadmium-Plated for easy soldering. Other grades of material or plating are available, quotations on request.

Model Number	Material	Mount	Mtg. Ctrs.	Mtg. Holes Diameter	Tube Shield Base	List Price per C
7-PIN MINIATURE MOLDED SOCKETS Standard Packing: 25 per box.						
MS-219	Bakelite	Top	⅞"	.098	No	$14.00
MS-220	Mica-Filled Bakelite	Top	⅞"	.098	No	17 00
MS-221	Bakelite	Bottom	⅞"	.098	No	14.00
MS-222	Mica-Filled Bakelite	Bottom	⅞"	.098	No	17.00
MS-223	Bakelite (with grd. lugs)	Bottom	⅞"	.098	No	15.00
MS-224	Mica-Filled Bakelite (with grd. lugs)	Bottom	⅞"	.098	No	18.00
MS-225	Bakelite	Top	⅞"	.125	J-slot	28.00
MS-226	Mica-Filled Bakelite	Top	⅞"	.125	J-slot	35.00
MS-227	Bakelite	Top	⅞"	.125	Snap-on	16.00
MS-228	Mica-Filled Bakelite	Top	⅞"	.125	Snap-on	20.00
MS-229	Bakelite	Top	1"	.095	Collapsible	37.50
MS-230	Mica-Filled Bakelite	Top	1"	.095	Collapsible	40.50
9-PIN MINIATURE MOLDED SOCKETS Standard Packing: 25 per box.						
MS-231	Bakelite	Top	1⅛"	.095	No	$20.00
MS-232	Mica-Filled Bakelite	Top	1⅛"	.095	No	23.00
MS-233	Bakelite	Bottom	1⅛"	.095	No	20.00
MS-234	Mica-Filled Bakelite	Bottom	1⅛"	.095	No	23.00
MS-235	Bakelite (with grd. lugs)	Bottom	1⅛"	.095	No	22.00
MS-236	Mica-Filled Bakelite (with grd. lugs)	Bottom	1⅛"	.095	No	25.00
MS-237	Bakelite	Top	1⅛"	.125	J-slot	30.00
MS-238	Mica-Filled Bakelite	Top	1⅛"	.125	J-slot	33.00
MS-239	Bakelite	Top	1⅛"	.125	Snap-on	24.00
MS-240	Mica-Filled Bakelite	Top	1⅛"	.125	Snap-on	27.00
MS-241	Bakelite	Top	1⅛"	.095	Collapsible	40.50
MS-242	Mica-Filled Bakelite	Top	1⅛"	.095	Collapsible	43.50
OCTAL MINIATURE MOLDED SOCKETS Standard Packing: 25 per box.						
MS-243	Bakelite	Top	1⁵⁄₁₆"	.140	All Molded	$14.00
MS-244	Mica-Filled Bakelite	Top	1⁵⁄₁₆"	.140	All Molded	18.00
MS-245	Bakelite	Top	1⁵⁄₁₆"	.137	Saddle	14.00
MS-246	Mica-Filled Bakelite	Top	1⁵⁄₁₆"	.137	Saddle	18.00
MS-247	Bakelite (with grd. lugs)	Top	1⁵⁄₁₆"	.137	Saddle	14.00
MS-248	Mica-Filled Bakelite (with grd. lugs)	Top	1⁵⁄₁₆"	.137	Saddle	18.00



(Use Index Page 1 for Quick, Easy Location of ALL Products)

"the mark of quality"

I. H. MFG. CO., INC.

Subsidiary of Industrial Electronic Hardware Corp.
New York 12, N. Y.

SOCKETS PRINTED CIRCUIT

A complete line of printed circuit sockets manufactured with meticulous care to provide maximum insulation resistance and minimum frequency loss. Automatic assembly assures uniformity and quality control required for automation processes. Variations of models listed as well as other designs can be made to your special order.

LAMINATED SOCKETS Standard Packing: 25 per box

SPECIFICATIONS: **Wafers** — NEMA Spec. Grade XP Laminated Phenolic. **Contacts** — Spring Temper Brass, Cadmium Plated. **Center Shield** — Tempered Steel, Cadmium Plated. (Other grades of Material, Wax Impregnation, or Plating available on request.)

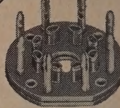
Model Number	Contacts	Pin Circle Diameter	Pin Mtg. Holes	Center Shield	Ground Strap	List Price per C
PS-249	7	.687	.093	N	N	$13.00
PS-250	7	.687	.093	Y	N	13.50
PS-251	7	.687	.093	Y	Y	17.50
PS-253	Octal	1.125	.093	N	N	30.00
PS-254	9	.781	.093	N	N	16.00
PS-255	9	.781	.093	Y	N	16.50
PS-256	9	.781	.093	Y	Y	20.50

MOLDED SOCKETS Standard Packing: 25 per box

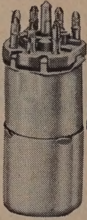
SPECIFICATIONS: **Casting** — General Purpose Phenolic or Low-Loss Mica Filled Phenolic. **Contacts** — Spring Temper Brass, Cadmium Plated. **Center Shield** — Brass, Cadmium Plated. **Ground Strap** — Tempered Steel, Cadmium Plated. (Other grades of Material, Wax Impregnation, or Plating available on request.)

Model Number	Contacts	Material	Pin Circle Diameter	Mtg. Holes	Center Shield	Ground Strap	List Price per C
PS-258	7	Bakelite	.687	.093	N	N	$14.50
PS-259	7	Mica-filled Bakelite	.687	.093	N	N	17.50
PS-260	7	Bakelite	.687	.093	Y	N	16.00
PS-261	7	Mica-filled Bakelite	.687	.093	Y	N	18.50
PS-262	7	Bakelite	.687	.093	Y	Y	19.00
PS-263	7	Mica-filled Bakelite	.687	.093	Y	Y	22.50
PS-264	7	Bakelite	.687	.093	w/Collapsible		42.50
PS-265	7	Mica-filled Bakelite	.687	.093	Tube Shield.		45.00
PS-266	Octal	Bakelite			N	N	20.00
PS-267	Octal	Mica-filled Bakelite			N	N	23.50
PS-268	9	Bakelite	.781	.093	N	N	19.50
PS-269	9	Mica-filled Bakelite	.781	.093	N	N	21.00
PS-270	9	Bakelite	.781	.093	Y	N	20.00
PS-271	9	Mica-filled Bakelite	.781	.093	Y	N	23.50
PS-272	9	Bakelite	.781	.093	Y	Y	24.00
PS-273	9	Mica-filled Bakelite	.781	.093	Y	Y	26.50
PS-274	9	Bakelite	.781	.093	w/Collapsible		48.00
PS-275	9	Mica-filled Bakelite	.781	.093	Tube Shield.		51.00

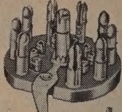
PS-258
PS-259
PS-260



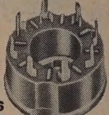
PS-254
PS-255
PS-256



PS-249
PS-250
PS-251



PS-274
PS-275



SOCKETS TRANSISTOR

SPECIFICATIONS: **Casting** — Low Loss Mica Filled Phenolic. **Contacts** — Beryllium Copper, Tin Coated. Printed Circuit Types can be heat-sealed. Triangular openings for easy insertion of Transistors. Supplied with Spring-type retaining rings of Tempered Steel, Cadmium Plated.

Note: TS-279 (Power Transistor Socket) made of NEMA Spec. Grade XP Laminated Phenolic Wafers. Other grades of material or plating available on request.

Model Number	Description	List Price per C
TS-276	General Purpose Universal Transistor Socket	$25.00
TS-277	Printed Circuit Transistor Socket	28.50
TS-278	Printed Circuit Transistor Socket with spring tail terminations	28.50
TS-279	Power Transistor Socket	12.00

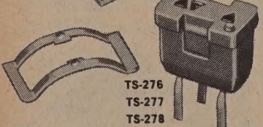
Standard Packing: 25 per box

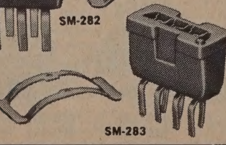
SOCKETS SUB-MINIATURE

SPECIFICATIONS: **Casting** — Low Loss Mica Filled Phenolic. **Contacts** — Beryllium Copper, Tin Coated. Triangular openings for easy insertion of Tubes. Supplied with Spring-type retaining rings of Tempered Steel, Cadmium Plated. Other grades of Material or Plating available on request.

Model Number	Description	List Price per C
SM-281	5-Contact Sub-Miniature Tube Socket	$27.50
SM-282	6-Contact Sub-Miniature Tube Socket	30.00
SM-283	7-Contact Sub-Miniature Tube Socket	32.00

Standard Packing: 25 per box





The mark of Quality

"the mark of quality"

TERMINAL STRIPS

I. H. MFG. CO., INC.

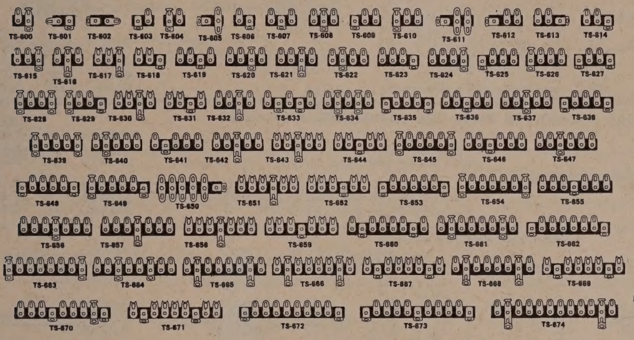
Subsidiary of Industrial Electronic Hardware Corp.
New York 12, N. Y.

We are equipped to meet every Terminal Strip requirement. Some of the most popular combinations are shown here. Special combinations on request. Lugs are Cadmium-plated steel, mounted on NEMA Spec. Grade XP Laminated Phenolic strips, ⅜" wide by 1/16" thick, with ⅜" spacing. Brackets have .140 diameter mounting holes, for No. 6 screw.

Model Number	Price Per C	Model Number	Price Per C	Model Number	Price Per C	Model Number	Price Per C	Model Number	Price Per C	Model Number	Price Per C	Model Number	Price Per C
TS-600	3.25	TS-612	4.00	TS-624	5.00	TS-636	6.00	TS-648	8.25	TS-660	9.00	TS-672	12.00
TS-601	3.50	TS-613	4.00	TS-625	5.00	TS-637	6.00	TS-649	8.25	TS-661	9.75	TS-673	12.00
TS-602	4.00	TS-614	4.00	TS-626	5.00	TS-638	8.00	TS-650	17.00	TS-662	9.75	TS-674	12.50
TS-603	3.25	TS-615	4.50	TS-627	6.00	TS-639	8.00	TS-651	8.25	TS-663	9.75	TS-675	12.50
TS-604	3.25	TS-616	4.50	TS-628	6.00	TS-640	6.00	TS-652	8.25	TS-664	9.75		
TS-605	4.00	TS-617	4.50	TS-629	6.00	TS-641	6.00	TS-653	8.25	TS-665	9.75		
TS-606	3.00	TS-618	4.50	TS-630	6.00	TS-642	6.50	TS-654	8.25	TS-666	10.00		
TS-607	4.00	TS-619	5.00	TS-631	6.00	TS-643	6.50	TS-655	8.25	TS-667	10.00		
TS-608	4.00	TS-620	5.00	TS-632	6.00	TS-644	6.50	TS-656	8.25	TS-668	10.00		
TS-609	4.00	TS-621	5.00	TS-633	7.00	TS-645	7.50	TS-657	9.00	TS-669	11.00		
TS-610	4.00	TS-622	5.00	TS-634	7.00	TS-646	7.50	TS-658	9.00	TS-670	11.00		
TS-611	5.75	TS-623	5.00	TS-635	8.50	TS-647	8.25	TS-659	9.00	TS-671	11.00		

Standard Packing

100 per box


TS-600
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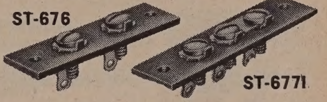
TS-673
TS-674

SCREW TYPE TERMINAL STRIPS

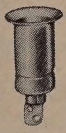
Lugs — Cadmium-Plated Steel, spaced 7/16"
Strips — XP Laminated Bakelite, 1/16" thick by ⅝" wide

Model No.	Terminals	Mtg. Ctr.	List Price per C
ST-676	2	1 5/16"	$10.00
ST-677	3	1¾"	15.00
ST-678	4	2 3/16"	19.00
ST-679	5	2⅝"	22.00
ST-680	6	3 1/16"	28.00
ST-681	7	3½"	35.00
ST-682	8	3 15/16"	39.00
ST-683	9	4⅜"	44.00
ST-684	10	4 13/16"	48.00
SHORTING LINK — Add "L" to number			3.00

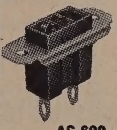

ST-676
ST-677

MISCELLANEOUS

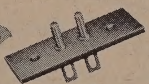
AA-697


AA-697-A

AA-697-B

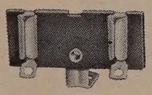

AC-699

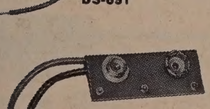
LC-698

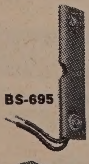

LC-698-A

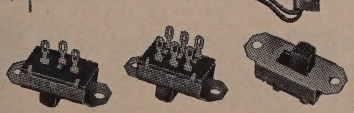
PP701

BS-691


SC-700


BS-693


BS-695


SW-685 — SW-690

Model Number		List Price per C
AUTO ANTENNA CONNECTORS		
AA-697	With Saddle-type flange.	$22.00
AA-697-A	With flange.	13.00
AA-697-B	Shell type.	13.00
INTERLOCK CONNECTORS		
LC-698	Recessed type male used with standard T.V. power cord female connector.	$13.00
LC-698-A	Mate for female T.V. power cord. Made of Laminated Phenolic.	9.00
UNIVERSAL SPEAKER CONNECTOR		
SC-700	2-prong, with mounting bracket.	$13.00

Model Number		List Price per C
A. C. RECEPTACLE		
AC-699	A.C. receptacles, mounts on top or bottom of panels. Middle barrier prevents shorting. U.L. approved. Mtg. Ctrs. 1⅛".	$19.00
PHONO PLUGS		
P P 701	9/16"	$6.00
P P 701-A	11/16"	6.00
SLIDE SWITCHES		
SW-685	SPST	$19.00
SW-686	SPDT	20.00
SW-687	DPST	25.00
SW-688	DPDT	40.00
SW-689	SPDT (spring return)	40.00
SW-690	DPDT (spring return)	48.00

U.L. Approved, .5 Amp @ 125 VDC
.3 Amp @ 125 VAC

BATTERY STRAPS (Use this chart for Battery Reference)

Model No.	Mtg. Centers	Description	Eveready	Burgess	R.C.A.	List Pri per C
BS-691	½"	9, 67½ V	216	2U6	VS-312	
			246	2N6	305	
			416	UX-5	318	$25.00
BS-692	¾"	9 V	266	M-6		$30.00
BS-693	15/16"	67½, 75, 90 V	495	N60X	VS-316	
			479	P60	216	
			437	XX-50	217	
			477	P45	218	$30.00
BS-694	1⅜"	9 V	276	D6	VS-306	$30.00
BS-695	1½"	45, 67½ V	455	XX-30	VS-055	
			457	K45	082	
			467	XX-45	016	$30.00
BS-696	2½"	90 V	490	N-60	VS-090	$30.00

Standard packing 50 per carton (except Slide Switches and Battery Straps — 25 per carton)

LAB-TRONICS, INC.

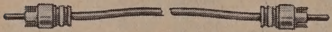
LT

CONNECTING CABLES with *Lenite* MOLDED PLUGS and JACKS

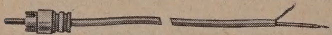
FOR HI-FI, TUNERS, AMPLIFIERS, PRE-AMPLIFIERS, RECORDERS, SPEAKERS, SPEAKER EXTENSIONS, RECORD CHANGERS, PUBLIC ADDRESS SYSTEMS, AUDIO EQUIPMENT, RADIO AND STEREOPHONIC SYSTEMS

SHIELDED

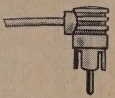
SHIELDED CONNECTING CABLES WITH MOLDED PHONO PIN PLUGS AND MOLDED PHONO PIN JACKS



			NET
Shielded cable. Molded Phono Pin Plug each end.	C101	18"	.54
	C102	36"	.63
	C103	72"	.81
	C104	120"	1.11

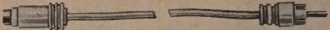


			NET
Shielded cable. Molded Phono Pin Plug; Stripped & Tinned.	C105	18"	.39
	C106	36"	.48
	C107	72"	.66
	C108	120"	.96

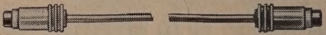


(Where a 90° right angle molded phono pin plug is desired, add "R" to stock number.)

The silver-gray cable is of high-quality, low-capacitance type for minimum loss. Used for interconnecting tuners, pre-amps, amplifiers, record changers, recorders and accessories, wherever Phono Pin Jack or Plug is used.



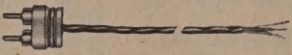
			NET
Shielded cable. Molded Phono Pin Plug; Phono Pin Jack.	C201	18"	.63
	C202	36"	.72
	C203	72"	.90
	C204	120"	1.20



			NET
Shielded cable. Molded Phono Pin Jack each end.	C401	18"	.84
	C402	36"	.93
	C403	72"	1.11
	C404	120"	1.41

MOLDED DUAL PHONO PIN PLUG FOR ALL STEREO AMPLIFIERS

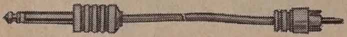
Plugs into standard ⅙ Centers dual phono jacks on all stereo amplifiers. Used for interconnecting stereo record changers, amplifiers and accessories.



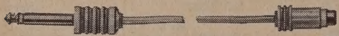
			NET
Two conductor shielded stereo cable. Molded dual phono pin plug; stripped and tinned.	SP8003	3'	1.68
	SP8006	6'	1.95
	SP8010	10'	2.31
Two conductor shielded stereo cable. Molded dual phono pin plugs each end.	SP8403	3'	2.19
	SP8406	6'	2.46
	SP8410	10'	2.82

MOLDED PHONE PLUGS

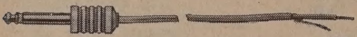
A fully SHIELDED MOLDED standard phone plug, available either straight or right angle, with gray, low-capacitance 100% shielded cable. The newly designed gray molded handle is grooved for ease in gripping, and permits easy insertion into a recessed jack.



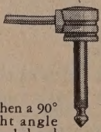
			NET
Shielded cable. Molded SHIELDED Phone Plug; Phono Pin Plug.	C4406	6'	1.11
	C4410	10'	1.35
	C4415	15'	1.65



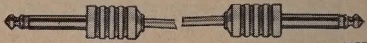
			NET
Shielded cable. Molded SHIELDED Phone Plug; Phono Pin Jack.	C4506	6'	1.17
	C4510	10'	1.41
	C4515	15'	1.71



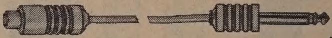
			NET
Shielded cable. Molded SHIELDED Phone Plug; Stripped and Tinned.	C4006	6'	.96
	C4010	10'	1.20
	C4015	15'	1.50



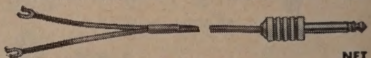
(When a 90° right angle molded phone plug is desired, add "R" to stock number.)



			NET
Shielded cable. Molded SHIELDED Phone Plug each end.	C4306	6'	1.32
	C4310	10'	1.56
	C4315	15'	1.86
	C4325	25'	2.46



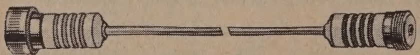
			NET
Shielded cable. Molded SHIELDED Phone Plug; Molded SHIELDED Phone Jack.	C4606	6'	1.71
	C4610	10'	1.89
	C4615	15'	2.19



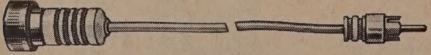
			NET
Shielded cable. Molded SHIELDED Phone Plug; Lugs.	C4106	6'	1.02
	C4110	10'	1.26
	C4115	15'	1.56

MICROPHONE CONNECTORS

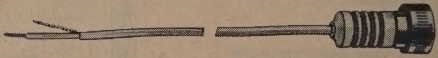
L-T has developed a new molded connector which is interchangeable with the present type now on the market. Molded grip with the cable molded directly onto the polished nickel plated brass connector. BOTH the conductor AND shield are soldered to the connector prior to molding, insuring noise-free operation. Heavy duty co-axial shielded cable, low loss, with a nominal capacitance of approximately 25 mmf/ft. For use with microphones, pre-amps, test equipment, VTVM, oscilloscopes, recorders, custom Hi-Fi installations or wherever a standard microphone connector is used. The coupling ring may be screwed back to convert connector from female to male type. Molded in gray to match the silver-gray cable.



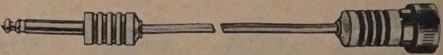
			NET
Shielded cable. Molded Male and Female Microphone Connector.	E906	6'	1.29
	E912	12'	1.71
	E925	25'	2.64



			NET
Shielded cable. Molded Microphone Connector; Molded Phono Pin Plug.	E801	1'	.74
	E803	3'	.90
	E806	6'	1.11



			NET
Shielded cable. Molded Microphone Connector; Stripped and Tinned.	E1106	6'	.99
	E1110	10'	1.29
	E1125	25'	2.40



			NET
Shielded cable. Molded Microphone Connector; Molded Phone Plug.	E1306	6'	1.29
	E1310	10'	1.59
	E1325	25'	2.76

ALL PRICES QUOTED ARE U.S.A. PRICES

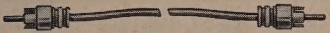
LAB-TRONICS, INC.

MOLDED PLUGS and JACKS for SPEAKER EXTENSIONS with *Lenite*

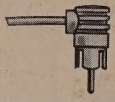
FOR SPEAKER EXTENSIONS, AUDIO RECORDING, LOW IMPEDANCE PATCHING, VOICE COIL, RECORDING, SPEAKER LINES, VOLTAGE LINES, ETC.

PARALLEL CABLE (Not Shielded)

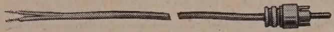
Flexible cable (not shielded) with molded phono pin plug for voice coil recording, speaker extensions, audio output, low impedance lines, etc. When the right angle type is desired, add "R" to the stock number.



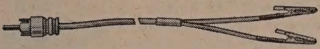
			NET
Flexible cable. Molded Phono Pin Plug each end.	P6406	6'	.66
	P6410	10'	.78
	P6420	20'	1.08



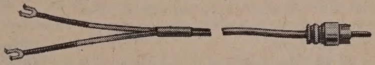
(Where a 90° right angle phono pin plug is desired, add "R" to the stock number.)



			NET
Flexible cable. Molded Phono Pin Plug; Stripped and Tinned.	P6006	6'	.45
	P6010	10'	.57
	P6020	20'	.87

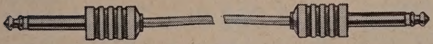


			NET
Flexible cable. Molded Phono Pin Plug; Clips.	P6206	6'	.75
	P6210	10'	.87
	P6220	20'	1.17

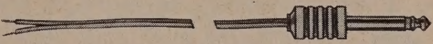


			NET
Flexible cable. Molded Phono Pin Plug; Lugs.	P6106	6'	.51
	P6110	10'	.63
	P6120	20'	.93

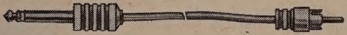
Molded Phone Plug, either right angle or straight, with flexible cable (unshielded) for use with radio voice coil recording, speakers, headphones, audio output, or other low impedance circuits. Silver-gray cable and plugs.



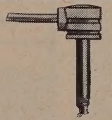
			NET
Flexible cable. Molded Phone Plug each end.	P7306	6'	1.26
	P7310	10'	1.38
	P7320	20'	1.68

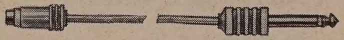


			NET
Flexible cable. Molded Phone Plug; Stripped and Tinned.	P7006	6'	.75
	P7010	10'	.87
	P7020	20'	1.17

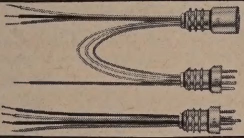


			NET
Flexible cable. Molded Phone Plug; Molded Phono Pin Plug.	P7406	6'	.96
	P7410	10'	1.08
	P7420	20'	1.38





			NET
Flexible cable. Molded Phone Plug; Phono Pin Jack.	P7506	6'	1.02
	P7510	10'	1.14
	P7820	20'	1.44

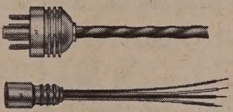


EXACT DUPLICATE CABLES for ORIGINAL EQUIPMENT REPLACEMENT

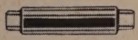
Molded Male Plugs; with Molded Female Receptacles, Molded Octal Plugs, etc. (as widely used on Record Changers and Audio and TV equipment).

Write for Exact Duplicate Replacement Catalog.

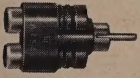
Cable Assemblies manufactured to specifications for O. E. M.



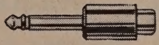
ADAPTERS & CONNECTORS



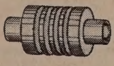
C400 Phono Pin Jack; Phono Pin Jack.
C400.........NET .60



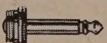
A754 Two Phono Pin Jacks; Phono Pin Plug.
A754........NET 1.20



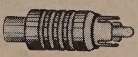
P55A Phono Pin Jack; Phone Plug.
P55A.........NET .75



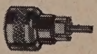
A753 PhoneJack; Phono Pin Jack.
A753........NET 1.05



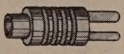
M75P Male Mic; Phone Plug.
M75P.........NET .30



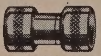
A750 PhoneJack; Phono Pin Plug.
A750........NET 1.05



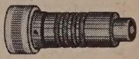
MP Mic; Phono Pin Plug.
MP............NET .60



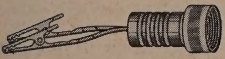
A780 Phono Pin Jack; 2 Prong Polarized Plug ¼" centers.
A780.........NET .75



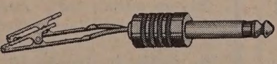
C800 Mic; Mic.
C800.........NET .60



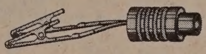
A751 Mic Connector; Phono Pin Jack.
A751.........NET .75



A779 Mic Connector; Clips. **NET .75**

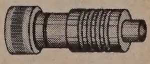


A782 Phone Plug; Clips. **NET .75**



A778 Phono Pin Jack; Clips. **NET .75**

A781 PhoneJack; Clips. **NET 1.05**



A752 Mic Connector; Phone Jack.
A752........NET 1.05

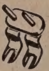
ALL PRICES QUOTED ARE U.S.A. PRICES

Mosley TV Installation Accessories

300 Ohm Connectors

Precision molded low loss 300 ohm connectors for UHF and VHF transmission lines. Constant impedance. Solderless.

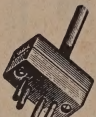
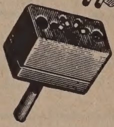
Type 301. Line Plug.		List $ .32
Type 311. Line Socket.		.32
Type 321. Polarized.	Pair,	.63
Type 304. Input Adapter.		.32
Type 27-S. Flat-line Splicer.		.19
Type 29-S. Round to flat Splicer.		.21

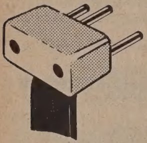


Multi-wire Connectors

For rotor cable connections and many other low voltage uses. No set screws in line plugs and line sockets. 8-wire line sockets and plugs are round. Brown or ivory.

Base Sockets		
Type 354.	4-Wire.	List $1.44
Line Sockets		
Type 364.	4-Wire.	List $1.01
Line Plugs		
Type 374.	4-Wire.	List $ .79



300 Ohm TV Plug

Type 303. 300 ohm plug, one piece construction and utilizing set screws to hold line. Supplied with 3 pins to mate with AC-TV series plates but middle pin is removable to use with Mosley 2-pin sockets. Brown or ivory. **List $ .32**

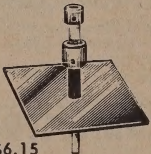
Universal TV Socket

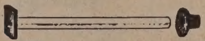
Type 343PK. Compact, neat plug-in socket for FM or TV lead-in line. Use as line tap or terminal socket. Low loss polystyrene, constant impedance design for 300 ohm line. In brown or ivory. Complete with mating plug. **List $1.11**

Roof-Thru

Type 624. 8" x 9" copper flashing with polystyrene feed through bushing permits direct weather-proof roof entrance of flat TV line and rotor cable. Easy to install. **List $6.15**

Type 623. Similar to No. 624 but for round or oval 300 ohm line only. **List $6.15**





Wall-Thru

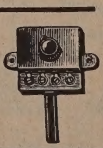
Type 625. Neat, low loss wall entrance for all popular oval, round or flat transmission lines. Fits walls up to 13" thick. Type 343 TV Socket mounts on inside plate. Brown or ivory. **List $2.05**

Type 625PK. Above, with TV Socket & Plug. **List $3.15**

TV Antenna Switches

Top quality rotary TV Antenna Switches for UHF and VHF. Silver-to-silver contacts and constant impedance design assures low insertion loss. Solderless. Brown or ivory.

Type F-40. 2-Way Switch.	List $2.05
Type F-20. 3-Way Switch.	List $3.94



MOSLEY WALL-FEED

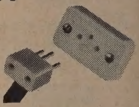
Wall Feed

Type 626. Install at gable end or under roof overhang to provide weatherproof TV lead-in entrance into attic. Ideal for house trailer installations. Ivory or brown polystyrene plate with weather-hood and 2" tube. In trailer installation cut tube flush with inside wall and install Type 343 TV Socket directly over opening. **List $1.33**

Type 626PK. Above, with TV Socket & Plug. **List $2.43**

Multi-Set Couplers

Type 912. "Tiny–Mite" Multi-set Coupler and plug-in socket with plug. Resistor type tap-off unit will operate two TV sets from one antenna. Neat, compact. In brown or ivory. **List $1.84**



Type 902. Dual Match 2-Set Coupler. Efficient resistor type coupler outperforms many coil type units and provides exceptionally good isolation between sets. Solderless. Brown or ivory case. Intended for primary signal areas. **List $3.10**

Type 904. 4–Set Coupler. Resistor type coupler designed for metropolitan areas, the major multi-set markets. Ideal for motels, small apartment buildings, etc. Brown or ivory poly case. **List $6.56**

MOSLEY 904
4 SET COUPLER

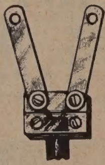
72-300 Ohm Transformer

Type 90. Balun type transformer matches 72 to 300 ohm or 300 to 72 ohm. Can be installed at set or directly on antenna. Solderless. Weather-sealed poly case. List $3.77

Tunable Wave Traps

High Q, series resonant wave traps for eliminating interference patterns and cross-talk on TV and FM. Use on any receiver input, 50 to 600 ohms, balanced or unbalanced. Solderless. Install on set terminal strip. Choose type with range including frequency of interfering station. List $4.82

Type	*Range (mcs)*	*Type*	*Range (mcs)*
WT-7	6.8 - 8.5	WT-41	27 - 55
WT-14	13.8 - 16	WT-78	47 - 110
WT-21	16 - 28	WT-165	100 - 230



MOSLEY "Y - TY"

Solderless strain relief connector prevents transmission line from breaking at the antenna. Easy to install, fits all types line. Use type 263-L for antennas with terminals more than 4" apart.

Type 263-S	"Y–TY"	List $ .69
Type 263-L	"Y–TY"	List $ .69

Polyethylene TV Conduit

Black polyethylene tubing makes ideal conduit for running TV and FM transmission lines within walls. Simplifies replacement of hidden wires. ¼" inside diameter. Flexible, easy to install. Many other applications such as intercom and other low voltage cables.

No. 80-25. 25'. List $8.25	No. 80-100. 100'. List $33.00
No. 80-50. 50'. List $16.50	

See MOSLEY Rotary Beam Antennas and other Amateur Components listed in another section of this book.

Mosley TV Installation Accessories

Flush Mounted TV Sockets

Easy-to-install, attractive wall plate TV sockets for every installation requirement. Ivory or brown plates are styled to harmonize with existing electrical plates. Available in types for single, dual or triple lead-in lines and for single and dual lines plus 4, 5 or 8-wire rotor cable. Packaged with mating plug(s), F-9 mounting brackets and full instructions.

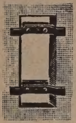
Type No.	*Service*	*List*
F-1PK	1 — 300 ohm lead.	$2.05
F-11PK	2 — 300 ohm leads.	2.81
F-111PK	3 — 300 ohm leads.	2.81
F-14PK	1 — 300 ohm lead & 4-wire rotor.	3.69
F-114PK	2 — 300 ohm leads & 4-wire rotor.	3.69

"Anti-Stub" TV-FM Wall Plate Outlets

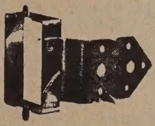
Similar to F-1PK, above, but with switch to disconnect system beyond outlet being used. Prevents "stub-effect". Silver plated positive action contacts. Brown or ivory poly. With polarized plug and mounting hardware.

Type FD-1PK **List $2.20**

Mounting Hardware



Type F-9, Mounting Brackets of heavy gauge steel for installing F-Series Sockets in walls of existing buildings. Requires rectangular opening 1¾" wide by 4" long. **List $ .37**



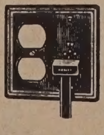
Type F-8, Plaster Ring for installing F-Series Sockets in new construction. Mounts easily and quickly to wood studding. Adjustable for plaster thicknesses up to 1½". Heavy plated steel. **List $ .42**

Surface Mounted Sockets

Surface mounted sockets resemble flush wall plate types but may be used for either concealed wiring or where TV line is brought along surface of wall. No wall opening required. In brown or ivory polystyrene. Supplied with mating plug(s) and wood screws.

Type No.	*Service*	*List*
SM-1PK	1 — 300 ohm lead.	$1.74
SM-11PK	2 — 300 ohm leads.	2.25
SM-111PK	3 — 300 ohm leads.	2.51
SM-14PK	1 — 300 ohm lead & 4-wire rotor.	3.69
SM-114PK	2 — 300 ohm leads & 4-wire rotor.	3.30

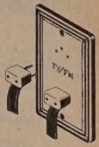
AC-TV Wall Plate Sockets



Combination TV lead-in outlet and plate for double convenience outlet. Ideal for installation during new construction or remodeling. Metal barrier plate, supplied, separates AC and TV services to comply with electrical codes. Install in ganged electrical boxes. Brown or ivory. With mating plug(s) & mounting screws.

Catalog No.	*TV Service*	*List Price*
AC-1PK	Single 300 Ohm Lead.	$ 1.97
AC-11PK	Dual 300 Ohm Lead.	2.62
AC-111PK	Triple 300 Ohm Lead.	3.48
AC-14PK	One 300 Ohm Lead plus 4-Wire Rotor.	3.48
AC-114PK	Two 300 Ohm Leads plus 4-Wire Rotor.	4.18

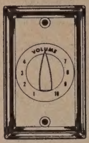
Stereo TV-FM Wall Plate Outlets



For use in areas where FM can be received with TV antenna. Resistor-type 2 set coupler built-in to isolate TV from FM permitting simultaneous reception without interaction.

Type WPS-11PK **List $2.20**

Audio Pad Plate w-knob



Attractive brown or ivory polystyrene plate with satin finished anodized aluminum dial face and modern indicator knob. Use to assemble L-pad, T-pad, Fader, etc., for audio and Hi-Fi systems. Less control.

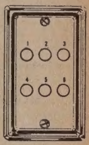
Type FAV-1 **List, $1.65**

Attenuator Plate with Speaker Jack

Same as Model FAV-1. Plug and jack have supplied for additional external speaker unit. Less control.

Type FAV-2 List, $2.45

Flush Speaker Switch Plate



High quality 6 position switch plate selects any speaker or combination of speakers in remote locations. Heavy duty push button switches on brown or ivory plate. Complete with plated machine screws and instructions.

Type FAS-6 **List, $9.00**

Speaker Wall Plate Outlets

Brown or ivory polystyrene flush mounting outlets. Speaker socket and plug polarized and solderless. Ideal for custom Hi-Fi installations where remote speakers are not permanently installed. Complete with mounting brackets and instructions.

Type FAS-1PK Single **List $2.81**
Type FAS-11PK Double **List $3.06**

3-Position Speaker Switch

Three position speaker switch for Hi-Fi or Stereo Speaker Systems. Will operate single speaker system, remote system or both. Model FSS-2 is supplied with external plug and jack for additional speakers.

Type FSS-1 List, $3.78
Type FSS-2 List, $4.03

TV Distribution Outlets

Attractive, easy-to-install wall plate sockets for hotels, hospitals, apartments, etc., with master antenna systems using RG-59/U or equivalent. Provides excellent electrical and mechanical plug-in connections of TV sets to coaxial cable drops. Fits standard electrical outlet boxes or may be installed with Type F-8 or F-9 accessories. In brown or ivory.

Type F-3BPK. Above, with balun coil. **List $4.73**
Type F-3CPK. With MC fitting for RG-59/U cable. **List $5.04**

Mueller Electric Co.

CLEVELAND, OHIO

ALLIGATOR, TEST, AND BATTERY CLIPS

U.S. PATENTS: 2,416,113; 2,549,589; 2,593,130; 2,762,028

For use in making quick, temporary electrical connections. Screw connections.

NEW "70 SERIES" ALLIGATOR CLIPS

U.S. Patent No. 2,762,028

A modern, streamlined version of our standard size Alligator Clips. Features simplified design, fast connection of wire with cord strain relief ears, patented hinge construction and lower cost. Mueller's traditionally snappy spring, full jaw spread, fine meshing teeth, round thumb grip and trim shape give most wanted features for test work in close quarters.

No. 70—FOR SOLDERED CONNECTION

Steel, cadmium plated. $1\frac{1}{8}$" long.

EACH NET......$0.07 LOTS OF 10....$0.044

No. 70-S—SCREW CONNECTION

Otherwise same as No. 70.

EACH NET......$0.08 LOTS OF 10......$0.05

No. 70-CS—COPPER SCREW CONNECTION

Solid copper version of No. 70-S.

EACH NET. ....$0.11 LOTS OF 10....$0.075

No. 72—NEW SKIN-TIGHT INSULATOR FOR 70 SERIES ALLIGATOR CLIPS!

For the first time complete, skin-tight, one-piece insulation for a standard size Alligator Clip! Covers entire clip right down to nose. Special tip slot permits full jaw opening without exposing teeth.

EACH NET............$0.06 LOTS OF 10............$0.04

"60 SERIES" ALLIGATOR CLIPS

No. 60—CONVENTIONAL TYPE

Accurately made, slim jaws, fine meshing teeth. Convenient, round thumb grip, barrel connection for banana plug. Equipped with small soldering lip. Strong spring with a hard bite. Cadmium plated. 2" long.

EACH NET..........................$0.07 LOTS OF 10..........................$0.05

No. 60-S—SCREW CONNECTION

Eliminates necessity for soldering. Otherwise same as No. 60.

EACH NET....$0.08 LOTS OF 10....$0.058

No. 60-CS—COPPER ALLIGATOR CLIP

Solid copper version of No. 60-S. Screw connection. 2" long. 10 per box.

EACH NET..........................$0.12 LOTS OF 10..........................$0.084

No. 60PR-2—SPECIAL BARREL FOR TEST PROD OR PHONE TIP

Barrel crimped to provide friction fit on standard test prod or phone tip. Holds prod on test, frees hand for other work.

EACH NET............$0.10 LOTS OF 10............$0.07

No. 62 FLEXIBLE VINYL INSULATOR

Red and black insulators for Alligator Clips 60, 60-S, 60-CS, 60PR-2.

EACH NET............$0.06 LOTS OF 10............$0.04

No. 60-HS—STEEL ALLIGATOR CLIP WITH INSULATED HANDLE

Same as No. 60-S except equipped with red and black insulating sleeves on end. Very convenient for distinguishing leads. Has screw connection also. Cadmium plated. $2\frac{1}{4}$" long. Shipped half red, half black.

EACH NET............$0.12 LOTS OF 10............$0.084

No. 60-CHS—COPPER ALLIGATOR CLIP, INSULATED HANDLE

Solid copper version of No. 60-HS. Screw connection. Shipped with half red, half black insulating sleeves. 10 per box.

EACH NET............$0.15 LOTS OF 10............$0.105

MINI-GATOR CLIP

(Smallest Insulated Clip Ever Made)

U.S. Patent No. 2,762,028 Trademark Reg.

Mini-gator

Mini-gator with Insulator

A truly miniaturized clip—the only one of its kind. Indispensable for testing or incorporation into miniaturized equipment. Skin-tight flexible Vinyl insulator (sold separately) covers completely — has slotted "lip action" tip. Clip weighs 1/20th oz., has tiny $\frac{11}{64}$" O.D. nose, but ample $\frac{3}{16}$" jaw spread. Crimping ears. Solder connection. Surprisingly strong bite penetrates corrosion and coatings.

No. 30 (Steel, cadmium plated)

EACH NET............$0.07 LOTS OF 10............$0.044

No. 30-C (Solid Copper)

EACH NET............$0.08 LOTS OF 10............$0.056

No. 32 (Insulator for Nos. 30 and 30-C)

EACH NET............$0.06 LOTS OF 10............$0.04

COMPLETELY INSULATED ALLIGATOR CLIPS

Patent Pending

No. 63 or 63-C Clip

Sold only as a unit, with factory-applied insulators.

A radically new development that doubles the usefulness of Alligator Clips! Completely insulated right down to the nose. Flexible 2-piece skin-type vinyl insulator of high dielectric strength, with "lip action" slotted nose that permits opening of clip without exposing metal. Insulator nose is only 15/64" O.D. The tight fitting sheath preserves all the slimness of the Alligator Clip, still giving complete protection against shorts in even th tightest spots. These clips could be bunched together—touching all around—without danger of shorting. Screw connection easily made by slipping insulator forward.

No. 63—INSULATED ALLIGATOR CLIP (STEEL)

Composed of Mueller No. 60-S Alligator Clip steel, cadmium plated, screw connection, complete with 2-piece vinyl insulator. Shipped half with red insulators, half black. 10 per box.

EACH NET............$0.24 LOTS OF 10............$0.164

No. 63-C—INSULATED ALLIGATOR CLIP (COPPER)

Composed of Mueller No. 60-CS Alligator Clip, solid copper, screw connection. Shipped half with red insulators, half black. 10 per box.

EACH NET............$0.26 LOTS OF 10............$0.18

CROCODILE CLIPS

No. 85 or 85-C Clip with No. 87 Insulator

No. 85-T Clip

No. 85—A very small clip with slender, elongated jaws for getting into tight places in radio or electrical test work. Screw connection. $2\frac{1}{8}$" long.

EACH NET............$0.09 LOTS OF 10............$0.06

No. 85-C—Same as No. 85, except solid copper. A radio frequency, entirely non-ferrous test clip. 10 per box.

EACH NET............$0.16 LOTS OF 10............$0.11

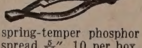
No. 85-T—Crocodile "Tip-Clip"—equipped with standard phone tip on one jaw, otherwise same as No. 85. Ideal for use as a prod, for ordinary clip connections and for connections to insulated binding posts having non-removable heads. $2\frac{5}{8}$" long. 10 per box.

EACH NET............$0.21 LOTS OF 10............$0.15

Use No. 87 Insulators for clips 85, 85-C and 85-T. Red and Black. Cover entire clip except nose. Protect against short and shock. Help to distinguish leads.

WEE-PEE-WEE No. 88

Entirely Non-ferrous. Smaller Than Ever!



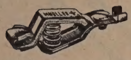
An extremely small clip for fine testing in radio and electrical work. Light-Weight; thin-nosed; spring-temper phosphor bronze. Ideal for close-wound coils. $1\frac{1}{8}$" long; jaw spread $\frac{5}{32}$". 10 per box.

EACH NET............$0.22 LOTS OF 10............$0.15

Use No. 93 Insulator.

Mueller Electric Co.

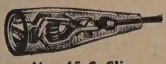
TEST CLIPS



No. 45 PEE WEE

A very small test clip for radio, ignition, meter and similar work. 1½″ long. Jaw spread $\frac{5}{16}$″. Steel, cadmium plated.

EACH NET..........................$0.07   LOTS OF 10..........................$0.05



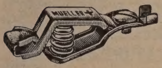
No. 45-C Clip
No. 47 Insulator

No. 45-C
Solid Copper R.F. Test Clip

Solid copper radio frequency test clip. Phosphor bronze spring, brass screw. Will not heat up in high frequency test work, entirely non-ferrous. 1½″ long. 10 per box.

EACH NET..........................$0.13   LOTS OF 10..........................$0.09

Use No. 47 Insulator for clips 45 and 45-C.



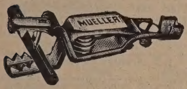
No. 48-B

A small test and battery clip for radio use and general testing purposes. 2″ long. Jaw spread $\frac{7}{16}$″. Steel, cadmium plated. 10 per box.

EACH NET......$0.10   LOTS OF 10......$0.07

No. 48C—Solid Copper. Same size as 48-B.

EACH NET..........................$0.14   LOTS OF 10..........................$0.098



No. 50-C Needle Clip

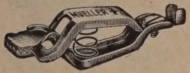
Solid bronze. Needle pierces insulation of wire for quick test contact. 2¼″ long. 10 per box.

EACH NET.$0.26   LOTS OF 10.$0.18

No. 51-C—Large crocodile clip. Same as 50-C but without needle. 10 per box.

EACH NET.$0.17   LOTS OF 10.$0.12

Use No. 49 insulator for Clips 48-B, 48-C, 50-C and 51-C.



No. 27

A high grade test clip with meshing teeth on three sides of jaws. For laboratory and shop test work $2\frac{7}{16}$″ long. Jaw spread ⅝″. Steel, cadmium plated. 10 per box.

EACH NET............$0.13   LOTS OF 10............$0.09

No. 27-C—Solid copper. Same size as No. 27. 10 per box.

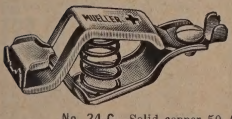
EACH NET............$0.20   LOTS OF 10............$0.14

Use No. 29 Insulator for clips 27 and 27-C.

LARGER SIZES OF CLIPS

No. 24-A

25 Amp.



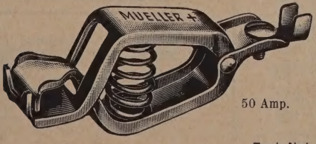
A medium sized battery clip. Stands erect on battery post. Lead coated, copper shunt protects spring. 2⅞″ long. Jaw spread ¾″. Steel, lead plated. 10 per box.

EACH NET $0.22
LOTS OF 10............$0.15

No. 24-C—Solid copper 50 Amp. Same size as No. 24-A.

EACH NET............$0.34   LOTS OF 10............$0.24

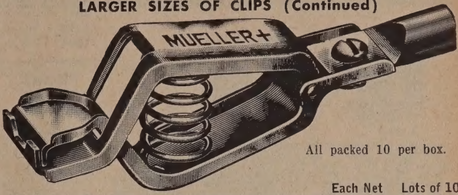
Use No. 26 Insulator for Clips 24-A and 24-C.



50 Amp.

	Each Net	Lots of 10
No. 21-A—Heavy Duty Steel, lead plated, 4″ long. 10 per box......................................	$0.40	$0.28

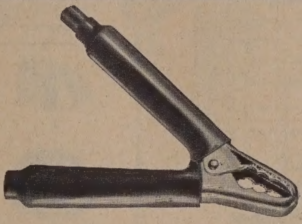
LARGER SIZES OF CLIPS (Continued)



All packed 10 per box.

	Each Net	Lots of 10
No. 21-C—100 Amp. Solid Copper, 4½″ long...	$0.91	$0.64
No. 11-A—100 Amp. Steel, lead plated, 6″ long	1.00	.70
No. 11-C—200 Amp. Solid Copper, 6″ long.......	1.70	1.19
No. 33-C—300 Amp. Solid Copper, 7¾″ long....	3.25	2.28

(Furnished with detachable lug connection for easy securing to large cables.)



No. 41-A
Steel
(lead plated)
100 Amp.

No. 41-C
Solid Copper
200 Amp.

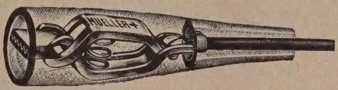
No. 43
Paired
Insulators

HIPPO-CLIP

An improved clip for fast chargers and booster cables. Full $1\frac{5}{16}$″ jaw spread. Detachable lug connection. Rugged design. Optional vinyl handle insulators, red for positive, black for negative.

		List Price Ea.
No. 41-A	Hippo-Clip	$ .95
No. 41-C	Hippo-Clip	2.00
No. 43	Insulators (per pair)	.25

FLEXIBLE INSULATORS FOR CLIPS

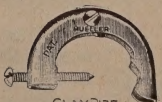


A convenient protection against short circuit and electric shock. Colors help to distinguish leads. Packed half red and half black to indicate polarity. Long tail prevents breakage of wire. Constructed so that clip is held in firmly. NOW AVAILABLE also in blue, white, yellow and green at 10% above regular price are insulators marked * below.

Insulator No.	For Use with Clip No.	Each Net	Lots of 10
13*	11-A, 11-C	$0.85	$0.59
23*	21-A, 21-C	.46	.32
26*	24-A, 24-C	.23	.16
29*	27, 27C	.15	.10
32*	30, 30-C	.06	.04
35	33-C	2.93	2.05
47*	45, 45-C	.06	.044
49*	48-B, 48-C, 50-C, 51-C	.09	.065
62*	60, 60-S, 60-CS, 60PR-2 (also 70 Series)	.06	.04
72*	70, 70-S, 70-CS	.06	.04
87*	85, 85-C, 85-T	.06	.044
93	88	.12	.08

*Also available in blue, white, yellow and green.

GROUND CLAMP



CLAMPIPE
No. 58

The exclusive patented feature of a U-shaped cross section in combination with a U-shaped clamp gives a rigidity and effectiveness to the ClamPipe that cannot be found in any other make.

The ClamPipe will not bend or lop over when applied to a pipe. The point of the large case hardened screw, cuts through rust, paint or corrosion into clean, fresh metal, insuring a good contact. The Clamp may be installed on a pipe lying flush against a wall. Will not spread open.

The best ground clamp value on the market. Applicable to pipe ⅜″ to 1⅜″ outside diameter.

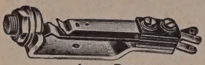
Packed 10 in a box

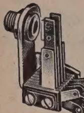
EACH NET..........................$0.20   LOTS OF 10..........................$0.14

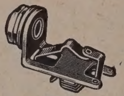
P R MALLORY & CO Inc
MALLORY

JACKS, PLUGS, KNOBS, DIAL PLATES & HARDWARE

P. R. MALLORY & CO. INC. INDIANAPOLIS 6, IND.

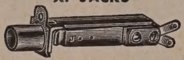

Long Frame


Junior


Midget

Long Fr.		Junior		Infant and Midget		
Mal. No.	Net Ea.	Mal. No.	Net Ea.	Mal. No.	Net Ea.	Schem.
1	45c	701	45c	A-1	39c	
2	57c	702	51c	A-2	48c	
2A	57c	702A	57c	A-2A	57c	
2B	57c	702B	57c			
3	60c	703	60c			
		703A	60c	A-3A	66c	
3B	60c	703B	60c			
		703C	60c			
		704	69c			
		704A	69c			
4B	75c	704B	69c			
5	90c	705	75c			
6	1.05					

XP JACKS



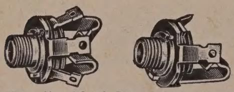
For telephone switchboard and industrial applications requiring a compact jack for close strip panel mounting. Special frame angle provides greater support. Plain, unthreaded bushing; jack mounts by use of screw through panel mounting plate at bushing base. Bushing fits all standard two and three conductor Mallory plugs. Springs assembled horizontally to frame. Bushings and springs nickel-plated; cadmium-plated steel frame; fine silver contacts.

Mallory No. XP1—Open circuit type. Net Each.......................... **63c**

Mallory No. XP2B—Three circuit microphone type. Net Each....... **75c**

Mallory No. XP3B—Single circuit, make before break type. Net Each.. **90c**

SC JACKS



Mallory No. SC-1A Phone Jack—Equivalent of Military No. JJ-034. Same spring arrangement as No. 1 long frame jack. Designed to receive following plugs: Mallory No. 75; Western Electric Nos. 47A and 47B; Signal Corps Nos. PL-47, PL-48, PL-55, PL-148, PL-155. PL-125; JAN plugs PJ-055, PJ-155, PJ-634, PJ-636 and PJ-047. Net Each..... **36c**

Mallory No. JJ-034—JAN-J-641 version of SC-1A. Net Each................ **39c**

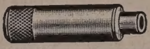
Mallory No. SCA-2B—Microphone Jack. Equivalent of Military Jack No. JJ-033. Same spring arrangements as No. 2B long frame jack. Designed to receive the following plugs: Western Electric No. 109 and Signal Corps Nos. PL-68 and PL-168. JAN Plugs PJ-068, PJ-168, and PJ-309. Net Each **42c**

Mallory No. JJ-033—JAN-J-641 version of above. Net Each................ **48c**

LA JACKS

For commercial electronic equipment. Extra compact and low cost. Similar to SC jacks, but commercial construction. Cadmium-plated 3/8"-32 brass bushings; silver-plated contacts. Phenolic insulation. Mtg. depth 1" behind panel; 1/2" mtg. radius.

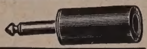
Mallory No.	Description	Net Ea.
LA-1	Open circuit same as A-1	27c
LA-2	Circuit closing same as A-2	30c
LA-2A	2-circuit same as A-2A	33c



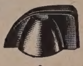
EXTENSION JACKS

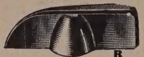
Mallory No.	Circuit	Shell	Net Each
100	2-way	Fiber	$0.84
100N	2-way	1-piece nickel	1.08
100A	2-way	2-piece nickel, built-in clamp	1.50

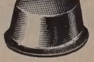
PHONE PLUGS

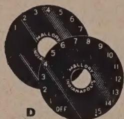


Mal. No.	Circuit	Shell	Net Each
55	....	Adapts mike con. to stand. jack	$0.30
75	2-way	Phenolic tie-cord anchor, shielded	.45
75A	2-way	Nickel, 2-piece, tie-cord anchor, built-in cble. clp.	1.05
75N	2-way	Nickel, tie-cord anchor, shielded	.66
76	3-way	Phenolic	.66
76A	3-way	Nickel, 2-piece, built-in cble. clp.	1.17
85	2-way	Miniature phone plug, shielded	.36


A


B


C


D

DIAL PLATES (FIG. D)

Aluminum dial plates with figures etched on solid black background. 1 13/16" dia., 7/16" hole, figures 7/64" high, .020" thick.

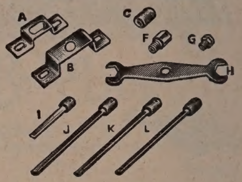
Mallory No. -20° Spacing	Mallory No. -30° Spacing	Marking	Net Each
....	372	1 to 2	12c
453	373	1 to 3	12c
454	374	1 to 4	12c
455	375	1 to 5	12c
456	376	1 to 6	12c
457	377	1 to 7	12c
458	378	1 to 8	12c
459	379	1 to 9	12c
460	380	1 to 10	12c
461	381	1 to 11	12c
462	382	1 to 12	12c
463	....	1 to 13	12c
464	....	1 to 14	12c
465	....	1 to 15	12c
466	....	1 to 16	12c
467	....	1 to 17	12c
468	....	1 to 18	12c
472	....	Off 1 to 2	12c
473	383	Off 1 to 3	12c
474	384	Off 1 to 4	12c
475	385	Off 1 to 5	12c
476	386	Off 1 to 6	12c
477	387	Off 1 to 7	12c
478	388	Off 1 to 8	12c
479	389	Off 1 to 9	12c
480	390	Off 1 to 10	12c
481	....	Off 1 to 11	12c
482	....	Off 1 to 12	12c
483	....	Off 1 to 13	12c
484	....	Off 1 to 14	12c
485	....	Off 1 to 15	12c
486	....	Off 1 to 16	12c
....	394* Special	1 to 24	12c
....	487† Special	1 to 5	12c
....	488‡ Special	1 to 4	12c

Spacing between numerals: *15°,†60°,‡90°.

ROUND AND BAR KNOBS

Mall. No.	Fig.	Description	Net
364	......	11/16" dia. round, black	9c
365-1	B	2 1/4" bar knob, black	21c
366-1	A	1 1/4" bar knob, black	15c
366-R-1	A	1 1/4" bar knob, red	15c
367-1	C	1 1/2" dia. round, black	21c
368-1	C	1 1/8" dia. round, black	18c

CONTROL HARDWARE



VOLUME CONTROL NUT WRENCH

Mal. No.	Fig.	Description	Net Ea.
178	H	For 1/2" and 9/16" hex nuts	51c

COUPLERS, BUSHINGS

Mal. No.	Fig.	Description	Net Ea.
EC240	C	Univ. coupling and reducer	60c
EB247	F	Univ. extension bushing	42c
UB241	G	Univ. bushing and nut	9c
EB158	...	3/8" dble. flat. bushg.	51c
EB214	...	3/8" flatted bushing	54c

ADJUSTABLE MOUNTING BRACKETS

Mal. No.	Fig.	Description	Net Ea.
RB248	A	1 3/4" mounting centers	21c
RB249	B	2 1/2" mounting centers	24c
RB254	...	Universal	15c

UNIVERSAL EXTENSION SHAFTS

Mal. No.	Fig.	Description	Net Ea.
RS242	J	4" long, 1/4" dia., 1/32" flat	57c
RS243	K	4" long, 1/4" dia., 3/32" flat	57c
RS244	L	4" long, 3/16" dia., 1/64" flat	57c
RS245	I	2" long, 1/4" dia., 3/32" slot	81c

DIAL PLATES FOR RHEOSTATS AND POTENTIOMETERS (NOT ILLUS.)

(No. 391—1 1/2" diameter; 370—5 1/2" diameter—all others—2 1/4" diameter).

Mall. No.	Marking	Control Type For	Net Each
369	0 to 100	All rheostats and potentiometers	21c
370	0 to 100	"K" type rheostats and potentiometers	85c
391	Increase Volume	All rheostats and potentiometers	21c
393	0 to 10	"C" types	21c
395	0 to 10	"M" type; Wire-wounds with plain covers	21c
396	0 to 10	Wire-wounds with switch covers	21c
397	0 to 10	Carbon with plain covers	21c
398	0 to 10	Carbon with switch covers	21c
399	0 to 10	"E" type pot's.	21c

HEX SHOULDER NUTS (NOT ILLUS.)

Mallory No.	Description	Net
232	For 1/4" panels*	21c
255	For 1/4" panels	12c
A11260-12	For 1/2" panels	15c
A11260-2	For 3/4" panels	18c

*Flat hex; pkge. of 10

TYPE "K" RHEOSTAT ACCESSORIES

Mal. No.	Description	Dia.	Net Ea
365-1	Bar knob	2 1/4"	$0.21
366-1	Bar knob	1 1/4"	.18
367-1	Knurled rd. knob	1 1/2"	.21
368-1	Knurled rd. knob	1 1/8"	.15
364	368 w/pointer	11/16"	.09
363-1†	Handwheel*	3 1/2"	2.49
363-2†	Handwheel**	3 1/4"	1.93
362-1	Handwheel*	3 1/2"	2.03
362-2	Handwheel**	3 1/4"	2.03
361	Finger Grip*	1 3/8"	.70
361-1	Finger Grip**	1 3/8"	.55
360	Finger Grip*	1 5/8"	.99
360-1	Finger Grip**	1 5/8"	.89
359†	Finger Grip*	2 3/8"	.64
359-1†	Finger Grip**	2 3/8"	.50

*With Pointer. **Without Pointer.

†3/8" hole dia., others, 1/4".

CONTROL AND SWITCH WASHERS

Mall. No.	Description	Net Pkg. 10
203	Extruded fiber; 3/4" O.D., 3/8" I.D.	18c
212	Flat phenolic; 3/4" O.D., 3/8" I.D.	12c
225	Nickel finish metal, 3/8" I.D.*	12c
226	Nickel finish metal, 7/16" I.D.*	12c
227	Cadmium plated lock washer‡	12c

*5/8" O.D. ‡11/16" O.D. 25/64" I.D.

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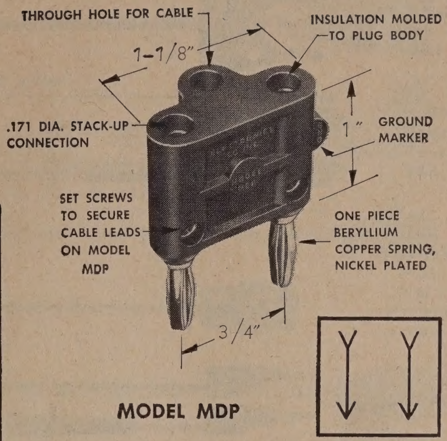
pēco POMONA *Electronics* CO., INC.
pomona, california

¾" MOLDED DOUBLE PLUG STACK-UP ACCESSORIES

MODEL MDP, designed to enable the user to attach a cable of his choice to the unit. Features a built-in cable guide to act as a strain relief. Internal set screws in the MODEL MDP provide a rapid means of connection to cable.
Rated: 15A CONT. 30A.INT. Working Voltage, 5,000 V.D.C. Capacity, 0.8 uuf @ 1 MC.

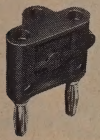
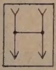
NET .75


THROUGH HOLE FOR CABLE
INSULATION MOLDED TO PLUG BODY
1-1/8"
.171 DIA. STACK-UP CONNECTION
1"
GROUND MARKER
SET SCREWS TO SECURE CABLE LEADS ON MODEL MDP
ONE PIECE BERYLLIUM COPPER SPRING, NICKEL PLATED
3/4"

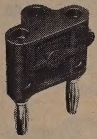
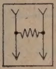
MODEL MDP

SCHEMATIC

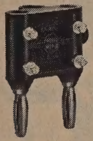
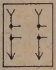
Color coded: Available in Red, Black, Brown, Orange, Yellow, Green, Blue, Violet, Gray, and White.

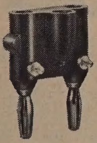
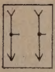
MODEL MDP-S
Molded shorting bar ¾" spaced, noise free, solder bonded internally.
Color—Cream
NET .95

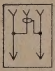
MODEL MDP-R
MOLDED PRECISION RESISTORS 1% tolerance, deposited carbon, values—0.1, 0.2, 0.25, 0.5, 1, 2, 5, 10 Megohms. Each value color identified. ¾" spaced.
NET 2.75

MODEL MDP-X
4 TERMINAL ISOLATION PLUG
Suitable for design of attenuators, filters, pads, networks, etc.
Color—Red
NET 3.25

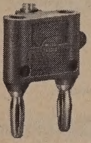



MODEL MDP-ST
Similar to Model MDP, except has solder turret terminals.
Color—Black
NET .85



MODEL 2B-1269
BNC RECEPTACLE ADAPTOR
Adapts ¾" spaced jacks to BNC plug.
Color—Black
NET 2.85

MODEL 2B-1270
BNC PLUG ADAPTOR
Adapts ¾" spaced jacks to BNC receptacle.
Color—Black
NET 3.85



MODEL 2B-1275	**50 OHM TYPE**
MODEL 2B-1277	**70 OHM TYPE**
MODEL 2B-1279	**93 OHM TYPE**

MICRODOT RECEPTACLE ADAPTORS, SCREW-ON TYPE
Adapts ¾" spaced jacks to Microdot miniature coaxial plugs, screw-on type. Color—Green, 50 Ohm; Violet, 70 Ohm; White, 93 Ohm.
NET 5.85

MODEL 2B-1276
MICRODOT RECEPTACLE ADAPTOR, SLIDE-ON TYPE
Adapts ¾" spaced jacks to Microdot coaxial miniature plugs, slide-on type; 50 Ohms, 70 Ohms, 93 Ohms. Color—Black
NET 5.85

MODEL 1285
PHONE PLUG ADAPTOR
Adapts phone jack to ¾" spaced binding posts.
Color—Black
NET 4.85

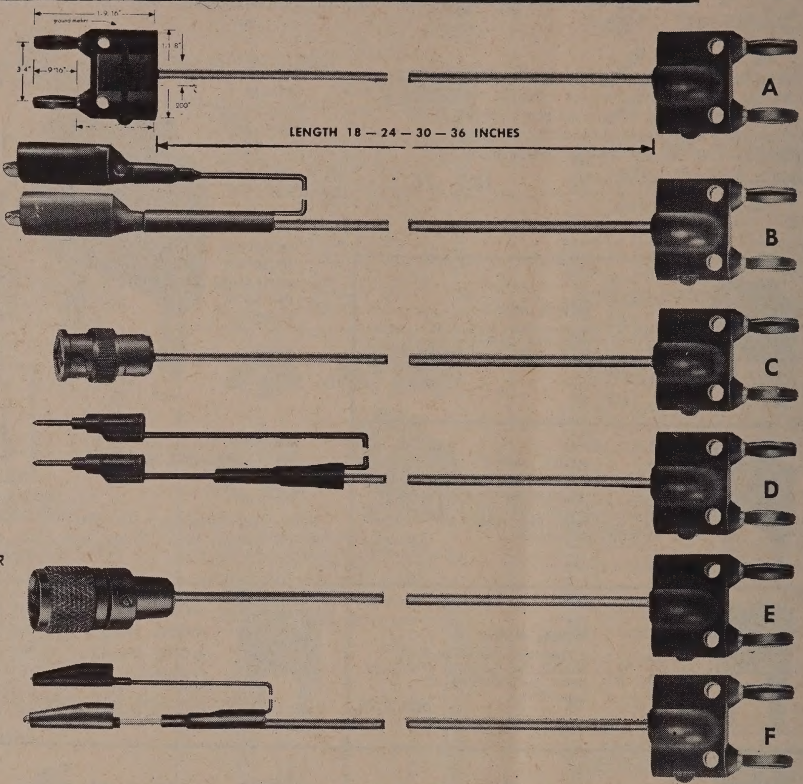
MODEL 1296
BNC BINDING POST ADAPTOR
Adapts a BNC receptacle to ¾" spaced binding posts.
Color—Black
NET 4.85

OTHER COLORS AVAILABLE ON QUANTITY ORDERS

POMONA Electronics CO., INC.

pomona, california

3/4" DOUBLE PLUG STACK-UP PATCH CORD & TEST LEADS



MODEL WITH DOUBLE PLUG BOTH ENDS
NET 4.85

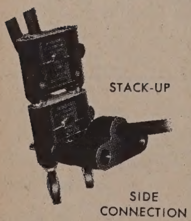
MODEL WITH ALLIGATOR CLIPS
NET 5.85

MODEL WITH UG 88C/U MALE BNC CONNECTOR
NET 5.85

MODEL WITH PHONE TIPS
NET 7.50

MODEL WITH MALE PLUG UHF CONNECTOR PL 259A
NET 5.85

MODEL WITH MINIGATOR CLIPS
NET 5.85



- Molded polyethylene plug body fully insulated
- Permits parallel multiple stacking
- Ground connection clearly marked
- One piece beryllium copper spring
- Solder bonded noise-free connection
- Fits standard banana jacks

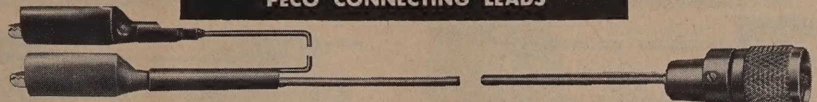
MODELS						SPECIFICATIONS	
A	B	C	D	E	F		
Model with Double Plugs	Model with Alligator Clips	Model with UG88C/U Male BNC Connector	Model with Phone Tip Plugs	Model with PL259A Male UHF Connector	Model with Minigator Clips	Cable Lengths	Cable Description
2BA-18	2BA-AL-18		2BA-PP-18		2BA-MG-18	18″	Two conductor twisted. 18 gauge wire 65/36 stranding. Vinyl insulation. Vinyl jacket. Nom. Capacity 30 mmf/ft.
2BA-24	2BA-AL-24		2BA-PP-24		2BA-MG-24	24″	
2BA-30	2BA-AL-30		2BA-PP-30		2BA-MG-30	30″	
2BA-36	2BA-AL-36		2BA-PP-36		2BA-MG-36	36″	
2BB-18	2BB-AL-18	2BB-BNC-18	2BB-PP-18	2BB-UHF-18	2BB-MG-18	18″	Shielded microphone cable. Polyethylene insulation. Vinyl jacket. Nom. Capacity 25 mmf/ft.
2BB-24	2BB-AL-24	2BB-BNC-24	2BB-PP-24	2BB-UHF-24	2BB-MG-24	24″	
2BB-30	2BB-AL-30	2BB-BNC-30	2BB-PP-30	2BB-UHF-30	2BB-MG-30	30″	
2BB-36	2BB-AL-36	2BB-BNC-36	2BB-PP-36	2BB-UHF-36	2BB-MG-36	36″	
2BC-18	2BC-AL-18	2BC-BNC-18	2BC-PP-18	2BC-UHF-18	2BC-MG-18	18″	Coaxial shielded cable. Polyethylene insulation. Vinyl jacket. Nom. Capacity 28.5 mmf/ft. RG58C/U.
2BC-24	2BC-AL-24	2BC-BNC-24	2BC-PP-24	2BC-UHF-24	2BC-MG-24	24″	
2BC-30	2BC-AL-30	2BC-BNC-30	2BC-PP-30	2BC-UHF-30	2BC-MG-30	30″	
2BC-36	2BC-AL-36	2BC-BNC-36	2BC-PP-36	2BC-UHF-36	2BC-MG-36	36″	

NOTE: Color of plug body to match cable unless otherwise specified. The following additional colors on plug body are available for color coding on special order: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray and White. The above Models also available on special order in the following cable types: RG55A/U, RG59/U, RG62A/U, and RG62B/U.

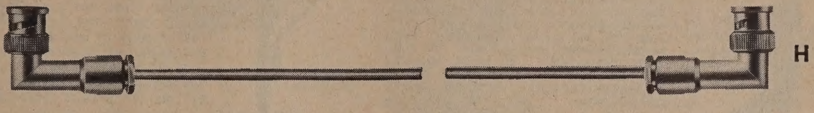
pēco POMONA *Electronics* CO., INC.
pomona, california

PECO CONNECTING LEADS

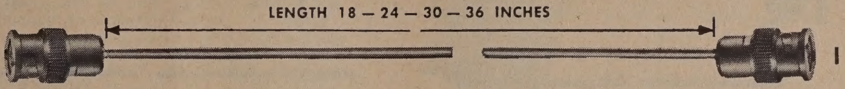
ALLIGATOR CLIPS TO PL259A UHF CONNECTOR
NET 5.85



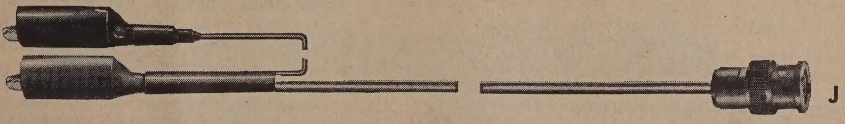
UG913/U ANGLE BNC MALE CONNECTOR BOTH ENDS
NET 10.85



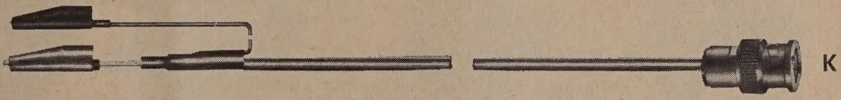
UG88C/U MALE BNC CONNECTOR BOTH ENDS
NET 5.85



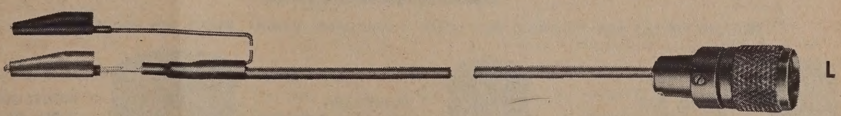
ALLIGATOR CLIPS TO UG88C/U MALE BNC CONNECTOR
NET 5.85



MINIGATOR CLIPS TO UG88C/U MALE BNC CONNECTOR
NET 5.85



MINIGATOR CLIPS TO MALE PLUG UHF CONNECTOR PL259A
NET 5.85



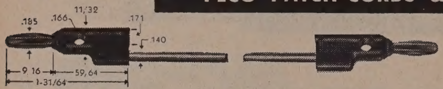
MODELS						SPECIFICATIONS	
G	H	I	J	K	L		
Alligator Clips to PL259A UHF Connector	UG913/U Angle BNC Male Connector Both Ends	UG88C/U Male BNC Connector Both Ends	Alligator Clips to UG88C/U Male BNC Connector	Minigator Clips to UG88C/U Male BNC Connector	Minigator Clips to PL259A UHF Connector	Cable Lengths	Cable Description
AL-B-UHF-18	BNCA-B-18	BNC-B-18	AL-B-BNC-18	MG-B-BNC-18	MG-B-UHF-18	18″	Shielded microphone cable. Polyethylene insulation. Vinyl jacket. Nom. Capacity 25 mmf/ft.
AL-B-UHF-24	BNCA-B-24	BNC-B-24	AL-B-BNC-24	MG-B-BNC-24	MG-B-UHF-24	24″	
AL-B-UHF-30	BNCA-B-30	BNC-B-30	AL-B-BNC-30	MG-B-BNC-30	MG-B-UHF-30	30″	
AL-B-UHF-36	BNCA-B-36	BNC-B-36	AL-B-BNC-36	MG-B-BNC-36	MG-B-UHF-35	36″	
AL-C-UHF-18	BNCA-C-18	BNC-C-18	AL-C-BNC-18	MG-C-BNC-18	MG-C-UHF-18	18″	Coaxial shielded cable. Polyethylene insulation. Vinyl jacket. RG58C/U. Nom. Cap. 28.5 mmf/ft.
AL-C-UHF-24	BNCA-C-24	BNC-C-24	AL-C-BNC-24	MG-C-BNC-24	MG-C-UHF-24	24″	
AL-C-UHF-30	BNCA-C-30	BNC-C-30	AL-C-BNC-30	MG-C-BNC-30	MG-C-UHF-30	30″	
AL-C-UHF-36	BNCA-C-36	BNC-C-36	AL-C-BNC-36	MG-C-BNC-36	MG-C-UHF-36	36″	

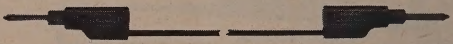
NOTE: Lengths other than those specified available upon request. The above models also available on special order in the following cable types: RG55A/U, RG59/U, RG62A/U, and RG62B/U.

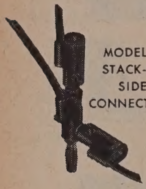
POMONA Electronics CO., INC.

pomona, california

PECO PATCH-CORDS & STACK-UP CONNECTING LEADS






MODEL B STACK-UP SIDE CONNECTION

MODEL B (BANANA TYPE)

Fits all standard banana jacks .166 DIA. One piece beryllium copper spring, heat treated, contact resistance less than 0.001 ohms. Plug body and spring, nickel plated. Extra flexible polyvinyl insulated wire .140 O.D., 7.5KV (Spark Test) . . . 18 gauge, stranding 65 x 36 T. C. Plug body molded with durable polyethylene insulation. SPECIFY LENGTH AND COLOR * **NET 1.50**

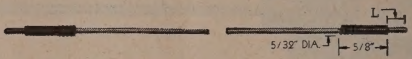
MODEL P STACK-UP

MODEL P (.080 PHONE TOP)

Fits all standard .080 tip jacks. One piece beryllium copper heat treated spring contact and tip. Finish silver plate, gold flash. Extra flexible polyvinyl insulated wire .087 O. D. 6KV (Spark Test) 20 gauge, stranding 41 x 36 T. C. Plug body molded with polyethylene. Compact size, extended height above jack 7/8", dia. 1/4". SPECIFY LENGTH AND COLOR * **NET 1.75**

MODEL M (BANANA TYPE) Miniature

Fits all standard miniature banana jacks with .104 dia. Finish, silver plated. Polyvinyl insulated wire .087 O. D., 6KV (Spark Test). 20 gauge stranding 41 x 36 T. C. Plug body molded with durable polyethylene insulation. Compact size, extended height above jack 35/64. SPECIFY LENGTH AND COLOR * **NET 1.50**



MODEL PT063 (.063 DIA. TIP) TIP LENGTH 7/16"
MODEL PT080 (.080 PHONE TIP) TIP LENGTH 1/2"
MODEL PM080 (.080 PHONE TIP) TIP LENGTH 1/4"

Model PT063 fits AN-MS No. 16 contact. Model PT080 fit .080 tip jacks. Insulation molded to plug body and cable. Finish gold over silver plated. Polyvinyl insulated wire (Mil. W-16878D Type C), 22 gauge, Stranding 19 x 34 T. C. O. D. .064. Subminiature in size. Compact size 5/32" dia. Plug body 5/8" length above jack. SPECIFY LENGTH AND COLOR * **NET .85**

* Stack-up patch cords above, available in 4", 8", 12", 18", 24" and 36" lengths. Lengths other than those specified available upon request. Colors: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray and White.

SOCKET SAVERS

REDUCED HEIGHT FOR PORTABLE EQUIPMENT • MAXIMUM HEIGHT ABOVE EQUIPMENT 13/16 INCHES

SOCKET SAVER
MODEL SS-7

MODEL SS-7
SEVEN PIN MINIATURE
NET 1.75

SOCKET SAVER
MODEL SS-9

MODEL SS-9
NINE PIN MINIATURE
NET 1.75

SOCKET SAVER
MODEL SS-8
POMONA ELECTRONICS CO. INC
POMONA, CALIFORNIA
PATENT PENDING

MODEL SS-8
8 PIN OCTAL
NET 1.75

The Socket Saver is designed to be installed on tube checkers and other electronic equipment to prevent wear and tear of sockets on original equipment. They are easy to install and remove. This eliminates the necessity of replacing and rewiring sockets on original equipment. Built of quality materials. BERYLLIUM COPPER LONG LIFE CONTACTS to give maximum service.

MODEL SS-789 KIT, SET OF THREE. NET 5.25

MODEL SS-11, 11 PIN OCTAL STYLE. NET 1.95

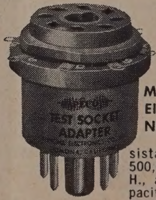
TEST SOCKET TUBE ADAPTERS

PECO
TEST SOCKET
ADAPTER

MODEL TVS-7
SEVEN PIN MINIATURE
NET 1.65 ea.

PECO
TEST SOCKET
ADAPTER

MODEL TVS-9
NINE PIN MINIATURE
NET 1.85



MODEL TVS-8
EIGHT PIN OCTAL
NET 1.75

Peco Test Socket Tube Adapters are ideal for making measurements of voltage, resistance, audio and video without tracing complicated circuits from the bottom of the chassis. They Feature: Extended test tabs for easy use with either alligator clips or test prods; Low loss MICA-FILLED molded phenolic construction per MIL-M-14, MFE. Power factor less than 0.010 at 10 Mc; High insulation resistance, the I. R. exceeds 500,000 meg-ohms at 40% R. H., at 24° C; Distributed capacity, inter-element approximately 1 micro-micro farad; High voltage operation, voltage breakdown elements exceeds 1700 volts AC or DC.

MODEL TVS—789 KIT, Set of Three. NET 5.25
SPECIAL ADAPTERS DESIGNED TO YOUR SPECIFICATIONS.

peco POMONA Electronics CO., INC.
pomona, california

TUBE SOCKET CONVERSION ADAPTERS

110-S
SOCKET
ADAPTER
POMONA ELECTRONICS

MODEL 110-S
NET 1.55 ea.

110-R
SOCKET
ADAPTER
POMONA ELECTRONICS

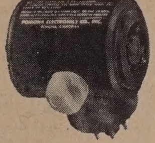
MODEL 110-P
MODEL 110-R
NET 1.55 ea.

110° CRT SOCKET ADAPTER TO DUO DECAL BASE FOR TESTING NEW NARROW-NECK 110° TUBES

Modernize your present test equipment with this simple adapter, no rewiring necessary. Just plug in adapter to convert to 110° socket. Used for testing, ageing, and lifetesting. Model 110-S has .820 pin-circle diameter (7 pins, .093 diameter) similar to 17BVP4, etc. Model 110-R has .600 pin-circle diameter (.040 pins) similar to 17BZP4, etc.

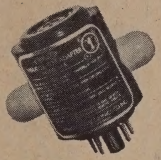
Model 110-P is similar to Model 110-R except that it is wired to test 110° Semi-Flat S-F series 17DAP4/SF17, 21EAP4/SF21, etc.

VIBRATOR TEST ADAPTERS



MODEL DA-34
NET 4.95 ea.
FOR CHECKING ANY STANDARD 3 OR 4 PRONG VIBRATOR, 6 OR 12 VOLT

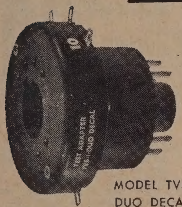
The Vibrator Test Adapter simplifies servicing of auto radios by eliminating the vibrator as a possible source of trouble. Features compact rugged phenolic construction. Instantly shows when contacts are sticking or open. Will indicate starting voltage. Eliminates all guesswork.



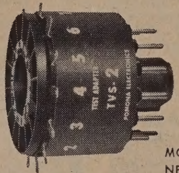
MODEL 4A 4 PRONG 6-12 VOLT
NET 3.25 ea.

MODEL 3D 3 PRONG 12 VOLT
NET 3.25 ea.

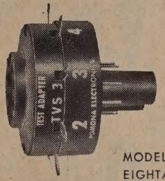
TEST SOCKET CATHODE RAY TUBE ADAPTERS



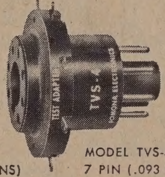
MODEL TVS-1
DUO DECAL
For Television
picture tubes
NET 1.95 ea.



MODEL TVS-2
NEO-DIHEPTAL
For color
Television
picture tubes
NET 7.45 ea.



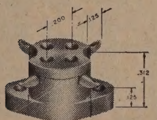
MODEL TVS-3
EIGHTAR (.040 PINS)
For 110°
Television
picture tubes
NET 2.55 ea.



MODEL TVS-4
7 PIN (.093 PINS)
For 110°
Television
picture tubes
NET 1.95 ea.

The PECO Test Socket Adapters are ideal for making measurements of voltage, resistance, and video from the base of the picture tube. The test socket adapter is inserted between the CR Tube base and its socket. This completes the circuit and makes all connections readily accessible. Measurements can be made without tracing circuit wiring to test points below the chassis, thereby saving valuable time and increasing efficiency in trouble shooting.

TRANSISTOR SOCKET

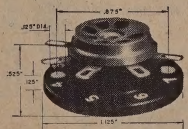


MODEL XS-T4

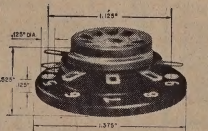
Peco XS-T4, surface mounted socket, designed for JETEC 30 type transistor. Features include: closed-entry, silver plated, gold flash, beryllium copper contacts; contact numbers and location tab molded into top of socket. Easily mounted with two #2 screws. All connections are made on top of chassis, making socket readily adaptable to enclosed-unit circuits. Socket is molded of low-loss mica-filled phenolic per MIL-M-14, type MFE. **NET .45 ea.**

SURFACE MOUNTED BREADBOARD SOCKETS

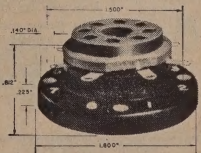
ideal for electronic and experimental use



MODEL XS-7
SEVEN PIN MINIATURE
NET .49 ea.



MODEL XS-9
NINE PIN MINIATURE
NET .57 ea.

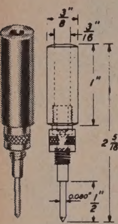


MODEL XS-8
EIGHT PIN OCTAL
NET .57 ea.

Surface Mounted Breadboard Sockets are used for experimental circuit design, portable and enclosed units, plug-in and packaged assemblies. They feature: An insulated base to prevent connections from shorting to chassis; Eliminates double chassis design; Circuits may be wired in an enclosed unit; The base connections are numbered for easy identification; Grade-A phosphor bronze spring contacts; Standard center to center mounting holes; For ease of installation the 7 and 9 Pin Miniatures may be mounted either in the center or on the sides, the 8 Pin Octal is mounted on the sides; Small mounting holes permit the re-use of experimental chassis.

HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"



INSULATED TIP PLUG
Solderless

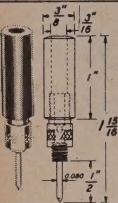
HANDLE: MOLDED BAKELITE. Red, Black, Yellow. Green, Blue White. SPECIFY COLOR.

BODY: Brass, nickel plated.

DESCR.: Solderless: wire fits through body of tip then wrapped around screw portion and tightened with knurled collar. Threaded type. Fits standard phone tip jacks.

Std. Pkg. 100

No.	Type	Per C
200	Senior	$25.00



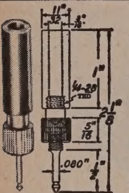
INSULATED TIP PLUG
Solderless

HANDLE: MOLDED BAKELITE. Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR.

BODY: Brass, nickel plated.

DESCR.: Solderless: wire fits through body of tip then wrapped around screw portion and tightened with knurled collar. Threaded type. Fits standard phone tip jacks. **Std. Pkg. 100**

No.	Type	Per 'C
201	Junior	$25.00



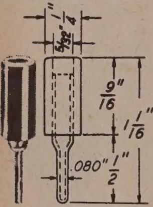
INSULATED TIP PLUG
Signal Corps Approved

HANDLE: ETHYL CELLULOSE. Red, Black. SPECIFY COLOR.

PLUG: Steel, case hardened to Signal Corps specs.

DESCR.: Recess at end of prod tip holds plugs more firmly in jack spring. Prevents tip from falling out when in an inverted position. **Std. Pkg. 50**

No.	Per C
250	$90.00



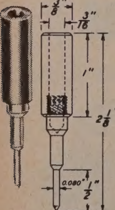
INSULATED TIP PLUG
Solder Type

HANDLE: MACHINED PLASTIC. Red or Black. SPECIFY COLOR.

BODY: Brass, nickel plated our No. 158.

DESCR.: Drawn hollow tip for easy soldering. Fits standard phone tip jack. **Std. Pkg. 100**

No.	Per C
237	$17.00



INSULATED TIP PLUG
Heavy Duty Type

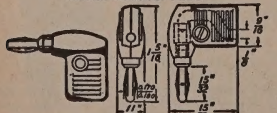
HANDLE: MOLDED BAKELITE. Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR.

PLUG: Brass, nickel plated.

DESCR.: Large diameter well enables soldering of heavy duty wire directly into plug. Fits standard phone tip jacks. **Std. Pkg. 100**

No.	Per C
229	$25.00

METER BANANA PLUG



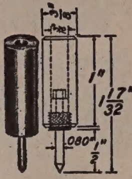
HANDLE: MOLDED BAKELITE. Red, Black. SPECIFY COLOR

PLUG: Brass, nickel plated.

SPRING: Four-leaved phosphor bronze, N. P.

DESCR.: Two halves for easy assembly with screw and nut. Fits stand. banana jacks. **Std. Pkg. 50**

No.		Per C
255		$60.00
255D	Display of 24 Pairs	$28.80



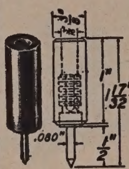
INSULATED SHORT TIP PLUG

HANDLE: MOLDED BAKELITE. Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR.

PLUG: Brass, nickel plated.

DESCR.: Inserts flush to insulated handle, no metal exposed; eliminates possibility of shock or grounding. Fits standard phone tip jacks. **Std. Pkg. 100**

No.	Per C
203	$20.00



INSULATED SHORT TIP PLUG
Solderless

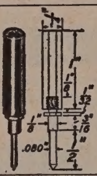
HANDLE: MOLDED BAKELITE. Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR.

PLUG: Brass, nickel plated.

DESCR.: Solderless: wire fits through handle and body of tip then wrapped around screw portion. Inserts flush to insulated handle, no metal exposed, eliminates possibility of shock or grounding. Fits standard phone tip jacks.

Std. Pkg. 50

No.	Per C
283	$22.00



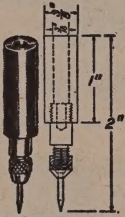
SUB-MINIATURE TIP PLUG

HANDLE: BONE FIBRE. Red, Black. SPECIFY COLOR.

DESCR.: Ideally suited for checking sub-miniature equipment. Fits standard phone tip jacks.

Std. Pkg. 100

No.	Per C
270	$30.00



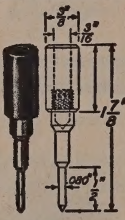
INSULATED TIP PLUG
Phono Needle

HANDLE: MOLDED BAKELITE. Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR.

BODY: Brass, nickel plated.

DESCR.: Removable chuck for easy replacement of broken needle. Needle pierces corrosion or plating for positive reading. **Std. Pkg. 50**

No.	Per C
216	$25.00



ADAPTER
Banana Plug to Tip Plug

HANDLE: MACHINED PLASTIC, Red, Black, Yellow, Green. SPECIFY COLOR.

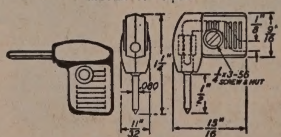
BODY: Brass, nickel plated.

DESCR.: Accepts standard banana plugs, adapts to standard tip plug.

Std. Pkg. 100

No.	Per C
215	$25.00

METER TIP PLUG

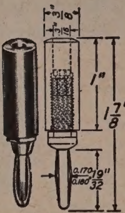


HANDLE: MOLDED BAKELITE, Red, Black. SPECIFY COLOR.

TIP: Brass, nickel plated.

DESCR.: Molded in two halves for easy assembly with screw, nut. Fits standard phone tip jacks. **Std. Pkg. 50**

No.		Per C
235		$45.00
235D	Display of 24 Pairs	$21.60



INSULATED BANANA PLUG

HANDLE: MOLDED BAKELITE. Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR.

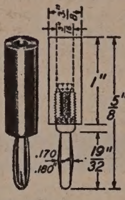
PLUG: Hex brass, nickel or silver plated.

SPRING: Four-leaved phosphor bronze or beryllium copper, nickel or silver plated.

DESCR.: Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks.

Std. Pkg. 100

No.	Spring Material	Plating	Per C
212	Phosphor Bronze	Nickel	$35.00
232	Phosphor Bronze	Silver	40.00
242	Beryllium Copper	Nickel	50.00
262	Beryllium Copper	Silver	55.00



INSULATED BANANA PLUG

HANDLE: MOLDED BAKELITE, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR.

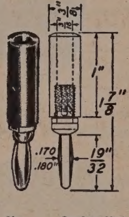
PLUG: Brass, nickel or silver plated.

SPRING: Four-leaved phosphor bronze or beryllium copper, nickel or silver plated.

DESCR.: Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks.

Std. Pkg. 100

No.	Spring Material	Plating	Per C
211	Phosphor Bronze	Nickel	$30.00
261	Phosphor Bronze	Silver	35.00
271	Beryllium Copper	Nickel	40.00
281	Beryllium Copper	Silver	45.00



INSULATED BANANA PLUG
Solderless

HANDLE: MOLDED BAKELITE. Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR.

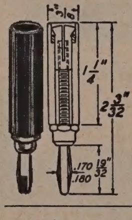
PLUG: Hex brass, nickel or silver plated.

SPRING: Four-leaved phosphor bronze or beryllium copper, nickel or silver plated.

DESCR.: Solderless: Wire fits through handle and body of tip then wrapped around screw portion. Fits standard banana jacks.

Std. Pkg. 50

No.	Spring Nut	Plating	Per C
295	Phosphor Bronze	Nickel	$30.00
296	Phosphor Bronze	Silver	35.00
297	Beryllium Copper	Nickel	40.00
298	Beryllium Copper	Silver	45.00



INSULATED BANANA PLUG
With Internal Spring Collett

HANDLE: MACHINED PLASTIC. Red or Black. SPECIFY COLOR.

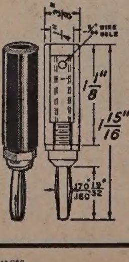
BODY: Hex brass, nickel plated.

SPRING: Four-leaved phosphor bronze, nickel plated.

DESCR.: Solderless: Spring collett provides quick connect and disconnect of wire or standard phone tip. Tin wire for secure contact. Fits standard banana jack.

Std. Pkg. 100

No.	Per C
239	$65.00



INSULATED BANANA PLUG
Solderless

HANDLE: MACHINED PLASTIC. Red or Black. SPECIFY COLOR

BODY: Hex brass, nickel plated with mating brass spacer.

SPRING: Four-leaved phosphor bronze, nickel plated.

DESCR.: Cross drilled hole in spacer enables quick solderless connection of wire to plug. Fits standard banana jacks.

Std. Pkg. 100

No.	Per C
236	$55.00

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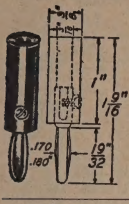
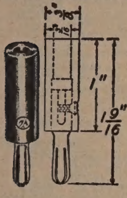


INSULATED BANANA PLUG
With Side Screw

HANDLE: MOLDED BAKELITE. Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR.
PLUG: Brass, nickel plated.
SPRING: Four-leaved phosphor, bronze or beryllium copper, nickel plated.
DESCR.: Set screw secures wire without soldering. Fits standard banana jacks.
Std. Pkg. 100

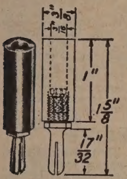
No.	Spring	Per C
204	Phosphor Bronze	$30.00
254	Beryllium Copper	45.00



INSULATED BANANA PLUG
Split Type With Side Screw

HANDLE: MOLDED PLASTIC. Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR.
PLUG: Brass, nickel plated.
DESCR.: Cross-slotted for spring tension. Set screw secures wire, without soldering. Fits standard banana jacks.
Std. Pkg. 100

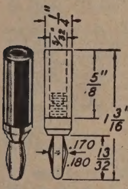
No.	Per C
213	$30.00



INSULATED BANANA PLUG
Split Type
With Internal Stud

HANDLE: MOLDED BAKELITE. Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR.
PLUG: Brass, nickel plated.
DESCR.: Cross-slotted for spring tension. Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks.
Std. Pkg. 100

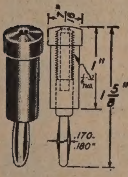
No.	Per C
253	$30.00



INSULATED BANANA PLUG
Midget Type

HANDLE: MACHINED PLASTIC. Red or Black. SPECIFY COLOR.
PLUG: Brass, nickel or silver plated.
SPRING: Phosphor bronze or beryllium copper nickel or silver plated.
DESCR.: Wire soldered directly into stud. Fits standard banana jacks.
Std. Pkg. 50

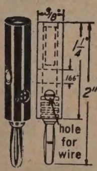
No.	Spring Material	Plating	Per C
291	Phosphor Bronze	Nickel	$30.00
292	Phosphor Bronze	Silver	35.00
293	Beryllium Copper	Nickel	40.00
294	Beryllium Copper	Silver	45.00



ADAPTER
Tip Plug to Banana Plug

HANDLE: MACHINED PLASTIC with molded Caps. Red or Black. SPECIFY COLOR.
PLUG: Brass, nickel plated.
CONTACT: Phosphor bronze.
JACK: Brass, nickel plated.
SPRING: Four leaved Phosphor bronze, nickel plated.
DESCR.: Accepts standard phone tip plugs and adapts to standard banana plugs.
Std. Pkg. 50

No.	Per C
214	$50.00



STACK BANANA PLUG
Solderless

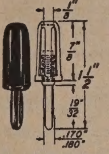
HANDLE: PLASTIC. Red, Black, Yellow or Green. SPECIFY COLOR.
BODY: Brass, nickel plated.
SPRINGS: Four-leaved Phosphor Bronze or Beryllium Copper, nickel plated.
DESCR.: Solderless connection. Accepts standard banana plugs in top and side. Inter-connects unlimited amount of multiple circuits.
Std. Pkg. 50

No.	Spring Material	Per C
1511	Phosphor Bronze	$45.00
1512	Beryllium Copper	50.00

NYLON HANDLE PLUGS

COLOR CODE SUFFIX — Add to Catalog Number as Required

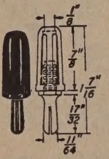
- — 101 WHITE
- — 102 RED
- — 103 BLACK
- — 104 DARK GREEN (Forest)
- — 105 LIGHT BLUE
- — 106 ORANGE
- — 107 YELLOW
- — 108 BROWN (Ecru)
- — 109 LIGHT GREEN (Jungle)
- — 110 DARK BLUE (Royal)
- — 111 IVORY
- — 112 VIOLET (Purple)
- — 113 GREY



NYLON BANANA PLUG

HANDLE: MOLDED NYLON. Specify color as coded above.
PLUG: Brass, nickel plated.
SPRING: Phosphor bronze or beryllium copper nickel or silver plated.
DESCR.: Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks.
Std. Pkg. 100

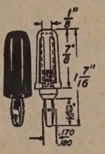
No.	Spring Material	Plating	Per C
476	Phosphor Bronze	Nickel	$35.00
477	Phosphor Bronze	Silver	40.00
478	Beryllium Copper	Nickel	45.00
479	Beryllium Copper	Silver	50.00



NYLON BANANA PLUG
Split Type

HANDLE: MOLDED NYLON. Specify color as coded above.
PLUG: Brass, nickel plated.
DESCR.: Cross-slotted for spring tension. Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks.
Std. Pkg. 100

No.	Per C
494	$30.00

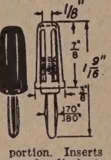


NYLON BANANA PLUG
Midget

HANDLE: MOLDED NYLON. Specify color as coded above.
PLUG: Brass, nickel or silver plated.
SPRING: Phosphor bronze or beryllium copper, nickel or silver plated.
DESCR.: Wire soldered directly into stud. Fits standard banana jacks.
Std. Pkg. 100

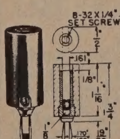
No.	Spring Material	Plating	Per C
426	Phosphor Bronze	Nickel	$30.00
427	Phosphor Bronze	Silver	35.00
428	Beryllium Copper	Nickel	40.00
429	Beryllium Copper	Silver	45.00

NYLON BANANA PLUG
Solderless



HANDLE: MOLDED NYLON. Specify color as coded above.
PLUG: Brass, nickel or silver plated.
SPRING: Phosphor bronze or beryllium copper, nickel or silver plated.
DESCR.: Solderless. Wire fits through handle and body of tip then wrapped around screw portion. Inserts flush to handle, no metal exposed, eliminates possibility of shock or grounding. Fits standard banana jacks. **Std. Pkg. 100**

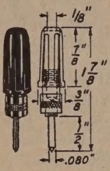
No.	Spring Material	Plating	Per C
455	Phosphor Bronze	Nickel	$35.00
456	Phosphor Bronze	Silver	40.00
457	Beryllium Copper	Nickel	45.00
458	Beryllium Copper	Silver	50.00



INSULATED SINGLE PLUG

BODY: Molded Red or Black Polystyrene. SPECIFY COLOR.
PLUG: Brass, nickel plated.
SPRING: Four-leaved Phosphor bronze, nickel plated.
SCREW: Steel, cadmium plated.
DESCR.: Internal set screw for wire or phone tip connection. Can be stacked for multiple connections.
Std. Pkg. 25

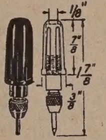
No.	Per C
324	$80.00



NYLON TIP PLUG
Solderless

HANDLE: MOLDED NYLON. Specify color as coded above.
PLUG: Brass, nickel plated.
DESCR.: Solderless: wire fits through body of tip then wrapped around screw portions and tightened with knurled collar. Threaded type. Fits standard phone tip jacks.
Std. Pkg. 100

No.	Per C
490	$28.00

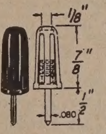


NYLON TIP PLUG
Phono Needle

HANDLE: MOLDED NYLON. Specify color as coded above.
BODY: Brass, nickel plated.
DESCR.: Removable chuck for easy replacement of broken needles. Needle pierces corrosion of plating for positive reading.
Std. Pkg. 50

No.	Per C
493	$28.00

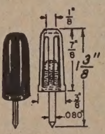
NYLON SHORT TIP PLUG
Solderless



HANDLE: MOLDED NYLON. Specify color as coded above.
PLUG: Brass, nickel plated.
DESCR.: Solderless: wire fits through handle and body of tip then wrapped around screw portion. Inserts flush to handle, no metal exposed, eliminates possibility of shock or grounding. Fits standard phone tip jacks.
Std. Pkg. 100

No.	Per C
492	$25.00

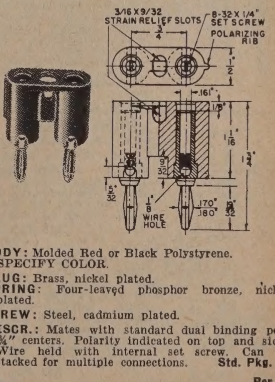
NYLON SHORT TIP PLUG



HANDLE: MOLDED NYLON. Specify color as coded above.
PLUG: Brass, nickel plated.
DESCR.: Inserts flush to insulated handle, no metal exposed; eliminates possibility of shock or grounding. Fits standard phone tip jacks.
Std. Pkg. 100

No.	Per C
491	$23.00

DUAL BANANA PLUG



BODY: Molded Red or Black Polystyrene. SPECIFY COLOR.
PLUG: Brass, nickel plated.
SPRING: Four-leaved phosphor bronze, nickel plated.
SCREW: Steel, cadmium plated.
DESCR.: Mates with standard dual binding post ¾" centers. Polarity indicated on top and side. Wire held with internal set screw. Can be stacked for multiple connections. **Std. Pkg. 25**

No.	Per C
210	$120.00

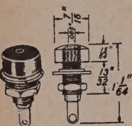
ALL PRICES SUBJECT TO TRADE DISCOUNT

HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

INSULATED PHONE TIP JACK

HEAD: MOLDED BAKELITE. Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR.

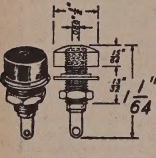


BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
DESCR.: Positive contact with standard phone tip plugs. Supplied complete with hex nut and fibre washer. Mounts in 5/16" hole in panels up to ⅜" thick. Accepts standard phone tip plugs.

Std. Pkg. 100

No.	Per C
202	$22.00

INSULATED PHONE TIP JACK



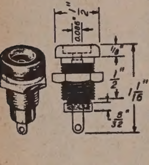
HEAD: MACHINED PLASTIC. Red, Black, Yellow, Green. SPECIFY COLOR.
BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
DESCR.: Complete with hex nut & fibre washer. Mounts in 5/16" hole in panels up to ⅜" thick. Accepts standard phone tip plugs.

Std. Pkg. 50

No.	Per C
223	$35.00

MOLDED NYLON TIP JACK

All Insulated **Rated at 4000 Volts AC**

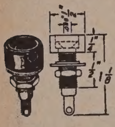


BODY: MOLDED NYLON. Red, Black, Yellow, Green, Blue. SPECIFY COLOR.
CONTACT: Phosphor bronze.
CAP: Brass, nickel plated.
DESCR.: Mounts in ⅜" hole in panels up to 5/16" thick. Accepts standard phone tip plugs. **Std. Pkg. 100**

No.	Per C
240	$30.00

INSULATED TIP JACK

Meter Type



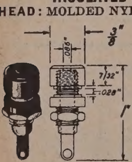
HEAD: MOLDED PLASTIC. Red, Black, Yellow, Green, Blue. SPECIFY COLOR.
BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
DESCR.: Supplied complete with hex nut and fibre washer. Mounts in 5/16" hole in panels up to ⅜" thick. Recessed jack body prevents possibility of shock or grounding. Accepts standard phone tip plugs.

Std. Pkg. 50

No.	Per C
282	$25.00

INSULATED PHONE TIP JACK

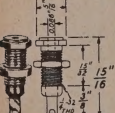
HEAD: MOLDED NYLON with molded nylon washer. Red, Black, Yellow, Green, Blue. SPECIFY COLOR.



BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
DESCR.: Extruded portion of head and washer provides excellent insulation from panel. Supplied with hex nut. Mounts in 5/16" hole in panels up to ¼" thick. Accepts standard tip plugs. **Std. Pkg. 100**

No.	Per C
241	$30.00

PHONE TIP JACK

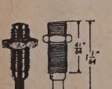


BODY: BRASS nickel plated.
SPRING: Phosphor bronze.
DESCR.: Positive contact with standard phone tip plugs. Supplied with hex nut. Mounts in ¼" hole in panels up to ⅜" thick.

Std. Pkg. 100

No.	Per C
107	$17.00

HEADLESS PHONE TIP JACK



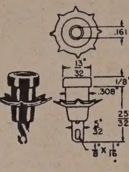
BODY: BRASS nickel plated.
SPRING: Phosphor bronze.
DESCR.: Supplied with hex nut. Used with plastic molded instrument cases, where jack body is screwed into case. Accepts standard phone tip plugs.

Std. Pkg. 100

No.	Per C
147	$10.00

"SPEEDI-MOUNT" BANANA JACKS

BODY: MOLDED BAKELITE. Red or Black. SPECIFY COLOR.

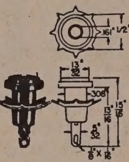


CONTACT: Brass, Cadmium Plated.
WASHER: Steel cadmium plated, internal and external tooth.
DESCR.: Unusual dished lockwasher permits fast assembly. Teeth embed into jack and panels, prevent pulling out and turning. Mounts in 5/16" hole in panels up to 3/16" thick. Accepts standard banana plug.

Std. Pkg. 100

No.	Head	Per C
398	13/32	$11.00

Large Head

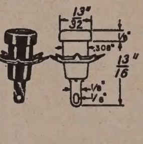


BODY: Molded Bakelite. Red or Black. SPECIFY COLOR.
CONTACT: Brass, Cadmium Plated.
WASHER: Steel cadmium plated, internal and external tooth.
DESCR.: Unusual dished lockwasher permits fast assembly. Teeth embed into jack and panels, prevent pulling out and turning. Mounts in 5/16" hole in panels up to 3/16" thick. Accepts standard banana plug. **Std. Pkg. 100**

No.	Head	Per C
399	½"	$11.00

"SPEEDI-MOUNT" TIP JACKS

Small Head

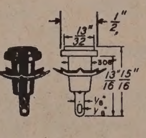


BODY: MOLDED BAKELITE. Red or Black. SPECIFY COLOR.
SPRING: Phosphor bronze.
WASHER: Steel cadmium plated, internal and external tooth.
DESCR.: Unusual dished lockwasher permits fast assembly. Teeth embed into jack and panels, prevents pulling out and turning. Mounts in 5/16" hole in panels up to 3/16" thick. Accepts Accepts standard phone tip plugs.

Std. Pkg. 100

No.	Head	Per C
279	13/32"	$11.00

Large Head

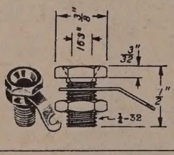


BODY: MOLDED BAKELITE. Red or Black. SPECIFY COLOR.
SPRING: Phosphor bronze.
WASHER: Steel cadmium plated, internal and external tooth.
DESCR.: Unusual dished lockwasher permits fast assembly. Teeth embed into jack and panel, prevent pulling out and turning. Mounts in 5/16" hole in panels up to 3/16" thick. Accepts standard midget banana plugs.

Std. Pkg. 100

No.	Head	Per C
299	½"	$11.00

BANANA JACK

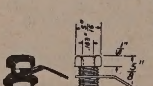


BODY: Hex Brass nickel plated with recessed head.
DESCR.: Supplied with hex nut & brass tinned lug. Mounts in ¼" hole; fits panels up to ⅜" thick. Accepts standard banana plugs.

Std. Pkg. 100

No.	Per C
101	$17.00

BANANA JACK

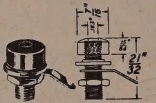


BODY: HEX BRASS, nickel plated.
DESCR.: Supplied with hex nut and brass tinned lug. Mounts in ¼" hole in panels up to ⅜" thick. Accepts standard banana plugs.

Std. Pkg. 100

No.	Per C
109	$17.00

INSULATED BANANA JACK



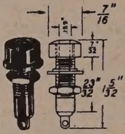
HEAD: MOLDED BAKELITE. Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR.
BODY: Brass, nickel plated.
DESCR.: Supplied with hex nut, fibre washer, and brass tinned lug. Mounts in 5/16" hole in panels up to ⅜" thick. Accepts standard banana plugs.

Std. Pkg. 100

No.	Per C
205	$22.00

INSULATED BANANA JACK

With Solder Tab

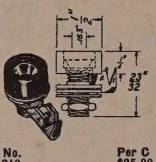


HEAD: MOLDED BAKELITE. Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR.
BODY: Brass, nickel plated.
TAB: Brass, cadmium plated.
DESCR.: Supplied with hex nut & fibre washer. Mounts in 5/16" hole in panels up to ⅝" thick. Solder direct to tab. Accepts standard banana plugs.

Std. Pkg. 100

No.	Per C
256	$25.00

INSULATED BANANA JACK

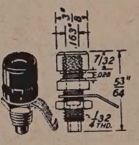


HEAD: MOLDED BAKELITE. Red, Black, Yellow, Green, Blue. Specify Color.
BODY: Brass, nickel plated.
DESCR.: Supplied with hex nut, fibre washer, lockwasher and brass tinned lug. Mounts in 5/16" hole in panels up to ⅜" thick. Jack body recessed for snug contact. Accepts standard banana plugs.

Std. Pkg. 100

No.	Per C
219	$25.00

INSULATED BANANA JACK

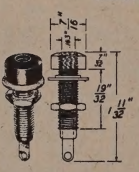


HEAD: MOLDED NYLON with molded nylon washer. Red, Black, Yellow, Green, Blue. SPECIFY COLOR.
BODY: Brass, nickel plated.
DESCR.: Extruded portion of head and washer provides excellent insulation from panel. Supplied with hex nut, brass tinned lug. Mounts in 5/16" hole in panels up to ¼" thick. Accepts standard banana plugs. **Std. Pkg. 100**

No.	Per C
221	$30.00

INSULATED JACK

Combination Type

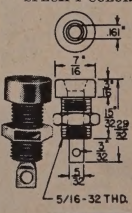


HEAD: MOLDED BAKELITE. Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR.
BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
DESCR.: Supplied with hex nut and fibre washer. Accepts standard phone tip plugs or standard banana plugs. **Std. Pkg. 100**

No.	Per C
206	$27.00

NYLON BANANA JACK

BODY: Molded of tough low-loss nylon. SPECIFY COLOR.



CONTACT: Brass, Cadmium Plated.
DESCR.: Mounts in 5/16" hole in panels up to 5/16" thick. Accepts standard banana plugs. Wide temperature and humidity range. **Std. Pkg. 50**

No.	Per C
1508	$20.00

Same as above, except "Double "D" " body mounts in round or punched hole to fit.

Std. Pkg. 50

No.	Per C
1509	$20.00

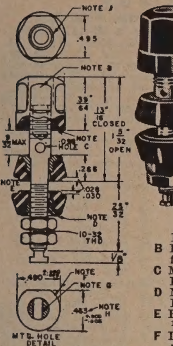
COLOR CODE SUFFIX

Add to Catalog Number as required.

—101 White
—102 Red
—103 Black
—104 Green
—105 Blue
—106 Orange
—107 Yellow
—108 Brown
—112 Purple
—113 Grey

HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

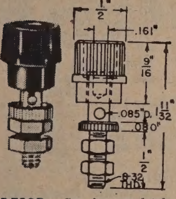

NOTE A
.495
NOTE B
39/64"
13/16" CLOSED
1 5/32" OPEN
3/32 MAX
.098 HOLE
NOTE C
.266
NOTE E
.028
.030
25/32"
NOTE D
10-32 THD
1/8"
.490" ±.010
NOTE F
NOTE G
.463
NOTE H
MTG. HOLE DETAIL

MULTI-PURPOSE BINDING POST

- **A** Banana Plug Receptacle, .161 I.D.
- **B** Head non-removable from Stud.
- **C** Molded-in Brass Bushing in Head.
- **D** Molded-in Brass Bushing in Washers.
- **E** For Panels 1/16″ to ¼″ thick.
- **F** Drill ½″ hole for mounting washers.
- **G** Wire Hole is at right angle to Flat or insulated Washers.
- **H** Production Punch for keyed Slot Slot for mounting Washers. (Sample Washer Sent on Request.)

RATING: 2000 V.A.C. RMS test.
CURRENT: 30 amps safe current carrying capacity.
ACCEPTS: Phone tip plug, spade lug, banana plug, alligator clip or wire strand.
DESCR.: Molded nylon head and washer completely insulates post from panel. Mounts in ½″ or keyed hole as indicated. Wrap around type—direct solder connection to stud. Metal parts brass, bright gold plated.
COLORS: Red, Black, Yellow, Green, Blue, White. Specify color. **Std. Pkg. 100**

No.	Per C
257	$60.00


1/2"
.161"
9/16"
.085" D.
1 11/32"
.080"
1/2"
8-32 THD.

BINDING POSTS

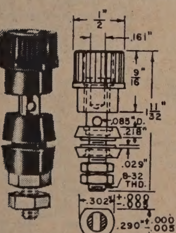
Five-Way Grounding Type

HEAD: CAPTIVE: Molded plastic. Red or Black. SPECIFY COLOR.
BODY: Brass, nickel plated.
ACCEPTS Phone tip plug, spade lug, banana plug, alligator clip or wire strand.
DESCR.: Can be completely insulated from panel by using our 2155 and 2163 fibre washers supplied with 2 hex nuts. **Std. Pkg. 100**

No.	Description	Per C
220	8-32 Threaded Stud	$30.00
230	6-32 Threaded Stud	30.00
391	Rivet Type	25.00

Same as above with brass nickel plated insert in head.

No.	Description	Per C
280	8-32 Threaded Stud	40.00
264	6-32 Threaded Stud	40.00
394	Rivet Type	25.00


1/2"
.161"
9/16"
1 11/32"
.085" D.
.218"
.029"
8-32 THD.
.302" +.000 -.005
.290" +.000 -.005

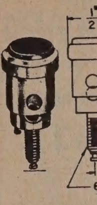
ALL-INSULATED TYPE

HEAD: CAPTIVE: Molded plastic. Red or Black. SPECIFY COLOR.
BODY: Brass, nickel plated.
WASHERS: Molded plastic with brass inserts.
ACCEPTS: Phone tip plug, spade lug, banana plug alligator clip or wire strand.
DESCR.: Mounts in 5/16″ hole in panel with milled slot for locking, supplied with two hex nuts. **Std. Pkg. 100**

No.	Description	Per C
260	8-32 Threaded Stud	$45.00
259	6-32 Threaded Stud	45.00

Same as above with brass nickel plated insert in head.

No.	Description	Per C
290	8-32 Threaded Stud	55.00
231	6-32 Threaded Stud	55.00


1/2"
.136 DIA.
3/4
B
A
.064" PIN
.125"
6-32 THD.

SPRING LOADED BINDING POSTS

HEAD: Captive, Brass nickel plated.
CAP: Molded black bakelite.
BODY: Brass, nickel plated.
PIN: Nickel Silver.
ACCEPTS: Standard phone tip or wire in side hole and locks them in place on release of pressure on cap.
DESCR.: Side dowel pin locates and prevents post from turning when mounted in panel. **Std. Pkg. 50**

WITH DOWEL PIN				LESS DOWEL PIN	
No.	A	B	Per C	No.	Per C
2701	¼″	⅛″	60.00	2801	50.00
2702	⅜″	⅛″	65.00	2802	55.00
2703	½″	¼″	70.00	2803	60.00
2704	¾″	¼″	75.00	2804	65.00
2705	1″	⅜″	80.00	2805	70.00
2706	1¼″	⅜″	85.00	2806	75.00
2707	1½″	½″	90.00	2807	80.00
2708	2″	¾″	95.00	2808	85.00

SPECIAL NOTE: Bakelite cap with engraved letters available on special order only.

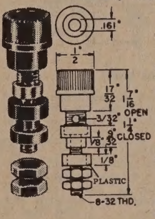
Same as above less threaded stud. Supplied with 6-32 internal mounting thread.

No.	Description	Per C
2709	With ⅛″ lg. Dowel Pin	55.00
2809	Without Dowel Pin	45.00

BINDING POST

Five-Way With Molded Mounting Washers

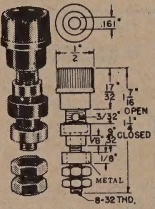
All Insulated Type


.161"
1/2"
17/32"
1 7/16" OPEN
3/32"
1 1/4" CLOSED
9/32"
1/8
1/8"
PLASTIC
8-32 THD.

HEAD: Captive—Molded plastic—Red or Black. SPECIFY COLOR.
BODY: Brass, nickel plated.
WASHERS: Molded plastic, BLACK ONLY.
ACCEPTS: Phone tip plug, spade lug, banana plug, alligator clip or wire strand.
DESCR.: Mounts in ¼″ hole in panel. Supplied with one hex nut. **Std. Pkg. 100**

No.	Per C
386	$40.00

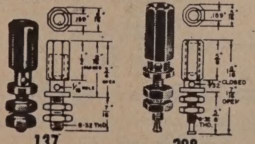
Grounding Type


.161"
1/2"
17/32"
1 7/16" OPEN
3/32"
1 1/4" CLOSED
9/32"
1/8
1/8"
METAL
8-32 THD.

HEAD: Captive—Molded plastic—Red or Black. SPECIFY COLOR.
BODY: Brass, nickel plated.
WASHERS: Mounting Washer — Molded plastic. BLACK ONLY. Back-up Washer — Brass, nickel plated.
DESCR.: Mounts in ¼″ hole in panel. Grounded to panel by back-up washer. Supplied with one hex nut. **Std. Pkg. 100**

No.	Per C
387	$40.00

BINDING POST METAL 5-WAY

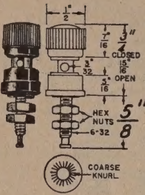

.189"
1/8" HOLE
8-32 THD
137
.189"
1/32 CLOSED
OPEN
THD.
208

HEAD: CAPTIVE: Hex brass nickel plated.
BODY: Brass, nickel plated.
ACCEPTS: Phone tip, spade lug, banana plug, alligator clip or wire strand.
DESCR.: Can be completely insulated from panel by using our 2155 and 2163 fibre washers. Supplied with two hex nuts. **Std. Pkg. 100**

No.	Description	Per C
137	Standard	$35.00
208	Wrap-around	36.00

MOLDED NYLON BINDING POSTS

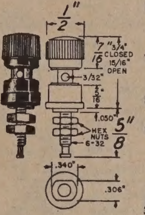
Grounding Type


1/2"
7/16
3/4"
CLOSED
3/32
15/16" OPEN
5/16
HEX NUTS
6-32
5/8"
COARSE KNURL

HEAD: CAPTIVE: Molded nylon, Red or Black with brass nickel plated insert. SPECIFY COLOR.
WASHER: Molded nylon with brass nickel plated insert.
BODY: Brass, nickel plated.
DESCR.: Supplied with 2 hex nuts. Grounds to panel but supplied with nylon washer for uniformity of height with No. 378 when used on same panel. Can be insulated from panel by using our No. 2150 shoulder washer. **Std. Pkg. 100**

No.	Per C
377	$44.00

ALL INSULATED


1/2"
7/16"
3/4" CLOSED
15/16" OPEN
3/32"
5/16
.050"
HEX NUTS
6-32
5/8"
.340"
.306"

HEAD: CAPTIVE: Molded nylon, Red or Black with brass nickel plated insert. SPECIFY COLOR.

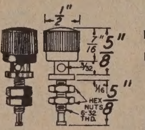
WASHER: Molded nylon with brass nickel plated insert.

BODY: Brass, nickel plated.

DESCR.: Supplied with two hex nuts. Boss washer insulates post from chassis when used with bakelite washer supplied. **Std. Pkg. 100**

No.	Per C
378	$44.00

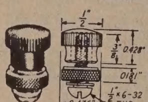
GROUNDING TYPE


1/2"
7/16"
5/8"
3/32
1/16
5/8"
HEX NUTS
6-32 THD.

HEAD: CAPTIVE: Molded nylon Red or Black with brass nickel plated insert. SPECIFY COLOR.
BODY: Brass, nickel plated.
DESCR.: Supplied with two hex nuts. Can be insulated from panel by using our No. 2150 shoulder washer and 2162 flat washer. **Std. Pkg. 100**

No.	Per C
379	$35.00

BINDING POST

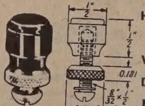

1/2"
3/8"
0.428"
0.181"
1/2 × 6-32 THD.
0.475"

265

HEAD: MOLDED bakelite with molded-in brass threaded insert, Red or Black. Specify Color.
WASHER: Brass, nickel plated.
DESCR.: Supplied complete with screw and lock-washer. **Std. Pkg. 100**

No.	Per C
265	$26.00

BINDING POST

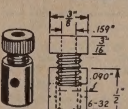

1/2"
1/2"
0.181
8/32 × 1/2 THD.
0.475"

266

HEAD: MOLDED bakelite with molded-in brass threaded insert, Red or Black. Specify Color.
WASHER: Brass, nickel plated.
DESCR.: Supplied complete washer. **Std. Pkg. 100**

No.	Per C
266	$30.00

METAL BINDING POST


3/8"
.159"
3/16
.090"
1/2"
6-32 THD.

136

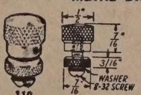
HEAD: BRASS nickel plated.

BODY: Brass nickel plated.

DESCR.: Accepts standard phone tips or banana plugs. **Std. Pkg. 50**

No.	Per C
136	$20.00

METAL BINDING POST


1/2"
7/16
3/16"
WASHER
8-32 SCREW
7/16

110

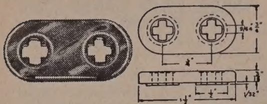
HEAD: BRASS nickel plated.

BODY: Brass nickel plated.
DESCR.: Supplied complete with screw and lock-washer. **Std. Pkg. 25**

No.	Per C
110	$25.00

HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"



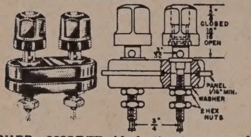
BLACK STYRENE INSULATOR

Mounts in two ½" holes on ¾" mounting centers in panels up to ¼" thick. Insulator can be supplied in colors on special order. **Std. Pkg. 100**

No.	Per C
207	$10.00

DUAL ASSEMBLY

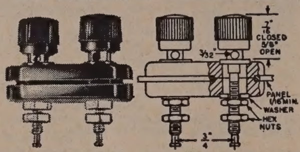
With Insulated Heads



WASHER: MOLDED black styrene, cross slotted (+) to accept standard phone tips in post either forward or sideways. Supplied in Colors on Special Order.
BODY: Brass, nickel plated.
HEAD: Captive: Molded bakelite with molded in brass nickel plated insert.
DESCR.: Mounts in two ½" holes on ¾" mounting centers in panels up to ¼" thick. Accommodates single or dual banana plugs. Supplied with 4 hex nuts, 2 flat washers. **Std. Pkg. 10**

No.	Description	Each
269BB	Two Black Heads	$1.10
269RR	Two Red Heads	1.10
269RB	One Red, One Black Head	1.10

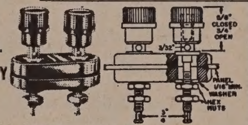
DUAL ASSEMBLY WITH NYLON HEADS



WASHER: MOLDED black styrene, cross slotted (+) to accept standard phone tips in post either forward, back or sideways. Supplied in colors on special order.
BODY: Brass, nickel plated.
HEAD: Captive: Molded nylon, with brass nickel plated insert.
DESCR.: Mounts in two ½" holes on ¾" mounting centers in panels up to ¼" thick. Supplied with 4 hex nuts, 2 flat washers. **Std. Pkg. 10**

No.	Description	Each
284BB	Two Black Heads	$1.00
284RR	Two Red Heads	1.00
284RB	One Red, One Black Head	1.00

DUAL ASSEMBLY



With Insulated Heads

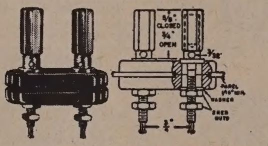
WASHER: MOLDED black styrene, cross slotted (+) to accept standard phone tips in post either forward or sideways. Supplied in colors on special order.
BODY: Brass, nickel plated.
HEAD: Captive: Molded plastic.
DESCR.: Mounts in two ½" holes on ¾" mounting centers in panels up to ¼" thick. Accommodates single or dual banana plugs. Supplied with 4 hex nuts, 2 flat washers. **Std. Pkg. 10**

No.	Description	Each
224BB	Two Black Heads	$ .90
224RR	Two Red Heads	.90
224RB	One Red, One Black Head	.90

Same as above with brass nickel plated insert in head

No.	Description	Each
263BB	Two Black Heads	1.10
263RR	Two Red Heads	1.10
263RB	One Red, One Black Head	1.10

DUAL ASSEMBLY



With Metal Heads

WASHER: MOLDED black stryene, cross slotted (+) to accept standard phone tips in post either forward or sideways. Supplied in Colors on special order.

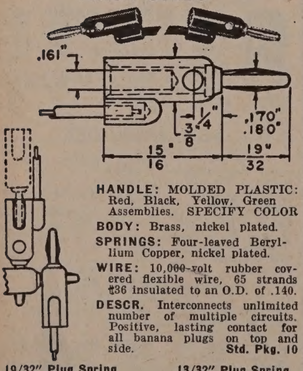
BODY: Brass, nickel plated.

HEAD: Captive: Hex brass, nickel plated.

DESCR.: Mounts in two ½" holes on ¾" mounting centers in panels up to ¼" thick. Accommodates single or dual banana plugs. Supplied with 4 hex nuts, 2 flat washers. **Std. Pkg. 10**

No. 209 **$1.00 Each**

MOLDED CROSS-PATCH PATCH CORDS



HANDLE: MOLDED PLASTIC: Red, Black, Yellow, Green Assemblies. SPECIFY COLOR

BODY: Brass, nickel plated.

SPRINGS: Four-leaved Beryllium Copper, nickel plated.

WIRE: 10,000-volt rubber covered flexible wire, 65 strands ♯36 insulated to an O.D. of .140.

DESCR. Interconnects unlimited number of multiple circuits. Positive, lasting contact for all banana plugs on top and side. **Std. Pkg. 10**

19/32" Plug Spring

No.	Wire	Each
1510-8	8"	$1.50
1510-12	12"	1.50
1510-24	24"	1.60
1510-36	36"	1.70

13/32" Plug Spring

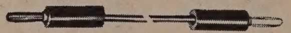
No.	Wire	Each
1515-8	8"	$1.50
1515-12	12"	1.50
1515-24	24"	1.60
1515-36	36"	1.70

"CROSS PATCH" PATCH CORD

HANDLES: PLASTIC Red or Black assemblies. SPECIFY COLOR.
BODY: Brass, nickel plated.
SPRING: Four-leaved, Beryllium Copper, brass nickel plated.
WIRE: 10,000 volt rubber covered flexible wire 65 strands ♯36 insulated to an O.D. of .140.
DESCR.: Provides a never ending banana plug receptacle, and can be used to interconnect an unlimited amount of multiple circuits. Accepts standard banana plug in side. **Std. Pkg. 10**

No.	Wire Length	Each
680	2 inches	$1.45
681	12 inches	1.55
682	24 inches	1.65
683	36 inches	1.75

PATCH CORD

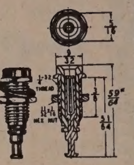


HANDLES: MOLDED BAKELITE. Red or Black. SPECIFY COLOR.
BODY: Brass, nickel plated.
SPRINGS: Four-leaved Beryllium copper, nickel plated.
WIRE: 10,000 volt rubber covered flexible wire 65 strands ♯36 insulated to an O.D. of .140.
DESCR.: Uses our standard No. 211 banana plug to interconnect circuits. Fits standard banana jack. **Std. Pkg. 10**

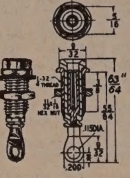
No.	Wire Length	Each
690	8 inches	$ .80
691	12 inches	.90
692	24 inches	1.00
693	36 inches	1.10

NYLON TIP JACK

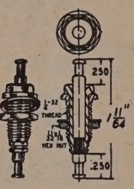
With Metal Shell
Made to MS-16108 Spec.



Wrap Around



Spade Terminal



Feed Thru

Molded Nylon Tip Jack. Metal shell eliminates possibility of stripping threads during assembly. Meets following requirements:

1. Salt Spray Test—Withstands 100 hours
2. Rated Voltage & Current —1000 volt peak at 5 amps. maximum
3. Test Voltage—2500 peak
4. Insulation Resistance—5000 megohms
5. Operating Conditions—
   - A. Continuous: 23 hours on, 1 hour off
   - B. Elevation: Up to 5,000 feet
   - C. Temperature: —55 to + 85C
   - D. Humidity: Up to 95%
6. Material Specifications—
   - A. Insulator: Nylon, Grade FM 10001
   - B. Shell & Nut: Brass Plated Per Spec 72-53
   - C. Lockwasher: Phosphor Bronze Nickel Plated per spec 72-53
   - D. Center Contact. Numbers 1501 and 1502 Heat Treated Bery. Copper Silver Plated per Spec 72-53. Number 1503 Brass, Tin Plated.
7. Non-Operating Conditions—
   - A. Elevation: Up to 50,000 feet
   - B. Temperature: Continuous exposure for 72 hours at +160 F and 240 hours at —80 F.
   - C. Humidity: Up to 100%

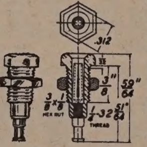
No.	Type	Per C
1501	Wrap Around	$53.00
1502	Spade Terminal	70.00
1503	Feed Through	65.00

(Std. Pkg. 25)

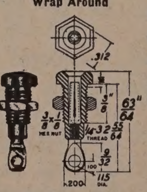
COLOR CODE SUFFIX
Add to Catalog Number as required.

—101 White
—102 Red
—103 Black
—104 Green
—105 Blue
—106 Orange
—107 Yellow
—108 Brown
—112 Purple
—113 Grey

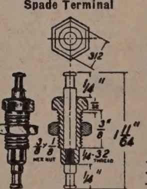
ALL NYLON TIP JACK



Wrap Around



Spade Terminal



Feed Thru

Completely Molded Nylon Jack. Fits all standard phone tip plugs. Contact recessed in head for safe contact. Hexagon head for grip in tightening. Mounts in ¼" hole in panels up to ¼" thick. Meets following requirements:

1. Salt Spray Test—Withstands 100 hours
2. Rated Voltage & Current—1000 volts peak at 5 amps. max.
3. Test Voltage—9000 volts DC peak
4. Insulation Resistance—5000 megohms
5. Operating Temperature —55 to + 150 C
6. Nominal Capacity—2.0 mmf
7. Material Specifications
   - A. Body: Nylon, Grade FM 10001
   - B. Center Contact: Numbers 1505 and 1506 Heat Treated Beryllium Copper Silver plated per Spec. 72-53. Number 1507 Brass, Tin Pl.
   - C. Hex Nut: Brass Nickel Plated.

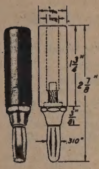
No.	Type	Per C
1505	Wrap Around	$45.00
1506	Spade Term.	50.00
1507	Feed Through	47.00

(Std. Pkg. 25)

COLOR CODE SUFFIX
Add to Catalog Number as required.

—101 White
—102 Red
—103 Black
—104 Green
—105 Blue
—106 Orange
—107 Yellow
—108 Brown
—112 Purple
—113 Grey

INS. GIANT BANANA PLUG



HANDLE: MACHINED PLASTIC. Red or Black. SPECIFY COLOR.

BODY: Hex brass, nickel plated.

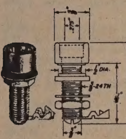
SPRING: Six-leaved, phosphor bronze, nickel plated.

DESCR.: Large deep internal well for soldering heavy duty wire.

Std. Pkg. 50

No.	Per C
285	$77.00

INS. GIANT BANANA JACK

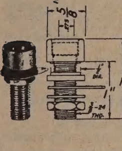


HEAD: MACHINED PLASTIC. Red, Black. SPECIFY COLOR.
BODY: Hex brass, nickel plated.
DESCR.: Supplied with hex nut, fibre washer, lockwasher, screw and tinned copper lug. Jack body recessed for snug contact. Mounts in ½" hole in panel up to ¾" thick.

Std. Pkg. 50

No.	Per C
286	$70.00

INS. GIANT BANANA JACK

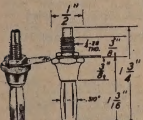


HEAD: MACHINED PLASTIC. Red, Black. SPECIFY COLOR.
BODY: Brass, nickel plated.
DESCR.: Supplied with hex nut, fibre washer, lockwasher, and brass tinned lug. Jack body recessed for snug contact. Mounts in ½" hole in panel up to ¾" thick.

Std. Pkg. 50

No.	Per C
287	$70.00

GIANT BANANA PLUG

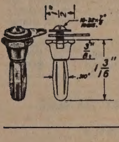


BODY: HEX BRASS, nickel plated.
SPRING: Six-leaved phosphor bronze, nickel plated.
DESCR.: Plug portion of #285 plug. Supplied with hex nut and brass tinned lug. Large deep internal well for soldering heavy duty wire.

Std. Pkg. 25

No.	Per C
185	$50.00

GIANT BANANA PLUG

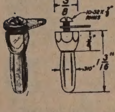


BODY: HEX BRASS, nickel plated.
SPRING: six-leaved phosphor bronze, nickel plated.
DESCR.: Supplied with screw and brass tinned lug, internal female permits use on all size panels.

Std. Pkg. 25

No.	Per C
186	$50.00

GIANT BANANA PLUG

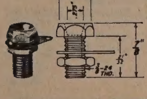


BODY: HEX BRASS, nickel plated.
SPRING: Six-leaved phosphor bronze, nickel plated.
DESCR.: Supplied with screw and brass tinned lug. Female permits use on all size panels. Internal screw.

Std. Pkg. 25

No.	Per C
188	$50.00

GIANT BANANA JACK



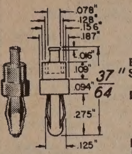
BODY: HEX BRASS, nickel plated.
DESCR.: Supplied with hex nut and brass tinned lug, mounts in ⅜" hole in panels up to ½" thick.

Std. Pkg. 25

No.	Per C
187	$50.00

SUB MINIATURE BANANA PLUG

Rivet Type



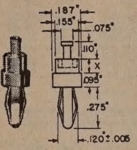
BODY: BRASS, silver plated.
SPRING: Four leaved beryllium copper, silver plated.
DESCR.: One piece beryllium copper spring insures positive and lasting contact.

Std. Pkg. 100

No.	Per C
191	$25.00

SUB MINIATURE BANANA PLUG

Swage Type

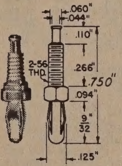


BODY: BRASS, silver plated.
SPRING: Four leaved beryllium copper, silver plated.
DESCR.: One piece beryllium copper spring insures positive and lasting contact.

Std. Pkg. 100

No.	"X"	Panel	Per C
2073	.105	1/16"	$25.00
2074	.135	3/32"	25.00
2075	.165	1/8"	25.00

SUB MINIATURE BANANA PLUG

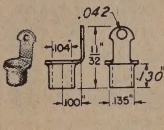


BODY: BRASS, silver plated. 5/32" Hex.
SPRING: Four leaved beryllium copper, silver plated.
DESCR.: One piece beryllium copper spring insures positive and lasting contact.

Std. Pkg. 100

No.	Per C
192	$25.00

SUB MINIATURE BANANA JACK

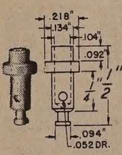


BODY: BRASS, silver plated.
DESCR.: This jack is rivetted directly to chassis or to printed circuit board for easy assembly.

Std. Pkg. 100

No.	Per C
194	$1.50

SUB MINIATURE BANANA JACK



BODY: BRASS, silver plated.

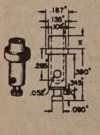
DESCR.: This jack is rivetted directly to chassis or to printed circuit board for easy assembly.

Std. Pkg. 100

No.	Per C
193	$15.00

SUB MINIATURE BANANA JACK

Panel Mount

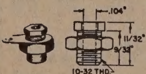


BODY: BRASS, silver plated.
RATING: 15 Amps.
DESCR.: These jacks are rivetted directly to chassis or bakelite board.

Std. Pkg. 100

No.	"X" Dim.	Panel	Per C
2076	.105	1/16"	$15.00
2077	.135	3/32"	15.00
2078	.165	1/8"	15.00

SUBMINIATURE BANANA JACK



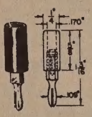
BODY: HEX BRASS, nickel plated.
RATING: 15 Amps.
DESCR.: Supplied with hex nut and tinned lug. Mounts in .196 (#10) hole in panels up to ⅛" thick.

Std. Pkg. 100

No.	Per C
195	$13.00

INSULATED BANANA PLUG

Sub Miniature



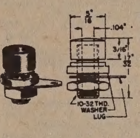
HANDLE: MACHINED plastic. Red or Black. SPECIFY COLOR.
PLUG: Brass, nickel plated.
RATING: 15 Amps. @ 1000 Volts A.C.
DESCR.: Cross-slotted for spring tension. Wire solders directly into plug. Fits standard midget banana jacks.

Std. Pkg. 100

No.	Per C
197	$25.00

INSULATED BANANA JACK

Sub Miniature



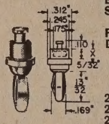
HEAD: MACHINED PLASTIC, Red or Black. SPECIFY COLOR.
BODY: Brass, nickel plated.
RATING: 15 Amps. @ 1000 Volts A. C.
DESCR.: Supplied with hex nut, fibre washer and tinned lug. Mounts in 5/16" hole in panels up to 3/32" thick. Accepts standard midget banana plugs.

St. Pkg. 100

No.	Per C
196	$18.00

RIVET TYPE BANANA PLUG

Wrap Around Type



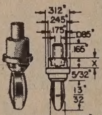
BODY: BRASS, nickel plated.
SPRING: Four leaved, beryllium copper, nickel plated.
RATING: 15 Amps.
DESCR.: Rivets to panel or bakelite board. Wire wraps around stud and is then soldered.

Std. Pkg. 100

No.	"X" Dim.	Panel	Per C
2082	.105	1/16"	$30.00
2083	.135	3/32"	30.00
2084	.165	1/8"	30.00

RIVET TYPE BANANA PLUG

Solder Well Type

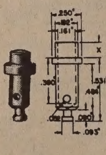


BODY: BRASS, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plated.
RATING: 15 Amps.
DESCR.: Rivets to panel or bakelite board. Wire solders to well in rear of plug..

Std. Pkg. 100

No.	"X" Dim.	Panel	Per C
2067	.105	1/16"	$30.00
2068	.135	3/32"	30.00
2069	.165	1/8"	30.00

PANEL MOUNT BANANA JACK

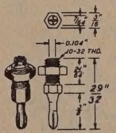


BODY: BRASS, nickel plated.
RATING: 15 Amps.
DESCR.: Accepts all standard banana jacks. These jacks are rivetted directly to chassis or bakelite board.

Std. Pkg. 100

No.	"X" Dim.	Panel	Per C
2079	.105	1/16"	$18.00
2080	.135	3/32"	18.00
2081	.165	1/8"	18.00

MIDGET BANANA PLUG



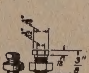
BODY: BRASS, nickel plated, cross-slotted.

DESCR.: Cross-slotted, supplied with hex nut. Fit our No. 112 midget jack.

Std. Pkg. 50

No.	Per C
111	$17.00

MIDGET BANANA JACK



BODY: BRASS, nickel plated.
DESCR.: Supplied with hex nut. Accepts our No. 111 midget plug.

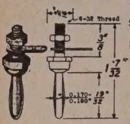
Std. Pkg. 50

No.	Per C
112	$13.00

HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

BANANA PLUG

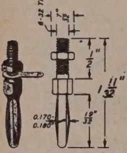


BODY: HEX BRASS, nickel plated.
SPRING: Four-leaved phosphor bronze, nickel plated.
DESCR.: Supplied with hex nut and phosphor bronze lug. Threaded stud for panel mounting. Fits standard banana jacks.

Std. Pkg. 100

No.	Per C
102	$25.00

BANANA PLUG

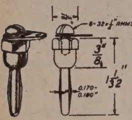


BODY: HEX BRASS, nickel plated.
SPRING: Four-leaved phosphor bronze, nickel plated.
DESCR.: Supplied with hex nut and phosphor bronze lug. Threaded stud for panel mounting. Fits standard banana jacks.

Std. Pkg. 100

No.	Per C
103	$25.00

BANANA PLUG



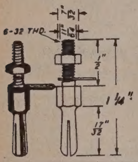
BODY: HEX BRASS, nickel plated.
SPRING: Four-leaved phosphor bronze or beryllium copper, nickel plated.
DESCR.: Supplied with screw and phosphor bronze tinned lug. Internal female permits use on all size panels. Fits standard banana jacks.

Std. Pkg. 100

No.	Spring Material	Per C
100	Phosphor Bronze	$25.00
190	Beryllium Copper	40.00

BANANA PLUG

Split Type



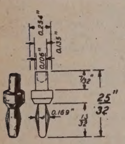
BODY: HEX BRASS, nickel plated, cross-slotted.
DESCR.: Fits all standard banana jacks. Supplied with hex nut and phosphor bronze lug, threaded stud for panel mounting. Fits standard banana jacks.

Std. Pkg. 100

No.	Per C
104	$22.00

MIDGET BANANA PLUG

Rivet Type

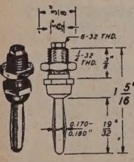


BODY: BRASS, silver plated.
SPRING: Four-leaved phosphor bronze, silver plated.
DESCR.: Can be furnished in varying types to meet Jan specs. Fits all standard banana jacks.

Std. Pkg. 100

No.	Per C
121	$27.00

BANANA PLUG

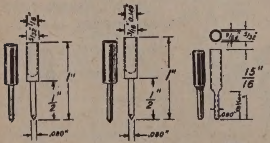


BODY: HEX BRASS, nickel plated.
SPRING: Phosphor bronze or beryllium copper, nickel plated.
DESCR.: Supplied with hex nut. Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection.

Std. Pkg. 50

No.	Spring Material	Per C
145	Phosphor Bronze	$27.00
135	Beryllium Copper	45.00

SOLDER TYPE PHONE TIPS

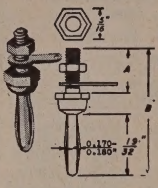


108 123 158

Brass, Nickel Plated
Std. Pkg. 100

No.	Type	Per M
108	Standard	$35.00
123	Large I.D.	44.00
158	Drawn	25.00

BANANA PLUG



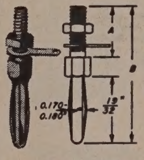
BODY: HEX BRASS, nickel or silver plated.
SPRING: Phosphor bronze or beryllium copper. Nickel or silver plated.
DESCR.: Supplied with hex nut and tinned phosphor bronze lug threaded stud for panel mounting. Fits standard banana jacks.

Std. Pkg. 50

PHOS. BR. SPRING Nickel Plated Overall			BERYL. COP. SPRING Nickel Plated Overall		
No.	Per C	A	B	No.	Per C
431	$25.00	6-32x⅜"	1- 7/32"	443	$30.00
432	25.00	6-32x½"	1-11/32"	444	30.00
433	25.00	6-32x¾"	1-19/32"	445	30.00
434	25.00	8-32x"⅜	1- 7/32"	446	30.00
435	25.00	8-32x½"	1-11/32"	447	30.00
436	25.00	8-32x¾"	1-19/32"	448	30.00

PHOS. BR. SPRING Silver Plated Overall			BERYL. COP. SPRING Silver Plated Overall		
		A	B		
437	$30.00	6-32x⅜"	1- 7/32"	449	$35.00
438	30.00	6-32x½"	1-11/32"	450	35.00
439	30.00	6-32x¾"	1-19/32"	451	35.00
440	30.00	8-32x⅜"	1- 7/32"	452	35.00
441	30.00	8-32x½"	1-11/32"	453	35.00
442	30.00	8-32x¾"	1-19/32"	454	35.00

BANANA PLUG



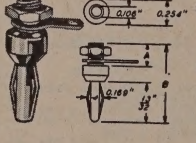
BODY: HEX BRASS, nickel or silver plated.
SPRING: Phosphor bronze or beryllium copper. Nickel or silver plated.
DESCR.: Supplied with hex nut and tinned phosphor bronze lug threaded stud for panel mounting. Fits standard banana jacks.

Std. Pkg. 50

PHOS. BR. SPRING Nickel Plated Overall			BERYL. COP. SPRING Nickel Plated Overall		
No.	Per C.	A	B	No.	Per C
401	$25.00	6-32x⅜"	1- 7/32"	414	$30.00
403	25.00	6-32x½"	1-11/32"	415	30.00
404	25.00	6-32x¾"	1-19/32"	416	30.00
405	25.00	8-32x⅜"	1- 7/32"	417	30.00
406	25.00	8-32x½"	1-11/32"	418	30.00
407	25.00	8-32x¾"	1-19/32"	419	30.00

PHOS. BR. SPRING Silver Plated Overall			BERYL. COP. SPRING Silver Plated Overall		
		A	B		
408	$30.00	6-32x⅜"	1- 7/32"	420	$35.00
409	30.00	6-32x½"	1-11/32"	421	35.00
410	30.00	6-32x¾"	1-19/32"	422	35.00
411	30.00	8-32x⅜"	1- 7/32"	423	35.00
412	30.00	8-32x½"	1-11/32"	424	35.00
413	30.00	8-32x¾"	1-19/32"	425	35.00

MIDGET BANANA PLUG



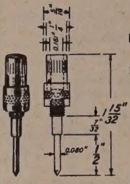
BODY: Brass, nickel or silver plated.
SPRING: Phosphor bronze or beryllium copper. Nickel or silver plated.
DESCR.: Supplied with hex nut and tinned phosphor bronze lug threaded stud for panel mounting. Fits standard banana jacks.

Std. Pkg. 50

PHOS. BR. SPRING Nickel Plated Overall			BERYL. COP. SPRING Nickel Plated Overall		
No.	Per C	A	B	No.	Per C
460	$25.00	4-40x⅜"	15/16"	468	$30.00
461	25.00	4-40x½"	1- 1/16"	469	30.00
462	25.00	6-32x⅜"	15/16"	470	30.00
463	25.00	6-32x½"	1- 1/16"	471	30.00

PHOS. BR. SPRING Silver Plated Overall			BERYL COP. SPRING Silver Plated Overall		
		A			
464	30.00	4-40x⅜"	15/16"	472	$35.00
465	30.00	4-40x½"	1- 1/16"	473	35.00
466	30.00	6-32x⅜"	15/16"	474	35.00
467	30.00	6-32x½"	1-1/16"	475	35.00

SOLDERLESS TIP PLUG



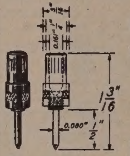
BODY: BRASS nickel plated.

DESCR.: Solderless; wire fits through body of tip then wrapped around screw portion and tightened with knurled collar. Force fit type. Fits standard phone tip jacks.

Std. Pkg. 100

No.	Type	Per C
105	Senior	$17.00

SOLDERLESS TIP PLUG



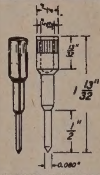
BODY: BRASS nickel plated.
DESCR.: Solderless; wire fits through body of tip then wrapped around screw portion and tightened with knurled collar. Force fit type. Fits standard phone tip jacks.

Std. Pkg. 100

No.	Type	Per C
106	Junior	$16.00

HEAVY DUTY TIP PLUG

Force Fit



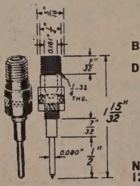
BODY: BRASS nickel plated.
DESCR.: Extra large well for soldering. Rear of plug accepts standard banana plugs. Fits all standard phone tip jacks.

Std. Pkg. 25

No.	Type	Per C
156	Force Fit	$17.00

SOLDERLESS TIP PLUG

Threaded Sr.



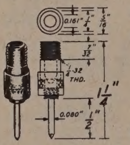
BODY: BRASS nickel plated.
DESCR.: Solderless; wire fits through body of tip, then wrapped around screw portion and tightened with knurled collar. Threaded for easy assembly in plastic handle. Fits standard phone tip jacks.

Std. Pkg. 100

No.	Type	Per C
124	Senior	$20.00

SOLDERLESS TIP PLUG

Threaded Jr.



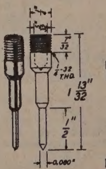
BODY: BRASS nickel plated.
DESCR.: Solderless; wire fits through body of tip, then wrapped around screw portion and tightened with knurled collar. Threaded for easy assembly in plastic handle. Fits standard phone tip jacks.

Std. Pkg. 50

No.	Type	Per C
127	Junior	$19.00

HEAVY DUTY TIP PLUG

Threaded

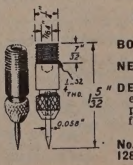


BODY: BRASS nickel plated.
DESCR.: Extra large well for soldering. Rear of plug accepts standard banana plugs. Fits standard phone tip jacks. Threaded for easy assembly in plastic handle.

Std. Pkg. 50

No.	Type	Per C
125	Threaded	$17.00

NEEDLE TIP AND CHUCK



BODY: BRASS nickel plated.

NEEDLE: Steel, nickel plated.

DESCR.: Removable chuck for easy replacement. Needle pierces plating or corrosion for positive reading.

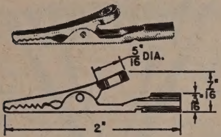
Std. Pkg. 50

No.	Per C
128	$22.00

Use Index Page 1 for Quick, Easy Location of ALL Products

ALL PRICES SUBJECT TO TRADE DISCOUNT

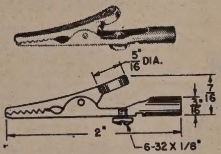
ALLIGATOR CLIPS
Solder Type



DESCR.: ⅜" jaw opening. Jaws match accurately and grip securely. Accepts standard banana plugs in rear. **Std. Pkg. 100**

		Sug. Resale	
No.	Type	Ea.	10
300	Steel, Cd. Pl.	$.07	.05
380	Solid Copper	.10	.075
332	Brass N.P.	.15	.104

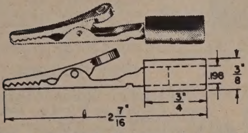
Screw Type



DESCR.: ⅜" jaw opening. Supplied with screw for solderless connection when required. Jaws match accurately and grip securely. Accepts standard banana plugs in rear. **Std. Pkg. 100**

		Sug. Resale	
No.	Type	Ea.	10
350	Steel, Cad. Pl.	$.08	.058
360	Solid Copper	.12	.084
339	Brass N.P.	.18	.13

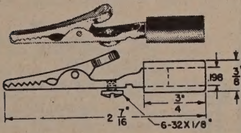
INSULATED ALLIGATOR CLIPS
Solder Type



HANDLE: MOLDED PLASTIC. Red or Black. SPECIFY COLOR.
DESCR.: ⅜" Jaw opening. Jaws match accurately and grip securely. Accepts standard banana plugs in rear. **Std. Pkg. 100**

		Sug. Resale	
No.	Type	Ea.	10
301	Steel, Cad. Pl.	$.13	.085
381	Solid Copper	.14	.105
354	Brass N.P.	.20	.15

Screw Type



HANDLE: MOLDED PLASTIC. Red or Black. SPECIFY COLOR.
DESCR.: ⅜" jaw opening. Supplied with screw for solderless connection when required. Jaws match accurately and grip securely. Accepts standard banana plugs in rear. **Std. Pkg. 100**

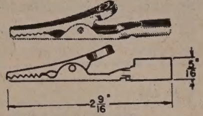
		Sug. Resale	
No.	Type	Ea.	10
351	Steel, Cad. Pl.	$.14	.095
361	Solid Copper	.16	.11
362	Brass N.P.	.25	.19

ALLIGATOR BOOT CLIP

MATERIAL: MOLDED VINYL PLASTIC. Red or Black. SPECIFY COLOR.
DESCR.: Fully insulates clip while allowing maximum jaw opening. **Std. Pkg. 100**

	Sug. Resale	
No.	Ea.	10
331	$.07	.048

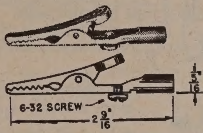
JUMBO ALLIGATOR CLIP
SOLDER CONNECTION



DESCR.: ⅝" jaw opening. Jaws match accurately. For heavy terminal use. **Std. Pkg. 100**

No.	Type	Per C
392	Steel, Cad. Pl.	$25.00
396	Solid Copper	30.00

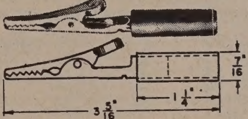
SCREW CONNECTION



DESCR.: ⅝" jaw opening. Jaws match accurately. Supplied with screw for solderless connection. For heavy terminal use. **Std. Pkg. 100**

No.	Type	Per C
368	Steel, Cad. Pl.	$30.00
356	Solid Copper	35.00

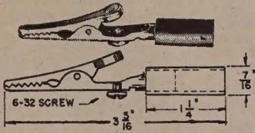
JUMBO ALLIGATOR CLIP INSULATED
SOLDER CONNECTION



HANDLE: Plastic, red or black. SPECIFY COLOR.
DESCR.: ⅝" jaw opening. Jaws match accurately. For heavy terminal use. **Std. Pkg. 100**

No.	Type	Per C
393	Steel, Cal. Pl.	$35.00
397	Colid Copper	40.00

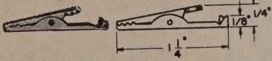
SCREW CONNECTION



HANDLE: Plastic, red or black. SPECIFY COLOR.
DESCR.: ⅝" jaw opening. Jaws match accurately. Supplied with screw for solderless connection. For heavy terminal use. **Std. Pkg. 100**

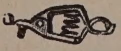
No.	Type	Per C
369	Steel, Cad. Pl.	$40.00
357	Solid Copper	45.00

MIDGET ALLIGATOR CLIP



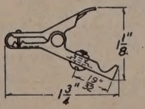
DESCR.: 3/16" jaw opening, jaws match accurately and grip securely. Solder connection and ears for crimping. **Std. Pkg. 100**

		Sug. Resale	
No.	Type	Ea.	10
338	Steel, Cad. Pl.	$.07	.044



BATTERY TEST CLIP

					Sug. Resl.	
No.	Spread	Lgth.	Cap.	Spring	Ea.	10
365	½"	1½"	5 amp	7 lbs.	$.07	.05
366	9/16"	2"	10 amp	10 lbs.	.10	.07

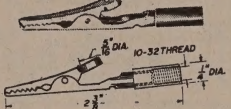


TL137 TEST CLIP

Signal Corps Approved
DESCR.: STEEL, nickel plated, made in accordance with government specs. ¾" jaw opening. **Std. Pkg. 25**

No.	Each
315	$.70

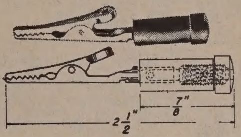
ALLIGATOR CLIP ADAPTER



BUSHING: Brass, Nickel Plated.
CLIP: Steel, Cadmium Plated.
DESCR.: Adapts standard solderless tips to alligator clip. This novel quick-adapter is a must for all types of bench work. **Std. Pkg. 50**

No.	Per C
310	$25.00

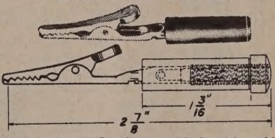
ALLIGATOR CLIP ADAPTER



PHONE TIP TO ALLIGATOR CLIP
HANDLE: PLASTIC. Red or Black with molded cap. SPECIFY COLOR.
CLIP: Steel cadmium plated or solid copper.
BODY: Brass.
SPRING: Phosphor bronze.
DESCR.: Jack in rear permits adapting standard phone tip plugs to alligator clips. **Std. Pkg. 25**

No.	Description	Per C
304	Steel Clip	$55.00
334	Copper Clip	60.00

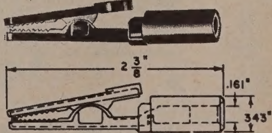
PHONE TIP OR BANANA PLUG TO ALLIGATOR CLIP ADAPTER



HANDLE: PLASTIC. Red or Black with molded cap. SPECIFY COLOR.
CLIP: Steel, cadmium plated or solid copper.
BODY: Brass.
SPRING: Phosphor bronze.
DESCR.: Combination jack in rear, permits the adapting standard phone tip plug or banana plugs to alligator clip. **Std. Pkg. 25**

No.	Description	Per C
305	Steel Clip	$65.00
335	Copper Clip	70.00

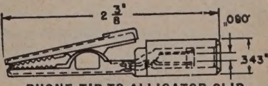
ALL INSULATED CLIPS



INSULA.: MOLDED NYLON. Red or black. SPECIFY COLOR.
CLIP: Steel cadmium plated.
DESCR.: All metal parts fully insulated with molded plastic. Insures against shock or grounding. Solder type connection. **Std. Pkg. 25**

No.	Each
337	$.40

ALL INSULATED ADAPTER



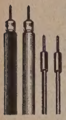
PHONE TIP TO ALLIGATOR CLIP
INSULA.: MOLDED PLASTIC. Red or Black. SPECIFY COLOR.
CLIP: Steel, cadmium plated.
BODY: Brass.
CONTACT: Phosphor bronze.
DESCR.: All metal parts fully insulated with molded plastic. Insures against shock or grounding. Jack in rear permits adapting standard phone tip plugs to alligator clips. **Std. Pkg. 25**

No.	Each
336	$.60

HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

SOLDERLESS TIP TEST LEAD

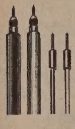


HANDLE: PROD: MOLDED TENITE 4" long x ⅜" O.D. Red and Black (No. 302).
TIP: Solderless: Brass nickel plated.

Std. Pkg. 6

No.	Meter End	Per Pr.
600	Phone Tips (No. 158)	$1.45
601	Spade Lugs (No. 129)	1.45
602	Alligator Clips (No.300)	1.55

PHONO NEEDLE TEST LEAD

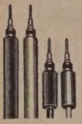


HANDLE: PROD: MOLDED TENITE 4" long x ⅜" O.D. Red and Black (No. 317).
BODY: Brass, nickel plated.
NEEDLE: Steel, nickel plated.

Std. Pkg. 6

No.	Meter End	Per Pr.
613	Phone Tips (No. 158)	$1.45
614	Spade Lugs (No. 129)	1.45
615	Alligator Clips (No. 300)	1.55

ALL SOLDERLESS TEST LEAD

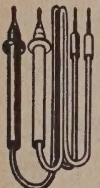


HANDLE: PROD: MOLDED TENITE 4" long x ⅜" O.D. Red and Black (No. 302).
PLUG: Molded Bakelite 1" long x ⅜" O.D. Red and Black (No. 200).
TIPS: Solderless: Brass, nickel plated.

Std. Pkg. 6

No.	Per Pr.
603	$2.10

HIGH TENSION TEST LEAD



HANDLE: PROD: FIBRE 5" long x ½" O.D. Red and Black (No. 630).

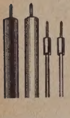
PLUG: Fibre 1" long x ½" O.D. Red and Black.

TIP: Brass, nickel plated.

Std. Pkg. 6

No.	Meter End	Per Pr.
620	Ins. Phone Tips	$3.30
621	Ins. Spade Lugs	3.30
622	Ins. Alligator Clips	4.00

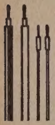
SHORT TIP TEST LEAD



HANDLES: PROD: MOLDED TENITE 4" long x ⅜" O.D. Red and Black (No. 383).
PLUG: Molded Bakelite 1" long x ⅜" O.D. Red and Black (No. 203).
TIPS: Brass, nickel plated.

No.	Per Pr.
624	$1.75

SLIM HANDLE TEST LEAD

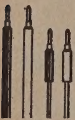


HANDLE: MACHINED TENITE 5" long x 5/16 O.D. Red and Black.
TIPS: Prod: Brass, nickel plated.
METER END: Drawn brass, nickel plated (No. 158).

Std. Pkg. 6

No.	Per Pr.
670	$1.10

SUB MINIATURE TEST LEAD

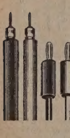


HANDLES: PROD: BONE FIBRE 4" long x ¼" O.D. Red and Black (No. 322).
PLUG: Bone fibre 1" long x ¼" O.D. Red and Black. (No. 270).
TIPS: Brass, nickel plated.

Std. Pkg. 6

No.	Per Pr.
678	$2.10

BANANA PLUG TEST LEAD

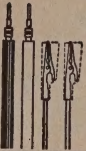


HANDLES: PROD: MOLDED TENITE 4" long x ⅜" O.D. Red and Black. (No. 302).
PLUG: Molded bakelite 1" long x ⅜" O.D. Red and Black. (No. 211).
TIP: Solderless: Brass, nickel plated.
BODY: Brass, nickel plated.
SPRING: Four leaved phosphor bronze, nickel plated.

Std. Pkg. 6

No.	Per Pr.
623	$2.50

ALLIGATOR CLIP TEST LEAD

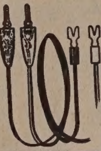


HANDLE: PROD: MOLDED TENITE 4" long x ⅜" O.D. Red and Black (No. 302).
TIPS: Solderless: Brass, nickel plated.
CLIPS: Steel, cadmium plated (No. 300).
BOOT: Vinyl Plastic Red and Black (No. 331).

Std. Pkg. 6

No.	Per Pr.
672	$2.10

CROCODILE CLIP TEST LEAD

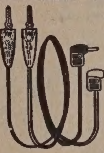


CLIP: STEEL, cadmium plated.
BOOT: Vinyl plastic Red and Black.
HANDLE: Spade Lug: Molded tenite ¾" long x ⅜" O.D. Red and Black (No. 218).
LUG: Steel, Hot tinned (No. 129).

Std. Pkg. 6

No.	Per Pr.
671	$2.00

CROCODILE CLIP TEST LEAD

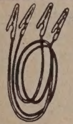


CLIP: STEEL, cadmium plated.
BOOT: Vinyl Plastic Red and Black.
ELBOW: Molded bakelite Red and Black (No. 235).
TIP: Brass, nickel plated.

Std. Pkg. 6

No.	Per Pr.
675	$1.90

ALLIGATOR CLIP TEST LEAD

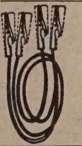


CLIPS: STEEL, cadmium plated.

Std. Pkg. 6

No.	Wire	Per Pr.
604	12 inches	$0.95
605	24 inches	1.05
606	36 inches	1.20
607	48 inches	1.35

INSULATED ALLIGATOR CLIP TEST LEADS

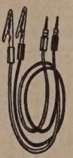


CLIPS: STEEL, cadmium plated.
BOOTS: Vinyl plastic, Red and Black (No. 331).

Std. Pkg. 6

No.	Wire	Per Pr.
629	12 inches	$1.35
657	24 inches	1.45
658	36 inches	1.60
659	48 inches	1.70

ALLIGATOR CLIP TEST LEAD

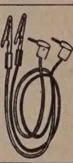


HANDLES: CLIP: MOLDED TENITE ¾" long x ⅜" O.D. Red and Black (No. 301).
PLUG: Molded bakelite 1" long x ⅜" O.D. Red and Black (No. 200).
CLIPS: Steel, cadmium plated (No. 301).
TIPS: Solderless: Brass, nickel plated.

Std. Pkg. 6

No.	Per Pr.
627	$1.65

ALLIGATOR CLIP TEST LEAD

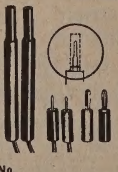


HANDLE: MOLDED TENITE ¾" long x ⅜" O.D. Red and Black (No. 301).
CLIPS: Steel, Cadmium plated (No. 301).
ELBOWS: Molded bakelite. Red and Black (No. 235).
TIPS: Brass, nickel plated.

Std. Pkg. 6

No.	Per Pr.
628	$2.00

SHIELDED TEST LEADS

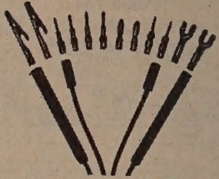


HANDLE: MACHINED TENITE 7/16" O.D.x4½" lg. Red and Black.
TIP: Prod tip brass nickel plated. Meter end see Type.
DESCR.: Plugs insert flush to insulated handle. Prods have retractable cover leaving no metal exposed. Eliminates possibility of shock or grounding. Supplied with either phone tip or Banana Plug meter ends. Other variations on special order.

Std. Pkg. 6

No.	Type	Per Pr.
616	Phone Tip End (No. 203)	$3.00
617	Banana Plug End (No. 211)	3.10

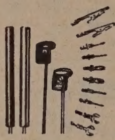
"UNIVERSAL" TEST LEAD
Completely Interchangeable



Fifty Leads in One! One lead can make any required test lead combination. All parts adapt into prod handle or tip handle. Complete as shown. With plastic kit.

No. 699 **$4.00 Ea.**

"UNIVERSAL" TEST LEAD
Miniature Accessories



Completely Interchangeable Fifty Leads in One. One lead can make any required test lead combination. All parts adapt into prod handle or meter tip. Supplied with miniature tips, clips, banana plugs and spade tips. Complete as shown. With plastic kit.

No. 679 **$4.00 Ea.**

TEST LEAD KIT

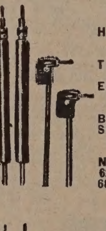
DESCR.: Each kit is supplied with one pair of test leads. One end test prods, other end ins. banana plugs.

FITTINGS: Two each: Phone tips, alligator clips., spade lugs.

Std. Pkg. 6

No.	Type	Each
610	Solderless Prods	$3.00
611	Needle Tip Prods	3.00

METER TEST LEADS
Solderless Prod

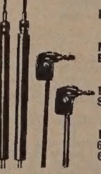


HANDLE: MOLDED TENITE 4" long x ⅜" O.D. Red and Black (No. 302).
TIP: Solderless: Brass, nickel plated.
ELBOW: Molded bakelite. Red and Black (No. 235, Phone Tip; No. 255, Banana Tip).
BODY: Brass, nickel plated.
SPRING: Four leaved, phosphor bronze, nickel plated.

Std. Pkg. 6

No.	Type	Per Pr.
625	Phone Tip Meter Tip	$2.25
685	Banana Meter Tip	2.50

Needle Prod

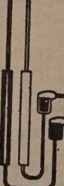


HANDLE: MOLDED TENITE 4" long x ⅜" O.D. Red and Black (No. 317).
NEEDLE: Steel, nickel plated.
ELBOW: Molded, bakelite, Red and Black (No. 235, Phone Tip; No. 255, Banana Tip).
BODY: Brass, nickel plated.
SPRING: Four leaved, phosphor bronze, nickel plated.

Std. Pkg. 6

No.	Type	Per Pr.
626	Phone Tip Meter Tip	$2.25
686	Banana Meter Tip	2.50

SLIM JIM TEST LEAD



HANDLE: MOLDED TENITE 4" long x ⅜" O.D. Red and Black.

PROBE: Steel, cadmium plated.

INSULATOR: Vinyl spaghetti tubing. Red and Black.

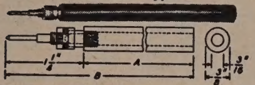
ELBOWS: Molded bakelite. Red and Black (No. 235).

TIPS: Brass, nickel plated.

Std. Pkg. 6

No.	Per Pr.
698	$1.90

SOLDERLESS TEST PROD
Threaded Type

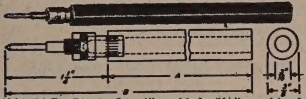


HANDLE: PLASTIC: 4" molded—5½" machined. Red or Black. SPECIFY COLOR.
BODY: Brass, nickel plated.
DESCR.: Solderless: Wire fits through handle and body of plug then wrapped around screw portion and tightened with knurled collar.

Std. Pkg. 25

No.	Handle (A)	Overall (B)	Each
302	4" (Molded)	5¼"	$0.50
303	5½" (Machined)	6¾"	.55

SOLDERLESS TEST PROD Force Fit Type

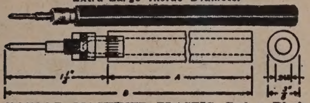


HANDLE: PLASTIC: 4" molded—5½" machined. Red or Black. SPECIFY COLOR.
BODY: Brass, nickel plated.
DESCR.: Solderless: Wire fits through handle and body of plug then wrapped around screw portion and tightened with knurled collar.

Std. Pkg. 25

No.	Handle (A)	Overall (B)	Each
382	4" (Molded)	5¼"	$0.40
383	5½" (Machined)	6¾"	.45

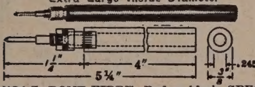
SOLDERLESS TEST PROD Force Fit Type
Extra Large Inside Diameter



HANDLE: MACHINED PLASTIC. Red or Black. SPECIFY COLOR.
BODY: Brass, nickel plated.
DESCR.: Solderless. Wire fits through handle and body of plug then wrapped around screw portion and tightened with knurled collar. Extra large I.D. for heavy duty wire. **Std. Pkg. 25**

No.	Handle (A)	Overall (B)	Each
352	4"	5¼"	$0.40
353	5½"	6¾"	.45

SOLDERLESS FIBRE TEST PROD
Extra Large Inside Diameter

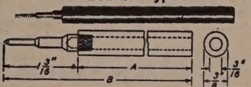


HANDLE: BONE FIBRE. Red or black. SPECIFY COLOR.
BODY: Brass, nickel plated.
DESCR.: Solderless. Wire fits through handle and body of plug then wrapped around screw portion and tightened with knurled collar. Large I.D. permits use of heavy duty wire.

Std. Pkg. 25

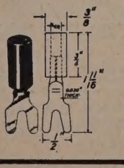
No.	Each
323	$0.50

HEAVY DUTY TEST PROD
Threaded Type



HANDLE: PLASTIC: 4" molded—5½" machined. Red or Black. SPECIFY COLOR.
BODY: Brass, nickel plated.
DESCR.: Large diameter well enables soldering of heavy duty wire directly into plug. Fits standard phone tip jacks. **Std. Pkg. 25**

No.	Handle (A)	Overall (B)	Each
319	4" (Molded)	5-3/16"	$0.50
329	5½" (Machined)	6-11/16"	.55



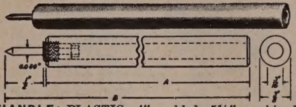
INSULATED SPADE PLUG

HANDLE: MOLDED PLASTIC. Red, Black. SPECIFY COLOR.
LUG: Steel, hot tinned., .030 thick.
DESCR.: Banana plug can be inserted into spade lug thru rear of handle.

Std. Pkg. 100

No.	Description	Per C
218	Insulated Spade Lug	$18.00
129	Lug Only	$20.00 M

SHORT TIP TEST PROD

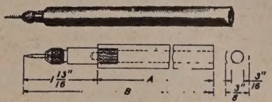


HANDLE: PLASTIC: 4" molded—5½" machined. Red or Black. SPECIFY COLOR.
BODY: Brass, nickel plated.
DESCR.: inserts flush with insulated handle, no metal exposed; eliminates possibility of shock or grounding. Fits standard phone tip jacks.

Std. Pkg. 25

No.	Handle (A)	Overall (B)	Each
363	4" (Molded)	4½"	$0.35
364	5½" (Machined)	6"	.40

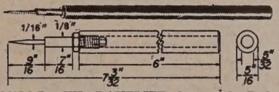
PHONO NEEDLE TEST PROD



HANDLE: PLASTIC: 4" molded—5½" machined. Red or Black. SPECIFY COLOR.
BODY: Brass, nickel plated.
DESCR.: Removable chuck for easy replacement of broken needles. Needle pierces corrosion or plating for positive reading. **Std. Pkg. 25**

No.	Handle (A)	Overall (B)	Each
317	4" (Molded)	4-13/16"	$0.50
318	5½" (Machined)	6-5/16"	.55

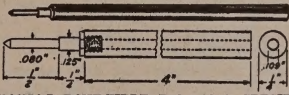
SOLDERLESS PHONO NEEDLE TEST PROD



HANDLE: XX BAKELITE lacquered. Red or Black. SPECIFY COLOR.
BODY: Brass, nickel plated.
NEEDLE: Phono needle, steel.
DESCR.: Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to pellet for solderless connections. **Std. Pkg. 25**

No.	Handle (A)	Overall (B)	Each
314	4"	5-3/32"	$1.25
313	6"	7-3/32"	1.35

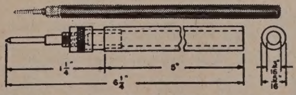
SUB-MINIATURE TEST PROD



HANDLE: BONE FIBRE. Red or black. SPECIFY COLOR.
TIP: Brass, nickel plated.
DESCR.: Threaded for easy assembly ideally suited for checking all types sub-miniature equipment. **Std. Pkg. 25**

No.	Each
322	$0.40

PENCIL TYPE SOLDERLESS TEST PROD
Force Fit Type

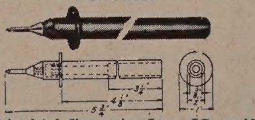


HANDLE: MACHINED PLASTIC. Red or Black. SPECIFY COLOR.
BODY: Brass, nickel plated.
DESCR.: Solderless: Wire fits through handle and body of plug then wrapped around screw portion and tightened with knurled collar.

Std. Pkg. 25

No.	Each
384	$0.85

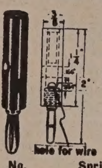
TEST PROBE



Heavy insulated fibre probe. Large I.D. enables use of Coax cable or 1N-34 crystal for R.F. Probes. Heavy Duty removable tip. **Std. Pkg. 10**

No.		Each
630		$ 1.20
630D	Display of 12	14.40

TEST LEAD ACCESSORIES

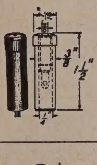


STACK BANANA PLUG
Solderless

HANDLE: PLASTIC. Red, Black, Yellor or Green. SPECIFY Color.
BODY: Brass, nickel plated.
SPRINGS: Four-leaved Phosphor Bronze or Beryllium Copper, nickel plated.
DESCR.: Solderless connection. Accepts standard banana plugs in top and side. Interconnects unlimited amount of multiple circuits. **Std. Pkg. 50**

No.	Spring Material	Per C
1511	Phosphor Bronze	$45.00
1512	Beryllium Copper	50.00

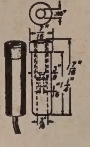
IN-LINE PHONE TIP JACK



HANDLE: MACHINED PLASTIC with molded cap. Red, Black, Yellow, Green. SPECIFY COLOR.
BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
DESCR.: Suitable for test lead extension where long leads are required. Accepts standard phone tip plug. **Std. Pkg. 50**

No.	Per C
248	$35.00

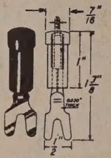
IN-LINE BANANA JACK



HANDLE: MACHINED PLASTIC with molded cap. Red, Black, Yellow, Green. SPECIFY COLOR.
BODY: Brass, nickel plated.
DESCR.: Suitable for test lead extensions where long leads are required. Accepts standard banana plugs. **Std. Pkg. 50**

No.	Per C
251	$35.00

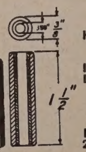
ADAPTER



Phone Tip to Spade Lug
HANDLE: MACHINED PLASTIC with molded cap. Red or black. SPECIFY COLOR.
JACK: Brass.
SPRING: Phosphor Bronze.
SPADE LUG: Steel hot tinned .030 thick.
DESCR.: Tip jack accepts standard phone tip plugs and adapts to spade lug. **Std. Pkg. 50**

No.	Description	Per C
249	Adapter	$55.00

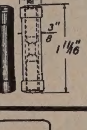
BANANA PLUG SPLICE



HANDLE: MACHINED PLASTIC. Red, Black, Yellow, Green. SPECIFY COLOR.
INSERT: Brass.
DESCR.: Invaluable for quick splicing connections. Accepts standard banana plugs. **Std. Pkg. 50**

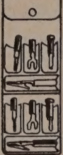
No.	Per C
245	$40.00

PHONE TIP PLUG SPLICE



HANDLE: MACHINED PLASTIC with molded cap. Red, Black, Yellow, Green. SPECIFY COLOR.
BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
DESCR.: Invaluable for quick splicing connections or for test lead extensions. Accepts standard phone tip plugs. **Std. Pkg. 50**

No.	Per C
246	$45.00



LABORATORY INTERCHANGE KIT

Consists of one Red, one Black of the following:
- Phone tips No. 200
- Spade Lugs No. 218
- Tip Plug Adapter No. 214
- Alligator clip jack No. 305

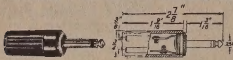
DESCR.: All parts interchangeable, converts any standard test lead to an all purpose unit. Packaged in an electronically sealed vinyl kit.

No.	Each
640	$3.75

HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

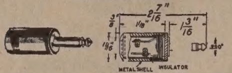
STANDARD PHONE PLUG Bakelite Barrel

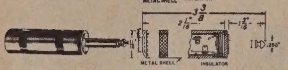


BARREL: Molded bakelite. Red or Black. SPECIFY COLOR.
BODY: Body, Tip, Sleeve—Brass, nickel plated.
DESCR.: Molded styrene separator insures maximum insulation between conductors. Tested at 1000 VAC. Fits standard phone jacks. **Std. Pkg. 25**

No.	Circuit	Terminals	Each
222	Two	Screw	$0.65
227	Three	Solder	1.40

Shielded Barrel

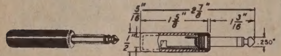




BARREL: Brass, N. P. with tubular insulator.
BODY: Body, Tip, Sleeve—Brass, nickel plated.
CONTACT: TWO CONDUCTOR — Screw connection with heavy ribbed clips and cord anchor. THREE CONDUCTOR—Solder connection only.
DESCR.: Molded styrene separator insures maximum insulation between conductors. Fits standard phone jacks. **Std. Pkg. 25**

No.	Type	Circuit	Each
252	Junior	Two	$0.90
272	Senior	Two	1.10
228	Junior	Three	1.50
238	Senior	Three	1.85

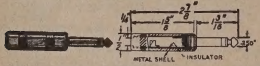
SLIM PHONE PLUG Bakelite Barrel



BARREL: MOLDED bakelite. Red or Black. SPECIFY COLOR.
BODY: Body, Tip, Sleeve—Brass, nickel plated.
DESCR.: Molded styrene separator insures maximum insulation between conductors. Tested at 1000 volts A.C. Fits standard phone jacks. **Std. Pkg. 25**

No.	Circuit	Terminals	Each
225	Two	Solder	$0.65
307	Two	Screw	.75
308	Three	Solder	1.05
309	Three	Screw	1.20

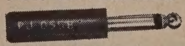
Shielded Barrel



BARREL: BRASS, N. P. with tubular insulator.
BODY: Body, Tip, Sleeve—Brass, nickel plated.
DESCR.: Molded styrene separator insures maximum insulation between conductors. Tested at 1000 volts A.C. Fits standard phone jacks. **Std. Pkg. 25**

No.	Circuit	Terminals	Each
226	Two	Solder	$1.00
316	Two	Screw	1.05
311	Three	Solder	1.30
312	Three	Screw	1.40

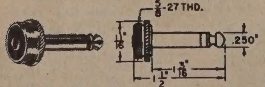
PJ055 AND PJ068 PLUGS



BARREL: MOLDED plastic.
BODY: Body, Tip, Sleeve—Brass, nickel plated.
TERM.: Brass, hot tinned.
INSUL.: Ethyl cellulose type EM-1 per Mil P3412.
DESCR.: Designed especially for high quality communications equipment and to meet the exacting requirements of the armed services. Parts are assembled together in a mold, providing a finished plug with complete continuity of thermo plastic insulation between the tip rod and plug sleeve. **Std. Pkg. 25**

No.	Type	Each
217	PJ055B	$1.35
247	PJ068B	3.65

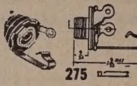
PHONE PLUG ADAPTER

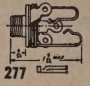


BODY: BODY, Tip, Sleeve—Brass, nickel plated.
INSUL.: XXXP Bakelite.
DESCR.: Mates with No. 116 microphone connector. Fits standard phone jacks. **Std. Pkg. 25**

No.	Each
113	$.50

TELEPHONE JACKS


275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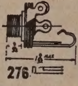
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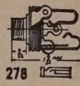
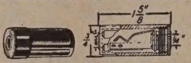

278

BUSHING: BRASS, nickel plated.
INSUL.: XXXP bakelite, type PBE-P per Mil-P-3115A.
SPRING: Nickel Silver alloy, spring temper.
TERMINAL: Brass, hot tinned.
DESCR.: Notched insulation washers interlock springs and lugs, eliminate possibility of shifting which result in electrical shorts. Springs firmly hold mating plug. Supplied with hex brass nut and steel mounting washer all nickel plated. **Std. Pkg. 50**

No.	Circuit	Each
275	Two Conductor Open	$0.45
276	Two Conductor Closed	.50
277	Three Conductor Open	.60
278	Three Conductor Closed	.75

IN-LINE EXTENSION JACK

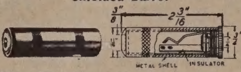


Bakelite Barrel

BARREL: MOLDED Bakelite. Red or Black. SPECIFY COLOR.
BODY: Brass, nickel plated.
SPRING: Nickel, silver, special alloy, spring temper.
INSUL.: XXP Bakelite.
DESCR.: For microphone and Hi-Fi extension cords. Mates with standard phone plugs. **Std. Pkg. 50**

No.	Type	Each
274	Solder Connection	$.90
288	Screw Connection	1.10

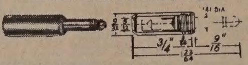
Shielded Barrel



BARREL: BRASS, nickel plated, with tubular insulator.
BODY: Brass, nickel plated.
SPRING: Nickel, silver, special alloy, spring temper.
INSUL.: XXP Bakelite.
DESCR.: For microphone and Hi-Fi extension cords. Mates with standard phone plug. **Std. Pkg. 25**

No.	Type	Each
273	Solder Connection	$1.25
289	Screw Connection	1.40

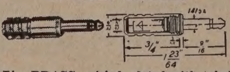
MINIATURE PHONE PLUG



HANDLE: MOLDED plastic. Grey only.
BODY: Body, Tip, Sleeve—Brass, nickel plated.
TERM.: Brass, hot tin dipped.
DESCR.: Designed for use with hearing aids, small meters etc. Solder terminals 500 volt breakdown. **Std. Pkg. 50**

No.	Each
480	$0.70

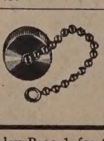
SHIELDED BARRELS



BARREL: BRASS, nickel plated with tubular insulator.
BODY: Body, Tip, Sleeve—Brass, nickel plated.
DESCR.: Designed for use with hearing aids, small meters, etc. Solder terminals 500 volt breakdowns. **Std. Pkg. 50**

No.	Circuit	Each
481	Two Conductor	$0.85

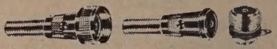
CAP AND CHAIN



DESCR.: BRASS, nickel plated. Seals chassis connectors against dust. Eliminates noisy connections. Used with any threaded one or two conductor chassis unit. **Std. Pkg. 10**

No.		Each
118	5/8-27 Thread	$.60

MICROPHONE CONNECTORS



BODY: BRASS, nickel plated.
SPRING: Steel, cadmium plated.
INSUL.: XXXP Bakelite.
EYELET: Brass, hot tinned for easy soldering.

Standard Type 5/8—27 Thread

DESCR.: Designed for use with single conductor cable. Microphone connectors provided with flexible protector spring. Cable clamped firmly to connector by hollow point set screw. **Std. Pkg. 50**

No.	Type	Length	Each
115	Single Contact Male	1¾"	$0.35
116	Single Contact Female	2 "	.53

CHASSIS CONNECTORS

Mount in .385 hole grounded: .500 hole insulated with shoulder washer.

No.	Type	Length	Each
117	Single Contact Male	⅝"	.35
114	Closed Circuit Male	¾"	.50

MINIATURE MICROPHONE CONNECTORS

3/8-32 THREAD

DESCR.: Ideal for lapel microphone, musical instruments, etc., wherever small cable is used. Accepts cable up to 3/16" diameter. **Std. Pkg. 50**

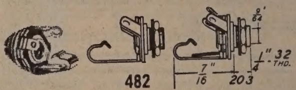
No.	Type	Length	Each
484	Single Contact Female	1¼"	$.60
485	Single Contact Male	1⅛"	.45

CHASSIS CONNECTOR

Mounts in 3/16" hole grounded; ¼" hole insulated with shoulder washer.

No.	Type	Length	Each
486	Single Contact Male	⅝"	.35

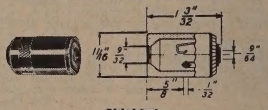
MINIATURE TELEPHONE JACKS



BUSHING: BRASS, nickel plated.
INSUL.: XXXP bakelite, type PBE-P per Mil-P-3115A.
SPRING: Nickel silver alloy, spring temper.
TERM.: Brass, hot tinned.
DESCR.: Notched insulation washers interlock springs and lugs, eliminates possibility of shifting which result in electrical shorts. Springs firmly hold mating plug. Supplied with hex brass nut and steel mounting washer all nickel plated. **Std. Pkg. 50**

No.	Circuit	Each
482	Two Conductor, Open	$.40
483	Two Conductor, Closed	.45

MINIATURE EXTENSION JACK

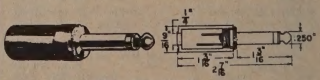


Shielded

BARREL: Brass, Nickel Plated.
BODY: Brass, Nickel Plated.
SPRING: Nickel Silver Alloy, Spring Temper.
INSUL.: Bakelite.
DESCR.: Mates with Miniature Phone Plugs. **Std. Pkg. 25**

No.	Each
487	$1.20

STANDARD (BABY) PHONE PLUG



Baby Bakelite Barrel

BARREL: Molded Bakelite, Red or Black. SPECIFY COLOR.
BODY: Body, Tip, Sleeve - Brass, nickel plated.
DESCR.: Molded Styrene separator insures maximum insulation between conductors. Fits standard phone jacks. **Std. Pkg. 25**

No.	Circuit	Terminals	Each
243	Two	Solder	$0.40

TELEPHONE CORD SLEEVE and CORD CLAMP STRAIN RELIEF

Fully listed on page 767

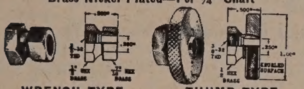
ALL PRICES SUBJECT TO TRADE DISCOUNT

HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

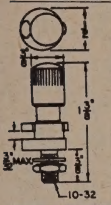
SHAFT LOCKS

Brass Nickel Plated—For ¼" Shaft



WRENCH TYPE		THUMB TYPE	
No. 181	$0.40 Ea.	No. 182	$0.55 Ea.
Std. Pkg. 100		Std. Pkg. 25	

DIAL LOCK



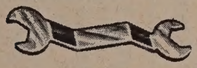
HEAD: Captive: Brass, nickel plated.

BODY: Brass nickel plated.

DESCR.: Prevents detuning of the dial when locked by means of the captive knurled nut. Supplied with hex nut & lockwasher. **Std. Pkg. 25**

No.	Each
199	$1.10

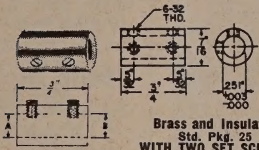
SHAFT WRENCH



Specially designed double end wrench, offset. One end for volume control nuts; other end for toggle switch nuts. Steel, Cadmium Plated.

No. 999 **Std. Pkg. 25** **$.35 Each**

COUPLINGS

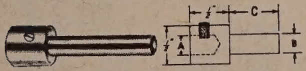


Brass and Insulated
Std. Pkg. 25

WITH TWO SET SCREWS

No.	A B	O.D.	Material	Each
120	¼"-¼"	7/16"	Brass N.P.	$0.30
140	¼"-¼"	7/16"	Fibre	.25
131	⅜"-¼"	½"	Brass N.P.	.30
141	⅜"-¼"	½"	Fibre	.25
133	⅜"-⅜"	½"	Brass N.P.	.30
142	⅜"-⅜"	½"	Fibre	.25
WITH FOUR SET SCREWS				
138	¼"-¼"	7/16"	Brass N.P.	.65

EXTENDERS



Brass and Insulated
LONG SHAFT TYPE

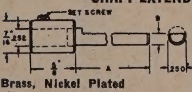
Std. Pkg. 25

No.	A B	C	Material	Each
150	¼"-¼"	1¼"	Brass N.P.	$0.33
130	¼"-¼"	1¼"	Fibre	.45
132	⅜"-¼"	1¼"	Brass N.P.	.33
134	⅜"-¼"	1¼"	Fibre	.45

SHORT SHAFT TYPE

No.	A B	C	Material	Each
160	¼"-¼"	⅝"	Brass N.P.	$0.30
161	¼"-¼"	⅝"	Fibre	.30
162	⅜"-¼"	⅝"	Brass N.P.	.30
163	⅜"-¼"	⅝"	Fibre	.30

SHAFT EXTENDERS

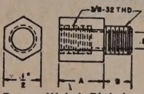


FOR VOLUME CONTROLS

Brass, Nickel Plated **Std. Pkg. 25**

No.	A	B	Each
2356	2"	.250"	$.35
2357	3"	.250"	.40
2358	4"	.250"	.45
2359	2"	.219"	.35
2360	3"	.219"	.40
2361	4"	.219"	.45
2362	2"	.156"	.35
2263	3"	.156"	.40
2364	4"	.156"	.45

BUSHING EXTENDERS

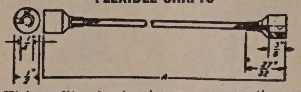


FOR VOLUME CONTROLS

Brass, Nickel Plated **Std. Pkg. 25**

No.	A	B	Each
2350	⅝"	3/16"	$.60
2351	⅝"	¼"	.60
2352	⅝"	⅜"	.60
2353	11/16"	⅜"	.60
2354	11/16"	½"	.60
2355	¾"	¼"	.60

FLEXIBLE SHAFTS

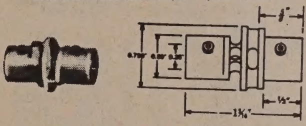


High quality phosphor bronze non-magnetic, nonrusting flexible shafts. Remote control when necessary to mount condensers and potentiometers away from panel at unusual angles. Turns at any angle up to 90°; free from back lash.

No.	Size "A"	Description	Std. Pkg.	Each
151	3"	with ¼" hub	25	$0.75
152	6"	with ¼" hub	25	1.00
153	3⅝"	with ¼" coupler	25	1.50
154	6⅝"	with ¼" coupler	25	1.75

FLEXIBLE SHAFT AND PANEL BEARING
Listed on page 767

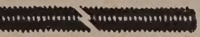
NYLON FLEXIBLE SHAFT COUPLING



DESCR.: Molded nylon with molded-in brass bushings. Hi-temp nylon not influenced by moisture. Designed for long reach shaft coupling. Supplied with 2 Allen-head set screws. **Std. Pkg. 25**

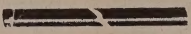
No.	Each
164	$1.75

BRASS THREADED RODS



Std. Pkg. 10

1-Ft. Length No.	Each	Threaded	2-Ft. Length No.	Each
1400-1	$ .40	6-32	1400-2	$ .80
1401-1	.40	8-32	1401-2	.80
1402-1	.60	10-32	1402-2	1.20
1403-1	.90	¼-20	1403-2	1.80



NYLON THREADED RODS

Std. Pkg. 10

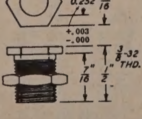
1-Ft Length No.	Each	Threaded	2-Ft. Length No.	Each
1420-1	$1.50	6-32	1420-2	$3.00
1421-1	1.70	8-32	1421-2	3.40
1422-1	1.80	10-32	1422-2	3.60
1423-1	2.00	¼-20	1423-2	4.00

PLAIN RODS

Brass Fibre and Nylon

Std. Pkg. 10

1404	Brass N.P.	6"	¼"	$.33
1405	Brass N.P.	12"	¼"	.66
1406	Fibre	6"	¼"	.25
1407	Fibre	12"	¼"	.50
1408	Nylon	6"	¼"	.50
1409	Nylon	12"	¼"	.75



PANEL BEARING

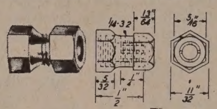
For ¼" Shafts. Mounts in ⅜" hole, in panels up to 5/16". Brass, nickel plated. **Std. Pkg. 100**

No. 119 **$0.25 Ea.**

MINIATURE SHAFT ACCESSORIES

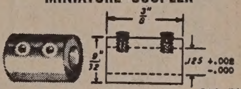
Brass Nickel Plated, for ⅛" Shafts

MINIATURE SHAFT LOCK—WRENCH TYPE



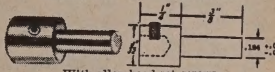
No. 183 **Std. Pkg. 25** **$0.40 Ea.**

MINIATURE COUPLER



No.	Set Screws	Std. Pkg. 25 Each
180	2	$.40

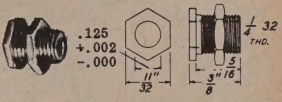
MINIATURE SHAFT EXTENDER



With allen head set screws.

No. 189 Std. Pkg. 25 **Std. Pkg. 25** **$0.30 Ea.**

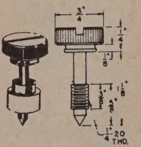
MINIATURE PANEL BEARING



Mounts in ¼" hole.

No. 184 **Std. Pkg. 25** **$0.25 Ea.**

CAPTIVE SCREW & BUSHING

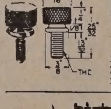


BODY: BRASS, nickel plated.

DESCR.: Supplied with panel bushing as shown. Used extensively for quick removal of panels from chassis. Non removable from panel.

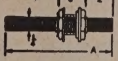
No.	Panel Bushing Length	Each
2365-A	5/32"	$1.25
2365-B	7/32"	1.25
2365-C	9/32"	1.25

THUMB SCREW



BODY: BRASS, nickel plated.
DESCR.: Used extensively for quick removal of panels from chassis. **Std. Pkg. 25**

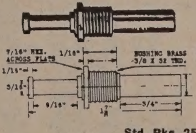
No.	Thread	Per C
2366	6-32	$40.00
2367	8-32	40.00
2368	10-32	40.00



PANEL BEARING ASSEMBLY

Uses our standard #119 Panel Bearing. Nickel Plated overall. **Std. Pkg. 25**

No.	A	Each
148	3"	$.55
149	6"	.65



PANEL BEARING ASSEMBLY

Plated Overall

Std. Pkg. 25

No. 126 **$40.00 Per C**

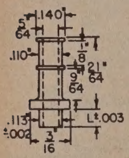
HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

TURRET TERMINALS

Terminals shown below are "stock" items, available for speedy delivery. All brass, silver-plated, precision made. See next page for Suggested Resale Prices. For quantities over 15,000 request special prices. Inquiries are invited, for special types and sizes to particular requirements. **L** indicates **Shank Length** of Lug. **T** indicates **Thickness** of mounting boards. Minimum package 100

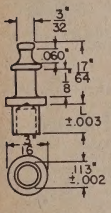
HOLLOW LUG


.140"
5/64
.110"
1/8"
21/64"
9/64
.113 ±.002
3/16
L±.003

No.	L	T
2000A	075	1/32
2000B	.105	1/16
2000C	.135	3/32
2000D	.165	1/8
2000E	.195	5/32
2000F	.230	3/16

List $25.00 Per M

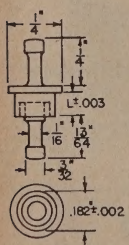
SHORT TERMINAL LUG


3/32"
.060"
17/64"
1/8
L ±.003
1/16
.113" ±.002

No.	L	T
2001A	.075	1/32
2001B	.105	1/16
2001C	.135	3/32
2001D	.165	1/8

List $25.00 Per M

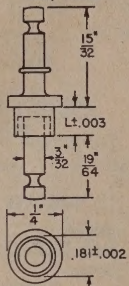
DOUBLE END TERMINAL LUG


1/4"
1/4"
L±.003
1/16
13/64"
3/32"
.182"±.002

No.	L	T
2002A	.105	1/16
2002B	.135	3/32
2002C	.165	1/8
2002D	.195	5/32
2002E	.230	3/16

List $55.00 Per M

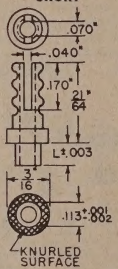
DOUBLE END LUG, LONG


15/32"
L±.003
3/32
19/64"
1/4"
.181"±.002

No.	L	T
2003A	.105	1/16
2003B	.135	3/32
2003C	.165	1/8
2003D	.195	5/32
2003E	.230	3/16

List $70.00 Per M

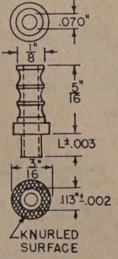
SLOTTED TERMINAL LUG SHORT


.070"
.040"
.170"
21/64
L±.003
3/16
.113±.001 -.002
KNURLED SURFACE

No.	L	T
2004A	.075	1/32
2004B	.105	1/16
2004C	.135	3/32
2004D	.165	1/8

List $42.00 Per M

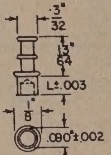
HOLLOW KNURLED LUG


.070"
1/8"
5/16"
L±.003
3/16"
.113"±.002
KNURLED SURFACE

No.	L	T
2005A	.105	1/16
2005B	.135	3/32
2005C	.165	1/8

List $36.00 Per M

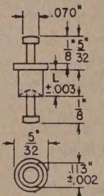
SHORT TERMINAL LUG


3/32"
13/64"
L±.003
1/8
.090"±.002

No.	L	T
2006A	.075	1/32
2006B	.105	1/16
2006C	.135	3/32
2006D	.165	1/8

List $17.00 Per M

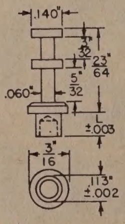
SHORT DOUBLE END LUG


.070"
1/8
5/32"
L ±.003
1/8"
5/32"
.113" ±.002

No.	L	T
2007A	.075	1/32
2007B	.105	1/16
2007C	.135	3/32
2007D	.165	1/8

List $23.00 Per M

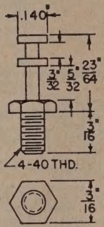
TERMINAL LUG


.140"
3/32
23/64"
5/32"
.060"
L ±.003
3/16"
.113" ±.002

No.	L	T
2008A	.075	1/32
2008B	.105	1/16
2008C	.135	3/32
2008D	.165	1/8
2008E	.195	5/32
2008F	.230	3/16
2008G	.293	1/4

List $27.00 Per M

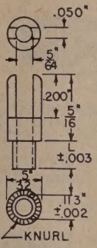
TERMINAL LUG


.140"
3/32
5/32
23/64"
3/16"
4-40 THD.
3/16"

No. 2009

List $42.00 Per M

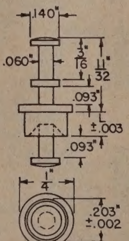
SPLIT TERMINAL LUG


.050"
5/64"
.200"
5/16"
L ±.003
1/8
.113" ±.002
KNURL

No.	L	T
2010A	.075	1/32
2010B	.105	1/16
2010C	.135	3/32
2010D	.165	1/8

List $40.00 Per M

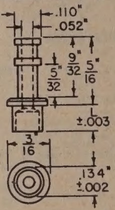
DOUBLE END TERMINAL LUG


.140"
.060"
3/16
11/32"
.093"
L ±.003
.093"
1/4"
.203" ±.002

No.	L	T
2011A	.105	1/16
2011B	.135	3/32
2011C	.165	1/8
2011D	.195	5/32
2011E	.230	3/16

List $60.00 Per M

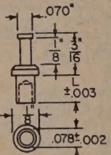
TERMINAL LUG


.110"
.052"
9/32
5/32
5/16"
L ±.003
3/16
.134" ±.002

No.	L	T
2012A	.105	1/16
2012B	.135	3/32
2012C	.165	1/8

List $35.00 Per M

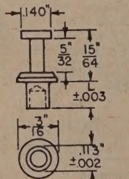
TERMINAL LUG


.070"
1/8"
3/16"
L ±.003
.078"±.002

No.	L	T
2013A	.075	1/32
2013B	.105	1/16
2013C	.135	3/32
2013D	.165	1/8

List $18.00 Per M

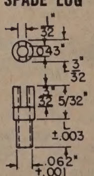
TERMINAL LUG


.140"
5/32"
15/64
L ±.003
3/16"
.113" ±.002

No.	L	T
2014A	.105	1/16
2014B	.135	3/32
2014C	.165	1/8
2014D	.195	5/32
2014E	.230	3/16

List $23.00 Per M

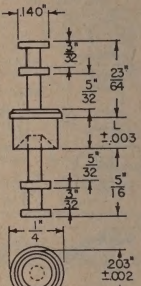
MINIATURE SPADE LUG


1/32"
.043"
3/32"
3/32"
5/32"
L ±.003
.062" +.001 -.002

No.	L	T
2021A	.037	1/64
2021B	.053	1/32
2021C	.084	1/16
2021D	.115	3/32
2021E	.147	1/8

List $25.00 Per M

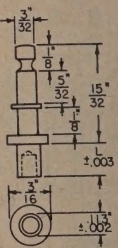
TERMINAL LUG


.140"
3/32
23/64"
5/32
L ±.003
5/32
3/32
5/16"
1/4"
.203" ±.002

No.	L	T
2015A	.135	3/32
2015B	.165	1/8
2015C	.195	5/32
2015D	.230	3/16

List $70.00 Per M

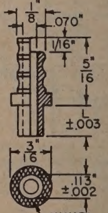
TERMINAL LUG


3/32"
1/8
5/32
15/32"
1/8
L ±.003
3/16
.113" ±.002

No.	L	T
2016A	.105	1/16
2016B	.135	3/32
2016C	.165	1/8

List $27.00 Per M

HOLLOW KNURLED LUG


1/8"
.070"
1/16"
5/16"
L ±.003
3/16"
.113" ±.002
KNURL

No.	L	T
2017A	.105	1/16
2017B	.135	3/32
2017C	.165	1/8
2017D	.195	5/32

List $40.00 Per M

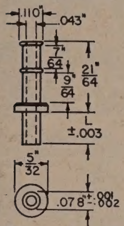
Use Index Page 1 for Quick, Easy Location of ALL Products

ALL PRICES SUBJECT TO TRADE DISCOUNT

HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

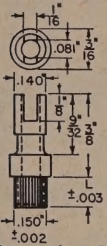
HOLLOW TERMINAL LUG


.110"
.043"
7/64
21"/64
9/64
L
±.003
5"/32
.078"±.001/.002

No.	L	T
2018A	.075	1/32
2018B	.105	1/16
2018C	.135	3/32
2018D	.165	1/8
2018E	.195	5/32
2018F	.230	3/16

List $50.00 Per M

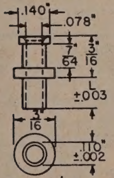
SPLIT TERMINAL LUG


1"/16
.081"
3"/16
.140"
1/8
9"/32
3/8
L
±.003
.150"
±.002

No.	L	T
2019A	.075	1/32
2019B	.105	1/16
2019C	.135	3/32
2019D	.165	1/8
2019E	.195	5/32
2019F	.230	3/16

List $45.00 Per M

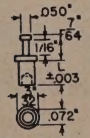
TERMINAL LUG


.140"
.078"
7/64
3/16
L
±.003
1/16
.110"
±.002

No.	L	T
2020A	.075	1/32
2020B	.105	1/16
2020C	.135	3/32
2020D	.165	1/8

List $25.00 Per M

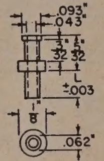
TERMINAL LUG


.050"
7"/64
1/16"
L
±.003
3/32
.072"

No.	L	T
2032A	.054	1/32
2032B	.084	1/16
2032C	.115	3/32
2032D	.147	1/8

List $55.00 Per M

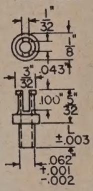
MINIATURE HOLLOW LUG


.093"
.043"
3/32
5/32
L
±.003
1"/8
.062"

No.	L	T
2022A	.037	1/64
2022B	.053	1/32
2022C	.084	1/16
2022D	.115	3/32
2022E	.147	1/8

List $25.00 Per M

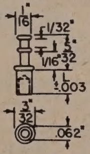
MINIATURE HOLLOW SPLIT LUG


1"/32
1/8
3"/32
.043"
.100"
3/32
L
±.003
.062"
+.001
-.002

No.	L	T
2023A	.037	1/64
2023B	.053	1/32
2023C	.084	1/16
2023D	.115	3/32
2023E	.147	1/8

List $45.00 Per M

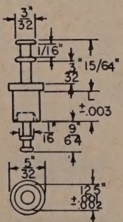
MINIATURE DOUBLE TIE LUG


1"/16
1/32"
5/32
1/16
L
±.003
3"/32
.062"

No.	L	T
2024A	.037	1/64
2024B	.053	1/32
2024C	.084	1/16
2024D	.115	3/32
2024E	.147	1/8

List $30.00 Per M

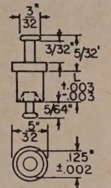
MINIATURE THROUGH LUG


3"/32
1/16"
15/64"
3/32
±.003
1/16
9/64
L
5"/32
.125"
±.001/.002

No.	L	T
2025A	.075	1/32
2025B	.105	1/16
2025C	.135	3/32
2025D	.165	1/8

List $45.00 Per M

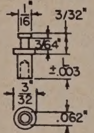
MINIATURE THROUGH LUG


3"/32
3/32"
5/32"
L
+.003
-.003
5/64"
5"/32
.125"
±.002

No.	L	T
2026A	.075	1/32
2026B	.105	1/16
2026C	.135	3/32
2026D	.165	1/8

List $45.00 Per M

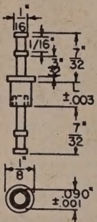
MINIATURE LUG


1"/16
3/32"
3/64
L
±.003
3"/32
.062"

No.	L	T
2027A	.037	1/64
2027B	.054	1/32
2027C	.084	1/16
2027D	.115	3/32
2027E	.147	1/8

List $20.00 Per M

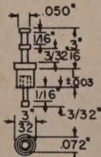
FEED-THRU TERMINAL LUG


1"/16
1/16"
7"/32
3"/32
L
±.003
7"/32
1"/8
.090"
±.001

No.	L	T
2028A	.054	1/32
2028B	.084	1/64
2028C	.115	3/32
2028D	.147	1/8

List $55.00 Per M

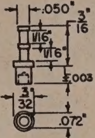
TERMINAL LUG


.050"
1/16"
3/32
3/16
L
±.003
1/16
3"/32
3/32"
.072"

No.	L	T
2029A	.054	1/32
2029B	.084	1/16
2029C	.115	3/32
2029D	.147	1/8

List $35.00 Per M

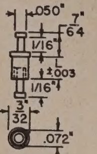
TERMINAL LUG


.050"
3"/16
1/16
1/16"
L
±.003
3"/32
.072"

No.	L	T
2030A	.054	1/32
2030B	.084	1/16
2030C	.115	3/32
2030D	.147	1/8

List $27.00 Per M

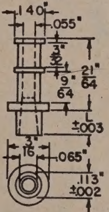
FEED TERMINAL LUG


.050"
7"/64
1/16
L
±.003
1/16"
3"/32
.072"

No.	L	T
2031A	.054	1/32
2031B	.084	1/16
2031C	.115	3/32
2031D	.147	1/8

List $27.00 Per M

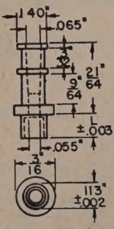
RECEPTACLE LUG


.140"
.055"
3"/32
21"/64
9"/64
L
±.003
3"/16
.065"
.113"
±.002

No.	L	T
2033A	.075	1/32
2033B	.105	1/16
2033C	.135	3/32
2033D	.165	1/8
2033E	.195	5/32
2033F	.230	3/16

List $60.00 Per M

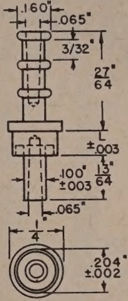
RECEPTACLE LUG


.140"
.065"
3/32
21"/64
9"/64
L
±.003
.055"
3"/16
.113"
±.002

No.	L	T
2034A	.075	1/32
2034B	.105	1/16
2034C	.135	3/32
2034D	.165	1/8
2034E	.195	5/32
2034F	.230	3/16

List $70.00 Per M

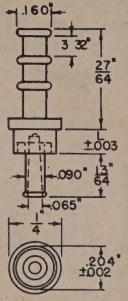
TAPERED TERM.


.160"
.065"
3/32"
27"/64
L
±.003
.100"
±.003
13"/64
.065"
1"/4
.204"
±.002

No.	L	T
2037A	.105	1/16
2037B	.135	3/32
2037C	.165	1/8

List $150.00 Per M

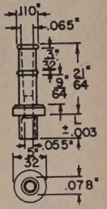
TAPERED TERM.


.160"
3/32"
27"/64
L
±.003
.090"
13"/64
.065"
1"/4
.204"
±.002

No.	L	T
2038A	.105	1/16
2038B	.135	3/32
2038C	.165	1/8

List $170.00 Per M

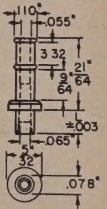
RECEPTACLE LUG


.110"
.065"
3/32
21"/64
9"/64
L
±.003
.055"
3"/32
.078"

No.	L	T
2035A	.075	1/32
2035B	.105	1/16
2035C	.135	3/32
2035D	.165	1/8
2035E	.195	5/32
2035F	.230	3/16

List $75.00 Per M

RECEPTACLE LUG


.110"
.055"
3/32
21"/64
9"/64
L
±.003
.065"
3"/32
.078"

No.	L	T
2036A	.075	1/32
2036B	.105	1/16
2036C	.135	3/32
2036D	.165	1/8
2036E	.195	5/32
2036F	.230	3/16

List $65.00 Per M

ADDITIONAL NUMBERS

We invite your inquiries on other types of turret terminals not shown here.

SUGGESTED RESALE PRICES

Cat. No. Series	List Per M	100-999 Per C	1,000-4,999 Per M	5,000-15,000 Per M
2000	$25.00	$ 1.50	$12.50	$10.00
2001	25.00	1.50	12.50	10.00
2002	55.00	3.30	27.50	22.00
2003	70.00	4.20	35.00	28.00
2004	42.00	2.52	21.00	16.80
2005	36.00	2.06	18.00	14.40
2006	17.00	1.02	8.50	6.80
2007	23.00	1.38	11.50	9.20
2008	27.00	1.62	13.50	10.80
2009	42.00	2.52	21.00	16.80
2010	40.00	2.40	20.00	16.00
2011	60.00	3.60	30.00	24.00
2012	35.00	2.10	17.50	14.00
2013	18.00	1.08	9.00	7.20
2014	23.00	1.38	11.50	9.20
2015	70.00	4.20	35.00	28.00
2016	27.00	1.62	13.50	10.80
2017	40.00	2.40	20.00	16.00
2018	50.00	3.00	25.00	20.00
2019	45.00	2.70	22.50	18.00
2020	25.00	1.50	12.50	10.00
2021	25.00	1.50	12.50	10.00
2022	25.00	1.50	12.50	10.00
2023	45.00	2.70	22.50	18.00
2024	30.00	1.80	15.00	12.00
2025	45.00	2.70	22.50	18.00
2026	45.00	2.70	22.50	18.00
2027	20.00	1.20	10.00	8.00
2028	55.00	3.30	26.50	22.00
2029	35.00	2.10	17.50	14.00
2030	27.00	1.62	13.50	10.80
2031	27.00	1.62	13.50	10.80
2032	55.00	3.30	27.50	22.00
2033	60.00	3.60	30.00	24.00
2034	70.00	4.20	35.00	28.00
2035	75.00	4.50	37.50	30.00
2036	65.00	3.90	32.50	26.00
2037	150.00	9.00	75.00	60.00
2038	170.00	10.20	85.00	68.00

HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

SPACERS

Brass Cadmium Plated

These brass bushings are ideal for use in raising sub panels, chassis, condensers, transformers, etc. Hole in bushing to accommodate a #4, #6, or #8 screw. **Std. Pkg. 100**

¼" O.D.

Length	for #4 Screw No.	for #6 Screw No.	for #8 Screw No.	Per C
¼"	2340	2100	2105	$ 5.50
⅜"	2341	2101	2106	7.25
½"	2342	2102	2107	8.80
¾"	2343	2103	2108	10.50
1"	2344	2104	2109	12.00

⅜" O.D.

Length	for #4 Screw No.	for #6 Screw No.	for #8 Screw No.	Per C
¼"	2345	2110	2115	$ 8.80
⅜"	2346	2111	2116	10.50
½"	2347	2112	2117	12.00
¾"	2348	2113	2118	13.75
1"	2349	2114	2119	15.50

THREADED SPACERS

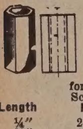
Brass Cadmium Plated

¼" O.D. Threaded
4-40, 6-32 and 8-32.

Length	THD 4-40 No.	THD 6-32 No.	THD 8-32 No.	Per C
¼"	2370	2120	2125	$ 6.50
⅜"	2371	2121	2126	8.25
½"	2372	2122	2127	10.00
¾"	2373	2123	2128	12.00
1"	2374	2124	2129	13.75

HEX SPACERS

Brass Cadmium Plated



Std. Pkg. 100

¼" HEX

Length	for #4 Screw No.	for #6 Screw No.	for #8 Screw No.	Per C
¼"	2380	2300	2305	$ 6.00
⅜"	2381	2301	2306	7.75
½"	2382	2302	2307	9.30
¾"	2383	2303	2308	11.25
1"	2384	2304	2309	13.00

⅜" HEX

Length	for #4 Screw No.	for #6 Screw No.	for #8 Screw No.	Per C
¼"	2385	2310	2315	$10.30
⅜"	2386	2311	2316	12.00
½"	2387	2312	2317	13.75
¾"	2388	2313	2318	16.50
1"	2389	2314	2319	17.50

THREADED HEX SPACERS

Brass Cadmium Plated

¼" HEX

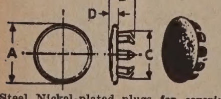
Length	THD 4-40 No.	THD 6-32 No.	THD 8-32 No.	Per C
¼"	2330	2320	2325	$ 7.00
⅜"	2331	2321	2326	8.75
½"	2332	2322	2327	10.50
¾"	2333	2323	2328	12.75
1"	2334	2324	2329	14.75

FIBRE SPACERS

These fibre bushings are ideal for use in raising sub panels, chassis, condensers, transformers, etc.
Std. Pkg. 100

¼" O.D.

Length	for #4 Screw No.	for #6 Screw No.	for #8 Screw No.	Per C
¼"	2335	2130	2140	$ 6.50
⅜"	2336	2131	2141	8.25
½"	2337	2132	2142	10.00
¾"	2338	2133	2143	12.00
1"	2339	2134	2144	13.75



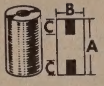
SNAP BUTTON HOLE PLUGS

Steel Nickel-plated plugs for covering punched or drilled holes in metal, plastic or wood.
Std. Pkg. 100

No.	Hole	A	B	C	D	Prongs	Per C
650	¼"	13/32	¼	17/64	5/64	6	$3.20
651	5/16"	7/16	¼	21/64	1/16	6	3.20
652	⅜"	17/16	⅜	25/64	5/64	6	3.20
653	½"	21/32	17/64	17/32	5/64	8	4.60
654	⅝"	51/64	9/32	41/64	5/64	8	4.60
655	¾"	15/16	19/64	49/64	3/32	12	4.60
608	⅞"	1 11/16	19/64	57/64	1/16	12	5.50
612	1"	1 5/32	19/64	1 1/64	5/64	12	7.50
*656	1"	1 5/32	19/64	1 1/32	5/64	12	18.00

* Vent

CERAMIC STANDOFFS

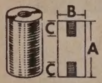


MADE TO JAN. SPECS.

Grade L-5 Ceramic made to JAN 1-8 and JAN 1-10 Specs. Outside of ceramic is glazed. **Std. Pkg. 50**

No.	Type	A	B	C	Thd.	Per C
2600	NS5W0104	½"	⅜"	5/32"	6-32	$22.00
2601	NS5W0105	⅝"	⅜"	¼"	6-32	25.00
2602	NS5W0106	¾"	⅜"	¼"	6-32	30.00
2603	NS5W0108	1"	⅜"	⅜"	6-32	35.00
2604	NS5W0110	1¼"	⅜"	⅜"	6-32	40.00
2605	NS5W0112	1½"	⅜"	⅜"	6-32	42.00
2606	NS5W0116	2"	⅜"	⅜"	6-32	47.00
2607	NS5W0205	⅝"	½"	3/16"	8-32	25.00
2608	NS5W0206	¾"	½"	¼"	8-32	30.00
2609	NS5W2008	1"	½"	⅜"	8-32	35.00
2610	NS5W0210	1¼"	½"	⅜"	8-32	40.00
2611	NS5W0212	1½"	½"	⅜"	8-32	42.00
2612	NS5W0216	2"	½"	⅜"	8-32	47.00
2613	NS5W0220	2½"	½"	⅜"	8-32	50.00
2614	NS5W0224	3"	½"	⅜"	8-32	55.00
2615	NS5W0308	1"	¾"	⅜"	10-32	30.00
2616	NS5W0310	1¼"	¾"	⅜"	10-32	35.00
2617	NS5W0312	1½"	¾"	⅜"	10-32	40.00
2618	NS5W0316	2"	¾"	⅜"	10-32	47.00
2619	NS5W0320	2½"	¾"	⅜"	10-32	55.00
2620	NS5W0324	3"	¾"	⅜"	10-32	65.00
2621	NS5W0332	4"	¾"	⅜"	10-32	72.00
2622	NS5W0410	1¼"	1"	7/16"	¼-20	55.00
2623	NS5W0412	1½"	1"	½"	¼-20	65.00
2624	NS5W0416	2"	1"	⅝"	¼-20	72.00
2625	NS5W0420	2½"	1"	⅝"	¼-20	80.00
2626	NS5W0424	3"	1"	⅝"	¼-20	90.00
2627	NS5W0432	4"	1"	⅝"	¼-20	110.00
2628	NS5W0440	5"	1"	⅝"	¼-20	130.00
2629	NS5W0448	6"	1"	⅝"	¼-20	150.00

CERAMIC STANDOFFS

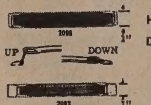


COMMERCIAL

Grade L5 Ceramic with outside glazed.
Std. Pkg. 50

No.	A	B	C	Thd.	Per C
2640	¼"	¼"	ALL	6-32	$17.00
2641	½"	¼"	5/32"	6-32	17.00
2642	⅜"	⅜"	5/32"	6-32	17.00
2643	½"	⅜"	3/16"	6-32	18.00
2644	½"	½"	9/64"	6-32	20.00
2645	¾"	½"	¼"	6-32	20.00
2646	1"	½"	⅜"	6-32	20.00
2647	1½"	½"	9/16"	6-32	23.00
2648	2½"	½"	½"	6-32	23.00
2649	2½"	¾"	¾"	¼-20	33.00
2650	4"	¾"	¾"	¼-20	50.00

RETRACTO-LINK HANDLES



HANDLE: Genuine leather, matching stitching, BLACK.
HDWRE.: Steel, Nickel plated.
DESCR.: Assemblies are shaped with all hardware installed except for decorative cover caps which are packed separately. Supplied in two styles — different lengths.

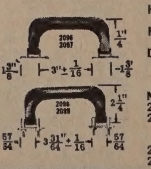
ATTACHES WITH PRONGS THAT BEND INSIDE CASE

No.	Length	Each
2090	4½"	$3.50
2091	5½"	3.50
2092	6¾"	3.50

ATTACHES WITH RIVETS OR SCREWS

No.	Length	Each
2093	4½"	3.50
2094	5½"	3.50
2095	6¾"	3.50

MOLDED GRIP HANDLES



HANDLE: Molded high impact styrene.
HDWRE.: Steel Nickel plated.
DESCR.: Designed for economy and rugged use.

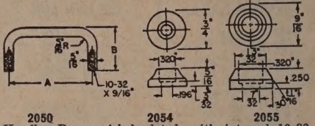
Attaches with Rivets or Screws

No.	Color	Each
2096	Black	$.75
2097	Grey	.75

Attaches with Threaded Stud

No.	Color	Each
2098	Black	1.40
2099	Grey	1.40

HANDLES AND FERRULES

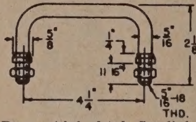


Handles Brass, nickel plated, with internal 10-32 thread. Individually packaged.
Std. Pkg. 10

No.	A	B	Each
2050	3"	1 5/16"	$1.05
2051	4 9/16"	1½"	1.25
2052	6 7/16"	1¾"	1.30
2056	4¼"	1½"	1.20
2057	3"	1½"	1.05
2058	2 57/64"	1"	1.00
2059	3 7/64"	1"	1.00

Ferrules Brass, nickel plated. For mounting of handles.

No.			
2054	Std. Pkg. 50	Per C	$16.00
2055	Std. Pkg. 50	Per C	25.00

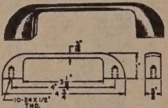


CABINET HANDLE

Brass, nickel plated. Supplied with hex nut and washer. Mounts in 5/16" hole. Individually packaged.
Std. Pkg. 10

No.	Each
2053	$1.50

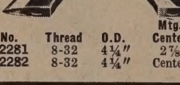
OVAL HANDLE



Die Cast Zamac Handle. Brush chrome plated.

No.	Each
2065	$1.50

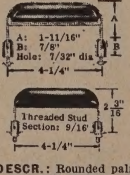
BAKELITE HANDLE



Std. Pkg. 10

No.	Thread	O.D.	Mtg. Center	Color	Per C
2281	8-32	4¼"	2⅞	Black	$24.00
2282	8-32	4¼"	Center	Red	26.00

MOLDED GRIP HANDLES



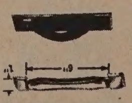
HANDLE: Molded high impact Styrene, Fungus Resistant.
HDWRE.: Steel, Nickel plated.
DESCR.: Rounded palm fitting design. Attaches to case with machine screws.

No.	Color	Each
2085	Black	$1.75
2086	Grey	1.75

HANDLE: Molded high impact Styrene, Fungus Resistant.
HDWRE.: Steel, Nickel plated.
DESCR.: Rounded palm fitting design. Attaches to case with washers and nuts supplied. Will support 100 pounds.

No.	Color	Stud Lgth.	Each
2087	Black	9/16"	$1.75
2088	Grey	9/16"	1.75

SPRING GLIDE HANDLE



HANDLE: Genuine leather, contoured, Black, matching stitching, 6" long.
CAPS: Steel, chrome plated.
DESCR.: Strong, silent spring glide, frequency or decibel extremes will not induce handle rattle.

Handle moves up for comfortable carrying — down when not in use.

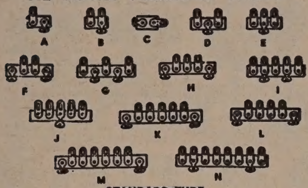
No.	Color	Each
2089	Black	$4.00

ALL PRICES SUBJECT TO TRADE DISCOUNT

HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

TIE DOWN TERMINAL STRIPS



STANDARD TYPE

LUG: BRASS, cadmium plated, spaced ⅜″ centers.
STRIP: XP Bakelite ⅜″ wide x .062 thick.
MOUNT.: .140 I.D. for No. 6 screw.

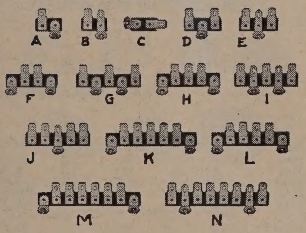
MINIATURE TYPE

LUG: BRASS, cadmium plated, spaced ¼″ centers.
STRIP: XP Bakelite, 5/16″ wide x .016 thick.
MOUNT.: .096 I.D. for No. 3 screw or 3/32 rivet.

Standard Type			Miniature Type	
No.	Per C	Illustration	No.	Per C
861	$3.50	A	1061	$ 4.00
862	3.50	B	1062	4.50
849	4.00	C	—	—
863	4.00	D	1063	5.50
864	4.00	E	1064	6.00
867	6.00	F	1067	6.50
865	7.00	G	1065	8.75
853	8.00	H	1073	8.75
868	7.00	I	1068	9.50
866	6.00	J	1066	9.00
860	8.25	K	1060	11.00
869	8.50	L	1069	10.00
848	9.75	M	1078	13.60
870	9.75	N	1070	13.50

Standard Package 100

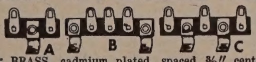
"QUICK-CONNECT" TERMINAL STRIPS



No.	Per C	No.	Per C	No.	Per C
1085	5.20	1090	9.50	1095	16.50
1086	5.50	1091	12.00	1097	15.50
1087	5.20	1092	12.00	1098	19.50
1088	8.00	1094	12.50	1099	19.50
1089	8.50	1094	13.50		

No. 1576 Terminal Strip Connectors $5.50 Per C

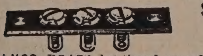
BRACKET TYPE TERMINAL STRIPS



LUGS: BRASS, cadmium plated, spaced ⅜″ centers.
BRACKETS: Brass, cadmium plated.
STRIPS: X.P. Bakelite ⅜″ wide x .062 thick.
MOUNT.: .140 I.D. for No. 6 screw. **Std. Pkg. 100**

No.	Fig.	Lugs	Per C
1077	A	2	$10.60
1079	C	3	11.00
1080	B	3	11.00
1081	B	4	12.00
1082	B	5	13.00
1083	B	6	14.00

SCREW TYPE TERMINAL BOARD



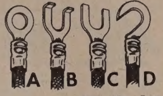
LUGS: BRASS, hot tinned, spaced 7/16″ centers.
SCREW: Steel, cadmium plated 6-32x⅜.
STRIP: X.P. Bakelite ⅝″ wide x .062 thick.

No.	Terminals	Mounting Center	Std. Pkg.	Per C
872	2	1 7/16″	50	$10.00
873	3	1¾″	50	15.00
874	4	2 3/16″	25	19.00
875	5	2⅝″	25	22.00
876	6	3 1/16″	25	28.00
877	7	3½″	25	35.00
878		Shorting Link		3.00

SOLDERLESS TERMINALS

AMP

Pre-Insulated Diamond Grip

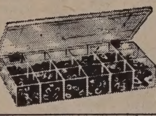


Color-coded for wire size. **Std. Pkg. 100**

RING TONGUE (A)

Wire Size	No.	AMP No.	Stud Size	Tongue Width	Overall Length	Stud Clear.	Per C
22	1550	320882	4	3/16	21/32	5/32	$15.00
	1551	31881	6	7/32	21/32	5/32	15.00
to	1552	31886	8	9/32	25/32	¼	15.00
	1553	31887	10	9/32	25/32	¼	15.00
16	1554	31894	¼	15/32	1 1/16	27/64	16.00
14	1555	32441	4	¼	11/16	11/64	15.00
	1556	32442	.6	¼	11/16	11/64	15.00
to	1557	31902	8	11/32	27/32	9/32	15.00
	1558	322238	10	5/16		¼	15.00
16	1559	31906	¼	15/32	1/16	7/16	16.00
FLANGED SPADE (B)							
22-16	1560	32562	6	19/64	23/32	13/64	$15.00
	1561	32498	8	27/64	13/16	¼	16.00
	1562	320861	6	19/64	23/32	13/64	15.00
14-16	1563	320862	8	19/64	23/32	13/64	15.00
	1564	320863	10	19/64	23/32	13/64	15.00
SPADE TONGUE (C)							
	1565	34541	6	¼	53/64	19/64	$15.00
22-16	1566	32053	8	⅜	57/64	19/64	15.00
	1567	32054	10	⅜	57/64	19/64	15.00
	1568	35559	6	19/64	47/64	13/64	15.00
14-16	1569	321233	8	19/64	47/64	13/64	15.00
	1570	32060	10	⅜	57/64	5/16	15.00
HOOK TONGUE (D)							
22-16	1571	34313	6	9/32	47/64	13/64	$15.00
	1572	32456	8	11/32	55/64	9/32	15.00
	1573	320381	6	11/32	27/32	9/32	$15.00
14-16	1574	320306	8	11/32	27/32	9/32	17.00
	1575	35481	10	11/32	27/32	9/32	17.00
18-14	1576	47100	.250	Faston Receptacle w/insulation support			$ 5.50
BUTT CONNECTOR							
22-16	1548	320559	.125 I.D.				60.00
16-14	1549	320562	.150 I.D.				60.00

TERMINAL ASSORTMENTS



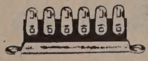
A basic assortment of the most commonly used Ring Tongue and Spade Terminals for wire sizes 22 to 14.

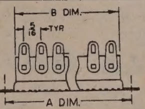
No.	Approx. Quantity of Terminals	Each
1577	200	$30.00
1578	300	45.00

HAND CRIMPING TOOL

Makes strong, solderless connections; cuts and strips wire, and has threaded bolt cutter.
No. 1579 **$12.00 Each**

TERMINAL STRIP ASSEMBLY



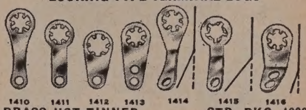


LUG: Brass, cadmium plated.
BASE: Brass, cadmium plated. Mounting holes for No. 6 screw.
STRIP: X.P. Bakelite **Std. Pkg. 100**

No.	Terminals	Dimensions "A"	"B"	Per C
3002	2	1.000	⅝″	$10.00
3003	3	1.312	15/16″	11.50
3004	4	1.625	1¼″	13.00
3005	5	1.937	1 9/16″	14.50
3006	6	2.250	1⅞″	16.00
3007	7	2.562	2 3/16″	17.50
3008	8	2.875	2½″	19.00
3009	9	3.187	2 13/16″	20.50
3010	10	3.500	3⅛″	22.00
3011	11	3.812	3 7/16″	23.50
3012	12	4.125	3¾″	25.00

(See listing of CONTACT STRIPS on page 767)

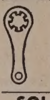
LOCKING TYPE TERMINAL LUGS



BRASS HOT TINNED STD. PKG. 1000

No.	L	Thick	Hole	Per M
1410-4	⅞″	.018	No. 4	15.00
1410-6	⅞″	.018	No. 6	15.00
1410-8	⅞″	.018	No. 8	15.00
1411-4	47/64″	.020	No. 4	15.00
1411-6	47/64″	.020	No. 6	15.00
1411-8	47/64″	.020	No. 8	15.00
1412-4	⅝″	.018	No. 4	14.00
1412-6	⅝″	.018	No. 6	14.00
1412-8	⅝″	.018	No. 8	14.00
1413-4	23/32″	.018	No. 4	15.00
1413-6	23/32″	.018	No. 6	15.00
1413-8	23/32″	.018	No. 8	15.00
1414-4	13/16″	.018	No. 4	15.00
1414-6	13/16″	.018	No. 6	15.00
1414-8	13/16″	.018	No. 8	15.00
1415-4	41/64″	.018	No. 4	15.00
1415-6	41/64″	.018	No. 6	15.00
1415-8	41/64″	.018	No. 8	15.00
1416-4	11/16″	.020	No. 4	15.00
1416-6	11/16″	.020	No. 6	15.00
1416-8	11/16″	.020	No. 8	15.00

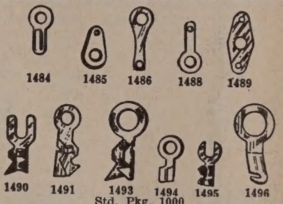
LOCKING TYPE TERMINAL LUGS



Brass Electro Plated

No.	Hole Size	Thick	Length	Per M
1465	No. 4	.020	47/64″	$17.00
1466	No. 6	.020	47/64″	17.00
1467	No. 8	.020	7/8″	17.00
1468	¼″	.020	13/16″	20.00

SOLDER TYPE LUGS—Hot Tinned



Std. Pkg. 1000

No.	Material	L.	Thick.	Hole	Per M
1484	Ph. Br.	⅝″	.020″	No. 6	$8.50
1485-4	Ph. Br.	9/16″	.012″	No. 4	9.00
1485-6	Ph. Br.	9/16″	.012″	No. 6	9.00
1485-8	Ph. Br.	9/16″	.012″	No. 8	9.00
1485-10	Ph. Br.	9/16″	.012″	No. 10	9.00
1486-4	Ph. Br.	13/16″	.012″	No. 4	9.00
1486-6	Ph. Br.	13/16″	.012″	No. 6	9.00
1486-8	Ph. Br.	13/16″	.012″	No. 8	9.00
1486-10	Ph. Br.	13/16″	.012″	No. 10	9.00
1488-4	Ph. Br.	9/16″	.012″	No. 4	7.25
1488-6	Ph. Br.	9/16″	.012″	No. 6	7.25
1488-8	Ph. Br.	9/16″	.012″	No. 8	7.25
1489	Brass	⅞″	.015″	No. 8	10.00
1490	Brass	¾″	.020″	No. 10	11.00
1491	Copper	15/16″	.020″	No. 10	16.50
1493	Brass	1⅛″	.027″	¼″	28.00
1494-6	Brass	⅝″	.020″	No. 6	9.00
1494-8	Brass	⅝″	.020″	No. 8	9.00
1495	Brass	⅝″	.020″	No. 8	11.00
1496	Brass	¾″	.020″	¼″	17.00
1497	Brass	⅞″	.017″	⅜″	40.00

HEAVY DUTY TERMINAL BOARDS

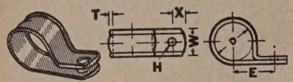
LUG: BRASS, cadmium plated .042 thick spaced ½″ centers. Terminals numbered.
STRIP: X.P. Bakelite ⅞″ wide x 3/32 thick, numbered.
SCREW: Brass, nickel plated 8-32 x 5/16.
Std. Pkg. 25

No.	Terminals	Mtg. Center	Per C
902	2	1½″	$ 34.00c
903	3	2″	47.00c
904	4	2½″	57.00c
905	5	3″	68.00c
906	6	3½″	77.00c
907	7	4″	87.00c
908	8	4½″	98.00c
909	9	5″	108.00c
910	10	5½″	118.00c
911	11	6″	128.00c
912	12	6½″	138.00c

HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

PLASTIC CABLE CLIPS
ETHYL CELLULOSE



These clips are well known for ability to withstand age, moisture, corrosion, shock and vibration. This tough, light weight, durable clip withstands temperatures from —60 to +175 degrees F. Made to Mil Std. 242A (Ships).

T .060 — W 1/2"
X 7/32" — H .204

No.	Hole (D)	E	Per C	Per M
831	1/8	.360	3.90	$32.00
832	3/16	.423	4.00	33.00
833	1/4	.457	4.30	36.00
834	5/16	.498	4.75	40.00
835	3/8	.529	5.00	42.00
836	7/16	.560	5.50	46.00
837	1/2	.592	6.00	50.00
838	9/16	.623	7.00	57.00
839	5/8	.654	7.50	66.00
840	11/16	.752	8.00	71.00
841	3/4	.783	8.50	74.00
842	7/8	.845	9.00	80.00
843	1	.908	9.50	86.00
844	1 1/8	.970	10.00	91.00
845	1 1/4	1.062	10.50	97.00

Standard Package 100

NYLON

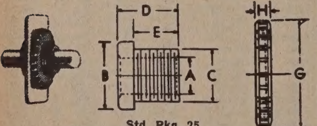
These strong and tough molded nylon clamps hold their shape under severest stress. Do not support combustion. Withstands temperatures from —60 to +250 degrees F. Made to Mil P17091A amend. 2.

	1/8" to 1/2"(D)	9/16" to 1 1/4"(D)
T	.040	.060
W	3/8"	1/2"
X	5/32"	13/64"
H	.167	.204

No.	Hole (D)	E	Per C	Per M
771	1/8	.310	6.00	$50.00
772	3/16	.373	6.50	53.00
773	1/4	.407	7.00	58.00
774	5/16	.448	7.75	64.00
775	3/8	.479	8.00	67.00
776	7/16	.510	8.50	71.00
777	1/2	.542	9.00	75.00
778	9/16	.623	11.00	93.00
779	5/8	.654	12.00	109.00
780	11/16	.752	12.50	115.00
781	3/4	.783	13.50	125.00
782	7/8	.845	14.50	135.00
783	1	.908	17.00	160.00
784	1 1/8	1.002	20.00	180.00
785	1 1/4	1.062	23.00	200.00

Standard Package 100

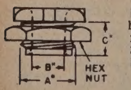
INSULATED RUBBER GROMMETS



Std. Pkg. 25
Black Phenolic—Matte Finish

	BUSHING				COLLAR			
No.	A	B	C	D	E	G	H	Each
931	1/8"	3/8"	1/4"—32	.3750"	1/4"	1/2"	1/8"	$.29
932	3/16"	7/16"	5/16"—32	.4250"	5/16"	5/8"	1/8"	.29
933	1/4"	1/2"	3/8"—27	.4375"	5/16"	11/16"	1/8"	.30
934	5/16"	9/16"	15/32"—32	.4500"	5/16"	7/8"	1/8"	.33
935	3/8"	3/4"	5/8"—27	.4500"	5/16"	1"	1/8"	.36

BAKELITE INSULATING BUSHINGS

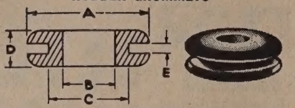


BODY: MOLDED, bakelite, black. U.L. approved recommended for temperatures up to 300 degrees Fahrenheit.
NUT: Steel, cadmium plated.

Std. Pkg. 50

No.	A	B	C	Per C
2136	13/32"	17/64"	1/4"	$14.00
2137	17/32"	5/16"	5/16"	15.00
2138	21/32"	29/64"	3/16"	16.00
2139	27/32"	9/16"	11/32"	17.00

RUBBER GROMMETS



Std. Pkg. 100

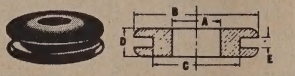
No.	A	B	C	D	E	Per C
2185	5/16"	1/8"	3/16"	3/16"	1/16"	$3.85
2172	7/16"	3/16"	5/16"	3/16"	1/16"	3.30
2170	5/8"	1/4"	3/8"	1/4"	1/16"	3.85
2174	5/8"	5/16"	7/16"	1/4"	1/16"	3.60
2175	11/16"	3/8"	1/2"	1/4"	1/16"	3.85
2177	3/4"	7/16"	9/16"	1/4"	1/16"	3.60
2186	1 1/16"	1/2"	3/4"	5/16"	1/16"	7.00
2187	1 1/8"	5/8"	7/8"	5/16"	1/16"	7.00
2188	1 1/16"	9/16"	3/16"	5/16"	1/16"	7.00
2189	1 "	3/4"	7/8"	5/32"	1/32"	8.50

VINYL GROMMETS

DESCR.: Exceptional aging qualities. High dielectric properties. Oil resistant. Durameter hardness 45 to 85.

No.	A	B	C	D	E	Per C
2145	11/32	1/8	1/4	3/16	1/16	$1.50
2146	7/16	3/16	5/16	7/32	1/16	1.60
2147	9/16	1/4	3/8	1/4	1/16	2.20
2148	5/8	3/8	1/2	1/4	1/16	2.50
2149	13/16	1/2	5/8	9/32	1/16	3.80

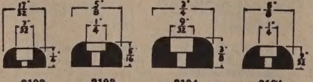
GROMMETS



Formerly listed by Radio Essentials, Inc., and American Radio Hardware Inc., (Their catalog numbers as below, minus first digit.)

No.	A	B	C	D	E	Each
91100	3/8"	13/16"	1/2"	13/32"	9/64"	$12.50
91101	7/8"	1 9/16"	1 1/4"	5/8"	3/16"	22.00
91102	9/32"	5/8"	13/32"	3/8"	5/32"	5.25
91103	3/16"	9/16"	15/32"	3/8"	1/8"	5.00
91104	1/4"	7/8"	5/8"	15/32"	3/16"	9.00
91105	5/8"	1 1/4"	31/32"	19/32"	7/32"	24.00
91106	5/16"	5/8"	1/2"	1/2"	3/16"	11.00
91107	3/8"	5/8"	7/16"	5/16"	3/32"	5.50
91108	1/4"	5/8"	7/16"	17/32"	5/32"	7.00
91109	3/8"	1 1/16"	7/8"	3/8"	1/4"	22.50
91110	13/64	3/8 1/2"	9/32"	7/32"	3/32"	7.00
91111	3/8"	7/8 1"	11/16"	13/32"	9/64"	11.00
91112	49/64	1 5/8"	1 3/32"	5/16"	1/16"	11.75
91113	21/64"	5/8"	13/32"	1/4"	1/16"	4.75
91114	1/8"	11/32"	1/4"	3/16"	1/16"	3.90
91115	1/4"	9/16"	3/8"	1/2"	7/32"	6.75
91116	5/16"	3/4"	1/2"	3/8"	1/8"	7.25
91117	3/8"	9/16"	15/32"	5/16"	1/8"	5.25
91118	3/16"	7/16"	5/16"	7/32"	1/16"	4.00
91119	17/64"	9/16"	13/32"	1/4"	1/16"	4.25
91120	19/64	5/8"	7/16"	1/4"	1/16"	5.00
91121	3/8"	11/16"	1/2"	1/4"	1/16"	4.75
91122	1/4"	1/2"	11/32"	5/32"	1/32"	4.75
91123	9/32"	11/16"	1/2"	7/16"	1/4"	6.00
91124	7/16"	3/4"	9/16"	1/4"	1/16"	5.75

RECESS RUBBER BUMPERS

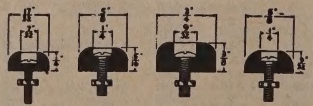


2192 2193 2194 2184

No.	Per C	No.	Per C
2192	$2.50	2194	$5.00
2193	3.25	2184	5.00

Std. Pkg. 100

RUBBER BUMPERS WITH SCREW



2196 2197 2198 2199

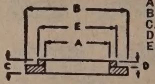
Supplied complete with 1/2" screw and hex nut. For panels up to 3/16" thick. Specify larger screw for larger panels. Std. Pkg. 100

No.	Per C	No.	Per C
2196	$11.00	2198	$12.50
2197	11.50	2199	12.50

FIBRE SHOULDER WASHERS

All material based on N.E.M.A. Standard and A.S.P.M. Spec. D-710.

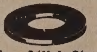
Std. Pkg. 1000



A. Inside Diameter
B. Outside Diameter
C. Thickness Overall
D. Height of Shoulder
E. Diameter of Shoulder

No.	A	(Hole Size)	B	C	D	E	Per M
2150	.140	No. 6	.375	.093	.031	.237	$11.50
2151	.110	No. 4	.250	.062	.031	.187	9.50
2152	.136	No. 6	.250	.093	.031	.187	10.00
2153	.136	No. 6	.312	.093	.031	.187	11.00
2154	.250	1/4"	.500	.068	.028	.312	12.00
2155	.172	No. 8	.375	.093	.031	.246	11.00
2156	.196	No. 10	.375	.093	.031	.308	11.00
2159	.265	17/64"	.500	.097	.031	.365	12.00
2157	.375	3/8"	.750	.093	.031	.500	14.50
2158	.385	3/8"	.625	.093	.031	.500	14.00

FLAT FIBRE WASHERS



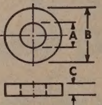
All material based on N.E.M.A. Standard and A.S.P.M. Spec. D-710

Std. Pkg. 1000

No.	[(Hole Size)	I.D.]	O.D.	Thickness	Per M
2160	No. 6	.136	.250	1/16	$9.50
2161	No. 4	.110	.250	1/16	9.50
2162	No. 6	.140	.375	1/16	8.50
2163	No. 8	.172	.375	1/16	8.50
2164	No. 10	.196	.375	1/16	8.50
2165	1/4"	.250	.500	1/16	9.00
2166	1/4"	.250	.500	3/32	9.50
2167	5/16"	.312	.500	1/16	9.00
2168	3/8"	.385	.625	1/16	11.00
2169	3/8"	.375	.750	1/16	14.00

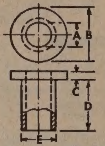
NYLON MOUNTING ACCESSORIES

Natural Color



NYLON FLAT WASHERS

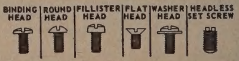
No.	I.D. (A)	O.D.(B)	Thick (C)	Per M
2514	#4(.115)	.281	.047	30.00
2515	#6(.140)	.312	.047	31.00
2516	#8(.170)	.375	.062	35.00
2517	#10(.200)	.437	.062	37.00
2518	1/4"(.260)	.562	.062	40.00



NYLON SPACER BUSHINGS

No.	I.D. (A)	B	C	D	E	Per M
2534	#4(.115)	.235	3/64	1/4	.147	35.00
2535	#6(.140)	.290	3/64	1/4	.170	35.00
2536	#8(.170)	.344	1/16	3/8	.205	37.00
2537	#10(.200)	.399	1/16	3/8	.260	40.00
2538	1/4"(.260)	.513	1/16	3/8	.312	45.00

NYLON SCREWS



Size	BINDING HEAD No.	ROUND HEAD No.	FILLISTER HEAD No.	FLAT HEAD No.	WASHER HEAD No.	HEADLESS SET SCREW No.	Per M
4-40x1/4	2500	2520	2540	2580	2560	2480	50.00
4-40x3/8	2501	2521	2541	2581	2561	2481	51.00
4-40x1/2	2502	2522	2542	2582	2562	2482	52.00
6-32x1/4	2503	2523	2543	2583	2563	2483	51.00
6-32x3/8	2504	2524	2544	2584	2564	2484	51.00
6-32x1/2	2505	2525	2545	2585	2565	2485	52.00
6-32x5/8	2506	2526	2546	2586	2566	2486	52.00
6-32x3/4	2507	2527	2547	2587	2567	2487	53.00
8-32x1/4	2509	2529	2549	2589	2569	2489	51.00
8-32x3/8	2510	2530	2550	2590	2570	2490	52.00
8-32x1/2	2511	2531	2551	2591	2571	2491	52.00
8-32x5/8	2512	2532	2552	2592	2572	2492	53.00

NYLON HEX NUTS

Std. Pkg. 100

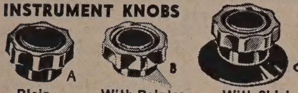
No.	Size	Per C
2554	4-40	$10.00
2555	6-32	10.50
2556	8-32	11.00
2557	10.32	11.50

ALL PRICES SUBJECT TO TRADE DISCOUNT

HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

INSTRUMENT KNOBS

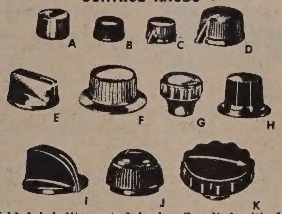


Plain — With Pointer — With Skirt

Molded black bakelite instrument knobs with molded in brass insert for ¼" shafts. **Style B** pointer knobs have white vinyl pointer. **Style C** skirt type have white indicator line. **Style D** same as style A except with protruding brass insert for mounting special dials and pointers. **Std. Pkg. 10**

No.	Style	O.D.	Pointer Size	Height	Per C
2200	A	1⅛"		⅝"	$ 47.00
2201	A	1⅜"		11/16"	49.00
2202	A	1⅝"		¾"	56.00
2203	A	2⅜"		⅞"	80.00
2204	B	1⅛"	¾" pointer	11/16"	74.00
2205	B	1⅜"	1 1/16" pointer	¾"	75.00
2206	B	1⅝"	1 3/16" pointer	13/16"	80.00
2207	B	2⅜"	1 9/16" pointer	15/16"	107.00
2208	C	1⅛"	1½" Skirt	13/16"	89.00
2209	C	1⅜"	1¾" Skirt	⅞"	92.00
2210	C	1⅝"	2 1/16" Skirt	29/32"	109.00
2211	C	2⅜"	3" Skirt	1 1/32"	143.00
2212	D	1⅛"		23/32"	58.00
2213	D	1⅜"		25/32"	59.00
2214	D	1⅝"		27/32"	67.00
2215	D	2⅜"		31/32"	92.00
			SKIRT ONLY		
2216		1½"	Skirt only		18.00
2217		1¾"	Skirt only		21.00
2218		2 1/16"	Skirt only		24.00
2219		3"	Skirt only		35.00

CONTROL KNOBS

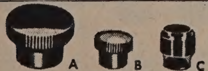


Molded bakelite control knobs. Supplied with ¼" molded hole; complete with set screw. *Recessed for locknut. **Std. Pkg. 25**

No.	Style	O.D.	Height	Color	Per C
2240	A	¾"	19/32"	Black	$20.00
2241	A	¾"	19/32"	Walnut	20.00
2242	B	11/16"	13/32"	Black	16.00
2243	B	11/16"	13/32"	Walnut	16.00
2344*	B	1"	½"	Black	22.00
2245*	B	1"	½"	Walnut	23.00
2275†	B	11/16"	13/32"	Black	36.00
2276†	B	11/16"	13/32"	Red	39.00
2246	C	11/16"	13/32"	Black	16.00
2247	C	11/16"	13/32"	Walnut	16.00
2273†	C	11/16"	13/32"	Black	36.00
2274†	C	11/16"	13/32"	Red	37.00
2248*	D	1"	½"	Black	28.00
2249*	D	1"	½"	Walnut	29.00
2250*	E	1⅛"	9/16"	Black	24.00
2251*	E	1⅛"	9/16"	Walnut	25.00
2252*	F	1½"	11/16"	Black	29.00
2253*	F	1½"	11/16"	Walnut	30.00
2254*	F	1½"	11/16"	Ivory	32.00
2258	G	⅞"	¾"	Black	25.00
2259	G	⅞"	¾"	Walnut	26.00
2265	H	29/32"	19/32"	Black	23.00
2266	H	29/32"	19/32"	Red	24.00
2267	J	1 3/16"	⅝"	Black	21.00
2268	J	1 3/16"	⅝"	Red	23.00
2269	K	⅞"	⅝"	Black	29.00
2270	K	⅞"	⅝"	Red	31.00
2283	L	⅞"	½"	Black	32.00
2284	L	⅞"	½"	Red	33.00

† Supplied with brass insert.

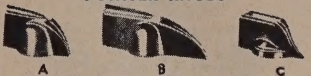
BINDING POST KNOBS



threaded 8-32 brass inserts

No.	Style	O.D.	Height	Color	Per C
2271	A	¾"	½"	Black	$14.00
2272	A	¾"	½"	Red	16.00
2285	B	½"	7/16"	Red	15.00
2286	B	½"	7/16"	Black	15.00
2287	C	½"	½"	Red	15.00
2288	C	½"	½"	Black	15.00

POINTER KNOBS

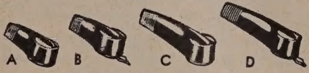


A: Length 1¼" Hgt. ⅝" — B: Length 2" Hgt. ⅝" — C: Length 1¼" Hgt. 9/16"

Molded bakelite pointer knobs, supplied with ¼" plain hole or brass inset. Complete with set screw. **Std. Pkg. 25**

No.	Style	Type Hole	Color	Per C
2220	A	¼" Plain	Black	$18.00
2221	A	¼" Plain	Walnut	19.00
2222	A	¼" Plain	Ivory	20.00
2223	A	¼" Brass Insert	Black	28.00
2224	A	¼" Brass Insert	Walnut	29.00
2225	A	¼" Brass Insert	Red	30.00
2226	B	¼" Plain	Black	36.00
2227	B	¼" Plain	Walnut	37.00
2228	B	¼" Brass Insert	Black	56.00
2229	B	¼" Brass Insert	Walnut	45.00
2230	C	¼" Plain	Black	23.00
2231	C	¼" Plain	Walnut	24.00

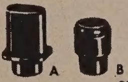
LEVER KNOBS



Molded bakelite lever knobs with ¼" brass insert, complete with set screw. **Std. Pkg. 25**

No.	Style	Length	Height	Color	Per C
2232	A	1⅝"	19/32"	Black	$37.00
2233	A	1⅝"	19/32"	Walnut	38.00
2234	B	1 15/16"	19/32"	Black	64.00
2235	B	1 15/16"	19/32"	Walnut	64.00
2236	C	2½"	⅝"	Black	40.00
2237	C	2½"	⅝"	Walnut	40.00
2238	D	2 13/16"	⅝"	Black	72.00
2239	D	2 13/16"	⅝"	Walnut	73.00

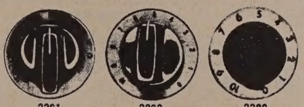
PUSH BUTTON KNOBS



Std. Pkg. 25

No.	Style	O.D.	Height	Color	Per C
2277	A	½"	13/64"	Black	$12.00
2278	A	½"	13/64"	Red	14.00
2279	B	31/64"	9/16"	Black	8.00
2280	B	31/64"	9/16"	Red	10.00

DIAL PLATES



2261 — 2262 — 2290

DIAL: BRASS, chrome silver, 1⅝" O.D.
KNOB: Molded bakelite black (our 2250).
DESCR.: For matching dials on instruments, receivers, amplifiers. Dial has clear black etched numbers. Knob fits 1'4" shaft. **Std. Pkg. 10**

No.	Type	Each
2261	10 to 0 180 Degrees	$1.25
2262	10 to 0 270 Degrees	1.25
	DIAL PLATES ONLY ½" I.D.	
2263	10 to 0 180 Degrees	.75
2264	10 to 0 270 Degrees	.75

KNOB DIAL PLATE

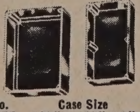
DIAL: Nickel silver, 1⅝" O.D.

KNOB: Molded bakelite.

DESCR.: Engraved numerals, varnish coated. 10 to 360 degrees. Knob fits ¼" shaft. **Std. Pkg. 10**

No. 2290 **$1.25 Ea.**

METER CASES

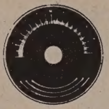


Molded Black, with four corner brass inserts for corner mounting

Std. Pkg. 5

No.	Case Size	Insert	Each
2255	3¾" x 6¼" x 2"	6-32	$1.71
2257	5-9/32" x 6-13/16" x 2-5/16"	4-36	2.13
2289	7" x 8" x 2¾"	6-32	4.00
2256	Cover for 2255		.98
2260	Cover for 2257		1.70

CONTROL PLATES



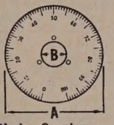
MATERIAL: Brass Black Satin Finish. Etched silver numerals.

DIMENSION: 13/32" I.D. x O.D. as specified.

Std. Pkg. 25

Clockwise Calib. 0.100 No.	Counter-Clockwise Calib. 100-0 No.	Degrees	O.D.	Each
2900	2906	180	2"	$ .75
2901	2907	270	2"	.75
2902	2908	325	2"	.75
2903	2909	180	3½"	1.50
2904	2910	270	3½"	1.50
2905	2911	325	3½"	1.50

DIAL PLATES



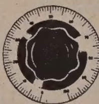
MATERIAL: Brass Chrome Silver Finish.

DESCR.: Mounting Holes 9/64".

Std. Pkg. 25

Clockwise Calib. 0-100 No.	Counter-Clockwise Calib. 100-0 No.	Degrees	A	B	Each
2912	2928	180	1⅛"	⅜"	$ .75
2913	2929	270	1⅛"	⅜"	.75
2914	2930	325	1⅛"	⅜"	.75
2915	2931	360	1⅛"	⅜"	.75
2916	2932	180	1¾"	31/64"	1.00
2917	2933	270	1¾"	31/64"	1.00
2918	2934	325	1¾"	31/64"	1.00
2919	2935	360	1¾"	31/64"	1.00
2920	2936	180	2¾"	¾"	1.25
2921	2937	270	2¾"	¾"	1.25
2922	2938	325	2¾"	¾"	1.25
2923	2939	360	2¾"	¾"	1.25
2924	2940	180	4"	15/16"	2.00
2925	2941	270	4"	15/16"	2.00
2926	2942	325	4"	15/16"	2.00
2927	2943	360	4"	15/16"	2.00

DIAL AND KNOB ASSEMBLY



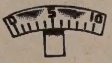
DIAL: Brass Chrome Silver Finish.

KNOB: Molded Bakelite with ¼" Brass insert.

Std. Pkg. 25

Clockwise Calib. 0-100 No.	Counter-Clockwise Calib. 100-0 No.	Degrees	O.D.	Each
2960	2976	180	1⅛"	$2.25
2961	2977	270	1⅛"	2.25
2962	2978	325	1⅛"	2.25
2963	2979	360	1⅛"	2.25
2964	2980	180	1¾"	2.35
2965	2981	270	1¾"	2.35
2966	2982	325	1¾"	2.35
2967	2983	360	1¾"	2.35
2968	2984	180	2¾"	5.00
2969	2985	270	2¾"	5.00
2970	2986	325	2¾"	5.00
2971	2987	360	2¾"	5.00
2972	2988	180	4"	5.75
2973	2989	270	4"	5.75
2974	2990	325	4"	5.75
2975	2991	360	4"	5.75

VERNIER DIAL MARKERS



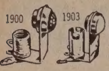
MATERIAL: Brass Chrome Silver Finish.

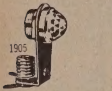
Std. Pkg. 25

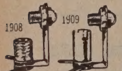
No.	For °Dials	Dial O.D.	Each
2944	180	1⅛"	$.50
2945	270	1⅛"	.50
2946	325	1⅛"	.50
2947	360	1⅛"	.50
2948	180	1¾"	.50
2949	270	1¾"	.50
2950	325	1¾"	.50
2951	360	1¾"	.50
2952	180	2¾"	.50
2953	270	2¾"	.50
2954	325	2¾"	.50
2955	360	2¾"	.50
2956	180	4"	.50
2957	270	4"	.50
2958	325	4"	.50
2959	360	4"	.50

PANEL INDICATORS

Indicators supplied with facetted jewels in Red, Green, Amber, Blue, Opal and White.
SPECIFY COLOR. **Std. Pkg. 10**







½" JEWEL—Mounts in 7/16" Hole

No.	Type	Each
1900	Miniature Screw	$0.45
1901	Candelabra	.55
1902	Candelabra w/Univ. Bkt.	.58
1903	Bayonet	.45
1904	Bayonet w/Univ. Bkt.	.50
1912	½" Jewel Only	.35

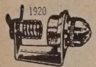
¾" JEWEL—Mounts in 11/16" Hole

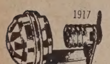
No.	Type	Each
1905	Miniature Screw	$0.95
1906	Bayonet	1.00
1907	Candelabra	1.00
1914	¾" Jewel Only	.70

⅜" JEWEL—Mounts in 5/16" Hole

No.	Type	Each
1908	Miniature Screw	$0.45
1909	Bayonet	.48
1941	⅜" Jewel Only	.35

OPEN TYPE





Jewel Removable From Front

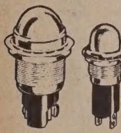
½" JEWEL—Mounts in 11/16" Hole
Std. Pkg. 10

No.	Type	Each
1920	Miniature Screw Open Type	$0.65
1921	Bayonet, Open Type	.65
1942	Bayonet, "U" Bkt.	.90
1943	½" Jewel Only	.42

1" JEWEL—Mounts in 1" Hole

No.	Type	Each
1917	Miniature Screw	$1.60
1918	Bayonet	1.60
1919	Candelabra	1.70
1916	1" Jewel Only	1.25

NEON INDICATORS



UL Approved. Supplies 180 degree light spread. Available in Red, Amber, White, Yellow and Clear caps. Neon removable from front.

Candelabra screw base; 105-125 volts 1" mtg. clearance hole. **Std. Pkg. 10**

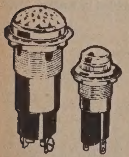
No.	Type	Each
1953		$2.85
1954	Lens Cap Only	1.17

Built-in 56K ohm, ⅓ watt resistor
11/16" mtg. celarance hole.

No.	Type	Each
1955		$2.25
1956	Lens Cap Only	.37

INDICATOR ASSEMBLIES

Enclosed Type

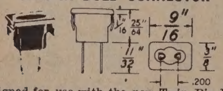


UL Approved. Available in Red, Green, Amber, Blue, Yellow, Clear and White. **Std. Pkg. 10**

Candelabra screw base; 1" mtg. clearance hole; 1" indicator. Uses No. 1916 Jewel.
No. 1957 **$2.87 Ea.**

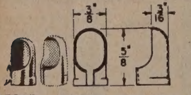
Bayonet base; 11/16" mtg. clearance hole; ½" indicator. Uses No. 1943 jewel.
No. 1958 **$2.14 Ea.**

SNAP-IN BULB CONNECTOR



Designed for use with the new Twin Pin Baseless Miniature Lamps (G.E. #10-25 volts, #12-6.3 volts, or #15-7.0 volts). Easily assembled to any unit for indicating purposes. Withstands excessive temperatures. Snaps into a .500x.296 rectangular hole in panels .032 to .062 thick. Bezel — brass, cad. plated; contacts — brass, silver plated. **Std. Pkg. 25**
No. 1504 **$17.00 Per C**

PILOT LIGHT SHIELD

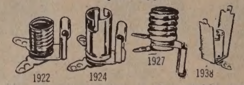


DESCR.: Prevents glare when used in radio receiver meters, etc. Ribbed bottom holds shield securely in place on bulb.

No.	Type	Per C
1963	Brass Cad. Plate	$6.00
1968	Plain Brass	5.50
1969	Flared Brass Cad. Plate	7.00

PILOT LIGHT SOCKETS

Clip-On Type

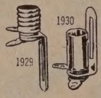


Can be used by clipping on to variable condenser or chassis. All brackets are cadmium plated. **Std. Pkg. 50**

No.	Type	Per C
1922	Miniature Screw Up Clip	$15.50
1923	Miniature Screw Down Clip	15.50
1924	Miniature Bayonet Up Clip	15.50
1925	Miniature Bayonet Down Clip	15.50
1926	Candelabra Up Clip	17.00
1927	Candelabra Down Clip	17.00
1938	Clip-in Socket	15.50

PILOT LIGHT SOCKETS

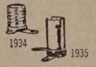
Bracket Type



Std. Pkg. 50

No.	Type	Per C
1928	Miniature Screw Up Bracket	$15.50
1929	Miniature Screw Down Bracket	15.50
1930	Miniature Bayonet Up Bracket	15.50
1931	Miniature Bayonet Down Bracket	15.50
1932	Candelabra Up Bracket	17.00
1933	Candelabra Down Bracket	17.00

UNMOUNTED TYPE SOCKETS



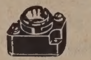
Std. Pkg. 50

No.	Type	Per C
1934	Miniature Screw Base	$15.50
1935	Miniature Bayonet Base	15.50
1936	Candelabra Base	17.00

NAVY TYPE LAMP SOCKETS

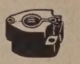
75W-125V

Bayonet Base



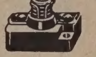
Vibration-proof socket for surface mounting. Made to rigid specifications of black phenolic. Has bayonet sleeve of brass and double contacts of heavy spring phosphor bronze. **Std. Pkg. 10**
No. 1950 **$1.40 Ea.**

SCREW BASE



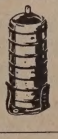
Made of black phenolic to strict requirements. Instead of usual screw shell has phosphor bronze wire coiled spring for perfect contact and elimination of vibration. Designed for soldering wire leads. **Std. Pkg. 10**
No. 1951 **$1.40 Ea.**

SCREW BASE



Easily wired and mounted. A very practical unit made of black phenolic to rigid specifications. Has phosphor bronze spring contact to assure positive contact and elimination of vibration. **Std. Pkg. 10**
No. 1952 **$1.40 Ea.**

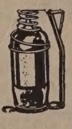
MINI-SHIELDS FOR MINI-TUBES



These Mini-Shields fit snugly on all Mini-Tubes. Serrations in base clip prevent shielded tube from jiggling or working loose. Available in two sizes for 1½ & 2" long tubes. **Std. Pkg. 50**

550	for 2" tube	1¾"	$13.00
551	for 1½" tube	1¼"	11.00
553	3 prong base clip		5.50
554	single clips		3.30

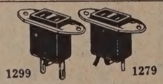
MINI-SPRING FOR MINI-TUBES



Maintains a direct axial pressure downwards plus a sideways support that keeps the tube upright and perpendicular to the chassis. The spring action is constant and resilient permanently. **Std. Pkg. 50**

No.	Type	Per C
560	Short	$17.00
561	Medium	17.00
562	Long	17.00
563	9 Prong	17.00

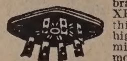
SPACE SAVER APPLIANCE RECEPTACLES



Mounting holes 1⅛" centers from #6 screw. Mounts from either top or bottom of mounting bracket. Has barrier to prevent shorts. Fully approved by UL for 15A-125V, AC and DC. **Std. Pkg. 50**

No.		Per C
1299	With soldering terminals	$20.00
1279	With 8" wire leads	38.00

MINIATURE WAFER SOCKETS

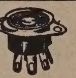


Miniature bakelite sockets with brass cadmium plated contacts. XP bakelite top plate 1/16" thick, bottom plate 3/64" thick; high grade spring brass cadmium plated contact; .095 dia. mounting holes. Std. Pkg. 50

No.	Description	MTG. Cen.	Per C
SEVEN PIN			
880	Eyelet only	⅞"	$11.00
881	Eyelet and Shield	⅞"	11.50
882	Grd Strap and Shield	⅞"	12.00
887	Eyelet only	1"	11.00
888	Eyelet and Shield	1"	11.50
889	Grd Strap and Shield	1"	12.00
NINE PIN			
890	Eyelet only	1⅛"	$14.25
891	Eyelet and Shield	1⅛"	14.75
892	Grd Strap and Shield	1⅛"	15.50

MOLDED MINIATURE SOCKETS

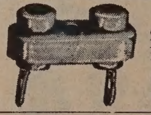
Saddle Type



Molded from either high dielectric black general purpose bakelite or low loss mica-filled bakelite. Both types supplied with center pin. .098 dia. mtg. holes. Std. Pkg. 50

No.	Type	Pin	Mtg. Ctrs.	Mtg. Hole	Per C
GENERAL PURPOSE BLACK BAKELITE					
895	Bottom Mount	7	⅞"	⅝"	$15.00
896	Top Mount	7	⅞"	⅝"	15.00
897	Bottom Mount	9	1⅛"	¾"	18.00
898	Top Mount	9	1⅛"	¾"	18.00
LOW LOSS MICA-FILLED BAKELITE					
883	Bottom Mount	7	⅞"	⅝"	19.00
884	Top Mount	7	⅞"	⅝"	19.00
885	Bottom Mount	9	1⅛"	¾"	22.00
886	Top Mount	9	1⅛"	¾"	22.00

CRYSTAL SOCKET



Glazed ceramic base. Phosphor bronze silver plated contacts spaced .486". Pin diameter .051, mtg. hole .125.
Std. Pkg. 25
No. 1945 **$25.00 Per C**

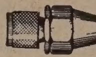
COAXIAL CONNECTORS

Solderless

For Multiple TV Antenna Installations

These connectors are designed to use the inner conductor of the coax cable for the male pin. Takes seconds to assemble! Positive contact. All models are brass, silver-plated, solderless, for RG-8/U. RG-11/U, RG-13/U and RG-59/U cables. **Std. Pkg. 25**

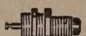
MALE CONNECTOR



Mates with No. 1660 receptacle or No. 1680 fedthru. Packaged individually with complete instruction sheet.

No.		Each
1650		$ 0.80
1650D	Display of 24	19.20

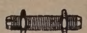
FEMALE CHASSIS CONNECTOR



Mates with No. 1650. Threaded stem is ⅝" long. Packaged individually. For RG-59/U, JRP-59, and RG-6U cables.

No.		Each
1660		$ 0.80
1660D	Display of 24	19.20

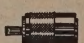
FEEDTHRU ADAPTOR



Mates at either end with a Male No. 1650 connector. Packaged individually.

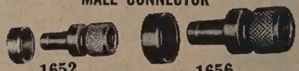
No.		Each
1680		$ 1.00
1680D	Display of 24	24.00

CABLE PLUG



No.		Each
1713	PL-259 Plug only	$1.25

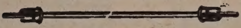
MALE CONNECTOR



Both types designed for use with No. 1752 pilers for quick and easy assembly. Withstands 350 lbs. pull when assembled. No. 1652 for RG 59/U and JRP 59 cables. No. 1656 for RF 6/U Cable. Packaged individually with complete instruction sheet.

No.		Each
1652		$ 0.80
1652D	Display of 24	19.20
1656		1.05
1656D	Display of 24	25.20
1752	Pliers	3.00

JUMPER CORDS



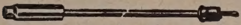
Male Phono Plug (our No. 1201) with finger-grip handle on each end. Std. pkg. 6

No. 631	18 inches	$0.85 Ea.
No. 632	24 inches	.90 Ea.
No. 633	36 inches	.95 Ea.
No. 634	48 inches	1.05 Ea.
No. 635	72 inches	1.15 Ea.
No. 636	120 inches	1.45 Ea.

STEREO JUMPER CORD

745 15 feet $2.00

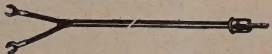
EXTENSION CORDS



Male Phono Plug (our No. 1201) with finger-grip handle on end. Female in-Line Jack (our No. 1237) other end. Std. pkg. 6

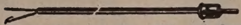
No. 641	18 inches	$1.25 Ea.
No. 642	24 inches	1.30 Ea.
No. 643	36 inches	1.35 Ea.
No. 644	48 inches	1.40 Ea.
No. 645	72 inches	1.50 Ea.
No. 646	120 inches	1.80 Ea.

PHONO PLUG CONNECTOR CORDS



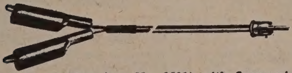
Male Phono Plug (our No. 1201) with finger-grip handle, one end. Spade lugs other end. Std. pkg. 6

No. 668 72 inches $1.00 Ea.



Male Phono Plug (our No. 1201) with finger-grip handle, one end. Other end stripped and tinned. Std. pkg. 6

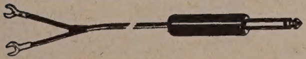
No. 637	36 inches	$0.75 Ea.
No. 638	72 inches	.90 Ea.



Male Phono Plug (our No. 1201) with finger-grip handle, one end. Insulated alligator clips other end. Std. pkg. 6

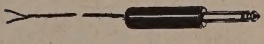
No. 673	36 inches	$1.20 Ea.
No. 674	72 inches	1.50 Ea.

PHONE PLUG CONNECTOR CORDS



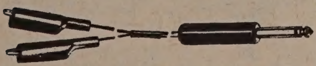
Male Phone Plug (our No. 225) one end. Spade Lugs other end. Std. pkg. 6

No. 665 72 inches $1.65 Ea.



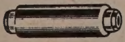
Male Phone Plug (our No. 225) one end. Other end stripped and tinned. Std. pkg. 6

No. 667 72 inches $1.45 Ea.



Male Phone Plug (our No. 225) one end. Insulated alligator clips other end. Std. pkg. 6

No. 664 72 inches $1.90 Ea.



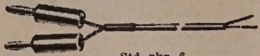
FEED THRU

Accepts phono plug on Each End Std. Pkg. 10

No. 661 $1.00 Ea.

CONNECTOR CORDS

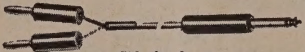
For Imported Hi-Fi Equipment



Std. pkg. 6

Two banana plugs one end, stripped and tinned other end.

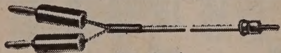
No. 709 72 Inches **$1.45 Ea.**



Std. pkg. 6

Two banana plugs one end, phone plug other end.

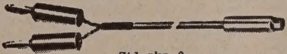
No. 710 72 Inches **$2.00 Ea.**



Std. pkg. 6

Two banana plugs one end, phono plug other end.

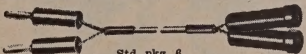
No. 711 72 Inches **$1.65 Ea.**



Std. pkg. 6

Two banana plugs one end, phono jack other end.

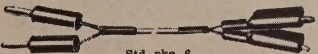
No. 712 72 Inches **$1.90 Ea.**



Std. pkg. 6

Two banana plugs one end, in-line banana jacks other end.

No. 713 72 Inches **$2.25 Ea.**

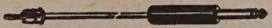


Std. pkg. 6

Two banana plugs one end, ins. alligator clips other end.

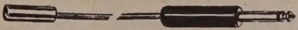
No. 714 72 Inches **$1.90 Ea.**

INPUT-OUTPUT CORDS



Male Phono Plug (our No. 1201) with finger-grip handle, one end. Male Phone Plug (our No. 225) other end. Std. pkg. 6

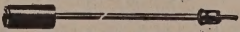
No. 662 72 inches **$1.50 Ea.**



Male Phone Plug (our No. 225) one end. Female In-Line Jack (our No. 1237) other end. Std. pkg. 6

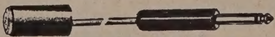
No. 663 72 inches **$2.20 Ea.**

EXTENSION CORD



Male Phono Plug (our No. 1201) one end, In-Line Jack (our No. 274) other end. Std. pkg. 6

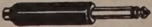
No. 639 72 inches **$2.05 Ea.**



Male Phone Plug (our No. 225) one end. In-Line Jack (our No. 274) other end. Std. pkg. 6

No. 669 72 inches **$2.70 Ea.**

PHONO PLUG TO PHONE PLUG ADAPTER



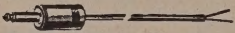
Adapts standard phono plug to phone plug with built in resistor to adapt either crystal or magnetic pickups. Std. pkg. 10.

No. 707	With Resistor	$1.75 Ea.
No. 708	Without Resistor	$1.00 Ea.

HI-FI CORDS FOR REVERE EQUIPMENT

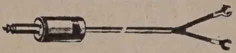
These cords are designed for use exclusively with Revere Tape Recorders and Hi-Fi equipment all using the special type phone plug 3/16″ O.D. necessary for use with this type equipment.

CONNECTOR CORDS



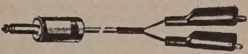
3/16″ O.D. phone plug one end, other end stripped and tinned. Std. pkg. 6

No. 700 120 inches **$2.90 Ea.**



3/16″ O.D. phone plug one end, other end spade lugs. Std. pkg. 6

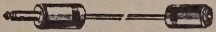
No. 701 120 inches **$3.10 Ea.**



3/16″ O.D. phone plug one end, insulated alligator clips other end. Std. pkg. 6

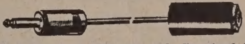
No. 702 120 inches **$3.35 Ea.**

EXTENSION CORDS



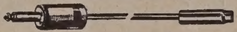
3/16″ phone plug one end, Revere type in-line jack othed end. Std. pkg. 6

No. 703 120 inches **$5.25 Ea.**



3/16″ O.D. phone plug one end, Standard in-line jack other end. Std. pkg. 6

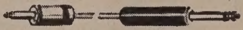
No. 704 120 inches **$4.00 Ea.**



3/16″ O.D. phone plug one end, Phono in-line jack other end. Std. pkg. 6

No. 705 120 inches **$3.65 Ea.**

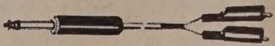
INPUT-OUTPUT



3/16″ O.D. phone plug one end, Standard phono plug other end. Std. pkg. 6

No. 706 120 inches **$3.65 Ea.**

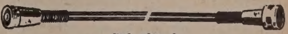
CONNECTOR CORD FOR WEBCOR TAPE RECORDER



Three way phone plug with built in resistor to cut down on audio one end, insulated alligator clips other end. Std. pkg. 6

No. 676 120 inches **$3.25 Ea.**

COAXIAL EXTENSION CABLE

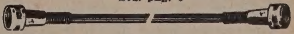


Std. pkg. 6

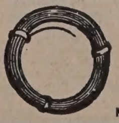
No. 687	36 inches	$2.00 Ea.
No. 688	72 inches	2.50 Ea.
No. 689	144 inches	3.60 Ea.

COAXIAL JUMPER CABLE

Std. pkg. 6



No. 694	36 inches	$2.25 Ea.
No. 696	72 inches	2.75 Ea.
No. 697	144 inches	3.85 Ea.



HI-FI WIRE

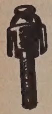
Cond.	**Strand.**	**Wall**
22	7/30	.062
Cap.	**Shield**	**O.D.**
37 Mmf.	Spiral	.140

No. 765 100-ft. **$5.50 Ea.**

HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

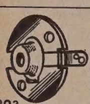
PHONO PLUGS



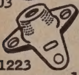
RCA Type Phone Plug. For use with record players, recording and reproducing equipment, etc. Extra large hole in cap (.175") for coaxial cable. Std. Pkg. 100

No.	Type	Per C
1201	Long Pin (1" overall)	$6.00
1202	Short Pin (13/16" overall)	6.00

PHONO JACKS



1203



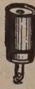
1223

Female for No. 1201 plug. Single prong positive grip jack mounted on 1/16" bakelite with 11/16" mounting centers. Std. Pkg. 100

No.		Per C
1203		$7.00
1203-1	Insulating Washer	3.00

Small, compact . . . where space is at a premium. 7/16" Mtg. Ctrs.
Std. Pkg. 100

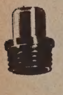
No.	Per C
1223	$12.00



Space Saver . . . Rivets and grounds to chassis. Mounts in 19/64" hole.
Std. Pkg. 50

No.	Per C
1233	$11.00

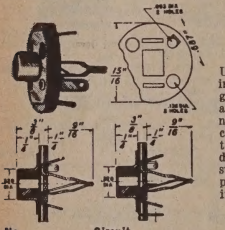
PANEL MOUNT PHONO JACK



Mounts in 29/64" hole (.453) with nut and washer. Easy installation for the home Hi-Fi enthusiast. Std. Pkg. 50

No.	Per C
1247	$35.00

STEREO PHONO JACKS



Used for stereo input, phonograph input and amplifier connections. Switches out single track audio for double track stereo when phono plug is inserted.

Std. Pkg. 50

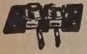
No.	Circuit	Per C
1215	2-Cond. Closed	$35.00
1216	3-Cond. Closed	35.00

HANDY GRIP PHONO PLUG

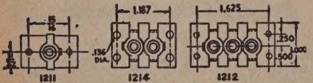
Quick connect: strip wire, solder inner conductor to pin and either solder braid to lug or crimp to lug. Fits all standard phono jacks. Std. Pkg. 100

No.	Per C
1246	$15.00

PHONO JACKS



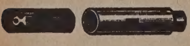
Used on recording units, phono plays, etc. Std. pkg. 50



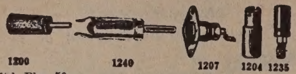
No.	Per C
1211—Single Jack	$12.00
1214—Double Jack	16.00
1212—Triple Jack	20.00
1214-1—Insulating Washer for No. 1214	4.00

See additional listings of phonojacks on page 767.

SHIELDED EXTENSION JACK



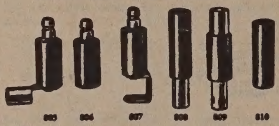
Brass shell, cadmium plated, 1 7/16" long, with black bakelite insert. Provides insulation for solder-coated positive grip contact. Uses No. 1201 phono plug. Std. Pkg. 50
No. 1237 .... $40.00 Per C



Std. Pkg. 50

No.	Type	Per C
1200	Motorola Type Plug	$17.00
1240	Motorola Type Plug	17.00
1207	Antenna Connector, Takes 1200 Plug	22.00
1204	Lead-in Adapter, converts Motorola pin plug to Delco	15.00
1235	Female for #1200 plug, without flange	12.00

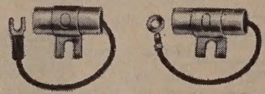
Auto Radio IGNITION SUPPRESSORS



Std. Pkg. 50

Cat. No.	Type	Per C
805	Snap-On Type Suppressor	$45.00
806	Univ. Type with Double Thrd.	45.00
807	Angle Type Suppressor	45.00
808	Distributor Screw Type	45.00
809	Distributor Plug-in Type	45.00
810	Double Screw Type	45.00

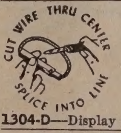
AUTO RADIO CONDENSERS



Eliminates radio interference caused by auto electrical system. Fits all cars — Proven quality — Guaranteed long life.

No.	Cap.	Type	Each
811	.5 MFD	General, Univ.	$1.00
812	.25 MFD	Universal	.90

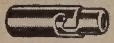
WIRED FUSE RETAINER



Simply cut wire, strip and put in line. Will accommodate either 3 A.G. 20 amp. or SFE 14 amp. fuse.

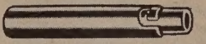
No.		Each
1304	Std. Pkg. 25	$ 0.50
1304-D—Display of 24		12.00

ANTENNA CONNECTOR



For use as connection of auto radio antenna lead-in to auto radio receiver. Std. Pkg. 50
No. 1300 .... $17.00 Per C

FUSE RETAINER



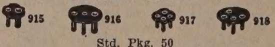
Recommended for use in auto radio power supply cables. Std. Pkg. 50
No. 1301 .... $22.00 Per C

PARTS FOR CONNECTOR & RETAINER

Std. Pkg. 100

No.	Type	Per C
1305	Male Cap for #1300 & #1301	$3.30
1306	Female Shell for #1300	3.85
1307	Contact for #1300 & #1301	5.50
1308	Spring for #1300 & #1301	1.10
1309	Washer for #1300 & #1301	.55
1310	Insulating Tube for #1301	1.00
1311	Female Shell for #1301	5.50

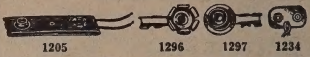
BATTERY PLUGS



Std. Pkg. 50

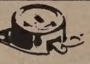
		For Batteries			
No.	Voltage	Eveready No.	RCA No.	Philco No.	Per C
915	1½ "A"	741, 742 743, 1052P	VS004, VS005 VS007, VS008	P94, P96 P8F1	$10.00
916	7½ "A"	687	VS003	—	11.00
917	6 "A", 90 "B"	—	VS044	P60A8F4	10.00
918	6 "A", 90 "B"	—	VS046	P41AFL	11.00

BATTERY CONNECTORS



No.	Type	Std. Pkg.	Per C
1205	67½ Volt	25	$30.00
1206	90 Volt	25	40.00
1296	Female	100	6.50
1297	Male	100	6.00
1210	67½ V. Small	25	30.00
1234	For Miniature 45V "B"	25	40.00

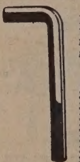
MINIATURE HUM BALANCING CONTROLS



Rheostat rated at 2 watts, grounded rotor, tolerance ± 20%. Screwdriver slot adjustment from front or rear. Useful for hum balancing, centering, hold and locking, linearity, AGC sensitivity, etc.
Std. Pkg. 25

No.	Total Res. Ohms	Per C
2291	50	$65.00
2292	100	65.00
2293	300	65.00
2294	500	65.00
2295	700	65.00
2296	1000	65.00
2297	2000	65.00
2298	3000	65.00
2299	4000	65.00

HEX AND SPLINE KEYS



Made of special alloy steel, tempered to avoid brittleness and impose maximum resistance to torsional strain. Ends ground for easy insertion.
Std. Pkg. 50

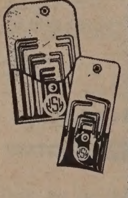
HEX KEYS

No.	Screw Size	Per C
340	No. 2	$13.00
341	No. 3, 4	13.00
342	No. 5, 6	13.00
343	No. 8	13.00
344	No. 10	15.00
345	1/4"	15.00
346	5/16"	15.00

SPLINE KEYS

No.	Screw Size	Per C
370	No. 4	$13.00
371	No. 5	13.00
372	No. 6	13.00
373	No. 8	13.00
374	No. 10	15.00
375	¼"	15.00
376	5/16"	15.00

HEX AND SPLINE KEY KITS



Attractive tearproof vinyl plastic kit with individual pockets for each of six keys in kit.
Std. Pkg. 25.

Kit of 6 hex keys for screws from No. 3 to 5/16".
No. 355 $100.00 per C

Kit of 6 spline keys for screws from No. 5 to 5/16".
No, 385 $100.0 per C

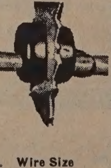
Combination Kit of 3 hex and 3 spline keys for No. 6-8-10 screws.
No. 390 $100.00 per C

Kit of 7 hex keys for screws from No. 2 to 5/16" and 4 spline keys Nos. 4, 6, 8, and 10.
No. 395 $200.00 per C

DISPLAY CARDS

No.		Each
355D	Display of 24 Hex Kits No. 355	$24.00
385D	Display of 24 Spline Kits No. 385	24.00
390D	Display of 24 Comb. Kits No. 390	24.00
395D	Display of 20 Comb. Kits No. 395	40.00

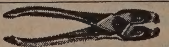
NYLON STRAIN RELIEF BUSHINGS



One piece construction. Eliminates grommets, wire knots and costly labor. Completely insulates wire from chassis and prevents cord pull push and twist. No. 937 ideal for small mike cables; No. 938 for line cords; No. 939 for Co-Ax Wire.
Std. Pkg. 50

A: Chassis Hole
B: Diameter of head
C: Length
D: Chassis Thickness

No.	Wire Size	A	B	C	D	Per C
937	1/8-3/16"	.375	.440	.415	to 1/16"	$6.00
938	SP-1 & SPT-1	.437	.468	.406	to 1/16"	6.00
939	.235-.265	.500	.560	.438	to 3/32"	7.00



No. 940 Setting Pliers $13.00 Each

SMITH
CODE COURSE

INTERNATIONAL MORSE CODE COURSES

5 RECORDS IN ALBUM— 78 R.P.M.

Ten Lessons Up to 15 Words Per Minute

The complete ablum includes 5 records and 20-page SMITH Instruction Book

The very latest in scientific code-teaching techniques! The SMITH system uses the proven EAR & EYE method, with carefully graduated lessons based on military teaching procedures.

No.	Description	Each
2400	Complete Album with Instruction Book	$10.00
2415	20-Page Instruction Book Only	.80

INTERNATIONAL MORSE
CODE COURSE

SINGLE RECORD 33-1/3 R.P.M.

TEN LESSONS UP TO 15 WORDS PER MINUTE

Complete on Two Sides

This twelve inch long play record contains all ten of the Code Course Lessons listed above, five on each side. 20-Page SMITH Instruction Book is included, and the record is housed in attractive, sturdy jacket with International Morse Code table on reverse side.

No. 2420 **Each $8.00**

INTERNATIONAL MORSE
ADVANCED
CODE COURSE

ADVANCED CODE COURSE

Single Record— 33⅓ R.P.M.

TWELVE LESSONS 16 to 25 Words Per Minute

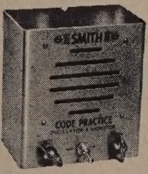
Specially prepared to increase skills in copying code at high speeds. 12 step-by-step lessons are provided plus specific directions with each. 20 page Advanced Code Instruction Book included. Record comes in sturdy jacket with International Morse Code table on reverse side.

No. 2435 Advanced Code Course complete with 20 page instruction Book $8.00

BEGINNERS AND ADVANCED CODE COURSES IN COMBINATION PACKAGE

Advanced Code Course #2435 PLUS Beginners' Code Course #2420 (see above) both complete with 20-page instruction books, attractively packaged in combination carton.

No. 2436 **$15.00**



CODE PRACTICE OSCILLATOR & MONITOR

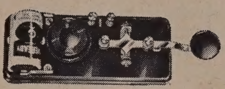
Ideal for the beginner as well as the experienced operator, this versatile instrument can be used as a code practice oscillator, as a keying monitor to check ICW signals, or as a monitor for phone signals.

Two tubes are used, in an up to date circuit that provides continuously variable tone and volume. Self-contained PM speaker affords ample volume for group use, with phone jack available for individual headphone listening.

The handsome Hammertone finish cabinet has additional provision for wall mounting, an exclusive SMITH feature that eliminates need for valuable desk space. The unit is designed for use on 110 Volts AC or DC, and is supplied complete with two tubes.

No.	Description	Each
2425	Kit	$22.50*
2426	Wired	$30.00*

* These Items Subject to Special Jobber Discount



CODE PRACTIC KEY AND BUZZER SET

COMPACT — INGENIOUS — HANDSOME!

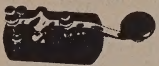
Perfect for the beginner! High frequency buzzer has variable pitch adjustment. Sturdy fully adjustable key and terminal binding posts, all plated. Uses one standard flashlight cell. All elements mounted on heavy molded bakelite base 6¾" x 2¾". Supplied less battery.

No. 2443 **$5.50 Ea.**

BUZZER ONLY

Complete with black bakelite cover.

No. 2444 **Each $2.00**

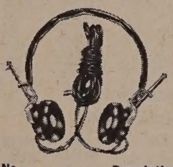


TELEGRAPH KEY

A well-built, smooth operating key, low priced, ideal for the beginner. Molded bakelite base and knob. Simple adjustments. All metal parts plated, ⅛" silver contacts. Base size 3¼ x 1$^{13}/_{16}$"

No. 2442 **Each $2.25**

HIGH SENSITIVITY HEADPHONES



The latest in deluxe design, with many features of more expensive types. Featherweight construction assures fatigue-free use. Alnico V magnets, dual coil construction provide excellent tonal fidelity. Adjustable vinyl covered headband, molded plastic cases. Cord equipped with phone tips.

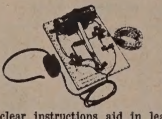
No.	Description	Each
2440	Double Headphones	$4.50*
2441	Single Headphone	$2.75*

*These Items Subject to Special Jobber Discount.

RUBBER EAR CUSHIONS

Finest quality soft rubber ear cushions, fit all standard earphones. For comfortable listening over long periods of time.

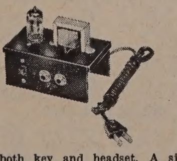
No. 2410 **Per Pair $1.50**



CRYSTAL RADIO KIT

Ideal for the beginner in electronics. Printed template, illustrates just where the components are to be placed, while clear instructions aid in learning basic rudiments of radio. Does not require any batteries or external power. Comes complete with all American made professional parts. Operates with the most modern, glass enclosed germanium diode, similar to those used in modern computers. A screwdriver is the only tool required to assemble the crystal radio kit.

No. 2432 **Each $6.00**

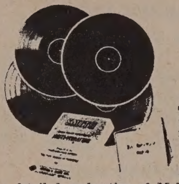


JUNIOR CODE OSCILLATOR

For Headset Only

A neat, compact little unit that provides a clean audio tone, ideal for code practice. It is equipped with two standard telephone jacks, to take phone plugs of both key and headset. A single 12AX7 tube is used in an improved circuit, designed for operation on 110 volts AC or DC. Available in wired or kit form, either type supplied with tube.

No.	Description	Each
2430	Kit	$11.00*
2431	Wired	$14.50*



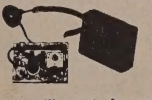
COMPLETE MULTI-VIBRATOR COURSE

"AutoTutor" Modern Teaching Technique, using new "re-inforced learning" principles. Designed as a refresher course for the practicing technician or engineer; as a detailed exploration of Multi-vibrators, for student electronic technician. Complete course consists of 4 hi-fi unbreakable 33⅓ RPM recordings, a 56-page instruction book, illustrations and checksheets, in attractive album package.

No. 2450 .... Suggested Resale ... **$12.60**

TRANSISTOR RADIO KIT

This personal portable Transistor Radio can be easily assembled, requiring nothing more than a screw driver. Printed template. The 25' antenna, supplied with set, will enable the listener to enjoy seven to eight stations at a distance of up to 100 miles from the broadcasting station. The transistor radio will operate for more than 1000 hours on the two miniature batteries included. All American made, high-impact plastic case, professional parts supplied, nothing else to buy.



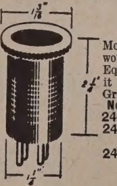
No. 2433 **Each $11.00**

Semi-Automatic

TELEGRAPH KEY

A well-constructed easy-operating automatic key at a very low price! Provides numerous adjustments to suit any operator. Well balanced, has large control lever, tension adjustments on both dot and dash sides, scale type weight on pendulum arm. Molded bakelite weighted base is equipped with suction cup feet. A really substantial, good looking Key that the Hams will Love at First Sight! Complete with Cord and Wedge. Dustproof cover.

No. 2445 **Each $20.00**

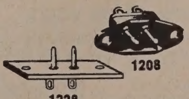


PLUG-IN COILS

For Short Wave and Broadcast

Molded bakelite, black. Precision wound low loss forms. Four prongs. Equipped with special rim making it easy to insert and pull. out. Grooved for color coding.

No.	Description	Each
2408	No Winding	$0.60
2413	Set of 4— 9½ to 217 Meters	5.00
2414	Set of 2— 190 to 500 Meters	4.00



INTERLOCK PLUGS

Std. Pkg. 100

No.	Type	Per C
1208	Recessed	$13.00
1228	Flush	9.00

AMERICAN-FOREIGN PLUG ADAPTERS

Streamlined bakelite plug adapters. Adapts from American to Foreign type.

No.	Female End	Male End	Per C
852	American	Continental	$40.00
856	American	British	40.00
851	Continental Plug		30.00

STEEL MACHINE SCREWS

Round Head Cadmium Plated

No.	Per M	Size	No.	Gross
1000M	$6.25	6-32 x ¼"	1000G	$1.05
1001M	6.75	6-32 x ⅜"	1001G	1.15
1002M	7.25	6-32 x ½"	1002G	1.20
1006M	8.00	8-32 x ¼"	1006G	1.35
1007M	8.65	8-32 x ⅜"	1007G	1.50
1008M	9.30	8-32 x ½"	1008G	1.55

BRASS MACHINE SCREWS

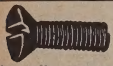
Round Head Nickel Plated

No.	Per M	Size	No.	Gross
1044M	$9.00	4-36 x ¼"	1044G	$1.50
1045M	10.00	4-36 x ⅜"	1045G	1.60
1046M	11.00	4-36 x ½"	1046G	1.70
1047M	9.00	4-40 x ¼"	1047G	1.50
1048M	10.00	4-40 x ⅜"	1048G	1.60
1049M	11.00	4-40 x ½"	1049G	1.70
1050M	12.00	6-32 x ¼"	1050G	2.00
1051M	13.00	6-32 x ⅜"	1051G	2.10
1052M	13.75	6-32 x ½"	1052G	2.30
1056M	16.00	8-32 x ¼"	1056G	2.65
1057M	18.00	8-32 x ⅜"	1057G	3.25
1058M	22.00	8-32 x ½"	1058G	3.70

BINDING HEAD SCREWS

Steel Nickel Plated

No.	Per M	Size	No.	Gross
1425M	$6.25	6-32 x ¼"	1425G	$1.05
1426M	6.75	6-32 x ⅜"	1426G	1.15
1427M	7.25	6-32 x ½"	1427G	1.20
1428M	8.00	8-32 x ¼"	1428G	1.35
1429M	8.65	8-32 x ⅜"	1429G	1.50
1430M	9.30	8-32 x ½"	1430G	1.55

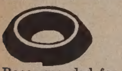


RACK SCREWS

Oval Head, Steel, Nickel Plated

Specially recommended for mounting panels in racks and cabinets. Available in gross packages or packed 1000 to the box.

No.	Per M	Size	No.	Gross
1111M	$10.25	10-32 x ½"	1111G	$1.75
1112M	12.00	10-32 x ¾"	1112G	2.00



COUNTERSUNK WASHERS

Brass, Nickel Plated

Recommended for use with Rack Screws designated above.

No.	Per M	Size	No.	Gross
1115M	$4.50	6	1115G	$0.75
1116M	5.00	8	1116G	.85
1117M	9.00	10	1117G	1.80

FLAT WASHERS

Brass Nickel Plated

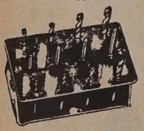
No.	Per M	Size	Material	No.	Gross
1149M	$11.00	4x⅜x.037"	Brass	1149G	$1.75
1150M	8.00	6x⅜x.012"	Phos. Br.	1150G	1.30
1151M	8.00	8x⅜x.012"	Phos. Br.	1151G	1.30
1152M	11.00	10x⅜x.037"	Brass	1152G	1.75

STEEL SPADE BOLTS

Steel, cadmium plated finish, threaded 6-32, thread length 5/16", length overall ¾". Std. Pkg. 500

No. 1500 $17.00 Per M

DRILL & TAP KIT



for

- **Hams**
- **Laboratories**
- **Servicemen**

Specially designed for electronic bench duty, this kit contains the most popular sizes of taps and corresponding tap and body drills for precise and speedy work. Drill and tap size identifications are engraved on the steel cadmium plated drill stand, to facilitate correct replacement as needed. Contains: 4-40, 6-32, 8-32, 10-32 Taps with eight corresponding tap and body drills.

No. 750 Kit	Each $9.00
No. 749 Stand Only	Each $1.10

Replacement Drills Available.

VOLUME CONTROL AND TOGGLE SWITCH NUTS

Nickel Plated

Std. Pkg. 500

No.	Type	Dimensions	Per M
1195	Vol. Cont. Brass	⅜-32x½x3/32	$25.00
1199	Vol. Cont. Steel	⅜-32x½x3/32	20.00
1196	Toggle Sw. Hex	15-32x9/16x5/64	30.00
1197	Toggle Sw. Ring	15-32x⅝x1/16	50.00

LOCK WASHERS

Steel, Cadmium Plated Internal Teeth

No.	Per M	Type	No.	Gross
1127M	$5.00	No. 4	1127G	$0.85
1128M	5.00	No. 6	1128G	.85
1129M	5.75	No. 8	1129G	.95
1130M	6.10	No. 10	1130G	1.00
1132M	7.75	¼"	1132G	1.30
1131M	13.00	⅜"	1131G	2.00

Narrow Rim Control Shaft Lockwasher Internal Teeth

1145M	$13.00	⅜"	1145G	$2.00

Narrow Rim Toggle Switch Lockwasher Internal Teeth

1146M	$13.00	15/32"	1146G	$2.00

External Teeth

No.	Per M	Type	No.	Gross
1139M	$5.00	No. 4	1139G	$0.85
1140M	5.00	No. 6	1140G	.85
1141M	5.75	No. 8	1141G	.95
1141M	6.10	No. 10	1142G	1.00
1144M	7.75	¼"	1144G	1.30
1143M	13.00	⅜"	1143G	2.00

HEXAGON NUTS

Brass Nickel Plated

No.	Per M	Size	No.	Gross
1188M	$10.00	4-36 x ¼"	1188G	$1.65
1168M	10.00	4-40 x ¼"	1168G	1.65
1189M	12.90	6-32 x ¼"	1189G	2.10
1190M	12.90	6-32 x 5/16"	1190G	2.10
1192M	14.10	8-32 x 5/16"	1192G	2.30
1193M	15.00	10-32 x 5/16"	1193G	2.65

Steel, Cadmium Plated

No.	Per M	Size	No.	Gross
1179M	$8.75	6-32 x ¼"	1179G	$1.45
1180M	9.25	6-32 x 5/16"	1180G	1.55
1181M	9.50	8-32 x 5/16"	1181G	1.60

SELF TAPPING SCREWS CADMIUM PLATED

Round Head—Type A—Sharp Point

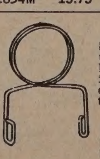
No.	Per M	Size	No.	Gross
1801M	$10.00	4 x ½	1801G	$1.65
1802M	10.00	6 x ¼	1802G	1.65
1803M	10.00	6 x ⅜	1803G	1.65
1804M	13.50	6 x ½	1804G	2.25
1805M	12.50	8 x ⅜	1805G	2.10
1806M	15.75	8 x ½	1806G	2.65

Round Head—Type Z—Blunt Point

No.	Per M	Size	No.	Gross
1807M	$10.00	4 x ½	1807G	$1.65
1808M	10.00	6 x ¼	1808G	1.65
1809M	10.00	6 x ⅜	1809G	1.65
1810M	13.50	6 x ½	1810G	2.25
1811M	12.50	8 x ⅜	1811G	2.10
1812M	15.75	8 x ½	1812G	2.65

Slotted Hex Head—Type B—Blunt Point

No.	Per M	Size	No.	Gross
1830M	$10.00	6 x ¼	1830G	$1.65
1831M	10.00	6 x ⅜	1831G	1.65
1832M	13.50	6 x ½	1832G	2.25
1833M	12.50	8 x ⅜	1833G	2.10
1834M	15.75	8 x ½	1834G	2.65



SPRING GRID CLIP

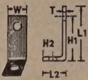
Small and large type grid clip used to replace clips that have lost their tension due to heat causing poor contact. Available in bulk or 24. $.45. List envelopes on attractive display card.

Std. Pkg. 100

No.	Type	Type	Per C	Display	Each
1288	1X2-6BQ6		$8.00	1288D	$10.80
1289	1B3-6BG6		8.00	1289D	10.80

ANGLES

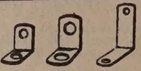
Steel, Cadmium Plated



L1-Lgth. of Leg
L2-Lgth. of Leg
T -Thickness
H1-Hole Location
H2-Hole Location
W -Width

Std. Pkg. 100

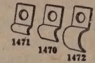
No.	"L1"	"L2"	"T"	"H1"	'H2'	'W'	'H1' Hole	'H2' Hole	Per C
1444	7/16"	7/16"	.032"	17/64"	¼"	⅜"	#8	7/64"	$1.20
1445	½"	½"	.050"	11/32"	23/64"	½"	#4	7/64"	1.50
1446	49/64"	27/64"	.030"	39/64"	15/64"	5/16"	#6	9/64"	1.50
1447	1 9/64"	½"	.050"	61/64"	23/64"	5/16"	#4	7/64"	1.70



BRASS AND STEEL ANGLES

Std. Pkg. 100

No.	Material	Size	Per C
1474	Brass N.P.	½" x ½"	$3.00
1475	Brass N.P.	⅝" x ⅝"	6.00
1476	Steel H.T.	¾" x ¾"	2.50
1477	Steel H.T.	⅝" x 1⅛"	2.50



CABLE CLAMPS

Std. Pkg. 100
Steel Cadmium Plated with No. 8 Mtg. Hole.

No.	Length	Width	Cable	Per C
1471	⅝"	⅜"	⅛"	$1.30
1470	¾"	⅜"	¼"	1.40
1472	1"	⅜"	½"	1.50

FAHNESTOCK SPRING BATTERY CLIPS

Clips are made of brass, nickel plated and are available in the single and double clip types.

Std. Pkg. 100

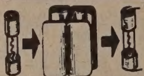
No.	Type	Length	Per C
539	Single	⅝"	$ 2.00
533	Single	¾"	2.40
534	Single	1"	2.80
535	Double	1½"	14.00
536	Double	2 1/16"	16.00

FUSE MOUNTING BASES

Black bakelite, panel mount type. Will accommodate the 3 A G Auto type cartridge fuse.

Std. Pkg. 25

No.	Type	Per C
530	Single	$20.00
531	Double	35.00
532	Clip Only	2.50

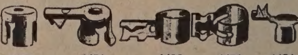


TV SNAP-ON FUSE HOLDER

Snap fuse clip over burned out fuse. Insert new fuse without soldering. Std. Pkg. 50

No.		Each
529		$0.27
529D	Display of 24 No. 529	6.48

GRID CAPS



Std. Pkg. 100

No.	Tube Type	Per C
1450	⅜" Glass Tubes	$2.00
1451	⅜" Glass Tubes	4.50
1452	⅜" Glass Tubes	2.00
1453	⅜" Glass Tubes	2.00
1454	¼" Mini Tubes	2.00

TV ANTENNA LUG

Solderless Type

A secure, swift, positive and permanent method of connecting TV wire to antenna. Simply strip wire, coil around groove and fold over. Insures positive contact. Std. Pkg. 100

No.	Type	Length	Hole	Per C
1460	Double Cup	13/16"	No. 10	$3.30
1461	Double Cup	15/16"	1/4"	3.50

AUTOMATIC WIRE STRIPPERS

For Industrial Production, Electrical and Electronic Servicing, Laboratories. Single Squeeze operation — Easy Grip — Precision Action — Adjustable Blades. FOR WIRE SIZES, #8 to # 30 STRANDED OR SOLID.

OPEN-SHUT TYPE

For Stripping Solid Wires

No.	Wire Size	Each
1320	10 to 22	$7.95
1321	14 to 30	7.95
1322	16 to 22	7.95
1323	10 to 18	7.95
1324	8 to 10	7.95
1325	POSJ-18	7.95
1326	300 ohm	7.95

Suggested Dealer Net $4.55 Each

TRIGGER TYPE

Strips Solid or Stranded Wire

No.	Wire Size	Each
1330	10 to 22	$9.90
1331	14 to 30	9.90
1332	16 to 22	9.90
1333	10 to 18	9.90
1334	8 to 10	9.90
1335	POSJ-18	9.90
1336	300 ohm	9.90

Suggested Dealer Net $5.95 Each

FULLY AUTOMATIC TYPE

Strips Solid or Stranded Wire

No.	Wire Size	Each
1340	8 to 22	$9.90
1341	14 to 30	9.90
1342	16 to 22	9.90
1343	10 to 18	9.90
1344	8 to 10	9.90
1345	POSJ-18	9.90
1346	300 ohm	9.90

Suggested Dealer Net $5.95 Each

ADJUSTABLE STOP INCLUDED WITH EACH STRIPPER

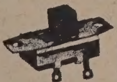
- **Speeds Production Stripping**
- **Eliminates Wire Waste**

Easy to put on and take off. Ideal for production work where many wires must be stripped to exactly the same length. Max. length of stripping with stop, ⅞". **Supplied free with every stripper.**

REPLACEMENT BLADES are available for all wire strippers. Add suffix "B" to catalog number of stripper for required replacement blade. 1320 series and 1330 series blades are interchangable.

All Blades .... **$1.75 Each**

Suggested Dealer Net $1.05 Each



SLIDE SWITCHES

With Detent

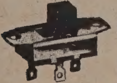
UL APPROVED

General purpose switches, used on hi-fi equipment, test instruments, etc. Steel cadmium plated housings. Black phenolic buttons. **Std. Pkg. 25**

No.	Circuit	Rating 125V	Each
515	SPST	.75 Amp.	$.19
516	SPDT	.75 Amp.	.20
517	DPST	.5 Amp.	.25
518	DPDT	.5 Amp.	.30

TRIPLE THROW

No.	Circuit	Rating 125V	Each
1053	SP3T	.5 Amp.	$.48
1054	DP3T	.5 Amp.	.50



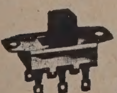
SLIDE SWITCHES

With Spring Return

Steel Cadmium plated housings. Black Phenolic Buttons.

Std. Pkg. 25

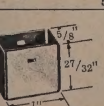
No.	Circuit	Rating 125V	Each
568	SPST	.5 Amp.	$.40
569	SPDT	.5 Amp.	.48



SLIDE SWITCHES

With Detent
CENTER OFF
Std. Pkg. 25

No.	Circuit	Rating 125V	Each
577	SP 3-Pos.	.5 Amp.	$.48
578	DP 3-Pos.	.5 Amp.	.50



SLIDE SWITCH SHIELD

For terminal protection or electrostatic shielding. Shield is made of steel, cadmium plated, with fibre insulation.

Std. Pkg. 25

No. 519 **Each $.10**

(See Full Listing of C-H Switches on page 769)

NYLON LACING CORD

The lacing cord meets specification for yardage and tensile strength and is made to meet Spec. MIL-T-713-A, Type S, Composition P, Classes 3, 2 and 1. Supplied in 1-lb. tubes. Natural color.

NATURAL COLOR

No.	Class	Test	Yardage	Each
734	1	70 lb.	600	$15.00
735	2	48 lb.	800	15.50
736	3	32 lb.	1140	16.00

BLACK COLOR

No.	Class	Test	Yardage	Each
791	1	70 lb.	600	$18.00
792	2	48 lb.	800	18.50
793	3	32 lb.	1140	19.00

LINEN LACING CORD

Made from pure flax, waxed and mildew proofed. Six, Eight and Twelve ply cord meet Spec. MIL-T-713-A. Type N, Classes 3, 2 and 1 respectively. Natural color.

NATURAL COLOR

No.	Tube	Ply	Class	Ydge.	Each
725	4 oz.	4	—	210	$2.75
726	8 oz.	4	—	425	5.00
727	1 lb.	4	—	850	9.00
728	4 oz.	6	3	150	$2.75
729	8 oz.	6	3	300	5.00
730	1 lb.	6	3	600	9.00
737	4 oz.	8	2	115	$2.75
738	8 oz.	8	2	235	5.00
739	1 lb.	8	2	470	9.00
731	4 oz.	9	—	100	$2.75
732	8 oz.	9	—	200	5.00
733	1 lb.	9	—	400	9.00
740	4 oz.	12	1	75	$2.75
741	8 oz.	12	1	150	5.00
742	1 lb.	12	1	300	9.00

BLACK COLOR

No.	Tube	Ply	Class	Ydge.	Each
794	1 lb.	4	—	850	$10.00
795	1 lb.	6	3	600	10.00
796	1 lb.	8	2	470	10.00
797	1 lb.	9	—	400	10.00
798	1 lb.	12	1	300	10.00

CONTACT STRIPS

CONTACTS: STEEL, cadmium plated, spring tension spaced ⅜" centers.

STRIP: X.P. Bakelite ⅝" wide x .062 thick.

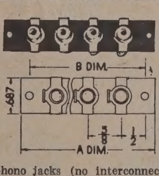
BRACKET: Steel cadmium plated .140 I.D. for No. 6 screw.

DESCR.: Quick connect and disconnect. Spring tension contacts for .125 dia. contact pins. Single hole mounting. Even number contacts have mtg. bracket in center; odd number contacts have extra contact on right. Special contacts on request.

No.	Contacts	Std. Pkg.	Per C
822	2	100	$11.00
823	3	50	14.00
824	4	25	17.00
825	5	25	20.00
826	6	25	25.00

(See Full Listing of Terminal Strips on page 759)

MULTIPLE PHONO JACKS



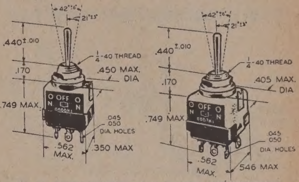
Individual phono jacks (no interconnected grounds) kmounted on narrow width bakelite strip.

Std. Pkg. 50

No.	No. of Jacks	Dimensions "A"	Dimensions "B"	Per C
1261	1	1⅜"	1.000	$ 8.00
1262	2	2"	1.625	14.50
1263	3	2⅝"	2.250	23.50
1264	4	3¼"	2.875	28.50
1265	5	3⅞"	3.500	36.00
1266	6	4½"	4.125	42.00
1267	7	5⅛"	4.750	49.00
1268	8	5¾"	5.375	56.00

(See Full Listing of Phono Jacks on page 764)

NEW SMITH PRODUCTS



C-H MINIATURE MILITARY SWITCHES

Extremely compact, highly reliable power or dry circuit switches. Usable as a pre-set switch in aircraft recognition systems; for walkie-talkies; for electronic instruments and communication systems.

RATINGS: 2 Amps. @ 28 V.D.C. 1 Amp @ 50 V.D.C. 2 Amps @ 115 V.A.C.

MINIMUM RATING: 30 Microamps. @ 50 Millivolts.

SINGLE POLE

WEIGHT: 5.0 Grams.

CUBIC CONTENT: .147 cubic inches "behind panel" volume. **Std. Pkg. 10**

HHS	C-H		Circuit	Each
1841	8866K1	SPDT	On-Off-On	$10.00
1842	8866K2	SPDT	Mom. On-Off-Mom. On	10.15
1843	8866K3	SPDT	On-Off-Mom. On	10.15
1844	8866K4	SPDT	On-None-On	10.00
1845	8866K5	SPST	On-Off-None	10.00
1846	8866K6	SPST	None-Off-Mom. On	10.15
1847	8866K7	SPST	On-None-Off	10.00

DOUBLE POLE

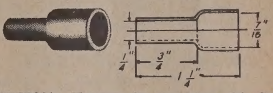
WEIGHT: 6.5 grams.

CUBIC CONTENT: .230 cubic inches "behind panel" volume. **Std. Pkg. 10**

HHS	C-H		Circuit	Each
1851	8867K1	DPDT	On-Off-On	$12.55
1852	8867K2	DPDT	Mom. On-Off-Mom. On	14.60
1853	8867K3	DPDT	On-Off-Mom. On	14.60
1854	8867K4	DPDT	On-None-On	12.55
1855	8867K5	DPST	On-Off-None	12.55
1856	8867K6	DPST	None-Off-Mom. On	14.60
1857	8867K7	DPST	On-None-Off	12.55

(See full listing of AHH Switches on page 768)

TELEPHONE CORD SLEEVE



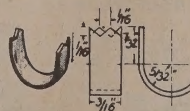
MATERIAL: Neoprene in accordance with Grade SC415AFF Per Mil-R-3065:

DESCR.: Used on Government cord assemblies for Strain Relief, Dust and Moisture Seal.

Std. Pkg 100

No.	Per C
748	$11.00

CORD CLAMP STRAIN RELIEF



MATERIAL: Cold Rolled Steel. Dull finish per Spec. QQ-S-636 and M228 per Spec. Mil-F-14072.

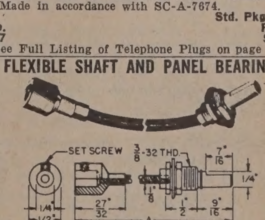
DESCR.: Used on Government Cord Assemblies. Made in accordance with SC-A-7674.

Std. Pkg. 100

No.	Per C
747	$3.00

(See Full Listing of Telephone Plugs on page 754)

FLEXIBLE SHAFT AND PANEL BEARING



Combination of ¼" Coupler at one end and Panel Bearing Assembly at other. High quality phosphor bronze non-magnetic, non-rusting flexible shaft, turns at any angle up to 90°. Free from backlash.

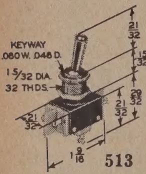
Std. Pkg. 25

No.	Length "A"	Each
165	4$\frac{1}{16}$"	$0.00
166	7$\frac{1}{16}$"	0.00

(See Full Listing of Shaft Accessories on page 755)

ARROW HART & HEGEMAN SWITCHES

SMALL CANOPY TYPE SWITCHES



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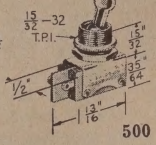


500

Laminated type 15/32-32 slotted sleeve, nickel finish. Supplied with hex nut and knurled nut. Solder terminals. SPST rated at 3 amps-250 volts AC-DC; all other rated at 1 amp-250 volts, 3 amps-125 volts AC-DC. Std. pkg. 10

BAT LEVER POSITIVE ACTION

15/32" long shaft No.	Each	CIRCUIT	13/32" long shaft No.	Each
510	$1.15	SPST	584	$1.15
511	1.45	SPDT	585	1.45
542	1.55	2-Circ.	586	1.55
512	2.10	DPST	587	2.10
513	2.40	DPDT	588	2.40

BAT LEVER MOMENTARY ACTION

15/32" long shaft

Normally Closed (ON)		CIRCUIT	Normally Open (OFF)	
1020	$1.85	SPST	1024	$1.85
1021	2.15	SPDT	——	——
1022	2.80	DPST	1025	2.80
1023	3.10	DPDT	——	——

BALL LEVER POSITIVE ACTION

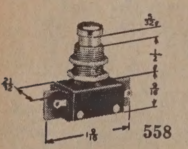
15/"32 long shaft		CIRCUIT	3/4" long shaft	
500	$1.15	SPST	501	$1.40
502	1.45	SPDT	503	1.80
540	1.45	2 Circ.	541	1.80
504	2.10	DPST	505	2.40
506	2.40	DPDT	507	2.65

6" WIRE LEADS POSITIVE ACTION

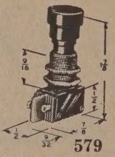
15/32" long shaft

BALL LEVER		CIRCUIT	BAT LEVER	
1010	$1.40	SPST	1015	$1.40
1011	1.95	SPDT	1016	1.95
1012	2.15	2 Circ.	1017	2.15
1013	2.75	DPST	1018	2.75
1014	3.35	DPDT	1019	3.35

MOMENTARY PUSH SWITCHES



558



579

Laminated type 15/32-32 x 9/16" slotted sleeve, nickel finish. Supplied with hex nut and knurled nut. All switches accept snap on button. SPST rated at 3 amps-250 volts AC-DC. All others rated at 1 amp-250 volts. 3 amps-125 volts AC-DC.

SUPPLIED LESS BUTTON: ORDER BUTTON SEPARATELY.

QUICK MAKE AND BREAK

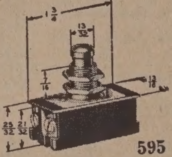
Normally Closed (ON) No.	Each	CIRCUIT	Normally Open (OFF) No.	Each
552	$2.25	SPST	555	$2.25
556	2.60	SPDT	——	——
557	2.55	2 Circ.	——	——
564	3.10	DPST	558	3.10
559	3.45	DPDT	——	——

SLOW MAKE AND BREAK

Rated at 1 amp.-125 volts AC

Normally Closed (ON)		CIRCUIT	Normally Open (OFF)	
582	$1.25	SPST	579	$1.25
580	1.60	2 Circ.	——	——

STANDARD DUTY MOMENTARY PUSH SWITCHES



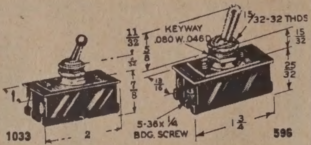
595

Molded phenolic base. 15/32-32 x 7/16" long slotted sleeve, nickel finish. Screw terminals. Supplied with hex nuts. All switches accept snap on button. Two circ. rated at 3 amps.-250 volts, 6 amps-125 volts. AC-DC. All others rated at 6 amps-250 volts, 12 amps-125 volts AC-DC. DPST also rated at 1 HP at 250 volts AC-DC.

Normally Closed (ON) No.	Each	CIRCUIT	Normally Open (OFF) No.	Each
1026	$3.30	SPST	544	$3.30
1027	3.50	SPDT	——	——
1028	3.50	2 Circ.	——	——
1029	3.30	DPST	595	3.30

STANDARD DUTY TOGGLE SWITCHES

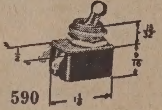
QUICK MAKE AND BREAK



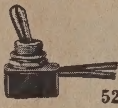
1033 596

BALL LEVER		CIRCUIT	BAT LEVER	
1030	$2.20	SPST	597	$2.20
1031	2.20	SPDT	598	2.20
1032	2.20	2 Circ.	599	2.20
1033	2.20	DPST	596	2.20

MIDGET SIZE TOGGLE SWITCHES



590


527

Molded phenolic base, 15/32-32 x 15/32" long slotted sleeve, nickel finish. Side connected silver plated solder contacts. Supplied with hex nut and knurled nut. SPST rated at 3 amps-250 volts; 6 amps.-125 volts; all others rated at 1 amp-250 volts, 6 amps.-125 volts.

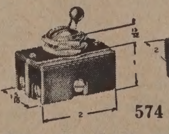
BALL LEVER No.	Each	CIRCUIT	BAT LEVER No.	Each
590	$1.30	SPST	591	$1.30
589	1.65	SPDT	592	1.65
594	1.70	2 Circ.	593	1.70

6" WIRE LEADS

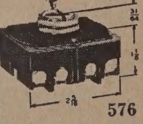
BALL LEVER		CIRCUIT	BAT LEVER	
526	$1.60	SPST	527	$1.60
538	2.10	SPDT	528	2.10
543	2.35	2 Circ.	514	2.35

EXTRA HEAVY DUTY POWER SWITCHES

3 POSITION—POSITIVE CENTER OFF



574



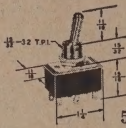
576

Slotted sleeve 3/4-32, nickel finish. Screw terminals. Supplied with 2 hex nuts. Rated at 5 amps-250 volts. 10 amps-125 volts plus HP rating shown below. Std. pkg. 5

No.	Circuit	Description	Each
574	DPDT	3/4 HP 250 volts AC-DS	$ 8.15
575	TPDT	1/2 HP 115/230 volts AC, 3 phase	12.55
576	4PDT	1/2 HP 115/230 volts AC, 2 phase	16.75

(See Miniature Military Switches on page 767)

INTERMEDIATE SIZE TOGGLE SWITCHES



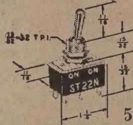
523

Molded phenolic base. 15/32-32 x 15/32" long slotted sleeve, nickel finish. Supplied with hex nut and knurled nut. Back connected silver plated solder contacts. SPDT rated at 1 amp-250 volts, 6 amps-125 volts AC-DC; all others rated at 3 amps-250 volts, 6 amps-125 volts AC-DC.

BAT LEVER

POSITIVE ACTION No.	Each	CIRCUIT	MOMENTARY ACTION No.		Each
520	$1.55	SPST	524	OFF	$2.20
521	1.85	SPDT	549	——	2.50
583	1.90	2 Circ.	——	——	——
522	2.25	DPST	537	OFF	3.15
523	2.60	DPDT	525	——	3.45

ST TYPE TOGGLE SWITCHES



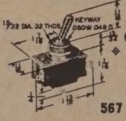
548

MEETS AN SPEC. JAN-23
Rated at 3 amps-250 volts, 6 amps-125 volts AC-DC.

No.	AWS No.	CIRCUIT	Position	Each
545	ST 12A	SPST	OFF-ON	$2.05
546	ST 12D	SPDT	ON-ON	2.34
1040	ST 12V	2-Circ.	ON-OFF	2.40
547	ST 22K	DPST	OFF-ON	2.95
548	ST 22N	DPDT	ON-ON	3.20

MOMENTARY NORMALLY OPEN (OFF)

No.	AWS No.	CIRCUIT	Position	Each
1041	ST 12C	SPST	OFF-ON	$2.70
1042	ST 22M	DPST	OFF-ON	3.55



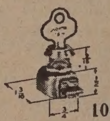
567

3 POSITION CENTER OFF

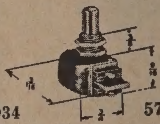
Rated at 3 amps-250 volts, 6 amps-125 volts AC-DC.

No.	CIRCUIT	Each
566	SPDT	$2.80
565	2 Circ.	3.15
567	DPDT	3.45

CANOPY TYPE ROTARY SWITCHES



1034

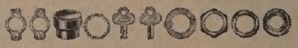


570

Laminated type. 11/32-32 x 15/32" sleeve, nickel finish. Solder lugs. Supplied with hex nut and dress nut. SPST rated at 3 amps-250 volts AC-DC, all others rated at 1 amp-250 volts, 3 amps-125 volts. AC-DC. Key removable in OFF position only on SPST and DPST—key removable in both positions on all others. 1⅛" shaft.

KEY TYPE		CIRCUIT	ROTARY TYPE	
1034	$2.20	SPST	570	$1.45
1035	2.50	SPDT	571	1.75
1036	2.55	2 Circ.	——	——
1037	3.15	DPST	572	2.40
1038	3.45	DPDT	573	2.70

SWITCH ACCESSORIES


508 509 581 1146 1170 1171 1172 1196 1197 1198

No.	Description	Per C
508	ON-OFF name plate	9.00
509	HI-LO name plate	9.00
581	Snap-On Button (Red or Black)	40.00
1146	Narrow Rim Lockwasher	1.30
1170	Key—Remove off position	35.00
1171	Key—Remove both positions	35.00
1172	Locking Ring	4.00
1196	Hex Nut—Brass N.P.	3.00
1197	Ring Nut—Brass N.P.	5.00
1198	Dress Nut—Brass N.P.	30.00

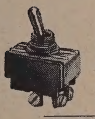
CUTLER-HAMMER SWITCHES

TOGGLE SWITCHES
STANDARD DUTY

15 Amps. 125 Volts — 10 Amps. 250 Volts
AC, UL Approved 15/32″ shank; slow-make and break; bakelite case. AC rated only for longer life and greater capacity. **Std. Pkg. 10**

BACK CONNECTED LUG TERMINALS

No.	C-H No.	Type	Each
966	7501K13	SPST	$1.15
967	7505K4	SPDT	1.35
968	7561K4	DPST	1.80
969	7565K5	DPDT	2.10
970	7611K2	TPST	3.65
971	7615K2	TPDT	4.50



BACK CONNECTED SCREW TERMINALS

No.	C-H No.	Type	Each
972	7500K14	SPST	$1.35
973	7504K4	SPDT	1.60
974	7560K5	DPST	2.10
975	7564K6	DPDT	2.60
976	7610K2	TPST	4.25
977	7614K2	TPDT	5.40

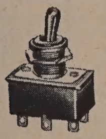
CENTER OFF STANDARD DUTY TOGGLE SWITCHES

BACK CONNECTED LUG TERMINALS

No.	C-H No.	Type	Each
978	7503K13	SPDT	$1.35
979	7563K4	DPDT	2.10
980	7613K2	TPDT	4.50

BACK CONNECTED SCREW TERMINALS

No.	C-H No.	Type	Each
981	7502K13	SPDT	$1.60
982	7562K4	DPDT	2.60
983	7612K2	TPDT	5.40

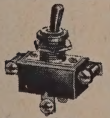


TOGGLE SWITCHES
LIGHT DUTY

AC-DC, UL Approved; 15/32″ shank; quick make — quick break; bakelite case. Unusually small size for electrical capacity. **Std. Pkg. 10**

BACK CONNECTED LUG TERMINALS

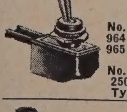
			Current Rating		
No.	C-H No.	Type	125 V.	250 V	Each
950	8280K16	SPST		3 Amps.	$1.15
951	8381K8	SPST	6 Amps.	3 Amps.	1.35
952	8282K14	SPDT	3 Amps.	1 Amp.	1.45
953	8284K14	2 circ.	3 Amps.	1 Amp.	1.55
954	8360K7	DPST		3 Amps.	2.10
955	8370K7	DPST	6 Amps.	3 Amps.	2.30
956	8363K7	DPDT		3 Amps.	2.40
957	8373K7	DPDT	6 Amps.	3 Amps.	2.60



SIDE CONNECTED SCREW TERMINALS

			Current Rating		
No.	C-H No.	Type	125 V.	250 V.	Each
958	8285K8	SPST		3 Amps.	$1.40
959	8396K8	SPST	6 Amps.	3 Amps.	1.60
960	8297K8	SPDT	3 Amps.	1 Amp.	1.85
961	8372K7	DPST	6 Amps.	3 Amps.	2.75
962	8365K7	DPDT		3 Amps.	3.15
963	8375K7	DPDT	6 Amps.	3 Amps.	3.35

WIRE LEADS— SIX INCHES LONG

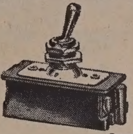


		Current Rating	
No.	C-H No.	Type	125 V.
964	8290K16	SPST	
965	8391K8	SPST	6 Amps.
No.	C-H No.	250 V.	Each
250 V.	Each	3 Amps.	$1.40
Type	125 V.	3 Amps.	1.60

PUSH BUTTON MOMENTARY SWITCHES

AC-DC, UL Approved, 15/32″ shank; rated at ¾ Amp, 125 volts — ¼ Amp,250 volts.

No.	C-H No.	Type	Term.	Ea.
992	8411K4	SP Norm. Op	Lug	$0.80
993	8411K3	SP Norm. Op	Screw	.90
994	8411K8	SP Norm. Cl	Lug	.60
995	8411K7	SP Norm. Cl	Screw	.65



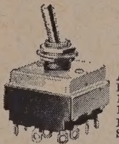
TOGGLE SWITCHES
HEAVY DUTY

AC - DC, UL Approved; 15/32″ shank; quick make-quick break; bakelite case. Screw Terminals.

Std. Pkg. 10

			Current Rating		
No.	C-H No.	Type	125 V	250-V	Each
984*	7321K3	SPST	12 A	6 A	$2.20
985*	7320K3	DPST	12 A	6 A	2.20
986+	7361K5	SPST	15 A	10 A	3.85
987+	7360K8	DPST	15 A	10 A	3.85
988±	7402K4	DPST		20 A	5.40

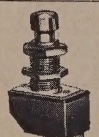
*1 Hp — 125/250V. +1½ Hp — 125/250V.
±1½ Hp — 125V, 2 Hp — 250V.



FOUR POLE SWITCHES

AC-DC GOVERNMENT APPROVED PER MIL-S-6745. 15/32″ shank. Rated 10 amps, 115 volt AC—20 amps, 28 volts DC (Nominal rating per pole) SEALED LEVER **Std. Pkg. 10**

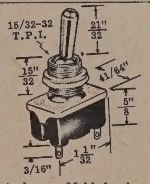
No.	C-H No.	Type	Terminals	Each
944	7661K6	4 PST	Solder Lugs	$7.60
945	7665K4	4 PDT	Solder Lugs	9.35
946	7660K8	4 PST	Screw Term.	8.25
947	7664K3	4 PDT	Screw Term.	10.25
		CENTER OFF		
948	7663K5	4 PDT	Solder Lugs	$ 9.35
949	7662K5	4 PDT	Screw Term.	10.25



PUSH BUTTON SWITCHES

Push to make—Push to break
AC-DC, UL Approved; 11/16″ shank; bakelite case. Pushing the button once closes the contacts. Pushing it again opens the contacts. Rated at 6 Amps. 125 Volts; 3 Amps. 250 Volts. **Std. Pkg. 10**

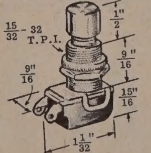
No.	C-H No.	Type	Term.	Each
989	7206K4	SPST	Lug	$1.60
990	7208K4	SPST	Screw	1.80
991	7207K4	SPST	Wire	1.80



MIDGET TOGGLE SWITCH

Bat lever. Molded phenolic base. 15/32-32 x 15/32″ long. Slotted sleeve, nickel finish. Supplied with hex nut and knurled nut. Back connected silver plated solder contacts. Rated 1 amp.-250 volts; 3 amps.-125 volts. **Std. Pkg. 10**

No.	Circuit	Each
920	SPST	$1.55
921	SPDT	1.85
922	2 Circ.	1.90
923	DPST	2.25
924	DPDT	2.60



MIDGET MOMENTARY SWITCH

SLOW MAKE AND BREAK

Molded Phenolic Base 15/32-32 x 9/16″ slotted sleeve, Nickel Finish. Supplied with hex nut and knurled nut. Side connected silver plated solder contacts. Rated at 3 amps.-120 volts A.C. Supplied less button; order button separately. **Std. Pkg. 10**

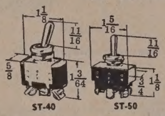
Normally Closed (ON)

No.	Circuit	Each
925	SPST	$1.25
926	2 Circ.	1.35

Normally Open (OFF)

No.	Circuit	Each
927	SPST	$1.25

"ST" SWITCHES



Nominal Rating Per. Pole:
10 Amps. 115 V. AC.
20 Amps. 28 V. DC
Std. Pkg. 10

ST-40 SERIES — Single Pole With Screw Terminals

HHS	C-H	JAN	Type	Circuit	Each
1720	8801K13	ST40A	SPST	On-None-Off	$2.80
1721	8813K12	ST40B	SPST	On-None-Mom-Off	3.10
1722	8811K12	ST40C	SPST	On-None-Mom-On	3.10
1723	8810K12	ST40D	SPDT	On-None-On	3.40
1724	8800K13	ST40E	SPDT	On-Off-On	3.40
1725	8804K12	ST40F	SPDT	On-None-Mom-On	3.65
1726	8812K13	ST40G	SPDT	Mom-On-Off-Mom-On	3.65
1727	8809K13	ST40H	SPDT	Off-On-Mom-On	3.65

All ST-40 Switches have Sealed Lever.

ST-42 SERIES — Single Pole With Solder Lugs

HHS	C-H	JAN	Type	Circuit	Each
1730	8803K6	ST42A	SPST	On-None-Off	2.10
1731	8819K5	ST42B	SPST	On-None-Mom-Off	2.30
1732	8817K5	ST42C	SPST	On-None-Mom-On	2.30
1733	8816K5	ST42D	SPDT	On-None-On	2.45
1734	8802K6	ST42E	SPDT	On-Off-On	2.45
1735	8805K5	ST42F	SPDT	On-None-Mom-On	2.70
1736	8818K5	ST42G	SPDT	Mom-On-Off-Mom-On	2.70
1737	8815K6	ST42H	SPDT	Off-On-Mom-On	2.70

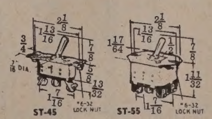
ST-50 SERIES — Double Pole With Screw Terminals

HHS	C-H	JAN	Type	Circuit	Each
1740	8822K8	ST50K	DPST*	On-None-Off	3.75
1741	8828K5	ST50L	DPST	On-None-Mom-Off	4.50
1742	8826K5	ST50M	DPST	Off-None-Mom-On	4.50
1743	8824K8	ST50N	DPDT*	On-None-On	4.50
1744	8820K10	ST50P	DPDT*	On-Off-On	4.50
1745	8830K5	ST50R	DPDT	On-None-Mom-On	4.90
1746	8834K4	ST50S	DPDT*	Mom-On-Off-Mom-On	4.90
1747	8832K4	ST50T	DPDT*	On-Off-Mom-On	4.90

* These switches are equipped with Sealed Lever.

ST-52 SERIES — Double Pole With Solder Lugs

HHS	C-H	JAN	Type	Circuit	Each
1760	8823K5	ST52K	DPST	On-None-Off	2.50
1761	8829K5	ST52L	DPST	On-None-Mom-Off	2.80
1762	8827K5	ST52M	DPST	Off-None-Mom-On	2.80
1763	8825K5	ST52N	DPDT	On-None-On	2.80
1764	8821K5	ST52P	DPDT	On-Off-On	2.80
1765	8831K5	ST52R	DPDT	On-None-Mom-On	3.25
1766	8835K3	ST52S	DPDT	Mom-On-Off-Mom-On	3.25
1767	8833K3	ST52T	DPDT	On-Off-Mom-On	3.25



ST-45 SERIES

Nominal Rating Per Pole: 15 Amps. 115 V. AC.
25 Amps. 28 V. DC.
Std. Pkg. 10

HHS	C-H	JAN	Type	Circuit	Each
1770	8201K6	ST45A	SPST	On-None-Off	3.25
1771	8213K6	ST45B	SPST	On-None-Mom-Off	3.60
1772	8211K7	ST45C	SPST	Mom-On-None-Off	3.60
1773	8210K7	ST45D	SPDT	On-None-On	3.95
1774	8200K7	ST45E	SPDT	On-Off-On	3.95
1775	8215K4	ST45F	SPDT	On-None-Mom-On	4.25
1776	8212K6	ST45G	SPDT	Mom-On-Off-Mom-On	4.25
1777	8209K6	ST45H	SPDT	On-Off-Mom-On	4.25

ST-55 SERIES

Nominal Rating Per Pole: 20 Amps. 115 V. AC.
30 Amps. 28 V. DC.

All ST-55 Series Switches are equipped with Sealed Lever.
Std. Pkg. 10

HHS	C-H	JAN	Type	Circuit	Each
1780	8701K14	ST55K	DPST	On-None-Off	6.85
1781	8713K14	ST55L	DPST	On-None-Mom-Off	7.50
1782	8711K14	ST55M	DPST	Off-None-Mom-On	7.50
1783	8710K14	ST55N	DPDT	On-None-On	8.20
1784	8700K14	ST55P	DPDT	On-Off-On	8.20
1785	8715K14	ST55R	DPDT	On-None-Mom-On	8.90
1786	8712K14	ST55S	DPDT	Mom-On-Off-Mom-On	8.90
1787	8709K14	ST55T	DPDT	On-Off-Mom-On	8.90
1788	8708K14	ST55U	DPDT*	On-Off-Mom-On	9.05

* Same as ST55T except with jumper across outside terminals to control one circuit.

HERMAN H. SMITH, INC.

Exclusive Distributors of KULKA BARRIER TERMINAL BLOCKS To Radio Parts Jobbers Only

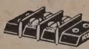
To Series Number Add Suffix	With Screw Terminals 600-2					With One-Sided Solder Terminals 600-¾ST-2		With Two-Sided Solder Terminals 600-ST-2		With Bottom Solder Terminals 600-Y-2	With Side And Bottom Terminals 600-XY-2			With Bottom Terminals 600-Z-2	
	General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF' / MDG 'B'	MAI-60 'D'	General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF' / MDG 'B'	MAI-60 'D'	General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF' / MDG 'B'	MAI-60 'D'
600- SERIES	Height 13/32", Width ⅞", Thickness ¼", Terminals ⅜" Centers, 5/16" Mtg., 5-40 x ¼ Screws.														
	600-					**600-¾ST-**		**600-ST-**		**600-Y-**	**600-XY-**			**600-Z-**	
- 1	$ .15	$ .16	$ .30	$. 42	$ .50	$ .19	$ .20	$ .38	$ .45	$ .53	$ .23	$ .24	$ .46	$ .53	$ .61
- 2	.24	.25	.48	.68	.82	.32	.33	.64	.76	.89	.40	.41	.80	.92	1.05
- 3	.33	.36	.66	.91	1.09	.44	.47	.88	1.00	1.18	.60	.63	1.20	1.32	1.50
- 4	.42	.46	.84	1.15	1.38	.57	.61	1.14	1.30	1.53	.73	.81	1.46	1.62	1.85
- 5	.51	.56	1.02	1.40	1.68	.69	.74	1.38	1.58	1.86	.93	.98	1.86	2.06	2.34
- 6	.59	.65	1.18	1.62	1.94	.83	.89	1.66	1.86	2.18	1.07	1.17	2.14	2.34	2.66
- 7	.68	.75	1.36	1.89	2.27	.95	1.02	1.90	2.14	2.51	1.23	1.34	2.46	2.70	3.07
- 8	.77	.85	1.54	2.11	2.53	1.08	1.16	2.16	2.42	2.84	1.40	1.52	2.80	3.16	3.58
- 9	.86	.95	1.72	2.36	2.83	1.21	1.30	2.42	2.72	3.24	1.57	1.70	3.14	3.44	3.91
- 10	.95	1.05	1.90	2.61	3.13	1.33	1.43	2.66	2.99	3.55	1.73	1.87	3.46	3.76	4.28
- 11	1.03	1.13	2.06	2.83	3.40	1.45	1.55	2.90	3.25	3.86	1.89	2.03	3.78	4.13	4.69
- 12	1.12	1.23	2.24	3.08	3.70	1.58	1.69	3.16	3.54	4.20	2.06	2.21	4.12	4.50	5.11
- 13	1.21	1.33	2.42	3.32	3.98	1.71	1.83	3.42	3.82	4.54	2.23	2.39	4.46	4.86	5.52
- 14	1.31	1.44	2.62	3.60	4.32	1.84	1.97	3.68	4.13	4.90	2.40	2.57	4.80	5.05	5.77
- 15	1.40	1.54	2.80	3.85	4.62	1.96	2.10	3.92	4.41	5.18	2.56	2.74	5.12	5.61	6.38
- 16	1.49	1.64	2.98	4.10	4.92	2.09	2.24	4.18	4.70	5.52	2.73	2.92	5.46	5.88	6.70
- 17	1.57	1.70	3.14	4.31	5.17	2.21	2.37	4.42	4.96	5.82	2.89	3.09	5.78	6.32	7.18
- 18	1.66	1.83	3.32	4.56	5.47	2.34	2.51	4.68	5.25	6.16	3.06	3.27	6.12	6.69	7.60
- 19	1.75	1.93	3.50	4.81	5.77	2.46	2.64	4.92	5.52	6.48	3.22	3.44	6.44	7.04	8.00
- 20	1.84	2.03	3.68	5.06	6.07	2.60	2.78	5.20	5.82	6.83	3.40	3.70	6.80	7.42	8.43
- 21	1.93	2.13	3.86	5.30	6.36	2.72	2.90	5.44	6.10	7.16	3.56	3.90	7.12	7.78	8.84
- 22	2.02	2.23	4.04	5.55	6.66	2.86	3.07	6.14	6.40	7.51	3.74	3.98	7.48	8.04	9.15
600A- SERIES	Height 13/32", Width ⅞", Thickness ¼", Terminals ⅜" Centers, 5/16" Mtg., 6-32 x ¼ Screws.														
	600A-					**600A-¾ST-**		**600A-ST-**		**600A-Y-**	**600A-XY-**			**600-A-Z-**	
- 1	$ .16	$ .18	$ .32	$ .47	$ .56	$ .20	$ .22	$ .40	$ .50	$ .59	$ .24	$ .26	$ .48	$ .54	$ .63
- 2	.25	.28	.50	.70	.91	.33	.37	.66	.83	.97	.41	.45	.82	.91	1.05
- 3	.36	.40	.72	1.00	1.20	.47	.51	.94	1.10	1.30	.63	.63	1.26	1.39	1.59
- 4	.46	.51	.92	1.26	1.51	.61	.66	1.22	1.43	1.68	.81	.82	1.62	1.80	2.05
- 5	.56	.62	1.12	1.54	1.85	.74	.80	1.48	1.74	2.04	.98	1.00	1.96	2.16	2.46
- 6	.65	.72	1.30	1.79	2.15	.89	.96	1.78	2.05	2.40	1.17	1.20	2.34	2.57	2.92
- 7	.75	.83	1.50	2.06	2.47	1.02	1.10	2.04	2.36	2.77	1.34	1.38	2.68	2.94	3.35
- 8	.85	.94	1.70	2.33	2.80	1.16	1.25	2.32	2.67	3.13	1.52	1.57	3.04	3.34	3.80
- 9	.95	1.05	1.80	2.60	3.12	1.30	1.40	2.60	3.00	3.52	1.70	1.76	3.40	3.67	4.19
- 10	1.05	1.16	2.10	2.88	3.46	1.43	1.54	2.86	3.30	3.87	1.87	1.94	3.74	4.11	4.68
- 11	1.13	1.25	2.26	3.12	3.74	1.55	1.67	3.10	3.58	4.20	2.03	2.11	4.06	4.46	5.08
- 12	1.23	1.36	2.46	3.38	4.06	1.69	1.82	3.38	3.90	4.57	2.21	2.30	4.42	4.86	5.53
- 13	1.33	1.47	2.66	3.65	4.38	1.83	1.97	3.66	4.21	4.94	2.39	2.49	4.78	5.25	5.98
- 14	1.44	1.60	2.88	3.96	4.75	1.97	2.13	3.94	4.54	5.33	2.57	2.69	5.14	5.65	6.44
- 15	1.54	1.71	3.08	4.23	5.08	2.10	2.27	4.20	4.85	5.69	2.74	2.87	5.48	6.02	6.86
- 16	1.64	1.82	3.28	4.51	5.41	2.24	2.42	4.48	5.17	6.07	2.92	3.08	5.84	6.42	7.32
- 17	1.73	1.91	3.46	4.74	5.69	2.37	2.55	4.74	5.46	6.40	3.09	3.23	6.18	6.79	7.73
- 18	1.83	2.02	3.66	5.02	6.02	2.51	2.70	5.02	5.78	6.78	3.27	3.42	6.54	7.15	8.15
- 19	1.93	2.13	3.86	5.29	6.35	2.64	2.84	5.28	6.18	7.23	3.44	3.60	6.88	7.56	8.61
- 20	2.03	2.24	4.06	5.57	6.68	2.78	3.00	5.56	6.40	7.51	3.62	3.80	7.24	7.96	9.07
- 21	2.13	2.35	4.26	5.83	7.00	2.90	3.14	5.80	6.71	7.88	3.78	3.98	7.56	8.31	9.47
- 22	2.23	2.46	4.46	6.10	7.32	3.07	3.29	6.14	7.24	8.46	3.99	4.17	7.98	8.77	9.99
601- SERIES	Height ½", Width 1⅛", Thickness 5/16", Terminals 7/16" Centers, 27/64" Mtg., 6-32 x ¼ Screws.														
	601-					**601-¾ST-**		**601-ST-**		**601-Y-**	**601-XY-**			**601-Z-**	
- 1	$ .20	$ .22	$ .40	$ .55	$ .66	$ .24	$ .26	$ .48	$ .59	$ .70	$ .28	$ .30	$ .56	$ .63	$ .74
- 2	.31	.34	.62	.85	1.02	.41	.44	.82	.95	1.12	.49	.52	.98	1.03	1.19
- 3	.42	.46	.84	1.15	1.38	.57	.61	1.14	1.30	1.53	.69	.73	1.38	1.51	1.74
- 4	.54	.59	1.08	1.48	1.78	.74	.79	1.48	1.68	1.97	.90	.95	1.80	1.98	2.27
- 5	.64	.72	1.28	1.76	2.11	.90	.98	1.80	2.02	2.37	1.10	1.18	2.20	2.42	2.77
- 6	.75	.83	1.50	2.06	2.47	1.07	1.15	2.14	2.38	2.79	1.31	1.39	2.62	2.84	3.25
- 7	.88	.97	1.76	2.42	2.90	1.23	1.32	2.46	2.77	3.25	1.51	1.60	3.02	3.32	3.80
- 8	.99	1.09	1.98	2.72	3.26	1.40	1.50	2.80	3.13	3.67	1.72	1.82	3.44	3.74	4.28
- 9	1.10	1.21	2.20	3.02	3.62	1.56	1.67	3.12	3.48	4.08	1.92	2.03	3.84	4.22	4.82
- 10	1.22	1.34	2.44	3.35	4.02	1.73	1.85	3.46	3.86	4.52	2.13	2.25	4.26	4.66	5.33
- 11	1.33	1.46	2.66	3.65	4.38	1.89	2.02	3.78	4.21	4.94	2.33	2.46	4.66	5.06	5.79
- 12	1.44	1.58	2.88	3.96	4.75	2.06	2.20	4.12	4.58	5.37	2.54	2.68	5.08	5.50	6.29
- 13	1.56	1.72	3.12	4.29	5.15	2.22	2.38	4.44	4.95	5.80	2.74	2.90	5.48	6.00	6.85
- 14	1.67	1.84	3.34	4.59	5.51	2.39	2.56	4.78	5.31	6.22	2.95	3.12	5.90	6.40	7.31
- 15	1.78	1.96	3.56	4.90	5.88	2.55	2.73	5.10	5.72	6.70	3.15	3.33	6.30	6.70	7.68
- 16	1.90	2.09	3.80	5.22	6.26	2.72	2.91	5.42	6.09	7.13	3.36	3.55	6.72	7.39	8.43
- 17	2.01	2.21	4.02	5.52	6.62	2.88	3.08	5.76	6.45	7.55	3.56	3.76	7.12	7.84	8.94
- 18	2.12	2.33	4.24	5.83	7.00	3.05	3.26	6.10	6.80	7.96	3.77	3.98	7.54	8.25	9.41
- 19	2.24	2.46	4.48	6.16	7.39	3.21	3.43	6.42	7.19	8.41	3.97	4.19	7.94	8.73	9.99
- 20	2.35	2.59	4.70	6.46	7.75	3.38	3.62	6.76	7.54	8.82	4.18	4.42	8.36	9.19	10.48
- 21	2.47	2.72	4.94	6.79	8.15	3.55	3.80	7.10	7.92	9.28	4.38	4.64	8.76	9.63	10.98
- 22	2.59	2.85	5.18	7.12	8.54	3.72	3.98	7.44	8.30	9.72	4.58	4.86	9.16	10.07	11.49
- 23	2.71	2.98	5.42	7.45	8.94	3.89	4.16	7.78	8.68	10.17	4.78	5.08	9.56	10.51	12.00
602- SERIES	Height ⅝", Width 1 5/16", Thickness ⅜", Terminals 9/16" Centers, ½" Mtg., 8-32 x 5/16 Screws														
	602-					**602-¾ST-**		**602-ST-**		**602-Y-**	**602-XY-**			**602-Z-**	
- 1	$ .23	$ .25	$ .46	$ .63	$ .76	$ .30	$ .32	$ .60	$ .70	$ .82	$ .34	$ .36	$ .60	$ .74	$ .86
- 2	.36	.40	.72	.99	1.19	.50	.54	1.00	1.13	1.33	.58	.62	1.00	1.21	1.39
- 3	.51	.56	1.02	1.40	1.68	.70	.75	1.40	1.59	1.87	.82	.87	1.40	1.71	1.99
- 4	.65	.72	1.30	1.78	2.14	.90	.97	1.80	2.03	2.38	1.06	1.13	1.80	2.19	2.54
- 5	.78	.86	1.56	2.15	2.58	1.11	1.19	2.22	2.48	2.91	1.31	1.39	2.22	2.68	3.11
- 6	.92	1.01	1.84	2.53	3.04	1.31	1.40	2.62	2.92	3.42	1.55	1.64	2.62	3.14	3.64
- 7	1.07	1.18	2.14	2.94	3.53	1.52	1.63	3.14	3.39	3.97	1.80	1.91	3.14	3.67	4.25
- 8	1.20	1.32	2.40	3.30	3.96	1.72	1.84	3.44	3.82	4.48	2.04	2.16	3.44	4.14	4.80
- 9	1.34	1.47	2.68	3.68	4.42	1.93	2.06	3.86	4.27	5.00	2.29	2.42	3.86	4.63	5.36
- 10	1.49	1.64	2.98	4.10	4.92	2.12	2.27	4.24	4.63	5.45	2.52	2.67	4.24	5.03	5.85
- 11	1.62	1.78	3.24	4.45	5.34	2.33	2.49	4.66	5.16	6.05	2.77	2.93	4.66	5.60	6.49
- 12	1.76	1.94	3.52	4.84	5.81	2.53	2.71	5.06	5.61	6.57	3.01	3.19	5.06	6.09	7.05
- 13	1.90	2.09	3.80	5.22	6.26	2.74	2.93	5.48	6.06	7.10	3.26	3.45	5.48	6.52	7.56
- 14	2.04	2.24	4.08	5.61	6.73	2.94	3.14	5.88	6.31	7.43	3.50	3.70	5.88	6.87	7.99
- 15	2.18	2.40	4.36	6.00	7.20	3.15	3.47	6.30	6.97	8.17	3.75	4.07	6.30	7.57	8.77
- 16	2.32	2.55	4.64	6.38	7.66	3.34	3.67	6.68	7.40	8.67	3.98	4.31	6.68	8.04	9.31
- 17	2.45	2.70	4.90	6.73	8.08	3.54	3.79	7.08	7.82	9.16	4.32	4.47	7.08	8.50	9.84
- 18	2.58	2.85	5.16	7.10	8.52	3.74	4.01	7.48	8.26	9.68	4.46	4.73	7.48	8.98	10.40
- 19	2.76	3.00	5.52	7.59	9.11	3.99	4.23	7.98	8.82	10.33	4.75	4.99	7.98	9.58	11.09
- 20	2.90	3.15	5.80	7.97	9.56	4.20	4.45	8.40	9.27	10.86	5.00	5.25	8.40	10.07	11.66
- 21	3.04	3.30	6.08	8.36	10.03	4.41	4.67	8.82	9.73	11.40	5.25	5.51	8.82	10.57	12.24
- 22	3.19	3.45	6.38	8.77	10.52	4.62	4.88	9.24	10.20	11.95	5.50	5.76	9.24	11.08	12.83
- 23	3.33	3.60	6.66	9.15	10.98	4.83	5.10	9.66	10.65	12.48	5.75	6.02	9.86	11.57	13.39
- 24	3.48	3.75	6.96	9.57	11.48	5.04	5.31	10.08	11.13	13.04	6.00	6.27	10.08	12.09	14.00
- 25	3.62	3.90	7.24	9.95	11.94	5.25	5.53	10.50	11.58	13.57	6.25	6.54	10.50	12.60	14.59
- 26	3.76	4.05	7.52	10.34	12.41	5.46	5.75	10.92	12.04	14.10	6.50	6.77	10.92	13.10	15.16

ALL PRICES SUBJECT TO TRADE DISCOUNT

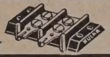
HERMAN H. SMITH, INC.

Exclusive Distributors of KULKA BARRIER TERMINAL BLOCKS To Radio Parts Jobbers Only

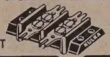
WITH SCREW TERMINALS



WITH ONE-SIDED SOLDER TERMINALS



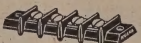
WITH TWO-SIDED SOLDER TERMINALS

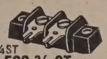


To Series Number Add Suffix	General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF' MDG 'B'	MAI-60 'D'	General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF' MDG 'B'	MAI-60 'D'
Height ¾", Width 1$\frac{13}{16}$", Thickness $\frac{7}{16}$", Terminals $\frac{11}{16}$" Centers, ⅝" Mtg., 10-32 x ⅜" Screws.										
603- SERIES			603-			603-¾ST-			603-ST-	
- 1	$ .55	$ .61	$1.10	$1.51	$1.81	$ .66	$ .72	$1.32	$1.62	$1.92
- 2	.94	1.03	1.88	2.58	3.10	1.13	1.22	2.26	2.77	3.28
- 3	1.32	1.45	2.64	3.63	4.36	1.60	1.73	3.20	3.91	4.63
- 4	1.71	1.88	3.42	4.70	5.64	2.07	2.24	4.14	5.06	6.00
- 5	2.09	2.30	4.18	5.75	6.90	2.53	2.73	5.06	6.18	7.23
- 6	2.48	2.73	4.96	6.82	8.18	3.00	3.25	6.00	7.34	8.70
- 7	2.86	3.15	5.72	7.86	9.43	3.46	3.75	6.92	8.46	10.02
- 8	3.25	3.58	6.50	8.93	10.72	3.92	4.25	7.48	9.60	11.38
- 9	3.63	3.99	7.26	9.99	11.99	4.40	4.77	8.80	10.75	12.74
- 10	4.02	4.45	8.04	11.05	13.26	4.80	5.23	9.60	11.83	14.03
Height $\frac{15}{16}$", Width 2", Thickness ½", Terminals ⅞" Centers, ¾" Mtg., 12-32 x ⅜" Screws.										
604- SERIES			604-			604-¾-ST-			604-ST-	
- 1	$ .90	$ .99	$1.80	$2.47	$2.96	$1.10	$1.19	$2.20	$2.67	$3.15
- 2	1.65	1.82	3.30	4.53	5.44	2.00	2.17	4.00	4.92	5.82
- 3	2.40	2.64	4.80	6.60	7.92	2.90	3.14	5.80	7.10	8.42
- 4	3.15	3.46	6.30	8.66	10.39	3.80	4.11	7.60	9.31	11.03
- 5	3.90	4.29	7.80	10.72	12.86	4.70	5.09	9.40	11.52	13.66
- 6	4.65	5.11	9.30	12.78	15.34	5.60	6.06	11.20	13.73	16.27
- 7	5.40	5.94	10.80	14.85	17.82	6.50	7.04	13.00	15.95	18.91
- 8	6.15	6.76	12.30	16.91	20.29	7.40	8.01	14.80	18.16	21.54
Height 1⅛", Width 2½", Thickness ⅝", Terminals 1⅛" Centers, ⅞" Mtg. ¼-28 x ½" Screws										
605- SERIES			605-			605-¾-ST-			605-ST-	
- 1	$1.25	$1.38	$2.50	$3.43	$4.12	$1.45	$1.58	$2.90	$3.63	$4.31
- 2	2.40	2.64	4.80	6.60	7.92	2.80	3.04	5.60	7.00	8.32
- 3	3.50	3.85	7.00	9.62	11.54	4.20	4.55	8.40	10.32	12.24
- 4	4.70	5.17	9.40	12.92	15.50	5.60	6.07	11.20	13.82	16.40
- 5	5.80	6.38	11.60	15.95	19.14	7.00	7.50	14.00	17.15	20.33
- 6	7.00	7.70	14.00	19.25	23.10	8.30	9.00	16.60	20.55	24.39

599 SERIES NARROW WIDTH TERMINAL BLOCK

Single Screw Terminal. Height $\frac{13}{32}$", Width $\frac{9}{16}$", Thickness ¼", Terminals ⅜" Centers, .156 dia mtg. holes: 5-40 x ¼" brass nickel plated screws.

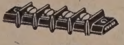


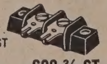


To Series Number Add Suffix	599-					599-¾-ST-				
- 1	$ .15	$ .16	$ .30	$ .42	$ .50	$ .19	$ .20	$ .38	$ .45	$ .53
- 2	.24	.25	.50	.69	.82	.32	.33	.64	.76	.89
- 3	.33	.36	.66	.91	1.09	.44	.47	.88	1.00	1.18
- 4	.42	.46	.84	1.15	1.38	.57	.61	1.14	1.30	1.53
- 5	.51	.56	1.02	1.40	1.68	.69	.74	1.38	1.58	1.85
- 6	.59	.65	1.18	1.62	1.94	.83	.89	1.66	1.86	2.18
- 7	.68	.75	1.36	1.89	2.27	.95	1.02	1.90	2.14	2.51
- 8	.77	.85	1.54	2.11	2.53	1.08	1.16	2.16	2.42	2.84
- 9	.86	.95	1.72	2.36	2.83	1.21	1.30	2.42	2.72	3.19
- 10	.95	1.05	1.90	2.61	3.13	1.33	1.43	2.66	2.99	3.51
- 11	1.03	1.13	2.06	2.83	3.40	1.45	1.55	2.90	3.25	3.81
- 12	1.12	1.23	2.24	3.08	3.70	1.58	1.69	3.16	3.54	4.15
- 13	1.21	1.33	2.42	3.32	3.98	1.71	1.83	3.42	3.82	4.48
- 14	1.31	1.44	2.62	3.60	4.32	1.84	1.97	3.68	4.13	4.85
- 15	1.40	1.54	2.80	3.85	4.62	1.96	2.10	3.92	4.41	5.18
- 16	1.49	1.64	2.98	4.10	4.92	2.09	2.24	4.18	4.70	5.52
- 17	1.57	1.73	3.14	4.31	5.17	2.21	2.37	4.42	4.96	5.82
- 18	1.66	1.83	3.32	4.56	5.47	2.34	2.51	4.68	5.25	6.16
- 19	1.75	1.93	3.50	4.81	5.77	2.46	2.64	4.92	5.52	6.48
- 20	1.84	2.03	3.68	5.06	6.07	2.60	2.78	5.20	5.82	6.83
- 21	1.93	2.13	3.86	5.30	6.36	2.72	2.90	5.44	6.10	7.16
- 22	2.02	2.23	4.04	5.55	6.66	2.86	3.07	6.14	6.40	7.51

699 SERIES NARROW WIDTH TERMINAL BLOCK

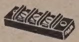
Single Screw Terminal. Height ½", Width ⅝", Thickness $\frac{5}{16}$", Terminals $\frac{7}{16}$" Centers. .175 Dia. Mtg. Holes 6-32 x ¼" Brass Nickel Plated Screws.





To Series Number Add Suffix	699-					699-¾-ST-				
- 1	$ .20	$ .22	$ .40	$ .55	$ .66	$ .24	$ .26	$ .48	$ .59	$ .69
- 2	.31	.34	.62	.85	1.02	.41	.44	.82	.95	1.11
- 3	.42	.46	.84	1.15	1.38	.57	.61	1.14	1.30	1.52
- 4	.54	.59	1.08	1.48	1.78	.74	.79	1.48	1.68	1.96
- 5	.64	.72	1.28	1.76	2.11	.90	.98	1.80	2.02	2.36
- 6	.75	.83	1.50	2.06	2.47	1.07	1.15	2.14	2.38	2.78
- 7	.88	.97	1.76	2.42	2.90	1.23	1.32	2.46	2.77	3.25
- 8	.99	1.09	1.98	2.72	3.26	1.40	1.50	2.80	3.13	3.67
- 9	1.10	1.21	2.20	3.02	3.62	1.56	1.67	3.12	3.48	4.08
- 10	1.22	1.34	2.44	3.35	4.02	1.73	1.85	3.46	3.86	4.53
- 11	1.33	1.46	2.66	3.65	4.38	1.89	2.02	3.78	4.21	4.93
- 12	1.44	1.58	2.88	3.96	4.75	2.06	2.20	4.12	4.58	5.36
- 13	1.56	1.72	3.12	4.29	5.15	2.22	2.38	4.44	4.95	5.79
- 14	1.67	1.84	3.34	4.59	5.51	2.39	2.56	4.78	5.31	6.22
- 15	1.78	1.96	3.56	4.90	5.88	2.55	2.73	5.10	5.72	6.70
- 16	1.90	2.09	3.80	5.22	6.26	2.72	2.91	5.42	6.09	7.13
- 17	2.01	2.21	4.02	5.52	6.62	2.88	3.08	5.76	6.45	7.55
- 18	2.12	2.33	4.24	5.83	7.00	3.05	3.26	6.10	6.80	7.96
- 19	2.24	2.46	4.48	6.16	7.39	3.21	3.43	6.42	7.19	8.41
- 20	2.35	2.59	4.70	6.46	7.75	3.38	3.62	6.76	7.54	8.82
- 21	2.47	2.72	4.94	6.79	8.15	3.55	3.80	7.10	7.92	9.27
- 22	2.59	2.85	5.18	7.12	8.54	3.72	3.98	7.44	8.30	9.72
- 23	2.71	2.98	5.42	7.45	8.94	3.89	4.16	7.78	8.68	10.16

411 SERIES MINIATURE TERMINAL BLOCK

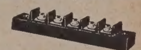


Single Screw Terminal. Height 5/16" Width 13/32", Thickness 7/32", Terminals. .250 Centers, .125 mtg. holes; 2-56 x 3/16" binding head brass nickel plated screws.

Cat. No.	Gen. Pur. Bake. CFG'C'	MFE'M' MME GMF MDG'B'
411-1	.23	.46
411-2	.32	.69
411-3	.41	.93
411-4	.50	1.17
411-5	.59	1.31
411-6	.68	1.65
411-7	.77	1.85
411-8	.87	2.10
411-9	.97	2.25
411-10	1.07	2.40
411-11	1.17	2.55
411-12	1.27	2.60
411-13	1.37	2.75
411-14	1.47	2.90
411-15	1.57	3.05
411-16	1.67	3.20
411-17	1.77	3.35
411-18	1.87	3.50
411-19	1.97	3.65
411-20	2.07	3.80
411-21	2.17	3.95
411-22	2.27	4.10

609 SERIES NARROW WIDTH TERMINAL BLOCK

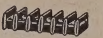
Single Screw Terminal. Height ½", Width ⅜", Thickness 9/32", Terminals ⅜" Centers, .156 dia. mtg. holes; 4-40 x 5/16" Pan-head, phillips type sems brass nickel plated screws.

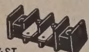


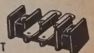
Cat. No.	Gen. Pur. Bake. CFG'C'	MFE'M' MME GMF MDG'B'
609-1	.20	.50
609-2	.30	.75
609-3	.42	1.02
609-4	.54	1.29
609-5	.66	1.56
609-6	.78	1.83
609-7	.90	2.00
609-8	1.02	2.30
609-9	1.14	2.60
609-10	1.26	2.90
609-11	1.38	3.20
609-12	1.50	3.50
609-13	1.62	3.80

409 SERIES SUBMINIATURE TERMINAL BLOCK

Single Screw Terminal. Height .260, Width .312, Thickness $\frac{7}{16}$" Terminals .187 Centers, .093 dia. mtg. holes; 0.80 x ⅛" brass silver plated or gold flash screws.



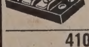


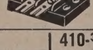


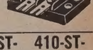
To Series Number Add Suffix	General Purpose Bakelite CFG 'C'	MME 'M' MFE 'GMF' MDG 'B'	MAI-60	General Purpose Bakelite CFG 'C'	MFE 'M' MME 'GMF' MDG 'B'	MAI-60 'D'
		409-		409-¾ST-		409-ST-
- 1	$ .40	$ .80	$ .90	$ .47	$ .87	$ .97
- 2	.60	1.10	1.20	.74	1.24	1.34
- 3	.80	1.40	1.50	.99	1.59	1.69
- 4	1.00	1.70	1.80	1.25	1.95	2.05
- 5	1.20	2.00	2.10	1.53	2.33	2.43
- 6	1.40	2.30	2.40	1.79	2.69	2.79
- 7	1.60	2.60	2.70	2.05	3.05	3.15
- 8	1.80	2.90	3.00	2.32	3.42	3.52
- 9	2.00	3.20	3.30	2.59	3.79	3.89
- 10	2.20	3.50	3.70	2.83	4.13	4.33
- 11	2.40	3.80	4.00	3.11	4.51	4.71
- 12	2.60	4.10	4.30	3.33	4.88	5.08
- 13	2.80	4.40	4.60	3.64	5.24	5.44
- 14	3.00	4.70	4.90	3.90	5.60	5.80
- 15	3.20	5.00	5.20	4.17	5.97	6.17
- 16	3.40	5.30	5.50	4.42	6.32	6.52
- 17	3.60	5.60	5.80	4.69	6.69	6.89
- 18	3.80	5.90	6.10	4.96	7.06	7.26
- 19	4.00	6.20	6.40	5.23	7.53	7.73
- 20	4.20	6.50	6.70	6.50	7.80	8.00
- 21	4.40	6.80	7.00	5.77	8.17	8.37

410 SERIES MINIATURE TERMINAL BLOCK

Double Screw Terminals. Height $\frac{5}{16}$", Width ⅝", Thickness $\frac{7}{32}$", Terminals ¼" Centers, .125 dia. mtg. holes; 2-56 x $\frac{3}{16}$" binding head brass nickel plated screws.





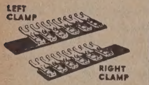


To Series Number Add Suffix	410-			410-¾ST-		410-ST-
- 1	$ .40	$ .80	$ .96	$ .44	$ .84	$1.00
- 2	.56	1.08	1.30	.63	1.15	1.37
- 3	.72	1.34	1.61	.83	1.45	1.72
- 4	.88	1.60	1.92	1.03	1.75	2.07
- 5	1.04	1.86	2.23	1.22	2.04	2.41
- 6	1.20	2.12	2.54	1.44	2.36	2.78
- 7	1.36	2.38	2.86	1.63	2.65	3.43
- 8	1.52	2.64	3.17	1.83	2.95	3.48
- 9	1.68	2.90	3.48	2.03	3.25	3.83
- 10	1.84	3.16	3.79	2.22	3.54	4.17
- 11	2.00	3.42	4.10	2.42	3.84	4.52
- 12	2.16	3.68	4.42	2.62	4.14	4.88
- 13	2.32	3.94	4.73	2.82	4.44	5.23
- 14	2.48	4.20	5.04	3.01	4.73	5.57
- 15	2.64	4.46	5.35	3.20	5.02	5.91
- 16	2.80	4.72	5.66	3.40	5.32	6.26
- 17	2.96	4.98	5.98	3.60	5.62	6.62
- 18	3.12	5.24	6.29	3.80	5.92	6.97
- 19	3.28	5.50	6.60	4.00	6.22	7.32
- 20	3.44	5.76	6.91	4.20	6.52	7.67
- 21	3.60	6.02	7.22	4.40	6.82	8.02
- 22	3.76	6.28	7.54	4.60	7.12	8.38

HERMAN H. SMITH, INC.

Exclusive Distributors of KULKA BARRIER TERMINAL BLOCKS To Radio Parts Jobbers Only

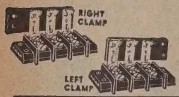
FLAT STYLE



For faster, better wiring of multiple connections to terminal blocks. Lugs are double eyeletted to prevent shift. Upturned ends of lugs acts as extra lock. Made of laminated black XP Phenolic (also supplied in XXXP natural Phenolic and GMG Glass Cloth Melamine resin per MIL-P-15037B).

Supplied in two styles, flat or angle—each style either right hand or left hand mounting.

ANGLE STYLE



650 SERIES

Connecting strip for 600 series terminal block. Strips are 3/32″ thick, ½″ wide, ⅜″ centers.

Left Clamp Catalog No.	Right Clamp Catalog No.	Number of Terminals	Price Each
650-L-2	650-R-2	2	$.13
650-L-3	650-R-3	3	.20
650-L-4	650-R-4	4	.25
650-L-5	650-R-5	5	.32
650-L-6	650-R-6	6	.39
650-L-7	650-R-7	7	.45
650-L-8	650-R-8	8	.51
650-L-9	650-R-9	9	.57
650-L-10	650-R-10	10	.64
650-L-11	650-R-11	11	.70
650-L-12	650-R-12	12	.76
650-L-13	650-R-13	13	.83
650-L-14	650-R-14	14	.89
650-L-15	650-R-15	15	.96
650-L-16	650-R-16	16	1.01
650-L-17	650-R-17	17	1.08
650-L-18	650-R-18	18	1.16
650-L-19	650-R-19	19	1.21
650-L-20	650-R-20	20	1.28
650-L-21	650-R-21	21	1.33
650-L-22	650-R-22	22	1.38
650-AL-2	650-AR-2	2	.19
650-AL-3	650-AR-3	3	.29
650-AL-4	650-AR-4	4	.37
650-AL-5	650-AR-5	5	.47
650-AL-6	650-AR-6	6	.57
650-AL-7	650-AR-7	7	.66
650-AL-8	650-AR-8	8	.75
650-AL-9	650-AR-9	9	.84
650-AL-10	650-AR-10	10	.94
650-AL-11	650-AR-11	11	1.03
650-AL-12	650-AR-12	12	1.12
650-AL-13	650-AR-13	13	1.22
650-AL-14	650-AR-14	14	1.31
650-AL-15	650-AR-15	15	1.41
650-AL-16	650-AR-16	16	1.49
650-AL-17	650-AR-17	17	1.59
650-AL-18	650-AR-18	18	1.70
650-AL-19	650-AR-19	19	1.78
650-AL-20	650-AR-20	22	1.88
650-AL-21	650-AR-21	21	1.96
650-AL-22	650-AR-22	22	2.08

651 SERIES

Connecting strip for 601 series terminal black. Strips are 3/32″ thick, ⅝″ wide, 7/16″ centers.

Left Clamp Catalog No.	Right Clamp Catalog No.	Number of Terminals	Price Each
651-L-2	651-R-2	2	$.14
651-L-3	651-R-3	3	.21
651-L-4	651-R-4	4	.26
651-L-5	651-R-5	5	.33
651-L-6	651-R-6	6	.40
651-L-7	651-R-7	7	.46
651-L-8	651-R-8	8	.52
651-L-9	651-R-9	9	.58
651-L-10	651-R-10	10	.65
651-L-11	651-R-11	11	.72
651-L-12	651-R-12	12	77
651-L-13	651-R-13	13	.84
651-L-14	651-R-14	14	.91
651-L-15	651-R-15	15	.97
651-L-16	651-R-16	16	1.03
651-L-17	651-R-17	17	1.09
651-L-18	651-R-18	18	1.17
651-L-19	651-R-19	19	1.22
651-L-20	651-R-20	20	1.29
651-L-21	651-R-21	21	1.36
651-L-22	651-R-22	22	1.43
651-L-23	651-R-23	23	1.50
651-AL-2	651-AR-2	2	.20
651-AL-3	651-AR-3	3	.30
651-AL-4	651-AR-4	4	.38
651-AL-5	651-AR-5	5	.48
651-AL-6	651-AR-6	6	.58
651-AL-7	651-AR-7	7	.67
651-AL-8	651-AR-8	8	.76
651-AL-9	651-AR-9	9	.85
651-AL-10	651-AR-10	10	.95
651-AL-11	651-AR-11	11	1.05
651-AL-12	651-AR-12	12	1.13
651-AL-13	651-AR-13	13	1.23
651-AL-14	651-AR-14	14	1.33
651-AL-15	651-AR-15	15	1.42
651-AL-16	651-AR-16	16	1.51
651-AL-17	651-AR-17	17	1.60
651-AL-18	651-AR-18	18	1.71
651-AL-19	651-AR-19	19	1.79
651-AL-20	651-AR-20	20	1.89
651-AL-21	651-AR-21	21	1.99
651-AL-22	651-AR-22	22	2.09
651-AL-23	651-AR-23	23	2.19

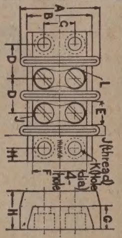
652 SERIES

Connecting strip for 602 series terminal block. Strips are 3/32″ thick, ⅝″ wide, 9/16″ centers.

Left Clamp Catalog No.	Right Clamp Catalog No.	Number of Terminals	Price Each
652-L-2	652-R-2	2	$.17
652-L-3	652-R-3	3	.23
652-L-4	652-R-4	4	.29
652-L-5	652-R-5	5	.35
652-L-6	652-R-6	6	.43
652-L-7	652-R-7	7	.48
652-L-8	652-R-8	8	.55
652-L-9	652-R-9	9	.61
652-L-10	652-R-10	10	.68
652-L-11	652-R-11	11	.74
652-L-12	652-R-12	12	.80
652-L-13	652-R-13	13	.86
652-L-14	652-R-14	14	.94
652-L-15	652-R-15	15	.99
652-L-16	652-R-16	16	1.06
652-L-17	652-R-17	17	1.11
652-L-18	652-R-18	18	1.16
652-L-19	652-R-19	19	1.21
652-L-20	652-R-20	20	1.26
652-L-21	652-R-21	21	1.31
652-L-22	652-R-22	22	1.36
652-L-23	652-R-23	23	1.41
652-L-24	652-R-24	24	1.46
652-L-25	652-R-25	25	1.51
652-L-26	652-R-26	26	1.56
652-AL-2	652-AR-2	2	.23
652-AL-3	652-AR-3	3	.32
652-AL-4	652-AR-4	4	.41
652-AL-5	652-AR-5	5	.50
652-AL-6	652-AR-6	6	.61
652-AL-7	652-AR-7	7	.69
652-AL-8	652-AR-8	8	.79
652-AL-9	652-AR-9	9	.89
652-AL-10	652-AR-10	10	.98
652-AL-11	652-AR-11	11	1.07
652-AL-12	652-AR-12	12	1.16
652-AL-13	652-AR-13	13	1.25
652-AL-14	652-AR-14	14	1.36
652-AL-15	652-AR-15	15	1.44
652-AL-16	652-AR-16	16	1.54
652-AL-17	652-AR-17	17	1.62
652-AL-18	652-AR-18	18	1.72
652-AL-19	652-AR-19	19	1.82
652-AL-20	652-AR-20	20	1.92
652-AL-21	652-AR-21	21	2.02
652-AL-22	652-AR-22	22	2.12
652-AL-23	652-AR-23	23	2.22
652-AL-24	652-AR-24	24	2.32
652-AL-25	652-AR-25	25	2.42
652-AL-26	652-AR-26	26	2.52

RATINGS FOR TERMINAL BLOCKS

Series Number	VOLTAGE Without Marker Strips	VOLTAGE With Marker Strips	Capacity
410	1000V. RMS	1100V. RMS	5 Amp.
411	1100V. RMS	1100V. RMS	5 Amp.
599	1100V. RMS	1200V. RMS	15 Amp.
600	1100V. RMS	1200V. RMS	15 Amp.
601	1100V. RMS	1600V. RMS	20 Amp.
602	1600V. RMS	2500V. RMS	30 Amp.
603	1700V. RMS	2600V. RMS	50 Amp.
604	1800V. RMS	3400V. RMS	70 Amp.
605	2100V. RMS	3800V. RMS	90 Amp.
609	1100V. RMS	1200V. RMS	15 Amp.



DIMENSIONAL DRAWING OF TERMINAL BLOCKS

Series No.	A	B	C	D	E	F	G	H	I	K	L	M	Max. Tms.
409	5/16	1/4	—	3/16	9/64	3/16	5/32	17/64	0-80	.093	1/8	1/4	21
410	5/8	5/8	1/4	1/4	3/16	5/8	7/32	5/16	2-56	.125	3/16	1/8	22
411	13/32	13/32	—	1/4	3/16	13/32	7/32	5/16	2-56	.125	3/16	1/8	22
599	9/16	3/8	—	3/8	19/64	9/32	1/4	13/32	5-40	.156	1/4	9/64	22
600	7/8	11/16	5/16	3/8	19/64	9/32	1/4	13/32	5-40	.156	1/4	9/64	22
601	1 1/8	7/8	27/64	7/16	21/64	3/4	5/16	1/2	6-32	.175	1/4	5/32	23
602	1 5/16	1 1/16	1/2	9/16	27/64	7/8	3/8	5/8	8-32	.209	5/16	13/64	26
603	1 13/16	1 5/16	5/8	11/16	15/32	1 1/16	7/16	3/4	10-32	.165	3/8	7/32	10
604	2	1 1/2	3/4	7/8	9/16	1 1/4	1/2	15/16	12-32	.195	3/8	17/64	8
609	3/8	3/8	—	1 1/8	21/32	1 1/2	5/8	1 1/8	1/4-29	.209	1/2	5/16	6
605	2 1/2	1 13/16	7/8	3/8	1/4	3/8	9/32	1/2	4-40	.156	5/16	11/64	13
699	11/16	1/2	—	7/16	21/64	13/32	5/16	1/2	6-32	.156	1/4	5/32	23

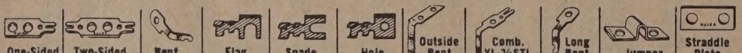
NAVY TERMINAL BOARDS

Made According to BUREAU of SHIPS Drawings No. 9000—S6505F-73214 Rev. 5 and Spec. MIL-T-16784 (Ships).

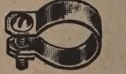
Cat. No.	Piece No.	Material	Studs	Ea.
3TB10	5	MAI-60	10	$10.00
4TB8	28	MAI-60	16	4.10
4TB20	26	MAI-60	20	7.50
5TB8	35	MAI-60	8	7.50
5TB10	1	MAI-60	10	8.50
5TB12	37	MAI-60	24	9.00
6TB6	24	MAI-60	6	3.40
6TB10	22	MAI-60	10	3.75
6TB24	18	MAI-60	24	7.05
7TB8	30	MAI-60	8	5.00
7TB12	33	MAI-60	12	6.25
8TB2	68	MAI-60	4	1.20
8TB2C	68	CFI-5	4	.80
8TB2M	68	MFG	4	1.00
8TB6	16	MAI-60	12	2.30
8TB6C	16	CFI-5	12	1.80
8TB6M	16	MFG	12	2.00
8TB8	14	MAI-60	16	2.86
8TB8C	14	CFI-5	16	2.30
8TB8M	14	MFG	16	2.60
8TB10	9	MAI-60	20	3.50
8TB10C	9	CFI-5	20	2.80
8TB10M	9	MFG	20	3.20
9TB2	73	MAI-60	2	2.00
9TB4	75	MAI-60	4	2.25
10TB8	51	MAI-60	8	4.25
10TB12	52	MAI-60	12	4.75
10TB18	53	MAI-60	18	5.25
10TB28	54	MAI-60	28	6.66
11TB4	55	MAI-60	4	3.86
11TB6	56	MAI-60	6	4.20
11TB9	57	MAI-60	9	5.20
11TB14	58	MAI-60	14	6.60
15TB10	79	MAI-60	10	4.00
15TB24	80	MAI-60	24	6.50
16TB4	83	MAI-60	8	3.60
16TB10	85	MAI-60	20	6.50
17TB4	87	MAI-60	8	5.00
17TB10	86	MAI-60	20	9.00

Stud Connector $40.00 M List

TERMINAL LUGS Std. Pkg. 100



Series	One-Sided -¾STL	Two-Sided -STL	Bent -YL	Flag -SLF	Spade -SLS	Hole -SLH	Outside Bent -ZL	Comb. YL-¾STL -XYL	Long Bent -YSYL	Jumper -J	Straddle Plate -SP
409	—	44.00 M	—	—	—	—	—	—	—	—	—
410	44.00 M	44.00 M	—	30.00 M	30.00 M	30.00 M	—	—	—	35.00 M	35.00 M
599	44.00 M	—	—	30.00 M	30.00 M	30.00 M	44.00 M	—	—	35.00 M	—
600	44.00 M	44.00 M	44.00 M	30.00 M	30.00 M	30.00 M	44.00 M	44.00 M	44.00 M	35.00 M	35.00 M
601	59.00 M	59.00 M	59.00 M	35.00 M	35.00 M	35.00 M	60.00 M	—	60.00 M	40.00 M	40.00 M
602	72.00 M	72.00 M	72.00 M	40.00 M	40.00 M	40.00 M	72.00 M	72.00 M	72.00 M	45.00 M	45.00 M
603	100.00 M	100.00 M	—	50.00 M	50.00 M	50.00 M	—	—	—	55.00 M	55.00 M
604	180.00 M	180.00 M	—	—	—	—	—	—	—	65.00 M	65.00 M
605	260.00 M	260.00 M	—	—	—	—	—	—	—	—	75.00 M
699	59.00 M	—	—	35.00 M	35.00 M	35.00 M	—	—	—	—	—



CABLE CLAMPS
For Terminal Connecting Strips

Made of nickel plated brass with 6-32 plated brass screws.

No.	Size	Per C
1435	⅜″	$14.00
1436	½″	14.00
1437	⅝″	14.00
1438	¾″	14.00
1439	⅞″	14.00

HERMAN H. SMITH, INC.

Exclusive Distributors of KULKA BARRIER TERMINAL BLOCKS To Radio Parts Jobbers Only

FIBRE AND XP BAKELITE MARKER STRIPS

Marker strips are supplied to fit each size terminal block — either plain or imprinted — in vulcanized fibre or Bakelite (1/32″ thick).

410—410-¾ST—410ST
411—599—599-¾ST
600—600-¾ST—600ST
600A—600A-¾ST—600ST

Cat. No.	Fibre Per C	Imp. Fibre Per C	Bake. Per C	Imp. Bake. Per C
MS600-1	$ 2.90	$ 7.90	$ 3.40	$ 8.40
MS600-2	3.80	8.80	4.60	9.60
MS600-3	4.70	9.70	5.70	10.70
MS600-4	5.70	10.70	6.80	11.80
MS600-5	6.60	11.60	8.00	13.00
MS600-6	7.60	12.60	9.10	14.10
MS600-7	8.50	13.50	10.20	15.20
MS600-8	9.50	14.50	11.40	16.40
MS600-9	10.40	15.40	12.50	17.50
MS600-10	11.40	21.40	13.70	23.70
MS600-11	12.30	22.30	14.80	24.80
MS600-12	13.30	23.30	15.90	25.90
MS600-13	14.20	24.20	17.10	27.10
MS600-14	15.20	25.20	18.20	28.20
MS600-15	16.10	31.10	19.40	34.40
MS600-16	17.10	32.10	20.50	35.50
MS600-17	18.00	33.00	21.60	36.60
MS600-18	19.00	34.00	22.80	37.80
MS600-19	19.90	34.90	23.90	38.90
MS600-20	20.90	40.90	25.00	45.00
MS600-21	21.80	41.80	26.20	46.20
MS600-22	22.70	42.70	27.40	47.40

600-Y—600-XY 600A-Y—600A-XY

Cat. No.	Fibre Per C	Imp. Fibre Per C	Bake. Per C	Imp. Bake. Per C
MS600-Y-1	$ 6.60	$11.60	$ 7.20	$12.20
MS600-Y-2	7.60	12.60	8.30	13.30
MS600-Y-3	8.50	13.50	9.50	14.50
MS600-Y-4	9.50	14.50	10.60	15.60
MS600-Y-5	10.40	15.40	11.80	16.80
MS600-Y-6	11.40	16.40	12.90	17.90
MS600-Y-7	12.30	17.30	14.00	19.00
MS600-Y-8	13.30	18.30	15.20	20.20
MS600-Y-9	14.20	19.20	16.30	21.30
MS600-Y-10	15.20	25.20	17.50	27.50
MS600-Y-11	16.10	26.10	18.60	28.60
MS600-Y-12	17.10	27.10	19.70	29.70
MS600-Y-13	18.00	28.00	20.90	30.90
MS600-Y-14	19.00	29.00	22.00	32.00
MS600-Y-15	19.90	34.90	23.10	38.10
MS600-Y-16	20.90	35.90	24.30	39.30
MS600-Y-17	21.80	36.80	25.40	40.40
MS600-Y-18	22.80	37.80	26.60	41.60
MS600-Y-19	23.70	38.70	27.70	42.70
MS600-Y-20	24.70	44.70	28.80	48.80
MS600-Y-21	25.60	45.60	30.00	50.00
MS600-Y-22	26.50	46.50	31.20	51.20

601—601-¾ST—601ST

Cat. No.	Fibre Per C	Imp. Fibre Per C	Bake. Per C	Imp. Bake. Per C
MS601-1	$ 3.20	$ 8.20	$ 3.80	$ 8.80
MS601-2	4.40	9.40	5.30	10.30
MS601-3	5.70	10.70	6.80	11.80
MS601-4	7.00	12.00	8.30	13.30
MS601-5	8.20	13.20	9.90	14.90
MS601-6	9.50	14.50	11.40	16.40
MS601-7	10.80	15.80	12.90	17.90
MS601-8	12.00	17.00	14.40	19.40
MS601-9	13.30	18.30	15.90	20.90
MS601-10	14.50	24.50	17.50	27.50
MS601-11	15.80	25.80	19.00	29.00
MS601-12	17.10	27.10	20.50	30.50
MS601-13	18.30	28.30	22.00	32.00
MS601-14	19.60	29.60	23.50	33.50
MS601-15	20.90	35.90	25.00	40.00
MS601-16	22.10	37.10	26.60	41.60
MS601-17	23.40	38.40	28.10	43.10
MS601-18	24.70	39.70	29.60	44.60
MS601-19	25.90	40.90	31.10	46.10
MS601-20	27.20	47.20	32.60	52.60
MS601-21	28.50	48.50	34.10	54.10
MS601-22	29.80	49.80	35.50	55.50
MS601-23	31.10	51.10	37.00	57.00

603—603-¾ST—603-ST

Cat. No.	Fibre Per C	Imp. Fibre Per C	Bake. Per C	Imp. Bake. Per C
MS603-1	$ 7.60	$12.60	$ 9.10	$14.10
MS603-2	9.40	14.40	11.20	16.20
MS603-3	11.10	16.10	13.40	18.40
MS603-4	12.90	17.90	15.50	20.50
MS603-5	14.70	19.70	17.60	22.60
MS603-6	16.40	21.40	19.70	24.70
MS603-7	18.20	23.20	21.90	26.90
MS603-8	20.00	25.00	24.00	29.00
MS603-9	21.80	26.80	26.10	31.10
MS603-10	23.50	33.50	28.20	38.20

604—604-¾ST—604-ST

Cat. No.	Fibre Per C	Imp. Fibre Per C	Bake. Per C	Imp. Bake. Per C
MS604-1	$ 7.70	$12.70	$ 9.20	$14.20
MS604-2	11.70	16.70	14.10	19.10
MS604-3	15.50	20.50	18.60	23.60
MS604-4	19.30	24.30	23.20	28.20
MS604-5	23.10	28.10	27.70	32.70
MS604-6	26.90	31.90	32.30	37.30
MS604-7	30.70	35.70	36.80	41.80
MS604-8	34.50	39.50	41.40	46.40

601-Y—601-XY

Cat. No.	Fibre Per C	Imp. Fibre Per C	Bake. Per C	Per C Imp. Bake.
MS601-Y-1	$ 7.00	$12.00	$ 7.60	$12.60
MS601-Y-2	8.20	13.20	9.10	14.10
MS601-Y-3	9.50	14.50	10.60	15.60
MS601-Y-4	10.80	15.80	12.10	17.10
MS601-Y-5	12.00	17.00	13.70	18.70
MS601-Y-6	13.30	18.30	15.20	20.20
MS601-Y-7	14.50	19.50	16.70	21.70
MS601-Y-8	15.80	20.80	18.20	23.20
MS601-Y-9	17.10	22.10	19.70	24.70
MS601-Y-10	18.30	28.30	21.30	31.30
MS601-Y-11	19.60	29.60	22.80	32.80
MS601-Y-12	20.90	30.90	24.30	34.30
MS601-Y-13	22.10	32.10	25.80	35.80
MS601-Y-14	23.40	33.40	27.30	37.30
MS601-Y-15	24.70	39.70	28.80	43.80
MS601-Y-16	25.90	40.90	30.40	45.40
MS601-Y-17	27.20	42.20	31.90	46.90
MS601-Y-18	28.50	43.50	33.40	48.40
MS601-Y-19	29.70	44.70	34.90	49.90
MS601-Y-20	31.00	51.00	36.40	56.40
MS601-Y-21	32.30	52.30	37.90	57.90
MS601-Y-22	33.60	53.60	39.40	59.40
MS601-Y-23	34.90	54.90	40.90	60.90

602—602¾ST—602ST

Cat. No.	Fibre Per C	Imp. Fibre Per C	Bake. Per C	Per C Imp. Bake.
MS602-1	$ 3.50	$ 8.50	$ 4.20	$ 9.20
MS602-2	5.10	10.10	6.10	11.10
MS602-3	6.60	11.60	8.00	13.00
MS602-4	8.20	13.20	9.90	14.90
MS602-5	9.80	14.80	11.80	16.80
MS602-6	11.40	16.40	13.70	18.70
MS602-7	13.00	18.00	15.60	20.60
MS602-8	14.50	19.50	17.50	22.50
MS602-9	16.10	21.10	19.40	24.40
MS602-10	17.70	27.70	21.30	31.30
MS602-11	19.30	29.30	23.10	33.10
MS602-12	20.90	30.90	25.00	35.00
MS602-13	22.50	32.50	26.90	36.90
MS602-14	24.00	34.00	28.80	38.80
MS602-15	25.60	40.60	30.70	45.70
MS602-16	27.20	42.20	32.60	47.60
MS602-17	28.80	43.80	34.50	49.50
MS602-18	30.40	45.40	36.50	51.50
MS602-19	32.00	47.00	38.50	53.50
MS602-20	33.60	53.60	40.40	60.40
MS602-21	35.20	55.20	42.30	62.30
MS602-22	36.80	56.80	44.30	64.30
MS602-23	38.40	58.40	46.30	66.30
MS602-24	40.00	60.00	48.20	68.20
MS602-25	41.60	66.60	50.20	75.20
MS602-26	43.20	68.20	52.20	77.20

602-Y—602-XY

Cat. No.	Fibre Per C	Imp. Fibre Per C	Bake. Per C	Per C Imp. Bake.
MS602-Y-1	$ 7.30	$12.30	$ 8.00	$13.00
MS602-Y-2	8.90	13.90	9.90	14.90
MS602-Y-3	10.40	15.40	11.80	16.80
MS602-Y-4	12.00	17.00	13.70	18.70
MS602-Y-5	13.60	18.60	15.60	20.60
MS602-Y-6	15.20	20.20	17.50	22.50
MS602-Y-7	16.80	21.80	19.40	24.50
MS602-Y-8	18.30	23.30	21.30	26.30
MS602-Y-9	19.90	24.90	23.10	28.10
MS602-Y-10	21.50	31.50	25.00	35.00
MS602-Y-11	23.10	33.10	26.90	36.90
MS602-Y-12	24.70	34.70	28.80	38.80
MS602-Y-13	26.30	36.30	30.70	40.70
MS602-Y-14	27.80	37.80	32.60	42.60
MS602-Y-15	29.40	44.40	34.50	49.50
MS602-Y-16	31.00	46.00	36.40	51.40
MS602-Y-17	32.60	47.60	38.30	53.30
MS602-Y-18	34.20	49.20	40.20	55.20
MS602-Y-19	35.80	50.80	42.10	57.10
MS602-Y-20	37.40	57.40	44.00	64.00
MS602-Y-21	39.00	59.00	45.90	65.90
MS602-Y-22	40.60	60.60	47.80	67.80
MS602-Y-23	42.20	62.20	49.70	69.70
MS602-Y-24	43.80	63.80	51.60	71.60
MS602-Y-25	45.40	70.40	53.50	78.50
MS602-Y-26	47.00	72.00	55.40	80.40

605—605-¾ST—605-ST

Cat. No.	Fibre Per C	Imp. Fibre Per C	Bake. Per C	Per C Imp. Bake.
MS605-1	$ 8.20	$13.20	$ 9.90	$14.90
MS605-2	14.50	19.50	17.50	22.50
MS605-3	20.90	25.90	25.00	30.00
MS605-4	27.20	32.20	32.60	37.60
MS605-5	33.50	38.50	40.20	45.20
MS605-6	39.80	44.80	47.80	52.80

EXTRA SERVICES

	600-1-2	603	604	605
Phillips Screws	.01	.02	.05	.05
Sems Screws	.02	.03	.04	.05
Phillips Sems Screws	.03	.03	.06	.06
K Monel Sems Screws	.04	.06	.08	.09
Fungus Varnish	.05	.05	.05	.05
Staked Screws	.05	.05	.05	.05
Stamped End	.10	.10	.10	.10

List Prices shown are per screw or per end.
All other series prices in first column.

Exclusive Distributors of

KULKA AIRCRAFT TYPE SWITCHES

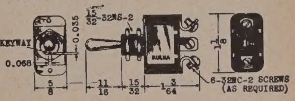
TO RADIO PARTS JOBBERS ONLY

Made to Joint Army and Navy Specifications
No. Jan-S-23 superseded by Mil S-3950

For Electronic & Communications Use

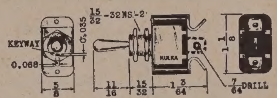
Bakelite housing for DC, or AC circuits up to 1600 cycles, one hole mounting. Two styles available—binding screw terminals (ST-40 Series and ST-50 Series). Solder lugs (ST-42 Series and ST-52 Series)—terminals and screws silver-plated to prevent corrosion; Solder lugs hot-tinned to facilitate soldering. Supplied with 2 mounting nuts, 1 sleeve lock-washer and if needed, locking rings. Terminal screws are Sems type, with external teeth. **Std. Pkg. 10**

SINGLE POLE Style 40—With Screw Term.



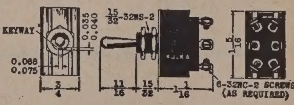
Cat. No.	Type	Up Position	Center Position	Down Position	Each
ST-40A	SPST	ON	NONE	OFF	$1.75
ST-40B	SPST	ON	NONE	MOM. OFF	1.95
ST-40C	SPST	OFF	NONE	MOM. ON	1.95
ST-40D	SPDT	ON	NONE	ON	2.15
ST-40E	SPDT	ON	OFF	ON	2.15
ST-40F	SPDT	ON	NONE	MOM. ON	2.35
ST-40G	SPDT	MOM. ON	OFF	MOM. ON	2.35
ST-40H	SPDT	ON	OFF	MOM. ON	2.35

SINGLE POLE Style 42—With Solder Lugs



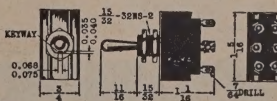
Cat. No.	Type	Up Position	Center Position	Down Position	Each
ST-42A	SPST	ON	NONE	OFF	$1.65
ST-42B	SPST	ON	NONE	MOM. OFF	1.80
ST-42C	SPST	OFF	NONE	MOM. ON	1.80
ST-42D	SPDT	ON	NONE	ON	1.95
ST-42E	SPDT	ON	OFF	ON	1.95
ST-42F	SPDT	ON	NONE	MOM. ON	2.15
ST-42G	SPDT	MOM. ON	OFF	MOM. ON	2.15
ST-42H	SPDT	ON	OFF	MOM. ON	2.15

DOUBLE POLE Style 50—With Screw Term.



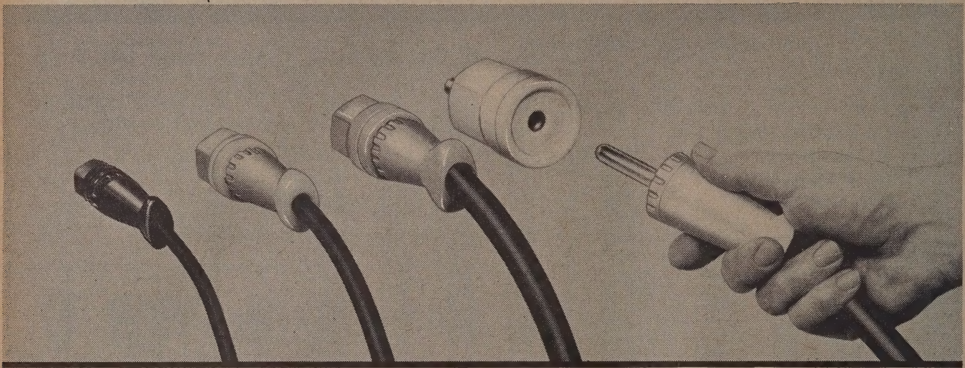
Cat. No.	Type	Up Position	Center Position	Down Position	Each
ST-50K	DPST	ON	NONE	OFF	$2.60
ST-50L	DPST	ON	NONE	MOM. OFF	2.60
ST-50M	DPST	OFF	NONE	MOM. ON	2.60
ST-50N	DPDT	ON	NONE	ON	2.60
ST-50P	DPDT	ON	NONE	ON	2.60
ST-50R	DPDT	ON	OFF	MOM. ON	2.95
ST-50S	DPDT	MOM. ON	NONE	MOM. ON	2.95
ST-50T	DPDT	ON	OF	MOM. ON	2.95

DOUBLE POLE Style 52—With Solder Lugs



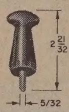
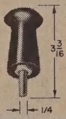
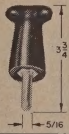
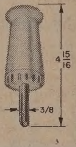
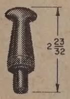
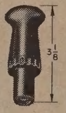
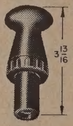
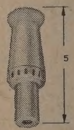
Cat. No.	Type	Up Position	Center Position	Down Position	Each
ST-52K	DPST	ON	NONE	OFF	$2.00
ST-52L	DPST	ON	NONE	MOM. OFF	2.25
ST-52M	DPST	OFF	NONE	MOM. ON	2.25
ST-52N	DPDT	ON	NONE	ON	2.25
ST-52P	DPDT	ON	OFF	ON	2.25
ST-52R	DPDT	ON	NONE	MOM. ON	2.60
ST-52S	DPDT	MOM. ON	OFF	MOM. ON	2.60
ST-52T	DPDT	ON	OFF	MOM. ON	2.60

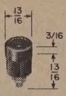
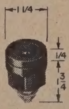
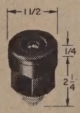
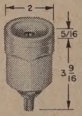
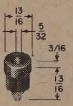
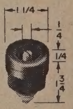
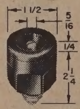
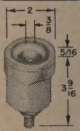
SUPERCON® *Electrical Connectors*



Current carrying parts gold-plated ● Simplified, quick assembly

Socket and pin types of single conductor plugs and receptacles are offered. Plugs have a functionally designed grip for handling ease and convenience. Wiring connection to the same plug can be either soldered or solderless. Two cable-fastening screws are provided which permit a range of cable sizes to be accommodated by the plug. All socket plug grips and 25 and 250 ampere pin plug grips are of a simple, two-piece threaded construction for quick assembly. The 50 and 100 ampere pin plugs are assembled by a single nut after cable connection. All plastic parts of a receptacle are molded of the same color nylon to permit more rapid and accurate circuit identification on both the front and back of the panel when installed. Six colors are available.

	PIN PLUGS				SOCKET PLUGS			
COLOR	25 AMPERE TYPES	50 AMPERE TYPES	100 AMPERE TYPES	250 AMPERE TYPES	25 AMPERE TYPES	50 AMPERE TYPES	100 AMPERE TYPES	250 AMPERE TYPES
BLACK	PP25GB	PP50GB	PP100GB	PP250GB	PS25GB	PS50GB	PS100GB	PS250GB
YELLOW	PP25GY	PP50GY	PP100GY	PP250GY	PS25GY	PS50GY	PS100GY	PS250GY
RED	PP25GR	PP50GR	PP100GR	PP250GR	PS25GR	PS50GR	PS100GR	PS250GR
BLUE	PP25GBL	PP50GBL	PP100GBL	PP250GBL	PS25GBL	PS50GBL	PS100GBL	PS250GBL
GREEN	PP25GGN	PP50GGN	PP100GGN	PP250GGN	PS25GGN	PS50GGN	PS100GGN	PS250GGN
WHITE	PP25GWT	PP50GWT	PP100GWT	PP250GWT	PS25GWT	PS50GWT	PS100GWT	PS250GWT
								

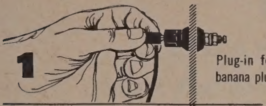
								
PANEL	3/16 MAX.	1/4 MAX.	1/4 MAX.	1/4 MAX.	3/16 MAX.	1/4 MAX.	1/4 MAX.	1/4 MAX.
HOLE	11/16	1	1 3/16	1 9/16	11/16	1	1 3/16	1 9/16
BLACK	RS25GB	RS50GB	RS100GB	RS250GB	RP25GB	RP50GB	RP100GB	RP250GB
YELLOW	RS25GY	RS50GY	RS100GY	RS250GY	RP25GY	RP50GY	RP100GY	RP250GY
RED	RS25GR	RS50GR	RS100GR	RS250GR	RP25GR	RP50GR	RP100GR	RP250GR
BLUE	RS25GBL	RS50GBL	RS100GBL	RS250GBL	RP25GBL	RP50GBL	RP100GBL	RP250GBL
GREEN	RS25GGN	RS50GGN	RS100GGN	RS250GGN	RP25GGN	RP50GGN	RP100GGN	RP250GGN
WHITE	RS25GWT	RS50GWT	RS100GWT	RS250GWT	RP25GWT	RP50GWT	RP100GWT	RP250GWT
	SOCKET RECEPTACLES				PIN RECEPTACLES			

THE SUPERIOR ELECTRIC COMPANY

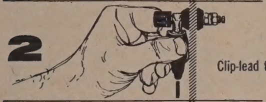
Bristol, Connecticut, U.S.A.

SEE OTHER SUPERIOR ELECTRIC PRODUCT PAGES IN SECTIONS 4000 AND 3500

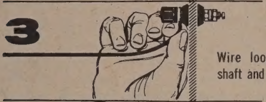
SUPERIOR 5-WAY® *Binding Posts*


1

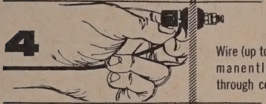
Plug-in for standard banana plug.


2

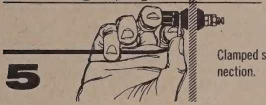
Clip-lead to shaft.


3

Wire looped around shaft and clamped.


4

Wire (up to No. 12) permanently clamped through center hole.

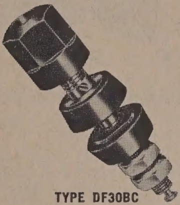

5

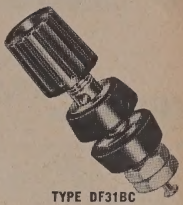
Clamped spade lug connection.

6 COLORS

GOLD-PLATED

5 WAYS TO CONNECT


TYPE DF30BC


TYPE DF31BC

These are the *original* SUPERIOR 5-WAY Binding Posts and are the first choice of electrical and electronic equipment manufacturers, engineers and technicians. Their 30 amperes current capacity and 1000 volt working voltage satisfy a wide range of user requirements. All current-carrying metal parts are gold-plated for long life, resistance to corrosion, stable electrical contact and faster soldering. Offered with either hexagonal or fluted type thumbnut. Available in six colors nylon for more attractive panels and easier circuit identification. They can be mounted and securely locked in any panel from 1/16″ to 1/4″ thick (adapter spacers are available for mounting in thinner panels). Completely insulated from the panel.

HEX NUT	FLUTED NUT	COLOR
DF30RC	DF31RC	RED
DF30BLC	DF31BLC	BLUE
DF30GNC	DF31GNC	GREEN
DF30WTC	DF31WTC	WHITE
DF30BC	DF31BC	BLACK
DF30YC	DF31YC	YELLOW

DUB-L-PLUG *Dual Electrical Connectors*

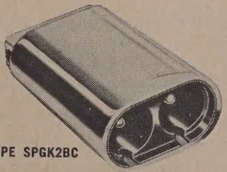
ALL CONDUCTING METAL PARTS GOLD-PLATED

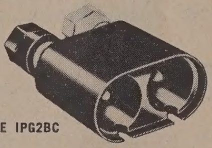
SHIELDED/INSULATED AND INSULATED TYPES AVAILABLE

NYLON BODIES ON INSULATED TYPES AVAILABLE IN SIX COLORS

DUB-L-PLUG Dual Connectors are valuable accessories for making quick electrical connections to SUPERIOR 5-WAY and similar binding posts mounted on 3/4″ centers. Completely recessed integral banana plugs prevent accidental shorting. Captive black and white thumbnuts permit ready circuit and polarity identification. Wiring connections to insulated DUB-L-PLUGS can be made by clamping through center hole, spade lug, clip-lead, banana plug or looping and clamping.

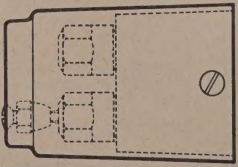
	TYPE	NYLON BODY COLOR
SHIELDED/INSULATED	SPGK2BC	BLACK
INSULATED	IPG2RC	RED
	IPG2WTC	WHITE
	IPG2BLC	BLUE
	IPG2YC	YELLOW
	IPG2GNC	GREEN
	IPG2BC	BLACK

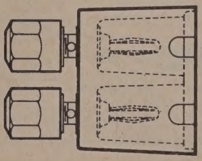

TYPE SPGK2BC


TYPE IPG2BC

SHIELDED/INSULATED DUB-L-PLUG used where protection from stray fields is desired as in high impedance testing. Supplied with sturdy die-cast chrome-plated case that can be removed if only insulated plug is needed. Has grounding banana plug that can be removed when used with 2-wire ungrounded circuits. Nylon body supplied in black only. Has one black and one white thumbnut.

INSULATED DUB-L-PLUG ideal for making rapid connections in power circuits and other electronic and electrical applications where shielding is not required. All metal parts are recessed for maximum safety of user and equipment. Design permits stacking of several DUB-L-PLUGS if desired. Nylon body supplied in red, white, blue, yellow, green or black. Has one white and one black thumbnut.





FOR MORE DETAILED INFORMATION
about specifications and technical data
on SUPERCON electrical connectors,
SUPERIOR 5-WAY binding posts
and DUB-L-PLUG dual electrical connectors,
request either individual bulletins
or complete electrical connector literature file.

—TRIMM—

PLUGS • PATCH CORDS • JACK PANELS

STANDARD PHONE PLUGS

The standard radio phone plug, widely used on P. A., etc. equipment. Designed to fit all standard jacks and available in both two and three conductor types. The "511" series, the two conductor plugs, are provided with binding head screws in terminal, handles of molded bakelite or metal when shielded plugs are required. The "513" series are three conductor types. The "515" adapter couples Amphenol type mike plug to standard phone jack.

No. 511 —Black plastic shell	$ .69
No. 511-1—Red plastic shell	.69
No. 511-2—Shielded, single piece shell	1.17
No. 511-3—Shielded, two piece shell	1.77
No. 511-4—Shielded, stubby shell	.97
No. 511-5—Two circuit, shielded, stubby shell. Has long tip to sleeve insulator which leaves "ring" spring open when inserted in three circuit jack	1.09
No. 513 —Three circuit, black plastic shell	1.09
No. 513-1—Three circuit, red plastic shell	1.09
No. 513-2—Three circuit, shielded, single piece shell	1.59
No. 513-3—Three circuit, shielded, two piece shell	2.19
No. 513-4—Three circuit, shielded, stubby shell	1.40
No. 515 —Adapter	.47

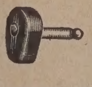
"514" MIN-A-PLUG

Developed especially for shielded microphone cable. Wing type terminal clamps directly onto cord shield. Center conductor solders to lug. Also widely used for ordinary cords.

No. 514 —Black plastic shell	$ .67
No. 514-1—Red plastic shell	.67
No. 514-2—Shielded, single piece shell	1.07
No. 514-4—Shielded, stubby shell	.97

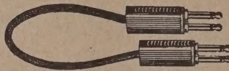
"512" FLAT TYPE PLUG

Compact, non-protruding design. Ideal for group hearing aid systems, centralized radio systems, etc. Body molded of phenolic plastic. All exposed edges rounded. Provision for stay cord anchorage. Fits standard jacks.



No. 512 —Black	$ .87
No. 512-1—Red	.87

PATCH CORDS and PLUGS



Widely used by majority of radio stations. "840" series cord assembly uses TRIMM No. 506 twin plug and high quality shielded black colored, nylon braided cord. Plug self-aligning. Number following "840" represents length.

No. 506 —Plug	$ 4.60
No. 840-1-PP—Cord Assembly	11.85
No. 840-2-PP—Cord Assembly	12.15
No. 840-3-PP—Cord Assembly	12.45

No. "841" series patch cords use a single triple circuit plug No. 517 at each end. Two program circuits connect to tip and ring, shield of cord going to sleeve of plug.

No. 517 —Plug	$ 2.90
No. 841-1-PP—Cord Assembly	9.80
No. 841-2-PP—Cord Assembly	10.20
No. 841-3-PP—Cord Assembly	10.50

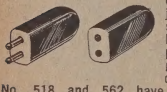
In addition to the lengths of both types of patch cords listed, lengths of 4, 5, 6 and 10 ft. are available as well as in the following colors: slate grey, white, red, blue, brown, and green. Also replacement cords carrying code No. 840-1 etc. and No. 841-1 etc. are available. See TRIMM Bulletin R36/7 for complete listing.

OTHER TYPES OF PATCH CORDS

In addition to the two types listed there are a number of special types produced both for audio and video work.

No. 842 SERIES	Uses TRIMM No. 500 two circuit type plugs. Assemblies correspond with W. E. type 2P1B, 2P2A etc.
No. 846 SERIES	Similar applications to "842" series but uses cordage jacketed with rubber-like material and TRIMM No. 501 plugs.

"518" PLUG — "562" JACK



Two circuit miniature disconnect plug and jack series. Ideal for small size cordage. Plugs have two grooved, parallel pins which engage with multi-leafed contact springs in jack. No. 518 and 562 have acetate half shells cemented together. No. 518-7 and 562-7 have molded bakelite shells held together with screws.

No. 518 —Plug	$ .60
No. 518-7—Plug	.80
No. 562 —Jack	1.00
No. 562-7—Jack	1.10

"525" CONNECTORS

The "525" series provides means of attaching headset cords, or any two wires, to single contact mike plugs (Amphenol 75-MC series of plugs). Main body of connector is similar to handle of "511" series plug. Connector held to receptacle by threaded retaining ring.

No. 525—Connector	$ .87

"501" PLUG

Widely used for high quality communication equipment, and commonly known as PL-55 type. Features a one piece tip-rod construction molded as an insert within plug body using blue diallyl phthalate molding compound. Parts cannot shift due to interlocking of plastic material with body and rod.

No. 501 —Black plastic shell	$1.30
No. 501-1 —Red plastic shell	1.30
No. 501-2 —Shielded shell	1.90
No. 501-10—Black plastic shell (PJ-055B)	1.35

Other modifications available in quantity orders.

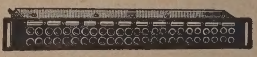
"509" PLUG

Tip, ring, and sleeve three circuit plug used on microphone circuits and usually identified as type PJ-068. Looks essentially like No. 501 type illustrated above.

No. 509 —Black plastic shell	$2.95
No. 509-10—Black plastic shell (PJ-068)	3.00

AUDIO JACK PANELS and ACCESSORIES

TRIMM "96" series. Most widely used, and intended for use with standard twin type patch cords. Mounts on standard 19" racks. Constructed of bakelite panel, reinforced with steel. Designation strip, TRIMM No. JP-30, included on panel. Spacing of jacks prevents cross connection of adjacent circuits with double plug. Uses "90" series jacks (Normally No. 90-02, see description of jacks).



No. 96-01—Single row, 12 pair jacks, 1¾" wide	$47.50
No. 96-02—Double row, 24 pair jacks, 2⅛" wide	77.25
No. 96-03—Double row, 24 pair jacks, 3½" wide	84.50

VIDEO JACK PANELS and ACCESSORIES

A complete line of video jack panels, plugs, jacks and patch cords are now available for broadcast station and instrumentation applications. Contact factory for Bulletin #R-41.
Your inquiry will receive immediate attention.

DESIGNATION STRIPS

Several types are available.

No. JP-30—Standard type has individual windows for each pair of jacks	$1.60
No. JP-35—Alternate type, has one long window	1.60

STANDARD TELEPHONE TYPE PLUGS

Below are listed the more common of the many different types produced by TRIMM and being mechanically and electrically interchangeable with types widely used in telephone service.

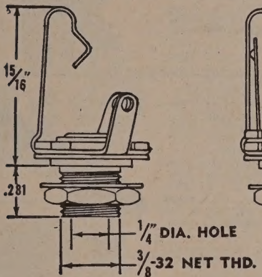
TRIMM No.	EQUIVALENT W.E. No.	DESCRIPTION	
500	347	Standard two circuit	$2.50
504	327	Twin, four circuit	4.70
505	289B	Twin, four circuit	4.70
508	309	Tip, ring, and sleeve, 0.206 diameter	2.90
516	310	Tip, ring, and sleeve, 0.250 diameter	2.90

—TRIMM—

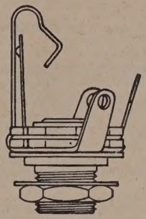
JACKS — P. A. and TELEPHONE TYPES

"95" SERIES JACKS

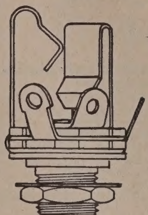
Widely used on P. A. amplifiers, tape recorders, short wave radios, servicemen test instruments, etc. Used where space behind panel is limited. Jack is panel mounted by means of threaded bushing upon which contact springs are directly assembled although adequately insulated from it. Bushing fits through ⅜" diameter hole. Spring contact of nickel silver, held in place by notched interlocking insulators. Drawing gives basic dimensions and arrangements.



No. 95-01



No. 95-02

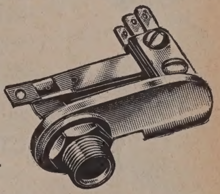


No. 95-25
No. 95-50

No. 95-01—Open circuit, two conductor	$ .45
No. 95-02—Closed circuit, two conductor	.54
No. 95-25—Open circuit, three conductor (for 0.250" diameter plugs)	.64
No. 95-50—Open circuit, three conductor (for 0.206" diameter plugs)	.68

"93" SERIES JACK

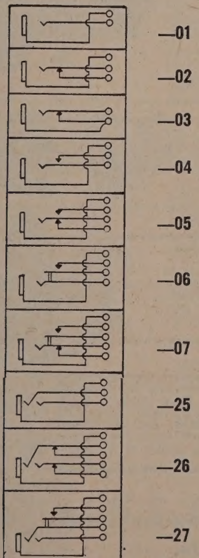
A short frame jack with springs mounted parallel to panel. Used particularly where depth behind panel is limited, on such applications as intercom systems, P. A. amplifiers, etc. Mounting is by means of threaded bushing ⅜" diameter, rigidly attached to a steel frame. May be mounted on panels up to $\frac{3}{16}$" thick. Contact springs of nickel silver, terminals hot tinned. See diagrams below for circuits.



No. 93-01	$ .70
No. 93-02	.85
No. 93-25	.85
No. 93-26	1.10

In addition a number of other circuits can be produced on order. Your inquiry will be given immediate attention.

All TRIMM jacks have a standardized coding consisting of the jack series number plus a dash number indicating spring arrangement, a few of which are shown below.

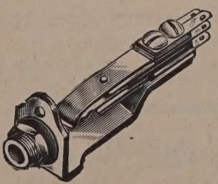


"91" SERIES JACK

A long frame jack having a threaded mounting bushing and which can be attached to panel by this alone, or by a mounting screw as is done on the "90" series jacks. May be mounted on panels up to about ¼" thick, having ⅜" hole. Depth behind panel 3⅛".

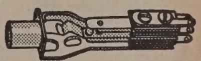
Frame is of very heavy gauge steel, zinc plated with dichromate finish. Springs of nickel silver. See diagrams below for circuits. Most circuits listed for "90" series can be supplied in "91" series. Those listed are the more commonly produced.

No. 91-01	$ .75
No. 91-02	.95
No. 91-25	.95
No. 91-26	1.20



"90" SERIES JACKS

Extensively used in jack panels and other high quality communication equipment. Commonly known as the telephone type jack. Bushing fits 29/64" diameter hole. Available in two modifications of the frame referred to as the "A" and "C" frame. These differ only in the orientation of the mounting plate with respect to the plane of the springs. Unless specified otherwise the "A" frame is supplied.



Frame of steel, heavily zinc plated with dichromate finish. Bushing of brass, natural finish standard (nickel plated or other finishes available on production orders). Springs of nickel silver, terminal ends hot tinned for ease in soldering. Contacts are of palladium-silver alloy. The circuits listed below represent those most commonly produced, but about sixty-five circuits are available. Write for specific information.

No. 90-01	$1.05
No. 90-02	1.20
No. 90-03	1.20
No. 90-04	1.30
No. 90-05	1.40
No. 90-06	1.40
No. 90-07	1.50
No. 90-25	1.20
No. 90-26	1.60
No. 90-27	1.80

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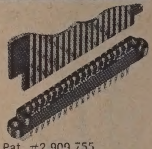
AVIONICS ● AUTOMATION ● COMMUNICATION ● CONTROLS ● INSTRUMENTATION
MISSILES ● PORTABLE EQUIPMENT ● PRINTED CIRCUITS ● TEST APPARATUS

UPCR SERIES
Single Row Printed Card Receptacle

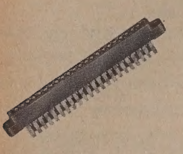
Number of contacts—(Beryllium Copper)
6, 10, 15, 18, 22
Solder wire hole size ....1/16"x3/32"
Voltage breakdown between contacts—sea level
2500 V A.C. RMS.
Current rating ....5 amps.
Polarizing pins and contacts—snap-in or out design permitting easy interchangeability.
Pat. #2,853,689.

UPCR-D. Double Row Printed Card Receptacle. Solder Type Terminals

Card range thickness accommodation
UPCR-D .... .052—.072 (nom. 1/16")
UPCR-93D .... .080—.104 (nom. 3/32")
Number of contacts (Beryllium Copper)
6, 10, 15, 18, 22 per row, (2) rows
Solder wire hole size ....3/64"x3/32"
Voltage breakdown between contacts—sea level
2500 V A.C. RMS.
Current rating ....5 amps.



Pat. #2,909,755

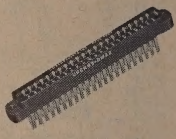


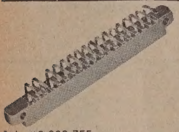
UPCR-DT. Double Row Printed Card Receptacle. Taper Tab Terminals

UPCR-DT ....uses #78 taper tab
Card range thickness accommodation
UPCR-DT .... .052—.072 (nom. 1/16")
UPCR-93 DT .... .080—.104 (nom. 3/32")
Number of contacts (Beryllium Copper)
6, 10, 15, 18, 22 per row, (2) rows
Voltage breakdown between contacts—sea level
2500 V A.C. RMS.
Current rating ....5 amps.
Polarizing pins and contacts—snap-in or out design permitting easy interchangeability.
Pat. #2,909,755

UPCR-DW. Double Row Printed Card Receptacle. "Wire-Wrap"* Terminals

Card range thickness accommodation
UPCR-DW .... .052—.072 (nom. 1/16")
UPCR-93 DW .... .080—.104 (nom. 3/32")
Number of contacts (Beryllium Copper)
6, 10, 15, 18, 22 per row, (2) rows
Voltage breakdown between contacts—sea level
2500 V A.C. RMS.
Current rating ....5 amps.
Polarizing pins and contacts—snap-in or out design permitting easy interchangeability.
Pat. #2,909,755
* T.M. of Gardner-Denver Co.





Pat. #2,909,755

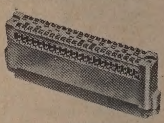
UPCR-RD. Double Row Printed Card Receptacle. Dip Solder. Right Angle Terminals

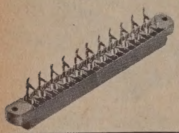
Card range thickness accommodation
UPCR-RD .... .052—.072 (nom. 1/16")
UPCR-93 RD .... .080—.104 (nom. 3/32")
Number of contacts (Beryllium Copper)
6, 10, 15, 18, 22 per row, (2) rows
Voltage breakdown between contacts—sea level
2500 V A.C. RMS.
Current rating ....5 amps.

UPCR-D. Double Row Special Design Printed Card Receptacle UPCR-93D22EAB Illustrated

Special designs custom built to requirements. Above unit is typical of many types engineered to suit various applications.

Pat. #2,909,755



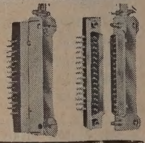


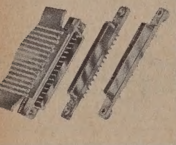
UPCR-SD. Double Row Printed Card Receptacle. Scatter Solder Dip Terminals

Card range thickness accommodation
UPCR-SD .... .052—.072 (nom. 1/16")
UPCR-93 SD .... .080—.104 (nom. 3/32")
Number of contacts (Beryllium Copper)
6, 10, 15, 18, 22 per row, (2) rows
Voltage breakdown between contacts—sea level
2500 V A.C. RMS.
Current rating ....5 amps.
Pat. #2,909,755

UPCC-SLH SERIES. Hooded Screw Lock

UPCC-M2SL ....**Male Chassis Screw Lock**
UPCC-F2HSL ....**Female Hooded Mating Unit**
Available — 7, 11, 15, 19, 23, 32 contacts
Voltage Breakdown between contacts—sea level
2500 V. A.C. RMS.
Male — available solder dip, wire solder turret, taper tab terminals
Female — available wire solder, turret tab terminals



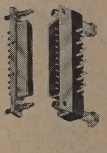


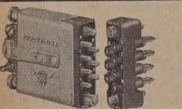
UPCC SERIES. Printed Circuit Connector

Card range thickness accommodation—
Male Dip Solder
UPCC-M ( ) A ....1/16"
UPCC-M ( ) B ....1/8"
UPCC-M ( ) C ....1/4"
UPCC-F ( ) female ....#20 AWG wire
UPCC-FDN ( ) ....Solder dip terminals
Maximum wire size—female ....#20 AWG wire
Number of contacts 7, 11, 15, 19, 23, 32
Voltage Breakdown between contacts—sea level
2500 V. A.C. RMS.
Current rating .... 7.5 amps.

UPCC-SL SERIES. Printed Circuit Screw Lock

Card range thickness accommodation—
Male Dip Solder
UPCC MSL ( ) A ....1/16"
UPCC MSL ( ) B ....1/8"
UPCC MSL ( ) C ....1/4"
UPCC-FSL ( ) female ....#20 AWG wire
UPCC-FD-SL (........................Solder dip terminals
Number of contacts 7, 11, 15, 19, 23, 32
Voltage Breakdown between contacts—sea level
2500 V. A.C. RMS.
Current rating ....7.5 amps.





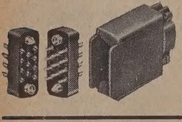
990-SL SERIES. Power Screw Lock

Number of contacts 7, 10, 15, 18
Maximum wire size ....#16 AWG, wire
Voltage breakdown between contacts—sea level
5300 V. A.C. RMS.
Current rating ....13 amps.
990-SL-SDL (solderless ....uses #53 taper pin
Patent #2,761,108. Double lead threads. "Twice the speed with double lead."

MH SERIES. Miniature Hex

Number of contacts 4, 5, 7, 9
Maximum wire size ....#20 AWG wire
Voltage breakdown between contacts—sea level
1215 V A.C. RMS.
Current rating ....7.5 amps.
MH-SDL (solderless) uses #37 taper receptacle
Also available HMH Hermetic Seal. Plug Series.

Pat. #2,848,702

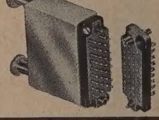


SMI SERIES. Subminiature

Number of contacts
5, 7, 11, 14, 20, 26, 34, 42, 50
Maximum wire size ....#20 AWG wire
Voltage breakdown between contacts—sea level
1950 V. A.C. RMS.
Current rating ....7.5 amps.
SMI-SDL (solderless)
uses #37 taper receptacle
Other configurations upon request.

SMI-SL SERIES. Subminiature Screw Lock

Number of contacts
5, 7, 11, 14, 20, 26, 34, 42, 50
Maximum wire size ....#20 AWG wire
Voltage breakdown between contacts—sea level
1950 V. A.C. RMS.
Current rating ....7.5 amps.
SMI-SL-SDL (solderless)
uses #37 taper receptacle
Other configurations upon request.
Pat. #2,761,108



GENERAL NOTE

All Sub-miniature (SMI), Miniature (MI), 980, 990 series Connectors, available with Solder Type, Solderless Type (SDL) and Turret Type (TU) Terminals

Connectors are available with molded bodies made of asbestos-filled melamine, glass-filled alkyd, asbestos or glass-filled diallyl phthalate, or mica-filled bakelite. All connectors meet or surpass all applicable sections of MIL-Q-9858, MIL-C-8384B, MS, MIL-C-21097A, MIL-C-25955 and NAS specifications. Rigid quality control is applied on a 100% basis for inspection and testing. All solder cups can be provided with 60-40 solder or projecting terminals can be solder dipped.

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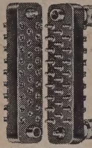
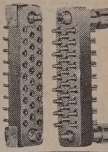


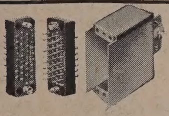
SMI-K SERIES

Subminiature Hoodless Knob Type Screw Lock
Number of contacts 5, 7, 11, 14, 20, 26, 34, 42, 50
Max wire size #20 AWG wire
Voltage breakdown between contacts—sea level 1950 V. A.C. RMS.
Current rating 7.5 amps.
SMI-K-SDL (solderless) uses #37 taper receptacle
Pat. 2,761,108. Other configurations on request.

SMI-KC SERIES

Subminiature Hoodless Knob Type Screw Lock
Reentrancy female contact Anti-Rotation Brackets
Number of contacts 5, 7, 11, 14, 20, 26, 34, 42, 50
Max wire size #20 AWG wire
Voltage breakdown between contacts—sea level 1950 V. A.C. RMS.
Current rating 7.5 amps.
SMI-K-SDL (solderless) uses #37 taper receptacle
Pat. 2,761,108. Other configurations on request.



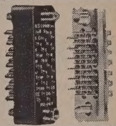


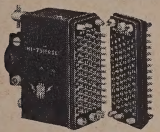
MI-SERIES. Miniature

Number of contacts 7, 12 (8-4), 14, 18, 20, 21, 26, 34, 41, 50, 75
Maximum wire size #20 AWG wire
Voltage breakdown between contacts—sea level 2800 V A.C. RMS.
Current rating 7.5 amps.
MII-SDL (solderless) uses #37 taper receptacle
MIP Series #18 wire — MIW Series #16 wire

HMI SERIES. Hermetic Seal Miniature

Number of contacts 7, 12 (8-4), 14, 18, 20, 21, 26, 34, 41, 50, 75
Maximum wire size #20 AWG wire
Voltage breakdown between contacts—sea level 2200 V A.C. RMS.
Current rating 7.5 amps.
Mates with corresponding MI-F (female) series connectors.





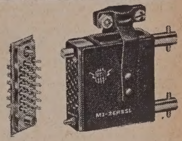
Pat. #2,761,108

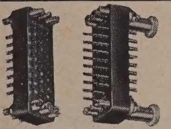
MI-SL SERIES. Miniature Screw Lock

Number of contacts 7, 12 (8-4), 14, 18, 20, 21, 26, 34, 41, 50, 75
Maximum wire size #20 AWG wire
Voltage breakdown between contacts—sea level 2800 V A.C. RMS.
Current rating 7.5 amps.
MI-SL-SDL (solderless) uses #37 taper receptacle
Pat. #2,761,108
ALSO AVAILABLE FOR #18 AWG WIRE
6-32—Double or single lead threads can be furnished.

HMI-SL SERIES

Hermetic Seal Miniature Screw Lock
Number of contacts 7, 12 (8-4), 14, 18, 20, 21, 26, 34, 41, 50
Maximum wire size #20 AWG wire
Voltage breakdown between contacts—sea level 2200 V A.C. RMS.
Current rating 7.5 amps.
Mates with corresponding MI-FSL (female screw lock) series connectors.
6-32—Double or single lead threads can be furnished.





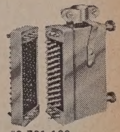
Pat. #2,761,108

MI-KSL SERIES

Miniature Hoodless Knob Type Screw Lock
Number of contacts 7, 12 (8-4), 14, 18, 20, 21, 26, 34, 41, 50, 75
Maximum wire size #20 AWG wire
Voltage breakdown between contacts—sea level 2800 V A.C. RMS.
Current rating 7.5 amps.
MI-K-SDL (solderless) uses #37 taper receptacle
ALSO AVAILABLE FOR #18 AWG WIRE

MI-BSL "FBI" SERIES

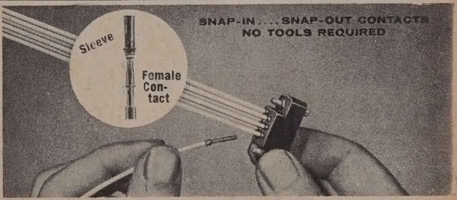
Miniature Bracket Screw Lock
Number of contacts 34, 41, 50, 75
Maximum wire size #20 AWG wire
Voltage breakdown between contacts—sea level 2800 V A.C. RMS.
Current rating 7.5 amps.
Hoods aluminum anodized
Brackets die-cast aluminum
MI-BSL-SDL (solderless) uses #37 taper receptacle



Pat. #2,761,108; #2,845,603; #2,845,604

MI-MBSL SERIES

Miniature Bracket Modular Screw Lock
Number of contacts 123, 150, 225
Maximum wire size #20 AWG wire
Voltage breakdown between contacts—sea level 2800 V A.C. RMS.
Current rating 7.5 amps.
Hoods aluminum anodized
Brackets die-cast aluminum
MI-BMSL-SLD (solderless) uses #37 taper receptacle
ALSO AVAILABLE FOR #18 AWG WIRE
Pat. #2,761,108; #2,845,603; #2,845,604; Additional Patents Pending.
Other configurations upon request.



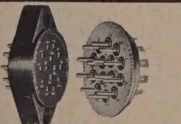
REMI SERIES—Standard and Screwlock

Number of contacts 7, 12 (8-4), 14, 18, 20, 21, 26, 34, 41, 50, 75
Type of contact crimp style, removable with "snap-in, snap-out" feature
Wire sizes accommodated #20, #22 A.W.G. (#18 if required)
Pats. applied for
REMI counterparts of our MI, MI-SL, MI-KSL, MI-BSL and MI-BMSL SERIES can be provided.

ALSO AVAILABLE FOR #18 AWG WIRE

MRO-MRA. Miniature Round

Number of contacts 7, 9
Maximum wire size #20 AWG wire
Voltage breakdown between contacts—sea level 1215 V A.C. RMS.
Current rating 7.5 amps.
MRO-SDL—MRA-SDL (solderless) uses #37 taper receptacle

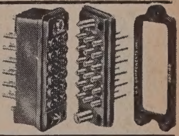


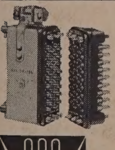
MR-HMR Miniature Relay

Number of contacts 14
Maximum wire size #20 AWG wire
Voltage breakdown between contacts—sea level 700 V A.C. RMS.
Current rating 7.5 amps.
MR-SDL (solderless) uses #37 taper receptacle
ALSO AVAILABLE FOR #18 AWG WIRE
Other versions custom built upon request

980 SERIES. Power-Guide Pin Spring Release

Number of contacts 12, 18, 24, 34
Maximum wire size #16 AWG wire
Voltage breakdown between contacts—sea level 4000 V A.C. RMS
Current rating 13 amps.
980-SL-SDL (solderless) uses #53 taper pin
Patent #2,658,182



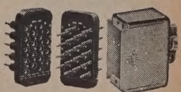


980-SL SERIES. Power Screw Lock

Number of contacts 12, 18, 24, 34
Maximum wire size #16 AWG wire
Voltage breakdown between contacts—sea level 4000 V A.C. RMS.
Current rating 13 amps.
980-SDL (solderless) uses #53 taper pin
Patents #2,658,182; #2,761,108

990 and 990S (Short Contacts) SERIES. Power

Number of contacts 7, 10, 15, 18
Maximum wire size #16 AWG wire
Voltage breakdown between contacts—sea level 5300 V A.C. RMS.
Current rating 13 amps.
990-SDL (solderless) uses #53 taper pin



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Mamaroneck, New York

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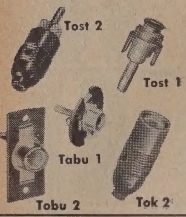
plugs—sockets—terminals

BUILT TO AMERICAN AND EUROPEAN STANDARDS

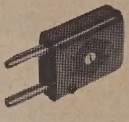


PICKUP PLUGS AND SOCKETS

Type	Description	
Tost 1	Plug	Plugs and sockets are interchangeable among each other
Tost 2	Plug Cable coupler	
Tabu 1	Panel-mounting socket	
Tabu 2	Panel-mounting socket	

FLAT PLUGS AND COUPLERS

Type	Description	Colors
Dp 10	Low-voltage plug, cable strain relieved, superimposed markings of identification of terminals	black white
Ol 10	Low-voltage coupler, for use with Dp 10, cable strain relieved, superimposed markings for identification of terminals. Dimensions of insulating part as for Dp 10	black white



Dp 10

Sr 10

BANANA PLUGS

Type		Insulated sleeve fitted	Colors*
Sr 10	Plug, small type	from front or rear	black, red, yellow, green, blue and assorted colors
Sr 30	Plug, small type	from front or rear	black, red, yellow, green, blue and assorted colors
Bs 10	Plug, shock-proof	from rear	black, red, yellow, green, brown, blue and assorted colors
Ab 10	One-two plug, shock-proof, with collet	from rear	black, red
Bsu 10	Plug, shock-proof, with stepped pin	from rear	black, red, yellow, green, blue and assorted colors

* Special colors on request

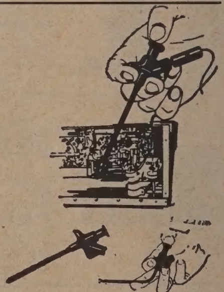
UNIVERSAL THIRD-HAND TEST PRODS

THE KLEPS SERIES of universal Third-Hand Test Prods reaches into the most out-of-the way places and if desired latches onto test points to completely free your hands. Any point in the circuit can be monitored. Positive contact is established by spring action. The special shape of the tip provides a firm grip with a locking action which cannot slip off. Simply push the button to hold, and push again to release.

Holds on to wires, solder joints, terminals, small projections, nuts and screws. It fits into the tiniest openings. Completely insulated body can withstand up to 5,000 volts. No fear of shorts or inadvertent contact with adjacent wiring . . . only the tip is exposed.

Offset socket accommodates either a bare probe wire or a banana plug. A set-screw on the socket may be used to firmly grip the test probe wire. No soldering is necessary. There are rigid and flexible types as well as longer or shorter prods to suit your needs.
Colors are red or black.

Model	Overall Length (inches)	Rod Length (inches)	Construction
Kleps 10	4.8 "	2.91"	rigid plastic
Kleps 20	7.17"	5.27"	rigid plastic
Kleps 30	6.18"	3.94"	flexible plastic



KLEPS 30

SMALL, MULTI-POLE CONNECTORS

Stek 3

Kupel 3

Meb 3

Mas 3

Mas 30

Mab 4

Mab 30 S/50 S

Type	Description	No. of poles
Stek 3	Plug	3
Stek 4*		4
Stek 5*		5
Stek 6*		6
Kupel 3	Cable Coupler	3
Kupel 4		4
Kupel 5		5
Kupel 6		6
Meb 3	Panel-mounting socket for use with Stek 3	3

Type	Description	No. of poles
Mas 2	Plug, pressure moulding	2
Mas 3		3
Mas 4		4
Mas 5		5
Mas 6		6
Mas 20	Plug, shielded, with insulating handle	2
Mas 30		3
Mas 40		4
Mas 50		
Mas 60		6

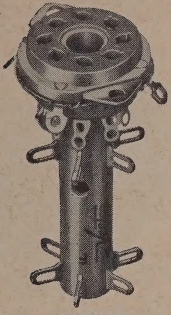
Type	Description	No. of poles
Mab 2	Panel-mounting socket	2
Mab 3 S		3
Mab 4		4
Mab 5		5
Mab 6		6
Mab 3-R	Wiring socket with rest contact	3
Mab 4-R		4
Mab 5-R		5
Mab 6-R		6
Mab 30 S	Socket	3
Mab 50 S	Plugs for stereo tape connection	5

*Can also be used with sockets Mab 4, 5 and 6

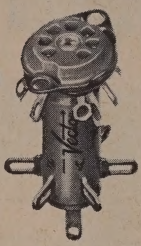
Vector ELECTRONIC COMPANY, INC.

GLENDALE 1, CALIF.

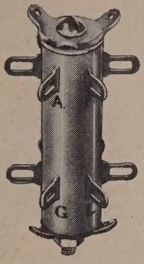
POST SOCKET TURRETS


10-0-12T

OCTAL


6-M-6T

7-PIN


6-12

TERMINAL

VECTOR SOCKET TURRETS AND TERMINAL TURRETS simplify electronic construction. Faster wiring, greater component density and higher reliability are assured by their use. Military types (premium grade) have JAN sockets with beryllium copper silver plated socket contacts, brass nickel plated hot tin dipped saddles and glass silicone turret post with fused tin brass terminals. Commercial types have mica filled sockets, hot tin dipped steel saddle, XXXP Phenolic turret post with brass fused tin terminals.

ORDERING INFORMATION

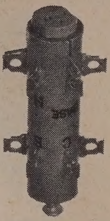
CATALOG NUMBERS Commercial Types	Military Types	TURRET DETAILS Height	No. of Term	No. of Rings	Space Between Rings	NET PRICE Comm. Type 1-19
OCTAL SOCKET-TURRETS						
6-0- 6T	680	1½″	6	1	—	.54
➧ 8-0- 9T	681	2″	9	2	1″	.60
8-0-12T	682	2″	12	2	1″	.63
➧ 10-0- 9T	683	2½″	9	2	1⅜″	.63
10-0-12T	684	2½″	12	2	1⅜″	.66
7-PIN SOCKET TURRETS						
6-M - 6T	687	1½″	6	1	—	.60
➧ 8-M - 9T	688	2″	9	2	1″	.69
8-M -12T	689	2″	12	2	1″	.72
➧ 10-MB-12T	690	2½″	12	2	1⅜″	.81
9-PIN SOCKET TURRETS						
6-N - 6T	693	1½″	6	1	—	.63
➧ 8-N - 9T	694	2″	9	2	1″	.69
8-N -12T	695	2″	12	2	1″	.72
➧ 10-NB-12T	696	2½″	12	2	1⅜″	.81
TERMINAL-TURRETS						
6-12	676	1 11/32″	12	2	⅝″	.45
8-12	677	1 27/32″	12	2	1″	.48
10-12	678	2 11/32″	12	2	1⅜″	.51

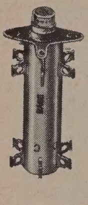
NOTE: Tolerance on dimensions ± 1/16″

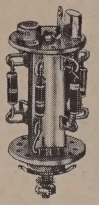
➧ Indicates preferred types

Longer or shorter types and other terminal configurations can be readily made to order.

TRANSISTOR TURRETS


7-A-12T-440


8-A-12T
Plus Transistor


#654

Supplied without wiring

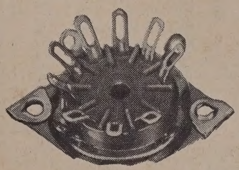
VECTOR TRANSISTOR TURRETS enable the user to mount transistors and other necessary circuit components on one structure.

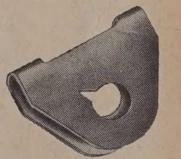
TRANSISTOR SOCKET TURRET: Dual Purpose Socket accommodating 3-in-line or "top-hat" type transistors.

TRANSISTOR WAFER TURRET: Holds four transistors on Wafer punched to take JETEC or in-line leads.

Catalog No.	Height	Space Between Rings	Space Between Wafers	Saddle	Knurl Nut	Net Price 1-19
6-A-12T	1½″	⅞″	—	YES	NO	1.06
7-A-12T-440	1¾″	⅞″	—	NO	YES	1.04
650	1½″	⅝″	1 3/16″	NO	NO	.75
652	2″	1″	2 11/16″	NO	NO	.81
654	2½″	1⅜″	2 3/16″	NO	NO	.87

SOCKET SADDLE NUTS

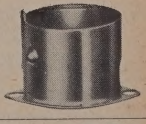




U nut designed especially to slip over and clamp on socket saddles provide convenient means for quickly screwing sockets to chassis. Two types are available, No. 4-40 U which fits No. 4-40 screws and No. 4Z U which fits a No. 4 sheet metal screw. The latter is stronger since it is of thicker metal than the former. Screws should be hardened steel for both nuts to avoid stripping and are also listed below: Material is cad. plated steel. Bags of 50 each.

Cat. No.	Thread	Screw Length	Net Price 1-19 Bags
4-40 U Nut	4-40	—	1.00
4-Z U Nut	4 Z	—	1.25
4-40 x ¼″ Screw	4-40	¼″	.60
4Z x ¼″ Screw	4 Z	¼″	.40

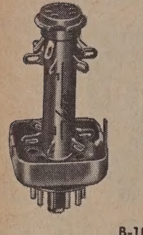
TUBE BASE SHIELDS



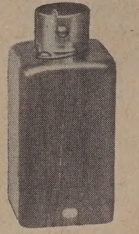
TUBE BASE SHIELDS are intended to be mounted above the socket as a base for conventional bayonet type tube shields.

CATALOG NO. Commercial	Military	DESCRIPTION	NET PRICE 1-19
S7	—	7 Pin Steel Cad. Plated	.09
S7.17	—	7 Pin Steel Cad. Iridited	.09
—	S7.22	7 Pin Brass Nickel Plated	.12
S9	—	9 Pin Steel Cad. Plated	.09
S9.17	—	9 Pin Steel Cad. Iridited	.09
—	S9.22	9 Pin Brass Nickel Plated	.12

Vector SMALL ROUND OR SQUARE PLUG IN UNITS & CASES



B-10-M



G2-10-M

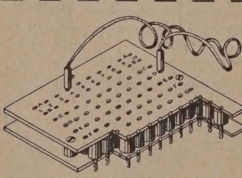
SMALL ROUND & SQUARE PLUG-INS for amplifiers, counters, oscillators, flip flops, and other circuits can be easily assembled and packaged from the wide variety of readily available Vector Plug-in Units and Cases. Cases are deep-drawn aluminum with caustic etch finish. Plugs are tube base type; Octal 8, 9, or 11 pins for B, C, and G2 types, 9 pin Noval for G2.1 size, and 7 pin miniature for G2.2. Sockets are mica filled phenolic, with brass cad. plated contacts. Military types (premium grade) have JAN sockets with beryllium copper silver plated contacts. (Add J to catalog number for this).

Catalog Number	Type of Plug	Type of Socket	Type of Turret	Dimensions Height	Size	Net Price 1-19
B-8	Octal 8	None	None	2″	1⁷⁄₁₆″ Sq.	.99
B-10	Octal 8	None	None	2½″	1⁷⁄₁₆″ Sq.	1.03
B-10-M	Octal 8	7 P. Min.	Post	2½″	1⁷⁄₁₆″ Sq.	1.91
B-10-N	Octal 8	9 P. Nov.	Post	2½″	1⁷⁄₁₆″ Sq.	1.95
B-10-T	Octal 8	None	Post	2½″	1⁷⁄₁₆″ Sq.	1.65
C-10	Octal 8	None	None	2½″	2″ Sq.	1.16
C-12	Octal 8	None	None	3″	2″ Sq.	1.20
C-12-M	Octal 8	7 P. Min.	Post	3″	2″ Sq.	2.24
C-12-N	Octal 8	9 P. Nov.	Post	3″	2″ Sq.	2.27
C-12-T	Octal 8	None	Post	3″	2″ Sq.	1.79
C-10 NN	Octal 8	9 p. Nov. (2)	Post	2½″	2″ Sq.	3.01
C-12 NN	Octal 8	9 p Nov. (2)	Post	3″	2″ Sq.	3.04
G2-10	Octal 8	None	None	2½″	1¼″ Dia.	.97
G2-10-M	Octal 8	7 P. Min.	None	2½″	1¼″ Dia.	1.66
G2-10-N	Octal 8	9 P. Nov.	None	2½″	1¼″ Dia.	1.69
G2-10-4	Octal 8	None	Wall*	2½″	1¼″ Dia.	1.68
G2.1-8	9 P. Nov.	None	None	2″	¾″ Dia.	1.35
G2.1-8-N	9 P. Nov.	9 P. Nov.	None	2″	¾″ Dia.	2.04
G2.1-8-4	9 P. Nov.	None	Wall*	2″	¾″ Dia.	1.73
G2.2-8	7 P. Min.	None	None	2″	⅝″ Dia.	1.21
G2.2-8-M	7 P. Min.	7 P. Min.	None	2″	⅝″ Dia.	1.93
G2.2-8-4	7 P. Min.	None	Wall*	2″	⅝″ Dia.	1.71

*** "G" pattern wall has grid matching JETEC transistor leads.**

The above are the most popular types, but many others are available at the factory viz 2″, 2½″, 3″ or 4″ height in B, C, & G2 types. 9 or 11 pin Octal plugs can be supplied instead of 8 pin in all cases. Deck or Wall Turrets instead of post turrets are also available.

PATCH BOARDS



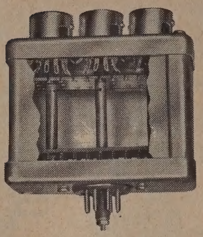
PB 1010

VECTOR PATCH-BOARDS provide simple, but reliable low-cost units for multiple connection, single conductor patching on computers and test fixtures. Standard units are made up in blocks of 100 receptacles on .265″ centers, ten rows of ten receptacles each. Horizontal rows lettered alphabetically starting at top. Vertical columns numbered starting "1" at left. Furnished with four brackets and drilled mounting holes. Special size patchboards available to order.

Specifications: Panels epoxy paper, ivory color, .093″ thick. Terminals beryllium copper, silver plated with gold flash. Dimensions 3¼″ x 3¼″ x ⅞″. Hole diameter 0.094 ±.002. Recommended plug. 0.087″ — .091″ diameter by .468″ long. Contact tabs provided with 2 holes for soldering on wires.

Cat. No.	Description	Net Price 1-19
PB1010	Patch Board (Standard) 100 Contacts	12.75
K2.06	Patchcord Single Conductor 6″ (25 per bundle)	3.95
K2.09	Patchcord Single Conductor 9″ (25 per bundle)	3.95
K2.15	Patchcord Single Conductor 15″ (25 per bundle)	3.95

MULTI-USE PLUG-IN-KIT:



Plug-In Unit made with Kit 4-EK3 using Case EX-12

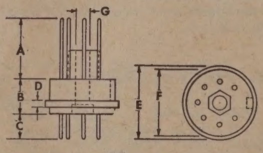
MULTI USE PLUG-IN KITS enable the user to readily wire and package a wide variety of circuits. Kits consist of a Lip-Loc Case with mounted noval sockets, shield bases, 2 Zip wiring decks, and 11-pin Octal plug plus extra components as follows: equal number of 7-pin miniature sockets, shield bases and adapter mounting rings; plug buttons to close unused socket holes; one extra unpunched base with spacers and screws for mounting larger plugs such as the Amphenol Blue Line (not supplied in kit); one extra zip wiring deck. The extra components may be readily installed as required in place of the furnished items.

Material specifications are as follows: case, caustic etch on aluminum; sockets, mica-filled phenolic, commerial grade; terminal strips and spacers are phenolic. Overall height of all units is 3″.

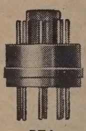
Cat. No.	Sockets	Base Dimen.	Deck Spacing (2 Decks)	Number Terminals per Deck	Base Price 1-19
4-EK3	3N & 3M	1⅝″ x 3⅞″	1⁷⁄₁₆	22	5.97
5-E2K3	4N & 4M	1.68″ x 4.82″	1⁷⁄₁₆	30	6.57
6-E1K3	5N & 5M	1⅝″ x 5⅞″	1⁷⁄₁₆	38	7.17

Many other case sizes and structures are obtainable at the factory.

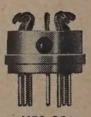
TUBE BASE PLUGS



P7



P7A



KF1.335

VECTOR TUBE BASE PLUGS have mica-filled castings and phosphor bronze pins. The wide variety of pin configurations on the top side of the plugs make possible design features not possible with other plugs. Plugs may be mounted as follows:

1. With a 4-40 or 5-40 screw through the center of the plug. The 7-pin miniature and 9-pin noval plugs have a recessed hexagonal hole in the base which fits a 4-40 or 5-40 small pattern nut.

2. With a retainer ring in a plate or chassis. Retainer rings are indicated by adding "R" after K or P in the catalog number.

3. Where round shells are to be attached, the 7-pin and 9-pin plugs without a keyway can be furnished with a threaded insert in each side which accommodate a 1-72 thread screw. Threaded inserts are indicated by "F" in catalog number.

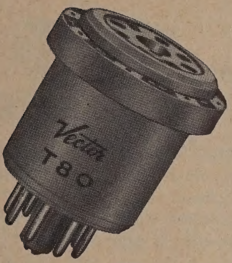
Cat. No.	Type	DIMENSIONS A	B	C	D	E	F	G	Base Price 1-19
P7	7-pin min.	¹⁷⁄₃₂″	.300″	.265″	¹⁄₁₆″	.621	.568	.125	.47
P9	9-pin noval	¹⁷⁄₃₂″	.300″	.265″	¹⁄₁₆″	.748	.700	.125	.52
P7A	7-pin min.	³⁄₁₆″	.300″	.265″	¹⁄₁₆″	.621	.568	.125	.47
P9A	9-pin noval	³⁄₁₆″	.300″	.265″	¹⁄₁₆″	.748	.700	.125	.52
K1.302	(Same as P7 exc. no centerpost)								.47
K1.402	(Same as P-9 exc. no centerpost)								.52
K1.334	Min hooked Pin	.150	.300″	.265″	¹⁄₁₆″	.621	.568	.125	.59
K1.434	Noval hooked pin	.162	.300″	.265″	¹⁄₁₆″	.748	.700	.125	.64
8L	Loctal	[illegible]	⁷⁄₁₆″	¹³⁄₃₂″	100	1.17	1.00	.110	1.23
KF1.301	(Same as P7 + knurl nuts exc. no keyway)								.76
KF1.311	(Same as P7A + knurl nuts exc. short pins, no keyway)								.76
KF1.401	(Same as P9 + knurl nuts exc. no keyway)								.79
KF1.411	(Same as P9A + knurl nuts exc. short pins, no keyway)								.78
KF1.335	(Same as K1.334 + knurl nuts exc. no keyway)								.88

Add R after "P" or "K" for retainer ring. .45

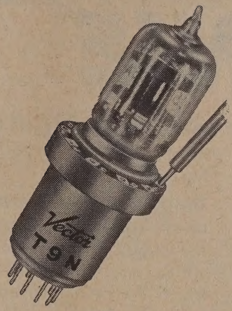
Net

Vector

TUBE SOCKET TEST ADAPTERS



T80



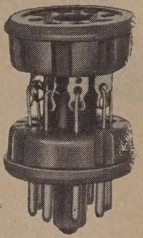
T9N

TUBE SOCKET TEST ADAPTERS are inserted between the socket and the tube and provide test tab elements for checking. Connections are wired straight thru from plug to socket. Beryllium copper socket contacts for long-life — molded tan phenolic bodies.

Catalog Number	Socket Type	Net Price 1-19
T-8-0	Octal	1.60
T-7-M	Miniature	1.65
T-9-N	Noval	1.85
T-789	Set of above three in kit	5.90
P-1	Probe for above	.39

EXPERIMENTER'S TEST ADAPTERS

EXPERIMENTER'S TEST ADAPTERS. These are similar to the Socket Test Adapter but are less the shells and tabs so that connections can be cross-connected in any desired way. User must solder connections (Outer shells available at factory — add "S" to number to obtain).

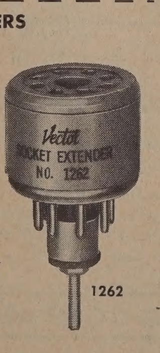


TX-8-0

Cat. No.	Socket Type	Net Price 1-19
TX-8-0	Octal	1.30
TX-7-M	Miniature	.80
TX-9-N	Noval	.85
TX-789	Set of above three in kit	3.25

SOCKET EXTENDERS

SOCKET EXTENDERS provide a replaceable unit for use in tube testers. Wear is shifted from the socket in the tester to the one in the Extender so that when it is worn out a new one can be easily inserted. Sockets have highest grade beryllium copper contacts. A screw projects thru the plug and may be used to hold the unit firmly in place if desired. Socket to plug leads are soldered and an outer shell is used.

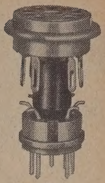


1262

Cat. No.	Socket Type	Net Price 1-19
#1262	Octal 8	1.90
#1263	9 P. Noval	1.80
#1264	7 P. Miniature	1.70

SOCKET CHANGE ADAPTERS

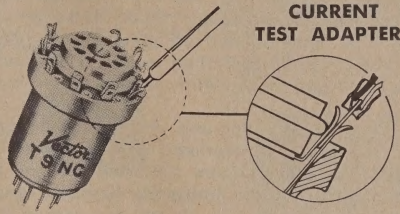
SOCKET CHANGE ADAPTERS facilitate use of unlike tube bases in existing sockets where a change of tube types is required. To be wired by user. Add "S" to number for an outer shell which may be cemented in place.



T97

Cat. No.	Socket	Plug	Net Price 1-19
T 780	7 P. Min.	Octal 8	1.05
T 79	7 P. Min.	9 P. Nov.	1.02
T 807	Octal 8	7 P. Min.	1.23
T 809	Octal 8	9 P. Nov.	1.23
T 97	9 P. Nov.	7 P. Min.	1.02
T 980	9 P. Nov.	Octal 8	1.05

CURRENT TEST ADAPTERS



Versatile VECTOR CURRENT TEST ADAPTERS make possible tube circuit current or votage measurements without cutting leads or making computations. All measurements may be made from the tube side of the electronic equipment without disturbing the chassis.

Cat. No.	Type	Net Price 1-19
T-7-M-C	7 Pin Min.	2.20
T-8-O-C	8 Pin Octal	2.45
T-9-N-C	9 Pin Noval	2.45
P-2	Dual Sided Plug-in Probe, Required for above	.75
T-789-C	Set of Above 3 Adapters with P-2 Probe in Case	8.40

THE ROTOPROBE

THE ROTOPROBE is a new type of test adapter to which a rotating test lead is permanently attached. Rotation of the shell causes a contact arm to move across the pins connecting the socket elements so that any position may be quickly contacted. This serves the same purpose as the usual Test Adapters but is more convenient and faster.

Vector
ROTOPROBE
T8B
PAT. PEND.

T8B

Cat. No.	Socket Type	Net Price 1-19
T-8-B	Octal	3.45
T-7-B	Miniature	3.30
T-9-B	Noval	3.60
T-789-B	Set of above three in kit	11.18

CABLE CONNECTOR PLUGS

These permit connecting cables to miniature and noval tube sockets. Aluminum shells are fitted to 7-pin and 9-pin plugs. In type "C" a rubber grommet (with 1/4" hole) is mounted in the side wall and a center screw holds the assembly together. In type "D" a Heyco strain relief grommet is mounted in the end of the shell and the base screws hold the shell on the plug. Approx. length (exc. pins) 2.125".

End Outlet Cat. No.	Side Outlet Cat. No.	No. of pins	Outside Diam.	Net Price 1-19 End Outlet	Net Price 1-19 Side Outlet
P7D	P7C	7	5/8"	1.50	1.08
P9D	P9C	9	3/4"	1.59	1.20

(Similar connectors for other tube type supplied to order).

ALLIANCE TV AND ELECTRONIC PRODUCTS

ALLIANCE TENNA-ROTORS • ALLIANCE GENIE®

GENIE®

Radio-Controlled Garage Door Operators

The first quality, low-cost, automatic garage door operator!

The Alliance Genie opens, closes, locks garage door, turns light on and off automatically! Now available in radio-controlled models (fully automatic), and key-lock switch models (semi-automatic).

The Alliance Genie operates on all standard one-piece and sectional overhead garage doors. The "Genie" radio models are activated from the car dash and by a radio transmitter installed under the car hood.

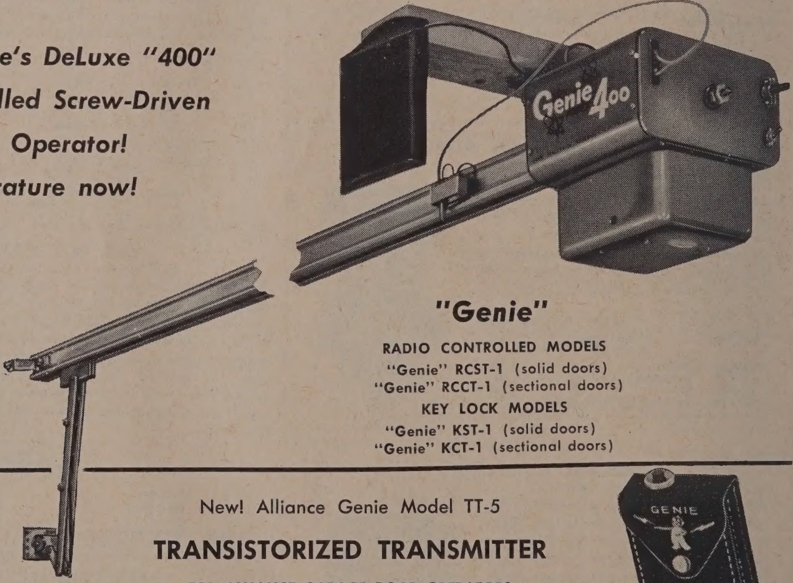
"Genie" key lock models are operated by turning a key mounted in a lock-switch installed along the driveway.

The Alliance Genie incorporates special safety features — a safety clutch which automatically stops the door if it strikes an object while operating and which automatically reverses direction of door's travel the next time operator is activated.

Special Alliance "wobbulator" assures instant stop and saves motor wear on CT and ST units.

The Alliance Genie is easily and quickly installed. Comes complete with necessary mounting brackets. Works on standard house circuits.

New! Alliance's DeLuxe "400" Radio-Controlled Screw-Driven Garage Door Operator! Send for literature now!



"Genie"

RADIO CONTROLLED MODELS

"Genie" RCST-1 (solid doors)
"Genie" RCCT-1 (sectional doors)

KEY LOCK MODELS

"Genie" KST-1 (solid doors)
"Genie" KCT-1 (sectional doors)

New! Alliance Genie Model TT-5

TRANSISTORIZED TRANSMITTER

FOR ALLIANCE GARAGE DOOR OPERATORS

The newest way to operate automatic garage doors. The Alliance Genie Model TT-5 now actuates models of operators without installation or wiring. Effective range and long-life battery operation with the newest Transistorized construction, guarantees smooth trouble free operation. The TT-5 is a handsome, dependable hand-held portable ready to do the work at a touch of the button.

Model TT-5
List Price $36.75

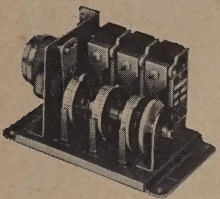
THE ALLIANCE MANUFACTURING COMPANY, INC. • Alliance, Ohio

Timers

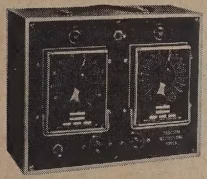
INDUSTRIAL TIMER CORPORATION

NEWARK, N. J., U. S. A.

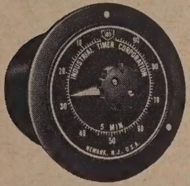
RECYCLING



Recycling Cam Timers, 1 to 20 load switches, 2/3 sec. to 72 hours in 600 steps. Details in Bulletin #200, 201, 202, & 203.

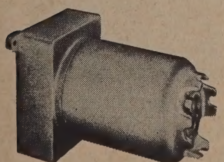


Tandem Recycling Timer, interchangeable elements, time cycles from 1/60 sec. to 3 hours. Details in Bulletin #500.

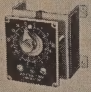


Percentage Timer, dial adjustable for ON-OFF percentage of given time cycle. Details in Bulletin #500.

Explosion Proof Cam Timers, 1 to 20 load switches, 2/3 sec. to 72 hours. Details in Bulletin #800.



TIME DELAY



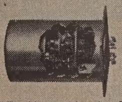
Series SFC, 1/10 sec. to 5 minutes, Auto-Reset, 10 amp. contact rating, Back mounted. Details in Bulletin #300.

Series H, 1/10 sec. to 5 min., Auto-Reset, 10 amp. contact rating, flush mounted. Bulletin #300.

Series TD, 1/10 sec. to 5 min., Auto-Reset, 10 amp. contact rating, mounts through a hole. Bulletin #300.

Series TDAF, 1/60 sec. to 3 hours, instant reset, 10 amp. contact rating, flush mounting. Bulletin #300.

Series TDAB, 1/60 sec. to 3 hours, instant reset, 10 amp. contact rating, back mounted or available in case. Bulletin #300.



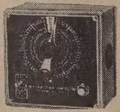
Series R, Hermetically Sealed, Ruggedized, time cycles from 1 sec. to 60 hours, 5 amp. contact rating. Details in Bulletin #600.

Series TH, Thermal Time Delay Switch, 10 amp. contact rating, time cycles from 15 sec. to 2 minutes, snap action switch. Details in Bulletin #301.

INTERVAL

Series PAB, 1/60 sec. to 3 hours, auto-reset, 15 amp. contact rating, available in housing, or back mount, extremely accurate. Bulletin #400.

Series P, 1/10 sec. to 5 min., self powered, auto-reset, 10 amp. contact rating. Bulletin #400.



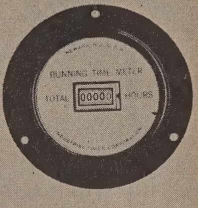
Series M, 1 minute only, 10 amp. contact rating, auto-reset. Bulletin #400.

Series RS, 15 minutes to 60 hours, 20 amp. contact rating, manual set. Request Bulletin #400.

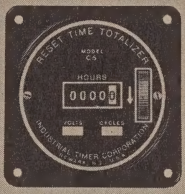
Series PAF, 1/60 sec. to 3 hours, instant reset, 15 amp. contact rating, panel mounting, extremely accurate. Bulletin #401.

Series SAR, Auto-reset Signalling Timer, time cycles from 15 min. to 3 hours. Bulletin #402.

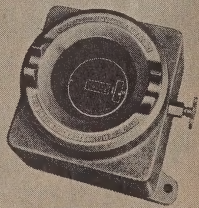
RUNNING TIME METERS



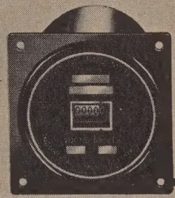
Series C-2, 1/10 sec. count to 1 hour count. Bulletin #700.



Series C-5, Time totalizer, reset to zero type, counts available from 1 sec to 1 hour. Bulletin #700.



Series TTXP, Explosion Proof, external reset. Bulletin #800.



Series T3, Hermetically sealed and ruggedized, same counts as Series C-2. Complete details in Bulletin #600.

Send for our Complete Timing Controls Catalog, free upon request . . . .

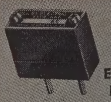
BLILEY

BULLETIN 44E

THE STANDARD OF QUALITY... FOR OVER 30 YEARS...

TYPE KV3
CODE E10

CASE LENGTH: $1\frac{9}{32}$"
DIAMETER: $1\frac{3}{16}$"
PIN SIZE: .093"
PIN SPACE: .486"



TYPE AX2
CODE E17, E18, E19, E20

CASE LENGTH: $\frac{15}{16}$"
WIDTH: $1\frac{1}{16}$"
THICKNESS: $\frac{7}{16}$"
PIN SIZE: .093"
PIN SPACE: .486"

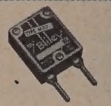
AMATEUR CRYSTALS

CODE	TYPE	APPLICATION	TOL.	PRICE
E17	AX2	1800-1825 kc.; 1875-1900 kc.; 1900-1925 kc.; 1975-2000 kc.	*	$3.75
E18	AX2	3500-4000 kc. (Novice frequencies for 80... 3700.0 kc. to 3750.0 kc.; Multiplies to 40... 3587.5 to 3600.0 kc.; Multiplies to 15... 3516.66 to 3541.66 kc.)	*	2.95
E19	AX2	7000-7425 kc.; 8000-8222 kc. (Novice frequencies for 40...7175.0 to 7200.0 kc.; Multiplies to 15...7033.33 to 7083.33 kc.)	*	2.95
E20	AX2	14,000-14,500 kc.	±10 kc.	3.95
E22 A	SR10	12 mc-27.5 mc experimental frequencies (Novice frequencies for 15...21, 100 to 21,250.0 kc.; Multiplies to 2...24,166.66 to 24,500.0 kc.)	±.03%	8.50

*Note: We will supply to integral spot frequencies (no fractions) as ordered; calibration ±500 cycles in factory test oscillator.

TYPE MS433A
CODE E27

CASE LENGTH: $2\frac{1}{32}$"
DIAMETER: $1\frac{7}{32}$"
PIN SIZE: .093"
PIN SPACE: OCTAL

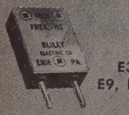


TYPE MC7
CODE E5

CASE LENGTH: $1\frac{39}{64}$"
WIDTH: $1\frac{1}{8}$"
THICKNESS: $2\frac{1}{32}$"
PIN SIZE: .125"
PIN SPACE: .750"

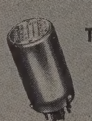
GENERAL COMMUNICATIONS CRYSTALS

CODE	TYPE	APPLICATION	TOL.	PRICE
E5	MC7	Radiotelephone 2-3.5 mc	±.02%	$7.50
E22	MC9	3-12 mc experimental frequencies	±.03%	6.50
E22A	SR10	12-27.5 mc experimental frequencies	±.03%	8.50



TYPE MC9
CODE E3, E8, E9, E11A, E22

CASE LENGTH: $1\frac{11}{64}$"
WIDTH: $\frac{13}{16}$"
THICKNESS: $\frac{7}{16}$"
PIN SIZE: .093"
PIN SPACE: .486"



TYPE TCO-14L
CODE E26

CASE LENGTH: $2\frac{11}{32}$"
DIAMETER: $1\frac{1}{4}$"
OCTAL BASE

CRYSTALS FOR STANDARD FREQUENCIES

CODE	TYPE	APPLICATION	TOL.	PRICE
E3	MC9	TV Service—4.5 mc intercarrier	±.02%	$3.95
E8	MC9	TV Service—5.0 mc signal generator	±.02%	3.95
E9	MC9	TV Service—10.7 mc FM—i-f alignment	±.05%	3.95
E10	KV3	Reference frequency 100 kc.	±.005%	8.50
E11A	MC9	Marker frequency 1000 kc.	±.05%	8.00
E15	CF6	455 kc.—456 kc.—465 kc. Single Signal Filters	±5 kc.	4.50
E27	MS433A	Reference frequency 1000 kc.	±.005%	17.00

TYPE SR10
CODE E22A

CASE LENGTH: $\frac{51}{64}$"
WIDTH: $\frac{3}{4}$"
THICKNESS: $\frac{11}{32}$"
PIN SIZE: .093"
PIN SPACE: .486"

TYPE BH6A
CODE E24

CASE LENGTH: $1\frac{1}{32}$"
WIDTH: $\frac{3}{4}$"
THICKNESS: $\frac{11}{32}$"
PIN SIZE: .050"
PIN SPACE: .486"

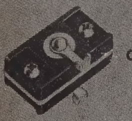
HIGH STABILITY PACKAGE . . . OVEN AND CRYSTAL

FOR 100 kc. OR 1000 kc.
For precision calibration of signal generators or other test instrumentation.

CODE	TYPE	DESCRIPTION	STABILITY	PRICE
E24	BH6A	1000 kc. Crystal	±.0002%	$14.75
E25	BH9A	100 kc. Crystal	±.0005%	11.25
E26	TCO-14L	Oven	75°C. ±2°C.	12.95

Crystal units described are calibrated in recommended oscillator circuit-adjustable to zero beat (at 75°C.) in this circuit. Oven rating: 6.3 V; 10 watts.

SPECIFY CODE E26 FOR TCO-14L OVEN ONLY
SPECIFY CODE E24 FOR BH6A 1000 KC. CRYSTAL ONLY
SPECIFY CODE E25 FOR BH9A 100 KC. CRYSTAL ONLY
SPECIFY CODE E28 FOR OVEN WITH BH6A AND BH9A CRYSTALS



TYPE CF6
CODE E15

CASE LENGTH: $1\frac{7}{32}$"
WIDTH: $\frac{15}{16}$"
THICKNESS: .695"

TYPE BH9A
CODE E25

CASE LENGTH: $1\frac{25}{32}$"
WIDTH: $\frac{3}{4}$"
THICKNESS: $\frac{11}{32}$"
PIN SIZE: .050"
PIN SPACE: .486"

Bliley BLILEY ELECTRIC COMPANY, UNION STATION BUILDING, ERIE, PENNSYLVANIA

ABOVE PRICES EFFECTIVE MAY 1, 1960

THE COMPANY RESERVES THE RIGHT TO CHANGE PRICES AND SPECIFICATIONS WITHOUT NOTICE.

PR Crystals

Since 1934

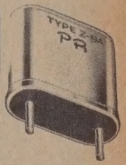
USE PR AND KNOW WHERE YOU ARE

PRICE LIST

Effective May 1, 1960
Subject to Change Without Notice

TYPE Z-2
PR
QUARTZ CRYSTAL
KC
7191
PETERSEN RADIO CO.

FOR AMATEUR SERVICE



Z-2 Crystals are supplied *only* in the following bands and calibrated *integral kilocycles* only, *no fractions.*

TYPE	FREQUENCY RANGE		PRICE
Z-2 Fundamental	3500 to 4000 Kc. 5000 to 6000 Kc. 7000 to 7425 Kc. 8000 to 8222 Kc. 8334 to 9000 Kc.	±500 Cycles	$2.95
Z-9A 3d Overtone	24000 to 24666 Kc. 25000 to 27000 Kc.	±3 Kc.	$4.95
Z-9A 5th Overtone	50000 to 54000 Kc.	±15 Kc.	$6.95

SPECIAL CRYSTALS

Type Z-6A, Frequency Standard

100 Kc. $6.95

TYPE Z-1
PR
QUARTZ CRYSTAL
KC

Type Z-1, MARS and CAP

Calibrated to .005%

Official assigned transmitter frequencies in the range.

1600 to 10000 Kc. $3.45

Type Z-1, TV Marker Crystals

Channels 2 through 13	$6.45
4.5 Mc. Intercarrier, .01%	$2.95
5.0 Mc. Signal Generator, .01%	$2.95
10.7 Mc. FM, IF, .01%	$2.95

Type 2XP

Suitable for converters, experimental, etc. Same holder dimensions as Type Z-2.

1600 to 12000 Kc.	±5 Kc. (Fund.)	$3.45
12001 to 25000 Kc.	±10 Kc. (3d Overtone)	$4.45

Broadcast Crystals Regrinding Service

Any Frequency, 550 to 1600 Kc. $20.00

COMMERCIAL TYPES

Available from 100 Kc. to 70 Mc. Prices on request.

CITIZENS BAND CLASS "D"
Type Z-9R, Transmitter

FCC Assigned Frequencies in Megacycles.

26.965	27.015	27.065	27.115	27.165	27.205
26.975	27.025	27.075	27.125	27.175	27.215
26.985	27.035	27.085	27.135	27.185	27.225
27.005	27.055	27.105	27.155		

Be sure to specify manufacturer of equipment.

Calibrated .005%. Each $2.95

CITIZENS BAND CLASS "D" Type Z-9R, Receiver

In ordering Receiver Crystals, specify I. F. Frequency, also whether receiver oscillator is above or below Transmitter Frequency. Be sure to specify manufacturer of equipment.

Calibrated .005%. Each $2.95

Type Z-9R, RADIO CONTROL

FCC Assigned Frequencies, in Megacycles.

26.995	27.095	27.195
27.045	27.145	27.255

Be sure to specify manufacturer of equipment.

Calibrated .005%. Each $2.95

VHF Type Z-9R, AIRCRAFT

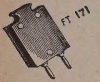
For LEAR, NARCO and similar equipment operating in the 121 Mc. region, requiring crystals in 30 Mc. range. Each $4.95

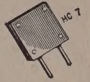
ACCESSORIES

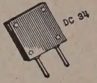
Single Sockets for Z-9, Z-9A, Z-9R	25c
Single Sockets for Z-1, Z-2 and 2XP	30c
Dual Sockets for Z-1, Z-2 and 2XP	35c
Adapters, to adapt Z-1, Z-2 and 2XP to ¾" Socket	40c

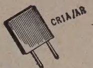
PETERSEN RADIO Company, Inc., Council Bluffs, Iowa

TEXAS CRYSTALS...FOR EVERY PURPOSE



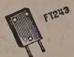






Made to order crystals in pressure type holders can be supplied in five types as shown. All TEXAS CRYSTALS are cut, lapped, and etched to exact frequencies. They are supplied for oscillator circuits having 32 MMFD capacity, unless otherwise ordered, as the crystal frequency will vary with capacity of the circuit.

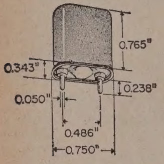
CRYSTALS MADE TO ORDER



M 1,001 to 1,600 KC .005% TOL.	$4.50
1,601 to 2,600 KC .005% TOL.	$2.75
2,600 to 9,000 KC .005% TOL.	$2.50
9,000 to 10,000 KC .005% TOL.	$3.00

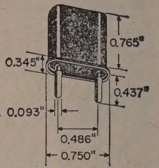
Low frequency crystals from 1001 KC to 2100 KC are space mounted —all others are pressure mounted. The advantage of the pressure mount crystal is its ability to handle more current (up to 50 Milliwatts) without fracture. Order by frequency, type holder, tolerance, and circuit capacity (if known) or type of equipment in which it is to be used.

HERMETICALLY SEALED CRYSTALS MADE TO ORDER



HC 6/U .050 PINS

In recent years, manufacturers have engineered new equipment utilizing the hermetically sealed plated crystal (HC6/U). This crystal is either gold or silver plated, the plating acting as electrodes. These crystals should be used in circuits designed for them as the maximum current capacity is 10 milliwatts (5 milliwatts for overtone type). High stability of frequency is a characteristic of this crystal. All TEXAS CRYSTALS are made to conform with military specifications. When ordering for G. E., Motorola, Link, etc., for split channel operation, a sample of both transmitting and receiving crystals known to be correct, be sent us with order specifying exact crystal frequency desired. We will correlate crystals and return your samples. Type HC6/U has .050 pins and fits CE-1 socket. Type HC17/U is the same physical size except the pins are .093 diameter. Specify type circuit, if known. Order by fundamental frequency, type circuit, type holder. All plated crystals are .005% tolerance.



HC 17/U .093 PINS

1,400 KC to 2,500 KC (Fundamental Frequency)	$6.00 ea.
2,501 KC to 5,000 KC (Fundamental Frequency)	3.50 ea.
5,001 KC to 10,000 KC (Fundamental Frequency)	3.25 ea.
10,001 KC to 15,000 KC (Fundamental Frequency)	3.75 ea.
15 MC to 20 MC (Fundamental Frequency)	5.00 ea.

OVERTONE CRYSTALS	
15 MC to 30 MC Third Overtone	$3.85 ea.
30 MC to 40 MC Third Overtone	4.10 ea.
45 MC to 65 MC Third or Fifth Overtone	4.50 ea.
65 MC to 100 MC Fifth Overtone	6.00 ea.

HC-6/U

CLASS "D" CITIZEN BAND CRYSTALS

22 Frequencies —3rd Overtone — .005% TOL.

All "Citizen Band" crystals supplied in HC-6/U holders. Pin spacing .493—Pin dia. .050—Frequencies listed in megacycles. Use circuit recommended on P5 for best results. Order by frequency.

CE-1 .... 20c
Ceramic Low Loss Socket for HC-6/U Holder — ½" Pin Spacing .050" Holes.

	CHANNEL		CHANNEL		CHANNEL		CHANNEL		CHANNEL
26.965	1	27.005	4	27.065	9	27.105	12	27.175	18
26.975	2	27.015	5	27.075	10	27.115	13	27.185	19
26.985	3	27.025	6	27.085	11	27.125	14	27.205	20
		27.035	7			27.135	15	27.215	21
		27.055	8			27.155	16	27.225	22
						27.165	17		

Can be supplied with .093 pins—15c extra. Available in counter display unit

We can supply crystals for the following manufacturers of Citizen Band Transceivers. Please specify manufacture and model number. All crystals .005% Tol. in HC6/U holders at $2.95 ea. Action Laboratories, Apelco, Arkay, Chickasha Electronics, Citizens Electronicsc, Dixon Electronics, Dunlap Electronics, Eico, Electronic Design, Essco CB, Globe, Gonset, Grove Electronics, Hallicrafters, Heath Co., Hershel Radio, International Crystal, Johnson Vikin, Kaar Engineering, Kay Townes, LaFayette Radio, Lakeland Electronics, Maxwell Electronics, Morrow Radio, Multi Products, Citi-Fone, Numaker Electronics, Pearce Simpson, Philmore, Polytronics, RCA, Radio Mfg. Eng., Radio Shack Corp., Radsen Eng., Ray Jefferson, Raytheon Mfg., Regency, Shell Electronics, Springfield Enterprises, Tecraft Sales, Transpace Inc., U.S. Electronics, Utica Communication, Vanguard Electronics, Vocaline, Western Radio, Wrightman Eng., and World Radio.

$2.95 EACH

TEXAS AMATEUR CRYSTALS

Order by Fundamental Frequency — $1.50 each. Available in self-selling counter display.

Band	Freq. Range	Multiplier	Crystal Freq.
80—Meter General	3,500 to 4,000 KC	Fundamental	3501-3999
80—Meter Novice	3701 to 3,749	Fundamental	3701-3749
40—Meter General	7,000 to 7,300	Double	3500-3650
40—Meter General	7,000 to 7,300	Fundamental	7000-7300
40—Meter Novice	7,151 to 7,199	Double	3576-3599
40—Meter Novice	7,151 to 7,199	Fundamental	7151-7199
20—Meter General	14,000 to 14,350	Double	7000-7175
20—Meter General	14,000 to 14,350	Triple	4667-4780
15—Meter General	21,000 to 21,450	Triple	7000-7150
15—Meter Novice	21,100 to 21,250	Triple	7034-7082
10—Meter General	28,000 to 29,700	X4	7000-7425
6—Meter Gen. & Tech.	50 MC to 54 MC	X6	8334-8900
2—Meter General	144 MC to 148 MC	X18	8001-8221
2—Meter Novice	145 MC to 149 MC	X18	8056-8277

AIRCRAFT CRYSTALS

All crystals are supplied at ¼ operating frequency unless otherwise specified. Tolerance .005%. Order by final frequency and type equipment. Be sure to designate 'HC6/U' holder, or 'miniature' type.

Frequencies in stock from 118 MC to 130 MC

Type HC6/U—all frequencies	$3.85 each
Miniature type—all frequencies	4.75 each

Note: Above crystals can be supplied with wire leads for soldering directly to equipment at 25c per crystal extra.

AIRPORT OWNERS AND SERVICE DEPARTMENTS WRITE FOR QUANTITY PRICES

MARINE CRYSTALS

Supplied in 4 types of holders—FT243, MC7, CR1/AR, HC6/U. .005% tolerance. Order by frequency for transmitter for transmitter types and actual crystal frequency for receiver (including 455 KC IF).

ANY MARINE FREQUENCY FROM 2000 KC to 3200 KC IN FT243, FT171, MC7 or CR1AR	$2.50
HERMETICALLY SEALED CRYSTALS FOR MARINE IN ANY FREQUENCY (Specify either .050 or .093 pins)	3.50

CIVIL AIR PATROL CRYSTALS

Supplied in DC34, FT243, FT171 or CR1/AR holders

PROMPT DELIVERY ON ALL ORDERS. ALL CAP frequencies supplied at above prices.

2374 KC, 2394 KC, 4325 KC, 4507.5 KC, 4585 KC, 5500 KC, 8230 KC & 8008.24 KC. — .005% TOLERANCE. $2.50 each.

TEXAS CRYSTALS **FORT MYERS, FLORIDA**

MIL-SPEC KNOBS

In stock! For immediate delivery! And produced by National! . . . a complete line of standard plastic control knobs made in conformance with MS-91528. There are four basic types: round, pointer, spinner (each with or without skirts) and dial skirted round . . . available in three different shaft sizes. Finishes are gloss, matte, or to your color specifications . . . in all Mil-Spec sizes.

Knobs: Made of plastic, type III, class H2, per Specification L-P-349. Set Screws: Cadmium plated, class 3, type II, per Specification QQ-P-416. Inserts: Brass, composition 4, hard, per Specification QQ-B-613.

COILS-FILTERS-CHOKES

National Radio Company is engaged in the manufacture of precision coil and filter assemblies. Why not let our engineering staff quote on your specific requirements? In addition to coils and filters made to customer specifications, National Radio Company can supply a wide variety of stock coils for the electronic industry. Typical of these coils are the following families:

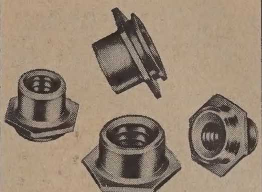
R-45 series, a new family of ferrite bead chokes for use as filament chokes, parasitic suppressors, and series elements of low-pass filters for frequencies from 5 to 200 mc. Insulated with an impregnated fiberglass sleeving, these chokes will handle 2 amperes of filament current with voltage drop of less than 0.02 volts, temperatures to the Curie point of 125°C.

R-40 series ferrite-core chokes . . . extremely high Q for small size. They are primarily for use in networks and filters at frequencies from 50 kc to 1500 kc, and as resonant elements in IF and RF circuits. Fungus-proof varnish impregnation per MIL-V-137A.

R-25 series MIL-inductance chokes for high frequency circuits, as filament chokes and peaking coils, inductance per MIL-C15305A, coil forms per MIL-P-14, and impregnation per MIL-V-173A.

R-33, R-50 and R-60 series RF coils are wound on molded phenolic forms per MIL-P-14 and coated with a tough, fungus-resistant varnish. R-50-10 choke is wound on a powdered-iron coil form instead of phenolic.

CAPTIVE NUTS
SELF-LOCKING TYPE



Self-locking, wear-resistant, machined, stainless steel threaded inserts for use in aluminum or brass. Easily applied, their reliable grip in the parent metal as well as their self-locking ability make them ideal for the variety of purposes they are designed to serve. The complete line includes one basic type in four sizes. Each of the four sizes may be obtained for insertion into any of five metal thicknesses.

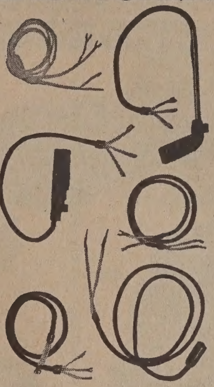
Material—Stainless steel Class 303 per FED QQ-S-763b

Finish—Passivated per MIL-P-12011

Other captive nuts and studs manufactured by National Radio Company include the line of exclusive "Flush Mount" types. Available in five sizes for use in metal thickness from 1/16" up. They provide permanent tapped holes and a flush fit on both sides of sheet.

The engineering staff will be glad to discuss your applications and possible variations to best meet your requirements.

ELASTICABLE



Elasticable is an elastic type wire, made in single and multiple conductors. It will stretch to more than three times its relaxed length. This unique elastic characteristic in a straight (not coiled or spring loaded) extra flexible wire gives the designer a new material to further his design concepts and assist him in solving heretofore impossible design problems. Five types, three commercial and two military are available as stock items. A sample specification of one type is:

Type 2—Core . . . natural rubber
Insulation . . Nylon (braided)
Conductor . . bronze tinsel
Diameter . . . ⅛" approx.
Resistance . . 1.0 ohm per ft. approx.
Elongation
single conductor 300%
multiple conductor 275%
Operating temperature
range . . . . . . −25°C to +85°C

National Radio is providing many companies with complete assemblies incorporating special terminations, molded parts and custom mechanical configurations. The Elasticable Application Engineering group is available to discuss electric and mechanical characteristics, applications and terminations. Why not let them quote on your finished Elasticable cable assembly?

OTHER NATIONAL COMPONENTS

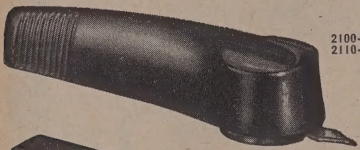
In addition to knobs, chokes, drives and captive hardware, National Radio Company also manufactures a complete line of dials, coil forms, condensers, tanks, grid and plate caps, IF transformers, tube and crystal sockets, ceramic insulators, bushings, spreaders, couplings, terminal assemblies, other electronic and electro-mechanical components. For specific design or development applications problems, write or call.

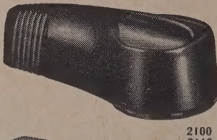
National RADIO COMPANY, INC.
MELROSE 76, MASSACHUSETTS
A wholly owned subsidiary of National Co., Inc.
Export: AD AURIEMA, INC., 85 Broad Street, New York, N.Y., U.S.A.
In Canada: CANADIAN MARCONI CO., 830 Bayview Ave., Toronto 17, Ont.
Specifications subject to change without notice.

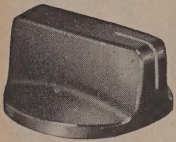
Harry Davies Molding Co.

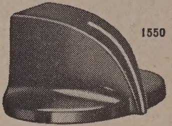
Molders of Plastics

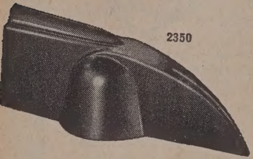
POINTER AND BAR KNOBS

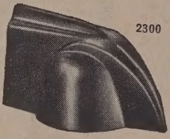

2100-P
2110-P

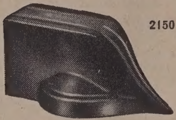

2100
2110


1500


1550


2350


2300


2150

No. 1500. Dia. 1⅛", hgt. 9/16", ¼" molded hole, set screw or knurled hole mounting, locknut recess, indicator line filled or unfilled.

No. 1550. Dia. 1-⅛", hgt. ⅝", ¼" molded hole or metal insert, set screw, spring or knurled hole mounting, locknut recess.

No. 2100. Length 2½", hgt. ⅝", width ¾", ¼" molded hole or metal insert, set screw mounting, locknut recess.

No. 2110. Length, 1⅝", hgt. 19/32", width ¾", ¼" molded hole or metal insert, set screw or knurled hole mounting, locknut recess.

No. 2100-P. Length 2½", hgt. ⅝", width ¾", ¼" metal insert and 5/16" pointer, set screw mounting.

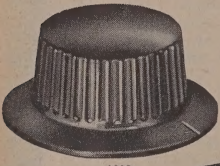
No. 2110-P. Length 1⅝", hgt. 19/32", width ¾", ¼" metal insert and 5/16" pointer, set screw mounting.

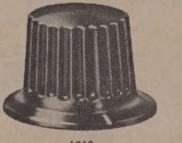
No. 2150. Length 1¼", hgt. 9/16", ¼" molded hole, set screw mounting, locknut recess.

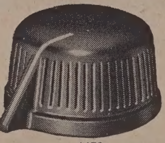
No. 2300. Length 1¼", hgt. ⅝", ¼" molded hole, also ¼" metal insert, set screw or knurled hole mounting, locknut recess.

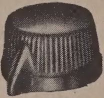
No. 2350. Length 2", hgt. ⅝", ¼" molded hole or metal insert, set screw mounting, locknut recess.

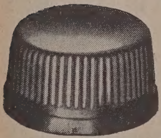
CONTROL KNOBS

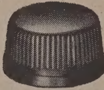

1600

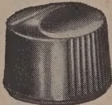

1610

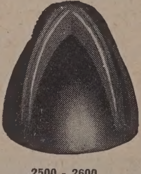

1470


1400


1475


1450


1700


2500 - 2600

No. 1400. Dia. 11/16", hgt. 13/32", ⅛" or ¼" molded hole or brass insert, set screw, spring or knurled hole mounting.

No. 1450. Dia. 11/16", hgt. 13/32", ⅛" or ¼" molded hole or brass insert, set screw, spring or knurled hole mounting.

No. 1470. Dia. 1", hgt. ½", ¼" molded hole or brass insert, set screw, spring or knurled hole mounting, indicator line filled or unfilled, locknut recess.

No. 1475. Dia. 1", hgt. ½", ¼" molded hole or brass insert, set screw, spring or knurled hole mounting, locknut recess.

No. 1600. Dia. 1½", hgt. 11/16", ¼" molded hole or metal insert, set screw mounting, locknut recess, indicator line filled or unfilled.

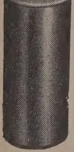
No. 1610. Dia. 15/16", hgt. ⅝", ⅛" or ¼" molded hole or metal insert, set screw mounting, locknut recess, indicator line filled or unfilled.

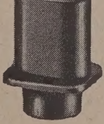
No. 1700. Dia. ¾", hgt. 19/32", ¼" molded hole or brass insert, set screw, spring or knurled hole mounting.

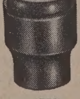
No. 2500. Dia. ¾", hgt. ¾", ¼" molded hole, set screw, spring or knurled hole mounting.

No. 2600. Dia. ⅞", hgt. ⅞", ¼" molded hole, set screw, spring or knurled hole mounting.

PUSH BUTTONS


1800


5149-A


1750
1770

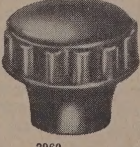
No. 1800. Dia. 7/16", hgt. 1" to 1⅜", touch tuning, plain or recessed top, push on, to fit flatted shaft .050" x .187 patented friction fit. Also with studs of various lengths.

No. 5149-A. Hgt. 51/64", oval touch tuning. Push-on to fit flatted shaft. .050" x .187".

No. 1750. Dia. 31/64", hgt. 9/16" to 15/16", touch tuning, push on, to fit flatted shaft .050" x .187".

No. 1770. Dia. 31/64", hgt. ½" to ⅞", 6-32 or 8-32 female metal insert. 8-32 male stud.

TERMINAL NUTS

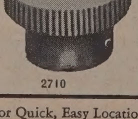

2960

No. 2960

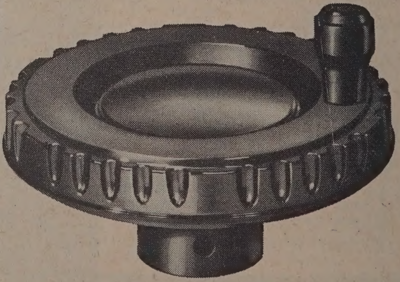
Dia. ⅞", hgt. ¾", 8-32 or 10-32 female metal insert, 10-24 or 10-32 male stud.

No. 2710

Dia. ¾", hgt. ½", 8-32, 10-32, 10-24 metal insert.


2710

SPINNER KNOBS

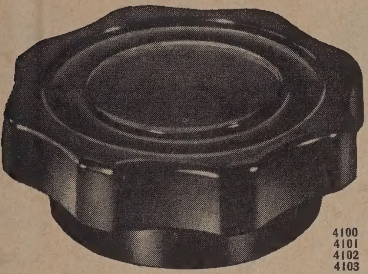


No. 99. Dia. 3⅜", hgt. 1½", ⅜" or ½" molded hole or metal insert. Set screw mounting, with or without spinner.

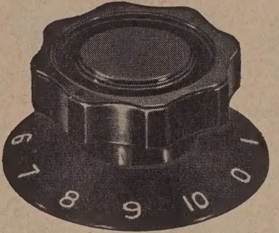
Harry Davies Molding Co.

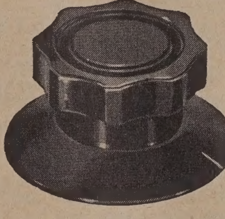
Molders of Plastics

INSTRUMENT KNOBS

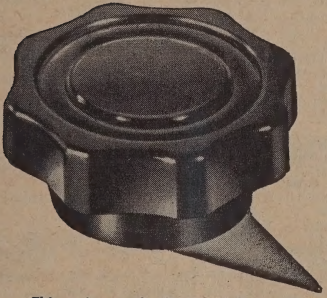


4100
4101
4102
4103

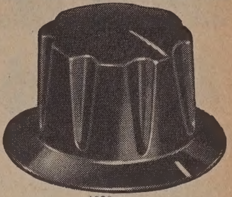




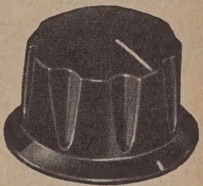
4104
4107
4108
4109



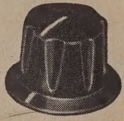
4100
4101
4102
4103



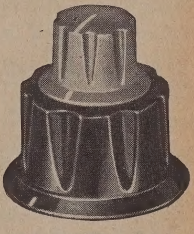
1930



1920



1910



1915

This series can be furnished in compliance with MS 91531.

Part No.	Knob Dia.	Knob Hgt.
4100	1⅛″	⅝″
4101	1⅜″	11/16″
4:02	1⅝″	¾″
4103	2⅜″	⅞″

Entire series available with ¼″ molded hole or metal insert, set screw mounting. White vinylite pointer available. Pointer lengths, ⅝″, ¾″, ⅞″, 1 1/16″, 1 3/16″, 1¼″, 1 9/16″.

Part No.	Knob Dia.	Skirt Dia.
4104	1⅛″	1½″
4107	1⅜″	1¾″
4108	1⅝″	2 1/16″
4109	2⅜″	3″

Skirt available with or without indicator line filled. Branding stamps constructed to your specifications.

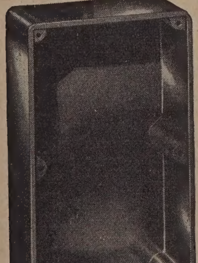
No. 1910. Dia. ¾″, hgt. ½″. ⅛″ or ¼″, molded hole or brass insert, set screw, spring or knurled hole mounting.

No. 1920. Dia. 1¼″, hgt. ¾″, ¼″ molded hole or brass insert, set screw, spring or knurled hole mounting.

No. 1915. Dia. 1¼″, hgt. 1 3/16″. Dual concentric control. ¼″ molded hole or brass insert.

No. 1930. Dia. 1½″, hgt. ⅞″. ¼″ molded hole or brass insert, set screw, spring or knurled hole mounting.

METER CASES AND COVERS



240

241

No. 240. 2″ hgt. x 3¾″ wide x 6¼″ long. (Outside Dimensions) — ⅛″ (Wall Thickness).

No. 241. Mating cover with interlocking lip for No. 240 series cases.

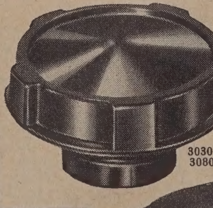
No. 260. 2-5/16″ height x 5-9/32″ wide x 6-13/16″ long. (Outside Dimensions) — 5/32″ (Wall Thickness).

No. 261. Mating cover with interlocking lip for No. 260 case.

Knobs shown are only part of our stock on hand. Our stock molds are interchangeable and meet most requirements with only minor tooling variations. Let us quote on your specifications.

WRITE FOR FREE CATALOG

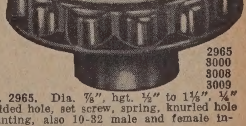
Harry Davies
Molding Co.
CHICAGO, ILLINOIS



3030
3080

No. 3030. Dia. 1¾″, hgt. ¾″, or 1″. ¼″ molded hole, some male and female metal inserts, set screw mounting.

No. 3080. Dia. 1¼″. ¾″ or 1″ hgt. ¼″ molded hole, some male and female metal inserts, set screw mounting.



2965
3000
3008
3009

No. 2965. Dia. ⅞″, hgt. ½″ to 1⅛″, ¼″ molded hole, set screw, spring, knurled hole mounting, also 10-32 male and female inserts.

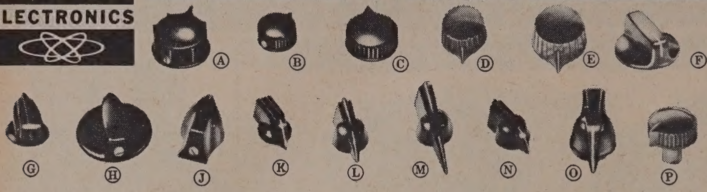
No. 3000. Dia. 1¾″, hgt. ¾″, 1″, 1¼″, 1½″; ¼″ molded hole, some male and female metal inserts, set screw mounting.

No. 3008. Dia. 1¼″, hgt. ¾″ to 1″, ¼″ molded hole, some male and female inserts, set screw mounting.

No. 3009. Dia. 1½″, hgt. ¾″ to 1″, ¼″ molded hole, some male and female metal inserts, set screw mounting.

GC ELECTRONICS

REPLACEMENT KNOBS



POINTER KNOBS

(A) TENITE POINTER KNOB—1" Diameter, ½" Height, Fits ¼" shafts.

Knurl

Cat. No. 24-464	Walnut	List $ .13
24-466	Ivory	.13

Set Screw

Cat. No. 24-468	Walnut	List $ .27
24-470	Ivory	.27

(B) TENITE POINTER KNOB — 23⁄32" Diameter, ⅜" Height, Fits ¼" shafts.

Knurl

Cat. No. 24-472	Walnut	List $ .10
24-474	Ivory	.10

Set Screw

Cat. No. 24-476	Walnut	List $ .22
24-478	Ivory	.22

(C) TENITE POINTER KNOB — 15⁄16" Diameter, 7⁄16" Height, Fits ¼" shafts.

Knurl

Cat. No. 24-480	Walnut	List $ .10
24-482	Ivory	.10

(D) BAKELITE POINTER KNOB — 1" Diameter, ½" Height, Fits ¼" shafts.

No Insert—Set Screw

Cat. No. 24-484	Walnut	List $ .22
24-486	Black	.22

With Insert—Set Screw

Cat. No. 24-488	Walnut	List $ .50
24-490	Black	.50

(E) BAKELITE POINTER KNOB—1¼" Diameter, ⅝" Height, Fits ¼" shafts.

No Insert—Set Screw

Cat. No. 24-492	Walnut	List $ .35
24-494	Black	.35
24-496	Ivory	.35

Brass Insert—Set Screw

Cat. No. 24-498	Walnut	List $ .55
24-500	Black	.55
24-502	Ivory	.55

(F) BAKELITE POINTER KNOB—Line filled, 1⅛" Diameter, 9⁄16" Height, Fits ¼" shafts.

Set Screw

Cat. No. 24-504	Walnut	List $ .35
24-506	Black	.35
24-508	Red	.35
24-510	Ivory	.35

(G) BAKELITE POINTER KNOB—13⁄16" Length, ¾" Height, Fits ¼" shafts.

Set Screw

Cat. No. 24-512	Walnut	List $ .25
24-514	Black	.25

(H) TENITE POINTER KNOB — 1¼" Diameter, 9⁄16" Height, Fits ¼" shafts.

Set Screw

Cat. No. 24-516	Walnut	List $ .40
24-518	Black	.40
24-520	Red	.40
24-522	White	.40

(J) BAKELITE POINTER KNOB—1¼" Length, 11⁄16" Height, Fits ¼" shafts.

Set Screw

Cat. No. 24-524	Black	List $ .37
24-526	Red	.37
24-528	Ivory	.37

(K) BAKELITE POINTER KNOB—1¼" Length, 9⁄16" Height, Fits ¼" shafts.

Set Screw

Cat. No. 24-530	Black	List $ .30
24-532	Walnut	.30
24-534	Red	.30
24-536	Ivory	.30

(L) BAKELITE POINTER KNOB—1¼" Length, ⅝" Height, Fits ¼" shafts.

Set Screw

Cat. No. 24-538	Black	List $ .29
24-540	Walnut	.29
24-542	Red	.29
24-544	Ivory	.29

(M) BAKELITE BRASS INSERT — 2" Length, ⅝" Height, Fits ¼" shafts.

No Insert—Set Screw

Cat. No.24-546	Black	List $ .50
24-548	Walnut	.50
24-550	Red	.50
24-552	Ivory	.50

Brass Insert—Set Screw

Cat. No. 24-554	Black	List $ .65
24-556	Walnut	.65
24-558	Red	.65
24-560	Ivory	.65

(N) BAKELITE BRASS INSERT—1¼" Length, ⅝" Height, Fits ¼" shafts.

Set Screw

Cat. No. 24-562	Black	List $ .40
24-564	Walnut	.40
24-566	Red	.40
24-568	Ivory	.40

(O) BAKELITE POINTER KNOB—1¼" Length, ⅝" Height, Fits ¼" shafts.

No Insert—Set Screw

Cat. No. 24-570	Walnut	List $ .22
24-572	Black	.22
24-574	Red	.22
24-576	Ivory	.22

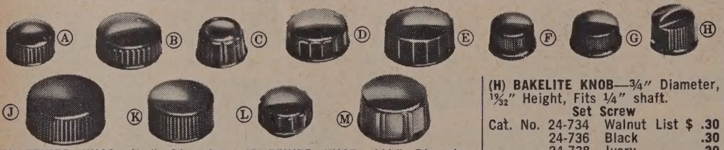
Brass Insert—Set Screw

Cat. No. 24-578	Walnut	List $ .37
24-580	Black	.37
24-582	Red	.37
24-584	Ivory	.37

(P) PLASTIC POINTER KNOB — 15⁄16" Diameter, ½" shank extension for ¼" knurled shaft.

Knurl

Cat. No. 24-586	Walnut	List $ .13
24-588	Ivory	.13



(A) TENITE KNOB—23⁄32" Diameter, 13⁄32" Height, Fits ¼" shaft.

Knurl

Cat. No. 24-666	Walnut	List $ .13
24-668	Ivory	.13

Set Screw

Cat. No. 24-670	Walnut	List $ .25
24-672	Ivory	.25

(B) TENITE KNOB—15⁄16" Diameter, 7⁄16" Height, Fits ¼" shaft.

Knurl

Cat. No. 24-674	Walnut	List $ .13
24-676	Ivory	.13

Spring Type

Cat. No. 24-678	Walnut	List $ .13
24-680	Ivory	.13

(C) TENITE KNOB—¾" Diameter, ½" Height, Fits ¼" shaft.

Knurl

Cat. No. 24-682	Walnut	List $ .13
24-684	Ivory	.13

Set Screw

Cat. No. 24-686	Walnut	List $ .19
24-688	Ivory	.19

(D) TENITE KNOB—15⁄16" Diameter, 7⁄16" Height, Fits ¼" shaft.

Knurl

Cat. No. 24-690	Walnut	List $ .13
24-692	Ivory	.13

Spring Type

Cat. No. 24-694	Walnut	List $ .13

(E) TENITE KNOB—1⅛" Diameter, 9⁄16" Height, Fits ¼" shafts.

Knurl

Cat. No. 24-700	Walnut	List $ .13
24-702	Ivory	.13

Spring Type

Cat. No. 24-704	Walnut	List $ .15
24-706	Ivory	.15

Set Screw

Cat. No. 24-708	Walnut	List $ .24
24-710	Ivory	.24

(F) BAKELITE KNOB—11⁄16" Diameter, 13⁄32" Height, Fits ¼" shafts.

Set Screw

Cat. No. 24-712	Walnut	List $ .23
24-714	Black	.23
24-716	Red	.23
24-718	Ivory	.23

Set Screw with Arrow

Cat. No. 24-720	Walnut	List $ .33
24-722	Black	.33
24-724	Red	.35
24-726	Ivory	.35

(G) BAKELITE KNOB—1" Diameter, ½" Height, Fits ¼" shafts.

Set Screw

Cat. No. 24-728	Black	List $ .36
24-730	Red	.36
24-732	Ivory	.36

(H) BAKELITE KNOB—¾" Diameter, 19⁄32" Height, Fits ¼" shaft.

Set Screw

Cat. No. 24-734	Walnut	List $ .30
24-736	Black	.30
24-738	Ivory	.30

(J) TENITE KNOB—13⁄16" Diameter, ½" Height, Fits ¼" shaft.

Knurl

Cat. No. 24-740	Walnut	List $ .16
24-742	Ivory	.16

(K) TENITE KNOB—11⁄16" Diameter, ½" Height, Fits ¼" shaft.

Knurl

Cat. No. 24-744	Walnut	List $ .14
24-746	Ivory	.14

Set Screw with Arrow

Cat. No. 24-748	Walnut	List $ .15
24-750	Ivory	.15

(L) BAKELITE KNOB—⅞" Diameter, ½" Height, Fits ¼" shaft.

Set Screw

Cat. No. 24-752	Walnut	List $ .34
24-754	Black	.34
24-756	Ivory	.37

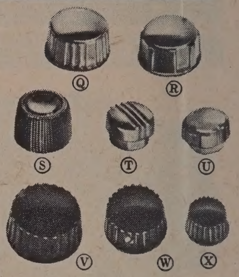
Set Screw with Arrow

Cat. No. 24-758	Walnut	List $ .45
24-760	Black	.45
24-762	Ivory	.45

(M) BAKELITE KNOB—1" Diameter, 9⁄16" Height, Fits ¼" shaft.

Set Screw

Cat. No. 24-764	Walnut	List $ .29
24-766	Ivory	.29



(Q) BAKELITE KNOB—11⁄16" Diameter, 9⁄16" Height, Fits ¼" shafts.

Set Screw

Cat. No. 24-772	Walnut	List $ .37
24-774	Ivory	.37

(R) BAKELITE KNOB—1" Diameter, 9⁄16" Height, Fits ¼" shaft.

Set Screw

Cat. No. 24-776	Walnut	List $ .34
24-778	Ivory	.34

(S) TENITE KNOB — 1" Diameter, 11⁄16" Height, Fits ¼" shaft.

Knurl

Cat. No. 24-780	Walnut	List $ .16
24-782	Ivory	.16

Spring Type

Cat. No. 24-784	Walnut	List $ .16
24-786	Ivory	.16

(T) BAKELITE KNOB—⅞" Diameter, ⅝" Height, Fits ¼" shaft.

Set Screw

Cat. No. 24-788	Walnut	List $ .45
24-790	Ivory	.45

(U) BAKELITE KNOB—⅞" Diameter, ⅝" Height, Fits ¼" shaft.

Set Screw

Cat. No. 24-792	Walnut	List $ .20

(V) BAKELITE KNOB—1¼" Diameter, ⅝" Height, Fits ¼" shaft.

Set Screw—No Insert

Cat. No. 24-796	Walnut	List $ .40
24-798	Black	.40

Brass Insert—Set Screw

Cat. No. 24-800	Walnut	List $ .45
24-802	Black	.45

(W) BAKELITE KNOB—1" Diameter, ½" Height, Fits ¼" shaft.

Set Screw—No Insert

Cat. No. 24-804	Black	List $ .32
24-806	Red	.32

Brass Insert—Set Screw

Cat. No. 24-808	Black	List $ .36
24-810	Red	.36

(X) BAKELITE KNOB—⅝" Diameter, 13⁄32" Height, Fits ¼" shaft.

Set Screw—No Insert

Cat. No. 24-812	Walnut	List $ .20
24-814	Black	.20
24-816	Red	.22
24-818	Ivory	.22

Set Screw—Brass Insert

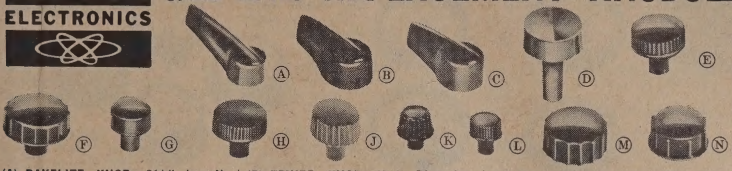
Cat. No. 24-820	Walnut	List $ .31
24-822	Black	.31
24-824	Red	.31
24-826	Ivory	.31

GC
ELECTRONICS

WRITE FOR FREE GC KNOB CATALOG . . . send us details of your requirements. No obligation.

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

GC ELECTRONICS GEE-LAR REPLACEMENT KNOBS



(A) BAKELITE KNOB—2½" Length, ⅝" Height, Fits ¼" shafts.

NO INSERT—SET SCREW

Cat. No. 24-590	Black	List $	.45
24-592	Walnut		.45

BRASS INSERT—SET SCREW

Cat. No. 24-594	Black	List $	.55
24-596	Walnut		.55

(B) BAKELITE KNOB—1⅝" Length, 19/32" Height, Fits ¼" shafts.

SET SCREW

Cat. No. 24-598	Black	List $	.36
24-600	Walnut		.36

(C) BAKELITE BRASS INSERT—1⅝" Length, 19/32" Height, Fits ¼" shafts.

SET SCREW

Cat. No. 24-602	Black	List $	.55
24-604	Walnut		.55

(D) TENITE KNOB—1 3/16" Shank, 1⅛" Diameter, 7/16" Height, Fits ¼" shafts.

KNURL

Cat. No. 24-606	Walnut	List $	.20
24-608	Ivory		.20

(E) TENITE KNOB—15/16" Diameter, 7/16" Height, ½" Shank Extension, Fits ¼" shafts.

KNURL

Cat. No. 24-610	Walnut	List $	.13
24-612	Ivory		.13

(F) TENITE KNOB—1¼" Diameter, 9/16" Height, ½" Shank Extension, Fits ¼" shafts.

KNURL

Cat. No. 24-614	Walnut	List $	.20
24-616	Ivory		.20

(G) TENITE KNOB—¾" Diameter, 7/16" Height, ½" Shank Extension, Fits ¼" shafts.

KNURL

Cat. No. 24-618	Walnut	List $	.13
24-620	Ivory		.13

(H) TENITE KNOB—15/16" Diameter, ⅝" Height, ½" Shank Extension, Fits ¼" shafts.

KNURL

Cat. No. 24-622	Walnut	List $	.18
24-624	Ivory		.18

(J) PLASTIC KNOB—15/16" Diameter, ½" Shank Extension for ¼" Knurled Shaft.

KNURL

Cat. No. 24-626	Walnut	List $	.14
24-628	Ivory		.14

(K) PLASTIC KNOB MIDGET TYPE—¾" Diameter, ⅜" Shank Extension, Fits ¼" shafts.

KNURL

Cat. No. 24-634	Walnut	List $	.15
24-636	Ivory		.15

(L) PLASTIC KNOB MIDGET TYPE—23/32" Diameter, ½" Shank Extension, Fits ¼" shafts.

KNURL

Cat. No. 24-638	Walnut	List $	.15
24-640	Ivory		.15

(M) TENITE KNOB—1⅛" Diameter, ½" Height, Fits ¼" shafts.

KNURL

Cat. No. 24-642	Walnut	List $	.13
24-644	Ivory		.13

SPRING TYPE

Cat No. 24-646	Walnut	List $	.25
24-648	Ivory		.25

SET SCREW

Cat. No. 24-650	Walnut	List $	.25
24-652	Ivory		.25

(N) TENITE KNOB—1" Diameter, 7/16" Height, Fits ¼" shafts.

KNURL

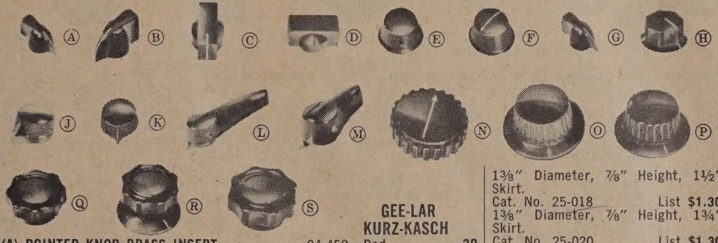
Cat. No. 24-654	Walnut	List $	.13
24-656	Ivory		.13

SPRING TYPE

Cat. No. 24-658	Walnut	List $	.19
24-660	Ivory		.19

SET SCREW

Cat. No. 24-662	Walnut	List $	.26
24-664	Ivory		.26



GEE-LAR KURZ-KASCH

(A) POINTER KNOB BRASS INSERT—1¼" Length, ⅝" Height, MIL Spec. AN3219-1.

Cat. No. 25-088 Black List $ .48

(B) POINTER KNOB BRASS INSERT—1½" Length, ⅞" Height.

Cat. No. 25-092 Black List $ .62

(C) BAR KNOB BRASS INSERT—1¼" Length, 21/32" Height, Black only.

Cat. No. 25-098 Black List $1.32

(D) BAR KNOB BRASS INSERT—1¼" Length, 21/32" Height, Black only.

Cat. No. 25-100 Black List $1.24

(E) BRASS INSERT NO ARROW—¾" Diameter, 9/16" Height, Black only.

Cat. No. 25-102 Black List $ .69

(F) BRASS INSERT WITH ARROW—1⅛" Diameter, 9/16" Height.

Cat. No. 25-104 List $ .64

1½" Diameter, ¾" Height, Black only.

Cat. No. 25-106 Black List $ .73

(G) POINTER KNOB BRASS INSERT—1¼" Length, ⅝" Height.

Cat. No. 25-108 Black List $ .65

(H) POINTER KNOB ⅛" BRASS INSERT—¾" Diameter, 7/16" Height.

Cat. No. 25-116 Black List $ .79

(J) BAKELITE POINTER KNOB—11/16" Diameter, 13/32" Height, Fine serrations, Fits ¼" shaft.

SET SCREW

Cat. No. 24-430	Walnut	List $	.22
24-432	Black		.22
24-434	Red		.24
24-436	Ivory		.24

(K) BAKELITE POINTER KNOB—11/16" Diameter, 13/32" Height, Fits ¼" shaft.

NO INSERT—SET SCREW

Cat. No. 24-440	Walnut	List $	.19
24-442	Black		.19
24-444	Red		.19
24-446	Ivory		.19

WITH BRASS INSERT

Cat. No. 24-448	Walnut	List $	.30
24-450	Black		.30
24-452	Red		.30
24-454	Ivory		.40

(L) POINTER BAR KNOB BRASS BUSHING—2¾" Length, Fits ¼" shaft, Metal pointer can be removed.

SET SCREW

Cat. No. 24-456	Black	List $	.85
24-458	Walnut		.90

(M) POINTER BAR KNOB BRASS BUSHING 1⅝" Length, Fits ¼" shaft, Metal pointer can be removed.

SET SCREW

Cat. No. 24-460	Black	List $	.85
24-462	Walnut		.85

(N) BAKELITE POINTER KNOB—1¾" Diameter, ⅞" Height, with molded white arrow, brass bushing, Black only.

Cat. No. 25-000 Set Screw Type List $ .72

(O) BAKELITE WITH BRASS INSERT—1½" Diameter, ¾" Height, Indicator line, Black only.

Cat. No. 25-002 Set Screw Type List $ .50

(P) BAKELITE SKIRT KNOBS—1½" Skirt Diameter, 11/16" Height.

Cat. No. 25-004 Set Screw Type List $ .40

(Q) POINTER KNOBS—1⅛" Diameter, ⅝" Height, ¾" Pointer.

Cat. No. 25-006 List $1.00

1⅜" Diameter, 11/16" Height, 1 1/16" Pointer.

Cat. No. 25-008 List $1.00

1⅝" Diameter, ¾"Height, 1 3/16" Pointer.

Cat. No. 25-010 List $1.15

2⅜" Diameter, ⅞" Height, 1 9/16" Pointer.

Cat. No. 25-012 List $1.30

(R) SKIRT KNOBS—1⅛" Diameter, 13/16" Height, 1½" Skirt.

Cat. No. 25-014 List $1.25

1⅛" Diameter, 13/16" Height, 1¾" Skirt.

Cat. No. 25-016 List $1.25

1⅜" Diameter, ⅞" Height, 1½" Skirt.

Cat. No. 25-018 List $1.30

1⅜" Diameter, ⅞" Height, 1¾" Skirt.

Cat. No. 25-020 List $1.30

1⅝" Diameter, 29/32" Height, 2 1/16" Skirt.

Cat. No. 25-022 List $1.50

2⅜" Diameter, 1 1/32" Height, 3" Skirt.

Cat. No. 25-024 List $2.10

(S) BAKELITE KNOB—1⅛" Diameter, ⅝" Height.

Cat. No. 25-026 List $ .60

1⅜" Diameter, 11/16" Height.

Cat. No. 25-028 List $ .70

2⅜" Diameter, ⅞" Height.

Cat. No. 25-032 List $1.10

1⅝" Diameter, ¾" Height.

Cat. No. 25-030 List $ .79

GEE-LAR KURZ-KASCH PUSH BUTTON KNOBS

PUSH BUTTON KNOB—½" Diameter, 15/32" Height, ⅜" Hole Depth, Black only. Tapered sides.

Cat. No. 25-118 Black List $ .19

PUSH BUTTON RECESSED TOP—½" Diameter, 15/32" Height, ⅜" Hole Depth, Top recessed for selector tab, Black only.

Cat. No. 25-120 Black List $ .19

PUSH BUTTON KNOB—7/16" Diameter 15/32" Height, ⅜" Hole Depth, Black only.

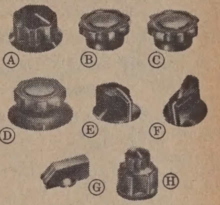
Cat. No. 25-122 Black List $ .21

PUSH BUTTON KNOB—7/16" Diameter, ⅝" Height, ⅜" Hole Depth, Black only.

Cat. No. 25-124 Black List $ .21

PUSH BUTTON RECESSED TOP—7/16" Diameter, ⅝" Height, ⅜" Hole Depth, Top recessed for selector tab, Black only.

Cat. No. 25-126 Black List $ .21



GEE-LAR KURZ-KASCH KNOBS

(A) POINTER KNOBS—Indicator line.

¾" Diameter, 7/16" Height.

Cat. No. 25-034 List $ .75

1" Diameter, 19/32" Height.

Cat. No. 25-036 List $ .85

1¼" Diameter, 21/32" Height.

Cat. No. 25-038 List $ .85

1½" Diameter, ¾" Height.

Cat. No. 25-040 List $ .85

2" Diameter, ⅞" Height.

Cat. No. 25-042 List $1.60

No Indicator Line.

1½" Diameter, ¾" Height.

Cat. No. 25-044 List $ .79

2" Diameter, ⅞" Height.

Cat. No. 25-046 List $1.55

(B) POINTER KNOBS—1" Diameter ⅝" Height, ¾" Pointer.

Cat. No. 25-048 List $1.10

1⅛" Diameter, ⅝" Height, ¾" Pointer.

Cat. No. 25-050 List $1.10

1⅜" Diameter, 11/16" Height, 1 1/16" Pointer.

Cat. No. 25-052 List $1.50

1⅝" Diameter, ¾" Height, 1 3/16" Pointer.

Cat. No. 25-054 List $1.50

2⅜" Diameter, ⅞" Height, 1 9/16" Pointer.

Cat. No. 25-056 List $2.00

(C) NO POINTER—1" Diameter, ⅝" Height.

Cat. No. 25-058 List $ .95

1⅛" Diameter, ⅝" Height.

Cat. No. 25-060 List $1.15

1⅜" Diameter, 11/16" Height.

Cat. No. 25-062 List $1.50

1⅝" Diameter, ¾" Height.

Cat. No. 25-064 List $1.24

2⅜" Diameter, ⅞" Height.

Cat. No. 25-066 List $1.80

(D) SKIRT KNOBS—1⅛" Diameter, 13/16" Height, 1½" Skirt.

Cat. No. 25-068 List $2.25

1⅜" Diameter, 27/32" Height, 1¾" Skirt.

Cat. No. 25-070 List $2.15

1⅝" Diameter, ⅞" Height, 2 1/16" Skirt.

Cat. No. 25-072 List $2.40

2⅜" Diameter, 15/16" Height, 3" Skirt.

Cat. No. 25-074 List $3.75

(E) POINTER KNOB BRASS INSERT—1⅛" Diameter, ⅝" Height.

Cat. No. 25-076 List $1.00

(F) POINTER KNOB NO BRASS INSERT—1⅛" Diameter, 11/16" Height, 1 Set Screw.

Cat. No. 25-078 List $ .25

(G) BAR KNOB NO BRASS INSERT—1½" Length, ⅝" Height, 1 Set Screw.

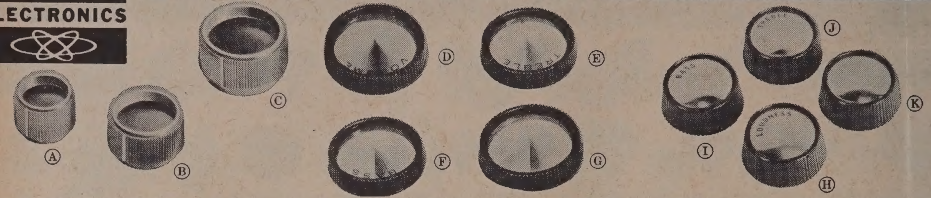
Cat. No. 25-080 List $ .50

(H) DUAL CONTROL—1" Diameter, 1 3/64" Height.

Cat. No. 25-086 List $1.65

GC ELECTRONICS

HI-FI AND STEREO KNOBS



HI-FI STEREO KNOB SERIES—For Hi-Fi Stereo Cabinets and Custom Installations.
Precision made of TENITE with sparkling brass top ring inserts and indicator lines. Set screw type.

Cat. No. 24-012 Set of 3, Black List $1.60
24-014 Set of 3, Ivory List $1.60

INDIVIDUAL KNOBS

"A" Small
1" Diameter 13/16" Height, Fits ¼" shaft.
Cat. No. 24-000 Black List $ .50
24-002 Ivory .50

"B" Medium
1 5/16" Diameter, 13/16" Height, Fits ¼" shaft.
Cat. No. 24-004 Black List $ .55
24-006 Ivory .55

"C" Large
1½" Diameter, ⅞" Height, Fits ¼" shaft.
Cat. No. 24-008 Black List $ .65
24-010 Ivory .65

AUDIO-PHILE KNOB SERIES—For Hi-Fi Custom Installations. TENITE with brass inserts. Indicated for Volume, Treble, Bass or Plain.
Cat. No. 24-024 Set of 4, Maroon List $2.35

"D" Volume
1½" Diameter, 5/16" Height, Fits Knurl shaft.
Cat. No. 24-016 Maroon List $ .65

"E" Treble
1½" Diameter, 5/16" Height, Fits Knurl shaft.
Cat. No. 24-018 Maroon List $ .65

"F" Bass
1½" Diameter, 5/16" Height, Fits Knurl shaft.
Cat. No. 24-020 Maroon List $ .65

"G" Plain
1½" Diameter, 5/16" Height, Fits Knurl shaft.
Cat. No. 24-022 Maroon List $ .50

HIGH-FIDELITY KNOB SERIES TENITE—with handsome, individually marked brass inserts for Volume, Bass, Treble and Plain.
Cat. No. 24-034 Set of 4, Maroon List $2.25

"H" Loudness
1⅛" Diameter, ½" Height, For .250 Diameter and .156 Flat Spring Type Shaft.
Cat. No. 24-026 Maroon List $ .60

"I" Bass
1⅛" Diameter, ½" Height, For .250 Diameter and .156 Flat Spring Type Shaft.
Cat. No. 24-028 Maroon List $ .60

"J" Treble
1⅛" Diameter, ½" Height, For .250 Diameter and .156 Flat Spring Type Shaft.
Cat. No. 24-030 Maroon List $ .60

"K" Plain
1⅛" Diameter, ½" Height, For .250 Diameter and .156 Flat Spring Type Shaft.
Cat. No. 24-032 Maroon List $ .55

(A) TENITE PLATED GOLD INLAY—1¼" Diameter, ½" Height, Fits ¼" shaft.

SPRING TYPE
Cat. No. 24-070 Walnut List $ .50
24-072 Ivory .50

(B) TENITE PLATED GOLD INLAY—1" Diameter, ⅝" Height, Fits ¼" shaft.

KNURL TYPE
Cat. No. 24-074 Walnut List $ .35
24-076 Ivory .35

(C) TENITE PLATED GOLD INLAY—1" Diameter, ½" Height, Fits ¼" shaft.

KNURL TYPE
Cat. No. 24-078 Walnut List $ .32
24-080 Ivory .32

(D) TENITE PLATED GOLD INLAY—1" Diameter, ⅜" Height, Fits ¼" shaft.

KNURL TYPE
Cat. No. 24-082 Walnut List $ .36
24-084 Ivory .36

SPRING TYPE
Cat. No. 24-086 Walnut List $ .38
24-088 Ivory .38

SET SCREW
Cat. No. 24-090 Walnut List $ .50
24-092 Ivory .50

(E) TENITE PLATED GOLD INLAY—¾" Diameter, ⅜" Height, Fits ¼" shaft.

KNURL TYPE
Cat. No. 24-094 Walnut List $ .30
24-096 Ivory .30

SPRING TYPE
Cat. No. 24-098 Walnut List $ .40
24-100 Ivory .40

(F) TENITE PLATED GOLD INLAY—1 3/16" Diameter, ½" Height, Fits ¼" shaft.

KNURL TYPE
Cat. No. 24-102 Walnut List $ .40
24-104 Ivory .40

SET SCREW
Cat. No. 24-106 Walnut List $ .60
24-108 Ivory .60

(G) TENITE PLATED GOLD INLAY—1" Diameter, 11/16" Height, Fits ¼" shaft.

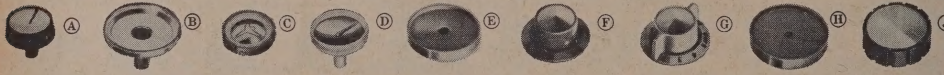
SET SCREW
Cat. No. 24-110 Walnut List $ .55
24-112 Ivory .55

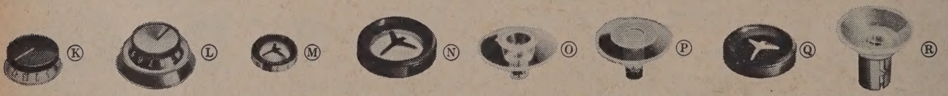
(H) TENITE PLATED GOLD INLAY—1 3/16" Diameter, ½" Height, Fits ¼" shaft.

KNURL TYPE
Cat. No. 24-114 Walnut List $ .40
24-116 Ivory .40

SET SCREW
Cat. No. 24-118 Walnut List $ .53
24-120 Ivory .53

GENERAL ELECTRIC KNOB REPLACEMENTS





(A) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. G 1001, Color Black & Gold.
Cat. No. 27-064 Channel Knob List $1.50

CHANNEL SELECTOR KNOB
Original Mfg.'s Part No. G 1002, Color Black & Silver.
Cat. No. 27-066 Channel Knob List $1.50

(B) FINE TUNING KNOB—Original Mfg.'s Part No. G 1003, Color Silver.
Cat. No. 27-068 Fine Tuning List $1.50

(C) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. GWT43x246, Color Green & Gold.
Cat. No. 27-070 Channel Knob List $2.10

(D) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. GWT43x269, Color Clear & Gold.
Cat. No. 27-072 Channel Knob List $2.50

(E) FINE TUNING KNOB—Original Mfg.'s Part No. WT43x40 (RDK222), Color Fawn.
Cat. No. 27-074 Fine Tuning List $ .95

(F) OFF-ON VOLUME KNOB—Original Mfg.'s Part No. WT43x41 (RDK223), Color Fawn.
Cat. No. 27-076 Off-On Volume List $1.25

(G) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x42 (RDK224), Color Fawn.
Cat. No. 27-078 Channel Knob List $1.45

(H) PICTURE VOLUME KNOB—Original Mfg.'s Part No. WT43x43 (RDK225), Color Fawn.
Cat. No. 27-080 Picture Volume List $ .95

(J) OFF-ON VOLUME KNOB—Original Mfg.'s Part No. WT43x53 (RDK263), Color Brown & Fawn.
Cat. No. 27-082 Off-On Volume List $1.65

CHANNEL SELECTOR KNOB
Original Mfg.'s Part No. WT43x54 (RDK264), Color Brown & Fawn.
Cat. No. 27-084 Channel Knob List $2.50

(K) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x76 (RDK331), Color Brown & Gold.
Cat. No. 27-086 Channel Knob List $3.20

CHANNEL SELECTOR KNOB
Original Mfg.'s Part No. WT43x152 (RDK455), Color Brown.
Cat. No. 27-090 Channel Knob List $4.75

(L) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x139 (RDK434), Color Brown & Gold.
Cat. No. 27-092 Channel Knob List $3.50

CHANNEL SELECTOR KNOB
Original Mfg.'s Part No. WT43x141 (RDK438), Color Fawn & Gold.
Cat. No. 27-094 Channel Knob List $3.80

(M) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x159 (RDK469), Color Brown.
Cat. No. 27-096 Channel Knob List $3.00

(N) ON-OFF VOLUME OR BRIGHTNESS—Original Mfg.'s Part No. WT43 x158 (RDK467), Color Mahogany & Gold.
Cat. No. 27-462 On-Off Volume List $2.10

ON-OFF VOLUME OR BRIGHTNESS—Original Mfg.'s Part No. WT-43x163 (RDK473), Color Brown.
Cat. No. 27-464 On-Off Volume List $1.65

CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x164 (RDK474), Color Mahogany.
Cat. No. 27-466 Channel Knob List $1.95

ON-OFF VOLUME KNOB—Original Mfg.'s Part No. WT43x165 (RDK475), Color Mahogany & Gold.
Cat. No. 27-468 On-Off Volume List $2.10

UHF CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x169 (RDK479), Color Mahogany & Gold.
Cat. No. 27-470 UHF Channel List $2.95

(O) PICTURE TUNING KNOB—Original Mfg.'s Part No. WT43x171 (RDK490), Color Clear.
Cat. No. 27-472 Picture Knob List $1.50

UHF CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x176 (RDK521), Color Mahogany & Gold.
Cat. No. 27-474 UHF Channel List $2.95

Continued next page

GC ELECTRONICS

REPLACEMENT KNOBS

GENERAL ELECTRIC KNOB REPLACEMENTS . . . See previous page for illustrations

CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x179 (RDK524), Color Mahogany.
Cat. No. 27-476 Channel Knob
List **$1.95**

UHF CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x182 (RDK527), Color Gold.
Cat. No. 27-478 UHF Channel
List **$2.95**

(P) CONTRAST TUNING KNOB—Original Mfg.'s Part No. WT43x184 (RDK530), Color Clear.
Cat. No. 27-480 · Contrast Tuning
List **$1.50**

UHF CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x187 (RDK540), Color Navy Blue.
Cat. No. 27-482 UHF Channel
List **$1.95**

UHF CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x192 (RDK550), Color Bronze & Gold.
Cat. No. 27-484 UHF Channel
List **$2.95**

UHF CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x194 (RDK552), Color Peacock Blue & Gold.
Cat. No. 27-486 UHF Channel
List **$2.95**

(Q) BRIGHTNESS KNOB — Original Mfg.'s Part No. WT43x209 (RDK569), Color Navy Blue.
Cat. No. 27-488 Brightness Knob
List **$1.65**

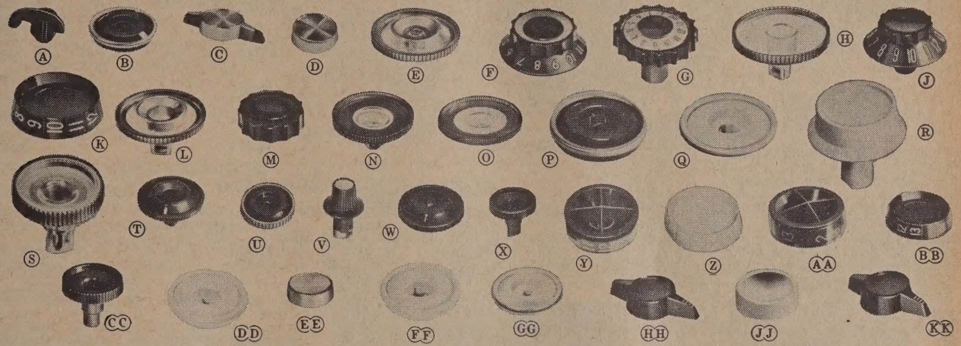
UHF CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x207 (RDK568), Color Cream & Gold.
Cat. No. 27-490 UHF Channel
List **$2.95**

VHF CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x217 (RDK587), Color Cream & Gold.
Cat. No. 27-492 VHF Channel
List **$2.95**

UHF CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x219 (RDK599), Color Green & Gold.
Cat. No. 27-494 UHF Channel
List **$2.95**

(R) BRIGHTNESS KNOB — Original Mfg.'s Part No. WT43x226 (RDK609), Color Clear.
Cat. No. 27-496 Brightness Knob
List **$ .70**

RCA EXACT TV REPLACEMENT KNOBS



(A) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. 76770, Color Dark Maroon & Gold.
Cat. No. 27-200 Channel Knob
List **$ .75**

(B) FINE TUNING KNOB — Original Mfg.'s Part No. 77707, Color Brown with Polished Brass Shell.
Cat. No. 27-202 Fine Tuning
List **$2.60**

(C) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. 77708, Color Red with Polished Brass Shell.
Cat. No. 27-204 Channel Knob
List **$2.50**

(D) ON-OFF VOLUME KNOB—Original Mfg.'s Part No. 77710, Color Black with Polished Brass Shell.
Cat. No. 27-206 On-Off Volume
List **$2.60**

(E) FINE TUNING KNOB — Original Mfg.'s Part No. 79464, Color Gold & Maroon.
Cat. No. 27-208 Fine Tuning
List **$1.65**

(F) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. 79466, Colors Amber, Gray, Maroon & Gold.
Cat. No. 27-210 Channel Knob
List **$1.95**

(G) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. 100627, Color Maroon & Polished Brass.
Cat. No. 27-212 Channel Knob
List **$3.10**

(H) FINE TUNING KNOB — Original Mfg.'s Part No. 100629, Color Clear with Gold Edge.
Cat. No. 27-214 Fine Tuning
List **$2.10**

(J) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. 100637, Color Brown.
Cat. No. 27-216 Channel Knob
List **$1.95**

(K) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. 100944, Color Dark Wine.
Cat. No. 27-218 Channel Knob
List **$1.65**

(L) FINE TUNING KNOB — Original Mfg.'s Part No. 101015, Color Gold & Maroon.
Cat. No. 27-220 Fine Tuning
List **$1.40**

(M) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. 101150, Color Dark Wine.
Cat. No. 27-222 Channel Knob
List **$1.00**

(N) FINE TUNING KNOB — Original Mfg.'s Part No. 101154, Color Gold & Maroon.
Cat. No. 27-224 Fine Tuning
List **$1.65**

(O) FINE TUNING KNOB — Original Mfg.'s Part No. 101276, Color Gold & Maroon.
Cat. No. 27-226 Fine Tuning
List **$1.65**

(P) BRIGHTNESS KNOB — Original Mfg.'s Part No. 77709, Color Brown & Gold.
Cat. No. 27-700 Brightness
List **$2.25**

(Q) FINE TUNING KNOB — Original Mfg.'s Part No. 77717, Color Beige & Gold.
Cat. No. 27-702 Fine Tuning
List **$2.25**

BRIGHTNESS KNOB — Original Mfg's. Part No. 77718, Color Beige & Gold.
Cat. No. 27-704 Brightness
List **$2.25**

(R) ON-OFF VOLUME KNOB—Original Mfg.'s Part No. 100621, Color Gray.
Cat. No. 27-706 On-Off Volume
List **$1.10**

ON-OFF VOLUME KNOB—Original Mfg.'s Part No. 101138, Color Brown.
Cat. No. 27-708 On-Off Volume
List **$1.10**

(S) BRIGHTNESS KNOB — Original Mfg.'s Part No. 101124, Color Clear & Gold.
Cat. No. 27-710 Brightness
List **$1.35**

(T) FINE TUNING KNOB — Original Mfg.'s Part No. 100639, Color Brown.
Cat. No. 27-712 Fine Tuning
List **$1.45**

(U) CONTRAST-BRIGHTNESS—Original Mfg.'s Part No. 79470, Color Mahogany.
Cat. No. 27-714 Contrast-Brightness List **$2.50**

(V) HORIZONTAL CONTROL KNOB—Original Mfg.'s Part No. 101010, Color Maroon.
Cat. No. 27-716 Horizontal
List **$1.35**

(W) FINE TUNING KNOB — Original Mfg.'s Part No. 79864, Color Brown.
Cat. No. 27-718 Fine Tuning
List **$1.35**

(X) CONTRAST KNOB—Original Mfg.'s Part No. 100622, Color Mahogany.
Cat. No. 27-720 Contrast
List **$1.35**

CONTRAST KNOB — Original Mfg.'s Part No. 100623, Color Gray.
Cat. No. 27-722 Contrast
List **$1.35**

(Y) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. 104304, Color Mahogany.
Cat. No. 27-724 Channel Knob
List **$2.25**

(Z) UHF CHANNEL SELECTOR — Original Mfg.'s Part No. 104305, Color Mahogany.
Cat. No. 27-726 Channel Knob
List **$2.25**

UHF CHANNEL SELECTOR — Original Mfg.'s Part No. 104306, Color Gray.
Cat. No. 27-728 Channel Knob
List **$2.25**

(AA) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. 102503, Color Gray.
Cat. No. 27-730 Channel Knob
List **$5.00**

CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. 102502, Color Mahogany.
Cat. No. 27-732 Channel Knob
List **$5.00**

(BB) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. 104303, Color Gray.
Cat. No. 27-734 Channel Knob
List **$2.25**

(CC) CONTRAST KNOB — Original Mfg.'s Part No. 104386, Color Maroon.
Cat. No. 27-736 Contrast Knob
List **$1.35**

(DD) BRIGHTNESS KNOB — Original Mfg.'s Part No. 79080, Color Beige.
Cat. No. 27-738 Brightness Knob
List **$2.25**

(EE) ON-OFF VOLUME KNOB—Original Mfg.'s Part No. 77710M, Color Mahogany & Gold.
Cat. No. 27-740 On-Off Volume
List **$2.25**

VOLUME KNOB—Original Mfg.'s Part No. 79445, Color Beige & Gold.
Cat. No. 27-742 Volume Knob
List **$2.25**

VOLUME KNOB — Original Mfg.'s Part No. 79471, Color Mahogany & Gold.
Cat. No. 27-744 Volume Knob
List **$2.25**

(FF) FINE TUNING KNOB — Original Mfg.'s Part No. 79077, Color Beige.
Cat. No. 27-746 Fine Tuning
List **$2.25**

(GG) BRIGHTNESS KNOB — Original Mfg.'s Part No. 77718M, Color Mahogany & Gold.
Cat. No. 27-748 Brightness Knob
List **$2.25**

FINE TUNING KNOB — Original Mfg.'s Part No. 77717M, Color Mahogany & Gold.
Cat. No. 27-750 Fine Tuning
List **$2.25**

(HH) CHANNEL SELECTOR KNOB — Original Mfg.'s Part No. 79222BL, Color Black.
Cat. No. 27-752 Channel Knob
List **$1.95**

CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. 79222, Color Mahogany.
Cat. No. 27-754 Channel Knob
List **$1.95**

(JJ) ON-OFF VOLUME KNOB—Original Mfg.'s Part No. 77710B, Color Beige & Gold.
Cat. No. 27-756 On-Off Volume
List **$2.25**

(KK) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. 77708B, Color Beige & Gold.
Cat. No. 27-758 Channel Knob
List **$2.25**

CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. 77708M, Color Brown & Gold.
Cat. No. 27-760 Channel Knob
List **$2.25**

ALSO AVAILABLE

Replacement Knobs for

- Admiral
- Crosley
- Emerson
- Hotpoint
- Motorola
- Muntz
- Olympic
- Philco
- Westinghouse
- Zenith

GC ELECTRONICS ELECTRONIC COMPONENTS

GC TV-RADIO DIAL CABLES

Nylon cord with a fibreglass core. All especially treated to prevent stretching and slipping. G-C Cords No. 75, 75-A and 74 will handle 90% of replacements. 25-Ft., 50-Ft., 100-Ft. Spools are supplied in permanent, clear plastic containers.

G-C No. 75 STANDARD THIN NYLON CORD .028" Diameter — Used on 95% of the latest sets manufactured. Made of finest braided Nylon over a Fiberglas Core. It is prestretched and chemically treated.

Cat. No.		
75-25	25 ft. spool	List $1.25
75-50	50 ft. spool	2.40
75-100	100 ft. spool	3.95
75-1000	1000 ft. spool	25.95

G-C No. 75-A EXTRA THIN NYLON CORD .025" Diameter—Used on Motorola, RCA, GE, Sentinel, Stromberg Carlson and others. Extra thin, made of finest braided Nylon, chemically treated.

RADIO
DIAL CABLE
NYLON
FIBER GLASS

Cat. No.		
75A-25	25 ft. spool	List $1.25
75A-50	50 ft. spool	2.40
75A-100	100 ft. spool	3.95
75A-1000	100 ft. spool	23.75

G-C No. 74 MEDIUM NYLON CORD .040" Diameter—Used on models of RCA, Philco, Majestic, Wells Gardner, etc. Made of finest braided Nylon over a Spun Fiberglas Core.

Cat. No.		
74-25	25 ft. spool	List $1.25
74-50	50 ft. spool	2.40
74-100	100 ft. spool	3.95
74-1000	1000 ft. spool	32.95

G-C No. 70 BRAIDED BRONZE CABLE .040" Diameter—Braided phosphor bronze cable made over a Fiberglas core for greater strength and flexibility. Will not unravel.

Cat. No.		
70-25	25 ft. spool	List $1.60
70-50	50 ft. spool	2.40
70-100	100 ft. spool	4.50
70-1000	1000 ft. spool	37.00

G-C No., 71 42-STRAND BRONZE CABLE .040" Diameter — 42-strand twisted phosphor bronze cable used on Majestic, Bosch, Philco, etc. 42 fine strands braided over a cotton core.

Cat. No.		
71-25	25 ft. spool	List $2.05
71-50	50 ft. spool	3.15
71-100	100 ft. spool	5.85
71-1000	1000 ft. spool	43.00

G-C No. 73 HEAVY NYLON CORD .062" Diameter—This is a heavier cord such as used on models of Philco, Silver Marshall, Majestic, Brunswick, etc.

Cat. No.		
73-25	25 ft. spool	List $1.70
73-50	50 ft. spool	2.90
73-100	100 ft. spool	4.95
73-1000	1000 ft. spool	41.50

G-C No. 76 SPECIAL THIN BRONZE CABLE .025" Diameter—Extra thin braided bronze cable such as is used on GE and RCA sets. Also used for speaker cones, pigtails, etc.

Cat. No.		
76-25	25 ft. spool	List $1.60
76-50	50 ft. spool	2.40
76-100	100 ft. spool	4.50
76-1000	1000 ft. spool	34.10

G-C COLOR TV NO-STRETCH DIAL CORD

EXTRA FINE .025" Diameter—Supplied on metal spools.

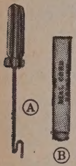
Cat. No.		
87-25	25 ft. spool	List $1.35
87-100	100 ft. spool	4.50

STANDARD .028" Diameter — Supplied on metal spools.

Cat. No.		
88-25	25 ft. spool	List $1.35
88-100	100 ft. spool	4.50

MEDIUM .040" Diameter—Supplied on metal spools.

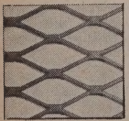
Cat. No.		
89-25	25 ft. spool	List $1.35
89-100	100 ft. spool	4.50



(A) G-C DIAL CABLE TOOL—A handy tool to aid in replacing worn out cables or cables slipped off of drums, to replace dial cord springs also.
Cat. No. 5096 List $ .90

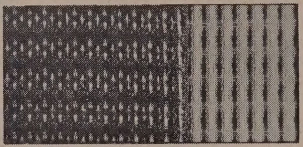
(B) G-C DIAL CORD NON-SLIP DRESSING STICK—Simply rub the stick on cord and job is done. Prevents and stops slipping.
Cat. No. 1212 List $ .30

G-C SWED. STEEL SPEAKER SHIMS—Four sizes are furnished in a handy gold-lettered partitioned snap case. .004, .006, .008 and .010 in. Instructions included with kit.
Cat. No. 701 List $ .90



G-C ORNAMENTAL METAL GRILLE SCREEN — Made of heavy metal, finished in beautiful "Brushed Brass-Rich Gold Color" and lacquered for durability.

Cat. No.		
9252	12"x18"	List $3.00
9253	18"x24"	5.50
9254	24"x36"	10.45
9255	24"x48"	13.75
9256	36"x48"	19.50



G-C PLASTIC SARAN WOVEN GRILLE CLOTH—A beautiful "lumite" plastic woven cloth in attractive patterns. Easily cleaned with a damp cloth. Won't stain, rot or mildew.

Cat. No.			
8736	12"x18"	Bronze & Gold	List $1.65
8739	36"x36"	Bronze & Gold	List $9.25
8737	12"x18"	Ecru & Ivory	List $1.65
8740	36"x36"	Ecru & Ivory	List $9.25

G-C GRILLE CLOTH ASSORTMENT—All patterns are modern and the assortment will provide for nearly all of the smaller and moderate size speaker grille openings.
Cat. No. 9114 List $1.65

G-C TV GRILLE CLOTH—New, modern patterns specially selected to blend in with the best of television cabinets. Gold metallic braid makes this an outstanding TV grille cloth. Colors: Walnut, Mahogany and Blonde. (Specify color when ordering).

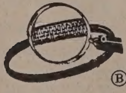
Cat. No.			
8656-E	Envelope	18"x24"	List $2.50
8657-E	Envelope	24"x36"	4.75
8658-E	Envelope	36"x36"	7.50
8659	36"Wide, per yard, bulk		7.25

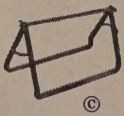
G-C METAL FLOCKED GRILLE SCREEN—Very popular Grille Screen flocked with a smooth rayon velvet-like flock. It can be bent and shaped to fit odd places. It is weatherproof and can be used outdoors. Made on electro-galvanized metal screen, flocked on both sides.

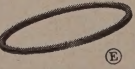
Cat. No.			
951-1	8"x11"	Walnut Brown	List $ .95
951-3	8"x11"	Ivory	.95
951-5	8"x11"	Maroon	.95
952-1	18"x24"	Walnut Brown	3.20
952-3	18"x24"	Ivory	3.20
952-5	18"x24"	Maroon	3.20
953-1	36"x36"	Walnut Brown per yard	9.85
953-3	36"x36"	Ivory, per yd.	9.85
953-5	36"x36"	Maroon, per yd.	9.85

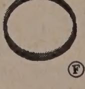
G-C RADIO CABINET SPEAKER GRILLE CLOTH—The cloth is supplied in light and dark shades in patterns for both small and large cabinets. It is also available in the light and ivory shades for light wood and plastic cabinets. Colors: Walnut, Mahogany, Ivory, (Specify Color Wanted).

Cat. No.		
949-1	1-Yard Packages	List $6.30
949-1R	40" Wide Cont. Length, Yard	6.00
949-2R	50" Wide Cont. Length, Yard	6.50
940	18"x20"	1.50
941	9"x18"	.75
942	12"x12"	.80
943	14"x18"	1.00
944	24"x13"	1.35
945	18"x13"	.90
955	18"x25"	2.25









(B) G-C RADIO DIAL BELTS—G-C Belt are approved replacements for all sets. They are made of the very best quality belting material and will not stretch. Especially treated to prevent slipping.
Cat. No. 101 thru 195 List $ .50

G-C SERVICEMEN'S KIT—Kits contain more popular belts, belt scale and complete listing of over 1100 models. Cat. No. G-25 List $13.95

(C) G-C PORTABLE WIRE REEL— The convenient way to handle wire coiled on spools. Just slip the spool into the reel and it's so easy to reel out the required amount right on the job. Cat. No. 9111 List $4.80

(D) G-C WIRE MARKERS—Handy wire markers needed for tracing circuits, marking wires in replacing parts, etc. Nos., 1 to 33—3 full strips included to kit. Cat. No. 9229 List $1.50

(E) G-C MOTOROLA TV DIAL BELT—Replacement belt as used on Motorola TV Tuners. Original replacement part. Cat. No. 196 List $ .50

(F) G-C RCA TUNER BELT—Belt used on RCA Tuners such as 8T, 8TC, 8TK, 9TC, etc.
Cat. No. 195 List $ .50

(G) G-C RCA-TV CHANNEL INDICATOR DRIVE BELT—Exact replacement for 1956 model RCA TV sets. Cat. No. 197 List $1.60

LERCO MIL-SPEC CONTROL KNOBS

Select from six types in six sizes as listed below — rounds, skirted rounds, dial skirted rounds, plain and skirted pointers, and crank-type knobs. A quality line to use where quality counts!

MIRROR OR MATTE FINISH available on all knobs... black only

TWO HARDENED SET SCREWS furnished with each knob

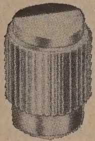
RIBBED CONSTRUCTION for added strength in large diameter knobs

MEETS MS-91528 SPECIFICATIONS for use in military applications

SHAFT SIZES Series 505 furnished with ⅛" shaft hole. All others furnished with ¼" hole (Series 507 available with ⅛" hole on special order)

Write for complete catalog or quotation on special orders

SIX SIZES, actual size shown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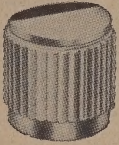
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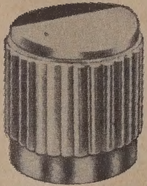
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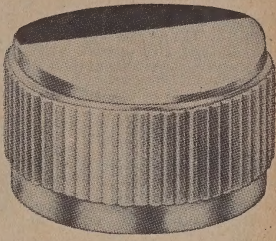
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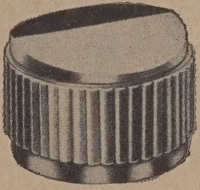
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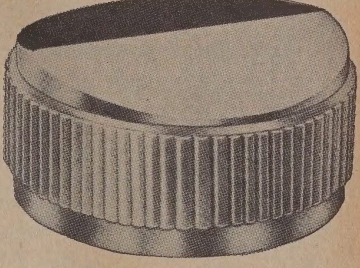
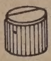
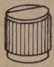
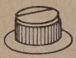
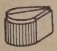
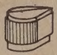
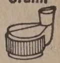

522

SIX STYLES ➧	Round 	Skirted Round 	Round Dial Skirt 	Pointer 	Skirted Pointer 	Crank 
MIRROR	505-1-1 50	505-2-1 56	505-3-1 64	505-4-1 50	505-5-1 56	—
MATTE	505-1-1M. . . .55	505-2-1M. . . .61	505-3-1M. . . .69	505-4-1M. . . .55	505-5-1M. . . .61	—
MIRROR	507-1-2 62	507-2-2 70	507-3-2 78	507-4-2 62	507-5-2 70	—
MATTE	507-1-2M. . . .67 MS91528—1N2D	507-2-2M. . . .75 MS91528—1D2D	507-3-2M. . . .83 MS91528—1F2D	507-4-2M. . . .67 MS91528—1P2D	507-5-2M. . . .75 MS91528—1K2D	—
MIRROR	509-1-2 66	509-2-2 74	509-3-2 82	509-4-2 70	509-5-2 78	—
MATTE	509-1-2M. . . .71 MS91528—2N2D	509-2-2M. . . .79 MS91528—2D2D	509-3-2M. . . .87 MS91528—2F2D	507-4-2M. . . .75 MS91528—2P2D	509-5-2M. . . .83 MS91528—2K2D	—
MIRROR	512-1-2 70	512-2-2 78	512-3-2 86	—	—	512-6-2 . . . 1.80
MATTE	512-1-2M. . . .75 MS91528—3N2D	512-2-2M. . . .83 MS91528—3D2D	512-3-2M. . . .91 MS91528—3F2D	—	—	512-6-2M. . 1.85 MS91528—3S2D
MIRROR	517-1-2 82	517-2-2 90	517-3-2 . . . 1.00	—	—	517-6-2 . . . 2.00
MATTE	517-1-2M. . . .87 MS91528—4N2D	517-2-2M. . . .95 MS91528—4D2D	517-3-2M. . 1.05 MS91528—4F2D	—	—	517-6-2M. . 2 05 MS91528—4S2D
MIRROR	522-1-2 94	522-2-2 . . . 1.02	522-3-2 . . . 1.14	—	—	522-6-2 . . . 2.08
MATTE	522-1-2M. . 1.00 MS91528—5N2D	522-2-2M. . 1.08 MS91528—5D2D	522-3-2M. . 1.20 MS91528—5F2D	—	—	522-6-2M. . 2.14 MS91528—5S2D

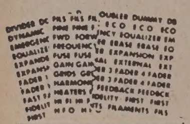
LERCO ELECTRONICS, INC., BURBANK, CALIF.

Net

Walsco ELECTRONICS DECALS TEKNI-LABELS • TEK-TITLES

WALSCO TEKNI-LABELS provide thousands of handy titles and designs for fast-easy labeling of electronic equipment. Each package contains hundreds of electronic terms, symbols, designs, abbreviations and letters for almost every conceivable use. Tekni-Labels are used by engineers, designers, manufacturers, technicians, hi-fi enthusiasts, amateurs, custom builders and particularly the "do-it-yourself" group

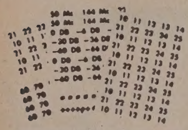
DECALS
TEKNI-LABELS



RECEIVER LABELS

For the engineer, designer or builder of receiver type equipment. Over 1300 titles, miscellaneous letters, alphabets and marks.

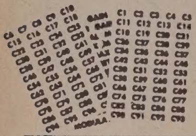
Cat. No. 2102 White List $1.35
Cat. No. 2112 Black List $1.35



TRANSMITTER LABELS

For transmitting equipment. Set contains over 1200 titles, including large, 1/4" high labels for titling stages or separate major components of transmitter equipment.

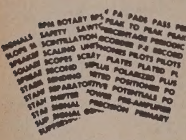
Cat. No. 2100 White List $1.35
Cat. No. 2108 Black List $1.35



TELEVISION LABELS

For the Television experimenter, engineer or designer of Television equipment and custom installer. Includes special color experimental Television titles of great usefulness in Television work.

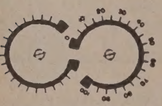
Cat. No. 2103 White List $1.35
Cat. No. 2113 Black List $1.35



INSTRUMENTS

Set includes all labels necessary for an Oscilloscope, Variable Frequency Oscillator, Grid Dip Meter, Standing Wave Meter, Null Detector, AC-DC Voltmeter, Audio Signal Generator, Modulation Monitor, Distortion Meter and Tube Tester and others.

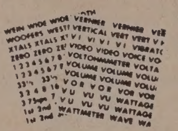
Cat. No. 2101 White List $1.35
Cat. No. 2109 Black List $1.35



DIAL LABELS

For general use to match titles in other decal sets of our manufacture. Dials impart a wholly professional look to front panels and add greatly to the usefulness and ease of operation of any equipment.

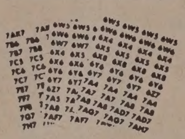
Cat. No. 2104 White List $1.35
Cat. No. 2110 Black List $1.35



AUDIO LABELS

For use in the Audio and Sound field by engineers, designers, Custom Builders and installers of sound system. Set contains all necessary titles as well as recent new Hi-Fi titles.

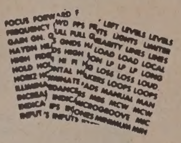
Cat. No. 2105 White List $1.35
Cat. No. 2107 Black List $1.35



RECEIVING TUBES

For identification of all tube sockets. More than 320 different tubes listed including most commonly used types. Tubes not listed can be made up by combining portions of titles.

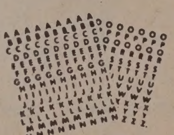
Cat. No. 2106 White List $1.35



PANEL TITLES

For Custom Builders and service men in titling front panels of finished wood cabinets, especially broadcast receivers. Television sets, Hi-Fi amplifiers, tape recorders and similar equipment.

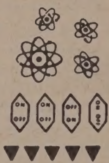
Cat. No. 2111 Gold List $1.35



ALPHABETS

Seven complete alphabets in each package ranging from 3/4" high letters down to 1/10" high. Set includes large block letters as well as Greek and Old English. This assortment is ideal to make individualized titles and designs on all equipment. Arresting results are easily obtainable by combining these letters with markings in the "Trademarks" set, especially if two or more colors are combined.

Cat. No. 2115 White List $1.35
Cat. No. 2125 Black List $1.35
Cat. No. 2135 Gold List $1.35
Cat. No. 2145 Red List $1.35

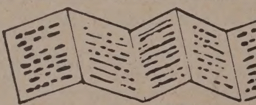


TRADEMARKS

Hundreds of electrical and electronic markings are included in this assortment, among them are circles, ovals, triangles, squares, arrows, dots, music notes, lighting flash, multi-orbit "Atomic" designs, name plates, corner designs, borders and many others which are extremely useful in decorating all electronic equipment.

Cat. No. 2116 White List $1.35
Cat. No. 2126 Black List $1.35
Cat. No. 2136 Gold List $1.35
Cat. No. 2146 Red List $1.35

WALSCO TEK-TITLES are handsome gold and silver foil labels designed to identify controls, knobs, switches and other electronic components. No water or adhesive is required; you merely snip out the exact title desired from the sheet of hundreds of labels, peel off the backing and press label into position.



Cat. No.		Foil Comp.
42-220	Stereo & High Fidelity Systems	(Gold on White)
42-222	Stereo & High Fidelity Systems	(Silver on Black)
42-224	Transistor Titles	(Silver on Black)
42-226	Intercom Systems	(Gold on White)
42-228	Intercom Systems	(Silver on Black)
42-230	Lubrication Titles	(Silver on Black)
42-232	Maintenance & Calibration	(Gold on White)
42-234	Repairman's Titles	(Gold on White)
42-236	Sound Systems	(Gold on White)
42-238	Amateur Equipment	(Silver on Black)
42-240	Alphabets, Large	(Gold on White)
42-242	Alphabets, Large	(Silver on Black)
42-244	Alphabets & Numerals, Medium	(Gold on White)
42-246	Alphabets & Numerals, Medium	(Silver on Black)
42-248	Numerals, Large	(Gold on White)
42-250	Numerals, Large	(Silver on Black)
42-252	Alphabets & Numerals, Small	(Gold on White)
42-254	Alphabets & Numerals, Small	(Silver on Black)
42-256	Electrical Distribution	(Gold on White)
42-258	School Electrical Systems	(Silver on Black)
42-260	U.S. Government Property	(Silver on Black)
42-262	U.S. Army Property	(Silver on Black)
42-264	U.S. Navy Property	(Silver on Black)
42-266	U.S. Air Force Property	(Silver on Black)

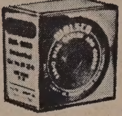
Dealer Net, each $1.35

Walsco
NET $1.35
PRESSURE SENSITIVE
TEK-TITLES
PRESS ON! NO WATER! NO SOLVENTS!

SEND FOR COMPLETE WALSCO CATALOG . . . or ask your jobber.

DIAL CORDS • CABLES • BELTS

Walsco ELECTRONICS



Same quality as used on original equipment, in variety of sizes and types and conveniently packaged.

"SPECIAL THIN"

Diameter .025", Breaking Strength 15 lbs.

Cat. No. 656-02	25 feet	List **$1.25**
Cat. No. 656-10	100 feet	List **3.95**
Cat. No. 656-50	500 feet	List **14.30**

MEDIUM

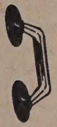
Diameter .040", Breaking Strength 35 lbs.

Cat. No. 652-02	25 feet	List **$1.25**
Cat. No. 652-10	100 feet	List **3.95**
Cat. No. 652-50	500 feet	List **17.60**

PHOSPHOR BRONZE CABLE

42-strand, .032" diameter, 40 lb. breaking strength. Numerous strands give cable extraordinary flexibility.

Cat. No. 662-02	25 feet	List **$2.05**
Cat. No. 662-10	100 feet	List **5.85**
Cat. No. 662-50	500 feet	List **27.00**



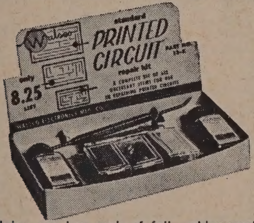
WALSCO SAFETY GLASS REMOVER

Chrome plated, steel handle is combined with two powerful, long lasting suction cups to insure trouble free removal of safety glass on TV sets.

Cat. No. 2575	List **$1.49**

PRINTED CIRCUIT ACCESSORIES

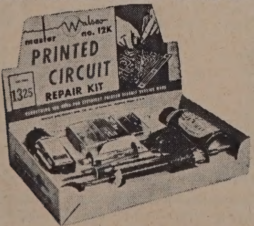
STANDARD PRINTED CIRCUIT REPAIR KIT



Contains one box each of foil, solder washers, solder wire, 1 solder-ease tool, fiber glass brush, printed circuit insulating varnish and solvent, tweezers and complete instructions.

Cat. No. 13-K	List **$8.25**

MASTER PRINTED CIRCUIT REPAIR KIT



Contains all items above plus 1 Ungar soldering iron with 1 special tip and a 6 oz. spray can of printed circuit insulating varnish. Also includes practice wiring board.

Cat. No. 12-K	List **$13.25**

BRAIDED BRONZE CABLE

16-strand, .039" O.D., 50 lb. breaking strength. Good flexibility, excellent abrasion resistance.

Cat. No. 660-02	25 feet	List **$1.60**
Cat. No. 660-10	100 feet	List **4.50**
Cat. No. 660-50	500 feet	List **20.00**

STANDARD

Diameter .032", Breaking Strength 20 lbs.

Cat. No. 654-02	25 feet	List **$1.25**
Cat. No. 654-10	100 feet	List **3.95**
Cat. No. 654-50	50 feet	List **20.40**

HEAVY

(Used on many Philco and Majestic sets.) **Diameter .060".**

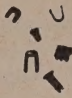
Cat. No. 650-02	25 feet	List **$1.70**
Cat. No. 650-10	100 feet	List **4.95**

THIN BRONZE CABLE

An extra-thin cable with diameter of only .022". Surprisingly strong and flexible. Non-raveling.

Cat. No. 664-02	25 feet	List **$1.80**
Cat. No. 664-10	100 feet	List **4.50**
Cat. No. 664-50	500 feet	List **20.00**

DIAL CORD CLIPS



This assortment of 24 Walsco Dial Cord Clips contains the proper sizes for all standard thicknesses of cords.

Cat. No. 7745-F	List **$ .60**

FLAT NYLON LACING CORD

The new, waxed and fungus resistant flat cord for tying harnesses, wrapping coils, etc. Will not cut wire insulation. Breaking strength 50 lbs., approx. width, .085", approx. thickness, .0125".

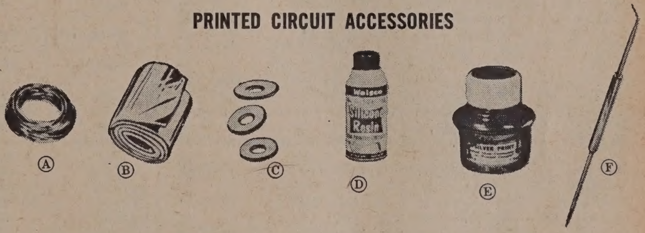
Cat. No. 666-15	150 ft. spool	List **$4.95**
Cat. No. 666-75	750 ft. spool	List **15.00**

STANDARD LACING CORD

Meets specifications JAN T-713—type N—Class 3. In natural gray color. Approximately .040". Min. tensile strength 32 lbs., low stretch.

Cat. No. 665-10	100 ft. spool	List **$1.75**
Cat. No. 665-45	450 ft. spool	List **2.95**
Cat. No. 665-80	1800 ft. spool	List **9.75**

PRINTED CIRCUIT ACCESSORIES



(A) PRINTED CIRCUIT REPAIR SOLDER — Especially compounded 11' solder wire with flux core to give a perfect solder joint and flow quickly and easily at lower temperatures required for printed circuit work.

Cat. No. 649	List **$ .85**

(B) PRINTED CIRCUIT REPAIR FOIL — Copper foil with thermo-plastic backing 24 sq. in. For use in repair of damaged or burned out sections of a printed circuit. Bonds permanently to panel with heat of soldering iron.

Cat. No. 647	List **$ .80**

(C) PRINTED CIRCUIT SOLDER WASHERS — Supplies the exact amount solder and flux when replacing components on printed circuit board. Center hole permits passage of most standard wire leads. Box of 60 washers.

Cat. No. 648	List **$ .99**

(D) PRINTED CIRCUIT INSULATING VARNISH — A special formula insulating varnish designed for the protection of printed circuits after they have been worked upon in repair or replacement of parts.

Cat. No. 120-02	2 oz. bottle with brush	List **$1.95**
Cat. No. 120-06	6 oz. spray can	**$3.65** each

INSULATING VARNISH SOLVENT — Excellent for dissolving and removing insulating varnish from printed circuits, etc. Also thinner for the Walsco Printed Circuit Insulating Varnish.

Cat. No. 205-02	2 oz.	List **$ .60** each

(E) WALSCO SILVER AND COPPER PRINT — "No more wires" when you use Silver or Copper Print. The same "Pure Silver" or Copper compound as used in Printed Circuit design.

Cat. No. 36 ½ Troy oz. Silver Print	List **$3.95**
Cat. No. 36-1 1 Troy oz. Silver Print	List **7.75**
Cat. No. 37-02 2 oz. bottle Copper Print	List **2.00**

(F) PRINTED CIRCUIT SOLDER-AID TOOL — Has probe on one end for tightening contacts, etc., and a fork on opposite end for handling wires or wire leads while soldering and unsoldering. 8" long plastic handle.

Cat. No. 2530	List **$1.65**

SEND FOR COMPLETE CATALOG . . .

shows hundreds of Walsco Electronic Products.

RAYTHEON

RECEIVING AND PICTURE TUBES • SEMICONDUCTOR PRODUCTS
MECHANICAL COMPONENTS • RAYTHEON/MACHLETT POWER TUBES
VOLTAGE REGULATORS • CAPTIVE HARDWARE • MICROWAVE TUBES

MECHANICAL COMPONENTS

Suggested List Price Effective June, 1960

CATALOG NUMBER	COMPONENT TYPE	DESCRIPTION	SUGG. LIST PRICE (EACH)
50-1-1 ★	Standard Control Knob	Round — 12 pack	$ .55
50-1-1 ★	Concentric Knob	For 1/8" Shaft	.55
50-1-1G ★	Standard Control Knob	Round — 12 pack	.61
50-1-1G ★	Concentric Knob	For 1/8" Shaft	.61
50-2-1	Standard Control Knob	Skirted Round — 12 pack	.64
50-2-1G	Standard Control Knob	Skirted Round	.69
50-3-1	Standard Control Knob	Dial Skirted Round — 12 pack	.73
50-3-1G	Standard Control Knob	Dial Skirted Round — 12 pack	.78
50-4-1	Standard Control Knob	Pointer	.55
50-4-1G	Standard Control Knob	Pointer	.61
50-5-1	Standard Control Knob	Skirted Pointer	.64
50-5-1G	Standard Control Knob	Skirted Pointer	.69
70-1-1 • ★	Standard Control Knob	Round	.76
70-1-1 ○ ★	Concentric Knob	For 1/8" Shaft	.76
70-1-1G ★	Standard Control Knob	Round	.81
70-1-1G ★	Concentric Knob	For 1/8" Shaft	.81
70-1-2	Standard Control Knob	Round — 12 Pack	.70
70-1-2G	Standard Control Knob	Round — 12 Pack	.76
70-1-2G-1	Tactile Shape Knob	Round — Intensity — Blue	1.16
70-1-2G-2	Tactile Shape Knob	Round — Tune — Orange	1.16
70-1-2G-3	Tactile Shape Knob	Round — Dimmer — White	1.16
70-1-2G-4	Tactile Shape Knob	Round — Gain — Red	1.16
70-1-2G-5	Tactile Shape Knob	Round — Focus — Violet	1.16
70-1-3	Concentric Knob	For .187 Shaft	.87
70-1-3G	Concentric Knob	For .187 Shaft	.92
70-1CB-2 ⑪	Concentric Knob	For 1/4" Shaft	.66
70-1CB-2G ⑪	Concentric Knob	For 1/4" Shaft	.71
70-1LK-2	Knob Lock Pointer Knob	Mirror	.94
70-1LK-2G	Knob Lock Pointer Knob	Matte	.99
70-1WD-2G	Black Knob — 3/32" White Dot	For 1/4" Shaft	.92
70-2-1 •	Standard Control Knob	Skirted Round	.85
70-2-1G	Standard Control Knob	Skirted Round	.90
70-2-2	Standard Control Knob	Skirted Round — 12 pack	.79
70-2-2G	Standard Control Knob	Skirted Round — 12 pack	.85
70-2-2G-1	Tactile Shape Knob	Skirted Round — Intensity — Blue	1.24
70-2-2G-2	Tactile Shape Knob	Skirted Round — Tune — Orange	1.24
70-2-2G-3	Tactile Shape Knob	Skirted Round — Dimmer — White	1.24
70-2-2G-4	Tactile Shape Knob	Skirted Round — Gain — Red	1.24
7C-2-2G-5	Tactile Shape Knob	Skirted Round — Focus — Violet	1.24
70-2WD-2	Black Knob — 3/32" White Dot	For 1/4" Shaft	.96
70-2WD-2G	Black Knob — 3/32" White Dot	For 1/4" Shaft	1.01
70-3-1G	Standard Control Knob	Dial Skirted Round	.99
70-3-2	Standard Control Knob	Dial Skirted Round — 12 pack	.88
70-3-2G	Standard Control Knob	Dial Skirted Round — 12 pack	.94
70-3-2G-1	Tactile Shape Knob	Dial Skirted Round — Intensity —Blue	1.33
70-3-2G-2	Tactile Shape Knob	Dial Skirted Round — Tune — Orange	1.33
70-3-2G-3	Tactile Shape Knob	Dial Skirted Round — Dimmer — White	1.33
70-3-2G-4	Tactile Shape Knob	Dial Skirted Round — Gain — Red	$1.33
70-3-2G-5	Tactile Shape Knob	Dial Skirted Round — Focus — Violet	1.33
70-3BL-2G	Standard Control Knob	Edgelighted Dial Skirted	2.33
70-3NP-2	Standard Control Knob	Dial Skirted Round — No Pointer Mark	.85
70-3NP-2G	Standard Control Knob	Dial Skirted Round — No Pointer Mark	.91
70-4-1G	Standard Control Knob	Pointer	.81
70-4-2	Standard Control Knob	Pointer — 12 pack	.70
70-4-2G	Standard Control Knob	Pointer — 12 pack	.76
70-4-2G-6	Tactile Shape Knob	Pointer — Range — Yellow	1.16
70-5-1 •	Standard Control Knob	Skirted Pointer	.85
70-5-1G	Standard Control Knob	Skirted Pointer	.90
70-5-2	Standard Control Knob	Skirted Pointer — 12 pack	.79
70-5-2G	Standard Control Knob	Skirted Pointer — 12 pack	.85
70-5-2G-6	Tactile Shape Knob	Skirted Pointer — Range — Yellow	1.24
70-7-2	70-Series Bar Knob	Plain Bar	.75
70-7-2G	70-Series Bar Knob	Plain Bar	.81
70-7WL-2	70-Series Bar Knob	Plain Bar — White Line	.78
70-7WL-2G	70-Series Bar Knob	Plain Bar — White Line	.84
70-8-2	70-Series Bar Knob	Dial Skirted Bar	.93
70-8-2G	70-Series Bar Knob	Dial Skirted Bar	.99
BC70-1-2	Color Cap Knob	Blue — 1/4" Shaft	.96
BC70-2-2	Color Cap Knob	Blue — 1/4" Shaft	.87
BC70-3-2	Color Cap Knob	Blue — 1/4" Shaft	.97
BC70-5-2	Color Cap Knob	Blue — 1/4" Shaft	.87
G70-1-2	Color Knob	Gray — 1/4" Shaft	.81
G70-1-2G	Color Knob	Gray — 1/4" Shaft	.87
G70-2-2	Color Knob	Gray — 1/4" Shaft	.90
G70-2-2G	Color Knob	Gray — 1/4" Shaft	1.05
G70-3-2	Color Knob	Gray — 1/4" Shaft	.99
G70-3-2G	Color Knob	Gray — 1/4" Shaft	1.05
G70-4-2	Color Knob	Gray — 1/4" Shaft	.81
G70-4-2G	Color Knob	Gray — 1/4" Shaft	.87
G70-5-2	Color Knob	Gray — 1/4" Shaft	.91
G70-5-2G	Color Knob	Gray — 1/4" Shaft	.97
G70-7-2	70-Series Bar Knob	Plain Bar — Mirror	.78
G70-7-2G	70-Series Bar Knob	Plain Bar — Matte	.84
G70-7WL-2	70-Series Bar Knob	Plain Bar — White line	.81
G70-7WL-2G	70-Series Bar Knob	Plain Bar — White Line	.87
G70-8-2	70-Series Bar Knob	Dial Skirted Bar	.96
G70-8-2G	70-Series Bar Knob	Dial Skirted Bar	1.02
GC70-1-2	Color Cap Knob	Green — 1/4" Shaft	.96
GC70-2-2	Color Cap Knob	Green — 1/4" Shaft	.87
GC70-3-2	Color Cap Knob	Green — 1/4" Shaft	.97
GC70-5-2	Color Cap Knob	Green — 1/4" Shaft	.87
R70-1-2	Color Knob	Red — 1/4" Shaft	.81
R70-2-2	Color Knob	Red — 1/4" Shaft	.91
R70-2-2G	Color Knob	Red — 1/4" Shaft	.99
R70-3-2	Color Knob	Red — 1/4" Shaft	.99
R70-4-2	Color Knob	Red — 1/4" Shaft	.81
R70-4-2G	Color Knob	Red — 1/4" Shaft	1.05
R70-5-2	Color Knob	Red — 1/4" Shaft	.91
RC70-1-2	Color Cap Knob	Red — 1/4" Shaft	.96
RC70-2-2	Color Cap Knob	Red — 1/4" Shaft	.87
RC70-3-2	Color Cap Knob	Red — 1/4" Shaft	.97

NOTE: 50-series Standard Control Knobs available for 1/8" shaft only.

- • Indicates 70-series Standard Control Knobs available for 1/8" shaft.
- ⑪ Unskirted bases for use on outer concentric shafts.
- ◘ Dial skirted bases for use on outer concentric shafts.
- ‡ Colors of same style test jack may be mixed for maximum discount.
- △ Packaged 50 per bag.
- § Packaged 25 per bag.
- ★ Same Knob.
- * Sizes may be mixed for maximum discount.
- † Styles per size may be mixed for maximum discount.
- ¶ Colors or styles may be mixed for maximum discount.

RAYTHEON

RECEIVING AND PICTURE TUBES • SEMICONDUCTOR PRODUCTS
MECHANICAL COMPONENTS • RAYTHEON/MACHLETT POWER TUBES
VOLTAGE REGULATORS • CAPTIVE HARDWARE • MICROWAVE TUBES

MECHANICAL COMPONENTS

Suggested List Price Effective June, 1960

CATALOG NUMBER	COMPONENT TYPE	DESCRIPTION	SUGG. LIST PRICE (EACH)
RC70-5-2	Color Cap Knob	Red — ¼″ Shaft	$ .87
90-1-2	Standard Control Knob	Round — 12 pack	.75
90-1-2G	Standard Control Knob	Round — 12 pack	.80
90-1-2G-1	Tactile Shape Knob	Round — Intensity — Blue	1.27
90-1-2G-2	Tactile Shape Knob	Round — Tune — Orange	1.27
90-1-2G-3	Tactile Shape Knob	Round — Dimmer — White	1.27
90-1-2G-4	Tactile Shape Knob	Round — Gain — Red	1.27
90-1-2G-5	Tactile Shape Knob	Round — Focus — Violet	1.27
90-1CB-2 Ⓤ	Concentric Knob	For ¼″ Shaft	.78
90-1CB-2G Ⓤ	Concentric Knob	For ¼″ Shaft	.83
90-1CB-4 Ⓤ	Concentric Knob	For 0.265″ Shaft	.89
90-1CB-4G Ⓤ	Concentric Knob	For 0.265″ Shaft	.94
90-1LK-2	Knob Lock Pointer Knob	Mirror	.99
90-1LK-2G	Knob Lock Pointer Knob	Matte	1.05
90-2-2	Standard Control Knob	Skirted Round — 12 pack	.84
90-2-2G	Standard Control Knob	Skirted Round — 12 pack	.89
90-2-2G-1	Tactile Shape Knob	Skirted Round — Intensity — Blue	1.35
90-2-2G-2	Tactile Shape Knob	Skirted Round — Tune — Orange	1.35
90-2-2G-3	Tactile Shape Knob	Skirted Round — Dimmer — White	1.35
90-2-2G-4	Tactile Shape Knob	Skirted Round — Gain — Red	1.35
90-2-2G-5	Tactile Shape Knob	Skirted Round — Focus — Violet	1.35
90-2WD-2	Black Knob — ³⁄₃₂″ White Dot	For ¼″ Shaft	1.00
90-2WD-2G	Black Knob — ³⁄₃₂″ White Dot	For ¼″ Shaft	1.06
90-3-2	Standard Control Knob	Dial Skirted Round — 6 pack	.92
90-3-2G	Standard Control Knob	Dial Skirted Round — 6 pack	.98
90-3BL-2G	Standard Control Knob	Edgelighted Dial Skirted	2.66
90-3CB-2 ■	Concentric Knob	For ¼″ Shaft	.92
90-3CB-2G ■	Concentric Knob	For ¼″ Shaft	.98
90-3CB-4 Ⓤ	Concentric Knob	For .265″ Shaft	1.03
90-3CB-4G Ⓤ	Concentric Knob	For .265″ Shaft	1.09
90-3NP-2	Standard Control Knob	Dial Skirted — No Pointer Mark	.89
90-3NP-2G	Standard Control Knob	Dial Skirted — No Pointer Mark	.95
90-4-2	Standard Control Knob	Pointer — 12 pack	.79
90-4-2G	Standard Control Knob	Pointer — 12 pack	.85
90-5-2	Standard Control Knob	Skirted Pointer — 12 pack	.88
90-5-2G	Standard Control Knob	Skirted Pointer — 12 pack	.94
90-5-2G-6	Tactile Shape Knob	Skirted Pointer — Range — Yellow	1.35
BC90-2-2	Color Cap Knob	Blue — ¼″ Shaft	.92
BC90-3-2	Color Cap Knob	Blue — ¼″ Shaft	1.01
BC90-5-2	Color Cap Knob	Blue — ¼″ Shaft	.97
G90-1-2	Color Knob	Gray — ¼″ Shaft	.86
G90-2-2	Color Knob	Gray — ¼″ Shaft	.96
G90-3-2	Color Knob	Gray — ¼″ Shaft	1.04
G90-3-2G	Color Knob	Gray — ¼″ Shaft	1.10
G90-4-2	Color Knob	Gray — ¼″ Shaft	.91
G90-4-2G	Color Knob	Gray — ¼″ Shaft	.97
G90-5-2	Color Knob	Gray — ¼″ Shaft	$1.01
G90-5-2G	Color Knob	Gray — ¼″ Shaft	1.07
GC90-2-2	Color Cap Knob	Green — ¼″ Shaft	.92
GC90-3-2	Color Cap Knob	Green — ¼″ Shaft	1.01
GC90-5-2	Color Cap Knob	Green — ¼″ Shaft	.97
R90-1-2	Color Knob	Red — ¼″ Shaft	.86
R90-2-2	Color Knob	Red — ¼″ Shaft	.96
R90-3-2	Color Knob	Red — ¼″ Shaft	1.04
R90-4-2	Color Knob	Red — ¼″ Shaft	.91
R90-5-2	Color Knob	Red — ¼″ Shaft	1.01
R90-5-2G	Color Knob	Red — ¼″ Shaft	1.07
RC90-2-2	Color Cap Knob	Red — ¼″ Shaft	.92
RC90-3-2	Color Cap Knob	Red — ¼″ Shaft	1.01
RC90-5-2	Color Cap Knob	Red — ¼″ Shaft	.97
125-1-2	Standard Control Knob	Round — 6 pack	.79
125-1-2G	Standard Control Knob	Round — 6 pack	.85
125-1LK-2	Knob Lock Pointer Knob	Mirror	1.06
125-1LK-2G	Knob Lock Pointer Knob	Matte	1.11
125-1WD-2G	Black Knob — ³⁄₃₂″ White Dot	For — ¼″ Shaft	1.01
125-2-2	Standard Control Knob	Skirted Round — 6 pack	.88
125-2-2G	Standard Control Knob	Skirted Round — 6 pack	.94
125-2-2G-1	Tactile Shape Knob	Skirted Round — Intensity — Blue	1.49
125-2-2G-2	Tactile Shape Knob	Skirted Round — Tune — Orange	1.49
125-2-2G-3	Tactile Shape Knob	Skirted Round — Dimmer — White	1.49
125-2-2G-4	Tactile Shape Knob	Skirted Round — Gain — Red	1.49
125-2-2G-5	Tactile Shape Knob	Skirted Round — Focus — Violet	1.49
125-2WD-2G	Black Knob — ³⁄₃₂″ White Dot	For ¼″ Shaft	1.10
125-3-2	Standard Control Knob	Dial Skirted Round — 6 pack	.97
125-3-2G	Standard Control Knob	Dial Skirted Round — 6 pack	1.02
125-3BL-2G	Standard Control Knob	Edgelighted Dial Skirted	2.83
125-3NP-2	Standard Control Knob	Dial Skirted — No Pointer Mark	.94
125-3NP-2G	Standard Control Knob	Dial Skirted — No Pointer Mark	.99
125-6-2	Standard Control Knob	Crank Knob — 4 pack	2.02
125-6-2G	Standard Control Knob	Crank Knob — 4 pack	2.08
125-7-2	Standard Control Knob	Bar Knob, Mirror	1.27
125-7-2G	Standard Control Knob	Bar Knob, Matte	1.32
G125-1-2	Color Knob	Gray — ¼″ Shaft	.90
G125-2-2	Color Knob	Gray — ¼″ Shaft	1.01
G125-2-2G	Color Knob	Gray — ¼″ Shaft	1.07
G125-3-2	Color Knob	Gray — ¼″ Shaft	1.11
G125-3-2G	Color Knob	Gray — ¼″ Shaft	1.17
R125-1-2	Color Knob	Red — ¼″ Shaft	.90
R125-2-2	Color Knob	Red — ¼″ Shaft	1.01
R125-3-2	Color Knob	Red — ¼″ Shaft	1.11
126-1	Knob Lock	70 Series Mirror	.77
126-2	Knob Lock	70 Series Matte	.83
126-3	Knob Lock	70 Series ¼-32 Mirror	.83
126-4	Knob Lock	70 Series ¼-32 Matte	.88
127-1	Knob Lock	90 Series Mirror	.88
127-2	Knob Lock	90 Series Matte	.94

NOTE: 50-series Standard Control Knobs available for ⅛″ shaft only.
● Indicates 70-series Standard Control Knobs available for ⅛″ shaft.
Ⓤ Unskirted bases for use on outer concentric shafts.
■ Dial skirted bases for use on outer concentric shafts.
‡ Colors of same style test jack may be mixed for maximum discount.
△ Packaged 50 per bag.

§ Packaged 25 per bag.
★ Same Knob.
* Sizes may be mixed for maximum discount.
† Styles per size may be mixed for maximum discount.
¶ Colors or styles may be mixed for maximum discount.

RAYTHEON

RECEIVING AND PICTURE TUBES • SEMICONDUCTOR PRODUCTS
MECHANICAL COMPONENTS • RAYTHEON/MACHLETT POWER TUBES
VOLTAGE REGULATORS • CAPTIVE HARDWARE • MICROWAVE TUBES

MECHANICAL COMPONENTS

Suggested List Price Effective June, 1960

CATALOG NUMBER	COMPONENT TYPE	DESCRIPTION	SUGG. LIST PRICE (EACH)
128-1	Knob Lock	125 Series Mirror	$ .94
128-2	Knob Lock	125 Series Matte	.99
141-1	Pull Handle	Mirror — Glossy	1.65
141-2	Pull Handle	Matte — Dull	1.50
175-1-2	Standard Control Knob	Round — 6 pack	.92
175-1-2G	Standard Control Knob	Round — 6 pack	.98
175-2-2	Standard Control Knob	Skirted Round — 6 pack	1.01
175-2-2G	Standard Control Knob	Skirted Round — 6 pack	1.07
175-3-2	Standard Control Knob	Dial Skirted Round — 2 pack	1.14
175-3-2G	Standard Control Knob	Dial Skirted Round — 2 pack	1.20
175-6-2	Standard Control Knob	Crank Knob — 2 pack	2.20
175-6-2G	Standard Control Knob	Crank Knob — 2 pack	2.26
175-6-2G-7	Tactile Shape Knob	Crank — Bearing — Gray	3.25
175-6-2G-8	Tactile Shape Knob	Crank — Marker — Green	3.25
203-1154G1	Captive Hardware	Nut Bracket Assembly 8/32	.11*
203-1154G2	Captive Hardware	Nut Bracket Assembly 10/24	.13*
203-1154G3	Captive Hardware	Nut Bracket Assembly 10/32	.13*
203-1154G4	Captive Hardware	Nut Bracket Assembly ¼-20	.21*
203-1154G5	Captive Hardware	Nut Bracket Assembly 5/16-18	.31*
209-1032P1-P3	Captive Hardware	Captive Screw 8/32	.44*
209-1032P4-P10	Captive Hardware	Captive Screw 10/24	.55*
209-1032P11-P15	Captive Hardware	Captive Screw 10/32	.83*
209-1032P36-P39	Captive Hardware	Captive Screw ¼-20	.39*
209-1032P44-P46	Captive Hardware	Captive Screw 5/16-18	.44*
217-1044P1	Terminal Board Bracket	Panel Bracket 2 1/16″	.16*
217-1044P2	Terminal Board Bracket	Panel Bracket 2 9/16″	.17*
217-1044P3	Terminal Board Bracket	Panel Bracket 3 1/16″	.18*
217-1044P4	Terminal Board Bracket	Panel Bracket 3 9/16″	.19*
225-1-2	Standard Control Knob	Round — 4 pack	1.06
225-1-2G	Standard Control Knob	Round — 4 pack	1.11
225-2-2	Standard Control Knob	Skirted Round — 4 pack	1.14
225-2-2G	Standard Control Knob	Skirted Round — 4 pack	1.20
225-3-2	Standard Control Knob	Dial Skirted Round — 2 pack	1.28
225-3-2G	Standard Control Knob	Dial Skirted Round — 2 pack	1.33
225-6-2	Standard Control Knob	Crank Knob — 2 pack	2.29
225-6-2	Standard Control Knob	Crank Knob — 2 pack	2.34
227-1214G1	5-way Binding Post	Black — For 0.080 Prod	.55¶
227-1214G2	5-way Binding Post	Red — For 0.080 Prod	.50¶
227-1214G3	5-way Binding Post	Black — For Banana Plug	.50¶
227-1214G4	5-way Binding Post	Red — For Banana Plug	.50¶
231-1142G1	Shaft Lock	Black — ¼″ Shaft	.28
231-1142G2	Shaft Lock	Red — ¼″ Shaft	.28
231-1151G1	Shaft Lock	Black — ⅛″ Shaft	.22
231-1164G1	Shaft Lock	Short — Black — ¼″ Shaft	.22
276-1564G1 △	Test Jack	Printed Circuit — Natural	.17‡
276-1564G2 △	Test Jack	Printed Circuit — Yellow	.17‡
276-1564G3 △	Test Jack	Printed Circuit — Brown	.17‡
276-1564G4 △	Test Jack	Printed Circuit — Red	.17‡
276-1564G5 △	Test Jack	Printed Circuit — Orange	.17‡
276-1564G6 △	Test Jack	Printed Circuit — Black	.17‡
276-1564G7 △	Test Jack	Printed Circuit — Green	.17‡

CATALOG NUMBER	COMPONENT TYPE	DESCRIPTION	SUGG. LIST PRICE (EACH)
276-1564G8 △	Test Jack	Printed Circuit — Blue	$.17‡
276-1564G9 △	Test Jack	Printed Circuit — White	.17‡
276-1569G4 §	Test Jack	Snap-In Contact — Red — Subminiature	.50‡
275-1569G6 §	Test Jack	Snap-In Contact — Black — Subminiature	.50‡
276-1570G1 §	Test Jack	Fixed-Contact — Natural — Subminiature	.19‡
276-1570G2 §	Test Jack	Fixed-Contact — Yellow — Subminiature	.19‡
276-1570G3 §	Test Jack	Fixed-Contact — Brown — Subminiature	.19‡
276-1570G4 §	Test Jack	Fixed-Contact — Red — Subminiature	.19‡
276-1570G5 §	Test Jack	Fixed-Contact —Orange — Subminiature	.19‡
276-1570G6 §	Test Jack	Fixed-Contact —Black — Subminiature	.19‡
276-1570G7 §	Test Jack	Fixed-Contact — Green — Subminiature	.19‡
276-1570G8 §	Test Jack	Fixed-Contact — Blue — Subminiature	.19‡
276-1570G9 §	Test Jack	Fixed-Contact — White — Subminiature	.19‡
276-1594G1 §	Test Jack	Turret — Nylon — Natural	.23‡
276-1594G2 §	Test Jack	Turret — Nylon — Yellow	.28‡
276-1594G3 §	Test Jack	Turret — Nylon — Brown	.28‡
276-1594G4 §	Test Jack	Turret — Nylon — Red	.28‡
276-1594G5 §	Test Jack	Turret — Nylon — Orange	.23‡
276-1594G6 §	Test Jack	Turret — Nylon Black	.28‡
276-1594G7 §	Test Jack	Turret — Nylon — Green	.28‡
276-1594G8 §	Test Jack	Turret — Nylon — Marine Blue	.28‡
276-1594G9 §	Test Jack	Turret — Nylon — White	.28‡
276-1594G11 §	Test Jack	Spade — Nylon — Natural	.33‡
276-1594G12 §	Test Jack	Spade — Nylon — Yellow	.33‡
276-1594G13 §	Test Jack	Spade — Nylon — Brown	.33‡
276-1594G14 §	Test Jack	Spade — Nylon — Red	.33‡
276-1594G15 §	Test Jack	Spade — Nylon — Orange	.33‡
276-1594G16 §	Test Jack	Spade — Nylon — Black	.33‡
276-1594G17 §	Test Jack	Spade — Nylon — Green	.33‡
276-1594G18 §	Test Jack	Spade —Nylon — Marine Blue	.33‡
276-1594G19 §	Test Jack	Spade — Nylon — White	.33‡
276-1594G21 §	Test Jack	Turret — Teflon — White	.72‡
276-1594G22 §	Test Jack	Spade — Teflon — White	.77‡
287-1114P1-P4	Captive Hardware	Gasket	.03*
343-1007G1-4,G7,G8	Fuse and Resistor Locking Clip	9/16″	1.10†
343-1008G1-4,G7-G8	Fuse and Resistor Locking Clip	13/16″	1.32†
343-1009G1-4,G7,G8	Fuse and Resistor Locking Clip	1-⅛″	1.65†
362-1037P1-P4	Captive Hardware	Gasket Retainer	.06*
364-1020P1-P5	Captive Hardware	Panel Insert 3/32	.17*
364-1020P6-P10	Captive Hardware	Panel Insert 10/24	.22*
364-1020P11-P15	Captive Hardware	Panel Insert 10/32	.28*
364-1020P16-P19	Captive Hardware	Panel Insert ¼-20	.13*
364-1020P20-P24	Captive Hardware	Panel Insert 5/16-18	.17*

NOTE: 50-series Standard Control Knobs available for ⅛″ shaft only.

- ● Indicates 70-series Standard Control Knobs available for ⅛″ shaft.
- Ⓤ Unskirted bases for use on outer concentric shafts.
- ■ Dial skirted bases for use on outer concentric shafts.
- ‡ Colors of same style test jack may be mixed for maximum discount.
- △ Packaged 50 per bag.
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- ★ Same Knob.
- * Sizes may be mixed for maximum discount.
- † Styles per size may be mixed for maximum discount.
- ¶ Colors or styles may be mixed for maximum discount.

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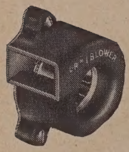
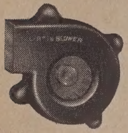


No. 1

High impact Phenolic Housing. Weight 1 ounce. Wheel is 1″ in dia. Standard shaft bores, 1/8″ or 3/16″. Overall height 2-5/16″. Overall width 2-1/8″. Depth 63/64″. Blower outlet 63/64″ wide by 11/16″ high.

List Price **$3.64** ea.



No. 1½

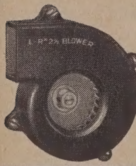
High impact Phenolic Housing. Weight 2-1/2 ounces. Wheel is 1-1/2″ dia. Standard shaft bores, 3/16″ or 1/4″. Overall height 3″. Overall width 2-7/8″. Depth 1″. Blower outlet 1″ wide by 1-3/16″ high.

List Price **$4.44** ea.

No. 2

High impact Phenolic Housing. Weight 5 ounces. Wheel is 2″ dia. Standard shaft bores, 3/16″ or 1/4″. Overall height 3-3/4″. Overall width 3-1/2″. Depth 1-3/8″. Blower outlet 1-1/8″ diameter.

List Price **$4.53** ea.



No. 2½

High impact Phenolic Housing. Weight 5-1/2 ounces. Wheel is 2″ in dia. Standard shaft bores, 3/16″ or 1/4″. Overall height 4-3/8″. Overall width 3-7/8″. Depth 1-7/16″. Blower outlet 1-7/16″ wide by 1-19/32″ high.

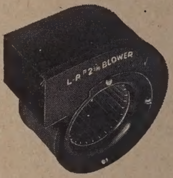
List Price **$4.65** ea.

L-R #2.7 BLOWER

No. 2.7

Rigid Steel Housing. Weight 8-1/2 ounces. Wheel is 2-1/2″ in dia. Standard shaft bores, 1/4″ or 5/16″. Overall height 4-5/8″. Overall width 4-13/32″. Depth 1-33/64″. Blower outlet 1-33/64″ wide by 1-3/4″ high.

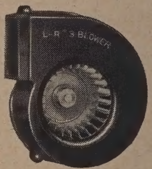
List Price **$4.90** ea.



No. 2¾

Rigid Steel Housing. Weight 10 ounces. Wheel is 2-1/2″ in dia. Standard shaft bores, 1/4″ or 5/16″. Overall height 4-5/8″. Overall width 4-13/32″. Depth 2-5/64″. Blower outlet 2-5/64″ wide by 1-3/4″ high.

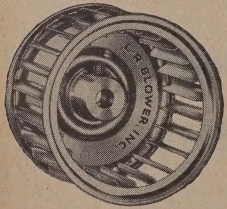
List Price **$4.90** ea.



No. 3

High impact Phenolic Housing. Weight 12-1/2 ounces. Wheel is 3″ in dia. Standard shaft bores, 1/4″ or 5/16″. Overall height 6-7/16″. Overall width 5-1/2″. Depth 2-3/8″. Blower outlet 2-3/8″ wide by 2-1/2″ high.

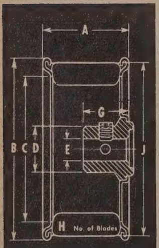
List Price **$5.36** ea.



L-R *Whirlwind* BLOWER WHEELS

A key factor in the superior efficiency of any blower is the wheel utilized in the housing. The Ripley Company provides the utmost in equipment and engineering "know-how" to produce small blower wheels of the highest standard and quality. Manufactured from the finest material available, precision engineered and rigidly inspected to meet your most exacting requirements. Standard wheels are cadmium plated steel. Other material and finishes available. Available for CW or CCW Rotation.

DIMENSIONS AND SPECIFICATIONS



ROTATION is determined viewing closed end of wheel

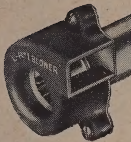
Wheel Size Dia.	Wheel Size Width	Used in Blower No.	A Width (± 1/32)	B Dia. (± 1/32)	C Dia. (± 1/64)	D Dia. (± .005)	E* (+.001 —.000)	F Set Screw	G (± .010)	H Number of Blades	J Dia (± 1/32)
1	x 20/32	1	5/8	1	11/16	.3125	.125, .1875	5-40	.3125	10	59/64
1 16/32	x 20/32	1½	5/8	1½	1 5/16	.5625	.1875, .250	8-32	.5156	16	1 13/32
2	x 31/32	2, 2½	31/32	2	1 39/64	.5625	.1875, .250	8-32	.5156	24	1 29/32
2 16/32 2 16/32	x 31/32 x 1 15/32	2.7 2¾	31/32 1 15/32	2½	2⅛	.750	.250, .3125	8-32	.6562	31 28	2 15/32
3	x 1 28/32	3	1⅞	3	2 29/64	.750	.250, .3125	10-32	.6562	24	2 15/16
3 26/32	x 1 28/32		1⅞	3 13/16	3⅜	.9375	.250, .3125	¼-28	.750	30	3¾

* Standard Bore—Other Sizes Available

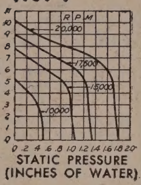
Superior . . . RIPLEY *through Research*

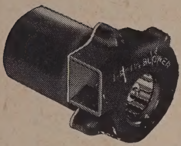
RIPLEY COMPANY, INC. ESTABLISHED 1936 **MIDDLETOWN, CONN.**

L-R MOTOR & BLOWER ASSEMBLIES

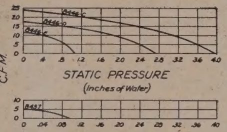


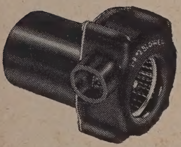
NO. 1



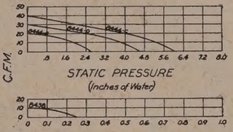


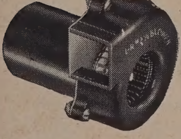
NO. 1½



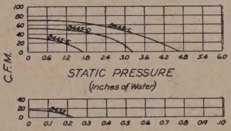


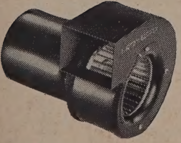
NO. 2



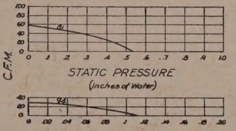


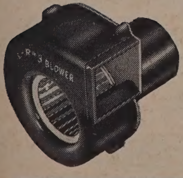
NO. 2½



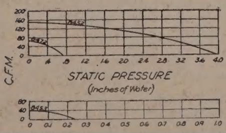


NO. 2¾



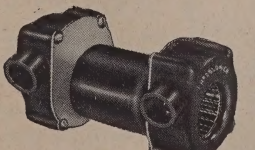


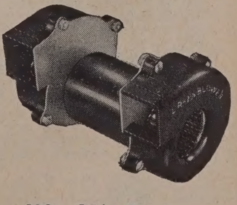
NO. 3



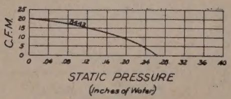
Model No.	Type	Input Voltage	Watts	Duty Cycle	R.P.M.	Output Free Air C.F.M.	Dimensions Length O.A.	Dimensions Motor Dia.	List Price
8474	1	27.5V. DC.	8	Continuous	18,000	9	2 21/64	⅞	**$49.00**
8437	1½	115V. AC-60 Cycle	15	Continuous	3,150	4	4 9/16	2¼	**13.29**
8446-E	1½	115V. AC/DC	25	Intermittent	8,000	12	4½	2 7/32	**17.96**
8446-D	1½	115V. AC/DC	45	Intermittent	11,000	17	4½	2 7/32	**17.96**
8446-C	1½	115V. AC/DC	70	Intermittent	15,000	23	4½	2 7/32	**17.96**
8438	2	115V. AC-60 Cycle	16	Continuous	3,100	10	4½	2¼	**13.48**
8444-E	2	115V. AC/DC	27	Intermittent	6,500	20	4 15/16	2 7/32	**18.14**
8444-D	2	115V. AC/DC	53	Intermittent	10,000	30	4 15/16	2 7/32	**18.14**
8444-C	2	115V. AC/DC	90	Intermittent	13,000	40	4 15/16	2 7/32	**18.14**
8433	2½	115V. AC-60 Cycle	17	Continuous	2,800	17	4½	2¼	**13.60**
8445-E	2½	115V. AC/DC	30	Intermittent	6,000	35	4 27/32	2 7/32	**18.26**
8445-D	2½	115V. AC/DC	55	Intermittent	9,000	53	4 27/32	2 7/32	**18.26**
8445-C	2½	115V. AC/DC	105	Intermittent	12,000	70	4 27/32	2 7/32	**18.26**
94	2¾	115V. AC-60 Cycle	26	Continuous	1,600	28	5 11/64	3¼	**16.50**
81	2¾	115V. AC-60 Cycle	40	Continuous	3,100	58	5 51/64	2 13/16	**16.50**
8453	3	115V. AC-60 Cycle	35	Continuous	1,600	40	5 15/32	3¼	**16.95**
8472	3	115V. AC-60 Cycle	40	Continuous	3,100	77	6 5/64	2 13/16	**16.05**
8452	3	115V. AC/DC	120	Intermittent	6,000	150	6¾	2¾	**22.40**

L-R BLOWERS DUAL ASSEMBLY

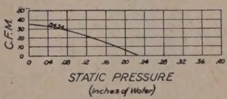




NO. 2 Dual



NO. 2½ Dual



Model No.	Type	Input Voltage	Watts	Duty Cycle	R.P.M.	Output Free Air C.F.M.	Dimensions Length O.A.	Dimensions Motor Dia.	List Price
8442	2 Dual	115V. AC-60 Cycle	18	Continuous	3,000	10-10	5 11/16	2¼	**$19.52**
8434	2½ Dual	115V. AC-60 Cycle	20	Continuous	2,800	17-17	5 11/16	2¼	**20.59**

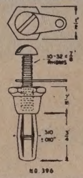
Birnbach

GIANT, STANDARD, MIDGET BANANA JACKS and PHONE TIPS

BIRNBACH

VARIATIONS OF STANDARD PLUGS AVAILABLE TO ORDER. PLATED TO GOV'T. SPECS.

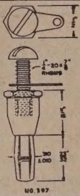
GIANT PLUG
No. 396


10-32 x ⅜ RHBMS
.310 ±.010
NO 396

Body is hexed brass, nickel plated. Fits all giant banana jacks. Complete with nickel plated screw and soldering lug. Rated at 25 amps.

Cat. No.	Spring	Std. Pkg.
396	Phos. Brz.	25
396B	Beryl. Cop.	25

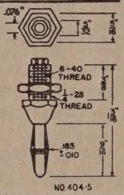
GIANT PLUG
No. 397



Body is hexed brass, nickel plated. Fits all giant banana jacks. Complete with nickel plated screw and soldering lug. Heavy duty, 25 amp. rating.

Cat. No.	Spring	Std. Pkg.
397	Phos. Brz.	25
397B	Beryl. Cop.	25

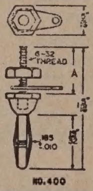
BANANA PLUG
No. 404S


.076"
6-40 THREAD
¼-28 THREAD
.185 ±.010
NO. 404-S

Hexed brass nickel pl. Complete with hex brass n.pl. nut. Has solderless Scrulok connection. Fits all standard banana plugs. Spring is four-leaved phosphor bronze nickel plated. Rated at 5 amps.

Cat. No.	Std. Pkg.
404S Scrulok Banana Plug	100

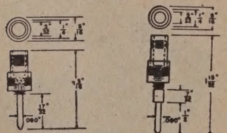
BANANA PLUG
No. 400


6-32 THREAD
A
.185 ±.010
NO. 400

Hexed brass nickel plated. Fits all standard banana plugs. Complete with hex brass n.pl. nut and tinned copper lug. Spring is four-leaved nickel plated. Rated at 5 amps. Stand. pkg. 100

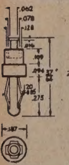
Cat. No.	Spring	Dim. "A"
400	Phos. Bronze	½"
400A	Phos. Bronze	⅜"
400B	Beryl. Copper	½"

SOLDERLESS PHONE TIPS
No. 23 and No. 24

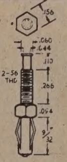


Brass, nickel plated. Wire fits thru body of tip, tightened around screw with nickel plated knurled nut. Fits all standard phone tip jacks.

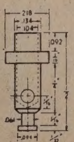
Cat. No.	Std. Pkg.
23—Junior Solderless Phone Tip	100
24—Senior Solderless Phone Tip	100


.062
.078
.128
.094
.275
.187

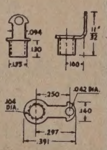
590


.156
.060
.044
.110
2-56 THD
.266
.094
9/32

591


.218
.134
.104
.092
.064
.094

592


.094
.130
.125
.100
.250
.042 DIA.
.104 DIA.
.140
.297
.391

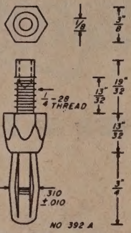
593

SUB MINIATURE BANANA PLUGS & JACKS

One piece beryllium copper springs insure positive and lasting contact. Silver plated overall.

Cat. No.	Description	Std. Pkg.
590	Rivet Type Plug	100
591	Screw Type Plug	100
592	Force Fit Jack	100
593	Rivet Type Jack	100

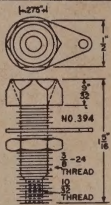
GIANT PLUG
No. 392A


¼-28 THREAD
.310 ±.010
NO 392 A

Body is hexed brass nickel plated. Rated at 25 amps. Has large soldering well in threaded shank. Fits all Giant Banana Jacks.

Cat. No.	Spring	Std. Pkg.
392A	Phos. Brz.	25

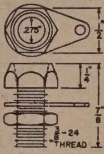
GIANT JACK
No. 394


.275
NO.394
⅜-24 THREAD
10-32 THREAD

Hexed brass nickel plated. Fits all Giant Banana Plugs. Mounts in ⅜" hole in panels up to ⅞" thick. Complete with n.pl. nut and tinned copper lug.

Cat. No.	Std. Pkg.
394 Giant Jack	25

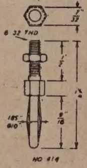
GIANT JACK
No. 395


.275
⅜-24 THREAD

Fits all giant banana plugs. Hexed brass head nickel plated overall. Mounts in ⅜" hole. Complete with nut and tinned copper lug.

Cat. No.	Std. Pkg.
395 Giant Jack	25

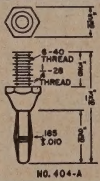
BANANA PLUG
No. 414


6 32 THD
NO 414

Hexed brass, nickel plated. One-piece construction. Four-leaved phosphor bronze spring. Complete with brass hexed nut n.pl. Rated at 5 amps. Fits all standard banana jacks.

Cat. No.	Spring	Std. Pkg.
414	Phos. Brz.	100

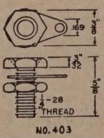
BANANA PLUG
No. 404A


6-40 THREAD
¼-28 THREAD
.185 ±.010
NO. 404-A

Hexed brass and four-leaved phosphor bronze spring all nickel plated. Rated at 5 amps. Fits all standard banana jacks.

Cat. No.	Std. Pkg.
404A Banana Plug	100

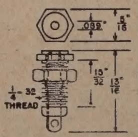
BANANA JACK
No. 403


.169
¼-28 THREAD
NO.403

Hexed brass n.pl., with brass n.pl. hex nut and tinned copper lug. Mounts in ¼" hole in panels up to ⅜" thick. Fits standard plugs.

Cat. No.	Std. Pkg.
403 Banana Jack	100

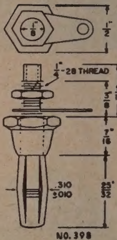
PHONE TIP JACK
No. 26


.082
¼-32 THREAD

Brass nickel pl. body. Double phosphor bronze springs, hot tinned. Fits standard phone tip plugs. Mounts in ¼" hole in panels up to ⅜" thick. Complete with hex n.pl. brass nut.

Cat. No.		Std. Pkg.
26	Phone Tip Jack	100

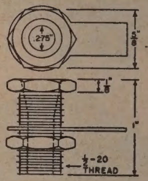
GIANT PLUG
No. 398


¼-28 THREAD
.310 ±.010
NO. 398

Body is hexed brass, n.pl. nut and tinned copper lug. Has large soldering well in threaded shank. Used in high amperage circuits rated at 25 amps. Fits all giant banana jacks.

Cat. No.	Spring	Std. Pkg.
398	Phos. Brz.	25
398B	Beryl. Cop.	25

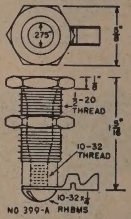
GIANT JACK
No. 399


.275
½-20 THREAD

Hexed brass nickel plated. Complete with hex brass n.pl. nut and tinned copper lug. Fits all giant banana plugs. Mounts in ½" hole in panels up to $\frac{21}{32}$" thick.

Cat. No.	Std. Pkg.
399 Gt. Jack	25

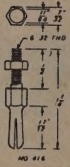
GIANT JACK
No. 399A


.275
½-20 THREAD
10-32 THREAD
10-32 x ¼
NO 399-A RHBMS

Hexed brass nickel plated. Mounts in ½" hole. Fits panels up to ¾" thick. Tapped at end with screw and lug connection. Complete with hex brass n.pl. nut, screw and hot tinned copper lug.

Cat. No.	Std. Pkg.
399A Gt. Jack	25

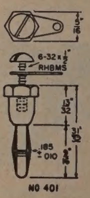
BANANA PLUG
No. 416


6 32 THD
NO 416

Hexed brass nickel plated. Cross slotted for positive contact. One-piece construction. Fits all standard banana jacks. Complete with hexed brass n.pl. nut.

Cat. No.	Std. Pkg.
416 Banana Plug	100

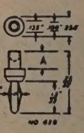
BANANA PLUG
No. 401


6-32 x ¼ RHBMS
.185 ±.010
NO 401

Hexed brass nickel plated. One-piece four-leaved spring. Complete with brass n.pl. screw and tinned copper lug. Rated at 5 amps. Fits all standard banana jacks.

Cat. No.	Spring	Std. Pkg.
401	Phos. Brz.	100
401B	Beryl. Cop.	100

MIDGET BANANA PLUG
RIVET TYPE—No. 426



Brass silver plated body. One-piece four-leaved phosphor bronze spring silver plated. Also made to Rigid Jan specs.

Cat. No.	"A"	St. Pkg.
426	$\frac{7}{32}$"	100
426A	$\frac{5}{32}$"	100

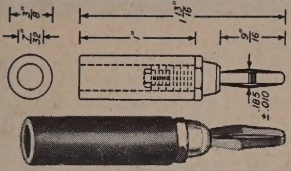
Midget Banana Plug
Rivet Type

Additional Midget Plugs & Jacks Available.
Also Sub-Miniature Plugs & Jacks.

Use Index Page 1 for Quick, Easy Location of ALL Products

See Pages 1556-1559 for Birnbach Prices for Above Items

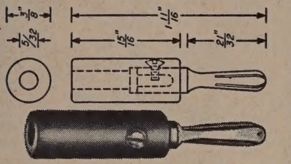
BIRNBACH INSULATED BANANA — GIANT — PLUGS and JACKS



INSULATED BANANA PLUG

Hexed brass N. Pl. spring type. Fits standard banana jacks. Scrulok solderless connection. Molded handle. Colors: Red, Black, Yellow, Blue, Green.

Cat. No.	Spring	Std. Pkg.
404	Phos. Brz.	50
404-CB	Beryl. Cop.	50

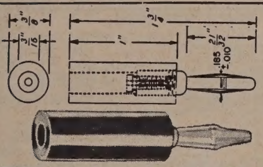


INSULATED BANANA PLUG

Split type plug brass n. pl. fits standard banana jacks. Set screw. Solderless connection. Molded handle.

Colors: Red, Black, Yellow, Blue, Green.

Cat. No.		Std. Pkg.
604	Banana Plug	50

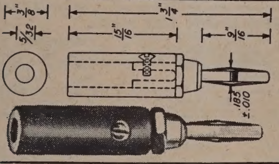


INSULATED BANANA PLUG

Brass n.pl. plug. Fits standard banana jacks. Spring type. Scrulok solderless connection. Molded handle.

Colors: Red, Black, Yellow, Blue, Green.

Cat. No.	Spring	Std. Pkg.
465	Phos. Brz.	50
465-B	Beryl. Cop.	50

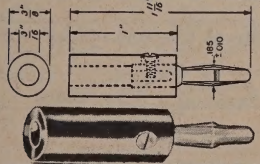


SPRING BANANA PLUG

Hexed brass n.pl. plug. Set screw solderless connection. 404-BC Beryllium springs, highly resilient. Molded handle.

Colors: Red, Black, Yellow, Blue, Green.

Cat. No.	Spring	Std. Pkg.
404-B	Phos. Brz.	50
404-BC	Beryl. Cop.	50

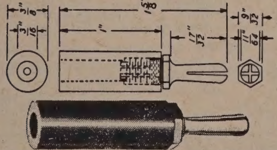


INSULATED BANANA PLUG

Plug brass n.pl. set screw solderless connection. Spring type. Fits standard banana jacks. Molded handle.

Colors: Red, Black, Yellow, Blue, Green.

Cat. No.	Hdl.	Spring	Std. Pkg.
466	1"	Ph. Brz.	50
466A	1½"	Ph. Brz.	50

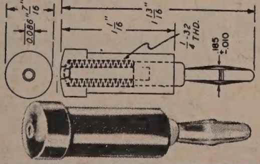


INSULATED BANANA PLUG

Split type, brass n.pl. Scrulok solderless connection. Fits standard jacks. Molded handle.

Colors: Red, Black, Yellow, Blue, Green.

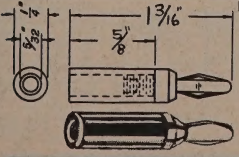
Cat. No.		Std. Pkg.
606	Banana Plug	50



TIP PLUG TO BANANA PLUG ADAPTER

Fits standard banana jacks. Adapter for phone tip to banana plug. Molded handle. Colors: Red, Black, Yellow, Blue, Green.

Cat.No.	Spring	Std. Pkg.
467	Phos. Brz.	50
467B	Beryl. Cop.	50



INSULATED MIDGET BANANA PLUG

Spring Type. Fits all standard Banana Jacks. Beryllium spring retains resiliency after thousands of insertions. Wire soldered directly into Plug.

Available in Red or Black only. Specify color. Std. pkg. 50.

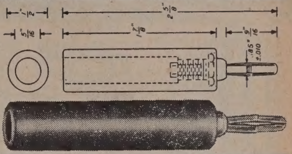
No.	Spring Material	Plating
455	Phosphor Bronze	Nickel
455BC	Beryllium Copper	Silver

INSUL. BANANA PLUG

Plug brass n.pl. Scrulok solderless connection. Spring type. Fits standard jacks. Plastic handle.

Colors: Red, Black.

Cat. No.	Spring	Std. Pkg.
341	Phos. Brz.	50
341B	Beryl. Cop.	50

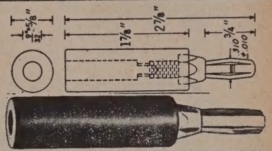


INSUL. GIANT PLUG

Plug brass n.pl. Wire can be soldered to plug. Spring type. Fits giant banana jacks. Plastic handle.

Colors: Red, Black.

Cat. No.	Spring	Std. Pkg.
392	Phos. Brz.	50
392B	Beryl. Cop.	50

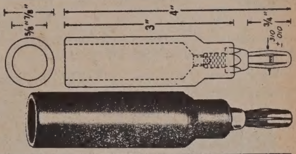


INSUL. GIANT PLUG

Plug brass n.pl. Wire can be soldered to plug. Spring type. Fits giant banana jacks. Polished giant hard rubber handle.

Colors: Red, Black.

Cat. No.	Spring	Std. Pkg.
342	Phos. Brz.	50
342B	Beryl. Cop.	50

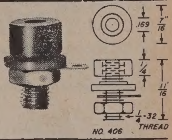


INSULATED BANANA JACK

Takes all standard banana plugs. Body is brass n.pl. Mounts in ¼" hole in panels up to ⅜" thick. Molded head.

Colors: Red, Black, Yellow, Blue, Green.

Cat. No.		Std. Pkg.
406	Insulated Jack	50

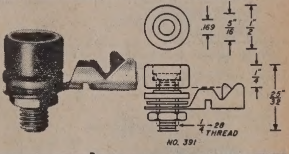


INSULATED BANANA JACK

Accommodates all standard banana plugs. Body is brass n.pl. Mounts in ¼" hole in panels up to ⅜" thick. Complete with all hardware. Molded head.

Colors: Red, Black, Yellow, Blue, Green

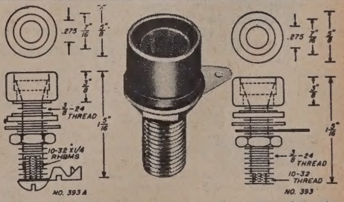
Cat. No.		Std. Pkg.
391	Insulated Jack	50



INSULATED GIANT JACK

Accommodates all giant plugs. Body is brass n.pl. Mounts in ⅜" hole in panels up to ⅝" thick. Molded plastic head.

Colors: Red, Black.



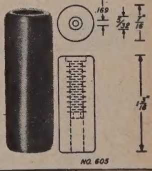
Cat. No.		Std. Pkg.
393	Insulated Giant Jack	50
393A	Insulated Giant Jack	50

INSULATED HANDLE JACK

Jack brass, n.pl. Fits all standard banana plugs. Plastic handle.

Colors: Red, Black, Yellow, Blue, Green.

Cat. No.		Std. Pkg.
605	Insulated Handle Jack	50

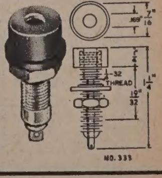


INSULATED COMBINATION JACK

Takes standard senior phone tip or banana plugs. Body is brass n.pl. Double Phosphor Bronze spring. Mounts in ¼" hole in panels up to ½" thick. Molded head.

Colors: Red, Black, Yellow, Blue, Green.

Cat. No.		Std. Pkg.
333	Insulated Combination Jack	50

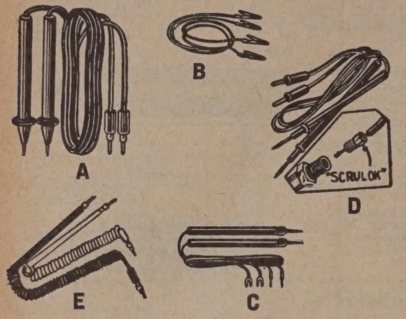


Use Index Page 1 for Quick, Easy Location of ALL Products

See Pages 1556-1559 for Birnbach Prices for Above Items

Birnbach INSULATED PHONE TIPS, TIP JACKS TEST PRODS

TEST LEADS



A—HEAVY DUTY HI VOLT LEADS

Overall length 60″. Tips are heavy solid brass nickel plated. Rugged, dependable heavy duty bakelite prods. Color coded Red and Black. Uses our Hi Volt kinkless test lead wire.

Cat. No.	Std. Pkg.
562—Heavy Duty High Voltage Test Leads	10

B—ALLIGATOR CLIP LEADS

Black and Red Kinkless test lead wire with Alligator Clips at each end.

Cat. No.	Wire Length	Std. Pkg.
675	12″	25
676	24″	25
677	36″	25
678	48″	25

Special Assemblies Available to Order

C—DELUXE AND BAKELITE PENCIL TYPE TEST LEADS

No. 408 Bakelite pencil test leads, color coded, Red, Black, all with kinkless test lead wire. Overall length 60″. #560 and #561 polished cast phenolic resin handles, solderless type tips. 50″ long. Color coded Red, Black.

Cat No.	Std. Pkg.
408—Bakelite Pencil Type Test Leads, 6″ handles	10
560—DeLuxe Solderless Prod Test Leads, 5″ handles	25
561—DeLuxe Needlepoint Prod Test Leads, 5″ handles	25

PUSH BUTTON KINKLESS TEST LEADS

556 Solderless phone tip one end, push button tip other end. Std. Pkg. 12
557 Solderless phone tip one end, push button banana plug other end. Std. Pkg. 12

D—NEEDLEPOINT TEST LEADS

Have Red and Black 4″ fibre handles. Use kinkless lead wire. Overall length 50″. Good, dependable low priced leads.

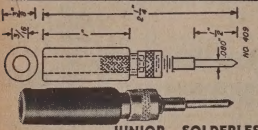
Cat No.	Std. Pkg.
420—Needlepoint Phone Tip Test Leads	25
421—Needlepoint Spade Lug Test Leads	25
422—Solderless Phone Tip Test Leads	25
423—Solderless Spade Lug Test Leads	25

E—STRETCH LEADS

Kink-Proof Retracted 9″ Coil

No tangling or knotting of wires. Lead coil only 9″, extends to 6 feet.

Cat. No.	Std. Pkg.
564—Solderless phone tip, retractile wire, solderless prod.	10



SENIOR SOLDERLESS PHONE TIP

Brass nickel plated. Fits standard phone tip jacks. Wire fastens under knurled nut. Molded handle.

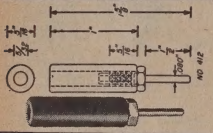
Colors:
Red, Black, Yellow, Blue, Green.

Cat. No. 409 Sr. . . Std. Pkg. 50

JUNIOR SOLDERLESS PHONE TIP

Same as above except 2″ overall length. Specify colors.

Cat No. 415 Jr. .... Std. Pkg. 50

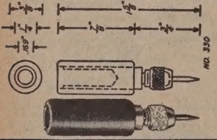


SCRULOK PHONE TIP

Brass nickel plated. Fits standard phone tip jacks. Scrulok solderless connection. Molded handle.

Colors:
Red, Black, Yellow, Blue, Green.

Cat. No. 412 . . . . Std. Pkg. 50

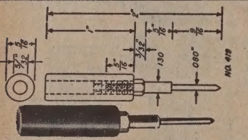


NEEDLE POINT PLUG

Brass nickel plated body. Needle point tip. Accommodates standard banana plug in molded plastic handle.

Colors: Red, Black.

Cat. No. 330 . . . . Std. Pkg. 50

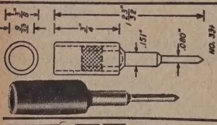


SCRULOK PHONE TIP

Fits standard phone tip jacks. Plug is brass, nickel plated. Has Scrulok solderless connection. Molded handle.

Colors:
Red, Black, Yellow, Blue, Green.

Cat. No. 419 . . . . Std. Pkg. 50

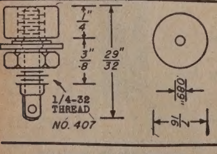


PHONE TIP

Plugs into standard phone tip jacks. Brass nickel plated plug. Accommodates standard banana plug in molded plastic handle.

Colors: Red, Black, Yellow, Green.

Cat. No. 331 . . . . Std. Pkg. 50

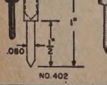


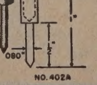
PHONE TIP JACK

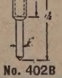
Fits all standard phone tips. Body is brass, n.pl. Double Phosphor Bronze springs. Mounts in 5/16″ hole in panels up to 3/8″ thick. Molded head.

Colors:
Red, Black, Yellow, Blue, Green.

Cat. No. 407 . . . . Std. Pkg. 50





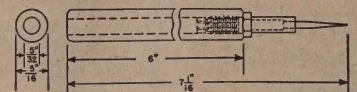


BRASS NICKEL PLATED TIPS

Fits all standard phone tip jacks.

Cat. No.	Std. Pkg.
402 —Standard Phone Tip	100
402A — Phone Tip Larger Diam	100
402B — Heavy Duty Phone Tip	100

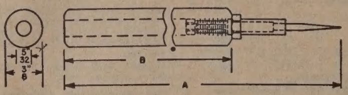
BAKELITE PENCIL TEST PROD



Body is brass nickel plated with steel n.pl. needle. Has Scrulok solderless connection. Bakelite handle. **Colors:** Red, Black.

Cat. No.		Std. Pkg.
411	Bakelite Pencil Test Prod	12

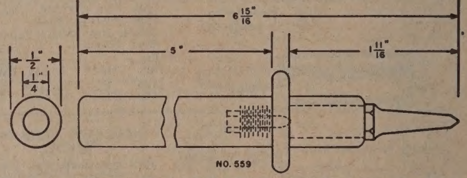
SCRULOK NEEDLEPOINT TEST PRODS



Phenolic insulated prod, has Scrulok solderless connection. Body is brass nickel plated with steel n.pl. needle. **Colors:** Red, Black.

Cat. No.	(A) Overall	(B) Handle Length	Std. Pkg.
417	5-3/32″	4″	50
418	6-3/32″	5″	50

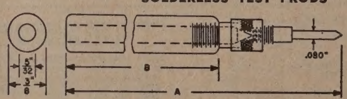
HEAVY DUTY HI-VOLTAGE TEST PROD HANDLE



Tip is heavy brass nickel plated. Bakelite finger guard. Accommodates IN-34 diode and condenser for use as RF Probe. **Colors,** Red, Black.

Cat. No.		Std. Pkg.
559	6″ H.V. Test Prod. Handles	20

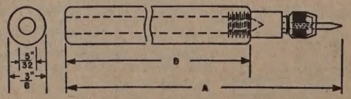
SOLDERLESS TEST PRODS



Body is brass nickel plated with solderless knurled nut connection. Heavy duty needlepoint, nickel plated. **Colors:** Red, Black.

Cat. No.	(A) Overall	(B) Handle Length	Std. Pkg.
410	5 1/8″	4″	50
343	6 1/4″	5″	50

NEEDLEPOINT TEST PRODS



Brass nickel plated body with steel nickel plated needle. Chuck threaded in end of handle is removable for replacing needles. Polished cast phenolic handle.

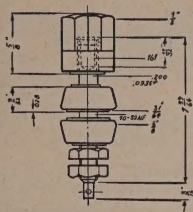
Cat. No.	(A) Overall	(B) Handle Length	Std. Pkg.
344	4-15/16″	4″	50
345	5-15/16″	5″	50

See Pages 1556-1559 for Birnbach Prices for Above Items

Birnbach ALLIGATOR CLIPS — TEST CLIPS — BINDING POST — MINIATURE ALLIGATOR CLIPS

NYLON BINDING POST

#276



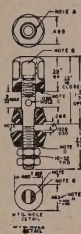
NEW! BIRNBACH "Multi-Use" Binding Posts Safe-Positive-Heavy Duty

Rugged, versatile "Multi-Use" binding post made of molded phenolic with molded-in brass inserts in head and washer for complete insulation from panel. For use on panels 1/16" to ¼" thick. Mounting hole ½". Current Capacity: 30 Amps. Voltage: 2000 V.A.C. RMS Test. **No. 276 Can be soldered directly to stud. Will permit six different methods of connection above panel and three below panel.**

Cat. No.	**Std. Pkg.**
276 Nickel Plated	100

COLORS: Red, Black, Yellow, Green, White, Blue, Brown, Grey.

NYLON BINDING POST



#274

"STANDARD" TYPE

No.		**Std. Pkg.**
274	30 Amps.	100

COLORS: Red, Black, Yellow, Green, White, Blue, Brown, Grey.
Can be soldered directly to Stud.

NOTES:
A Banana Plug Receptacle, .161 I. D.; B Head non-removable from Stud; C Molded in Brass Bushing in Head; D Molded in Brass Bushing in Washers; E For Panels 1/16" to ¼" thick; F Drill ½" hole for mounting washers; G Wire Hole is at right angle to Flat on insulated Washers; H Production Punch for keyed Slot for mounting Washers.

STANDARD DUTY 5-WAY BINDING POST

#278

Molded-in brass bushings for complete insulation. Useful for standard duty work. Available in Red or Black. Specify color. Body is brass nickel plated.

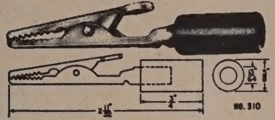
6 Amp. Rating

#279

Cat. No.	**Description**	**Std. Pkg.**
278	Red or Black	100
279*	Red or Black	100

*Same as above, but normally grounded. (Without bottom insulating section.)

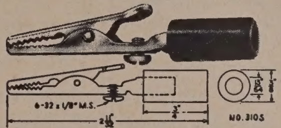
INSULATED ALLIGATOR CLIP



Made of steel, cadmium plated. Insulated handle allows use of all banana plugs. Has small soldering lip. **Colors:** Red, Black.

Cat. No.		**Std. Pkg.**
310	Insulated Alligator Clip	50
311	1½" Insulated Alligator Clip	50

INSULATED ALLIGATOR CLIP (Screw Type)

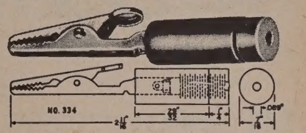


Made of steel, cadmium plated. Accurately matching jaws for tight grip. Has screw for solderless connection. Banana plug fits into rear of clip. Insulated handle.

Colors: Red, Black.

Cat. No.		**Std. Pkg.**
310S	Insulated Alligator Clip	50

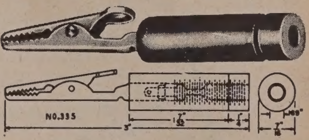
ALLIGATOR CLIP WITH PHONE TIP JACK



Handle has our No. 31 clip and our No. 407 tip jack in rear for all standard phone tip plugs. **Colors.** Red, Black.

Cat. No.		**Std. Pkg.**
334	Alligator Clip with Phone Tip Jack	50
336	Same as above except with our #31C screw type Copper Alligator Clip	50

ALLIGATOR CLIP COMBINATION JACK



Insulated alligator clip is composed of our #31, steel, cadmium plated Alligator Clip with our #333 Combination Jack in rear allowing the adaption of both standard senior phone tip plugs and banana plugs to Alligator Clips. **Colors:** Red, Black.

Cat. No.		**Std. Pkg.**
335	Alligator Clip Combination Jack	50
337	Same as above except with our #31C screw type Copper Alligator Clip	50

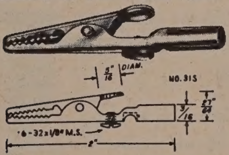
INSULATED COPPER ALLIGATOR CLIP (SCREW TYPE) — No. 310C

Composed of our No. 31C—Copper Alligator Clip with insulated handle. Has brass screw for solderless connection.

Colors: Red, Black.

Cat. No.		**Std. Pkg.**
310C	Insulated Copper Alligator Clip	50

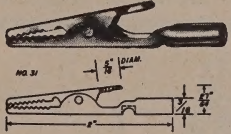
ALLIGATOR CLIP (Screw Type)



Made of cadmium plated steel. The jaws match accurately, permitting them to grip all kinds of wire securely. Has screw for solderless wire connection. Banana plug fits into rear of clip.

Cat. No.		**Std. Pkg.**
31S	Alligator Clip	50
31C	Alligator Clip (Copper)	50

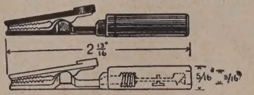
ALLIGATOR CLIP



Made of cadmium plated steel. Banana plug fits into rear of clip. Equipped with soldering lip.

Cat. No.		**Std. Pkg.**
31	Alligator Clip	50

ALL INSULATED ALLIGATOR CLIP



Steel Cadmium plated alligator clip. All metal parts covered with vinyl plastic insuring against shock. Solder Type connection. Red or Black. Specify color.
Cat. No. 123 Std. pkg. 50

PHONE TIP TO CLIP ADAPTER

Same as above with spring in rear of handle enabling the adapting of standard phone tip plugs to alligator clips. Red or Black. Specify color.
Cat. No. 124 Std. pkg. 50

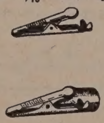
ALLIGATOR CLIP VINYL INSULATOR BOOT

Extremely flexible. Made to fit Nos. 31, 31S, 31C. Colors: White, Red, Black, Yellow, Blue.

Cat. No.		**Std. Pkg.**
31R	Vinyl Insulator	50

MINIATURE ALLIGATOR CLIPS

Very small and compact ● Useful where space is important. Accurately matching jaws for finger-tight grip. Length 1 11/16". Jaws open to 5/16". Has lip for soldering.

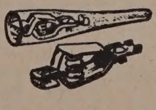


CAT. NO.	**TYPE**	**STD. PKG.**
31 MS	STEEL (Cad Plate)	50
31 MC	Solid Copper	50

31 MB INSULATOR BOOT to fit **31 MS** or **31 MC.** Specify Black or Red
Std. Pkg. 100

BIRNBACH TEST CLIPS

The teeth mesh correctly permitting good contact to be made. The No. 27-C is a solid copper clip with a brass screw designed for high frequency work.



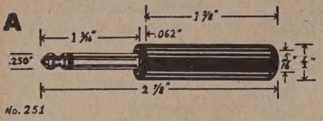
Cat. No.	**Length**	**Jaw Spread**	**Capacity**	**Std. Pkg.**
27—Pee Wee	1½"	⅜"	5 Amp.	50
28—Midget	2"	9/16"	10 Amp.	50
29—Medium	2⅞"	1"	25 Amp.	50
30—Large	4"	1¼"	50 Amp.	50
27C—Pee Wee Copper	1½"	⅜"	10 Amp.	50
27R—Plastic Sleeve—Red or Black				50

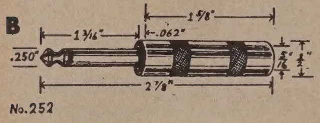
See Pages 1556-1559 for Birnbach Prices for Above Items

Birnbach

STANDARD TELEPHONE TYPE JACKS • PLUGS • SHAFT LOCKS • TEST LEADS CABINET HANDLES AND FERRULES

BIRNBACH


A
1 ⅝"
1 3/16"
.062"
.250"
5/16"
½"
2 ⅞"
No. 251

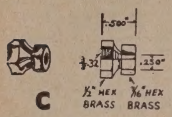

B
1 ⅝"
1 3/16"
.062"
.250"
5/16"
½"
2 ⅞"
No. 252

TELEPHONE TYPE PLUGS

This standard two conductor plug fits all standard jacks. All metal parts brass with nickel plating except for contact screw. Barrel is molded bakelite. Red or Black.

A — BAKELITE DOUBLE PHONE PLUG
Cat. No. 251 .... Std. Pkg. 25

B — SHIELDED PHONE PLUG
Cat. No. 252 .... Std. Pkg. 25


.500"
3/8-32
.250"
½" HEX BRASS
7/16" HEX BRASS
C

SHAFT LOCKS

C — WRENCH TYPE

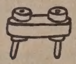
Brass, nickel plated. ½" length overall. Rear: ½" hex brass with ⅜-32 thread. Front: 7/16" hex brass.

Cat. No.	Std. Pkg.
546 — For ¼" Shaft	25

D — THUMB TYPE

Brass, nickel plated. ½" length overall. Rear: ½" hex brass with ⅜-32 thread. Front: 1" diam. knurled nut.

Cat. No.	Std. Pkg.
547 — For ¼" Shaft	25

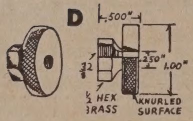


C-1

C-1 — CRYSTAL SOCKET

Glazed ceramic base. Phosphor bronze silver plated contacts spaced .486". Pin diameter .051, mtg. hole .125. Std. Pkg. 25

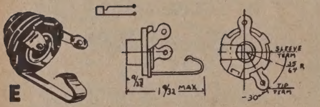
Cat. No. 595 Crystal Socket

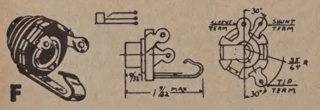

D
.500"
3/8-32
.250"
1.00"
½ HEX BRASS
KNURLED SURFACE

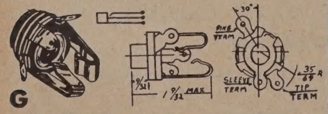
TELEPHONE TYPE JACKS

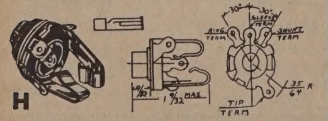
The body is brass nickel plated. Small, rugged and they are designed for long life, with low contact resistance snap springs made specially from nickel silver alloy which is corrosion resistant. Mounts in ⅜" hole.

E — **Cat. No. 257** — Open Circuit Two Conductor .... **Std. Pkg. 25**
F — **Cat. No. 258** — Single Closed Circuit Two Conductor .... **Std. Pkg. 25**
G — **Cat. No. 259** — Open Circuit Three Conductor .... **Std. Pkg. 25**
H — **Cat. No. 260** — Single Closed Circuit Three Conductor .... **Std. Pkg. 25**


E
9/32
1 7/32 MAX
SLEEVE TERM
35/64 R
TIP TERM
30°

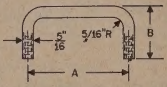

F
9/32
1 7/32 MAX
SLEEVE TERM
SHUNT TERM
30°
35/64 R
TIP TERM


G
9/32
1 7/32 MAX
RING TERM
SLEEVE TERM
30°
35/64 R
TIP TERM


H
9/32
1 7/32 MAX
30°
RING TERM
SLEEVE TERM
SHUNT TERM
35/64 R
TIP TERM

YOUR SPECIAL ELECTRONIC HARDWARE
REQUIREMENTS ARE SOLICITED FOR
CUSTOM COMPONENTS

HANDLES

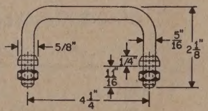


MATERIAL: BRASS
FINISH: NICKEL PLATED

Has 10-32 thread individually packaged for a perfect finish.

Cat. No.	A	B	Std. Pkg.
1065-3	3"	1 5/16"	10
1065-4	4 9/16"	1½"	10
1065-6	6 7/16"	1¾"	10
1065-9	9"	1¾"	10

CABINET HANDLE


5/8"
5/16"
2 1/8"
1/4"
11/16"
4 1/4"

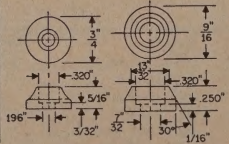
MATERIAL: BRASS
FINISH: NICKEL PLATED

Mounts in 5/16" Hole.

Supplied with Hex Nut and Washer. Individually packaged for perfect finish.

Cat. No.		Std. Pkg.
1066	Handle	10

FERRULE


3/4"
9/16"
.320"
13/32"
.320"
5/16"
.250"
196"
3/32"
7/32"
30°
1/16"

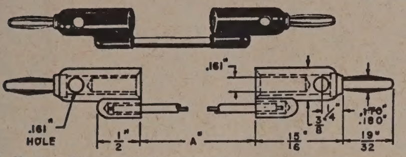
BRASS—NICKEL PLATED.
Used for mounting handles.

Cat. No.		Std. Pkg.
1068	Ferrule	100
1069	Ferrule	100

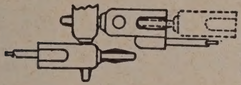
Birnbach

PATCH CORDS
PHONO JACK & PLUGS • PHONO SPLICE/TIP
INSULATED SPADE LUGS • BINDING POSTS

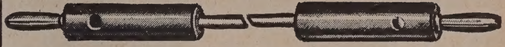
MOLDED "STACKING TYPE" PATCH CORDS



1. Never ending banana plug receptacle.
2. Interconnects unlimited amount of multiple circuits.
3. Positive and lasting contact for all standard banana plugs.
4. Four leaved heat treated beryllium copper spring.
    - a. 360 degrees spring contact
    - b. maintains resiliency after thousands of insertions.
5. Supplied in Red, Black, Yellow or Green. (Specify Color) (Special colors on request)
6. Handle molded to body and to wire.
7. 10,000 volt rubber covered flexible wire.
    - a. 65 strands #36 insulated to an O.D. of .140.



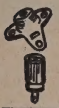
Cat. No.	("A") Wire	Std. Pkg.
655-8	8 inches	12
655-12	12 inches	12
655-24	24 inches	12
655-36	36 inches	12



Provides a never-ending banana plug receptacle to interconnect an unlimited amount of multiple circuits. The cross hole is designed for positive contact of all standard banana plugs. Fits all standard banana jacks. Four-leaved phosphor bronze nickel plated spring. Red or Black assemblies. Specify color. Std. pkg. 10.

		Pkg.
Cat. No. 653-8	8″ Wire Length	12
Cat. No. 653-12	12″ Wire Length	12
Cat. No. 653-24	24″ Wire Length	12
Cat. No. 653-36	36″ Wire Length	12

PHONO-JACKS



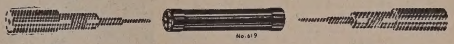
Small, compact . . . where space is at a premium.

Cat. No.	Std. Pkg.
597	50

Space Saver . . . Rivets and grounds to chassis.

Cat. No.	Std. Pkg.
598	50

PHONE TIP PLUG SPLICE

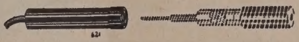


Takes all standard phone tip plugs excellent for quick connections or test, lead extensions.

Colors: Red, Black, Yellow, Green.

Cat. No. 619 — Insulated Banana Plug Splice ....**Std. pkg.** 25

IN-LINE PHONE TIP JACK

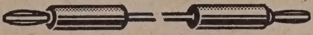


Takes all standard phone tip plugs. Can be used as lead extension.

Colors: Red, Black, Yellow, Green.

Cat. No. 621 — Insulated-In-Line Tip Jack ....**Std. pkg.** 25

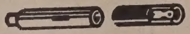
BIRNBACH PATCH CORDS



Birnbach No. 465 Banana Plugs connected to our kinkless test lead wire. Used to interconnect circuits. Fits all standard banana jacks. Specify red or black.

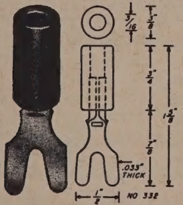
Cat. No.	Wire Length	Std. Pkg.
607	12″	25
608	24″	25
609	36″	25
610	48″	25

SHIELDED EXTENSION JACK



Cadmium plated brass shell with black bakelite insert. Length is 2-7/16″. Insulates for solder grip contact. Mates with No. 248 Phono Plug.

Cat. No.	Std. Pkg.
246—Inline Extension Jack	100



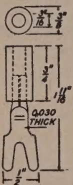
INSULATED SPADE LUG

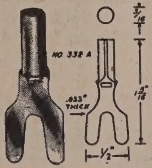
Accommodates all standard banana plugs into the rear of lug enabling same to be adapted to a splade lug. Lug is Steel Hot Tinned.

Colors:

Red or Black

Cat. No. 332
Std. Pkg. 50



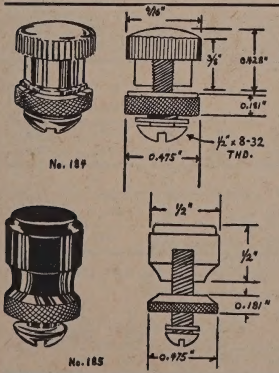


SPADE LUG

Barrel accommodates all standard banana type plugs. Lug is Steel Hot Tinned.

Cat. No.	Std. Pkg.
332A	50

Spade Lug



INSULATED BINDING POSTS

Molded bakelite head with brass insert molded-in. Supplied complete with 8-32 x ½″ screw, lock washer. Has brass insert molded-in. Supplied with washer. Available in black.

Cat. No.	Std. Pkg.
184 Binding Post	50

Molded bakelite head with brass insert molded-in. Supplied complete with 8-32 x ½″ screw and lock washer. Has brass nickel-plated retaining washer.

Colors: Red, Black.

Cat. No.	Std. Pkg.
185 Binding Post	50

Brass, heavily nickel-plated overall. Complete with screw and lock washer. Designed for high amperage, low resistance connections.

Cat. No.	Std. Pkg.
186 Metal Bind. Post	50

Birnbach SUB-MINIATURE TEFLON TERMINALS

NEW SUB-MINIATURE TELFLON* terminals provide instant mounting without any extra hardware of any kind because of the exceptional properties of Virgin Teflon*.

Low dielectric constant, low power factor (60 cps to 30,000 mc), low capacitance, high volume, high surface resistivity, high dielectric strength (1500-2000 v/mil, s.t.), continuous service—450°F to plus 500°F, unaffected by soldering, chemically inert, damage resistant, water repellant, voltage rating, sea level 750v r.m.s., flash-over, sea level 3000v r.m.s., flash-over, 50,000 ft. 1300 v r.m.s.

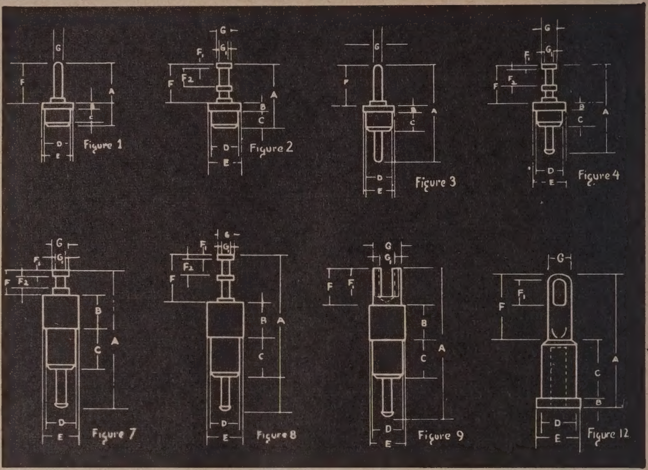
Installed permanently in seconds, in metallic or non-metallic chassis in one, simple, corking motion into punched or drilled holes. Mounting Hole Data: 1. Punch or drill the hole to a diameter that is .012″ less than the diameter of the Teflon insulator which passes thru the chassis. 2. Where the thickness of the chassis permits, the entrance edge of the mounting hole should be countersunk 30° to the diameter of the insulator. Where chassis thickness will not permit (.040″ or smaller), countersink 45° to the diameter of the insulator.

Speeds up assembly—cut production costs, no nuts, washers, staking or soldering necessary especially adapted in crowded assemblies.

As for HF, VHF, UHF, microwave, radar, telemetering, guided missile instrumentation and circuitry. circuitry.

Variations of specifications listed below are available. Your inquiries invited.

** DuPont TM*



SUB-MINIATURE STAND-OFFS

Std. Pkg. 100, 1000

Cat No.	FIG.	CAPACITANCE mmf +	A	B	C	+.002 —.000 D DIA.	E DIA.	F	F1	F2	G DIA.	G1 DIA.
506	1	0.5	.350	.040	.100	.148	.172	.210			.040	
507	1	0.5	.406	.040	.156	.148	.172	.210			.040	
508	1	0.5	.500	.040	.250	.148	.172	.210			.040	

Cat No.	FIG.	CAPACITANCE mmf +	A	B	C	+.002 —.000 D DIA.	E DIA.	F	F1	F2	G DIA.	G1 DIA.
510	2	0.55	.350	.040	.100	.148	.172	.210	.020	.100	.040	.080
511	2	0.55	.375	.040	.125	.148	.172	.210	.020	.100	.040	.080
512	2	0.40	.350	.040	.100	.179	.200	.210	.020	.100	.040	.080

SUB-MINIATURE FEED-THRUS

Std. Pkg. 100, 1000

Cat. No.	FIG.	CAPACITANCE mmf +	A	B	C	+.002 —.000 D DIA.	E DIA.	F	G DIA.
514	3	0.60	.515	.040	.100	.148	.172	.210	.040
515	3	0.55	.443	.040	.100	.148	.172	.210	.040
516	3	0.75	.725	.040	.100	.148	.172	.210	.040

Cat No.	FIG.	CAPACITANCE mmf +	A	B	C	+.002 —.000 D DIA.	E DIA.	F	F1	F2	G DIA.	G1 DIA.
518	4	0.65	.500	.040	.100	.148	.172	.210	.020	.100	.040	.080
519	4	0.65	.500	.040	.165	.148	.172	.210	.020	.100	.040	.080

CAT. NO.	FIG.	VOLTAGE, Nominal Rating	CAPACITANCE mmf +	RMS, 60 CPS Flashover Sea Level	Flashover 50,000 Ft.	A	B	C	+.022 —.000 D DIA.	E DIA.	F	F1	F2	G DIA.	G1 DIA.
520	7	2000	1.00	6000	1400	.540	.063	.171	.171	.187	.133	.020	.093	.046	.093
521	8	2000	1.00	6000	2500	.836	.187	.165	.148	.172	.125	.020	.093	.040	.093

CAT. NO.	FIG.	VOLTAGE, Nominal Rating	CAPACITANCE mmf +	RMS, 60 CPS Flashover Sea Level	Flashover 50,000 Ft.	A	B	C	+.022 —.000 D DIA	E DIA.	F	F1	G DIA.	G1 DIA.
522	9	2000	1.10	6000	1400	.821	.187	.212	.171	.187	.203	.156	.148	.078

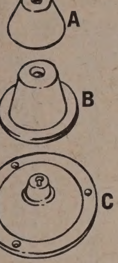
CONNECTORS & TEST JACKS

Std. Pkg. 100, 1000

CAT. NO.	FIG.	VOLTAGE, Nominal Rating	CAPACITANCE mmf +	RMS, 60 CPS Flashover Sea Level	Flashover 50,000 Ft.	A	B	C	D DIA.	E DIA.	F	F1	F2	G DIA	G1 DIA.
523	12	1250	0.40	4500	1500	.687	.046	.287	.185	.218	.354	.140	.070	.115	.060

See Pages 1556-1559 for Birnbach Prices for Above Items

Birnbach INSULATORS
ANTENNA • FEED THRU • STAND-OFF



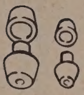
STEATITE FEEDTHRU INSULATOR

Useful in many constructions. Has high dialetric and mechanical strength. They are made of L-5 Glazed Steatite. No hardware is included.

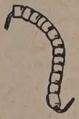
Cat. No.	Figure	Height	Base Diam.	Max. Screw Size	Std. Pkg.
4200	A	⅞″	1¼″	10-32	25
4201	A	1⅛″	1¾″	¼-20	25
4202	B	1⅝″	2½″	⅜-16	25
4203	C	1″	3⅛″	8-32	12

STEATITE FEEDTHRU PANEL BUSHING INSULATORS

Made of L-5 Glazed Steatite. These Feedthrus have male and female (tops and bottoms) for feeding thru chassis, panels, shields, racks or panels. No hardware included.



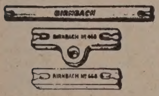
Cat. No.	Top Height	Max. Dia.	Panel Hole	Panel Thickness	Max. Screw Sz.
4204	⅛″	½″	5/16″	To ⅛″	6-32
4205	7/32″	⅝″	7/16″	To ⅛″	8-32
4206	⅜″	½″	¼″	To 3/16″	6-32
4207	⅜″	⅝″	⅜″	To ⅜″	8-32
4208	¾″	1⅛″	¾″	To ⅜″	10-32
4209	1⅝″	1¼″	½″	To 2″	10-32



FISH SPINE BEADS

Made of L-5 Glazed Steatite. Useful for insulating Buss or Heavy Lines. Ball and Socket style interlocks permitting beads to follow bends and curves. Four Beads cover approx 1″-Package of 100 covers 25″ of wire. Dimensions: 5/16″ O.D., ⅛″ I.D. Beads are treated with special Dow Corning treatment to prevent accumulation of surface moisture.

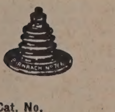
Cat. No.		Std. Pkg.
4205	Fish Spring Beads	100



BIRNBACH ANTENNA INSULATORS

These antenna insulators have exceptionally low moisture absorption. The leakage path is long and the cross section is small and is consistent with the strength required. Smooth white glaze overall prevents the accumulation of dirt or ice.

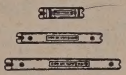
Cat. No.	Std. Pkg.
468—4½″ long Center Insulator	10
668—4¼″ long	25
470—7″ long	10
471—12″ long	5



BEE HIVE STANDOFF

Base measures 2-3/16″ diam. with 3 holes on 1-15/16″ circle for No. 6 screws. Height of base 1½″. Complete with 10-32 brass screw and nuts. No. 766J has a No. 403 Jack. Available in white glaze.

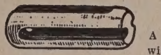
Cat. No.	Std. Pkg.
766 —Standoff Insulator, 10-32 Screws	10
766J—Jack Type with No. 403 Jack	10



BIRNBACH FEEDER SPREADERS

They have a cross section of ⅜″ x ½″. Made of highly vitrified, low absorption, high tensile strength porcelain with a smooth white glaze overall.

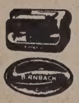
Cat. No.	Std. Pkg.
462—Spreader, 2″ long	25
464—Spreader, 4″ long	25
469—Spreader, 6″ long	25



BIRNBACH STEATITE AIRPLANE INSULATORS

A very small compression type Steatite insulator with small wind resistance. Fully glazed. It is 1½″ in length; 17/32″ in diameter; ¾″ line spacing.

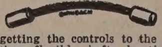
Cat. No.	Std. Pkg.
463—Steatite Airplane Insulators	25



BIRNBACH AIRPLANE INSULATORS

They are used on mobile and aircraft and also with guy wire on TV installations. They are shaped for the least air resistance and have very high tensile strength, and low loss. Nos. 473 and 474 are made of white glazed low absorption porcelain. No. 472 is made of wet process glazed brown.

Cat. No.	Std. Pkg.
472—2¼″ (brown)	25
473—2″ (white)	100
474—1½″ (white)	100



BIRNBACH FLEXIBLE SHAFTS

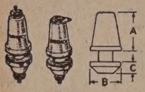
Modern construction calls for more compact arrangement of parts. At times there is difficulty getting the controls to the proper position on the panel. With couplings and these flexible shafts, locations can be made with ease on an offset and angles up to 90 degrees. The flexible shafts are made of phosphor bronze and fitted into ¼″ dia. hubs.

Cat. No.	Std. Pkg.
553—Flexible Shaft 3″ long	25
554—Flexible Shaft 6″ long	25

See Pages 1556-1559 for Birnbach Prices for Above Items

Birnbach FEEDTHRU • STEATITE PILLARS • CORRUGATED CERAMIC • STANDOFF INSULATORS

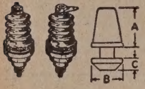
BIRNBACH FEEDTHRU INSULATORS



Made of highly vitrified, low absorption porcelain smoothly glazed to prevent accumulation of dust or dirt. Maximum strength is achieved by the proper proportions and flat mounting surfaces. Long insulating sleeves on the lower part of the insulator contribute much to their performance on high voltages. Brass nickel plated hardware.

Cat. No.	Height A	Std. Pkg.	Dimensions B	Dimensions C	Mounting Hole	Hardware
458	⅝"	50	11/16"	¼"	5/16"	6-32
478	1"	25	13/16"	5/16"	7/16"	10-32
478J	1"	25	13/16"	5/16"	7/16"	No. 403 Jack
4125	1¼"	25	⅞"	⅜"	7/16"	10-32
4125J	1¼"	25	⅞"	⅜"	7/16"	No. 403 Jack
4234	2¾"	10	2"	1"	1¼"	¼-20
4175	2¾"	10	1¼"	¾"	⅝"	¼-20
4175J	2¾"	10	1¼"	¾"	⅝"	No. 394 Jack

CORRUGATED FEEDTHRU INSULATORS



The six new corrugated type feedthru insulators have more than twice the leakage path of the straight type because of increased surface of the corrugations and recommends itself where a straight side insulator of equal height is not satisfactory because of its shorter leakage path. Brass nickel plated hardware and cork mounting washers supplied.

Cat. No	Height A	Std. Pkg.	Dimensions B	Dimensions C	Mounting Hole	Hardware
479	1⅜"	25	1¼"	11/16"	9/16"	10-32
479J	1⅜"	25	1¼"	11/16"	9/16"	No. 403 Jack
4276	2¾"	10	1⅝"	1"	¾"	¼-20
4276J	2¾"	10	1⅝"	1"	¾"	No. 394 Jack
4452	4½"	5	2⅛"	1½"	1"	¼-20
4452J	4½"	5	2⅛"	1½"	1"	No. 394 Jack

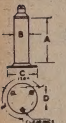
HIGH VOLTAGE FEEDTHRU INSULATOR

This insulator has been designed to meet the demand for an insulator having high dielectric and mechanical strength. The extra long leakage path is made possible by the corrugations on the top insulator. The bottom sleeve taper from a base dia. of 1-3/16" where the electric stress is greatest.

Cat. No.	Height	Std. Pkg.	Base Dia.	Mounting Hole	Hardware
4233	1⅝"	10	2"	1¼"	¼-20

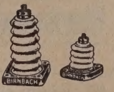
STEATITE PILLARS

Have great tensile strength with extremely low losses at very high frequencies. Tapped on both ends; supplied with nickel plated mounting base and top hardware.

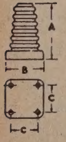


Cat. No.	Height A	Std. Pkg.	Dimen. B	Base Dia. C	D	Hardware
450	1"	10	½"	1⅛"	⅞"	6-32
450J	1"	10	½"	1⅛"	⅞"	No. 403 Jack
451	1½"	10	½"	1⅛"	⅞"	6-32
451J	1½"	10	½"	1⅛"	⅞"	No. 403 Jack
452	2½"	10	½"	1⅛"	⅞"	6-32
452J	2½"	10	½"	1⅛"	⅞"	No. 403 Jack
453	2½"	5	¾"	1-9/16"	1-3/16"	¼-20
453J	2½"	5	¾"	1-9/16"	1-3/16"	No. 395 Jack
454	4"	5	¾"	1-9/16"	1-3/16"	¼-20
454J	4"	5	¾"	1-9/16"	1-3/16"	No. 395 Jack

BIRNBACH METAL BASE INSULATORS



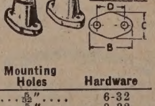
Corrugated surface provides long leakage path. Made of high tensile strength low absorption porcelain fully glazed. Supplied with nickel plated brass screws and nuts, cadmium plated drawn steel bases.



Cat. No.	Height A	Std. Pkg.	Base Dimension B	Base Dimension C	Mtg. Screw D	Hardware
867	1⅜"	25	1⅞" x 1 5/16"	1½"	2 No. 8	10-32
867J	1⅜"	25	1⅞" x 1 5/16"	1½"	2 No. 8	403 Jack
4176	2¾"	10	1¾" x 1¾"	1⅜"	4 No. 10	¼-20
4176J	2¾"	10	1¾" x 1¾"	1⅜"	4 No. 10	395 Jack
4451	4½"	5	2¼" x 2¼"	1¾"	4 No. 10	¼-20
4451J	4½"	5	2¼" x 2¼"	1¾"	4 No. 10	395 Jack

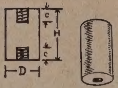
BIRNBACH STANDOFF INSULATORS

Made of highly vitrified low absorption glazed porcelain. No washers necessary — mounting surface is ground flat for No. 404. No. 966 it is advisable to use cork washers which are available. All brass nickel plated hardware supplied.



Cat. No.	Height A	Std. Pkg.	Base Dimension B	Base Dimension C	D	Mounting Holes	Hardware
405	⅝"	100	1"	17/32"	11/16"	5/32"	6-32
965	1"	50	1¼"	¾"	13/16"	5/32"	8-32
966	1"	50	1⅜"	⅞"	1"	5/32"	8-32
966J	1"	50	1⅜"	⅞"	1"	5/16"	No. 403 Jack
866	1½"	25	1¾"	1⅛"	1¼"	5/32"	10-32
866J	1½"	25	1¾"	1⅛"	1¼"	5/16"	No. 403 Jack
866SJ	1½"	10	1¾"	1⅛"	1¼"	5/32"	No. 395 Jack
4275	2¾"	10	2¾"	2"	2⅛"	¼"	¼-20
4275J	2¾"	10	2¾"	2"	2⅛"	¼"	No. 399 Jack
4450	4½"	5	3⅝"	2½"	2⅝"	9/32"	¼-20
4450J	4½"	5	3⅝"	2½"	2⅝"	9/32"	No. 399 Jack

BIRNBACH STEATITE PILLARS JAN-I-8 and JAN-I-10 SPECS.

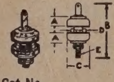


(Less Hardware)

In many constructions, these unmounted threaded Steatite pillars will facilitate assembly because of the one hole mounting and parallel mounting surfaces. They are made of L5 glazed Steatite with threaded holes on both sides.

Cat. No.		Height	Diam.	Threaded Hole		Std. Pkg.
Cat. No.	Conforms to Type	H	D	Length of Thread	Thread	Std. Pkg.
441		¼"	¼"	All	6-32	100
441B		⅜"	¼"	5/32"	6-32	100
441A		½"	¼"	5/32"	6-32	100
444A		¾"	¼"	¼"	6-32	100
445A		1"	¼"	¼"	6-32	100
442		⅜"	⅜"	5/32"	6-32	100
442A	NS5W0104	½"	⅜"	5/32"	6-32	100
443A	NS4W0105	⅝"	⅜"	¼"	6-32	100
444B	NS5W0106	¾"	⅜"	¼"	6-32	100
445B	NS5W0108	1"	⅜"	⅜"	6-32	100
446A	NS5W0112	1½"	⅜"	⅜"	6-32	100
446B	NS4W0110	1¼"	⅜"	⅜"	6-32	100
446C	NS4W0116	2"	⅜"	⅜"	6-32	100
443		½"	½"	9/64"	6-32	100
444		¾"	½"	¼"	6-32	100
445		1"	½"	⅜"	6-32	100
446		1½"	½"	⅜"	6-32	100
447		2½"	½"	⅜"	6-32	100
440	NS5W0205	⅝"	½"	3/16"	8-32	100
440A	NS5W0206	¾"	½"	¼"	8-32	100
440B	NS5W0208	1"	½"	⅜"	8-32	100
440D	NS5W0212	1½"	½"	⅜"	8-32	100
440C	NS5W0210	1¼"	½"	⅜"	8-32	100
440E	NS5W0216	2"	½"	⅜"	8-32	100
440F	NS5W0220	2½"	½"	⅜"	8-32	100
444C		¾"	¾"	¼"	10-32	100
445C	NS5W0308	1"	¾"	⅜"	10-32	100
445D	NS5W0310	1¼"	¾"	⅜"	10-32	100
445E	NS5W0312	1½"	¾"	⅜"	10-32	100
445F	NS5W0316	2"	¾"	⅜"	10-32	100
445G	NS5W0320	2½"	¾"	⅜"	10-32	100
448		2½"	¾"	¾"	¼-20	50
449		4"	¾"	¾"	¼-20	50
447B	NS5W0412	1½"	1"	½"	¼-20	50
447D	NS5W0420	2½"	1"	⅝"	¼-20	50
447E	NS5W0424	3"	1"	⅝"	¼-20	50

STEATITE BUTTONS

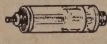


This specially designed Steatite button is intended for use to simplify wiring and to be used as a binding post or a binding post insulator. Attention is called to the uniqueness of the design which prevents either section of the insulator from turning in respect to the special screw. The specially designed screw locks both sections.

Cat No.	Std. Pkg.
457—Button	25

Dimensions	A	B	C	D	E
	5/16"	1⅜"	¾"	½"	6-32

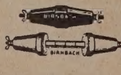
"LUCITE" FEEDTHRU INSULATORS



These feedthru insulators are ideal for bringing high frequency leads thru a panel. They are made of genuine Dupont Lucite. Because of its low loss at high frequency, it is well adapted to insulated elements of high frequency circuits. The ½" dia. insulators have brass nickel plated 6-32 hardware and the ¾" dia. insulators, 10-32 hardware.

Cat. No	Height Above Panel	Insulator Dia.	Mounting Hole	Bottom Height	Std. Pkg.
377	¼"	½"	5/16"	¼"	25
378	½"	½"	5/16"	¼"	25
379	1"	½"	5/16"	¼"	25
475	1½"	¾"	7/16"	½"	25
476	2"	¾"	7/16"	½"	25

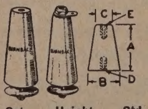
BIRNBACH LEADIN INSULATORS



Each cone is 2¾" high and made of low absorption, highly vitrified glazed porcelain. The Nos. 4237 and 4238 Leadin Insulators have sufficient insulating bushings to insulate the rod that goes through the wall. In addition, 2 bushings are included, ¼" and ½" long, allowing complete insulation of the threaded rod of any length in multiples of ¼". They come complete with brass nickel plated hardware and lead and cork washers to permit a water-tight seal.

Cat. No.	Description	Std. Pkg
4235	10" Rod	10
4236	15" Rod	10
4237	10" Rod with bushings	10
4238	15" Rod with bushings	10

BIRNBACH CONE STANDOFF INSULATORS



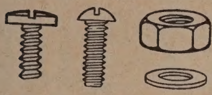
(Steatite)

Made of low absorption high tensile strength Steatite with a smooth glaze. All heights except the No. 430 are available with a Jack or a threaded hole top. Available in a white glaze and are complete with screws, metal and cork washers.

Cat. No	Height A	Std. Pkg.	Base Dimensions B	Base Dimensions C	Threaded Holes D	Threaded Holes E	Mtg. Hole
430	⅝"	100	⅝"	7/16"	6-32	6-32	5/32"
431	1"	50	11/16"	½"	8-32	8-32	3/16"
431J	1"	50	11/16"	½"	8-32	No. 403 Jack	3/16"
432	1½"	50	⅞"	⅝"	10-32	10-32	7/32"
432J	1½"	50	⅞"	⅝"	10-32	No. 403 Jack	7/32"
433	2¾"	25	1¼"	¾"	¼-20	¼-20	9/32"
433J	2¾"	25	1¼"	¾"	¼-20	No. 395 Jack	9/32"

Birnbach SCREWS & NUTS • WASHERS • STANDOFFS ALL-NYLON FASTENINGS

Non-Corrosive, Non-Conducting



Used in variety of applications, such as; appliances, computers and business machines, chemical and food processing equipment, electronic equipment and instruments, airborn equipment, etc.

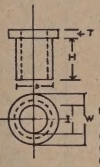
*Reg. T.M. of DuPont

ALL-NYLON FASTENINGS

Zytel 101 per Mil P 20693 Spec, Mil S 7742 Spec

Birnbach All-Nylon Fastenings are made of Zytel 101*, a Polymide plastic of the Nylon 6.6 Type. They offer outstanding insulating properties plus resistance to heat, shock, vibration and chemical solvents plus lightness elasticity and superior torque strength. In most cases, because of their high dielectric strength, they eliminate the need of bushings, washers or other insulation. They are corrosion resistant, non-magnetic and good torque strength thru a wide temperature range. Continuous service temperature to 300°F (150°C). Stock color: Natural. Additional colors available to order. Zytel 101 per MIL-P-17019B.

BIRNBACH NYLON BUSHINGS AND SPACERS



Designed with wide flanges to completely isolate screw from mounting surface, useful where hi tensile and torque requirements require high strength non-insulating screws. Natural color.

Cat. No.	UsedU with Screw Size	Dimensions			
	I	W	T	H	D
6549	#4(.115″)	.235″	3/64″	¼″	.146″
6549A	#6(.140″)	.290″	3/64″	¼″	.170″
6549B	#8(.173″)	.344″	1/16″	⅜″	.205″
6549C	#10(.200″)	.399″	1/16″	⅜″	.260″
6549D	¼″(.260″)	.513″	1/16″	⅜″	.312″

ALL NYLON MACHINE SCREWS

STANDARD PKG.: 100, 1000

Cat. No.	Size	Type
6640	2-56 x ¼″	Round Head
6640A	2-56 x ¼″	Fillister Head
6640B	2-56 x ¼″	Binding·Head
6641	2-56 x ⅜″	Round Head
6641A	2-56 x ⅜″	Fillister Head
6641B	2-56 x ⅜″	Binding Head
6550	2-56 x ½″	Round Head
6551	2-56 x ½″	Fillister Head
6551A	2-56 x ½″	Binding Head
6643	4-40 x ¼″	Round Head
6643A	4-40 x ¼″	Fillister Head
6643B	4-40 x ¼″	Binding Head
6644	4-40 x ⅜″	Round Head
6644A	4-40 x ⅜″	Fillister Head
6644B	4-40 x ⅜″	Binding Head

Cat. No.	Size	Type
6552	4-40 x ½″	Round Head
6552A	4-40 x ½″	Fillister Head
6552B	4-40 x ½″	Binding Head
6646	6-32 x ¼″	Round Head
6646A	6-32 x ¼″	Fillister Head
6646B	6-32 x ¼″	Binding Head
6553	6-32 x ⅜″	Round Head
6554	6-32 x ⅜″	Binding Head
6555	6-32 x ⅜″	Fillister Head
6556	6-32 x ⅜″	Flat Head
6557	6-32 x ½″	Round Head
6558	6-32 x ½″	Binding Head
6559	6-32 x ½″	Fillister Head
6560	6-32 x ½″	Flat Head
6648	6-32 x ¾″	Round Head
6648A	6-32 x ¾″	Fillister Head
6648B	6-32 x ¾″	Binding Head
6561	6-32 x 1″	Round Head
6561C	6-32 x 1″	Flat Head
6650	8-32 x ¼″	Round Head
6650A	8-32 x ¼″	Fillister Head
6650B	8-32 x ¼″	Binding Head
6562	8-32 x ⅜″	Round Head
6563	8-32 x ⅜″	Binding Head
6564	8-32 x ⅜″	Flat Head
6565	8-32 x ⅜″	Fillister Head
6566	8-32 x ½″	Round Head
6567	8-32 x ½″	Binding Head
6568	8-32 x ½″	Flat Head
6569	8-32 x ½″	Fillister Head
6570	8-32 x ⅝″	Round Head
6571	8-32 x ⅝″	Fillister Head
6572	8-32 x ¾″	Round Head
6572A	8-32 x ¾″	Fillister Head
6572B	8-32 x ¾″	Binding Head
6573	8-32 x 1″	Flat Head
6573A	8-32 x 1″	Fillister Head
6574	10-32 x ⅜″	Round Head
6575	10-32 x ½″	Round Head
6576	10-32 x ½″	Flat Head
6577	10-32 x ⅝″	Round Head
6578	10-32 x 1″	Round Head
6579	10-32 x 1″	Flat Head

THREADED NYLON ROD in 6-32, 8-32, 10-32 and ¼-20 thread sizes available.

ROUND HEAD MACHINE SCREWS

Standard Package 1000

STEEL NICKEL PLATED

Cat. No.	Size
6300	2-56 x 3/16
6301	2-56 x ⅜
6302	2-56 x ½
6303	3-48 x ¾
6304	4-36 x ¼
6305	4-36 x ½
6306	4-36 x ¾
6307	4-40 x ¼
6308	4-40 x ½
6309	4-40 x ¾
6420	6-32 x ¼
6421	6-32 x ⅜
6422	6-32 x ½
6423	6-32 x ⅝
6424	6-32 x ¾
6425	6-32 x 1
6426	8-32 x ¼
6427	8-32 x ⅜
6428	8-32 x ½
6429	8-32 x ⅝
6430	8-32 x ¾
6431	8-32 x 1
6432	8-32 x 1½
6433	10-32 x ¼
6434	10-32 x ⅜
6435	10-32 x ½
6436	10-32 x ⅝
6437	10-32 x ¾
6438	10-32 x 1
6439	¼-20 x ½
6310	¼-20 x 1¼
6311	¼-20 x 2½
6400	4-36 x ¼
6401	4-36 x ⅜

BRASS NICKEL PLATED

Cat. No.	Size
6402	4-36 x ½
6403	4-36 x ¾
6404	4-36 x 1
6312	4-40 x ¼
6313	4-40 x ⅜
6314	4-40 x ½
6315	4-40 x ¾
6405	6-32 x ¼
6406	6-32 x ⅜
6407	6-32 x ½
6408	6-32 x ⅝
6409	6-32 x ¾
6410	6-32 x 1
6410A	6-32 x 1⅛
6411	6-32 x 1¼
6412	6-32 x 1½
6413	8-32 x ¼
6414	8-32 x ⅜
6415	8-32 x ½
6416	8-32 x ⅝
6417	8-32 x ¾
6418	8-32 x 1
6316	10-32 x ¼
6317	10-32 x ⅜
6318	10-32 x ½
6318A	10-32 x ⅝
6319	10-32 x ¾
6319A	12-24 x 1
6320	10-32 x 1
6320A	¼-20 x ⅞
6320B	¼-20 x 1¼
6320C	¼-20 x 1½

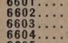
BINDING HEAD MACHINE SCREWS

Steel Nickel Plated

Cat. No.	Size	Std. Pkg.
6321	6-32 x ¼″	1000
6322	6-32 x ⅜″	1000
6323	6-32 x ½″	1000
6324	8-32 x ¼″	1000
6325	8-32 x ⅜″	1000
6326	8-32 x ½″	1000

OVAL HEAD RACK SCREWS

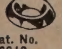
Steel Nickel Plated



Widely used for mounting panels on racks and cabinets. Screws are nickel-plated brass.

Cat. No.	Size	Std. Pkg.
6600	6-32 x ¼″	1000
6601	6-32 x ½″	1000
6602	6-32 x ¾″	1000
6603	6-32 x 1″	1000
6604	8-32 x ¼″	1000
6605	8-32 x ½″	1000
6606	8-32 x ¾″	1000
6607	8-32 x 1″	1000
6608	10-32 x ¼″	1000
6609	10-32 x ½″	1000
6610	10-32 x ⅝″	1000
6611	10-32 x ¾″	1000
6611-A	10-32 x 1″	1000

FINISHING RACK WASHERS



Brass Nickel Plated

Cat. No.	Size	Std. Pkg.
6612	6-32 Cup Washer	1000
6613	8-32 Cup Washer	1000
6614	10-32 Cup Washer	1000

SHEET METAL SELF TAPPING SCREWS

Steel Cadmium Plated

TYPE A — SHARP POINT

Cat. No.	Size	Std. Pkg.
6500	#4 x ½	144
6501	#6 x ¼	144
6502	#6 x ⅜	144
6503	#6 x ½	144
6504	#6 x ¾	144
6540	#8 x ⅜	144
6541	#8 x ½	144
6505	#8 x 1	144
6542	#10 x ⅜	144
6543	#10 x ½	144
6506	#10 x ¾	144
6507	#10 x 1	144

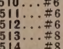
HEX HEAD SELF TAPPING SCREWS

TYPE B — BLUNT POINT SLOTTED

Steel Cadmium Plated

Cat. No.	Size	Std. Pkg.	Cat. No.	Size	Std. Pkg.
6510	#6 x ⅜	144	6515	#8 x ½	144
6511	#6 x ½	144	6516	#8 x ¾	144
6512	#6 x ¾	144	6517	#8 x 1	144
6513	#8 x ¼	144	6518	#10 x ½	144
6514	#8 x ⅜	144	6519	#10 x 1	144

VOLUME CONTROL AND TOGGLE NUTS



STEEL - BRASS - NICKEL PLATED

No.	Type	Size	Std. Pkg
6337	Vol. Control Brass	⅜-32x½x3/32	1000
6337A	Vol. Control Steel	⅜-32x½x3/32	1000
6338	Toggle Switch Brass	15-32x9/16x5/64	1000
6339	Toggle Ring Nut	15-32x⅝x1/16	1000

All parts are manufactured to American Thread Standards to a class 2A or 2B fit. B 18.2 (hex nuts), B 18.6 (machine screws), B 1.1 (thread specs.)

BIRNBACH ALL NYLON HEX NUTS

STANDARD PKG.: 100, 1000

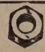
Cat. No.	Size	Cat. No.	Size
6585	2-56	6588	8-32
6586	4-40	6589	10-32
6587	6-32	6590	¼-20

BIRNBACH ALL-NYLON WASHERS

STANDARD PKG.: 100, 1000

Cat. No.	Fits Screw No.	O.D.	I.D.	Thickness
6592	2	¼″	3/32″	.016″
6593	4	¼″	⅛″	.016″
6594	6	5/16″	5/32″	.031″
6595	8	⅜″	.170″	.031″
6596	10	⅜″	.195″	.031″
6597	¼″	⅝″	9/32″	.063″

BIRNBACH HEXAGON STEEL MACHINE SCREW NUTS



Nickel Plated

Cat. No.	Thread Size	Width across Flats	Thickness	Std. Pkg
6330	2-56	3/16″	1/16″	1000
6331	3-48	3/16″	1/16″	1000
6332	4-36	1/4″	3/32″	1000
6333	4-40	1/4″	3/32″	1000
6448	6-32	1/4″	3/32″	1000
6449	6-32	5/16″	7/64″	1000
6334	8-32	1/4″	3/32″	1000
6450	8-32	5/16″	7/64″	1000
6335	10-32	3/8″	1/8″	1000
6336	¼-20	7/16″	3/16″	1000

BIRNBACH HEXAGON MACHINE SCREW NUTS

BRASS—NICKEL PLATED

Cat. No.	Thread Size	Width across Flats	Thickness	Std. Pkg.
6440	4-36	1/4″	3/32″	1000
6442	4-40	1/4″	3/32″	1000
6441	6-32	1/4″	5/64″	1000
6443	6-32	5/16″	7/64″	1000
6444	8-32	11/32″	1/8″	1000
6445	10-32	5/16″	7/64″	1000
6446	10-32	3/8″	1/8″	1000
6447	¼-20	7/16″	1/8″	1000

BIRNBACH BRASS NICKEL PLATED FLAT WASHERS

Cat. No.	Fits Screw No.	Hole Size	O.D.	Thickness	Std. Pkg.
6479	4	.118″	9/32″	.025″	1000
6480A	6	.145″	5/16″	.025″	1000
6480	6	.145″	3/8″	.025″	1000
6481	8	.172″	3/8″	.032″	1000
6482	10	.203″	7/16″	.036″	1000
6483	¼-20	.265″	9/16″	.040″	1000

BIRNBACH STEEL KANKLINK LOCKWASHERS

Cat. No.	Screw Size	O.D.	Thickness	Std. Pkg
6484	4	3/16″	1/32″	1000
6485	6	15/64″	1/32″	1000
6486	8	15/64″	.025″	1000
6487	10	5/16″	.050″	1000
6488	¼	7/16″	5/64″	1000

BIRNBACH SHAKEPROOF LOCKWASHERS

EXTERNAL TEETH

Cat. No.	Screw Size	Std. Pkg
6358	4	1000
6359	6	1000
6360	8	1000
6361	10	1000
6362	¼	1000
6363	⅜	1000

BIRNBACH SHAKEPROOF LOCKWASHERS

INTERNAL TEETH

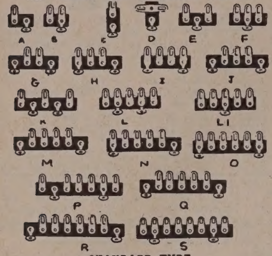
Cat. No.	Screw Size	Std. Pkg.
6355	2	1000
6356	3	1000
6357	4	1000
6490	6	1000
6491	8	1000
6492	10	1000
6493	¼	1000
6494	⅜	1000

6494-1 Narrow Rim Control Shaft Lockwasher 3/8″ 1000

6494-2 Narrow Rim Toggle Switch Lockwasher 15/32″ 1000

Birnbach TERMINAL STRIPS • LUGS • BUSHINGS SHAFT COUPLINGS • PANEL BEARINGS SPACERS • THREADED RODS

TIE DOWN LUG TERMINAL STRIPS



STANDARD TYPE

These lugs made of 1/16" (.062" thick) XP bakelite x ⅜" wide with cadmium plated brass lugs. Lugs are ⅜" centers with .140 diam. mounting holes. Strips illustrated are standard; special combinations on request.

Cat. No.	Illustration	Std. Pkg.	Cat. No.	Illustration	Std. Pkg.
1382	A	100	1385B	L	100
1382A	B	100	1385C	L1	100
1382B	C	100	1386	M	100
1382C	D	100	1386A	N	100
1383	E	100	1386B	O	100
1383A	F	100	1387	P	100
1384	G	100	1388	Q	100
1384A	H	100		5 Ter., 2 grds.	
1384B	I	100	1389	R	100
1385	J	100		6 Ter., 2 grds.	
1385K	K	100	1390	S	100

MINIATURE TYPE

These lugs made of 1/16" (.062" thick) XP bakelite x 5/16" wide. Brass, cadmium plated lugs are ¼" centers; .096 diam. mounting hole. Clearance for 3/32" rivet or No. 3 screw. Strips illustrated are standard; special combinations on request.

Cat. No.	Illustration	Std. Pkg.	Cat. No.	Illustration	Std. Pkg.
1352	A	100	1355A	K	100
1352A	B	100	1355B	L	100
1352B	C	100	1356	M	100
1352C	D	100	1356A	N	100
1353	E	100	1356B	O	100
1353A	F	100	1357	P	100
1354	G	100	1358	Q	100
1354A	H	100	1359	R	100
1354B	I	100	1360	S	100
1355	J	100			

BIRNBACH BRASS BUSHINGS & SPACERS

An ideal brass bushing for raising sub panels, chassis, condensers, transformers, etc. Hole will accommodate a No. 6 or No. 8 screw.

For No. 6 Cat. No.	Std. Pkg.	¼" O.D. Length	For No. 8 Cat. No.	Std. Pkg.
1125	100	¼"	1130	100
1126	100	⅜"	1131	100
1127	100	½"	1132	100
1128	100	¾"	1133	100
1129	100	1"	1134	100
		⅜" O.D.		
1135	100	¼"	1140	100
1136	100	⅜"	1141	100
1137	100	½"	1142	100
1138	100	¾"	1143	100
1139	100	1"	1144	100

THREADED BRASS SPACERS

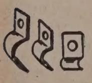
¼" O.D.

For No. 6-32 Cat. No.	Std. Pkg.	Length	For No. 8-32 Cat. No.	Std. Pkg.
1125T	100	¼"	1130T	100
1126T	100	⅜"	1131T	100
1127T	100	½"	1132T	100
1128T	100	¾"	1133T	100
1129T	100	1"	1134T	100

BIRNBACH INSULATED BUSHINGS AND SPACERS

For No. 6 Cat. No.	Std. Pkg.	¼" O.D. Length	For No. 8 Cat. No.	Std. Pkg.
1145	100	¼"	1149	100
1146	100	⅜"	1150	100
1147	100	½"	1151	100
1148	100	¾"	1152	100

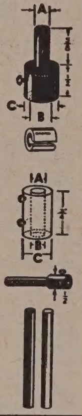
BIRNBACH CABLE CLAMPS



Cat. No.	To Fit Cable Up to	Lth.	Wth.	Mtg. Hole	Std. Pkg.
1153	3/32"	7/16"	⅜"	4	100
1154	5/32"	⅝"	⅜"	6	100
1155	¼"	11/16"	⅜"	6	100
1156	½"	15/16"	⅜"	8	100
1157	¾"	1⅛"	⅜"	10	100

SHAFT COUPLING REDUCERS AND EXTENDERS

By the use of these units all ¼" and ⅜" dia. shafts and knobs can be assembled together. The insulated units are for use where electrical isolation is desired. Furnished complete with set screws shown. Be sure to specify whether Brass or Insulated is desired.



SHAFT COUPLINGS

Cat. No. Br.	Cat. No. Insul.	Shaft A	Hole B	O.D. C	Std. Pkg.
534	634	¼"	¼"	½"	50
535	635	¼"	⅜"	9/16"	50
536	636	⅜"	¼"	½"	50
537	Reducer for ⅜" Dia. Hole to ¼" Dia. Hole			⅜"	50

COUPLINGS

Cat. No. Br.	Cat. No. Insul.	Shaft A	Hole B	O.D. C	Std. Pkg.
531	631	¼"	¼"	½"	50
532	632	¼"	⅜"	9/16"	50
533	633	⅜"	¼"	9/16"	50

EXTENDERS

Cat. No.	Over-all Lgth.	Shaft Lgth.	Hole I.D.	Shaft O.D.	Std. Pkg.
538 Brass	1¾"	1¼"	¼"	¼"	50
539 Insulated	1¾"	1¼"	¼"	¼"	50

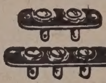
BRASS SHAFTING

Cat. No.			Std. Pkg.
540	¼" Dia.	6" Long	12
541	¼" Dia.	12" Long	12
542	⅜" Dia.	8" Long	12

FIBRE SHAFTING

Cat. No.			Std. Pkg.
543	¼" Dia.	6" Long	12
544	¼" Dia.	12" Long	12
545	⅜" Dia.	8" Long	12

BAKELITE TERMINAL STRIPS



Terminals are made of brass and cadmium plated. Terminals are mounted on 1/16" bakelite. 7, 8, 9 and 10 terminals are mounted on 3/32" bakelite. All terminals are space 7/16" center to center.

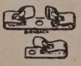
PLAIN

Cat. No.	Terminals	Mtg. Center
1372	2	1-5/16"
1373	3	1-¾"
1374	4	2-3/16"
1375	5	2-⅝"
1376	6	3-1/16"
1377	7	3-½"
1378	8	3-15/16"
1379	9	4-⅜"
1380	10	4-13/16"

MARKED

Cat. No.	Terminals Marked
1260	2; A-G
1261	2; Output
1262	2; Input
1263	3; 1-2-3
1264	4; 1-2-3-4
1265	5; 1-2-3-4-5
1266	6; 1-2-3-4-5-6

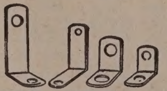
SPRING WIRE CLIPS



They will hold a wire up to No. 10 B&S Gauge in a secure contact. All clips are brass nickel plated.

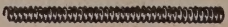
Cat. No.	Length	Width	Mtg. Hole	Std. Pkg.
32A—Spring Clip	¾"	5/16"	6	100
32 —Spring Clip	1"	⅜"	10	100
33 —Twin Clip	1¾"	⅜"	10	100

BRASS AND STEEL ANGLES



Cat. No.	Material	Size	Mtg. Holes	Std. Pkg.
1121	Brass N.P.	½"x ½"	169	100
1122	Brass N.P.	⅝"x ⅝"	169	100
1123	Steel H.T.	¾"x ¾"	144	100
1124	Steel H.T.	⅝"x1⅛"	169	100

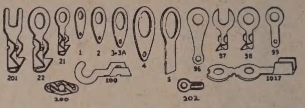
BIRNBACH THREADED RODS



These brass nickel plated threaded rods are standard parts of our insulator assemblies.

Cat. No.	Length	Thread	Std. Pkg.
16	4"	¼-20	100
17	5½"	¼-20	100
18	10"	¼-20	100
113	15"	¼-20	100
114	1⅜"	10-32	100
115	1⅝"	10-32	100
116	2¼"	10-32	100
117	8"	10-32	100
118	8"	8-32	100
119	8"	6-32	100
15	2"	6-32	100

BIRNBACH TINNED TERMINAL LUGS

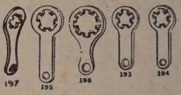


Cat. No.	Hole for Screw	Material	Thickness	Lgth.
1	6	Tinned Copper	.015"	17/32"
2	10	Tinned Copper	.016"	⅝"
3	.252	Tinned Copper	.015"	17/32"
3A	1/4	Tinned Copper	.015"	13/16"
4	3/8	Tinned Copper	.016"	⅞"
5	1/2	Hot Tin. Cop.	.024"	1-3/16"
21	10	Hot Tin. Cop.	.020"	3/16"
22	1/4	Hot Tin. Cop.	.025"	1-1/16"
200	8	Brass Hot Tin.	.015"	⅞"
201	8	Brass Hot Tin.	.020"	13/16"
202	6	Brass Hot Tin.	.020"	⅝"
96	6-8-10	Brass Hot Tin.	.020"	⅞"
97	8	Tinned Copper	.016"	⅝"
98	6-8-10	Brass Hot Tin.	.020"	11/16"
99	4-6-8	Brass Hot Tin.	.020"	11/16"
100	10	Brass Hot Tin.	.020"	⅞"
1017	10	N. Pl. Cop.	.023"	13/16"

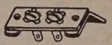
Standard Package — 1000

BIRNBACH LOCKING TYPE TERMINAL LUGS

Brass
Electro Plated



Cat. No.	Hole for Screw	Thickness	Length In.	Std. Pkg.
193	4	.020"	¾"	1000
194	6	.020"	¾"	1000
195	8	.020"	⅞"	1000
197	10	.020"	⅞"	1000
196	¼"	.020"	13/16"	1000



TERMINAL STRIPS 2 POST

Excellent mounting for twin lead transmission lines. Brass hot tinned lugs spaced 7/16" center to center. 1/16" bakelite. 1-15/16" mounting center.

Cat. No. T16.....................St. Pkge. 50

BIRNBACH 3 POST

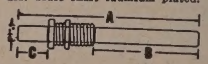
A synchronizing lock strip for RCA type television receivers.

Brass hot tinned lugs. Spaced 7/16" center to center. Mounting center 1¾". 1/16" bakelite.

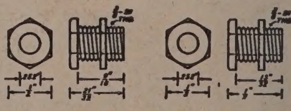
Ca. No. T16A.....................Std. Pkg. 50

BIRNBACH FRONT PANEL BEARINGS

Cadmium plated brass for panels up to ⅜" in thickness and for ¼" dia. shafts. The No. 551 and No. 552 are complete assemblies of the No. 550 and ¼" dia. brass shaft cadmium plated.



Cat. No.	A	B	C	Std. Pkg.
551	3"	1¾"	½"	50
552	6"	4¾"	½"	25

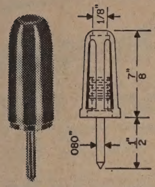


(Same as used on No. 551 and No. 552)

Cat. No.		Std. Pkg.
550	—Front Panel Bearing, threaded length 9/16"	50
550A	—Front Panel Bearing, threaded length 13/32"	50
550-B	—Front Panel Bearing, ⅜-32 threaded length 5/16"-11/16" O.L.	
550-C	—Front Panel Bearing— Miniature ¼-32 thd length 5/16, 3/8" O.L. .125 opening 11/32 hex.	

Birnbach PHONE TIPS, TIP JACKS TEST PRODS

NEW NYLON INSULATED PLUG



Molded of tough low-loss Nylon—provides high voltage insulation. Withstands extreme temperature changes without chipping or cracking. This series fits all standard Banana Jacks and standard Phone Tip Jacks.

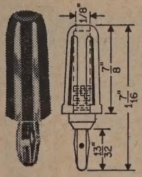
Nylon Solderless Short Tip Plug. Molded nylon handle, recessed metal head provides flush contact without metal exposure in any standard tip jack brass nickel plated plug. Solderless wire fits thru handle.

Cat. No.	Std. Pkg.
1169	100

Specify color as indicated above.

NYLON BANANA PLUG—MIDGET

Molded Nylon Handle Brass N.Pl. Wire can be soldered directly into stud. Fits all Standard Banana Jacks.



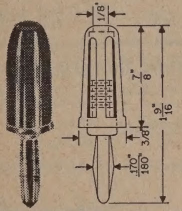
Cat. No.	Spring Material	Plating	Std. Pkg.
1172	Phospor Bronze	Nickel	100
1173	Phospor Bronze	Silver	100
1174	Berylium Copper	Nickel	100
1175	Berylium Copper	Silver	100

Specify color as indicated in Color Code at right.

Same as above with Solderless Scrulock Connection.

1164	Phosphor Bronze	Nickel	100
1165	Phosphor Bronze	Silver	100
1166	Berylium Copper	Nickel	100
1167	Berylium Copper	Silver	100

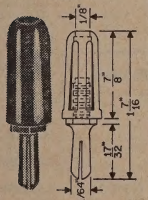
Specify color as indicated above.



Color Code For NYLON HANDLE PLUGS
Add to Catalog Numbers

—01 White	—08 Brown
—02 Red	—09 Lt. Green
—03 Black	—10 Dk. Blue
—04 Dk. Green	—11 Ivory
—05 Lt. Blue	—12 Violet (Purple)
—06 Orange	—13 Grey
—07 Yellow	

NYLON BANANA PLUG

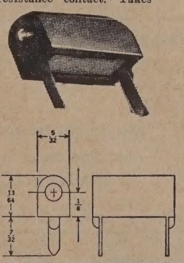


Molded Nylon handle, brass N.P. plug, split type with solderless scrulock connection.

Cat. No.	Std. Pkg.
1168	100

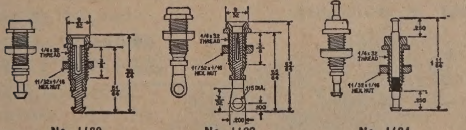
PRINTED CIRCUIT TEST JACKS

Designed for permanent, soldered assembly to printed circuit boards. Nylon bodies. Has gold over silver plated Berylium copper contacts which provide low resistance contact. Takes standard .080" diameter test probes. Colors: Red, Black, Green, Brown, Yellow, Blue, Purple, Grey.



Cat. No.		Std. Pkg.
1177	Printed Circuit Jack	25

ALL NYLON TIP JACKS

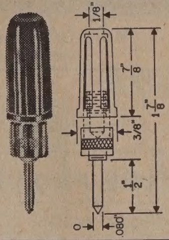


No. 1180 No. 1182 No. 1184

Completely Molded Nylon Jack. Fits all standard phone tip plugs. Contact recessed in head for safe contact. Hexagon head for grip in tightening. Mounts in 1/4" hole in panels up to 1/4" thick. Meets fololwing requirements:
1. Salt Spray Test—Withstands 100 hours. 2. Rated Voltage & Current—1000 volts peak at 5 amps. max. 3. Test Voltage—9000 volts DC peak. 4. Insulation Resistance—5000 megohms. 5. Operating Temperature —55 to +150C. 6. Nominal Capacity—2.0 mmf. 7. Material Specifications—A. Body: Nylon Grade FM 10001 A. Center Contact: Numbers 1180 and 1182 Heat Treated Beryllium Copper Silver plated per Spec. 72-53. Number 1184 Brass, Tin Pl.; Hex Nut: Brass Nickel Pl. 8. **Colors—Red, Black, Orange, Green, Blue, White, Brown, Yellow, Grey & Purple. Specify Color.**

No.	Type	Std. Pkg.
1180	Wrap Around	25
1182	Spade Terminal	25
1184	Feed Through	25

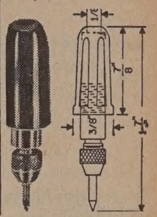
NYLON SOLDERLESS TIP PLUG



Molded Nylon handle, Brass N.Pl. Solderless plug. Wire fits thru body of tip and is wrapped around screw portion and then tightened. Fits all standard tip jacks.

Cat. No.	Std. Pkg.
1170	100

Specify color as indicated above.



PHONE NEEDLE TIP PLUG

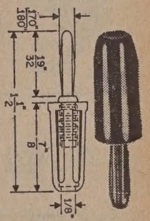
Molded Nylon Handle, Brass N.Pl. Plug. Has removable chuck for easy replacement of needles. Needle makes positive contact thru insulation or corrosion.

Cat. No.	Std. Pkg.
1171	100

Specify color as indicated above.

NYLON BANANA PLUG

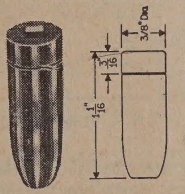
Molded Nylon handle, Brass N.Pl. plug. Springs Phosphor Bronze or Berylium Copper. Nickel or Silver plated. Wire can be soldered into plug or brass stud.



Cat. No.	Spring	Plating	Std. Pkg.
1160	Phos. Brz.	Nickel	100
1161	Phos. Brz.	Silver	100
1162	Beryl. Cop.	Nickel	100
1163	Beryl. Cop.	Silver	100

Specify color as indicated in color code above.

NYLON HANDLE JACK



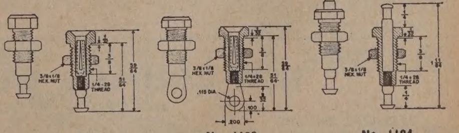
Made with our Nylon Tip Jack #1180 without mounting nut inside of threaded molded nylon insulated sleeve.

Cat. No.		Std. Pkg.
1179	Nylon Handle Jack	100

Specify color as indicated above.

NYLON TIP JACK WITH METAL SHELL

Made to Meet MS-16108 Spec.



No. 1190 No. 1192 No. 1194

Molded Nylon Tip Jack. Metal shell eliminates possibility of stripping threads during assembly. Meets following requirements: 1. Salt Spray Test—Withstands 100 hours. 2. Rated Voltage & Current—1000 volt peak @ 5 amps. maximum. 3. Test Voltage—2500 peak. 4. Insulation Resistance—5000 megohms. 5. Operating Conditions—A. Continuous: 23 hours on, 1 hour off; B. Elevation: Up to 15,000 feet; C. Temperature: —55 to +85 C; D. Humidity: Up to 95%.
6. Material Specifications—A. Insulator: Nylon, Grade FM 1001; B. Shell & Nut: Brass Nickel Plated Per Spec. 72-53; C. Lockwasher: Phosphor Bronze Nickel Plated Per Spec. 72-53; D. Center Contact. Numbers 1190 and 1192 Heat Treated Bery. Copper Silver Plated per Spec. 72-53. Number 1194 Brass, Tin Plated.
7. Non-Operating Conditions—A. Elevation: Up to 50,000 feet; B. Temperature: Continuous exposure for 72 hours @ +160 F and 240 hours @ —80 F; C. Humidity: Up to 100%.
8. **Colors—Red, Black, Orange, Green, Blue, White, Brown, Yelolw, Grey & Purple. Specify Color.**

No.	Type	Std. Pkg.
1190	Wrap Around	25
1192	Spade Terminal	25
1194	Feed Through	25

See Pages 1556-1559 for Birnbach Prices for Above Items

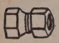
Birnbach MINIATURE

SHAFT ACCESSORIES • PLUG • JACKS • PHONE PLUGS
MIKE CONNECTORS • WIRE MEASURING OUTFIT

BIRNBACH

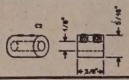
MINIATURE SHAFT ACCESSORIES

Brass Nickel plated for ⅛″ shafts.



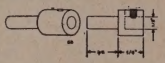
MINIATURE LOCK—WRENCH TYPE

Cat. No. 546A Std. Pkg. 25



MINIATURE SHAFT EXTENDER
with allen head set screws

Cat. No.	Std. Pkg.
538A	25



MINIATURE BRASS COUPLER
with allen head set screws

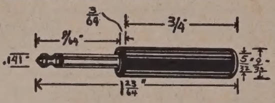
Cat. No.	Std. Pkg.
531A	25

MINIATURE PHONE PLUGS AND JACKS

MINIATURE PHONE PLUG

Insulated type, Solder terminals, two conductor mini. phone plug. Ideal for hearing aids, portable receivers, small instruments, etc. Rated 500 volts.

No.	Std. pkg.
130 Red or Black	50

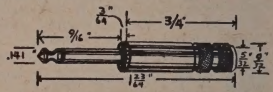


No. 130

SHIELDED MINIATURE PHONE PLUG

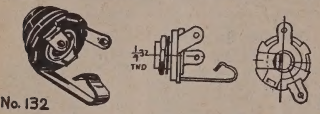
Same as No. 130 except with brass, bright nickel plated barrel with insulating tube inside.

No.	Std. pkg.
131	50



No. 131

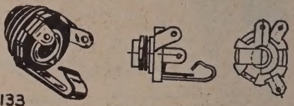
MINIATURE TELEPHONE TYPE JACK



No. 132

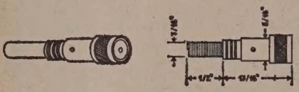
Rugged construction, smaller than standard type Jacks. Mount in ¼″ dia. hole in panels up to ⅛″ thick.

No.		Std. Pkg.
132	Open circuit type	50
133	Single closed circuit type	50



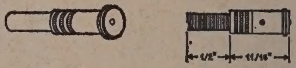
No. 133

MINIATURE MICROPHONE CONNECTOR



Single contact female.
No. 134 Miniature Female Conn. Std. Pkg. 50

Single Contact Male
No. 135 Miniature Male Conn. Std. Pkg. 50

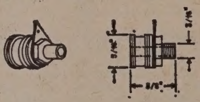


MINIATURE CHASSIS CONNECTOR

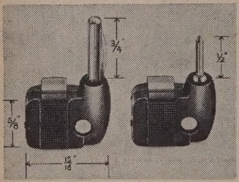
Single Contact Male

Complete with insulating washer and lug. Mounts in ¼″ hole. Mates with No. 134.

	Std. pkg.
No. 136 Miniature Chassis Conn.	50



PUSH BUTTON PHONE TIP PLUGS AND BANANA PLUGS



122 # 121

Description: Wire is fastened easily, speedily, and securely without soldering. Simply by pressing the push buttons the bare wire can be inserted into the opening of the plug.

Cat. No.		Std. Pkg.
121	Push Button Phone Tip Plug, Red and Black	100
122	Push Button Banana Plug, Red, Black, Yellow, White	100

No. 121 Phone Tip Plug will fit all Standard Phone Tip Jacks.

No. 122 Banana Plug will fit all Standard Banana Jacks.

NEW COMPLETE WIRE MEASURING OUTFIT

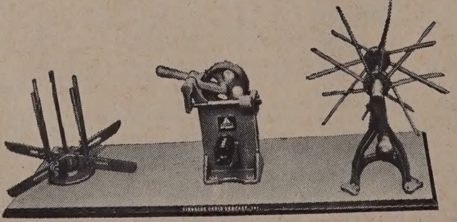
ACCURATE • COMPACT • NOISELESS

MEASURING MACHINE

Sturdy and compact construction. Has a precision quality built counter with large numbers for easy reading and will register wire up to .9,999 feet for direct accurate reading. Can be easily reset to zero position.

Wire passes through two rollers, the upper roller being self-adjusting and the tension of the upper roller can be set by a thumb screw to provide the proper grip for very fine as well as for heavy wire.

Two hardened lead bushings with an opening of ⅝″ diameter will guide the wire properly through the rollers. Bushings are removable to allow cables up to 1″ dia. to pass through. Will measure accurately all electric wires, cables, coaxial cables, rope, tape, etc.



Sold without baseboard.

PRICES

	MODEL	LIST	NET
COMPLETE WIRE MEASURING OUTFIT	7389	$235.00	$117.50
Separately:			
HOLDING REEL	7398-1M	31.00	15.50
MEASURING MACHINE	7398-2M	165.90	82.95
WIRE WINDER	7398-3M	43.00	21.50

WIRE WINDER

Has adjustable arms to be set to the desired coil size and the arms will open to a flat position for easy removal of the coil. Simply open thumb screw which holds the front collar tight on the shaft, push the collar in any direction to the desired position and tighten the thumb screw again.

HOLDING REEL

Compact, adjustable to size of coil and folding. Will hold spools or coils of wire.

Use Index Page 1 for Quick, Easy Location of ALL Products

See Pages 1556-1559 for Birnbach Prices for Above Items

Birnbach ASSORTMENT PAKS

"HANDYPAK" ASSORTMENTS *In Stock*

6 spools to a Handypak. Sell Them Individually or by the Box or Carton

THE NEW
BIRNBACH
"HANDYPAK"
IN STOCK

BIRNBACH "HANDYPAK"
WIRE · CABLE · JACKS · PLUGS

COMPLETE MERCHANDISING COUNTER-DISPLAY *Free* WITH EVERY 12 HANDYPAKS ORDERED

FOR STANDARD PACKAGE THE #155H COMPLETE KIT OF HANDYPAKS WILL CONSIST OF THE FOLLOWING:

1—203A ass't colors, 1—203H blue, 1—203H black, 1—204A ass't colors, 1—204H yellow, 1—204H red, 1—206A ass't colors, 1—206H 3 ea. red, blk, 1—205H, 1—207H, 1—208H, 1—209H.

Cat. #155H Complete Kit of Handypak	$45.00 ea.
Each Handypak (6 spools)	3.75
Each Spool	.65

PHONO WIRE • HOOK UP WIRE • DIAL CABLE • TEST LEAD WIRE

ASSORTED *"SPAGHETTI"* PAK

BIRNBACH
Assorted
"SPAGHETTI PAK"
BIRNBACH RADIO COMPANY, INC.

Each Pak contains 25—9" lengths of quality varnished tubing and sleeving of assorted sizes (from #18 to ⅜") and comes thru in a variety of bright colors.

Cat. No.		List
287	Pak of 25 lengths ea.	$ .49
288	Display box of 25 Paks #287 ea.	12.25

CHOOSE YOUR OWN ASSORTMENT OF HANDYPAKS TO FIT YOUR SPECIFIC NEEDS

Cat. No.	No. of Spools	PICK YOUR CHOICE OF ONE STOCK COLOR*
*203H	6	RED, BLACK, WHITE, GREEN, BLUE, YELLOW
*203A	6	Same as 203H, but contains one each of 6 stock colors
*204H	6	RED, BLACK, WHITE, GREEN, BLUE, YELLOW
*204A	6	Same as 204H, but contains one each of 6 stock colors
205H	6	PHONO PICKUP WIRE
*206H	6	RED, BLACK, WHITE, GREEN, BLUE, YELLOW
*206A	6	Same as 206H, but contains one each of 6 stock colors
207H	6	3 RED, 3 BLACK
208H	6	NYLON DIAL CORD
209H	6	BRONZE DIAL CABLE
212A	6	Contains 1 each: Cat. Nos. 205, 206, 207 Red, 207 Black, 208 and 209.

*Stock Colors: RED, BLACK, WHITE, GREEN, BLUE, YELLOW
*TRADE MARK APPLIED FOR

	Cat. No.	Spool	Size		Insulation	O.D.
*PLASTIC HOOK-UP WIRE	203	25-Ft.	#20 Stranded		Plastic	.075"
	203A	25-Ft.	#20 Stranded		Plastic	.075"
	204	25-Ft.	#20 Solid		Plastic	.069"
	204A	25-Ft.	#20 Solid		Plastic	.069"
PHONO WIRE	Cat. No.	Spool	Size	Insul.	Shield	O.D.
	205	10-Ft.	#24 Strd.	Plastic	Tinned Copper	.085"
*PUSHBACK HOOK-UP WIRE	Cat. No.	Spool	Size		Insulation	O.D.
	206	20-Ft.	#20 Solid		Cotton	.065"
	206A	20-Ft.	#20 Solid		Cotton	.065"
TEST LEAD WIRE	Cat. No.	Spool	Size			O.D.
	207	10-Ft.	#20 Stranded		Rubber	.137"
DIAL CABLE, CORD	Cat. No.	Spool	Type		Tensile Strength	O.D.
	208	15-Ft.	Nylon		25 Lb.	.040"
	209	10-Ft.	Bronze		60 lb.	.040"
SPECIAL ASSORTMENT	Cat. No.	Contains 6 spools, 1 each of				
	212A	#205, 206, 207 Red, 207 Black, 208. 209				

BIRFLON TEFLON* HOOK-UP WIRE LAB SPECIAL

EXTRUDED TEFLON*
HOOK-UP WIRE KITS
TYPE E 600 VOLT
HIGH TEMPERATURE RATING —90° TO +250°C
PER SPECIFICATION MIL-W-16878 B

TEFLON KIT TK-1
HIGH TEMPERATURE EXTRUDED WIRE
TEFLON KIT TK-1
HIGH TEMPERATURE EXTRUDED WIRE

TEFLON KIT TK-2
No. 30 thru No. 20 ASSORTMENT
HIGH TEMPERATURE EXTRUDED WIRE
TEFLON KIT TK-2
HIGH TEMPERATURE EXTRUDED WIRE

Because of Teflon's unique and outstanding properties; laboratory and industrial users will find these kits useful for experimental and prototype purposes. All sizes are available from stock. In addition, Teflon hook-up wire is available with shielding; nylon, glass braid or silicone; in multi-conductors; in stripe tracers. Your inquiries on specials will receive our immediate attention.

KIT #TK-1

Contains 6—50 foot spools #22 AWG stranded silver plated copper wire Type E extruded Teflon hook-up wire. One spool each color: white, black, red, green, yellow, blue.

KIT #TK-1 .... $49.50 net

KIT #TK-2

Contains 6—50 foot spools, one each size from #30 through #20 AWG Type E extruded Teflon insulated hook-up wire in assorted colors.

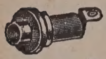
KIT #TK-2 .... $45.50 net

*"TEFLON" — DuPont trademark for "TETRAFLUOROETHYLENE RESIN"

See Pages 1556-1559 for Birnbach Prices for Above Items

CINCH-JONES SALES • DIVISION OF CINCH MANUFACTURING COMPANY

STAND-OFF TERMINALS

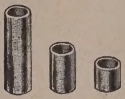


No. 16L

Insulated terminals for television and other high voltage electronic equipment. Provides excellent insulation for passing high voltage wires through chassis. Molded from mica-filled low loss bakelite. Available in two lengths: 9/32" or 13/32". Diameter of cylinder is .110. Mounts in 5/32" dia. hole.

No.	Length	List Price Ea.
16S	9/32"	$ .65
16L	13/32"	.65

METAL SPACER SLEEVES



Zinc plated cold rolled steel spacer sleeves. Six (6) popular sizes for spacing chassis, panels, etc. Illustrations are full size.

No.	Length	Outside Dia.	Inside Dia	Price
43A	3/16"	1/4"	3/16"	$.02
43B	1/4"	1/4"	3/16"	02
43C	3/8"	1/4"	3/16"	.02
43D	1/2"	1/4"	3/16"	.02
43E	3/4"	1/4"	3/16"	.03
43F	15/16"	1/4"	3/16"	.03

SCREEN TYPE PLUG BUTTON

For portable radios, transmitters, amplifiers, etc. Provides ventilation wherever required in radio, television and electronic equipment. Bright zinc plated steel button snaps in 1" diam. hole. Half size illustration.

No.	Description	List Price
41V	for 1" Hole	Ea. $ .19

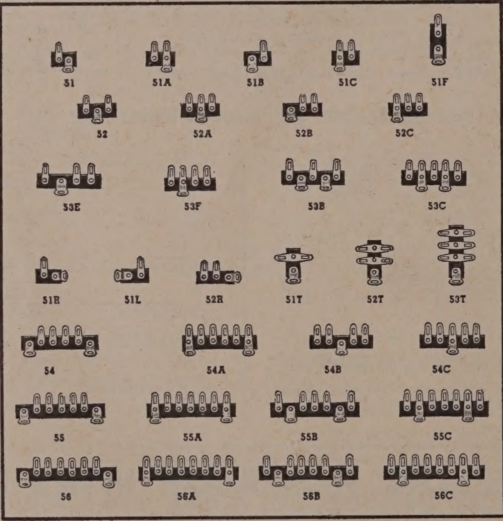
SCREW TYPE TERMINAL STRIPS

Ideal for chassis or breadboard layouts. Solder coated brass terminals. .136 diameter mounting holes. Strips with 1 to 6 lugs are of 1/16" bakelite; 7 to 10 terminals mounted on 3/32" bakelite. Ends of screws are captivated to prevent removal. Terminals are spaced on 7/16" centers.

No.	Lugs	Mounting Centers	List Price
17- 1	1	7/8"	Each $ .07
17- 2	2	1 5/16"	Each .10
17- 3	3	1 3/4"	Each .15
17- 4	4	2 3/16"	Each .20
17- 5	5	2 5/8"	Each .23
17- 6	6	3 1/16"	Each .28
17- 7	7	3 1/2"	Each .35
17- 8	8	3 15/16"	Each .39
17- 9	9	4 3/8"	Each .45
17-10	10	4 13/16"	Each .49

LUG TYPE TERMINAL STRIPS

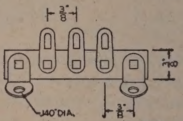
These bakelite strips are handy for neatly supporting resistors, condensers, etc., in circuit wiring. Solder coated steel lugs are spaced on 3/8" centers with .140 diameter mounting holes. Chocolate bakelite strips are 1/16" thick and 3/8" wide.



CONTACT STRIPS

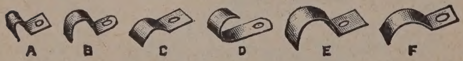
For connections which must be changed quickly and easily. Solder coated spring steel contacts spaced on 3/8" centers and mounted on 1/16" bakelite. Contacts are sized for 1/8" diameter tube pins such as Cinch No. 13C illustrated on page F-33.

No.	Contacts	Mounting Centers	List Price
49-1	1	3/4"	Ea. $ .07
49-2	2	1 1/8"	Ea. .10
49-3	3	1 1/2"	Ea. .13
49-4	4	1 7/8"	Ea. .16
49-5	5	2 1/4"	Ea. .20
49-6	6	2 5/8"	Ea. .23



No.	Mtg. Centers	List Price Each
51		$ .03
51A		.03
51B		.03
51C		.03
51R		.04
51L		.04
51F		.04
51T		.05
52		.04
52A		.04
52B		.04
52C		.04
52R		.06
52T		.06
53B	3/4"	.07
53C	3/4"	.07
53E		.04
53F		.04
53T		.10
54	1 7/8"	.07
54A	1 7/8"	.07
54B		.07
54C		.07
55	2 1/4"	.08
55A	2 1/4"	.08
55B	1 1/2"	.08
55C	1 1/2"	.08
56	2 5/8"	.17
56A	2 5/8"	.18
56B	1 7/8"	.17
56C	1 7/8"	.18

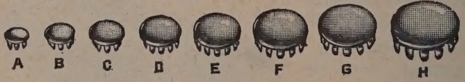
CABLE CLAMPS



Cadmium plated sturdy steel cable clamps designed for securing cables ranging from 1/16" diameter to 5/8" diameter. Illustrations are half size.

No.	Dia. of arc	Hole Dia.	Over-all Width	Over-all Length	Hole cent. to arc cent.	List Price Ea.
85A	1/8"	.149	11/32"	15/32"	1/4"	$ .04
85B	5/16"	.140	5/16"	23/32"	3/8"	.03
85C	5/16"	.144	3/8"	21/32"	3/8"	.03
85D	5/16"	.136	5/16"	27/32"	1/2"	.03
85E	1/2"	.147	1/2"	15/16"	7/16"	.03
85F	5/8"	.171	3/8"	1"	1/2"	.03

PLUG BUTTONS



Used to cover punched or drilled holes in metal, wood, fibre, tubes, plastic, cardboard, etc. Nickel plated steel plug buttons for eight popular size holes. Other sizes available, let us know your requirements. Spring tension prongs hold plug bottom firmly in position. Illustrations are 1/3 actual size.

No.	For hole Diameter	Cap Diameter	List Price Ea.
41A	1/4"	13/32"	$ .04
41B	3/8"	1/2"	.04
41C	1/2"	21/32"	.04
41D	5/8"	51/64"	.04
41E	3/4"	15/16"	.04
41F	7/8"	1 1/16"	.05
41G	1"	1 5/32"	.08
41H	1 1/4"	1 7/16"	.08

BARRIER TYPE TERMINAL STRIPS

Increased insulation is provided by having Barriers placed between each Terminal. These Barriers follow around the edge of the Strips and terminate at the base. They not only make a long leakage path but prevent direct shorts from frayed wires at the terminals. Mounting holes are at the ends as illustrated. The base is molded Bakelite. The Eyelets and Binder Screws are of brass, nickel plated. The ¾W or Y terminals are of brass, hot tin finish.

No. 140 TERMINAL STRIPS

5-40 x 3/16 Binder Head Screws. Metal to Metal Spacing over Bakelite ¼"

No. 2-140

No. 140

Code	List Price Each
1-140	$0.15
2-140	.24
3-140	.33
4-140	.42
5-140	.51
6-140	.59
7-140	.68
8-140	.77
9-140	.86
10-140	.95
11-140	1.03
12-140	1.12
13-140	1.21
14-140	1.31
15-140	1.40
16-140	1.49
17-140	1.57
18-140	1.66
19-140	1.75
20-140	1.84
21-140	1.93

No. 2-140-¾ W

No. 140-¾ W

Code	List Price Each
1-140-¾ W	$0.19
2-140-¾ W	.32
3-140-¾ W	.44
4-140-¾ W	.57
5-140-¾ W	.69
6-140-¾ W	.83
7-140-¾ W	.95
8-140-¾ W	1.08
9-140-¾ W	1.21
10-140-¾ W	1.33
11-140-¾ W	1.45
12-140-¾ W	1.58
13-140-¾ W	1.71
14-140-¾ W	1.84
15-140-¾ W	1.96
16-140-¾ W	2.09
17-140-¾ W	2.21
18-140-¾ W	2.34
19-140-¾ W	2.46
20-140-¾ W	2.60
21-140-¾ W	2.72

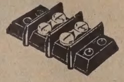
No. 2-140-Y

No. 140-Y

Code	List Price Each
1-140-Y	$0.19
2-140-Y	.32
3-140-Y	.44
4-140-Y	.57
5-140-Y	.69
6-140-Y	.83
7-140-Y	.95
8-140-Y	1.08
9-140-Y	1.21
10-140-Y	1.33
11-140-Y	1.45
12-140-Y	1.58
13-140-Y	1.71
14-140-Y	1.84
15-140-Y	1.96
16-140-Y	2.09
17-140-Y	2.21
18-140-Y	2.34
19-140-Y	2.46
20-140-Y	2.60
21-140-Y	2.72

No. 164 TERMINAL STRIPS

6-32 x ¼ Binder Head Screws. Metal to Metal Spacing over Bakelite ¼"



No. 2-164

No. 164

Code	List Price Each
1-164	$0.16
2-164	.26
3-164	.36
4-164	.46
5-164	.56
6-164	.65
7-164	.75
8-164	.85
9-164	.95
10-164	1.05
11-164	1.14
12-164	1.24
13-164	1.34
14-164	1.45
15-164	1.55
16-164	1.65
17-164	1.74
18-164	1.84
19-164	1.94
20-164	2.04
21-164	2.14

No. 2-164-¾-W

No. 164-¾ W

Code	List Price Each
1-164-¾ W	$0.20
2-164-¾ W	.34
3-164-¾ W	.47
4-164-¾ W	.61
5-164-¾ W	.74
6-164-¾ W	.89
7-164-¾ W	1.02
8-164-¾ W	1.16
9-164-¾ W	1.39
10-164-¾ W	1.43
11-164-¾ W	1.56
12-164-¾ W	1.70
13-164-¾ W	1.84
14-164-¾ W	1.98
15-164-¾ W	2.11
16-164-¾ W	2.25
17-164-¾ W	2.38
18-164-¾ W	2.52
19-164-¾ W	2.65
20-164-¾ W	2.80
21-164-¾ W	2.93

No. 2-164-Y

No. 164-Y

Code	List Price Each
1-164-Y	$0.20
2-164-Y	.34
3-164-Y	.47
4-164-Y	.61
5-164-Y	.74
6-164-Y	.89
7-164-Y	1.02
8-164-Y	1.16
9-164-Y	1.30
10-164-Y	1.43
11-164-Y	1.56
12-164-Y	1.70
13-164-Y	1.84
14-164-Y	1.98
15-164-Y	2.11
16-164-Y	2.25
17-164-Y	2.38
18-164-Y	2.52
19-164-Y	2.65
20-164-Y	2.80
21-164-Y	2.93

No. 141 TERMINAL STRIPS

6-32 x ¼ Binder Head Screws. Metal to Metal Spacing over Bakelite ⅜"

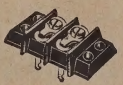
No. 2-141

No. 141

Code	List Price Each
1-141	$0.20
2-141	.31
3-141	.42
4-141	.54
5-141	.65
6-141	.75
7-141	.88
8-141	.99
9-141	1.10
10-141	1.22
11-141	1.33
12-141	1.44
13-141	1.56
14-141	1.67
15-141	1.78
16-141	1.90
17-141	2.01
18-141	2.12
19-141	2.24
20-141	2.35

No. 2-141-¾-W
No. 141-¾ W

Code	List Price Each
1-141-¾ W	$0.24
2-141-¾ W	.41
3-141-¾ W	.57
4-141-¾ W	.74
5-141-¾ W	.90
6-141-¾ W	1.07
7-141-¾ W	1.23
8-141-¾ W	1.40
9-141-¾ W	1.56
10-141-¾ W	1.73
11-141-¾ W	1.89
12-141-¾ W	2.06
13-141-¾ W	2.22
14-141-¾ W	2.39
15-141-¾ W	2.55
16-141-¾ W	2.72
17-141-¾ W	2.88
18-141-¾ W	3.05
19-141-¾ W	3.21
20-141-¾ W	3.38



No. 2-141-Y
No. 141-Y

Code	List Price Each
1-141-Y	$0.24
2-141-Y	.41
3-141-Y	.57
4-141-Y	.74
5-141-Y	.90
6-141-Y	1.07
7-141-Y	1.23
8-141-Y	1.40
9-141-Y	1.56
10-141-Y	1.73
11-141-Y	1.89
12-141-Y	2.06
13-141-Y	2.22
14-141-Y	2.39
15-141-Y	2.55
16-141-Y	2.72
17-141-Y	2.88
18-141-Y	3.05
19-141-Y	3.21
20-141-Y	3.38

No. 142 TERMINAL STRIPS

8-32 x 5/16" Binder Head Screws. Metal to Metal Spacing over Bakelite 9/16"

No. 2-142

No. 142

Code	List Price Each
1-142	$0.23
2-142	.36
3-142	.51
4-142	.65
5-142	.78
6-142	.92
7-142	1.07
8-142	1.20
9-142	1.34
10-142	1.49
11-142	1.62
12-142	1.76
13-142	1.90
14-142	2.04
15-142	2.18
16-142	2.32
17-142	2.45

No. 2-142-¾ W

No. 142-¾ W

Code	List Price Each
1-142-¾ W	$0.30
2-142-¾ W	.50
3-142-¾ W	.70
4-142-¾ W	.90
5-142-¾ W	1.11
6-142-¾ W	1.31
7-142-¾ W	1.52
8-142-¾ W	1.72
9-142-¾ W	1.93
10-142-¾ W	2.12
11-142-¾ W	2.33
12-142-¾ W	2.53
13-142-¾ W	2.74
14-142-¾ W	2.94
15-142-¾ W	3.15
16-142-¾ W	3.34
17-142-¾ W	3.54

No. 2-142-Y

No. 142-Y

Code	List Price Each
1-142-Y	$0.30
2-142-Y	.50
3-142-Y	.70
4-142-Y	.90
5-142-Y	1.11
6-142-Y	1.31
7-142-Y	1.52
8-142-Y	1.72
9-142-Y	1.93
10-142-Y	2.12
11-142-Y	2.33
12-142-Y	2.53
13-142-Y	2.74
14-142-Y	2.94
15-142-Y	3.15
16-142-Y	3.34
17-142-Y	3.54

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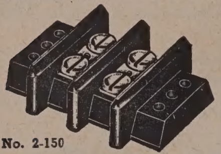
BARRIER TYPE TERMINAL STRIPS

No. 150 TERMINAL STRIPS



No. 2-150

1-13/16" wide by 25/32" high. Terminals are mounted on 11/16" centers. Screws: 10-32 x 5/16" brass, burnished nickel plate. Fits standard 50 Amp. solder lug for 6 Ga. stranded wire. Metal to metal spacing over bakelite 5/8".

Code	List Price Each	Code	List Price Each
1-150	$0.55	6-150	$2.48
2-150	.94	7-150	2.86
3-150	1.32	8-150	3.25
4-150	1.71	9-150	3.63
5-150	2.09	10-150	4.02

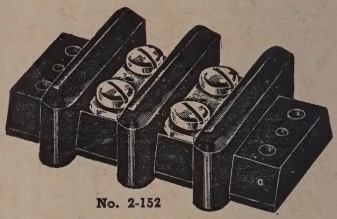
No. 151 TERMINAL STRIPS

No. 2-151

2" wide by 15/16" high. Terminals are mounted on 7/8" centers. Screws: 12-32 x 3/8" brass, burnished nickel plate. Fits standard 70 Amp. solder lug for 4 Ga stranded wire. Metal to metal spacing over bakelite 3/4".

Code	List Price Each	Code	List Price Each
1-151	$0.94	5-151	$4.02
2-151	1.71	6-151	4.79
3-151	2.48	7-151	5.56
4-151	3.25	8-151	6.33

No. 152 TERMINAL STRIPS

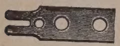


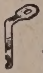
No. 2-152

2½" wide by 1⅛" high. Terminals are mounted on 1⅛" centers. Screws: ¼"-28 x ½" brass, burnished nickel plate. Fits standard 90 Amp. solder lug for 2 Ga. stranded wire. Metal to metal spacing over bakelite 1".

Code	List Price Each	Code	List Price Each
1-152	$1.27	4-152	$4.73
2-152	2.42	5-152	5.89
3-152	3.58	6-152	7.04

¾W Solder Terminal



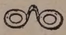


"Y" Solder Terminal

Code	Code	For Barrier Strip	List Price Each
¾W-140	Y-140	140	$.044
¾W-141	Y-141	141	.059
¾W-142	Y-142	142	.072

Code	For Barrier Strip	List Price Each
¾W-150	150	$.10
¾W-151	151	.18
¾W-152	152	.26

Jumpers

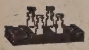


141-J

Code	For Barrier Strip	List Price Each
141-J	140	$.04
141-J	141	.04
95-B	142	.14

No. 170 TERMINAL STRIPS

Terminal .032" Brass, Tin Plated



No. 2-170

A heavy solder Terminal.

Insulation: Black molded Bakelite, 5/16" wide, ¼" thick. Terminals mounted on ⅜" centers. Mounting holes are ⅜" from center of ends Terminals.

Code	List Price Each	Code	List Price Each
No. 1-170	$0.26	No. 6-170	$0.59
No. 2-170	.33	No. 7-170	.64
No. 3-170	.38	No. 8-170	.70
No. 4-170	.45	No. 9-170	.78
No. 5-170	.53	No. 10-170	.83

No. 171 TERMINAL STRIPS

No. 6-171

A Miniature Barrier Terminal Strip with Single Screw Terminals. 13/32" wide by 5/16" overall height. Terminals are mounted on ¼" centers. 2-56 x ¼" Binder Head Screws. ⅛" Dia. Mtg. Holes.

Code	Contacts	List Price Each	Code	Contacts	List Price Each
2-171	2	$ .24	5-171	5	$0.51
3-171	3	.33	6-171	6	.60
4-171	4	.42	7-171	7	.69
			8-171	8	.78

No. 172 TERMINAL STRIPS

No. 6-172

Double Screw Terminals. ⅝" wide by 5/16" overall height. Terminals mounted on ¼" centers. 2-56 x 3/16". Binder Head Screws. ⅛" Dia. Mtg. Holes.

Code	Contacts	List Price Each	Code	Contacts	List Price Each
1-172	1	$0.41	8-172	8	$1.52
2-172	2	.57	9-172	9	1.68
3-172	3	.73	10-172	10	1.84
4-172	4	.89	11-172	11	2.01
5-172	5	1.05	12-172	12	2.17
6-172	6	1.20	13-172	13	2.32
7-172	7	1.36	14-172	14	2.48

No. 172-W and 172-¾W TERMINAL STRIPS

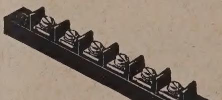
No. 3-172¾W

172-Y also available same price as 172-W.

Code	Code	Contacts	List Price Each
1-172-W	1-172-¾W	1	$0.45
2-172-W	2-172-¾W	2	.64
3-172-W	3-172-¾W	3	.84
4-172-W	4-172-¾W	4	1.04
5-172-W	5-172-¾W	5	1.24
6-172-W	6-172-¾W	6	1.44
7-172-W	7-172-¾W	7	1.64
8-172-W	8-172-¾W	8	1.84
9-172-W	9-172-¾W	9	2.04
10-172-W	10-172-¾W	10	2.24
11-172-W	11-172-¾W	11	2.44
12-172-W	12-172-¾W	12	2.64
13-172-W	13-172-¾W	13	2.84
14-172-W	14-172-¾W	14	3.04

No. 173 TERMINAL STRIPS

Single Screw Terminals, ⅜" wide by ½" overall height. Terminals mounted on ⅜" centers. 4-40 x 5/16" Sems Type Binder Head Screws. 5/32" Dia. Mtg. Holts.

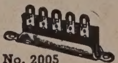


No. 6-173

Code	Contacts	List Price Each
2-173	2	$ .30
3-173	3	.42
4-173	4	.54
5-173	5	.66
6-173	6	.78
7-173	7	.90
8-173	8	1.02
9-173	9	1.14
10-173	10	1.26

No. 2000 TERMINAL STRIPS

Terminal .019" Brass, Tin Plated



No. 2005

Mounting hole—9/64"

Compact and sturdy junction terminal strip. Useful in assembling radio chassis, wiring, etc.

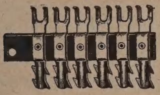
Insulation: Bakelite, Brackets: Steel, cadmium plated. Terminals spaced on 5/16" centers.

Code	Mounting Hole Centers	List Price Each	Code	Mounting Hole Centers	List Price Each
No. 2002	1"	$ .11	No. 2008	2⅞"	$ .20
No. 2003	1 5/16"	.12	No. 2009	3 3/16"	.22
No. 2004	1⅝"	.14	No. 2010	3½"	.23
No. 2005	1 15/16"	.15	No. 2011	3 13/16"	.25
No. 2006	2¼"	.17	No. 2012	4⅛"	.26
No. 2007	2 9/16"	.18	No. 2013	4 7/16"	.28

CINCH-JONES SALES • DIVISION OF CINCH MANUFACTURING COMPANY

FANNING STRIPS FOR CONNECTING TO BARRIER TERMINAL STRIPS

Jones Fanning Strip Terminals are of .032" Brass, Cadmium Plated. The Bakelite strips are furnished with a hole in either the right or left end for fastening the cable with a cable clamp or lacing twine. Simplifies cable or harness wiring, assuring positive connections. Makes replacement of units an easy matter and assures correct connections after servicing.



6-160-L

THE 160 SERIES

The following Fanning Strips fit the 140 Series Barrier Strips. Terminals are mounted on 3/32" Bakelite, ½" wide and on ⅜" centers.

The B type fits the 140 and 164 series. If desired add suffix B to Code No.

2-160-L	2-160-R	$0.14
3-160-L	3-160-R	.22
4-160-L	4-160-R	.28
5-160-L	5-160-R	.35
6-160-L	6-160-R	.43
7-160-L	7-160-R	.50
8-160-L	8-160-R	.56
9-160-L	9-160-R	.63
10-160-L	10-160-R	.70
11-160-L	11-160-R	.77
12-160-L	12-160-R	.84
13-160-L	13-160-R	.91
14-160-L	14-160-R	.98
15-160-L	15-160-R	1.06
16-160-L	16-160-R	1.11
17-160-L	17-160-R	1.19
18-160-L	18-160-R	1.28
19-160-L	19-160-R	1.33
20-160-L	20-160-R	1.41
21-160-L	21-160-R	1.46

6-161-L (Cable Clamp on Left)

THE 161 SERIES

The following Fanning Strips fit the 141 Series Barrier Strips. Terminals are mounted on 3/32" Bakelite, ⅝" wide and on 7/16" centers.

2-161-L	2-161-R	$0.15
3-161-L	3-161-R	.23
4-161-L	4-161-R	.29
5-161-L	5-161-R	.36
6-161-L	6-161-R	.44
7-161-L	7-161-R	.51
8-161-L	8-161-R	.57
9-161-L	9-161-R	.64
10-161-L	10-161-R	.72
11-161-L	11-161-R	.79
12-161-L	12-161-R	.85
13-161-L	13-161-R	.92
14-161-L	14-161-R	1.00
15-161-L	15-161-R	1.07
16-161-L	16-161-R	1.13
17-161-L	17-161-R	1.20
18-161-L	18-161-R	1.29
19-161-L	19-161-R	1.34
20-161-L	20-161-R	1.42

6-162-R (Cable Clamp on Right)

THE 162 SERIES

The following Fanning Strips fit the 142 Series Barrier Strips. Terminals are mounted on 3/32" Bakelite, ⅝" wide and on 9/16" centers.

2-162-L	2-162-R	$0.19
3-162-L	3-162-R	.25
4-162-L	4-162-R	.32
5-162-L	5-162-R	.39
6-162-L	6-162-R	.47
7-162-L	7-162-R	.53
8-162-L	8-162-R	.61
9-162-L	9-162-R	.67
10-162-L	10-162-R	.75
11-162-L	11-162-R	.81
12-162-L	12-162-R	.88
13-162-L	13-162-R	.95
14-162-L	14-162-R	1.03
15-162-L	15-162-R	1.09
16-162-L	16-162-R	1.17
17-162-L	17-162-R	1.22

CABLE CLAMPS

Cable Clamps are available for the Fanning Strips listed at the left and are furnished in 6 different sizes as listed below. Cable Clamp is of Brass Nickel Plated, with 6-32 round head Nickel Plated Brass Screws. For convenience the Cable Clamps are furnished unassembled.

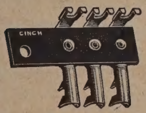
CABLE CLAMP SIZES AVAILABLE

No.	I.D.	List Price Ea.
CC-161- 4	¼"	$ .20
CC-161- 6	⅜"	.21
CC-161- 8	½"	.22
CC-161-10	⅝"	.23
CC-161-12	¾"	.24
CC-161-14	⅞"	.25

Be sure to give code number when ordering.

On small sizes Lacing Twine can be used for anchoring cable to the Fanning Strip instead of Cable Clamp.

ANGLE TYPE

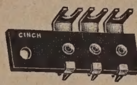


3-160-AL

THE 160A SERIES

The following Fanning Strips fit the 140 Series Barrier Strips.

Code	Code	List Price Each
2-160-AR	2-160-AL	$0.21
3-160-AR	3-160-AL	.32
4-160-AR	4-160-AL	.41
5-160-AR	5-160-AL	.52
6-160-AR	6-160-AL	.63
7-160-AR	7-160-AL	.73
8-160-AR	8-160-AL	.83
9-160-AR	9-160-AL	.92
10-160-AR	10-160-AL	1.03
11-160-AR	11-160-AL	1.13
12-160-AR	12-160-AL	1.23
13-160-AR	13-160-AL	1.34
14-160-AR	14-160-AL	1.44
15-160-AR	15-160-AL	1.55
16-160-AR	16-160-AL	1.64
17-160-AR	17-160-AL	1.75
18-160-AR	18-160-AL	1.87
19-160-AR	19-160-AL	1.96
20-160-AR	20-160-AL	2.07
21-160-AR	21-160-AL	2.16



3-160-BAL

THE 160BA SERIES

The following Fanning Strips fit the 164 Series Barrier Strips.

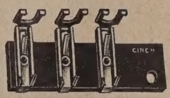
Code	Code	List Price Each
2-160-BAL	2-160-BAR	$0.21
3-160-BAL	3-160-BAR	.32
4-160-BAL	4-160-BAR	.41
5-160-BAL	5-160-BAR	.52
6-160-BAL	6-160-BAR	.63
7-160-BAL	7-160-BAR	.73
8-160-BAL	8-160-BAR	.83
9-160-BAL	9-160-BAR	.92
10-160-BAL	10-160-BAR	1.03
11-160-BAL	11-160-BAR	1.13
12-160-BAL	12-160-BAR	1.23
13-160-BAL	13-160-BAR	1.34
14-160-BAL	14-160-BAR	1.44
15-160-BAL	15-160-BAR	1.55
16-160-BAL	16-160-BAR	1.64
17-160-BAL	17-160-BAR	1.75
18-160-BAL	18-160-BAR	1.87
19-160-BAL	19-160-BAR	1.96
20-160-BAL	19-160-BAR	2.07
21-160-BAL	21-160-BAR	2.16

3-161-AR

THE 161A SERIES

The following Fanning Strips fit the 141 Series Barrier Strips.

Code	Code	List Price Each
2-161-AR	2-161-AL	$0.22
3-161-AR	3-161-AL	.33
4-161-AR	4-161-AL	.42
5-161-AR	5-161-AL	.53
6-161-AR	6-161-AL	.64
7-161-AR	7-161-AL	.74
8-161-AR	8-161-AL	.84
9-161-AR	9-161-AL	.94
10-161-AR	10-161-AL	1.05
11-161-AR	11-161-AL	1.16
12-161-AR	12-161-AL	1.24
13-161-AR	13-161-AL	1.35
14-161-AR	14-161-AL	1.46
15-161-AR	15-161-AL	1.56
16-161-AR	16-161-AL	1.66
17-161-AR	17-161-AL	1.76
18-161-AR	18-161-AL	1.88
19-161-AR	19-161-AL	1.97
20-161-AR	20-161-AL	2.08



3-162-AR

THE 162A SERIES

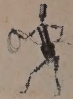
The following Fanning Strips fit the 142 Series Barrier Strips.

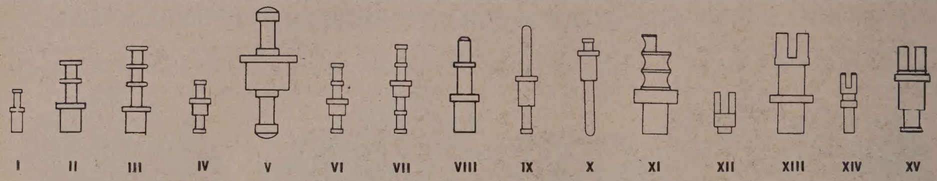
Code	Code	List Price Each
2-162-AL	2-162-AR	$0.25
3-162-AL	3-162-AR	.35
4-162-AL	4-162-AR	.45
5-162-AL	5-162-AR	.55
6-162-AL	6-162-AR	.67
7-162-AL	7-162-AR	.76
8-162-AL	8-162-AR	.87
9-162-AL	9-162-AR	.98
10-162-AL	10-162-AR	1.08
11-162-AL	11-162-AR	1.18
12-162-AL	12-162-AR	1.28
13-162-AL	13-162-AR	1.38
14-162-AL	14-162-AR	1.50
15-162-AL	15-162-AR	1.58
16-162-AL	16-162-AR	1.69
17-162-AL	17-162-AR	1.78

Minimum Billing $10.00

CAMBRIDGE THERMIONIC CORPORATION
CAMBION®
The guaranteed electronic components

SOLDER TERMINALS





MATERIAL: Brass. **FINISH:** Silver plate unless otherwise noted. Other platings available on special order.

TERMINALS — TURRET AND SPADE TYPE

Part No.	Fig.	Shank Dia.	Turret Dia.	Shoulder Dia.	Hole Dia. Hollow Type	Height Above Board	Height Below Board	Tooling	Board Thickness and Notes
1011	VIII	.090	3/32	1/8	—	19/64	—	HS-18 or PSA-4 and PSP-4	Chart I.
1013	VIII	.090	7/64	5/32	—	11/32	—	HS-25 or PSA-47 and PSP-4	Chart I.
1014	VIII	.090	7/64	5/32	—	15/32	—	HS-25 or PSA-47 and PSP-4	Chart I.
1030	IX	.072	3/64	3/32	—	1/4	1/8	HS-75 or PSA-61 and PSP-18	Chart I.
1031	X	.072	3/64	3/32	—	5/64	1/4	HS-76 or PSA-20 and PSP-18	Chart I.
1032	X	.062	3/64	5/64	—	5/64	9/64	HS-77 or PSA-62 and PSP-19	Chart I, except -5 -6.
1081	VII	.201	.144	1/4	—	11/32	5/16	HS-6 or PSP-38 and PSP-6	**-AA** 1/16, **-A** 1/8, -B 3/32, **-C** 3/16, **-D** 1/4.
1143	V	.181	3/32	1/4	—	1/4	7/32	HS-3 or PSA 3 and PSP-2	Chart II.
1245	I	.112	.145	3/16	—	15/64	—	HS-1 or PSA-1 and PSP-1	Chart II. Chamfer on upper edge of shoulder.
1457	I	.078	.075	1/8	—	3/16	—	HS-4 or PSA-46 and PSP-3	Chart II, except **-E -F.** Chamfer on upper edge of turret and shoulder.
1463	V	.116	.070	5/32	—	5/32	1/8	HS-5 or PSA-5 and PSP-5	Chart II, except **-E -F.** Like V except no turret bases.
1548	II	.112	.149	3/16	5/64	5/16	—	HS-1 or PSA-1 and PSP-1	Chart II.
1558	II	.090	3/32	1/8	—	7/32	—	HS-18 or PSA-4 and PSP-4	Chart II
1579	VII	.202	9/64	1/4	—	11/32	7/64	HS-6 or PSA-6 and PSP-6	Chart II, except **-F.**
1604	I	.062	1/16	3/32	—	3/32	—	HS-10 or PSA-11 and PSP-11	Chart II, except **-E -F**, plus **-AA** 1/64.
1724	II	.112	.145	3/16	—	23/64	—	HS-1 or PSA-1 and PSP-1	Chart II. Chamfer on upper edge of shoulder.
1797	I	.110	9/64	3/16	.067	3/16	—	HS-1 or PSA-51 and PSP-1	Chart II, except **-E -F.**
1798	II	.135	.110	3/16	.043	5/16	—	HS-7 or PSA-7 and PSP-7	**-A** 1/16, **-B** 3/32, **-C** 1/8, **-D** 3/16.
1979	XI	.112	.130	3/16	.060	5/16	—	HS-52 or PSA 53 and PSP-1	Chart II.
2000	VI	.090	1/16	1/8	—	7/32	7/64	HS-35 or PSA-30 and PSP-54	Chart II, except **-E -F.**
2004	VII	.090	1/16	1/8	—	7/32	3/16	HS-35 or PSA-30 and PSP-54	Chart II, except **-E -F.**
2027	I	.071	.096	1/8	.043	3/16	—	HS-23 or PS-19 and PSP-17	Chart II, except **-E -F.**
2034	II	.090	7/64	5/32	—	9/32	—	HS-25 or PSA-47 and PSP-4	Chart II.
2040	VII	.072	.050	3/32	—	3/16	11/64	HS-24 or PSA-20 and PSP-18	Chart II.
2041	I	.072	.050	3/32	—	7/64	—	HS-24 or PSA-20 and PSP-17	Chart II.
2042	IV	.072	.050	3/32	—	7/64	5/64	HS-24 or PSA-20 and PSP-18	Chart II.
2043	II	.072	.050	3/32	—	3/16	—	HS-24 or PSA-20 and PSP-17	Chart II.
2044	VI	.072	.050	3/32	—	3/16	5/64	HS-24 or PSA-20 and PSP-18	Chart II.
2080	III	.090	3/32	1/8	—	19/64	—	HS-18 or PSA-4 and PSP-4	Chart II, except **-F.**
2084	III	.112	.145	3/16	—	31/64	—	HS-1 or PSA-1 and PSP-1	Chart II. Chamfer on upper edge of shoulder.
2085	I	.047	.040	1/16	—	3/32	—	HS-33 or PSA-29 and PSP-29	Chart II, except **-E -F**, plus **-AA** 1/64.
2100	I	.062	1/16	3/32	.023	3/32	—	HS-10 or PSA-11 and PSP-11	Chart II, except **-D -E -F**, plus **-AA** 1/64.
2114	II	.145	.149	3/16	.064 max. .052 min.	5/16	—	HS-30 or PSA-26 and PSP-21	Chart II. For use with .061/in. taper pins. Takes pin from top of board. Finish copper plate and electro-tin.
2115	IV	.145	.118	3/16	.064 max. .052 min.	1/4	1/4	HS-31 or PSA-27 and PSP-27	Chart II. For use with .061/in. taper pins. Takes pin from top or bottom of board, or both. Finish copper plate and electro-tin.
2132	II	.145	.149	3/16	.064 max. .052 min.	33/64	—	HS-37 or PSA-33 and PSP-21	Chart II. For use with .061/in. taper pins. Takes pin from top or bottom of board, or both. Finish copper plate and electro-tin.
2186	I	.112	.118	5/32	.064 max. .052 min.	15/64	—	HS-40 or PSA-34 and PSP-1	Chart II. For use with .061/in. taper pins. Takes pin from top of board; taper not a through hole. Finish copper plate and electro-tin.
			Spade Width	Slot Width					
1010	XIII	.112	.146	.040	.078	5/16	—	HS-50 or PSA-45 and PSP-1	Chart I. Two slots at right angles.
1025	XIV	.112	.145	1/16	—	25/64	—	HS-69 or PSA-54 and PSP-1	Chart I. Chamfer on upper edge of shoulder.
1089	XIV	.047	.072	.025	.026	5/32	—	HS-71 or PSA-49,29 and 48	**-1** 1/64, **-2** 1/32, **- 3** 1/16, **-4** 3/32, **-5** 1/8, **-6** 3/16, **-7** 1/4.
1578	XIV	.150	.142	1/16	.081	3/8	—	HS-17 or PSA-9 and PSP-9	Chart II, except **-A -F.** Straight knurl on shank.
1782	XIV	.185	1/4	.090	.120	11/16	—	HS-8 or PSA-8 and PSP-8	Chart II, except **-A -B.** Straight knurl on shank. Chamfer on lower edge of spade and upper edge of shoulder.
1783	XIV	.135	7/32	1/16	.102	1/2	—	HS-13 or PSA-24 and PSP-13	Chart II, except **-A -E -F.** Straight knurl on shank. Chamfer on lower edge of spade and upper edge of shoulder.
1784	XIV	.112	5/32	1/32	.070	11/32	—	HS-14 or PSA-18 and PSP-4	Chart II, except **-A -E -F.** Straight knurl on shank. Chamfer on lower edge of spade and upper edge of shoulder.
1785	XII	.062	3/32	1/32	.043	5/32	—	HS-15 or PSA-12 and PSP-11	Chart II, plus **-AA** 1/64.
1969	XII	.112	3/16	.053	.079	21/64	—	HS-2 or PSA-2 and PSP-1	Chart II. Radial knurl on lower edge of shoulder.
2086	XV	.122	1/8	1/32	.047	5/32	—	HS-32 or PSA-28 and PSP-20	Chart II, except **-F.** Diameter turret below board 3/32.

CHART I

DASH NUMBER	BOARD THICKNESS
-1	1/32
-2	1/16
-3	3/32
-4	1/8
-5	3/16
-6	1/4

CHART II

DASH LETTER	BOARD THICKNESS
-A	1/32
-B	1/16
-C	3/32
-D	1/8
-E	3/16
-F	1/4

CAMBION TERMINAL-SWAGING TOOLS

HAND SWAGERS: For small-volume staking, Cambion Hand Swagers are recommended. These Hand Swagers are machined from fine tool steel, carefully tempered for long wear. They can be used manually or in a kick press, pneumatic press, or riveting machine. All tool diameters are 1/2". Hand Swager tooling is designated by the HS prefix.

PRESSURE SWAGERS: Cambion Pressure Swagers are specially designed for mounting Cambion terminals on terminal boards. These swagers are sturdy, precision-built, hand—operated, cam-action rolling tools. Designed for quick, solid, uniform swaging of solder terminals, Cambion Pressure Swagers are adjustable to a wide range of terminal board thicknesses by setting the anvil at the proper height. Terminals may be swaged in place as far as 1⅞ from the board edge. Pressure is adjustable and uniform, assuring good, even peening.

Pressure Swagers are furnished complete with one set of tooling. Refer to the terminal tables for proper PSA and PSP tooling for each type of Cambion terminal. When ordering, specify part number of terminal, as well as tool number. Additional interchangeable anvils and punches are available for Cambion Pressure Swagers.

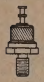
HOPPER STAKERS: For high-volume staking, involving thousands of terminals, Cambion Hopper Stakers are recommended. The Cambion Hopper Staker is a semiautomatic device for feeding and staking Cambion solder terminals at approximately 100 terminals per minute. For additional information, consult the Factory.

CAMBRIDGE THERMIONIC CORPORATION

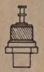
CAMBION®

The guaranteed electronic components

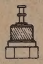
INSULATED TERMINALS
AND FEED-THRUS



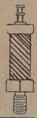
I-a
STUD
TYPE



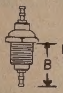
I-b
RIVET
TYPE



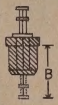
I-c
THREADED
TYPE



II
Also available in b and c types (see Fig. I)



III
FEED-THRU



IV
PRESS-MOUNT
TYPE

Material: Mounting stud — brass, with cadmium plate unless otherwise noted. Terminal—brass, with silver plate unless otherwise noted.

Part No.	Fig.	Height Above Board	Turret Dia. or Spade Width	No. Turrets or Slot Width	Base Dia.	Rivet Dia. or Thread Size	Stud-Length, Rivet Length or Tap Depth	Voltage Breakdown at 60 cy. AC	Recomm. Panel Thickness	Notes
1580*	I-b	9/16	3/32	2	5/16 hex	.187	Chart I	4,000 RMS		Tooling HS-11 or PSA-13 and PSP-12.
1581*	I-a	9/16	3/32	2	5/16 hex	6-32	1/4	4,000 RMS		
1581-3*	I-a	9/16	3/32	2	5/16 hex	6-32	3/8	4,000 RMS		
1719*	I-a	1 1/16	3/32	2	5/16 hex	6-32	1/4	11,000 RMS		
1719-3*	I-a	1 1/16	3/32	2	5/16 hex	6-32	3/8	11,000 RMS		
1795-A*	III	3/8	.052	2 ea. end	3/8 hex.	1/4-28	1/4	2,800 RMS		Mounting hardware supplied. B height 5/8 Stud nickel plated.
1795-B*	III	5/16	.052	2 ea. end	3/8 hex.	1/4-28	1/4	2,800 RMS		Mounting hardware supplied. B height 9/16. Stud nickel plated.
1942-F4†	I-c	19/32	3/32	2	5/16 hex	4-40	1/8	4,000 RMS		
1942-F6†	I-c	19/32	3/32	2	5/16 hex	6-32	1/8	4,000 RMS		
1942-X†	I-a	17/32	3/32	2	5/16 hex	6-32	1/4	4,000 RMS		
1942-X3†	I-a	17/32	3/32	2	5/16 hex	6-32	3/8	4,000 RMS		
1942-Y†	I-b	17/32	3/32	2	5/16 hex	.187	Chart I	4,000 RMS		Tooling HS-22, PSA-18 and PSP-12
1945‡	I-a	37/64	3/32	2	5/16 hex	6-32	Chart IV			Terminal tin-lead solder plate.
1946‡	I-b	37/64	3/32	2	5/16 hex	.187	Chart V			Terminal tin-lead solder plate,PSA-67, PSP-12.
1980-XA†	I-a	3/8	3/32	1	3/16 hex	3-48	Chart II	2,500 RMS		
1980-XB†	I-a	7/16	3/32	1	3/16 hex	3-48	Chart II	4,000 RMS		
1980-XC†	I-a	1/2	3/32	1	3/16 hex	3-48	Chart II	5,000 RMS		
1980-YA†	I-b	3/8	3/32	1	3/16 hex	.141	Chart I	2,500 RMS		Tooling SS-1
1980-YB†	I-b	7/16	3/32	1	3/16 hex	.141	Chart I	4,000 RMS		
1980-YC†	I-b	1/2	3/32	1	3/16 hex	.141	Chart I	5,000 RMS		
1990†	III	3/8	1/16	2 ea. end	3/8 hex	1/4-28	1/4	2,500 RMS		Mounting hardware supplied. B height 3/4. Stud nickel plated.
1995-A†	I-a	35/64	.145	1	5/16 hex	6-32	1/4	4,000 RMS		
1995-B†	I-a	35/64	.145	1	5/16 hex	6-32	3/8	4,000 RMS		Stud nickel plated.
1995-C†	I-a	43/64	.145	2	5/16 hex	6-32	1/4	4,000 RMS		
1995-D†	I-a	43/64	.145	2	5/16 hex	6-32	3/8	4,000 RMS		
2045-F4†	I-c	39/64	3/32	2	1/4 hex	4-40	1/8	2,500 RMS		
2045-F6†	I-c	39/64	3/32	2	1/4 hex	6-32	1/8	2,500 RMS		
2045-X†	I-a	17/32	3/32	2	1/4 hex	4-40	1/4	2,500 RMS		
2045-X3†	I-a	17/32	3/32	2	1/4 hex	4-40	3/8	2,500 RMS		
2045-Y†	I-b	17/32	3/32	2	1/4 hex	.141	Chart I	2,500 RMS		Tooling SS-2
2128-F3†	II-c	35/64	3/32	1	3/16 hex	3-48	1/8	3,300 RMS		Terminal silver plate and gold flash; stud nickel plate.
2128-X†	II-a	29/64	3/32	1	3/16 hex	3-48	1/4	3,300 RMS		Terminal silver plate and gold flash; stud nickel plate.
2128-Y†	II-b	29/64	3/32	1	.211	.141	Chart I	3,300 RMS		Tooling SS-3. Terminal silver plate and gold flash. Stud nickel plate.
2220-F4†	II c	1 1/32	3/32	2	5/16 hex	4-40	1/8	11,000 RMS		
2220-F6†	II c	1 1/32	3/32	2	5/16 hex	6-32	1/8	11,000 RMS		
2220-X†	II a	31/32	3/32	2	5/16 hex	6-32	1/4	11,000 RMS		
2220-X3†	II a	31/32	3/32	2	5/16 hex	6-32	3/8	11.000 RMS		
2220-Y†	II b	31/32	3/32	2	.355	.187	Chart I	11,000 RMS		Tooling HS-38.
2255†	II a	13/32	5/64	1	1/8 hex	2-56	Chart III	2,000 RMS		Terminal silver plate and gold flash. Stud nickel plate.
4115-1‡	IV	19/64	3/32	2	1/4	.205	7/32		1/16 to 1/8	Terminal tin-lead solder plate.
4114-1‡.	IV	19/64	.096	2	1/4	.205	7/32		1/16 to 1/8	Terminal tin-lead solder plate. .043 through-hole.
4113-1‡	IV	13/64	.096	1	1/4	.205	7/32		1/16 to 1/8	Terminal tin-lead solder plate. .043 through-hole.
4263-1‡	IV	19/64	3/32	2 ea. end	1/4	.205	7/32		1/16 to 1/8	Terminal tin-lead solder plate. .070 turret dia. below. B height 13/32.
4025-1‡	IV	1/4	5/64	2	11/64	.136	7/64		1/32 to 3/32	Tooling 2664.
4025-2‡	IV	19/64	5/64	2	11/64	.136	7/64		1/32 to 3/32	Tooling 2664.
4025-3‡	IV	1/4	5/64	2	11/64	.136	1/8		1/32 to 3/32	Tooling 2664.
4025-4‡	IV	19/64	5/64	2	11/64	.136	1/8		1/32 to 3/32	Tooling 2664.
4026-1‡	IV	1/4	5/64	2	11/64	.136	11/64		1/32 to 1/8	Tooling 2664.
4026-2‡	IV	19/64	5/64	2	11/64	.136	11/64		1/32 to 1/8	Tooling 2664.
4026-3‡	IV	1/4	5/64	2	11/64	.136	1/4		1/32 to 5/16	Tooling 2664.
4026-4‡	IV	19/64	5/64	2	11/64	.136	1/4		1/32 to 5/16	Tooling 2664.
4027-2‡	IV	19/64	5/64	2	11/64	.136	1/8		1/32 to 3/32	Tooling 2664.
4028-2‡	IV	11/32	5/64	2	11/64	.136	1/8		1/32 to 3/32	Tooling 2664.

* Insulator Material, Phenolic

† Insulator Material, Ceramic

‡ When ordering add suffix—0519 to Part Number. 0519 indicates electro tin lead plate and white teflon insulation.

CHART I
RIVET LENGTH AND PART NO. SUFFIX
.062
.094
.105
.125
.156

CHART II
STUD LENGTH AND PART NO. SUFFIX
.094
.125
.156
.250

CHART III	
DASH NO.	STUD LENGTH
-1	.125
-2	.188
-3	.250

CHART IV	
DASH NO.	STUD LENGTH
-1	1/4
-2	3/8

CHART V	
DASH NO.	RIVET LENGTH
-1	.062
-2	.094
-3	.105
-4	.125
-5	.156

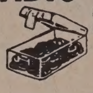
CHART VI	
DASH NO.	THREAD SIZE
-1	4-40
-2	6-32

CAMBRIDGE THERMIONIC CORPORATION CAMBRIDGE 38, MASSACHUSETTS

(Use Index Page 1 for Quick, Easy Location of ALL Products)

GC ELECTRONICS

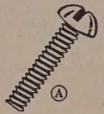
RADIO AND TV HARDWARE

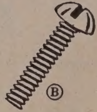


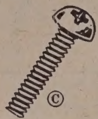
HINGED COVER
PLASTIC BOXES
—50 LINE—
List Price 60c
Per Box

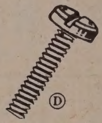
BOXES OF 100
Standard Carton
10 Boxes of 100

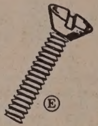
BULK
HARDWARE
Box of 1000

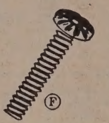


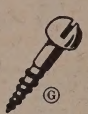


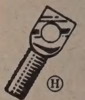












(A) G-C ROUND HEAD MACHINE SCREWS STEEL — NICKEL PLATED

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	List Per 100	Part No.	List Per M
Assorted Screws	H1000-F	35				
Assorted Screws & Nuts	H1001-F	40				
Assorted No. 2 & 4 Screws & Nuts	H1002-F	35				
Assorted 4-36 Screws	H1010-F	40				
Assorted 6-32 Screws	H1012-F	40				
Assorted 8-32 Screws	H1016-F	40				
Assorted 10-32 Screws	H1018-F	25				
2-56 x ¼″	H1022-F	40	7130-C	$ .74	7130-M	$5.88
2-56 x ½″	H1024-F	40	7131-C	.80	7131-M	6.42
2-56 x ¾″	H1026-F	40	7132-C	.92	7132-M	7.38
3-48 x ¾″	H1028-F	40	7124-C	.97	7124-M	7.74
4-36 x ¼″	H1032-F	40	6005-IC	.81	6005-M	6.44
4-36 x ⅜″	H1033-F	35	7138-C	.88	7138-M	6.60
4-36 x ½″	H1034-F	35	6006-C	.87	6006-M	6.96
4-36 x ⅝″			5651-C	.95	5651-M	7.56
4-36 x ¾″	H1036-F	35	6007-C	1.01	6007-M	8.10
4-40 x ¼″	H1042-F	40	6005-AC	.81	6005-AM	6.44
4-40 x ½″	H1044-F	35	6005-BC	.88	6005-BM	7.02
4-40 x ⅝″			5652-C	.95	5652-M	7.56
4-40 x ¾″	H1046-F	35	6005-CC	1.01	6005-CM	8.10
6-32 x ¼″	H1062-F	40	6008-C	.89	6008-M	7.08
6-32 x ½″	H1064-F	30	6009-C	1.03	6009-M	8.22
6-32 x ⅝″			5653-C	1.13	5653-M	9.00
6-32 x ¾″	H1066-F	30	6010-C	1.21	6010-M	9.66
6-32 x 1″	H1068-F	30	6011-C	1.39	6011-M	11.10
6-32 x 1¼″	H1070-F	30	7141-C	1.67	7141-M	13.32
6-32 x 2″	H1076-F	20	7148-C	2.51	7148-M	20.10
8-32 x ¼″	H1082-F	30	6013-C	1.16	6013-M	9.24
8-32 x ⅜″	H1083-F	25	6014-C	1.25	6014-M	9.96
8-32 x ½″	H1084-F	25	6015-C	1.35	6015-M	10.80
8-32 x ⅝″			5654-C	1.45	5654-M	11.58
8-32 x ¾″	H1086-F	25	6016-C	1.55	6016-M	12.36
8-32 x 1″	H1088-F	20	6017-C	1.77	6017-M	14.16
8-32 x 1¼″	H1090-F	20	7142-C	2.06	7142-M	16.44
10-32 x ½″	H1104-F	20	6020-C	1.59	6020-M	12.72
10-32 x ⅝″			5655-C	1.73	5655-M	13.86
10-32 x ¾″	H1106-F	20	6021-C	1.86	6021-M	14.88
10-32 x 1″	H1108-F	17	6022-C	2.09	6022-M	16.74
10-32 x 1½″	H1112-F	15	7143-C	2.75	7143-M	22.02

(B) G-C ROUND HEAD MACHINE SCREWS BRASS — NOT PLATED

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	List Per 100	Part No.	List Per M
Assorted	H1210-F	30				
2-56 x ¼″			5657-C	1.11	5657-M	$ 8.85
2-56 x ½″			5658-C	1.34	5658-M	10.70
2-56 x ⅝″			5659-C	1.45	5659-M	11.60
2-56 x ¾″			5660-C	1.56	5660-M	12.50
3-48 x ¾″			5661-C	1.74	5661-M	13.90
4-36 x ¼″			5662-C	1.34	5662-M	10.75
4-36 x ½″			5663-C	1.69	5663-M	13.50
4-36 x ⅝″			5664-C	1.84	5664-M	14.70
4-36 x ¾″			5665-C	1.99	5665-M	15.90
4-40 x ¼″			5666-C	1.34	5666-M	10.75
4-40 x ½″			5667-C	1.69	5667-M	13.50
4-40 x ⅝″			5668-C	1.84	5668-M	14.70
4-40 x ¾″			5669-C	1.99	5669-M	15.90
6-32 x ¼″			8501-C	1.80	8501-M	14.40
6-32 x ⅜″			5670-C	1.92	5670-M	15.35
6-32 x ½″			8502-C	2.16	8502-M	17.30
6-32 x ⅝″			5671-C	2.39	5671-M	19.10
6-32 x ¾″			8503-C	2.64	8503-M	21.10
6-32 x 1″			8504-C	3.13	8504-M	25.00
6-32 x 1¼″			5672-C	3.65	5672-M	29.20
6-32 x 2″			5673-C	6.13	5673-M	49.00
8-32 x ¼″			8505-C	2.66	8505-M	21.30
8-32 x ⅜″			5674-C	2.80	5674-M	22.40
8-32 x ½″			8506-C	3.20	8506-M	25.60
8-32 x ⅝″			5675-C	3.53	5675-M	28.20
8-32 x ¾″			8507-C	3.91	8507-M	31.25
8-32 x 1″			8508-C	4.66	8508-M	37.25
8-32 x 1¼″			5676-C	5.47	5676-M	43.75
10-32 x ½″			5677-C	4.06	5677-M	32.50
10-32 x ⅝″			5678-C	4.51	5678-M	36.10
10-32 x ¾″			5679-C	4.91	5679-M	39.25
10-32 x 1″			5680-C	5.85	5680-M	46.80
10-32 x 1½″			5681-C	8.00	5681-M	64.00

(C) G-C PHILLIPS TYPE ROUND HEAD MACHINE SCREWS STEEL — NICKEL PLATED

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	List Per 100	Part No.	List Per M
Assorted	H1180-F	25				
6-32 x ¼″			8511-C	1.97	85-11M	$15.78
6-32 x ½″			8512-C	1.78	8512-M	14.22
6-32 x ⅝″			5689-C	1.91	5689-M	15.30
6-32 x ¾″			8513-C	2.03	8513-M	16.26
6-32 x 1″			8514-C	2.27	8514-M	18.12
8-32 x 5⁄16″			8515-C	1.73	8515-M	13.86
8-32 x ½″			8516-C	1.91	8516-M	15.30
8-32 x ⅝″			5690-C	2.06	5690-M	16.50
8-32 x ¾″			8517-C	2.22	8517-M	17.76
8-32 x 1″			8518-C	2.55	8518-M	20.40

(D) G-C BINDING HEAD MACHINE SCREWS STEEL — NICKEL PLATED

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	List Per 100	Part No.	List Per M
Assorted	H1168-F	35				
5-36 x ¼″	H1170-F	35	7154-C	.88	7154-M	$ 7.00
6-32 x 3⁄16″			7151-C	.88	7151-M	7.00
6-32 x ¼″	H1172-F	35	7152-C	.88	7152-M	7.06
6-32 x ⅜″			7153-C	.94	7153-M	7.50
7-32 x ⅜″	H1174-F	30	7155-C	2.60	7155-M	20.81
8-32 x 5⁄16″			7158-C	1.20	7158-M	9.56

(E) G-C OVAL HEAD RACK AND CABINET SCREWS STEEL — NICKEL PLATED

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	List Per 100	Part No.	List Per M
Assorted Screws and Washers	H1005-F	15				
6-32 x ½″			6540-C	1.03	6540-M	$ 8.22
6-32 x ⅝″			5691-C	1.13	5691-M	9.00
6-32 x ¾″			6541-C	1.21	6541-M	9.66
8-32 x ⅝″			5692-C	1.45	5692-M	11.58
8-32 x ¾″			6542-C	1.55	6542-M	12.36
10-32 x ½″			8848-C	1.58	8848-M	12.66
10-32 x ⅝″			5693-C	1.73	5693-M	13.86
10-32 x ¾″			6543-C	1.86	6543-M	14.88

(F) G-C ORNAMENTAL HEAD SCREWS STEEL — BRONZE PLATED

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	List Per 100	Part No.	List Per M
Assorted	H1250-F	20				
6-32 x ¾″	H1252-F	25	1097-C	2.14	1097-M	$17.10
6-32 x 1″	H1253-F	20	1098-C	2.34	1098-M	18.80
8-32 x 1¼″	H1255-F	12	1099-C	3.20	1099-M	25.50

(G) G-C WOOD SCREWS ROUND HEAD — STEEL — NICKEL PLATED

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	List Per 100	Part No.	List Per M
Assorted	H1502-F	25				
No. 4 x ½″			6114-C	1.30	6114-M	$10.40
No. 4 x ⅝″			5694-C	1.41	5694-M	11.25
No. 4 x ¾″			6115-C	1.50	6115-M	12.00
No. 6 x ¾″			6116-C	1.61	6116-M	12.90
No. 6 x 1″			6117-C	1.99	6117-M	15.95
No. 8 x ¾″			6118-C	1.91	6118-M	15.25
No. 8 x 1¼″			8071-C	2.64	8071-M	21.15
No. 10 x 1½″			8073-C	3.53	8073-M	28.25
No. 12 x 1½″			8075-C	4.50	8075-M	36.00
No. 14 x 1¾″			8076-C	6.34	8076-M	50.75

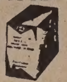
(H) G-C SPADE BOLTS OR MOUNTING SCREWS STEEL — NICKEL PLATED

A	B No.	C	D	E	50-Line Part No.	Quan. In Box	Part No.	List Per 100	Part No.	List Per M
Assorted					H1570-F	15				
6-32	6	9⁄32″	11⁄16″	9⁄16″			6081-C	1.91	6081-M	$15.25
6-32	6	13⁄32″	⅞″	11⁄16″			6082-C	2.59	6082-M	20.75
8-32	8	7⁄16″	15⁄32″	15⁄16″			6084-C	4.88	6084-M	39.00

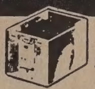
GC RADIO AND TV HARDWARE

ELECTRONICS

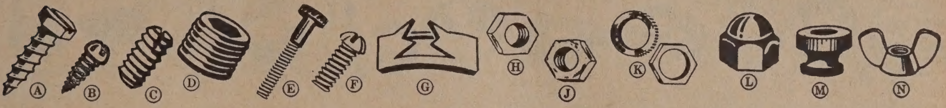
HINGED COVER
PLASTIC BOXES
—50 LINE—
List Price 60c
Per Box



BOXES OF 100
Standard Carton
10 Boxes of 100



BULK
HARDWARE
Box of 1000



(A) G-C SHEET METAL SCREWS HEX HEAD — SLOTTED — SELF-TAPPING — NICKEL PLATED POINTED TYPE "A"

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	List Per 100	Part No.	List Per M
Asstd.	H1300-F	25				
Asstd. No. 4 & 6						
Asstd. No. 8 & 10						
No. 4 x ½"	H1350-F	35	6090-C	$1.25	6090-M	$10.00
No. 6 x ¼"	H1362-F	30	6091-C	1.43	6091-M	11.40
No. 6 x ⅜"	H1363-F	25	6092-C	1.45	6092-M	11.60
No. 6 x ½"	H1364-F	25	6093-C	1.53	6093-M	12.20
No. 6 x ⅝"			5695-C	1.58	5695-M	12.60
No. 6 x ¾"	H1366-F	20	6094-C	1.66	6094-M	13.25
No. 8 x ¼"						
No. 8 x ⅝"	H1382-F	20	8102-C	1.68	8102-M	13.40
No. 8 x ⅜"	H1383-F	20	6095-C	1.74	6095-M	13.90
No. 8 x ½"	H1384-F	20	6096-C	1.80	6096-M	14.40
			5696-C	1.83	5696-M	14.65
No. 8 x 1"	H1388-F	15	6097-C	2.30	6097-M	18.40
No. 10 x ⅜"	H1403-F	15	6098-C	1.98	6098-M	15.85
No. 10 x ½"	H1404-F	15	6099-C	2.11	6099-M	16.90
No. 10 x ¾"	H1406-F	12	6100-C	2.33	6100-M	18.60

(B) G-C ESCUTCHEON PLATE SCREWS ROUND HEAD — SLOTTED — BRONZE PLATED

Asstd.	H1500-F	25				
No. 2 x ¼"			1091-C	$1.19	1091-M	$9.50
No. 2 x ⅜"			1093-C	1.19	1093-M	9.50

(C) G-C RADIO KNOB SET SCREWS SLOTTED — HEADLESS — CUP POINT Standard

No. 1060 Kit 50 Asst. .... List **$1.10**
No. 1061 Kit 100 Asst. .... List **$2.00**

Asst. 6-32, 8-32, 10-32	H1605-F	15				
6-32 x 3/16"	H1623-F	15	6072-C	$3.00	6072-M	$24.00
8-32 x 3/16"	H1633-F	15	6075-C	3.00	6075-M	24.00
8-32 x ¼"	H1634-F	15	6076-C	3.00	6076-M	24.00

(D) G-C ALLEN HEX SET SCREWS STEEL — HEADLESS

Asstd. Lengths, 4-36	H1674-F	5				
Asstd. Lengths, 6-32	H1676-F	5				
Asstd. Lengths, 8-32	H1678-F	5				
8-32 x ⅛"			7201-C	$8.22	7201-M	65.75
8-32 x 3/16"			7202-C	8.22	7202-M	65.75

(E) G-C PHONOGRAPH NEEDLE AND STYLUS SET SCREWS STEEL — BRONZE PLATED

No. 1052 Asst., 15 in Box .... List $ .75						
Assorted	H1550-F	12				
No. 1053 Asst., 100 in Box .... List **$12.25**	H1551-F	12				
2-56 x 3/16"	H1553-F	12	P1-C	1.10	P1-M	$ 8.81
1-72 x 29/32"	H1555-F	5	P6-C	2.77	P6-M	22.19

(F) PHONO CARTRIDGE MOUNTING SCREWS STEEL — NICKEL PLATED

Assorted	H1560-F	60				
4-36 x ¼"	H1562-F	40	6005-1C	.81	6005-M	$6.44
4-40 x ¼"	H1564-F	40	6005-AC	.81	6005-AM	6.44

(G) G-C TINNERMAN SPEED NUTS

Assorted	H1960-F	30				
No. 4			6051-C	$1.56	6051-M	$ 9.50
No. 6			6052-C	1.30	6052-M	10.38
No. 8			6053-C	1.30	6053-M	10.38

(H) G-C HEXAGON NUTS STEEL — NICKEL PLATED

Description & Specs.			50-Line Part No.	Quan. In Box	Part No.	List Per 100	Part No.	List Per M
Assorted			H1800-F	30				
Thread	**Width**	**Thickness**						
2-56	3/16"	1/16"	H1802-F	30	7225-C	1.15	7225-M	$9.19
3-48	3/16"	1/16"	H1803-F	30	7226-C	1.15	7226-M	9.19
4-36	¼"	3/32"	H1805-F	30	6041-C	1.10	6041-M	8.81
4-40	¼"	3/32"	H1804-F	30	6041-AC	1.10	6041-AM	8.81
5-40	5/16"	7/64"			6045-BC	1.21	6045-BM	9.69
6-32	¼"	3/32"	H1806-F	30	6042-C	1.15	6042-M	9.19
6-32	5/16"	7/64"	H1807-F	30	7230-C	1.21	7230-M	9.69
8-32	¼"	3/32"	H1808-F	30	6043-C	1.22	6043-M	9.75
8-32	11/32"	⅛"	H1809-F	30	7233-C	1.22	7233-M	9.75
10-32	⅜"	5/64"	H1810-F	30	6044-C	1.60	6044-M	12.81
10-32	⅜"	⅛"			6049-C	1.45	6049-M	11.63
¼-20	7/16"	3/16"	H1820-F	25	7235-C	2.21	7235-M	17.69
11/32-32	7/16"	1/16"			7236-C	3.25	7236-M	26.00
⅜-32	9/16"	3/32"	H1923-F	15	6050-AC	2.44	6050-AM	19.50
7/16-27	9/16"	⅛"	H1924-F	10	7238-C	5.50	7238-M	44.00
15/32-32	9/16"	5/64"			6050-BC	3.00	6050-BM	24.00

(J) G-C BRASS HEXAGON NUTS NOT PLATED

Thread	Width	Thickness						
2-56	3/16"	1/16"			7241-C	$1.63	7241-M	$13.06
3-48	3/16"	1/16"			7242-C	1.49	7242-M	11.88
4-36	¼"	3/32"	H1842-F	35	7243-C	1.96	7243-M	15.69
4-40	¼"	3/32"	H1844-F	25	7244-C	1.95	7244-M	15.56
6-32	¼"	3/32"	H1846-F	25	7245-C	1.94	7245-M	15.50
6-32	5/16"	7/64"			5697-C	2.33	5697-M	18.63
8-32	¼"	3/32"			5698-C	1.94	5698-M	15.50
8-32	5/16"	7/64"	H1848-F	15	7248-C	2.33	7248-M	18.63
10-32	⅜"	⅛"	H1850-F	15	7249-C	2.56	7249-M	20.44
¼-20	7/16"	3/16"			5699-C	5.21	5699-M	41.70

(K) G-C MOUNTING NUTS STEEL — NICKEL PLATED

Assorted			H1920-F	12				
Thread	**Width**	**Thickness**						
(Rotary Switch Size)					7236-C	$3.25	7236-M	$26.00
11/32-32	7/16"	1/16"						
⅜-32	9/16"	3/32"	H1923-F	15	6050-AC	2.44	6050-AM	19.50
(Volume Control Size)								
7/16-27	9/16"	⅛"			7238-C	5.50	7238-M	44.00
(Pilot Light Size)								
15/32-32	9/16"	5/64"	H1924-F	10	6050-BC	5.24	6050-BM	41.88
(Toggle Switch Size)								
15/32-32	Round Ring Nut	1/16"	H1926-F	8	6050-CC	5.79	6050-CM	46.31
(Toggle Switch Size)								

(L) G-C ACORN NUTS SOLID BRASS — NICKEL PLATED

Assorted	H1950-F	10				
6-32			6031-C	$4.69	6031-M	$37.50
8-32			6032-C	5.00	6032-M	40.00
10-32			6033-C	6.06	6033-M	48.50

(M) G-C KNURLED THUMB NUTS BRASS — NICKEL PLATED

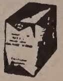
Assorted	H1941-F	10				
6-32	H1943-F	8	6655-C	$3.78	6655-M	$30.25
8-32	H1944-F	8	6656-C	3.78	6656-M	30.25
10-32	H1945-F	5	6657-C	8.31	6657-M	66.50

(N) G-C WING NUTS NICKEL PLATED

Assorted	H1931-F	10				
6-32	H1933-F	10	6658-C	$5.52	6658-M	$44.19
8-32	H1934-F	10	6659-C	4.09	6659-M	32.75
10-32	H1935-F	8	6660-C	4.56	6660-M	36.50

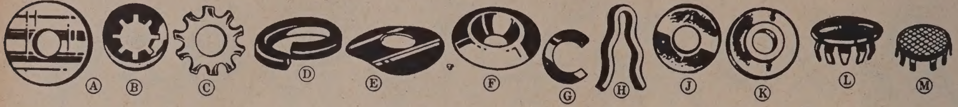
GC ELECTRONICS RADIO AND TV HARDWARE

HINGED COVER
PLASTIC BOXES
—50 LINE—
List Price 60c
Per Box



BOXES OF 100
Standard Carton
10 Boxes of 100

BULK
HARDWARE
Box of 1000



(A) G-C METAL WASHERS NICKEL PLATED

Desc. and Spec.				50-Line Part No.	Quan. in Box	Part No.	List Per 100	Part No.	List Per M
Asstd.				H870-F	80				
Screw Size No.	Hole Size	O.D.	Thickness						
4	⅛"	9/32"	1/32"	H874-F	80	6154-C	.50	6154-M	$3.75
6	5/32"	⅜"	1/32"	H876-F	80	6155-C	.47	6155-M	3.75
8	3/16"	7/16"	1/32"	H878-F	80	6156-C	.49	6156-M	3.94
10	13/64"	⅜"	1/32"	H880-F	70	7306-C	.53	7306-M	4.25
10	13/64"	7/16"	1/32"			7307-C	.49	7307-M	3.94
10	13/64"	½"	.049			6157-C	.66	6157-M	5.31
12	.228	7/16"	.021			7308-C	.58	7308-M	4.63
¼"	9/32"	⅝"	1/16"	H882-F	50	6158-C	.77	6158-M	6.13
¼"	17/64"	½"	1/16"			7311-C	1.06	7311-M	8.44
5/16"	5/16"	11/16"	1/16"			7312-C	.98	7312-M	7.91

(B) G-C LOCK WASHERS INTERNAL LOCK WASHERS CADMIUM PLATED

Desc. and Spec.		50-Line Part No.	Quan. in Box	Part No.	List Per 100	Part No.	List Per M
Asstd. All Types		H918-F	45				
Asstd. Internal Screw		H920-F	50				
Screw Size	O.D.						
2		H922-F	35	7322-C	1.20	7322-M	$9.63
3				7323-C	1.05	7323-M	8.38
4		H924-F	50	7324-C	.76	7324-M	6.06
6	9/32"	H926-F	50	7326-C	.76	7326-M	6.06
8	21/64"	H928-F	50	7328-C	.88	7328-M	6.63
10	⅜"	H930-F	45	7330-C	.88	7330-M	6.63
¼"	9/16"			7332-C	1.08	7332-M	8.75
5/16"	19/32"			7333-C	1.36	7333-M	10.88
⅜"	11/16"			7334-C	1.83	7334-M	14.63
⅜"	9/16"	H938-F	25	7335-C	2.08	7335-M	16.63
15/32"	19/32"			7338-C	2.63	7338-M	21.06

(C) EXTERNAL LOCK WASHERS CAD PLATED

Desc. and Spec.	50-Line Part No.	Quan. in Box	Part No.	List Per 100	Part No.	List Per M
Asstd.	H950-F	60				
No. 4			7354-C	$.76	7354-M	$6.06
No. 6			7356-C	.76	7356-M	6.06
No. 8			7358-C	.83	7358-M	6.63
No. 10			7360-C	.81	7360-M	6.44
No. ¼" ½"			7361-C	1.09	7361-M	8.69
No. ⅜" 11/16"			7363-C	1.60	7363-M	12.81

(D) SPLIT TYPE LOCK WASHERS CAD PLATED

Desc. and Spec.			50-Line Part No.	Quan. in Box	Part No.	List Per 100	Part No.	List Per M
Asstd.			H960-F	60				
Screw Size	O.D.	Thick.						
No. 4	3/16"	1/32"			6503-C	.81	6503-M	$6.50
No. 6	15/64"	1/32"			6504-C	.76	6504-M	6.06
No. 8	11/32"	.025			6505-C	.63	6505-M	5.00
No. 10	5/16"	.050			6506-C	.90	6506-M	7.19
No. ¼"	7/16"	5/64"			6507-C	1.33	6507-M	10.63

(E) G-C SPRING FRICTION WASHERS

Desc. and Spec.				50-Line Part No.	Quan. in Box	Part No.	List Per 100	Part No.	List Per M
Asstd.				H750-F	12				
A	B	C	Thick.						
9/64"	5/16"	1/32"	.012			7385-C	3.25	7385-M	$26.00
3/16"	⅜"	1/32"	.008			7386-C	2.75	7386-M	22.10
3/16"	7/16"	1/16"	.008			7387-C	2.70	7387-M	21.55
¼"	9/16"	1/16"	.012			7389-C	3.10	7389-M	24.60

(F) G-C CUP FINISHING WASHERS NICKEL PLATED

Desc. and Spec.	50-Line Part No.	Quan. in Box	Part No.	List Per 100	Part No.	List Per M
Asstd. Screws & Washers	H1005-F	15				
Asstd. Washers	H805-F	40				
No. 6	H806-F	45	6161-C	.66	6161-M	$5.31
No. 8	H808-F	45	6162-C	.70	6162-M	5.63
No. 10	H810-F	35	6163-C	.93	6163-M	7.44

(G) G-C C-WASHERS AND RETAINING RINGS STEEL-CAD PLATED

Desc. and Spec.					50-Line Part No.	Quan. in Box	Part No.	List Per 100	Part No.	List Per M
Asst'd. C-Washers					H770-F	25				
Shaft Diam.	A	B	C	D						
3/16"	.171	.125	.062	.031	H772-F	15	6182-C	1.57	6182-M	$12.56
¼"	.234	.156	.046	.031	H774-F	15	6183-C	1.79	6183-M	14.31
¼"	.260	.187	.062	.031			6184-C	1.82	6184-M	14.56
¼" 9/32" O.D. Wire Ring .029					H778-F	50	6185-C	.69	6185-M	5.50

(H) G-C HAIR PIN COTTERS

Desc. and Spec.			50-Line Part No.	Quan. in Box	Part No.	List Per 100	Part No.	List Per M
Asstd.			H380-F	50				
A	B	C						
9/32"	1/16"	.026			7375-C	.81	7375-M	$6.50
⅜"	1/16"	.026			7376-C	.69	7376-M	5.50
13/32"	3/32"	.026			7377-C	.79	7377-M	6.31
½"	5/32"	.026			7378-C	.69	7378-M	5.50
21/32"	3/16"	.032			7379-C	.82	7379-M	6.56

(J) G-C FLAT FIBRE WASHERS

Desc. and Spec.				50-Line Part No.	Quan. in Box	Part No.	List Per 100	Part No.	List Per M
Asstd.				H820-F	35				
Screw Size	I.D.	O.D.	Thick.						
6	.140	¼"	1/32"	H824-F	30	6513-C	.70	6513-M	$5.50
8	11/64"	⅜"	1/32"	H825-F	30	6514-C	.70	6514-M	5.50
10	.196	⅜"	1/32"	H826-F	30	6515-C	.70	6515-M	5.50
¼"	¼"	½"	3/64"	H827-F	24	6516-C	.77	6516-M	6.13
⅜"	.390	25/64"	3/64"	H828-F	20	6517-C	1.27	6517-M	10.19
15/32"	15/32"	¼"	1/32"			6518-C	1.27	6518-M	10.19

(K) G-C EXTRUDED FIBRE WASHERS

Desc. and Spec.					50-Line Part No.	Quan. in Box	Part No.	List Per 100	Part No.	List Per M
Asstd. Extruded & Flat					H854-F	30				
Asstd. Extruded					H855-F	30				
Screw Size	A	B	C	D						
6	5/16"	.187	.140	.039			6525-C	1.44	6525-M	$11.50
8	⅜"	.250	.169	.031			6526-C	1.44	6526-M	11.50
10	7/16"	.255	.196	.032			6527-C	1.57	6527-M	12.56
¼"	½"	.375	.250	.032			6528-C	1.57	6528-M	12.56
⅜"	⅝"	.437	.380	.031	H864-F	20	6529-C	1.65	6529-M	13.19

(L) G-C SNAP BUTTON HOLE PLUGS NICKEL PLATED

Asstd. H300-F 8

No. 1710 Asst. 50 Plugs in Box List Price $2.75

Desc. and Spec.					50-Line Part No.	Quan. in Box	Part No.	List Per 100	Part No.	List Per M
¼"	13/32"	¼"	17/64"	5/64"	H306-F	8	1711-AC	3.75	1711-AM	30.00
5/16"	7/16"	¼"	21/64"	1/16"			1711-BC	4.00	1711-BM	32.00
⅜"	17/32"	⅜"	25/64"	5/64"	H308-F	8	1711-C	5.13	1711-M	41.00
½"	21/32"	17/64"	17/32"	5/64"	H310-F	6	1712-C	5.13	1712-M	41.00
⅝"	51/64"	9/32"	41/64"	5/64"	H312-F	6	1713-C	5.50	1713-M	44.00
¾"	15/16"	19/64"	49/64"	3/32"	H314-F	5	1714-C	6.00	1714-M	48.00
⅞" Fits Switch Box Knockout Hole							1714-AC	7.69	1714-AM	61.50
1 "	1 5/32"	19/64"	1 1/32"	5/64"	H316-F	5	1715-AC	8.25	1715-AM	66.00
1⅛"	1 5/16"	11/32"	1 9/64"	3/32"			1715-BC	9.88	1715-BM	79.00
1¼"	1 7/16"	5/16"	1 17/64"	3/32"			1715-C	10.75	1715-M	86.00
1⅜"	1 9/16"	13/32"	1 13/32"	3/32"			5700-C	11.88	5700-M	95.00
1 7/16"	1 39/64"	27/64"	1 15/32"	7/64"			5701-C	12.13	5701-M	97.00
1½"	1 41/64"	13/32"	1 17/32"	3/32"			5702-C	15.63	5702-M	125.00

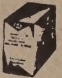
(M) G-C SNAP-IN VENTILATING PLUGS NICKEL PLATED

Desc. and Spec.	50-Line Part No.	Quan. in Box	Part No.	List Per 100	Part No.	List Per M
1" Punched Holes	H334-F	4	1709-C	13.50	1709-M	108.60
1" Screen Vent			1708-C	35.63	1708-M	285.00

GC RADIO AND TV HARDWARE

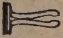
ELECTRONICS

HINGED COVER
PLASTIC BOXES
—50 LINE—
List Price 60c
Per Box



BOXES OF 100
Standard Carton
10 Boxes of 100

BULK
HARDWARE
Box of 1000



G-C SNAP-IN TRIMOUNTS

No. 1720 Asst.
100 Trimounts
List Price **$1.35**

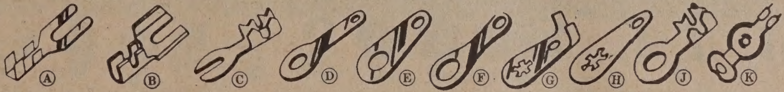
Description & Specs.			50-Line Part No.	Quan. In Box	Part No.	List Per 100	Part No.	List Per M
Assorted			H370-F	20				
To Fit Hole	**A**	**B**						
⅛"	9/32"	3/16"			1721-C	$1.88	1721-M	$16.00
⅛"	9/32"	13/64"	H373-F	25	1722-C	2.00	1722-M	16.00
.136	11/32"	17/64"			1723-C	2.31	1723-M	18.50
.136	23/64"	9/32"	H375-F	20	1724-C	2.42	1724-M	19.38
5/32"	3/16X11/32"	25/64"	H378-F	17	1726-C	2.94	1726-M	23.50
5/32"	3/16X11/32"	21/32"	H379-F	15	1727-C	2.94	1727-M	23.50

G-C DIAL CORD CLIPS NICKEL PLATED

Description & Specs. Used on Cord No.	A	B	C	50-Line Part No.	Quan. In Box	Part No.	List Per 100	Part No.	List Per M
				H745-F	30				
75-75A	⅛"	7/64"	3/32"	H746-F	40	6221-C	1.13	6221-M	9.06
74-74L	¼"	5/32"	5/32"			6222-C	1.27	6222-M	10.13
73-73X	3/16"	9/64"	3/16"			6223-C	1.31	6223-M	10.50

G-C FUSE CLIPS

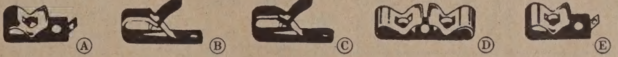
For ¼" Fuses, No. 6 Mounting Hole TV Fuse Clip, No. 8618 **($0.41) List)**	H600-F	12	6311-C	3.09	6311-M	24.69



G-C SOLDERING LUGS TINNED

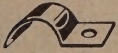
No. 1020, 100 Asst.
List Price **$1.10**

Assorted	H100-F	30				
No. 6, ⅝" Length (A)			8466-C	$2.63	8466-M	$21.06
No. 6, 23/32" Length (B)			8467-C	4.69	8467-M	37.50
No. 8, 23/32" Length (B)			8468-C	4.41	8468-M	35.25
No. 6, 23/32" Length (C)	H104-F	25	1021-BC	1.75	1021-BM	14.00
No. 8, 23/32" Length (C)	H106-F	25	7445-C	1.99	7445-M	15.94
No. 10, 23/32" Length (C)			8473-C	1.94	8473-M	15.50
No. 6, ½" Length (D)			5708-C	2.81	2708-M	22.50
No. 8, 13/16" Length (D)			5704-C	2.81	5704-M	22.50
No. 10, 13/16" Length (D)			5705-C	2.81	5705-M	22.50
No. 6, 11/16" Length (D)	H108-F	30	1021-CC	1.15	1021-CM	9.19
No. 6, 9/16" Length (E)	H112-F	30	1021-FC	1.54	1021-FM	12.31
No. 8, 9/16" Length (E)	H113-F	30	7451-C	1.45	7451-M	11.63
No. 6, 1" Length (F)	H114-F	25	7454-C	1.11	7454-M	8.88
No. 8, 1" Length (F)	H117-F	25	7455-C	3.09	7455-M	24.75
No. 10, 1" Length (F)	H118-F	25	7456-C	3.09	7456-M	24.75
No. 4, 13/16" Length (G)			7458-C	3.09	7458-M	24.75
No. 8, 13/16" Length (G)			7460-C	3.10	7460-M	24.81
No. 10, 13/16" Length (G)			7461-C	3.10	7461-M	24.81
No. 6, ⅝" Length (H)	H122-F	20	7462-C	1.77	7462-M	14.19
No. 8, ⅝" Length (H)			7463-C	1.77	7463-M	14.19
No. 4, ⅞" Length (E)			5706-C	2.81	5706-M	22.50
No. 8, ⅞" Length (E)			5707-C	2.81	5707-M	22.50
No. 6, ⅞" Length (E)			5708-C	2.81	27.08-M	22.50
No. 6, 11/16" Length (J)	H124-F	25	7441-C	1.97	7441-M	15.75
No. 8, 11/16" Length (J)	H134-F	25	7442-C	1.90	7442-M	15.19
No. 10, 11/16" Length (J)	H102-F	25	1021-AC	1.90	1021-AM	15.19
Solderless TV Line Lug (K)	H225-F	10	8633-C	2.74	8633-M	21.88



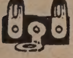
G-C FAHNESTOCK CLIPS NICKEL PLATED

	L	W	Hole	Wire						
Assorted					H590-F	12				
(A)	½"	7/32"	4	16	H592-F	15	6391-C	2.50	6301-M	$21.75
(B)	¾"	5/16"	6	14	H594-F	14	6302-C	2.90	6302-M	23.30
(C)	1 1/16"	⅜"	8	10			6303-C	4.95	6303-M	39.75
(D)	1½"	5/16"	6	10			6304-C	18.35	6304-M	161.20
(E)	¾"	5/16"	6	14			6306-C	6.72	6306-M	53.80



G-C CABLE HOLDER CLAMPS NICKEL PLATED

To Fit Cable	Mounting Hole						
Assorted		H500-F	20				
⅛" to 3/16"	No. 6	H502-F	25	6251-C	1.63	6251-M	13.06
3/16" to ¼"	No. 6	H503-F	20	6252-C	1.85	6252-M	14.81
¼" to 5/16"	No. 6			7503-C	2.88	7503-M	23.00
5/16" to ½"	No. 6	H506-F	15	6253-C	2.11	6253-M	16.88
Baseboard Clips Blk.		H509-F	20	8345-C	3.08	8345-M	24.63

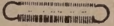


G-C TERMINAL STRIP ASSORTMENT 1/16" INSULATION — 3/8" SPACING

Assorted	H250-F	4		
1 Lug			1781-C	4.50
2 Lugs			1782-C	4.50
3 Lugs			1783-C	4.70
4 Lugs			1784-C	6.50
5 Lugs			1785-C	7.50
6 Lugs			1786-C	8.00
7 Lugs			1787-C	14.50
8 Lugs			1788-C	16.00

G-C COMPRESSION SPRINGS

Asst. Small	H440-F	20
Asst. Large	H441-F	15



G-C DIAL DRIVE TENSION PHONO SPRINGS STEEL CAD. PLATED

Asst. Reg. Dial Drive

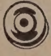
Asst. Small Dial Drive

No. 1055 Kit of 25 Asst. List $1.30	H401-F	8
No. 1056 Kit of 100 Asst. List $4.85	H400-F	10
Asst. Lge. Tension Spgs.	H421-F	10
Asst. Sm. Tension Spgs.	H420-F	10

A	B	C	Wire Size	Old No.	List Price	Part No.	Quan. In Bx	Part No.	List Per 100	Part No.	List Per M
⅛"	½"	¼"	.019	T1	$0.05	H403-F	10	6450-C	$ 8.40	6450-M	$67.21
⅛"	1"	¾"	.019	T2	.06	H406-F	8	6451-C	6.31	6451-M	50.51
3/16"	1"	⅝"	.020	T3	.06	H408-F	8	6452-C	7.05	6452-M	56.36
3/16"	1⅜"	1"	.020	T4	.06	H410-F	8	6453-C	7.23	6453-M	57.85
¼"	1½"	1"	.026	T5	.08	H412-F	6	6454-C	9.34	6454-M	74.75
¼"	2"	1½"	.026	T6	.10			6455-C	11.53	6455-M	92.24

G-C PHONO TURNTABLE MOUNTING SPRINGS

O.D.	Lgth.	Wire Size	No. of Coils				
1"x11/16"	13/16"	.079	4	7497-C	5.28	7497-M	42.25



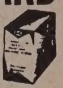
G-C DIAL PULLEYS BRASS

A	B	C	(Groove D Wd.)					
Assorted				H1966-F				
⅜"	.120	⅛"	3/32"		6057-AC	7.70	6057-AM	61.62
7/16"	.067	13/64"	⅛"		6057-BC	11.42	6057-BM	91.46
½"	⅛"	3/16"	3/32"		6057-GC	14.15	6057-GM	113.23
.620	.128	.165	1/16"		6057-CC	15.58	6057-CM	124.61
.860	.128	5/32"	.050		6057-FC	26.74	6057-FM	213.92

GC ELECTRONICS

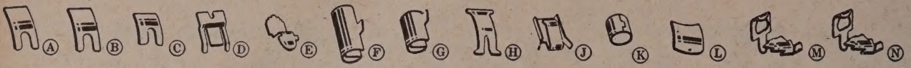
RADIO AND TV HARDWARE

HINGED COVER
PLASTIC BOXES
—50 LINE—
List Price 60c
Per Box



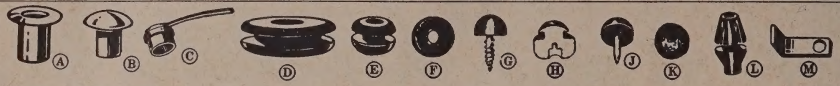
BOXES OF 100
Standard Carton
10 Boxes of 100

BULK
HARDWARE
Box of 1000



G-C RADIO KNOB SPRINGS

Description & Specs.	Width	Length	For Knob Shaft Dia.	50-Line Part No.	Quan. In Box	Part No.	List Per 100	Part No.	List Per M
Asst.				H480-F	18				
TV Spring Asst.				H460-F	12				
No. 1050 Kit of 35 Springs List $1.20									
No. 1051 Kit of 100 Springs List $3.25									
(A)	9/32" Light	7/16"	1/4"	H482-F	20	6460-C	1.75	6460-M	13.98
(B)	9/32" Heavy	7/16"	1/4"	H484-F	20	6461-C	1.83	6461-M	14.63
(C)	9/32"	5/16"	1/4"	H487-F	20	6462-C	1.48	6462-M	11.83
(D)	3/8"	5/32"	1/4"	H489-F	10	6463-C	1.96	6463-M	15.67
(E)	7/32"	13/32"	1/4"			6464-C	3.08	6464-M	24.64
(F)	9/32"	3/8"	1/4"	H492-F	8	6465-C	3.93	6465-M	31.40
(G)	9/32"	1/4"	1/4"			6466-C	4.67	6466-M	37.38
(H)	9/32"	1/2"	1/4"			6467-C	2.11	6467-M	16.84
(J)	9/32"	3/8"	1/4"	H494-F	10	6468-C	2.49	6468-M	19.89
(K)	11/32"	1/4"	1/4"			6469-C	3.93	6469-M	31.40
(L)	3/8"	3/8"	1/4"	H497-F	10	6470-C	2.50	6470-M	20.02
(M)	3/8"	7/16"	1/4"	H498-F	10	6471-C	4.25	6471-M	34.00
(N)	3/8"	7/16"	3/16"	H499-F	10	6472-C	3.89	6472-M	31.14
TV Knob Spring .202" Shaft				H462-F	10	8541-C	2.11	8541-M	16.84
TV Knob Spring 3/8" Flat Shaft				H464-F	10	8542-C	2.52	8542-M	20.15



(A) G-C BRASS EYELETS

Description & Specs.	Shank Dia.	Length Under Head	Head Dia.	50-Line Part No.	Quan. In Box	Part No.	List Per 100	Part No.	List Per M
Asst. Rivets and Eyelets				H526-F	55				
Asst. Eyelets and Clamps				H744-F	60				
Eyelet Asst.				H510-F	50				
	.087	1/8"	.145			7251-C	.47	7251-M	3.77
	.087	5/32"	.145			7252-C	.59	7252-M	4.75
	.087	7/32"	.145			7253-C	.79	7253-M	5.33
	.087	11/32"	.180			7254-C	1.81	7254-M	14.50
	.123	5/32"	.197	H515-F	50	7257-C	.83	7257-M	6.63
	.123	7/32"	.195			7259-C	.67	7259-M	5.33
	.123	1/4"	.195			7260-C	.87	7260-M	6.96
	.123	9/32"	.195			7261-C	.89	7261-M	7.09
	.125	5/16"	.289			7264-C	1.52	7264-M	12.16
	.127	15/32"	.222			7265-C	1.86	7265-M	14.89
	.182	3/16"	.315			7269-C	.53	7269-M	4.23

(B) G-C RIVETS NICKEL PLATED

	Shank Dia.	Length Under Head						
Asst. Rivets and Eyelets			H526-F	55				
Rivet Assortment			H525-F	50				
TV Interlock Receptacle Rivets			H527-F	Asst.				
	.059	5/32"			7276-C	1.46	7276-M	11.64
	.059	3/16"			7277-C	1.46	7277-M	11.64
	.059	1/4"			7278-C	.98	7278-M	7.87
	.088	3/16"			7280-C	1.57	7280-M	12.55
	.098	3/16"			7283-C	1.65	7283-M	13.20
	.121	1/8"			7286-C	1.29	7286-M	10.34
	.121	3/16"			7288-C	.99	7288-M	7.93
	.121	1/4"			7290-C	1.03	7290-M	8.26
	.121	1/2"			7293-C	1.07	7293-M	8.58
	.146	5/16"			7296-C	1.21	7296-M	9.69

(C) G-C GRID CAPS NICKEL PLATED

Asstd.	H609-F	8				
Glass			6291-C	2.23	6291-M	17.88
Metal			6292-C	2.24	6292-M	17.94
TV Spring Type, Asstd.	H610-F					
1/4" High-Voltage			8838-IRC	6.32	8838-IRM	50.57
3/8" High-Voltage			8838-2RC	6.61	8838-2RM	52.91
1/4" Insulated High-Voltage	H612-F	1	8834-C	41.90	8834-M	381.62
3/8" Insulated High-Voltage	H614-F	1	8835-C	41.90	8835-M	381.62

(D) G-C RUBBER GROMMETS

Asstd. Soft Grommets	H025-F	15
No. 1040 Kit of 50 Asstd. Grommets List $1.25		

A	B	C	D	E	50-Line Part No.	Quan. In Box	Part No.	List Per 100	Part No.	List Per M
11/32"	1/8"	3/16"	1/16"	1/4"	H030-F	16	1041-2C	1.86	1041-2M	14.88
7/16"	3/16"	7/32"	1/16"	5/16"	H032-F	14	1041-C	2.10	1041-M	16.80
9/16"	1/4"	1/4"	1/16"	3/8"	H034-F	12	1042-C	2.81	1042-M	22.50
5/8"	3/8"	1/4"	1/16"	1/2"	H036-F	10	1043-C	3.16	1043-M	25.25
1/2"	3/16"	1/4"	1/16"	5/16"			5710-C	6.34	5710-M	50.70
1/2"	1/4"	5/16"	1/8"	3/8"			7566-C	4.07	7566-M	32.56
7/8"	9/16"	15/64"	1/16"	3/4"			5711-C	5.89	5711-M	47.10
3/4"	7/16"	1/4"	1/16"	9/16"			5712-C	8.59	5712-M	68.70
13/16"	1/2"	9/32"	1/16"	5/8"	H038-F	8	1043-IC	4.81	1043-IM	44.00
1"	3/8"	1/4"	1/16"	7/8"			7569-C	9.57	7569-M	76.56
3/4"	5/16"	11/32"	3/32"	15/32"			5715-C	11.33	5715-M	90.60
1 1/8"	5/8"	5/16"	1/16"	7/8"			5716-C	9.56	5716-M	76.50
1 5/16"	11/16"	3/8"	1/16"	1"			5717-C	19.24	5717-M	153.90

(E) G-C PURE GUM GROMMETS

SOFT RUBBER GROMMETS FOR SHOCK DAMPENING. FOR MOUNTING TUNING CONDENSERS, SOCKETS, PHONO MOTORS, ETC.

Asst.	H040-F	12
No. 7581 Kit of 100 Asst. Grommets. List $2.45		

A	B	C	D	E						
7/16"	3/16"	7/32"	1/16"	5/16"	H042-F	12	7582-C	2.69	7582-M	21.50
9/16"	1/4"	1/4"	1/16"	3/8"	H043-F	10	7584-C	3.83	7584-M	30.63

(F) G-C RADIO KNOB FELTS

3/4" O.D. x 1/4" Hole, Brown	H760-F	40	1065-C	.65	1065-M	5.35

(G) G-C RUBBER FEET — Screw Type

O.D.	High						
		H050-F	8				
3/8"	3/16"	H052-F	8	1075-BC	1.52	1075-BM	12.16
1/2"	1/4"	H054-F	8	1075-CC	2.44	1075-CM	19.50
5/8"	5/16"	H056-F	8	1075-FC	3.70	1075-FM	29.50

(H) G-C RUBBER BUTTON BUMPERS

A O.D.	B Height	C Hole	E Height						
3/8"	3/8"	3/16"	3/16"			7596-C	2.40	7596-M	19.18
1/2"	7/16"	1/4"	1/4"	H058-F	8	7597-C	3.51	7597-M	28.08
5/8"	9/16"	3/8"	5/16"			7598-C	5.65	7598-M	45.18

(J) G-C RUBBER TACK BUMPERS

3/8" O.D.	H071-F	10	1075-C	3.08	1075-M	24.64

(K) G-C FELT PADS

Asstd. Felt Pads	H074-F	40				
1/2" O.D. x 1/4" Thick Felt Pads			1071-C	.50	1071-M	3.97

(L) G-C CORD STRAIN RELIEFS

Will Fit P.O.S.J. Cord	H048-F	5	6675-C	8.78	6675-M	70.20

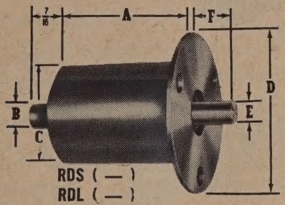
(M) G-C ANGLES AND BRACKETS

A	B	C	Hole Size						
Asstd.				H570-F	12				
1/4"	3/16"	9/32"	6			6261-C	1.87	6261-M	14.95
3/8"	1/4"	9/32"	6			6262-C	2.32	6262-M	18.53
1/2"	7/16"	3/8"	6			6263-C	2.64	6263-M	21.13

JAN'S ENGINEERED COMPONENTS FOR ELECTRONICS

Functionally Designed • Rigidly Standardized • Performance Guaranteed

Consistently specified by leading instrument makers



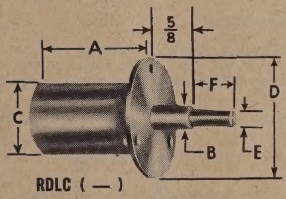
RDS (—)
RDL (—)

RATIO DRIVES—Ball Bearing Type

Compact, durable, exceptionally smooth action

These unique ratio drives employ precision ball bearings. Used for rotary control of components in instruments, they provide unexcelled smooth motion. Ruggedly built, permanently sealed and lubricated, JAN Ratio Drives accommodate applications where miniaturization is essential.

Input and output shafts of these units operate in the SAME DIRECTION. Types "RDL" and "RDS" provide "in-line" input-output shafts. Type "RDLC" is supplied with **concentric** shafts whereby the output envelopes the input shaft.



RDLC (—)

CAT. No.	RATIO	A	Output Shaft B	C	D	Input Shaft E	F	Bolt-Mtg. Dia.
RDL-1	2.66-1	1	3/8	1 1/8	1 13/16	1/4	23/32	1 15/32
RDL-2	7.08-1	1 13/32	3/8	1 1/8	1 13/16	1/4	23/32	1 15/32
RDL-3	18.80-1	1 13/16	3/8	1 1/8	1 13/16	1/4	23/32	1 15/32
RDLC-1	2.66-1	1	3/8	1 1/8	1 13/16	1/4	1 5/32	1 15/32
RDLC-2	7.08-1	1 13/32	3/8	1 1/8	1 13/16	1/4	1 5/32	1 15/32
RDLC-3	18.80-1	1 13/16	3/8	1 1/8	1 13/16	1/4	23/32	1 15/32
RDS-1	2.70-1	3/4	—	5/8	1 5/16	1/8	—	31/32
RDS-2	7.28-1	31/32	—	5/8	1 5/16	1/8	—	31/32
RDS-3	19.65-1	1 7/32	—	5/8	1 5/16	1/8	—	31/32

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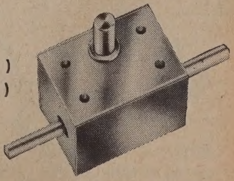
RIGHT ANGLE RATIO DRIVES

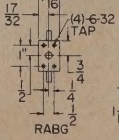
Versatile, miniaturized, right angle rotary controls.

Featuring dual output stainless steel shafts at right angles to input, these engineered drives provide an ideal type of instrument control. Available with matched bevel or worm gears covering a wide range of ratios.

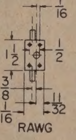
JAN'S WORM GEAR RIGHT ANGLE DRIVES are especially useful for handling spring or gravity-loaded components since the output shaft automatically locks in any desired position yet remains free for smooth adjustment by the input shaft. Assembled in dust-proof housings, the gears are permanently pinned in place on stainless-steel shafts mounted in oilite bearings and held under constant pressure.

RAWG (—)
RABG (—)

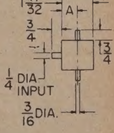




RABG

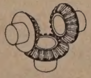


RAWG



BEVEL GEAR RIGHT ANGLE DRIVES

CAT. No.	RATIO	"A"
RABG-1	1:1	7/8
RABG-2	2:1	7/8
RABG-3	3:1	7/8



WORM GEAR RIGHT ANGLE DRIVES

CAT. No.	RATIO	"A"
RAWG-1	5:1	3/4
RAWG-2	10:1	3/4
RAWG-3	20:1	3/4

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JAN

JAN HARDWARE MANUFACTURING CO., INC.

LONG ISLAND CITY 1, NEW YORK

WHERE INTEGRITY COSTS NO MORE

JAN HARDWARE MANUFACTURING CO., INC.

LONG ISLAND CITY 1, NEW YORK

JACK COVERS (TRIMMER COVERS)

These sturdy Jack Covers fit jack or panel bushings and are used to keep out dust and moisture as well as to prevent inadvertent disturbance of control settings. Outer surfaces are finished in standard colors of baked enamel.

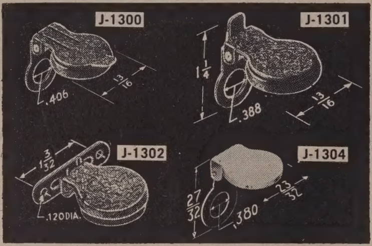
NOTE: No. J-1300 (SNAP-JACK) is made with toggle action. It snaps to open or shut position and will remain open until snapped shut. No. J-1304 is a miniaturized Jack Cover similar to a No. J-1301 but without thumb lift.

J-1300 ( ) SNAP-JACK COVER (toggle type)

J-1301 ( ) STANDARD JACK COVER

J-1302 ( ) PANEL MOUNT JACK COVER

J-1304 ( ) MINI-JACK COVER



To Order Colors:
Black Wrinkle, specify: (1); Navy Gray Smooth, specify: (2)
Sig. Corps Olive Smooth, specify: (3); Other colors on request

Example:
Panel Mount Jack Cover, color black wrinkle, order as J-1302 (1).

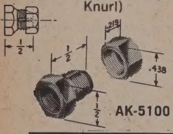
SHAFT LOCKS

Cat. No. AK-5100 thru No. AK-5106
Split-bushing, collet type locks.

Used to securely hold the shaft of volume controls, capacitors, switches, etc. in position. Body and lock nut are brass—nickel plated. Supplied with nickel plated internal tooth lock washers.

SPLIT BUSHING TYPE

AK5100	Standard JAN LOCK NUT	**AK5103**	Miniature for ⅛" shafts (Not shown)
AK5101	PANEL MOUNT TYPE		
AK5102	Knurled Lock Nut Type ¼" (⅝" O.D. Knurl)	**AK5106**	Knurled Shaft Lock ¼" (1" O.D. Knurl)



AK-5100

AK-5101

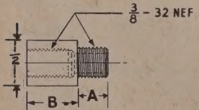
AK5102
AK5106

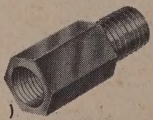
BUSHING EXTENDERS

Cat. No. AK-5075-1 thru No. AK-5075-11

Permit staggered mounting of components having ¼" shafts, behind a panel. Useful in meeting problems of space economy. Supplied in nickel plated brass.

Note: Extender No. AK-5075-9 is a locking (collet) type and is supplied by JAN with lock nut.





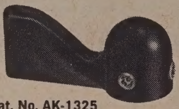
AK 5075- ( )

Cat. No.	"B"	"A"	Cat. No.	"B"	"A"
AK5075-1	⅝"	⅜"	AK5075-6	1⅝"	¼"
AK5075-2	⅝"	¼"	AK5075-7	1 7/16"	3/16"
AK5075-3	⅝"	3/16"	AK5075-8	1 1/16"	¼"
AK5075-4	¾"	¼"	AK5075-9	11/16"	½"
AK5075-5	2¼"	¼"	AK5075-10	1 21/64"	7/16"
			AK5075-11	55/64"	7/16"

BAR-KNOB

Cat. No. AK-1325

Precision cast aluminum for ½" shafts. Furnished with twin set screws for shaft attachment.
Provides a 1.0" integrally cast lever arm for heavy-load switching. Finished to specifications.



Cat. No. AK-1325

KNOB LOCK

Cat. No. AK-1326

Black anodized aluminum with serrated edges for easy locking. Has twin set screws for firm attachment to ¼" shafts.
Height 5/16" x 9/16" diameter.

Cat. No. AK-1326

CHASSIS & CABINET BUMPER

Cat. No. AK574 ( )

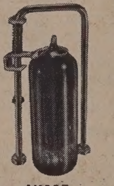
Durable, low-friction vinyl plastic. Guards against scuffing. Supplied in either black or russet brown, with recessed hole for screw or bolt usage.

Cat. No. AK574

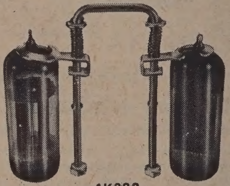
TUBE BAIL ASSEMBLIES

Positive protection against vibration and shock.
Spring-loaded tube holders give positive protection that is free of strain on tube. Available as single and twin tube hold-downs.

Holds securely in any position,—can't shake loose. Also provides excellent heat sink.



AK387

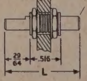


AK382

PANEL BEARING & SHAFT ASSEMBLIES

Cat. No. AP-15350 series

Used for rotary control of components. Passivated stainless steel shaft is ¼" dia. with one end flattened for attaching to knob control by set screws. Supplied completely assembled with two retaining rings, jam nut with lock washer and nickel plated, brass panel bearing. Fits all panels up to 3/16" thick; mounts in 13/32" dia. hole.



AP 15350- ( )

STAINLESS STEEL

Cat. No.	Item	"L" Shaft Length
AP 15350	Panel Bearing	—
AP 15350-1	Panel Bearing & Shaft Assembly	1 5/16"
AP 15350-2		3"
AP 15350-3		6"

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JAN HARDWARE MANUFACTURING CO., INC.

LONG ISLAND CITY 1, NEW YORK

HI-VOLTAGE INSULATED COUPLINGS

Series No. AK-5079 & No. AK-5164
(U. S. Patent No. 2,681,378)
For Military and Quality Instrumentation
15 KV Rating—Shock resistant—Vibration and Fungus Proof

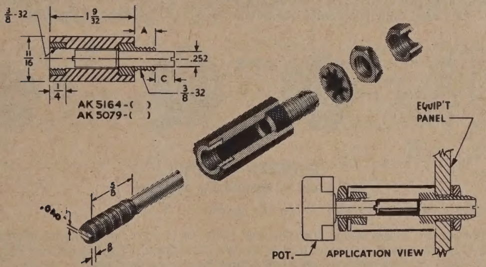
Engineered with stainless steel shaft and precision, screwdriver tip molded integrally with Mineral-Filled-Melamine in accordance with Military Specifications. Completely shock, vibration and fungus proof, they operate with ease over an ambient temperature range of —75 to +175° C. Supplied complete with nickel plated mounting hardware. **Torque—** 10 in. pounds.

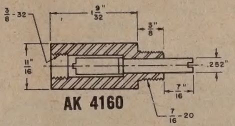
Stainless steel screw driver tip fits all standard slotted shafts (potentiometer, etc.) without need for further machining.

Ideally suited to adjust high voltage controls thus protecting operating personnel against danger. They are also used to reduce ground capacitance on other types of sensitive instrument controls.

	CAT No.	"A"	"B"	SHAFT	"C"
LOCKING TYPE	AK-5079-X-1	9/16"	3/16"	Slotted	1/8"
	AK-5079-B-1	9/16"	1/16"	Slotted	1/8"
	AK-5079-X-2	9/16"	3/16"	Slotted	9/32"
	AK-5079-B-2	9/16"	1/16"	Slotted	9/32"
STANDARD TYPE	AK-5164-X-1	3/8"	3/16"	Slotted	5/16"
	AK-5164-B-1	3/8"	1/16"	Slotted	5/16"
	AK-5164-X-2	3/8"	3/16"	Slotted	7/16"
	AK-5164-B-2	3/8"	1/16"	Slotted	7/16"
	AK-5164-X-3	3/8"	3/16"	No Slot	15/16"
	AK-5164-B-3	3/8"	1/16"	No Slot	15/16"
	AK-5164-X-4	3/8"	3/16"	No Slot	1 7/16"
	AK-5164-B-4	3/8"	1/16"	No Slot	1 7/16"
	AK-5164-X-5	3/8"	3/16"	Slotted	Minus 1/16"
	AK-5164-B-5	3/8"	1/16"	Slotted	Minus 1/16"

NOTE: Specify "X" type for use with "pots" having 1/8" long shafts and type "B" where "pot" shaft is 1/4" long.





30KV- INSULATED COUPLINGS

Series No. AK-4160
For TV and Industrial Applications

These handy couplings, capable of withstanding 30KV, are made of high grade Bakelite throughout except for the stainless steel screw driver tip molded within the drive shaft. Mounting hardware supplied.

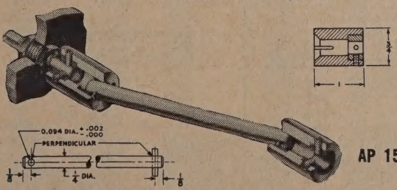
OFFSET-SHAFT COUPLINGS

Cat. No. AP-15299
Extension shaft couplings for ±30° offset, provide insulation in excess of 10KV.

These highly versatile and durable insulated couplings are made with single-unit, molded Nylon-to-metal insert construction. Application requires two couplings and permits smooth control of two parallel shafts that are offset from each other up to 30 degrees and at separations greater than 3 inches. Secured to component and control shafts (1/4") by 2 set screws.

Note: Coupling is accomplished with a 1/4" shaft of any length (Not furnished). Coupling shaft is keyed to each coupler by steel drive pins supplied by JAN.

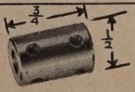
In addition to their application as Offset-Shaft Couplings, these units are widely used to correct for inadvertent misalignments especially where components must be located at distances remote from their panel control point.



AP 15299

SHAFT COUPLING

Cat. No. AP-15150



AP 15150

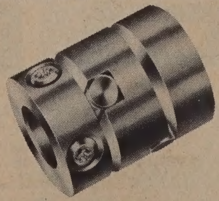
A rugged, nickel plated brass coupling for joining two 1/4" shafts. Supplied with 4 set screws for firm attachment to shafts.

AUTOLINEAR SHAFT COUPLINGS

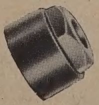
Universal, miniature, self-aligning

Cat. No. AP 15300

A unique series of shaft couplers that accommodate either similar or dissimilar 1/4", 3/16" or 1/8" shafts. Permits offset mis-alignment to 1/16" and 5° angle. Operates free of backlash. Made with our specially formulated non-combustible plastic (SR#23) insulator between precision cast aluminum hubs. Withstands thermal shock from —75° to +85° C. Each hub has 2 set screws for firm attachment. Alodine finish.



NYLON SHAFT LOCK



AK 1050

Cat. No. AK-1050

These shaft locks fit standard 3/8"-32 thread of shaft bushing. Grasps 1/4" shaft with friction grip to prevent accidental or vibrational disturbance of control settings. Adjustment for semi-permanent locking of control shaft is provided. These one-piece units are supplied in black nylon.

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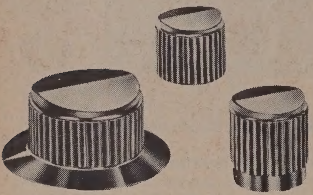
JAN HARDWARE MANUFACTURING CO., INC.

LONG ISLAND CITY 1, NEW YORK

DELUXE CONTROL KNOBS

GUARANTEED TO TOTALLY MEET PERFORMANCE CHARACTERISTICS OF MIL STANDARD 91528

A popular series of high-styled non-combustible knobs, molded from our specially formulated plastic (SR#23). Withstands thermal shocks from —75° to +85° C. Anodized aluminum insert with 2 set screws at 90° insures firm attachment to control shaft. Available with dial skirt, with plain skirt or without skirt. Finishes: Dull matte or glossy. Special colors on request.



SLIP-CLUTCH, SAFETY KNOBS

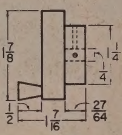
With Fixed or Retractable Spinners

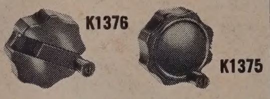
Cat. Nos. K-1375 & K-1376 (For ¼" shafts)

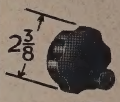
Designed for driving devices such as variable capacitors, inductors, potentiometers, etc., these knobs are based upon the principle of the "slip-clutch", automatically disengaging and slipping when a pre-determined torque has been exceeded. JAN'S SLIP-CLUTCH SAFETY KNOBS are fluted to aid in sensitive adjustments and are equipped with either a fixed or retractable spinner for fast turning. Insert-molded-to-Bakelite construction provide durable, backlash-free units to safeguard delicate and costly instruments against careless or inadvertent cranking beyond their normal stops.

Model No. K-1376 is identical with No. K-1375 but has the additional feature of a retractable spinner. Spring loading provides positive, toggle-type action to lock spinner in either open or closed position. Model No. K-1376 is designed for use where economy of space is essential.

Model No. K-1475 Slip-Clutch knobs are designed similar to No. K-1375 except for larger dimensions and utilize cast aluminum in place of Bakelite.







1475

SPINNER KNOBS

With Fixed or Retractable Spinners

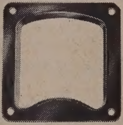
Cat. Nos. K-1275 & K-1276 (For ¼" shafts)

In appearance, these knobs are identical with No. K-1375 and No. K-1376 but without JAN'S Slip-Clutch mechanism. Made with single-unit, molded Bakelite-to-metal-insert construction, with two set screws for firm attachment to shafts.

ET-120

ET-150

ET-160



EM-310

EM-320

EM-325

ET-125

ET-165

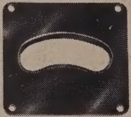
ET-140

ET-155

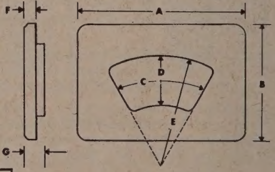
ET-135

ET-130

ET-145



EM-315



SPECIFICATIONS — JAN ESCUTCHEONS

Escutcheon Cat. No.	A Overall Width	B Overall Height	C Window Width*	D Window Height	E Effective Outer Dial Radius	Thickness F=Face Only	Thickness G=Incl. Flange	Type of Dial	Material
ET-120	2 27/32	1 7/8	1 3/4	1"	1 27/32	3/16	3/16	Circular	Injection Molded Tenite II, Black Matte Finish
ET-125	3 7/8	2 15/16	2 7/8	1"	3 1/4	3/16	5/16		
ET-135	2 3/4	1 7/8	1 1/2	7/8	1 7/8	3/16	1/4		
ET-150	3 7/8	2 5/16	2 7/8	3/4	3 1/8	3/16	5/16		
ET-165	2 5/8	1 5/8	1 43/64	5/8	2 3/32	1/8			
ET-130	4	1 13/16	2 1/4	13/16	—	3/16	1/4	Flexible Tape, Digital Counter, Cylinder or Drum	Injection Molded Tenite II, Black Matte Finish
ET-140	2 1/2	1 1/2	1 1/4	5/8	—	1/8	5/16		
ET-145	3 1/4	2 1/16	1 15/16	3/4	—	5/32	5/32		
ET-155	2 1/2	1 3/16	1 11/16	1/2	—	5/32			
ET-160	3 7/8	2 1/2	2 15/16	1 5/8	—	1/8	1/8		
EM-310	3	3	2 1/16	1 15/16	2 9/16	1/32	1/4	Helical	Soft Aluminum with Black Matte Enamel Finish
EM-315	3 1/4	3	2 1/4	5/8	2 1/16	1/32	1/8	Circular	
EM-320	3 1/4	2 3/4	2 1/4	5/8	2 1/16	1/32	1/8	Circular	
EM-325	3	3	2 1/16	1 1/2	2 5/16	1/32	1/4	Helical	

ESCUTCHEON PLATES

For Elegant Framing of Panel Openings

JAN'S molded, black, shock-resistant plastic escutcheons are available in an exceptionally wide variety of different types and sizes. They provide a pleasing window to frame dial plates mounted behind the panel. For especially large working areas, stamped aluminum escutcheons, finished in dull black enamel paint are available to meet the needs for space economy.

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JAN HARDWARE MANUFACTURING CO., INC.

LONG ISLAND CITY 1, NEW YORK

JOLTA SHOCK TEST MACHINES

For reproducible impact-shock test pulses

Four models engineered to reproduce the entire spectrum of all significant impact shock waves.

Designed for laboratory and production testing of light to medium weight components as well as complete instrumentation. Produced to meet practically all requirements of common Mil. Spec. qualification tests. Each JOLTA is electronically calibrated to certify compliance with test specifications.

JOLTA — Bench Model No. 1001 — Produced to meet JAN-S-44 & Mil-Std. 202 (202A). Standard model range-30-120G. Accessory plate springs available for test pulses to 500 G.

JOLTA — Bench Model No. M-500 — Produced to meet Mil-T-12679A (Sig. C) and Mil. T-19500A. Standard model range —200 to 1000 G at 1.0 millisecs. Alternate anvil and pad kits available to order.

JOLTA—Floor Model Nos. F-3003-B-1 and F-3003-B-2—These units are indicated for high impact shock testing of small and moderate sized components. No. F-3003-B-1 has precision machined aluminum carriage. Model F-3003-B-2 has carriage of cast magnesium for higher shock ampitudes. Typical tests with these units —300 to 1500 G at 1 to 2 millisecs. For High impact testing, accessory springs and twin anvil combinations yield pulses of 0.2 millisecs to 5000 G.

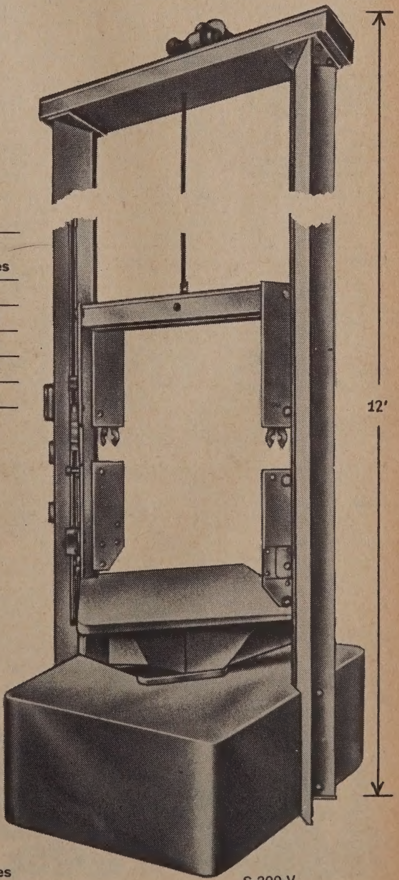
Note: New design allows for quick changeovers of accessories.

FEATURES

- Economical
- Simple to operate
- Rugged
- Uniformly accurate

JOLTA UNIVERSAL SHOCK TESTERS
No. S-200-V

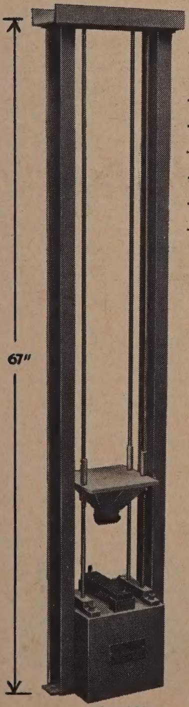
A functionally engineered test machine for large components and complete instrumentation. Accepts specimens up to 200 lbs. and volume of 2 cubic feet. Standard model provides pulses of from 20 to 250 G at 3.0 to over 30.0 millisecs.



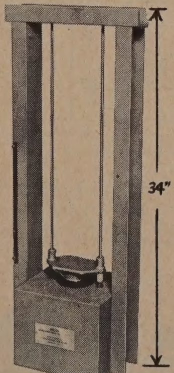
S-200-V

SPECIFICATIONS — JOLTA SHOCK TESTERS

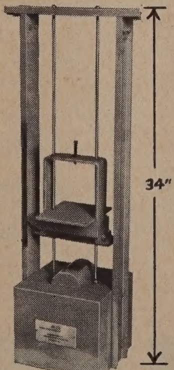
Model No.	Carriage Volume	Test Weight	"G" Ranges
1001	5" x 5" x 7"	0-12 lbs.	25-500
M-500	3" cube	0-2.0 lbs.	100-1000
F-3003B-1	6" cube	0-12 lbs.	50-1500
F-3003B-2	6" cube	0-4.0 lbs.	350-5000
S-200-V	2 Foot cube	0-200 lbs.	20-250



F-3003B



M-500



1001

Free engineering services available to customers where adaptation or conversion of standard machines are needed to meet Mil. Spec. changes or other special needs

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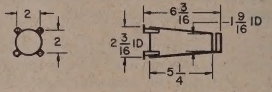
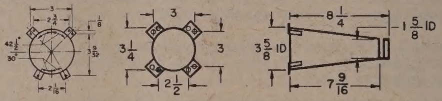
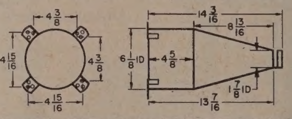
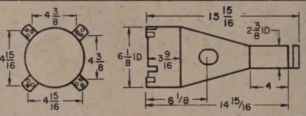
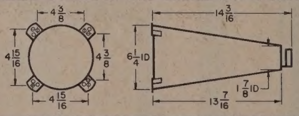
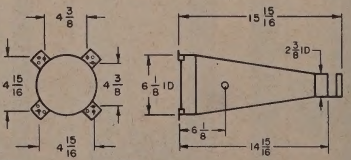
JAN HARDWARE MANUFACTURING CO., INC.

LONG ISLAND CITY 1, NEW YORK

JAN'S MAGNETIC SHIELDS are made of Mu-Metal and are hydrogen annealed by a special process to assure optimum orientation of the molecular structure of the alloy for best magnetic shielding. JAN'S MAGNETIC SHIELDS prevent distortion and intensity modulation of the electron beam due to stray magnetic fields. In addition, the use of these shields protect personnel against the dangers of accidental tube breakage. Mounting holes are tapped for No. 6-32 screws as shown. These shields are designed to fit JAN'S standard bezels as listed below. See following pages for specifications on JAN BEZEL ASSEMBLIES.

SHIELD CAT. NO.	FOR USE WITH C.R.T. NO.	MATCHING JAN BEZEL	
S2001 **S2001-1**	902 2AP 2BP	CP1110 P	 2 2 6 3/16 1 9/16 ID 2 3/16 ID 5 1/4
S3001 adaptable for edge-lighting graticule using S3010 with Bezel CP1428*	3RP1A 3RPA	CP1328-P-1 CP1427-1 CP1429-1 CP1328-P2 CP1427-2 CP1429-2	 3 2 3/4 1/8 42 1/2° 30° 3 9/32 2 1/16 3 3 1/4 3 2 1/2 8 1/4 1 5/8 ID 3 5/8 ID 7 9/16
S3002	3MP	Same as S3003	Same as S-3001 except 8¼ = 7 3/16
S3003	3AP 3KP 908A	CP1328-P1 CP1427-1 CP1429-1	Same as S-3001 except 8¼ = 10⅛
S3004 adaptable for edge-lighting graticule using S3012 with Bezel CP1428*	3BP1 3JP 3ACP	Same as S3003 Same as S3005	Same as S-3001 except 8¼ = 8⅝
S3005 adaptable for edge-lighting graticule using S3008 with Bezel CP1428*	3WP	CP1328-P2 CP1427-2 CP1429-2	Same as S-3001 except 8¼ = 10⅝
S5001	5UP	CP1465 CP13584-1 CP13549-1 CP13595-1 CP19495-1 CP19636-1	 4 3/8 4 15/16 4 3/8 4 15/16 14 3/16 8 13/16 6 1/8 ID 4 5/8 1 7/8 ID 13 7/16
S5002 adaptable for edge-lighting	5BP1 5CP1 5ABP 5ADP	Same as S5001 Same as S5006	 4 3/8 4 15/16 4 3/8 4 15/16 15 15/16 2 3/8 ID 6 1/8 ID 3 9/16 4 6 1/8 14 15/16
S5003	5UP	CP1465 CP13584-1 CP13549-1 CP13595-1 CP19495-1 CP19636-1	 4 3/8 4 15/16 4 3/8 4 15/16 14 3/16 6 1/4 ID 1 7/8 ID 13 7/16
S5005 adaptable for edge-lighting	5AQP 5ABP 5ADP	CP1465-2 CP13549-2 CP13584-2 CP13595-2 CP19495-2 CP19636-2	 4 3/8 4 15/16 4 3/8 4 15/16 15 15/16 2 3/8 ID 6 1/8 ID 6 1/8 14 15/16

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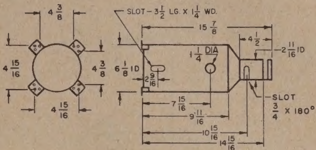
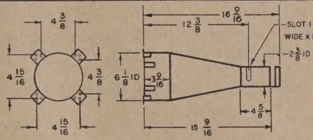
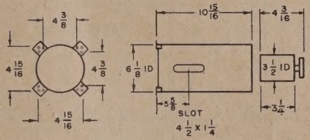
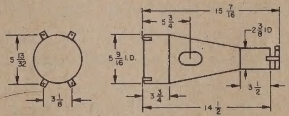
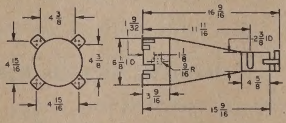
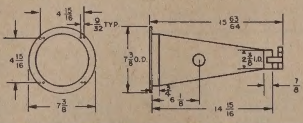
SHIELD CAT. NO.	FOR USE WITH C.R.T. NO.	MATCHING JAN BEZEL	
S5006 adaptable for edge-lighting	5RPA 5 AWP	CP1465-2 CP13549-2 CP13584-2 CP13595-2 CP19495-2 CP19636-2	 4 3/8 SLOT – 3 1/2 LG. x 1 1/4 WD. 15 7/8 4 1/2 2 11/16 ID 4 15/16 4 3/8 6 1/8 ID 1 1/4 DIA 2 9/16 SLOT 3/4 x 180° 7 15/16 9 11/16 10 15/16 14 15/16 4 15/16
S5008 adaptable for edge-lighting	5AMP	CP1465-2 CP13549-2 CP13584-2 CP13595-2 CP19495-2 CP19636-2	 4 3/8 16 9/16 12 3/8 SLOT 1 1/4 WIDE x 180° 2 3/8 ID 4 15/16 4 3/8 6 1/8 ID 3 9/16 4 5/8 4 15/16 15 9/16
S5009 (Shield supplied as two separate sections)	5SPA	CP1465-2 CP13549-2 CP13584-2 CP13595-2 CP19495-2 CP19636-2	 4 3/8 10 15/16 4 3/16 4 15/16 4 3/8 6 1/8 ID 3 1/2 ID 5 5/8 SLOT 4 1/2 x 1 1/4 3 1/4 4 15/16
S5017 adaptable for edge-lighting	5ABP 5ADP	CP1465-2 CP13549-2 CP13584-2 CP13595-2 CP19495-2 CP19636-2	 15 7/16 5 3/4 2 3/8 ID 5 13/32 5 9/16 I.D. 3 1/8 3 3/4 3 1/2 14 1/2
S5019	5BGP	CP1465-2 CP13549-2 CP13584-2 CP13595-2 CP19495-2 CP19636-2	 4 3/8 16 9/16 1 9/32 11 11/16 2 3/8 ID 4 15/16 4 3/8 6 1/8 ID 1 1/8 9/16 R 4 5/8 3 9/16 15 9/16 4 15/16
S5021	5AQP 5ABP 5ADP	CP1465-2 CP13549-2 CP13584-2 CP13595-2 CP19495-2 CP19636-2	 4 15/16 9/32 TYP. 15 63/64 4 15/16 7 3/8 O.D. 2 3/8 I.D. 7/8 3/4 6 1/8 14 15/16 7 3/8

All 5" Shields have mounting provisions for edge lighting, except #5021

The service of JAN's design engineers is available to assist you with your Shield & Bezel requirements. JAN will design and manufacture special Shields & Bezels to customers' specifications. Complete facilities for prototype work.

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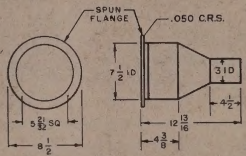
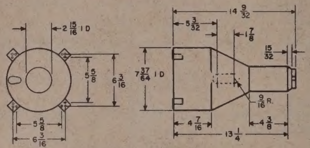
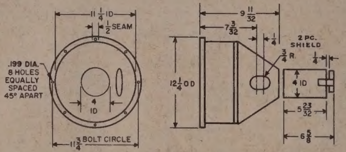
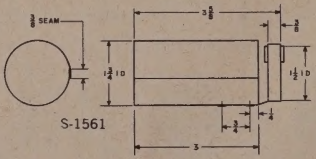
SHIELD CAT. NO.	FOR USE WITH C.R.T. NO.	MATCHING JAN BEZEL	
S7001	7GP4 7JP 7VP1	CP7330 CP7375 CP7331 CP7550 CP7420	 SPUN FLANGE .050 C.R.S. 7 1/2 ID 3 ID 4 1/2 5 21/32 SQ 12 13/16 8 1/2 4 3/8
S7002	7CP 7BP	Same as S7001	Same as S 7001, except anode opening provided
S7006	7AEP	CP7330 CP7375 CP7331 CP7550 CP7420	 2 15/16 ID 14 9/32 5 3/32 1 7/8 15/32 5 5/8 6 3/16 7 37/64 ID 9/16 R. 4 7/16 4 3/8 13 1/4 5 5/8 6 3/16
S10001	10WP	CP10860	 11 1/4 ID 1/2 SEAM .199 DIA. 8 HOLES EQUALLY SPACED 45° APART 4 ID 11 3/4 BOLT CIRCLE 9 11/32 7 3/32 1/4 2 PC. SHIELD 3/4 R. 1/4 12 1/4 OD 4 ID 5 23/32 6 5/8

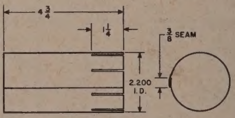
When ordering, be sure to specify CRT type number. Anode openings provided, where required.

MAGNETIC SHIELDS FOR PHOTO-MULTIPLIER & SPECIAL PURPOSE TUBES

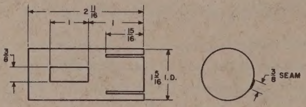
SHIELD	TUBE	SHIELD	TUBE
S-2003	6903	S-1091	ICP1
S-2004	5819 6217 6292 6342 6571 6655	S-1181	929 930 5581 5653 IP39 IP40
S-2005	6372	S-1500	6291
S-3013	1197	S-1561	6199 7102
S-3015	6363	S-1562	931 6323 6328 IP21 IP22 IP28
S-5013	1112		
S-5018	1198		
S-7009	1238 1287	S-2002	6810 7264


3/8 SEAM
3 5/8
3/8
1 3/4 ID
1 1/2 ID
3/4
1/4
3

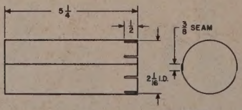
S-1561


4 3/4
1 1/4
3/8 SEAM
2.200 I.D.

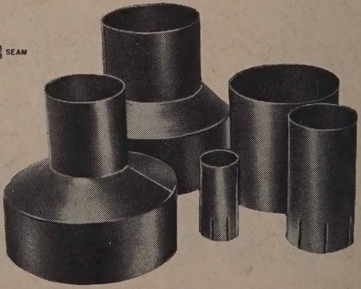
S-2004


2 11/16
1
1
15/16
3/8
1 5/8 I.D.
3/8 SEAM

S-1562


5 1/4
1/2
3/8 SEAM
2 1/8 I.D.

S-2002



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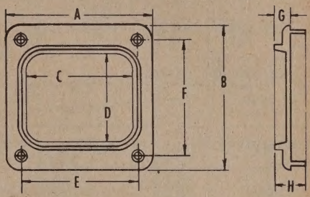
JAN's Bezels enhance the appearance of the instruments on which they are used. These units are functionally designed to provide OPTIMUM UTILIZATION OF THE CRT SCREEN, as well as safety against tube breakage and danger to operating personnel.

JAN Bezel Assemblies are supplied with a bezel, calibrated graticule, (where applicable) light filter and CRT cushion. Bezels are finished in a smooth dull black non-reflecting surface. These units fit JAN Mu-Metal Shields.

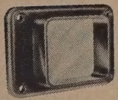
Edge-lit Bezels (E.L.B.A.)** These Bezels are designed to provide edge lighting of the engraved scale-calibrated graticule by means of pilot lights.

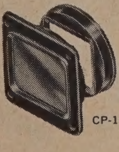
Camera Mount Bezel These units provide an integral cast mounting flange that fits all standard 3″, 5″ and 7″ CRT cameras.

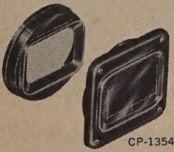


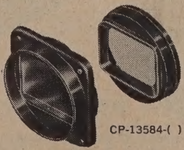
Catalog No.	CRT Face	Material	Type		A	B	C Visible Area (Bezel)	D	E Mounting Holes	F	G- Thickness	H-	Visible Area (Cushion)	
				Panel Opening	Overall Width	Overall Height	Width	Height	Width	Height	(Face Only)	(Incl. Flange)	Height	Width
BEZELS FOR 3″ C.R.T.														
CP-1220-P‡	Curved or Flat	Plastic*	Camera Mount	—	4⅞″	3¼″	2¾″	2¼″	4″	2½″	5/16″	1 1/16″	—	
CP-1328-P-1 CP-1328-P-2	Curved Flat	Plastic*	Standard	3 33/64″	3¾″	3¾″	2⅝″	2 3/16″	3″	3″	⅜″	45/64″	2½″	2 1/16″
CP-1427-1 CP-1427-2	Curved Flat	Aluminum	Camera Mount	3 17/64″	4″	4″	2¾″ Dia.		3″	3″	27/32″	27/32″	2 25/32″ Dia.	
CP-1428-1** CP-1428-2**	Curved Flat	Aluminum	Camera Mount E.L.B.A.**	3 17/64″	4″	4″	2¾″ Dia.		3″	3″	27/32″	27/32″	2 25/32″ Dia.	
CP-1429-1 CP-1429-2	Curved Flat	Aluminum	Camera Mount	3 17/64″	4″	4″	2¾″ Dia.		3″	3″	27/32″	27/32″	2 25/32″ Dia.	
BEZELS FOR 4″ C.R.T.														
CP-1533-P‡		Plastic*	Camera Mount	3 1/32″	4 ⅜″	3 63/64″	3″	3″	4″		1 3/32″	1 3/32″	No Cushion	
BEZELS FOR 5″ C.R.T.														
CP-13549-1 CP-13549-2	Curved Flat	Aluminum	Standard	6.0″	6¼″	6¼″	4⅞″	3¾″	4 15/16″	4 15/16″	17/32″	1 3/32″	4¼″	3 3/16″
CP-13584-1 CP-13584-2	Curved Flat	Aluminum	Camera Mount	6.0″	6¼″	6¼″	4⅞″	3¾″	4 15/16″	4 15/16″	1 5/32″	1 23/32″	4¼″	3 3/16″
CP-13595-1** CP-13595-2**	Curved Flat	Aluminum	Standard E.L.B.A.**	5 7/16″	6¼″	6¼″	4⅞″	3¾″	4 15/16″	4 15/16″	17/32″	17/32″	4¾″ Dia.	
CP-1465 CP-1465-2	Curved or Flat Flat	Steel	Camera Mount	5 9/16″ 5 17/32″	6⅜″ Dia.		5 35/64″ Dia.		6″	6″	⅞″	⅞″	No Cushion 4½″ Dia.	
CP-19495-1** CP-19495-2**	Curved Flat	Aluminum	Camera Mount E.L.B.A.**	5 7/16″	6¼″	6¼″	5¼″ Dia.		4 15/16″	4 15/16″	1 5/32″	1 5/32″	4¾″ Dia.	
CP-19636-2**	Flat	Aluminum	Camera Mount E.L.B.A.**	5 5/16″	5⅞″	5⅞″	4½″ Dia.	3″	4⅞″	4⅞″	1¼″	1¼″	4½″ Dia.	

* All Plastic Bezels are furnished in shock resistant plastic, per MIL P-3414 ** Edge Lit Bezel Assemblies ‡ Rectangular C.R.T.

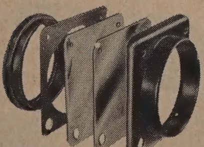

CP-1220-P


CP-1328-P-( )


CP-13549-( )


CP-13584-( )

CP-13595-( )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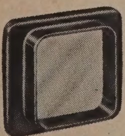
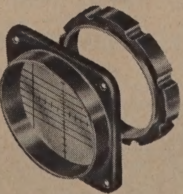

CP-1533-P

CP-1465-( )


CP-19495-( )

CP-19636-(2)

CP-1427 }
CP-1429 } Same as 1428, except for mounting holes

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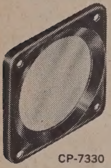
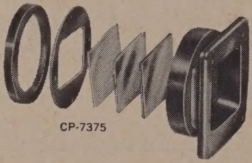
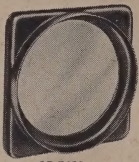
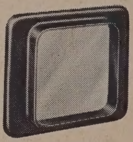
Catalog No.	CRT Face	Material	Type	Panel Opening	A Overall Width	B Overall Height	C Visible Area (Bezel) Width	D Visible Area (Bezel) Height	E Mounting Holes Width	F Mounting Holes Height	G- Thickness (Face Only)	H- Thickness (Incl. Flange)	Visible Area (Cushion) Height	Visible Area (Cushion) Width
BEZELS FOR 7" C.R.T.														
CP-7330 CP-7331**	Curved or Flat	Aluminum	Standard E.L.B.A.**	7 13/32"	7 13/16"	7 13/16"	6 5/16" Dia.		6 3/16"	6 3/16"	3/4"	3/4"	6 3/8" Dia.	
CP-7375**	Curved or Flat	Aluminum	E.L.B.A.**	7 13/32"	8"	8"	4 1/2"	4 1/2"	6 3/16"	6 3/16"	1 17/32"	2 29/32"		
CP-7420	Curved or Flat	Aluminum	Camera Mount	7 13/32"	7 13/16"	7 13/16"	6 15/16" Dia.		6 3/16"	6 3/16"	3/4"	1 3/8"	6 3/8" Dia.	
CP-7550	Curved or Flat	Aluminum	Camera Mount	4 25/32"	7 3/8"	6 1/4"	4 3/4"	4 3/4"	6 1/4"	5 1/8"	1 3/16"	1 9/16"	No Cushion	
BEZEL FOR 10" C.R.T.														
CP-10860	Curved or Flat	Aluminum	Standard	11 1/32"	10 3/4" Dia.		8 1/16"	6 1/4"	11 1/2"	11 1/2"	13/16"	1 3/16"	No Cushion	

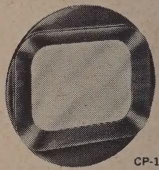
** Edge Lit Bezel Assemblies


CP-7330


CP-7375


CP-7420

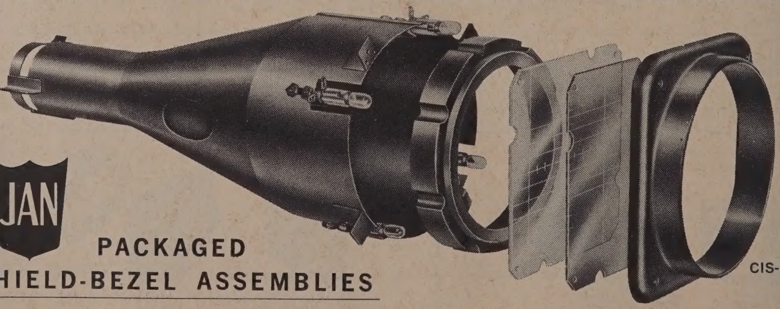

CP-7550


CP-10860

DISTINCTIVE FEATURES

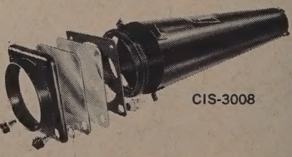
- Engineered for 2", 3", 4", 5", 7", 8" and 10" CRT
- Maximum display area
- Precision engraved, scale-calibrated graticules; standard or to customer's specifications
- Materials and finish to "Mil Spec"
- Heavy buna-S shock cushion
- Models for edge-lighting
- Phosphor-matched light filters
- Non-reflecting matte surfaces
- Rugged camera mounts
- Models for curved and flat-faced CRT

● ●


CIS-5002

PACKAGED SHIELD-BEZEL ASSEMBLIES

SAVES TIME / MONEY **ELIMINATES** MULTIPLE PURCHASING / COMPLEX ENGINEERING


CIS-3008

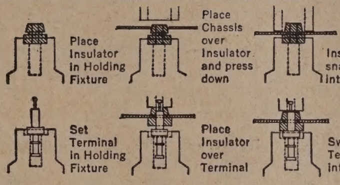
All necessary items for CRT Magnetic Shield and Bezel applications are packaged in one unit.

EACH ASSEMBLY CONTAINS: Shield, JAN Bezel, CRT Rubber Cushion, Graticule, Filter, Light Sockets, Pilot Lamps (for edge-lit bezel-shield assemblies) plus Hardware.

When ordering specify:
"JAN PACKAGED UNIT" giving JAN shield No., JAN bezel No. and CRT tube type with which it is to be used.

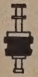
LERCO INSULATED TERMINALS

TEFLON INSULATED SNAP-LOCK TERMINALS



1 SNAP Place Insulator in Holding Fixture — Place Chassis over Insulator and press down — Insulator snaps into hole

2 LOCK Set Terminal in Holding Fixture — Place Insulator over Terminal — Swage Terminal into Place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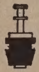
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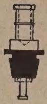
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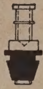
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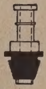
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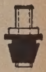
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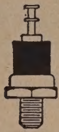
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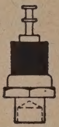
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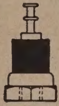
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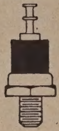
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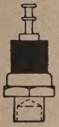
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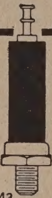
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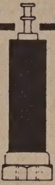
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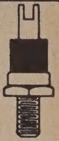
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Phenolic
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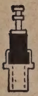
MOLDED STAND-OFF TERMINALS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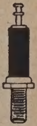
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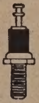
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Melamine
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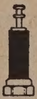
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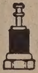
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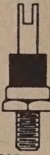
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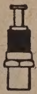
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Alkyd
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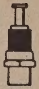
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Melamine
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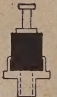
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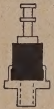
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Melamine
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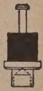
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Melamine
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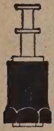
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Melamine
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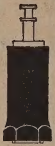
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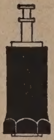
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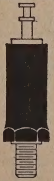
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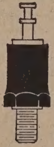
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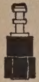
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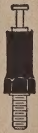
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Melamine
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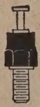
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Melamine
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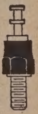
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Melamine
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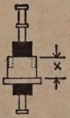
MOLDED FEED-THRU TERMINALS



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Melamine
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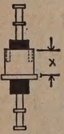

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Melamine
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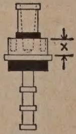

6077*
Melamine
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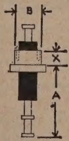
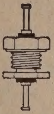


6078-79**
Melamine
.22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Melamine
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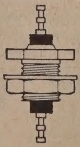
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Phenolic
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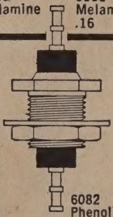
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Phenolic
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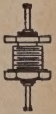

6090
Teflon
.40

*Alternate sizes for items asterisked

Part No.	Dim. X	Thick-ness
-A	.075	1/32
-AB	.095	.050
-B	.105	1/16
-C	.135	3/32
-D	.165	1/8

**6078-79 Available in sizes

Part No.	Dim. A	Dim. B 6078	Dim. B 6079	Dim. X	Board Thick-ness
-A	.420	.173	.195	.075	1/32
-AB	.420	.173	.195	.095	.050
-B	.405	.173	.195	.105	1/16
-C	.375	.173	.195	.135	3/32
-D	.345	.173	.195	.165	1/8

ALL ITEMS SHOWN FULL SIZE

Net price shown under part number. Specify shaft length and board thickness (see next page for ordering information.

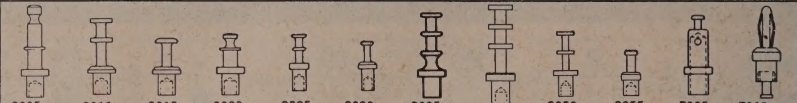
SPECIFICATIONS

Terminal material is half-hard brass with .0003" minimum silver plating unless otherwise specified. Other platings available on special order. Bases are cadmium plated brass. Tolerances: ±.005" unless otherwise specified.

LERCO ELECTRONICS, INC., BURBANK, CALIF.

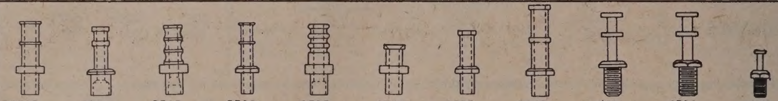
LERCO STANDARD TERMINALS

SINGLE END TERMINALS PLUG AND JACK



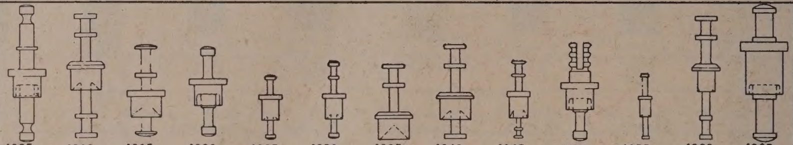
Model	Price
3005	14.20M
3010	11.80M
3015	12.10M
3020	9.20M
3025	8.50M
3030	13.50M
3035	11.80M
3045	22.00M
3050	12.75M
3055	13.50M
7005	58.00M
7010	130.00M

HOLLOW AND THREADED TERMINALS



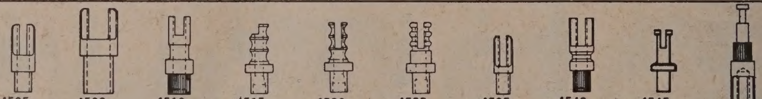
Model	Price
3505	11.80M
3510	17.60M
3515	20.00M
3520	24.50M
3525	21.00M
3530	14.00M
3535	15.50M
3540	21.80M
4530	23.00M
4531	21.00M
4532	18.00M

DOUBLE END TERMINALS



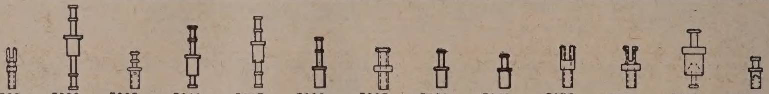
Model	Price
4005	29.40M
4010	31.00M
4015	26.00M
4020	22.00M
4025	12.60M
4030	28.60M
4035	22.50M
4040	28.60M
4045	31.00M
4050	38.00M
4055	24.00M
4060	34.00M
4065	49.30M

MILLED TERMINALS



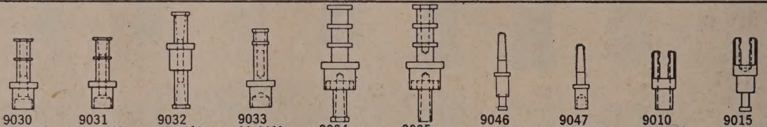
Model	Price
4505	18.00M
4508	36.00M
4510	21.00M
4515	19.60M
4520	28.00M
4525	28.00M
4535	26.80M
4540	19.00M
4545	18.80M
4550	36.00M

SUBMINIATURE TERMINALS



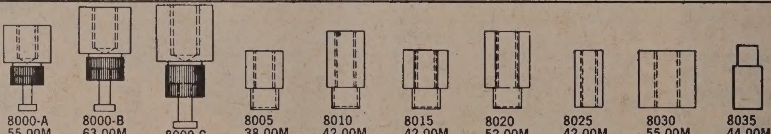
Model	Price
4560	36.00M
5000	16.40M
5005	13.60M
5010	13.80M
5015	16.40M
5020	11.40M
5025	14.00M
5030	14.00M
5040	11.40M
5075	19.00M
5080	28.00M
5085	31.50M
5090	11.50M

TAPER PINS (mate with AMP pins) DIODE CLIPS



Model	Price
9030	22.00M
9031	28.00M
9032	37.40M
9033	33.00M
9034	53.00M
9035	68.00M
9046	30.00M
9047	30.00M
9010	26.70M
9015	27.00M

MOUNTING STANDOFFS



Model	Price
8000-A	55.00M
8000-B	63.00M
8000-C	70.00M
8005	38.00M
8010	42.00M
8015	42.00M
8020	52.00M
8025	42.00M
8030	55.00M
8035	44.00M

ORDERING INFORMATION

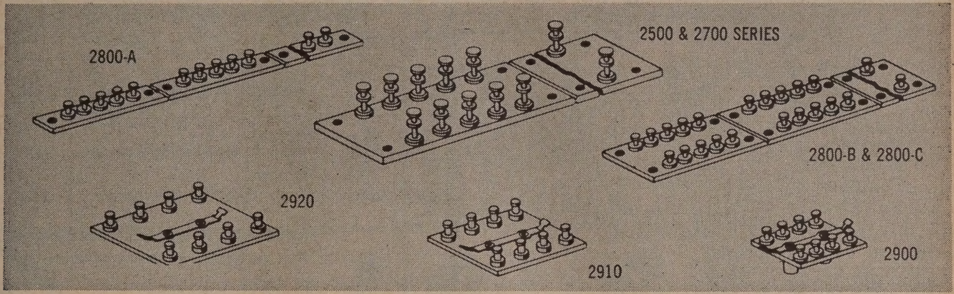
Specify shaft length and desired board thickness by adding code letter to item number. For example, item No. 3005-B has shaft length of .105" and accommodates board thickness of 1/16"; No. 3005-C dimensions are .135" and 3/32", etc.

All items shown full size.
Net price is indicated under model number

	3000, 4000, 7000, 8000, & 9000 SERIES		5000 SERIES		6000 SERIES
	shaft length	thickness	shaft length	thickness	
A	.075	1/32	.053	1/32	Specify desired material thickness
B	.105	1/16	.084	1/16	
C	.135	3/32	.115	3/32	
D	.165	1/8	.147	3/32	

LERCO ELECTRONICS, INC., BURBANK, CALIF.

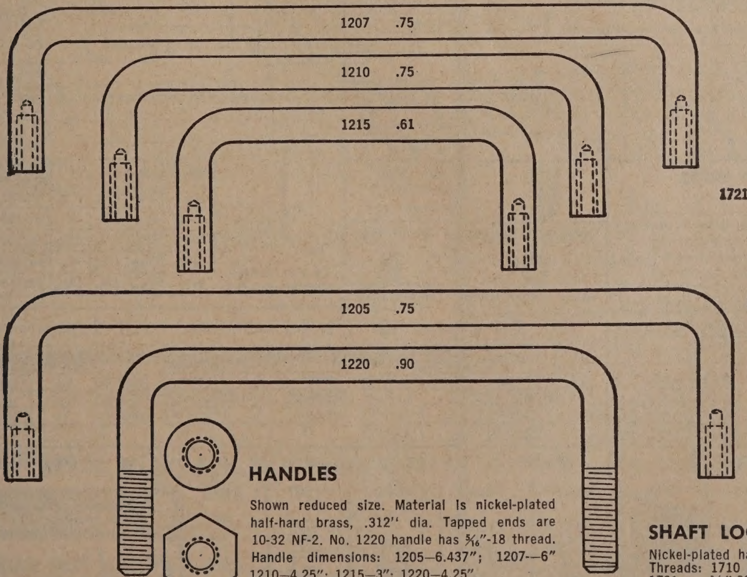
LERCO TERMINAL BOARDS • HANDLES • HARDWARE



TERMINAL BOARD SPECIFICATIONS

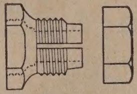
PART NO.	2500-B	2500-C	2500-D	2600	2700-A	2700-B	2800-A	2800-B	2800-C	2900	2910	2920
LENGTH	13⅛″	13⅛″	13⅛″	13⅛″	13⅛″	13⅛″	7¹³⁄₁₆″	7¹³⁄₁₆″	7¹³⁄₁₆″	.875″	1.22″	1½″
WIDTH	2″	2½″	3″	½″	1¹⁄₁₆″	1½″	.312″	¾″	1″	.719″	1.03″	1.16″
BOARD MATERIAL	paper base phenolic	paper base phenolic	paper base phenolic	paper base phenolic	paper base phenolic	paper base phenolic	paper base phenolic	paper base phenolic	paper base phenolic	glass melamine	glass melamine	glass melamine
NO. OF SECTIONS	5	5	5	5	5	5	5	5	5	1	1	1
NO. OF TERMINALS	50	50	50	25	50	50	25	50	50	8	8	8
TERMINAL	3010	3010	3010	3010	3025	3025	5025	5025	5025	5025	3530	3530
ALTERNATE TERMINAL	3015-3505	3015-3505	3015-3505	3015-3505	—	—	5090	5090	5090	—	—	—
PRICE EA.	2.20	2.30	2.40	1.10	1.72	1.78	1.05	2.10	2.10	.60	.65	.70

ORDERING INFORMATION—All terminal boards supplied with ³⁄₃₂″ material unless otherwise specified. Lerco will supply boards of any type made to customer's designs. Send blueprints for immediate quotation.

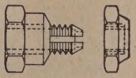


HANDLES

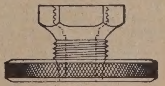
Shown reduced size. Material is nickel-plated half-hard brass, .312″ dia. Tapped ends are 10-32 NF-2. No. 1220 handle has ⁵⁄₁₆″-18 thread. Handle dimensions: 1205—6.437″; 1207—6″ 1210—4.25″; 1215—3″; 1220—4.25″.



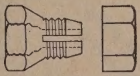
1710 Shaft Lock .17



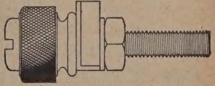
1721-1722 Shaft Lock Nut Ass'y. .17



1720 Hand-Type Shaft Lock .39



1712 Miniature Shaft Lock .17



1750 Dial Lock .30

SHAFT LOCKS

Nickel-plated half-hard brass, shown actual size. Threads: 1710 and 1720 are 3⅜″-32; 1712 and 1721 are ¼″-32; 1722 is ¼″-28.

LERCO ELECTRONICS, INC., BURBANK, CALIF.

Write for complete catalog or quotation on special orders

KEYSTONE DESIGNERS & MANUFACTURERS
NEW YORK 12, N. Y.

ELECTRONIC COMPONENTS

• TERMINAL BOARDS • BATTERY HOLDERS • ELECTRONIC HARDWARE • SHAFTLOCKS • TEST LEADS

KEYSTONE BATTERY HOLDERS

These holders are designed for use in transistor assemblies, radios, Geiger counters, meters, model airplanes, etc. They feature engineered snap clips, moisture-proof fibre washers, spring-temper aluminum alloy, nickel-plated eyelets. Terminals are coated for easy soldering. Mounting holes on all holders.

STANDARD BATTERY HOLDERS

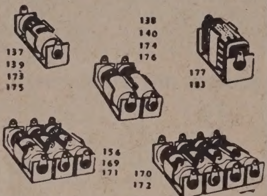
Keystone No.	Holds	Battery *	Keystone No.	Holds	Battery *	Keystone No.	Holds	Battery †
137	1 min. cell	912	185	2 "C" cells, end to end	935	167	2 15-v. cells	U10
138	2 min. cells	912	175	1 "D" cell	D-99	225	1 15-v. cell	Y10
169	3 min. cells	912	176	2 "D" cells	A-100	226	2 15-v. cells	Y10
170	4 min. cells	912	186	2 "D" cells, end to end	724, 950	164	1 22½-v. cell	K15
139	1 pen cell	E9	154	1 1½-v. cell	W468	139	1 22½-v. cell	Y15
140	2 pen cells	E12	155	2 1½-v. cells	W468	140	2 22½-v. cells	Y15
171	3 pen cells	E133	156	3 1½-v. cells	W468	177	1 22½-v. cell	U15
182	4 pen cells	E502	160	1 1½-v. cell	964	178	2 22½-v. cells	U15
189	2 pen cells, end to end	915, 1015E	163	1 15-v. cell	417	165	1 30-v. cell	K20
173	1 "C" cell	E233	166	1 15-v. cell	411	183	1 30-v. cell	U20
174	2 "C" cells	635				184	2 30-v. cells	U20
						157	1 30-v cell	Y20
						134	1 30-v. cell	Y20S

*Eveready type that fits (will take Burgess equal) †Burgess type that fits (will take Eveready equal).

MERCURY BATTERY HOLDERS

Keystone No.	Mallory Battery ‡	Keystone No.	Mallory Battery ‡
101	RM-1R	132	TR-163R
103	RM-3R	109	TR-164R
104	RM-4R	110	TR-165R
139	ZM-9	173	TR-233R
139	RM-12R	111	TR-400R
175	RM-42R	154	RM-401R
113	TR-113R	112	RM-450R
114	TR-114R	139	RM-502R
132	TR-115R	116	RM-601R
132	TR-132R	117	RM-625R
139	TR-133R	118	RM-640R
134	TR-134R	119	302351M
135	TR-135R	120	302478M
189	TR-136R	121	302642M
154	TR-152R	122	302435M
106	TR-153R	139	302437M
113	TR-162R	173	302599M

‡Will fit other manufacturers' equivalent models

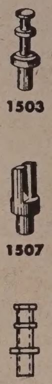


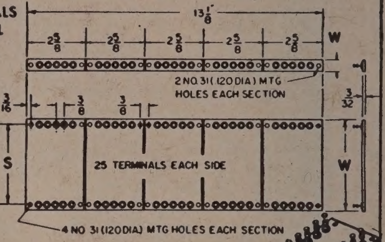
SPECIAL BATTERY HOLDERS CAN BE BUILT TO YOUR SPECIFICATIONS. WRITE FOR INFORMATION.

STANDARDIZED TURRET TERMINAL BOARDS

Cut your production cost by eliminating the tooling and setup charge usually applied to nonstandardized boards. Terminals are securely riveted and hot tinned for easy soldering. Material 3/32" thick natural bakelite to Gov't Spec MIL-P-3115B-TYPE PBE. Five 2-5/8" sections scored for easy separation. Specify #1503, 1507 or 1509 Terminal when ordering.

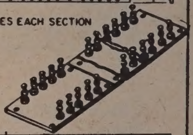
TERMINALS ACTUAL SIZE




13 1/8
2 5/8
2 5/8
2 5/8
2 5/8
2 5/8
W
2 NO. 31 (.120 DIA) MTG HOLES EACH SECTION
3/16
3/8
3/8
3/32
S
25 TERMINALS EACH SIDE
W
4 NO 31 (.120 DIA) MTG HOLES EACH SECTION

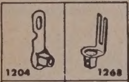
CHOICE OF TERMINALS

1503 1507 1509



CAT NO	CAT NO	CAT NO	W width	S ins. dim.	Total No. terminals
15031	15071	15091	½	single	25
15032	15072	15092	1 ½	1	50
15033	15073	15093	2.	1 ½	50
15034	15074	15094	2 ½	2	50
15035	15075	15095	3	2 ½	50
15036	15076	15096	1 ½	1 3/16	50

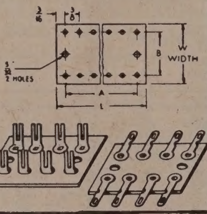
CHOICE OF TERMINALS



READI-MADE TERMINAL BOARDS

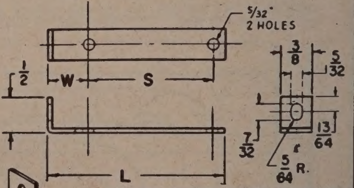
An inexpensive line of terminal boards for general use; terminals are hot tinned for easy soldering and provide a rigid mounting for resistors, condensers, etc Material 1/16" thick bakelite

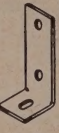
Mountina Holes Provided on all Boards



CAT NO	CAT NO	W width	L length	A mtg ctr	B dim	terminal ea side
1204-12	1268-12	1	2 ¼	1 7/8	11/16	6
1204-28	1268-28	1	5 ¼	4 7/8	11/16	14
1204-20	1268-20	1 ¾	3 ¾	3 3/8	1 7/16	10
1204-22	1268-22	1 ¾	4 1/8	3 ¾	1 7/16	11
1204-38	1268-38	1 ¾	7 1/8	6 ¾	1 7/16	19

MOUNTING BRACKETS



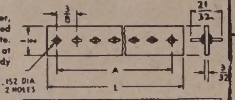


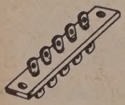
16 GA STEEL
NICKEL PLATED

CAT. NO.	W	L	Y	FOR READY MADE BOARD
1567	3/8	2 1/8	1 1/2	NO. 15033
1568	3/8	2 5/8	2	NO. 15034
1569	3/8	3 1/8	2 1/2	NO. 15035
1570	9/32	1 3/16	3/4	NO. 15022
1571	9/32	1 5/8	1 3/16	NO. 15036

FEED THRU TERMINAL BOARD

Terminals made of copper, hot tinned and force fitted into 3/32" thick bakelite. Holes pierced in Terminal at each end to provide a sturdy feed thru terminal.



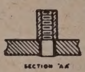


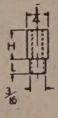
CAT No	No LUGS	A MTG CENTER	L LENGTH
1220-1	1	¾	1 1/8
1220-2	2	1 1/8	1 ½
1220-3	3	1 ½	1 7/8
1220-4	4	1 7/8	2 ¼
1220-5	5	2 ¼	2 5/8
1220-6	6	2 5/8	3
1220-7	7	3	3 3/8
1220-8	8	3 3/8	3 ¾
1220-9	9	3 ¾	4 1/8
1220-10	10	4 1/8	4 ½

No. 1701
SHAFTLOCK
Wrench Type

THREADED BUSHINGS Rivet Type

BRASS NICKEL PLATED





(H) = 1/8" ABOVE PANEL

CAT. NO.	PANEL THICKNESS	L SHANK LENGTH	C THREAD
1560-A	1/16	7/64	4-40
1560-B	1/16	7/64	6-32
1560-C	3/32	9/64	6-32
1560-D	1/8	11/64	6-32

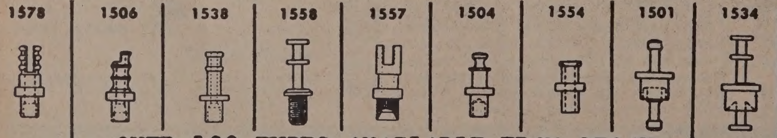
(H) = 1/4" ABOVE PANEL

CAT. NO	PANEL THICKNESS	L SHANK LENGTH	C THREAD
1546	1/16	7/64	6-32
1546-B	3/32	9/64	6-32
1546-D	1/8	11/64	6-32

(H) = 3/8" ABOVE PANEL

CAT. NO.	PANEL THICKNESS	L SHANK LENGTH	C THREAD
1561-B	1/16	7/64	6-32
1561-C	3/32	9/64	6-32
1561-D	1/8	11/64	6-32

TERMINAL ILLUSTRATIONS FULL SIZE. MADE OF BRASS. AVAILABLE IN HOT TIN OR SILVER PLATE



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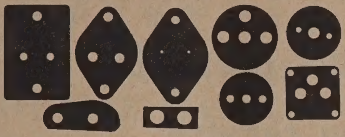
NEW PRODUCT FACTS

STANDARDIZED MICA WAFERS FOR TRANSISTORS

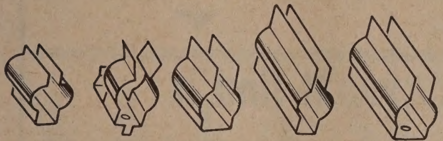


These washers act as a chassis mount for transistors. Made of .002 muscovite mica precision die cut to shapes for most transistors in use today. Good thermal conductivity where transistors must be isolated from the chassis. Also available in .005 thick mylar or silicone varnished fiberglass.

● Special types fabricated on special order ●

Write for our brochure showing dimensional characteristics and description.

HEAT SINKS



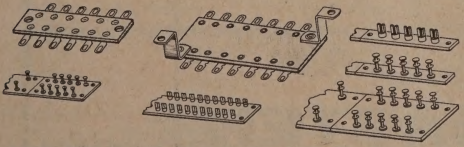
These low cost heat sinks effectively dissipate excessive heat from transistors. Longer transistor life in applications where both good thermal conduction and durability are necessary. Made of steel cadmium plated, also supplied in beryllium copper with silver plate or black finish.

STANDARDIZED PERFORATED BAKELITE BOARDS

Prototype development is simplified by using these standardized pre-punched bakelite boards. Six patterns described here are available from stock. The "G" pattern has .062 dia. holes on a .200 diameter hole circle and is ideal for subminiature wiring using transistors and diodes. The other patterns were chosen for their practicability. **MATERIAL:** GRADE XXXP (MIL-p-3115B) or paper base Epoxy furnished as our standard. Other grades of Epoxy, glass silicone, copper clad either one or both sides are available on special order. Lengths up to 39" furnished if requested.

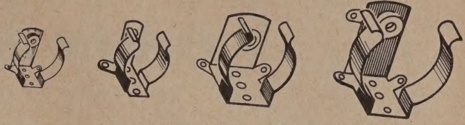
PATTERN	HOLE DIA	DISTANCE BETWEEN CENTERS OF HOLES	THICKNESSES AVAILABLE
B	.062	.187	1/16
F	.062	.200	1/16
G	.062	.200 dia. circle	1/16
A	.093	.265	1/16 or 3/32
E	.100	.250	1/16 or 3/32
H	.120	.375	1/16 or 3/32

STANDARDIZED TERMINAL BOARDS



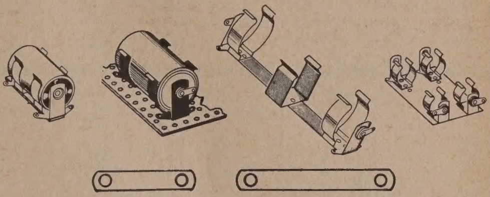
A wide range of sizes for every requirement. You may choose a variety of insulation, terminals, hardware, finishes or marking. Made of certified materials that meet with MIL specifications.

SPACE-SAVER BATTERY HOLDER— INSULATED AND NON-INSULATED TYPES.



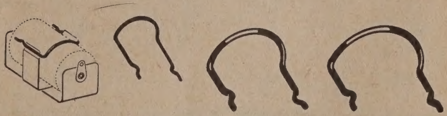
These holders are available insulated contact or with a dimple contact. Provides positive contact in either case. They are compact and economical. The "AA", "C", "D", Mercury and Ni-Cad batteries are accommodated. Made of SAE 1065 steel heat treated to spring temper and nickel plated. Insulated type has steel nickel plated eyelet and resin impregnated vulcanized fibre insulation. Snap-on washer for polarization will be supplied upon request.

SPECIAL APPLICATIONS



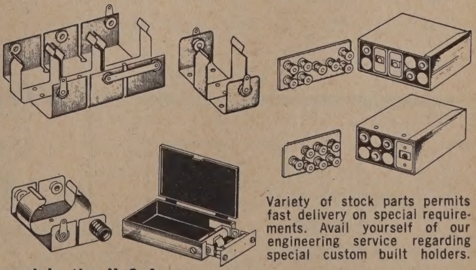
A few examples showing the manner of mounting the above mentioned holders. They can be fastened by screws, rivets, or eyelets to either an insulated base such as bakelite, steel or aluminum. Ideal for mounting directly to a chassis or printed circuit board. We can supply these with POLARIZED washers and straps to eliminate wiring.

RETAINERS FOR KEYSTONE CLIPS



These retainers slide on and compress the lips of the clip preventing the battery from shifting or loosening in the holder. Recommended for use where shock or vibration is encountered. Made of high carbon steel, heat treated to spring temper and nickel plated.

SPECIAL ASSEMBLIES



Variety of stock parts permits fast delivery on special requirements. Avail yourself of our engineering service regarding special custom built holders.

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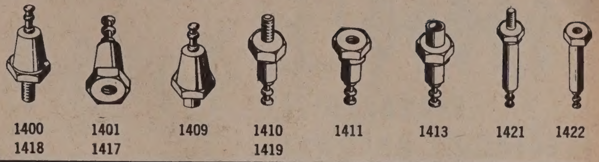
STANDARDIZED ELECTRONIC HARDWARE

INSULATED TERMINALS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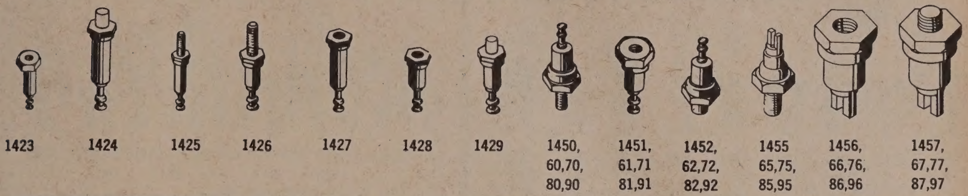
1423
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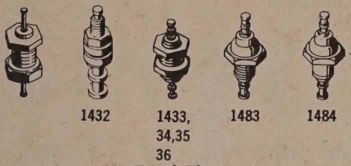
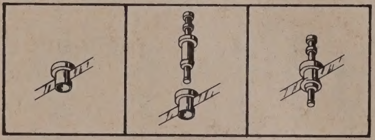
1450, 60,70, 80,90
1451, 61,71 81,91
1452, 62,72, 82,92
1455 65,75, 85,95
1456, 66,76, 86,96
1457, 67,77, 87,97

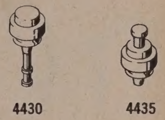

1432
1433, 34,35 36
1483
1484

Feed-Thru

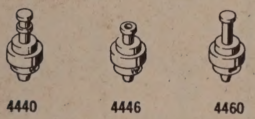
LOC-FIT TEFLON INSULATED TERMINALS



1. Push Teflon Grommet into hole.
2. Insert LOC-FIT terminal.
3. Snap LOC-FIT into place.



Insulated Terminals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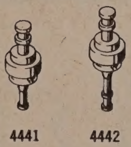
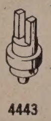
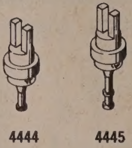
4460



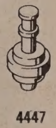
Insulated Feed-Thru



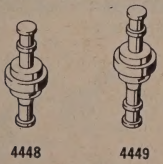
Bifurcated Terminals



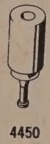
Insulated Bifurcated Feed-Thru



Taper Pin Receptacle

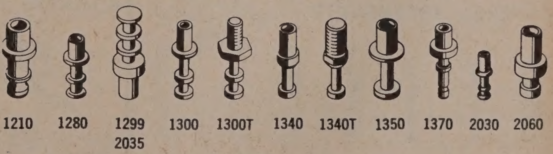


Taper Pin Receptacle Feed-Thru



Insulated Test Point

STANDARD TERMINALS


1210
1280
1299
2035
1300
1300T
1340
1340T
1350
1370
2030
2060
Turret

ENGINEERING DESIGN KIT

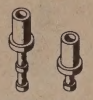
Complete engineering design kits for Loc-Fit, plastic and Hi-Alumina insulated series K-44 and K-14. Also kits for printed circuit terminals, series K-70, and standard terminals, series K-12.

K-44	LOC FIT
K-14-1	HI ALUMINA
K-14-2	TEFLON
K-14-3	PLASTIC
K-70	PRINTED CIRCUIT
K-12	SOLDER TERMINALS

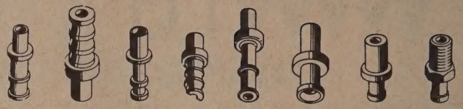
USECO®

STANDARDIZED ELECTRONIC HARDWARE

STANDARD TERMINALS



Turret


1200
1260
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1390
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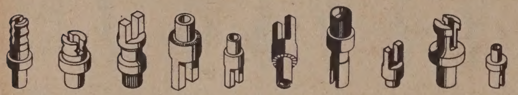
2010T

Hollow Lug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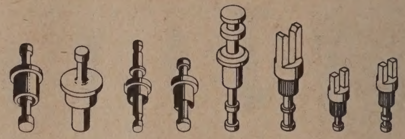
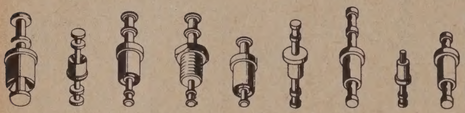
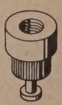
2021

Bifurcated

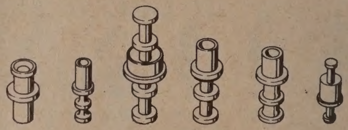

1220
1221
1230
1290
1301
1311
1315
1316

Feed-Thru


1320
1360
2040
2040T
2050
2500
2510
2511
2530

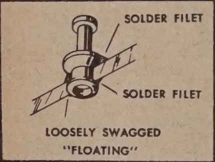


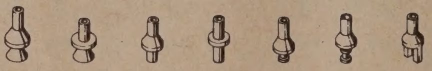
Combination Terminal


704
705
706
707
708
709

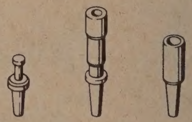
NAS Terminals

FLOATING PRINTED CIRCUIT TERMINALS

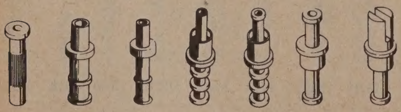

SOLDER FILET
SOLDER FILET
LOOSELY SWAGGED
"FLOATING"


7000
7001
7010
7011
7020
7030
7040

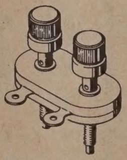
TAPER PINS


2770
2775
2776

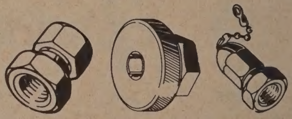
TAPERED RECEPTACLE


2710
2720
2730
2740
2760
2761
2762
2763

BINDING POST



SHAFT LOCKS


1510
1511
1512
1513
1520
1515
1514
(CAP ONLY)

How To Order

Tool number is the same as the number of the terminal of "Loc-Fit" assembly number. Check catalog for proper number.

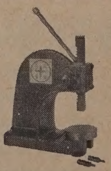
Example:
1. Terminal 1300 A-2, Order 1300 tool
2. "Loc-Fit" 4440 B-2, Order 4440 tool

Always list tool after basic part number.

TOLERANCES

TOLERANCES UNLESS OTHERWISE SPECIFIED.	
DECIMALS	±.003
FRACTIONS	±1/64

USECO Model A SWAGING MACHINE and TOOLS



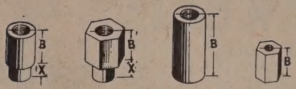
In ordering USECO tools, please order by the part number of the terminal for which the tool is to be used; i.e., one set of #1300 tools will swage all of the letter deviation such as A-B-C, etc., of the #1300 terminal lug. Shipping weight of the swaging machine—18 lbs. tools—4 oz. For your convenience, a large stock of machines and tools are in stock for immediate delivery.

MODEL A	$54.75
TOOLS (SET)	6.50

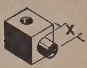
USECO

STANDARDIZED ELECTRONIC HARDWARE

STAND-OFFS

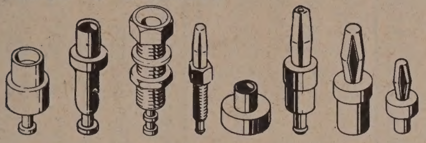


1530, 1540
1531, 1541
1550
1551



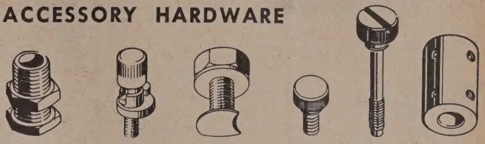
1590 Chassis Fastener

PLUGS & SOCKETS



1571
1700, 1785
1701, 1787
1705, 1782
1710, 1786
1715, 1716
1780
1781

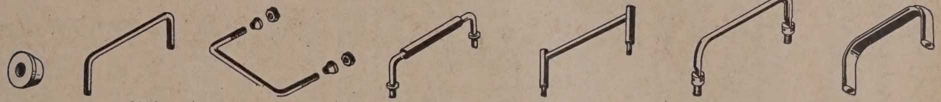
ACCESSORY HARDWARE



1500 series, 1561 series Chassis Bushing
1800 Dial Lock
1815 Dial Indicator
3100-6, 8,10 Thumb Screw
3200-6, 8,10,25 Captive Panel Screw
3316A, B Shaft Coupling

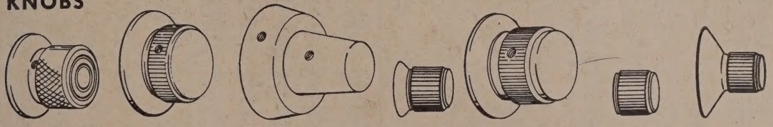
HANDLES & FERRULE

FINISH: CHROME PLATE OVER NICKEL
NICKEL PLATE AVAILABLE UPON REQUEST



900
1004 thru 1019
1020
1025
1030
1032
1053
1050

KNOBS

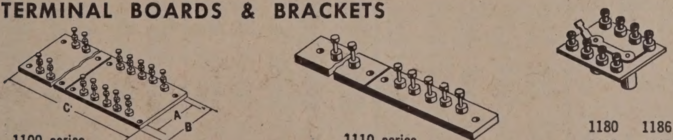


300 series, 305 series, 310 series
400 series, 410 series
450 series
500 series, 501 series, 502 series
550 series, 555 series, 560 series
625 series, 626 series, 627 series
1000 series, 1038 series, 1040 series

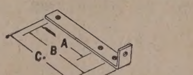
FOR ANODIZED COLORS
ORDER BY DASH NO.

-20	PLAIN	-26	BLUE
-21	BROWN	-27	VIOLET
-22	RED	-28	GREY
-23	ORANGE	-29	WHITE
-24	YELLOW	-30	BLACK
-25	GREEN		

TERMINAL BOARDS & BRACKETS



1100 series, 1102 series, 2200 series, 2202 series
8001 series, 8003 series
1110 series, 1112 series, 2210 series, 2212 series
8002 series, 8004 series
1180, 1181, 1182
1186, 1187, 1188



NO.	A	B	C	D	USE ON
11-2	1.50	—	2-1/8	.35	1100B
11-3	1.50	2.00	2-5/8	.35	1100B 1100C
11-4	2.00	2.50	3-5/16	.56	1100C 1100D
11-5	1.50	2.00	2-13/16	.56	1100B 1100G

To Order

STANDARD CATALOG ITEMS — Standard USECO Electronic Hardware is stocked at your nearby AUTHORIZED USECO DISTRIBUTOR, who offers prompt delivery F.O.B. his warehouse. As a further convenience these items are stocked at:

Los Angeles USECO factory,
or
215 South Fulton Avenue,
Mount Vernon, N.Y.

Shipments F.O.B. Los Angeles or Mount Vernon.

SPECIAL ITEMS — For special USECO items manufactured to your requirements, write or call factory,

Shipments F.O.B. Los Angeles

TERMS: Unless otherwise arranged, net 30 days.

USECO
LITTON INDUSTRIES
U. S. ENGINEERING CO. DIV.
Van Nuys, California

Refer to Next Page For SPECIFICATIONS

for complete information write for Engineering Standards Manual

USECO®

UNLESS OTHERWISE INDICATED:
X - Shank Length: T - Thread or Shank Dia.
BD. THICK - Thickness of Board:

A,B,C,D dimensions on drawings:
Price — Suggested Minimum Quantity

INSULATED STAND-OFF TERMINALS

No.	X	T	Bd. Thick	Price Each
1400A	.187	6-32		.195
1400B	.250	6-32		.195
1400C	.312	6-32		.195
1400D	.375	6-32		.195
1400E	.187	4-40		.195
1400F	.250	4-40		.195
1400G	.312	4-40		.195
1400H	.375	4-40		.195
1401		6-32		.195
1401A		4-40		.195
1410A	.054	.188	.031	.195
1410B	.094	.188	.062	.195
1410C	.125	.188	.094	.195
1410D	.156	.188	.125	.195
1417		6-32		.23
1417A		4-40		.23
1418A	.187	6-32		.23
1418B	.250	6-32		.23
1418C	.312	6-32		.23
1418D	.375	6-32		.23
1418E	.187	4-40		.23
1418F	.250	4-40		.23
1418G	.312	4-40		.23
1418H	.375	4-40		.23
1419A	.054	.188	.031	.23
1419B	.094	.188	.062	.23
1419C	.125	.188	.094	.23
1419D	.156	.188	.125	.23
1421	.250	6-32		.28
1422		6-32		.28
1423		6-32		.28
1450A	.187	6-32		.26
1450B	.250	6-32		.26
1450C	.312	6-32		.26
1450D	.375	6-32		.26
1450E	.187	4-40		.26
1450F	.250	4-40		.26
1450G	.312	4-40		.26
1450H	.375	4-40		.26
1451		6-32		.26
1451A		4-40		.26
1452A	.054	.188	.031	.26
1452B	.094	.188	.062	.26
1452C	.125	.188	.094	.26
1452D	.156	.188	.125	.26
1455A	.187	6-32		.275
1455B	.250	6-32		.275
1455C	.312	6-32		.275
1455D	.375	6-32		.275
1455E	.187	4-40		.275
1455F	.250	4-40		.275
1455G	.312	4-40		.275
1455H	.375	4-40		.275
1456		6-32		.275
1456A		4-40		.275
1457A	.050		.031	.275
1457B	.094		.062	.275
1457C	.125		.094	.275
1457D	.156		.125	.275
1460A	.187	6-32		.26
1460B	.250	6-32		.26
1460C	.312	6-32		.26
1460D	.375	6-32		.26
1460E	.187	4-40		.26
1460F	.250	4-40		.26
1460G	.312	4-40		.26
1460H	.375	4-40		.26
1461		6-32		.26
1461A		4-40		.26
1462A	.054	.188	.031	.26
1462B	.094	.188	.094	.26
1462C	.125	.188	.125	.26
1262D	.156	.188	.156	.26
1465A	.187	6-32		.275
1465B	.250	6-32		.275
1465C	.312	6-32		.275
1465D	.375	6-32		.275
1465E	.187	4-40		.275
1465F	.250	4-40		.275
1465G	.312	4-40		.275
1465H	.375	4-40		.275
1466		6-32		.275
1466A		4-40		.275
1467A	.054	.188	.031	.275
1467B	.094	.188	.062	.275
1467C	.125	.188	.094	.275
1467D	.156	.188	.125	.275

MINIATURE INSULATED STAND-OFF TERMINALS

No.	X	T	Bd. Thick	Price Each
1409	.250	6-32		.23
1411		6-32		.23
1413A	.075	.113		.23
1413B	.105	.113		.23
1413C	.135	.113		.23
1413D	.165	.113		.23
1424B	.105	.115	.062	.28
1424C	.135	.115	.125	.28
1424D	.165	.115	.094	.28
1425	.218	2-56		.28
1427		2-56		.28
1470A	.188	6-32		.29
1470B	.250	6-32		.29
1470C	.312	6-32		.29
1470D	.375	6-32		.29
1470E	.188	4-40		.29
1470F	.250	4-40		.29
1470G	.312	4-40		.29
1470H	.375	4-40		.29
1471A		2-56		.29
1471B		4-40		.29
1472A	.075	.115	.031	.29
1472B	.105	.115	.062	.29
1472C	.135	.115	.094	.29
1472D	.165	.115	.125	.29
1475A	.188	6-32		.305
1475B	.250	6-32		.305
1475C	.312	6-32		.305
1475D	.375	6-32		.305
1475E	.188	4-40		.305
1475F	.250	4-40		.305
1475G	.312	4-40		.305
1475H	.375	4-40		.305
1476A		2-56		.305
1476B		4-40		.305
1477A	.075		.031	.305
1477B	.105		.062	.305
1477C	.135		.094	.305
1477D	.165		.125	.305

SUBMINIATURE INSULATED STAND-OFF TERMINALS

No.	X	T	Bd. Thick	Price Each
1426	.218	.256		.26
1428		.256		.26
1429B	.105	.113	.062	26
1429C	.135	.113	.093	.26
1429D	.165	.113	.125	.26
1480A	.125	.256		.30
1480B	.218	.256		.30
1480C	.125	4-40		.30
1480D	.218	4-40		.30
1481A		4-40		.30
1481B		2-56		.30
1482A	.054	.115	.031	.30
1482B	.094	.115	.062	.30
1482C	.125	.115	.094	.30
1482D	.156	.115	.125	.30
1485A	.125	2-56		.315
1485B	.218	2-56		.315
1485C	.125	4-40		.315
1485D	.218	4-40		.315
1486A		4-40		.315
1486B		2-56		.315
1487A	.054		.031	.315
1487B	.094		.062	.315
1487C	.125		.094	.315
1487D	.156		.125	.315
1490A	.125	2-56		.30
1490B	.218	2-56		.30
1490C	.125	4-40		.30
1490D	.218	4-40		.30
1491A		2-56		.30
1492A	.054	.115	.031	.30
1492B	.094	.115	.062	.30
1492C	.125	.115	.094	.30
1492D	.156	.115	.125	.30
1495A	.125	2-56		.315
1495B	.218	2-56		.315
1495C	.125	4-40		.315
1495D	.218	4-40		.315
1496A		2-56		.315
1497A	.054		.031	.315
1497B	.094		.062	.315
1497C	.125		.094	.315
1497D	.156		.125	.315

INSULATED FEED-THRU TERMINALS

No.	Overall Length	T	Bd. Thick	Price Each
1430	.687	10-32		.385
1431		10-32		.455
1432	.796	5-40		.365
1433	.875	¼-28		.365
1434		¼-28		.47
1435	1.312	⅜-32		.435
1436		⅜-32		.51
1483		¼-28		.68
1484B	.105	.188		.575

INSULATION:
1400, 1401, 1410 — phenolic
1450, 1451, 1452 — teflon
1460, 1461, 1462 — alumina
ALL OTHERS — alkyd

LOC-FIT TEFLON INSULATED TERMINALS

4430A	.031	.062	.094	.105
4430B	.031	.062	.094	.105
4430C	.031	.062	.094	.105
4435A	.031	.062	.094	.095
4435B	.031	.062	.094	.095
4435C	.031	.062	.094	.095
4440A	.031	.062	.094	.105
4440B	.031	.062	.094	.105
4440C	.031	.062	.094	.105
4443A	.031	.062	.094	.12
4443B	.031	.062	.094	.12
4443C	.031	.062	.094	.12
4446A	.031	.062	.094	.10
4446B	.031	.062	.094	.10
4446C	.031	.062	.094	.10
4460A	.031	.062	.094	.105
4460B	.031	.062	.094	.105
4460C	.031	.062	.094	.105

LOC-FIT TEFLON INSULATED FEED-THRUS

No.	Overall Length	T	Bd. Thick	Price Each
4441A	.031	.062	.094	.125
4441B	.031	.062	.094	.125
4441C	.031	.062	.094	.125
4442A	.031	.062	.094	.125
4442B	.031	.062	.094	.125
4444A	.031	.062	.094	.13
4444B	.031	.062	.094	.13
4444C	.031	.062	.094	.13
4445A	.031	.062	.094	.13
4445B	.031	.062	.094	.13
4445C	.031	.062	.094	.13

LOC-FIT TAPER PIN RECEPTACLE

4447A	.031	.062	.094	.145
4447B	.031	.062	.094	.145
4447C	.031	.062	.094	.145

LOC-FIT TAPER PIN RECEPTACLE FEED-THRU

4448A	.031	.062	.094	.185
4448B	.031	.062	.094	.185
4448C	.031	.062	.094	.185
4449A	.031	.062	.094	.17
4449B	.031	.062	.094	.17
4449C	.031	.062	.094	.17

LOC-FIT INSULATED TEST POINTS

4450A			.031	.21
4450B			.062	.21
4450C			.094	.21
4450D			.125	.21

TURRET TERMINALS

No.	X	T or Dia.	Bd. Thick	Price Per M
1210A	.075	.114		15.41
1210B	.105	.114		15.41
1210C	.135	.114		15.41
1210D	.165	.114		15.41
1280A	.075	.091		10.08
1280B	.105	.091		10.08
1280C	.135	.091		10.08
1280D	.165	.091		10.08
1299A	.075	.114	.031	32.93
1299B	.105	.114	.062	32.93
1299C	.135	.114	.094	32.93
1299D	.165	.114	.125	32.93
1299E	.195	.114	.156	32.93
1299F	.230	.114	.188	32.93
1300A	.075	.114	.031	15.41
1300B	.105	.114	.062	15.41
1300C	.135	.114	.094	15.41
1300D	.165	.114	.125	15.41
1300E	.195	.114	.156	15.41
1300F	.230	.114	.188	15.41
1300G	.293	.114	.250	15.41
1300T	.188	4-40		32.75
1340A	.075	.079	.031	14.11
1340B	.105	.079	.062	14.11
1340C	.135	.079	.094	14.11
1340D	.165	.079	.125	14.11
1340T	.125	2-56		20.01
1350B	.105	.114	.062	21.96
1350C	.135	.114	.094	21.96
1350D	.165	.114	.125	21.96
1350E	.195	.114	.156	21.96
1350F	.230	.114	.188	21.96
1370B	.105	.114	.062	20.70
1370C	.135	.114	.094	20.70
1370D	.165	.114	.125	20.70
1370G	.293	.114	.250	20.70
2030	.037	.062	.016	16.22
2030A	.053	.062	.031	16.22
2030B	.084	.062	.062	16.22
2030C	.115	.062	.094	16.22
2030D	.147	.062	.125	16.22
2035A	.075	.089	.031	17.07
2035B	.105	.089	.062	17.07
2035C	.135	.089	.094	17.07
2035D	.165	.089	.125	17.07
2060	.037	.063	.016	14.56
2060A	.054	.063	.031	14.56
2060B	.084	.063	.062	14.56
2060C	.115	.063	.094	14.56
2060D	.147	.063	.125	14.56
2520A	.054	.073	.031	17.84
2520B	.084	.073	.062	17.84
2520C	.115	.073	.094	17.84
2520D	.147	.073	.125	17.84
2540A	.054	.073	.031	15.77
2540B	.084	.073	.062	15.77
2540C	.115	.073	.094	15.77
2540D	.147	.073	.125	15.77

HOLLOW TERMINALS

No.	X	T or Dia.	Bd. Thick	Price Per M
1200A	.075	.114	.031	14.08
1200B	.115	.114	.062	14.08
1200C	.135	.114	.093	14.08
1200D	.165	.114	.125	14.08
1200E	.195	.114	.156	14.08
1200F	.230	.114	.187	14.08
1260B	.105	.114	.062	23.04
1260C	.135	.114	.093	23.04
1260D	.165	.114	.125	23.04
1330B	.105	.135	.062	24.13
1330C	.135	.135	.093	24.13
1330D	.165	.135	.125	24.13
1380B	.105	.114	.062	23.56
1380C	.135	.114	.093	23.56
1380D	.165	.114	.125	23.56
1380E	.195	.114	.156	23.56
1390A	.075	.079	.031	39.46
1390B	.105	.079	.062	39.46
1390C	.135	.079	.093	39.46
1390D	.165	.079	.125	39.46
1390E	.195	.114	.156	39.46
1390F	.230	.114	.187	39.46
1392A	.075	.111	.031	17.37
1392B	.105	.111	.062	17.37
1392C	.135	.111	.093	17.37
1392D	.165	.111	.125	17.37
2010	.037	.063	.015	14.91
2010A	.053	.063	.031	14.91
2010B	.084	.063	.062	14.91
2010C	.115	.063	.093	14.91
2010D	.147	.063	.125	14.91
2010T	.125	.063		17.32

BIFURCATED TERMINALS

No.	X	T or Dia.	Bd. Thick	Price Per M
1240B	.105	.183	.062	31.20
1240C	.135	.183	.094	31.20
1240D	.165	.183	.125	31.20
1240E	.195	.183	.156	31.20
1240F	.230	.183	.188	31.20
1250A	.075	.114	.031	25.88
1250B	.105	.114	.062	25.88
1250C	.135	.114	.094	25.88
1250D	.165	.114	.125	25.88
1255A	.075	.114	.031	21.22
1255B	.105	.114	.062	21.22
1255C	.135	.114	.094	21.22
1255D	.165	.114	.125	21.22
1305B	.105	.114	.062	27.14
1305C	.135	.114	.094	27.14
1305D	.165	.114	.125	27.14
1306B	.105	.135	.062	45.28
1306C	.135	.135	.094	45.28
1306D	.165	.135	.125	45.28
1307C	.135	.186	.094	54.33
1307D	.165	.186	.125	54.33
1307E	.195	.186	.156	54.33
1307F	.230	.186	.188	54.33
1308A	.054	.114	.031	20.42
1308B	.084	.114	.062	20.42
1308C	.115	.114	.094	20.42
1308D	.147	.114	.125	20.42
1309A	.075	.091	.031	21.78
1309B	.105	.091	.062	21.78
1309C	.135	.091	.094	21.78
1309D	.165	.091	.125	21.78
1310A	.075	.114	.031	18.03
1310B	.105	.114	.062	18.03
1310C	.135	.114	.094	18.03
1310D	.165	.114	.125	18.03
1391A	.075	.151	.031	29.47
1391B	.105	.151	.062	29.47
1391C	.135	.151	.094	29.47
1391D	.165	.151	.125	29.47
1391E	.195	.151	.156	29.47
1391F	.230	.151	.188	29.47
2000	.037	.063	.016	15.67
2000A	.053	.063	.031	15.67
2000B	.084	.062	.062	15.67
2000C	.115	.062	.094	15.67
2000D	.147	.062	.125	15.67
2000E	.179	.062	.156	15.67
2001	.037	.062	.016	22.36
2001A	.053	.062	.031	22.36
2001B	.084	.062	.062	22.36
2001C	.115	.062	.094	22.36
2001D	.147	.062	.125	22.36

Net

USECO®

No.	X	T or Dia.	Bd. Thick	Price Per M
2005	.037	.062	.016	20.80
2005A	.053	.062	.031	20.80
2005B	.084	.062	.062	20.80
2005C	.115	.062	.094	20.80
2005D	.147	.062	.125	20.80
2020	.037	.063	.016	19.19
2020A	.053	.063	.031	19.19
2020B	.084	.063	.062	19.19
2020C	.115	.063	.094	19.19
2020D	.147	.063	.125	19.19
2021	.037	.063	.016	22.53
2021A	.053	.063	.031	22.53
2021B	.084	.063	.062	22.53
2021C	.115	.063	.094	22.53
2021D	.147	.063	.125	22.53
2022	.037	.063	.016	23.40
2022A	.053	.063	.031	23.40
2022B	.084	.063	.062	23.40
2022C	.115	.063	.094	23.40
2022D	.147	.063	.125	23.40

FEED-THRU TERMINALS

No.	X	T or Dia.	Bd. Thick	Price Per M
1220B	.105	.183	.062	32.02
1220C	.135	.183	.094	32.02
1220D	.165	.183	.125	32.02
1220E	.195	.183	.156	32.02
1220F	.230	.183	.188	32.02
1221B	.105	.183	.062	38.83
1221C	.135	.183	.094	38.83
1221D	.165	.183	.125	38.83
1221E	.195	.183	.156	38.83
1221F	.230	.183	.188	38.83
1230B	.105	.183	.062	49.65
1230C	.135	.183	.094	49.65
1230D	.165	.183	.125	49.65
1230E	.195	.183	.156	49.65
1230F	.230	.183	.188	49.65
1290A	.075	.114	.031	15.08
1290B	.105	.114	.062	15.08
1290C	.135	.114	.094	15.08
1290D	.165	.114	.125	15.08
1301C	.135	.114	.094	37.40
1301D	.165	.114	.125	37.40
1301E	.195	.114	.156	37.40
1301F	.230	.114	.188	37.40
1311A	.105	.114	.062	44.20
1311B	.135	.114	.094	44.20
1311C	.165	.114	.125	44.20
1315B	.094	.094	.062	38.13
1315C	.125	.094	.094	38.13
1315D	.156	.094	.125	38.13
1316B	.094	.094	.062	56.33
1316C	.125	.094	.094	56.33
1316D	.156	.094	.125	56.33
1320B	.105	.204	.062	32.15
1320C	.135	.204	.094	32.15
1320D	.165	.204	.125	32.15
1320E	.195	.204	.156	32.15
1320F	.230	.204	.188	32.15
1360C	.135	.204	.094	39.82
1360D	.165	.204	.125	39.82
1360E	.195	.204	.156	39.82
1360F	.230	.204	.188	39.82
2040A	.075	.126	.031	18.98
2040B	.105	.126	.062	18.98
2040C	.135	.126	.094	18.98
2040D	.165	.126	.125	18.98
2040T	.125	5-40		24.09
2050A	.075	.126	.031	20.97
2050B	.105	.126	.062	20.97
2050C	.135	.126	.094	20.97
2050D	.165	.126	.125	20.97
2500A	.053	.091	.031	18.11
2500B	.084	.091	.062	18.11
2500C	.115	.091	.094	18.11
2500D	.147	.091	.125	18.11
2510A	.053	.073	.031	18.03
2510B	.084	.073	.062	18.03
2510C	.115	.073	.094	18.03
2510D	.147	.073	.125	18.03
2511A	.053	.073	.031	20.22
2511B	.084	.073	.062	20.22
2511C	.115	.073	.094	20.22
2511D	.147	.073	.125	20.22

No.	X	T or Dia.	Bd. Thick	Price Per M
2530A	.053	.073	.031	15.77
2530B	.084	.073	.031	15.77
2530C	.115	.073	.094	15.77
2530D	.147	.073	.125	15.77

COMBINATION TERMINALS

No.	X	T or Dia.	Bd. Thick	Price Per M
1203C	.141	.221	.094	78.78
1203D	.172	.251	.125	78.78
1203E	.234	.258	.188	78.78

NAS TERMINALS

No.	Shank Length	Bd. Thick	Dia.	Price Per M
704-1	.078	.031	.110	20.80
704-2	.109	.062	.110	20.80
704-3	.141	.093	.110	20.80
704-4	.172	.125	.110	20.80
705-1	.075	.031	.092	11.80
705-2	.105	.062	.092	11.80
705-3	.135	.093	.092	11.80
705-4	.165	.125	.092	11.80
706-2	.094	.062	.201	43.25
706-3	.125	.093	.201	43.25
706-4	.156	.125	.201	43.25
707-2	.109	.062	.112	17.85
707-3	.141	.093	.112	17.85
707-4	.172	.125	.112	17.85
708-2	.109	.062	.112	15.81
708-3	.141	.093	.112	15.81
708-4	.172	.125	.112	15.81
709-1	.062	.031	.116	16.81
709-2	.094	.062	.116	16.81
709-3	.125	.093	.116	16.81
709-4	.156	.125	.116	16.81

FLOATING PRINTED CIRCUIT TERMINALS

No.	X	T or Dia.	Bd. Thick	Price Per M
7000A	.062	.062	.031	17.93
7000B	.094	.062	.062	17.93
7000C	.125	.062	.094	17.93
7000D	.156	.062	.125	17.93
7001A	.062	.062	.031	17.93
7001B	.094	.062	.062	17.93
7001C	.125	.062	.094	17.93
7001D	.156	.062	.125	17.93
7010A, B, C, D		(same as 7001 series)		17.77
7020A, B, C, D		(same as 7001 series)		17.77
7030A, B, C, D		(same as 7001 series)		17.77
7040A, B, C, D		(same as 7001 series)		23.57

TAPER PINS

2770	.205	Taper .061 in. per in. on dia.	14.73
2775	.281	Taper .061 in. per in. on dia.	24.74
2776	.281	Taper .061 in. per in. on dia.	15.90

ENGINEERING DESIGN KIT

No.	Price Each
K-14	28.50
K-44	28.50
K-12	28.50
K-70	28.50

TAPERED RECEPTACLE TERMINALS

No.	X	T or Dia.	Bd. Thick	Price Per M
2710	.531	.094	.500	69.94
2720A	.075	.114	.031	27.87
2720B	.105	.114	.062	27.87
2720C	.135	.114	.094	27.87
2720D	.165	.114	.125	27.87
2720E	.195	.114	.156	27.87
2720F	.230	.114	.188	27.87
2730A	.075	.114	.031	36.40
2730B	.105	.114	.062	36.40
2730C	.135	.114	.094	36.40
2730D	.165	.114	.125	36.40
2730E	.195	.114	.156	36.40
2730F	.230	.114	.188	36.40
2740A	.075	.079	.031	39.40
2740B	.105	.079	.062	39.40
2740C	.135	.079	.094	39.40
2740D	.165	.079	.125	39.40
2740E	.195	.079	.156	39.40
2740F	.230	.079	.188	39.40
2750A	.075	.079	.031	32.60
2750B	.105	.079	.062	32.60
2750C	.135	.079	.094	32.60
2750D	.165	.079	.125	32.60
2750E	.195	.079	.156	32.60
2750F	.230	.079	.188	32.60
2760B	.105	.204	.062	69.93
2760C	.135	.204	.094	69.93
2760D	.165	.204	.125	69.93
2761B	.105	.204	.062	43.33
2761C	.135	.204	.094	43.33
2761D	.165	.204	.125	43.33
2762A	.062	.145	.031	51.31
2762B	.094	.145	.062	51.31
2762C	.124	.145	.094	51.31
2762D	.156	.145	.125	51.31
2762E	.188	.145	.156	51.31
2762F	.219	.145	.188	51.31
2762G	.281	.145	.250	51.31
2763A	.062	.145	.031	88.35
2763B	.094	.145	.062	88.35
2763C	.124	.145	.094	88.35
2763D	.156	.145	.125	88.35
2763E	.188	.145	.156	88.35
2763F	.219	.145	.188	88.35
2763G	.281	.145	.250	88.35

BINDING POST

No.	Mtg. Hole Dia.	Bd. Thick	Price Each
3500	.500	.437	1.145

PLUGS AND SOCKETS

No.	X	T or Dia.	Bd. Thick	
1571B	.105	.181	.062	.175
1571C	.135	.181	.094	.175
1571D	.165	.181	.125	.175
1571E	.204	.181	.156	.175

No.	X	T	Bd. Thick	Recept. Dia. Nom.
1700C	.135	.135	.094	.21
1700D	.165	.135	.125	.21
1701		¼-28		.25
1705B	.105		.062	.30
1705C	.135		.094	.30
1705D	.165		.125	.30
1710C	.135		.094	.10
1710D	.13		.165	.10
1715		2-56		.28
1716		4-40		.28
1780E	.195	.190	.156	.30
1780F	.230	.190	.188	.30
1780G	.255	.190	.218	.30
1781B	.094	.094	.062	.345
1781C	.125	.094	.094	.345
1781D	.156	.094	.125	.345
1782E	.195	.190	.156	.345
1782F	.230	.190	.188	.345
1782G	.255	.190	.218	.345
1785E	.195	.203	.156	.345
1785F	.230	.203	.188	.345
1785G	.255	.203	.218	.345
1786E	.195	.205	.156	.25
1786F	.230	.205	.188	.25
1786G	.255	.205	.218	.25
1787		¼-28		.25

ACCESSORY HARDWARE

No.	B	Thd.	D or Dia.	Price Each
1560	.562		.250	.16
1560-1	.438		.250	.16
1560-2	.375		.250	.16
1561	.562		.125	.16
1561-1	.438		.125	.16
1561-2	.375		.125	.16
1800		10-32		1.06
1815		4-40		.365
3100-6		6-32		.25
3100-8		8-32		.25
3100-10		10-32		.25
3200-6		6-32	.094	.28
3200-8		8-32	.120	.28
3200-10		10-32	.140	.28
3200-25		¼-20	.200	.28
3316A		6-32	.251	.435
3316B		6-32	.126	.435

SHAFT LOCKS

No.	Shaft Dia.	Int. Thd.	Price Each
1510	.250	⅜-32	.23
1511	.250	⅜-32	.385
1512	.125	¼-32	.21
1513	.125	¼-32	.335
1514	Cap Only		.23
1515	.250	⅜-32	.47

STAND-OFFS

No.	Lgth. B	X	T	Price Each
1530A	.250	.075	.031	.065
1530B	.250	.105	.062	.065
1530C	.250	.135	.093	.065
1530D	.250	.165	.125	.065
1531A	.375	.075	.031	.065
1531B	.375	.105	.062	.065
1531C	.375	.135	.093	.065
1531D	.375	.165	.125	.065
1540A	.375	.075	.031	.065
1540B	.375	.105	.062	.065
1540C	.375	.135	.093	.065
1540D	.375	.165	.125	.065
1541A	.375	.075	.031	.065
1541B	.375	.105	.062	.065
1541C	.375	.135	.093	.065
1541D	.375	.165	.125	.065
1550A	.250	.187	4-40	.08
1550B	.375	.187	4-40	.08
1550C	.250	.250	6-32	.10
1550D	.375	.250	6-32	.10
1550E	.500	.250	6-32	.10
1550F	.625	.250	6-32	.10
1550G	.750	.250	6-32	.10
1550H	.250	.375	8-32	.12
1550I	.375	.375	8-32	.12
1550J	.500	.375	8-32	.12
1550K	.625	.375	8-32	.12
1550M	.750	.375	8-32	.12
1551A	.250	.187	4-40	.105
1551B	.375	.187	4-40	.105
1551C	.250	.250	6-32	.125
1551D	.375	.250	6-32	.125
1551E	.500	.250	6-32	.125
1551F	.625	.250	6-32	.125
1551G	.750	.250	6-32	.125
1551H	.250	.375	6-32	.145
1551I	.375	.375	8-32	.145
1551J	.500	.375	8-32	.145
1551K	.625	.375	8-32	.145
1551M	.750	.375	8-32	.145

Shank Dia., .188

CHASSIS FASTENER

No.	X	T	
1590B	.105	.062	.125
1590C	.135	.093	.125
1590D	.165	.125	.125
1591B	.105	.062	.125
1591C	.135	.094	.125
1591D	.165	.125	.125

Shank Dia., .187

HANDLES — FERRULE

900 (Fits 1005 through 1017)

No.	A	B	Price Each
1004	6.44	1.50	1.08
1005	6.44	1.75	1.08
1007	6.00	1.50	1.06
1010	4.25	1.50	99
1012	4.00	1.50	.99
1013	4.56	1.50	1.01
1015	3.00	1.50	.975
1017	2.00	1.50	.955
1018	8.00	1.50	1.395
1019	10.00	1.50	1.735
1020	4.25	1.50	1.185
1025A	4-5	1.50	1.98
1025B	5-6	1.50	1.98
1030	3-6	1.50	2.81
1032	4.00	2.435	3.07
1050	3.00	1.28	1.375
1053	9.00	1.75	1.755

A—Bolt Centers

B—Hgt. Off Panel

ROUND KNURLED ALUMINUM KNOBS

No.	Hole Dia.	Max. Shaft O.D.	Price Each
300	.250	.250	.955
301	.188	.188	.955
302	.125	.125	.955
305	.250	.250	.99
306	.188	.188	.99
307	.125	.125	.99
310	.250	.250	1.03
311	.188	.188	1.03
312	.125	.125	1.03
400	.250	.250	1.655
401	.188	.188	
402	.125	.125	
410	.250	.250	5.20
411	.188	.188	
412	.125	.125	
450	.250	.250	3.475
500	.250	.250	.715
501	.188	.188	.715
502	.125	.125	.715
550	.250	.250	1.01
551	.188	.188	1.01
552	.125	.125	1.01
555	.250	.250	1.04
556	.188	.188	1.04
557	.125	.125	1.04
560	.250	.250	1.08
561	.188	.188	1.08
562	.125	.125	1.08
625	.250	.250	.73
626	.188	.188	.73
627	.125	.125	.73
1000	.250	.250	.885
1001	.188	.188	.885
1002	.125	.125	.885
1038	.250	.250	1.01
1039	.188	.188	1.01
1040	.125	.125	1.01

STANDARD TERMINAL BOARDS & BRACKETS

No.	A	B	C	Price Each
1100A	1.000	1.50	13.12	2.57
1100B	1.500	2.00	13.12	2.655
1100C	2.000	2.50	13.12	2.76
1100D	2.500	3.00	13.12	2.86
1102A	1.000	1.50	13.12	
1102B	1.500	2.00	13.12	4.94
1102C	2.000	2.50	13.12	5.585
1102D	2.500	3.00	13.12	6.21
1110		.500	13.12	1.165
1112		.500	13.12	2.015
1180	.500	.719	.875	.75
1181	.750	1.031	1.218	.78
1182	.875	1.156	1.500	.855
1186	.500	.718	.875	.835
1187	.750	1.031	1.218	.875
1188	.875	1.156	1.500	.94
2200B	.500	.75	7.812	2.62
2200C	.750	1.00	7.812	2.965
2202B	.500	.75	7.812	3.265
2202C	.750	1.00	7.812	4.215
2210		.312	7.812	1.475
2212		.312	7.812	2.34
8001A	1.00	1.50	13.12	ON REQUEST
8001B	1.50	2.00	13.12	
8001C	2.00	2.50	13.12	
8001D	2.50	3.00	13.12	
8002		.500	13.12	
8003B	.500	.750	7.812	
8003C	.750	1.00	7.812	
8004		.937	7.812	

1100, 2200 series—5 sect.
1180 series—1 sect.

11-2	(See	.105
11-3	Bracket	.105
11-4	Chart)	.125
11-5		.125

Sealectro PRESS-FIT® TEFLON† TERMINALS

SIMPLE INSTALLATION — WIDEST STOCK SELECTION — ASSORTED LUGS AND PLATING

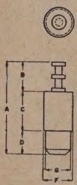


Fig. 26

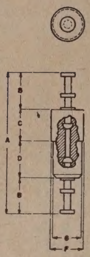


Fig. 27

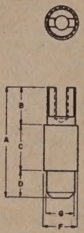


Fig. 31

MINIATURE STAND-OFFS

Wide selection of types in voltage ratings to 4000. Choice of lugs and finishes, as well as bushings. For components and assemblies stressing higher operating voltages rather than space-saving.

PART NO.	FIG.	A	B	C	D	F	G
ST-210	26	.346	.156	.103	.087	.125	.104
ST-250	26	.431	5/32	.125	.150	3/16	.165
ST-1000	26	.493	5/32	.187	.150	3/16	.165
ST-1500	26	.556	5/32	.250	.150	3/16	.165
ST-2000	26	.831	9/32	.400	.150	3/16	.165
ST-2500	26	.968	9/32	.500	.187	1/4	.215
ST-4000	26	1.268	9/32	.800	.187	1/4	.215
DST-1000	27	.819	.210	.187	.212	3/16	.171
DST-1550	27	1.187	9/32	.250	.375	1/4	.218
DST-2550	27	1.687	9/32	.500	.625	1/4	.218
ST-250 SL	31	.478	13/64	.125	.150	3/16	.171
ST-1000 SL	31	.540	13/64	.187	.150	3/16	.171
ST-1500 SL	31	.603	13/64	.250	.150	3/16	.171
ST-2500 SL	31	.890	13/64	.500	.187	1/4	.217
ST-4000 SL	31	1.190	13/64	.800	.187	1/4	.217

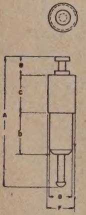


Fig. 33

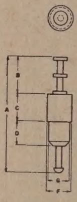


Fig. 35

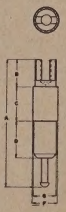
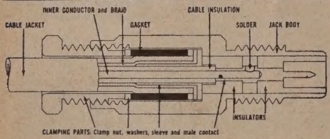


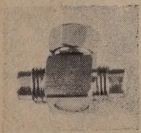
Fig. 37

MINIATURE FEED-THRUS

Handy Feed-thru terminals with choice of lugs. Handling voltage ratings up to 4000. Wide selection of bushing diameters and lengths. Ideal for making connections through chassis or casings, with generous safety factor at rated voltages.

PART NO.	FIG.	A	B	C	D	F	G
FT-310	33	.540	.133	.063	.171	.187	.171
FT-1000	33	.740	1/8	.187	.212	3/16	.171
FT-1500	33	.865	1/8	.250	.275	3/16	.171
FT-2500	33	1.365	1/8	.500	.525	1/4	.217
FT-4000	33	1.965	1/8	.800	.825	1/4	.217
FT-1000 DTUR	35	.836	1/4	.187	.212	3/16	.171
FT-1000 SL	37	.821	13/64	.187	.212	3/16	.171
FT-1500 SL	37	.947	13/64	.250	.275	3/16	.171
FT-2000 SL	37	1.197	13/64	.375	.400	3/16	.171


INNER CONDUCTOR and BRAID
CABLE INSULATION
CABLE JACKET
GASKET
SOLDER
JACK BODY
INSULATORS
CLAMPING PARTS: Clamp nut, washers, sleeve and male contact



NEW—CONHEX ADAPTORS

RF subminiature "T" adaptor (75 ohm) for use in tight spaces in communications gear. One piece construction for unusual strength. Contact assembly designed to provide excellent electrical characteristics.

50 ohm BNC to ConheX cable adaptor to accept all series 3000 ConheX rf subminiature connectors. Permits the use of all 50 ohm ConheX connectors to BNC panel fittings.

Sealectro CONHEX

SUB-MINIATURE R.F. CONNECTORS

Radically different. Provably *better*. And you can tell them at a glance—by their *hexagonal* bodies. The only connectors that can be wired and rewired in factory, lab, shop or field, *without special tools*. Typical advantages:

Successfully withstand pull-out strain in excess of 20 lbs.

Captivated contacts insure proper engagement of mating parts.

Clamping parts, insulators and contacts readily assembled on cable before insertion in connector body.

Gold-plated hex stock allows assembly with usual pliers or small wrench.

Contacts soldered to center conductor of cable, insuring proper connections.

No distortion of cable insulation that might affect electrical characteristics.

Flexible design accepts all RG-188/U MIL cable diameters.

50-OHM "CONHEX" TYPES SHOWN

Type 3000
Cable Plug

Type 3001
Cable Jack

Type 3002
Panel
Receptacle

Type 3003
Panel Jack

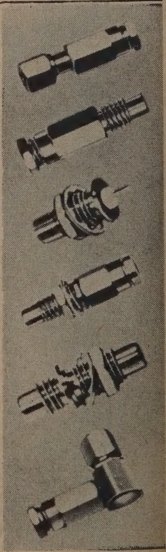
Type 3005
Right-Angle
Plug

Type 3004
Cable Feedthru

Type 3007
Printed Wiring
Straight Receptacle

Type 3008
Printed Wiring
Right-Angle

In several other popular types.
Also available in 75- and 95-ohm impedance sizes.



Sealectro PRESS-FIT® TEFLON† TERMINALS

INSURED PERFORMANCE — OUTSTANDING LABORATORY SERVICE — PRECISION PARTS

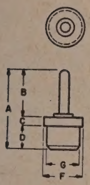


Fig. 1

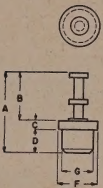


Fig. 4

SUBMINIATURE STAND-OFFS

The ultimate in space-saving terminals for subminiaturization programs. Teflon bushing diameters of the order of .148″ to .218″. Choice of lugs, including turrets.

PART NO.	FIG.	A	B	C	D	F	G
ST-SM-1	1	.350	.210	.040	.100	.172	.148
ST-SM-1L2	1	.265	.125	.040	.100	.172	.148
ST-SM-1L4	1	.250	.110	.040	.100	.172	.148
ST-SM-1L6	1	.285	.145	.040	.100	.172	.148
ST-SM-1L10	1	.594	.450	.040	.100	.172	.148
ST-SM-2C4	1	.375	.210	.050	.110	.172	.148
ST-SM-19	1	.365	.193	.040	.132	.172	.148
ST-SM-1 TUR	4	.350	.210	.040	.100	.172	.148
ST-SM-4 TUR	4	.350	.210	.040	.100	.200	.179
ST-SM-20 TUR	4	.350	.210	.040	.100	.218	.185
ST-SM-22 TUR	4	.428	.210	.093	.125	.172	.148
ST-SM-23 TUR	4	.350	.210	.040	.100	.250	.204
ST-SM-29 TUR-C2	4	.540	.250	.040	.250	.172	.148

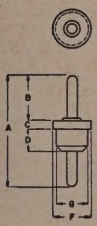


Fig. 8

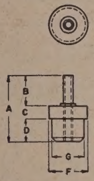


Fig. 9

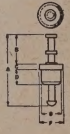


Fig. 12

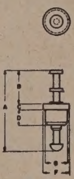
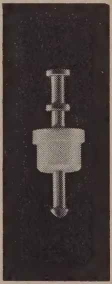


Fig. 13

SUBMINIATURE FEED-THRUS

For facilitating connections through chassis or casing, in subminiaturized components and assemblies. Choice of lug designs and finishes, including hollow-tube lugs. Generous safety factor at rated voltages.

PART NO.	FIG.	A	B	C	D	F	G
FT-SM-1	8	.515	.210	.040	.100	.172	.148
FT-SM-2C4	8	.535	.210	.050	.110	.172	.148
FT-SM-2C6	8	.410	.147	.050	.110	.172	.148
FT-SM-9L2	8	.407	.125	.040	.132	.172	.148
FT-SM-52	9	.225	.125	.040	.060	.150	.125
FT-SM-55	9	.296	.136	.060	.100	.172	.148
FT-SM-60	9	.367	.207	.050	.110	.213	.171
FT-SM-1 TUR	12	.500	.210	.040	.100	.172	.148
FT-SM-16 TUR	12	.500	.210	.040	.100	.125	.093
FT-SM-21 TUR	13	.531	.210	.040	.125	.218	.185



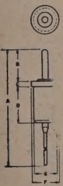


Fig. 46

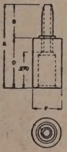


Fig. 51

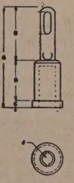


Fig. 52

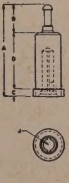
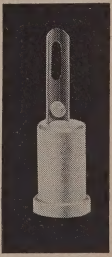


Fig. 53

JACKS AND PLUGS

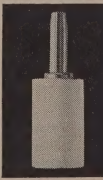
Breakaway connectors (male and female) miniature test point jacks (female) that will accept test instrument probes or companion plugs and patch cord jumpers

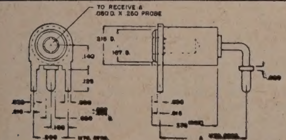
PART NO.	FIG.	A	B	C	D	J
SKT 1	52	11/16	.354	.046	.287	.050
SKT-4	52	11/16	.354	.046	.287	.041
SKT-8	52	11/16	.330	.046	.287	.080
SKT-2BC	53	7/16	.120	.046	.281	.090
SKT-5BC	53	7/16	.120	.046	.281	.080
SKT-10	53	.637	.187	.050	.400	.080
SKT-12	53	.375	.060	.046	.269	.090
SKT-13	53	.203	.060	——	.143	.040
SKT-14	53	.345	.120	.046	.179	.040
SKT-15	53	.732	.188	.157	.387	.050



Specifically designed as companion units (male) for connectors and test jacks. Used as test instrument probes, jumper plugs and multiple pin plugs.

PART NO.	FIG.	A	B	C	D	F	G
FT-M-2	46	2.083	¼	.046	.287	.218	.185
FT-M-4	46	.739	9/32	.046	.287	.218	.185
PR-300	51	.645	.270	.375	——	.218	——





PRINTED WIRING JACKS

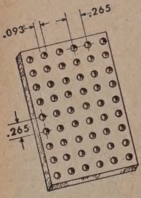
Miniature jacks. Mount flat on printed-wiring board. Double-prong steel strap in front, connection lug at rear, fit into three holes of grid coordinate layout.

Part No. SKT-102 PC (.500″ overall centers)
Part No. SKT-103 PC (.400″ overall centers)

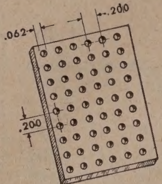
AVAILABLE IN COLORS — DESIGNED FOR COLOR CODING.

Vector ELECTRONIC CO., INC.
GLENDALE 1, CALIF.

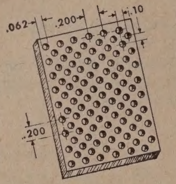
VECTORBORD



Pattern A & AA



Pattern F



Pattern G

VECTORBORD (Pre-punched terminal board) is especially useful for breadboarding as well as production because it provides an overall grid of pre-punched holes. Holes are either .093″ or .062″ diameter in XXXP phenolic per MIL-P-3115B or epoxy paper. Also available in Epoxy Glass grade G-10 per MIL-P-18177, Glass Silicone Grade G-7 per MIL-P-997B, and in other board sizes and hole patterns.

Cat. No.	Pattern	Thickness	Width	Length	No. of Holes	Net Price 1-19
Epoxy Paper						
32AA18EP	AA	3/32″	4 13/16″	8½″	32 x 18	1.40
64AA18EP	AA	3/32″	4 13/16″	17″	64 x 18	2.73
85F24EP	F	3/32″	4 13/16″	17″	85 x 23	2.06
85G24EP	G	1/16″	4 13/16″	17″	(85 x 23) x 2	2.06
XXXP Phenolic						
32AA18	AA	3/32″	4 13/16″	8½″	32 x 18	.84
64A18	A	1/16″	4 13/16″	17″	64 x 18	1.25
64AA18	AA	3/32″	4 13/16″	17″	64 x 18	1.60
32AA9	AA	3/32″	2 7/16″	8½″	32 x 9	.60
Epoxy Glass						
64A18WE	A	1/16″	4 13/16″	17″	64 x 18	3.72
85G24WE	G	1/16″	4 13/16″	17″	(85 x 23) x 2	3.81

PLUGBORD

R616

812

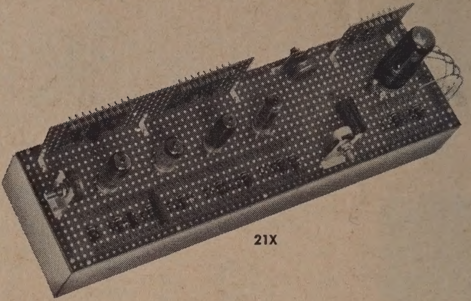
Use Plugbords for
- Plug-In Test Circuits
- Prototype of To-Be Printed Circuit Cards
- Modular Plug-In Cards

Standard Plugbords made from 1/16″ thick Epoxy Paper material with allover grid of 0.062″ holes on alternate 0.1″ centers.

Locate Vector T-28 Push-In Terminals and eyelets where required and lay out components to exactly duplicate printed card, if desired. Elco Varicon contacts come attached to board. Different sizes, hole patterns and materials readily available to order.

Cat. No.	Description	Net Price 1-19
837	Plugbord, 3″ wide by 4½″ long with 12 contacts	2.13
812	Plugbord, 4½″ wide by 6½″ long with 16 contacts	2.73
R612	Receptacle, 12 contacts	1.59
R616	Receptacle, 16 contacts	2 02

EXPERIMENTER'S CHASSIS KIT


21X

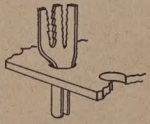
The EXPERIMENTER'S CHASSIS Kit for rapid setup of circuitry provides a perforated epoxy paper type AA deck described elsewhere, aluminum channel supports, PUSH-IN ZIP terminals as above, miniature seven pin, nine pin and octal sockets, self-tapping screws and spacers for mounting sockets, pot and switch mtg brackets, and other miscellaneous hardware and strips. Instructions for assembly are supplied with the kit.

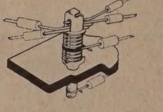
Kit 22X resembles #20X except that parts are provided to connect transistors.

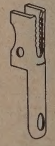
Kit 25X is a truly solderless experimental circuitry kit built around the Vector T-30 Solderless Springclip Terminal. Solderless Springclips hold up to six leads without soldering.

Cat. No.	Description	Net Price 1-19
20X	Low Cost sampler 4¾″ x 8½″ Deck & accessories	6.25
21X	4¾″ x 17″ Deck-Term, Sockets, many accessories	15.25
22X	4¾″ x 8½″ Deck for Transistor circuitry	10.50
25X	17″ x 8½″ Deck, Frame, Solderless Springclip terminals, Wire, Accessories	19.50

VECTOR PUSH-IN ZIP TERMINALS


T9.4


T30


T28

VECTOR PUSH-IN TERMINALS simplify "breadboarding". Push them into .062 or .093 holes in 1/16″ or 3/32″ Vectorbord panels and they hold without staking. (May be staked if desired for maximum holding). Each terminal has serrated slots to grip inserted wires. Large slot accommodates most resistor and capacitor wires, small slot holds transistor leads. The T9.6 also has special slot to accommodate diodes. All types have thru-shank construction enabling riser wires to be inserted down through center of terminal, and slotted shank end for additional connections.

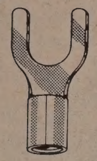
SOLDERLESS SPRINGCLIP TERMINALS—Reliable, truly solderless terminal for experimental circuitry. Holds up to six leads without soldering. May be used over and over—permits reusing expensive components. Packaged in bags of 10 and 100.

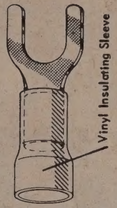
Cat. No.	Fits Holes	Description	Quantity Per Bag	Net Price 1-19 Bags
T9.4	.093″	Brass, Fused tin Pltg.	100	1.25
T9.6	.093″	Heat Treat Beryllium Copper, Fused Tin Pltg.	100	2.10
T28	.062″	Heat Treat Beryllium Copper, Fused Tin Pltg.	100	1.55
T30	.093″	Half Hard Brass post & Washer, Stl. spring. Sil Plated, Stearic Acid Dip	10	1.20
T9.62	.093″	Two T9.6 in Tandem	25	1.22
T9.63	.093″	Three T9.6 in Tandem	25	1.75
T9.64	.093″	Four T9.6 in Tandem	25	2.27

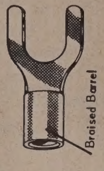
WALDOM

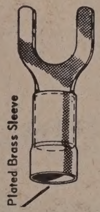
SOLDERLESS TERMINALS AND CONNECTORS

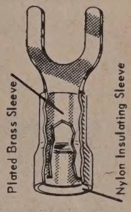
COMPLETE LINE . . . 14 TYPES, 5 CONSTRUCTION STYLES











KRIMPTITE ®

Basic non-insulated electrotin plated copper terminal. One-piece construction for maximum strength and conductivity.

INSULKRIMP ®

All advanced features of KRIMPTITE, plus permantly attached rigid vinyl plastic insulating sleeve for increased vibration resistance.

UNIKRIMP ®

Advantageous features of KRIMPTITE plus the higher tensile strength afforded by BRAZED BARREL construction.

VIBRAKRIMP ®

Particularly suitable where high vibration is a factor. KRIMPTITE construction plus seamless annealed electrotin plated brass sleeve.

AVIKRIMP ®

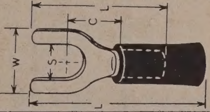
All VIBRAKRIMP features, tin-plated brass sleeve plus permanently attached overlapping nylon insulating sleeve.

Insulated terminals color coded 22–16 Red 16–14 Blue 12–10 Yellow

BASIC TERMINAL CONSTRUCTION DETAILS

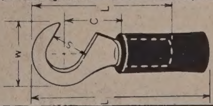
Material: Annealed electrolytic copper, electro-tin finish. Modern one-piece design for maximum strength and conductivity. With strength gusset, open end rapid inspection, beveled edge to facilitate wire insertion. Circumferential serrations for maximum contact area and grip. Full 1/4 inch barrel length, wide crimping area, easy location.

Spade Tongue Terminals



	Basic Dimensions			KRIMPTITE		INSULKRIMP			UNIKRIMP		VIBRAKRIMP			AVIKRIMP		
Wire Range	Stud Size S	Width W	Clearance C		Length L	.125 Max. Insulation Diameter	.145 Max. Insulation Diameter	Length L		Length L	.145 Max. Insulation Diameter		Length L	.145 Max. Insulation Diameter		Length L
				Cat. No.		Cat. No.	Cat. No.		Cat. No.		Cat. No.			Cat. No.		
22-16	3-4	1/4	7/32	S-1116	5/8	T-2116	T-2116X	13/16	B-3116	5/8	D-4116		25/32	N-5116		13/16
	3-4	19/64	7/32	S-1117	5/8	T-2117	T-2117X	13/16	B-3117	5/8	D-4117		25/32	N-5117		13/16
	5-6	1/4	7/32	S-1118	5/8	T-2118	T-2118X	13/16	B-3118	5/8	D-4118		25/32	N-5118		13/16
	5-6	19/64	7/32	S-1014	5/8	T-2014	T-2014X	13/16	B-3014	5/8	D-4014		25/32	N-5014		13/16
	5-6	5/16	5/16	S-1029	3/4	T-2029	T-2029X	15/16	B-3029	3/4	D-4029		29/32	N-5029		15/16
	8	1/4	7/32	S-1119	5/8	T-2119	T-2119X	13/16	B-3119	5/8	D-4119		25/32	N-5119		13/16
	8	19/64	7/32	S-1030	5/8	T-2030	T-2030X	13/16	B-3030	5/8	D-4030		25/32	N-5030		13/16
	8	5/16	5/16	S-1031	3/4	T-2031	T-2031X	15/16	B-3031	3/4	D-4031		29/32	N-5031		15/16
	10	19/64	7/32	S-1120	5/8	T-2120	T-2120X	13/16	B-3120	5/8	D-4120		25/32	N-5120		13/16
	10	5/16	5/16	S-1032	3/4	T-2032	T-2032X	15/16	B-3032	3/4	D-4032		29/32	N-5032		15/16
16-14						.155 Max.	.175 Max.				.155 Max.			.175 Max.		
	3-4	1/4	7/32	S-1121	5/8	T-2121	T-2121X	13/16	B-3121	5/8	D-4121		29/32	N-5121		13/16
	3-4	19/64	7/32	S-1122	5/8	T-2122	T-2122X	13/16	B-3122	5/8	D-4122		29/32	N-5122		13/16
	5-6	1/4	7/32	S-1123	5/8	T-2123	T-2123X	13/16	B-3123	5/8	D-4123		29/32	N-5123		13/16
	5-6	19/64	7/32	S-1015	5/8	T-2015	T-2015X	13/16	B-3015	5/8	D-4015		29/32	N-5015		13/16
	5-6	23/64	9/32	S-1051	3/4	T-2051	T-2051X	15/16	B-3051	3/4	D-4051		29/32	N-5051		15/16
	8	1/4	7/32	S-1124	5/8	T-2124	T-2124X	13/16	B-3124	5/8	D-4124		25/32	N-5124		13/16
	8	19/64	7/32	S-1033	5/8	T-2033	T-2033X	13/16	B-3033	5/8	D-4033		25/32	N-5033		13/16
	8	23/64	9/32	S-1052	3/4	T-2052	T-2052X	15/16	B-3052	3/4	D-4052		29/32	N-5052		15/16
	10	19/64	7/32	S-1104	5/8	T-2104	T-2104X	13/16	B-3104	5/8	D-4104		25/32	N-5104		13/16
	10	23/64	9/32	S-1016	3/4	T-2016	T-2016X	15/16	B-3016	3/4	D-4016		29/32	N-5016		15/16

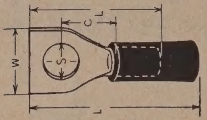
Hook Tongue Terminals



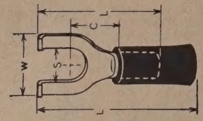
22-16						.125 Max.	.145 Max.				.145 Max.			.145 Max.		
	5-6	5/16	5/16	S-1018	23/32	T-2018	T-2018X	29/32	B-3018	23/32	D-4018		7/8	N-5018		29/32
	8	5/16	5/16	S-1036	23/32	T-2036	T-2036X	29/32	B-3036	23/32	D-4036		7/8	N-5036		29/32
	10	5/16	5/16	S-1037	23/32	T-2037	T-2037X	29/32	B-3037	23/32	D-4037		7/8	N-5037		29/32
16-14						.155 Max.	.175 Max.				.175 Max.			.175 Max.		
	5-6	11/32	9/32	S-1038	23/32	T-2038	T-2038X	29/32	B-3038	23/32	D-4038		7/8	N-5038		29/32
	8	11/32	9/32	S-1039	23/32	T-2039	T-2039X	29/32	B-3039	23/32	D-4039		7/8	N-5039		29/32
	10	11/32	9/32	S-1040	23/32	T-2040	T-2040X	29/32	B-3040	23/32	D-4040		7/8	N-5040		29/32

NOTE: 12–10 Wire Range sizes also available. Ask your distributor for Waldom Sales Bulletin 5E9 with complete listings, comprehensive cross reference to other sources, and pricing.

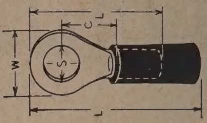
WALDOM SOLDERLESS TERMINALS AND CONNECTORS



Rectangular Tongue



Flanged Spade



Ring Tongue

Rectangular Tongue Terminals

	Basic Dimensions			KRIMPTITE		INSULKRIMP			UNIKRIMP		VIBRAKRIMP			AVIKRIMP		
Wire Range	Stud Size S	Width W	Clearance C		Length L	.125 Max. Insulation Diameter	.145 Max. Insulation Diameter	Length L		Length L	.145 Max. Insulation Diameter		Length L	.145 Max. Insulation Diameter		Length L
				Cat. No.		Cat. No.	Cat. No.		Cat. No.		Cat. No.			Cat. No.		
22-16	3-4	1/4	7/32	S-1127	5/8	T-2127	T-2127X	13/16	B-3127	5/8	D-4127		25/32	N-5127		13/16
	3-4	19/64	7/32	S-1128	5/8	T-2128	T-2128X	13/16	B-3128	5/8	D-4128		25/32	N-5128		13/16
	5-6	1/4	7/32	S-1129	5/8	T-2129	T-2129X	13/16	B-3129	5/8	D-4129		25/32	N-5129		13/16
	5-6	19/64	7/32	S-1071	5/8	T-2071	T-2071X	13/16	B-3071	5/8	D-4071		25/32	N-5071		13/16
	5-6	5/16	5/16	S-1130	3/4	T-2130	T-2130X	15/16	B-3130	3/4	D-4130		29/32	N-5130		15/16
	8	1/4	7/32	S-1131	5/8	T-2131	T-2131X	13/16	B-3131	5/8	D-4131		25/32	N-5131		13/16
	8	19/64	7/32	S-1072	5/8	T-2072	T-2072X	13/16	B-3072	5/8	D-4072		25/32	N-5072		13/16
	8	5/16	5/16	S-1132	3/4	T-2132	T-2132X	15/16	B-3132	3/4	D-4132		29/32	N-5132		15/16
	10	19/64	7/32	S-1073	5/8	T-2073	T-2073X	13/16	B-3073	5/8	D-4073		25/32	N-5073		13/16
	10	5/16	5/16	S-1133	3/4	T-2133	T-2133X	15/16	B-3133	3/4	D-4133		29/32	N-5133		15/16
						.155 Max.	.175 Max.				.175 Max.			.175 Max.		
16-14	3-4	1/4	7/32	S-1134	5/8	T-2134	T-2134X	13/16	B-3134	5/8	D-4134		25/32	N-5134		13/16
	3-4	19/64	7/32	S-1135	5/8	T-2135	T-2135X	13/16	B-3135	5/8	D-4135		25/32	N-5135		13/16
	5-6	1/4	7/32	S-1136	5/8	T-2136	T-2136X	13/16	B-3136	5/8	D-4136		25/32	N-5136		13/16
	5-6	19/64	7/32	S-1074	5/8	T-2074	T-2074X	13/16	B-3074	5/8	D-4074		25/32	N-5074		13/16
	5-6	23/64	9/32	S-1137	3/4	T-2137	T-2137X	15/16	B-3137	3/4	D-4137		29/32	N-5137		15/16
	8	1/4	7/32	S-1138	5/8	T-2138	T-2138X	13/16	B-3138	5/8	D-4138		25/32	N-5138		13/16
	8	19/64	7/32	S-1075	5/8	T-2075	T-2075X	13/16	B-3075	5/8	D-4075		25/32	N-5075		13/16
	8	23/64	9/32	S-1139	3/4	T-2139	T-2139X	15/16	B-3139	3/4	D-4139		29/32	N-5139		15/16
	10	19/64	7/32	S-1076	5/8	T-2076	T-2076X	13/16	B-3076	5/8	D-4076		25/32	N-5076		13/16
	10	23/64	9/32	S-1140	3/4	T-2140	T-2140X	15/16	B-3140	3/4	D-4140		29/32	N-5140		15/16

Flanged Spade Terminals

						.125 Max.	.145 Max.				.145 Max.			.145 Max.		
22-16	3-4	19/64	7/32	S-1125	5/8	T-2125	T-2125X	13/16	B-3125	5/8	D-4125		25/32	N-5125		13/16
	5-6	19/64	7/32	S-1080	5/8	T-2080	T-2080X	13/16	B-3080	5/8	D-4080		25/32	N-5080		13/16
	8	19/64	7/32	S-1081	5/8	T-2081	T-2081X	13/16	B-3081	5/8	D-4081		25/32	N-5081		13/16
	10	19/64	7/32	S-1082	5/8	T-2082	T-2082X	13/16	B-3082	5/8	D-4082		25/32	N-5082		13/16
						.155 Max.	.175 Max.				.175 Max.			.175 Max.		
16-14	3-4	19/64	7/32	S-1126	5/8	T-2126	T-2126X	13/16	B-3126	5/8	D-4126		25/32	N-5126		13/16
	5-6	19/64	7/32	S-1083	5/8	T-2083	T-2083X	13/16	B-3083	5/8	D-4083		25/32	N-5083		13/16
	8	19/64	7/32	S-1084	5/8	T-2084	T-2084X	13/16	B-3084	5/8	D-4084		25/32	N-5084		13/16
	10	19/64	7/32	S-1085	5/8	T-2085	T-2085X	13/16	B-3085	5/8	D-4085		25/32	N-5085		13/16

Ring Tongue Terminals

						.125 Max.	.145 Max.				.145 Max.			.145 Max.		
22-16	2	7/32	5/32	S-1099	33/64	T-2099	T-2099X	45/64	B-3099	33/64	D-4099		43/64	N-5099		45/64
	3-4	7/32	5/32	S-1047	33/64	T-2047	T-2047X	45/64	B-3047	33/64	D-4047		43/64	N-5047		45/64
	3-4	9/32	1/4	S-1096	41/64	T-2096	T-2096X	53/64	B-3096	41/64	D-4096		51/64	N-5096		53/64
	5-6	7/32	5/32	S-1001	33/64	T-2001	T-2001X	45/64	B-3001	33/64	D-4001		43/64	N-5001		45/64
	5-6	9/32	1/4	S-1002	41/64	T-2002	T-2002X	53/64	B-3002	41/64	D-4002		51/64	N-5002		53/64
	5-6	5/16	5/16	S-1103	23/32	T-2103	T-2103X	29/32	B-3103	23/32	D-4103		7/8	N-5103		29/32
	8	9/32	1/4	S-1097	41/64	T-2097	T-2097X	53/64	B-3097	41/64	D-4097		51/64	N-5097		53/64
	8	5/16	5/16	S-1021	23/32	T-2021	T-2021X	29/32	B-3021	23/32	D-4021		7/8	N-5021		29/32
	10	9/32	1/4	S-1098	41/64	T-2098	T-2098X	53/64	B-3098	41/64	D-4098		51/64	N-5098		53/64
	10	5/16	5/16	S-1003	23/32	T-2003	T-2003X	29/32	B-3003	23/32	D-4003		7/8	N-5003		29/32
	10	15/32	.400	S-1111	57/64	T-2111	T-2111X	1-5/64	B-3111	57/64	D-4111		1-3/64	N-5111		1-5/64
	1/4	15/32	.400	S-1004	57/64	T-2004	T-2004X	1-5/64	B-3004	57/64	D-4004		1-3/64	N-5004		1-5/64
	5/16	15/32	.400	S-1005	57/64	T-2005	T-2005X	1-5/64	B-3005	57/64	D-4005		1-3/64	N-5005		1-5/64
						.155 Max.	.175 Max.				.175 Max.			.175 Max.		
16-14	2	1/4	7/32	S-1102	19/32	T-2102	T-2102X	25/32	B-3102	19/32	D-4102		3/4	N-5102		25/32
	3-4	1/4	7/32	S-1048	19/32	T-2048	T-2048X	25/32	B-3048	19/32	D-4048		3/4	N-5048		25/32
	3-4	11/32	9/32	S-1112	45/64	T-2112	T-2112X	57/64	B-3112	45/64	D-4112		55/64	N-5112		57/64
	3-4	11/32	5/16	S-1095	47/64	T-2095	T-2095X	59/64	B-3095	47/64	D-4095		57/64	N-5095		59/64
	5-6	1/4	7/32	S-1006	19/32	T-2006	T-2006X	25/32	B-3006	19/32	D-4006		3/4	N-5006		25/32
	5-6	11/32	9/32	S-1007	45/64	T-2007	T-2007X	57/64	B-3007	45/64	D-4007		55/64	N-5007		57/64
	5-6	11/32	5/16	S-1092	47/64	T-2092	T-2092X	59/64	B-3092	47/64	D-4092		57/64	N-5092		59/64
	8	1/4	7/32	S-1113	19/32	T-2113	T-2113X	25/32	B-3113	19/32	D-4113		3/4	N-5113		25/32
	8	11/32	9/32	S-1024	45/64	T-2024	T-2024X	57/64	B-3024	45/64	D-4024		55/64	N-5024		57/64
	8	11/32	5/16	S-1093	47/64	T-2093	T-2093X	59/64	B-3093	47/64	D-4093		57/64	N-5093		59/64
	10	11/32	9/32	S-1008	45/64	T-2008	T-2008X	57/64	B-3008	45/64	D-4008		55/64	N-5008		57/64
	10	11/32	5/16	S-1094	47/64	T-2094	T-2094X	59/64	B-3094	47/64	D-4094		57/64	N-5094		59/64
	10	15/32	.400	S-1106	57/64	T-2106	T-2106X	1-5/64	B-3106	57/64	D-4106		1-3/64	N-5106		1-5/64
	1/4	15/32	.400	S-1009	57/64	T-2009	T-2009X	1-5/64	B-3009	57/64	D-4009		1-3/64	N-5009		1-5/64
	5/16	15/32	.400	S-1041	57/64	T-2041	T-2041X	1-5/64	B-3041	57/64	D-4041		1-3/64	N-5041		1-5/64

NOTE: 12–10 Wire Range sizes also available. Ask your distributor for Waldom Sales Bulletin 5E9 with complete listings, comprehensive cross reference to other sources, and pricing.

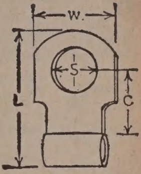
WALDOM

SOLDERLESS TERMINALS AND CONNECTORS

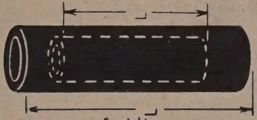
Flag Type Terminals

				KRIMPTITE	
Wire Range	Stud Size S	Max. Width W	Clearance C	Catalog No.	Length L
22–16	5-6	3/8	19/64	S-1059	5/8
	8	3/8	19/64	S-1060	5/8
	10	3/8	19/64	S-1043	5/8

				KRIMPTITE	
Wire Range	Stud Size S	Max. Width W	Clearance C	Catalog No.	Length L
16–14	5-6	3/8	9/32	S-1061	5/8
	8	3/8	9/32	S-1062	5/8
	10	3/8	9/32	S-1044	5/8



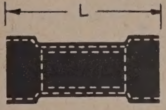
Butt Connectors



Straight

Flared (X)

Parallel Connectors



Flared (x)

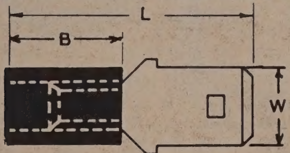
Straight

Wire ranges represent cumulative totals of wires used.

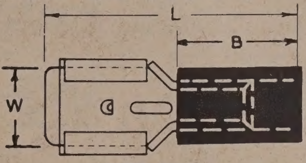
	KRIMPTITE		INSULKRIMP			UNIKRIMP	
Wire Range	Catalog No.	Overall Length L	Catalog No.	Catalog No.	Overall Length L	Catalog No.	Overall Length L
22-16	S-1019	9/16	T-2019 (.185 O.D.)	T-2019X (.207 O.D.)	15/16	B-3019	9/16
16-14	S-1020	9/16	T-2020 (.215 O.D.)	T-2020X (.236 O.D.)	15/16	B-3020	9/16

	KRIMPTITE		INSULKRIMP			UNIKRIMP	
Wire Range	Catalog No.	Overall Length L	Catalog No.	Catalog No.	Overall Length L	Catalog No.	Overall Length L
22-16	S-1105	5/16	T-2105 (.185 O.D.)	T-2105X (.207 O.D.)	11/16	B-3105	5/16
16-14	S-1063	5/16	T-2063 (.215 O.D.)	T-2063X (.236 O.D.)	11/16	B-3063	5/16

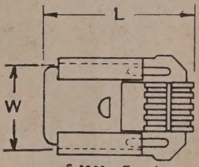
QUICK DISCONNECTS PUSH-ON TYPE



T-2089 Male



T-2090 Female



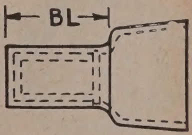
S-1091 Female

WIRE RANGE: 18–14 BLUE COLOR CODING IN THIS CASE INDICATES A WIRE RANGE OF 18–14

	Basic Dimensions	KRIMPTITE			INSULKRIMP		
Wire Range	Width W	Catalog No.	Length L	Barrel Length B	Catalog No.	Length L	Barrel Length B
18-14	1/4	S-1089	21/32	1/4	T-2089	27/32	7/16
	1/4	S-1090	43/64	7/32	T-2090	55/64	7/16
	1/4	S-1091	15/32	5/32	–	–	–

These devices are designed to give high pressure spring loaded contacts. They incorporate a locking action caused by mating a depression on the male tongue with a raised pip in the female slot when the parts are engaged. Insulation is not available on the flag design.

NYLON-INSULATED CLOSED-END CONNECTORS



Material – Connector: Tin plated seamless brass.
Insulation: Natural color molded nylon.

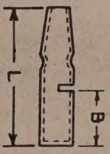
Wire ranges shown in the table represent various cumulative totals of wire diameters that may be combined and inserted for crimping. A completely insulated splice of two, three or more wires may be quickly and cheaply made as follows:

1. Strip insulation to show 3/8" to 1/2" of bare wire.
2. Insert wires fully into cap.
3. Squeeze barrel with crimping tool.

Wire Range	Catalog No.	Outside Diameter O.D.	Overall Length L	Barrel Length BL	Inside Diameter ID	Circular Mil Area
22-14	CE-2214	5/16	39/64	11/32	1/4	600- 5,180
16-10	CE-1610	7/16	23/32	3/8	3/8	2,400-13,100

SNAP PLUGS

	Basic Dimensions		KRIMPTITE
Wire Range	Length L	Barrel Length B	Catalog No.
16-14	19/32	3/16	S-1055
	35/64	3/16	S-1056



CRIMPING TOOLS

CT–1050 for Krimptite, Unikrimp, Vibrakrimp terminals.
CT–2050 for Insulkrimp, Avikrimp terminals.

NOTE: 12–10 Wire Range sizes also available. Ask your distributor for Waldom Sales Bulletin 5E9 with complete listings, comprehensive cross reference to other sources, and pricing.

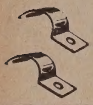
See Waldom Panel Meters in another section.

WALDOM ELECTRONICS INC. Chicago 32, Illinois

Walsco ELECTRONIC HARDWARE

ELECTRONICS

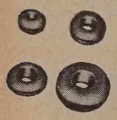
WALSCO CABLE CLAMPS



For all cable or wire groups from 1/8" to 5/16" in diameter.

Description	Mtg. Hole Size	50 LINE List Price .55/Pkg.		100 Pack			BULK PACK List Price		List Price Per 1000
		Cat. No.	Qty. Pkg.	Cat. No.	Qty. Pkg.	List Price	Cat. No.	Std. Pack	
1/8" to 3/16" cable diameter	#6	7502-F	25	7502-C	100	$1.63	7502-M	1000	$13.06
3/16" to 1/4" cable diameter	#8	7503-F	20	7503-C	100	1.85	7503-M	1000	14.81
1/4" to 5/16" cable diameter	#8	7505-F	16	7505-C	100	3.47	7505-M	1000	27.75
	Assorted	7500-F	20						

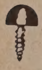
VINYL GROMMETS



Protects insulated wires from sharp edges of chassis holes. Easily installed. Extremely useful for damping vibration in mounting parts.

DIMENSIONS											
A	B	C	D	E	Cat. No.	Qty. Pkg.	Cat. No.	Qty. Pkg.	List Price	Cat. No.	Std. Pack	List Price Per 1000
11/32	1/8	3/16	1/16	1/4	7030-F	14	7030-C	100	1.67	7030-M	1000	13.55
7/16	3/16	7/32	1/16	5/16	7032-F	12	7032-C	100	2.09	7032-M	1000	16.68
9/16	1/4	1/4	1/16	3/8	7034-F	12	7034-C	100	2.27	7034-M	1000	18.13
5/8	3/8	1/4	1/16	1/2	7036-F	10	7036-C	100	2.44	7036-M	1000	19.55
13/16	1/2	9/32	1/16	5/8	7038-F	8	7038-C	100	3.79	7038-M	1000	30.35
				Assorted	7025-F	12						

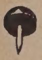
CABINET FEET — SCREW TYPE



Made of synthetic rubber. Easily installed with wood screws, metal screws or tacks. Screw type is supplied with wood screws on "50" and "99" line packages.

Diameter	Height	50 LINE List Price .55/Pkg.		100 Pack			BULK PACK List Price		List Price Per 1000
		Cat. No.	Qty. Pkg.	Cat. No.	Qty. Pkg.	List Price	Cat. No.	Std. Pack	
3/8	3/16	7052-F	8**	7052-C	100**	1.52	7052-M*	1000	12.16
1/2	1/4	7054-F	8**	7054-C	100**	2.44	7054-M*	1000	19.50
5/8	5/16	7056-F	8**	7056-C	100**	3.70	7056-M*	1000	29.50
3/4	3/8			7058-C	100**	4.69	7058-M*	1000	37.50
	Assorted	7050-F	8**						

TACK TYPE



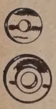
Same as above, but with handy tacks molded in feet.

Diameter	Cat. No.	Qty. Pkg.	Cat. No.	Qty. Pkg.	List Price	Cat. No.	Std. Pack	List Price Per 1000
3/8			7071-C	100	3.08	7071-M	1000	24.64
1/2			7072-C	100	3.24	7072-M	1000	25.95
Assorted	7070-F	8						

* No screws included ** Wood screws included

WALSCO INSULATING WASHERS

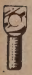
(Flat and Extruded)



Precision made from vulcanized phenolic fiber. Assures the proper and safe insulation between components and controls from each other or the chassis and other metal parts.

Fits Screw Size	DIMENSIONS					50 LINE List Price .55/Pkg.		100 Pack			BULK PACK List Price		List Price Per 1000
	A	B	C	D		Cat. No.	Qty. Pkg.	Cat. No.	Qty. Pkg.	List Price	Cat. No.	Std. Pack	
#6	5/16	3/16	.140	.039	Extruded			7856-C	100	1.44	7856-M	1000	11.50
	5/16		.140		Flat			7836-C	100	.70	7836-M	1000	5.50
					Fl & Ex.	7824-F	30						
#8	3/8	1/4	.169	1/32	Extruded			7858-C	100	1.44	7858-M	1000	11.50
	3/8		.166		Flat			7838-C	100	.70	7838-M	1000	5.50
					Fl. & Ex.	7825-F	30						
#10	3/8	.308	.195	1/32	Extruded			7860-C	100	1.57	7860-M	1000	12.56
	3/8		.195		Flat			7840-C	100	.70	7840-M	1000	5.50
					Fl. & Ex.	7826-F	30						
1/4"	1/2	11/32	.250	1/32	Extruded			7862-C	100	1.57	7862-M	1000	12.56
	1/2		.250		Flat			7842-C	100	.77	7842-M	1000	6.13
					Fl. & Ex.	7827-F	24						
3/8"	5/8	1/2	.380	1/32	Extruded			7864-C	100	1.65	7864-M	1000	13.19
	5/8		.380		Flat			7844-C	100	1.27	7844-M	1000	10.19
					Fl. & Ex.	7828-F	20						

WALSCO SPADE BOLTS

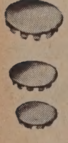


Ideal for fastening condsensers, coils, shields, etc. The type 8572 is straight and has 9/32" long thread. Thread on type 8573 is 5/16" long. Both types are 3/4" long overall, have 6-32 thread and hole for 6-32 screw or 1/8" rivet.

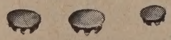
Hole Dia., .141.

Size	A	B	C	D	50 LINE List Price .55/Pkg.		100 Pack			BULK PACK List Price		List Price Per 1000
					Cat. No.	Qty. Pkg.	Cat. No.	Qty. Pkg.	List Price	Cat. No.	Std. Pack	
Assorted					8570-F	15						
6-32 Straight	3/4"	9/16"	9/32"	1/4"			8572-C	100	2.04	8572-M	1000	20.40
6-32 Offset	3/4"	9/16"	5/16"	15/64"			8573-C	100	4.24	8573-M	1000	33.90

WALSCO SNAP-HOLE PLUGS



The quickest, simplest way ever devised to cover a hole in chassis or panel. Spring flanges hold polished nickel-plated flat-head button firmly in place. Use Walsco Snap-Hole Plugs to seal adjustments, cover unused holes, etc.



Fits Hole Diameter	50 LINE List Price .55/Pkg.		100 Pack			BULK PACK List Price		List Price Per 1000
	Cat. No.	Qty. Pkg.	Cat. No.	Qty. Pkg.	List Price	Cat. No.	Std. Pack	
1/8"						7302-M	1000	42.75
3/16"						7304-M	1000	40.65
1/4"	7306-F	8	7306-C	100	3.56	7306-M	1000	30.00
3/8"	7308-F	8	7308-C	100	4.76	7308-M	1000	38.10
1/2"	7310-F	6	7310-C	100	5.06	7310-M	1000	41.00
5/8"	7312-F	6	7312-C	100	5.25	7312-M	1000	44.00
3/4"	7314-F	5	7314-C	100	6.00	7314-M	1000	48.00
7/16"						7315-M	1000	61.50
1"	7316-F	4	7316-C	100	8.25	7316-M	1000	66.00
1 1/8"						7318-M	1000	99.00
1 1/4"						7320-M	1000	105.00
Assorted	7300-F	6						

VENTILATING HOLE PLUGS

Assorted

Snap these protective screen coverings into ventilating holes on chassis, portable equipment cases, amplifiers, amateur rigs, etc. Spring flange holds plug in place.

Fig. No.	Type	Hole Size	Finish	50 LINE List Price .55/Pkg.		100 Pack			BULK PACK List Price		List Price Per 1000
				Cat. No.	Qty. Pkg.	Cat. No.	Qty. Pkg.	List Price	Cat. No.	Std. Pack	
1	Screened	1"	Steel						7331	100	$356.25
2	Eyelet	19/32"	Brass—Not Plated						7332	100	74.85
2	Eyelet	3/4"	Brass						7333	100	106.05

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

AERO Instrument Company

NORTH HOLLYWOOD, CALIFORNIA

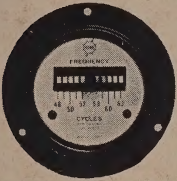
VIBRATING REED FREQUENCY & TIMING INSTRUMENTS

GENERAL DESCRIPTION

Vibrating Reed Instruments are direct reading frequency indicators for use where the efficient operation of A.C. equipment depends upon the maintenance of known or constant frequency. They are self contained, their accuracy is not affected by wide voltage variations or wave form distortions and require no auxiliary apparatus. They consist of a number of steel reeds, of high Q, each of which is tuned to a single frequency within the band covered by the instrument. Indication is by visual pattern formed by the vibration of the reed in resonance with the line frequency. Excitation is electromagnetic, and the reeds are the only moving elements. **Running Time Meters** are synchronous motor operated instruments to automatically measure service periods or service requirements.

APPLICATIONS

A large demand exists for VIBRATING REED FREQUENCY METERS for use with engine driven A.C. generator units as this is the most simple speed and frequency indicator yet devised for A.C. generator sets. These meters are also generally used in laboratory and portable test equipment, electronics, telephony, aircraft, industrial plants and numerous applications where electrical frequency indication is desired. Engineering services are available for those desiring assistance on their application problems. **Running Time Meters** are often used in conjunction with reed type frequency meters.



SERIES 7002

Range: 48-52 and 58-62 cycles for reading in either 50 or 60 cycles. **Voltage:** 125 volts ±20 volts. **Accuracy:** ±0.3% of designated frequency. **Power Consumption:** 1 watt. **Resistance:** Approximately 100 ohms per volt. Flush panel mounting.

2810-134—48-52 and 58-62 cy. in 3½″ flange MIL-M-6A molded bakelite case..............................$25.00
2810-133—48-52 and 58-62 cy. in 3½″ flange metal case........ 25.00
2810-153—48-52 and 58-62 cy. in 3¼″ flange metal case........ 25.00
2810-123—48-52 and 58-62 cy. in 2½″ flange metal case........ 25.00

SERIES 7004

FREQUENCY
59 61 63
60 62
CYCLES

Range: 59-63 cycles. Used extensively on standby power supplies for measuring generator frequency and engine speeds. **Electrical characteristics:** Same as the Series 7002.

6915-134—59-63 cy. in 3½″ flange MIL-M-6A molded bakelite case. $21.50
6915-133—59-63 cy. in 3½″ flange metal case $21.50
6915-153—59-63 cy. in 3¼″ flange metal case $21.50
6915-123—59-63 cy. in 2½″ flange metal case $21.50

SERIES 4009

FREQUENCY
380 390 400 410 420
CYCLES

Range: 380-420 cycles. For use on 400 cycle commercial power supplies and air-raft inverters. **Accuracy:** ±0.2% at 70° F. **Power consumption:** Approximately 1.25 watts. **Resistance:** Approximately 70 ohms per volt. Flush panel mounting.

4059-134—380-420 cy. in 3½″ flange MIL-M-6A molded bakelite case. $31.00
4059-133—380-420 cy. in 3½″ flange metal case $31.00
4059-153—380-420 cy. in 3¼″ flange metal case $31.00
4059-123—380-420 cy. in 2½″ flange metal case $31.00

VOLTAGES—All frequency meters can be supplied for voltages from 10 to 440 volts.

DISCOUNTS—Quantity prices quoted upon request.

SPECIAL INSTRUMENTS—Prices on special ranges will be furnished upon request.

RUNNING TIME METERS—Special ranges, frequencies and voltages available.

Write for catalog describing complete line of Aero stock instruments.

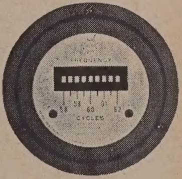
SERIES 1001

TOTAL
HOURS

Direct reading indicators to automatically and cumulatively register total operating or idle time of any equipment, machine, circuit or system to which they are connected. **Range:** 0 to 10,000 hours in hours and tenths of hours—automatically resets. **Voltage:** 125 ±20 volts. **Power consumption:** 2.5 watts. **Frequency:** 50, 60 and 400 cycles.

61134—60 cy. in 3½″ flange MIL-M-6A molded bakelite case......$19.00
41134—400 cy......Price upon request

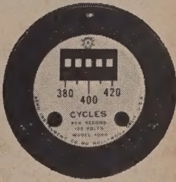
3½″ SEALED METER



Meets all applicable requirements of MIL-M-6A Specification. All 3½″ meters can be supplied in hermetically sealed cases. **Electrical characteristics:** Same as unsealed instruments.

Prices on all models available upon request.

1½″ SEALED METER



Range: 380-420 cycles. For use in air borne or ground equipment where size and weight are important factors. **Voltage:** 125 ±20 volts. **Resistance:** Approximately 70 ohms per volt. **Accuracy:** ±0.2% at 70° F. or 1.5% over range of —65° to +165° F. **Breakdown voltage:** 1500 volts. **Power consumption:** Approximately 1.25 watts.

4005-115—380-420 cy. in 1½″ hermeticaly sealed case..........$23.85

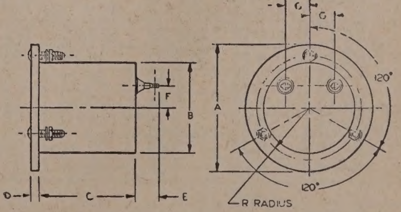
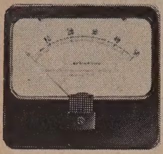


TABLE I

CASE SIZE CHART											MOUNTING SCREWS
CASE STYLE	A	B	C	D	E	F		G		R	
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MIN	
A	2.10	1.51	1.56	0.14	0.40	.41	.35	.41	.35	.877	.873	4-36NS-2A

Series 4005
Range 380 to 420 C.P.S. Hermetically Sealed.

BEEDE METERS


MODEL 16

MODEL 15

MODELS 310 501

MODELS 23 - 14 - 2 - 5

Model D.C.	Case Mat. & Mounting	Case Size	Barrel Diameter & Depth	Scale Length
5	Styrene - Flush	1 19/32" x 1 19/32"	1 15/32" Dia. x 1"	1 5/16"
411	Metal - Flush	2 9/32" Dia.	2 1/16" Dia. x 1 5/16"	1 25/32"
412	Metal - Flush	2 37/64" Dia.	2 1/16" Dia. x 1 5/16"	1 25/32"
501	Bakelite - Flush	2 3/4" Dia.	2 5/32" Dia. x 1 5/16"	1 25/32"
733	Metal - Surface	3 1/16" Dia.	———	2"
2	Styrene - Flush	2 3/8" x 2 3/8"	2 3/16" Dia. x 1 1/32"	2 3/16"
701	Metal - Flush	3 7/32" Dia.	2 17/32" Dia. x 1 5/16"	2 11/64"
15	Bakelite - Flush	3 "x 3"	2 3/4" Dia. x 1 7/16"	2 3/8"
310	Bakelite - Flush	3 1/2" Dia.	2 3/4" Dia. x 1 11/32"	2 3/8"
140	Styrene - Flush	3 3/8" x 2 5/8"	2 3/16" Dia. x 1 9/64"	2 11/16"
811	Metal - Flush	3 3/4" Dia.	3" Dia. x 1 11/32"	2 9/16"
815	Metal - Surface	3 1/2" Dia.	———	2 9/16"
14	Styrene - Flush	3 13/32" x 3"	2 3/4" Dia. x 1 1/32"	3 3/64"
1	Bakelite - Flush	4 5/8" x 4"	2 3/4" Dia. x 1 1/16"	3 13/32"
16	Bakelite - Flush	4 21/32" x 4 3/16"	2 3/4" Dia. x 1"	4 1/4"
23	Styrene - Flush	4 21/32" x 4 3/16"	2 3/4" Dia. x 1 1/32"	4 1/4"
45	Bakelite - Flush	4 5/8" x 4"	2 3/4" Dia. x 1 1/16"	3 13/32"
425	Metal - Surface	4 1/4" Dia.	———	3 13/32"
450	Metal - Flush	4 9/16" Dia.	3 3/4" Dia. x 1 11/32"	3 13/32"
458	Bakelite - Flush	4 21/32" x 4 3/16"	2 3/4" Dia. x 1"	4 1/4"
541	Bakelite - Flush	4 1/2" x 3 3/8"	2 3/4" Dia. x 1 1/16"	3 13/32"
230	Styrene - Flush	4 5/8" x 3 5/8"	2 3/4" Dia. x 1 9/64"	3 59/64"
6	Metal - Flush	6 1/16" Dia.	3" Dia. x 1 1/8"	4 23/32"
70	Styrene - Flush	7" x 5 1/4"	2 3/4" Dia. x 1 9/64"	6 5/32"
7	Bakelite - Flush	7 1/4" x 7 1/4"	3" Dia. x 1 1/8"	5 29/32"

D.C. MICROAMMETERS

Range	Approx. Res.	Models 411 - 412 - 501 2 - 701 - 733	Models 310 - 15 - 14 140 - 811 - 815	Models 1 - 45 - 16 458 - 23 - 230	Model 70
0-20	3000 ohms	$16.23	$16.60	$18.43	$21.44
0-50	2000 ohms	14.23	14.60	16.43	19.94
0-100	1000 ohms	13.50	14.15	14.75	18.38
0-200	500 ohms	13.18	13.48	14.00	17.50
0-500	150 ohms	10.73	10.98	12.55	16.05

D.C. MILLIAMMETERS

Range	Models 411-412-501 2-701-733	Models 310-15-14 140-811-815	Models 1-45-16 458-23-230	Model 70
0-1	$10.10	$10.38	$11.95	$15.63
0-5	9.38	9.63	10.10	13.60
0-10	9.38	9.63	10.10	13.60
0-15	9.38	9.63	10.10	13.60
0-25	9.38	9.63	10.10	13.60
0-50	9.38	9.63	10.10	13.60
0-100	9.38	9.63	10.10	13.60

Range	Models 411-412-501 2-701-733	Models 310-15-14 140-811-815	Models 1-45-16 458-23-230	Model 70
0-150	$9.38	$9.63	$10.10	$13.60
0-200	9.38	9.63	10.10	13.60
0-250	9.38	9.63	10.10	13.60
0-300	9.38	9.63	10.10	13.60
0-400	9.38	9.63	10.10	13.60
0-500	9.38	9.63	10.10	13.60
0-1000	9.38	9.63	10.10	13.60

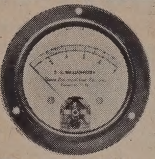
BEEDE ELECTRICAL
INSTRUMENT CO., INC.
PENACOOK, N. H.

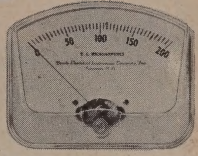
BEEDE ELECTRICAL INSTRUMENT CO., INC.

BEEDE METERS

MODEL 458

MODEL 411


MODELS 701 - 412 - 811


MODELS 70 - 140 - 230

D.C. AMMETERS

Range	Models 411-412-501 2-701-733	Models 310-15-14 140-811-815	Models 1-45-16 458-23-230	Model 70
0-1	$9.38	$9.63	$10.10	$13.60
0-5	9.38	9.63	10.10	13.60
0-10	9.38	9.63	10.10	13.60

Range	Models 411-412-501 2-701-733	Models 310-15-14 140-811-815	Models 1-45-16 458-23-230	Model 70
0-15	$9.38	$9.63	$10.10	$13.60
0-25	9.38	9.63	10.10	13.60
0-50	9.38	9.63	10.10	13.60

D.C. VOLTMETERS

Intermediate sensitivities available in all models

Range		Models 411-412-501 2-701-733	Models 310-15-14 140-811-815	Models 1-45-16 458-23-230	Model 70
0-1	125 ohms per volt	$ 9.38	$ 9.63	$10.10	$13.60
0-5	"	9.38	9.63	10.10	13.60
0-10	"	9.38	9.63	10.10	13.60
0-15	"	9.38	9.63	10.10	13.60
0-25	"	9.38	9.63	10.10	13.60
0-50	"	9.38	9.63	10.10	13.60
0-100	"	9.38	9.63	10.10	13.60
0-150	"	9.38	9.63	10.10	13.60
0-200	1000 ohms per volt	11.60	11.88	13.45	17.05
0-250	"	11.60	11.88	13.45	17.05
0-300	"	11.60	11.88	13.45	17.05
0-500	"	11.60	11.88	13.45	17.05

MODEL 5

1½ inch Panel Instrument

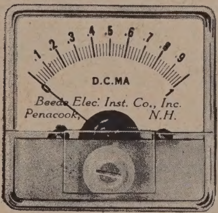
Magcentric®

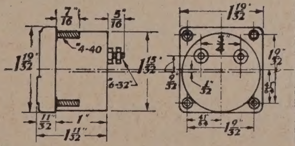
Magnetically self shielded

PATENT APPLIED FOR

Clear Plastic Flush Type

Accuracy within 2%
Pointer Style Optional
Alnico Magnet





CONSTRUCTION D'Arsonval moving coil design, precision polished jewels and pivots, fatigue tested springs, and stress-released assembled units. Superior workmanship and individual operation inspected production provides accurate, on the dot instruments. The Magcentric mechanism provides an inherent magnetic shield with no loss in sensitivity.

D.C. MILLIAMPERES

Range	
0-1	$10.10
0-5	9.38

D.C. AMPERES

Range	
0-1	$9.38
0-5	9.38
0.50	9.38

D.C. MICROAMPERES

Range	
0-50	$14.23
0-100	13.50
0-200	13.18
0-500	10.73

D.C. VOLTS

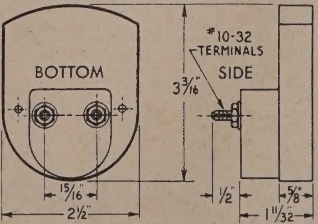
125 ohms per volt	$ 9.38
1000 ohms per volt	11.60

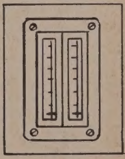
MODEL E-25 EDGEWISE

.2
.4
.6
.8
1.0
D C MILLIAMPERES

Clear Plastic Horizontal or Vertical

CONSTRUCTION D'Arsonval moving coil design, precision polished jewels and pivots, fatigue tested springs, and stress-released assembled units. Superior workmanship and individual operation inspected production provides accurate, on the dot instruments. The Magcentric mechanism provides an inherent magnetic shield with no loss in sensitivity.




•may be paired for comparative reading.

D.C. MICROAMPERES

Range	
0-50	$16.43
0-100	14.75
0-200	14.00
0-500	12.55

D.C. MILLIAMPERES

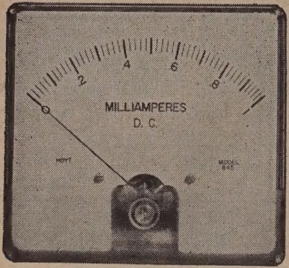
Range	
0-1	$11.95
0-5	10.10

Accuracy within 2%
Pointer Style Optional
Alnico Magnet

Hoyt
SINCE 1904

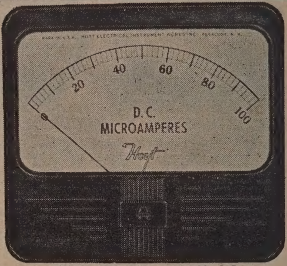
HOYT ELECTRICAL INSTRUMENTS

For Original Equipment and Replacement Applications



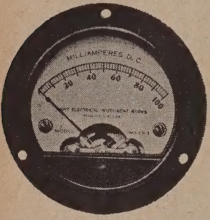
MODEL Nos. 641, 645, 653 and 649, D.C.
MODEL Nos. 642, 646, 654 and 650, A.C.
Clear Plastic Styrene Cases

HOYT moving-coil Meters are built on the D'Arsonval principle using carefully selected jewel bearings and polished steel pivots. Accuracy within 2%. Alnico Magnets with soft-iron pole-pieces of uniform flux density used in all movements. Permanently correct balance assured by HOYT "cross arm" spiral wire balance. High torque to weight ratio. Quick response and good damping under all conditions. Choice of "knife-edge" or "lance" type pointers. Full 100° movements standard on most models.

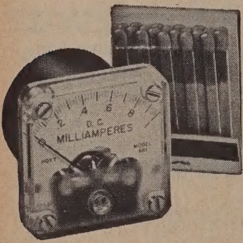


MODEL 647, D.C., and 648, A.C.

MODEL DC	MODEL AC	CASE TYPE PANEL MTG.	SCALE LENGTH DC	FLANGE	BODY DIAM. AC - DC	BODY DEPTH AC - DC
661	—	Styrene Sq.	1.800″	1.740″	1.500″	1.000″
17/3	552	Bakelite Rd.	2.015″	2.690″	2.200″	1.375″
17/3	552	Metal Rd.	2.015″	2.547″	2.063″	1.297″
635	636	Bakelite Sq.	2.015″	2.375″	2.200″	1.400″
649	650	Styrene Sq.	2.480″	2.625″ x 2.375″	2.200″	1.125″
17/L	560	Metal Rd.	2.480″	3.219″	2.500″	1.500″
17/L	560	Metal Surf.	2.480″	3.063″	2.500″	—
582	584	Bakelite Rd.	2.720″	3.500″	2.750″	1.375″
1037	1038	Styrene	3.812″	3.500″	2.750″	1.125″
597	598	Bakelite Sq.	2.720″	3.000″	2.750″	1.375″
653	654	Styrene Sq.	3.435″	3.375″ x 3.125″	2.750″	1.125″
570	580	Metal Rd.	2.850″	3.750″	3.000″	1.688″
570	580	Metal Surf.	2.850″	3.625″	3.000″	—
607	610	Bakelite Sq.	2.850″	3.625″ x 3.313″	2.250″	1.063″
574	617	Metal Rd.	3.875″	4.500″	3.750″	1.594″
574	617	Metal Surf.	3.875″	4.500″	3.750″	—
600	601	Bakelite Sq.	4.034″	4.500″ x 4.000″	2.750″	1.063″
641	642	Styrene	4.250″	4.500″ x 3.844″	2.750″	1.125″
645	646	Styrene Sq.	4.470″	4.625″ x 4.188″	2.750″	1.125″
647	648	Bakelite Sq.	4.470″	4.500″ x 4.188″	2.750″	1.125″
1060	1061	Styrene	5.375″	6.000″ x 4.500″	2.750″	1.100″



MODEL Nos. 582 & 17/3, D.C.
MODEL Nos. 584 and 552, A.C.



MODEL No. 661, D.C.
MODEL No. 661R
(rectifier type), A.C.

								PORTABLE	PORTABLE
Range	*Approx. Resist.*	#17/3 #635 #649	#1037 #17L #661 #653 #582 #597	#570 #607	#574 #641 #645 #600 #647	#1060	#583 #602	#578	#515
D.C. MILLIAMMETERS									
0/1*	*60*	$ 9.75	$10.35	$10.85	$11.45	$13.70		$12.55	$14.80
Above prices also apply to 0/3, 0/5, 0/10, 0/15 MA Standard ranges.									
0/25	*1.7*	10.00	10.60	11.10	11.70	14.10		12.80	14.95
Above prices also apply to 0/25, 0/30, 0/50, 0/100, 0/150, 0/200, 0/300, 0/500 MA Standard ranges.									
D.C. MICROAMMETERS									
0/20	*3000*	$17.45	$18.05•	$18.55	$19.15	—	Prices on request —quantity only	—	—
0/50	*2000*	14.75	15.25•*	15.75	16.35	—		—	—
0/100	*2000*	12.85	13.35	13.85	14.45*	16.70		15.65	17.90
0/200	*1000*	10.95	11.55*	12.05	12.65	14.90		13.75	16.05
0/500	*200*	10.45	10.95	11.45	12.05	14.30		13.20	15.45
Zero center microammeters available for most models in 25/0/25, 50/0/50, 100/0/100, 500/0/500 UA. Prices on request.									
D.C. MILLIVOLTMETERS									
0/50	*3*	9.75	10.35	10.85	11.45	13.70		12.55	14.80
D.C. AMMETERS									
0/1	*0.005*	9.75	10.35	10.85	11.45	13.70		12.55	14.80
0/5	*0.004*	10.15	10.65	11.20	11.80	14.40		12.75	15.10
Above prices for 0/5 amp. range also apply to standard ranges of 0/10, 0/15, 0/25, 0/30*, 0/50* amps. on all models. No. 661 uses external shunt over 5 amps. See Shunt Table below for High Current Ammeter Ranges.									
D.C. VOLTMETERS									
0/1	*1000Ω/V.*	10.55	11.05	11.55	12.15	14.40		13.30	15.60
Above prices also apply to standard ranges of 0/3, 0/5, 0/10, 0/15, 0/25, 0/30*, 0/50*, 0/100, 0/150*, 0/300* volts on all models.									
0/500•	*2000Ω/V.*	11.05	11.65	12.15	12.75	15.00		13.90	16.10
Above prices also apply to standard ranges at 0/600•, 0/750• volts on all models.									

NOTE: If "in-between" ranges are required, add $2.00 to price of next higher range listed. If "zero-center" ranges are required, add $2.00 to price of that range. For in-between ranges on moving-coil type Voltmeter 150 volts and up, add $3.00 to next higher range.

NOTE: Please specify type of case on order from chart above. Unless specified, all meters are calibrated on non-magnetic panels. If steel panels are used, give thickness of steel and size of panel hole (No extra charge). All prices are net — subject to change or withdrawal without notice.

*These ranges carried IN STOCK . . . Models #582, 597, and 647 only. (Calibrated for non-magnetic panels) •No. 661 not available in these ranges.

STANDARD SWITCHBOARD SHUNTS AND AMMETER RANGES

On High Current Ammeters, add 0/50 millivoltmeter price to external shunt price below. Shunts include 3 ft. leads. *Stock shunts.

0/25—$7.20 0/30—$7.20 0/50—$7.20* 0/75—$7.20* 0/100—$7.20* 0/150—$7.20* 0/200—$7.20* 0/300—$8.40*
0/500—$12.60* 0/600—$15.15* 0/800—$19.20* 0/1000—$27.85* 0/1500—$41.35 0/2000—$46.75 0/2500—$59.50 0/3000—$71.50

TRADE DISCOUNT APPLIES TO *LIST* PRICES ONLY

Hoyt
SINCE 1904

HOYT ELECTRICAL INSTRUMENTS

For Original Equipment and Replacement Applications

PRICE LIST: PANEL MOUNTING / PORTABLE

Range	Approx. Resist.	Panel Mounting #552 #636 #650	Panel Mounting #560 #1038 #654 #584 #598	Panel Mounting #580 #610	Panel Mounting #617 #601 #648 #642 #646	Panel Mounting #1061	Portable #562	Portable #517
A.C. MILLIAMMETERS								
0/6	*6000*	$10.45	$11.20	$11.70	$12.45	—	—	—
0/10	*2700*	9.45	10.20	10.70	11.45	$13.70	$12.55	$14.80

Prices for ranges: 0/30, 0/50, 0/100, 0/150, 0/200, 0/300, 0/500 MA. for all models—same as 0/10 MA. range above.

A.C. AMMETERS

Range	Approx. Resist.	#552 #636 #650	#560 #1038 #654 #584 #598	#580 #610	#617 #601 #648 #642 #646	#1061	#562	#517
0/1	*0.271*	9.45	10.20	10.70	11.45	13.70	12.55	14.80

Above prices also apply to all models of standard single ammeter ranges—0/3, 0/5*, 0/10, 0/15, 0/25, 0/30*, 0/50* amps. A.C. Ammeters are self-contained to 50 amps.

For High Current Ranges—See Transformer Section below.

A.C. VOLTMETERS (Repulsion Type)

Range	Approx. Resist.	#552 #636 #650	#560 #1038 #654 #584 #598	#580 #610	#617 #601 #648 #642 #646	#1061	#562	#517
0/5	*77*	9.45	10.20	10.70	11.45	13.70	12.55	14.80
Above prices also apply to all models in standard ranges of 0/10 and 0/15 volts.								
0/25	*1476*	9.75	10.20	10.85	11.45	13.70	12.55	14.80
Above prices also apply to all models in standard ranges of 0/30, 0/50, 0/100 volts.								
0/150*	*25,000*	10.65	11.25	11.75	12.45	14.60	13.60	16.85
0/300*	*50,000*	10.65	11.25	11.75	12.45	15.70	13.60	16.85
0/500	*83,300*	—	16.20	16.65	17.25	19.50	18.55	21.90
0/600*	*99,960*	—	16.20	16.65	17.25	19.50	18.55	21.90

*These ranges carried IN STOCK on Models #584, #598 and #648 only (calibrated for non-magnetic panels).

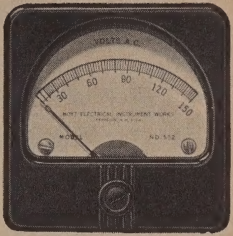
NOTE: For A.C. RECTIFIER-TYPE VOLTMETERS—5 through 300 volts—Prices on request. Accuracy within 5%.

NOTE: If "in-between" ranges are required, add $2.00 to next higher price as shown above (add $3.00, if above 150 volts). Standard calibration is for non-magnetic panels. Steel panel calibration at no extra charge if order specifies thickness of steel and size of panel hole. Please specify type of meter case.

HIGH CURRENT DONUT TYPE TRANSFORMERS (In Stock)

For prices of HIGH CURRENT AC AMMETERS, add price of ammeter model above to transformer price below. Transformers have 2-ft. leads and 2 VA burden. Other ranges available on request.

50/5	$8.70	100/5	$8.70	200/5	$8.70	500/5	$15.70
75/5	8.70	150/5	8.70	300/5	8.70	600/5	15.70



MODEL Nos. 635 and 597, D.C.
MODEL Nos. 636 and 598, A.C.

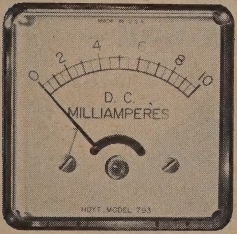
HOYT A.C. Meters for indicating 60 cycle Voltage and Current are of the repulsion type with pneumatic damping. Furnished in the same case styles and sizes as HOYT D.C. Meters, they match the D.C. meter where both types are used on the same panel. See DC-AC Specification Chart on opposite page.

Accuracy is 2%. A choice of pointers is available, and special shields can be supplied at additional cost.

VU METERS, with "A" scale, available in #649, #653, #645, and #647 case styles.
Prices on request.

NOTE: A.C. Meters calibrated at any special frequency. Prices on request.

MOVING MAGNET INDICATORS



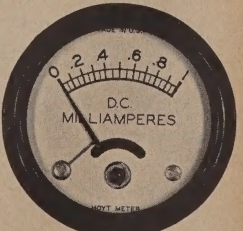
MODEL No. 793, D.C.
2½" Plastic Case

HOYT Moving Magnet Indicators have been used for many years by the leading manufacturers of electrical devices. Feature long scales and accuracy within 5%.
Attractive appearance is combined with a sturdy movement. Furnished in round or square cases at low cost. Standard finish on metal cases is black. Chrome Plate is available at slight additional cost. Many types of mounting arrangements available.

NOTE: A.C. Vane Meters are furnished in quantity only. Prices on request.

NOTE: If in-between ranges are required—add $1.00 to next higher range price; for "zero-center" ranges, add $1.00 to same range price.

NOTE: DC Ammeters up to 100 amps. have internal shunts.



MODEL No. 640, D.C.
2¼" Metal Case

MODEL DC	MODEL AC	CASE TYPE PANEL MTG.	SCALE LENGTH DC	FLANGE	BODY DIA. DC	BODY DEPTH DC
640	531AC	Nar. Metal Rd.	1.400"	2.281"	2.000"	1.078"
640	531AC	Metal Surface	1.400"	2.375"	2.000"	—
693	594	Metal Sq.	1.400"	2.625"	2.000"	0.563"
793	—	Plastic Sq.	1.715"	2.375"	2.000"	0.500"

D.C. MILLIAMMETERS

Range	Approx. Resist.	#640	#693	#793
0/1	*1000*	$3.85	$3.90	$4.20
0/3	*700*	2.85	2.95	3.20
0/5	*480*	2.60	2.65	2.95
0/10	*180*	2.45	2.50	2.75
0/15	*130*	2.10	2.15	2.45
Prices for 0/25, 0/30, 0/50, 0/100, 0/150, 0/200, 0/300, 0/500 MA. ranges:		2.05	2.10	2.40

D.C. AMMETERS

Range	#640	#693	#793
0/1	$2.05	$2.10	$2.40
Above prices also apply to 1/0/1, 3/0/3, 0/5, 5/0/5, 0/10, 10/0/10, 0/15 amp. ranges.			
20/0/20	2.55	2.60	2.85
Above prices also apply to 0/25, 0/30, 30/0/30 amp. ranges.			
0/50	2.75	2.80	3.10
50/0/50	2.75	2.80	3.10
0/75	3.20	3.30	3.60
0/100	3.70	3.80	4.10

D.C. VOLTMETERS

Range	Approx. Resist.	#640	#693	#793
0/1	—	$2.05	$2.10	$2.40
Above prices also apply to 0/3, 0/5, 0/10, 0/15 volt ranges.				
0/25	*1375*	2.40	2.45	2.70
0/30	*1650*	2.40	2.45	2.70
0/50	*2200*	2.55	2.60	2.85
0/100	*20,000*	2.55	2.60	2.85
0/150	*30,000*	2.60	2.65	2.95
0/300	*60,000*	3.50	3.60	3.90

CORNELL-DUBILIER

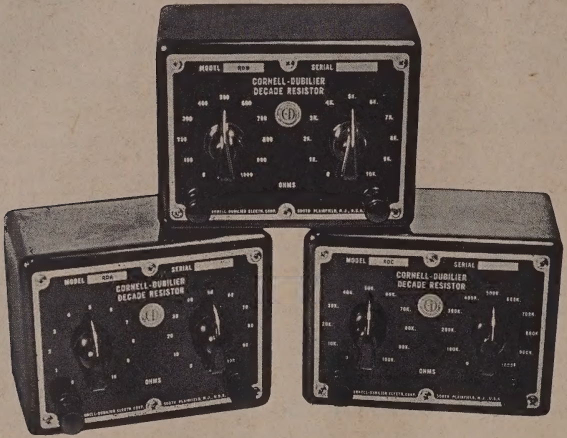
RADIART

CDE

CORNELL-DUBILIER ELECTRONICS DIVISION • FEDERAL PACIFIC ELECTRIC COMPANY • SOUTH PLAINFIELD • NEW JERSEY

DECADES

SUBSTITUTION BOXES


MODEL RDB
SERIAL
CORNELL-DUBILIER DECADE RESISTOR
OHMS
MODEL RDA
CORNELL-DUBILIER DECADE RESISTOR
MODEL RDC
CORNELL-DUBILIER DECADE RESISTOR

DECADE RESISTORS

MODELS RDA, RDB, RDC

Provide a reliable source of resistance for substitution purposes in a wide variety of electronic and electrical applications. Each instrument permits a possible selection of 110 resistance values, and the use of all three decades provides resistances from 1 Ohm to 1,111,110 Ohms in steps of 1 Ohm.

USER NET PRICES:

Model RDA — 1 to 110 Ohms	$13.35
Model RDB — 100 to 11,000 Ohms	$13.75
Model RDC — 10,000 to 1,100,000 Ohms	$13.75

DECADE CAPACITORS

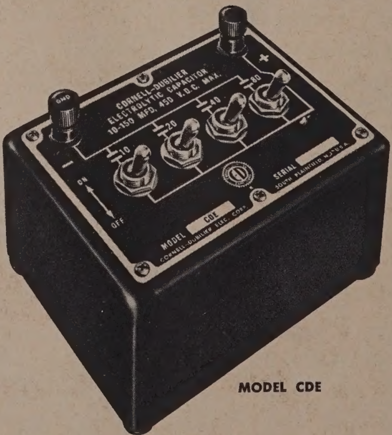
MODELS CDA, CDB, CDC

Provide an accurate source of measured capacitances for electronic and electrical substitution purposes. Units of capacitance selected from direct reading switch scales. Models CDA, CDB, and CDC can be grouped in parallel to provide capacitances from 0 to 11.111 Mfd. in steps of .0001 Mfd.

RATED VOLTAGE — 600 D.C-220 A.C.

Model	Capacity	+ or − Tol.	Dielectric	Net Price
CDA-5	.011 mfd. in .0001 mfd. steps	5%	Mica	**$12.50**
CDB-5	1.1 mfd. in .01 mfd. steps	5%	Oil-Paper	**12.50**
CDB-3	1.1 mfd. in .01 mfd. steps	3%	Oil-Paper	**14.85**
CDC-5	10.0 mfd. in 1.0 mfd. steps	5%	Oil-Paper	**21.95**
CDC-3	10.0 mfd. in 1.0 mfd. steps	3%	Oil-Paper	**24.20**

ELECTROLYTIC CAPACITOR SUBSTITUTION BOX


CORNELL-DUBILIER ELECTROLYTIC CAPACITOR 10-150 MFD. 450 V.D.C. MAX.
GND
+
10
20
40
80
ON
OFF
SERIAL
MODEL CDE

MODEL CDE

Provides a reliable and flexible selection of fifteen combinations of capacitance, from 10 Mfd. to 150 Mfd. in steps of 10 Mfd. Additional units can be connected in parallel to provide an unlimited range of higher capacitances. The Model CDE is a valuable tool for a wide variety of service and experimental electronic applications.

USER NET....................$12.50

Tracks 'em Down Dead or Alive

ONLY THE VERSATILE

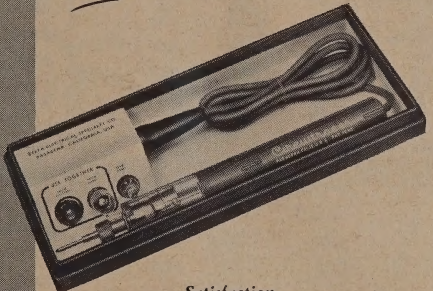
DESCO* Circuitracer*

GIVES YOU A 3-IN-1 ELECTRICAL TEST LABORATORY

Pocket Size!

DON'T SEND A MAN TO DO A BOY'S JOB!

Are the technicians in your laboratories and shops using expensive meters and instruments for simple continuity and voltage checks? Speed up production through the use of the tool specifically designed for this application. A meter should be used only when the value of voltage, resistance or current must be known. Under any other conditions a Circuitracer will provide the required information faster, easier than expensive, bulky meters.



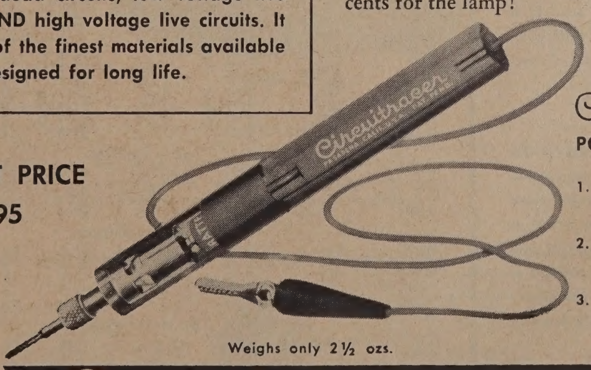
Satisfaction Unconditionally Guaranteed

CIRCUIT TESTING WITH A CIRCUITRACER IS FASTER because the signal light is in the tip at the point of contact. This makes it possible to determine the existence of a circuit or voltage without removing the eyes from the test point to read a meter.

SAVE METER REPAIR MONEY BY USING DESCO CIRCUITRACERS. An overvoltage across a meter usually results in extensive damage which takes the meter out of service until repaired or replaced. The worst that can happen to your Circuitracer is a burned out lamp that can be replaced by the operator in less than a minute. Total cost, ten or fifteen cents for the lamp!

The CIRCUITRACER is the only electrical tester (other than expensive meters) that can test dead circuits, low voltage live circuits AND high voltage live circuits. It is made of the finest materials available and is designed for long life.

LIST PRICE
$4.95



Weighs only 2½ ozs.

Circuitracer* POINTERS

1. As a continuity tracer for dead circuits
2. As a low voltage live circuit tester
3. As a high voltage live circuit tester

T.M.

DESCO Circuitracer*

DESCO MFG. CO., GLENDALE, CALIF.

ELECTRO-MECHANICAL INSTRUMENT CO. PERKASIE, PENNSYLVANIA

PRECISION-PLUS
EMICO

PRECISION
Modern Engineering . . .

EMICO *panel and test meters are rugged and reliable instruments. (Available with plastic or metal face.) DC meters have the new HI-TORK magnetic movements and are accurate to well within 5%. AC meters are of the moving iron type and are also accurate to within 5%.*

MOUNTING *— All model NF-2C, RF-2C, and RF-2¼C with plastic front meters will fit into a 2-1/16" diameter hole and are mounted by means of a U clamp.*

DESIGN *— EMICO meters are designed to give satisfactory service under the most severe conditions. They are styled to add to the prestige and appearance of electrical equipment.*

CALIBRATION *— Since the instruments are calibrated in steel cases, their accuracy is not affected by panels made of magnetic materials of nominal thickness.*

GUARANTEED *— ALL EMICO instruments are guaranteed against defective material and workmanship for a period of one year after date of purchase, and will be repaired or replaced if sent to the factory postpaid with a 50¢ handling charge.*

PRICE LIST

DC AMMETERS

		MODEL NF-2C		MODEL RF-2C		MODEL RF-2¼C	
Range	Approximate Resist. Ohms	Catalog Number	Dealers' Net Price	Catalog Number	Dealers' Net Price	Catalog Number	Dealers' Net Price
0-1	.15	2101	$1.90	2201	$2.00	2301	$2.30
0-3	.032	2101-A	1.90	2201-A	2.00	2301-A	2.30
0-5	.016	2102	1.90	2202	2.00	2302	2.30
0-10	.00115	2103	1.90	2203	2.00	2303	2.30
0-15	.00115	2103-A	1.90	2203-A	2.00	2303-A	2.30
0-20	.00115	2104	1.90	2204	2.00	2304	2.30
0-25	.00115	2104-A	1.90	2204-A	2.00	2304-A	2.30
0-30	.00115	2105	1.90	2205	2.00	2305	2.30
0-60	.000116	2106-A	2.60	2206-A	2.70	2306-A	3.00
1-0-1	.08	2109	1.90	2209	2.00	2309	2.30
3-0-3	.00115	2110	1.90	2210	2.00	2310	2.30
6-0-6	.00115	2111	1.90	2211	2.00	2311	2.30
10-0-10	.00115	2112	1.90	2212	2.00	2312	2.30
15-0-15	.00115	2113	1.90	2213	2.00	2313	2.30
20-0-20	.00115	2114	1.90	2214	2.00	2314	2.30
30-0-30	.00115	2115	1.90	2215	2.00	2315	2.30
75-0-75	.000116	2116-A	2.95	2216-A	3.05	2316-A	3.35
DC MILLIAMMETERS							
0-1	850	2120	$3.70	2220	$3.75	2320	$4.05
0-3	425	2121	2.60	2221	2.65	2321	2.95
0-5	925	2125	2.35	2225	2.40		
0-5	1300					2325	2.70
0-10	300	2126	2.20	2226	2.25		
0-10	350					2326	2.55
0-20	95	2127	1.90	2227	2.00		
0-20	105					2327	2.30
0-25	65	2127-A	1.90	2227-A	2.00	2327-A	2.30
0-30	37	2128	1.90	2228	2.00		
0-30	45					2328	2.30
0-50	14.5	2129	1.90	2229	2.00		
0-50	18					2329	2.30
0-100	7.0	2130	1.90	2230	2.00		
0-100	8.3					2330	2.30
0-150	1.8	2130-A	1.90	2230-A	2.00		
0-150	2.15					2330-A	2.30
0-200	1.5	2130-B	1.90	2230-B	2.00		
0-200	1.7					2330-B	2.30
0-300	.61	2131	1.90	2231	2.00		
0-300	.8					2331	2.30
0-500	.21	2132	1.90	2232	2.00		
0-500	.27					2332	2.30
DC VOLTMETERS (HIGH RESISTANCE) (100 ohms/volt except 150 and 300 volt ranges are 200 ohms per volt)							
0-10	1050	2140	$2.75	2240	$2.85	2340	$3.15
0-30	2800	2141	2.75	2241	2.85	2341	3.15
0-50	4000	2142	2.95	2242	3.05	2342	3.35
0-150	28000	2143	3.10	2243	3.20	2343	3.50
0-300	55000	2144	3.20	2244	3.30	2344	3.60

DC VOLTMETERS (LOW RESISTANCE)

		MODEL NF-2C		MODEL RF-2C		MODEL RF-2¼C	
Range	Approximate Resist. Ohms	Catalog Number	Dealers' Net Price	Catalog Number	Dealers' Net Price	Catalog Number	Dealers' Net Price
0-1	33	2134	$1.90	2234	$2.00	2334	$2.30
0-3	100	2135	1.90	2235	2.00	2335	2.30
3-0-3	30	2136	1.90	2236	2.00	2336	2.30
0-5	140	2136-A	1.90	2236-A	2.00	2336-A	2.30
0-8	225	2136-B	1.90	2236-B	2.00	2336-B	2.30
0-10	280	2137	1.90	2237	2.00	2337	2.30
0-15	450	2137-A	1.90	2237-A	2.00	2337-A	2.30
0-20	600	2137-B	1.90	2237-B	2.00	2337-B	2.30
0-30	1000	2137-C	1.90	2237-C	2.00	2337-C	2.30
0-50	1400	2138	1.90	2238	2.00	2338	2.30
AC AMMETERS							
0-1	.365	6101	$3.05	6201	$3.15	6301	$3.45
0-3	.078	6102	3.05	6202	3.15	6302	3.45
0-5	.023	6103	3.05	6203	3.15	6303	3.45
0-10	.013	6104	3.05	6204	3.15	6304	3.45
AC MILLIAMMETERS							
0-25	750	6125	$3.05	6225	$3.15	6325	$3.45
0-50	175	6126	3.05	6226	3.15	6326	3.45
0-100	58	6127	3.05	6227	3.15	6327	3.45
0-250	12	6128	3.05	6228	3.15	6328	3.45
0-500	1.75	6129	3.05	6229	3.15	6329	3.45
AC VOLTMETERS							
0-5	50	6135	$3.05	6235	$3.15	6335	$3.45
0-10	175	6136	3.05	6236	3.15	6336	3.45
0-15	300	6137	3.05	6237	3.15	6337	3.45
0-25	920	6137-A	3.05	6237-A	3.15	6337-A	3.45
0-50	1800	6138	3.05	6238	3.15	6338	3.45
0-150	9530	6139	3.60	6239	3.70	6339	4.00
0-300	32000	6140	4.20	6240	4.25	6340	4.55

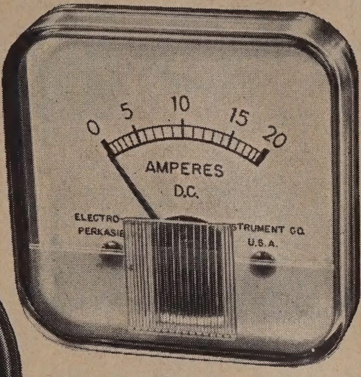
PRICES—Prices listed are net and include all hardware and individual boxing. Resistance approximate. If important request factory engineering confirmation.

INSTRUMENTS FOR PANELS AND TEST SETS

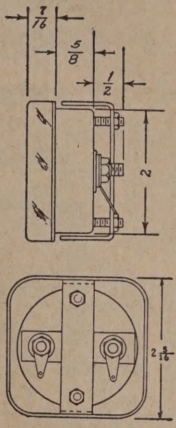
Precision Workmanship!

- PEAK EFFICIENCY
- TOP SERVICE
- LONG LIFE

ELECTRO-MECHANICAL INSTRUMENT CO. • PERKASIE, PENNSYLVANIA


0
5
10
15
20
AMPERES
D.C.
ELECTRO-
PERKASIE
STRUMENT CO.
U.S.A.

MODEL RF2¼C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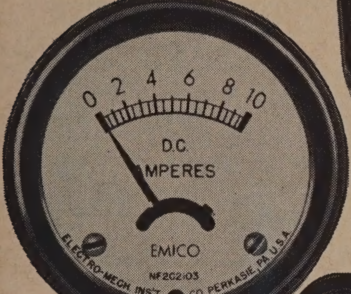
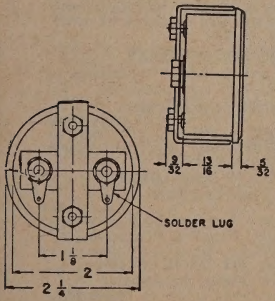
5/8
1/2
2
2 5/16


0
2
4
6
8
10
D.C.
AMPERES
EMICO
NF2C2:03
ELECTRO-MECH. INS'T CO. PERKASIE, PA. U.S.A.

MODEL NF2C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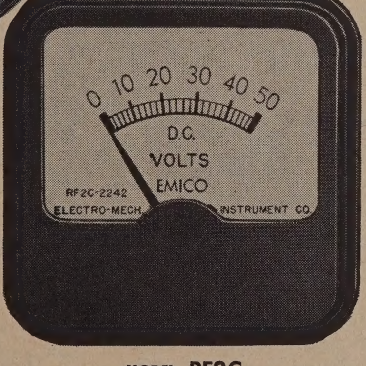
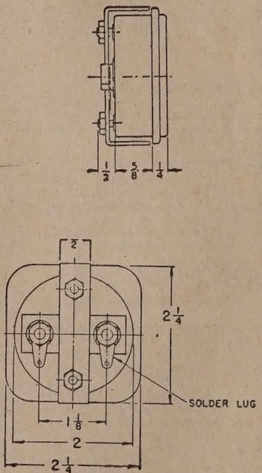
13/16
5/32
SOLDER LUG
1 1/8
2
2 1/4


0
10
20
30
40
50
D.C.
VOLTS
EMICO
RF2C-2242
ELECTRO-MECH.
INSTRUMENT CO.

MODEL RF2C


1/2
5/8
1/4
2
2 1/4
SOLDER LUG
1 1/8
2
2 1/4

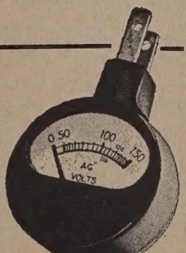
EMICO offers a complete line of precision direct current indicating instruments having the simplicity of construction of polarized vane meters with an accuracy and performance comparable to moving coil indicators. This new development is the result of years of experience in instrument designs, manufacturing techniques and the use of modern magnetic materials.

EMICO
RELAY
MODEL
PERKASIE, PA. U.S.A.

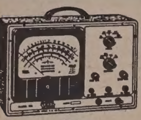
EMICO Sensitive Sub-Miniature Plug-in Relay
Single pole, double throw, rotating magnet instrument type Relay. Hermetically sealed unit. 1400 Ohm coil operates at 1 MW. Plugs in a standard 9-pin miniature tube base.
Dealers' Net **$18.75**

EMICO Circuit Indicator
Sub-miniature power indicator* with sensitivity to 1 MW. Maximum resistance to 1400 Ohms. Voltage to 25 volts D.C. Front panel mounting.
Dealers' Net **$7.50**
*Variation Available in Quantity

EMICO A.C. Voltage Tester
Accurate, precision mechanism plug-in type with damped meter movement. Convenient 90° swivel prongs for ease of reading from any position.
Dealers' Net **$3.45**


0
50
100
150
AC
VOLTS

EICO® KITS and WIRED...TEST INSTRUMENTS•HI-FI•HAM GEAR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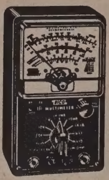
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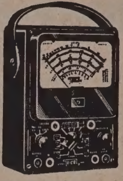
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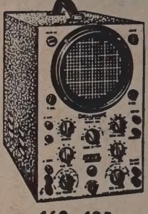
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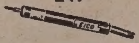
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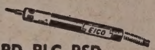
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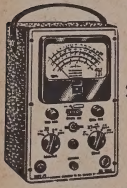
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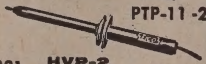
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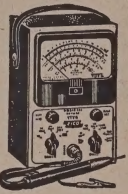
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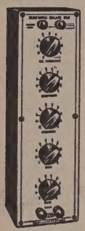
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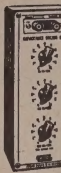
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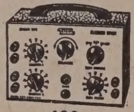
488

DECADE RESISTANCE BOX No. 1171

KIT $19.95 Wired $24.95

Exceptionally accurate, wide-range, versatile instrument. 0-99,999 ohms in 1-ohm steps with 5 decades and ½% precision.

DECADE CONDENSER BOX No. 1180

KIT $14.95 Wired $19.95

Precision silver-mica capacitors (± 1% accuracy, 500 VDC rated) arranged in 3 decades for extremely wide range of 100 mmf to 0.111 mf in steps of 100 mmf. Positive detent ceramic wafer switches, silverplated contacts.

MODEL 232
PEAK-TO-PEAK VTVM with DUAL-PURPOSE AC/DC UNI-PROBE

KIT $29.95 Wired $49.95

The established leader in professional peak-to-peak VTVMs—revolutionary engineering for laboratory precision and lowest price! Measure **directly** p-p voltage of complex and sine waves: 0-4, 14, 42, 140, 420, 1400, 4200. DC/RMS sine volts: 0-1.5, 5, 15, 50, 150, 500, 1500 (up to 30 000 v. with HVP probe, and 250 mc with PRF probe). Ohms: 0.2 ohms to 1000 megs. 7 **non-skip** ranges on every function. Calibration without removing from cabinet. 4½" meter, can't-burnout circuit. Zero center, 1% multipliers. Exceptional stability and accuracy.

DELUXE PEAK-TO-PEAK VTVM No. 249 with 7½" METER and EXCLUSIVE UNI-PROBE

(Pat. Pend.)

All the outstanding and exclusive features of Model 232 — PLUS the convenience and readability of its big 7½" meter. An ideal bench instrument.

KIT $39.95 Factory Wired $59.95

VACUUM TUBE VOLTMETER No. 221

KIT $25.95 Wired $39.95

The popular, reliable, performance-proven VTVM —over 100,000 in use! Large 4½" meter in can't-burnout circuit. Zero center for TV/FM discriminator alignment. AC/DC Volts: 0-5, 10, 100, 500, 1000 (up to 30,000 v. with HVP probe, up to 250 mc with PRF probe, and peak-to-peak with PTP probe). Ohms: 0.2 ohms to 1000 megs. DB: —20 to +55. Input R: 25 megs. 1% precision multipliers. Stable, accurate double-triode bridge circuit. Satin aluminum etched panel; steel case.

Leatherette Carrying Case

For No. 221 .... $3.95

DELUXE VTVM No. 214

KIT $34.95 Wired $54.95

All the versatility and performance-proven features of Model 221—PLUS the extra convenience and legibility of its big 7½" meter.

6 EICO VOLT-OHM-MILLIAMETERS

No. 565 — 20,000 OHMS/VOLT V-O-M

KIT $24.95 Wired $29.95

31 Full Scale Ranges - DC/AC/Output Volts: 0-2.5, 10, 50, 250, 1000, 5,000 - DC Current: 0-100 ua; 10, 100, 500 ma; 10 Amp. - Ohms: 0-2000, 200K, 20 meg. - 5 DB Ranges: —12 to +55. - Large 4½" 50 UA Meter Movement. - High-Impact Bakelite case. 6¾" x 5¼" x 3". Ship. wt. 2¾ lbs.

No. 555 — 20,000 OHMS/VOLT V-O-M

KIT $29.95 Wired $34.95

As above, with 1% precision resistors.

No. 566 — 1000 OHMS/VOLT V-O-M

KIT $14.90 Wired $18.95

Ranges: Same as Model 536 (see below), plus 7 output voltage ranges. Large 4½" 400 ua meter movement. 6¾" x 5¼" x 3". Ship. wt. 3 lbs.

No. 556 — 1000 OHMS/VOLT V-O-M

KIT $16.90 Wired $23.50

Same as Model 566, with 1% precision resistors.

No. 536 — 1000 OHMS/VOLT V-O-M

KIT $12.90 Wired $14.90

31 1000 Ohms/Volt Full-Scale Ranges! - DC/AC Volts: Zero to 1, 5, 10, 50, 100, 500, 5000. - DC/AC Current: 0-1, 10 ma.; 0.1, 1 Amp. - Ohms: 0-5000, 100K, 1 meg. - 6 DB Ranges: —20 to +69 - Large 3" 400 UA Meter Movement - High-Impact Bakelite case. 6¼" x 3¾" x 2". Ship. wt. 2 lbs.

No. 526 — 1000 OHMS/VOLT V-O-M

KIT $13.90 Wired $16.90

As above, with 1% precision resistors.

VTVM PROBES

DUAL-PURPOSE AC/DC UNI-PROBE

Available separately for EICO No. 221 and other VTVMs.

Terrific time saver! Only 1 probe performs all functions — a half-turn of probe-tip selects DC or AC-OHMS!

KIT $4.95 Factory Wired $6.95

MODEL PTP-11 or 25
PEAK-TO-PEAK VTVM PROBES

KIT $4.95 Wired $6.95

For Color and Monochrome TV Servicing

Accurate reading of p-p voltages directly on DC scales of your VTVM. Use with any 11 or 25 megohm VTVM. For tracing complex AC waveforms thru TV receiver deflection systems.

MODEL PRF-11 or 25
RF VTVM PROBES

KIT $3.75 Wired $4.95

For RF voltage measurements up to 250 mc. Accuracy ±10%. Use with any 11 or 25 megohm VTVM.

HIGH VOLTAGE PROBE No. HVP-2

$4.95

For safe measurement up to 30,000 volts dc with any VTVM or 20,000 ohms/volt VOM. Ideal for TV high voltage measurement. Includes a choice of high quality multiplier resistor to match most popular instruments.

HIGH VOLTAGE PROBE No. HVP-1

$6.95

Popular choice for years. Same applications as Model HVP-2 above and supplied with matching resistor for your instrument.

DC WIDE BAND
5" OSCILLOSCOPE No. 460

KIT $79.95 Wired $129.50

For Color and Monochrome TV Servicing

Incomparable! The world's FINEST professional scope value — far outperforms and outfeatures scopes of many times its cost! For Color, Black-and-White TV, lab and industry.

Flat from DC to 4.5 mc. usable to 10 mc., featuring DC amplifers. Vert. Sens.: 25 mv/in., push-pull thruout. Sweep freqs.: 10 cps to 100 kc, low sweep with ext. condenser. Automatic sync limiter and amplifier eliminates sync voltage adjustment. On front panel: int. mod., saw-tooth output, 60 cps, ext. sync, ext. capacitor jacks! 60 cps variable phase sine sweep. Pre-set TV V&H sweep positions. Edge-lit plexiglass filter screen with variable illumination. 4 freq. compensated attenuator positions up to 1000:1 on either direct or capacitive coupled input.

5" PUSH-PULL OSCILLOSCOPE No. 425

KIT $44.95 Wired $79.95

The lowest priced professional 5" scope in the world—tens of thousands in use! Push-pull Vert. and Hor. amplifiers. High V&H sens.: 0.05-0.1 rms v/in. V&H resp., 5 cps-500 kc. Useful to 2.5 mc. Sweep: 15 cps-75 kc. Z-axis intensity mod. Direct connections to CRT plates. 2-6J5, 3-6SN7, 2-5Y3, 5" CRT.

SCOPE PROBES

For Color and Monochrome TV Servicing

MODEL PSD OSCILLOSCOPE DEMODULATOR PROBE

KIT $3.75 Wired $5.75

For signal tracing and checking of TV/radio RF and IF stages. Demodulates amplitude-modulated carriers between 150 kc and 250 mc.

MODEL PD OSCILLOSCOPE DIRECT PROBE

KIT $2.75 Wired $3.95

For TV waveform tracing in low Z or low frequency circuits. Eliminates stray pickup and signal re-radiation.

MODEL PLC OSCILLOSCOPE LOW CAPACITY PROBE

KIT $3.75 Wired $5.75

For TV waveform tracing in high Z, high frequency or wide-band circuits.

OSCILLOSCOPE VOLTAGE CALIBRATOR No. 495

KIT $12.95 Wired $17.95

Makes your scope an accurate, wide-range, peak-to-peak AC electronic voltmeter; Enables p-p voltage measurement of complex TV sweep waveforms displayed on scope, calibration of vert. and hor. scope amplifiers, etc. Output variable from zero on every range with full-scale readings of 0.1, 1, 10, and 100 volts p-p. Accuracy ±5% of full scale on each range. VR tube regulated power supply.

ELECTRONIC SWITCH No. 488

KIT $23.95 Wired $39.95

Makes your 1 Scope more useful than 2 in many cases! Simultaneously observe 2 patterns on 1 scope: compare voltage and current amplitudes, waveforms, freqs. and phase relationships. Continuously variable switching rates from less than 10 cps to over 2000 cps. Very useful as square wave generator over same range.

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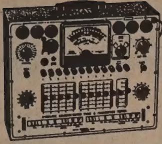
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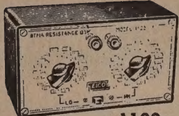
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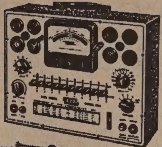
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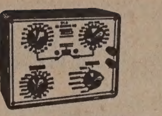
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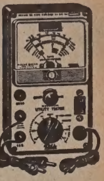
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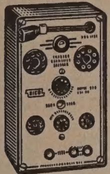
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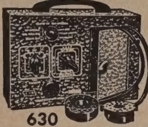
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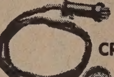
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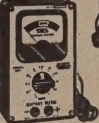
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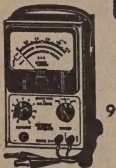
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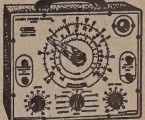
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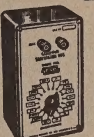
1120

TUBE TESTER No. 625

KIT $34.95 **Wired $49.95**

CRA 110 pix tube adapter for 110° deflection pix tubes — $4.50

Tests new 600 ma filament series string tubes. A professional, dependable tube tester and merchandiser. Tests ALL conventional and TV tubes. 10 individual lever-type element switches. 4½" meter, 3-color scale. Illuminated anti-backlash "SPEEDROLL" roll-chart. Protective overload bulb. Line-adjust control. 2 grid caps. Blank socket for future tube types. Pilot light test socket. Also tests TV picture tubes with EICO CRA Adapter.

Tube Tester Kit with Counter Display Case

Model 625-CK, Kit	**$44.95**
Model 625-C, factory wired	**$59.95**
Lid for your EICO Tube Tester	**$3.98**

FAST TUBE & CRT FILAMENT TESTER #612

KIT $3.95 **Factory Wired $5.95**

Includes batteries

Fast filament check of series string & all other TV & radio tubes (9-pin, octal, loctal, 7-pin); 14-pin, 12-pin, 8-pin CRTs; bayonet & screw-type pilot lamps; cartridge fuses. Just plug tube into tester socket, observe indicator lamp—no fiddling with controls or switches. Self-powered for convenience & safety. 7-pin & 9-pin miniature tube pin straighteners provided. Compact: 6¼" h, 3¾" w, 2" d.

PICTURE TUBE TEST ADAPTER No. CRA

(For EICO Models 625, 625-K, 666 and 666-K Tube Testers)

With the new Model CRA and your EICO Tube Tester, you check all sizes TV Picture Tubes as fast and easily as any ordinary tube. Model CRA gives a quantitative measurement of cathode emission, and tests for filament continuity and shorts between elements. Comes complete with standard 12-pin TV tube socket, octal plug-in connector, and extra long 4-foot cable that enables Pix Tube to remain in set WHILE TESTING.

Factory Wired $4.50

PICTURE TUBE TEST ADAPTER CRA-110

For 110° deflection tubes. Has Eightar 8-contact socket, octal plug, 4-ft. cable. Use with EICO #625, #666 and similar tube testers. **Factory wired $3.95.**

CATHODE RAY TUBE CHECKER No. 630

KIT $13.95 **Factory Wired $18.95**

Easy, fast, dependable testing of all sizes TV picture and oscilloscope type C-R tubes—right in the set or carton. Measures peak beam current (proportional to screen brightness) using neon lamp as sensitive balance indicator. Balance control calibrated directly in terms of tube condition. Detects open and shorted elements. Size: 9½" x 6½" x 3". Ship. wt. 5 lbs.

DYNAMIC CONDUCTANCE TUBE AND TRANSISTOR TESTER No. 666

Complete with rugged steel carrying case, matching steel cover, and carrying handle for easy portability.

KIT $69.95 **Factory Wired $109.95**

Unexcelled testing thoroughness and accuracy. Checks transistor collector current and Beta using internal dc power supply. Tests all receiving tubes including subminiatures (and tv pic tubes with accessory adapter).* Composite indication of mutual conductance, plate conductance, and peak emission. Simultaneous sel. of any 1 of 4 combinations of 3 plate, 3 screen, and 3 ranges of control grid voltage. Grid voltage variable over 3 ranges with 5% accuracy pot. New series-string voltages for 600, 450 and 300 ma types. 5 ranges meter sens. with 1% precision shunts and 5% accurate pot. 10 SIX-position lever switches for free-point connection of every tube pin or cap. 10 push-buttons for rapid insert of any tube element in leakage circuit and speedy sel. of individual tube sections. Direct reading of inter-element leakage in ohms. New gear-driven rollchart. Sensitive 200 μa meter.   * CRA & CRA110 pix tube adapters.

BATTERY TESTER No. 584

KIT $9.95 **Factory Wired $12.95**

For accurate, true DYNAMIC test of all A and B portable radio batteries, lantern batteries, and other types — in or out of equipment. Test Positions (Volts): 1.5, 4.5, 6.0, 7.5, 9.0, 22.5, 45, 67.5, 75, 90 plus Spare Position. Test leads provided. High-impact Bakelite case and satin aluminum panel. 6¼" h x 3¾" w x 2" d.

READI-TESTER No. 540

KIT $12.95 **Wired $15.95**

Designed specifically for the ever-expanding do-it-yourself market, the 540 is excellent for electrical and electronic servicing, for home and automotive repairs. Low-cost, dependable, extremely versatile, the 540 is an all-in-one multi-range ac/dc voltmeter, ammeter, ohmmeter, wattmeter and leakage checker. Its rotary switch selection and one-place visual indication—both unique in instruments of this type—permit much faster and convenient operation. Locates defects in electrical appliances, motors, house wiring, furnace control, air conditioning, automotive equipment, tv and radio tubes and parts. Its instruction book, contains an introduction to electricity, complete operating method, and procedures for common repair jobs.

FLYBACK XFMR & YOKE TESTER No. 944

KIT $23.95 **Wired $34.95**

Positive check of all flybacks and yokes, in or out of set, **in just seconds!** Uses sensitive grid-dip principle — shows up even 1 shorted turn! **Exclusive** separate calibration for air- and iron-core flybacks. Checks any inductance of not too low impedance; also usable for general continuity testing. Large 4½" 50 μa meter, 3 separate colored scales.

R-C BRIDGE & R-C-L COMPARATOR

KIT $19.95 **No. 950B** **Wired $29.95**

Latest bridge-type instrument directly reads 0.5 ohms—500 megs resistance (4 ranges), 10 mmfd-5000 mfd capacitance (4 ranges), and power factor. (Kit includes precision calibrating resistor.) Unique comparator range for R, C, and L comparison measurement against external standard. Leakage testing of all capacitors at rated dc working voltage with internal 0-500 vdc source. Electron—ray tube as both bridge balance and capacitor leakage indicator.

CAPACITANCE SUBST. BOX No. 1120

KIT $5.95 **Wired $9.95**

Enables rapid substitution of a wide range of EIA capacitance values from 0.0001 to 0.22 mfd in an operating circuit to determine value needed for optimum performance and to find value of badly damaged or illegible capacitors. Minimum accuracy ±10%. Uses silver mica and molded plastic capacitors, most conservatively rated at 600 volts. Convenient 5-way jack-top binding posts.

RESISTANCE SUBST. BOX No. 1100

KIT $5.95 **Wired $9.95**

Enables rapid substitution of wide range of EIA resistance values from 15 ohms to 10 megohms in decade multiples of 15, 22, 33, 47, 68, 100 ohms. Uses standard 1 watt, ±10% EIA resistors.

SERIES/PARALLEL R-C COMBINATION BOX No. 1140

KIT $13.95 **WIRED $19.95**

Only EICO has it!

A combination of Models 1100 and 1120 (above) with switching facilities permitting selection of any R alone, any C alone, or 1350 combinations of same in series or parallel. Open and short circuit positions provided. Standard E.I.A. values, 10% accuracy. Convenient jack-top binding posts.

RF SIGNAL GENERATOR No. 324

KIT $26.95 **Factory Wired $39.95**

"The Best Generator Buy in the World!" say EICO customers. For IF-RF alignment, signal tracing and trouble-shooting of TV, FM, AM sets all on fundamentals . . . marker generator for alignment of new h-f and older l-f TV IF's . . . 400 cps sine wave audio testing . . . lab and experimental work. Extended frequency range: 150 kc to 145 mc on fundamentals in 6 bands; 111-435 mc on calibrated harmonics. ±1.5% frequency accuracy; 6:1 vernier tuning knob and excellent spread at most important alignment frequencies. Etched tuning dial, plexiglass windows, edgelit hairlines. Colpitts RF oscillator, directly plate-modulated by cathode follower for improved modulation. Variable depth of internal modulation 0-50% by 400 cps Colpitts oscillator. Variable gain external modulation amplifier: only 3.0 volts needed for 30% modulation. Turret-mounted slug-tuned coils. Fine and Coarse (3-step) attenuators, 50-ohm output Z. RF and AF outputs respectively 100,000 uv and up to 10 v. Tubes: 12AU7, 12AV7, selenium rectifier, xfmr-operated. 5-way jack-top binding posts for AF in/out; coaxial connector and shielded cable for RF out. Satin aluminum panel and grey wrinkle steel case. 8" H x 10" W x 4¾" D. Ship. wt. 10 lbs.

TV-FM SWEEP GENERATOR AND MARKER No. 368

KIT $69.95 **Factory Wired $119.95**

The FINEST service instrument of this type ever offered in either kit or wired form at ANY price! Outstanding ease and accuracy in FM and TV (including Color) alignment. Entirely electronic sweep circuit with accurately biased increductor: superb linearity on both sides of selected center freq. Newly-designed AGC circuit automatically adjusts osc. for max. output on each band with min. amplitude variations. Sweep gen. range 3-216 mc in 5 OVERLAPPING FUND. BANDS. Sweep width continuously variable from 0-3 mc lowest max. deviation to 0-30 mc highest max. deviation. Variable marker gen. range from 2-75 mc in 3 FUND. BANDS plus a calibrated harmonic band 60-225 mc. Variable marker calibrated with int. xtal marker gen. 4.5 mc xtal included. Ext. marker provision. Double pi line filter. Edge-lit hair-lines eliminate parallax.

RF SIGNAL GENERATORS

MODEL 320: For AM-FM precision alignment and TV marker frequencies. Vernier Tuning Condenser. Highly stable RF oscillator, range: 150 KC - 102 MC with fundamentals to 34 MC. Separate audio oscillator supplies 400-cycle pure sine

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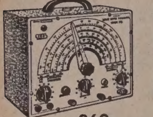
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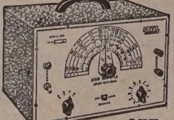
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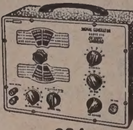
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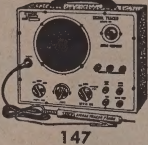
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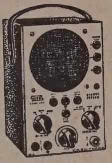
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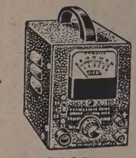
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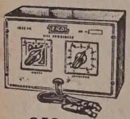
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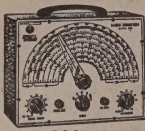
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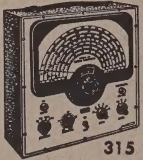
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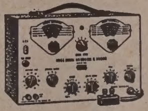
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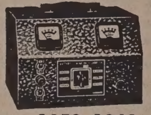
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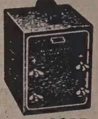
1055

wave voltage. Pure RF, modulated RF or pure AF for external testing. Satin aluminum etched panel; rugged steel case. Ship. wt. 10 lbs.
Model 320—KIT $19.95 Factory Wired $29.95
MODEL 322: In addition to all the outstanding laboratory-precision qualities of the famous EICO Model 320. Model 322 features the individual calibration of each of its 5 bands.
Model 322—KIT $23.95 Factory Wired $34.95

DELUXE RF SIGNAL GENERATOR No. 315

KIT $39.95 Factory Wired $59.95
Laboratory-precision generator EICO Service-Engineered with 1% accuracy. Frequency range: 75 kc-150 mc in 7 calibrated ranges. Extremely stable. Illuminated hairline VERNIER TUNING. VR stabilized line supply. 400-cycle pure sine wave with less than 5% distortion. Tube complement: 6X5, 6SL7, 6C4, VR-150. Satin aluminum etched panel; rugged steel case. 115 v., 60 cycles AC. Size: 12″ x 13″ x 7″. Ship. wt. 21 lbs.

TV-FM SWEEP GENERATOR No. 360

KIT $34.95 Factory Wired $49.95
Covers all TV-FM alignment frequencies, 500 KC - 228 MC. Vernier-driven dial. Center of each of 13 TV channels marked on front panel. Sweepwidth variable 0-30 MC with mechanical inductive sweep — permits gain comparison of adjacent TV channels. Crystal marker oscillator, variable amplitude. Provides for injection of external marker. Phasing control. Complete with HF tubes. Less Crystal. Size: 10″ x 8″ x 6¾″. Ship. wt. 12 lbs.
EICO 5 MC and 4.5 MC Crystals — $3.95 ea.

SINE AND SQUARE WAVE AUDIO GENERATOR No. 377

KIT $31.95 Factory Wired $49.95
Complete sine wave coverage: 20-200,000 cps. Complete square wave coverage: 60-50,000 cps. 2-gang tuning condenser. All frequency range resistors have 1% or better accuracy. Large easy-reading dial calibration: 0-100 linear reference scale. Response ±1.5 db from 60 cps to 150 kc. Wien bridge RC oscillator. Improved cathode follower output circuit. Output Voltage: 10 v. at 1000 ohms load, 14 v. at 10,000 ohms and higher, 8 v. at 500 ohms on sine wave; square wave output higher. High power output: 100mw into rated load. Rated load impedance: 1000 ohms resistive. Continuously variable output attenuator. Distortion 1% of rated output. Hum less than 0.4% of rated output. Tubes: 6X5, 6SJ7, 2-6K6, 6SN7, 6S6 (G-E 6-watt lamp). Satin aluminum etched rub-proof panel; rugged steel case. 115 V., 50/60 cycles, 50 W. Size: 11⅛″ x 7⅛″ x 7⅝″. Ship. wt. 14 lbs.

BAR GENERATOR No. 352

KIT $14.95 Factory Wired $19.95
Enables rapid adjustment of TV picture Vertical and Horizontal linearity without hard-to-find station-transmitted test pattern. Produces 16 to 23 V bars and 13 to 22 H bars, adjustable in number to accommodate all screen sizes. Incorporates VHF osc., RF osc., and LF multi-vibrator. Adjustable from Channel 2 to 6. Deluxe 3-way antenna terminal clip fits any type antenna terminal including plug-in type. Output voltage: 100,000 microvolts. Tubes: 1-12AU7, 1-6C4; selenium rectifier. Size: 5″ x 7½″ x 4½″. Ship. wt. 6 lbs.

DELUXE MULTI-SIGNAL TRACER No. 147

KIT $24.95 Factory Wired $39.95
Entirely new 5-tube instrument provides high gain RF and low gain audio channels with both visual and aural monitors (electron-ray tube and 5″ speaker). Permits RF, IF and audio signal tracing in TV, FM and AM sets. Highly useful noise localizer circuit that applies DC test voltage thru probe to suspected component and simultaneously picks up and amplifies effect. Wattmeter circuit detects abnormal power consumption in TV and radio receivers. May be connected as test speaker, amplifier or output transformer, and has output for VTVM or scope. Excellent for gain-per-stage estimation, null detector, scope preamplifier, utility amplifier, small P.A. system. New satin finish etched panel; grey wrinkle steel case. 105-125 VAC, 50/60 cps. Size: 8″ x 10″ x 4¾″. Ship. wt. 10 lbs.

LOW-COST MULTI SIGNAL TRACER 145A

KIT $19.95 Factory Wired $28.95
High gain RF and low gain audio input channels for signal tracing and trouble shooting RF, IF, and audio stages of AM, FM, and TV receivers. More than enough RF gain to trace up to receiver input; signal is heard through built-in 5″ PM speaker. Shielded RF crystal demodulator and direct probes supplied. Noise localizer circuit applies DC test voltage through probe to suspected component and simultaneously picks up and amplifies effect. May be connected as test speaker, amplifier or output transformer. Output for VTVM or scope. For null detector, scope preamp, etc. Remarkably compact. With all parts. 7-13/16 x 5-9/16 x 5-1/16. Shipping weight, 7 lbs.

POWER and BIAS SUPPLY FOR TRANSISTORIZED EQPT. MODEL 1020

KIT: $19.95 Wired: $27.95
Comparable in purity of output and voltage and current capacity to transistorized power supplies selling for several hundred dollars. Supplies up to 30 V @ 300 ma. Includes power transformer, full-wave silicon diode rectifier circuit, electrolytic capacitor input filter followed by a **two-power transistor (2-2N256)** cascaded filter circuit providing extraordinary ripple rejection. Very low ripple; maximum ripple 0.005% (0.00005) at full load. Monitored by a dual range voltmeter (0-6 V, 0-30 V DC). Ideal for engineering, development, service work and other applications where a pure low current DC power supply is required.

SPECIFICATIONS

Output Voltage Range: 0-30 V DC, continuously variable. **Max. Output Current Capacity** (continuous): 150 ma from 0-12 V, 200 ma from 12-24 V, 300 ma from 24-30 V. **Ripple:** (120 cps): 0.005% (.00005) at full load. **Power Requirements:** 117 V, 60 cps. **Size** (HWD): 5″ x 4″ x 5½″ **Shipping Weight:** 4½ lbs.

6V and 12V BATTERY ELIMINATOR and CHARGER No. 1050

KIT $29.95 Factory Wired $38.95
Gives you all the electrical power you need for 6-volt and 12-volt battery charging and auto radio servicing. Two DC ranges: 0-8 v (10 amps continuous, 20 amps intermittent), 0-16 volts (6 amps continuous, 12 amps intermittent). Continuous voltage adjustment with variac-type transformer. Separate voltmeter and ammeter. Heavy duty selenium rectifiers. Fused primary; automatic reset circuit-breaker opens secondary circuit upon overload. Rugged, well-ventilated steel cabinet. Size: 8¾″ x 10½″ x 7¾″. Ship. wt. 15 lbs.

BATTERY ELIMINATOR ACCESSORY FILTER No. 1055

KIT $11.95 Factory Wired $15.95
L-C filter provides additional filtering of output of EICO No. 1050 above, or any similar unit, when the battery eliminator is used for powering transistor and "hybrid" car radios. Functions on either 6V or 12V ranges of the b.e. up to 10 amps max current; can remain in use for ALL functions of the b.e.

"EXTRA-FILTERED" 6V and 12V BATTERY ELIMINATOR and CHARGER No. 1060

KIT $38.95 Factory Wired $47.95
Combines Model 1050K Battery Eliminator and Model 1055 Filter in a single unit. Powers both transistor and conventional equipment. New dual-range ammeter permits more accurate readings. Selection of voltage range automatically provides appropriate current range.

IMPORTANT NOTE:
All EICO factory-wired equipment is completely meticulously hand-wired throughout; and is 100% final-tested throughout (no "spot" checking, no "partial" checking).

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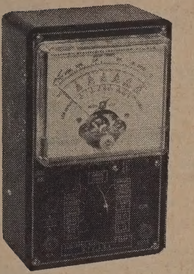


MODEL 102 VOM . . .

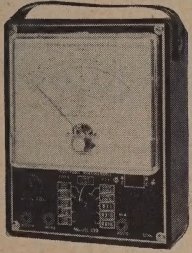
Resistance to 1 meg.
AC and DC Volts to 3000V.
3 AC and DC Current Ranges.

Wired	**$14.90**
Kit	**12.50**

MODEL 102F . . .

(With Fused Meter)

Wired	**$15.55**
Kit	**13.10**



MODEL 109 VOM . . .

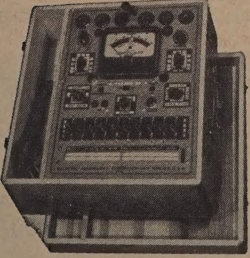
20,000 ohms per Volt DC.
10,000 ohms per Volt AC.
4½" 40 Microampere Meter
5 AC and DC Volt Ranges
to 3000V. 3 Resistance
Ranges to 20 megs.
3 AC & DC Current Ranges.

Wired	**$26.95**
Kit	**19.25**

MODEL 700 AUDIO AND RF GENERATOR . . .

Complete coverage from 18 cycles to 108 MC on fundamentals. Bar Generator. Square Wave Generator.

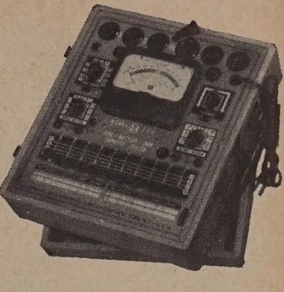
Wired $55.90



MODEL 206P DYNAMIC MUTUAL CONDUCTANCE TUBE TESTER . . .

Checks micromho value. Gas Content Flexible switching. Lowest Priced Mutual Conductance Tester on Market.

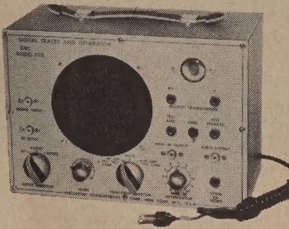
Wired $83.50
(Oak Portable Case)



MODEL 204P TUBE-BATTERY OHM-CAPACITY TESTER . . .

Checks Tubes, Batteries, Condensers and Resistors. Flexible Switching.

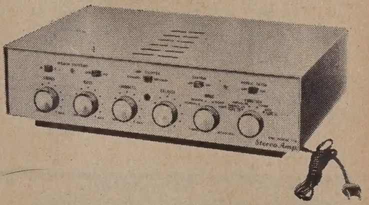
Wired $55.90
(Oak Carrying Case)



MODEL 802 SIGNAL TRACER AND GENERATOR . . .

Generates its own Audio and RF signals for tracing. Complete with RF and 2 Audio leads. Uses Magic Eye and Speaker. Checks noisy components.

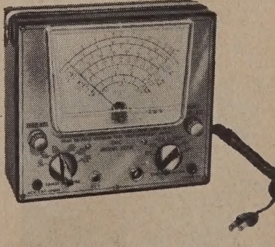
Wired	**$38.95**
Kit	**24.95**



MODEL 214 STEREO AMPLIFIER . . .

56 Watts Power. Has contour switch and rumble filter. Etched 2 color panel.

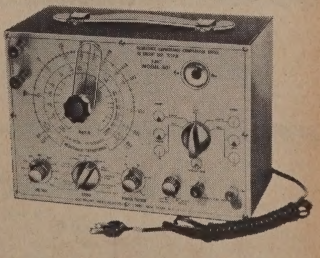
Wired	**$106.90**
Kit	**68.90**



MODEL 107A PEAK-TO-PEAK VACUUM TUBE VOLT-OHM-CAPACITY TESTER . . .

Uses 6" meter. Bakelite Case. 6 AC & DC volt ranges to 2800 V. 6 capacity ranges from 50 MMFD to 5000 MFD. 6 resistance ranges from .2 ohm to 1000 megs.

Wired	**$51.40**
Kit	**36.50**



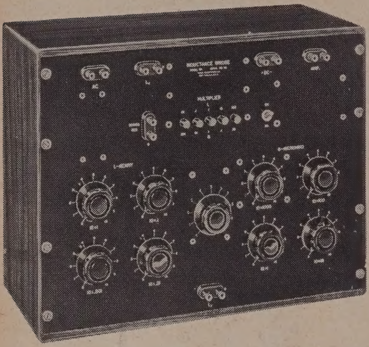
MODEL 801 RC BRIDGE AND IN-CIRCUIT CHECKER . . .

Checks condensers completely in and out of circuit. Checks resistance. Checks condensers for value, leakage and power factor

Wired	**$38.95**
Kit	**24.95**

EMC

ELECTRONIC MEASUREMENTS CORPORATION
New York 12, New York



INCREMENTAL INDUCTANCE BRIDGE
TYPE 1110-AB

USES

The Incremental Inductance Bridge is designed for measuring the inductance of Iron Core components at any frequency up to 10,000 cycles. Inductors can be measured with a superimposed direct current, therefore the bridge will measure the incremental inductance of coils. The bridge can be used for detemination of storage factor, "Q", either at a given frequency as a function of the applied voltage or at a given voltage as a function of the applied frequency. The bridge can be used by the manufacturers of iron core components for testing filter chokes, high Q coils, and iron core audio and supersonic frequency components. Due to its very wide inductance range the instrument can be used as a general purpose laboratory inductance bridge.

SPECIFICATIONS

Inductance: 1 Millihenry to 1000 Henry.

Frequency: The bridge is calibrated and adjusted at both 60 and 1000 cycles but can be used at any frequency up to 10,000 cycles.

Accuracy: 1% to 1000 Cycles, 2% to 10KC.

Conductance: 1 Micromho to 1 MHO.

"Q": 0.5 to 100.

Superimposed D.C.: Up to 1 Ampere.

Direct Reading: For use by unskilled operators.

Dimensions: 21" x 8" x 16⅝".

Weight: 48 lbs.

ACCESSORIES AVAILABLE

1140-A Null Detector, 1210-A Null Detector-V.T.V.M., 1170 D.C. Supply and 1180 A.C. Supply.

INCREMENTAL INDUCTANCE BRIDGE
TYPE 1115
MAXIMUM D.C. 15 AMPERES

USES

Designed to supplement to Freed type 1110-AB for measuring the incremental inductance of iron core components with up to 15 Ampere super-imposed direct current.

SPECIFICATIONS

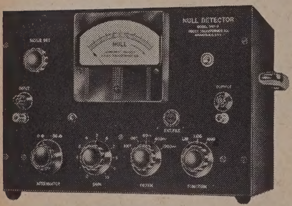
Inductance Range: .1 Millihenry to 10 Henry.

Superimposed D.C. Range: 15 Amp. — .1 MH to 100 MH; 4 Amp. — 1 MH to 1 Hy; 1.4 Amp. — 1 Hy. to 10 Hy.

Frequency: 20 cycles to 20 kc.

Accuracy: ±1% to 10 kc, ±2% 10 to 20 kc.

NULL DETECTOR AMPLIFIER TYPE 1140-A



USES

A sensitive null indicator for bridge measurements, providing visual null indications or aural when used in conjunction with headphones. The unit may also be used as a high gain amplifier for general laboratory work.

DESCRIPTION

Functionally the instrument consists of a high gain linear amplifier with a 30 db. input attenuator in addition to the variable gain control. A four-inch panel meter provides visual null indications, the response of the meter circuit is approximately logarithmic over a 40 db. voltage range. Resonant circuits tuned to 60, 400 and 1000 cycles limit the amplifier transmission characteristics to the three audio frequencies commonly used for bridge measurements or it may be used as a non-selective amplifier with filter "off." Other selective frequency can be obtained by use of a Type 1940 Filter Unit.

SPECIFICATIONS

Input Impedance: 1 megohm in parallel with 25 mmf. GAIN: 98 db. with 1 megohm load (6 mmf. shunt capacity).

Null Detector Sensitivity: At 1 kc. 100 microvolts will give a 15% meter deflection.

Selective Amplifier: 26 db. second harmonic attenuation at 60, 400 and 1000 cycles.

Power Supply: 105-125 volts, 50-60 cycles, 35 watts consumption.

Dimensions: 12" x 8½" x 10". **Weight:** 24 lbs.

A.C. SUPPLY TYPE 1180

USES

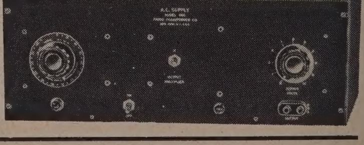
The type 1180 A.C. Supply is designed for both laboratory and production applications where a power line isolated source of A.C. test voltage is required. It will have particular application to bridge measurements where a source of voltage in small increments is needed.

SPECIFICATIONS

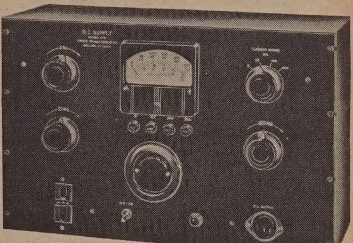
Voltage Range: .01 — 130 volts AC — 50-60 cycles.

Dimensions: Width 19"; Depth 5"; Height 7".

Weight: 13½ lbs.



D.C. SUPPLY TYPE 1170



USES

Intended as a dependable source of direct current for the Incremental Inductance Bridge Type No. 1110-AB. Can also be used as a general laboratory substitute for a high voltage storage battery.

DESCRIPTION

Consists of an electronically regulated high voltage supply. Four independent control circuits provide four current ranges, namely 5 milliamperes, 25 milliamperes, 100 milliamperes and 500 milliamperes. The output current is indicated by a multirange 4" meter.

SPECIFICATIONS

Current Ranges: Four current ranges: 5, 25, 100 and 500 milliamperes.
Voltage Ranges: The maximum no load voltages corresponding to the four current ranges are the following: 500 MA — 270 volts, 100 MA — 270 volts, 25 MA — 55 volts, 5 MA — 25 volts. On both 500 MA and 100 MA range with the control set to zero, the output voltage is independent of the load.
Voltage Regulation: The unit operates from a 115 volts, 50-60 cycle line. For a line variation of plus or minus 10%, the output voltage shall not vary more than ±1½%.
Dimensions: 21" x 15" x 14". **Weight:** 89 lbs.

D. C. SUPPLY TYPE 2070

The Type 2070 DC Supply is a compact and dependable source of metered current for use with the Freed Type 1110-AB Incremental Inductance Bridge. This unit is not electronically regulated and is therefore not intended for measurements requiring the close regulation supplied by the Freed Type 1170, however, this supply will be found suitable for all but the most critical production testing.

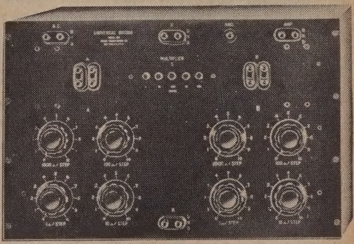
DESCRIPTION

The instrument consists of a variable voltage primary, a full wave silicon diode bridge and a multisection filter. Output current is indicated on a 4" multi-scale meter.

SPECIFICATIONS

Current Range: 0-500 Milliampere in 4 ranges: 5-25-100-500 Milliamperes.
Voltage Output: 200 volts @ 500 Ma., 170 volts @ 100 Ma.,
110 volts @ 25 Ma., 70 volts @ 5 Ma.
Full Load Ripple: Average ripple and noise less than 20 miilivolts.
Input Power: 115 volts AC. **Size:** 19 x 7 x 12 inches. **Weight:** 30 lbs.

UNIVERSAL BRIDGE TYPE 1150

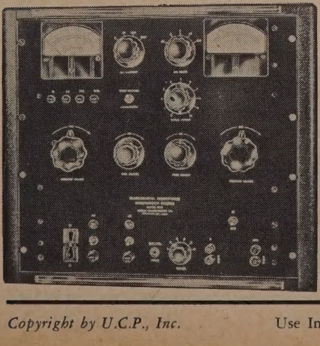


FEATURES

The Universal Bridge offers a variety of five possible bridge circuits. A wide range of capacitance, inductance, impedance, and phase angle measurement can be made throughout the frequency spectrum from 20 cycles to 20,000 cycles.
Decade resistors in the variable arms allow the unknown to be measured to four significant figures. Operation is simple and both terminals and controls are arranged for convenience and ease of measurements.

SPECIFICATIONS

Frequency Range: The bridge can be used at frequencies from 20 cycles to 20,000 cycles.
Accuracy: All resistors of the bridge arms are adjusted to 0.1%. The absolute accuracy of measurement will depend upon the accuracy of standards used.
Inductance Range: The bridge will measure inductance of coils from 0.1 mh to 1000 henries with an accuracy of 0.5% at 1000 cycles.
Capacitance Range: Condensers from .001 mf to 1 mf can be measured to within 0.5% at 1000 cycles. Condensers below .001 mf should be measured by the substitution method.
Mounting: The bridge supplied in walnut cabinet or on special order for standard rack mounting.
Dimensions: Rack 19"x8"x14" **Weight:** 32 lb.; Cabinet 21"x8"x16⅝" **Weight:** 43 lbs.



INCREMENTAL INDUCTANCE COMPARISON BRIDGE TYPE 1870

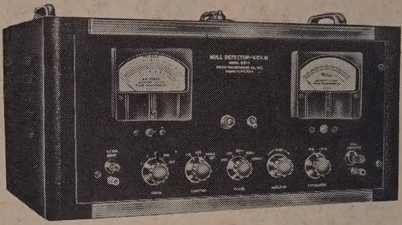
DESCRIPTION

The unit is completely self-contained, consisting of a metered 500 ma D.C. supply, a metered 135 volt, 60 cycle supply and a direct reading % deviation indicator. An external oscillator jack is provided so that test frequencies from 60 cycles to 10 kc may be used.

SPECIFICATIONS

Inductance Range: 25 mh to 100 h.
Deviation Range: ±20% with an accuracy of 1%. ±30% with an accuracy of 5%.
Frequency: 60 cycles to 10,000 cycles.
Voltage Applied to Unknown: Variable from 0 to 135 volts.
D.C. Current Range: 0 to 500 ma in four overlapping ranges, 0-5 ma, 0-25 ma, 0-100 ma, 0-500 ma.
Vacuum Tube Voltmeter: .01, .1, 10, and 100 volts full scale.
Power Supply: Instrument is entirely self-contained, operates on 100-125 volts, 50-60 cycles.
Dimensions: 19½" high x 22" wide x 15" deep. **Weight:** 150 lbs.

NULL DETECTOR AND VACUUM TUBE VOLTMETER TYPE 1210-A



USES

The Type 1210-A Null Detector and Vacuum Tube Voltmeter is primarily designed for bridge measurements. The Null Detector indicates the balance of the bridge, and the Vacuum Tube Voltmeter indicates the voltage across the unknown two terminal or four terminal network.

SPECIFICATIONS

NULL DETECTOR

Input Impedance: 1 megohm in parallel with 25 mmf.

Frequency Response: 2 db from 20 to 20,000 cycles.

Null Detector Sensitivity: At 1000 cycles, 100 microvolts will give a 15% meter deflection.

Selective Amplifier: 26 db second harmonic attenuation at 60,400 and 1000 cycles. Selectivity at any other frequency between 20 cycles and 20 kc. may be obtained by connecting Freed Model 1940 to the external filter jack.

VACUUM TUBE VOLTMETER

Voltage Range: .01 volts to 150 volts in four ranges — (.15 — 1.5 — 15 — 150 volts at full scale.)

Accuracy: 2% of full scale on all four ranges.

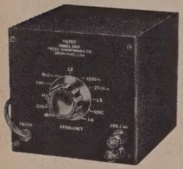
Waveform Error: The instrument is a full wave average meter and is free of turnover effects. For small amounts of distortion the accuracy of the instrument is independent of the waveform.

Frequency Range: 20 cycles to 20,000 cycles (1 db.)

Input Impedance: Equivalent to 50 megohms resistance in parallel with a 25 mmf condenser.

Power Supply: 105-125 volts AC. 50-60 cycles. **Dimensions:** 21" x 15" x 13". **Weight:** 37 lbs.

INTERSTAGE FILTER TYPE 1940



USES

This filter may be used with the Freed Type 1140-A Null Detector and Type 1210-A Null Detector V.T.V.M. or similar amplifiers. It can be set to any one of 7 fixed frequencies to reduce noise and harmonics when making bridge measurements.

DESCRIPTION

The filters are parallel resonant circuits, and are designed to be used in the plate circuit of the amplifier. D.C. current through the inductor is limited to 3 ma. Terminals are provided for connecting an external capacitor to tune to any frequency between 50 cps and 20 kc.

FEATURES

- Each of 7 tuned frequencies is quickly available.
- Any resonant frequency between 50 cps and 20 kc can be obtained with external capacitors.
- Sharp anti-resonant tuning.
- Can be used directly in plate circuit.

SPECIFICATIONS

Frequencies: 100 cps, 200 cps, 500 cps, 800 cps, 1200 cps, 2000 cps and 10 kc. adjusted to any accuracy of ±2%. Discrimination vs 2nd harmonic approximately 23 db.

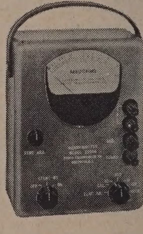
Terminals: Shielded cord and plug for connection to null detector. Binding posts for connecting external capacitors.

Dimensions: 6" x 6" x 6". **Weights:** 7 lbs.

BATTERY OPERATED PORTABLE MEGOHMMETER TYPE 2030

USES

The Freed Type 2030 Megohmmeter is a battery operated instrument especially suited for measuring leakage of transformers, motors, cables, condensers and insulating materials wherever the power line is inaccessible or where battery operation is more desirable.



FEATURES

Resistance values are indicated on a 3" expanded scale meter protected against overload. Low resistance in series with component under test provides very short charging time for even the largest condensers. Calibration position provided to check accuracy of 500 volt test potential. The 500 volt D.C. test potential is obtained from a regulated transistor power supply.

SPECIFICATIONS

Range: 5 megohms to 5 million megohms, indications to 10 million megohms in 5 overlapping ranges.

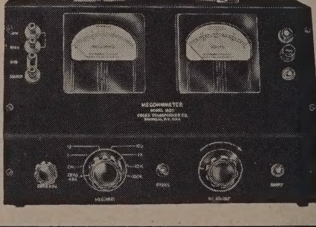
Accuracy: Plus or minus 3% on resistance values up to 100,000 megohms: plus or minus 5% from 100,000 megohms to 5,000,000 megohms.

Voltages on Unknown: The voltage applied to the Unknown terminals is 500 volts D.C. and is independent (less than 1%) of the value of the Unknown.

Terminals: Four terminals are provided, two for connecting the Unknown, one guard and one ground.

Dimensions: 6" x 8" x 4". **Weight:** 8 lbs.

VARIABLE TEST VOLTAGE MEGOHMMETER TYPE 1620



The Freed Type 1620 Megohmmeter is a versatile insulation resistance measurement instrument with a continuously variable DC test potential from 50 to 1000 volts.

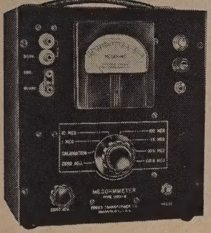
Components such as transformers, condensers, motors, printed circuits; cables and insulation material can be tested at their rated voltage and above, for safety factor.

- **Resistance** — 0.1 megohms to 4,000,000 megohms.
- **Voltage** — variable, 50 - 1000 volts.
- **Accurate** — plus or minus 5% on all ranges.
- **Simple** — for use by unskilled operators.

Power Supply: 105-125 volts AC — 50-60 cycles.
Dimensions: 15" x 9" x 7½". **Weight:** 24 lbs.

TYPE 1620-C MEGOHMMETER

All features same as type 1620 with additional circuitry for measuring capacitor leakage with test voltages from 50-1000 volts D.C.



MEGOHMMETER TYPE 1020-B

USES

A self-contained and A.C. operated instrument for laboratory or production testing of leakage resistance of insulation materials, condensers, cables, motors and transformer windings.

FEATURES

Resistance values indicated directly on a four-inch meter protected against over-load. Rapid and safe to use, test voltage removed from terminals, and capacitive component discharged to ground in all positions of multiplier switch. Maximum short circuit-current limited to 6 milliamperes for optimum safety of operating personnel. Low resistance in series with component under test provides very short charging time for even the very largest capacitors. Calibration position provided to check accuracy of 500 volts D.C. potential.

SPECIFICATIONS

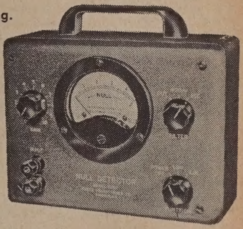
Range: 1 megohm to 2,000,000 megohms in six overlapping ranges selected by a multiplier switch.
Accuracy: Plus or minus 3% on resistance values up to 100,000 megohms: plus or minus 5% from 100,000 to 2,000,000 megohms.
Voltages on Unknown: The voltage applied to the unknown terminals is 500 volts D.C. and is independent (less than 1%) of the value of the unknown.
Power Supply: 105-125 volts A.C. 50-60 cycles 30 watts.
Dimensions: 9½" x 10½" x 8".
Weight: 18 lbs.

NULL DETECTOR TYPE 2050 (ALL TRANSISTOR)

The Freed Type 2050 Null Detector, when used in conjunction with other battery operated equipment, allows complete isolation from the power lines. This feature, plus battery operation, provide a lower noise level which makes it useful in all types of AC Bridge measurements. Readily portable and independent of power lines, this instrument is particularly suited for bridge measurements in any location.

FEATURES

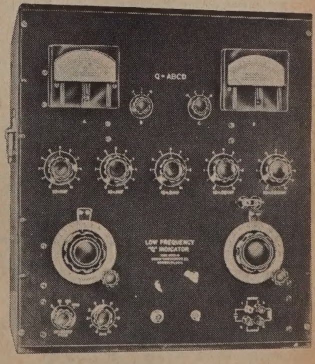
- Complete isolation from power lines.
- Portable — lightweight.
- Economical operation.
- High sensitivity throughout battery life.
- Maintenance — free service.
- Simplified operations — no warm-up, no zero setting.
- Built-in harmonic filters.



SPECIFICATIONS

Sensitivity: (with 400 cycle or 1000 cycle filter)
A — 200μV for full-scale
80μV for 30% deflection } in "Linear" position
B — 2000μV for full-scale
100μV for 30% deflection } in "Null" position
Input Impedance: Approximately 1 Megohm (resistive) at 1000 cycles.
Frequency Range: 40 cycles to 20 kc ±1 db.
In "Direct" position: 20 cycles to 50kc ±5 db.
Filters: 400 cycles and 1000 cycles, greater than 22 db rejection of 2nd Harmonics.
Power Supply: 5.2 volts (4 mercury cells).
Battery Life: At least 1800 hours.
Size: 6 x 8 x 3½ inches.
Weight: 3½ lbs. with batteries.

LOW FREQUENCY "Q" INDICATOR TYPE 1030-A



USES

Measures the "Q" factor of coils directly and the inductance of coils, distributed capacity, impedance and dielectric losses. The "Q" Indicator can be used to study the magnetic properties of iron, such as stability of iron cores in function of applied voltages, and, iron losses as a function of the frequency.

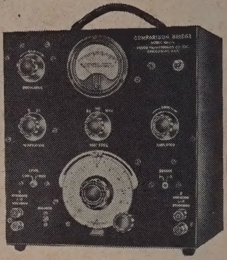
FEATURES

- Direct reading
- Unaffected by line voltage variations.
- Self contained — A.C. operated.

SPECIFICATIONS

Range of "Q" Measurements: The range of "Q" factors is from 0.1 to 1000 over the frequency range from 20 to 50,000 cycles with an accuracy of 5%; from 50,000 to 200,000 cycles the accuracy of "Q" measurements is limited by the residual capacity of the measuring circuit (for iron core components, measurements in this frequency range will approach 5%).
Oscillator Frequency Range: Continuously variable from 20 to 200,000 cycles in four ranges.
Power Supply: The instrument is entirely self-contained and operates on 105-125 volts, 50-60 cycles. Total power consumption 200 watts.
Dimensions: 19½" x 14½" x 23".
Weight: 120 lbs.

COMPARISON LIMIT BRIDGE TYPE 1010-A



USES

For laboratory and production testing of resistors, condensers and inductors. Instrument is completely self contained and A.C. operated.

DESCRIPTION

The instrument is composed of an oscillator, a bridge and a selective amplifier.

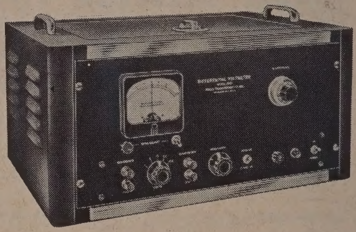
SPECIFICATIONS

Frequency: 50 or 60 cycles, 1000 cycles and 10,000 cycles.
Range: Two comparison ranges, 5% and 20%.
Accuracy: ±0.1% in the 5% position.
Resistor Measurements: 1 ohm to 20 Megohms.
Condenser Measurements: 10Mmfd. to 100 Mfd.
Inductor Measurements: 10 Microhenries to 1000 Henries.
Voltage applied to the Unknown: Two controls are provided to vary the voltage across the unknown. A special low impedance winding is used when measuring small impedances and the voltage across these may be varied from .1 to 1 volts. For higher values of impedance the voltage may be varied from .5 to 15 volts.
Power Supply: 105-125 volts; 50-60 cycles.
Dimensions: 10½" x 12" x 12".
Net Weight: 17 lbs.

A. C. DIFFERENTIAL VOLTMETER TYPE 1560

USES

Measures differences in voltage levels as low as 0.01% regardless of their phase relation. It is extremely useful when checking response and attenuation of filters, transformers, amplifiers and other applications where a small difference in two voltages is to be measured. Because of its excellent stability and high sensitivity the differential voltmeter may also be used to observe drift in amplifiers, meters and filters.

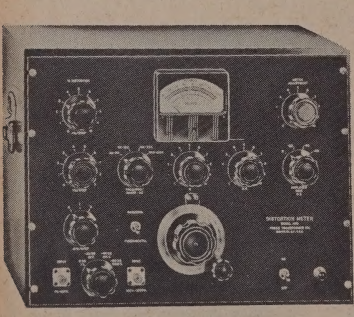


DESCRIPTION

This instrument consists of a balanced dual-channel AC Amplifier with separate rectifiers; a D.C. comparison circuit which indicates percent difference on a calibrated multiturn potentiometer; a chopper modulated D.C. Amplifier operating at 60 cps; a synchronous detector which is polarity-sensitive; and a 4" center-zero null meter.

SPECIFICATIONS

Percent Difference: —10% to +5% in .01% increments on multiturn potentiometer dial.
Input Voltage (each channel): .3 volt to 100 volts rms in 5 ranges.
Input Impedance: 470 K ohms shunted by approximately 20 mmf capacitance on 1 volt range; 400 K ohms shunted by 40 mmf.
Frequency Range: 20 to 20,000 cps (MODEL 1560); 20 to 200,000 cps (MODEL 1560E).
Calibration Linearity: ±.25% difference, 20 to 20kc; ±.5% difference, 20 to 200kc.
Power Supply: Electronically regulated; 115 volts, 60 cps input.
Dimensions: 21" x 15" x 10½".
Weight: 37 lbs.



WIDE BAND AND CARRIER FREQUENCY DISTORTION METER TYPE 1410

USES

The Type 1410 Distortion Meter may be used in the laboratory or for production testing of Wide Band Amplifiers, Carrier Frequency, Telemetering and Ultra-Sonic equipment.

DESCRIPTION

The high sensitivity of the instrument permits measurements to be made on signals as low as 0.2 volts to an accuracy of 0.1%. Signals as high as 1000 volts may be applied to the input terminals directly. The frequency range of the instrument is 20 kc to 1 mc. in 10 overlapping ranges. Frequencies up to 3 mc. are passed without attenuation by the amplifier circuits, so that distortion measurements can be made on fundamental frequencies up to 1 mc.

An isolation transformer and line filter provided with the instrument prevent any feedback through the power line.

SPECIFICATIONS

Frequency Range: 20 kc to 1 mc.
Input Impedance: 500,000 ohms shunted by 70 mmfd. (plus capacity of input cable) in all ranges but the 0.1 volt range. The shunt capacity on this range is 800 mmfd.
Accuracy: Harmonic Distortion can be measured accurately to 0.1%.
Sensitivity: Distortion levels of 0.1% can be read accurately for a signal input as low as 0.2 volts. Maximum input signal is 1000 volts rms.
Elimination Characteristics: Eliminates fundamental completely while attenuating second harmonic approximately 3%.
Power Supply: 105-125 volts, 50-60 cycles.
Dimensions: 19¾" x 16¾" x 15¾".
Net Weight: 60 pounds.

FREED TRANSFORMER COMPANY, INC.

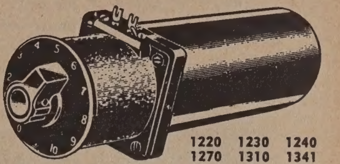
DECADE INDUCTORS

DESCRIPTION

Each unit is an assembly of four Toroids wound on a stabilized Molybdenum permalloy dust core protected against moisture. Four coils (nominal inductance valves 1 2, 3, 4) are connected in series, the inductance is varied from 0-10 by use of an 11 position low loss switch. A positive detent mechanism allows the switch to be set accurately.

USES

The Freed Toroidal Decade Inductors are available in single units from 1 Millihenry per step to 10 henries per step or in various combinations of assembled decade. They are especially useful in the design of filters and equalizers at audio and supersonic frequencies where the variable feature allows adjustments for optimum circuit performance.



1220 1230 1240
1270 1310 1341

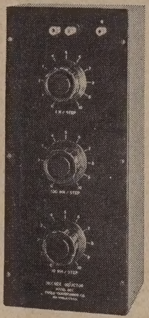
SPECIAL FEATURES

- High stability of inductance valve.
- Small variation of inductance with frequency (high self resonant frequency).
- Small variation of inductance with AC and DC currents.
- High Q in the operating frequency range.
- Low temperature coefficient.
- True astatic construction.

MAXIMUM Q VALUES ABOVE 200

Type	Frequency Range cps.	Maximum Q*	Inductance Per Step	Total Inductance	Size	Wgt. Lbs.
1164†	30- 2,000	60 @ 300	.1 Hy	111. Hy	15" x 7" x 5½"	28
1220	500-20,000	230 @ 4kc	0.001 Hy	0.01 Hy	3" x 3" x 9"	4½
1230	500-20,000	280 @ 3kc	0.01 Hy	0.1 Hy	3" x 3" x 9"	4½
1240	500-20,000	260 @ 3kc	0.1 Hy	1. Hy	3" x 3" x 9"	4½
1270	500-20,000	190 @ 2kc	1. Hy	10. Hy	3" x 3" x 9"	4½
1280	500-20,000	280 @ 3kc	0.001 Hy	1.11 Hy	13¾" x 6⅛" x 5½"	16
1290	500-20,000	280 @ 3kc	0.001 Hy	11.11 Hy	15" x 7" x 5½"	20
1310	500-20,000	280 @ 3kc	0.01 Hy	11.1 Hy	13¾" x 6⅛" x 5½"	16
1341	100- 2,000	100 @ 1kc	10. Hy	100. Hy	3" x 3" x 9"	4½

1164 1280
1290 1310



ACCURACY OF TOROIDAL INDUCTANCE

Inductance per Step:	1 mh	10 mh	100 mh	1 h
Nominal Accuracy:	±2%	±1%	±0.5%	±0.25%

*Maximum Q depending on inductance value and AC voltage across the coil.

†Type 1164 Decade Inductance is wound on a special nickel alloy laminated core, nominal inductance ±1%.

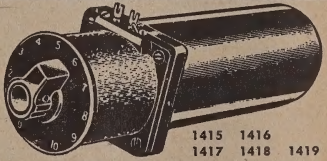
DECADE CAPACITORS

The Freed series of Decade Capacitors covers a wide range of values and can be supplied as individual decades from 0.0001 mfd. per step to 1 mfd. per step or in various combinations of assembled decade boxes.

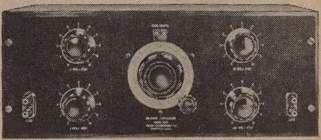
Single decade units can be assembled in different capacitor values for use in experimental and permanent equipment. The decade boxes are useful for laboratory work in bridge measurements and as components of filters and tuned circuits.

Polystyrene dielectric is used in the manufacture of the capacitor assemblies with the exception of the 1 mfd. per step unit which uses Mylar as a dielectric. All capacitors are non-inductively wound and heat treated for stability, low dielectric absorption and low losses.

Each decade is variable from 0 to 10 by use of 11 position selector switch. The losses in the switches and mountings are kept low by the use of special low loss, impregnated switch wafers. A positive detent mechanism allows the switch to be set accurately.



1415 1416
1417 1418 1419



1350 Decade Capacitor

SPECIFICATIONS

Accuracy: Individual capacitors are adjusted to an accuracy of ±1% when measured at 1kc. The capacitance at the terminals, less the zero capacitance, is within ±1% of indicated dial setting. The zero capacitance of the decade boxes is supplied with each unit. Single decade units have a zero terminal capacity of approximately 8 mmfd. except Type 1419, which is compensated for true terminal capacity.

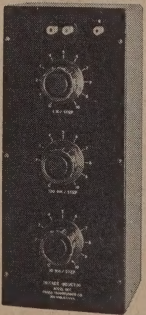
Dissipation Factor: The dissipation factor of the polystyrene units when measured at 1kc is less than 0.0002, the 1mfd. per step decade (Mylar) is less than 0.005.

Maximum Voltage: The maximum voltage that may be applied to these decades is 500 DC working volts.

Note: Individual capacitors can be supplied to better than ±1% Tolerance. Write for complete information.

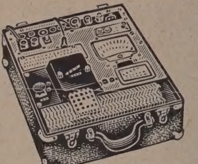
Type	Step	Total Capacity	Size	Wgt.
1415	1. mfd.	10. mfd.	3" x 3" x 7"	2 lbs.
1416	0.1 mfd.	1. mfd.	3" x 3" x 7"	2 lbs.
1417	0.01 mfd.	0.1 mfd.	3" x 3" x 7"	2 lbs.
1418	0.001 mfd.	0.01 mfd.	3" x 3" x 7"	2 lbs.
1419	0.0001 mfd.	0.001 mfd.	3" x 3" x 7"	2 lbs.
1250*	0.001 mfd.	1.110 mfd.	13¾" x 6" x 4½"	8 lbs.
1350†	0.001 mfd.	11.111 mfd.	19" x 7¾" x 8"	20 lbs.
1351‡	0.0001 mfd.	11.1111 mfd.	19" x 10¾" x 8"	25 lbs.

*3 decade unit
†4 decade unit plus 1000 mfd. air variable
‡5 decade unit plus 100 mfd. air variable



1250

Hickok Test Equipment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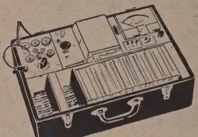
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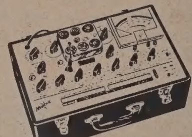
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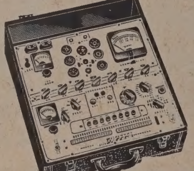
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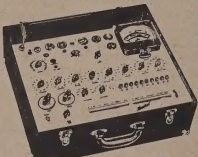
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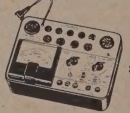
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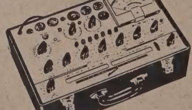

800

MODEL 123A CARDMATIC TUBE TESTER

Laboratory accuracy in a revolutionary card type tube tester. The most accurate portable tube tester available. Code cards make all test settings—test any receiving tube with highest accuracy. All indications are automatic and instantaneous by use of two push-buttons. Ideal for production line use Permits special engineering tests to meet any exact tube specifications for special circuit use. 60 watts, 110-125 v., 60 cps. In black leatherette carrying case, 19½" x 16½" x 9¼" d. Shipping, 57 lbs. Includes 500 selected cards.
Model 123A Cardmatic Tube Tester—Net Each.................................. $\$530^{00}$

MODEL 121 AUTOMATIC CARDMATIC TUBE TESTER

Technician's portable "Cardmatic" tube, transistor and semi-conductor diode tester; instantaneous and automatic high sensitivity shorts test. Heater to cathode leakage is quantitatively indicated directly on the meter. Measures: 320 heater voltages; 140 fixed bias potentials; 640 plate voltages; 640 screen voltages; 100 self-bias settings; and 1000 quality-value sensitivity ranges—all set automatically. Accurately checks horizontal and vertical amplifier tubes for pulse operation. 50 watts, 110-125 v., 60 cps. Baked gold finished panel. 19¾" x 13¼" x 8" d. Shipping, 40 lbs.
Model 121 Portable Tube Tester—Includes 341 selected cards. Net Each............ $\$329^{50}$

MODEL 6000 PORTABLE TUBE AND TRANSISTOR TESTER

New, high-speed dynamic mutual conductance tube, transistor and semi-conductor diode tester cuts testing time in half; tests all receiver tubes normally found in present day electronics equipment, including the new 11-pin types. Hickok-built 5" multi-scale meter. Instantaneous line adjust and automatic short indication. One push-button immediately permits rating in micromhos. Third push-button instantly provides accurate gas evaluation. 40 watts, 105-125 v., 50-60 cps. 16¾" x 11¾" x 7½" d. Shipping, 21 lbs.
Model 6000 Portable Tube and Transistor Tester—Net Each...................... $\$197^{50}$

Model 6000C Counter Tube and Transistor Tester—Net Each.....................**$197.50**

Model 6000 or Model 6000C with CRT Adapter—For testing all picture tubes including new 110° types; and with SA-1 adapter for testing 7-pin inline and 8-pin round subminiatures. Add Additional Net.. $\$22^{90}$

MODEL 870 DYNAMIC BETA TRANSISTOR TESTER (NOT ILLUS.)

Variable collector voltage and collector current permit tests according to manufacturer's specifications. Tests switching transistors; measures large signal DC Beta on power transistors, small signal AC Beta on low and medium power transistors. Collector test current variable up to two amperes permits Beta measurement on power transistors rated five amperes or more. **Ranges** (I_{cbo})**:** 0-100 ma, 0-1 ma, 0-10 ma. **Beta Ranges:** 0-100, 0-300. Shipping Weight, 10 lbs.
Model 870 Portable Dynamic Beta Transistor Tester—Complete with roll chart. Net Each.. $\$298^{00}$

MODEL 539B LABORATORY PORTABLE TUBE TESTER

6 Micromho Ranges: 60,000, 30,000, 15,000, 6,000, 3,000 and 600; Rectifier-Diode Range and Voltage Regulator Range in addition. .25, .5, 1.0 or 2.5 v. may be applied to grid. Separate DC voltmeter for grid bias; separate AC meter for line voltage. Separate rectified DC voltages applied to each tube element. Test leakage (to 50 megs.); neon test lamp for shorts; self-bias through switch; tubes can be matched; tests future life; also noise and gas. Test tubes at normal or at low plate and screen voltages. 40 watts, 110-125 v., 50-60 cps. Black leatherette covered case; 16¾" x 18⅜" x 7½" d. Shipping, 35 lbs.
Model 539B Tester—Complete with SW-1 replaceable socket set. Net Each.......... $\$439^{00}$

Model 539B Tester—With CRT adapter. Net Each...............................**$453.95**

MODEL 752 ENGINEER'S TUBE TESTER

Field engineers' most popular dynamic mutual conductance tube tester. Illuminated 4½" meter with 0-1,500, 3,000, 6,000, 15,000, 30,000 micromhos; four AC signal voltages; two plate voltages; two screen voltages. Tests shorts, noise, gas, tube life. Checks voltage regulator tubes under actual use conditions. Features test whereby dual tube elements are tested individually with only one test set-up. Meter and roll chart are illuminated. Includes tube pin straighteners mounted on panel. 40 watts, 110-125 v., 60 cps. Black leatherette covered portable case, 18⅜" x 16¾" x 7½" d. Shipping, 27 lbs.
Model 752 Engineer's Tube Tester—Net Each................................. $\$298^{00}$

MODEL 820 TUBE CADDY PAL

Combination tube-transistor tester and VTVM-Ohmmeter. Designed to fit into standard tube caddy. Tester checks gas, grid emission, contact potential and leakage. Also checks TV picture tubes (with CRT adapter) and transistors, including power types. **VTVM Ranges:** 0-1.5, 15, 150, 750 volts DC; Ohms, 100 ohm center scale, x1, x100, x10K. No batteries; has built-in power supply; operates on 15 watts, 115 v., 50-60 cps. 8½" x 3½" x 6" d. Shipping, 6 lbs.
Model 820 Tube Caddy Pal—Complete with three test leads. Net Each............... $\$99^{55}$

Model 820 with CRT Adapter—For testing all picture tubes, including 110° types. Net.**$114.50**

MODEL 850 TRANSISTOR ANALYZER

Low-cost, accurate, easy-to-use transistor analyzer that can never become obsolete. Panel selector quickly sets choice of circuit use conditions. Checks parameters in any of three configurations: Common Base, Common Emitter, Common Collector. Checks power transistors with collector current up to 1 amp. Checks collector leakage, C Base or C Emitter; Beta (current) gain; input and output resistance; power gain; linearity. 105-125 v. AC. Portable steel case with aluminum panel; 16½" x 13½" x 8" d. Shipping, 26 lbs.
Model 850 Portable Transistor Analyzer—Net Each................................ $\$159^{50}$

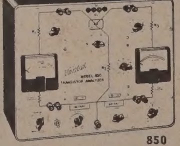
Model 850P Console—Portable version in red leatherette case. Net Each.............**$169.50**

MODEL 800 TUBE AND TRANSISTOR TESTER

Smaller, handier portable model for radio and TV technicians as well as labs and industry. Micromho Range: 0-3000, 6000, 15,000. AC signal, 2.5 v. 5" meter. Tubes are tested under simulated operating conditions; covers all latest types including miniatures and subminiatures. Includes Gas, Shorts and Transistor tests. Easy-to-read roll chart is replaceable. 40 watts, 110-125 v., 50-60 cps. Dark red, leatherette covered portable case; has gold finished panel. 16¾" x 11¾" x 7½" d. Shipping, 21 lbs.

Model 800 Portable Tube-Transistor Tester—Net Each.................................. $\$169^{50}$

Model 800 Tester—Including CRT adapter and replaceable socket set (7, 8, 9-pin non-oscillating) and 7-pin inline, 8-pin round subminiature socket adapters. Net Each...**$198.90**

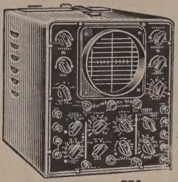


850

HICKOK Test Equipment

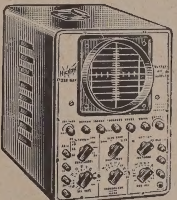
MODEL 770 5" LABORATORY OSCILLOSCOPE

For general purpose, industrial laboratory and TV applications. **Wide Band Amplifier:** Response DC to 5 mc, −3 db. **Vertical DC and AC Amplifier:** 10 mv rms/inch (narrow); 35 mv rms/inch (wide). **Frequency Response:** 0-2.5 mc, −3 db (narrow); 0-5 mc, −3 db (wide). **Horizontal Amplifier:** 75 mv rms/inch deflection at full gain. **Built-in Calibrating Voltages:** p-p, 100, 10, 1, .01 volts. **Test Signals:** Line Frequency, 3 v. rms; Sawtooth available; direct connection to horizontal and vertical deflection plates. **Line Frequency Phasing Control:** 0, ±90° phase shift. Shock mounted; shielded; stabilized. Illuminated, calibrated screen with green filter. Equipped with new flat-face tube for improved reading linearity or photographing trace. 150 watts, 105-125 v., 50-70 cps. Portable steel case, 14" x 12" x 18". Net, 50 lbs.; Shipping, 61 lbs. Complete with combination light shield and camera base, test leads.
Model 770 5" 'Scope—Net Each.. $\$470^{00}$


770

MODEL 675A 5" OSCILLOSCOPE

New 5" 'scope with all late design features for unusual accuracy in servicing present day electronic equipment, including color TV receivers. Illuminated, calibrated screen, with astigmatic focus and green filter. **Vertical Amplifier:** Response: 1 cps to 4.5 mc, ±3 db; flat through color burst frequency (3.58). Sensitivity: 20 mv rms/inch. **Horizontal Amplifier:** Response: 1 cps to 450 kc, ±3 db. Sensitivity: 250 mv rms/inch. **Time Base Generator:** Four calibrated decades, with 10:1 vernier control—10-100 cps, 100-1000 cps, 1 kc-10 kc, 10 kc-100 kc. Both B+ and Line fused. **Power:** Consumed—125 watts at 115 v. AC. Source—105-125 v., 50-400 cps. Portable case, 13" h. x 10" w. x 16" d. Net, 35 lbs.; Shipping, 43 lbs.
Model 675A 'Scope—Complete with light loading probe. Net Each.................. $\$299^{90}$


675A

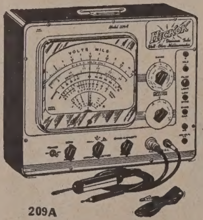
OSCILLOSCOPE PROBES

Model 34 Crystal Probe—For signal tracing with Model 770. Shipping, 2 lbs. Net Each.. $\$5^{75}$

Model TVP-1 Television Probe—For true reproduction. Shipping, 2 lbs. Net Each......$14.40

MODEL 209A CAPACITANCE TESTER AND TRUE VACUUM TUBE VOLT-OHM-MILLIAMMETER

9" meter with non-glare black scale; conversion chart; P-P Voltmeter (also measures AC rms); 0-Center DC scale; high input Z to prevent loading; built-in power supply. **AC-DC Volts:** 0-3, 12, 30, 120, 300, 1200. **DC Current:** 0-3, 12, 30, 120, 300, 1200 ma. **Capacitance:** 0-10,000 μμf (2 ranges); 0-1000 μf (5 ranges). **Inductance:** 50 mh to 100 henries. **Ohms:** 0.1 ohm to 10,000 megohms. **Frequency:** Up to 200 mc AC. **Input Z:** DC—15 megs.; AC—12 megs. **Tubes:** 1-6X5GT, 1-6SJ7, 1-6SN7GT. 20 watts, 105-125 v., 50-70 cps. Gray-finished steel portable case; attractive black panel with white nomenclature. 13¼" x 16¼" x 7" d. Net, 18 lbs.; Shipping, 26 lbs.
Model 209A Tester—Complete with leads and high frequency light loading probe. Net. $\$157^{00}$
Model PR-30KVA High Voltage Probe—For DC only. Net Each......................$18.50


209A

MODEL 455A VOLT-OHM-MILLIAMMETER

Exclusive overload cut-out and fuse system provides complete protection for meter, resistors, shunts, and other components. Any high voltage or current can be applied directly across any function without danger or damage. **Sensitivity:** 20,000 ohms/v. DC-AC. **Volts:** 0-3, 15, 60, 150, 600, 1200 DC-AC. **Ohms:** 0-100 megs. (5, 500, 5000, 500,000 ohms—center scale.) **Current:** 50 microamps; 1, 10, 100, 1000 ma; 10 amps. Single Function-and-Range switch. Full-wave bridge-type rectifier circuit. Streamlined case with curved face and slanted dial; batteries housed in special compartment—just snap in. Portable case, 8½" x 5⅜" x 3" (inclined to 1¾" h.). Net, 3¾ lbs.; Shipping, 6 lbs.
Model 455A Volt-Ohm-Milliammeter—Complete with leads. Net Each.. $\$74^{50}$

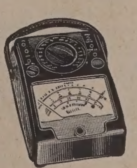
MODEL 457 VOLT-OHM-MILLIAMMETER

Similar to Model 455A Volt-Ohm-Milliammeter except 1000 ohm/v. AC and special automatic cut-out overload protective circuit is not included.
Model 457 Volt-Ohm-Milliammeter—Net Each.................................... $\$45^{00}$

Leather Carrying Case—For 455A and 457—Net Each.............................$10.00

MODEL 225K VTVM QUALI-KIT

Practical kit with a big 9" meter that permits reading easily at normal working distance. Designed for the serviceman. Accurate peak-to-peak scales. Built-in audio tone for quick continuity testing. DC Voltmeter measures plus and minus 0-1.5, 3, 12, 30, 120, 300, 1200. **Input Resistance:** 10 megohms. **Ohmmeter:** Center Scale—10 ohms; Readability—0.2 ohm to 1000 megohms. **AC Voltmeter Ranges:** 7 Ranges AC rms—0-1.5, 3, 12, 30, 120, 300, 1200; 7 Ranges Peak-to-Peak—0-4, 8, 32, 80, 320, 800, 3200. **Frequency Characteristics:** Flat, 40 cps to 3.5 mc. 20 watts, 105-125 v., 50-800 cps. Blue hammertex steel case, 13¼" x 16¼" x 7". Net, 16 lbs.; shipping, 23 lbs. Complete with new Dual-Probe and leads, plus 60 page instruction book for easy assembly.
Model 225K VTVM Quali-Kit—Net Each.................................... $\$59^{50}$


455A

VTVM-VOM PROBES

Model PR-30KVA Probe—High voltage probe for use with Model 209A. DC only. Shipping, 2 lbs. Net Each.. $\$18^{50}$

Model PR-46 Probe—High voltage probe for use with Models 455A and 457 to measure up to 6 kv. Shipping, 2 lbs. Net Each...$18.90

Model PR-50KV Probe—High voltage probe for use with Model 470 to check voltages up to 30 kv. Shipping, 2 lbs. Net Each...$16.40

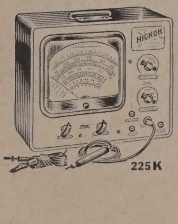
Model PR-430 Probe—High voltage probe for use with Models 455A and 457 to measure 30 kv. Shipping, 2 lbs. Net Each...$18.90

MODEL 470

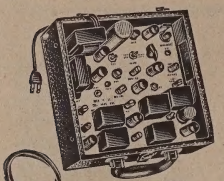
PORTABLE ELECTRONIC VOLT-OHMMETER

New, handy size professional's portable electronic volt-ohmmeter features a large Hickok-built 7" meter. Also featured is a new high-sensitivity, low voltage range for transistor bias testing. **DC Volts:** 0-1.5, 5, 15, 50, 150, 500, 1500; input resistance 13.3 megs with probe. **Ohms:** (No batteries needed) x 1, x 10, x 100, x 1K, x 10K, x 100K, x 1 meg; readable 0.2 ohm to 1000 megs; design center 10 ohms. **AC Volts:** Based on p-p detection and calibrated in rms—0-1.5, 5, 15, 150, 500, 1500. **Frequency Response:** 30 cps to 2.5 mc. 10 watts, 105-125 v., 50-400 cps. Rugged, shock-resistant, molded phenolic case has long proven to be the only practical housing for this type of instrument, 8½" x 5⅞" x 3"—1¾" h. Net, 7 lbs.; shipping, 10 lbs. Complete with AC-DC probe, ohms lead, ground lead, instructions and guarantee.
Model 470 Electronic Volt-Ohmmeter—Net Each..... $\$94^{75}$

470


225K

HICKOK Test Equipment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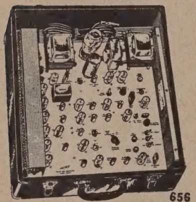
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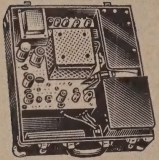
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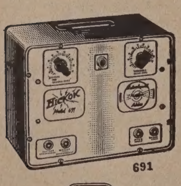

691

MODEL 660 WHITE DOT-BAR COLOR TV GENERATOR

Provides 3 patterns on screen of any color TV set: White Line Crosshatch (20 vertical, 15 horizontal, less those in blanking); White Dot (Small size—300 dots, less those in blanking); Color Display (Sequence of orange, red magenta, blue, cyan, green). All frequencies crystal controlled and locked together with extreme stability. RF output preset, channel 2 through 6. Small dot and crosshatch down to 2 lines, horizontal and vertical. Sync to video output variable 10-90%. Stable timer circuit. **Video Output:** 0-4 v. p-p; 300 ohm Z.; black positive or negative. Sidelock color frequency crystal 3.563795 mc; output 1 v. p-p. **RF Output:** .001 v. to .05 v. RF modulated by all video outputs (60% modulation). 40 watts, 105-125 v., 50-60 cps. 10½" x 10½" x 5¼". Net, 15 lbs.; shipping, 21 lbs.

Model 660—Complete with 2 crystals and cables, instructions, guarantee. Net Each. . **$243.00**

MODEL 656 STANDARD TV COLOR GENERATOR

Produces standard 100% fully saturated NTSC color bar pattern on color TV sets; provides signals for complete color alignment— will never be obsolete. Color generated within 30 seconds of warmup. Generates 3 primaries, 3 complements, plus black and white (white produced by adding 3 primaries), pattern is green, yellow, red, magenta, white, cyan, blue and black. Crystal controlled. Sub-carrier and brightness amplitudes set with precision resistive networks. Also produces White Dot Crosshatch, Vertical Lines, Horizontal Lines, and White Dots (small). Sound carrier and signals for I, Q, G-Y, R-Y and B-Y provided. RF output modulated through color bar pattern, channels 2-6. Video output, 0-2 v. p-p open circuit; 0-1 v. p-p across 100 ohms. 125 watts, 105-125 v., 50-60 cps. Black leatherette covered case. 16¾" x 18⅜" x 7½" d. Net, 34 lbs.; shipping 48 lbs.

Model 656 Generator—Complete with leads. Net Each. **$495.00**

MODEL 760 VIDEO SCANNER

Stable, versatile TV trouble-shooter has many uses; features innumerable signals and displays normally not available to the TV technician. Instantly scans and produces a video or RF signal for any slide that is inserted into the unit; works with black and white, and color receivers. Generates and scans at the 525 line, 60 field and 30 frame system. Patterns furnished are Bar, Dot, Standard Test Pattern and transparent blanks for grease pencil use; optional patterns are Gamma, Square Wave and Burst Wave forms. Fully crystal controlled; sync to EIA specifications. 145 watts, 105-125 v., 50-60 cps. Portable, 18⅜" x 14" x 8½" d. Net, 43 lbs.; shipping, 51 lbs.

Model 760 Video Scanner—
Net Each. **$395.00**

MODEL 690 VHF-UHF MARKER GENERATOR

Crystal controlled. RF output .25 v. Provides dual markers with any sweep generator. 45" of Non-Parallax shadow-type dial can be self-calibrated to ±.05% accuracy with self-contained crystal calibrator. RF, channels 2 through 83; also 3.57 mc crystal (color burst frequency). No counting of beats, interpolation or remembering of frequencies. Calibrates other signal generators accurately. Marker can be modulated by self-contained 400 cps. Provision for two other crystals, in addition to 2.5 mc crystal supplied. Electronic-eye and 'phone jack for visual or audible zero-beat. Attenuation controlled by step attenuator and vernier. All VHF frequencies on fundamentals. 20 watts, 105-125 v., 50-70 cps. Steel case, 16½" x 13¼" x 8" d. Net, 26 lbs.; shipping, 34 lbs.

Model 690 Generator—Complete with crystal and leads. Net Each. **$362.00**

MODEL 691 HETERODYNED MARKER ADDER

Together with 695 and 690, provides ultimate in TV alignment. Marker visible at all times, including trap points; will not change amplitude or distort response curve. Sweep and marker generators heterodyned so marker signal never passes through receiver—no overloading. **Input:** 50,000 mv (RF); 90 ohms Z. **Output:** 3 v. max. **Attenuation:** Marker, variable 0-60 db; Response, variable 0-20 db. 25 watts, 105-125 v., 50-60 cps. Portable steel case, 11¼" x 8¼" x 7" d. Net, 10 lbs.; shipping, 15 lbs.

Model 691 Marker Adder—Complete with leads. Net Each. **$109.00**

MODEL 288X CRYSTAL-CONTROLLED SIGNAL GENERATOR

High output AM-FM generator. RF variable 110 kc to 110 mc AM and 100 kc to 160 mc FM in 7 bands, all fundamental. Fixed 50 mc output internally FM at 60 or 400 cps. Fixed, crystal controlled 100 and 1000 kc outputs. Variable AF output 0-15,000 cps; fixed AF 400 cps. **DB:** −10 to +38, over 100" of scale. 13¼" x 16¼" x 7" d. Net, 25 lbs.; shipping, 33 lbs.

Model 288X Generator—Complete with cables and 100-1000 kc crystal. Net Each. . **$307.00**

MODEL 810 TRANSISTOR-RADIO TESTER

Has all the necessary features for complete transistor radio trouble-shooting. Includes tuned receiver (for IF and RF), audio amplifier (400 cps output for signal injection), AM signal generator (for IF and RF), cathode follower input probe, transistor tester, loudspeaker for signal tracing. 25 watts, 105-125 v., 50-70 cps. Portable steel case with aluminum panel, 11¼" x 9" x 7" d. Net, 11 lbs.; shipping, 16 lbs.

Model 810 Transistor Radio Tester—Net Each. **$138.00**

MODEL 695 VHF SWEEP ALIGNMENT GENERATOR

Sweep signal absolutely linear, without amplitude modulation. Fundamental output on all VHF channels (.3 volt). Blanking of oscillator provides reference base line. Continuously variable tuning. 0-50 mc IF heterodyned output (.15 volt). 100 db attenuation, .3 volt to 3 mv. Triple-shielded—no leakage. Metered, variable DC bias voltage, 0-12 v. 170° phasing. Sweep width, 0-15 mc, ±3 mc. 90 ohms output Z. 30 watts, 105-125 v., 50-800 cps. Portable steel case, 16¼" x 13¼" x 8" d. Net, 30 lbs.; shipping, 39 lbs.

Model 695 Generator—Complete with leads. Net Each. **$391.00**

MODEL 615 SWEEP AND MARKER ALIGNMENT GENERATOR

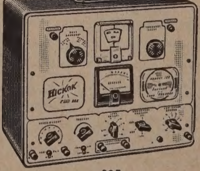
Complete, single-unit TV sweep and marker generator for visual alignment of any TV receivers, (Tuner, IF, Video). Strong 0.25 volts rms marker amplitude (less than .1 db/mc modulation); excellent attenuation; frequency—2.5-5.5 mc, 19-50 mc, 54-108 mc, 108-216 mc. Built-in retrace blanking (controlled). Variable sweep width (0-15 mc). Built-in 4.5 mc crystal. Marker and crystal oscillators can be amplitude modulated 30% by self-contained 900 cps internal modulator. 170° variable phasing. 13¼" x 16¼" x 8" d. Net, 31 lbs.; shipping, 39 lbs.

Model 615 Generator—Complete with leads and crystal. Net Each. **$339.90**

TYPE 75 TERMINATION PAD—For use with TV-FM alignment generators to eliminate most standing waves. For 90 and 300 ohms inputs. Shipping, 2 lbs. Net Each. **$11.50**

288X

810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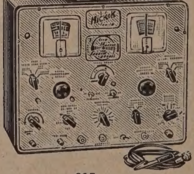
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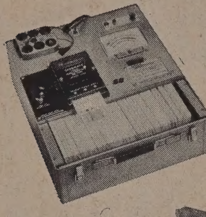
HICKOK RD INSTRUMENTS — FOR RESEARCH AND DEVELOPMENT



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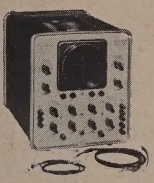

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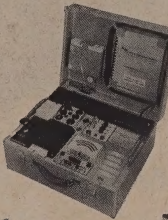

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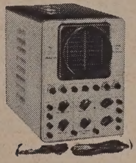

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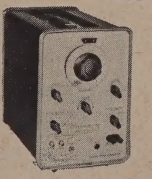

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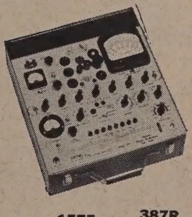

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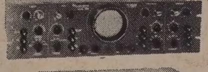
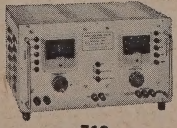


387R

295X



710

MODEL 295X MICROVOLT AND CRYSTAL CONTROLLED GENERATOR

Microvolt and crystal controlled generator. Silverplated copper RF circuits shielded and isolated from chassis. Accurate step-attenuator. Direct reading vernier tuning. **Frequency:** Continuous on fundamentals, 125 kc to 175 mc; up to 250 mc on harmonics through proper crystal. Crystal controlled RF oscillator, 400 kc to 20 mc. **Metered Output:** 0.1-100,000 µv. Includes 1,000 kc crystal. **Size:** 19" x 12½" x 9". Weight, 40 lbs.

RD Model 295X Microvolt and Crystal Controlled Generator—Net Each.......................... $610.00

ADDITIONAL INFORMATION ON ITEMS LISTED HERE AVAILABLE ON REQUEST

MODEL 1810 WIDE BAND 5" OSCILLOSCOPE

Flat-faced, post accelerated 5" CRT with illuminated, calibrated screen. Built-in, direct reading, regulated square-wave voltage calibrator. **Sensitivity:** 10 mv p-p/cm deflection. **Vertical Amplifier:** 4 mc band width; AC or DC inputs. **Sweeps:** Triggered or recurrent; variable 2-30,000 cps; exceptionally slow sweeps through use of external capacitors. **Size:** 12⅝" x 18⅜" x 14⅝". Weight, 50 lbs. Complete with shielded input and ground cables.

RD Model 1810 Wide Band Oscilloscope—Net Each.................................... $535.00

MODEL 1230
CARDMATIC® AUTOMATIC TUBE TESTER

Insertion of proper card automatically sets up desired tube testing conditions. Accuracy, within 3%. Automatic decade systems provide wide voltage and circuit combinations; cover 1000 filament voltages, 250 mutual conductance ranges, 500 current sensitivities and 1000 self-bias conditions. Instantaneous, highly accurate shorts and leakage tests (to 10 megs). Sensitive gas and grid emission tests. Up to 200 ma load on rectifier tubes. "Knee" test for horizontal amplifier tubes. Patented automatic switch offers unlimited switching combinations. Operates on 105-125 v., 50-60 cps AC, 55 watts. **Size:** 19½" x 16½" x 9¼". Weight, 49 lbs.

RD Model 1230 Cardmatic® Automatic Tube Tester—With self-calibrating cards and 500 standard industrial tube cards. Net Each.................................. $570.00

MODEL 1234 ENGINEER'S CARDMATIC®

Provides specialized tests for amplifiers, heptodes, power pentodes, computer rectifiers, diodes and VR tubes. All power supplies fully regulated. Auxiliary functions compartment permits special tests and calibration of tester. Tube element shorts sensitivity, 1 megohm; special high sensitivity for grid to cathode, 10 megohms. Heater to cathode reject values, 1 µa and 150 µa, depending on tube types. Lab accuracy, within 1% to 3% of recognized standards for transconductance and plate current measurements. Five automatic safety devices. Operates on 105-125 v., 50-60 cps AC, 55 watts. Size: 19½" x 9½" x 16½".

RD Model 1234 Engineer's Cardamatic®—Net Each $805.00

MODEL 1700 LABORATORY TUBE TESTER

Dynamic mutual conductance tube tester provides broad range of regulated tube parameters. Use also for study of tubes in non-conventional and special circuits. Facilities for analysis of static and dynamic characteristics. Permits tube tests under handbook conditions. Provision for self-bias tests. Electronically regulated and metered power supplies. Continuously variable filament power supply, 0-117 v.; filament current measureable 0-8 amps. All voltages and currents variable and metered (nine separate meters). Eight ranges, 0-3,000 to 0-60,000 µmhos; 11 ranges, 0-600 to 0-60,000 µmhos with null accessory. Electrically inter-locked selector switches; connect-disconnect switch permits tube warm-up with only filament voltage applied. Patch cord system permits tube base selection independent of selector switches. Provision for oscilloscope connection to observe AC signal in plate circuit. Operates on 105-125 v., 60 cps AC, 300 watts. **Size:** 20" x 29" x 12". Weight, 75 lbs.

RD Model 1700 Laboratory Tube Tester—Net Ea.. $1387.00

RD Model 7001 Null Reading Indicator—For 1½% accuracy. 8¼" x 13½" x 8". Wt., 7 lbs. Net Each... $206.50

MODEL 685
IDENTICAL AMPLIFIERS 5" OSCILLOSCOPE

With 5" CRT and illuminated, calibrated screen. Provision for Z-axis modulation. Identical amplifiers, to 750 kc, AC or DC. **Rise Time:** 5 µsec. **Sensitivity (MV RMS/In.):** Vertical, 20; horizontal, 30. **Sweep:** 1 cps to 100 kc in five calibrated decade ranges with vernier control slow sweep with external capacitors. External sync. Shock mounted. **Size:** 10" x 16" x 13". Weight, 35 lbs. Complete with test leads and instructions.

RD Model 685 Identical Amplifiers Oscilloscope—Net $383.00

MODEL 1575 PORTABLE TUBE TESTER

For field service. Seven ranges, 0-60,000 µmhos. Separate line voltage and grid bias voltages meters. Four signal voltages; 0.25, 0.5, 1, 5. Voltage regulator test evaluates operating conditions, including regulation and striking potential. Accurate shorts-leakage test; sensitive gas test; life-test. **Size:** 18" x 16⅜" x 7¼". Weight, 26 lbs. Complete with carrying case.

RD Model 1575 Portable Tube Tester—Net Each... $474.00

MODEL 1715 SQUARE WAVE GENERATOR

Highly stable; voltage regulated. **Frequency Range:** 1 cps to 1 mc, continuous, in six decades; constantly variable frequency available through entire range. **Rise Time:** 0.02 µsec. Includes symmetry control and external sync provision. **Size:** 10" x 15¾" x 14½". Weight, 30 lbs.

RD Model 1715 Square Wave Generator—Net Each. $300.00

MODEL 387R INDUSTRIAL 3" OSCILLOSCOPE

Standard 19" rack mounting 3" industrial oscilloscope. Identical horizontal and vertical amplifiers with 10 mv sensitivity; bandpass DC to 500 kc. Triggered or recurrent sweep, 1 cps to 100 kc. Internal or external locking. **Size:** 19" x 11½" x 5¼". Weight, 15 lbs. Complete with shielded input and ground cables.

RD Model 387R Rack Mounting Oscilloscope—Net. $399.00

MODEL 710
SINE-WAVE SQUARE-WAVE GENERATOR

Highly accurate readings. Push button attenuators. Metered output. Portable or rack mounting. **Frequency:** 20 cps to 1 mc. **Sine Wave Total Harmonics Distortion:** Less than 1%. **Square Wave Rise Time:** Less than .1 µsec. **Hum:** Better than 90 db down. **Size:** 16" x 12" x 8¾". Weight, 44 lbs.

RD Model 710 Sine-Wave Square-Wave Generator—Net Each.................................... $525.00

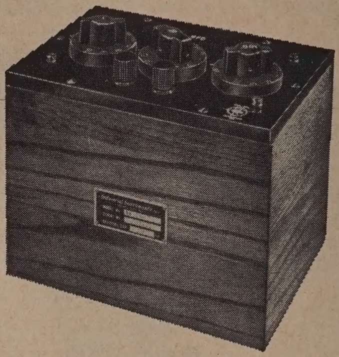
ELECTRICAL

RESISTANCE DECADES

- Available in a wide variety of standard models. Accuracy at 1.0 and 0.1 ohm steps is ±0.25%. Accuracy of all other resistors is ±0.1% of indicated value. Self-cleaning, molded nylon and silver plated brass switch mounted below panel. Zero resistance is less than .003 ohms per dial. Hardwood case. Models DR-1D to DR-4D, 8″ x 5½″ x 4½″. Weight 4 lbs. net, 6 lbs. shipping. Models DR-50D to DR-52D, 9″ x 6″ x 4½″ h. Weight 5 lbs. net, 7 lbs. shipping. Models DR-70D and DR-71D, 17¼″ x 5″ x 4½″ h. Weight 6 lbs. net, 8 lbs. shipping.

ELECTRICAL SPECIFICATIONS AND PRICES

Model No.	Total Resistance Ohms	Decade Steps	Accuracy	Price
DR-1D	1,110,000	10x(1,000+10,000 +100,000)	±0.1%	**$ 92.50**
DR-2D	111,000	10x(100+1,000 +10,000)	±0.1%	**75.00**
DR-3D	11,100	10x(10+100+1,000)	±0.1%	**71.50**
DR-4D	1,110	10x(1.+10+100)	±0.25 & ±0.1%	**66.25**
DR-50D	11,111	10x(.1+1+10+100 +1,000)	±0.25 & ±0.1%	**108.25**
DR-51D	111,110	10x(1+10+100 +1,000+10,000)	±0.25 & ±0.1%	**115.50**
DR-52D	1,111,100	10x(10+100+1,000 +10,000+100,000)	±0.1%	**137.50**
DR-70D	1,111,111	10x(.1+1+10+100 +1,000+10,000 +100,000)	±0.25 & ±0.1%	**165.50**
DR-71D	11,111,110	10x(1+10+100 +1,000+10,000 +100,000 +1,000,000	±0.25 & ±0.1%	**215.25**



CAPACITANCE DECADES

- These are 3-dial units with the sum of the dial settings indicating total capacity in microfarads. Mylar and silver-mica capacitors are used for high stability, low-loss characteristics. Polished hardwood case, engraved dial graduations.

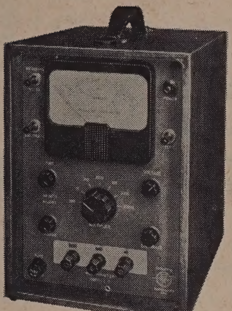
ELECTRICAL SPECIFICATIONS AND PRICES

Model	Decade Steps MF	Accuracy	Dielectric	P.F.	Peak Volts	Price
DK-2A	10x(.001+.01 +0.1)	±1%	Silver Mica	0.2%	700 (.001) (.01) 500 (.1)	**$218.50**
DK-4	10x(.001+.01 +0.1)	±1% (.001) (.01)	Silver Mica	0.2%	700	**97.50**
		±3% (0.1)	Mylar	1%	400	
DK-5A	10x(.01+0.1 +1.0)	±1% (.01)	Silver Mica	0.2%	700	**115.50**
		±3% (0.1) (1.0)	Mylar	1%	400	
DK-11A	10x(.01+0.1 +1.0)	±0.5% (.01) (0.1)	Silver Mica	0.2%	700 (.01) 500 (0.1)	**225.75**
		±2% (1.0)	Mylar	1%	400 (1.0)	
DK-10	10x(.0001 +0.001 +.01)	±0.5% or 10 mmf	Silver Mica	0.2% 2% (.0001)	700	**131.00**

PHYSICAL SPECIFICATIONS

	Overall Dimensions	Weight (Lbs.)	
		Net	Shipping
DK-2A, DK-4, DK-10	8 x 5½ x 7½	8	10
DK-5A, DK-11A	10¾ x 7¾ x 7½	10	12

TEST EQUIPMENT



TYPE L MEGOHMMETERS

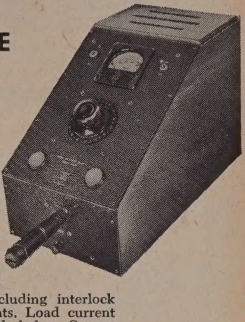
Type L Megohmmeters are used for both laboratory and high speed production testing of motor and transformer winding insulation, cable insulation, high value resistors, capacitor insulation, and for the measurement of surface and volume leakage of insulating materials. These instruments meet the requirements for testing insulation resistance in accordance with ASTM D-257, and Federal Specification LP-406B, Method 4041.

ELECTRICAL SPECIFICATIONS AND PRICES

Model	TEST Voltage	RANGE Low in meg.	High in meg.	POWER Consumption	WEIGHT Net	Ship.	Size	Price
L-2A	200 fixed	1	100,000	40 Watts	12	15	15"x8"x10"	$175.
L-4A	200 and 500 fixed	1 2.5	100,000 250,000	52 Watts	14	17	15"x8"x10"	240.
L-6B	100 to 600*	1	100,000	82 Watts	15	18	15"x8"x10"	310.
L-7	100 to 600*	1	5x10^{13}	75 Watts	20	24	8"x10½" x11½"	383.

*Continuously variable, built-in voltmeter for accurate setting.

TYPE P—VOLTAGE BREAKDOWN TESTERS



The Type P Series Voltage Breakdown Testers are designed for safe, accurate and fast testing of materials, components and circuits both in the laboratory and on the production line. All types have self-contained metered high-voltage power supply with safety features including interlock switches and pilot warning lights. Load current is limited to values shown in table below. Output voltage continuously variable over range listed for each model.

ELECTRICAL SPECIFICATIONS AND PRICES

Model	VOLTAGE RANGE AC volts RMS	DC volts	CURRENT RANGE AC	DC	Price
P1		0-4000		5 ma (max)*	$208.00
P2	0-3000	0-4000	7 ma (max)	5 ma (max)*	252.00
P3A	0-8000	0-10,000	60 ma (max)	50 ma (max)*	488.00

*Models P1, P2, and P3A incorporate a variable series resistance which limits short circuit current independently of voltage.

Other power supplies up to 100 KV can be supplied to your specifications. Send complete details for quotation.

WHEATSTONE BRIDGES TYPE RN

Universally used for the measurement of all types of resistance devices and circuits where high accuracy is required. Models available for performing Murray-Varley Loop tests.

Model	Total Resistance of Decade	Ratio Dial Settings	Circuits	Dimensions	Price
RN-1	9x(1+10 +100 +1000)	.001, .01, .1, 1, 10, 100, 1000	....	9"x8"x6½"	$176.50
RN-2	9x(1+10 +100 +1000)	.001, .01, .1, 1, 10, 1000, M10, M100, M1000	Murray & Varley	9"x8"x6½"	193.25
RN-3	10x(1+10 +100) +9(1000)	1/1000, 1/100, 1/10, 1/9, 1/4, 1/1, 10/1, 100/1, M10, M100, M1000	Murray & Varley	9½"x8"x6½"	226.00

TYPE LRO-1 LOW RESISTANCE OHMMETER

The Type LRO-1 Low Resistance Ohmmeter is useful for the measurement of resistance of sensitive relay contacts, fuses, bus-bars and connections, rail joints, pipe or conduit, switch contacts, transformer windings, motor windings, bonding, grounding and similar applications. The current through the unknown resistance never exceeds 110 ma.

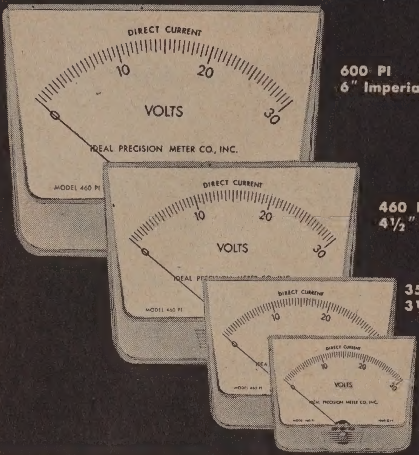
Price $148.85

FEATURES: Extreme accuracy for the most critical measurements. • Entirely self-contained, including 1½ volt flashlight battery • Ranges: .1 ohm, 1 ohm and 10 ohms. 100 meter scale divisions. • Accuracy of plus/minus 1½% on LRO-1 based on full scale values. • Full Scale Readings. • Maximum current through piece under test = 0.11 amp.

• Other electrical test equipment manufactured by Industrial Instruments can be found in current editions of ELECTRONIC ENGINEERS MASTER. For complete technical details and specifications on test equipments listed here and many others request a copy of Catalog 21.

Industrial Instruments Inc.
CEDAR GROVE, N. J.

THESE PANEL METERS ARE IDEAL


DIRECT CURRENT
VOLTS
IDEAL PRECISION METER CO., INC.
MODEL 460 PI

600 PI
6" Imperial

460 PI
4½" Imperial

350 PI
3½" Imperial

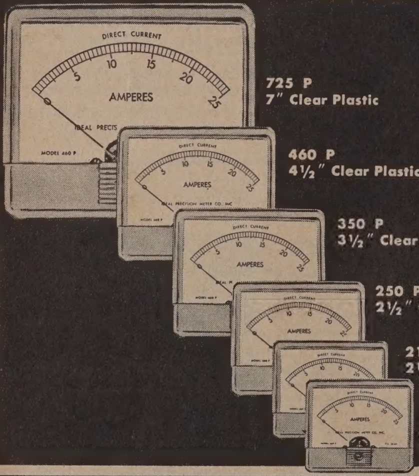
250 PI
2½" Imperial

FOR EVERY PRECISION APPLICATION

- Accurate to within 2% full scale. —1% on special order.
- D'Arsonval moving coil type DC.
- Self-Shielded core magnet type DC.
- D'Arsonval moving coil AC Rectifier type.
- AC iron vane meters.
- Size, color and scale to customer specification.

For a measure of perfection, IDEAL panel meters are engineered and produced to the highest standards under controlled atmospheric and climatic conditions. High torque to weight ratio—specially selected alnico magnets to suit individual needs—100% microscopic inspection of jewels and pivots—these are just a few of the advantages when you specify IDEAL meters.

Ideal has recently developed new miniature core magnet meters for limited space applications. A complete range of all purpose panel meters is available and firm prices can be quoted immediately upon request. Fast delivery enables you to maintain critical production schedules.


DIRECT CURRENT
AMPERES
IDEAL PRECIS
MODEL 460 P

725 P
7" Clear Plastic

460 P
4½" Clear Plastic

350 P
3½" Clear Plastic

250 P
2½" Clear Plastic

212 P
2⅛" Clear Plastic

150 P
1½" Clear Plastic

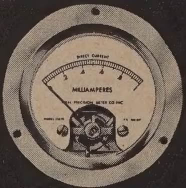
Ideal offers a complete line of:

Ammeters
Milliammeters
Microammeters
Expanded Scale Meters
Suppressed Scale Meters
Special Meters to Order

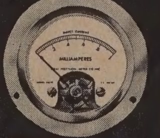
Volt meters
Millivolt meters
Decibel meters
VU meters
A.C. Meters (Rectifier Type)
A.C. Meters (Iron Vane Type)

DIRECT CURRENT
MICROAMPERES

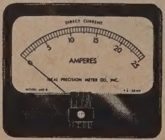
275 PR
2¾" Plastic Round


DIRECT CURRENT
MILLIAMPERES

350 PR
3½" Plastic Round


DIRECT CURRENT
MILLIAMPERES

250 PR
2½" Plastic Round


DIRECT CURRENT
AMPERES

460 B
4½" Bakelite

DIRECT CURRENT
MILLIAMPERES

350 B
3" Bakelite

Sold to electronic parts distributors exclusively through

IDEAL

IDEAL PRECISION METER CO., INC.
Brooklyn, New York

WALDOM

WALDOM ELECTRONICS, INC.
Chicago, Ill.

SPECIALISTS in Sub-Miniature Panel Meters

FIRST in U.S. to manufacture 1″-diameter meter
FIRST to produce 1″ and 1½″ illuminated meters
FIRST to produce 1½″ self-contained DB and VU meters
FIRST to produce miniature side indicators

ELECTRONIC CONTROL METERS

Models 2545* and 2546*

Miniaturized control meters that operate *without contacts*—thus eliminating contact resistance, arcing or corrosion. Model 2546 has polarity-reversing control-signal output. Both models assure more reliable switching and more accurate control, with full scale use of indicating meter always available regardless of control-point settings. Accuracy held to ±2% of full scale for dc, ±5% for ac.

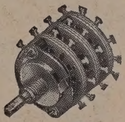
*Patented

RUGGEDIZED METERS

1½″ Square

Meets MIL-M-10304 (SIG.C.) Accurate within ±3% of full scale deflection. Basic d-c ranges 0-100 d-c ua, 0-1 d-c ma, and 0-10 d-c mv. RF and VU meters and other ranges also available.

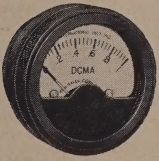
SUB-MINIATURE ROTARY SWITCH



Wafer size 1″ x ⅞″.

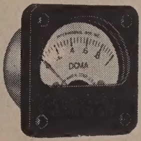
Twelve positions per deck . . . one to three decks. One, two, three or four poles per deck. Shorting or non-shorting contacts. Positive indexing with 30° spacing.

1½″ ROUND and SQUARE



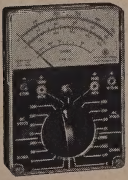
Model 150

1½″ barrel diameter. Full 90° scale arc, scale length 1.322″. Model 153 meets MIL-M-3823 requirements. Also available: self-contained VU and DB meters — illuminated meters with lamp housing attached.



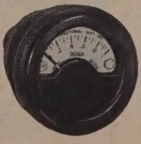
Model 153

VOM-20 Multi-Tester



Sensitivity: 20,000 ohms per volt for dc, 15,500 ohms per volt for ac. Three big scales with ranges: (1) to 1500 acv, dcv (2) to 500 dcma (3) to 2 megohms. Moderately priced.

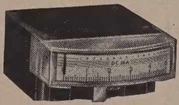
1″ ROUND



Model 100

1″ barrel diameter. Full 90° scale arc, scale length .770″. VU, DB and illuminated meters also available with external accessory attached.

Model 1120
Single
Vertical
Mounting



Model 1135*
Single
Horizontal
Mounting

Model 1145*
Single
Horizontal
Mounting

*Patented

SIDE INDICATORS

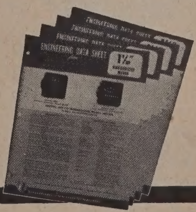
- GREATER READABILITY
- REDUCES PANEL AREA ⅓ OVER CONVENTIONAL METER INSTALLATIONS OF SAME SCALE LENGTH
- HORIZONTAL OR VERTICAL MOUNTING

THREE SIZES AVAILABLE:

MODEL 1120—Scale length 1.2″.
MODEL 1135—Scale length 2.1″. Front external zero adjuster.
MODEL 1145—Scale length 2.75″. Front external zero adjuster.

International Instruments' components lead the way for miniaturization through practical engineering design.

ENGINEERING DATA SHEETS COMPLETELY DESCRIBING THESE INSTRUMENTS ARE AVAILABLE. WRITE FOR YOUR COPIES TODAY.



international instruments

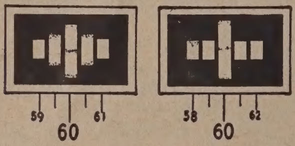
INCORPORATED
NEW HAVEN 15, CONN., CABLE "INTERINST"

VIBRATING REED FREQUENCY METERS (PATENTED)

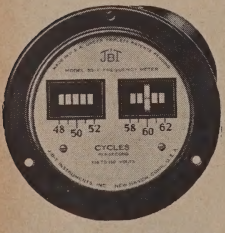
J-B-T Vibrating Reed Frequency Meters are used extensively in radio, telephone, and television service, on engine generator sets, in laboratories, in many types of electronic equipment, on panel and control boards, in inspection set-ups — wherever constant or known frequency is important to efficient operation of equipment. More than 18 years of continuous experience covering many thousands of these instruments are your assurance of quality for both commercial and defense applications.

The patented, simplified design used in the J-B-T meter operates on AC or interrupted DC. Each reed is adjusted to respond by resonance to but one frequency. As the current excites the driving coil, the reed "in tune" with the frequency in the coil will respond by vibrating rapidly because of permanent magnet polarization and induced magnetism from the coil. The instrument is adapted to specified operating voltage by a series resistor. To determine frequency, simply read the reed.

The response patterns differ with the increments of frequency between reeds. For example, at 60 cycles, half-cycle steps give the broad response shown below at left, whereas full cycle steps bring the sharp response at right.



CAUTION: If a meter plugged in on a 60-cycle AC power line does not indicate exactly 60 cycles, trust the meter! Power supply may momentarily be off-frequency due to changing load conditions. All J-B-T Frequency Meters are accurately calibrated at the factory, entirely independent of frequency of power supply. Production and inspection equipment are checked regularly against National Bureau of Standards frequency signals.



(Meter operating at 60 cycles)

10 REEDS

Range: 48-52 and 58-62 cycles. Double window for ease of reading either range. Often specified for export. 100-130 volts; 130 ohms per volt; 1 watt power consumption. Accuracy ±0.3% at reference temperature. Flush panel mounting. See Table of Dimensions, lines 4 and 5.

30-F, (illustrated). 48-52 and 58-62 cy., 3¼" Metal Case. **$30.50**

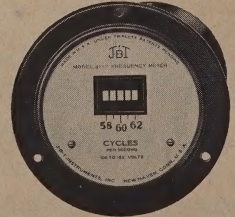
30-FX, 48-52 and 58-62 cy., 3½" Molded Case, MIL-M-6A mtg. **$27.50**

5 REEDS

Used on standby power equipment. Handy for accurately measuring frequency of power source. Five reeds, 58-62 cycles, 100-130 volts. Other characteristics same as Model 30-F. See Table of Dimensions, lines 4 and 5. (This meter also is made with 7 reeds).

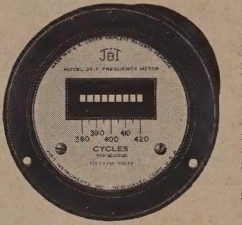
31-F, (illustrated). 58-62 cy., 3¼" Metal Case........ **$26.65**

31-FX, 58-62 cy., 3½" Molded Case, MIL-M-6A mtg...... **$23.65**



ADVANTAGES: Guaranteed accuracy at reference temperature of 77°F is ±0.3% or better of the AC frequency being measured, unless otherwise stated. Accuracy on interrupted DC may be somewhat less. High fatigue safety factor for continuous operation. Temperature compensations are not required as temperature coefficient of reeds is only approximately 75 parts per million per degree F., negative.

All meters are permanently calibrated at the factory and do not require subsequent adjustment. J-B-T reeds have relatively high Q characteristics, an especially desirable factor in electronic circuits. Wave form or external magnetic fields do not ordinarily have an adverse effect. Built with no pivoted parts and with lock washers at every critical point, these rugged meters can take rougher treatment than many instruments.

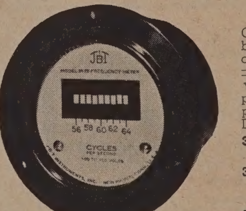


9 REEDS — 400 CY.

Used for measuring frequency of high-cycle power sources, particularly aircraft. Accuracy ±0.3% at reference temperature. Nine reeds, 380-420 cycle range. 100-130 volts; 90 ohms per volt; 1.5 watts power consumption. Flush panel mounting. See Table of Dimensions, lines 4 and 5.

33-F, (illustrated). 380-420 cy., 3¼" Metal Case........ **$37.10**

33-FX, 380-420 cy., 3½" Molded Case, MIL-M-6A mtg...... **$34.10**



9 REEDS — 60 CY.

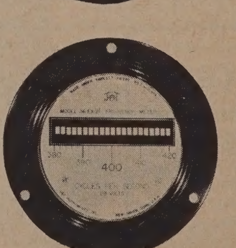
Covers a broad frequency band. Nine reeds, 56-64 cycles, or in half-cycle steps (accuracy ±0.2%) 58-62 cycles. 100-130 volts; 110 ohms per volt; 1 watt power consumption. Flush panel mounting. See Table of Dimensions, lines 4 and 5.

34-F, 56-64 cy., 3¼" Metal Case, 1-cycle steps...... **$30.25**

34-FX, (illustrated). 56-64 cy., 3½" Molded Case, MIL-M-6A mtg. **$27.25**

34-F-Z, 58-62 cy., 3¼" Metal Case, ½-cycle steps.... **$31.90**

34-FX-Z, 58-62 cy., 3½" Molded Case, MIL-M-6A mtg...... **$28.90**



18 OR 21 REEDS

Advanced design offers 21 reeds as an interchangeable 3½" panel meter with 2-cycle intervals for close reading over the band of 380 to 420 cycles per second. Accuracy ±0.3% at reference temperature. The reed flag size is necessarily smaller than the 9-reed 400-cycle meter, such as the model 33-FX, but the 21 reeds are located in an enlarged window 2" wide with flags 3/32" high x 1/16" wide to give maximum readability. A revised internal construction for mounting the reeds in one clamp assures ruggedness. This instrument and its variations are particularly useful where unusually close indication of frequency throughout the band has not been available heretofore. These meters are not regularly stocked. See Table of Dimensions, line 5.

36-FX-21, (as illustrated). 380-420 cycles, 21 reeds, 28 volts operation, 3½" Molded Case; 18 ohms per volt; 1.6 watts power consumption **$43.75**

36-FX-21-115, 380-420 cycles, 21 reeds, 100-130 volts; 90 ohms per volt; 1.5 watts power consumption........ **$45.00**

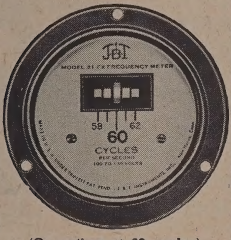
30-FX-18, (not illustrated). 46-54 and 56-64 cycles, 18 reeds in one window with two groupings, 100-130 volts; 210 ohms per volt; 0.7 watts power consumption. **$36.30**

Instruments J-B-T Testers

J-B-T INSTRUMENTS, INC.

2½" METERS — 5 REEDS

MODEL 21-FX, 23-FX. Matches other 2½" panel instruments. Meets ASA C39.1-1951 and MIL-M-6A (Type MR 24 or MR 25) in depth of case and mounting dimensions. Weighs only 4½ ozs.; 5 reeds; 500 ohms per volt; 0.25 watt power consumption. Also 116 to 124 cy.; 250 ohms per volt; 0.5 watt power consumption. 380 to 420 cy.; 170 ohms per volt; 0.7 watts power consumption. Flush panel mounting, see Print MD-20, also Table of Dimensions, Line 2.



(Operating at 60 cycles)

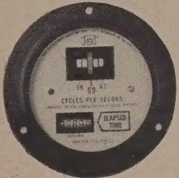
21-FX, 58-62 cy., 2-11/16" Molded Case, 1 cy. steps......**$22.55**

21-FX, 116-124 cy., 2-11/16" Molded Case, 2 cy. steps......**$25.30**

23-FX-54, 390-410 cy., 2-11/16" Molded Case, 5 cy. steps......**$27.50**

23-FX, 380-420 cy., 2-11/16" Molded Case, 10 cy. steps..**$27.50**

ELAPSED TIME — FREQUENCY METERS



31-FE SERIES. To conserve panel space and centralize information, this panel instrument combines the elapsed time or running time meter with frequency reeds. It is used on motor generator sets and on electrical equipment where maintenance routine calls for periodic servicing. The J-B-T design, proved by years of field experience, uses a separate exciting coil for the reeds to achieve close control of reed amplitude and frequency. Reads 0-9,999.9 hours, and 58-62 cycles with 5 reeds, for 100-130 volt operation; self starting. Tenths shown in red, all other numerals in black. Black metal case with front mounting per Table of Dimensions, line 6. Power consumption is 3.5 watts. For variations having 7, 9, or 11 reeds, not regularly stocked, such as Model 34-FE, see revised print SK-45.

31-FE, 3¼" metal case..........**$33.00**

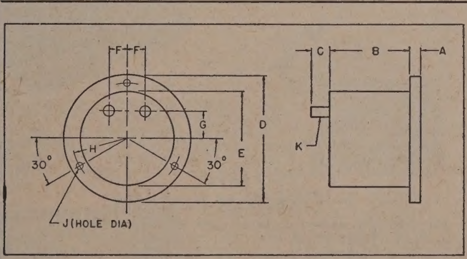
31-FEX-1, (per print SK-44—not regularly stocked) like Model 31-FE, except with 3½" metal flange permanently attached for MIL-M-6A front mounting per line 7, Table of Dimensions......**$34.10**

RUGGEDIZED METERS

Models with "RUG"—Sealed vibrating reed frequency meters and sealed elapsed time meters can be supplied, on special order, to the intent of MIL-M-10304A which covers ruggedization of other kinds of meters. This feature usually is specified only for extra severe shock and vibration.

400 CYCLES, IN 1 CYCLE STEPS; 800 CYCLES

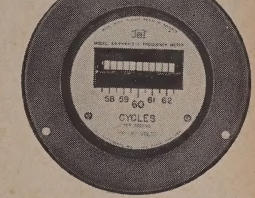
Among the non-catalog variations which J-B-T manufactures on special order, are 21-reed, 390-410 cycles in 3½" case; and 11-reed 780-820 cycles. Quotations on request.



NOTE ON METER VOLTAGE

J-B-T Vibrating Reed Frequency Meters of all sizes normally are made with two studs and are designed to be connected across one phase of a multi-phase line. The single phase voltage where the meter will be used thus becomes the voltage to be specified for the meter. Special meters with extra studs are made only for the purpose of reading two or more voltages, not additional phases.

3½" SEALED METERS



FHXX TYPE sealed meters, glass-to-metal construction, with solder terminals and detachable flange, supersede the former FHX sealed meters (Print SK-24). While JAN-I-6 and MIL-M-6A (Type MR36) do not refer to frequency indicators, the FHXX series uses the front mounting dimensions, and meets or exceeds the sealing and electrical requirements including the 3000 volt breakdown. Mounting dimensions are shown below. Standard voltage is 100-130. Electrical characteristics and accuracy are the same as for corresponding models without the HXX designation. Every meter tested in water where the absolute pressure of the air above the water is reduced to 2.5 inches of mercury (approx. 57,000 ft. altitude) and is maintained for one minute. While not regularly stocked, these meters are in production. For dimensions, see Table, line 8.

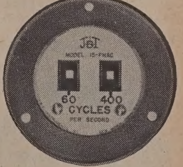
30-FHXX, 10 reeds, 48-52 cy. and 58-62 cy..........**$34.30**
31-FHXX, 5 reeds, 58-62 cy.......... **30.45**
33-FHXX, 9 reeds, 380-420 cy.......... **40.90**
34-FHXX, 9 reeds, 56-64 cy.......... **34.05**
34-FHXX-11, 11 reeds, 55-65 cy.......... **36.25**
34-FHXX-Z-11, illustrated, 11 reeds, 57.5-62.5 cy.......... **37.90**

2½" SEALED METERS

On special order, J-B-T supplies 2½" sealed frequency meters. MIL-M-6A mounting. See Table of Dimension, line 3.

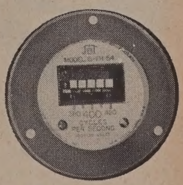
21-FHXX, 5 reeds, 58-62 cy. 100-130 volts **$34.85**
23-FHXX, 5 reeds, 380-420 cy. 100-130 volts **39.80**

1½" SEALED METERS



MODEL 15-FHAC. Widely used as the frequency standard on audio-oscillators, the model illustrated operates 2 reeds, 60 and 400 cycles, at approximately 8-10 volts on 0.04 watts for a cathode follower circuit. Accuracy ±0.5% at 77°F. Steel case has telephone black case, solder terminals. Barrel is 1½" diameter; 2-3/32" detachable flange FL-4 covers glass-to-metal seal. See Table of Dimensions, line 1.

15-FHAC **$20.30**



15-FH-5 METERS (lower photo) also use the 1½" black metal case with 2-3/32" detachable flange and glass-to-metal seal. The 15-FH-5 series features 5 reeds in a row for 100-130 volt operation. Specified where size and weight are important. Same 100% inspection for approx. 57,000 ft. altitude as FHXX types. Standard meter, but not regularly stocked. See Table of Dimensions, line 1.

15-FH-54, 5 reeds, 390-410 cycles, 2.5 watts power consumption..........**$25.85**

15-FH-56, 5 reeds, 58-62 cycles, 0.25 watts power consumption..........**$21.45**

15-FH-400, 5 reeds, 380-420 cy., 2.5 watts power consumption........**$25.85**

FREQUENCY METERS, TABLE OF DIMENSIONS, INCHES

	MODEL	MIL-M-6A* MOUNTING	A	B	C	D	E	F	G	H	J	K	TERMINAL DESCRIPTION
Line 1	15-FH Series	—	1/8	1-9/16	3/8	2-3/32	1-1/2	3/8	3/8	0.875	0.125	Solder,	1/16" dia. hole
Line 2	21-FX and 23-FX Series	MR 24, MR 25	13/64	1-3/8	23/32	2-11/16	2-5/32	7/16	9/16	1.220	0.116	10-32	NF-2 studs
Line 3	21-FHXX, 23-FHXX	MR 26	3/32	1-27/32	11/16	2-11/16	2-1/8	1/2	1/2	1.220	0.125	Solder,	3/32 hole
Line 4	30-F to 34-F Series	—	7/64	2-3/32	23/32	3-1/4	2-9/16	7/16	7/8	1.453	0.150	10-32	NF-2 studs
Line 5	30-FX to 36-FX Series	MR 34, MR 35	19/64	2	23/32	3-1/2	2-11/16	7/16	7/8	1.580	0.150	10-32	NF-2 studs
Line 6	31-FE Series	—	7/64	3-7/8	23/32	3-1/4	2-9/16	7/16	7/8	1.453	0.150	10-32	NF-2 studs
Line 7	31-FEX-1 Series	MR 34, MR 35	7/64	3-7/8	23/32	3-1/2	2-9/16	7/16	7/8	1.453	0.150	10-32	NF-2 studs
Line 8	30-FHXX to 34-FHXX Series	MR 36	3/32	2-1/4	5/8	3-1/2	2-11/16	1/2	3/4	1.580	0.150	Solder.	3/32 hole

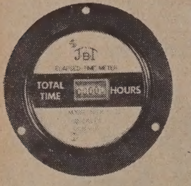
* Also JAN-I-6 and ASA C39.1-1951 Mounting

Instruments J-B-T Testers

J-B-T INSTRUMENTS, INC.

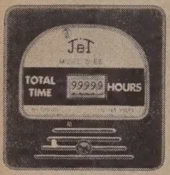
ELAPSED TIME METERS; 4" AND PORTABLE FREQUENCY METERS

ELAPSED (OR RUNNING) TIME METERS — 60 Cycles



MODEL 31-EX. To record operating time of AC electrical and electronic equipment, this self-starting synchronous instrument registers in 1/10th hour steps to 9,999.9 hours, then automatically re-sets. Shows tenths in red numerals, all others in black. Black molded case matches FX, 3½" frequency meters, and fully encloses all parts. This case, with centered terminals, meets type MR34 or MR35 mounting dimensions of MIL-M-6A, also JAN-I-6. Referring to line 5 of the Table of Dimensions on the preceding page, barrel depth (B) is 2½", stud height above center (G) is zero, and all other measurements are as shown. J-B-T engineers recommend AC elapsed time meters for superior accuracy, especially where voltage or ambient temperatures vary widely. Popular for tube life, TV equipment, punch presses, conveyors, oil burners, maintenance schedules, etc. Types for 99,999 hours, or 50 cycles, or special voltages are available on special order.

31-EX, 60 cy., 110-125 volts **$15.95**
31-EX-200, 60 cy., 230 volts (not regularly stocked)........... **17.05**

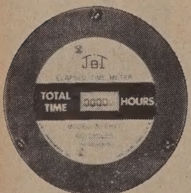


MODEL 31-ES. A square black molded case, matching other 3" x 3" meters, differentiates this model from the round 31-EX. Ask for Print SK-110, Rev. C showing standard rear mounting 2¼" bet. centers of molded-in studs, new rugged case with overall depth 3-11/32" behind flange, and electrical studs on center line. Variations can be made for 99,999 hours (suffix U), 230 volts, minutes, matte finish, or 50 cycles.
31-ES, 60 cy., 110-125 volts.
0-9, 999.9 hours..................... **$17.05**

ELAPSED TIME METERS — Tenths of Minutes

MODEL 31-EXM, 60 cycles, 110-125 volts, reading 0-9,999.9 **minutes;** for short-run applications or readings at closer intervals than 31-EX. Tenths of minutes in red, minutes in black numerals, otherwise identical with 31-EX **$16.25**

3½" SEALED ELAPSED METERS — 60 Cycles



MODEL 31-EHXX. Where rugged requirements make a completely sealed elapsed time meter desirable, this glass-to-metal construction, with flat glass front and 3½" diameter separable flange, often is specified. Heavy-duty solder terminals are supplied. Every instrument is checked in a vacuum chamber. Overall dimensions and appearance match the FHXX series sealed frequency meters. Maximum voltage between terminals and case, 1000 volts, R.M.S. The meter registers in 1/10 hour steps to 9,999.9 hours, then automatically re-sets. Tenths indicator is in red, all others in black. Mount according to Print SK-85.
31-EHXX, 60 cy., 110-125 volts **$19.75**

2½" SEALED ELAPSED TIME METERS

MODEL 21-EHXX. This new 2½" sealed meter, with front mounting dimensions the same as Type MR-26 electrical indicating instruments in MIL-M-6A, nevertheless offers a full-size counter reading 0-9,999.9 hours in 1/10th hour steps and a rugged self-starting synchronous motor. Glass-to-metal seal makes the instrument completely tamper-proof. Ask for Print SK-68. A 2½" 400 cycle-meter, **Model 23-EHXX,** also is made on special order.
21-EHXX, 60 cy., 110-125 volts **$24.75**

⋙→ SEALED ELAPSED TIME METER — 400 Cycles ←⋘

MODEL 33-EHXX. Meeting a long-felt need for a stable 400-cycle elapsed time meter compact enough to fit in a 3½" flanged case, with all parts enclosed, is this new 400-cycle elapsed time meter. The instrument now is being produced only in sealed construction, glass-to-metal, with separable flange, heavy-duty solder terminals and flat glass front. External appearance matches FHXX series and Model 31-EHXX sealed, 60-cycle, elapsed time meter. A slightly larger case is used per SK-61.
33-EHXX, 400 cy., 0-9,999.9 hours, 1/10 hours steps, 110-125 volts **$58.00**

CLEAR-PLASTIC ELAPSED TIME METERS

J-B-T
ELAPSED TIME METER
HOURS
MODEL 21-EPL

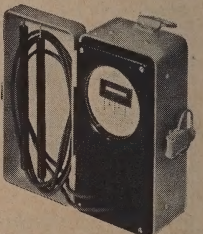
EPL TYPE meters recently have been developed for the J-B-T family of elapsed or running time meters. The clear-plastic front gathers light from all sides and is compatible with all modern instruments. A sturdy metal case with solder terminals is used behind the panel. The 2½" size is 2-19/32" wide x 2⅜" high with 2⅛" diameter barrel, per print SK-102; the 3½" per print SK-108.
21-EPL, 2½" size (illustrated), 60 cy., 110-125 v., 0-9,999.9 hrs.................... **$25.75**
31-EPL, 3½" size (not illustrated), 60 cy., 110-125 volts, 0-9,999.9 hrs. **$23.75**

400 CYCLE BROAD AND VERNIER INDICATORS

Model 41-FX-42 (supersedes Model 41-FX). Widely used in commercial and military testing, this model provides 2 windows: the lower offers a range of 300-500 cycles having 21 reeds in 10-cycle steps, the upper gives a vernier effect over 380-420 cycles with 21 reeds in 2-cycle steps. Housed in black molded case with flush front 4-5/16" wide x 4-3/16" high and 2-29/32" deep behind panel over studs. Made for 100-130 volt operation. Also available with 4 studs for 200-240, 115, and 30 volts, 4.5 watts at 115 volts, 7.7 watts at 200 volts.
41-FX-42, 100-130 volts.. **$120.00**
41-FX-42, triple voltage, without switch.................................. **$135.00**

PORTABLE FREQUENCY TESTERS

METAL CASE (TS-328A/U, 33-FP-9M, 34-FP-9M)



This portable frequency meter with accuracy of #10.3%, meets the exacting test requirements of aviation, signal and communication equipment. The sturdy, light-weight case of anodized aluminum with gray protective finish locks tightly when not in use. Detachable cover, leads, sub-panel, and meter assembly permanently attached. Case dimensions: 6⅜" long x 4" wide x 3-9/32" deep with attached D-ring for belt or carrying strap. Panel and meter barrel are molded in one piece to exclude moisture and dirt. When made to Government specifications, using pertinent name plate, the 33-FP-9M is known as TS-328A/U. See Print SK-63-10.
33-FP-9M, 380-420 cy., 9 reeds, 100-130 volts, 70 ohms per volt, 1.75 watts power consumption; com. quality and packing....**$49.25**
34-FP-9M, 56-64 cy., 9 reeds, 100-130 volts, 130 ohms per volt, 1 watt power consumption; com. quality and packing........**$42.35**

OTHER REED PRODUCTS

Inquiries are invited on these new J-B-T products:

1. Reed Tachometers—Reading rpm by resonance alone—without any electrical circuitry or complicated mechanical connections—these instruments are held or mounted against the housing of turbines, electric shavers, vacuum cleaners, sewing machines or other motor-driven products. (Ask for Bulletin MT-458.)

2. Reed Relays—Reed-relays for selective frequency calling, or single-reed types for response to a single transmitted signal, such as 100 to 500 cycles, are made in plug-in cans. One type, a unique J-B-T construction with patent pending, eliminates vibrating contacts and substitutes a mechanism with exceptional efficiency which often eliminates need for further amplification. The device also can be added as a frequency-limit control on an indicating reed meter. (Ask for Bulletins 260-L and 160-R.)

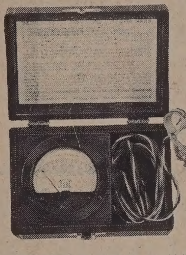
3. Oscillator Controls—Plug-in reed-type oscillator controls to match transmitted frequencies to those picked up by vibrating reed relays can be supplied, for example, to operate in mobile or other communications equipment. (Ask for Bulletin 160-R.)

Net Effective Sept. 1, 1960

APPLIANCE TEMPERATURE TESTERS

OVEN TESTERS

MODEL 23-JP-1. This newest model indicating portable pyrometer saves time and furnishes reliable information in testing and setting thermostats on electric or gas ranges and other appliances by showing oven temperatures as they change. Standard size dial, 0-650°F., with 2⅜'' scale arc reading, is used but covered by clear-plastic instrument front. The indicator is mounted on a black metal panel affixed inside a pocket-sized, black top-grain leather case 4½'' x 2⅞'' x 4¼'' over hardware. Characteristic of more expensive pyrometers, the 23-JP-1 is automatically compensated for ambient temperature. Thus the tester eliminates calculations, avoids likelihood of serious error as temperature change inside the instrument itself, and gives foolproof direct readings. Supplied with attached SA-116 5½' calibrated thermocouple clip, and convection shield **$26.00**



MODEL 32-JP-3. This highly popular model uses a rigid outer carrying case 6'' x 3⅞'' x 3¾'', covered in black leatherette. The glass-covered indicator shows 0-650°F. range in 10° divisions readable to 2½° on a 2⅜'' scale arc. Exceptionally fast, continuous response. Automatic compensation for ambient temperature is a valuable feature whether the tester is used for service work, sales demonstrations, or inspection. Attached SA-116 5½' thermocouple, clip for attaching to grill and convection shield included..**$27.50**

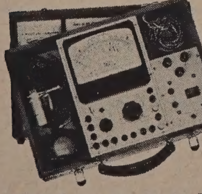
MODEL 32-JP-4. Most versatile of the oven testers this model has all the features of the 32-JP-3 plus a leather carrying strap and binding posts for quick attachment or interchanging of various thermocouples, as listed, to check irons, washers, toasters, clothes dryers, etc. Range, 0-650°F with 2⅜'' scale arc; black leatherette case 6'' x 3⅞'' x 3¾''. Unattached SA-116 thermocouple is included. **$28.75**

IRON TESTER

MODEL 32-JIT

Self-contained bench-type tester; checks all makes of irons; measures thermostat temperatures; shows open or short circuits. Automatically compensated for room temperature. Also indicates operating temperature of the sole plate (working surface) on non-electric or cordless irons. Black metal base; overall size 10'' x 12'' x 5½'', scale 0-650°F, 15 amp fuse, 6' cord, 110-volt, 50-60 cycles **$34.50**

ALL-PURPOSE TESTER



MODEL 61-JRT. A 9-in-1 tester to speed accurate temperature adjustment and electrical analysis of ranges, refrigerators, etc. Rapidly reads four cold zones —100°F, + 80°F. up to 14' distant; two heat zones 0-600°F. up to 5½' distant; one voltage range 0-300 AC; and, with transformer, two current ranges, 0-30 and 0-60 amps, AC. Sturdy, polished walnut case, 15½'' x 10-3/16'' x 4¾''. Two-color etched metal panel. Separate switches protect bulb and ammeter circuits. Requires one standard flash-light cell, replaceable in the field. Temperature accuracy ±2% of full scale; rectified AC readings ±5%. Accessories as listed may be added for testing appliances. Includes two SA-162 resistance bulbs, two SA-116 thermocouples, electrical leads, and AS-TR-2 built-in transformer. **$118.00**

MODEL 61-JRT (LESS TRANSFORMER)
Same unit, same scales except no reading in amperes; AS-TR-2 transformer omitted **$105.00**

HEAT INDICATORS

MODEL 32-J PYROMETER IN SN-7 STAND. Mounted in sloping front black metal stand, 4¼'' high x 4⅜'' deep x 4⅛'' wide. Compensated for ambient temperature. Medium resistance system, damped for quick reading on 2⅜'' scale, assures ruggedness and pointer stability. For ±2% accuracy, use only the type and resistance of thermocouple and lead provided; if extra length, — coil it — to maintain calibration. A protection tube usually is not required. For convenience keep an extra thermocouple and lead on hand.

MODEL 32-J IN SN-7 STAND (Supersedes SN-3 Stand)
0° — 650°F — 350°C, includes SA91 thermocouple, SA-84 lead, and CB-1 connector block **$33.50**
0° — 1200°F — 650°C, includes SA-87, SA-82, and CB-1........ **33.50**
0° — 2000°F — 1100°C, includes SA-87, SA-82, and CB-1........ **33.50**

MODEL 32-J IN SN-8 STAND (not illustrated). With 3 binding posts to accommodate flexible extra lead and thermocouple for hard-to-reach locations. (Stand Supersedes SN-5).
0° — 650°F with SA-91 thermocouple, SA-84 lead, CB-1 connector block, and SA-86 flexible leads and thermocouple **$37.50**

TEMPERATURE AND TESTER ACCESSORIES

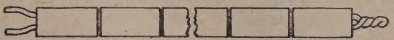
Condensed listing; full line in Catalog 558-B.

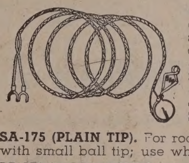
THERMOCOUPLES. For J-B-T pyrometers and leads, thermocouples are carefully selected, standardized, and tested.

SA-87. 12'' #14 Ga. chromed-alumel, 2-hole ceramic beads, fits 5/16'' hole; welded tip **$3.40**

SA-91. 12'' #14 Ga. iron-constantan, 1938 calibration; 2-hole ceramic beads, fits 5/16'' hole; welded tip **$2.90**

Flexible Thermocouple, 7' length, see SA-86 lead wire.





SA-116 with SHIELD and CLIP. Standard flexible No. 22 gauge iron constantan, asbestos insulated, 5½', with attachment clip and convection shield as normally supplied with 23-JP-1, 32-JP-1, 32-JP-2, 32-JP-3, 32-JP-4, 60-JRT and 61-JRT Testers. (See SA-199 for extra quality, glass insulated type).
SA-116 .... **$2.00**

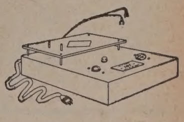
SA-175 (PLAIN TIP). For roasters, waffle irons, etc., 5½' #22 Ga. with small ball tip; use where clip and shield unsuitable......**$1.60**

SA-176 (for TOASTERS, etc.). Same as SA-175 except tip has special disc to collect heat........ **$3.00**

SA-188 (for AUTOMATIC WASHER TEMPERATURES, etc.). 3/16'' dia. copper tube, 4'' long, encloses couple; for use in pipe or sample of water........ **$4.50**

SA-199 (with SHIELD and CLIP). Same as SA-116 except duplex, non-fraying glass braid construction; dia. .115''; for frequent use above 400°F. **$2.65**

SA-300 (for SURFACE READINGS). Spring-type I-C in Transite tip with handle and 5' #22 Ga. lead for rapid reading; not regularly stocked **$8.00**



ACCESSORY IRON TESTER, MODEL IT-1. This attachment is identical with 32-JIT except there is no meter....**$18.00**

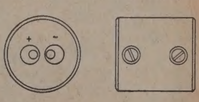
LEAD WIRES SA-82. 6' compensating lead for chromel-alumel couples; duplex stranded; asbestos-insulated, outside, moisture-proof and flame-proof used on 650°F scales (not interchangeable with SA-84) **$2.05**

TRANSFORMERS. AS-TR-2. Attachment for 61-JRT, reads 30 and 60 AC amp scales on tester; includes jumper lead and panel **$18.00**

AS-TR-3. For 60-JRT tester. Reads 30 and 60 AC amp by dividing volt scale by 10 or 5. Complete with attachments........ **$20.00**

RESISTANCE BULBS (for cold testing). SA-142. Bulb with 14' polyethylene ribbon lead, for 60-JRT only........ **$6.50**

SA-162. Bulb, with 14' polyethylene ribbon lead, for 50-50 and 61-JRT testers **$6.50**



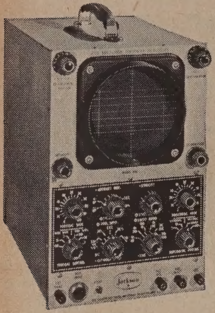
CONNECTOR BLOCK MODEL CB-1. Lava connector block, withstands high temperatures, accommodates all thermocouples. Heavy brass connectors keep contact resistance low. Usable with or without connector head **$1.85**

LEAD WIRES
SA-82, 6' for C-A couples **$1.70**
SA-84, 6' for I-C couples **$1.70**
SA-86, 7' I-C thermocouple and lead combined; #20 Ga., twisted pair asbestos insulated **$2.05**

Jackson

"SERVICE ENGINEERED" TEST EQUIPMENT

THE JACKSON ELECTRICAL INSTRUMENT COMPANY, DAYTON 2, OHIO
IN CANADA: THE CANADIAN MARCONI CO.



MODEL 600 LABORATORY OSCILLOSCOPE

A new, compact, laboratory oscilloscope, equally suited to service, industrial and scientific applications. Features choice of wide-band or high sensitivity operation, originated by Jackson. Power supply regulated for stable operation.

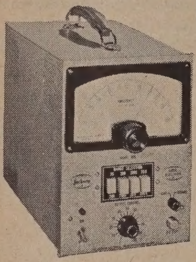
- Wide band vertical amplifier, flat within 1db from less than 20 cycles to 4.9 MC, usable to 10 MC.
- Two-range vertical sensitivity from 20 mv/inch.
- Horizontal amplifier response uniform within 2 db from 20 cycles to 200 KC.
- Linear Sawtooth Sweep, 10 cycles to 100 KC.
- Sync Sources: Internal Signal, Internal 60 or 120 cycle, External Source.
- Input Calibration Voltage, 10 V, P-P.
- Provision for direct connection to CRT deflection plates.
- Lighted graticule with variable illumination.
- Camera studs for any standard scope camera.
- Variable sweep expansion.
- Return Trace Blanking.
- Intensity modulation, external, or internal 60 cycles.
- Flat face CRT for improved linearity.
- Sweep frequency pulse on panel terminal for transformer ringing test.

Size: 15″ H x 9⅛″ W x 13″ D, overall.

Power Requirements: 105-125 VAC, 50-60 cycle, 75 watts.

Accessory Probes: Uses same probes as Model CRO-2.

$335.00 net SHIPPING WEIGHT 29 LBS.



MODEL 605 AUDIO SINE-SQUARE WAVE OSCILLATOR

A new, precision audio generator with a choice of either sine wave or true square wave output. Square wave is NOT a clipped sine wave but is generated by a special Schmitt Trigger circuit. Features push-button range selection and variable output.

Range: 20 cycles to 200,000 cycles, sine or square wave in 4 ranges.

Accuracy: 3% or 1 cycle, whichever is greater.

Output: High Impedance, continuously variable. Sine wave 0 to 5.0 RMS Volts, Square Wave 20 mv to 7.0 P-P.

Sine Waveform: Less than 1% distortion.

Output Level Characteristic: ±1 db over full range.

Hum Level: Down more than 50 db at all output levels.

Square Wave Rise Time: Less than 0.2 μsec.

Square Wave Tilt: 5% at 60 cycles. Less than 1% above 200 cycles.

Dimensions: 11″ H x 7⅝″ W x 13″ D.

Power Requirements: 110-120 VAC, 50-60 cycles, 50 watts.

$129.95 net SHIPPING WEIGHT 21 LBS.

MODEL 607 VARIABLE REGULATED POWER SUPPLY

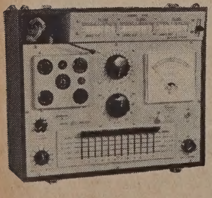
A complete laboratory power supply which provides heater, bias and regulated variable B+ voltages in one compact package.

- AC Heater Output: 6.3 VAC at 3 A max.
- DC Bias Output: 30 to 275 VDC, no load. 15 to 150 VDC at 20 ma.

$79.95 net
SHIPPING WEIGHT 12 LBS.

- DC Regulated Output: Low Position 150 to 225 VDC, 0 to 100 ma. max. High Position 225 to 300 VDC, 0 to 100 ma. Regulation: Within 1.5%. no load to 100 ma. at 300 volts.
- Ripple Content: Bias Supply: Less than 0.003% at 20 ma. Regulated Supply: Less than 0.005% at 100 ma.
- Metered Output: For Bias and Regulated B+ Supply.
- Dimensions: 8¼″ H x 5⅜″ W x 10¼″ D.

MODEL 598 LOW-COST DYNAMIC® TUBE TESTER



An economical tube tester featuring the famous Jackson Dynamic principle, already proved by service men everywhere. Checks practically all receiving tubes under load conditions. Completely flexible for future tubes, without having to buy extra cards or sockets.

$89.95 net
SHIPPING WEIGHT 21 LBS.

- 23 Separate Heater Voltages for any receiving tube.
- Variable Plate Voltage and Load.
- Grouped Tube Socket Sub-Assembly.
- Good/Bad, plus "percentage" meter indications.
- Zig-Zag Roll Chart in Quick-Change Housing.
- Variable Shorts Sensitivity Test.
- Line Voltage Indicating Control.
- Convenient Lever Switching.
- Portable case for shop or on-the-job use.

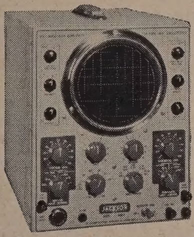
Dimensions: 16½″ L x 14½″ W x 6¾″ D.
POWER CHART AVAILABLE

Jackson

"SERVICE ENGINEERED" Test Equipment

THE JACKSON ELECTRICAL INSTRUMENT CO., DAYTON 2, OHIO
IN CANADA: THE CANADIAN MARCONI CO.

MODEL CRO-2 5-INCH WIDE-BAND, HIGH SENSITIVITY OSCILLOSCOPE



Laboratory quality scope with highly stable circuitry and every feature for accurate TV work, color and black & white. Widely used, too, in many laboratory and industrial applications.

- Wide Band Amplifier, flat within 1 db 20 cycles to 4.5 mc.
- Two-range vertical deflection sensitivity from 0.018 rms volts-per-inch
- Highly stable amplifier circuits. No balancing required.
- Positive or negative internal horizontal sync.
- Linear sawtooth oscillator, 20 cycles through 50 kc.
- Input calibrating voltage, 10 volts peak-to-peak
- Vertical polarity reversal
- Variable sweep expansion
- Return trace blanking
- Z-axis modulation — internal, external or 60-cycle
- Direct connection to deflection plates when required

ACCESSORY PROBES

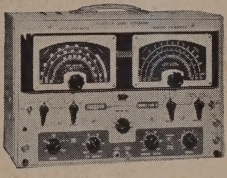
LC2-1P Low Capacity Probe. Cathode follower type. 2:1 attenuation. Not more than 8 *uuf* effective impedance ....$19.95 net.

LC10-P High Voltage Low Capacity Probe. 10:1 attenuation ratio. For circuits where up to 1,000-volts is present ....$7.95 net

DEM-P Demodulation Probe. For RF or IF signal tracing ....$9.95 net

$225.00 net SHIPPING WEIGHT 32 IBS.

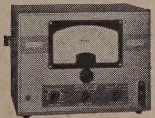
MODEL TVG-2 SWEEP MARKER GENERATOR AND CRYSTAL CALIBRATOR



The TVG-2 is a complete alignment generator for any TV set or FM broadcast receiver—in fact, any receiver within its tuning range. Has ample output for even the most badly de-tuned receiver. Valuable for working with FM broadcast receivers, low band police FM receivers and others in the VHF ranges covered.

- Wide range sweep oscillator covers three bands all on fundamentals: 2 to 38 mc, 38 to 108 mc, and 174 to 216 mc.
- Variable sweep width 0 to 18 mc in 8 steps
- Video Sweep (30 kc) for color circuit adjustments
- Accurate Marker Generator (¼%) from 4 to 216 mc.
- Crystal oscillator for any crystal 3 mc to 20 mc with beat detector
- 400 cycle modulation for marker or crystal oscillators
- Provision for video signal modulation
- Variable output impedance on 10K range
- Provides oscilloscope timing axis with phase and blanking controls

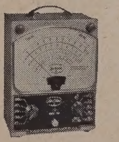
$259.95 net. SHIPPING WEIGHT 35 LBS.



MODEL 655 WIDE RANGE AUDIO OSCILLATOR

- Exceptionally stable RC tuned sine wave generator
- Frequency range 20 cycles to 200,000 cycles in 4 steps
- Up to 500 milliwatt output
- Output impedances of 10,250, 500, or 5,000 ohms plus resistive output
- Frequency characteristic within 1 db 30 to 15,000 cycles on transformer output
- Accuracy, 3% or 1 cycle whichever is greater
- Sinusoidal Waveform
- Hum Level down 60 db at maximum output
- Logarithmic Calibration Curve
- Continuously variable output
- Factory-calibrated for guaranteed accuracy

$135.00 NET
SHIPPING WEIGHT 32 LBS.



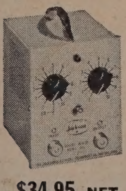
MODEL 590 ALL-NEW 7" VTVM

- Large 7" meter and hairline pointer for greatest accuracy
- Fast warm-up time—complete accuracy in less than 5 minutes
- Single Probe for all measurements
- Accurate a-c voltage readings from 20 cycles to 2 mc.
- All-new silicon diode circuitry
- Factory calibrated for guaranteed accuracy

$69.95 NET. SHIPPING WEIGHT 8 LBS.

RANGES: DC volts, plus or minus, and AC volts: 1, 5, 10, 50, 100, 500, 1000 volts full scale. Separate 1 volt rms scale, separate peak-to-peak and Zero-center d-c scales. Ohms Rx1, 10, 100, 1k, 10k, 100k and 1 meg. Center of Rx1 scale, 10 ohms. Accuracy d-c and ohms, 3% of full scale; a-c volts 5% full scale.

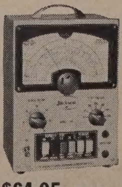
MODEL 59 H.P. HIGH VOLTAGE PROBE FOR 590..........$9.95 NET



MODEL 606 SQUARE WAVER

Now you can get true square waves from your present sine wave generator. The Model 606 square wave characteristics are the same as Model 605 Generator. Provides true square waves over the frequency range provided by the driving source generator. Input and output continuously variable. Negligible rise time and tilt. Square wave shape is independent of the driving source wave shape. Ideal for producing a square wave output from the Model 655.

$34.95 NET
SHIPPING WT.
5 LBS.



MODEL 591 WIDE-RANGE CAPACITANCE CHECKER

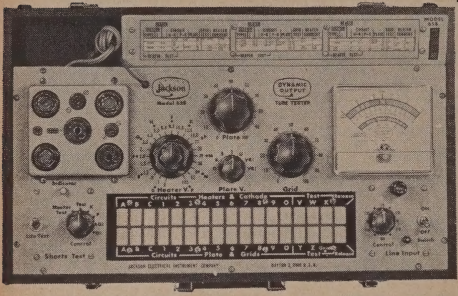
- Tests capacity from 10 *uuf* to 1000 *uf* in 4 ranges
- Color-coded range push-buttons match scale colors for easy selection
- Graduated leakage tests for both polarized and unpolarized capacitors
- Low-voltage leakage tests for transistor-circuit capacitors
- Graduated power factor test for electrolytics, 0 to 60%
- Electron-ray indicator tube for all tests
- Complete with test leads
- Factory-wired and calibrated for guaranteed accuracy

$64.95 NET
SHIPPING WEIGHT
11 LBS.

Jackson

"SERVICE ENGINEERED" Test Equipment

THE JACKSON ELECTRICAL INSTRUMENT CO., DAYTON 2, OHIO
IN CANADA: THE CANADIAN MARCONI CO.



$189.95 SHIPPING WEIGHT 26 LBS.

NEW! DYNAMIC® OUTPUT TUBE TESTER MODEL 658

Makes more—and more accurate tests than any service tube tester ever made. Tests practically any tube the average serviceman will ever encounter. Faster, more versatile, the 658 is also ideal for laboratory and engineering applications.

DYNAMIC OUTPUT PRINCIPLE—Choice of 8 DC voltages applied to plate, screen, and VR tubes. Variable DC plus variable AC signal voltage applied to control grid. Meter reads only the AC component in the plate circuit. A much more valid test than mutual conductance because it considers the entire output curve of the tube, not just a small portion.

TESTS NEW 12-VOLT-PLATE HYBRID TUBES—Ample current capacity for even high current space charge grid tubes. The only tester made with this capability.

TRUE RECTIFIER TESTS—AC voltages are applied to diodes and rectifiers. Meter then reads rectified plate current—the true test for any rectifier. Easily handles high current rectifiers up to 250 ma.

GRID LEAKAGE TESTS—Highly sensitive test with direct leakage indication on special meter scale. Sensitivity of 15 megohms. Regular shorts test also included with three separate sensitivities to suit the type being tested.

TESTS "EYE" TUBES UNDER DYNAMIC CONDITIONS—You can open and close the eye to determine accurately its operating limits.

HEATER-CURRENT TEST FOR SERIES STRING TUBES—Actual current is read directly on meter scale.

HEATER CONTINUITY CHECK WITHOUT WARM-UP—No wasted time if the heater is open. Instant checks tells you immediately.

TEST VOLTAGE REGULATOR AND REFERENCE TUBES—Meter indication of the striking voltage and control voltage range for each type.

PLUS THESE FEATURES AND MANY MORE

Push-Button Sequence Switching
Silicon Rectifier Balanced Double-Bridge Circuit
231 Heater Voltage Combinations From 0.6 To 120 Volts
Panel Mounted Fused Line For Overload Protection
Grouped Tube Sockets For Easy Accessibility
Complete Data For Testing Over 1,200 types
Compact, Portable Case 21" l. x 13¾" w. x 7" d.

POWER CHART AVAILABLE FOR EITHER MODEL AT $20.00 NET, ADDITIONAL.

DYNAMIC® TUBE TESTER MODEL 648R

$129.95 net SHIPPING WEIGHT 22 LBS.

The world famous Jackson Dynamic tubes test principle exceeded in quality only by the Jackson 658 above. New, more convenient design puts all the tube sockets together, keeps roll-chart up and out of the way. Fast push-button sequence switching makes the set-up time less than the warm-up time of the tube. Completely flexible for new tubes. No panels to change, no cards to buy.

NEW TUBE SOCKET SUB-ASSEMBLY—All sockets grouped in one convenient subassembly. You can replace individual sockets or the entire subassembly easily.

ANGLED FULL-VIEW ROLL CHART—Super convenient zig-zag roll chart is now up higher, and out of the way. Complete chart assembly may be removed by taking out only one screw.

SILICON RECTIFIER—The 648R is ready the second you flip the switch.

23 SEPARATE HEATER VOLTAGES—The correct voltage for every receiving type—including series string tubes. From .75 to 100 volts.

PLUS ALL THESE SERVICE-PROVED JACKSON FEATURES

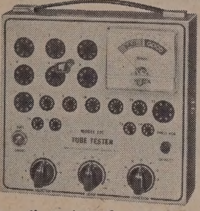
Variable Sensitivity Shorts Test—Up to 2 Megohms.
Easy-Reading GOOD-BAD And Percentage Meter Scales
Portable Case Finished In Attractive Two-Tone Plastic Covering
Automatic Line Voltage Indicator
Life Test Switch
Factory Assembled And Calibrated For Guaranteed Accuracy

PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

NEW DATA FOR JACKSON TUBE TESTERS APPEARS MONTHLY IN "PF REPORTER" and CANADA'S "RADIO, TELEVISION AND APPLIANCE SALES."

Technician Approved Test Equipment . . . TOPS in *PERFORMANCE . . . QUALITY . . . APPEARANCE . . . VALUE*

Model 101 TUBE TESTER

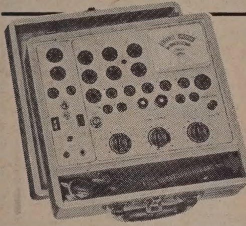


A VERSATILE ECONOMY PRICED TUBE TESTER

• Checks quality (emission, shorts and gas) of up to 1500 tube types, including the newest series-string TV tubes, OZ4s, gas regulators, hi-fi and foreign tubes • Checks each section of multi-purpose tubes • Easy-to-read 3 color meter scales • 17 long lasting phosphor bronze tube sockets • Positively cannot become obsolete. New tube listings furnished periodically to all registered owners • Sturdy-gray hammertone steel case • Size: 9x8½x2¾".

Dealer Net . . . $\$39^{95}$

Model 102-P TUBE TESTER



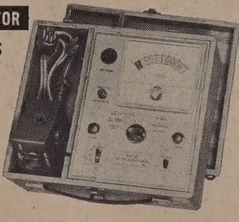
A DELUXE TUBE TESTER WITH MANY EXTRAS

• Checks quality (emission, shorts and gas) of up to 1500 tube types, including the newest series-string TV tubes, OZ4s, gas regulators, hi-fi and foreign tubes • Checks each section of multi-purpose tubes • Positively cannot become obsolete. New tube listings furnished periodically to all registered owners • 21 long lasting phosphor bronze tube sockets.

EXTRAS ➧ • Checks crystal diodes and all power rectifiers • Checks all pilot lamps and fuses for continuity • Provides for quick check of tube filament continuity • Handy appliance power outlet provided on panel • Insulated test leads provided for external continuity checks • Built-in 7-pin and 9-pin straighteners on panel • Hand rubbed wood carrying case. Size: 11¼x12x4½".

Dealer Net . . . $\$59^{50}$

Model 800 CRT TESTER-REACTIVATOR

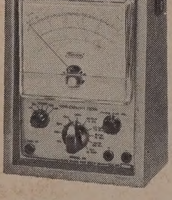


TESTS, REPAIRS AND REACTIVATES ALL BLACK AND WHITE AND ALL COLOR PICTURE TUBES . . .

TESTS . . . emission, inter-element leakage and life expectancy • REPAIRS . . . shorts and open elements • REACTIVATES . . . weak tubes with a controlled high voltage pulse (reactivation is seen and controlled on the meter as it takes place) • Tests the red, green and blue sections of color tubes separately • Also provides the newer 2.35 and 8.4 filament voltages • Hand rubbed wood carrying case • Size: 11⅛x9½x4½".

Dealer Net . . . $\$49^{95}$

Model 400 VOM - CAPACITY TESTER

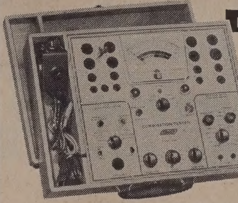


✓ A 20,000 Ohms per Volt VOM
✓ AN ACCURATE CAPACITY METER

DC VOLTAGE RANGES: 0 to 15/75/150/300/750/1500/7500 Volts • AC VOLTAGE RANGES: 0 to 15/75/150/300/750/1500 Volts • DC CURRENT RANGES: 0 to 75 microamps/7.5 ma./15 amps. • CAPACITY RANGE: .001 mfd. to 80 mfd. • RESISTANCE RANGES: 0 to 1,000/10,000 ohms/0 to 10 megohms • Sturdy hammertone finish steel case • Size: 5⅞x7¾x3½".

Dealer Net . . . $\$39^{95}$

Model 300 COMBINATION TESTER



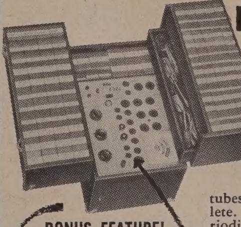
✓ A MULTIPLE-SOCKET TUBE TESTER
✓ A CRT TESTER-REACTIVATOR
✓ A 20,000 Ohms per Volt VOM and CAPACITY METER

ALL COMBINED IN ONE COMPACT UNIT!

AS A TUBE TESTER . . . will check quality (emission, shorts and gas) of up to 1500 tube types • AS A CRT TESTER-REACTIVATOR . . . will test, repair and reactivate all black and white and all color picture tubes • AS A VOM - CAPACITY METER . . . sensitivity is 20,000 ohms per volt/DC and 5000 ohms per volt/AC . . . Capacity range: .001 mfd to 80 mfd. • Hand-rubbed wood carrying case • Size: 17½x13⅛x4½".

Dealer Net . . . $\$99^{75}$

Model 102-C CADDY TUBE TESTER



A DELUXE TUBE TESTER AND TUBE CADDY "ALL IN ONE"

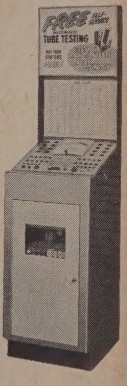
BONUS FEATURE!

Tube tester is removable so that it can be used in or out of the caddy. Extra special storage compartment provided below tester.

• Checks quality (emission, shorts and gas) of up to 1500 tube types including the newest series-string TV tubes, OZ4s, gas regulators, hi-fi and foreign tubes • Checks each section of multi — purpose tubes • Positively cannot become obsolete. New tube listings furnished periodically to all registered owners • 21 long lasting phosphor bronze tube sockets.

EXTRAS ➧ • Checks crystal diodes and all power rectifiers • Checks all pilot lamps and fuses for continuity • Provides for quick check of tube filament continuity • Handy appliance power outlet provided on panel • Insulated test leads provided for external continuity checks • Built-in 7-pin and 9-pin straighteners on panel • Housed in custom made, compact durable tube caddy • Holds a complete stock of over 200 tubes • Convenient drawer for tools, test leads, etc. • Size: 9¾x16x13⅛". *Dealer Net . . .* $\$74^{50}$

Model 201 SELF-SERVICE TUBE TESTERS



A VALUABLE ASSISTANT IN THE SERVICEMAN'S SHOP . . .

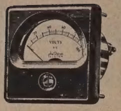
• Checks quality (emission, shorts and gas) of up to 1500 tube types, including the newest series-string TV tubes, OZ4s, one volt tubes, hi-fi and foreign tubes • Completely self-service . . . just two settings are required to test a tube in less than ten seconds • Checks each section of multi-purpose tubes • Tests all 6 and 12 volt standard auto radio vibrators • 46 long lasting phosphor-bronze beryllium sockets • Tube compartment with own lock holds over 400 tubes • Tube storage drawers with tube carton dividers and drawer sheets provide for automatic inventory control • Positively cannot become obsolete. New tube listings furnished periodically to all registered owners • Attractive red and hammer-tone gray durable metal cabinet • Takes only 19"x19" of floor space. 6'1" high.

Model 201-C (Counter Model) *Dealer Net* $\$109^{50}$	Model 201-F (Floor Model) *Dealer Net* $\$158^{50}$

AVAILABLE ONLY THROUGH YOUR ELECTRONIC PARTS DISTRIBUTOR!

Mercury ELECTRONICS CORPORATION
manufacturers of quality electronic products
Mineola, New York

PHAOSTRON


2½″ 3½″ Square

2½″ 3½″ Round

CUSTOM

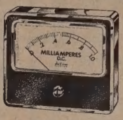
1½″ Square

2½″ 3½″ 4½″ Round

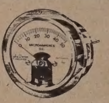
RUGGEDIZED

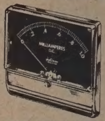
PANEL METERS

Standard of Quality for the Industry


4½″ Rectangular

6″ Rectangular


2½″ 3½″ Round


2½″ 3½″ 4½″ Rectangular

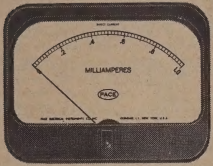
PRESTIGE

TYPE	RANGE	RUGGEDIZED AND SEALED METERS				CUSTOM METERS							PRESTIGE METERS				
		1½" Square	2½" Round	3½" Round	4½" Round	2½" Sq. or Rd.	3½" Rd. or Sq.	3½" Rectangular		4½" Rectangular		6" Rectangular	2½" Round	3½" Round	2½" Rectangular	3½" Rectangular	4½" Rectangular
								Black	Chrome	Black	Chrome						
Voltmeter DC	0-1.5 0-3 0-5 0-8 0-10 0-15 0-30 0-50 0-80 0-100 0-150 0-200 0-300 0-500	18.00	18.00	18.00	19.50	15.00	15.00	17.00	18.50	18.00	19.50	22.50	14.00	14.00	14.50	14.50	15.00
		Note: 0-1 MA movement ext. multiplier req'd in 0-500 range 2½" Rugg. meter only															
Voltmeter AC (Rectifier Type)	0-1.5 0-3 0-5 0-10 0-15 0-25 0-50 0-100 0-150 0-300	20.50	20.50	20.50	22.00	19.00	19.00	21.00	22.50	22.00	23.50	26.50	15.50	15.50	16.00	16.00	16.50
Ammeter DC	0-1 0-1.5 0-2 0-3 0-5	16.50	16.50	16.50	18.00	14.00	14.00	16.00	17.50	17.00	18.50	21.50	13.00	13.00	13.50	13.50	14.00
	0-10 5-0-5	Not Available															
Ammeter DC (External Shunt Required)	0-15 0-30 0-50 10-0-10 15-0-15 20-0-20 30-0-30 50-0-50	16.50	16.50	16.50	18.00												
Milliammeter DC	0-1 0-1.5 0-2 0-3 0-5 0-10 0-15 0-20 0-30 0-50 0-100 0-150 0-200 0-300 0-500 1-0-1 100-0-100	16.50	16.50	16.50	18.00	13.00	13.00	15.00	16.50	16.00	17.50	20.50	12.00	12.00	12.50	12.50	13.00
Milliameter AC (Rectifier Type)	0-1, 0-2, 0-5	20.50	20.50	20.50	22.00	19.00	19.00	21.00	22.50	22.00	23.50	26.50	15.50	15.50	16.00	16.00	16.50
Microammeter DC	0-20	–	–	30.00	31.00		22.00	24.00	25.50	25.00	26.50	38.50	18.00	18.00	18.50	18.50	19.00
	0-30	–	–	27.00	31.00		22.00	24.00	25.50	25.00	26.50	38.50	18.00	18.00	18.50	18.50	19.00
	0-50	27.00	25.65	27.00	31.00	18.00	18.00	20.00	21.50	21.00	22.50	34.50	17.00	17.00	17.50	17.50	18.00
	0-100	23.40	22.85	23.50	24.50	16.00	16.00	18.00	19.50	19.00	20.50	30.50	15.00	15.00	15.50	15.50	16.00
	0-200	19.55	19.00	19.50	20.50	15.00	15.00	17.00	18.50	18.00	19.50	27.50	14.00	14.00	14.50	14.50	15.00
	0-500	18.15	17.60	18.15	19.25	14.00	14.00	16.00	17.50	17.00	18.50	26.50	13.00	13.00	13.50	13.50	14.00
	50-0-50	23.40	22.85	23.50	24.50	16.00	16.00	18.00	19.50	19.00	20.50	30.50	15.00	15.00	15.50	15.50	16.00
	100-0-100	19.55	19.00	19.50	20.50	15.00	15.00	17.00	18.50	18.00	19.50	27.50	14.00	14.00	14.50	14.50	15.00
	500-0-500	16.50	16.50	16.50	17.60	13.00	13.00	15.00	16.50	16.00	17.50	20.50	12.00	12.00	13.50	13.50	13.00
Microammeter (Rectifier Type)	0-100	24.00	24.00	24.00	28.00	20.00	20.00	22.00	23.50	23.00	24.50	40.50	16.50	16.50	17.00	17.00	17.50
	0-200	22.00	22.00	22.00	22.85	19.00	19.00	21.00	22.50	22.00	23.50	30.50	15.50	15.50	16.00	16.00	16.50
	0-250	21.50	21.50	21.50	22.60	19.00	19.00	21.00	22.50	22.00	23.50	30.50	15.50	15.50	16.00	16.00	16.50
	0-500	21.00	21.00	21.00	22.00	19.00	19.00	21.00	22.50	22.00	23.50	29.50	14.50	14.50	15.00	15.00	15.50
Null Indicator	A, B, C	Not Avail.	28.85	31.35	33.60	21.00	21.00	23.00	24.50	24.00	25.50	28.50					
VU Meter	A, B	29.15	28.60	29.15	30.25	22.00	22.00	24.00	25.50	25.00	26.50	29.50	18.50	18.50	19.00	19.00	19.50

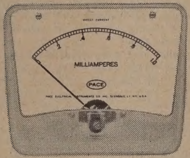
PACE

THE METER OF PRECISION

PANEL INSTRUMENTS FOR EQUIPMENT MANUFACTURERS

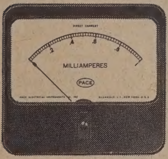


Model 55. . . .5¼″
Rectangular
Phenolic

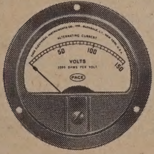


Model 25-LP. .2½″
Model 35-LP. . . .3″
Model 45-LP. .4⅞″
Rectangular
Acrylic

Model 45-L. . .4⅝″
Rectangular
Phenolic

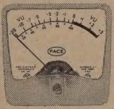


Model 42-W. . .4¼″
Rectangular
Phenolic

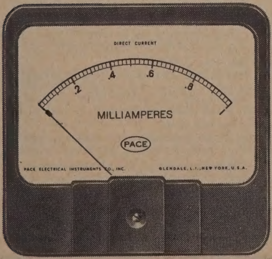


Model 25-R. . .2½″
Model 35-R. . .3½″
Round
Phenolic

Model 25-L. . .2⅜″
Model 35-L. . . . .3″
Rectangular
Phenolic



VU Meters
Available with
Standard A
or B Scales



Model 75. . . . . .7″
Rectangular
Phenolic

PACE Electrical Instruments Co., Inc. is the meter manufacturing division of

PRECISION Apparatus Company Inc.

Behind the carefully integrated design and high quality performance of Pace Meters is over a quarter-of-a-century of experience in the manufacturing of fine electronic instruments.

SPECIAL PACE FEATURES

- Full Double-Bridge D'Arsonval Movement
- Precision Die-Cast Movement Frame
- High Density Sintered Iron Pole Pieces
- Coined, Soft-Iron Pole Faces
- High-Flux Alnico Magnets
- Optimum Torque To Mass Ratio

These features, coupled with strict quality control, result in a line of consistently dependable meters with superior shock and vibration characteristics, high accuracy and long, trouble-free life.

PACE meters are also supplied in production quantities to meet the custom requirements of Original Equipment Manufacturers.

PACE stock meters are available at leading electronic parts distributors.

	Ranges	Approx. Resistance (ohms)	Models 25-L, 25-R, 25-LP*	Models 35-L, 35-R, 35-LP*	Models 42-W, 45-L, 45-LP*	Model 55	Model 75
D.C. MICROAMMETERS	0-50	2000	$14.40	$14.90	$16.00	$17.60	—
	0-100	1000	12.50	13.00	14.10	15.50	—
	0-200	500	11.10	11.70	12.80	14.10	$20.50
	0-500	200	10.25	10.75	12.00	13.20	18.50
D.C. MILLIAMMETERS	0-1	100	$ 9.40	$10.00	$11.10	$12.20	$17.00
	0-2.5	40	9.40	10.00	11.10	12.20	17.00
	0-5	20	9.40	10.00	11.10	12.20	17.00
	0-10	10	9.40	10.00	11.10	12.20	17.00
	0-50	2.0	9.80	10.40	11.50	12.70	17.75
	0-100	1.0	9.80	10.40	11.50	12.70	17.75
	0-250	.4	9.80	10.40	11.50	12.70	17.75
	0-500	.2	9.80	10.40	11.50	12.70	17.75
D.C. AMMETERS	0-1	.100	$ 9.80	$10.40	$11.50	$12.70	$17.75
	0-2.5	.040	9.80	10.40	11.50	12.70	17.75
	0-5	.020	10.30	10.90	12.00	13.20	18.25
	0-10	.010	10.30	10.90	12.00	13.20	18.25
D.C. VOLTMETERS	0-3	1000 ohms per volt	$10.20	$10.70	$11.80	$13.00	$18.00
	0-10		10.20	10.70	11.80	13.00	18.00
	0-15		10.20	10.70	11.80	13.00	18.00
	0-50		10.20	10.70	11.80	13.00	18.00
	0-150		10.20	10.70	11.80	13.00	18.00
	0-250		10.20	10.70	11.80	13.00	18.00
	0-500		10.70	11.30	12.40	13.60	18.75
A.C. VOLTMETERS	0-3	1000 ohms per volt	$13.30	$14.75	$16.50	$18.20	$23.50
	0-10		13.30	14.75	16.50	18.20	23.50
	0-15		13.30	14.75	16.50	18.20	23.50
	0-50		13.30	14.75	16.50	18.20	23.50
	0-150		13.30	14.75	16.50	18.20	23.50
	0-250		13.30	14.75	16.50	18.20	23.50
	0-500		13.80	15.25	17.00	18.80	24.25
VU METERS A or B scales	−20 to +3	3900	$17.30	$18.75	$20.50	—	—

All prices are subject to change without notice.

*Add 50 cents to prices indicated for "BLACK" acrylic cases Models 25-LPB, 35-LPB and 45-LPB. **PACE** meters are calibrated for use on non-magnetic panels. If meters are required for use on magnetic panels, state panel material and thickness when ordering and add $1.50 to prices indicated.

Write for complete descriptive catalog to:
PACE Electrical Instruments Co., Inc. Glendale 27, L. I., N. Y.

Net

PRECISION APPARATUS COMPANY, INC.

MODEL 120

LABORATORY-TYPE MIRRORED-SCALE V-O-M

The most comprehensive V-O-M ever offered within its price range. It features 61 ranges and functions specifically designed for industry, lab., maintenance shop and technical school.

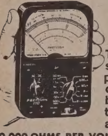
20,000 OHMS-PER-VOLT DC 5,000 OHMS-PER-VOLT AC
61 RANGES
EXTRA-LOW RESISTANCE RANGE 2 ohms at center scale
EXTRA-LOW VOLTAGE RANGES 0.3 V full scale DC, 1.2 V full scale AC
EXTENDED LOW-CURRENT RANGE 60 µA first DC range
EXTRA-LARGE 5½″ mirrored-scale **PACE METER**
DC POLARITY REVERSING SWITCH
WIDE FREQUENCY RESPONSE AC AND DB RANGES
"TRANSIT" POSITION ON RANGE SELECTOR
9 DC VOLTAGE RANGES 20,000 ohms-per-volt (neg. and pos. reading) 0-0.3-1.2-3-12-60-300-600-1200-6000 V.
8 AC AND OUTPUT VOLTAGE RANGES 5000 ohms-per-volt (wide frequency response); built-in 600 V blocking capacitor; 0-1.2-3-12-60-300-600-1200-6000 volts
7 DC CURRENT RANGES (neg. and pos. reading) 0-60-300 µamps; 0-1.2-12-120-600 Ma; 0-12 amps
5 RESISTANCE RANGES (self-contained batteries) 0-200-2000-200,000 ohms; 0-2-20 megohms
8 WIDE-FREQUENCY DECIBEL RANGES—20 to +77 Db
1% MULTIPLIERS AND SHUNTS
DIMENSIONS 5⅜″ x 7″ x 3⅛″
NET PRICE **$44.95**

MODEL 120M HIGH-ACCURACY

LABORATORY-TYPE MIRRORED-SCALE V-O-M

Designed for industrial and lab. applications. It incorporates every feature and all of the wide-spread ranges of Model 120 PLUS the features listed below.

20,000 OHMS-PER-VOLT DC 5,000 OHMS-PER-VOLT AC
½% ACCURACY MULTIPLIERS AND SHUNTS
1% ACCURACY MIRRORED-SCALE PACE METER
HIGH-ACCURACY MULTIPLIERS AND SHUNTS AND METER ±1½% accuracy DC, ±3% AC
ALL OTHER PHYSICAL AND ELECTRICAL SPECIFICATIONS are identical with Model 120 described above·
DIMENSIONS 5⅜″ x 7″ x 3⅛″
NET PRICE **$55.95**

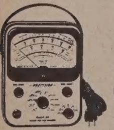


MODEL 110

POCKET-SIZE HIGH-SENSITIVITY V-O-M

This rugged, pocket-size test set features full-size instrument performance and readability, incorporating an unmatched combination of ranges and functions for use in industrial and service applications.

20,000 OHMS-PER-VOLT DC 5,000 OHMS-PER-VOLT AC
7 DC VOLTAGE RANGES (20,000 ohms-per-volt) 0-0.3-1.5-6-30-150-600-3000 volts
6 AC VOLTAGE RANGES (5,000 ohms-per-volt) 0-1.5-6-30-150-600-3000 volts
5 DC CURRENT RANGES 0-60-600 µA; 0-6-60-600 Ma
3 RESISTANCE RANGES (self-contained batteries) 0-2000-200,000 ohms; 0-20 megohms
6 DECIBEL RANGES from −20 to +71 Db
RUGGED 3½ INCH WIDE-VISION PACE METER
1% MULTIPLIERS AND SHUNTS
DIMENSIONS: 1-11/16″ x 3½″ x 5⅜″
NET PRICE **$35.95**



MODEL 68

METAL-CASED V-T-V-M WITH PEAK-TO-PEAK VOLTAGE RANGES

A wide-range AC-operated general-purpose electronic multi-range tester especially developed to meet the demand for a comprehensive V-T-V-M at a modest price. Designed for industrial applications, maintenance, general electronic service and technical schools. Complete with 3-way Coaxial DC-AC Probe and internal ohmmeter battery.

5 PLUS (+) AND 5 MINUS (−) DC VOLTAGES (left-hand zero) 13⅓ megohms input resistance, 0-3-12-60-300-1200 volts DC
5 WIDE-SPREAD RESISTANCE RANGES 0-1000-100,000 ohms; 0-1-100-1000 megohms
5 HIGH-IMPEDANCE R.M.S. AC VOLTAGE RANGES 0-3-12-60-300-1200 volts R.M.S.
5 PEAK-TO-PEAK VOLTAGE RANGES direct reading 0-8-32-160-800-3200 volts P-P
5 STABILIZED ZERO-CENTER REFERENCE RANGES specifically provided for simplified FM discriminator balancing, voltage polarity determination, etc.
4 HIGH-FREQUENCY RF PROBE RANGES (available through use of accessory Crystal Probe, Model RF-12) 0-3-12-30-120 RF volts (R.M.S.)
ONE COAXIAL 3-WAY VTVM PROBE
1% MULTIPLIERS AND SHUNTS
RUGGED 5½″ WIDE-VISION PACE METER
DIMENSIONS 5⅞″ x 7¾″ x 3½″
NET PRICE **$64.95**

MODEL 88

HIGH-IMPEDANCE LABORATORY-TYPE VACUUM TUBE VOLTMETER with PEAK-TO-PEAK VOLTAGE RANGES TO 3200 VOLTS

Specially-engineered peak-to-peak voltage ranges afford a new high in peak-to-peak reading accuracy of pulsed waveforms as are encountered in industrial control equipment, TV and similar applications.

MODEL 88, complete with 3-way Coaxial VTVM Probe, detachable AC line cord

7 FUNCTIONS 40 RANGES
6 TRUE ZERO-CENTER DC VOLTAGE RANGES (26⅔ megohms input) 0 to ±1.2, ±6, ±12, ±60, ±300, ±1200 volts DC
5 OHMMETER RANGES 0-1000-10,000 ohms, 0-1-100-1000 megohms
6 MINUS (−) AND 6 PLUS (+) DC VOLTAGE RANGES (left-hand zero) 13⅓ megohms input resistance 0-1.2-6-12-60-300-1200 volts
6 HIGH-IMPEDANCE R.M.S. AC VOLTAGE RANGES 0-1.2-6-12-60-300-1200 volts R.M.S.
6 HIGH-IMPEDANCE P-P AC VOLTAGE RANGES 0-3.2-16-32-160-800-3200 volts P-P
5 HIGH-FREQUENCY PROBE RANGES. Input approximately 5 mmf, 0-1.2-6-12-60-300 volts R.M.S. (Requires accessory High Frequency Vacuum Tube Probe, Model RF-10A)
1 UNIVERSAL COAXIAL DC-AC VTVM PROBE
5½″ WIDE-VISION PACE METER
1% MULTIPLIERS AND SHUNTS
DIMENSIONS 5⅜″ x 7″ x 3⅛″
NET PRICE **$84.95**

DECADE RESISTORS

Designed for use as lab. standards, and general industrial laboratory use.

1203

1204

1205

MODEL 1203 **999 ohms in steps of 1 ohm (3 dials), size 11¾″ x 4″ x 5¼″.**
NET PRICE.................... **$74.95**

MODEL 1204 **9,999 ohms, in steps of 1 ohm (4 dials), size 14¾″ x 4″ x 5¼″.**
NET PRICE.................... **$89.95**

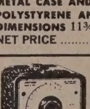
MODEL 1205 **99,999 ohms in steps of 1 ohm (5 dials), size 11¾″ x 7¼″ x 5¼″.**
NET PRICE.................. **$109.95**

ACCURACY WITHIN ±0.1% except 1-ohm units which are adjusted to ±0.15%
EXCELLENT STABILITY achieved through use of selected alloys, ceramic forms and careful high-temperature aging
TEMPERATURE COEFFICIENT OF RESISTANCE less than ±0.002% per degree Centigrade; minimum residual reactances
TERMINALS Insulated Jack-top Posts

DECADE CAPACITOR MODEL 1303

For lab. and industrial test purposes where a high degree of stability and wide range are important.

CAPACITANCE RANGE .001 mf to 1.110 mf
THREE DECADE UNITS in steps of .001, .01 and 0.1 mf
ALL UNITS ACCURATE WITHIN ±1%
MAXIMUM VOLTAGE 400 V peak or DC
TERMINALS Jack-top Binding Posts
METAL CASE AND PANEL for maximum shielding
POLYSTYRENE AND SILVERED MICA CAPACITORS
DIMENSIONS 11¾″ x 4″ x 5¼″
NET PRICE **$89.95**



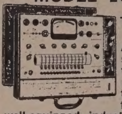
MODEL E-310

WIDE RANGE SINE AND SQUARE WAVE GENERATOR

The only generator on the market today to offer both sine and square wave coverage from 5 cps to 600 Kc at a moderate price.

EXTRA-WIDE FREQUENCY RANGE sine *and* square waves from 5 cycles per second to 600 Kc in 5 decimal bands; ±2% reading accuracy (or 1 cycle)
OUTPUT CHARACTERISTICS within ±1 Db over each band and within ±1 Db band-to-band
DISTORTION less than 1% from 5 cps to 600 Kc
LEVEL: Sine wave, 10 volts R.M.S. into 600 ohms; Square wave, 10 volts P-P, 0.2 µsec. rise time; 4-position step attenuator and continuous amplitude control
METERING TERMINALS at front of panel for convenient monitoring of output level via use of external VTVM, VOM or VU meter.
6″ DIAMETER TUNING DIAL with 12-1 drive ratio; provides scale lengths of 85″ over the 5 bands
DIMENSIONS 9″ x 11½″ x 11¼″
NET PRICE **$179.95**

MODEL 10-60 *Electronamic**



TUBE AND TRANSISTOR TESTER with ULTRA-SENSITIVE DIRECT-READING GAS TEST

An advanced, industrial-type instrument engineered to meet the needs of modern electronic production and maintenance testing. This instrument will find an important place in the well-equipped industrial laboratory, service shop, and technical school, offering an unparalleled combination of functions at a remarkably low price.

MODEL 10-60, complete with Transistor Adapter Cable and detailed technical manual.

TESTS

1. **VACUUM TUBES**
2. **LOW AND HIGH POWER TRANSISTORS**
3. **CRYSTAL DIODES**
4. **VOLTAGE REGULATOR TUBES**
5. **TV PICTURE TUBES**

TUBE TESTING:
POSITIVE, ALL-INCLUSIVE TEST OF TUBE PERFORMANCE not limited to mutual conductance alone; effectively tests tubes over complete path of operation, not at just one arbitrary point
ULTRA-SENSITIVE GAS TEST CIRCUIT detects gas content on PACE 50 µA 5½″ meter
FREE-POINT LEVER ELEMENT SELECTOR SYSTEM affords utmost protection against obsolescence
DUAL SHORT-CHECK SENSITIVITY special low-voltage short-check circuit
BUILT-IN PIN STRAIGHTENERS for 7- and 9-pin types
TESTS TUBES for regulation, at manufacturers' specified current limits
PROVIDES FOR TESTING FOREIGN-TYPE TUBES
5-WINDOW GEARED ROLL CHART provides the ultimate in space for data listing for all tube and transistor test settings

TV PICTURE TUBE TESTING:
SPECIALLY-ENGINEERED CIRCUIT provides picture-producing beam current test (requires optional accessory Model PTA Picture Tube Cable Adapter and Model PAA 110° Socket Adapter)

TRANSISTOR AND CRYSTAL DIODE TESTING
WIDESPREAD Icbo **RANGES COVER ALL TYPES OF TRANSISTORS** low, medium and high power
WIDE RANGE OF COLLECTOR POTENTIALS 0.5 volts DC to 160 volts DC in 22 steps
DIRECT READING BETA RANGES circuit provides for separate injection currents for low and high-power types
CRYSTAL DIODE TESTS 22 DC voltages for forward and reverse current tests
LEVER SELECTOR PLUS UNIVERSAL SEMI-CONDUCTOR ADAPTER provides accommodations for all present and future semi-conductor releases

GENERAL INFORMATION:
TUBE AND TRANSISTOR TEST DATA SUBSCRIPTION SERVICE FREE to registered owners for first year; thereafter at a nominal cost
DIMENSIONS 20″ x 15″ x 7″
NET PRICE **$215.00**

MODEL 10-40

Electronamic TUBE TESTER with DIRECT-READING GAS TEST

A superbly-designed industrial-type instrument engineered to provide positive, all-inclusive testing of tube performance . . . not limited to mutual conductance alone.

TESTS

1. **VACUUM TUBES**
2. **VOLTAGE REGULATOR TUBES**
3. **TV PICTURE TUBES**

TUBE TESTING:
POSITIVE, ALL-INCLUSIVE TEST OF TUBE PERFORMANCE not limited to mutual conductance alone; effectively tests tubes over complete path of operation
ULTRA-SENSITIVE GAS TEST CIRCUIT directly detects troublesome gas content via built-in V-T-V-M
TESTS ALL MODERN TUBE TYPES INCLUDING SUB-MINIATURES
FREE-POINT LEVER ELEMENT SELECTOR SYSTEM affords utmost protection against obsolescence
DUAL SHORT-CHECK SENSITIVITY special low-voltage short-check circuit
BUILT-IN PIN STRAIGHTENERS for 7- and 9-pin types
TESTS TUBES for regulation, at manufacturers' specified current limits
PROVIDES FOR TESTING FOREIGN-TYPE TUBES
3-WINDOW GEARED ROLL CHART provides the ultimate in space for data listing for all tube and test settings

TV PICTURE TUBE TESTING
SPECIALLY-ENGINEERED CIRCUIT provides for picture-producing beam current test (requires optional accessory Model PTA Picture Tube Cable Adapter and Model PAA 110° Socket Adapter)

GENERAL INFORMATION
TUBE TEST DATA SUBSCRIPTION SERVICE FREE to registered owners for first year; thereafter at a nominal cost
DIMENSIONS 20″ x 15″ x 7″
NET PRICE **$159.95**

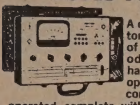
**Reg. U.S. Patent Office*

ALL *PRECISION* TEST EQUIPMENT IS GUARANTEED FOR ONE FULL YEAR

Net

ELECTRONIC TEST EQUIPMENT

MODEL 960 TRANSISTOR AND CRYSTAL DIODE TESTER



A comprehensive semi-conductor test set for reliable testing of transistors and crystal diodes. Operating parameters have been engineered in co-operation with leading semi-conductor manufacturers. Line operated, complete with Transistor Test Cable.

TESTS

1. **LOW-POWER TRANSISTORS**
2. **MEDIUM-POWER TRANSISTORS**
3. **POWER TRANSISTORS**
4. **CRYSTAL DIODES**

DIRECT Icbo **READINGS**

FIVE Icbo **RANGES** cover all types of transistors—low, medium and high power; n-p-n and p-n-p types

WIDE RANGE OF COLLECTOR POTENTIALS 0.5 volts DC to 100 volts DC in 17 steps

DIRECT-READING BETA RANGES. Circuit provides for 5 injection currents for low, medium and power types

CRYSTAL DIODE TESTS. 17 DC voltages for reverse current tests; also provides for forward tests

WIDE-ANGLE 5½" 100 MICROAMP PACE METER

TRANSISTOR TEST SETTINGS listed on roller chart

PATCHCORD ELEMENT SELECTOR SYSTEM AND UNIVERSAL SEMI-CONDUCTOR ADAPTER provide for accommodation of future semi-conductor releases

HIGH-SPEED GEARED ROLL CHART

TRANSISTOR AND CRYSTAL DIODE TEST DATA SUBSCRIPTION SERVICE FREE to registered owners for first year; thereafter at a nominal cost

DIMENSIONS 18" x 10½" x 6¼"

NET PRICE **$99.95**

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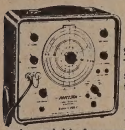
MODEL E-200C

MULTI-BAND SIGNAL-MARKING GENERATOR



The famous general purpose RF signal generator whose exceptional stability and accuracy have made it the #1 choice of technicians and schools everywhere. Also serves as an accurate variable-frequency Marker Generator.
MODEL E-200C, complete with output cable.

FREQUENCY COVERAGE 88 Kc to 440 Mc (to 110 Mc on fundamental)

6½" BRUSHED ALUMINUM DIAL direct reading in 10 bands up to 440 Mc; 1% accuracy on all bands

0-1000 POINT VERNIER SCALE

THE CIRCUIT 6AU6 in stable E.C.O. circuit; 6U8 audio oscillator-modulator; 5Y3 full wave rectifier

400-CYCLE SINE WAVE AUDIO OSCILLATOR with over 50 volts output, fully adjustable at front panel

DUAL-SHIELDED RF ATTENUATORS

COMPARTMENT SHIELDING of vital components; AC line is RF filtered

SHIELDED COAXIAL OUTPUT CABLE AND (LO-HI) CABLE CONNECTORS

FOUR TYPES OF SIGNALS. Unmodulated RF, 400 cps Modulated RF, Externally-modulated RF, 400 cps Audio Output

DIRECT-READING VARIABLE MODULATION CONTROL 0-100%; triples signal utility as against obsolete fixed or stepped modulation of only 30% or 40%

BUILT-IN AVC-AGC BIAS SUBSTITUTION

EACH INSTRUMENT INDIVIDUALLY HAND CALIBRATED

DIMENSIONS 11½" x 13" x 6⅝"

NET PRICE **$99.95**

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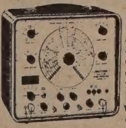
MODEL E-400

SWEEP SIGNAL GENERATOR



Application-engineered for FM and TV visual alignment procedures. Unparalleled standard of performance and value for the efficient TV and FM service lab and test bench. Complete with 2 megacycle and 4.5 megacycle crystals, cables, leads.

DIRECT FREQUENCY READING 3 to 900 Mc in 8 bands; harmonically calibrated from 390 to 990 Mc

ALL VHF CHANNELS DIRECTLY CALIBRATED on tuning dial (channels 2 thru 13)

6½" SATIN BRUSHED-ALUMINUM TUNING DIAL

INTERNAL RETRACE BLANKING CIRCUIT eliminates dual traces

NARROW AND WIDE-BAND ZERO-CENTER SWEEP CIRCUIT 0-1 Mc and 0-15 Mc

DUAL CONTINUOUS RF ATTENUATORS triple shielded

WIDE-RANGE PHASING CONTROL

MULTIPLE CRYSTAL MARKER-CALIBRATOR built-in; 0.02% accuracy; 4.5 Mc and 2 Mc crystals supplied

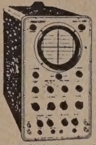
TERMINATED RG/U TYPE COAXIAL OUTPUT CABLE

DIMENSIONS 11½" x 13" x 6⅝"

NET PRICE **$175.00**

MODEL ES-550B

5-MEGACYCLE HIGH-SENSITIVITY 5" OSCILLOSCOPE



The complete answer to laboratory, industrial and electronic technicians' requirements for a rugged, dependable instrument for broadest coverage of oscilloscope applications including color TV. Provides an unparalleled standard of extra-high sensitivity with full 5-megacycle wide-frequency response.

RESPONSE, 10 CYCLES TO 5 MEGACYCLES

PUSH-PULL WIDE-BAND VERTICAL AMPLIFIER
10 MV (.01 volts) per inch sensitivity
Cathode-follower Input: 2 megohms and 22 mmf
Response 1 Db from 10 cps to 3.5 Mc; 3 Db at 5 Mc

3-POSITION VERTICAL STEP ATTENUATOR frequency-compensated; X100, X10, X1

DIRECT-READING PEAK-TO-PEAK VOLTAGE CALIBRATOR permits use of oscilloscope as dependable high-impedance Vacuum Tube Voltmeter

VERTICAL PATTERN REVERSING SWITCH

PUSH-PULL WIDE-RANGE HORIZONTAL AMPLIFIER
100 MV (0.1 volts) per inch sensitivity
Cathode-follower Input: 2 megohms and 22 mmf
Response 1 Db from 10 cps to 1.0 Mc; 3 Db at 2 Mc

3-POSITION HORIZONTAL STEP ATTENUATOR frequency compensated; X100, X10, X1

LINEAR MULTI-VIBRATOR SWEEP CIRCUIT 10 cycles to 100 Kc; automatically synchronized 30 cycles and 7875 cycles sweep for TV sync-pulse analysis; amplified sweep retrace blanking

AMPLIFIED AUTO-SYNC CIRCUIT

FOUR-WAY SYNC SELECTION
Internal negative, Internal Positive, External & Line

3000-VOLT INTENSIFIER ANODE POTENTIAL assures utmost visibility of oscilloscope traces for pulsed waveforms and high frequencies

"Z" AXIS INPUT TERMINAL for blanking, timing and marking

BUILT-IN 60 CPS PHASING AND BLANKING CONTROLS

ALL 4 DEFLECTION PLATES READILY AVAILABLE

HIGH-CONTRAST FILTER-TYPE ILLUMINATED GRATICULE

CAMERA MOUNT BEZEL

DIMENSIONS 8¼" x 14½" x 18½"

NET PRICE **$249.95**

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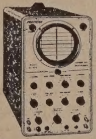
MODEL ES-525

GENERAL PURPOSE 5" OSCILLOSCOPE



This highly-stable general-purpose oscilloscope affords the maximum in performance and operation flexibility at moderate cost.

PUSH-PULL VERTICAL AMPLIFIER
Response: 3 Db from 10 cps to 500 Kc;
6 Db to 700 Kc
20 MV (.020 V) R.M.S. per inch sensitivity
Input: 3.3 Megohms and 40 mmf

3-POSITION VERTICAL STEP ATTENUATOR frequency compensated X100, X10, X1

DIRECT-READING BUILT-IN P-P VOLTAGE CALIBRATOR

EXCELLENT SQUARE WAVE RESPONSE 20 cps to 50 Kc

PUSH-PULL HORIZONTAL AMPLIFIER
Response: 3 Db from 10 cps to 150 Kc (at full gain)
60 MV (.060 V) R.M.S. per inch sensitivity
Input: 2.2 Megohms, 30 mmf

INTERNAL LINEAR SWEEP 10 cps to 100 Kc as low as 2 cps with external capacitor

SYNCHRONIZATION Neg, Pos, External and Line

BUILT-IN SINE SWEEP PHASING CONTROL

"Z" AXIS MODULATION INPUT TERMINAL

DEFLECTION PLATES AT REAR

AUDIBLE MONITORING FACILITIES via tip jacks

ILLUMINATED GRATICULE (VARIABLE INTENSITY)

CAMERA MOUNT BEZEL

DIMENSIONS 8¼" x 14½" x 18½"

NET PRICE **$179.95**

• •

MODEL SP-5

OSCILLOSCOPE TEST PROBE SET

Important accessories for application of an oscilloscope to sensitive electronic circuits and to analysis of complex waveforms. For use with all previous and current *PRECISION* Oscilloscopes.

SET INCLUDES:

HIGH-IMPEDANCE/LOW-CAPACITY PROBE —10 to 1 divider type

CRYSTAL DEMODULATING PROBE

RESISTIVE ISOLATING PROBE

DIRECT PROBE (shielded)—plus Master Cable

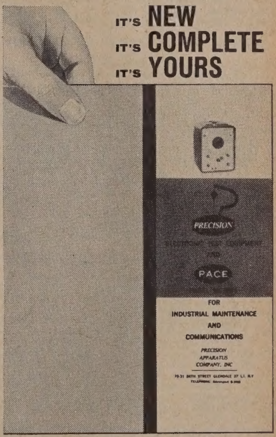
NET PRICE **$29.95**

ALL *PRECISION* TEST EQUIPMENT IS GUARANTEED FOR ONE FULL YEAR

PRECISION

ELECTRONIC TEST EQUIPMENT for INDUSTRIAL MAINTENANCE and COMMUNICATIONS

PRECISION APPARATUS CO INC.
(A SUBSIDIARY OF PACOTRONICS. INC.)
GLENDALE 27, L. I., N. Y.



*It's the 1960 PRECISION/*PACE *Catalog of Electronic Test Equipment for* **INDUSTRY • COMMUNICATIONS • SERVICE •**

providing detailed specifications of the PRECISION instruments on these pages

Plus

- **MODEL 660,** *Tube and Transistor Checker*
- **MODEL 640,** *Tube Checker*
- **MODEL E-420,** *Dot and Bar Generator*
- **MODEL E-440,** *Color Bar Generator*
- **MODEL 100,** *V-O-M*
- **MODEL 98,** *VTVM*
- **MODEL SS-10,** *Series String Filament Checker*

Write for your copy today!

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

PACO KITS

a division of PACOTRONICS, Inc., Glendale 27, L. I., N. Y.

THE FINEST ELECTRONIC EQUIPMENT IN KIT FORM ALSO AVAILABLE FACTORY WIRED, TESTED AND CALIBRATED

MODEL B-10 BATTERY ELIMINATOR AND CHARGER KIT

With Built-in Low-Ripple L/C Filter

Meets the rigid requirements of modern, transistorized auto radios and similar 6-volt and 12-volt apparatus. **Output Volts:** 0-8 and 0-16 v. DC continuously variable; special low ripple 6 v. and 12 v. **Output Current:** 10 amps continuous, 20 amps intermittent at 6 v. DC; 6 amps continuous, 12 amps intermittent at 12 v. DC; 5 amps continuous on low-ripple output (0.3% max. ripple at special terminal at full load). **Size:** 7" x 11½" x 6⅝"; in heavy-duty louvered steel cabinet. Shpg. Wt., 21 lbs.

Paco Model B-10 Kit—With detailed assembly-operating manual. Net Each. . **$41⁹⁵**

Paco Model B-10W—Factory wired. Net. **$49.95**

MODEL C-20 RESISTANCE-CAPACITY-RATIO BRIDGE KIT

Incorporates a versatile AC bridge circuit which measures virtually any unknown resistance or capacitance. **Capacitance Ranges:** Four, 10 μμf to 2000 μf. **Power Factor Range:** Direct reading, 0 to 60%; handles capacitors 0.1 to 2000 μf. **Resistance:** Four ranges, 0.5 ohm to 200 megs. **Capacitor Leakage:** Sensitive circuit checks all types of capacitors at rated voltages, up to 500 v. DC. **Ratio Tests:** Permits rapid determination of transformer turns ratio and reactance. In ripple-finished steel cabinet. **Size:** 7" x 11½" x 5". Shipping Weight, 9 lbs.

Paco Model C-20 Kit—With detailed assembly-operating manual. Net Each. . **$21⁹⁵**

Paco Model C-20W—Factory wired. Net. **$32.95**

MODEL G-30 RF SIGNAL GENERATOR KIT

Designed for easiest possible assembly, wiring and calibration without sacrificing performance. **Frequency Range:** 160 kc to 240 mc direct reading, in 8 bands (to 120 mc on fundamental frequencies). **Calibration Scale:** 0-100 linear vernier permits hand calibration procedures and convenient spotting of special frequencies. **High RF Output:** In excess of 100,000 μv. **Audio Output:** 400 cycle up to approx. 15 volts; permits direct testing of audio amplifiers including power output stages. Handsome, ripple-finished steel cabinet. **Size:** 7" x 11½" x 5". Shipping Weight, 9 lbs.

Paco Model G-30 Kit—With detailed assembly-calibration-operating manual. Net Each. **$29⁹⁵**

Paco Model G-30W—Factory wired. Net. **$42.95**

Paco Model G-30PC—Same as Model G-30 but with pre-calibrated front end. Net Each. **$37.95**

MODEL M-40 HIGH SENSITIVITY V-O-M KIT

20,000 Ohms/Volt DC; 10,000 Ohms/Volt AC

More functions, features and extended ranges than usually found in similar V-O-M's. **DC Volts:** Seven ranges, 1.5 to 6,000 volts. **AC Volts:** Seven ranges, 3 to 12,000 volts. **Resistance:** Three wide-spread ranges to 20 megs; self-contained batteries. **DC Current:** 0-60 μa; 0-1.5-15-150 ma; 0-1.5-15 amps. **AC Output Volts:** Same ranges and sensitivity as AC voltage ranges listed above. Molded phenolic case. **Size:** 5¼" x 6⅞" x 2⅜". Shpg. Wt., 4 lbs.

Paco Model M-40 Kit—With detailed assembly and operating manual. Net. . . . **$31⁹⁵**

Paco Model M-40W—Factory wired. Net **$37.95**

Paco Model AM-1 High Voltage Safety Probe—Factory assembled and wired. Shpg. Wt., 1 lb. Net Each. **$5.95**

MODEL S-50 5" OSCILLOSCOPE KIT

High sensitivity, extended 2 mc bandwidth and push-pull vertical and horizontal deflection amplifiers (with cathode follower input). **Vertical Amplifier:** Frequency response, ±3 db, 5 cps to 1.2 mc; ±6 db to 2 mc. Sensitivity, 90 mv rms/inch. Vertical input attenuator has 3 steps (×100, ×10, ×1). **Horizontal Amplifier:** Frequency response, ±3 db to 450 kc; ±6 db to 700 kc. Sensitivity, 250 mv rms/inch. **Voltage Calibrator:** Built-in peak-to-peak type. **Internal Linear Sweep:** 20 cps to 150 kc in four overlapping ranges. **Sync Selector:** Multiple switch for internal, external and line. Louvered steel cabinet. **Size:** 13⅜" x 8¾" x 17¼". Shipping Weight, 24 lbs.

Paco Model S-50 Kit—With all tubes (including CRT) and manual. Net Each. **$49⁹⁵**

Paco Model S-50W—Factory wired. Net. **$85.95**

MODEL S-55 WIDE BAND OSCILLOSCOPE KIT

Ideal for color TV, this deluxe laboratory type instrument covers the entire range between DC and 5 mc. **Vertical Channel:** 3-stage, push-pull, balanced DC amplifier. Sensitivity, 70 mv/inch, DC; 25 mv rms/inch AC. Frequency response, ±3 db to 4.5 mc, ±5 db at 5 mc, DC; ±3 db, 1 cps to 4.5 mc, ±5 db at 5 mc, AC. Rise time better than .08 μsec. **Horizontal Channel:** Push-pull output amplifier has 0.6 v. rms/inch sensitivity. Frequency response, ±3 db, 1 cps to 400 kc. **Linear Time Base:** 10 cps to 100 kc, TV-V and TV-H, plus provisions for external capacitor sweep down to 1 cps. **Other Features:** Automatic "Positive" and "Negative" synchronization; illuminated screen graticule; adjustable light control. Louvered steel cabinet. **Size:** 13⅜" x 8¾" x 17¼". Shipping Weight, 30 lbs.

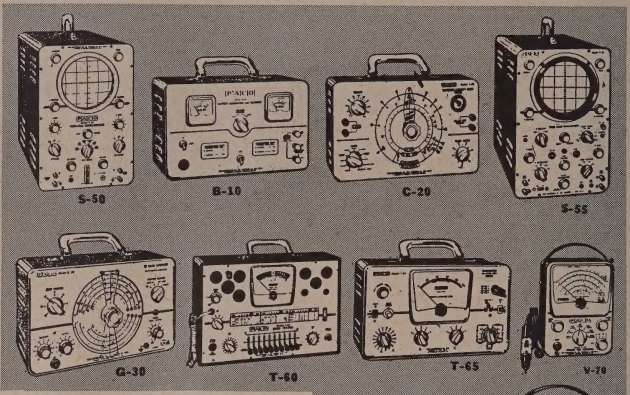
Paco Model S-55 Kit—With all tubes (including CRT) and manual. Net Each. **$89⁹⁵**

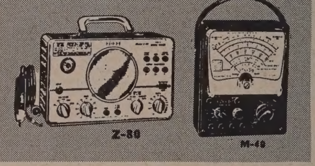
Paco Model S-55W—Factory wired. Net Each. **$144.95**

OSCILLOSCOPE PROBE SET

For use with Models S-50 and S-55 Oscilloscopes. Includes one 10/1 low capacity probe; a crystal demodulator probe; and, a shielded direct probe. Factory assembled and wired; complete with detailed operating manual. Shpg. Wt., 2 lbs.

Paco Model AS-1—Net Each. **$15⁹⁵**





MODEL T-60 TUBE CHECKER KIT

Modern, lever operated portable tube checker. Accommodates all series string and other up-to-date tubes. Tests all button 9-pin tubes, miniature 7-pin types, loctals, single-ended (TV and FM amplifiers), regular octals, etc. Illuminated 3-window, high speed roller tube chart. Subscription system is available to keep test data automatically up to date. Visible filament continuity tests. Filament voltages from ¾ to 110 volts. Indicates open filaments. Pilot light tests for all miniature screw-base and bayonet types. Rugged, handsome cabinet. **Size:** 10½" x 15¼" x 4¾". Shpg. Wt., 11 lbs.

Paco Model T-60 Kit—With manual. Net Each. **$39⁹⁵**

Paco Model T-60W—Factory wired. Net. **$57.95**

Paco Model AT-1 CRT Test Cable—Factory wired and assembled. Net Each. **$4.95**

Paco Model AT-2 110° CRT Adapter—Net **4.95**

Paco Model AT-3 Cabinet Cover—Net Ea. **4.95**

MODEL T-65 TRANSISTOR AND CRYSTAL DIODE TESTER KIT

Tests low power, medium power and power-type transistors (NPN and PNP types) for shorts ICBO, leakage, and gain. Tests diodes for forward and reverse current. All transistor tests read on a single 0-100 meter scale; direct test limits for each transistor are listed on the accompanying data sheets. Two panel mounted transistor sockets plus a universal alligator terminated cable to provide connection facilities for all transistors. Convenient test data reference sheets; subscription system available to keep test data up to date automatically. In ripple-finished steel cabinet. **Size:** 11½" x 7" x 5". Shipping Weight, 8 lbs.

Paco Model T-65 Kit—With assembly-operating manual. Net Each. **$39⁹⁵**

Paco Model T-65W—Factory wired. Net. **$59.95**

MODEL V-70 VTVM KIT

Employs ±1% precision deposited-film and wire-wound resistors. Twin-triode, balanced bridge VTVM circuit plus twin-diode peak-to-peak rectifier for AC ranges. Single 3-way AC-DC probe supplied. **DC Volts:** Seven ranges, 0 to 1,500 volts (11 meg. input resistance; 1 meg. in test probe). **AC Volts:** Seven rms ranges to 1,500 volts; seven AC peak-to-peak ranges to 4,000 volts. **Frequency Response (AC):** ±1 db, 40 cps to 4 mc. **DB Ranges:** Seven ranges, −6 to +66 db (0 db equals 1 mw, 600 ohms). **Ohms:** Seven ranges to 1,000 megs. Rugged steel cabinet. **Size:** 7½" x 5⅜" x 4¼". Shipping Weight, 6 lbs.

Paco Model V-70 Kit—With manual. Net **$31⁹⁵**

Paco Model V-70W—Factory wired. Net. **$49.95**

Paco Model AV-1 High Frequency Crystal Probe—Factory assembled and wired. Net Each. . . **$5.95**

Paco Model AV-2 High Voltage Safety Probe—Factory assembled and wired. Net Each. . **$5.95**

MODEL Z-80 RF-AF TRACER KIT

High gain amplifier for both RF and AF investigation. Visual and audible signal indicators plus output terminals for use with oscilloscope or VTVM. Noise test circuit for fast identification of noisy components. Test amplifier checks phono pickups, tuners, mikes, speakers; also useful as a small PA or paging amplifier. Substitute speaker and output transformer permit testing receivers and amplifiers detached from their own speakers. Watt meter circuit covers 36-500 watt range. Two-way AF-RF shielded probe with built-in selector switch. In ripple finish steel cabinet. **Size:** 7" x 11½" x 5". Shipping Weight, 10 lbs.

Paco Model Z-80 Kit—With manual. Net **$29⁹⁵**

Paco Model Z-80W—Factory wired. Net. **$44.95**

MODEL RD-5 DECADE RESISTOR/DIVIDER KIT

A universally-useful laboratory-service-school accessory instrument for use in a wide variety of test development and experimental work. A flexible and accurate source of resistance for use with bridges, and in the determination of resistance values in development circuits. "Comparator" post affords simplified comparison of external resistors; allows quick substitution of the decade for an external resistance. Four voltage divider posts provided which permit use of RD-5 as a general-purpose wide-range voltage-divider; permit set-up for practical voltage ratios between .0001 and 1.0 (10,000 to 1); input resistance as a divider is variable from 11 ohms to over 110,000 ohms. Decade resistance ranges include 5 decades, total of 0-111,110 ohms in steps of 1 ohm. **Tolerance:** ±0.5% 1 watt in all resistance elements; negligible-inductance type. Five-way insulated binding posts throughout. Completely shielded; in steel case with aluminum panel. Rugged ripple-finish cabinet; attractive easy-reading two-color panel. **Size:** 4¼" w. x 3½" d. x 12" h. Shipping Weight, 3 lbs.

Paco Model RD-5 Kit—Complete with detailed assembly-operating manual. Net Each. **$23⁹⁵**

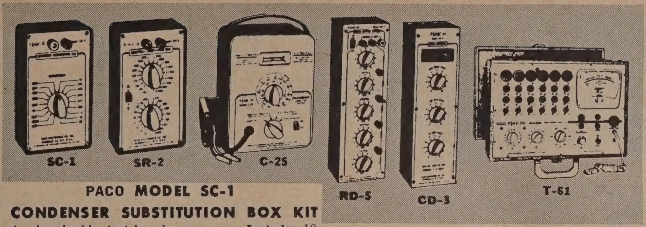
Paco Model RD-5W—Factory-wired, ready to operate. Net Each. **$29⁹⁵**

MODEL CD-3 DECADE CONDENSER KIT

Engineered for the widest variety of design and experimental work. Its wide capacity range and excellent stability characteristics render it ideal for determination of capacitor values in all types of experimental circuitry, for use in tuned circuits, filters, RC networks, etc. All capacitors silvered mica, insulation resistance better than 100,000 megohms at 500 volts DC. **Capacitance Range:** .0001 μf to .111 μf in .0001 μf steps; minimum capacity .0001 μf plus approximately 10 μμf residual ±1% accuracy. **Voltage Rating of Overall Unit:** 350 WVDC, 500 WVDC intermittent, 1,000 v. AC test. **Power Factor of Capacitors:** .001 or better. All switches incorporate ceramic decks. Five-way insulated binding posts. Completely shielded in steel case with aluminum panel. **Size:** 4¼" w. x 3½" d. x 12" h. Shipping Weight, 3 lbs.

Paco Model CD-3 Kit—Complete with comprehensive technical manual. Net Each. **$19⁹⁵**

Paco Model CD-3W—Factory-wired, ready to operate. Net Each. **$24⁹⁵**



PACO MODEL SC-1
CONDENSER SUBSTITUTION BOX KIT

An invaluable test-bench accessory. Includes 18 capacitors, selectable on one clearly-marked rotary switch. Ideal for a multitude of electronic experimental and development work. Eliminates the need for maintaining a large variety of individual capacitors. **Capacity Range:** (18 values to EIA specifications) from .0001 µf to .22 µf. **Capacitors Include:** 100 to 470 µµf (silvered mica, ±5% accuracy 500 WVDC); .001 to 0.22 µf (molded, ±10% accuracy) 600 WVDC. Custom-designed molded case with durable two-color panel. **Size:** 3¾" w. x 2¾" d. x 6½" h. Shipping Weight, 1 lb.

Paco Model SC-1 Kit—Complete with comprehensive technical manual. Net Each.............................. $\$8^{95}$

Paco Model SC-1W—Factory-wired, ready to operate. Net Each............ $\$11^{95}$

PACO MODEL SR-2
RESISTANCE SUBSTITUTION BOX KIT

Permits rapid direct substitution of 36 values of resistors through use of either of two clearly identified rotary switches. An important and convenient time-saver for use on the development bench as well as in school and home shop. Standard EIA resistance values range from 15 ohms to 10 megohms. Watt dissipation of all resistors, 1 watt, ±10% tolerance. Custom-designed molded case with legible two-color panel. **Size:** 3¾" w. x 2¾" d. x 6½" h. Shipping Weight, 1 lb.

Paco Model SR-2 Kit—Complete with assembly-operating manual. Net Each..... $\$8^{95}$

Paco Model SR-2W—Factory-wired, ready to operate. Net Each............ $\$11^{95}$

PACO MODEL T-61 "SPEED CHECK" TUBE TESTER KIT

Specially-designed to reduce tube test time to an absolute minimum. Twenty-four clearly-identified tube sockets plus three simple selectors combine complete flexibility and non-obsolescence with the important time-saving features required for efficient electronic servicing. Socket circuitry and simplified dials are designed to accommodate all anticipated types of tube configurations with the minimum of panel sockets. Provides time-proven overall quality test on virtually every modern tube type; indicates shorted elements, inter-element leakage and filament continuity. Accommodates all series string and other up-to-date tubes with filament voltages from 0.75 to 110 volts; tests button 9-pin tubes, miniature 7-pin types, single-ended (TV and FM amplifiers), regular octals, etc. Reliable, sensitive neon method quickly shows up inter-element shorts and poor cathode structure. Large, easy-to-read, 4⅝" PACE meter in modern clear plastic case; rugged double-jewelled, full-bridge D'Arsonval type, ±2% accuracy. Separate picture tube socket accommodates Paco Model AT-1 Picture Tube Test Cable. Micro-line adjustment reads directly on meter. Test circuits completely transformer-isolated from power line to assure utmost safety to operator and instrument. Selected components assure accurate, long-lived dependable service. Pin-straighteners for 7- and 9-pin types. Data chart in cabinet lid. Rugged handsome cabinet with easy-to-read two-color panel. **Size:** 15¼" w. x 10½" d. x 4¾" h. Shipping Weight, 13 lbs.

Paco Model T-61 Kit—Complete with assembly-operating manual. Net Each... $\$49^{95}$

Paco Model T-61W—Factory-wired, ready to operate. Net Each............ $\$69^{95}$

PACO MODEL C-25 IN-CIRCUIT CAPACITOR TESTER KIT

One of the greatest time-saving trouble-shooting instruments on the service bench. Instantly reveals open or shorted capacitors without removing them from the circuit. Discloses dried-out electrolytics as well as shorted or open electrolytics by directly indicating actual capacitance, in one quick test, without removing capacitor from circuit with exclusive Paco Capacity Dial. Simple sequential test reveals an open or shorted capacitor, including electrolytic types. Sharp, non-confusing readings on wide-angle EM-84 indicator. Electrolytic dial indicates actual electrolytic values while capacitor is in-circuit; any electrolytic which yields a capacity reading on the Electrolytic Dial is automatically revealed as not shorted or open. Checks by-pass coupling, blocking and filter capacitors of all types including electrolytics. Open test provides positive test for open circuit for condensers as low as 5 µµf. Short test will show up shorted capacitors of all types, even if circuit shunting resistance is as low as 7 ohms. Electrolytic test indicates in-circuit electrolytic capacity from 4 µf to 700 µf in two ranges; condenser is automatically proved non-shorted and not open if capacity reading can be obtained. Rugged ripple-finish steel cabinet with attractive easy-reading two-color panel. **Size:** 5⅜" w. x 4¼" d. x 7½" h. Shipping Weight, 6 lbs.

Paco Model C-25 Kit—Complete with assembly-operating manual. Net Each... $\$19^{95}$

Paco Model C-25W—Factory-wired, ready to operate. Net Each............ $\$29^{95}$

PACO MODEL T-5 RAPID FILAMENT CHECKER FOR SERIES STRING TUBES

A highly versatile pocket-size instrument that is extremely light in weight. It quick-checks: Radio receiver and TV tubes, bayonet and screwbase type pilot lamps for filament continuity; TV and radio set fuse continuity; TV sets for AC circuit continuity. Completely self-contained. Powered by self-contained battery. Built-in pin straighteners for 7- and 9-pin tubes. Checks general continuity of electrical circuits having a resistance between zero and approximately 70 ohms. Battery self-check indicates condition of its own battery at any time. Handsome custom-molded case with durable, attractive, two-color panel. **Size:** 3½" w. x 1" d. x 5⅜" h. Shipping Weight, 1 lb.

Paco Model T-5 Kit—Complete with batteries and assembly operating manual. Net Each....**$4.50**

Paco Model T-5W—Factory-wired, ready to operate, complete with batteries. Net Each....**$6.50**

PACO STEREO HIGH FIDELITY COMPONENTS, KITS

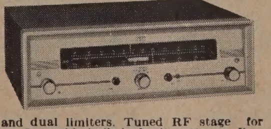
MODEL SA-40 STEREO PREAMP-AMP KIT

Stereophonic preamp-amplifier. Designed for optimum performance and maximum flexibility in stereophonic or monophonic sound systems. Kit version has specific assembly instructions with large wiring diagrams for greatly simplified construction. **Power Output:** 20 watts each channel, 40 watts combined; combined peak, 80 watts. **Frequency Response:** 30-90,000 cps, ±1.0 db measured at 1 watt steady-state output. **Distortion:** Less than .5% harmonic at 20 watts per channel, .2% at 10 watts. Intermodulation distortion less than 1% at full rated output. **Hum and Noise:** High level input, −70 db below rated output; low level input, −60 db below; tape input, −60 db below. **Inputs:** 14 total; three dual high-level, four dual low-level. **Outputs:** Dual tape outputs, separate preamp, 4, 8, 16, 32 ohms dual. **Tape Output Level:** 2 v. per channel. **Controls:** Input (Aux 1, Aux 2, Tuner, Phono 1, Phono 2, Tape Head, Mike); Mode (Balance Left, Balance Right, Monophonic, Stereophonic, Stereophonic Reverse, Channel Right, Channel Left); Balance; Loudness; Bass (ganged, ±15 db at 50 cps); Treble (ganged, ±15 db at 10 kc); Equalization (EUR-7½"/sec., RIAA-3¾"/sec.); Rumble Filter (On-Off); Contour (On-Off); Speaker Selector (One-Both); System (System 1, System 2); Power Off-On. **Power Required:** 175 watts, 117 v. AC, 50-60 cps. **Tubes:** 9 plus two silicon rectifiers and one selenium bias rectifier. **Size:** 15⅜" w. x 11¾" d. x 5⅝" h. Shpg. Wt., 28 lbs. Complete with black and gold case.

Paco Model SA-40 Stereo Preamp-Amplifier Kit— Complete with case, and instruction manual. Net Each. $\$79^{95}$

Paco Model SA-40W Stereo Preamp-Amplifier—Factory wired. Net Each..................................**$129.95**

MODEL ST-45 AM-FM STEREO TUNER KIT



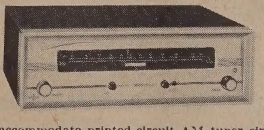
Super-sensitive AM-FM stereo tuner with many advanced design features. Built-in provision for addition of Multiplex adapter. EM-84 tuning indicator for both AM and FM to assure perfect tuning every time. Separate pilot-indicated AFC. Foster-Seeley discriminator and dual limiters. Tuned RF stage for AM; 10 kc whistle filter. Rotatable built-in ferrite antenna. Provision for AM-FM stereo or separate AM and FM broadcast reception. Independent AM and FM tuners. Cathode follower outputs on both AM and FM. **Sensitivity:** FM, 2 µv for 30 db quieting. **Harmonic Distortion:** Less than 1%. **Controls:** AM Tuning; FM Tuning; Function (AM, AM-FM, Multiplex, FM); Power (Push Button); AFC (Push Button) with pilot indicator. **Size:** 15⅜" w. x 11¾" d. x 5⅜" h. Shipping Weight, 20 lbs. Complete with black and gold case.

Paco Model ST-45 Kit—With factory-prealigned transformers. Net Each.................................. $\$84^{95}$

Paco Model ST-45PA Semi-Kit—With both AM and FM tuner sections factory-wired; completely prealigned and calibrated for hairline sensitivity. Net Each............ $\$99^{95}$

Paco Model ST-45W—Factory wired, aligned, calibrated and assembled. Net Each................. $\$134^{95}$

MODEL ST-35 FM TUNER KIT



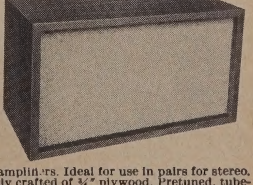
Ultra-sensitive FM tuner with reserved chassis space for inclusion of built-in multiplex circuitry. Foster-Seeley discriminator and dual limiters. Separate pilot-indicated AFC is push button controlled. Cathode follower output. May accommodate printed-circuit AM tuner circuitry should conversion for AM-FM type stereo be desired. EM-84 tuning indicator for accurate tuning. **Sensitivity:** 2 µv for 30 db quieting. **Harmonic Distortion:** Less than 1%. **Controls:** Tuning; Dimension with Multiplex Off; Power (Push Button); AFC (Push Button) with pilot indicator. **Size:** 15⅜" w. x 11¾" d. x 5⅜" h. Shipping Weight, 19 lbs. Complete with black and gold case.

Paco Model ST-35 Kit—With factory-prealigned transformers. Net Each................................ $\$59^{95}$

Paco Model ST-35PA Semi-Kit—With tuner section factory wired and completely prealigned for hairline sensitivity. Net Each.. $\$69^{95}$

Paco Model ST-35W—Factory wired, aligned, calibrated and assembled. Net Each.................... $\$89^{95}$

MODEL L-2U HIGH FIDELITY 2-WAY SPEAKER SYSTEM SEMI-KIT



Incorporates a special design 10" Jensen long-excursion woofer and a horn-type compression tweeter for truly smooth response from 45 cps to 15 kc. Adjustable control at rear permits balancing the system output to match room acoustics. Built-in crossover network. Impedance is eight ohms. Delivers smooth room-volume output even when used with lowest power amplifiers. Ideal for use in pairs for stereo. The cabinet is acoustically crafted of ¾" plywood. Pretuned, tube-loaded port for excellent extension of low frequency response. Smooth, hardwood-grained finish on all four sides; may be used either in vertical or horizontal position. **Size:** 23½" w. x 13" d. x 12" h. Shipping Weight, 30 lbs. Assembly time, less than 1 hour.

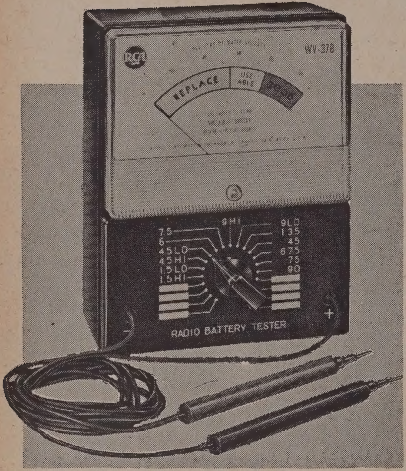
Paco Model L-2U Semi-Kit—Completely factory built, unfinished. Net Each.......................... $\$59^{95}$

Paco Model L-2F Semi-Kit—Completely factory built, walnut finish. Net Each.......................... $\$69^{95}$

PACO kits are available and on display at leading electronic parts distributors.
All prices and specifications subject to change without notice.

RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES



WV-37B BATTERY TESTER

The WV-37B is designed to test over 60 different types of tube-portable and transistor-portable radio batteries. The tester has a large, easy-to-read meter which tests batteries in terms of "REPLACE—USABLE—GOOD" and above these colored ranges a scale shows the percentage of rated output voltage of the battery under test. Simple and easy-to-use, the new WV-37B Battery Tester also has eight blank switch positions which allow for testing future additional battery types.

$24.95* **(Price includes permanently-attached test probes and leads, instruction bulletin)**
**User (Price Optional)*

WV-38A(K) VOM KIT and WV-38A VOLT-OHM-MILLIAMMETER

Never so many valuable features packed into a VOM!

Ohms-divider network fuse-protected. Easier-to-read scales on extra-large 5¼ inch meter. Polarity reversal switch. Improved frequency response. Full-wave bridge rectifier. Less circuit loading. Standard dbm ranges. PLUS—modern styling!

Look at these exclusive features you get with the RCA WV-38A!

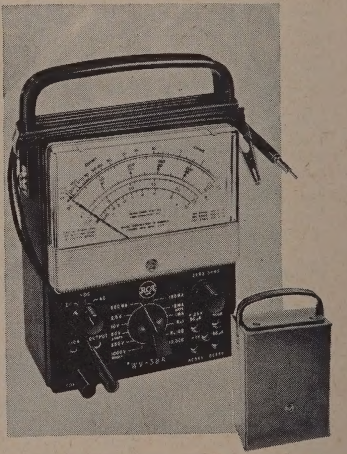
EXCLUSIVE—extra 1-volt and 0.25-volt (250 mv) ranges permit wide applications in transistor servicing!

EXCLUSIVE—new handle clips accommodate probes and test leads for extra carrying convenience.

PLUS—the WV-38A(K) VOM KIT is extremely easy to assemble! Just mount six components on the front panel, mount and solder all other components on one side of laminated circuit board, put the panel and circuit board together, and slip on the knobs! When properly assembled, the WV-38A(K) incorporates RCA's high standards of excellence in quality, accuracy and performance!

The WV-38A VOM has an input resistance of 20,000 ohms-per-volt on dc and 5,000 ohms-per-volt on ac and an accuracy of ±3% of full scale on dc, ±5% of full scale on ac. Regular scales: 2.5, 10, 50, 250, 1000, 5000 volts, ac and dc; 50 μamp, 1, 10, 100, 500 ma, 10 amps (dc); plus extra scales of 250 mv and 1-volt (dc)! Frequency response (ac), flat from 10 cps to 50 Kc with usable response at 500 Kc. Ohms—3 ranges—R x 1 (0-2,000 ohms), R x 100 (0-200,000 ohms), R x 10,000 (0-20,000,000 ohms). Dimensions: W 5¼" x H 6⅞" x D 3⅛".

$29.95* WV-38A(K) VOM Kit
$43.95* WV-38A VOM (wired)



WG-270A Accessory Carrying Case for WV-38A VOM

Features: rugged, scuff-proof, stain-resistant, laminated vinyl construction—looks and wears like leather; snap-off front cover for instant use; storage compartment below instruments for probes and leads; attractive gray finish — modern functional styling!

$4.95*
**User (Price Optional)*

RCA TEST EQUIPMENT

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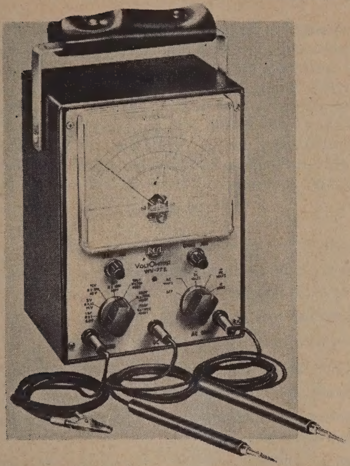


$29.95* WV-77E(K) VoltOhmyst Kit
$43.95* WV-77E VoltOhmyst (Factory-Wired)

**User Price (Optional)*

(Prices for WV-77E(K) and WV-77E include dc probe and cable, ac/ohms probe and cable, ground lead and clip, and instruction booklet. Assembly instruction sheet is provided with the WV-77E(K) VoltOhmyst Kit.)

WV-77E VoltOhmyst® and WV-77E(K) VoltOhmyst Kit

NOW—at popular prices—here is a new addition to the world-famed RCA Volt-Ohmyst family, and it's available kit or wired!

The WV-77E(K) is extremely easy to assemble! The laminated circuit board is keyed for accurate placement of components—the range switch has only two decks—the single-sheet instructions are the ultimate in clarity!

The WV-77E features flat frequency response ±5% from 40 cps to 5 Mc on the 1.5, 5, and 15-volt rms ranges and the 4, 14, and 40-volt peak-to-peak ranges. The WV-77E measures dc from 0.02 volt to 1500 volts, rms ac from 0.1 volt to 1500 volts, peak-to-peak ac from 0.2 volt to 4000 volts, and resistance from 0.2 ohm to 1000 megohms—all in seven overlapping ranges! Full-scale accuracy is ±3% on dc and ±5% on ac. Meter is electronically protected against burnout. Separate scales are provided for low ac measurements. Input resistance is standard 11 megohms. Width 5⅝", Height 7¾", Depth 4¾", Weight 5 lbs.

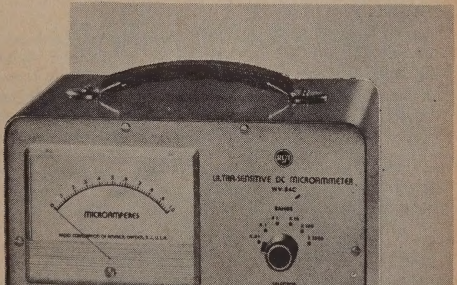
- **NEW—sleeve on handle stores probes and cables**
- **NEW—fuse in ohms circuit prevents accidental burnout**
- **NEW—circuit minimizes effect of residual gas in bridge tube**
- **NEW—color-coded scales for easier, faster readings**
- **NEW—ultra-slim probes and extra-flexible cables**

WV-84C

ULTRA-SENSITIVE DC MICROAMMETER

Application: a battery-operated vacuum tube microammeter designed for measuring minute direct currents, for making current and voltage measurements in electrolysis and corrosion investigations, and for checking currents in light meters, ultra-violet and infrared detectors, and spectrophotometric devices. Self-contained batteries permit use almost anywhere. Low-drain tubes extend battery life and protect the delicate meter against burnout due to accidental overloads. When used as a voltmeter, it is especially suited to measurements in circuits where loading is a critical factor. Can also be used as an ohmmeter to measure extremely high resistances, such as leakage and insulation resistance.

- **Six direct-current ranges for measuring currents from 0.0002 to 1000 microamperes.**
- **Can be used as ohmmeter to measure resistance in the order of billions of ohms.**
- **Voltage drop for full-scale deflection only 0.5 volts.**
- **Input resistance of 100 megohms for measurement of voltages from 0.1 to 1 volt; 1000 megohms input resistance for voltages from 1 to 10 volts, 1005 megohms for voltages from 1 to 100 volts.**
- **Over-all microammeter accuracy on .01 range ±5% or better; accuracy on all other ranges ±4% or better.**
- **Size: 7½" x 10½" x 6¼". Weight: 10 lbs. including batteries.**



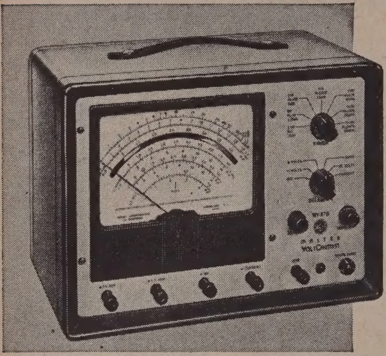
$110.00* includes 50- and 950-megohm multiplier resistors, instruction booklet. (less batteries)

**User Price (Optional)*

RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

WV-87B
MASTER VoltOhmyst®



$137.50* complete with probes and cables, including WG-299D DC/AC-Ohms Probe and Cable, current cable, ground cable insulator, instruction booklet.

**User Price (Optional)*

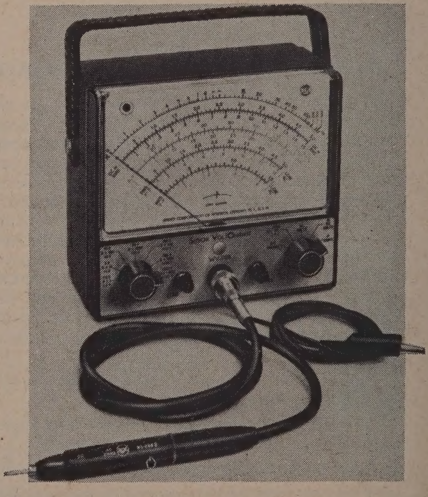
Application: measures dc voltages accurately in high-impedance circuits even with ac present; reads rms values of sine waves and the peak-to-peak value of complex waves or recurrent pulses even in presence of dc. Invaluable for television, radar and other types of pulse work. Has the accuracy and stability necessary for many laboratory applications including a mirror scale. Its large, easy-to-read meter also makes it especially desirable as a permanently mounted instrument in the factory and repair shop.

- **±3% accuracy on ac and dc volts.**
- **Measures resistance from 0.1 ohm to 1000 megohms, current from 10 microamperes to 15 amperes.**
- **Features ±1% multiplier and shunt resistors.**
- **Zero-center scale adjustment for discriminator alignment.**
- **Sensitivity on 1.5 v range — 7.3 megohm/volt.**
- **DC polarity reversing switch.**
- **Measures dc Voltage from 0-1500 volts; ac from 0-1500 volts rms; 4200 volts peak-to-peak.**
- **Frequency Response — 30 cps to 250 Mc using auxiliary WG-301A Crystal-Diode Probe.**

WV-98B
SENIOR VoltOhmyst®

Application: provides direct reading of peak-to-peak voltages of complex waveforms found in video, sync and deflection circuits. Includes an improved circuit providing 3% accuracy full scale on both ac and dc measurements with better than 1% tracking error. Separate color-coded, peak-to-peak and rms-voltage scales in two distinctive colors simplify readings. Features die-cast aluminum case; high input resistance; electronic protection against burnout; rugged 200-microampere meter movement; and precision multiplier resistors with accuracy of ±1%.

- **Large 6½" easy-to-read, full vision meter (26 sq. in.).**
- **Measures complex waveforms directly from 0.2 volt to 4200 volts peak-to-peak in 7 overlapping ranges.**
- **Measures rms values of sine waves from 0.1 volt to 1500 volts in 7 overlapping ranges.**
- **Measures from 0.02 volt to 1500 volts dc on two scales in 7 overlapping "3-to-1" ranges.**
- **INPUT RESISTANCE — 11 megohms on all dc ranges.**
- **Measures resistance from 0.2 ohms to 1000 megohms on single scale, with 7 overlapping ranges.**
- **FREQUENCY RESPONSE — 30 cps to 250 Mc with WG-301A Crystal-Diode Accessory Probe.**
- **Compact design: 7" wide, 3¾" deep, 6½" high.**



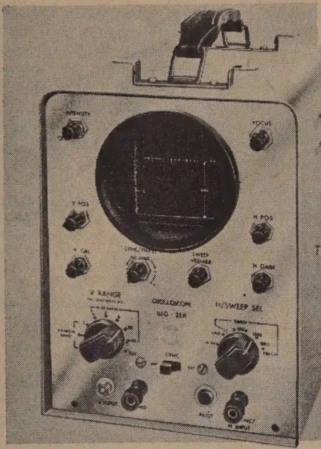
$79.50* Complete with WG-299D DC/AC-Ohms Probe and Cable, ground cable, alligator clip, insulator clip, instruction booklet.

**User Price (Optional)*

RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

WO-33A(K) OSCILLOSCOPE KIT and WO-33A OSCILLOSCOPE



$79.95* —WO-33A(K) Oscilloscope Kit
$129.95* —WO-33A Oscilloscope

(Prices for the WO-33A(K) and WO-33A include Direct/Lo-Cap probe and cable, and instruction booklet. Assembly instruction sheet is provided with the WO-33A(K) 3-inch Oscilloscope Kit.)

°User Price (Optional)

Higher gain and wider bandwidth for greater value!
When you buy a scope—whether in kit form or factory-wired and calibrated—the WO-33A is the scope for you! The WO-33A will give you what you need in gain, bandwidth, transient response, accuracy, versatility, portability—and you can take it with you on the job—anywhere! The WO-33A 3-inch Oscilloscope is the "all purpose" scope! All the bandwidth you need for servicing color-TV, video broadcast monitors and cameras; and for square-wave testing of audio and ultrasonic equipment! All the gain you need for for low-level audio work—servicing pickups, microphones, preamps; plus signal-tracing radios, amplifiers—trouble shooting communications signaling systems, ham radio and hi-fi equipment, industrial electronics machinery and many other applications.

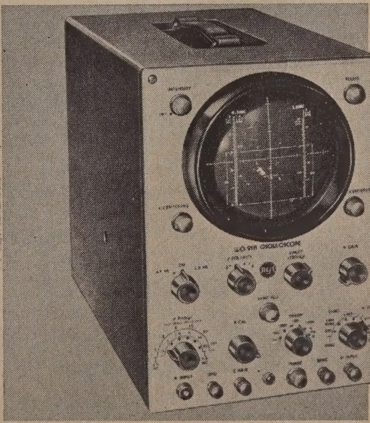
With vertical amplifier in narrow-band position, sensitivity is 3 rms millivolts/inch; bandwidth within –3 db, 20 cps to 150 Kc. Wide band position: sensitivity 100 rms millivolts/inch; bandwidth within –3 db, 5.5 cps to 5.5 Mc. Sweep circuit: Sawtooth range from 15 cps to 75 Kc; sync — external, ± internal; line sweep — 160° adjustable phase; sync range—to 4.5 Mc.

- **for accuracy—voltage-calibrated frequency-compensated, 3-to-1 step attenuator**
- **for measurements—scaled graph screen and calibrating voltage source allows direct reading of peak-to-peak voltages**
- **for stability—"plus-minus" internal sync . . . holds sync to 4.5 Mc**
- **for completeness—shielded input cable with low-capacitance probe included**
- **for portability—compact size—W 6½" x H 8¾" x D 10¼"—weight only 14 lbs. Plus built-in brackets to hold power cord and cables**

WO-91A 5" OSCILLOSCOPE

Application: for production and servicing both black-and-white and color TV receivers. Used to measure color burst signals and for trouble-shooting wide-band color circuits, signal tracing and aligning wide-band video amplifiers, and chrominance circuits. A multi-scale graph screen makes peak-to-peak voltage measurements as simple as with a VTVM. Response: Wide-band within 3 db from 10 cps to 4.5 Mc; High sensitivity within –1 db from 3 cps to 0.5 Mc: within –6 db to 1.5 Mc. Sensitivity: .05 volt peak-to-peak per inch (0.018 volts rms) in high-sensitivity position; 0.15 volt peak-to-peak per inch (0.053 volts rms in wide-band position).

- **Voltage-calibrated, frequency-compensated, 3-to-1 step attenuator for "V" amplifier.**
- **Shielded vertical-input connector and shielded cable minimize hum, stray field pickup.**
- **Input Resistance — 1 megohm shunted by 40 $\mu\mu f$. Lo capacitance position — 10 megohm shunted by 12.5 $\mu\mu f$.**
- **Z-Axis input 12 volts for blanking.**
- **Preset "V" and "H" sweep positions.**
- **"Plus" or "Minus" internal-sync selector.**
- **Positive-lock internal sync.**
- **Sweep Frequency: 10 cps to 100 Kc.**
- **Maximum ac input: 600 volts peak-to-peak.**
- **Weight: 30 lbs. Size: 13½" x 16½" x 9".**

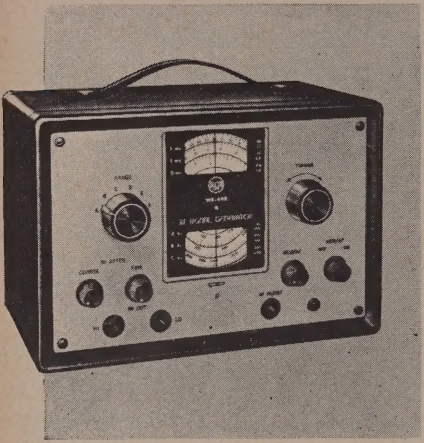


$239.50* **complete with WG-300B two-way Direct/Low-Capacitance Probe and Cable, alligator clip and insulator, ground cable; green graph screen. Instruction booklet.**

User Price (Optional)

RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES



$79.50* complete with shielded cable for rf or af output, instruction booklet.

**User Price (Optional)*

WR-49B RF SIGNAL GENERATOR

Application: for alignment and signal tracing of AM and FM radio receivers, alignment of low-frequency if amplifiers in TV receivers, and signal tracing and trouble-shooting in TV receivers. Continuously tunable from 85 Kc to 30 Mc. With the WR-49A you can inject rf signals into plate circuits and other points where dc is present without placing a dc load on circuit under test . . . with protection from burnout in both equipment and signal generator.

- **Cathode-follower output stage isolates oscillator from effects of load reactance and resistance, thereby maintaining good output waveform, voltage regulation and frequency stability of the oscillator.**
- **Functional-design dial facilitates accurate, easy readings.**
- **Full-length shielding of output cable minimizes radiation and hum pickup.**
- **Built-in dc blocking capacitors.**
- **Built-in 400 cycle oscillator for internal or external use.**
- **Range: 85 Kc to 30 Mc in 6 ranges.**
- **Maximum output at "hi" connector — .05 volts; at "lo" connector — .01 volts rms.**
- **Calibration accuracy of Dial — ± 1%.**
- **Attenuation range — 65 db.**
- **Percentage of modulation — adjustable to 70%.**
- **External modulation input available.**
- **Weight: 8 lbs. Size: 7½" x 10½" x 6".**

WR-70A RF/IF/VF MARKER ADDER

Application: for rf, if and video sweep alignment of both color and black-and-white TV receivers. Provides sharp, easy-to-read markers for alignment. A choice of four different marker shapes is available, permitting use of marker type best suited to the response curve. Designed for use with conventional marker and sweep generators, such as the RCA WR-39 and WR-89 series marker generators and the WR-59 and WR-69 series TV sweep generators. With the WR-70A, the marker signal is added to the sweep-response curve after the sweep signal is taken out of the receiver under test.

- **Eliminates or reduces distortion of sweep curve by the marker.**
- **Permits trap alignment without marker "suckout."**
- **Hi-Q markers—high in amplitude, narrow in width.**
- **Four marker choices—positive peak, negative peak, positive and negative peaks (wide band), positive and negative peaks (narrow band).**
- **Voltage stabilized for rock-steady trace display.**

SPECIFICATIONS

IF/VF sweep input — 50 Kc to 50 Mc. RF input — 50 Mc to 250 Mc.

MINIMUM INPUT VOLTAGES—IF/VF—0.1 volts rms. RF Sweep sample input—0.005 volts rms. Marker input — 0.1 volts rms. Maximum demodulator signal input — 8 volts peak-to-peak.

MAXIMUM SIGNAL OUTPUT— Marker signal—2.5 volts rms. Demodulator signal—10 volts peak-to-peak.

Input and output impedances all 100 ohms except demodulator signal input of 0.5 megohm.

Weight: 8 lbs. Size: 7½" x 10½" x 6¼".

MARKER AMPLITUDE
RF/IF/VF MARKER ADDER
WR-70A
TRACE AMPLITUDE & POLARITY

$97.50* complete with four coaxial cables and instruction booklet.

**User Price (Optional)*

RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

WR-99A
CRYSTAL-CALIBRATED MARKER GENERATOR

Application: supplies a fundamental frequency rf carrier of crystal accuracy for use in aligning and trouble-shooting TV (color and black-and-white) and FM receivers, and other electronic equipment operating in the range of 19 to 260 Mc. Built-in crystal calibrator, heterodyne detector, amplifier and speaker provides calibrating beats at 1 Mc or 10 Mc intervals throughout entire tuning range which is covered by 8 bands. A built-in 4.5 Mc crystal provides necessary accuracy for alignment of intercarrier-if amplifiers and discriminators.

- **At least 0.1 volt output, into 95 ohms terminated.**
- **Provides signals for adjusting vertical or horizontal linearity.**
- **Precision matched impedance/resistance pad attenuator, 0-60 db in 5 db steps.**
- **Special modulation input available for re-transmission.**
- **Provision for use as Heterodyne Frequency Meter.**
- **Provides dual markers for band-width checks and rf alignment.**
- **Triple markers for sound-if alignment and band-width checks.**
- **Adjustable dial pointer for accurate registration with crystal-calibration check points.**

Crystal Calibrated Marker Generator
WR-99A

$242.50* complete with rf output cable, instruction booklet.

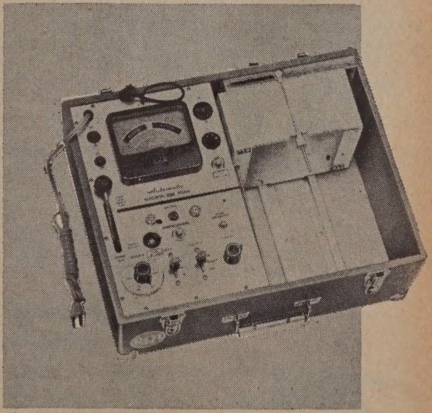
**User Price (Optional)*

WT-110A
Automatic
ELECTRON-TUBE TESTER

A new approach in fast, accurate tube testing, the WT-110 *Automatic* Electron-Tube Tester utilizes punched cards of heavy-duty plastic for automatic internal set-up of pin connections and test voltages. Complete transconductance test-set-up takes only seconds; cards are permanently hinged in case for convenient insertion into test slot. The WT-110A tests for gas, shorts, interelectrode leakage and over-all tube quality. Quality of tube indicated on "Renew—?—Good" meter scale. Tests 7-pin, 9-pin, octal, and loctal types.

Simplified, automatic design speeds testing of diodes, triodes, and other multi-element tubes, as well as double-and-triple section tubes having similar or dissimilar sections. Designed especially for TV and general electron-tube service testing, the WT-110A punch-card system provides for flexibility and easy addition of cards for new tube types. Width 17¼", Height 6⅝", Depth 13¼".

WG-324A Gas Tube Adapter permits testing of gas tubes such as OA2, OA3, OB2, OC2, OD3, OD4. **$2.95***



$199.50* complete with 1 set of 239 punched cards, 1 master punch-card, test card, plus 24 additional punched cards, 24 unpunched cards, a card punch and instruction booklets covering card-punching and operation of the tester.

**User Price (Optional)*

RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

WT-100A

Electron-Tube MicroMhoMeter

$1,075.00* Electron-Tube MicroMhoMeter

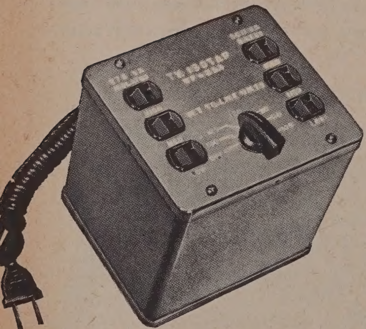
(complete with 4 multiple-socket plug-in units, instruction booklet.)

A precision laboratory measuring instrument which tests tubes under typical operating conditions as specified in the tube manufacturers' technical data manuals. It is particularly useful in production line testing, design and development work, preselecting for critical applications, quality control programs, and preventive maintenance. MEASUREMENTS PERFORMED: ac heater current from 0.02 ampere to 5 amperes • dc filament current up to 250 ma • voltage drop across rectifier tubes and semiconductor diodes • transconductance from 10 micromhos to 100,000 micromhos. Within the range of its facilities it will test: vacuum tubes—diodes, triodes, tetrodes, pentodes, heptodes, septodes, octodes, and multi-unit types; gas tubes—thyratrons, voltage regulators, cold-cathode and hot cathode rectifiers; in these bases and envelopes—bases with 4, 5, and 6 pins, lock-in, miniature, sub-miniature, pencil and lighthouse; and semi-conductor diodes—small dry-disc rectifiers, germanium and silicon diode types. Size: W 23½" x H 8" x D 18½". Weight: 50 lbs.

- **measures transconductance to an accuracy of *better* than ± 3%**
- **accurate measurement of "hybrid" auto receiver tube types under actual operating conditions**
- **built-in shorts test for any combination of tube elements**
- **measures transconductance up to 100,000 micromhos in six ranges**
- **measures both control-grid-to-plate and suppressor-grid-to-plate transconductance**
- **built-in calibrating circuit—no null meters or extra devices required**
- **meter completely burnout-proof**
- **regulated power supplies for dc plate and screen test voltages**

WP-25A

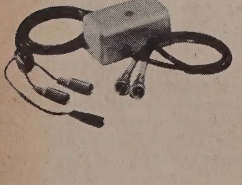
TV ISOTAP



Speeds up servicing, prevents damage to test equipment, minimizes shock hazard, cuts down costly returns. The WP-25A may be used as a high-medium-low voltage isolation transformer or as an auto - transformer for testing radio and TV receivers at various settings of line voltage. Supplies outputs of 130, 115, and 105 volts at maximum load and is tapped to match line voltages from 105 to 130 volts in six steps **$22.00***

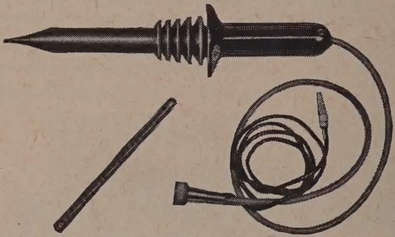
WG-304B

RF MODULATOR



An accessory used to check the over-all frequency response of TV receivers from antenna to picture tube grid. The unit permits modulation of an rf marker signal from a marker generator (such as WR-89A or WR-99A) by a signal from a video sweep generator (such as WR-59C or WR-69A).

$12.50*



WG-289, WG-297

HIGH-VOLTAGE PROBES

The WG-289 extends the dc-voltage range of the WV-77A, WV-77B, WV-77C, WV-87A, WV-87B, WV-97A, WV-98A and WV-98B VoltOhmysts to 50,000 volts. The WG-297 extends the range of the WV-77E VoltOhmyst® and WV-38A volt - ohms - milliammeter to 50,000 volts dc.

The WG-289 is provided with a microphone-type connector, and the WG-297 is provided with banana-plugs for use with appropriate VoltOhmysts and other VTVM's, VOM's.

A choice of three multiplier resistors is available, enabling these probes to be used with many popular electronic and non-electronic volt-ohm-meters!

WG-206—1090-megohm multiplier resistor for VTVM's having 11-megohm input (multiplying factor 100).

WG-210—900-megohm resistor multiplies 5000-volt dc range of 20,000-ohms-per-volt VOM's by a factor of 10.

WG-211—495-megohm resistor multiplies 250-volt dc range of 20,000-ohms-per-volt VOM's by a factor of 100.

WG-289 or WG-297, Probe Only............................ **$7.15***

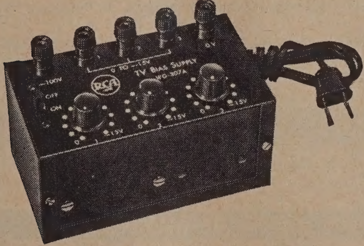
WG-206, WG-210, or WG-211,
Multiplier Resistor Only (each) **$2.80***

*User Price (Optional)

RCA TEST EQUIPMENT ACCESSORIES

WG-295C VIDEO MULTIMARKER

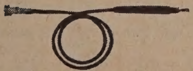
Provides seven simultaneous absorption-type markers at accurately preset frequencies for marking video response curves in color receivers. Markers are at 0.5 Mc (for Q. R-Y, B-Y, G-Y filters), 1.5 Mc (for J filter), 2.5 Mc (for bandpass filter), 3.58 Mc (color subcarrier frequency), 3 and 4.1 Mc (video and bandpass amplifiers), and 4.5 Mc (sound-trap frequency). Each marker is identified simply by touching a corresponding contact on the WG-295C case. This reduces the amplitude of the particular marker. The WG-295C connects between the IF/VF output on the sweep generator and the video output cable. Equipped with shorting switch. With instruction booklet **$32.50***



WG-307A TV BIAS SUPPLY

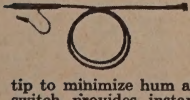
Three fully adjustable 0 to 15V negative, plus a negative 100V nominal for biasing the burst keyer. Size: 2½" x 3" x 5¼"; weight: 22 ounces. **$22.50***

WG-299D DC/AC OHMS PROBE AND CABLE



The WG-299D is a single-unit probe for use with Volt Ohmysts®. Switch provides instant selection of dc or ac/ohms operation. The WG-299D replaces the WG-299A, WG-299B and WG-299C. **$4.95***

WG-300B DIRECT/LOW CAPACITANCE PROBE AND CABLE

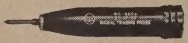


Designed for use with the RCA WO-91A, WO-88A and WO-78B 'Scopes. Cable is 48" long, completely shielded from microphone connector to probe tip to minimize hum and stray field pick-up. Built-in switch provides instant selection of direct or low-capacitance operation. Input characteristics: 10 megohms resistance, less than 12.5 $\mu\mu f$ capacitance in low capacitance position. Includes ground lead and clip. $14.25*

WG-301A CRYSTAL-DIODE PROBE

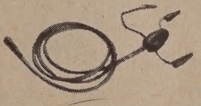
"Slip-on" type for use with the WG-299A, B or C DC/AC Ohms Probe and Cable extending the frequency range of VoltOhmysts® to 250 Mc. $7.75*

WG-302A RF/IF/VF SIGNAL TRACING PROBE



"Slip-on" type high-frequency probe designed for use with the WG-300A and B probe and cable to permit visual signal tracing for rapid isolation of trouble in radio receivers and in television if and video stages. $8.50*

WG-349A DIRECT/LOW-CAPACITANCE PROBE



The WG-349A is a 48-inch, small diameter, extremely flexible shielded cable designed for use with the WO-33A and WO-33A(K) Oscilloscopes. The probe consists of three short leads with alligator clips for ground, direct, and low-capacitance connections. For convenient use, the WG-349A eliminates the need for switching. It connects to the oscilloscope by means of a miniature-type microphone connector. Input characteristics: 10 megohms, 12 uuf capacitance, when used with the WO-33A and WO-33A(K).

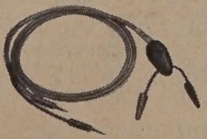
$4.95*

WG-350A DEMODULATOR PROBE

For use with the WO-33A Super-Portable Oscilloscope for demodulation and signal tracing of radio/TV rf and if signals.

$4.95*

WG-351A CRYSTAL DIODE PROBE

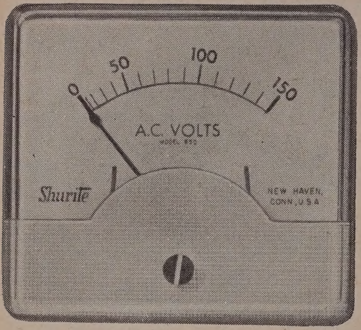


For extending the rf measuring capability of the WV-77E VoltOhmyst, and WV-77E(K) VoltOhmyst Kit, to over 100 Mc.

$4.95*

**User Price (Optional)*

Shurite PANEL METERS



MODEL 850 SERIES
ZERO-ADJUSTER OPTIONAL

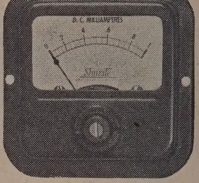
TYPICAL USES

Amateur radio rigs . . . battery eliminators . . . battery chargers . . . volt-ohm milliammeters and kits . . . model train equipment . . . ultrasonic equipment . . . battery condition testers . . . tuning circuits for stereo and tape recorders . . . burglar or fire alarm systems . . . transistor testers . . . emergency lighting equipment . . . voltage regulators . . . plating equipment . . . electric-welding equipment . . . soil moisture testers . . . school and demonstration panels . . . detergent strength analyzer . . line voltage tester for appliance servicing . . . rectifiers; metal locators . . . many other applications.

Shurite meters are attractive, rugged, dependable instruments with accuracy well within ±5%, and have the ability to duplicate readings. DC meters are polarized-vane solenoid type, or moving-magnet construction when indicated; AC meters are double vane repulsion type with jeweled bearing. The jewel construction costs more to build, but it pays off by providing continuing accuracy during a longer useful life. All models fit 2-5/32″ hole, and Model 850 also fits any smaller size down to 2-1/16″. All are guaranteed.

CLEAR PLASTIC INSTRUMENTS

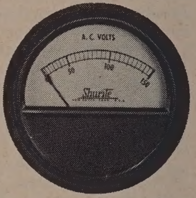
Now No. 1 in popularity, the 850 Series dresses up panels and retains the characteristically sturdy construction of Shurite. The snap-on front, of crystal polystyrene, 2$\frac{15}{32}$″ wide x 2$\frac{5}{16}$″ high, admits light from all sides and accentuates the appearance of the scale arc, which is the longest in its field. The case back with interior frosted finish is molded of the same material to provide weight reduction and superior insulation.



MODEL 950 SERIES
WITH ZERO-ADJUSTER

0-1 D.C. MILLIAMPERES

Sensitive-type meters such as stock Nos. 9300Z or 8300Z, 0-1 D.C. Ma. with approximately 1000 ohms internal resistance, and stock Nos. 9332Z and 8332Z, 0-3 D.C. Ma., 500 ohms internal resistance, are specified in many circuits. Volume production makes moderate prices possible.



MODEL 550 SERIES

FEATURES

GUARANTEE: Meters are guaranteed to users against defective workmanship and material, and will be repaired or replaced if sent to the factory postpaid with 40c handling charge within one year after purchase.

ALL-METAL DIALS—age and moisture resistant, lithographed in black on white for high visibility.

STURDY DESIGN—with husky new coil frames designed to prevent breakage, rigidly mounted in cases with anti-turning square head studs.

MODERN APPEARANCE—with concealed coils and new raised dial design, enhancing appearance and greatly increasing readability.

WIDE SELECTION— Shurite offers the broadest line of standard meters in the economy-priced field. Distributor stocks are backed by an extensive factory inventory.

DC MILLIAMMETERS

RANGE Ma.	RESIST. Approx. Ohms	MODEL 550* Stock No.	MODEL 950* Stock No.	MODEL 950* Net Each	MODEL 850* Stock No.	MODEL 850* Net Each
0-1**	1000	5300Z	9300Z	$3.60	8300Z	$3.80
0-3L**	500	5332Z	9332Z	3.30	8332Z	3.50
0-3	4800	5301	9301	2.70	8301	2.90
0-5	3475	5302	9302	2.45	8302	2.65
0-10	870	5303	9303	2.20	8303	2.40
0-15	485	5304	9304	2.00	8304	2.20
0-25	172	5305	9305	2.00	8305	2.20
0-50	46	5306	9306	2.00	8306	2.20
0-100	10.4	5307	9307	2.00	8307	2.20
0-150	4.7	5308	9308	2.00	8308	2.20
0-200	2.8	5309	9309	2.00	8309	2.20
0-300	1.5	5310	9310	2.00	8310	2.20
0-400	.46	5311	9311	2.00	8311	2.20
0-500	.30	5312	9312	2.00	8312	2.20

* For zero adjuster add 35c to price and Z to stock number.
** Sensitive type, note internal resistance. Moving-magnet construction, patent pending. Price includes zero adjuster built-in.

DC AMMETERS

RANGE Amps	RESIST. Approx. Ohms	MODEL 550 Stock No.	MODEL 950 Stock No.	MODEL 950 Net Each	MODEL 850* Stock No.	MODEL 850* Net Each
0-1	.105	5201	9201	$2.00	8201	$2.20
0-3	.02 Max	5202	9202	2.00	8202	2.20
0-5	.02 Max	5203	9203	2.00	8203	2.20
0-8	.02 Max	5204	9204	2.00		
0-10	.02 Max	5205	9205	2.00	8205	2.20
0-15	.02 Max	5206	9206	2.00	8206	2.20
0-25	.02 Max	5207	9207	2.50	8207	2.70
0-50	.02 Max	5208	9208	2.50	8208	2.70
3-0-3	.02 Max	5210	9210	2.10		
5-0-5	.022 Max	5211	9211	2.10		
6-0-6	.02 Max	5212	9212	2.10		
10-0-10	.02 Max	5213	9213	2.50	8213	2.70
20-0-20	.02 Max	5214	9214	2.50	8214	2.70
30-0-30	.02 Max	5215	9215	2.50	8215	2.70
50-0-50	.02 Max	5216	9216	2.60	8216	2.80

* For zero adjuster add 35c to price and Z to stock number.

AC MILLIAMMETERS

RANGE Ma.	RESIST. Approx. Ohms	MODEL 550 Stock No.	MODEL 950 Stock No.	MODEL 950 Net Each	MODEL 850* Stock No.	MODEL 850* Net Each
0-10	4800	5607	9607	$3.40	8607	$3.60
0-25	750	5601	9601	3.20	8601	3.40
0-50	150	5602	9602	3.20	8602	3.40
0-100	37	5603	9603	3.20	8603	3.40
0-250	5.4	5604	9604	3.20	8604	3.40
0-500	1.34	5605	9605	3.20	8605	3.40

NO ZERO ADJUSTER ON AC METERS, EXCEPT ON MODEL 850
* For zero adjuster add 35c to price and Z to stock number.

AC AMMETERS

RANGE Amps	RESIST. Approx. Ohms	MODEL 550 Stock No.	MODEL 950 Stock No.	MODEL 950 Net Each	MODEL 850* Stock No.	MODEL 850* Net Each
0-1	.42 Max	5501	9501	$3.10	8501	$3.30
0-3	.072 Max	5502	9502	3.10	8502	3.30
0-5	.041 Max	5503	9503	3.10	8503	3.30
0-10	.02 Max	5504	9504	3.10	8504	3.30
0-15	.02 Max	5508	9508	3.10	8508	3.30
0-30	.02 Max	5505	9505	3.20	8505	3.40
0-50	.02 Max	5506	9506	3.40	8506	3.60

NO ZERO ADJUSTER ON AC METERS, EXCEPT ON MODEL 850
* For zero adjuster add 35c to price and Z to stock number.

DC VOLTMETERS

RANGE Volts	RESIST. Approx. Ohms	MODEL 550* Stock No.	MODEL 950* Stock No.	MODEL 950* Net Each	MODEL 850* Stock No.	MODEL 850* Net Each
0-1	10	5101	9101	$2.00		
0-3	93	5102	9102	2.00	8102	$2.20
3-0-3	250	5103	9103	2.00		
0-5	300	5104	9104	2.00	8104	2.20
0-6	390	5105	9105	2.00		
0-8	600	5106	9106	2.00	8106	2.20
0-10	880	5107	9107	2.00	8107	2.20
0-15	2370	5108	9108	2.00	8108	2.20
0-20	3500	5121	9121	2.00	8121	2.20
0-25	1240	5109	9109	2.30	8109	2.50
0-25H**	5800	5110	9110	2.75		
0-50	2540	5122	9122	2.30	8122	2.50
0-50H**	11800	5111	9111	2.95		
0-75	3740	5112	9112	2.30		
0-100	5140	5113	9113	2.30		
0-100H**	23800	5114	9114	3.00		
0-150	7540	5115	9115	2.40	8115	2.60
0-150H**	34800	5116	9116	3.10		
0-300H**†	74800	5117	9117	3.20	8117	3.40
0-500H**†	124800	5118	9118	3.45	8118	3.65
0-750H**†	184800	5119	9119	4.05		

* For zero adjuster add 35c to price and Z to stock number.
** H denotes high resistance.
† Supplied with external resistors.

AC VOLTMETERS

RANGE Volts	RESIST. Approx. Ohms/Volt	MODEL 550 Stock Stock	MODEL 950 Stock No.	MODEL 950 Net Each	MODEL 850* Stock No.	MODEL 850* Net Each
0-4	11	5401	9401	$3.25		
0-6	15.8	5402	9402	3.25		
0-10	27	5403	9403	3.25	8403	$3.45
0-15	32.3	5404	9404	3.25	8404	3.45
0-25	53	5412	9412	3.25	8412	3.45
0-50	96	5405	9405	3.60	8405	3.80
0-150	100	5406	9406	3.70	8406	3.90
0-300**	100	5407	9407	4.35	8407	4.55
0-600**	100	5408	9408	4.90		
0-750**	100	5409	9409	5.50		

NO ZERO ADJUSTER ON AC METERS, EXCEPT ON MODEL 850
* For zero adjuster add 35c to price and Z to stock number.
** Supplied with external resistors.

RESISTANCE METERS

RANGE Ohms	Volts	MODEL 550* Stock No.	MODEL 950* Stock No.	MODEL 950* Net Each	MODEL 850* Stock No.	MODEL 850* Net Each
10,000	4.5**	5701	9701	$2.60	8701	$2.80

* For zero adjuster add 35c to price and Z to stock number.
** Requires 3 flashlight cells for resistance readings but does not require resistor for voltage readings.

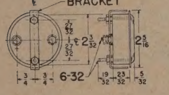
3-HOLE MOUNTING ADAPTER

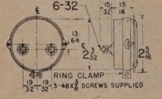
To adapt any Model 550 (round) meter for 3-hole flange mounting (former Model 650) attach this 2¾" flange from front of panel **Model 5-A,** standard black with hardware, each **$0.18**

DC

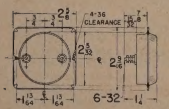
AC

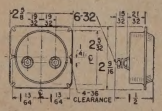
Model 550



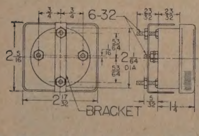


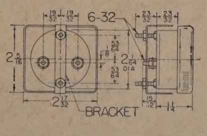
Model 950





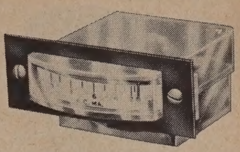
Model 850





NEW!

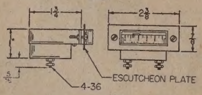
EDGEWISE Model 350 Series

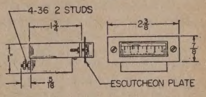


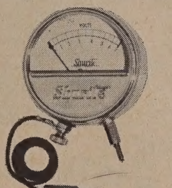
The crystal polystyrene front of this newly-developed series adds beauty to panel designs and the 1.2" scale length offers easy reading. Less than half the panel space of other Shurite meters is required. Early production has been booked by original equipment manufacturers, but with increased capacity it is expected that you will be able to obtain the most popular ranges from authorized electronic parts distributors by October 1, 1960. Horizontal mounting; black and white dials; accuracy well within ±5%; weight under 2 ozs.; black escutcheon plate supplied.

RANGE	Resistance Approx. Ohms	Model 350 Stock No.	Net Each
0-10 DC Milliamperes	810	3303	$3.45
0-50 DC Milliamperes	24.5	3306	3.35
0-100 DC Milliamperes	7.7	3307	3.35
0-10 DC Volts	1000	3107	3.35
0-15 DC Volts	1500	3108	3.35
0-150 AC Volts	100/volt	3406	4.10
0-5 DC Amperes	max .02	3203	3.35

DC **Model 350** **AC**



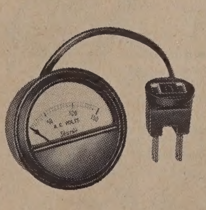




POCKET TYPE METERS

A typical pocket meter in bright-plated Model 450 case is this transistor battery tester, 0-7 DC volts. Please ask for Catalog 94A which includes Battery Testers (Pocket Type) which have stock numbers beginning with the digit 4. **Stock No. 4151,** 0-7 DC volts, approx. resistance 670 ohms. (illustrated) **$2.30**

HANDY AC-DC LINE VOLTAGE TESTER



Stock 5406-LT—Here's how to use this highly popular line tester: push in the plug and read line voltage, then plug in the TV set, iron, toaster, washer, air-conditioner, or other appliance, and note the new reading. Find (and demonstrate) voltage drop or inadequate wiring as a major source of service problems with this compact, sturdily-built device. Cord is permanently attached to metal-cased meter which tests single outlets without accessories. Range 0-150 Volts. Standard package of 6 individually boxed meters includes attractive counter display at no extra charge. Per meter **$3.95**

IMPORTANT — HOW TO ORDER

For all standard models, give (1) Model Number, (2) Range, (3) Stock Number. If Model number and stock number are not stated, Model 550 will be supplied.

ZERO ADJUSTERS (Z) For DC meters, zero-adjusters are available only on Models 550, 950 and 850. For AC meters, zero adjusters are available on Model 850. When ordering, add Z to stock number. Example: Model 550-DC voltmeter, 0-1 volt range without zero adjuster is 5101. With zero adjuster, it is 5101Z. Add 35c to price.

PANEL CALIBRATION (S) Meters are calibrated for non-magnetic panels. If for magnetic (steel) panel mounting, specify thickness and overall size of panel, and add -S to stock number when ordering, as 5101-S.

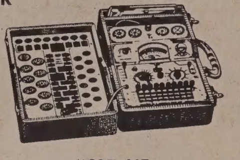
VISCOSITY DAMPING Careful application of new silicone compound on bearing surfaces damps pointer overtravel.

SEE YOUR DISTRIBUTOR Besides carrying most types, and being able to obtain your other needs promptly, your authorized Shurite distributor of electronic parts is qualified to suggest the right meter for your need.

SHURITE METERS NEW HAVEN 8, CONNECTICUT

SECO TEST EQUIPMENT

COMPLETE TUBE TESTER

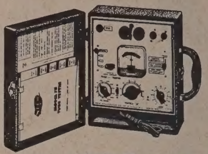


MODEL 107

Three complete tests in one compact, portable instrument! Ideal tester for Radio-TV, Industrial and Foreign types—including sub-miniature. Dynamic Mutual Conductance Test on pre-wired chassis—Cathode Emission Test for all tubes by free point selector system—"Good-Bad" meter indicates merit. Nationally accepted Grid Circuit Test, developed and patented by Seco. 12AU7 Cascode Amplifier; 6 AF6G Electron Eye Indicator; 3" meter. Size: 13½" long x 9" high x 6" wide. Shipping weight: 14½ lbs. In portable carrying case with handy flip-chart for fast, easy tube set-up data. For 105-125 V, 60 cycle AC.

MODEL 107 . . . Wired and Factory Tested . . . . . . **$139.50 NET**

GRID CIRCUIT AND TUBE MERIT TESTER

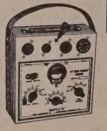


MODEL 78

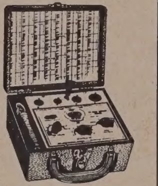
Compact, portable, low-cost tester. Fast easy to use! 5 sockets offer complete TV tube type coverage—all modern heater type radio tubes including hybrid types. Incorporates patented Seco Grid Circuit Test plus reliable Cathode Emission Test—also checks filament continuity and provides open element test. One easy-to-read meter indicates results for both Grid Circuit and Tube Merit Tests. Two-stage DC amplifier isolates and protects meter—achieves wide range of load currents and test conditions. Size: 9" wide x 10½" high x 5½" deep. Shipping weight: 6 lbs. For 110-125 V, 60 cycle AC. With portable carrying case and flip-chart for quick set-up data.

MODEL 78 . . . Wired and Factory Tested . . . . **$69.50 NET**

GRID CIRCUIT TUBE TESTER



GCT-9S

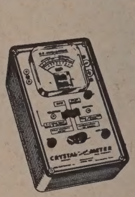


GCT-9W

Only Grid Circuit Tester with full TV tube coverage—including voltage amplifiers; power output and heater-type diodes; types with Grid, Plate or Cathode caps; and hundreds of Foreign and Industrial tube types. Tests for Grid Emission, leakage, shorts and gas in one operation! Two new exclusive tests—Cathode Continuity Check and Inter-element Short Test with short identified to pin number. Easy to operate—available in metal case with exposed panel (Model GCT-9S, Size: 6½" wide x 6½" high x 2½" deep. Shipping Weight: 4 lbs.) or mounted in carrying case (Model GCT-9W, Size: 6½" wide x 6½" high x 2½" deep. Shipping Weight: 4½ lbs.) For 105-125 V, 60 cycle AC.

MODELS GCT-9-S or GCT-9-W . . . Wired and Factory Tested **$32.95 NET**

2-WAY RADIO TEST SET

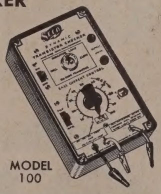


MODEL 500

Combination Crystal Checker, RF Signal and Field Strength Meter! Cuts service and installation time on all types of crystal controlled transmitters and receivers! Checks crystal activity on third overtone transmitter crystals—checks fundamental types and third overtone receiver crystals at fundamental frequency. Plug into jacks and use 0-50 ma. meter for final amplifier tuning. Use as output indicator. Insert crystal for quick check of "on channel" operation. Supplies low power, unmodulated RF signal for adjusting squelch, etc.—or tone modulated RF signal for peaking. Unit may be modulated by external signal generator or voice modulator. Lets you check modulation visually or with headphones. With 15 ft. remote cable. Size: 2¼" deep x 3¼" wide x 6¼" high. Shipping weight: 1½ lbs. Powered by two 1.5 V "C" cells.

MODEL 500 . . . Wired and Factory Tested . . . . **$29.95 NET**

DYNAMIC TRANSISTOR CHECKER



MODEL 100

Safely, automatically tests PNP and NPN transistors "in or out" of circuit. No set-up necessary. Covers wide range of types: small signal including "drift" types; medium power and power types. Provides positive check for "opens", shorts and gain—indicates results by simple visual signal. Also provides GO-NO-GO test at practical collector currents, and permits matching of similar transistor types. Transistors under test may be easily plugged into unit or "clipped" into circuit with external leads. Size: 3¼" wide x 6¼" long x 2¼" deep. Shipping weight: 1½ lbs. Powered by one 1.5 V "C" cell.

MODEL 100 . . . Wired and Factory Tested . . . . **$19.95 NET**

DELUXE DYNAMIC TRANSISTOR CHECKER

MODEL 200

Offers comprehensive test of complete transistor operation either "in or out" of circuit. Covers a wide range of types from smallest units to 40 watt power types and new tetrode types. Makes rapid comparison tests—dependably determines gain—checks usability in high or low resistance circuitry with DC base leakage test. Spots creeping and runaway effects—provides reliable GO-ON-GO check—identifies NPN or PNP transistors. May also be used as a signal injector for stage elimination work. Size: 5" deep x 9" wide x 10½" high. Shipping weight: 6 lbs. Powered by one "D" cell and two 1.5 V "C" cells.

MODEL 200 . . . Wired and Factory Tested . . . . . . **$109.50 NET**

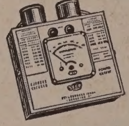
BATTERY ELIMINATOR FOR TRANSISTOR EQUIPMENT

MODEL PS-2

Substitutes for battery used to normally operate and service portable radios and other low-power transistorized equipment. Supplies clean, filtered DC—can't be damaged by short circuit. Voltage variable from 0 to 15 V—sufficient output for checking transistor receivers up to 22½ V. Voltage scale calibrated at 15 ma. Max. output: 100 ma. Size: 4½" wide x 5" long x 1½" high. Shp. Wt.: 1½ lbs. For 105-125 V, 60 cycle AC.

MODEL PS-2 Wired **$13.95 NET**

IN-CIRCUIT CURRENT CHECKER

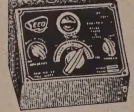


MODEL HC-6

Provides positive on-the-spot check of output tube cathode current—indicates whether or not TV horizontal circuitry is over-loading output tube and associated components. Place in a circuit in seconds—no need to unsolder or disturb circuit wiring. Front panel lists tube types checked and typical cathode current specified by tube manufacturer. Size: 5½" high x 5" wide x 2" deep. Shp. Wt.: 1 lb.

MODEL HC-6 Wired **$12.95 NET**

FLYBACK CIRCUIT AND INDUCTANCE ANALYZER



MODEL FB-4

Troubleshoots TV deflection circuits fast—100% accuracy! Quick "yes" or "no" answer. Checks complete horizontal circuit, not just individual components. No disconnecting or charting required. Uses resonant frequency and "Q" meter principle—will not be obsoleted due to variables in engineering design of circuits to be checked. Size: 7" wide x 5½" deep x 5¼" high. Shp. Wt.: 5 lbs. For 110-125 V, 60 cycle AC.

MODEL FB-4 Wired **$38.95 NET**

VACUUM TUBE VOLTMETER

MODEL 208

Practically "foolproof"! 200 Microamp meter has 7 DC, 7 AC, 7 ordinary Ohm ranges—plus special RETMA (EIA) Ohm scale. Function switch identifies and connects proper probe and isolates probe not in use. All-metal shielded case permits use in strong RF fields—accurate within 3% on all scales. Size: 5¼" wide x 8½" long x 3½" high. Shp. Wt.: 5 lbs. For: 105-125 V, 50-1200 cycle AC. May be supplied for 220 V, 50-1200 cycle AC. With 1.5 V "C" cell.

MODEL 208 Wired . **$74.50 NET**

SECO ELECTRONICS INC.
MINNEAPOLIS • MINNESOTA

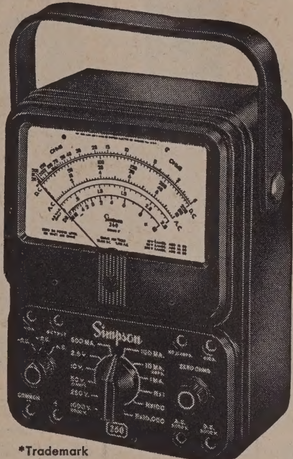
1908
195-
Ray R. Simpson
OVER 50 YEARS
IN THE INSTRUMENT BUSINESS

Simpson PANEL INSTRUMENTS

The VOM That Outsells All Others Combined is Now Better Than Ever!

Simpson 260*

AC-DC VOLT-OHM-MILLIAMMETER



*Trademark

The 260 in Ever-Redy Carrying Case

The 260RT (Roll-Top Safety Case Unit)

Seven Features Make the 260 More Valuable Than Ever!

For years, the rugged dependability of the Simpson 260 has made it the world's most popular volt-ohm-milliammeter. Now . . . Simpson offers a new and improved 260 . . . easier to operate, more sensitive, more accurate . . . a better buy than ever before. Over ¾ million Simpson 260's have been purchased by technicians, service organizations, laboratories, factories, and the armed forces. Such overwhelming preference is proof that the 260 best meets the needs of VOM users. When you're in the market for a VOM, you can feel sure that the 260 is your best buy.

NEW FEATURES

1. POLARITY REVERSING SWITCH: Speeds up servicing when making direct current measurements.
2. 50 MICROAMPERE-250 MILLIVOLT RANGE: Gives more sensitive measurements . . . reads lower values of current and voltage.
3. EASIER-TO-READ SCALES: Black and red scales have been spread out for faster reading, less chance of error.
4. LESS CIRCUIT LOADING: Sensitivity of AC voltage ranges has been increased to 5000 ohms per volt.
5. POPULAR DBM RANGES: —20 DBM to +50 DBM, one milliwatt in 600 ohms.
6. IMPROVED FREQUENCY RESPONSE IN AC MEASUREMENTS: Five to 500,000 cycles per second.
7. FULL-WAVE BRIDGE RECTIFIER SYSTEM: Provides more accurate AC voltage measurements.

RANGES

DC VOLTAGE (20,000 ohms-per-volt): 0-250 mv; 0-2.5 v; 0-10 v; 0-50 v; 0-250 v; 0-1000 v; 0-5000 v. Accuracy, ±3% of full scale..

AC VOLTAGE (5000 ohms-per-volt): 0-2.5 v; 0-10 v; 0-50 v; 0-250 v; 0-1000 v; 0-5000 v. Accuracy, ±5% of full scale.

AF OUTPUT VOLTAGE (With .1 microfarad internal series capacitor): 0-2.5 v; 0-10 v; 0-50 v; 0-250 v.

VOLUME LEVEL IN DECIBELS (Zero DB equal to 1 milliwatt across a 600 ohm line): —20 to +10 DB; —8 to +22 DB; +6 to +36 DB; +20 to +50 DB.

DC RESISTANCE: 0-2000 ohms (12 ohms center); 0-200,000 ohms (1200 ohms center); 0-20 megohms (120,000 ohms center). Accuracy, ±3% of arc length.

DIRECT CURRENT: 0-50 u a; 0-1 ma; 0-10 ma; 0-100 ma; 0-500 ma; 0-10 amp.

DEALER'S NET PRICES

260 VOM, complete with test leads and Operator's Manual	$43.95
(Size: 5¼" x 7" x 3⅛". Wt: 3½ lbs. Ship Wt: 5 lbs.)	
1818 LEATHER CARRYING CASE	7.75
4236 EVER-REDY VINYL CARRYING CASE	9.75
260RT VOM, in Roll-Top Safety Case, complete with test leads and Operator's Manual	49.95
(Size: 6⅜" x 9" x 4¾". Wt: 6½ lbs. Ship. Wt: 9 lbs.)	
HIGH VOLTAGE PROBE for 260 (25,000 v)	9.95
HIGH VOLTAGE PROBE for 260 (50.000 v)	12.50

Adjust-A-Vue Handle — holds the 260 at convenient viewing angle. Eliminates separate gadgets and makeshift props.

MIDGETESTER, Model 355, AC-DC Volt-Ohmmeter

SELF SHIELDED, 10,000 Ohms Per Volt AC and DC

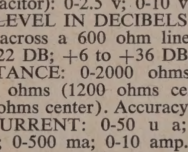
World's smallest! Ideal for appliance repair, radio-TV service, etc. Utilizes the rugged Core Magnet Meter Movement.

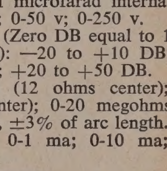
VOLTS, DC: 3, 12, 60, 300, 1200.
VOLTS, AC: 3, 12, 60, 300, 1200.
RESISTANCE, DC: 0-10K ohms (120 ohms center); 0-100K ohms (1.2K ohms center); 0-1 megohm (12K ohms center); 0-10 megohms (120K ohms center).

SIZE: 2¾" wide, 4½" high, and 1" thick.
WEIGHT: 7 oz.

MODEL 355 with Leads, Operator's Manual	**$34.95**
ZIPPER CASE, Leather with Belt Loop #6355	**$3.95**

Fits in Your Shirt Pocket





(Use Index Page 1 for Quick, Easy Location of ALL Products)

Net

1908
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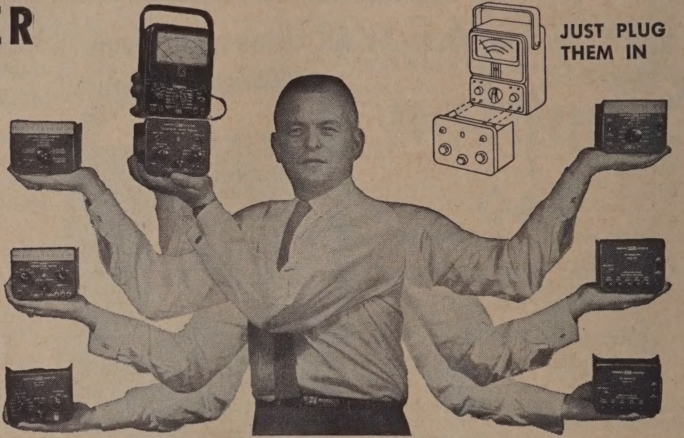
Ray R. Simpson
OVER 50 YEARS
IN THE INSTRUMENT BUSINESS

Simpson **PANEL INSTRUMENTS**

ADD-A-TESTER
Adapters



Now Convert Your 260 VOM into 10 Different Testers!

Now Converts Your 260* VOM into 10 DIFFERENT Testers

Think of it! A small investment turns your 260 VOM into a whole array of testers — equipment with a quality that is found only in individual pieces of test equipment at much higher prices. The secret lies in combining an adapter with the *top-notch meter and circuitry* of your 260.

Each combination of Add-A-Tester unit and 260 is self-contained, self-powered. Each adapter goes on and off in a jiffy. No gadgets, no complicated connections. Furthermore, Add-A-Tester units require only 1/2 to 1/3 the storage space of individual testers. By reducing bench clutter, this compactness makes jobs go faster, raises shop efficiency. Make your 260 do double duty. See your Electronic Parts Distributor and get all the facts soon.

*Trademark

ADD-A-TESTER Adapters (All measures $5\tfrac{5}{16}'' \times 4\tfrac{3}{8}'' \times 3\tfrac{7}{16}''$)

TRANSISTOR TESTER, Model 650 .... $26.95
  Beta Ranges: 0-10, 0-50, 0-250, (F.S.)
  Beta Accuracy: ±3%, with 260, ±5% nominal
  Ico Range: 0-100 ua
  Ico Accuracy: ±1%, with 260, ±3% (F.S.)

DC VTVM, Model 651 .... $32.95
Voltage Ranges: 0-.5/1.0/2.5/5.0/10/25/50/100/250/500
  Accuracy: ±1%, with 260 ±3% (F.S.)
  Input Impedance: greater than 10 megohms for all ranges

TEMPERATURE TESTER, Model 652 .... $38.95
  Temperature Ranges: —50°F to +100°F, +100°F to +250°F
  Accuracy: with 260 ±2° (nominal)
  Three lead positions provided
  Sensing Element: Thermistor

AC AMMETER, Model 653 .... $18.95
  Ranges: 0-0.25/1/2.5/12.5/25 amps
  Accuracy: ±1%, with 260 ±3% nominal
  Frequency Range: 50 cycles to 3000 cycles.

AUDIO WATTMETER, Model 654 .... $18.95
  Load Ranges: 4, 8, 16, 600 ohms
  Wattage: Continuous 25 watts (8,600 ohms)
  50 watts (4, 16 ohms)
  Intermittent 50 watts (8,600 ohms'
  100 watts (4, 16 ohms'
  Accuracy: ±5%, with 260 ±10% nominal
  Direct reading scale from 17 microvolts to 100 watts

MICROVOLT ATTENUATOR, Model 655 .... $18.95
  Ranges: 2.5 microvolts to 250,000 microvolts continuously variable in decade steps
  Frequency: DC to 20 KC

BATTERY TESTER, Model 656 .... $19.95
  Checks all radio and hearing aid batteries up to 90 volts at the manufacturer's recommended load, or any external load.

NEW! MILLIOHMMETER, Model 657 .... $44.95
  Resistance Ranges: 0-.1/.25/.5/1 ohm
  Accuracy: Adapater only ±¾%
  Adapter with 260 ±2% F.S. (nominal)
  Adapter with 270 ±1½% F.S.
  Scale — Linear

TV PICTURE TUBE TESTER, Model 658 .... $34.95
  Tests Performed:
    Provides for checking shorts, emission, grid control, gas, and rejuvenation.
  Heater Voltages:
    1.5, 2.35, 2.5, 2.68, 4.7, 6.3, 8.4, 12.6, 16 volts
  Type of Bases Accepted:
    Duo-decal plus 3 adapters for 7 and 8 pin bases
  Type Tubes:
    All general type TV picture tubes including color (with adapter).

NEW! D.C. AMMETER, Model 661 .... $17.95
  Current Ranges: 0-1/2.5/5/10/25 amperes
  Accuracy:
    Adapter only ±¾%
    Adapter with 260 ±2½% F.S. (nominal)
    Adapter with 270 ±1½% F.S.

Note: All Simpson 260 Adapters provide for normal 260 usage without disconnecting the adapter.

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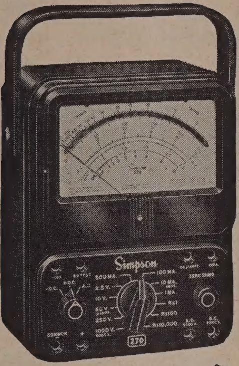
INSTRUMENTS THAT STAY ACCURATE



ADJUST-A-VUE HANDLE

NEW! HIGH ACCURACY VOM—MODEL 270

Excellent Repeatability
Greater Accuracy Predictable Over a Wide Temperature Range
DC Accuracy, 1½%* Full Scale
AC Accuracy, 2%* Full Scale
Resistance Accuracy, ±1½° of Arc
*At an Ambient Temperature of 77°F

RANGES

DC VOLTAGE (20,000 ohms-per-volt): 0-250 mv; 0-2.5 v; 0-10 v; 0-50 v; 0-250 v; 0-1000 v; 0-5000 v.

AC VOLTAGE (5000 ohms-per-volt): 0-2.5 v; 0-10 v; 0-50 v; 0-250 v; 0-1000 v; 0-5000 v.

AF OUTPUT VOLTAGE (With .1 microfarad internal series capacitor): 0-2.5 v; 0-10 v; 0-50 v; 0-250 v.

VOLUME LEVEL IN DECIBELS (Zero DB equal to 1 milliwatt across a 600 ohm line): —20 to +10 DB; —8 to +22 DB; +6 to +36 DB; +20 to +50 DB.

DC RESISTANCE: 0-2000 ohms (12 ohms center); 0-200,000 ohms (1200 ohms center); 0-20 megohms (120,000 ohms center).

DIRECT CURRENT: 0-50 mu a; 0-1 ma; 0-10 ma; 0-100 ma; 0-500 ma; 0-10 amp.

MODEL 270, complete with test leads and Operator's Manual	$59.95
MODEL 270 RT, in Roll-Top Case	$65.95
25,000 V High Voltage Probe, No. 0247	$11.50
50,000 V High Voltage Probe, No. 0248	$12.50
Leather Carrying Case No. 1818	$ 8.50
Vinyl Carrying Case, No. 4236	$ 9.75

100,000 OHMS PER VOLT

MODEL 269*, AC-DC Volt-Ohm-Microammeter

Self Shielded . . . 33 ranges . . . 7″ scale . . . rugged Core Magnet Meter Movement with spring backed jewels. Can replace VTVM's for many voltage and resistance checks. Carrying case and accessory probes available.

VOLTS DC: 1.6, 8, 40, 160, 400, 1600, 4000 . . . 100,000 ohms per volt. Accuracy, ±3% of full scale.

VOLTS AC: 3, 8, 40, 160, 800 . . . 5,000 ohms per volt. Accuracy, ±5% of full scale.

OUTPUT: 3, 8, 40, 160 volts AC.

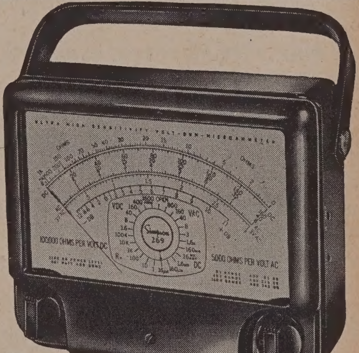
DECIBELS: —12 to +45.5 DB in 4 ranges. ODB = .001 watt in 600 ohms.

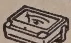
RESISTANCE DC: 0-2K ohms (18 ohms center); 0-20K ohms (180 ohms center); 0-200K ohms (1.8K ohms center); 0-2 megohms (18K ohms center); 0-20 megohms (180K ohms center); 0-200 megohms (1.8 megohms center). Accuracy, ±3% of arc length.

CURRENT DC: 0-16, 0-160 ua; 0-1.6, 0-16, 0-160 ma; 0-1.6, 0-16 a.

SIZE: 7-15/16″ x 6″ x 2-15/16″. WEIGHT: 4 lbs.

MODEL 269 with leads and Operator's Manual **$89.95**





*ADJUST-A-VUE HANDLE

DELUXE VOM

MODEL 262*, AC-DC Volt-Ohm-Milliammeter

This compact instrument is made possible by the Simpson **Self Shielded** Core Magnet Meter Movement with spring backed jewels. . . . 20,000 ohms per volt . . . 33 ranges . . . 7″ scale. Carrying case and accessory probes available.

VOLTS DC: 1.6, 8, 40, 160, 400, 1600, 4000 . . . 20,000 ohms per volt. Accuracy, ±3% of full scale.

VOLTS AC: 3, 8, 40, 160, 800 . . . 5,000 ohms per volt. Accuracy, ±5% of full scale.

OUTPUT: 3, 8, 40, 160 volts AC.

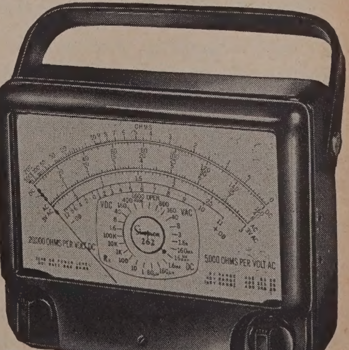
DECIBELS: —12 to +45.5 DB in 4 ranges. ODB = .001 watt in 600 ohms.

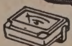
RESISTANCE DC: 0-500 ohms (4.5 center); 0-5K ohms (45 ohms center); 0-50K ohms (450 ohms center); 0-500K ohms (4.5K ohms center); 5 megohms (45K ohms center); 0-50 megohms (450K ohms center). Accuracy, ±3% of arc length.

CURRENT DC: 80, 160 ua; 1.6, 16, 160 ma; 1.6, 16 a.

SIZE: 7-15/16″ x 6″ x 2-15/16″. WEIGHT: 4 lbs.

MODEL 262 with leads and Operator's Manual **$69.95**





*ADJUST-A-VUE HANDLE

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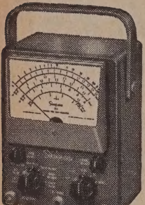


HIGH SENSITIVITY VTVM

Model 311

Compare these features: 22 MEGOHM Input Impedance • Peak-to-Peak Readings of Complex AC Voltages • Accessory RF Probe with High Frequency Response and Accuracy • New "TIMESAVER" Probe Tip Hangs on Wire for Continuous Readings, Gives Quick Pressure Contact also for Point-to-Point Readings • Unbreakable Metal Case • Sensibly Priced.

SPECIFICATIONS

DC VOLTS: 0-1.5, 5, 15, 50, 150, 500, 1500 (±3% accuracy). AC VOLTS: 0-1.5, 5, 15, 50, 150, 500, 1500 (±3% accuracy, of full scale).

AC PEAK-TO-PEAK: 0-4, 14, 40, 140, 400, 1400, 4000 volts (±5% accuracy, of full scale).

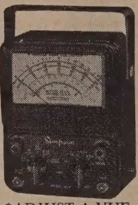
INPUT IMPEDANCE: 22 Megohms.

OHMS: X1; X10; X100; X1000; X10,000; X100,000; X1 megohm (meter can be set for center zero for FM alignment).

AC FREQUENCY RANGE: 30 to 100,000 cycles per second.

MODEL 311, complete with **slimline** probe, lead, ground cable, clips, and Operator's Manual.................. **$69.95**

RF PROBE: 50 cycles to 100 megacycles, ±5%; 0-150 volts RMS, maximum. Input capacity, 10 mmf **$11.50**



*ADJUST-A-VUE HANDLE

VACUUM TUBE VOLT-OHMMETER* MODEL 303*

AC VOLTS: 1.2, 12, 60, 300, 1200. Accuracy, ±5% of full scale.
DC VOLTS: 1.2, 12, 60, 300, 1200. Accuracy, ±3% of full scale.
OUTPUT: 1.2, 12, 60 volts AC.
RESISTANCE DC: 1K ohms (10 ohms center); 100K ohms (1000 ohms center); 1 megohm (10K ohms center); 10 megohms (100K ohms center); 1000 megohms (10 megohms center).
DECIBELS: —20 to +63 DB in 5 ranges. ODB = .001 watt in 600 ohms.
R.F. VOLTS: (with R.F. probe) 20 volts maximum. Frequency — Flat 20 Kc to 100 Mc.
LINE VOLTAGE: 105-125V, 50/60 Cycles.
Accessory Probes and Carrying Case available.
MODEL 303 with DCV Probe, ACV-Ohms Probe, Ground Lead, Operator's Manual **$73.95**

LOW-OHM-METER MODEL 362

Greater Accuracy from 0.1 to 25 ohms

—

Low Circuit Current

RANGES:
0-5 ohms and 0-25 ohms.

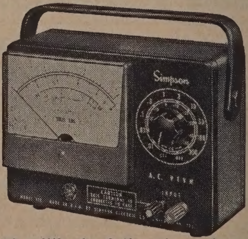
The two ranges of the Low-Ohm Meter permit highly accurate readings between 0.1 and 25 ohms. This is ideal for checking motor armatures and fields; switch and relay contact resistances; shorts between generator windings and grounds; shorts in TV and radio chassis wiring; electrical equipment in industrial plants; plus many other uses. Accuracy is within 3% of full scale value.

Model 362 with calibrated test leads **$24.95**

NEW! AC VTVM, Model 715

High input impedance, multi-voltage ranges and wide frequency response are incorporated in Model 715 to offer a greater versatility for general purpose applications. Ideal for hi-fi and general low level audio work such as hum and ripple measurements, IF gain and vibration analyzing. Model 715 features a specially designed meter scale that provides DB markings on both the voltage range positions and the meter scale.

Examine this high sensitivity AC VTVM, compare its features! It has the rugged dependability that has made Simpson the World's Largest Manufacturer of Electronic Test Equipment.



RANGES:
Volts: 0 to .01/.03/.1/.3/1/3/10/30/100/300 rms
Decibels: Total Range —52 to +52 DBM
Zero DBM: 1 millivolt in 600 ohms
Scale Markings: —12 to +2 DB
ACCURACY: ±5% of full scale
TESTER SENSITIVITY: 10 millivolts full scale on lowest range
INPUT IMPEDANCE: Minimum 1 meg @ 1 KC
INTERNAL MULTIPLIERS: ±1% precision resistors
FREQUENCY RESPONSE: 10 cps to 400 KC ±1 DB
INPUT POWER REQUIREMENTS: 110 to 125 VRMS, 50/60 cps @ 10 watts
SIZE: 7½" wide x 5½" high x 3" deep
NET WEIGHT: 3 pounds 12 ounces
Complete with operator's manual and test leads . . . **$69.95**

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INSTRUMENTS THAT STAY ACCURATE

COLOR BAR GENERATOR

Model 430

- **Service Any Color TV Receiver — Past, Present, and Future**
- **True, 100% Saturated NTSC Signals**
- **Exceptionally Wide Range of Outputs**
- **Outputs *Pictured in Color* on Single Master Control**

IMPORTANT SPECIFICATIONS

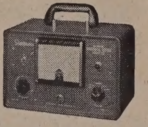
OUTPUTS — Y; chroma; color bar (8 bars simultaneously); R-Y; B-Y; R-Y and B-Y simultaneously; I; Q; I and Q simultaneously; G-Y at 90°; sync and burst; horizontal sync; high level 3.58 megacycle output; high level modulated rf output; positive or negative video output. 4.5 Megacycle (crystal controlled) marker for proper tuning.

CHROMA LEVEL SWITCH — 0 db for checking older style receivers and some current models; 6 db for video checks of newer receivers using vestigial color sideband alignment; 15 db for checking color sync lock under weak signal conditions. Variable chroma control position for other chroma levels.

COLOR BAR DISPLAY PATTERN — Left to right: red, yellow, green, cyan, white magenta, blue, black.

Model 430, complete with Operator's Manual, and Leads **$395.00**

In-Circuit HORIZONTAL SYSTEM ANALYZER, Model 382



Model 382 is the world's most complete "testing package" for analyzing TV horizontal deflection systems. With this **one** instrument, you can:

(1) Check any winding in the horizontal system (transformer or yoke) for **shorts** and **opens.** Even one shorted turn is clearly indicated on a large 4½″ meter. Uses reliable, time-proven Q-type test.

(2) Check flyback and yoke **system** IN-CIRCUIT (disconnect only plate cap of output tube). High-Q systems are checked on a quick-reading, Good-Bad scale (most present day sets use the High-Q system); Low-Q systems on comparative logging scale.

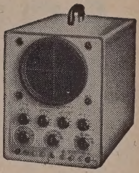
(3) Measure capacitance value (and check for open capacitors) — direct-reading scales indicate from 10 mmf to 0.1 mfd — no bridge to balance. Measures capacitance to better than 10%.

(4) Make continuity checks of **any** wire-wound component, such as width coils, linearity coils, oscillator transformers; check capacitors for direct shorts. Can check many other components for Q, also.

Model 382, test cable, Operator's Manual **$69.95**

COLORSCOPE

Model 458



- **100% RESPONSE AT 3.58 MC COLORBURST**
- **DUAL BANDWIDTH — NARROW OR WIDE**
- **BIG 7-INCH SCREEN**

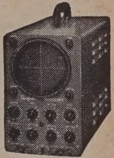
$249.95

Frequency Response of Vertical Amplifier
Wide Band Position
From 20 cycles/sec. to 4.5 mc/sec.—flat within ±1 db.
From 10 cycles/sec. to 5.0 mc/sec.—within ±2 db.
Rise Time — less than 0.05 microseconds.
Narrow Band Position
From 20 cycles/sec. to 200 kc/sec.—flat within ±1 db.
From 10 cycles/sec. to 300 kc/sec.—within ±2 db.
Maximum Vertical Deflection Sensitivity
WB:50 Mv RMS/inch; NB: 20 Mv RMS/inch
Frequency Response of Horizontal Amplifier
Same as Vertical Amplifier — Narrow Band Position
Maximum Horizontal Deflection Sensitivity
"Hi" — 150 Mv RMS/inch; "Low" — 1.4V RMS/inch
Z-axis sensitivity 4.0 volts RMS to extinguish beam
Calibrating Voltage (@ 117.5 VAC Input to Colorscope) 1.0 P-P volts ±10%
Maximum Input Voltage—600 volts peak
Input Resistance (Minimum)—3.3 Megohms ±10%
Input Capacitance @ 5.0 mc/sec.—20 uuf ±10%
Sawtooth Sweep Range—14 cycles/sec. to 250 kc/sec.

HANDISCOPE, Model 466

5″ SCREEN

Measures only 8″ x 12¼″ x 16¼″

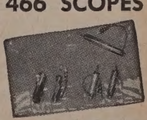


FREQUENCY RESPONSE OF VERTICAL AMPLIFIER: From 15 cycles/sec to 100 Kc/sec, flat within ±1 db; 6 db down at 250 Kc/sec; usable to 1 Mc/sec.
MAXIMUM VERTICAL DEFLECTION SENSITIVITY: 30 Millivolts R.M.S./inch.
FREQUENCY RESPONSE OF HORIZONTAL AMPLIFIER: From 15 cycles/sec to 20 Kc, flat within ±1 db; 6 db down at 100 Kc/sec.
MAXIMUM HORIZONTAL DEFLECTION SENSITIVITY: 0.7 volt RMS/inch.
Z-AXIS SENSITIVITY (VOLTAGE REQUIRED TO EXTINGUISH BEAM): 20 volts RMS.
CALIBRATING VOLTAGE (at 117.5 VAC power source): 1 volt P-P ±10%.
MAXIMUM INPUT VOLTAGE: 400 volts peak.
INPUT RESISTANCE: 0.1 Meg (at atten. x 1); 0.5 Meg (at atten. x 100).
INPUT CAPACITANCE: 40 uuf (at atten. x 1); 35 uuf (at atten. x 100).
SAWTOOTH SWEEP RANGE: 15 cycles/sec to 80 Kc/sec.

MODEL 466 with lead, Operator's Manual **$149.95**

PROBE KIT FOR 458 and 466 SCOPES

Adaptable to other Scopes Also



Model 739

Contains: Low Capacity, Voltage Double-Detector, 100:1 Voltage Divider, and Dual-Direct Probes; Plastic Roll Case; 466 Adapter Socket; and Operator's Manual **$45.15**

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INSTRUMENTS THAT STAY ACCURATE

PORTABLE
Field Strength Meter
Model 498A

- **Multi-Power**
- **Calibrated**
- **Operates Anywhere**
- **Covers All Channels**

This newest Simpson calibrated field strength meter provides means for measurement of television signals in any locality. It answers the need of service technicians for a combination power line or battery operated field strength meter that is self-charging.

MODEL 498A covers all channels. UHF and VHF. Measures relative field strength from approximately 20 microvolts to .05 volts. Excellent for fringe areas. Also useful as a tuner substitute when servicing TV. Continuously variable sensitivity. Operates from any **one** of **four** sources: (1) 117 VAC line; (2) Self-contained storage battery*; (3) Your automobile battery; and (4) Your external battery.

ACCURACY: VHF (±6 db); UHF (±8 db).

SIZE: 8″ x 11″ x 8½″. WEIGHT: 11½ lbs. Shipping Wt: 15 lbs.

MODEL 498A, 117 VAC and 6.3 VDC, less battery. **$199.95**

No. 5721 Storage battery, 12 ampere hour capacity. **$14.00**

*Internal storage battery can be recharged by self-contained charger or from your automobile battery while traveling between jobs.

PLATE CONDUCTANCE
TUBE TESTER
Model 1000

Extra Lo-Volt Leakage Test
Will Not Damage Any Tube

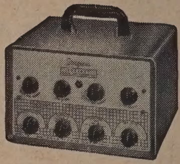
MODEL 1000 is ideal for radio-TV and industrial control servicing. Tests any receiving tube, including 9 pin miniatures and sub-miniatures with base arrangements in a line or circle. The Simpson plate conductance method makes testing simpler . . . more positive . . . more accurate. Multi-position toggle switches provide quick adjustment.

Snap-Out-Snap-In transparent plastic windows are provided over the roll chart . . . add new tube data at any time.

LINE VOLTAGE: 105-125 Volts, 50-60 cycle.
SIZE: 15¾″ x 11¾″ x 6″.
WEIGHT: 15 lbs. Shipping Wt: 19 lbs.

MODEL 1000 complete with Operator's Manual **$189.95**

VARIDOT
WHITE DOT GENERATOR
MODEL 434A



VARIABLE DOT SIZE . . . VARIABLE DOT NUMBER

The NEW Simpson Model 434A provides white dot patterns with variable dot size (from 1 to 8 scanning lines, with corresponding dot widths), and variable dot number, from 6 to 11 horizontal dots, and 6 to 12 vertical dots.

Very high modulation provides bright, clear dots.

With the Model 434A White Dot Generator, you make linearity adjustment of black and white TV and linearity and convergence adjustments on color TV receivers with confidence. Adjustable dot size provides a check of receiver transient response.

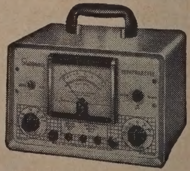
Horizontal and vertical sync pulses are provided, with adjustable vertical sync which can be operated at line frequency or off line frequency. This also operates as a hum-check control for both color and black and white receivers. This feature is rarely found in test equipment offered at this price. Vertical and horizontal synchronization assures you of correct aspect ratio . . . ample attenuation . . . 300 ohm RF output.

Positive or negative video output . . . excellent for accurate and fast checking transient response of video amplifiers is available.

Modulated RF output is available, operating on fundamentals from Channel 2 to Channel 6. Line Voltage: 117 Volts, 50-60 cycles, 45 watts.

DEALER'S NET PRICE, Complete with operating instructions and output cables **$149.95**

CAPACOHMETER
Model 383A
World's First IN-CIRCUIT
Capacitor Leakage Tester



The "Capacohmeter" combines in "one package" the flexibility to: (a) Measure leakage of defective paper, mica, or ceramic capacitors in ohms; (b) indicate directly the capacitance of good paper, mica, or ceramic capacitors over a range of 10.0 micromicrofarads to 10.0 microfarads; (c) detects many marginal capacitors by means of a pulse technique. All tests are read directly on a 4½″ instrument. No adjusting of a bridge circuit and balancing controls. All measurements made under load conditions. Borderline capacitors which cause costly "call backs" are immediately "knocked out" with the "pulse test." Many tests are made right "in circuit."

Model 383A, complete with test leads and Operator's Manual **$89.95**

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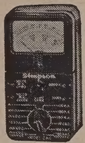
INSTRUMENTS THAT STAY ACCURATE

SIMPSON MICROTESTERS (Size: 3" x 5⅞" x 2½")

AC-DC VOLT-OHM-MILLIAMMETER, Model 240



Designed for radio testing . . . 1000 ohms per volt, AC and DC.

AC VOLTS: 15, 150, 750, 3000.

DC VOLTS: 15, 75, 300, 750, 3000.

DC MILLIAMPERES: 15, 150, 750.

OHMS: 0-3000 (center scale 30); 0-300,000 (center scale 3000). Model 240 with Leads. **$31.95**

AC-DC VOLT-OHM-MILLIAMMETER, Model 230 — AC Volts: 10, 250, 1000 (400 ohms per volt) — DC Volts: 10, 50, 250, 1000 (1000 ohms per volt) — DC Milliamperes: 10, 50, 250 — Ohms: 0-1000, 0-100,000 — with Leads **$30.95**

DC AMMETER, Model 375 — 0-1, 2.5, 5, 10, 25 amps **$21.95**

DC MILLIAMMETER, Model 373 — 0-1, 5, 10, 25, 50, 100, 250, 1000 ma **$21.95**

DC MICROAMMETER, Model 374 — 0-50, 100, 250, 500, 1000 ua **$24.95**

AC AMMETER, Model 370 — 0-1, 0-2.5, 0-5, 0-10, 0-25 amps **$22.95**

AC MILLIAMMETER (Self-contained transformer), Model 378 — 0-5, 25, 100, 250, 1000 ma **$24.95**

DC VOLTMETER (Res. 1000 ohms per volt), Model 377 — 0-1, 2.5, 5, 10, 25, 50, 100, 250, 500, 1000 DC volts **$22.95**

AC VOLTMETER (Rec. Type — 1000 ohms per volt), Model 376 — 0-5, 10, 25, 50, 100, 250, 500, 1000 AC volts **$21.95**

AC VOLTMETER, Model 371 — 0-150, 0-300, 0-600 volts **22.95**

OHMMETER, Model 372—0-500 ohms (5 ohms center); 0-5000 ohms (50 ohms center); 0-50,000 ohms (500 ohms center); 0-500,000 ohms (5,000 ohms center); 0-5 meg. (50,000 ohms center); 0-50 meg. (500,000 ohms center) — with Leads **$29.95**

AC VOLT-AMP-WATTMETER, Model 390 — Volts: 0-150, 300 — Amps: 0-0.3, 15 — Watts: 0-300, 600, 1500, 3000—with break-in plug and Leads.... **$48.95**

AC-DC VOLT-WATTMETER, Model 391 — AC or DC — Volts: 0-130, 0-260 — Watts: 0-1500, 0-3000 — with Cord and Plug **$43.95**

AC-DC VOLT-WATTMETER, Model 392 — AC or DC — Volts: 0-130, 0-260 — Watts: 0-1000, 0-5000 — with Cord and Plug **$43.95**

BATTERY TESTER, Model 379 — (Separate arcs for Radio A Batteries, Hearing Aid A Batteries, and for all B Batteries) — with Leads **$29.95**

TEMPERATURE TESTERS — Check 3 Temperatures at 1 Time

THERM-O-METER*

Model 388-3L

Scale: Fahren./cent.
—50°F to +1000°F
—46°C to + 538°C

The Therm-O-Meter measures the temperature of air, gases, liquids, or solids by means of thermocouple type leads. Readings can be made in 15 to 30 seconds, and up to a distance of 7½'. Model 388-3L, the three-lead model, is particularly useful where two or three temperatures must be measured at the same time.

LEADS — Two types available: General Purpose and Surface Temperature probe. Length is 7½'.

SIZE AND WEIGHT—7-15/16" x 6" x 2-15/16", 4 lbs.

MODEL 388-3L* (for three leads) with one No. 0190 general purpose lead, battery, and Operator's Manual. **$67.95**

MODEL 388* (for one lead) with one No. 0190 general purpose lead, battery, and Operator's Manual. **$62.95**

Ever-Redy Carrying Case, Vinyl, No. 5262.......... **$9.95**

General Purpose Lead, No. 0190.......... **$4.95**

Surface Temperature Probe Lead, No. 0187....... **$8.95**

*Adjust-A-Vue Handle supports instrument at convenient angles.

TEMPERATURE METER

Model 385-3L

Measures Temperatures from —50° to +70° F

The Temperature Meter was developed primarily for servicing refrigeration equipment such as deep-freeze units, home refrigerators, and walk-in coolers. It can also be used to service air-conditioning units when the test requirements fall within its temperature range.

MODEL 385-3L, for three 15-foot leads, is especially useful where two or three temperatures must be checked at the same time, such as in setting up a refrigerator thermostat or in checking ambient temperature rises and control apparatus.

LEADS — General purpose type, 15' long. Thermistor tip.

SIZE AND WEIGHT — 3" x 5⅞" x 2½", 1½ lbs.

MODEL 385-3L (for three leads) with one test lead and Operator's Manual **$33.95**

Additional Thermistor Lead, No. 0010 .... **$4.75**

Ever-Redy Carrying Case, Leather, No. 4299 **$8.75**

* Simpson

INSTRUMENTS THAT STAY ACCURATE

1906
195-
Ray R. Simpson
OVER 50 YEARS
IN THE INSTRUMENT BUSINESS

DUAL RANGE THERM-O-METER

Low Range, —50° to 100°F; High Range, 100° to 250°F

APPLICATIONS — Frozen Food Packaging, Ice Manufacturing, Freezer Storage, Refrigeration, Photo Processing, Air Conditioning, Heating Systems, Pasteurization, Distillation, and numerous others. Readings are made in 15 to 30 seconds.

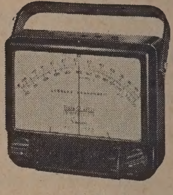
ACCURACY — Over-all accuracy is ±3°F, in any position. However, near center scale, accuracy is within ±2°F or better. Compensated for room temperature effects from 60°F to 100° F.

PROBE — Thermistor tip with a 15′ lead. The lead cord is only .144″ in diameter to permit closing doors of equipment being checked. Model 389-3L is designed to accommodate 3 leads simultaneously with separate readings through one selector switch.

MODEL 389-3L, Complete with single Thermistor, Lead, and Operator's Manual **$62.50**

Additional Thermistor Lead, No. 0010 **4.75**

Carrying Case, No. 5262 **9.95**



Model 389-3L

Measures Temperatures In Up to *Three* Locations at *One* Time on a combination Fahrenheit and Centigrade scale.

Checks Safety Thermocouples on GAS-FIRED Equipment

MILLIVOLTMETER

MODEL 387

For Servicing Gas-Fired—

Furnaces • Boilers • Heaters • Hot Water Heaters • Dryers • Refrigerators

The new Simpson Millivoltmeter makes gas unit servicing faster, more accurate. Simply place the probe leads across the thermocouple terminals and test for correct value. Ranges are 10, 30, 100, 300, and 1000 millivolts. Accuracy is 3% of full scale from 50° to 120°F. Handy pocket size—only 3″ x 5⅞″ x 2½″.

Simpson
MODEL 387

MODEL 387, with leads and Operator's Manual **$29.95**

ACCESSORIES FOR SIMPSON TEST EQUIPMENT

Ever-Ready Leather Carrying Case
No. 4236 $9.75

CARRYING CASES . . . Save you time and protect your instruments. Instruments are always ready for instant testing.

For Models	Part No.	Price
260, 270—Leather	1818	$8.50
260, 270, 303—Ever-Redy Leather	4236	9.75
262, 269, 388-3L, 389-3L—Ever-Redy Vinyl	5262	9.95
385-3L—Ever-Redy Vinyl	8073	8.75
391, 392—Leatherette-Covered	3413	5.95
355—Ever-Redy Leather	6355	3.95
All Microtesters—Ever-Redy Leather	4299	7.50
All Microtesters—Leatherette-Covered	3011	5.95

LEADS

For Models	Part No.	Price
260 Series 3, Banana plugs and alligator clip	7500	$ 2.10
260 Series 3, Banana plugs and test prods	7538	2.50
355 Test prods	8600	1.85
385,-3L, 389-3L, 15 ft. Thermistor lead	0010	4.75
385,-3L, 389-3L, 30 ft. Thermistor lead	0216	5.55
385,-3L, 389-3L, 50 ft. Thermistor lead	0415	6.50
385,-3L, 389-3L, 100 ft. Thermistor lead	0416	8.70
385,-3L, 389-3L, 150 ft. Thermistor lead	0417	$10.95

For Models	Part No.	Price
Test prods and elbow terminals 230/240/260-2/372	8381	$2.50
Test prods and spade terminals—all microtesters	8379	2.50
Alligator clips and elbow terminals—230/240/260-2/372	8375	1.75
Alligator clips and spade terminals—all microtesters	8376	1.75
Combination test prods with removable alligator clips and elbow terminals 262/269	8463	2.30

PROBES—High Voltage Types

For Models	Probe No.	Price
221 (30,000v)	0009	$12.55
260 Series 2 (25,000v)	0007	10.75
260 Series 2 (50,000v)	0179	12.50
260 Series 3 (25,000v)	0247	11.50
260 Series 3 (50,000c)	0248	12.50
262 (16,000v)	0172	11.95
262 (40,000v)	0180	12.50
269 (16,000v)	0173	11.95
269 (40,000v)	0181	13.50
270 (25,000v)	0247	11.50
270 (50,000v)	0248	12.50
303 (30,000v)	0074	11.95

Miscellaneous Type Probes

For Models	Part No.	Price
303 High frequency	0073	$ 8.75
303 AC Probe	0068	3.55
303 DC Probe	0067	3.55
303 Ground lead	0069	1.00
311 High frequency	0731	11.50
311 High voltage	0732	11.75
311 DC-AC/OHMS	0734	8.50
311 Ground lead	0733	1.25
388-3L General purpose thermocouple	0190	4.95

Miscellaneous Type Probes

For Models	Part No.	Price
388,-3L Surface temperature thermocouple	0187	$ 8.90
479, 480 High frequency crystal probe and cable	0185	7.65
479, 480 Output cable 45mc	0046	4.25
Voltage Doubler	0740	14.65
Low Capacitance	0741	14.00
100:1 Voltage Divider	0742	15.20
Direct-Resistive Dual Purpose	0743	11.55

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Ray R. Simpson
OVER 50 YEARS
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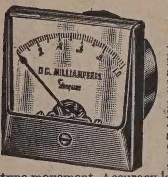
INSTRUMENTS THAT STAY ACCURATE

Accurate Panel Meters



"WIDE-VUE" PANEL INSTRUMENTS

Modern styling with durable, open face plastic cover for wide-angle readability and protection of meter face; permits longer scales. Black, one-piece wrap-around cover is made of methyl methacrylate. Black bakelite case on 2½" and 3½" models; lucite case on 4½" units. DC meters have self-shielded core magnet movements except 0-25 and 0-50 microammeters and VU meters, which are external magnet type. AC meters have moving vane type movement. Accuracy is 2% except Models 1347C and 1349C, 5%. All are calibrated for nonmagnetic panels; for steel panels, state panel thickness and add **$1.65** to prices shown.

Models 1227C and 1257—2½" meters require 2.17" dia. hole; four mounting studs on 1.88" centers. Scale length 2.36".

Models 1327C, 1347C and 1357—3½" meters require 2.73" dia. hole; four mounting studs on 2.24" centers. Scale 3.14" long.

Models 1329C, 1349C and 1359—4½" meters secure 2.75" dia. hole; four mounting studs on 4" x 3.56" centers. Scale length, 3.93".

VOLTMETERS

Model Range	1227C	1327C	1329C	1257	1357	1359
		DC			AC	
0-5	$13.35	$13.80	$15.30	....	$12.15	$13.95
0-8	....	13.80	15.30	....	....	....
0-10	13.35	13.80	15.30	$11.85	12.15	13.95
0-15	13.35	13.80	15.30	....	12.15	13.95
0-25	13.35	13.80	15.30	12.00	12.60	13.95
0-30	13.35	13.80	15.30	....	....	....
0-50	13.35	13.80	15.30	12.00	12.60	13.95
0-100	13.35	13.80	15.30	....	13.20	13.95
0-150	13.35	13.80	15.30	12.60	13.50	14.55
0-200	....	13.80	15.30	....	....	....
0-250	....	13.80	15.30	....	13.50	14.55
0-300	13.35	13.80	15.30	12.60	13.50	14.55
0-500	13.80	14.55	15.75	....	17.40	18.60
0-750	17.10	14.55	15.75	....	....	....
0-1000	17.40	18.15	19.35	....	....	....

AMMETERS

AC-DC units have internal shunts for ranges up to and including 50 amps.

Model Range	1227C	1327C	1329C	1257	1357	1359
		DC			AC	
0-1	$12.60	$13.20	$14.55	$11.25	$12.00	$14.10
0-1.5	12.60	13.20	14.55	11.25	12.00	14.10
0-2	12.60	13.20	14.55	....	12.00	14.10
0-3	12.60	13.20	14.55	....	12.00	14.10
0-5	12.60	13.20	14.55	11.25	12.00	14.10
0-10	12.60	13.20	14.55	11.25	12.00	14.10
0-15	12.60	13.20	14.55	11.25	12.00	14.10
0-25	12.60	13.20	14.55	11.85	12.45	14.55
0-30	....	13.20	14.55	....	....	....
0-50	12.60	13.20	14.55	11.85	12.45	14.55
0-100	12.60	13.20	14.55	....	12.00	14.10
0-150	12.60	13.20	14.55	....	12.00	14.10
0-200	....	13.20	14.55	....	12.00	14.10
0-300	....	13.20	14.55	11.25	12.00	14.10
0-500	....	13.20	14.55	....	....	....
15-0-15	....	14.10	....	....	....	....
30-0-30	....	14.10	....	....	....	....
50-0-50	....	14.10	....	....	....	....

MILLIAMMETERS

Model Range	1227C	1327C	1329C	1257	1357	1359
		DC			AC	
0-1	$12.45	$13.05	$13.80	....	....	....
0-3	12.45	13.05	13.80	....	....	....
0-5	12.45	13.05	13.80	....	....	....
0-10	12.45	13.05	13.80	....	....	....
0-15	12.45	13.05	13.80	....	....	....
0-20	....	13.05	13.80	....	....	....
0-25	12.75	13.35	14.55	....	....	....
0-50	12.75	13.35	14.55	....	$12.00	$14.10
0-100	12.75	13.35	14.55	....	12.00	14.10
0-150	12.75	13.35	14.55	....	....	....
0-200	12.75	13.35	14.55	....	....	....
0-250	12.75	13.35	14.55	....	12.00	14.10
0-300	12.75	13.35	14.55	....	....	....
0-500	12.75	13.35	14.55	$11.25	12.00	14.10
0-750	....	13.35	14.55	....	....	....
0-1000	....	13.35	14.55	....	....	....

DC MICROAMMETERS

Range	Approx. Resis. Ohms	Net Each		
		1227C	1327C	1329C
0-15*	4500	....	$22.05	$24.15
0-25*	2200	$18.75	19.65	21.75
0-50*	2000	16.20	16.65	18.00
0-100	2000	14.55	15.15	16.95
0-200	1000	13.20	13.80	15.30
0-500	200	13.05	13.50	14.70
25-0-25*	2000	....	16.80	18.15
50-0-50	2000	14.70	15.30	17.10
100-0-100	1000	....	13.95	15.45
500-0-500	46	....	13.20	13.95

*Has external magnet type movement.

RECTIFIER TYPE AC VOLTMETERS

Range	Approx. Resis. Ohms Per Volt	Net Each	
		Model 1347C	Model 1349C
0-5	1000	$17.85	$19.65
0-10	1000	17.85	19.65
0-15	1000	17.85	19.65
0-50	1000	17.85	19.65
0-150	1000	17.85	19.65
0-150	2000	18.60	20.40
0-300	1000	17.85	19.65

VOLUME LEVEL INDICATORS

Range	Model 1247C	Model 1347C	Model 1349C
General Purpose DB*	$17.90	$18.15	$19.80
AC Scale VU†	....	22.05	23.25
B Scale VU†	....	22.05	23.25

*Zero power level, 6 mw 500 ohm; 5,000 ohm range; core magnet.
†Reference level, 1 mw 600 ohm line; external magnet type.

RF AMMETERS

Model	Ranges Available (Amperes)								Net Each
1337C	0-1	0-1.5	0-2	0-2.5	0-3	0-5	0-8	0-10	$15.45
1339C	0-1	0-1.5	0-2	0-2.5	0-3	0-5	0-8	0-10	17.70

DC GALVANOMETERS

Scale	Sensitivity, μa	Resistance, Ohms (Approx.)	Net Each	
			1227C	1327C
50-0-50	500-0-500	46	$12.45	$13.20
50-0-50	75-0-75	2000	13.50	14.70

DC MILLIVOLTMETER

Range	Resistance, Ohms (Approx.)	Net Each		
		1227C	1327C	1329C
0-50	10	$12.60	$13.20	$14.55

EDGEWISE PANEL INSTRUMENTS

2
4
6
8
10
DC VOLTS
Simpson

Unusual design permits mounting wherever space is a problem; makes every square inch count on a crowded panel; will solve many of your design problems. Supplied complete with mounting hardware, including bezel with two speed nuts for quick, simple mounting.

Types: Direct Current and AC Rectifier. **Accuracy:** DC, 2% of full scale; AC Rectifier, 5%. **Pointers:** Knife-edge, lance, spade types. **Standard Scale:** Black numbers on white background; 1⅞" long. **Terminals:** Solder or stud type. **Case:** Dustproof, molded lucite. Weight, about 5 oz.

MODEL 1502

DC AMMETERS

Range	Net	Range	Net	Range	Net
0-5	$15.30	0-15	$15.30	0-50	$15.30
0-10	15.30	0-25	15.30		

MODEL 1502 (Continued)

DC VOLTMETERS

Range	Net	Range	Net	Range	Net
0-10	$14.55	0-50	$14.55	0-300	$14.55
0-15	14.55	0-150	14.55	0-500*	14.70

*2,000 ohms/v.; all others 1,000 ohms/v.

DC MILLIAMMETERS

0-1	$14.40	0-50	$15.00	0-250	$15.00
0-5	14.40	0-100	15.00	0-300	15.00
0-10	14.40	0-150	15.00	0-500	15.00
0-25	15.00	0-200	15.00		

DC MICROAMMETERS

Range	Net Each	Range	Net Each
0-25	$21.75	0-200	$15.30
0-50	19.05	0-500	14.85
0-100	16.95		

MODEL 1507

VU Meters*		AC Voltmeters†	
Range	Net Each	Range	Net Each
"A" Scale	$24.30	0-150	$18.75
"B" Scale	24.30	0-300	18.75

*Volume level indicators. †Rectifier type, 1,000 ohms/volt resistance.

65-60B

ELAPSED-TIME METER

Use self-starting synchronous clock motors. Indicate up to 9999.9, then recycle and begin again at 0000.0. Molded bakelite case similar to the Simpson 3½" rectangular meters. Case depth 2⁹⁄₁₆". Mounting by four studs, 4-36 threaded.

Range	Model 55ET*	Model 57ET†
120 v., 60 cps	$17.95	$17.95
240 v., 60 cps	18.25	18.25

*Round case. †Illustrated.

NEW MODEL 29XA FRONT ADJUSTABLE METER RELAYS

For alarm, control or limit setting uses. Non-locking contacts may be positioned along scale through external, front adjustment. Rectangular construction, similar to Type 29 meters. Size: Face, 4¹³⁄₆₄" x 4²¹⁄₃₂"; body, 2¾" dia. x 1" deep.

DC Microammeter—0-50 μa. Net Each	$44.10
DC Microammeter—0-100 μa. Net Each	$42.15
DC Microammeter—0-500 μa. Net Each	$39.00
DC Milliammeter—0-1 ma. Net.	38.10
DC Millivoltmeter—0-50 mv....	38.25

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INSTRUMENTS THAT STAY ACCURATE

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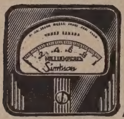

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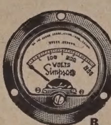

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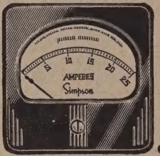

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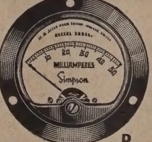

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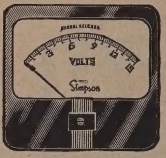


E

FIGURE A—Models 127, 137, 147, 157. 2½" rectangular case. Width 2⅜"; height, 2⅜". Mounts in round hole. Body diameter, 2 3/16". Scale length, 1⅞". Bakelite case.
FIGURE B—Models 125, 135, 145, 155. 2½" round case, open face style. Flange diameter, 2¾"; depth overall, 2 5/16"; body diameter, 2 11/16"; scale length, 1⅞". Bakelite case.
FIGURE C—Models 27, 37, 47, 57. 3½" rectangular case. Width, 3"; height, 3⅛". Mounts in round hole. Body diameter, 2¾". Scale length, 2 9/16". Bakelite case.
FIGURE D—Models 25, 35, 45, 55. 3½" round case. Open face style. Flange diameter, 3½"; depth overall, 2¼"; body diameter, 2¾"; scale length, 2 9/16". Bakelite case.
FIGURE E—Models 29, 39, 49, 59, 4½" rectangular case. Width, 4 21/32"; height, 4 13/64". Mounts in round hole. Body diameter, 2¾". Scale length, 3 29/32". Bakelite case.

*ILLUMINATED DIALS

The 2½" and 3½" rectangular instruments indicated (*) in tables below are also carried in stock with lucite illuminated dials. Supplied complete with socket and 6 volt bulb for additional Dealer Net of **$3.45.** 2½" R.F. ammeters lucite illum. must be supplied with external thermocouple. Add **$5.55** to Net for couple. **All instruments calibrated for use on non-magnetic panels.**

ALL PRICES ARE DEALER NET

VOLTMETERS

External resistors are furnished on AC meters having a range of 500 volts or higher, 2½" DC meters 750 volts or higher, 3½" and 4½" DC meters, 1000 volts or higher.

Model	125-127	25-27	29	155-157	55-57	59
Range	DC			AC		
0-1.5	$12.15	$12.60	$13.95	$10.80	$11.55	$13.20
0-3	12.15	12.60	13.95	10.80	11.55	13.20
0-5	12.15	12.60	13.95	10.80	11.55	13.20
0-8	12.15	12.60	13.95	....	....	....
0-10	12.15*	12.60*	13.95	10.80*	11.55*	13.20
0-15	12.15	12.60	13.95	10.80*	11.55*	13.20
0-25	12.15	12.60	13.95	11.25	11.85	13.20
0-30	12.15	12.60	13.95	....	....	....
0-50	12.15*	12.60*	13.95	11.25	11.85	13.20
0-100	12.15	12.60	13.95	12.30	12.90	13.80
0-150	12.15*	12.60*	13.95	12.00*	12.75*	13.95
0-200	12.15	12.60	13.95	....	....	....
0-250	12.15	12.60	13.95	12.00	12.75	13.95
0-300	12.15*	12.60*	13.95	12.00*	12.75*	13.95
0-500	12.90*	13.20*	14.40	16.50	16.80	17.40
0-750	15.75	13.20	14.40	18.30	18.45	19.20
0-1000	16.05	16.65*	18.30	19.80	19.95	20.85
0-1500	....	16.95	18.60	....	....	....
0-2000	....	17.25*	18.90	....	....	....
0-2500	....	17.55	19.20	....	....	....
0-3000	....	17.85*	19.50	....	....	....
0-4000	....	18.15*	19.80	....	....	....
0-5000	....	18.45*	20.10	....	....	....

AMMETERS

0-1	$12.00	$12.45	$13.80	$10.65	$11.25	$13.50
0-1.5	12.00	12.45	13.80	10.65	11.25	13.50
0-2	12.00	12.45	13.80	10.65	11.25	13.50
0-3	12.00	12.45	13.80	10.65	11.25	13.50
0-5	12.00	12.45	13.80	10.65	11.25	13.50
0-10	12.00	12.45	13.80	10.65	11.25	13.50
0-15	12.00	12.45	13.80	10.65	11.25	13.50
0-25	12.00	12.45	13.80	10.95	11.55	14.10
0-30	12.00	12.45	13.80	10.95	11.55	14.10
0-50	12.00	12.45	13.80	10.95	11.55	14.10
0-75	11.55	12.00	13.50	10.65	11.25	13.50
0-100	11.55	12.00	13.50	10.65	11.25	13.50
0-150	11.55	12.00	13.50	10.65	11.25	13.50
0-200	11.55	12.00	13.50	10.65	11.25	13.50
0-250	11.55	12.00	13.50	10.65	11.25	13.50
0-300	11.55	12.00	13.50	10.65	11.25	13.50
0-500	11.55	12.00	13.50	10.65	11.25	13.50
0-750	11.55	12.00	13.50	....	....	....
0-1000	11.55	12.00	13.50	....	....	....
15-0-15	12.30	12.75	14.25	....	....	....
30-0-30	12.30	12.75	14.25	....	....	....
50-0-50	12.30	12.75	14.25	....	....	....

WATTMETERS—DYNAMOMETER TYPE

Watts	Volts	Amps	175-177	75-77	79
0-75	150	1.0	$25.35	$26.70	$33.00
0-150	150	2.0	25.35	26.70	33.00
0-300	150	4.0	25.35	26.70	33.00
0-750	150	10.0	25.35	26.70	33.00
0-600	300	4.0	27.75	29.10	35.55
0-1500	300	10.0	27.75	29.10	35.55
0-3000	300	20.0	27.75	29.10	35.55

DC GALVANOMETERS

Scale	Sensitivity Micro-Amperes	Resistance	Model 125-127	Model 25-27
50-0-50	500-0-500	46 ohms	$11.85	$12.30
50-0-50	75-0-75	2000 ohms	12.75	14.10

MILLIAMMETERS

Model	125-127	25-27	29	155-157	55-57	59
Range	DC			AC		
0-1	$11.25*	$11.85*	$13.05	....	....	....
0-1.5	11.25	11.85	13.05	....	....	....
0-3	11.25	11.85	13.05	....	....	....
0-5	11.25	11.85	13.05	....	....	....
0-10	11.25*	11.85*	13.05	$10.65	$11.25	$13.50
0-15	11.25*	11.85*	13.05	10.65	11.25	13.50
0-20	11.25	11.85	13.05	....	....	....
0-25	12.00*	12.45*	13.95	10.65	11.25	13.50
0-50	12.00*	12.45*	13.95	10.65	11.25	13.50
0-75	12.00	12.45	13.95	....	....	....
0-100	12.00*	12.45*	13.95	10.65	11.25	13.50
0-150	12.00	12.45	13.95	....	....	....
0-200	12.00*	12.45*	13.95	....	....	....
0-250	12.00	12.45	13.95	10.65	11.25	13.50
0-300	12.00*	12.45*	13.95	....	....	....
0-500	12.00*	12.45*	13.95	10.65	11.25	13.50
0-750	12.00	12.45	13.95	....	....	....
0-1000	12.00	12.45	13.95	....	....	....

DC MICROAMMETERS

Range	Approximate Resist., Ohms	Model 125-127	Model 25-27	Model 29
0-15 μa	4500	....	$22.05	$24.15
0-25 μa	2200	18.75	19.65	21.75
0-50 μa	2000	16.20	16.65	18.00
0-100 μa	2000	13.95	14.55	16.35
0-200 μa	1000	12.30	13.05	14.55
0-500 μa	200	11.85	12.45	13.95
25-0-25 μa	2000	....	16.80	18.15
50-0-50 μa	2000	....	14.70	16.50
100-0-100 μa	1000	....	13.20	14.85
500-0-500 μa	46	....	12.00	13.20

DC MILLIVOLTMETERS

Range 0-50 mv: **Model 125-127, $11.55; Model 25-27, $12.00; Model 29, $13.50.** Range 0-100 mv: **Model 125-127, $11.55; Model 25-27, $12.00; Model 29, $13.50.**

AC VOLTMETERS—RECTIFIER TYPE

Range	1000 Ohms/Volt		2000 Ohms/Volt	
	Model 45-47	Model 49	Model 45-47	Model 49
0-1	$17.25	$19.05	$17.85	$19.65
0-3	17.25	19.05	17.85	19.65
0-5	17.25	19.05	17.85	19.65
0-10	17.25	19.05	17.85	19.65
0-15	17.25	19.05	17.85	19.65
0-50	17.25	19.05	17.85	19.65
0-100	17.25	19.05	17.85	19.65
0-150	17.25	19.05	17.85	19.65
0-300	17.25	19.05	17.85	19.65

AC MILLIAMMETERS AND MICROAMMETERS

Milliammeters			Microammeters		
Range	Model 45-47	Model 49	Range	Model 45-47	Model 49
0-1	$17.10	$18.60	0-100	$19.65	$21.15
0-2	17.10	18.60	0-200	17.25	18.90
0-5	17.10	18.60	0-300	17.10	18.60
			0-500	16.80	18.30

RF AMMETERS—INTERNAL THERMOCOUPLE TYPE

Range	Approximate Resist., Ohms	Model 135-137	Model 35-37	Model 39
0-1	.343	$13.20*	$14.10*	$16.35
0-1.5	.200	13.20	14.10	16.35
0-2	.120	13.20*	14.10*	16.35
0-2.5	.10	13.20	14.10	16.35
0-3	.08	13.20*	14.10*	16.35
0-5	.045	13.20*	14.10*	16.35
0-8	.031	13.20	14.10	16.35
0-10	.023	13.20	14.10	16.35

RF MILLIAMMETERS

0-115†	....	....	$27.45	$28.95
0-150	4.5	....	17.10	19.50
0-250	3.0	....	17.10	19.50
0-500	.6	....	17.10	19.50

†0-100 linear scale—50 divisions.

VOLUME LEVEL INDICATORS—DB METERS

Zero Power Level—6 milliwatts. 500 ohm line.

Description −10 to +6 db, 5000 ohms	Models		
	145-147	45-47	49
General Purpose type	$17.40	$17.55	$19.20
High Speed type	....	19.50	20.85
Low Speed type	....	19.35	20.25
VU METERS—Reference Level, 1 milliwatt. 600 ohm line.			
Not Illum. A or B Scale. 3900 ohms	....	$21.45	$23.25†
Illuminated A or B Scale. 3900 ohms	....	....	25.80†

†Model 142—4" Rectangular; Fig. E.

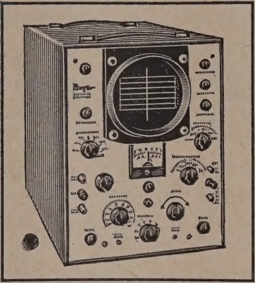
★ Simpson

1906
195-
Ray R. Simpson
OVER 50 YEARS
IN THE INSTRUMENT BUSINESS

INSTRUMENTS THAT STAY ACCURATE

Lab Test Instruments

MODEL 2610 WIDE BAND OSCILLOSCOPE



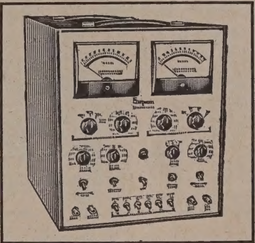
High gain and stability for production line or lab use. Accuracy, ±3% of vertical calibration. Graticule calibrated in centimeters; controlled edge illumination. Removable bezel has mounting studs for standard camera mount. BNC connectors. VERTICAL AMPLIFIER: **Response:** Linear Position, DC to 5.0 mc/sec, ±0.5 db or DC to 8.0 mc/sec, ±1.5 db; Transient Position, DC to 3.5 mc/sec, −3 db and −6 db at 5.0 mc/sec.; Differential Input, 2 cps to 3.0 mc/sec., ±1.5 db. **Sensitivity:** 2.5 mv rms/cm without delay line; 5.0 mv rms/cm with delay line; 2.5 mv rms/cm differential. **Rise Time:** 0.1 µsec. in Transient Position. **Delay:** 0.25 µsec delay line. **Attentuation:** Multipliers of X1, X3, X10, X30, X100, X300, X1000, plus 12 db attenuator; Differential Input variable 0-12 db through vertical gain control. **Input Impedance:** 1.0 megohm shunted by 30 µµf (AC or DC coupled); Differential Input, 1.0 megohm shunted by 15 µµf (AC coupled only). **Probe:** 10:1 probe with 10 megohm input resistance shunted with 15 µµf. HORIZONTAL AMPLIFIER: **Response:** 2 cps to 1.0 mc/sec, ±1.5 db. **Sensitivity:** 12 mv rms/cm (min.). **Attenuation:** Three 20 db steps, plus 21-22 db variable attenuator. **Input Impedance:** 1.0 megohm shunted by 45 µµf (AC only). Sawtooth voltage output of horizontal sweep signal provided. **Switching:** May be connected (by BNC) to external source; may be connected internally to time base. TIME BASE RECURRENT SWEEPS: **Recurrent Sweep Frequency:** 3 cps to 500 kc (3-10, 10-30, 30-100, 100-300, 300-1000, cps; 1-3, 3-10, 10-30, 30-100, 100-500 kc); plus "Fine Frequency" control. **Triggered Sweeps:** Four precalibrated sweeps (5, 50, 500, 5000 µsec), ±5% accuracy; fifth triggered sweep has approximately 1.0 µsec duration. **Synchronization:** Internal or external; plus or minus. GENERAL: **Power:** 200 watts, 117.5., 50/60 cps. **Size:** 15″ x 11½″ x 20½″. Weight, 53 lbs.

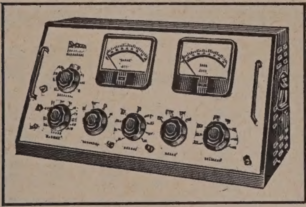
Simpson Model 2610 Oscilloscope—With probe, green filter, graticule, detachable line cord, manual. Net Each.................................... $575.00

MODEL 2620 PULSE GENERATOR

Offers wide range of continuously variable, metered pulse repetition rates and pulse durations; provision for external gating, triggering, and "single shot" uses. **Pulse Repetition Rate (PRR):** Continuously variable, 10-100,000 PPS (10-100, 100-1000, 1000-10,000, 10,000-100,000; indicated on 4½″ "Wide-Vue" meter. **Accuracy:** ±4% of PRR setting. **Pulse Duration:** Continuously variable, 0.1-1000 µsec (0.1-1, 1-10, 10-100, 100-1000); ±5%, ±0.1 µsec. **Rise Time:** 0.02 µsec. **Decay Time:** 0.03 µsec. **Droop:** Less than 5%. **Pulse Polarity:** Positive or negative. **Pulse Amplitude:** 0-80 v. open; 0-40 v. across 93 ohms. **Jitter:** Under 5 millisec. **Output Impedance:** 93 ohms nominal. **Output Attenuator:** Six fixed sections, with attenuation of 1, 2, 3, 5, 10 and 20 db (provides any fixed value from 1-41 db in 1 db steps); plus continuously variable attenuator with 10 db range; ±1% accuracy. **Termination:** Matched termination may be selected by switch on front panel. **Duty Cycle:** 25% max. **Pulse Position:** Fixed delay of 1.0 µsec between "+sync output" pulse and "main pulse". **+Sync Output:** Positive 0.25 µsec pulse with a PRR determined by setting of PRR control; amplitude variable, 0-40 v. **Trigger Input:** May be triggered by external sine wave or trigger with amplitude of 12-600 v. p-p, whose PRR or frequency does not exceed the generator PRR limits. **Gated Operation:** May be "gated" from external negative gate with amplitude of −10 to −100 v. **Connectors:** BNC except ground (binding posts) and power line (detachable type line cord). **Power:** 250 watts, 117.5 v., 50/60 cps. **Size:** 15½″ x 13¼″ x 21″. Weight, 66 lbs.

Simpson Model 2620 Pulse Generator—With detachable line cord and manual. Net Each.................................... $625.00





MODEL 2600 SELF-POWERED CALIBRATOR

Multi-range, self-powered unit calibrates and tests electrical instruments. Laboratory standard, semi-portable design can set-up and indicate certain parameters; produces and meters accurate values of DC voltage and current. AC voltage over a wide range. Used on Simpson production lines to check and calibrate. Uses spring back jewels in core meter movement to eliminate damage to meter pivots due to shock. Separate AC and DC panel instruments are 7″ core type with mirrored scales with 5.9″ arc length. Two terminal connections handle all 49 ranges for quick operation; 30° sloped front panel for added convenience. **Accuracy:** ±0.5% of full scale on DC within 45°-105° F. ±0.75% of full scale on AC within 45°-105° F and 50-2,000 cps. ±1% to 10 megs, ±2% 100 megs, for resistance values. **DC Volts:** 0-1.6/4/8/16/40/80/160/400/800/1600. **DC Microamperes:** 0-1.6/4/8/16/40/80/160/400/800/1600. **DC Milliamperes:** 0-1.6/4/8/16/40/80/160/400/800/1600. **DC Amperes:** 0-16. **AC Volts:** 0-1.6/4/8/16/40/80/160/400/800/1600. **Resistance:** 1, 10, 100, 1,000, 10,000 and 10,000 ohms; 1, 10 and 100 megs.; all fixed values. **Power Required:** 50 watts, 117.5 v. AC, 60 cps; 150 watts on the 16 amp DC range. **Size:** 15″ x 31″ x 15″. Weight, 132 lbs.

Simpson Model 2600 Calibrator—Net Each.................... $1620.00

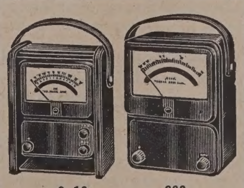
PORTABLE LABORATORY EQUIPMENT

MODELS 9 AND 10

For inspection, lab and research work; feature 4½″ hand drawn mirrored scales with knife edge pointer. **Model 9** DC meter with D'Arsonval movement; ±0.5% accuracy of full scale at 77° F. **Model 10** AC meter with iron vane movement; accuracy ±1%.

Range Volts	Net Ea. Models 9 (DC)	Net Ea. Models 10 (AC)	Range Amperes	Net Ea. Models 9 (DC)	Net Ea. Models 10 (AC)	Range	Net Ea. Models 9 (DC)	Net Ea. Models 10 (AC)
50	$49.50	$43.95	5	$49.50	$43.95	1 ma	$57.15	....
100	49.50	43.95	15	49.50	43.95	50 ma	49.50	$43.95
150	49.50	43.95	30	49.50	43.95	100 ma	49.50	43.95
300	55.00	49.50	50	49.50	43.95	500 ma	49.50	43.95
15-150*	55.00	....	100	49.50	....	10-100 ma*	55.00	....
150-300*	60.45	55.00	2.5-5*	55.00	....	25-250 ma*	55.00	....
300-750*	66.00	60.45	5 -10*	55.00	....	100-500 ma*	55.00	....
15-150-300†	63.75	....	2.5-10-25†	60.45	....	50 µa#	71.55	....
150-300-600†	66.00	60.45	10 -25-50†	60.45	....	100 µa#	67.00	....

*Double range. †Triple range. #Also available for 200 µa range. Net Each...**$64.95**



9, 10   880

MODEL 880 AC-DC DYNAMOMETER TYPES

Accuracy ±1% of full scale at 77° F. Mirrored 4½″ hand drawn scale with knife edge pointers.

VOLTMETERS

Maximum Volts	Net Each	Maximum Volts	Net Each
0-150	$60.45	0-75-150-300†	$76.95
0-150-300*	71.55	0-150-300-600†	76.95

*Double range. †Triple range.

In Roll-Top Safety Case—For Models 9, 10 and 880. Add to Net.................................... $8.00

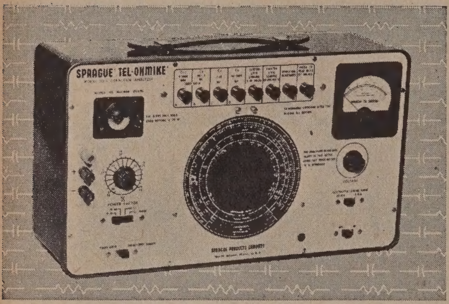
WATTMETERS

Amperes Normal	Amperes Maximum	Watts Range Low	Watts Range High	Maximum Volts	Net Each
1	1.5	100	200	150-300	$60.45
2	3.0	200	400	150-300	60.45
5	7.5	500	1000	150-300	60.45
10	15.	1000	2000	150-300	60.45
20	30.	2000	4000	150-300	66.00
50	75.	5000	10000	150-300	66.00
2.5- 5*	3.75- 7.5	250- 500-1000		150-300	76.95
5-10*	7.5 -15.0	500-1000-2000		150-300	76.95

*Double current range.

SPRAGUE TEST EQUIPMENT

TO-5 TEL-OHMIKE® CAPACITOR ANALYZER

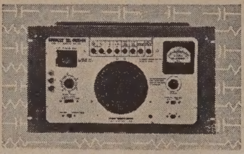


The TO-5 TEL-OHMIKE capacitor analyzer is a must for checking all capacitors except special low voltage transistor types. The TO-5 is a moderately priced instrument with laboratory quality and accuracy—the highest accuracy of any instrument of its type available to the service trade!

MODEL TO-5RM FOR RACK MOUNTING

Electrically identical with the standard instrument, Model TO-5RM has a standard 19" wide x 10½" high panel so that it can be mounted in standard relay racks.

Model TO-5RM......$102.50



- **CAPACITANCE BRIDGE** measures up to 2000 mf in five overlapping ranges. The special 1 mmf to 100 mmf range is exclusive with the Tel-Ohmike.
- **INSULATION RESISTANCE** directly read on large meter up to 20,000 megohms for papers, ceramics, and micas. No guessing with neon lamps.
- **LEAKAGE CURRENT** of electrolytics measured directly on meter, with exact rated voltage up to 600v. applied from continuously adjustable power supply. Two ranges: 0-6-60 ma. No guessing on eye-width or counting lamp blinks!
- **POWER FACTOR** of electrolytics measured by Wien Bridge up to 55% in three ranges.
- **TURNS RATIO SCALE** to measure turns ratio of power and audio transformers.
- **MAGIC-EYE TUBE** simplifies bridge balancing for capacitance and power factor measurements.
- **PUSH-BUTTONS** for instant range selection, also discharge capacitors for safety upon release.
- **MODERN CASE** finished in two-tone gray; measures 8⅞" high, 14⅝" wide, 6⅛" deep. Weight only 12½ pounds.

MODEL TO-5..........115 VAC/50-60 cy..........$92.50 net
Model TO-5X...............115-230 V/25-60 cy............... 98.75 net

LF-1 TRANSIMULATOR®

SPEEDS DESIGN OF TRANSISTOR CIRCUITS BY ELIMINATING BREADBOARD LAYOUT

Bring transistor circuits to life in a matter of minutes with the Sprague LF-1 Transimulator. This new instrument lets you simulate any amplifier stage, a-c or direct-coupled, short of high power audio output; also multivibrator, switching, phasing, push-pull, Class A and B, and many others using cross-coupled Transimulators . . . whether the circuit is common or grounded emitter, base, or collector . . . whether the transistors are PNP, NPN, or Surface Barrier. You can simulate circuits stage-by-stage for cascade operation . . . or use a separate Transimulator for each stage to get simultaneous multistage operation.

Bring Circuit Diagrams To Life In Minutes

Everything you need for RC amplifier circuits is built right into the LF-1, including coupling capacitors . . . bias and load resistors . . . battery voltage supplies . . . Base Collector—Voltage Divider stabilization circuits . . . 5-way binding posts for transformer coupling and metering. Whether you're designing audio circuits or switching circuits, you'll get a true picture of operating parameters minutes after you've drawn the circuit diagram . . . without wasting valuable time with breadboard and soldering gun.

Pays For Itself In A Matter Of Weeks

An ideal laboratory instrument, Transimulators are inexpensive enough to justify several on every bench. You can even use the LF-1 to test transistors *in the circuit* . . . the only real proof of design parameters. And a complete step-by-step instruction manual makes operation fast, simple, and easy.

SPRAGUE TRANSIMULATOR
FOR TRANSISTOR CIRCUIT DESIGNING
MODEL LF-1

FEATURES OF THE LF-1 TRANSIMULATOR

- TRANSISTORS—PNP and NPN Junction, and Surface Barrier.
- CIRCUITS—Common or Grounded Emitter, Base, Collector.
- RANGE—Audio, up to 100 kc.
- TRANSISTOR POWER—Through medium power audio output.
- BATTERY SUPPLY—Separate bias and load. 1.5, 3, 4.5, 6 volts d-c. Polarity Reversing Switch.
- COUPLING—2 µf and 20 µF Direct, and Ext. C. posts, on both Input and Output.
- BIAS RESISTANCE—Up to 555,000 ohms continuously variable.
- LOAD RESISTANCE—Up to 277,500 ohms continuously variable.
- EMITTER RESISTANCE—Up to 2,500 ohms variable. Series resistor and bypass capacitor can be added.
- BASE COLLECTOR STABILITY—Up to 250,000 ohms variable. Series resistor and bypass capacitor can be added.
- VOLTAGE DIVIDER STABILITY—Up to 50,000 ohms variable.
- 5-WAY BINDING POSTS—For meters, transformer coupling, external supply voltage, degeneration, bypass, coupling, signal input and output, almost any connection required.

$79.50 NET
LESS BATTERIES

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SPRAGUE TEST EQUIPMENT

TCA-1 TRANSFARAD *
TRANSISTOR CAPACITOR ANALYZER

TRANSFARAD CAPACITOR ANALYZER
MODEL TCA-1
105-125V. 60 CY.
CAPACITANCE IN MICROFARADS
SPRAGUE
the mark of reliability
SPRAGUE PRODUCTS COMPANY
North Adams, Mass.

THE FIRST ANALYZER SPECIFICALLY DESIGNED TO SAFELY TEST TRANSISTOR CIRCUIT CAPACITORS

CAPACITANCE RANGE		ACCURACY			
Scale	Range of Scale	±2% ±1μμF	±3%	±5%	Reading Accuracy is the Determining Factor
C_1	0–100μμF	0–100			
C_2	.0001–.005μF		.00015–.001		.001–.005
C_3	.001–.5μF		.005–.1	.001–.005	.1–.5
C_4	.1–50μF		.5–10	.1–.5	10–50
C_5	45–2000μF		50–200	45–50	200–2000

- **CAPACITANCE BRIDGE** measures 1μμF to 2000μF in five overlapping ranges. Only 0.5 volt is applied to the bridge from a continuously adjustable power supply. The voltage across the capacitor is less than this applied voltage, the amplitude depending on the capacitance being measured. No possibility of overheating or deforming *any* low voltage capacitor during measurements.

- **INSULATION RESISTANCE** directly read from 50 megohms to 20,000 megohms. Only 25v d-c is applied, permitting measurements on low voltage ceramic, mica, and film capacitors. IR of ceramics rated below 25v may be calculated from leakage current measurements at exact rated voltage.

- **LEAKAGE CURRENT** measured directly on meter at exact rated d-c voltage of capacitor. Sensitive circuit makes full scale measurements from 0.6 μa to 600μa in seven ranges.

The Sprague TCA-1 is specifically designed to safely test capacitors such as tantalum capacitors, low-leakage aluminum electrolytic miniatures, low voltage ceramics and low voltage paper and film capacitors used in transistor and other low voltage circuits. No industrial laboratory or modern electronic service shop can afford to be without one!

MODEL TCA-1 ----------	**$197.50 net**

- **POWER FACTOR** measured by Wien bridge from 0 to 5 per cent.

- **MAGIC EYE** null detector in high-gain amplifier has sensitivity control permitting accurate measurement of small capacitors.

- **SHORT-TIME STABILITY** is assured by dual regulation of the power supply. Specially processed etched circuits and complete encapsulation of the critical bridge-null amplifier insure long-time stability.

- **BINDING POSTS** are shielded against strays, assuring greater accuracy during low capacitance measurements.

- **FOR SAFETY** the capacitor under test is automatically discharged after testing. Three wire line cord grounds instrument case.

- **OPERATING PROCEDURES** are clearly shown on convenient pull-out slide.

MODEL TCA-1RM FOR RACK MOUNTING

Electrically identical with the standard instrument Model TCA-1RM has a standard 19″ w. x 10½″ h. panel so that it can be mounted in the conventional relay rack.

MODEL TCA-1RM ----------	**$207.50 net**

*Trademark

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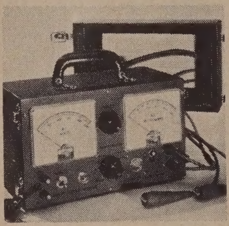
Test with confidence

WRITE FOR DATA SHEETS ON THE INSTRUMENTS SHOWN . . . ALL ARE STANDARD PRODUCTION MODELS, AVAILABLE FOR IMMEDIATE DELIVERY FROM STOCK . . . LET US QUOTE ON YOUR REQUIREMENTS FOR MODIFIED UNITS OR SPECIAL TEST EQUIPMENT.

SLAUGHTER CO.
PIQUA 3, OHIO

High-Voltage Leakage Tester

checks insulation for leakage
. . . grounds
. . . arcing



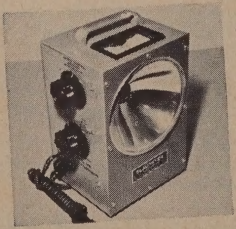
MODEL
122

16 lb. Portable for lab and field work

0/2100 V.A.C. . . . 0/100/1000 MICROAMPS CAPACITY COMPENSATION . . . MEASURES A.C. RESISTANCE, CAPACITY, AND POWER FACTOR.

Metered Precision Stroboscope

with high intensity daylight lamp
. . . stable
. . . accurate



MODEL
165

1% accuracy portable

FOR SPEED MEASUREMENTS TO 100,000 RPM FOR MOTION STUDIES . . . CAN BE SYNCHRONIZED WITH EXTERNAL SIGNALS . . . CAN BE TRIGGERED WITH EXTERNAL CONTACTS . . . CAN BE COUPLED TO COUNTER, SCOPE, OR OTHER EQUIPMENT.

SLAUGHTER CO. • PIQUA 3, OHIO

High-Voltage Insulation Tester

with buzzer signal on breakdowns
. . . grounds
. . . shorts

MODEL
101

Watch what you are doing . . . not the tester

SIX TEST VOLTAGES . . . 500 to 2500 V.A.C. PRICED SO YOU CAN AFFORD TO SPOT A FEW ALONG YOUR ASSEMBLY LINES. FOR SAFETY

Adjustable High-Voltage Tester

with buzzer signal on breakdowns
. . . grounds
. . . shorts

MODEL
106

Voltmeter shows actual Test Voltage

ADJUSTABLE VOLTAGES TO 2500 V.A.C. RECOMMENDED FOR BREAKDOWN TESTING AT FINAL ASSEMBLY AND INSPECTION.

High-Voltage Leakage Tester

audibly signals excess leakage
. . . grounds
. . . arcing

MODEL
103

Measures Leakage . . . not capacity current

TEST VOLTAGE ADJUSTABLE TO 2100 V.A.C. LEAKAGE LIMIT ADJUSTABLE . . . 0 TO 5 MA. DETECTS 20 MICROAMPERE ARCS . . . CANCELS CHARGING CURRENT CAUSED BY INHERENT CAPACITY. USED AT FINAL INSPECTION FOR BREAKDOWN AND LEAKAGE TESTS.

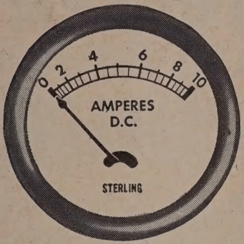
SLAUGHTER CO. • PIQUA 3, OHIO

STERLING PANEL METERS

PRICE LIST

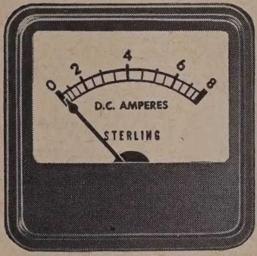
Range	Approximate Resist. Ohms	Model 80 Part No.	NET EACH	Model 75 Part No.	Model 55 Part No.	NET EACH
D.C. AMMETERS						
0-1	.02 Max.	80-855	$1.80	75-855	55-855	$2.05
0-3	.02 Max.	80-856	1.80	75-856	55-856	2.05
0-6	.02 Max.	80-857	1.80	75-857	55-857	2.05
0-8	.02 Max.	80-928	1.80	75-928	55-928	2.05
0-10	.02 Max.	80-858	1.80	75-858	55-858	2.05
0-15	.02 Max.	80-864	1.80	75-864	55-864	2.05
0-25	.02 Max.	80-865	1.80	75-865	55-865	2.05
0-50	.02 Max.	80-866	2.40	75-866	55-866	2.65
30-0-30	.02 Max.	80-867	1.80	75-867	55-867	2.05
D.C. MILLIAMMETERS						
0-1	1000	80-834	$3.60	75-834	55-834	$3.85
0-2	4350	80-835	2.70	75-835	55-835	2.95
0-5	2175	80-836	2.25	75-836	55-836	2.55
0-10	750	80-837	2.10	75-837	55-837	2.40
0-15	319	80-838	1.80	75-838	55-838	2.05
0-25	130	80-839	1.80	75-839	55-839	2.05
0-50	33	80-840	1.80	75-840	55-840	2.05
0-100	8	80-841	1.80	75-841	55-841	2.05
0-150	3	80-842	1.80	75-842	55-842	2.05
0-200	2.4	80-843	1.80	75-843	55-843	2.05
0-300	1.3	80-844	1.80	75-844	55-844	2.05
0-500	.23	80-848	1.80	75-848	55-848	2.05
D.C. VOLTMETERS						
0-1	15	80-801	$1.80	75-801	55-801	$2.05
0-3	130	80-802	1.80	75-802	55-802	2.05
0-5	210	80-804	1.80	75-804	55-804	2.05
0-10	1000	80-807	1.80	75-807	55-807	2.05
0-15	1580	80-808	1.80	75-808	55-808	2.05
0-25	1700	80-809	1.80	75-809	55-809	2.05
0-50	3340	80-811	1.80	75-811	55-811	2.05
0-150	10000	80-815	2.25	75-815	55-815	2.55
0-300	100000	80-817	3.00	75-817	55-817	3.30
A.C. AMMETERS						
0-1	.7	80-886	$2.85	75-886	55-886	$3.15
0-3	.09	80-887	2.85	75-887	55-887	3.15
0-5	.04	80-888	2.85	75-888	55-888	3.15
0-10	.02	80-889	2.85	75-889	55-889	3.15
0-15	.02	80-917	2.85	75-917	55-917	3.15
0-30	.02	80-892	3.00	75-892	55-892	3.30
A.C. MILLIAMMETERS						
0-100	104	80-882	$2.85	75-882	55-882	$3.15
0-250	16	80-883	2.85	75-883	55-883	3.15
0-500	3	80-884	2.85	75-884	55-884	3.15
A.C. VOLTMETERS						
0-10	104	80-872	$2.85	75-872	55-872	$3.15
0-15	210	80-873	2.85	75-873	55-873	3.15
0-25	1750	80-910	2.85	75-910	55-910	3.15
0-50	2750	80-879	2.85	75-879	55-879	3.15
0-150	11500	80-874	3.60	75-874	55-874	3.90
0-300	19400	80-875	4.05	75-875	55-875	4.35

For meters with special scales, ranges or construction, contact the factory or local Sterling representative.



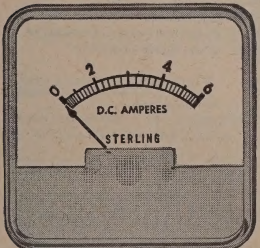
MODEL 80

2-5/32″ dia. flange, flush case. Fits mounting hole 2-1/32″ dia. Black clamp mounting. Black enamel finish.



MODEL 75

2-1/4″ square flange, fits mounting hole 2-1/32″ dia., Back clamp mounting. Black enamel finish.



MODEL 55

2-1/4″ clear plastic face. Fits mounting hole 2-1/32″ dia. Back clamp mounting.

All Sterling meters have rugged, time-proven linear-power movement. Calibration accuracy is within 5%.

STERLING POCKET METERS

No. 10 Dual A and B for Hearing Aids. Has 2-0-2 and 50-0-50 scales **Net Price $3.15**

No. 13 Transistor Hearing Aid tester. Has 0-7 volt scale. **Net Price $2.79**

No. 24 Ammeter 0-35 amp. for No. 6 dry cells. Scale has 1 amp. divisions **Net Price $2.10**

No. 34 Voltmeter for "hot-shot" batteries. 0-10 volt scale with 1/5 volt divisions. **Net Price $2.25**

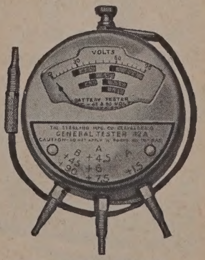
No. 42A General voltmeter. Has red-green color zones for all standard batteries plus 0-100 scale. Three ranges — 0/1.5, 0/7.5 and 0/100. **Net Price $3.90**

No. 44 Voltammeter. 0-35 amp. scale, 1 amp. divisions, 0-10 volt scale, 1/5 volt divisions. **Net Price $2.55**

Send for complete pocket meter and battery tester catalog.

The STERLING Manufacturing Company

Cleveland 13, Ohio

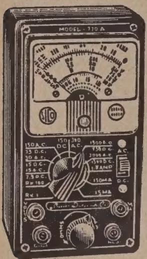


42A GENERAL TESTER

SUPERIOR TEST EQUIPMENT

SUPERIOR'S NEW MODEL 770-A

The FIRST Pocket-Sized VOLT-OHM MILLIAMMETER



USING THE NEW "FULL-VIEW" METER

71% MORE SCALE AREA!

Yes, although our new FULL-VIEW D'Arsonval type meter occupies exactly the same space used by the older standard 2½" Meters, it provides 71% more scale area. As a result, all calibrations are printed in large easy-to-read type and for the first time it is now possible to obtain measurements instead of approximations on a popular priced pocket-sized V.O.M.

• Compact—measures 3⅛" x 5⅞" x 2¼". • Uses "Full View" 2% accurate, 850 Microampere D'Arsonval type meter. • Housed in round-cornered, molded case. • Beautiful black etched panel. Depressed letters filled with permanent white, insures long-life even with constant use.

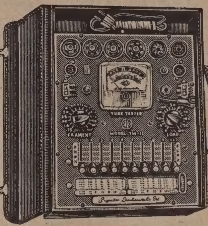
Specifications

• **6 A.C. VOLTAGE RANGES:** 0-15/30/150/300/1500/3000 Volts. **6 D.C. VOLTAGE RANGES:** 0-7.5/15/75/150/750/1500 Volts. **2 RESISTANCE RANGES:** 0-10,000 Ohms, 0-1 Megohm. **3 D.C. CURRENT RANGES:** 0-15/150 Ma., 0-1.5 Amps. **3 DECIBEL RANGES:** —6 db to + 18 db, + 14 db to + 38 db, + 34 db to + 58 db.

The Model 770-A comes complete with self-contained batteries, test leads and all operating instructions. **$15.85**

SUPERIOR'S NEW MODEL TW-11 STANDARD PROFESSIONAL

TUBE TESTER



★ Tests all tubes, including 4, 5, 6, 7, Octal, Lock-in, Hearing Aid, Thyratron, Miniatures, Sub-miniature, Novals, Sub-minars, Proximity fuse types, etc.

★ Uses the new self-cleaning Lever Action Switches for individual element testing. Because all elements are numbered according to pin-number in the RMA base numbering system, the user can instantly identify which element is under test. Tubes having tapped filaments and tubes with filaments terminating in more than one pin are truly tested with the Model TW-11 as any of the pins may be placed in the neutral position when necessary.

★ The Model TW-11 does not use any combination type sockets. Instead individual sockets are used for each type of tube. Thus it is impossible to damage a tube by inserting it in the wrong socket.

★ Free-moving built-in roll chart provides complete data for all tubes. All tube listings printed in large easy-to-read type.

NOISE TEST: Phono-jack on front panel for plugging in either phones or external amplifier will detect microphonic tubes or noise due to faulty elements and loose internal connections.

EXTRAORDINARY FEATURE

SEPARATE SCALE FOR LOW-CURRENT TUBES: Previously, on emission-type tube testers, it has been standard practice to use one scale for all tubes. As a result, the calibration for low-current types has been restricted to a small portion of the scale. The extra scale used here greatly simplifies testing of low-current types.

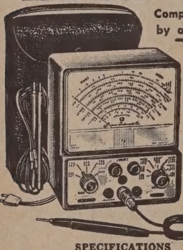
The Model TW-11 operates on 105-130 Volt 60 Cycles A.C. Comes housed in a beautiful hand-rubbed oak cabinet complete with portable cover. **$47.50**

SUPERIOR'S NEW MODEL 77

VACUUM TUBE VOLTMETER

WITH NEW 6" FULL-VIEW METER

Compare it to any peak-to-peak V. T. V. M. made by any other manufacturer at any price!



• Uses new improved SICO printed circuitry. • Employs a 12AU7 as D.C. amplifier and two 9006's as peak-to-peak voltage rectifiers to assure maximum stability • Meter is isolated from the measuring circuit by a balanced push-pull amplifier. • Uses selected 1% zero temperature coefficient resistors as multipliers.

AS A DC VOLTMETER: The Model 77 is indispensable in Hi-Fi Amplifier servicing and a must for Black and White and color TV Receiver servicing where circuit loading cannot be tolerated.

AS AN ELECTRONIC OHMMETER: Because of its wide range of measurement leaky capacitors show up glaringly. Because of its sensitivity and low loading, intermittents are easily found, isolated and repaired.

SPECIFICATIONS

• **DC VOLTS** — 0 to 3/15/75/150/300/750/1,500 volts at 11 megohms input resistance. • **AC VOLTS (RMS)** — 0 to 3/15/75/150/300/750/1,500 volts. • **AC VOLTS (Peak to Peak)** — 0 to 8/40/200/400/800/2,000 volts. • **ELECTRONIC OHMMETER** — 0 to 1,000 ohms/10,000 ohms/100,000 ohms/1 megohm/10 megohms/100 megohms/1,000 megohms. • **DECIBELS** —10 db to + 18 db, + 10 db to + 38 db, + 30 db to + 58 db. All based on 0 db = .006 watts (6 mw) into a 500 ohm line (1.73v). • **ZERO CENTER METER** — For discriminator alignment with full scale range of 0 to 1.5/7.5/37.5/75/150/375/750 volts at 11 megohms input resistance.

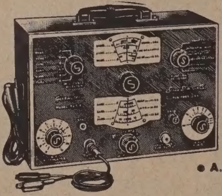
AS AN AC VOLTMETER: Measures RMS value if sine wave, and peak-to-peak value if complex wave. Pedestal voltages that determine the "black" level in TV receivers are easily read.

Comes complete with operating instructions, probe, leads, and steamlined carrying case. Operates on 110-120 volt 60 cycle. Only.. **$42.50**

SUPERIOR'S NEW MODEL TV-50A

GENOMETER

7 Signal Generators in One!



- ✓ **R.F. Signal Generator for A.M.**
- ✓ **R.F. Signal Generator for F.M.**
- ✓ **Audio Frequency Generator**
- ✓ **Marker Generator**
- ✓ **Bar Generator**
- ✓ **Color Dot Pattern Generator**
- ✓ **Cross Hatch Generator**

This Versatile All-Inclusive GENERATOR Provides ALL the Outputs for Servicing:

• A.M. RADIO • F.M. RADIO • AMPLIFIERS • BLACK AND WHITE TV • COLOR TV

R. F. SIGNAL GENERATOR: 100 Kilocycles to 60 Megacycles on fundamentals and from 60 Megacycles to 180 Megacycles on powerful harmonics.

VARIABLE AUDIO FREQUENCY GENERATOR: Provides a variable 300 cycle to 20,000 cycle peaked wave audio signal.

MARKER GENERATOR: The following markers are provided: 189 Kc.; 262.5 Kc., 456 Kc., 600 Kc., 1000 Kc., 1400 Kc., 1600 Kc., 2000 Kc., 2500 Kc., 3579 Kc., 4.5 Mc., 5 Mc., 10.7 Mc., (3579 Kc. is the color burst frequency.)

BAR GENERATOR: Pattern consists of 4 to 16 horizontal bars or 7 to 20 vertical bars.

DOT PATTERN GENERATOR (FOR COLOR TV): The Dot Pattern projected on any color TV Receiver tube by the Model TV-50A will enable you to adjust for proper color convergence.

CROSS HATCH GENERATOR: The pattern consists of non-shifting horizontal and vertical lines interlaced to provide a stable cross-hatch effect.

The Model TV-50A comes complete with shielded leads and operating instructions. Only **$47.50**

SUPERIOR'S NEW MODEL 83

C.R.T. TESTER

Tests and Rejuvenates ALL PICTURE TUBES

CRT TUBE TESTER

ALL BLACK AND WHITE TUBES

From 50 degree to 110 degree types —from 8" to 30" types.

ALL COLOR TUBES

Test ALL picture tubes—in the carton—out of the carton—in the set!

Model 83 comes housed in handsome portable Saddle-Stitched Texon case—complete with sockets for all black and white tubes and all color tubes. Only **$38.50**

• Model 83 is not simply a rehashed black and white C.R.T. Tester with a color adapter added. Model 83 employs a new improved circuit designed specifically to test the older type black and white tubes, the newer type black and white tubes and all color picture tubes.

• Model 83 provides separate filament operating voltages for the older 6.3 types and the newer 8.4 types.

• Model 83 employs a 4" air-damped meter with quality and calibrated scales.

• Model 83 properly tests the red, green and blue sections of color tubes individually—for each section of a color tube contains its own filament, plate, grid and cathode.

• Model 83 will detect tubes which are apparently good but require rejuvenation. Such tubes will provide a picture seemingly good but lacking in proper definition, contrast and focus. To test for such malfunction, you simply press the rej. switch of Model 83. If the tube is weakening, the meter reading will indicate the condition.

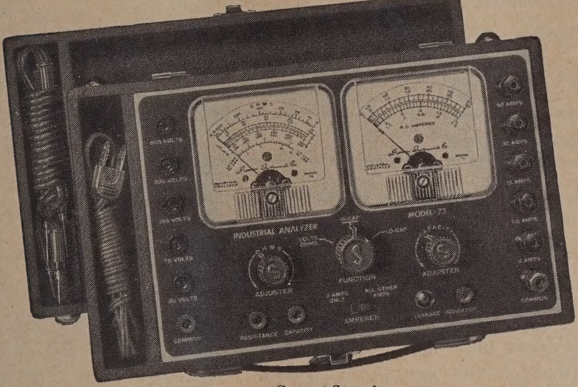
• Rejuvenation of picture tubes is not simply a matter of applying a high voltage to the filament. Such voltages improperly applied can strip the cathode of the oxide coating essential for proper emission. The Model 83 applies a selective low voltage uniformly to assure increased life with no danger of cathode damage.

SUPERIOR TEST EQUIPMENT

GREAT NEWS FOR: Electrical Contractors; Maintenance Men; Air Conditioning Men, Motor Repairmen, Appliance Men, etc.

THE MODEL 73—A NEW IMPROVED

INDUSTRIAL ANALYZER



For the first time ever in an instrument selling for less than $70.

All Voltage, Current, Resistance, Capacity, and Leakage measurements required for all-around electrical maintenance..plus... Measurements of Voltage and Current Simultaneously!

Specifications:

- ✓ 5 AC and DC Voltage Ranges:
- ✓ 0 to 30/75/150/300/600 Volts
- ✓ 5 AC Current Ranges:
- ✓ 0 to 3/7/15/30/60 Amperes
- ✓ Resistance: 0 to 2000 ohms
- ✓ Leakage: To 5 Megohms
- ✓ 2 Capacity Ranges: .1 Mfd. to 1 Mfd. 1 Mfd. to 50 Mfd.

Ease of Operation

One of the problems facing the design engineer of a multi-service multi-range instrument is the need of easy switching from one service and range to another. Particular consideration was given to provide the maximum degree of convenience. For example, in the Model 73 **all** services requiring the use of test leads are accomplished with one of the leads **always** in the "common" jack. Actually, therefore, the Model 73 is a "one lead" tester since **the common lead is never moved** when switching from one service to another.

Voltage Measurements.

The voltage ranges of the Model 73 were carefully selected to provide **maximum utility** and **highest degree of accuracy at the most frequently used points.**

We claim maximum utility because in addition to the usual volt ranges we included a 30 volt range to accommodate the ever increasing use of 24 volt relay systems.

And regarding point of maximum accuracy . . . obviously the voltage measurement most frequently made is that of the line voltage. Since the standard line voltage can vary at different times of the day due to line loading from a low of 108 volts to a high of 125 volts, the 150 volt range of each Model 73 is calibrated against a laboratory standard at 120 volts. The 220 volt lines can vary from 208 volts to 235 volts. The 300 volt range of each Model 73 is therefore calibrated at the 225 volt point of the Model 73 meter scale.

Current Measurements.

With the exception only of extremely high current measurements required by the Utility Companies, the Model 73 affords every possible current measurement required for all around industrial use. It will accurately measure the fractional ampere used to actuate relays and contactors. It will measure the general current drain of most industrial devices (2 amperes to 20 amperes.) It will measure the current drawn by the massive heavy duty industrial motor (up to 60 amperes.)

Simultaneous Volt-Current Measurements.

It would be impractical to list all the ways in which this unique service can be employed. For example, the Air-Conditioning Installer will now be able to determine if a line is subject to excessive drop by using a simulated load (2 heating elements) and adjusting this "phantom" load to the equipment drain of the system to be installed. He can watch the effect on the voltmeter section while the ammeter section is reading the exact current drain. The Motor Repairman can measure the surge current drawn by a motor on starting, then the current drain on the steady run, and note at the same time the exact effect in the line voltage during both phases. The Electrical Contractor by recording the exact voltage fluctuations in relation to current drain can determine if a contemplated or existing line will adequately handle planned appliance loads. The Industrial Maintenance Man can now decide if a particular motor or device is affecting other equipment on the same line.

Capacity Measurements.

Capacitors (condensers) are used in power-factor corrective equipment; in noise eliminators; in motor starters; as arc suppressors across contact points and in many other industrial applications. The Model 73 will test and measure **all** capacitors from .1 Mfd. to 50 Mfd.

Resistance Measurements.

The resistance range is most frequently used to make a fast positive check for continuity. The Model 73 will of course do this effectively and in addition it will accurately measure the exact resistance of relay coils, field coils, motor starter windings and all common industrial ohmages.

Leakage Feature:

The Model 73 retains the reliable leakage system used in all our testers during the past 20 years. It consists of a neon working in conjunction with a resistance network and will indicate leakages up to 5 Megohms. This check will enable the Industrial Maintenance Man to make fast periodic checks of all equipment. In that manner he will have "advance notice" of potential short-circuits due to overheating, overloading, or accumulations of dirt and grease.

Model 73 comes complete in portable carrying case. Only................. $\$52^{50}$

Manufactured by

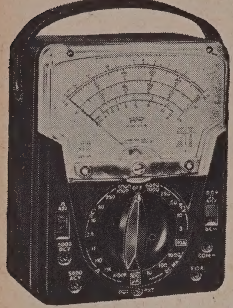
SUPERIOR INSTRUMENTS CO.

NEW YORK 67, N. Y.

TRIPLETT

TEST EQUIPMENT

MODEL 630-PL VOLT-OHM-MILLIAMMETER



Instant-vision, wider spread scales; streamlined case, handsome modern design.

Outstanding linear ohm scale; low reading .1 ohm; high to 100 megs.

One switch selects any range; minimizes chance of incorrect settings and burnouts. 5 to 500,000 cycles per second frequency response in AC measurements.

DC Polarity reversing switch.

High Sensitivity: 5,000 ohms per volt AC; 20,000 ohms per volt DC.

RANGES

DC Volts: 0-2.5-10-50-250-1,000-5,000—at 20,000 ohms/volt.

AC Volts: 0-3-10-50-250-1,000-5,000—at 5,000 ohms/volt.

Decibels: —20 to +11, +21, +35, +49, +61, +75; "0" DB at 1 MW on 600 ohm line.

DC Microamperes: 0-100—at 250 millivolts.

DC Milliamperes: 0-10-100-1,000—at 250 millivolts.

DC Amperes: 0-10—at 250 millivolts.

Ohms: 0-1,000-10,000—(4.4-44 at center scale).

Megohms: 0-1-100—(4,400-440,000 at center scale).

Output V (AC): 0-3-10-50-250-1,000—at 5,000 ohms/volt, jack with condenser in series with AC ranges.

Case: Molded, fully insulated; 3-11/32" x 5-1/2" x 7-1/2".

MODEL 630-PL—U.S.A. Dealer Net........................**$44.50**
Complete with leads, alligator clips, rubber feet, batteries and instruction manual.

MODEL 630-APL VOLT-OHM-MILLIAMMETER

Laboratory type V-O-M featuring ½% resistors and more accurate movement for greater accuracy.

Long MIRRORED scales to eliminate parallax in reading.

One switch selects any range; minimizes chance of incorrect settings and burnouts. 5 to 500,000 cycles per second frequency response in AC measurements.

DC Polarity Reversing switch.

High Sensitivity: 5,000 ohms per volt AC; 20,000 ohms per volt DC.

RANGES

DC Volts: 0-2.5-10-50-250-1,000-5,000—at 20,000 ohms/volt.

AC Volts: 0-3-10-50-250-1,000-5,000—at 5,000 ohms/volt.

Decibels: —20 to +11, +21, +35, +49, +61, +75; "0" DB at 1 MW on 600 ohm line.

DC Microamperes: 0-100—at 250 millivolts.

DC Milliamperes: 0-10-100-1,000—at 250 millivolts.

DC Amperes: 0-10—at 250 millivolts.

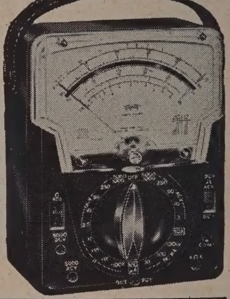
Ohms: 0-1,000-10,000—(4.4-44 at center scale).

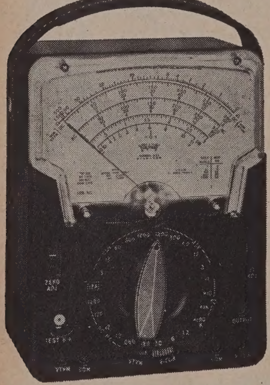
Megohms: 0-1-100—(4,400-440,000 at center scale).

Output V (AC): 0-3-10-50-250-1,000—at 5,000 ohms/volt, jack with condenser in series with AC ranges.

Case: Molded, fully insulated; 3-11/32" x 5-1/2" x 7-1/2".

MODEL 630-APL—U.S.A. Dealer Net..........................**$54.50**
Complete with leads, alligator clips, rubber feet, batteries and instruction manual.





MODEL 631 — COMBINATION VOLT-OHM-MILLIAMMETER AND VACUUM TUBE VOLTMETER

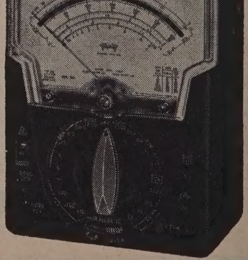
Two fundamental units at the price of a single tester; the number one instrument for all electronic men.
VTVM stability assured by battery operation.
Sensitivity plus—sensitivity of the 1.2 volt (VTVM) range is equal to over nine million ohms per volt.
Long battery life on VTVM section.
A V-O-M for general use and a VTVM when needed; ranges entirely adequate for servicing needs.
Large meter easy to read; unbreakable meter face.
Single switch selects all ranges; minimizes chance of incorrect settings and burnouts.
Accuracy 3% DC to 1200 V.

V-O-M RANGES

DC Volts: 0-3-12-60-300-1,200 (20,000 ohms per volt).
AC Volts: 0-3-12-60-300-1,200 (5,000 ohms per volt).
Ohms: 0-1,500-15,000.
Megohms: 0-1.5-150.
DC Microamperes: 0-60 at 250 MV.
DC Milliamperes: 0-1.2-12-120-1,200 at 250 MV.
DC Amperes: 0-12 at 250 MV.
DB: —20, +11, +23, +37, +51, +63. (600 ohm line at 1 MW).
Output Volts: 0-3-12-60-300-1200; jack with condenser in series with AC ranges.

VTVM RANGES

DC Volts: 0-1.2-6-30-120.
CASE—Molded, fully insulated, 3 11/32" x 5½" x 7½".
MODEL 631—U. S. A. Dealer Net **$64.50**
Complete with leads, alligator clips, rubber feet, batteries and instruction manual.



MODEL 630-NA — VOLT-OHM-MILLIAMMETER

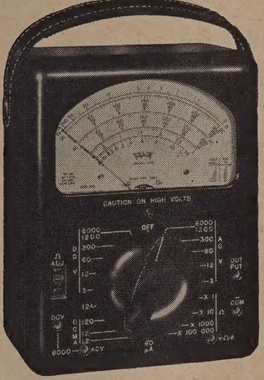
The super deluxe of VOMs.
Seventy ranges; nearly double those of conventional testers.
Frequency compensated from 35 cps to 20 kc.
Temperature compensated.
Accurate within 1½% of full scale reading on DC.
Large open front meter easy to read.
Mirrored scale.
Meter protection against overloads.

RANGES

DC Volts: 0-.240-.6-3-12-60-300-1,200-6,000 at 10,000 ohms per volt.
0-.120-.3-1.5-6-30-150-600-3,000 at 20,000 ohms per volt.
AC Volts: 0-3-12-60-300-1,200-6,000 at 5,000 ohms per volt.
0-1.5-6-30-150-600-3,000 at 10,000 ohms per volt.
Ohms: 0-1K-10K-100K.
Megohms: 0-1-10-100.
DC Microamperes: 0-120 at 240 millivolts.
0-60-600 at 120 millivolts.
DC Milliamperes: 0-1.2-12-120-1,200 at 240 millivolts.
0-6-60-600 at 120 millivolts.
DC Amperes: 0-12 at 240 millivolts. 0-6 at 120 millivolts.
DB: —20 to +77 (600 ohm line at 1 MW).
Output Volts: 0-3-12-60-300-1200; jack with condenser in series with AC ranges.
CASE—Molded, fully insulated, 3 11/32" x 5½" x 7½".
MODEL 630-NA—U. S. A. Dealer Net **$74.50**
Complete with leads, alligator clips, rubber feet, batteries and instruction manual.

TEST EQUIPMENT

TRIPLETT



MODEL 630 — VOLT-OHM-MILLIAMMETER

Popular streamlined tester with long meter scales arranged for easy reading.
Outstanding linear ohm scale; low reading .1 ohm, high 100 megs.
One switch will select any range; minimizes chance of incorrect settings and burnouts.
Accuracy 3% DC to 1200 V.

RANGES

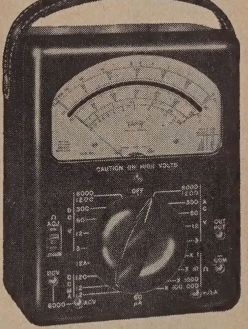
DC Volts: 0-3-12-60-300-1,200-6,000 at 20,000 ohms per volt.
AC Volts: 0-3-12-60-300-1,200-6,000 at 5,000 ohms per volt.
Ohms: 0-1,000-10,000.
Megohms: 0-1-100.
DC Microamperes: 0-60 at 250 millivolts.
DC Milliamperes: 0-1.2-12-120 at 250 millivolts .
DC Amperes: 0-12.
DB: —20 to +77 (600 ohm line at 1 MW).
Output Volts: 0-3-12-60-300-1,200; jack with condenser in series with AC ranges.
CASE—Molded, fully insulated, 3⁷⁄₃₂″ x 5½″ x 7½″.
MODEL 630—U. S. A. Dealer Net **$44.50**
Complete with leads, alligator clips, rubber feet, batteries and instruction manual.

MODEL 630-A — VOLT-OHM-MILLIAMMETER

A laboratory type VOM with ½% resistors for greater accuracy.
Long mirrored scale to eliminate parallax.
Banana jacks, low resistance connections.
High flux magnet for increased ruggedness.
One switch selects any range; minimizes chance of incorrect settings and burnouts.
Accuracy 1½% on DC to 1200 V.

RANGES

DC Volts: 0-3-12-60-300-1,200-6,000 at 20,000 ohms per volt.
AC Volts: 0-3-12-60-300-1,200-6,000 at 5,000 ohms per volt.
Ohms: 0-1,000-10,000.
Megohms: 0-1-100.
DC Microamperes: 0-60 at 250 millivolts.
DC Milliamperes: 0-1.2-12-120 at 250 millivolts.
DC Amperes: 0-12 at 250 millivolts.
DB: —20 to +77 (600 ohm line at 1 MW).
Output Volts: 0-3-12-60-300-1,200; jack with condenser in series with AC ranges.
CASE—Molded, fully insulated. 3⁷⁄₃₂″ x 5½″ x 7½″.
MODEL 630-A—U. S. A. Dealer Net **$54.50**
Complete with leads, alligator clips, rubber feet, batteries and instruction manual.



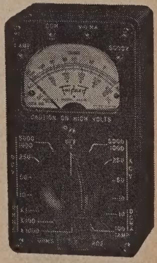
MODEL 666-R — POCKET VOLT-OHM-MILLIAMMETER

Hand-size — the ideal tester for electrical maintenance.
Recessed range knob enables tester to fit in tool kit.
AC rectifier pre-calibrated unit for easy replacement.
Banana jacks at top of the panel lessen possibility of leads falling over the meter dial.
Single switch selects all ranges; minimizes chance of incorrect settings and burnouts.
Accuracy 3% DC to 1000 V.

RANGES

DC Volts: 0-10-50-250-1,000-5,000 at 1,000 ohms per volt.
AC Volts: 0-10-50-250-1,000-5,000 at 1,000 ohms per volt.
Ohms: 0-3,000-300,000.
Megohms: 0-3.
DC Milliamperes: 0-10-100 at 250 MV.
DC Amperes: 0-1 at 250 MV.
Output Volts: 0-10-250-1,000; jack with condenser in series with AC ranges.

CASE—Black molded, streamlined, completely insulated. Handy pocket size, 3¹⁄₁₆″ x 5⅞″ x 2⁹⁄₁₆″.
MODEL 666-R—U. S. A. Dealer Net **$29.50**
Complete with leads, alligator clips, batteries and instruction manual.
Special field case designed for the 666-R. Camera-type leather case, No. 669-RL, $6.60.



LEATHER CARRYING CASES

FOR TESTERS, 630, 630-A, 630-PL, 630-APL, 630-NA, 631

Case 639	Net $ 9.40
Case 639-N (Center open flap snaps back, use tester in case)	Net $ 9.50
Case 639-P (Sponge rubber lined)	Net $14.90

FOR TESTERS 666-R, 666-HH

Case 669	Net $ 6.10

FOR TESTER 666-R

Case 669-RL (Use Tester in Case)	Net $ 6.60

FOR TESTER 310

Case 369 (For testers 310, 305, 308, 309)	Net $ 3.20
Case 379 (For 310-10-101)	Net $ 5.50

OTHER CASES

Case 659 (For Tester 650)	Net $10.50
Case 659-P (For Tester 650)	Net $16.00
Case 629 (For 625-NA, 660, 661, 690-A)	Net $ 7.20

TESTER STAND

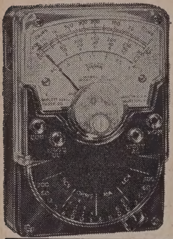
Metal stand holds Model 630, 630-A, 630-PL, 630-APL, 630-NA, 630-T, 631 or 650 tester in approximately a 45° angle; will enable you to make easier readings.

STAND ONLY—Pt. T-255-A-33. U. S. A. Dealer Net .... **$ .50**

EXTERNAL SHUNTS

Pt. T-91-247— 30 Amperes (Plug-In)	**$ 9.00**
Pt. T-91-248— 60 Amperes (Portable)	**$12.00**
Pt. T-91-255—120 Amperes (Portable)	**$12.00**

TEST EQUIPMENT



MODEL 630-T — VOLT-OHM-MILLIAMMETER

Specially designed for telephone maintenance.
Accuracy 2% on DC.

Fused protected circuit protects resistors and meter in ohms ranges.

Special neck strap supplied to hold instrument, leaving both hands free.

Banana jack connectors to eliminate all shock hazard.

Completely insulated case to protect instrument from ground.

RANGES

DC Volts: 0-.3-3-12-60-300-600 at 20,000 ohms per volt.
AC Volts: 0-3-12-60-300-600 at 3,000 ohms per volt.
Ohms: 0-1K-10K-100K.
Megohms: 0-1-10.
DC Microamperes: 0-60 at 150 millivolts.
DC Milliamperes: 0-1.2-12-120 at 150 millivolts.
DB: —20 to +57.
CASE—Molded, completely insulated to protect instrument from ground, 3⅞₂″ x 5½″ x 7½″.
WEIGHT—4 lbs.

MODEL 630-T—U. S. A. Dealer Net........**$54.50**

TRIPLETT MODEL 10 CLAMP-ON ADAPTER

Just plug into any Triplett Model 310 Miniature V-O-M it becomes an AC clamp-on ammeter to measure AC amperes without cutting or opening current carrying wires. The split transformer yoke opens at the touch of a lever to fit around a single conductor or bus-bar for direct readings of AC amperes from 6 to 300 in 6 steps. **MODEL 10** .... **$14.50 net**

RANGES

MODEL 10:
AC Amperes: 0-6-12-30-60-120-300.

TRIPLETT MODEL 101 LINE SEPARATOR

Serves to plug in at outlet to divide 2 conductor cords for clamp-on measuring. Makes accurate, rapid testing of radio and TV sets, phonographs, appliances, motors, etc. possible without opening or splitting double conductors. Also serves to increase ammeter sensitivity 10X and 20X, if desirable, for easier reading. **Model 101** ....**$5.50 net.**

RANGE	**Max. Capacity Amps.**
Direct	30
Divide by 10	12
Divide by 20	6

MODEL 100 V-O-M AND CLAMP-ON AMMETER SET

Consists of Model 310 VOM, Model 10 Clamp-On Adapter, Model 101 Line Separator, No. 311 leads — all conveniently packaged in one handy, durable, high-quality Model 379 leather carrying case which has provision for all parts.
Model 100 ....**$59.50 net**

The Model 10 can be used at a distance from the Model 310 by using No. 311 lead attachment. This permits readings in difficult locations.
No. 311 Leads ....**$1.90 net**

In addition, to use with the Model 310, the Model 10 Adapter also can be used as a Clamp-On Ammeter with any Volt-Ohm-Milliammeter having a 3 AC Volt scale at 5,000 ohms per volt such as Triplett Models 630, 630-A, 630-NA, 630-PL, 630-APL, 631, etc. by employing **Triplett No. 611 Leads** ....**$1.90 net**

MODEL 310 — HAND-SIZE MIGHTY MITE

MODEL 310 VOLT-OHM MILLIAMMETER

The only complete miniature V-O-M with 20,000 ohms per volt and selector range switch.
Self-shielded for checking in strong magnetic field.
Rugged, high torque, bar-ring instrument.
Unbreakable plastic meter window. Fitting interchangeable test prod into top of tester makes it the common probe, freeing one hand.
Standard sensitivity 20,000 ohms per volt DC, and 5,000 ohms per volt AC.
Accuracy 3% DC.

RANGES

DC Volts: 0-3-12-60-300-1,200 (at 20,000 ohms per volt). **AC Volts:** 0-3-12-60-300-1,200 (at 5,000 ohms per volt).
Ohms: 0-20,000-200,000. **Megohms:** 0-2-20.
DC Microamperes: 0-600 at 250 millivolts. **DC Milliamperes:** 0-6-60-600 at 250 millivolts.
WEIGHT—Approx. 14 oz., complete with batteries. **CASE**—Molded, fully insulated, 2¾″ x 4¼″ x 1⁵⁄₁₆″.
MODEL 310—U. S. A. Dealer Net **$34.50**
Complete with leads, batteries and instruction manual.

MODEL 666-HH — POCKET VOLT-OHM-MILLIAMMETER

Compact, hand-size V-O-M.

Three-inch meter integral with panel, adjusted to 400 microamperes at 250 millivolts.

Only three jacks necessary for all ranges.

Accuracy 3% DC to 1000 V.

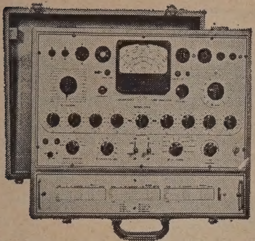
RANGES

DC Volts: 0-10-50-250-1,000-5,000 at 1,000 ohms per volt.
AC Volts: 0-10-50-250-1,000-5,000 at 1,000 ohms per volt.
Ohms: 0-2,000-400,000.
DC Milliamperes: 0-10-100-500 at 250 millivolts.
Output Volts: 0-10-50-250-1,000; jack with condenser in series with AC ranges.
CASE—Black molded, insulated 3¹⁄₁₆″ x 5⅞″ x 2⁹⁄₁₆″.

MODEL 666-HH—U. S. A. Dealer Net **$27.50**
Complete with leads, alligator clips, battery and instruction manual.

TEST EQUIPMENT

TRIPLETT



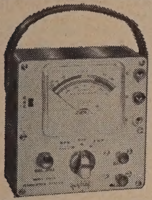
MODEL 3444 — NEW PORTABLE TRUE DYNAMIC MUTUAL CONDUCTANCE TUBE ANALYZER

Rapid, positive, completely analyzes, solves the most perplexing tube analysis problems — Laboratory, Research, Industrial Production, Radio, TV, Theatre, PA Equipment, Communications, etc.

Measures true GM — no extra compensating factors — using proper value DC electrode potentials, 5 KC-AC signal source and vacuum tube micro-ammeter at very low 33 ohm plate impedance.

Offers unique test advantages never before available in portable models: CHECKS PLATE current cut-off. PLOTS tube characteristic curves. CHECKS GAS under actual operating condition. CHECKS RECTIFIERS under load. CHECKS THYRATRON firing voltage, grid current. CHECKS DUAL section tubes with only 1 lever movement. CHECKS ACCURACY GM circuits by self-checking GM circuit. PROVIDES SHORTS, LEAKAGE measurements from 0-10 megohms using filtered DC supply 85V. New easy tube chart data. PROVIDES cut-off measurements voltage amplifiers. RECESSED SOCKET SAVERS (under-panel-mounted) easily removable for replacement. CASE: Wood, gray leatherette covered, $15\frac{3}{16}$″ x $18\frac{13}{16}$″ x 7¾″.

Model 3444 U.S.A. Dealer Net..........$249.50



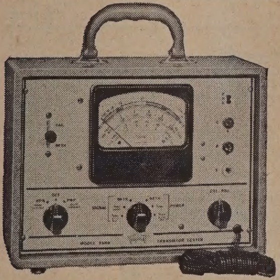
MODEL 690-A TRANSISTOR TESTER

Leakage and gain tests for all low and medium power PNP and NPN type transistors . . . Measures DC Beta (current gain from base to collector with grounded emitter) from 5 to Infinity. The long, GOOD scale provides a better indication of the degree of quality . . . Affords an exact test for shorts and leakage . . . Checks forward and reverse leakage of diodes. Prevents drain on batteries in case of accidental shorting of leads. Battery operation eliminates need for external power supply . . . Error-proof controls . . . Easily portable. Transistor socket and external leads for any basing layout. **CASE**—Black molded 2½″ x 5½″ x 6″ with removable black leather strap handle. Overall thickness of tester 3″.

PANEL—Black and red markings etched on aluminum.

Model 690-A U.S.A. Dealer Net..........**$29.50**

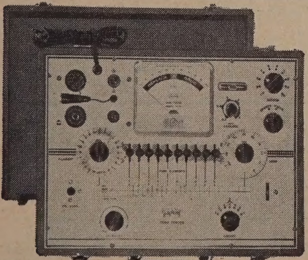
Carrying case 629.



MODEL 2590 — NEW TRANSISTOR TESTER

Tests Power Type Transistors and Signal Type Transistors under SIMULATED OPERATING CONDITIONS. Tests for shorts and leakage . . . Provides for testing ICEO (at 9.5 volts); ICBO (at 9.5 volts), and BETA (at 3 volts) on both NPN and PNP transistors . . . Checks leakage and forward currents of Diodes . . . SIMPLE AND STRAIGHTFORWARD IN OPERATION . . . No roll chart or special technical data is required. The only information needed to make a test is the transistor type . . . FOR ANY BASING ARRANGEMENT. A transistor socket and a set of external leads permit use with any basing arrangement . . . Power—115 volts, 50-60 cycle AC. No batteries are required . . . **CASE**—Handsome gray leatherette covered case, 11⅝″ x 8⅝″ x 5⅛″. Case has rubber feet. Luggage style handle for ease in ~~carrying~~ . . . **RECESSED PANEL**—Panel of etched heavy gauge aluminum has natural finish with black and red markings and trim . . . **WEIGHT**—Approximately 5¼ pounds; Shipping weight 9 pounds.

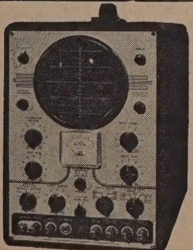
Model 2590 Suggested U.S.A. Dealer Net Price..........**$49.50**



MODEL 3414 TUBE TESTER — FASTER, MORE FLEXIBLE

All Switch settings made before tube warms up; ready for testing before filaments reach proper temperature. Rejects burned out tubes instantly without filament heatup. Complete flexibility for new tube setups; plus non-obsolescence factor. Few simple switch settings give complete accurate story tube capabilities. Modified plate conductance circuit for closer correlation to tube characteristics. Neon indicator shorts test. Slightest inter-element shorts show while cathodes are hot. New variable leakage test from 0.3 Meg. to over 3 Meg. Checks all today's and tomorrow's tubes (including new series filament tubes). With BV adapter ($5.40) tests TV picture tubes in set. Wide angle neon indicator for greater visibility glow test. Checks appliances for shorts, open circuits. **CASE:** Counter-portable, wood, dark gray leatherette covered. **PANEL:** Etched, heavy gauge aluminum, black and red markings, 12 lbs.

Model 3414 U.S.A. Dealer Net..........**$79.50**



MODEL 3441-A — NEW 5″ OSCILLOSCOPE

Maximum sensitivity (10 millivolts per inch). Wide band width 4.5 MC (Usable to 9 MC).

Wide band amplifiers for color TV servicing.

Calibration voltage metered so line voltage is not a factor.

Horizontal amplifier frequency range flat to + or —1 DB from 20 cycles to 60 KC.

Deflection sensitivity .15 volts RMS per inch.

Saw tooth output supplies a saw tooth wave form from 10 to 60,000 cycles. Output variable 0-70 volts peak to peak. Polarity-reversing swich keeps wave form showing in conventional manner.

PANEL—Black and red on white. Characters etched on aluminum.

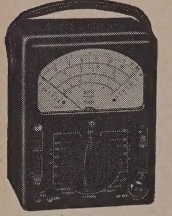
CASE—Metal with black suede enamel finish, 15-11/32″ x 11-1/32″ x 16″. Leather handle.

Model 3441-A U.S.A. Dealer Net..........**$249.50**

Crystal (Demodulating or Signal Tracing) Probe. Part No. 9989 **$10.50**

Low capacity (10-1). Part No. 10379-A **$11.90**

TRIPLETT TEST EQUIPMENT



MODEL 650 — VACUUM TUBE VOLTMETER

Complete frequency coverage from 15 cps to over 150 MC, with one probe supplied with instrument.
One volt full scale reading on both DC-AC.
Reads peak to peak AC volts and RMS.
Separate 1 volt AC and 5 volt AC scales for greater accuracy.
Pointer will remain zero when changing ranges.
Single selector switch for all ranges.
Accuracy 3% DC.

RANGES

DC Volts: 0-1-5-10-50-100-500-1,000.
AC-RF Volts: 0-1-5-10-50-100-500 (15 cps to over 150 MC).
Peak to Peak Volts: 0-2.8-14-28-140-280-700.
Ohms: 0-1K-10K-100K-1 Meg.-100 Meg.-1,000 Meg.
CASE—Insulated molded case and panel, 3¾" x 5½" x 7½". Removable strap handle.

MODEL 650—U. S. A. Dealer Net **$89.50**

Complete with leads, alligator clips, rubber feet, battery and instruction manual.

DC High Voltage Probe: 50 KV-500 DC volt; 10 KV-100 DC volt; 5 KV-50 DC volt. **$14.50 net each.**

A NEW SERIES OF MATCHED HAND SIZE INSTRUMENTS

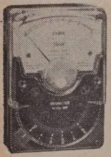
THE "LITTLE TRIPLETT" *LINE*

In standard models or specialized test equipment to quantity order
Completely self-contained — Selector switch speeds range selection
Fits easily into palm of hand — Strong plastic meter window
Plus fully insulated black molded case — Banana type jacks
All have Bar-Ring design self-shielded, rugged, high-torque meters

MODEL 307 AC AMMETER

Ranges: AC Amperes 0-1, 0-2.5, 0-5, 0-10, 0-25. Using Model 10 Clamp-on Ammeter ($14.50) ranges can be extended to: 0-6, 0-12, 0-30, 0-60, 0-120, 0-300. A general-purpose AC Ammeter with built-in transformer (for use on 60 cycles). Among its many advantages: Permits measurement of current drawn by electric appliances and motors, heating elements, lamps, radio sets, etc.

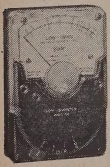
METER — Bar-Ring design, self-shielded, 50 microamperes full-scale.
ACCURACY — Within 4% on all ranges.
CASE — Fully insulated black molded, 2¾" x 4¼" x 1-3/16". Posts extend ¾" below case.
WEIGHT — Approx. 14 ounces.
Model 307 U.S.A. Dealer Net **$29.50**



MODEL 305 DC MILLIVOLTMETER

RANGES: DC MILLIVOLTS 0-10, 0-30, 0-100, 0-300, 0-1000. Servicing of gas-fired equipment and appliances can be accomplished quickly and more accurately with Little Triplett Model 305. It is indispensable for faster servicing of furnaces, boilers, heaters, hot water heaters, refrigerators, dryers, and gas-fired equipment. Simply place the probe leads across the thermocouple terminals for correct value measurements.

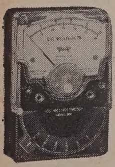
METER — Bar-Ring design, self-shielded, 1 Milliampere full scale.
ACCURACY — Within 2% on all ranges.
CASE — Fully insulated black molded, 2¾" x 4¼" x 1-3/16".
WEIGHT: Approximately 12 ounces.
LEADS — One set (Black and Red) 42 inches long.
Model 305 U.S.A. Dealer Net **$29.50**



MODEL 308 LOW OHMMETER

RANGES: OHMS 0-50. 0-500, 0-5000. 1 Ohm center scale on 0-50 range: lowest reading .1. For motor testing, armatures and fields, shorts between generator windings and grounds, and for many other phases of testing, including: Switch and relay contact resistances, shorts in TV or radio chassis wiring; electrical equipment in industrial plants, etc.

OHMS ADJUST — Knob on side of case, to compensate for variations in battery voltages.
METER — Bar-Ring design, self-shielded, 1 Milliampere full scale.
ACCURACY — Within 3% on all ranges.
CASE — Fully insulated black molded, 2¾" x 4¼" x 1-3/16".
WEIGHT — Approximately 14 ounces.
LEADS — One set (Black and Red) 42 inches long, with battery switch incorporated in the Black lead.
BATTERIES — One Mercury cell 1.3 volt, Eveready E-601-E or equivalent.
Model 308 U.S.A. Dealer Net **$29.50**



MODEL 309 OHMMETER

RANGES: OHMS, MEGOHMS 0-2000, 0-20,000, 0-200,000 Ohms; 0-2, 0-20 Megohms. 20 Ohm Center Scale on 0-2000 range. A general purpose Ohmmeter to 20 Megohms for industrial, laboratory and servicing use.

OHMS ADJUST — Knob on side of case, to compensate for variations in battery voltages.
METER — Bar-Ring design, self-shielded, 50 Microamperes full scale.
ACCURACY — Within 3% on all ranges.
CASE — Fully insulated, black molded, 2¾" x 4¼" x 1-3/16".
WEIGHT — Approximately 14 ounces.
LEADS — One set (Black and Red) 42 inches long.
BATTERIES — One Mercury cell 1.3 volt; Eveready E-401-E or equivalent. One Eveready 15 volt #504 or equivalent.
Model 309 U.S.A. Dealer Net **$29.50**

MODEL 3439 — COLOR BAR GENERATOR

Crystal controlled RF output.
A built-in VTVM circuit with meter on the panel provides quick and easy checking of sync, subcarrier and modulation amplitudes.

Unit completely self-contained—no extra accessories or equipment needed. Easy to set up, with RF output direct. Sound carrier (unmodulated) insures precise tuning of the receiver, and permits checking sound rejection and presence of beat interference between the color subcarrier and the sound carrier.

Brightness modulation is available to check for possible shift of hue in the bright areas or highlights.

Amplitude of the color subcarrier is adjustable; for checking the color sync lock action in the receiver.

Video signals of positive or negative polarity are provided for low impedance (75 ohms) and high impedance (5,000 ohms) video circuits.

CASE: Metal with black baked enamel suede finish, 15-11/32" x 11-1/32" x 6¼". Leather handle.

Model 3439 U.S.A. Dealer Net.. **$249.50**

MODEL 3438 — DOT BAR COLOR GENERATOR

Frequency RF output fundamental coverage on channels 2 to 6.
Provides its own horizontal and vertical sync pulses.
RF and IF output.

Video output—Video signals as above with positive or negative polarity supplied across low impedance source of 2,000 ohms with 1 mfd. 200 volt blocking condenser.

Color oscillator provides three base colors (red, blue and green) plus colors corresponding to phases of R-Y, B-Y, I and Q axis.

Completely self-contained; no extra accessories or equipment is needed. No additional sync is required from the set.

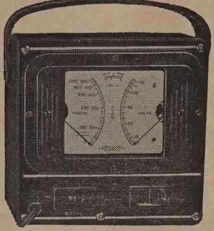
Can be used for signal tracing completely through either b/w or color TV sets.

CASE: Metal with attractive baked black enamel suede finish, 6¼" x 11-1/32" x 15-11/32", panel silver black and red etched aluminum. Shielded output coaxial cable.

Model 3438 U.S.A. Dealer Net.. **$229.50**

TEST EQUIPMENT

TRIPLETT



MODEL 660 — LOAD CHEK

A time-saver, designed for TV servicing. Helps prevent repair come-backs. No time lost in connecting this unit. Just plug in the power cord of the radio and all meters are connected.

Quick way to locate hidden shorts and overloaded circuits.

Double meter indication provides simultaneous check of line voltage and power.

Shows faulty power line wiring as well as proper functioning of the appliance under test.

Simple operation by means of only one toggle switch to change watts range.

Double range on Watts meter permits one unit to serve from a 5-tube radio to the largest TV set.

RANGES

Watts: DC-AC: 0-500-1,000.
Volts: DC-AC: 0-150.

CASE—Black molded, 2½″ x 5½″ x 6″, insulated to protect instrument from ground. Removable black leather strap handle.

MODEL 660—U. S. A. Dealer Net $34.50

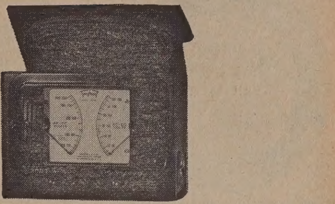
MODEL 661

Designed for Radio and Low Wattage Appliances. Appearance and construction same as 660 with watt range 150-300.

RANGES

Watts: DC-AC: 0-150-300.
Volts: DC-AC: 0-150.

MODEL 661—U. S. A. Dealer Net..$34.50



MODEL 2002 — APPLIANCE TESTER

For installations and servicing.

Shows power consumption of industrial equipment, radios, electric ranges, refrigerators, washers and other household appliances under actual operating conditions, on either DC or AC between 25 and 133 cycles.

A Wattmeter on the left and a Voltmeter on the right permit Watts and Volts to be read simultaneously or independently.

Shows if voltage remains within limits under operating loads.

Current coils assure ample capacity for momentary tests on motor starting overloads.

Heavy inner construction assures ample current capacity for momentary tests on motor starting overloads.

Shows faulty power lines.

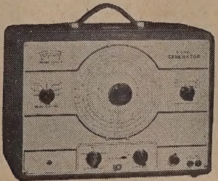
RANGES

Watts: DC-AC: 0-1,500-3,000.
Volts: DC-AC: 0-130-260.

CASE—Heavy leather and snap button cover and leather handle, 6½″ x 4½″ x 3¼″. Storage space for leads furnished which include one cord to plug into wall socket, another with a socket to receive connections from appliances under test.

MODEL 2002—U. S. A. Dealer Net..$44.50

MODEL 3432-A — SIGNAL GENERATOR



The generator is provided with a 400 cycle audio frequency with variable control for 0-100 per cent modulation.

Band A	160-370 KC	Band E	4.85-13 MC
B	360-735 KC	F	12.5-35 MC
C	715-1875 KC	G	34-110 MC
D	1825-4950 KC	G (Harmonics)	68-220 MC

CASE—Metal with black baked enamel suede finish, 15$\frac{11}{32}$″ x 11$\frac{1}{32}$″ x 6¼″. Black leather strap handle, rubber feet.

MODEL 3432-A—U. S. A. Dealer Net $99.50

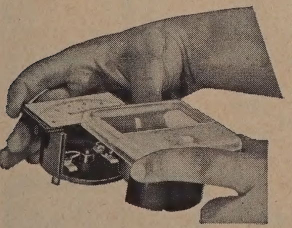
Designed for new servicemen coming into the service field. One generator to align radio, television (monochrome and color).

Complete frequency coverage 160 KC to 110 MC fundamental with seven bands (220 MC harmonics).

R.F. circuits are double shielded with copper steel shields.

Large easily read etched aluminum dial.

Cathode follower output provides good stability by acting as a buffer to the oscillator.



NEW TRIPLETT UNIMETERS

An innovation in self-service meters these Select-Your-Range Unimeters consist of two basic meter movements, which can be combined with any one of a number of separate dial-component units for a wide variety of meter ranges. The basic meter movements and the Dial-Component units lock together simply; no soldering, no wiring, no opening of the dust-proof movement is required.

In two sizes, 327-U 3½″ rectangular and 420-U 4½″ rectangular with mirror scale for greater accuracy in reading. Also in handy kits, both sizes, as below. The triple-purpose kit case with handle provides handy portability; easy protective storage and attractive display.

UNIMETER PRICE LIST

BASIC MOVEMENTS

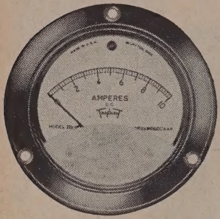
	U.S.A. Dealer Net
Model 327-U 0-1 DC Milliammeter (50 MV)	$11.00
Model 327-U 0-50 DC Microammeter (250 MV)	15.90
Model 420-U 0-1 DC Milliammeter (50 MV)	12.00
Model 420-U 0-50 DC Microammeter (250 MV)	17.00

DIAL-COMPONENT UNITS

U.S.A. Dealer Net Price Each Unit (Specify for use with 327-U or 420-U)..$ 2.50

DC-MA		DC-VM 1000 o/v Film Type	DC-AM	AC-VM Rectifier Type*	DC-UA	DC-MA		DC-VM 1000 o/v Film Type	DC-AM	AC-VM Rectifier Type*	DC-UA
0-1	0-100	0-10	0-1	0-10	0-50	0-15	0-250	0-150	0-15		0-500
0-5	0-150	0-25	0-5	0-150	0-100	0-25	0-300	0-300	0-25		
0-10	0-200	0-50	0-10	0-300	0-200	0-50	0-500	0-500	0-50	*500 o/v	

TRIPLETT INSTRUMENTS



RUGGEDIZED INSTRUMENTS

A complete line of 2½" and 3½" ruggedized and sealed instruments designed to meet government specification MIL-M-10304A.

Triplett ruggedized instruments employ the unique and exclusive bar-ring construction so well adapted to ruggedization, that the addition of spring loaded jewels and an internal rubber mount (both designed for jewel protection) constitute the essential difference between the commercial and ruggedized movements.

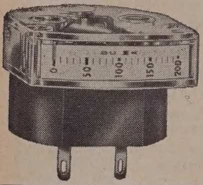
The bar-ring construction is inherently self-shielding so that the heavy steel case does not affect instrument calibration nor does mounting in a steel panel of any thickness.

The unusually strong housing consists of a drawn steel case with heavy die cast window bezel. The bezel seals the window to the case with a simple gasket and screws. A tough plastic window is used instead of glass.

Husky gasket-sealed studs are used for electrical connections to provide additional protection over delicate glass sealed types.

Most catalog ranges of DC: MV, Volts, Mic, Ma, Amp and AC rectifier type can be supplied. Regular dials in accordance with MIL-M-10304A are supplied although special dials of all descriptions can be made up for special applications.

MINIATURE EDGEWISE PANEL METERS



If space on your panel is at a premium here is a miniature meter that will fit into even the most restricted area—yet give you the readability, performance and reliability you expect from the conventional 2½" sizes.

Weighing only four ounces this meter also is of value to the user who has a weight limitation factor on his hands.

Accuracy—D.C. 2% of full scale; A.C. Rectifier type 5% of full scale.

Self-Shielded Bar-Ring Magnet—Not affected by magnetic panels. High torque, exceedingly rugged and accurate.

Mounting—Horizontal, zero at left and barrel down is standard.

Vertical mounting or other special adaptations in quantity orders.

Panel Hole Required—Only 9/16" x 1-11/16".

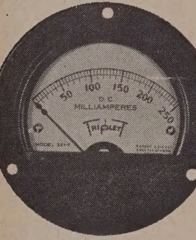
DC-MA	Dealer Net
0-1	$10.40
0-10	10.40
0-25	10.80
0-50	10.80
0-100	10.80
0-150	10.80
0-200	10.80
0-300	10.80
0-500	10.80
DC-VM	
0-10	$11.20
0-50	11.20
0-150	11.20

	Dealer Net
DC-UA	
0-50	$15.40
0-100	13.50
0-200	11.60
DC-AM	
0-10	$11.20
AC-VM (Rect. Type)	
0-150	$16.40
0-300	17.40
VU Meters	
A or B Scales	$19.90

D.C. MILLIVOLTMETERS

Range	Approx. Res.	Scale Div.	2" Models 221-T 227-T	2" Models 221-PL 227-PL	3" Models 321-T 327-T	3" Models 321-PL 327-PL	4" Model 420	4" Model 420-PL	6" Model 626
0-50	6.3	50	$9.90	$10.40	$10.50	$11.00	$11.60	$11.60	$13.80
0-100	12.5	50	9.90	10.40	10.50	11.00	11.60	11.60	13.80
0-150	20	(30) 75	9.90		10.50		11.60		13.80

D.C. VOLTMETERS — (1000 Ohms Per Volt — Film Type Resistors)



Range	2" Models 221-T 227-T	2" Models 221-PL 227-PL	3" Models 321-T 327-T	3" Models 321-PL 327-PL	4" Model 420	4" Model 420-PL	6" Model 626
0-10	$10.70	$11.20	$11.20	$11.70	$12.30	$12.30	$14.50
0-25	10.70	11.20	11.20	11.70	12.30	12.30	14.50
0-50	10.70	11.20	11.20	11.70	12.30	12.30	14.50
0-100	10.70	11.20	11.20	11.70	12.30	12.30	14.50
0-150	10.70	11.20	11.20	11.70	12.30	12.30	14.50
0-200	10.70	11.20	11.20	11.70	12.30	12.30	14.50
0-250	10.70	11.20	11.20	11.70	12.30	12.30	14.50
0-300	10.70	11.20	11.20	11.70	12.30	12.30	14.50
0-500	11.20*	11.70*	11.80	12.30	12.90	12.90	15.10
0-750	11.20*	11.70*	11.80	12.30	12.90	12.90	15.10
0-1000*	13.30	13.80	13.90	14.40	15.00	15.00	17.20
0-2000*	13.30	13.80	13.90	14.40	15.00	15.00	17.20
0-3000*	13.30	13.80	13.90	14.40	15.00	15.00	17.20
0-4000*	13.30	13.80	13.90	14.40	15.00	15.00	17.20
0-5000*	13.30	13.80	13.90	14.40	15.00	15.00	17.20

* Supplied with external resistors

D.C. VOLTMETERS — 1000 Ohms Per Volt (Wirewound)

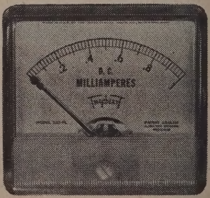
Range	Scale Div.	2" Models 221-T 227-T	2" Models 221-PL 227-PL	3" Models 321-T 327-T	3" Models 321-PL 327-PL	4" Model 420	4" Model 420-PL	6" Model 626
0-1	50	$10.70	$11.20	$11.20	$11.70	$12.30	$12.30	$14.50
0-3	(30) 60	10.70	11.20	11.20	11.70	12.30	12.30	14.50
0-5	50	10.70	11.20	11.20	11.70	12.30	12.30	14.50
0-10	50	10.70	11.20	11.20	11.70	12.30	12.30	14.50
0-25	50	13.10	13.60	13.60	14.10	14.70	14.70	16.90
0-50	50	13.10	13.60	13.60	14.10	14.70	14.70	16.90
0-100	50	13.60	14.10	14.20	14.70	15.30	15.30	17.50
0-150	(30) 75	13.60	14.10	14.20	14.70	15.30	15.30	17.50
0-300	(30) 60	16.60	17.10	17.20	17.70	18.30	18.30	20.50
0-500	50	18.60*	19.10	19.10	19.60	20.20	20.20	22.40
0-750	(30) 75	21.30*	21.80	21.90	22.40	23.00	23.00	25.20
		The following supplied with external resistor boxes at prices shown.						
0-1000	50	37.50	38.00	38.10	38.60	39.20	39.20	41.40
0-2000	40	61.50	62.00	62.00	62.50	63.10	63.10	65.30

* Supplied with external resistors. Scale divisions for 2" models in parenthesis.

D.C. MICROAMMETERS

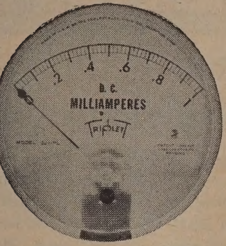
Range	Approx. Res.	Scale Div.	2" Models 221-T 227-T	2" Models 221-PL 227-PL	3" Models 321-T 327-T	3" Models 321-PL 327-PL	4" Model 420	4" Model 420-PL	6" Model 626
0-20	2600	40	$17.60	$18.10	$18.20	$18.70	$19.30	$19.30	
0-50	2000	50	14.90	15.40	15.40	15.90	16.50	16.50	$18.70*
0-100	825	50	13.00	13.50	13.50	14.00	14.60	14.60	16.80*
0-200	360	40	11.10	11.60	11.70	12.20	12.80	12.80	15.00
0-500	156	50	10.60	11.10	11.10	11.60	12.20	12.20	14.40
50-0-50	825	50	13.00	13.50	13.50	14.00	14.60	14.60	
100-0-100	360	50	11.10	11.60	11.70	12.20	12.80	12.80	
500-0-500	55	50	9.90	10.40	10.50	11.00	11.60	11.60	

* Supplied only with knife-edge pointers.



INSTRUMENTS

TRIPLETT



Models 221-PL, 231-PL, 321-PL, 331-PL, 341-PL

D.C. MILLIAMMETERS

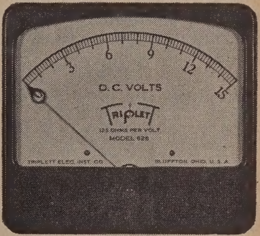
Range	Approx. Res.		Scale Div.	2" Models 221-T 227-T	2" Models 221-PL 227-PL	3" Models 321-T 327-T	3" Models 321-PL 327-PL	4" Model 420	4" Model 420-PL	6" Model 626
0-1	55		50	S$ 9.90S	S$10.40S	S$10.50S	S$11.00S	S$11.60	S$11.60	$13.80
0-1.5	30	**(30)	75	9.90	10.40	10.50	11.00	11.60	11.60	13.80
0-3	14	**(30)	60	9.90	10.40	10.50	11.00	11.60	11.60	13.80
0-5	8.5		50	S 9.90	10.40	10.50S	11.00	11.60	11.60	13.80
0-10	3.1		50	9.90S	10.40	S 10.50S	11.00	11.60	11.60	13.80
0-15	6.6	**(30)	75	9.90	10.40	10.50S	11.00	11.60	11.60	13.80
0-25	4		50	10.30S	10.80	10.90S	11.40	12.00	12.00	14.20
0-50	2		50	10.30S	10.80	S 10.90S	11.40	12.00	12.00	14.20
0-75	1.3	**(30)	75	10.30	10.80	10.90	11.40	12.00	12.00	14.20
0-100	1		50	S 10.30S	10.80	S 10.90S	11.40	12.00	12.00	14.20
0-150	0.6	**(30)	75	S 10.30S	10.80	10.90S	11.40	12.00	12.00	14.20
0-200	0.5		40	10.30S	10.80	S 10.90S	11.40	12.00	12.00	14.20
0-250	0.4		50	10.30	10.80	10.90	11.40	12.00	12.00	14.20
0-300	0.33	**(30)	60	10.30S	10.80	10.90S	11.40	12.00	12.00	14.20
0-400	0.25		40	10.30	10.80	10.90	11.40	12.00	12.00	14.20
0-500	0.2		50	S 10.30S	10.80S	S 10.90S	11.40	12.00	12.00	14.20
0-750	0.13	**(30)	75	10.30	10.80	10.90	11.40	12.00	12.00	14.20
0-1000	0.1		50	10.30	10.80	10.90	11.40	12.00	12.00	14.20

Ranges above 10 Milliamperes are shunted and have a drop of approximately 100 millivolts. Special resistance may be obtained to order. Double-range Milliammeters available on special order. Prices on request.

D.C. AMMETERS

Range		Scale Div.	2" Models 221-T, 227-T	2" Models 221-PL, 227-PL	3" Models 321-T, 327-T	3" Models 321-PL, 327-PL	4" Model 420	4" Model 420-PL	6" Model 626
0-1		50	$ 9.90	$10.40	S $10.50S	$11.00	$11.60	$11.60	$13.80
0-3	**(30)	60	9.90	10.40	10.50	11.00	11.60	11.60	13.80
0-5		50	10.70	11.20	S 11.20S	11.70	12.30	12.30	14.50
0-10		50	10.70S	11.20	S 11.20S	11.70	12.30	12.30	14.50
0-15	**(30)	75	10.70	11.20	11.20S	11.70	12.30	12.30	14.50
0-25		50	10.70	11.20	11.20S	11.70	12.30	12.30	14.50
0-30	**(30)	60	10.70	11.20 221-PL	11.20	11.70 321-PL	12.30		14.50
0-50		50	10.70	11.20 only	S 11.20S	11.70 only	12.30		14.50

D.C. Ammeters are self-contained up to and including 50 Amperes. Shunts 75 Amperes (50 M.V.) and higher are switchboard type with 5 ft. leads.



Models 626, 636, 646

A.C. VOLTMETERS

Range	Approx. Ohms/Volt		Scale Div.	2" Models 231-S, 237-S	2" Models 231-PL, 237-PL	3" Models 331-S, 337-S	3" Models 331-PL, 337-PL	4" Model 430	4" Model 430-PL	6" Model 636
0-1.5	1.33	**(30)	75	$ 9.90	$10.40	$10.50	$11.00	$11.60	$11.60	$13.80
0-3	3.33	**(30)	60	9.90	10.40	10.50	11.00	11.60	11.60	13.80
0-5	4		50	9.90	10.40	10.50	11.00	11.60	11.60	13.80
0-10	10		50	9.90	10.40	10.50S	11.00	11.60	11.60	13.80
0-15	16	**(30)	75	9.90	10.40	10.50	11.00	11.60	11.60	13.80
0-25	20		50	9.90	10.40	10.50	11.00	11.60	11.60	13.80
0-50	50		50	9.90	10.40	10.50	11.00	11.60	11.60	13.80
0-100	91		50	9.90	10.40	10.50	11.00	11.60	11.60	13.80
0-150	125	**(30)	75	S 10.90S	11.40	S 11.40S	S 11.90S	S 12.50	S 12.50	14.70
0-250	144		50	11.40	11.90	12.00	12.50	S 13.10	13.10	15.30
0-300	144	**(30)	60	12.00	12.50	S 12.50S	13.00	13.60	13.60	15.80
0-500	125		50	15.70†	16.20†	16.30†	16.80†	17.40†	17.40†	19.60†
0-750	125	**(30)	75	16.30*	16.80*	16.80*	17.30*	17.90*	17.90*	20.10*
0-1000	125		50	16.80*	17.30*	17.40*	17.90*	18.50*	18.50*	20.70*

These A.C. Voltmeters are for use on frequencies from 25 to 133 cycles. † Indicates instruments supplied with external wire-wound series resistors at prices shown. *Supplied with external resistor boxes at prices shown above. All other instruments are self-contained. Double-range Voltmeters are available on special order. Prices on request.

A.C. AMMETERS

Range	Approx. Res.		Scale Div.	2" Models 231-S, 237-S	2" Models 231-PL, 237-PL	3" Models 331-S, 337-S	3" Models 331-PL, 337-PL	4" Model 430	4" Model 430-PL	6" Model 636
0-1	.21		50	$9.90	$10.40	S$10.50S	$11.00	$11.60	$11.60	$13.80
0-2	.11		40	9.90	10.40	10.50	11.00	11.60	11.60	13.80
0-3	.02	**(30)	60	9.90	10.40	10.50S	11.00	11.60	11.60	13.80
0-5	.01		50	9.90S	10.40	S 10.50S	11.00	S 11.60	11.60	13.80
0-10	.005		50	9.90S	10.40	S 10.50S	S 11.00	11.60	11.60	13.80
0-15	.002	**(30)	75	9.90	10.40	S 10.50S	11.00	11.60	11.60	13.80
0-25	.001		50	9.90	10.40	S 10.50S	11.00	S 11.60	11.60	13.80
0-30	.011	**(30)	60	9.90	10.40	S 10.50S	11.00	11.60	11.60	13.80
0-50	.0005		50	9.90	10.40	S 10.50S	11.00	11.60	11.60	13.80
0-75	.0003	**(30)	75			12.10S		13.20		15.40

For use on frequencies from 25 to 500 cycles. Instruments listed above are self-contained. For ranges above 75, (above 50 on 2" models) use current transformers, with 5 Amp. secondary (60-133 cycles). Add Do-Nut transformer price to price of 0-5 A.C. Ammeter shown above. Transformers: Primary Ampere Range 75, 100, 200, 250, 300, 400 Amp. $10.50 net each; 500, 600 Amp., $13.80 net each; 750, 1000 Amp. $19.30 net each, and 1200 Amp., $28.60 net each.

A.C. MILLIAMMETERS

Range	Approx. Res.		Scale Div.	2" Models 231-S, 237-S	2" Models 231-PL, 237-PL	3" Models 331-S, 337-S	3" Models 331-PL, 327-PL	4" Model 430	4" Model 430-PL	Model 636
0-10	2900		50	$ 9.90	$10.40	$10.50	$11.00	$11.60	$11.60	$13.80
0-15	1150	**(30)	75	9.90	10.40	10.50	11.00	11.60	11.60	13.80
0-25	344		50	9.90	10.40	10.50	11.00	11.60	11.60	13.80
0-50	82		50	9.90	10.40	10.50	11.00	11.60	11.60	13.80
0-100	21		50	9.90	10.40	10.50	11.00	11.60	11.60	13.80
0-200	6.7		40	9.90	10.40	10.50	11.00	11.60	11.60	13.80
0-250	3.4		50	9.90	10.40	10.50	11.00	11.60	11.60	13.80
0-500	0.8		50	9.90	10.40	S 10.50	11.00	11.60	11.60	13.80

For use on frequencies from 25 to 500 cycles.

THERMO AMMETERS (R. F.)

Range	Approx. Res.		Scale Div.	2" Models 241-T, 247-T	3" Models 341-T, 347-T	3" Models 341-PL, 347-PL	4" Model 440	4" Model 440-PL	6" Model 646
0-.5 Amps	.93		50	$11.00	$11.60	$12.10	$12.70	$12.70	$14.90
0-1 Amps	.35		50	11.00	11.60	12.10	12.70	12.70	14.90
0-1.5 Amps	.21	**(30)	75	11.00	11.60S	12.10	12.70	12.70	14.90
0-2.5 Amps	.13		50	11.00	11.60	12.10	12.70	12.70	14.90
0-5 Amps	06		50	11.00	11.60	12.10	12.70	12.70	14.90
0-10 Amps	.03		50	11.00	11.60	12.10	12.70	12.70	14.90

Internal couples are normally furnished at prices shown. If external couples are required, please specify on order, adding $5.50 net to price of instrument shown above. External couples only less meter, with leads, $6.60 net each. **Scale divisions for 2-Inch Models in parentheses.

S — NORMALLY CARRIED IN STOCK.

WESTON INSTRUMENTS

The newly expanded CROWN SERIES distinguished by handsome, functional design

Weston's Crown Line represents the ultimate in meter design, performance and readability. The series now includes a 4.5-inch group of D.C. instruments . . . both A.C. and D.C. types in the 2.5-inch group. Their striking cases will enhance the most modern panels or electronic equipment.

Scales are exceptionally long for the case diameters: 5.3 inches for the 4.5-inch models, up to 2.5 inches for the 2.5-inch models. Ballistic characteristics are greatly improved.

Clear plastic covers and exceptionally long scales afford unmatched readability, with excellent natural illumination from top, front and sides. Confusing shadows are eliminated. In poorly lighted areas, one bulb mounted above the instrument furnishes adequate illumination. The neutral tone of the multi-prism front is designed to complement test equipment or panels of any color. CORMAG® mechanisms eliminate the need for external shielding; they can be closely grouped on magnetic or nonmagnetic panels without special adjustments or danger of intereffects.

SPECIFICATIONS

MECHANISM—Models 1721/1722/1741 core magnet moving coil type. Model 1724—Movable iron vane.

ACCURACY—D.C. instruments are within ±2% of full scale value. Model 1722 rectifier type a-c instrument is within ±3% of full scale when used on sine wave 60 cycle source at normal room temperature of 25°C.

Model 1724 a-c instrument is within ±2% of full scale value.

CASE—Crown shape with molded Bakelite base and clear plastic cover.

MOUNTING—Models 1721/1722/1724—Interchangeable with any 2.5'' MIL Spec instrument, including the flush round Bakelite case Weston 506 Series.

Model 1741—four #6-32 mounting studs in flange. Conforms to ASA C39.1-1955 for 4½'' panel instrument.

TERMINALS—8-32 BC rods with nuts and washers.

POINTERS—Lance type, black finish.

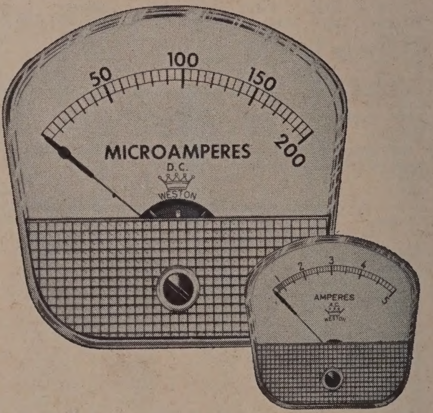
SCALES—Models 1721/1722—Full 2.5'' long—(longer than most 3½'' panel instruments) 100° arc.

Model 1724—2.25'' long, 90° arc.

Model 1741—5.3'' long, 100° arc.

ZERO CORRECTOR—Screwdriver type, 360° rotation.

SHIELDING—Models 1721/1722/1471—CORMAG® mechanism. Model 1724 is unshielded.



TYPICAL RANGES

D-C MODEL 1721-1741 VOLTMETERS—1,000 Ohms Per Volt

Range	Scale Div.	Price	
	1721	1721	1741
5	50	$13.50	$18.75
15	75	13.50	18.75
50	50	13.50	18.75
150	75	13.50	18.75
300	60	14.00	19.25
500	50	—	19.75

AMMETERS

Range (Self-Contained)	Scale Div.	Price	
	1721	1721	1741
1	50	$13.00	$18.25
3	60	13.00.	18.25
5	50	13.00	18.25
10	50	13.00	18.25

External Shunt Type	Scale	Scale Div.	Price	
	1721	1721	1721	1741
50 MV	100 amps	50	$13.25	$18.50
50 MV	150 amps	75	13.25	18.50
50 MV	200 amps	40	13.25	18.50

MILLIAMMETERS

Range	Approx. Res.	Scale Div.	Price	
	1721	1721	1721	1741
1	80	50	$13.00	$18.25
5	8	50	13.00	18.25
10	1.1	50	13.00	18.25
20	1.1	40	13.00	18.25
50	2	50	13.00	18.25
100	1	50	13.00	18.25
200	0.5	40	13.00	18.25
300	0.33	60	13.00	18.25
500	0.2	50	13.00	18.25
1-0-1	45	50	13.00	18.25

MICROAMMETERS

Range	Approx. Res.	Scale Div.	Price	
	1721	1721	1721	1741
20	5500	40	$23.00	$32.25
50	4800	50	19.00	26.50
100	1230	50	16.00	22.25
200	600	40	13.50	18.75
500	230	50	13.50	18.75
50-0-50	1230	50	16.00	22.25

RECTIFIER TYPE A-C MODEL 1722 VOLTMETERS—1,000 Ohms Per Volt

Range	Scale Div.	Price
5	50	$20.00
15	75	20.00
50	50	20.00
150	75	20.00
300	60	20.00
500	50	20.00

MILLIAMMETERS

Range	Approx. Res.	Scale Div.	Price
1	470	50	$20.00
5	150	50	20.00

MICROAMMETERS

Range	Approx. Res.	Scale Div.	Price
200	2,000	40	$22.50
500	750	50	20.00

MODEL 1724 A-C VOLTMETER 25-125 CYCLES

Range	Scale Div.	Approx. Ohms/Volt	Price
5	50	10	$17.00
10	50	10	17.00
15	30	14	17.00
30	30	27	17.00
50	50	45	17.00
80	40	70	17.00
150	30	130	17.50
300	30	260	19.00
500	50	260	21.50

A-C AMMETER 25-500 CYCLES

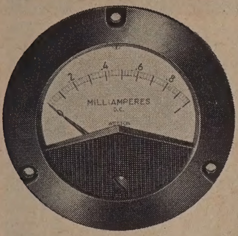
Range	Scale Div.	Approx. Resis. Ohms	Price
1	50	0.125	$17.00
2	40	0.035	17.00
3	30	0.0165	17.00
5	50	0.002	17.00
10	50	0.001	17.00

A-C MILLIAMMETER 25-500 CYCLES

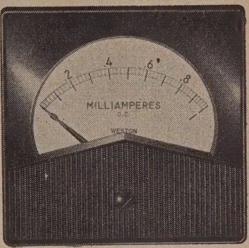
Range	Scale Div.	Approx. Resis. Ohms	Price
15	60	600	$17.00
50	50	82	17.00
100	50	21	17.00
500	50	0.65	17.00

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

WESTON INSTRUMENTS



201/301
PANEL INSTRUMENT SERIES



The Weston 301 Line—famous and trusted throughout industry for many years—has undergone important changes. The 3½-inch instruments look different, are more versatile, work better and longer. And now a sister line of 2½-inch instruments has been introduced—the 201 Group—matching the 301 instruments in appearance and incorporating the same new features.

The renowned Weston CORMAG® mechanism is now standard equipment . . . permits mounting on magnetic or nonmagnetic panels, close to other instruments, without special adjustments. It makes the "301" and "201" immune to the effects of stray magnetic fields. Ballistic characteristics are improved; even critical damping can be obtained. New, modernistically styled Bakelite cases—round or rectangular—are standard. These cases are interchangeable for A.C. and D.C. models.

MODELS 201/301—D.C. VOLTMETERS
1000 Ohms/Volt

Range	Scale Div. 201	Scale Div. 301	Price 201	Price 301
1	20	50	$14.25	$15.25
1.5	30	75	14.25	15.25
3	30	60	14.25	15.25
5	25	50	14.25	15.25
8	40	40	14.25	15.25
10	20	50	14.25	15.25
15	30	75	14.25	15.25
30	30	60	14.25	15.25
50	25	50	14.25	15.25
80	40	40	14.25	15.25
100	20	50	14.25	15.25
150	30	75	14.25	15.25
200	40	40	14.75	15.75
300	30	60	14.75	15.75
500	25	50	15.25	16.25
1KV		50		20.25

MODELS 201/301—D.C. MILLIAMMETERS

Range	Scale Div. 201	Scale Div. 301	App. Resis. 201	App. Resis. Ohms 301	Price 201	Price 301
1	20	50	100	88	$13.75	$14.75
1.5	30	75	40	88	13.75	14.75
2	40	40	40	45	13.75	14.75
3	30	60	40	45	13.75	14.75
5	25	50	6	8	13.75	14.75
10	20	50	2.5	2.5	13.75	14.75
15	30	75	2.5	2.5	13.75	14.75
20	40	40	2.5	2.5	13.75	14.75
30	30	60	2.5	2.5	13.75	14.75
50	25	50	2	2	13.75	14.75
100	20	50	1	1	13.75	14.75
150	30	75	0.66	0.66	13.75	14.75
200	40	40	0.5	0.5	13.75	14.75
300	30	60	0.33	0.33	13.75	14.75
500	25	50	0.2	0.2	13.75	14.75
800	40	40	0.12	0.12	13.75	14.75
1000	20	50	0.05	0.05	13.75	14.75
1-0-1	40	40	40	45	13.75	14.75
50-0-50	50	50	2	2	13.75	14.75
100-0-100	40	40	1	1	13.75	14.75

MODELS 201/301—D.C. AMMETERS

Range	Scale Div 201	Scale Div 301	Price 201	Price 301
1	20	50	$13.75	$14.75
1.5	30	75	13.75	14.75
2	40	40	13.75	14.75
3	30	60	13.75	14.75
5	25	50	13.75	14.75
10	20	50	13.75	14.75
15	30	75	14.75	15.75
30	30	60	14.75	15.75
50	25	50	14.75	15.75
5-0-5		50		14.75
10-0-10		40		14.75
15-0-15		60		15.75
20-0-20		40		15.75
30-0-30		60		15.75
50-0-50		50		15.75

MODELS 201/301—D.C. MICROAMMETERS

Range	Scale Div. 201/206	Scale Div. 301/306	Approx. Res. 201	Approx. Res. 206	Approx. Res. 301	Approx. Res. 306	Price 201	Price 206	Price 301	Price 306
10	20	50	—	4500	—	4500		$31.00		$32.00
20	40	40	—	1520	5500	1520		26.00	$24.75	27.00
30	30	60	—	1520	5500	1520		25.00	23.00	26.00
50	25	50	4150	1140	4800	1140	19.75	24.00	20.75	24.00
100	20	50	870	660	1230	600	16.75	22.00	17.75	22.00
200	40	40	600	—	600	—	14.25		15.25	22.00
500	25	50	160	—	230	—	14.25		15.25	
50-0-50	20	50	870	—	1230	—	16.25		17.75	
100-0-100	40	40	600	—	600	—	14.25		15.25	
500-0-500	20	50	100	—	88	—	13.75		14.75	

MODEL 204/304 SERIES—A.C. VOLTMETERS

Range	Scale Div. 204/304	Approx. Ohms/Volt 204/304	Price 204	Price 304
1.5	30	3	$17.50	$18.50
3	30	6	17.50	18.50
5	50	10	17.50	18.50
10	50	10	17.50	18.50
15	30	14	17.50	18.50
30	30	27	17.50	18.50
50	50	45	17.50	18.50
80	40	70	17.50	18.50
130	26	115	18.00	19.00
150	30	130	18.00	19.00
250	25	220	19.00	20.00
300	30	260	19.50	20.50
500	50	260	22.00	22.00

A.C. AMMETERS—25-500 CYCLES

Range	Scale Div. 204/304	Approx. Resis. Ohms 204/304	Price 204	Price 304
1	50	0.125	$17.00	$18.00
2	40	0.035	17.00	18.00
3	30	0.0165	17.00	18.00
5	50	0.002	17.00	18.00
10	50	0.001	17.00	18.00
20	40	0.001	17.00	18.00
30	30	0.00085	17.00	18.00
50	50	0.00072	17.00	18.00

A.C. MILLIAMMETERS

Range	Scale Div. 204/304	Approx. Resis. Ohms 204/304	Price 204	Price 304
15	30	600	$17.00	$18.00
50	50	82	17.00	18.00
100	50	21	17.00	18.00
500	50	0.65	17.00	18.00

208 THERMO SERIES—THERMO-AMMETER

Range	Scale Div.	Price	Range	Scale Div.	Price
1	20	$29.00	8	40	$29.00
1.5	30	29.00	10	20	29.00
2	40	29.00	15	30	29.00
3	30	29.00	20	40	29.00
5	25	29.00			

THERMO-MILLIAMMETER

Range	Scale Div.	App. Resis. Ohms	Price
100	20	5.2	$33.00
*115	20	5.2	33.00
120	30	5.2	33.00
300	30	1.8	33.00
500	25	1.3	33.00

*Current Squared Galvanometer with uniform 100 division scale.

MODEL 308 SERIES—THERMO-AMMETER

Range	Scale Div.	Price	Range	Scale Div.	Price
1	50	$30.00	5	50	$30.00
1.5	60	30.00	8	40	30.00
2	40	30.00	10	50	30.00
2.5	50	30.00	15	60	30.00
3	60	30.00	20	40	30.00
4	40	30.00			

THERMO-MILLIAMMETER

Range	Scale Div.	App. Resis.	Price
† 10	50	85	$66.00
† 20	40	22	66.00
† 50	50	5	66.00
100	50	8	34.00
*115	50	5.2	34.00
120	60	5.2	34.00
150	75	5.2	34.00
200	40	2.7	34.00
300	60	2.4	34.00
500	50	1.3	34.00

For ranges of 100 MA or higher, expanded scale can be furnished at an additional $8.00.

†Vacuum Thermocouple type

*Current Squared Galvanometer with uniform 100 division scale

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

WESTON INSTRUMENTS

PANEL INSTRUMENT SERIES, CONT.

202/302 RECTIFIER TYPE A.C. SERIES A.C. VOLTMETER

1000 Ohms/Volt

Range	Scale Div. 302	Price 202	Price 302
3	60	$20.25	$21.25
5	50	20.25	21.25
10	50	20.25	21.25
15	75	20.25	21.25
30	60	20.25	21.25
50	50	20.25	21.25
100	50	20.25	21.25
150	75	20.25	21.25
300	60	20.75	21.75

2000 Ohms/Volt

Range	Scale Div. 302	Price 202	Price 302
1	50	$20.75	$21.75
1.5	75	20.75	21.75
3	60	20.75	21.75
5	50	20.75	21.75
10	50	20.75	21.75
15	75	20.75	21.75
30	60	20.75	21.75
50	50	20.75	21.75
100	50	20.75	21.75
150	75	20.75	21.75

A.C. MILLIAMMETERS

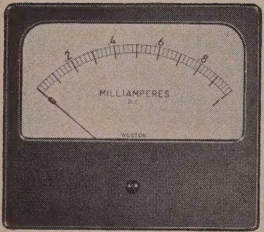
Range	Scale Div.	Approx. Resis. Ohms	Price 202	Price 302
0.5	50	1030	$20.25	$21.25
1	50	470	20.25	21.25
2	40	270	20.25	21.25
5	50	150	20.25	21.25

A.C. MICROAMMETERS

Range	Scale Div.	Approx. Resis. Ohms	Price 202	Price 302
100	50	3400	$24.00	$25.00
200	40	2400	22.75	23.75
300	60	2000	22.75	23.75
500	50	1030	20.25	21.25

NEW 1751 SERIES

An important new addition to the Weston panel instrument line. Noteworthy features include an all-Bakelite case with glass window . . . the Weston CORMAG® self-shielded mechanism . . . 4″ long scale. Method of mounting conforms to ASA C39.1-1955 for 4½″ panel instruments.



TYPICAL RANGES
D-C MODEL 1751

D-C AMMETERS

Range (Self-contained)	Scale Div.	Price
1	50	$16.25
3	60	16.25
5	50	16.25
10	50	16.25

External Shunt Type	Scale	Scale Div.	Price
50 MV	100	50	$16.25
50 MV	150	75	16.25
50 MV	200	40	16.25

D-C MICROAMMETERS

Range	Scale Div.	Approx. Res.	Price
50	50	4700	$22.25
100	50	1230	19.25
200	40	600	16.75
500	50	230	16.75

D-C MILLIAMMETERS

Range	Scale Div.	Approx. Res.	Price
1	50	88	$16.25
5	50	8	16.25
10	50	1.1	16.25
20	40	1.1	16.25
50	50	2.0	16.25
100	50	1	16.25
200	40	0.5	16.25
300	60	0.33	16.25
500	50	0.2	16.25

D-C VOLTMETERS (1000 Ohms per Volt)

Range	Scale Div.	Price
5	50	$16.75
15	75	16.75
50	50	16.75
150	75	16.75
300	60	17.25

RECTIFIER TYPE A-C—MODEL 1752

A-C MILLIAMMETERS

Range	Scale Div.	Approx. Res.	Price
1	50	470	$22.75
5	50	150	22.75

A-C MICROAMMETERS

Range	Scale Div.	Approx. Res.	Price
200	40	2400	$25.25
500	50	750	22.75

A-C VOLTMETERS (1000 Ohms per Volt)

Range	Scale Div.	Price
5	50	$22.75
15	75	22.75
50	50	22.75
150	75	22.75
300	60	22.75

MARK II ANALYZER

Weston Analyzer
MODEL 980
COMMON

Model 980 Mark II

Price $44.50

Combination protective front cover and tilt stand $5.50

The new thin-line Mark II is a highly sensitive and extremely rugged volt-ohm-milliammeter designed for a wide range of accurate test measurements in the electronic field.

Famous CORMAG® mechanism protects the instrument against false readings due to magnetic disturbances. Electrostatic shielding assures accurate measurements at high d-c voltages. Fuses in the low ohmmeter circuits prevent burnout if voltages are mistakenly applied. Interchangeable parts eliminate all need for parts selection in the event replacements are ever necessary. The breakproof case will withstand dropping and thus eliminate the major source of repair and maintenance costs.

FEATURES

- Modern Thin-Line Design
- Spring Back Jewels for Maximum Shock Resistance
- Fused Resistance Ranges
- Transit Switch Position to Dampen Movement During Transportation
- Fully Insulated Crackproof Case
- Single Selector Knob for all Functions and Ranges
- Wide Angle Scale for Maximum Visibility
- Precision Components—No Parts Selection Required
- Single Board Etched Wiring Circuit for Easy Maintenance
- Static Shielded for Accurate High Voltage Measurement
- 4-Way Combination Tilt Stand and Protective Cover Available

SPECIFICATIONS

Accuracy: 2%, d-c; 3%, a-c.

Scale Length: 4.63″

Ranges:

D-C Volts: 1.6, 8, 40, 160, 400, 800, 4000 . . . at 20,000 ohms/volt.

A-C Volts: 1.6, 8, 40, 160, 400, 1600 . . . at 1,000 ohms/volt.

DB Range: —15 db to +54 db (in six ranges).

D-C Amperes: 8 .

D-C Milliamperes: 1.6, 8, 80, 800.

D-C Microamperes: 80.

Ohms Range	Center Scale	Full Scale
R x 1	25	1,000
R x 10	250	10,000
R x 100	2,500	100,000
R x 1,000	25,000	1 megohms
R x 10,000	250,000	10 megohms

Case: Black impact resistant plastic, with carrying strap.

Panel: Black impact resistant plastic with engraved white markings.

Size: 6.25″ x 7.50″ x 2.25″.

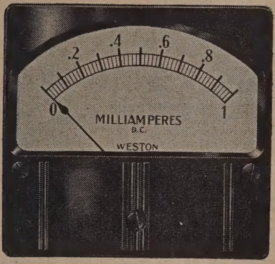
Approx. Weight: 2.5 lbs.

Ohms: Four decade ranges: 1K to 10 meg full scale; 25 ohms to 250K center scale.

High Voltage Probes: High voltage probes are available for measuring high voltages up to 20 kv at 50 microamperes or less. Probes have multiplier resistors encased in insulated handles. Multipliers are rated with a flash voltage of 30 kv.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

WESTON INSTRUMENTS



MODEL 961

MODEL 961—D-C INSTRUMENTS

Rated accuracy 2% of full scale—Scale 3.17" (80.3 mm)—Permanent Magnet Moving Coil

D-C VOLTMETERS

Range	Scale Div.	Price
1	50	$37.25
2	40	37.25
3	60	37.25
5	50	37.25
7.5	75	37.25
10	50	37.25
15	75	37.25
25	50	37.25
30	—	37.25
50	50	37.25
80	40	37.25
100	50	38.00
130	65	36.75
150	75	38.75
200	40	39.50
250	50	41.00
300	60	41.75
500	50	44.75

Self-contained ranges listed have sensitivity of approximately 200 ohms per volt up to and including 200 volts; higher ranges are 1000 ohms per volt.

4¼" PANEL INSTRUMENTS

D-C MILLIAMMETERS

Range	Scale Div.	Approx. Res.	Price
1	50	80	$37.25
3	60	7.3	37.25
5	50	2.8	37.25
10	50	1.25	37.25
25	50	1.0	37.25
30	50	—	37.25
50	50	2	37.25
100	50	1	37.25
200	40	0.5	37.25
300	60	0.33	37.25
500	50	0.2	37.25

Ranges above 25 milliamperes are shunted and have a drop of approximately 100 millivolts.

D-C AMMETERS

Range	Scale Div.	Price	Range	Scale Div.	Price
1	50	$37.25	5	50	$37.25
1.5	75	37.25	10	50	37.25
2	40	37.25	25	50	37.25
3	60	37.25	50	50	37.25

Regularly supplied with self-contained shunts up to and including 50 amperes, but can be supplied with external 50 mv shunts and 5 foot (0.065 ohm) leads.

D-C MICROAMMETERS

Range	Scale Div.	Approx. Res. Ohms	Price
30	60	1800	$53.00
50	60	720	51.25
75	75	450	51.25
100	50	250	51.00
200	40	400	41.00
300	60	175	41.00
500	50	80	41.00

MODEL 963—THERMO AMMETERS

Rated accuracy 2% of full scale . . . Scale 3.17" . . . Thermocouple type.

POWER CONSUMPTION: 1 to 4 amperes incl. varies from 0.2 to 0.4 watt per ampere. Approx. 5 amperes and above—0.2 watt per ampere.

Frequency errors less than 2% up to 65 megacycles:

Amps.	Scale Div.	Price	Amps.	Scale Div.	Price
1	50	$47.00	5	50	$47.00
1.5	75	47.00	6	60	47.00
2	40	47.00	8	40	47.00
2.5	50	47.00	10	50	47.00
3	60	47.00	15	75	47.00
4	40	47.00	20	40	47.00

The ranges are all self-contained.

Through the use of specially controlled characteristics, thermo ammeters can be supplied to meet the special requirements of the FCC for antenna ammeters.

MODEL 962—TYPE 30 VU METERS

Model 962 VU Meters are available with a choice of two scales. Type A stresses the level in VU and is used largely in monitoring wire lines. Type B emphasizes per cent use of transmitter output and is the standard for broadcast service. Scale backgrounds are buff colored.

Scale A or B..........................Model 962—$60.00

MATCHED A-C AND D-C PORTABLE INSTRUMENTS

MODEL 433—A-C INSTRUMENTS

Scale Length 4.04"—Accuracy within ¾ of 1% — Movable Iron Type — Shielded Case Size 5-1/16" x 5¼" x 3¼"—Weight 2½ lbs.—Hand Calibrated Mirror Scales Bakelite Case with Carrying Strap.

Note: These instruments are calibrated for use in a horizontal position.

A-C VOLTMETERS

Made with single, double and triple ranges. For use on frequencies from 25 to 125 cycles.

Range	Price
10, 30, 50, 75	$ 89.75
10/5, 20/10, 30/15	91.25
450/300/150	107.75
600/300/150	107.75
750/300/150	107.75

A-C MILLIAMMETERS

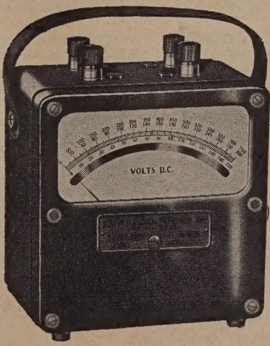
Made in single and double ranges only, for use on frequencies from 25 to 500 cycles.

Range	Price
15, 30, 75, 500	$ 83.25
300/150	95.75

A-C AMMETERS

Made in single, double and triple ranges for use on frequencies from 25 to 500 cycles. All instruments have two binding posts; double and triple range instruments are provided with a range selector switch.

Range	Price
1, 1.5, 2, 3	$ 84.75
15, 25, 30	84.75
2/1, 5/2.5, 10/5	97.75
3/1.5/0.75, 5/2.5/1, 10/5/1	135.75
20/5/2, 30/7.5/3, 50/20/5	135.75



MODEL 432—D-C AND SINGLE PHASE A-C WATTMETERS

Double voltage and single or double current ranges, self-contained up to 300 volts and 50 amperes, frequencies from 25 to 125 cycles.

Electrodynamometer Type

Accuracy ½ of 1% ....Scale Length 4.04"

Case Size 5$\frac{1}{16}$" x 5¼" x 3¼"..........Wt. 3¼ lbs.

Normal Volts	Normal Amps	Price
150/75	.1	$183.00
Double Current Ranges		
300/150	5/2.5	$183.00

MODEL 931—D-C INSTRUMENTS

Scale Length 4.04"—Accuracy within ½ of 1% Core Magnet Moving Coil Type. Case Size 5-1/16" x 5¼" x 3¼"—Weight 2 lbs. — Hand Calibrated Mirror Scales — Bakelite Case with Carrying Strap.

Note: These instruments are calibrated for use in a horizontal position.

D-C VOLTMETERS

Range	Net Price 1,000 Ohms Per Volt	Price 5,000 Ohms Per Volt
3, 15, 50	$ 82.75	$ 94.25
300/150/3	96.75	108.00
750/300/150	96.75	108.00

D-C AMMETERS

	Price
1, 1.5, 3, 5	$ 84.25
30/15/3	96.75
50/20/5	96.75

Self-contained up to 50 amperes inclusive, but can be supplied with external 50 mv shunts and 5 ft. leads.

D-C MILLIAMMETERS

Range	Price
15, 150	$ 80.75
1500/150/15	94.25
15/1.5/.15	105.75

Single range Milliammeters with ranges above can be supplied with external 50 mv shunts and 30 ma are shunted and have a drop of 50 mv ±5%.

D-C MICROAMMETERS

Range	High Resistance Approx. Res. Ohms	High Resistance Price	Low Resistance Approx. Res. Ohms	Low Resistance Price
30	2300	$105.75	490	$108.00
100	2000	94.25	60	105.75
200	600	89.25	15	94.25

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

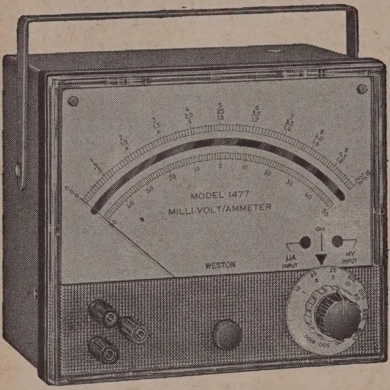
WESTON INSTRUMENTS

MODEL 1477 ELECTRONIC MILLI-VOLT/AMMETER

This versatile Electronic Milli-Volt/Ammeter provides in a single, compact, light-weight unit measurement and amplification of a wide span of d-c current and voltage ranges. The Weston Model 1477 uses a unique electronic servo-amplifier whose extreme high gain, coupled with full feedback, provides accuracy and stability without the adverse affects resulting from variations of line voltage or frequency, condition of amplifier tubes or other variables.

No mechanical switches or choppers are used. The device is a true d-c meter with zero-drift comparable to a typical permanent magnet moving coil instrument. It offers the advantage of essentially zero power-drain from the source being measured, and combines this with power-gain sufficient to supply 1 ma output to drive its own indicating meter, and any external load of 5000 ohms or less. The power output is available at terminals in the back of the unit.

The indicating instrument, incorporating the famous Weston self-shielded CORMAG® mechanism which permits its use in close proximity to magnetic fields without affecting accuracy, knife-edge pointer and mirror scale, all combine to provide dependable performance and unmatched visibility.



- Calibration is dependent only on precision resistors in the range standard.
- No tube selection is necessary when replacements are needed.
- Neither input or output need be grounded, but if grounding is desired, either side or some intermediate point can be grounded. Output polarity may be selected at will.
- Since zero-drift is dependent only on position of galvanometer coil, long-time drift can be maintained to less than 2 microvolts after a few minutes warm-up time.
- Gain stability and output linearity are both within 0.1% at ranges above 1 mv or 200 μa.
- Resolution capability is within 2 microvolts or .02 microamperes.
- Adjustable to zero-left or zero-center.

SPECIFICATIONS

Ranges: 10-20-50-100-200-500-1000 microamperes.
1-2-5-10-20-50-100-200-500-1000 millivolts.

Accuracy: 2% on lowest current and lowest potential range. 1% on all others.

Instrument Scale: mirror, 7.12" long; black and red printing on white dial.

Approx. Size: 7¾" wide x 6½" high x 4⅜" deep.

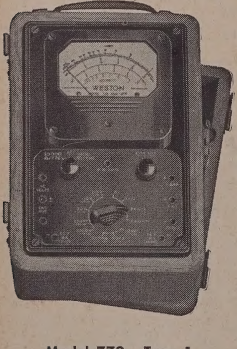
Approx. Weight: 5½ lbs.

Power: 105-125 volts a-c 50-1600 cycles, 35 watts internally fused.

Amplifier Component: Weston Model 1411 INDUCTRONIC® DC Amplifier.

Model 1477—Price $425.00

SUPER-SENSITIVE ANALYZER MODEL 779



Model 779 Type 1
Price $185.00

ACCURACY: A-C within 3%; D-C within 2% to 250 volts; 3% on 1,000 volt range.

Size: 6⅜" x 9⅛" x 4⅞" (162 x 232 x 124 mm) Approx. Wt.: 6 lb. (2.72 kgs.)

A compact 26 range ultra-sensitive analyzer with five d-c voltage ranges at a sensitivity of either 1,000 or 20,000 ohms per volt. A-C temperature compensated; precision resistors throughout. Supplied in a rugged solid oak case with a removable cover and convenient carrying handle. Test leads are provided.

RANGES

Volts D-C	Volts A-C	Current D-C Only	Decibels	Ohms
2.5	2.5	.1 Ma	− 14 to + 2*	0-3000
10	10	1 Ma	− 2 to + 14*	0-30,000
50	50	10 Ma	+ 12 to + 28*	0-300,000
250	250	50 Ma	+ 26 to + 42†	0-30 Meg
1000	1000	250 Ma	+ 38 to + 54††	
		1 Amp	(6 milliwatts,	
		10 Amp	500 ohms, zero level)	

* Substantially flat to 10,000 cycles.
† Substantially flat to 3,000 cycles. †† Substantially flat to 1,000 cycles.

MODEL 799 INSULATION TESTER

ACCURACY: Within ⅛" of scale length. **SCALE: 2.375" (60.3 mm)**

Size: 3⁄16 x 5¼ x 5" (86 x 133 x 127 mm) Approx. Wt.: 3.8 lbs. (1.7 kgs.)

For leakage measurements up to 10,000 megohms at low voltage at a maximum test potential 50 volts. Test leads, tubes, batteries and oak case are supplied.

RANGES: 0-10,000 megohms (Logarithmic scale)

Price $95.25

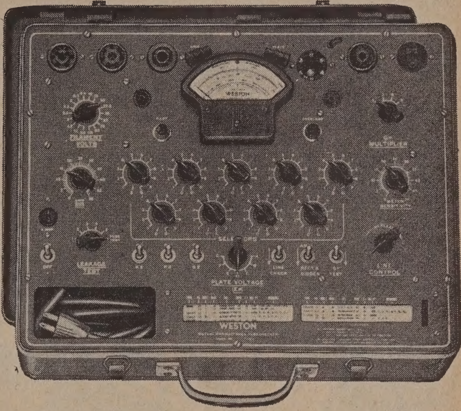
LINE
SHIELD
GROUND
MEGOHMS
WESTON
MODEL 799
INSULATION TESTER
ZERO
ADJUSTER
PRESS
TO READ

Model 799

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

WESTON INSTRUMENTS

WESTON MODEL 981 PROPORTIONAL MUTUAL CONDUCTANCE TUBECHECKER



FEATURES

METER MEASUREMENT OF HIGH LEAKAGE RESISTANCE: Provides an accurate meter measurement of leakage resistance as high as 5 megohms between tube elements, thus being particularly useful for TV servicing and TV line production assembly.

MULTIPLE SWITCHING FACILITIES: Protection against obsolescence is assured through the use of nine single circuit, twelve position, selector switches.

TWIN SECTION TUBES: Three toggle switches make it possible to rapidly check and compare the respective sections of twin section tubes at only one setting of the selector switches.

SINGLE SOCKET FOR EACH TUBE BASE REGARDLESS OF TUBE CONNECTION: Eliminates the possibility of plugging a tube into the wrong socket.

Gm MEASUREMENTS: Gm measurements are made more accurately by using filtered d-c plate, screen grid and control grid potentials. A precision voltage divider network and selector switch allows a proportionate value of signal voltage to be chosen for testing tubes having transconductances up to 30,000 micromhos. Signal voltages of 5.2, 2.6, 1.3, and 0.65 volts peak-to-peak having a frequency of 5000 cycles are provided.

ROLL INDEX CHART—A complete listing of tube test data is available at the flick of a finger by means of an easy-to-read, built-in roll chart.

LEAKAGE TEST: The leakage tests are performed at a d-c potential of 125 volts. For each numbered position of the LEAKAGE TEST switch, a specific tube element is isolated and connected into a series ohmmeter circuit consisting of the isolated element, the 125 volt d-c potential, a current limiting resistor, a milliammeter, and all other elements of the tube.

VOLTAGE REGULATOR TUBES: A selenium rectifier supply furnishes 200 volts d-c for testing of voltage regulator tubes.

SUBMINIATURE TYPE TUBES: A 45 volt potential source facilitates testing of subminiature tubes.

SPECIFICATIONS

FILAMENT VOLTAGES: .65, 1.1, 1.5, 2, 2.5, 0.6a, 3.3, 5, 6.3, 7.5, 10, 13, 20, 27.5, 35, 47, 70, 115.

PLATE VOLTAGES: 90, 130, 220 volts d-c; 22, 44, 160 volts a-c.

SIGNAL VOLTAGES: 5.2, 2.6, 1.3, 0.65 volts peak-to-peak.

Gm RANGE: Up to 30,000 micromhos.

POWER REQUIREMENTS: 100 to 125 volts, 60 cycles single phase a-c, 30 watts.

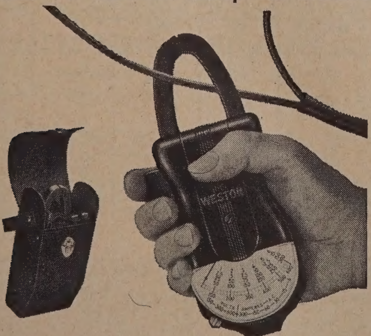
CASE: Grey hammertone finished steel.

SIZE: 17.50'' x 13.25'' x 6.00''.

WEIGHT: 23½ ~~lbs.~~ (10.7 Kgs.).

Model 981 Type 3A..Price $311.75

Model 749 Miniature Clamp Volt-Ammeter



Light weight and rugged pocket-size instrument for quick easy servicing. Has self-shielded core magnet mechanism with spring backed jewels, and shatter-proof Plexiglas window. Only one scale for all ranges and functions. Jaws take up to 1'' round, or 1¾'' x ⅜'' rectangular conductors. Furnished with test leads in scuff-proof case.

Plug-In Adapter available for making both current and voltage measurements . . . has female receptacles on both sides for plugging in load without disturbing circuit being tested . . . convenient for lead insrtion for voltage checks . . . serves as 10 to 1 divider for low current mesaurements.

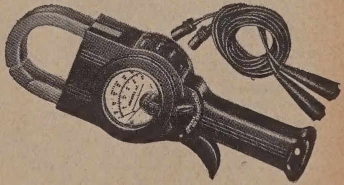
RATED ACCURACY: (Model 749) ±3% full scale deflection.

RANGES: Current 300/150/60/30/15/6 amperes a-c.

Voltage 600/300/150 volts a-c.

Model 749 — *$49.00 complete* Plug-In Adapter — *$5.25*

Model 633 Clamp Volt-Ammeter and Clamp-Ammeter



MODEL 633 Type VA-1

	Price
Model 633 Type VA-1 (Incl. Potential Leads) — 1000/250/100/25/10 amperes a-c 700/350/175 volts a-c	$123.00
Model 633 Type A-3 — 2000/1000/500/250/100/50 amperes a-c	$115.75
Model 9958, 50 Foot Extension Cable, Plug & Receptacle for Model 633 Types A-1, A-2, A-3	$ 79.25
Leather Carrying Case (Model 633 Types VA-1, A-1, A-2, A-3)	$ 13.50
Leather Carrying Case (Model 9958 — Cable, Plug and Receptacle)	$ 22.50

NOTE—*Model 633 instruments may be used for continuous duty up to 500 amperes.*

Approximate Dimensions and Weights

Model 633 Types VA-1, A-1, A-2, A-3	13⅝x4⅜"x2½"	3¼ lbs.
Leather Carrying Case (Types VA-1, A-1, A-2, A-3)	14½"x5½"x3⅝"	2¼ lbs.
Model 9958, 50 Foot Extension Cable, Plug & Receptacle		4¼ lbs.
Leather Carrying Case (Model 9958—Cable, Plug & Receptacle)	14"x8½"x3¾"	4¼ lbs.

Prices Subject To Change Without Notice.

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POCKETSCOPES®
CRAFTSCOPES® · PANELSCOPES® FIRST

LIGHT • ACCURATE • PORTABLE • DC COUPLED

	PRIMER SCOPE MARK I	Industrial POCKETSCOPE® S-11-A	Hi Gain POCKETSCOPE® S-14-A	Wide Band POCKETSCOPE® S-14-B	Computer POCKETSCOPE® S-14-C	Twin Tube POCKETSCOPE® S-15-A	TV & Hi Fi CRAFTSCOPE® S-16-A	Direct Reading POCKETSCOPE® Hi-Gain S-17-A	Basic PANELSCOPE® P-1	Indicator PANELSCOPE® P-100
CR Tube Size—Inches	3	3	3	3	3	1½x3**	5	1½x3	1½x3	1½x3
Accelerating Voltage	560	560	850	850	1000	850**	800/1600	850	900	900
V Sens. (MV rms)	25/in	100/in	10/in	50/in	70/in*	—	2.5/cm	3.6/div	—	20 V/in
V Sens. (MV dc)	1000/in	280/in	28/in	140/in	200/in	28/in**	100/cm	10/div	56 V/in	—
V Response	DC-75 KC	DC-200 KC	DC-155 KC	DC-700 KC	DC-700 KC	DC-155 KC**	DC-5.0 MC†	DC-230 KC	From DC††	From 3c††
V Pulse rise—μ sec.	2.6	2	2.2	0.35	0.35	2.2**	0.07	2	††	††
H Sens. (MV rms)	—	100/in	15/in	150/in	—	—	10/cm	140/div	—	28 V/in
H Sens. (MV dc)	1500/in	280/in	42/in	420/in	—	2.8 V/in**	—	—	80 V/in	—
H Response	DC-75 KC	DC-200 KC	DC-155 KC	DC-200 KC	—	DC-140 KC**	3c-180 KC	3c-170 KC	From DC††	From 3c††
Sweep	REP	REP	REP-TRIG	REP-TRIG	TRIG	REP-TRIG	REP	TRIG	—	—
Range	20c–20 KC	3c-50 KC	0.5c-50 KC	0.5c-50 KC	20μS-2S	0.5c-50 KC	5c-50 KC	100μS-10S	—	—
Case Depth—in.	10	11	12	12	12	12	12½	10	10	10
Case Width—in.	3½	5	6	6	6	6	7	5½	5¼	5¼
Case Height—in.	7	7	7	7	7	7	10½	4¾	5³⁄₁₆	5³⁄₁₆
Weight—lbs.	5¾	8¾	12¾	14	16	16¼	18½	8	5	5
Shipping Weight—lbs.	7	10	16	17	19	19	21	10	7	7
AC Voltage Input	105-125	105-125	105-125	105-125	105-125	105-125	105-125	105-125	105-125	105-125
Frequency in cps	50-400	50-400	50-400	50-400	50-400	50-400	50-400	50-400	50-400	50-400
Watts	35	43	50	65	85	75	65	48	10	10
PRICE	$69.95	$149.50	$249.00	$239.00	$289.00	$399.00	$245.00	$295.00	$109.50	$129.50

*7 MV rms with Amplifier Probe A-11-D
**Each Channel
†Hi-Sensitivity V Response 5c-500 KC
††Coupling is direct to deflection plates making upper limit dependent on driving source

PRICES & SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

PROBES

MODEL	FUNCTION	USED WITH	PRICE
A-10-A	Combination Probe (1 & 10:1)	S-14-A,B S-15-A	$19.90
A-10-B	Combination Probe (1 & 10:1)	S-16-A	9.95
A-10-C	Combination Probe (1 & 10:1)	S-14-C	19.90
A-10-H	Combination Probe (1 & 10:1)	S-17-A	11.95
A-11-D	Amplifier Probe (1:10)	S-14-C	39.90

CARRYING CASES

MODEL	For POCKETSCOPE® Model	PRICE
A-20-A	S-11-A	$11.95
A-20-B	S-14-A,B,C S-15-A	11.95
A-20-C	S-17-A	11.95

Engineering data sheets available with complete descriptions

See page 1489
for Waterman Rayonic®
Cathode Ray Tubes

WATERMAN PRODUCTS CO., INC.

Philadelphia 25, Pa.
Cable Address—Pocketscope, Philadelphia 25, Pa.

WATERMAN PRODUCTS

POLYSTYRENE ROD — TUBING — SHEET

For radio and electronic applications, because of its very low loss factor at ultra high frequencies, Polystyrene is the ideal material for insulators, coil forms, shields, etc. It has excellent arc resistance, is non-tracking and has splendid insulating properties. Because its water absorption is practically zero it has excellent dimensional stability.

POLYSTYRENE ROD—Transparent

Available in 12″ or 48″ lengths

Catalog Number	Diameter	Net Price 12″ lgth.	Net Price 48″ lgth.
JB-100	⅛″	$ .03	$ .12
JB-101	3/16″	.07	.28
JB-102	¼″	.12	.48
JB-103	5/16″	.18	.72
JB-104	⅜″	.26	1.04
JB-105	7/16″	.36	1.44
JB-106	½″	.48	1.92
JB-107	⅝″	.72	2.88
JB-108	¾″	1.00	4.00
JB-109	⅞″	1.42	5.68
JB-110	1″	1.90	7.60
JB-111	1⅛″	2.50	10.00
JB-112	1¼″	3.00	12.00
JB-113	1⅜″	3.60	14.40
JB-114	1½″	4.30	17.20
JB-116	1¾″	6.00	24.00
JB-118	2″	7.50	30.00

POLYSTYRENE TUBING—Satin Finish

Available in 12″ or 48″ lengths.

Catalog Number	O.D.	I.D.	Net Price 12″ lgth.	Net Price 48″ lgth.
JB-201	¼″	⅛″	$ .10	$ .40
JB-202	5/16″	3/16″	.14	.56
JB-203	⅜″	¼″	.18	.72
JB-205	½″	⅜″	.26	1.04
JB-206	⅝″	½″	.32	1.28
JB-207	¾″	⅝″	.40	1.60
JB-208	1″	⅞″	.56	2.24
JB-220	1½″	1¼″	1.50	6.00
JB-222	2″	1¾″	2.20	8.80

POLYSTYRENE SHEET

The following sheets are all crystal clear with smooth surfaces fully protected against abrasion by masking paper on both sides.

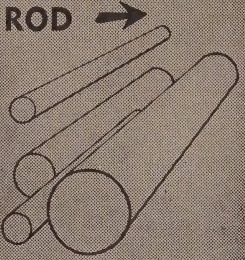
Catalog Number	Thickness	Sheet Size	Net Price
JB-125	1/16″	12″ x 12″	$4.15
JB-126	3/32″	12″ x 12″	4.80
JB-127	⅛″	12″ x 12″	5.50
JB-128	3/16″	12″ x 12″	7.15
JB-129	¼″	12″ x 12″	8.15
JB-245	1/16″	12″ x 24″	7.80
JB-246	3/32″	12″ x 24″	9.15
JB-247	⅛″	12″ x 24″	10.50
JB-248	3/16″	12″ x 24″	13.15
JB-249	¼″	12″ x 24″	15.65
JB-315	1/32″	24″ x 24″	9.65
JB-301	1/16″	24″ x 24″	11.15
JB-302	3/32″	24″ x 24″	13.00
JB-303	⅛″	24″ x 24″	14.80
JB-304	3/16″	24″ x 24″	18.75
JB-305	¼″	24″ x 24″	23.00
JB-316	5/16″	24″ x 24″	27.65
JB-309	⅜″	24″ x 24″	31.25
JB-311	½″	24″ x 24″	38.65
JB-317	⅝″	24″ x 24″	50.00
JB-318	¾″	24″ x 24″	69.25
JB-319	1″	24″ x 24″	94.15

JULIUS BLUM & CO.; INC.
CARLSTADT, N. J.

Serving Industry
Since 1910

PLASTICS for electronics

ROD →



(R = Rods, B = Bars, ½R = Half Round)

EXAMPLE: Cat. No. R11A-½ is ½" diameter Acrylic Rod 1 foot long.

MATERIAL →	POLYSTYRENE	ACRYLIC	ACRYLIC	ACRYLIC	PHENOLIC Paper Base	PHENOLIC Canvas Base	POLYETHYLENE	NYLON	TEFLON	TEFLON	TEFLON	MACHINABLE LAVA	MACHINABLE CERAMIC
Length →	1′	1′	1′	1′	1′	1′	1′	1′	1′	6″	3″	1′	8″
CAT. NO. →	R10A	R11A	½R11A	B11A	R12A	R13A	R14A	R15A	R16A	R16P	R16L	B17A	B18R
Dia.													
1/16	—	—	—	—	—	—	—	.06	—	—	—	—	—
⅛	.03	.06	—	—	.69	1.02	—	.18	—	—	—	—	—
3/16	.06	.09	—	—	.71	1.04	—	.27	.98	.63	.37	—	—
¼	.09	.15	—	.27	.72	1.05	.10	.45	1.18	.77	.47	—	—
5/16	.14	.21	—	—	.80	1.16	—	.63	1.52	.97	.58	—	—
⅜	.18	.29	—	.53	.92	1.36	.39	.87	1.94	1.34	.81	—	—
½	.36	.48	.35	.84	1.38	2.03	.53	1.49	3.10	2.25	1.34	1.95	.90
⅝	.60	.75	.60	1.50	2.12	2.85	.72	1.94	4.55	3.32	2.00	—	—
¾	.81	1.08	.86	—	2.76	3.72	1.05	2.64	6.38	4.64	2.78	2.70	1.80
⅞	1.20	1.43	—	—	3.44	4.67	1.43	3.48	8.47	6.30	3.78	—	—
1″	1.70	1.88	—	—	4.16	5.70	2.03	4.38	10.95	7.32	4.79	4.05	2.70
1⅛″	2.11	2.33	—	—	4.56	6.91	—	5.43	13.76	9.58	6.14	—	—
1¼″	2.54	2.78	—	—	5.37	8.13	2.93	6.39	16.87	11.08	7.45	—	—
1⅜″	3.38	3.83	—	—	6.43	9.74	—	7.28	20.12	13.60	8.96	—	—
1½″	3.58	4.13	—	—	7.55	11.43	4.20	8.40	23.88	16.29	10.57	9.45	—
1⅝″	4.23	—	—	—	8.64	13.08	—	10.25	27.95	19.60	12.56	—	—
1¾″	4.91	5.47	—	—	10.79	16.34	—	11.97	32.35	22.92	13.88	—	—
1⅞″	5.54	—	—	—	12.75	19.32	—	13.29	40.70	26.48	16.03	—	—
2″	6.24	6.98	—	—	15.05	22.77	7.05	15.42	41.48	29.86	17.38	14.63	—

R10, 11, 14, 15 and 16 also available in 4′ and 6′ lengths. R12 and 13 also available in 3′ random lengths. Smaller sizes in the R15 are available in 100′ and 500′ continuous lengths.

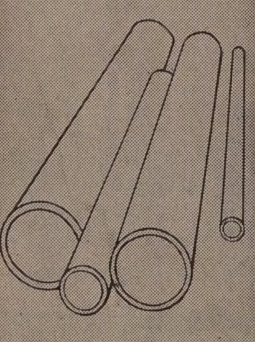
The Illumitronic Jobber Line of PLASTICS is the most complete line available in small standard sizes and short lengths. All sizes are available from stock. For quantity requirements request quotation.

illumitronic

sunnyvale, california

engineering

TUBING →



EXAMPLE: Cat. No. T15A-¼x⅛ is ¼" O.D. with ⅛" I.D. Nylon Tubing 1 foot long.

MATERIAL →	POLYSTYRENE	ACRYLIC	PHENOLIC Paper Base	PHENOLIC Canvas Base	POLYETHYLENE	NYLON	TEFLON	TEFLON	MACHINABLE CERAMIC
Length →	1′	1′	1′	1′	1′	1′	1′	6″	8″
CAT. NO. →	T10A	T11A	T12A	T13A	T14A	T15A	T16A	T16P	T18R
O.D. I.D.									
⅛x 3/32	—	—	—	—	—	.06	—	—	—
¼x ⅛	.09	.15	.60	.83	.09*	—	—	—	—
¼x 3/16	—	—	—	—	—	.14	1.53	1.01	—
⅜x ¼	.15	.21	.64	.88	.18*	—	1.79	1.17	—
⅜x 19/64	—	—	—	—	—	.27	—	—	—
½x ⅜	.21	.37	.74	.97	.24*	.72	—	—	—
½x ¼	—	—	—	—	—	—	2.99	1.96	—
⅝x ½	.24	.41	.81	1.05	.36	—	—	—	—
¾x ⅝	.30	.51	.88	1.20	.42	—	—	—	—
¾x ½	—	—	—	—	—	—	5.08	3.30	—
⅞x ¾	.39	.63	.94	1.30	—	—	—	—	—
⅞x ⅝	—	—	—	—	—	—	5.98	3.88	—
1 x ⅞	.42	—	1.04	1.47	.54	—	—	—	—
1 x ¾	.81	1.13	1.42	2.22	—	—	7.69	5.00	—
1¼x1	1.12	1.35	1.58	2.55	.81	—	—	—	—
1½x1¼	1.20	1.65	1.73	3.00	1.05	—	—	—	3.30
1¾x1½	1.58	1.80	2.02	3.30	1.27	—	—	—	—
2 x1¾	1.65	2.25	—	—	—	—	—	—	5.40
2¼x2	—	3.00	—	—	—	—	—	—	—
2½x1¾	—	—	—	—	—	—	—	—	5.85
3 x2¾	—	3.60	—	—	—	—	—	—	—
3 x2½	—	—	—	—	—	—	—	—	6.15

T10, T11 and T14 also available in 4′ and 6′ lengths. T12 and T13 also available in 3′ random lengths.
*T14 also available in 100′ and 500′ continuous lengths.

PLASTICS for electronics

SHEET

MATERIAL →	POLYSTYRENE			ACRYLIC			PHENOLIC Paper Base			PHENOLIC Canvas Base		
SIZE →	6"x12"	12"sq.	24"sq.	6"x12"	12"sq.	24"sq.	6"x12"	12"sq.	24"sq	6"x12"	12"sq.	24"sq.
CAT. NO. →	S10A	S10C	S10E	S11A	S11C	S11E	S12A	S12C	S12E	S13A	S13C	S13E
Thickness												
1/32	1.77	2.82	9.18	—	—	—	.39	.60	1.86	.57	.96	3.02
1/16	1.84	3.08	10.77	1.59	2.66	8.41	.61	1.02	3.23	1.05	1.76	5.56
⅛	2.46	4.11	14.50	1.68	2.79	8.84	1.23	2.04	6.48	2.10	3.51	11.13
3/16	3.20	5.32	18.35	1.99	3.34	10.53	1.83	3.06	9.68	3.16	5.27	16.69
¼	3.64	6.07	21.55	2.35	3.93	12.45	2.44	4.08	12.93	4.21	7.02	22.25
⅜	5.08	8.47	29.93	3.78	6.30	19.96	3.67	6.14	19.44	6.33	10.55	33.38
½	6.27	10.46	36.71	5.03	8.39	26.57	4.90	8.18	25.87	8.43	14.06	44.52
⅝	8.55	14.25	47.35	6.22	10.83	32.85	6.13	10.23	32.37	10.54	17.57	55.63
¾	11.79	19.65	65.44	7.42	12.38	39.21	7.35	12.26	38.80	12.66	21.09	66.77
⅞	12.65	21.07	70.09	8.65	14.42	45.66	8.58	14.31	45.31	14.76	24.60	77.88
1"	16.02	26.70	89.24	9.84	16.40	51.92	9.82	16.37	51.82	16.86	28.11	89.02

S11 also available in sizes 36"x60", 36"x36". S12 and S13 also available in sizes 36"x48", 36"x36".

MATERIAL DESIGNATION

10 = Polystyrene
11 = Acrylic*
12 = Paper Base Phenolic
13 = Canvas Base Phenolic
14 = Polyethylene
15 = Nylon
16 = Teflon
17 = Machinable Lava**
18 = Machinable Ceramic**

*(Acrylic is also called Plexiglas or Lucite)

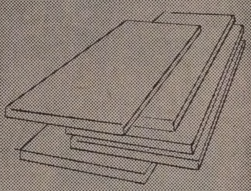
**May be drilled or machined.

SHEET

MATERIAL →	POLYETHYLENE			NYLON				TEFLON		
SIZE →	6"x12"	12"sq.	24"sq.	3"x6"	4"x12"	6"x12"	12"sq.	3"x6"	6"x12"	12"sq.
CAT. NO. →	S14A	S14C	S14E	S15L	S15M	S15A	S15C	S16L	S16A	S16C
Thickness										
.005	.14	.27	.93	—	—	—	—	* .32	.93	1.48
.010	.24	.36	1.26	—	.48	—	—	* .53	1.73	2.66
.015	.33	.48	1.65	—	.68	—	—	* .80	2.55	4.00
.020	.39	.60	2.00	—	.83	—	—	* 1.09	3.46	5.33
.025	—	—	—	—	1.05	—	—	* 1.30	4.34	6.68
.030	.54	.90	3.06	—	1.20	—	—	* 1.57	5.11	8.00
.040	.68	1.17	4.06	—	1.50	—	—	* 2.10	6.81	10.66
.050	.75	1.35	4.66	—	1.83	—	—	* 2.63	8.51	13.33
.060	.97	1.65	5.65	—	2.25	—	—	* 3.14	10.21	15.99
1/32	.54	.90	3.06	—	1.20	—	—	* 1.57	5.11	8.00
1/16	.97	1.65	5.65	—	2.25	6.38	9.38	* 3.14	10.21	15.99
⅛	1.62	2.70	9.31	—	5.03	10.64	15.00	4.81	16.01	25.38
3/16	2.01	3.36	11.77	3.99	—	13.30	18.75	7.08	23.67	37.00
¼	3.00	4.95	17.36	5.19	—	17.29	24.38	8.92	29.79	46.50
⅜	4.65	7.74	26.73	7.18	—	23.94	33.75	13.77	45.75	71.63
½	6.30	10.50	36.77	7.98	—	26.60	37.50	17.82	59.32	92.75
⅝	7.95	13.26	46.42	9.98	—	33.25	46.88	22.34	**	**
¾	11.55	19.20	**	11.97	—	39.90	56.25	26.40	—	—
⅞	—	—	—	—	—	**	**	30.46	—	—
1"	15.60	25.95	—	—	—	—	—	35.38	—	—

S14 also available in sizes 60"x36" and 36"x36". S16 also available in size 24"x24".
*1/16 and smaller are skived sheets, larger are cast sheets.
**Larger sizes available on request.

EXAMPLE: Cat. No. S14C-¼ is ¼" thick Polyethylene Sheet 12"x12".



illumitronic

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TOLERANCES:

6" ± 1/16"	3"x6" ± 1/16"
1' ± ⅛"	6"x12" ± ¼"
3' ± ¼"	12"x12" ± ¼"
4' ± ½"	24"x24" ± ½"
6' ± 1"	36"x36" ± 1"

For Vinyl Sleeving, Vinyl lacing cord, Spiral Wrap, Zippertubing, Cable Clamps and other plastic items see other Illumitronic sheets.

For Physical Properties ask for Tele-Hint #9.

Available from Leading Jobbers nationally.

PERMACEL® PLASTIC *Electrical* TAPE

PERMACEL
Plastic Electrical Tape
39¢
FOR ALL ELECTRICAL WIRING . . . INDOORS AND OUTDOORS

PERMACEL 29A DISPLAY
12 rolls— ½″ x 150″

FOR ELECTRICAL REPAIRS

High Dielectric Strength—Flexible—Good Stretch and Conformability—Snug Wrap—Waterproof—Resists Oil, Gasoline, Water, Salt Water, Alkalis and Sunlight. Hundreds of uses!

PERMACEL 29
PLASTIC ELECTRICAL TAPE

TECHNICAL DATA

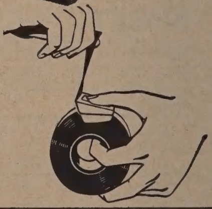
Dielectric Strength	10,000 volts
Thickness	7 mils
Adhesion (oz./inch)	25
Tensile strength (lbs./inch)	20
Elongation	175%

PERMACEL
PLASTIC ELECTRICAL TAPE
FOR ALL ELECTRICAL WIRING INDOORS AND OUTDOORS
PERMACEL
PLASTIC ELECTRICAL TAPE
WATERPROOF · FLEXIBLE · RESISTS OIL, ACID, ALKALI

PERMACEL 29D DISPLAY
12 rolls— ¾″ x 66′

PERMACEL
Plastic Electrical Tape
75¢
FOR ALL ELECTRICAL WIRING . . . INDOORS AND OUTDOORS

PERMACEL 29C DISPLAY
12 rolls— ¾″ x 20′



FREE CUTTER BAR WITH EVERY 66′ ROLL!

Eliminates need for scissors, razor blades or penknives Made of durable plastic—good for thousands of cuts. A non-conductor—safe for all electrical uses. Saves money—prevents tape waste.

PERMACEL® CLOTH TAPE...an improved Friction Tape

PERMACEL
CLOTH TAPE
AN IMPROVED FRICTION TAPE
NO GUMMY EDGES OR BACKING

PERMACEL 64B DISPLAY
24 rolls— ¾″ x 60′

No gummy edges or backing—better adhesion to its own backing and other surfaces—easier unwind—thinner, builds up less bulk—excellent insulation—long-aging.

PERMACEL
CLOTH TAPE
NO GUMMY EDGES OR BACKING

SELF-STICKING
PERMACEL® TAPE
PERMACEL · New Brunswick, New Jersey
TAPES · ELECTRICAL INSULATING MATERIALS · ADHESIVES

MICROWAVE COMPONENTS, Inc.

DOYLESTOWN, PENNSYLVANIA

All merchandise of current manufacture, suitable for laboratory experiments and training aids. Complete transmitter and receiver parts. All units are constructed of standard RG-52/U brass waveguide and employ UG/39 type flanges unless otherwise stated. All units are nickel plated.

"X" BAND MICROWAVE COMPONENTS 8.7 to 9.3 KMC

#501 Wave Guide type RG52 equipped with 2 type UG 39 flanges, 501 C has two chokes type UG 40, and 501 CF has one flange and one choke. Standard length 4", can also be furnished in full inches from 2" to 20" or longer 2" to 4" $5.40

#502 Wave Guide to Coax Adaptor has UG39 type flange, two inches of RG 52 type guide and a UG 23 connector which will mate with UG 21 cable connector as used with RG 8, 9 or 10 type coax $5.40

#503 Klystron Tube Mount for 723A/B or 2K25 Klystrons. Equipped with 3DB pad, 1N23 crystal, UG 88 connector for crystal current, RG 52 Wave Guide and UG 39 type flange. Power cable equipped with M1P8 connector to connect with 510 power supply. This Klystron tube mount may be used as local oscillator for micro wave receiver, transmitter, signal generator, spectrum analyzer and test oscillator. Klystron not supplied. Klystron shell is at ground potential using 510 power supply $24.00

#503A Klystron Tube Mount same as 503 less pad and crystal mount $15.00

#504 Frequency Meter consists of 4" length of RG 52 type wave guide with UG 39 input and output flanges. The 1" micrometer head tunes a cylindrical cavity from approximately 8.2 KMC to 10 KMC. The coupling and Q permit satisfactory absorption indications of resonance in the tuning band $30.00

#505 Slotted Line consists of a 4" length of slotted RG 52 equipped with UG 39 input and output flanges. The sliding probe, adjustable for depth and 5 CM travel, is equipped with a IN 23 crystal terminated in to a UG 88 connector and 200 ohm shunt resistance. With a suitable amplifier as supplied in the 510 power supply, wave length and VSWR can be indicated $30.00

#506 Flap Attenuator adjustable from 0 to over 20 DB at power levels under 1 watt. Consists of 4" length of RG 52 equipped with 2 type UG 39 flanges $18.00

#507 Wave Guide Termination consists of 2.5 inches of RG 52 guide and a UG 39 input flange. Will absorb power at levels less than 1 watt. The strip of absorbing material is easily removed $5.40

#508 Thermister Mount consists of 1.75" length of RG 52 guide with a UG 39 input flange. Thermister balances, with no RF power input, at 600 to 1000 ohms and will indicate down to 1 MW RF with a 100 micro ampere bridge balance meter. High power levels may be indicated using fixed standard attenuators ahead of the thermister. D. C. bridge output is through a UG 88 connector to DC power and bridge balance meter in type 510 Power Supply $18.00

#509 Horn Antenna consists of 3" length of RG 58 guide flared at one end for low gain transmission or reception. Output is through coax connector type UG 23 $9.00

#509-F Horn Antenna with flange input $9.00

#510 Power Supply furnishes fixed regulated cavity potential for 723A/B or 2K25 Klystrons (cavity grounded) adjustable and regulated repeller voltage, unregulated filament and means to insert signal for repeller modulation. Sensitive meter may be switched from tube mount crystal current to Thermistor bridge output and to VSWR amplifier output. Regulated power for thermister bridge and VSWR amplifier also provided for. Operates from 110 to 130 volt AC 1ø 60 C/S power, using less than 50 watts. $120.00

#511 Shunt Tee consists of 3" length of RG 52 guide equipped with three UG 39 flanges $12.00

#512 Directional Coupler consists of 4" length of RG52 guide equipped with UG 39 flanges. Attenuation approximately 20 DB. Directional output is terminated in UG 23 connector. $15.00

#513 Fixed Attenuator is the same as 506 except fixed pad is used $13.50

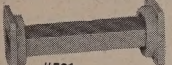
#514 R.F. Cable consists of 2 feet of RG 8 type coax equipped with two UG 21 cable connectors $6.00

#515 Video Cable consists of 2 feet of RG 58 cable equipped with two UG 89 cable connectors $4.50

#516 Series Tee consists of 3" lengths of RG 52 guide terminated with 3 type UG 39 flanges. $12.00

#517 Tuning Probe is the same as 505 except that probe is grounded and crystal is not required. $24.00

#518 Crystal Mount consists of 2 inch length of RG 52 equipped with 2 UG 39 Flanges and 1N23 crystal terminated with UG 88 connector. Suitable for R.F. detection or mixer applications as required for heterodyne reception and spectrum analyzers. $12.00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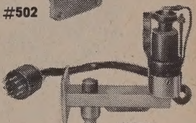
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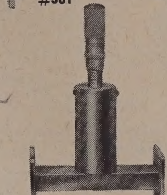
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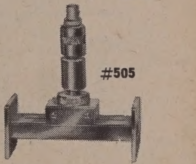
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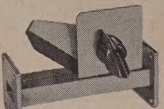
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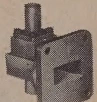
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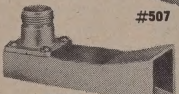
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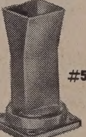
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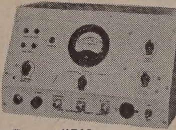
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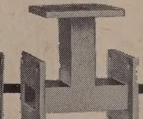
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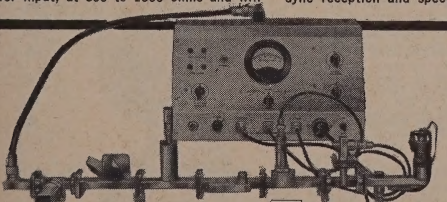
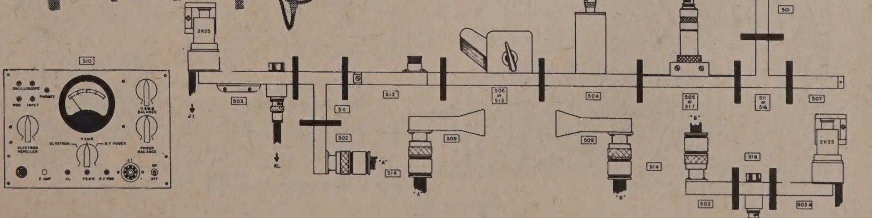
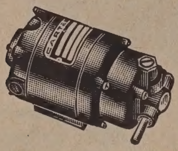




PRICES SUBJECT TO CHANGE

Carter Motor FRACTIONAL HP MOTORS and GEARMOTORS

CARTER *Classic* DOUBLE REDUCTION GEAR MOTORS



Interchangeable with similar motors now in use. Shaft worm and second worm case hardened for longer life. High speed first gear is phenolic for quiet operation. Bronze low speed second gear provides maximum torque. Motor shaft runs on sealed, super precision ball bearings, require no lubrication. Sleeve bearings on gear shafts are permanently lubricated. Output shaft position variable to six 30 degree positions simply by removing three screws. Rotation is clockwise looking at end of shaft. **Size:** 6 1/16" x 3 7/16" x 3 3/8" h., less base, Weight, 5 lbs.

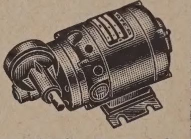
115 VOLT CONTINUOUS DUTY CW ROTATION*

RPM	Torque In.-Lb.	Universal Models		Shunt Models	
		Carter No.	Net Each	Carter No.	Net Each
10	1.2	CUA011R2	$34.77	CSA011R2	$35.97
20	4.0	CUA024R2	34.77	CSA024R2	35.97
30	4.0	CUA034R2	34.77	CSA034R2	35.97
50	4.0	CUA054R2	34.77	CSA054R2	35.97
100	3.0	CUA103R2	34.77	CSA103R2	35.97

*Opposite rotation available on order, no extra charge.

Other models available up to 12 in.-lbs. torque, intermittent duty.

CARTER *Classic* SINGLE REDUCTION GEAR MOTORS



Interchangeable with similar motors now in use. Employs the most advanced engineering practices and quality die cast construction. Case hardened worm for maximum life. Fiber gear for minimum noise, hub mounted for accurate factory setting. Six 30 degree shaft positions.

Rotation is counter clockwise looking at end of output shaft. All gears and bearings permanently lubricated and sealed. Precision ball bearings on main shaft. Bronze sleeve bearings on gear shaft.

Size: 6 1/2" x 3 7/16" x 3 3/8" h., less base. Weight, 4 1/2 lbs.

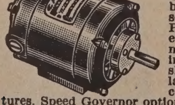
115 VOLT CONTINUOUS DUTY CCW ROTATION*

RPM	Torque In.-Lb.	Universal Models		Shunt Models	
		Carter No.	Net Each	Carter No.	Net Each
200	3.0	CUA203R1	$32.37	CSA203R1	$33.57
300	2.5	CUA302R1	32.37	CSA302R1	33.57
400	2.0	CUA402R1	32.37	CSA402R1	33.57
500	1.5	CUA501R1	32.37	CSA501R1	33.57
750	1.0	CUA751R1	32.37	CSA751R1	33.57

*Opposite rotation available on order, no extra charge.

Other models available up to 12 in.-lbs. torque, intermittent duty

CARTER *Classic* FHP MOTORS



Interchangeable with competitive units. Same as above, less gear reducer. Complies with new mil specs. Steel bearing sleeves. Instrument quality sealed ball bearings. Oversize brushes. Precision die cast frame and end brackets machined in one operation, provide matched alignment of armature, bearing bore, and frame. (No sheet metal shell). Statically and dynamically balanced armature. Diamond turned commutator. Other top quality features. Speed Governor optional at extra cost. Rotation clockwise viewed from end opposite shaft extension.

Size: 4 1/2" x 3 5/16" x 3 3/8" h. Weight, 3 3/4 lbs. Models listed are for 115v. input, other inputs 12v. to 220v. available.

115 V. CW ROTATION*

RPM	HP	Universal Models		Shunt Models	
		Carter No.	Net Each	Carter No.	Net Each
3600	1/35	CUA3635A	$22.38	CSA3635A	$23.97
5000	1/25	CUA5025A	22.38	CSA5025A	23.97
7500	1/20	CUA7520A	22.38	CSA7520A	23.97
10000	1/15	CUA1015A	22.38	CSA1015A	23.97
10000	1/10	CUA1010A	22.77	CSA1010A	23.97

*Opposite rotation available on order, no extra charge. Other models available to your specification.

CARTER ECLIPTIC FHP MOTORS

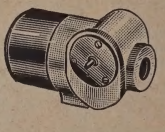
M105 UNIVERSAL MOTOR

Rated 1/75 hp intermittent; 1/125 hp continuous. Speed—3,000 to 20,000 rpm. Input, 6 v. to 115 v. Torque, 4.2 oz. in. con.; 5.5 oz. in. int. Shaft dia., 7/64" to 15/64". **Size:** 1 3/4" x 3", plus 3/4" shaft. Weight, 10 oz.
Carter Model M105—Net $18.90

M106 DC SKELETON FRAME MOTOR

Input, 6 v. to 110 v. DC, reversible, shunt or series. Rated 1/50 hp—7.5 oz. in. torque con.; 1/40 hp—9 oz. in. torque int. Speed—3,000 to 15,000 rpm. Shaft, 5/32" to 15/64" dia. **Size:** 2 3/4" x 3 1/8" l., plus 1" shaft. Weight, 1-1/10 lbs.
Carter Model M106—Net. . $18.90

M107 UNIVERSAL GEAR MOTOR



DC series, shunt type, or universal. Reversible. Input 6 v. to 115 v. Rated 1/350 hp—28 oz. in. torque con.; 1/250 hp—35 oz. in torque int. Speed—100 to 300 rpm. through 38/1 or 66/1 reduction. Shaft, .109" to .156" dia. **Size:** 3 3/8" x 2 3/8" x 2", plus 19/32" shaft. Weight, 12 oz.
Carter Model M107—Net $24.60

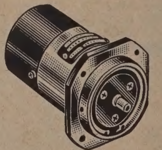
M114 PM DC REVERSIBLE MOTOR

Input, 6 v. to 115 v. DC. Rated 1/150 hp con.; 1/75 hp int. Shaft speed 3,000 to 20,000 rpm. Extra output DC generator winding for tachometer, or control circuits or dual input. **Size:** (overall) 1 3/8" x 2 5/8" l., plus 19/32" shaft. Shaft size, .109" to .118" dia. Weight, 6 oz.
Carter Model M114—Net $16.20

M120 DC GOVERNOR MOTOR

Uniform shaft speed within 1%. PM field. Input, 24 v. to 48 v. DC. Rotation. CW or CCW optional. Rated 1/200 hp—2.8 oz. in. torque con.; 1/100 hp—3.5 oz. in. torque int. Speed— 4500 to 9000 rpm. Shaft size, .109" to .118" dia. **Size:** (overall) 1 1/2" x 2 5/8", plus 3/8" shaft. Weight, 7 oz.
Carter Model M120— Net Each. $33.00

M141 DC PM REVERSIBLE MOTOR

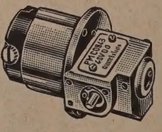


Input, 6 v. to 127 v. DC. Rated 1/15 hp—27 oz. in. torque con. duty; 1/10 hp—38 oz. in. torque int. **Size:** (overall) 2 3/8" x 4 5/16" l., plus 7/16" shaft. Shaft dia., 1/4" to 17/64". Weight 2 1/4 lbs.
Carter Model M141— Net Each. $47.40

M133 UNIVERSAL MOTOR

For military, geophysical and other critical applications. Input, 6 v. to 115 v. Rated 1/75 hp int.; 1/125 hp con. Speed 3,000 to 20,000 rpm. Shaft dia, 7/64" to 15/64". Overall size, 1 3/4" x 3" plus 3/4" shaft. Weight 10 oz.
Carter Model M133—Net $24.00

CO843 DOUBLE GEAR REDUCTION MOTOR



PM field. Input 6 v. to 115 v. DC. Output shaft speeds, 10 to 100 rpm. Maximum torque, 50 in. oz. Output shaft, .093" to .156" dia. Extends .187" to .593". Size, (overall) 2 7/8" x 2". Weight, 9 oz.
Carter Model CO0843—Net $38.10

hurst

SYNCHRONOUS MOTORS

FOR HEAVY DUTY CONTINUOUS TIMING

new!

POSITIVE CLUTCH & INSTANTANEOUS BRAKE

... electrically actuated!

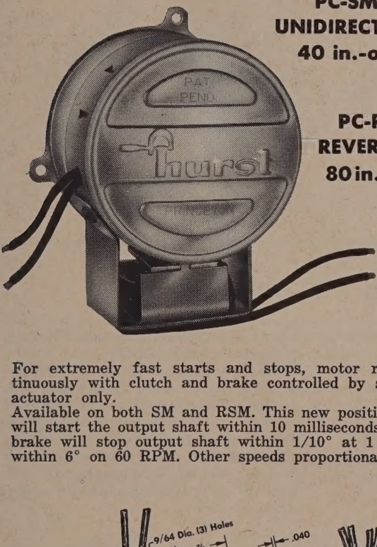
★

STARTS & STOPS IN 10 MILLISECONDS

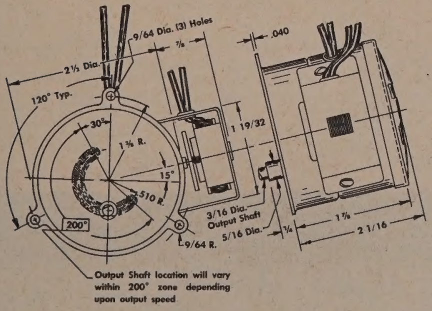
★

PC-SM
UNIDIRECTION
40 in.-oz.

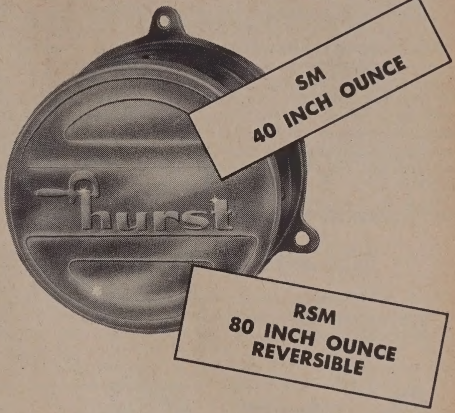
PC-RSM
REVERSIBLE
80in.-oz.


PAT. PEND.
hurst

For extremely fast starts and stops, motor runs continuously with clutch and brake controlled by switching actuator only.
Available on both SM and RSM. This new positive clutch will start the output shaft within 10 milliseconds and the brake will stop output shaft within 1/10° at 1 RPM or within 6° on 60 RPM. Other speeds proportional.


9/64 Dia. (3) Holes
7/8
.040
2 1/2 Dia.
120° Typ.
30°
1 3/8 R.
1 19/32
15°
.510 R.
200°
3/16 Dia. Output Shaft
5/16 Dia.
9/64 R.
1/4
1 7/8
2 1/16
Output Shaft location will vary within 200° zone depending upon output speed

MOUNTING DIMENSIONS for PC-SM and PC-RSM


SM
40 INCH OUNCE
hurst
RSM
80 INCH OUNCE
REVERSIBLE

This compact motor is engineered for tough jobs demanding accurate timing. It has excellent shock and vibration resistance and will start instantly at full torque. It will not overheat during continuous duty nor in a stall position.

Gear-trains are constructed to withstand loads more than three times the motor's rated capacity.

SERIES SM & RSM SPECIFICATIONS

TYPE (SM)	Hysteresis/Synchronous
TYPE (RSM)	Capacitor/Synchronous
TORQUE (SM)	40 inch ounces at 1 RPM
TORQUE (RSM)	80 inch ounces at 1 RPM
DUTY (SM & RSM)	Continuous
WEIGHT (SM)	12 oz.
WEIGHT (RSM)	14 oz.
SHAFT SIZE (In stock) (SM & RSM)	3/16"x1" flatted
MOUNTING (SM & RSM)	3 No. 6 holes spaced 120°
POWER (In stock) (SM&RSM)	95/130 V. 60 cycle 7 watts
ROTATION (In stock) (SM)	CW (Right hand facing shaft)
ROTATION (RSM)	Reversible
TEMPERATURE RISE (SM&RSM)	40°C. above ambient
OPERATING TEMPERATURE (SM & RSM)	-40°C. (-40°F.) to 105°C. (221°F.)

NET PRICES

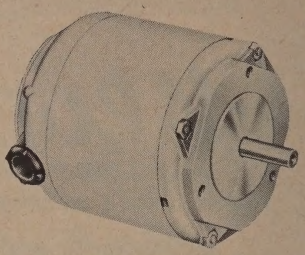
SM 40 inch-ounce	$ 8.10
RSM 80 inch-ounce (Rev.)	9.60
PC-SM 40 inch-ounce	12.22
PS-RSM 80 inch-ounce (Rev.)	13.72

hurst MFG. CORP. Princeton, Indiana

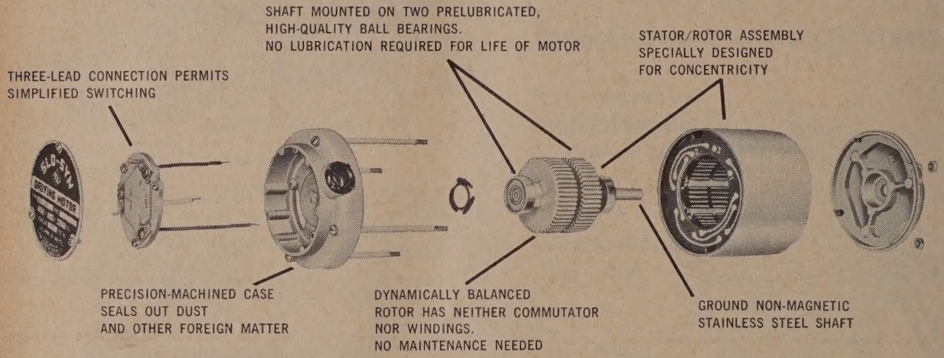
SLO-SYN® *Synchronous Motors*

- **INSTANT STARTING, STOPPING, REVERSING**
- **CAN BE USED AS D-C STEPPING MOTORS**
- **72 RPM SHAFT SPEED WITHOUT GEARS**
- **START AT FULL RATED TORQUE**

A SLO-SYN is a synchronous permanent magnet type motor having instant start, stop and reverse characteristics and a basic shaft speed of 72 RPM with 60 cycles applied. Although used extensively as a constant speed a-c motor, its use as a d-c stepping or incremental positioning device offers control system designers, machine tool and process control engineers unlimited application possibilities. It is compact and economical, has almost negligible overshoot, no ratchets or detents. A single-pole, three-position switch can give complete forward, reverse and "off" control because the motor has three leads only. Starts or stops in less than 0.025 seconds or approximately 1.5 cycles. There is no need for electrical or mechanical braking because it will stop in less than 5° of motor shaft rotation. The starting and operating currents are nearly identical and there is no excessive inrush current when the motor is turned on. All types have a ⅜" diameter shaft. Quiet-running, maintenance-free motor.



TYPES SS150, SS150M, SS152, SS250


SHAFT MOUNTED ON TWO PRELUBRICATED, HIGH-QUALITY BALL BEARINGS. NO LUBRICATION REQUIRED FOR LIFE OF MOTOR
STATOR/ROTOR ASSEMBLY SPECIALLY DESIGNED FOR CONCENTRICITY
THREE-LEAD CONNECTION PERMITS SIMPLIFIED SWITCHING
SLO-SYN
PRECISION-MACHINED CASE SEALS OUT DUST AND OTHER FOREIGN MATTER
DYNAMICALLY BALANCED ROTOR HAS NEITHER COMMUTATOR NOR WINDINGS. NO MAINTENANCE NEEDED
GROUND NON-MAGNETIC STAINLESS STEEL SHAFT

Types SS150 and SS152

SLO-SYN types SS150 and SS152 are designed for 150 ounce-inch duty. Types are available also with a resistor and a capacitor integrally mounted in an enclosure on the end of the motor (suffix RC when ordering). Use Class A insulation, rated for 50° C temperature rise from 40° C maximum ambient under continuous duty.

Militarized Type SS150M

SLO-SYN type SS150M has a rating of 150 ounce-inches and is designed to meet or exceed applicable military specifications regarding materials (CCM-636-A), shock (MIL-T-17113), vibration, salt spray, humidity, and temperature (MIL-E-4970A). Used as a driving motor for beacons, searchlights, radar antennas and similar applications.

TYPE SS250

SLO-SYN type SS250 has a torque rating of 250 ounce-inches and is designed primarily for heavier duty applications. Its high torque makes it particularly well-adapted for duty as a prime mover for controlling valves, machine tool carriages and similar applications. Uses Class B insulation and is rated for 75° C temperature rise from 40° C maximum ambient under continuous duty.

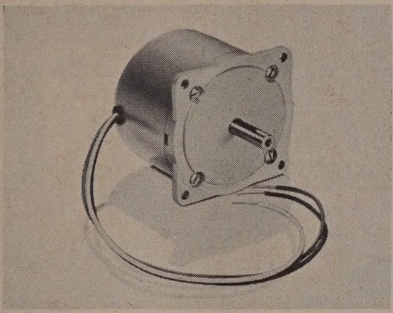
	TYPES SS150 AND SS150M	TYPE SS152	TYPE SS250
INPUT	120 volts, 40/70 cycles, 1 phase	240 volts, 40/70 cycles, 1 phase	120 volts, 40/70 cycles, 1 phase
OUTPUT SPEED*	72 RPM	72 RPM	72 RPM
MAX. CURRENT*	0.4 ampere	0.2 ampere	0.6 ampere
TORQUE*	150 ounce-inches	150 ounce-inches	250 ounce-inches
WEIGHT	6.5 pounds	6.5 pounds	6.5 pounds
RESISTOR	250 ohms ±5% 25W	1200 ohms ±5% 25W	150 ohms ±5% 50W
CAPACITOR	3.75 mfd ±6%, 330 VAC	1.0 mfd ±6%, 660 VAC	6.5 mfd ±6%, 330 VAC

*Ratings for 60 cycle single-phase operation. Motors will operate satisfactorily at any frequency between 40 and 70 cycles with proportional change in speed and some reduction in torque.

THE SUPERIOR ELECTRIC COMPANY
Bristol, Connecticut, U.S.A.

SEE OTHER SUPERIOR ELECTRIC PRODUCT PAGES IN SECTIONS 2100 AND 4000

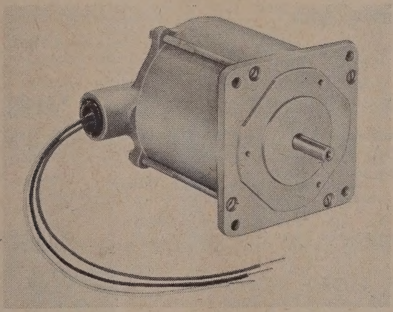
SLO-SYN® *Synchronous Motors*



TYPE SS50

The small size of the 50 ounce-inch SLO-SYN type SS50 makes it particularly adaptable as an original equipment component where space is limited. Especially useful for actuating selector switches, tape handling and process timing. Uses Class B insulation and is rated for 75° C temperature rise from 40° C maximum ambient under continuous duty.

INPUT	120 volts, 40/70 cycles, 1 phase
OUTPUT SPEED	72 RPM at 60 cycles
MAX. CURRENT	0.3 ampere at 60 cycles
TORQUE	50 ounce-inches
WEIGHT	3 pounds
RESISTOR	250 ohms ±5%, 25W
CAPACITOR	2.6 mfd ±6%, 330 VAC



EXPLOSIONPROOF TYPE X250

Explosionproof type X250 has a torque rating of 250 ounce-inches. Provides safe operation in hazardous areas where a small arc or spark could cause an explosion. Underwriters' Laboratories Approved for Class 1, Group D service. Uses Class B insulation and is rated for 75° C temperature rise from 40° C maximum ambient under continuous duty.

INPUT	120 volts, 40/70 cycles, 1 phase
OUTPUT SPEED	72 RPM at 60 cycles
MAX. CURRENT	0.6 ampere at 60 cycles
TORQUE	250 ounce-inches
WEIGHT	7-3/4 pounds
RESISTOR	150 ohms ±5%, 50W
CAPACITOR	6.5 mfd ±6%, 330 VAC

. . . PLANETARY GEAR TYPES

Standard types having specially-designed planetary gear assemblies are available. The speed reduction assembly, is completely enclosed in a dust proof housing mounted on the shaft end of the motor. The load is evenly distributed over three nylon gears thereby reducing the possibility of tooth damage. The self-lubricated nylon gears provide quiet operation and long life. The planetary gear shaft is ball bearing mounted. When ordering, the basic type number must be suffixed with the desired planetary gear assembly number. For example, type SS50-P1.

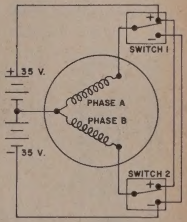
Output Torque (Oz.-In.)					
Basic Motor Type SS50	Basic Motor Type SS150 SS150M SS152	Basic Motor Type SS250 X250	Approx. Speed* (RPM)	Gear Ratio	Planetary Assembly (Suffix)
120	400	650	16.6	4-1/3	P1
600	2000	—	3.32	21-2/3	P2
2000	2000	—	0.665	108-1/3	P3
2000	2000	—	0.133	541-2/3	P4
2000	2000	—	0.027	2708-1/3	P5

*Exact speed may be calculated from basic motor speed (72 RPM) and given ratio.

. . . AS A D-C STEPPING MOTOR

When used as an incremental positioning device, one revolution of the motor shaft can be divided into 200 precise increments through the use of a d-c power source and a suitable switching arrangement. The motor will advance 1.8° for each change in polarity if the d-c voltage applied to the windings is switched according to the sequence shown in the chart. Request SLO-SYN Data Sheet No. 1 for more complete stepping information.

	SWITCHING SEQUENCE	
ROTOR POSITION	PHASE A (SWITCH #1)	PHASE B (SWITCH #2)
	CLOCKWISE ROTATION	
1	+	+
2	−	+
3	−	−
4	+	−
1	+	+
	COUNTERCLOCKWISE ROTATION	
1	+	+
4	+	−
3	−	−
2	−	+
1	+	+

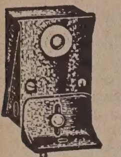


FOR MORE DETAILED INFORMATION
about ratings, specifications and technical
data about SLO-SYN synchronous motors,
request the complete SLO-SYN literature file
which includes information about the use
of SLO-SYNS as d-c stepping motors.

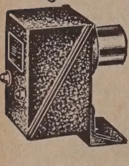
AUTOTRON Photoelectric Controls

AUTOTRON, INC. • Danville, Illinois

S SERIES PHOTOELECTRIC CONTROLS

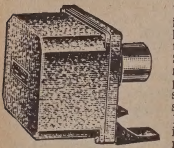


Rugged, industrial quality controls preadjusted for use with 100% light beam interruption. Used for counting and control applications where phototube dark time and phototube light time each is .060 second or more.
Control Relay Contacts SPDT rated 8 amperes at 115 v. AC non-inductive load.
Splashproof cast aluminum case with adjustable mounting bracket, tapped for ½″ conduit. Power consumption 10 watts.
S1A, S4A Photoelectric Controls—Require 20 foot-candle minimum light. Lens diameter ¾″.
S2A, S5A Photoelectric Controls—Require 10 foot-candles minimum light. Lens diameter 1½″



Energized		50-60 Cycles	Net Each
†Dark	**†Light**	**Volts**	
S1A	**S4A**	115/230	**$38.75**
S1AR	**S4AR**	115 or 230 (specify)	**50.75**
S2A	**S5A**	115/230	**45.00**
S2AR	**S5AR**	115 or 230 (specify)	**57.00**

F SERIES PHOTOELECTRIC CONTROLS



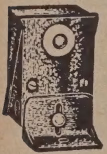
"Fail Safe", sensitive, high speed. Widely used where "safe" relay action is required in case of tube failure, where light change is limited, and where phototube dark time or light time is short. Special, quick response DC circuit permits speeds to 1200 operations (cycles) per minute. Sensitivity adjustment inside case inhibits tampering. Shaftlock secures setting.
Minimum light, 5 foot-candles. Minimum phototube dark time, .025 second; minimum phototube light time, .025 second.
Plate Relay: Contacts DPDT, rated 8 amps at 115 v. AC, non-inductive load. Splashproof cast aluminum case tapped for ½″ conduit. Rigid mounting feet. Lens dia. 1½″. 115/230 v., 50-60 cycles. Power consumption, 20 watts.

Energized		For 115/230 v., 50-60 Cycles	Net Each
†Dark	**†Light**	**Description**	
***F2B**	***F1B**	Photoelectric Control	**$67.50**
***F2BR**	***F1BR**	Above with R feature	**79.50**

TUBELESS PHOTOELECTRIC CONTROLS

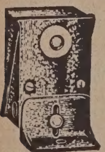
Reliable photoelectric control without vacuum tubes has been made possible by development of transistors, magnetic amplifiers and light-sensitive elements such as cadmium cells. The following AUTOTRON controls represent months of development utilizing the best of the latest developments.

BC1 PHOTOELECTRIC CONTROL



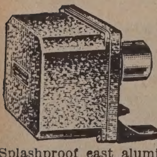
†Light-Energized—Cad Cell Sensing Element
10 foot-candles minimum light.
.07 second ‡minimum dark time.
.07 second ‡minimum light time.
Plate Relay: Energizes when light is on the Cad Cell Sensing Element; Contacts SPDT, silver cadmium oxide, rated 4 amps at 115 v. AC, non-inductive load.
Splashproof cast aluminum case tapped for ½″ conduit. Adjustable mounting bracket. Lens dia. ¾″. 115/230 v., 50-60 cycles. Power consumption, 2 watts.
BC1 Photoelectric Control—Net ... **$42.50**

TRANSISTORIZED PHOTOELECTRIC CONTROLS
BT1 †LIGHT ENERGIZED, BT2 †DARK ENERGIZED



10 foot-candles minimum light.
.04 second ‡minimum dark time.
.04 second ‡minimum light time.
Plate Relay: Contacts SPDT, silver cadmium oxide, rated 8 amps at 115 v. AC, non-inductive load.
Splashproof cast aluminum case tapped for ½″ conduit. Adjustable mounting bracket. Lens dia. ¾″. 115/230 v., 50-60 cycles. Power consumption, 2 watts.
BT1 or BT2 Photoelectric Control—Net Each.......................... **$49.50**

BM1 PHOTOELECTRIC CONTROL †LIGHT ENERGIZED—MAGNETIC AMPLIFIER



10 foot-candles minimum light.
.04 second ‡minimum dark time.
.04 second ‡minimum light time.
Plate Relay: Energizes when light is on the Sensing Element.
Contacts SPDT, silver cadmium oxide, rated 10 amps at 115 v. AC, non-inductive load.
Splashproof cast aluminum case tapped for ½″ conduit. Rigid mounting feet. Lens dia. 1½″. 115/230 v., 50-60 cycles. Power consumption, 2 watts.
BM1 Photoelectric Control—Net Each.............. **$69.50**

PHOTOELECTRIC TIMING CONTROLS

For applications requiring delayed plate relay response to light change, such as conveyor jam-up, spraying, processing, etc.

T1A Photoelectric Timing Control

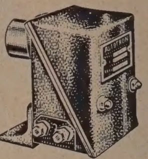


Plate relay energizes when phototube is dark and timing period has expired; de-energizes when light is on the tube. Time delay with shaft lock adjustment from 1 to 10 seconds. Repeat accuracy 4%. Minimum light, 40 foot-candles. Plate relay: Contacts SPDT, rated 8 amps at 115 v. AC, noninductive load. Splashproof aluminum case, tapped for ½″ conduit. Adjustable mounting bracket. Lens dia. 1½″. Power consumption, 10 watts. 115/230 v., 50-60 cycles.
T1A Timing Control—Net Ea.. **$57.50**

T2B and T3A Photoelectric Timing Controls

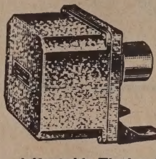


Plate Relay: Contacts DPDT, rated 8 amps at 115 v. AC, non-inductive load. Time delay adjustment has shaft lock. Splashproof cast aluminum case tapped for ½″ conduit. Lens diameter 1½″. 115/230 v., 50-60 cycles. Power consumption 20 watts.

T2B Photoelectric Timing Control: Plate relay energizes when light is on the phototube, de-energizes when the light beam is interrupted and the timing period expires. Repeat accuracy 3%. Minimum light 20 foot-candles.

Adjustable Timing Ranges (specify)		**Minimum Light Time**
No. 1.	.25 to 3 seconds	.25 second
No. 2.	1.25 to 10 seconds	.5 second
No. 3.	3.0 to 20 seconds	1.0 second

***T2B Photoelectric Timing Control**—Net Each.. . . . **$72.50**
***T2BR**—Above with Safety Relay. Net Each...... **84.50**

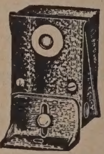
T3A Photoelectric Timing Control: Plate relay energizes when light is on the phototube and timing period expires. De-energizes when the light beam is interrupted. Timing accuracy, 2%. Minimum light, 10 foot candles.

Adjustable Timing Ranges (specify)

No. 0.1 .03 to 0.1 second
No. 0.5 .25 to 8.0 seconds
No. 1. .5 to 15 seconds
No. 2. 1 to 30 seconds
No. 3. 20 seconds to 5 minutes

***T3A Photoelectric Timing Control**—Net Each...... **$72.50**
***T3AR-T3A**—Above With Safety Relay—Net Each.... **84.50**

L1A LIGHT SOURCE



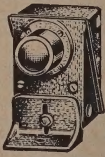
Has ¾″ OD straight, fixed beam conservatively rated as follows—

Foot-Candles.....	20	10	5	2
Distance in feet...	8	12	15	18

Dustproof, cast aluminum case. Adjustable bracket. Tapped for ½″ conduit. 115/230 v., 50-60 cycles.

Model	**L1A**	**L1AY**	**L1AR**	**L1ARY**
Net Each	**$18.50**	**$23.50**	**$30.50**	**$35.50**

L2A LIGHT SOURCE



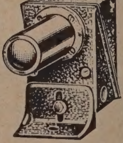
Has 1½″ OD straight, fixed beam conservatively rated as follows—

Foot-Candles.....	20	10	5	2
Distance in feet...	13	20	30	45

Splashproof, cast aluminum case. Adjustable bracket. Tapped for ½″ conduit. 115/230 v., 50-60 cycles.

Model	**L2A**	**L2AY**	**L2AR**	**L2ARY**
Net Each	**$21.80**	**$26.80**	**$33.80**	**$38.80**

L3A LIGHT SOURCE



Light beam adjustable from a minimum focal length of 4¾″ and corresponding focal size of 5/16″ x ¼″ to a straight light beam of 1½″ OD. Light input at twice the focal distance exceeds 30 foot-candles.
Splashproof, cast alum. case; adjustable bracket, tapped for ½″ conduit. 115/230 v., 50-60 cycles.

Model	**L3A**	**L3AY**	**L3AR**	**L3ARY**
Net Each	**$29.30**	**$34.30**	**$41.30**	**$46.30**

FEATURES AND NOTES

R—Built-in SAFETY Relay—**In control:** Energizes when power comes on; de-energizes when tube filament burns out or power goes off. **In light source:** Energizes when light comes on; de-energizes when lamp fails or goes off. (Contacts SPDT, rated 5 amps at 115 v. AC.)

Y—Built-in Light Beam Intensity Adjustment.

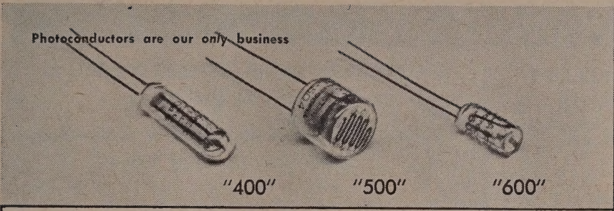
*Available with built-in heating element at **$7.50** extra.

†Dark Energized—Plate relay energizes when light beam is interrupted; de-energizes when the light beam is restored, when a tube filament fails, or any tube loses emission.

Light Energized—Plate relay energizes when light beam is restored; de-energizes when light beam is interrupted, when a tube filament fails or any tube loses emission.

‡Specified **minimum dark and light time are based on the specified minimum foot-candles.**

SEND FOR CATALOG



CLAIREX PHOTOCONDUCTIVE CELLS

3 SERIES IN GLASS
. . . TO MEET MOST DESIGN NEEDS !

Now, 25 standard types in glass!

CL Cell #	Sensitive Material	Enclosure (inches)	Pk. Spectral Response, A	Light Resistance[1]	Voltage Rating (Max.)	Power[4] (MW)
CL402	CdS	.265x1	5150	1M	300	75
CL402S[5]	CdS	.265x1	5150	1M	300	75
CL403	CdSe	.265x1	7350	133K	300	75
CL403S[5]	CdSe	.265x1	7350	133K	300	75
CL403A	CdSe	.265x1	7350	75K	300	75
CL403AS[5]	CdSe	.265x1	7350	75K	300	75
CL403ASL[5]	CdSe	.265x1	7350	3.5K	60	75
CL404	CdSe	.265x1	6900	30K	300	75
CL404S[5]	CdSe	.265x1	6900	30K	300	75
CL404SL[5]	CdSe	.265x1	6900	1.5K	60	75
CL407	CdS	.265x1	6150	133K	300	75
CL407S[5]	CdS	.265x1	6150	133K	300	75
CL504	CdSe	.5x.5	6900	1.5K	250	500-250[2]
CL504L	CdSe	.5x.5	6900	0.25K	60	500-250[2]
CL505	CdS	.5x.5	5500	9K	250	500-250[2]
CL505L	CdS	.5x.5	5500	1.5K	60	500-250[2]
CL602[3]	CdS	.25x.5	5150	1M	300	75
CL603[3]	CdSe	.25x.5	7350	133K	300	75
CL603A[3]	CdSe	.25x.5	7350	75K	300	75
CL603AL	CdSe	.25x.5	7350	3.5K	60	75
CL604[3]	CdSe	.25x.5	6900	30K	300	75
CL604L	CdSe	.25x.5	6900	1.5K	60	75
CL605	CdS	.25x.5	5500	166K	300	75
CL605L	CdS	.25x.5	5500	7.5K	60	75
CL607[3]	CdS	.25x.5	6150	133K	300	75

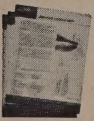
Operating temperature, all types, —50 to +75° C.

[1] Average DC resistance measured at 2 foot-candles, 2870° K. and 25° C ambient.
[2] With and without heat sink.
[3] Designed to replace previous plastic types. [4] At 25° C ambient. [5] S denotes side view cell.

Salient Charactertistics:

- Hermetically Sealed Glass Enclosures.
- A Variety of Spectral Response and Resistance.
- The High Sensitivity and Fast Response of Cadmium Selenide.
- Power Dissipation to ½ watt, continuous.
- High Ratio of Light to Dark Current at low light levels.
- Stable and closely controlled Parameters.
- NEW !
Low Resistance "L" types for Transistor and other low voltage applications!

Are you on the mailing list for Clairex Technical Information? If not, contact our representative or write direct to Dept. AR.



Clairex Photoconductive Cells . . . variable resistors controlled by light . . . unique design components for automation and control.

Your local distributor may be able to supply Clairex Photoconductors from stock. If not call or write our New York office for direct and immediate service, or contact our technical representative in your area listed below.

Priced from $1.15 to $4.00 depending upon quantity for all types listed.

IF YOU DESIGN IN THE FIELDS OF

- photography
- computers, data processing
- medical electronics
- industrial control
- electronic instruments
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CLAIREX CAN OPEN NEW HORIZONS . . .

THE light TOUCH IN AUTOMATION AND CONTROL

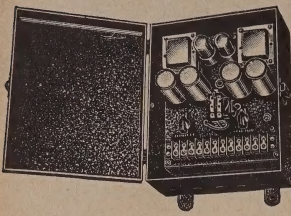
CLAIREX CORPORATION • NEW YORK, N. Y.

Your Local Distributor May Be Able To Supply Clairex Photoconductors From Stock!

Designed and Manufactured by ELECTRONIC DEVICES **WORNER** **Rankin, Illinois • U. S. A.**

ELECTRONICALLY OPERATED RELAYS

MODEL 63



Especially designed for use with a correct combination of the standardized Worner Photo-Cell and Exciter Lamp units shown at right. Will operate also from light sources such as daylight, artificial lights, radiant energy, etc.

Model 63 Electronically Operated Relay is a specially engineered, highest quality unit. It enjoys wide preference as it efficiently meets exacting requirements and replaces the need of costly individually engineered equipment. Technical details on request.

	Price, Each
Model 63, Described Above	$117.00
Model 63-A, combines Model 63 and Time Delay Circuit giving delay from zero to 45 seconds	$134.10
Model 63-B, same as Model 63 with additional amplification to operate on less active change of light	$141.30
Model 63-C, same as Model 63 but operates with "on" light	$117.00

Model 64, Electronically Operated Relay is an efficient unit for practically any industrial applications that do not require fine detection and where the Relay is not required to operate in excess of 450 times a minute. (For fine detection at greater speeds, we recommend a choice of Model 63 series.)

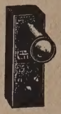
Model 64 Electronicaly Operated Relay................ea. **$67.35**

EXCITER LAMP & PHOTO-CELL RECEIVER UNITS

For Use With Models 63, 63-A, 63-B, 63-C and 64 Electronically Operated Relays

Model 33

Model 23



Model 31

Model 21

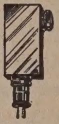
The Exciter Lamp unit is designed to project the light beam and the Photo-Cell Receiver is designed to pick up the beam and convert its light into electrical energy through the Electronically Operated Relay unit.

Model 33 Exciter Lamp and Model 23 Photo-cell Receiver units operate as a Set. Unit to unit light beam covers a distance of from a few inches to 25 ft. The Set is heavy cast iron with ½ in. conduit fittings. Gray finish. For use in damp areas, the Set can be made moistureproof at slight add'l. cost.

Model 31 Exciter Lamp and Model 21 Photo-cell Receiver Set is smaller and lighter. 18 ga. steel case construction, gray wrinkle finish, with ½ in. knockout. Light beam distance from a few inches to 25 ft.

Model No.	Description	Size, Inches	Price, Each
33	Exciter Lamp Unit	4¼ x 2¾ x 2¾	$19.50
23	Photo-Cell Receiver	4¼ x 2¾ x 2¾	22.50
31	Exciter Lamp Unit	6⅝ x 2 x 1¾	14.88
21	Photo-Cell Receiver	6⅝ x 2 x 1¾	19.17

"MINIATURE" FOTOLECTRIC HEADS



Exciter Lamp Model M-36

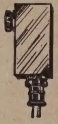


Photo-Cell Receiver Model M-26

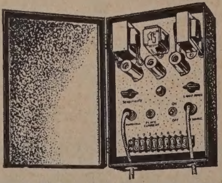
For horizontal installation, Order Models M-37 and M-27

Size 1¼" x ¾" x 2½" for space limitations. One-piece solid aluminum machined for components. Pin-point detection on cross-over beam at distances from 3 in. to 12 in. Diverging beam supervises objects 1 in. or larger at a distance up to 8 ft. Operates up to 10,000 counts per minute with Model 66-A below. Units equipped with 6 ft. of cable with prong-type positive connectors. For guaranteed efficiency, Miniature Heads should be used only with Electronically Operated Relays described below.

Model M-36 Vertical Exciter Lamp	$21.06
Model M-26 Vertical Photo-cell Receiver	$25.56
Model M-37 Horizontal Exciter Lamp	$21.06
Model M-27 Horizontal Photo-cell Receiver	$25.56

ELECTRONICALLY OPERATED RELAYS

For Use With Miniature Heads Above



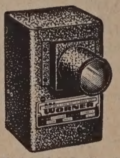
Speeds based upon "on" and "off" periods being equal. Models 66-A and 66, double-pole, double-throw relay with contact rating of 110 v. 60 cy. a.c., 10 amps. non-inductive, 5 amps. inductive. Light beam intensity control.

Model 66-A Electronically Operated Relay for use with ultra high speed electronic decade counters. Accurate counts of light beam interruption or variation of intensity up to 10,000 counts per minute. ....Each **$138.60**

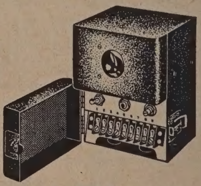
Model 66 Electronically Operated Relay same as Model 66-A except it operates up to 900 counts per minute. ....Each **$131.10**

Model 67 Electronically Operated Relay for applications where fine detection at high speeds is not a factor or Relay is not required to operate in excess of 450 times per minute. Each **$69.90**

MODEL 62 R&L • TWO UNIT SET



Model 62-L Exciter Lamp
(Light Source Unit)



Model 62-R Electronically Operated Relay Unit

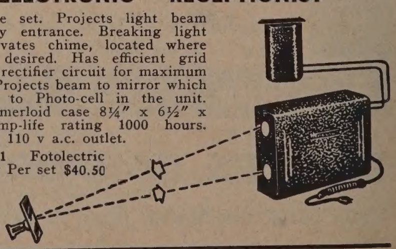
This Electronically Operated Relay Unit includes Photo-Cell Relay and components. Efficient for distances from a few inches to 75 feet, where Relay is not required to operate in excess of 400 times a minute, such as: Counting, sorting large objects; limit switches; start, stop operations; opening doors, etc.

Model 62 R & L "Two-Unit Set"	Per set	$82.50
Model 62-R Electronicaly Operated Relay	Each	69.30
Model 62-L. Exciter Lamp Unit	Each	24.60

ELECTRONIC RECEPTIONIST

Three-piece set. Projects light beam across any entrance. Breaking light beam activates chime, located where signal is desired. Has efficient grid controlled rectifier circuit for maximum stability. Projects beam to mirror which reflects it to Photo-cell in the unit. Gray hammerloid case 8¼" x 6½" x 3¾". Lamp-life rating 1000 hours. Plugs into 110 v a.c. outlet.

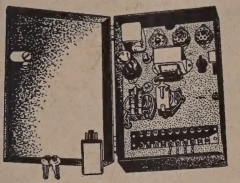
Model 61 Fotolectric Announcer Per set $40.50



Designed and Manufactured by ELECTRONIC DEVICES **WORNER** Rankin, Illinois • U. S. A.

FOTOLECTRIC BURGLAR ALARM SYSTEMS

MODEL 9000 SERIES. The Worner Master Control System consists of a Master Control Panel used in combination with 1, 2, 3 or 4 Fotolectric Sets. (Each Fotolectric Set consists of Exciter Lamp for invisible beam and Photo-cell). Operates alarms the user installs. May be used with foil systems, etc. Sets off alarm if wiring of Fotolectric Set is tampered with.



MODEL 9000-N Master Control Panel prevents false alarm if power fluctuates 5 volts or more. If power fails completely, the unit automatically resets supervision when power is restored. Relays controlled by a switch. For 110-120 V. Panels are supplied with plate relays for the number of Fotolectric Sets ordered. Should Fotolectric Sets be added later, plug-in relays are supplied with Fotolectric Sets ordered.

MODEL 9000-N Master Control Panel....ea. **$61.05**

Sets for 150′, 250′, and 500′ ranges have unwanted light rejector which increases day-light range. Ranges listed are for infra-red light.

Model No.	Fotolectric Set	Range	Per Set
9100	Master Trespass Trap........	100 ft.	$ 88.50
9150	Master Trespass Trap........	150 ft.	103.50
9250	Master Trespass Trap........	250 ft.	130.80
9500	Master Trespass Trap........	500 ft.	146.25

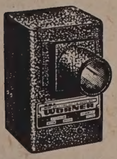
MODEL 7000 SERIES operates with burglar alarm company's central office control, police signal or local alarm. The Relay may be connected either in series or parallel to meet circuit requirements. One or more Fotolectric Sets (illustrated below) can be used and can be operated by an existing control panel. Can be used with foil systems, etc. For 110-120V or 24V.

Model No.	Fotolectric Set	Range	Per Set
7100	Remote Cont. Trespass Trap..	100 ft.	$ 88.50
7150	Remote Cont. Trespass Trap..	150 ft.	103.50
7250	Remote Cont. Trespass Trap..	250 ft.	130.80
7500	Remote Cont. Trespass Trap..	500 ft.	146.25

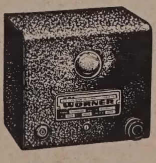
MODEL 5000 SERIES for 100′ range and 150′ range for interior use where a single beam is ample protection. Not intended for use with foil systems, etc. Equipped with lock and key. 110V. Illustrated below.

Model No.	Fotolectric Set	Range	Per Set
5100	Single Beam Trespass Trap....	100 ft.	$ 88.50
5150	Single Beam Trespass Trap....	150 ft.	103.50

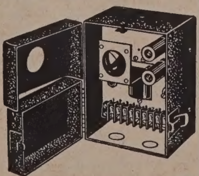
FOTOLECTRIC SETS FOR ALL ABOVE SYSTEMS



Exciter Lamp (Light Source Unit) 100′ and 150′ range

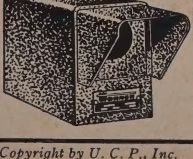


Electronically Operated Relay for 100 ft. Range.



Electronically Operated Relay for 150 ft. Range.

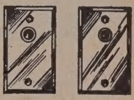
Model 9150



← **Exciter Lamps (Light Source Units) and Electronically Operated Relays for 250′ and 500′ ranges are externally the same and are weatherproof.**

"MINIATURE"
FOTOLECTRIC BURGLAR ALARM

"In-Wall" Concealment



Light Source and Photo-cell Receiver units concealed in light-switch type face plates. Projects invisible light beam ranging up to 35 feet (indoors).

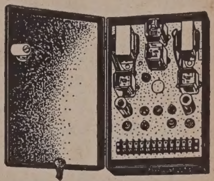
Standard size wall plates concealing Fotolectric detection units are high finish stainless steel. Light bulb rated 2000 hours. For guaranteed efficiency Fotolectric sets must be used only with specially engineered amplifiers listed below.

Model 81 "In-Wall" Light Source, each..........................	$21.18
Model 82, "In-Wall" Photo Cell Receiver, each	22.92

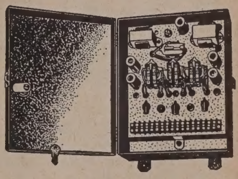
WORNER AMPLIFIER PANELS

Two specially engineered units. Circuits with no-voltage control relay prevent false alarms due to line voltage irregularities and will sound alarm if tampered with. Standard alarm continuous, regulated warning signal "special" upon order. For 110, 120 volts, 60 cycle a.c. (For operation on 24 volts a.c. use Model 302-T Step-Down Transformer listed below.)

Model 86-1 is a single channel Amplifier Panel that will amplify current flow of one Fotolectric Set, each **$115.50**

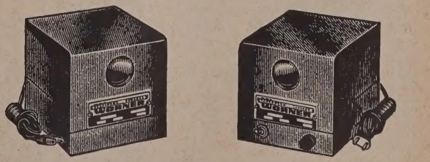


Model 86-2 is a dual channel Amplifier Panel that will amplify current flow of two Fotolectric Sets, each installed to guard a separate area. Will also supervise one Fotolectric Set where amplification is provided for future addition of a second Fotolectric Set, each............ **$178.50**



Model 302-T Step-down Transformer, each **$24.00**

THE TWO-UNIT WORNER WATCHMAN



Exciter Lamp is equipped with removable infra-red filter. Provides invisible light beam ranging up to 50 ft. The Electronically Operated Relay combines Photo-cell and electrical components. Equipped with toggle switch for either continuous alarm or to sound only while light beam is broken. Extraneous light rejector maintains daylight range. Two-piece case construction enables removal of cover without unmounting. Identical cases 5″ x 5″ x 5½″ welded steel, mahogany hammerloid finish. For indoor use; 110-120V. 60 cycle A.C.

Model 4000 Two Unit Watchman. ....per set **$63.00**

FOTOLECTRIC FIRE PROTECTION

The Worner Fan Motor Stop installed on ventilating ducts detects smoke, gives alarm, stops fan to prevent fan-driven fire to a succession of outbreaks. Approved by Underwriters Laboratories. Write for Bulletin 650.

CHICAGO MINIATURE LAMPS

Standard or Special Design

Shown below are the most popular and widely used of the hundreds of standard lamps manufactured to the highest standards of quality and precision by the Chicago Miniature Lamp Works.

The complete list in the form of a convenient pocket size booklet that also contains specifications and pertinent engineering data, will be forwarded on request.

When special lamps are required, as for a new product development, Chicago Miniature's 50 years of experience will prove extremely helpful.

For dependable service, always ask your jobber for Chicago Miniature Lamps.

CHICAGO MINIATURE LAMP WORKS, Chicago 10, Illinois

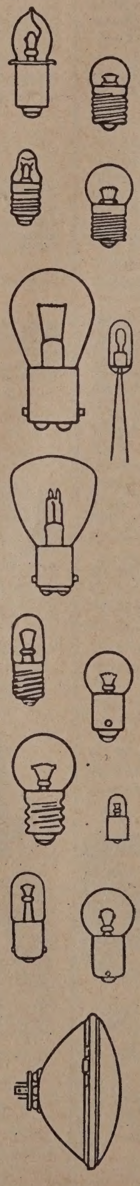
INDICATOR — RADIO — COIN MACHINE LAMPS

Lamp No.	Bulb	Base	Volts	Amps	Hours Life
10	G-3½	Min. 2 Pin	2.5	.50	3000
12	G-3½	Min. 2 Pin	6.3	.15	L
19	G-3½	Min. 2 Pin	14.4	.11	1000
39	T-3¼	Min. Bay	6.3	.37	5000
40	T-3¼	Min. Screw	6.3	.15	3000
41	T-3¼	Min. Screw	2.5	.50	3000
43	T-3¼	Min. Bay.	2.5	.50	3000
44	T-3¼	Min. Bay.	6.3	.25	3000
45	T-3¼	Min. Bay	3.2	.35	3000
46	T-3¼	Min. Screw	6.3	.25	3000
47	T-3¼	Min. Bay	6.3	.15	3000
48	T-3¼	Min. Screw	2.0	.06	1000
49	T-3¼	Min. Bay	2.0	.06	1000
50	G-3½	Min. Screw	7.5	.25	500
51	G-3½	Min. Bay.	7.5	.22	1000
53	G-3½	Min. Bay.	14.4	.12	1000
55	G-4½	Min. Bay.	7.0	.41	500
57	G-4½	Min. Bay.	12	2 CP	1000
63	G-6	S. C. Bay.	7.0	.63	1000
63L	G-6	S. C. Bay.	7.0	.79	10000
71K	G-6	Cand. Sc.	22	.20	200
81	G-6	S. C. Bay.	6.5	1.02	500
82	G-6	D. C. Bay.	6.5	1.02	500
87	S-8	S. C. Bay	6.75	1.82	300
89K	G-6	Cand. Sc.	13	.58	750
509K	G-6	Cand. Sc.	24	.18	1000
1224K	G-6	Cand. Sc.	32	.18	200
1446	G-3½	Min. Sc.	12	.20	250
1447	G-3½	Min. Sc.	18	.15	250
1456	G-5	Min. Bay.	18	.25	250
1458	G-5	Min. Bay.	20	.25	250
1471	G-6	Cand. Sc.	12	.26	250
1474	T-3	Min. Sc.	14	.17	250
1476	T-3	Min. Sc.	18	.17	250
1477	T-3	Min. Sc.	24	.17	250
1481	T-3¼	Min. Sc.	14	.15	200
1487	T-3¼	Min. Sc.	14	.20	3000
1488	T-3¼	Min. Bay.	14	.15	200
1489	T-5	S. C. Bay.	6.5	2.75	125
1490	T-3¼	Min. Bay.	3.2	.16	3000
1493	S-8	D. C. Bay.	6.5	2.75	100
1767	T-1¾	Mid. Sc.	2.5	.20	500
1768	T-1¾	Mid. Sc.	6	.20	500
1815	T-3¼	Min. Bay.	14	.20	3000
1816	T-3¼	Min. Bay.	13	.33	1000
1820	T-3¼	Min. Bay.	28	.10	1000
1822	T-3¼	Min. Bay.	36	.10	1000
1847	T-3¼	Min. Bay.	6.3	.15	L
1890	T-3¼	Min. Bay	6.3	.25	L
1891	T-3¼	Min. Bay	14	.24	500
1892	T-3¼	Min. Bay.	14	.12	L

FLASHLIGHT AND LANTERN LAMPS

Lamp No.	Bulb	Base (Min.)	Volts	Amps	Hours Life
PR2	B-3½	Flanged	2.38	.50	15
PR3	B-3½	Flanged	3.57	.50	15
PR4	B-3½	Flanged	2.33	.27	10
PR6	B-3½	Flanged	2.47	.30	30
PR7	B-3½	Flanged	3.70	.30	30
PR8	B-3½	Flanged	1.90	.60	10
PR9	B-3½	Flanged	2.7	.15	45
PR12	B-3½	Flanged	5.95	.50	15
PR13	B-3½	Flanged	4.75	.50	15
PR15	B-3½	Flanged	4.8	.50	15
13	G-3½	Screw	3.70	.30	15
14	G-3½	Screw	2.47	.30	15
27	G-4½	Screw	4.90	.30	30
112	TL-3	Screw	1.20	.22	5
114	TL-2¾	Sp. Screw	1.20	.20	5
123	G-3½	Screw	1.25	.30	10
131	G-3½	Screw	1.30	.1	50
136	G-4½	Screw	1.25	.60	75
222	TL-3	Screw	2.25	.25	5
224	TL-2¾	Sp. Screw	2.15	.22	5
425	G-4½	Screw	5.0	.50	15
502	G-4½	Screw	5.10	.15	100
605	G-4½	Screw	6.15	.50	15
965	T-4½	Screw	9.84	.50	15
1209	RP-11	S. C. Pref.	6.1	32 CP	125
1651	S-8	S. C. Bay.	5.0	.60	20
P4512	PAR-36	Screw Term.	5.0	.50	. .
P4546	PAR-36	Screw Term.	4.7	.50	. .

P4512 & P4546: plastic sealed beams w/replaceable bulb.



AIRCRAFT TYPES

Lamp No.	Bulb	Base	Volts	C. P. or Amps	Hours Life
301	G-5	S. C. Bay.	28	3 CP	500
301NR	G-5	S. C. Bay.	28	3 CP	500
302	G-5	D. C. Bay.	28	3 CP	500
303	G-6	S. C. Bay.	28	6 CP	500
303-OF	G-6	S. C. Bay.	28	6 CP	500
303NR	G-6	S. C. Bay.	28	6 CP	500
304	G-6	D. C. Bay.	28	6 CP	500
305	S-8	S. C. Bay.	28	15 CP	300
305IF	S-8	S. C. Bay.	28	15 CP	300
305NR	S-8	S. C. Bay.	28	15 CP	300
306	S-8	D. C. Bay.	28	15 CP	300
307	S-8	S. C. Bay.	28	21 CP	300
307IF	S-8	S. C. Bay.	28	21 CP	300
307NR	S-8	S. C. Bay.	28	21 CP	300
308	S-8	D. C. Bay.	28	21 CP	300
309	S-11	S. C. Bay.	28	32 CP	300
309IF	S-11	S. C. Bay.	28	32 CP	300
309NR	S-11	S. C. Bay.	28	32 CP	300
310	S-11	D. C. Bay.	28	32 CP	300
311	S-11	S. C. Bay.	28	50 CP	300
311NR	S-11	Min. Bay	28	.17 A	500
312	S-11	D. C. Bay.	28	50 CP	300
313	T-3¼	Min. Bay.	28	.17 A	500
313NR	T-3¼	Min. Bay.	28	.17 A	500
315	S-8	S. C. Bay	28	32 CP	300
323	T-1¼	Special	3	.19 A	350
323NR	T-1¼	Special	3	.19 A	350
324	T-1¼	Wire Term.	3	.19 A	350
325	T-1¼	Special	3	.19 A	350
327	T-1¾	Mid. Flngd.	28	.04 A	1000
328	T-1¾	Mid. Flngd.	6	.20 A	500
328L	T-1¾	Mid. Flngd.	6	.20 A	3000
330	T-1¾	Mid. Flngd.	14	.08 A	750
331	T-1¾	Mid. Flngd.	1.35	.06 A	500
334	T-1¾	Mid. Gr.	28	.04 A	1000
335	T-1¾	Mid. Scr.	28	.04 A	1000
1251	G-6	S. C. Bay.	28	3 CP	1000
1816	T-3¼	Min. Bay.	13	.33 A	1000
1819	T-3¼	Min. Bay	28	.035	1000
1829	T-3¼	Min. Bay.	28	.07	1000
CM680	T-1	Wire Term.	5	.06 A	L
CM682	T-1	Spec.	5	.06 A	L

Only the more popular of the standard lamps produced are listed. Information regarding others, and Neon Glow and Small Standard Voltage Lamps available, on request.

INDICATOR LIGHTS

for every panel design by

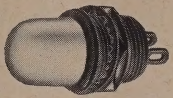
ELECTROSNAP
HETHERINGTON

CONTROL SWITCH DIVISION
CONTROLS COMPANY OF AMERICA
• Folcroft, Pennsylvania

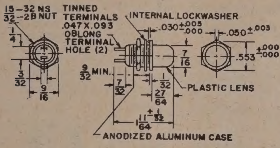
Shown below are only a few of the more than 50 basic standard types of indicator lights available from Control Switch Division. Actually, there are dozens of variations in color, mounting, appearance and circuitry possible for almost every basic style. For example, indicator lights are available for 6, 14, or 28 volt, D.C. and 110 V. A.C. circuits. So whatever your needs, there are ready-made, in-stock indicator lights to fit your panel.

(LIST PRICES BELOW ARE FOR UNITS WITHOUT LAMPS)

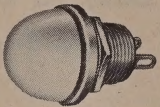
SERIES L14005B



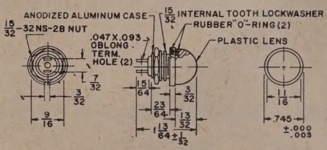
Conforms to MS-25256. Long plastic lens for 180° visibility. Front panel mounting (L14000) shown; also available for back mounting (L14200). Uses MS-25237 lamps. **LIST $1.12**


15/32-32 NS -2B NUT
TINNED TERMINALS
.047 X .093 OBLONG TERMINAL HOLE (2)
INTERNAL LOCKWASHER
.030 +.005 -.000
.050 ±.003
.553 +.000 -.000
1/4
7/16
9/32 MIN.
3/32
9/16
7/32
1/32
27/64
11/64 ± 1/32
PLASTIC LENS
ANODIZED ALUMINUM CASE

SERIES L5105



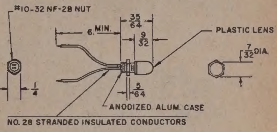
Watertight, front-of-panel mounting. Wide-angle visibility. 2-terminal circuit. Mounts in ½-inch hole. Uses MS-25237 lamps. Press-to-Test Model L16200 available. **LIST $1.62**


ANODIZED ALUMINUM CASE
15/32 INTERNAL TOOTH LOCKWASHER
15/32-32 NS-2B NUT
RUBBER "O"-RING (2)
.047 X .093 OBLONG TERM. HOLE (2)
PLASTIC LENS
7/32
3/32
9/16
15/64
3/32
23/64
13/32
1 13/64 ± 1/32
11/16
.745 +.000 -.003

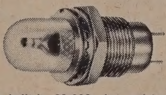
SERIES L10000

Supplied with 5V. Lamp

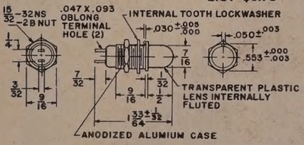
Sub-miniature, moisture-proof. Rated life of 60,000 continuous hours at 5 volts. Models available to mount flush with panel surface. **LIST $5.45**


#10-32 NF-2B NUT
6 MIN.
35/64
9/32
PLASTIC LENS
7/32 DIA.
1/4
5/64
ANODIZED ALUM. CASE
NO. 28 STRANDED INSULATED CONDUCTORS

SERIES L15015B

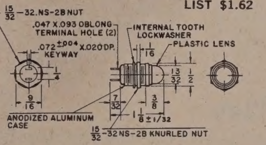


Neon indicator with built-in 62,000 ohm resistor for 115V circuits. Conforms to MS-25257. Available for front or back panel mounting. **LIST $3.78**

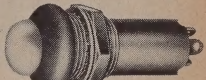

15/32-32 NS -2B NUT
.047 X .093 OBLONG TERMINAL HOLE (2)
INTERNAL TOOTH LOCKWASHER
.030 +.005 -.000
.050 ±.003
.553 +.000 -.003
1/4
7/16
7/32
3/32
9/16
9/16
1/32
1/2
TRANSPARENT PLASTIC LENS INTERNALLY FLUTED
1 33/64 ± 1/32
ANODIZED ALUMIUM CASE

SERIES L14215

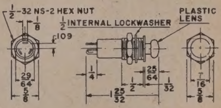
Special model for back-of-panel mounting on very compact panels. Mounting nut is tightened from front. Lens has knurled nut for easy removal of lens-lamp module. Uses MS-25237 lamps. **LIST $1.62**


15/32-32 NS-2B NUT
.047 X .093 OBLONG TERMINAL HOLE (2)
.072 ±.004 X .020 DP. KEYWAY
INTERNAL TOOTH LOCKWASHER
PLASTIC LENS
1/16
13/32
1/2
1/4
9/16
7/32
3/8
1 1/8 ± 1/32
ANODIZED ALUMINUM CASE
15/32-32 NS-2B KNURLED NUT

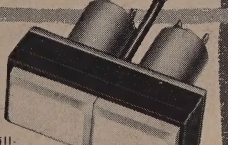
SERIES L3005



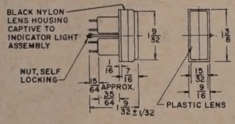
Moisture-proof push-to-test indicator light. Test lamp circuit by pushing plastic lens. Supplied with or without silicon rubber boot to seal panel. Lens has "O"-ring seal. Flange-type mounting in ½-inch hole. Uses MS-25237 lamps. **LIST $3.75**


1/2-32 NS-2 HEX NUT
1/8
1/2 INTERNAL LOCKWASHER
PLASTIC LENS
.109
29/64
5/8
1/4
25/64
1 25/32
2
1/32
7/16
5/8

SERIES L5915



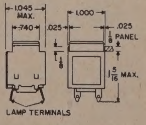
Miniature "billboard" placard contains two MS-25237 lamps. 2-color model shown (L5915), also available: 1-color (L5900) and Press-to-Test (L5200). All legends engraved (not hot-stamped). Self-indexing unit. Captive lens. **L5915: LIST $6.73**


BLACK NYLON LENS HOUSING CAPTIVE TO INDICATOR LIGHT ASSEMBLY
NUT, SELF LOCKING
1 9/32
1/16
7/16
15/64 APPROX.
25/64
1 9/32 ± 1/32
1 3/8
15/32
9/16
PLASTIC LENS

SERIES C6

CC
CONTROL SWITCH DIV.
CHICAGO ILLINOIS U.S.A.
PART NO.

TWINLITE modular indicator light assembly with identical panel appearance and mounting configuration to Series C6 lighted push-buttons. Mounts with barriers in rows, in matrix, or individually. Contains two lamps on individual or common circuits. Split or solid color buttons available. With 6 V. or 28 V. lamps. **LIST $5.25**


1.045 MAX.
.740
.025
1.000
.025
1/4 PANEL
1/8
1/8
1 5/16 MAX.
LAMP TERMINALS

ELECTROSNAP
HETHERINGTON

CONTROL SWITCH DIVISION
CONTROLS COMPANY OF AMERICA

Factories at Folcroft, Pa.;
Chicago, Ill.; El Segundo, Calif.

It's so easy to order from this catalog...

When ordering products shown in this book or writing for additional information, please be sure to specify:

1. **Manufacturer's Catalog Numbers and Page Numbers.**
2. **The Year and Edition of This MASTER.**

This will avoid confusion and expedite delivery.

Thank you!

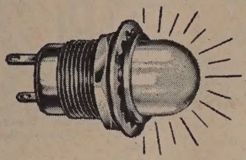
The Radio-Electronic MASTER

Sub-Miniature PILOT LIGHTS

Two Terminal • Fully Insulated

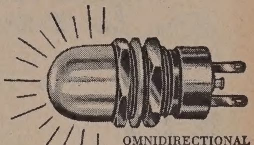
The Ultimate in Compactness

(Illustrations are approx. actual size)



THESE PILOT LIGHTS CONFORM TO ALL APPLICABLE MILITARY SPECIFICATIONS.

For FRONT of Panel Insertion:	For BACK of Panel Insertion:
Requires single 17/32″◆ clearance hole.	Requires single 15/32″ clearance hole.



OMNIDIRECTIONAL PLASTIC DOME

EASY LAMP REPLACEMENT: All assemblies (whether for front or rear insertion) have this important feature: The plastic domes or metal caps are easily removed from front of panel — thus making the lamps accessible for easy lamp replacement. Please refer to our Form L-156D which describes these units in detail.

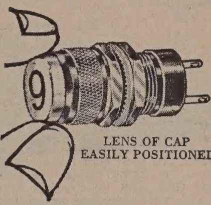
PLASTIC DOME — OMNIDIRECTIONAL: The unique "stovepipe" lens, moulded of high heat plastic, radiates light in all directions. Heavy plastic walls are reinforced by threaded brass insert. This fitting receives lamp well up into plastic dome for maximum light dispersion.

LENS WITH MESSAGE — easily positioned. A DIALCO feature is the specially designed cap-and-lens (as shown at right). By pressing on spring-mounted lens and rotating in either direction the legends may be positioned *after* installation of the assembly.

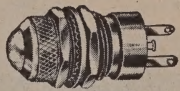
INSULATED: Lamp, socket, and all connections are completely insulated from the bushing and panel to which it is attached.

FINISH: Black nickel . . . *TERMINALS*: Soldering or Taper-Tab.

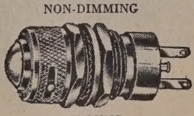
◆Now also available—units for mounting in 15/32″ clearance hole.



LENS OF CAP EASILY POSITIONED



NON-DIMMING



DIMMING

LIGHT SOURCE: T-1¾ midget flanged incandescent lamps. Available in the following voltages.

Lamp No.	Volts	Amps.	Life (Hours)
331*	1.3	.06	500
338*	2.7	.06	500
328	6.0	.20	500
345	6.0	.04	1000
344*	10.0	.015	L
330	14.0	.08	750
327	28.0	.04	1000

L = indefinite, over 6000 hours

*Recommended for use with *transparent* lenses only.

CATALOGUE NUMBERS

PLASTIC DOME TYPES

All caps are available in transparent or translucent plastic.

TRANSPARENT COLORS

Color	Catalogue No. (Back insertion)	Catalogue No. (Front insertion)
Red	101-3830-931	101-5030-931
Green	101-3830-932	101-5030-932
Amber	101-3830-933	101-5030-933
Blue	101-3830-934	101-5030-934
White (Opal)	101-3830-935	101-5030-935
Yellow	101-3830-936	101-5030-936
Clear (Colorless)	101-3830-937	101-5030-937

TRANSLUCENT COLORS

Red	101-3830-971	101-5030-971
Green	101-3830-972	101-5030-972
Amber	101-3830-973	101-5030-973
Blue	101-3830-974	101-5030-974
White (Opal)	101-3830-975	101-5030-975
Yellow	101-3830-976	101-5030-976

For complete listings, refer to Brochure L-156D.

LIGHTS WITH MESSAGES

Translucent Colors	(Back insertion)	(Front insertion)
Red	134-3830-351	134-5030-351
Green	134-3830-352	134-5030-352
Amber	134-3830-373	134-5030-373
White	134-3830-375	134-5030-375
Yellow	134-3830-376	134-5030-376

INDICATOR LIGHT (Non-dimming)

Lens, frosted back	Lens, frosted all over	Lens, unfrosted
111-3830-111	111-3830-121	111-3830-131

DIMMER TYPES (Mechanical or Polaroid)

	Lens, frosted back	Lens, frosted all over	Lens, unfrosted
Semi-blackout	109-3830-111	109-3830-121	109-3830-131
Blackout	108-3830-111	108-3830-121	108-3830-131
Polaroid	112-3830-111	112-3830-121	112-3830-131

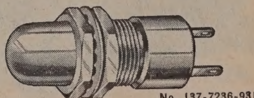
LENS COLOR: The *final figure* in the catalogue number indicates that the lens has *RED* color. When color other than red is desired, change this digit to a figure from the listing below. Note that white lenses are translucent and are always furnished unfrosted.

Red—1	Green—2	Amber—3	Blue—4
White Trans.—5	Yellow—6	Clear (Colorless)—7	

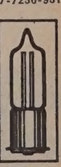
New . . . NEON INDICATOR LIGHTS

SUB-MINIATURE

Use tiny T-2 G.E. Glow Lamps



No. 137-7236-931



NE-2D or NE-2J*

This series houses newly improved lamps with formed bulbs and midget flanged bases. Lamps are designated as *NE-2D* for the regular lamp, and as *NE-2J* for the high brightness type which may be operated at high current. The *NE-2J* has higher voltage characteristics requiring 110V. A.C. or 160V. D.C. for reliable performance . . . a resistor (or other ballast device) must be used to limit the lamp current. Since the current is never more than 3 milliamperes, the resistor may be the small 1/3 watt type . . . All assemblies have 2 terminals (*Soldering or Taper-Tab*); conform to applicable Mil. Specs. . . . *For full details, ask for Brochures L-159B and L-162.*

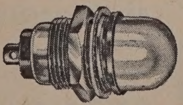
*New HIGH BRIGHTNESS lamp.

OTHER NEW SUB-MINIATURES

The DIALCO line is constantly expanding. New Series include Neon Sub-Miniatures MS25257 with built-in 62K Resistor (patented); also watertight units, etc. Request latest brochures.

Also ONE terminal units

For use on grounded circuits



DIALCO also makes a complete line of *single terminal sub-miniature pilot lights* intended for use where it is desired to ground one side of circuit. Available in the styles similar to the above. Instead of the single soldering terminal, a binding screw terminal may be specified. Brochure L-157B describes these units in detail.

ORDER COMPLETE WITH LAMPS so that you will be assured of receiving the pilot lights and correct lamps at one time, ready for immediate use.

DIALIGHT CORPORATION

Foremost Manufacturer of Pilot Lights

BROOKLYN 37, N. Y.

PILOT LIGHT ASSEMBLIES

for T-3¼ NEON LAMP • NE-51 *types*

For 11/16″* and 1″** MOUNTING HOLES

BUILT-IN RESISTORS

(Patent No. 2,421,321)

NE-51
or NE-51H
(High Brightness)

For operation on 105-125V. or 210-250V. . . . The required resistor is an integral part of the unit — BUILT IN. (See below.) Also, simple external resistors for all higher voltages.

All of these assemblies are listed by Underwriters' Laboratories, Inc.

PROPER CHOICE OF LAMP AND BUILT-IN RESISTOR VALUES: The NE-51 glow lamp types are shown with resistor tables for each. The lamps are the *standard NE-51* and the *new NE-51H*. The *new high brightness lamp* may be operated at about three times the level of current that may be applied to the standard lamp and it will produce more than eight times as much light.

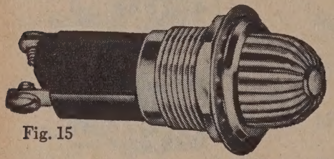


Fig. 15

Multivue caps

BINDING SCREWS

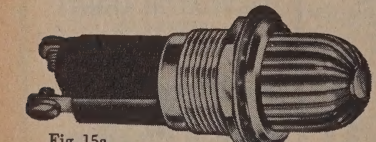


Fig. 15a

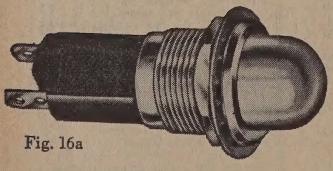


Fig. 16a

SOLDERING TERMINALS

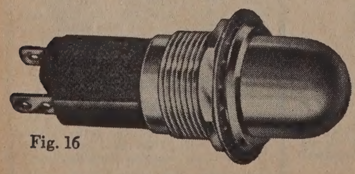


Fig. 16

BUILT-IN RESISTOR VALUES for the NE-51 TYPE GLOW LAMPS (Values in ohms)

NE-51			New NE-51H (high brightness)		
	Applied to terminals			Applied to terminals	
VOLTS	105-125	210-250	VOLTS *	105-125	210-250
BRIGHT LIGHT	56,000 (1/3 watt)	180,000 (1/3 watt)	BRIGHT LIGHT	18,000 (1/3 watt)	56,000 (1/3 watt)
MEDIUM LAMP LIFE	100,000 (1/3 watt)	270,000 (1/3 watt)	MEDIUM LAMP LIFE	33,000 (1/3 watt)	120,000 (1/3 watt)
VERY LONG LAMP LIFE	220,000 (1/3 watt)	680,000 (1/3 watt)	VERY LONG LAMP LIFE	82,000 (1/3 watt)	220,000 (1/3 watt)

* The **NE-51H** Neon Glow Lamp is not recommended for use on **DC** circuits below 160 V.

CATALOGUE NUMBERS

*For 11/16″ Mounting Hole

521308-991	Short multivue cap, Screw terminals (Fig. 15)
531308-991	Long multivue cap, Screw terminals (Fig. 15a)
91408-931	Long clear cap, Soldering terminals (Fig. 16)
95408-931	Short clear cap, Soldering terminals (Fig. 16a)
81408-111	Screw-in cap, Convex lens, Soldering terminals (Fig. 17)

For High Brightness, add "H"; example: 521308H-991.

Units for 9/16″ Mounting Hole are also available

**For 1″ Mounting Hole

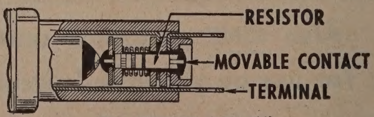
80408-831	Screw cap, Dome plastic lens, Soldering terminals (Fig. 18)
801308-831	Screw cap, Dome plastic lens (Fig. 18). Screw terminals similar to those in Fig. 15
51408-111	Screw cap, Convex lens, Soldering terminals (Fig. 19)
511308-111	Screw cap, Convex lens (Fig. 19). Screw terminals similar to those in Fig. 15

LENS COLOR: The *final figure* in the catalogue number indicates that the lens has RED color. When color other than red is desired, change this digit to a figure from the listing below. Note: white lenses are translucent and are always furnished unfrosted.

Red—1 Green—2* Amber—3 Blue—4*
White Translucent—5 Yellow—6 Clear (Colorless)—7

*** Not recommended with neon lamps.**

ORDER COMPLETE WITH LAMPS so that you will be assured of receiving the pilot lights and correct lamps at one time, ready for immediate use.



(U. S. Patent No. 2,421,321)

External resistors will be furnished which will permit use of these pilot lights on voltages higher than 250 volts.

DIALIGHT CORPORATION

Foremost Manufacturer of Pilot Lights

BROOKLYN 37, N. Y.

PILOT LIGHT ASSEMBLIES

FOR T-3¼ BULB WITH MINIATURE BAYONET BASE

DIALCO®

LISTED UNDER REEXAMINATION SERVICE OF UNDERWRITERS' LABORATORIES, INC. UL

CATALOGUE NUMBERS

for low voltages

*For 11/16″ Mounting Hole

521310-991	Short multivue cap, Screw terminals (Fig. 15)
531310-991	Long multivue cap, Screw terminals (Fig. 15a)
91410-931	Long clear cap, Soldering terminals (Fig. 16)
95410-931	Short clear cap, Soldering terminals (Fig. 16a)
81410-111	Screw-in, Convex lens, Soldering terminals (Fig. 17)
211310	Light shield, Screw terminals (Fig. 20)
93410-111	Polaroid dimmer cap, Convex lens, Soldering terminals (Fig. 21a)
98B410-111 or 98SB410-111	Dimmer cap, Convex lens, Soldering terminals (Fig. 21)

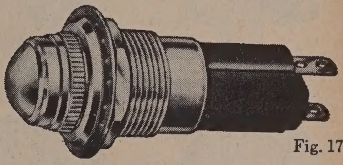


Fig. 17

**For 1″ Mounting Hole

80410-831	Screw cap, Dome plastic lens, Soldering terminals (Fig. 18)
801310-831	Screw cap, Dome plastic lens, (Fig. 18). Screw terminals similar to those in Fig. 20
51410-111	Screw cap, Convex lens, Soldering terminals (Fig. 19)
511310-111	Screw cap, Convex lens, (Fig. 19). Screw terminals similar to those in Fig. 20

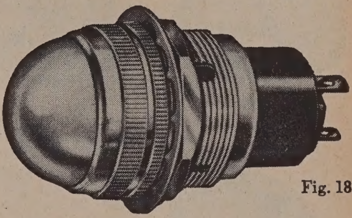


Fig. 18

LENS COLOR: The *final figure* in the catalogue number indicates that the lens has RED color. When color other than red is desired, change this digit to a figure from the listing below. Note that white lenses are translucent and are always furnished unfrosted.

Red—1 Green—2 Amber—3 Blue—4
White Translucent—5 Yellow—6 Clear (Colorless)—7

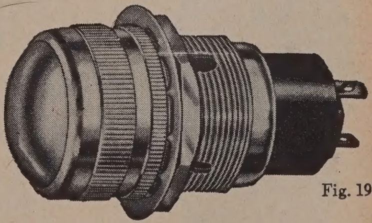


Fig. 19

ORDER COMPLETE WITH LAMPS so that you will be assured of receiving the pilot lights and correct lamps at one time, ready for immediate use.

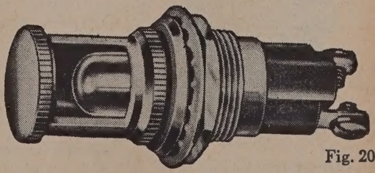
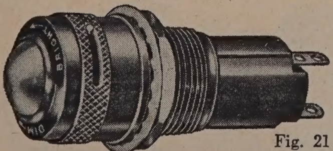


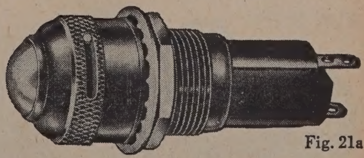
Fig. 20

MECHANICAL and POLAROID DIMMERS



mechanical

Fig. 21



polaroid

Fig. 21a

Any of the mechanical dimmers can be supplied either for "Complete Blackout" or for "Semi-Blackout". Typical Catalogue Numbers are as follows:

98*B*410-111 ("Complete Blackout" . . . **98*SB*410-111** ("Semi-Blackout")

DIALIGHT CORPORATION

Foremost Manufacturer of Pilot Lights

BROOKLYN 37, N. Y.

All illustrations are approximately actual size

LENS CAPS

FRICTION

Convex

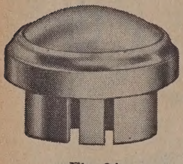


Fig. 34

BAYONET

Convex

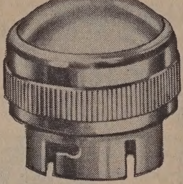


Fig. 6

SCREW

Torpedo

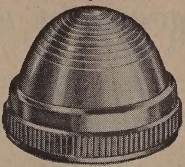


Fig. 3

Large Convex

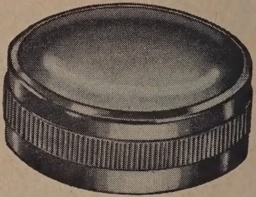


Fig. 2

Dome

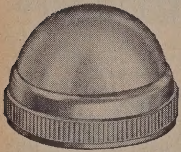


Fig. 35

SCREW

Faceted

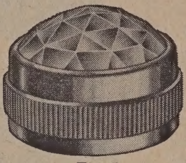


Fig. 5

Small Convex

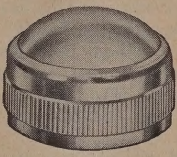


Fig. 1

Large Torpedo

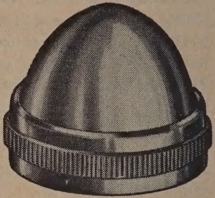
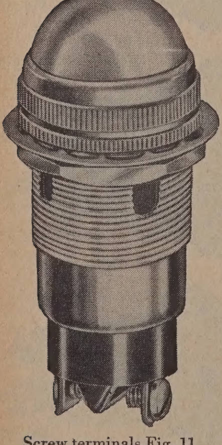


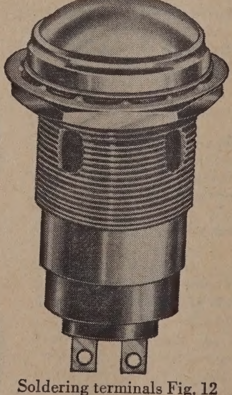
Fig. 4

ASSEMBLIES FOR 1 INCH MOUNTING HOLE

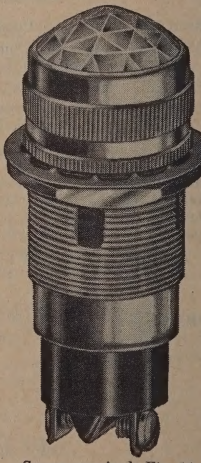
DOUBLE CONTACT BAYONET



Screw terminals Fig. 11
(moveable type)

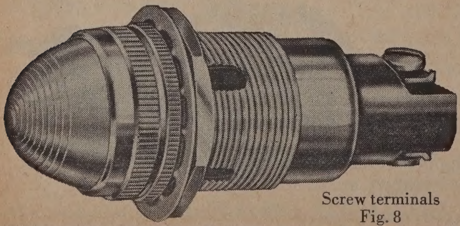


Soldering terminals Fig. 12

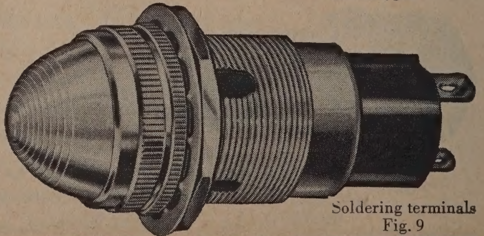


Screw terminals Fig. 10
(fixed type)

CANDELABRA SCREW



Screw terminals
Fig. 8



Soldering terminals
Fig. 9

DIALIGHT CORPORATION

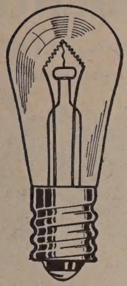
Foremost Manufacturer of Pilot Lights

BROOKLYN 37, N. Y.

CATALOG NUMBERS FOR ENCLOSED ASSEMBLIES

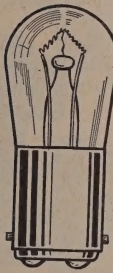
Mount in ONE INCH clearance hole

UNDERWRITERS' LISTED



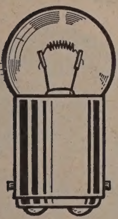
For S-6 Lamp with Candelabra Screw Base

51901-111	Screw cap, Convex lens, frosted back (Fig. 1). Screw terminals (Fig. 8)
61901-211	Screw cap, Large convex lens, frosted back (Fig. 2). Screw terminals (Fig. 8)
51901-431	Screw cap, Faceted lens (Fig. 5). Screw terminals (Fig. 8)
19901-531	Screw cap, Large torpedo lens (Fig. 4). Screw terminals (Fig. 8)
514001-111	Screw cap, Convex lens, frosted back (Fig. 1). Soldering terminals (Fig. 9)
41901-111	Bayonet cap, Convex lens, frosted back (Fig. 6). Screw terminals (Fig. 8)
31901-111	Friction cap, Convex lens, frosted back (Fig. 34). Screw terminals (Fig. 8)
47901	Light Shield cap (Fig. 13). Binding Screw terminals (Fig. 8)
71B4001-111	Mechanical dimmer, Screw cap, Convex lens, frosted back (Fig. 14)
784001-111	Polaroid dimmer, Screw cap, Convex lens, frosted back (Fig. 14)



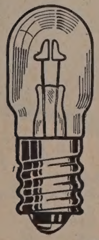
For S-6 Lamp with Double Contact Bayonet Base

513202-111	Screw cap, Convex lens, frosted back (Fig. 1) Screw terminals (Fig. 10)
613202-211	Screw cap, Large convex lens, frosted back (Fig. 2) Screw terminals (Fig. 10)
513202-431	Screw cap, Faceted lens (Fig. 5) Screw terminals (Fig. 10)
803202-531	Screw cap, Torpedo lens (Fig. 3) Screw terminals (Fig. 10)
413202-111	Bayonet cap, Convex lens, frosted back (Fig. 6) Screw terminals (Fig. 10)
313202-111	Friction cap, Convex lens, frosted back (Fig. 34) Screw terminals (Fig. 10)



For G-6 Lamp with Double Contact Bayonet Base

513504-111	Screw cap, Convex lens, frosted back (Fig. 1) Screw terminals (Fig. 11)
513504-431	Screw cap, Faceted lens (Fig. 5) Screw terminals (Fig. 11)
803504-531	Screw cap, Torpedo lens (Fig. 3) Screw terminals (Fig. 11)
803504-1211	Screw cap, Dome glass lens, frosted back (Fig. 35) Screw terminals (Fig. 11)
51204-111	Screw cap, Convex lens, frosted back (Fig. 1) Soldering terminals (Fig. 12)
41204-111	Bayonet cap, Convex lens, frosted back (Fig. 6) Soldering terminals (Fig. 12)
31204-111	Friction cap, Convex lens, frosted back (Fig. 34) Soldering terminals (Fig. 12



For NE-45 Neon Glow Lamp, Candelabra Screw Base

51914-131	Screw cap, Convex lens, unfrosted (Fig. 1) Screw terminals (Fig. 8)
80914-841	Screw cap, Dome lens, matted back (Fig. 35) Screw terminals (Fig. 8)
41914-131	Bayonet cap, Convex lens, unfrosted (Fig. 6) Screw terminals (Fig. 8)
31914-131	Friction cap, Convex lens, unfrosted (Fig. 34) Screw terminals (Fig. 8)
514014-131	Screw cap, Convex lens, unfrosted (Fig. 1) Soldering terminals (Fig. 9)
804014-531	Screw cap, Torpedo lens, unfrosted (Fig. 3) Soldering terminals (Fig. 9)

LENS COLOR: The *final figure* in the catalogue number indicates that the lens has RED color. When color other than red is desired, change this digit to a figure from the listing below. Note that white lenses are translucent and are always furnished unfrosted.

Red—1 *Green—2 Amber—3 *Blue—4
White Translucent—5 Yellow—6 Clear (Colorless)—7

**Green and blue lenses are not recommended with neon glow lamps.*

ORDER COMPLETE WITH LAMPS so that you will be assured of receiving the pilot lights and correct lamps at one time, ready for immediate use.

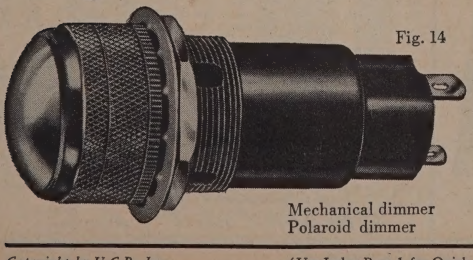


Fig. 14

Mechanical dimmer
Polaroid dimmer

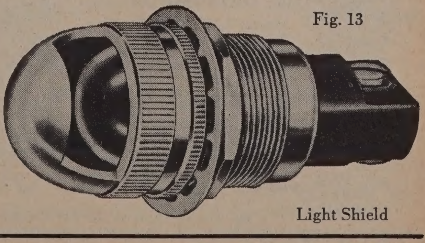


Fig. 13

Light Shield

DIALIGHT CORPORATION

Foremost Manufacturer of Pilot Lights

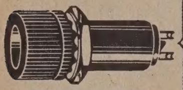
BROOKLYN 37, N. Y.

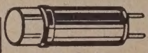
DATALITES®

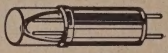
For the Computer-Automation Industries

DATALITES by DIALCO are ultra-miniature Indicator Lights specially designed to meet the critical requirements of the computer-automation fields. Made in 2 basic styles: *Lamp Holders with* DIALCO'S own *replaceable Lamp Cartridges;* or integrated DATALITES *with Built-in Neon Lamps* which are *not replaceable* (see below). Ultra-compact, single units mount in ⅜" clearance hole. Also available (not illust.)—Twin Lamp Assembly which mounts in ¾" clearance hole.

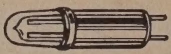
DATALITES have fully insulated terminals and conform to all applicable military specifications. Integrated units are available *with or without built-in resistors.* The cylindrical lenses can be hot-stamped with digits, letters, etc.


No. 7538 Lampholder
Mounts in 3/8" clearance hole


No. 39-6-1471*
(Short cylind., incand.)


No. 38-1531
(Long cylind., neon)

Replaceable
Lamp Cartridges


No. 38-931
(Stovepipe, neon)

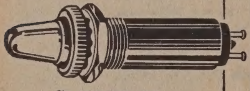
NEON or INCANDESCENT

Lamps used: T-1¾ wire-lead Incandescent Lamps . . . or Neon Lamps NE-2E (regular), or NE-2H (High Brightness) which is specified by adding **H** to the Cat. No. Example: 38H-931.

Neon Cartridge Cat. Nos.

LENS COLOR (Transparent)	STOVEPIPE	LONG CYL.
Red	38-931	38-1531
Yellow (Amber)	38-933	38-1533
White	38-935	38-1535
Light Yellow	38-936	38-1536
Clear (Colorless)	38-937	38-1537

DATALITES with Built-in
NE-2E or NE-2H Neon Lamps


No. 249-7841-931
with built-in resistor

Available—shorter unit,
without resistor, No. 249-7840-931

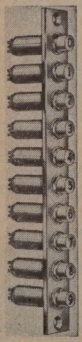
Incandescent Cartridge Cat. Nos.

LENS COLOR (Translucent)	SHORT CYL. (Translucent)
Red	* 39-6-1471
Green	39-6-1472
Yellow (Amber)	39-6-1473
Blue	39-6-1474
White	39-6-1475
Light Yellow	39-6-1476

*NOTE: The -6- in the Cat. Nos. indicate a 6V lamp. For 14V or 28V, change the -6- to-14- or -28-. Example: 39-14-1471.

Dialco DATA STRIP and DATA MATRIX

Multiple DATALITES in a minimum of space

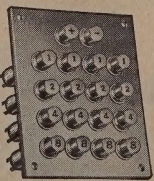

DATA STRIP
No. DSV-7538-10
(Vertical)

DATA STRIP

LAMP HOLDERS are mounted on an aluminum strip for either *vertical* or *horizontal* reading. The cartridges are easily mounted and provide an attractive display of numerals, symbols or letters in a small area of space. Each lamp holder on the DATA STRIP is on ½" centers and every adjacent DATA STRIP has ½" spacing. **There is no basic (or stock) item;** we can supply any number of lamp holders on a strip: 2, 6, 10, 15, or 20 units.

DATA MATRIX

Similar to DATA STRIP but rectangular in shape, DATA MATRIX can be supplied with any combination of lamp holders on ½" centers or for special applications. A typical Binary computing application shown here holds 18 lamp holders. The cartridges contain incandescent lamps and are capped with short cylindrical lenses hot-stamped with legends.

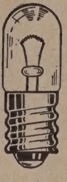

DATA MATRIX
No. DM-7538-18

For complete details, ask for Brochure L-160B

DIALCO PILOT LIGHTS

A SELECTION OF OPEN TYPES

For T-3¼ Low Voltage Incandescent Lamps


Min. Screw
Base

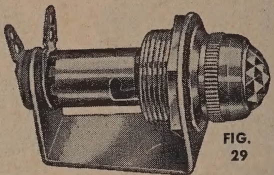
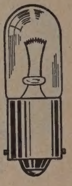


FIG. 29


Min. Bayonet
Base

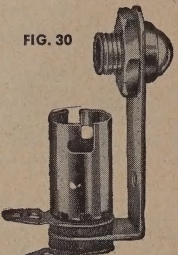


FIG. 30

Typical assemblies for bayonet base lamp. Available also for screw base type. See listing below.

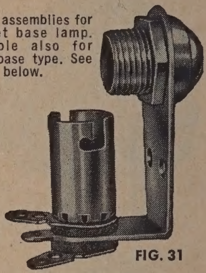


FIG. 31

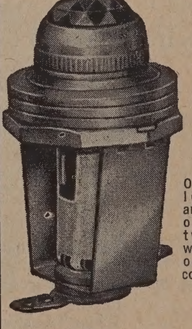


FIG. 32

Octagon lock nut and bracket on these two units welded into one-piece construction

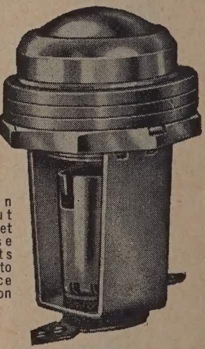


FIG. 33

CATALOGUE NUMBERS

Assemblies for T-3¼ miniature bayonet base lamps

No. 810B-431	Faceted	½" lens.	For	11/16" mounting hole.	Fig. 29
No. 710-121	Convex	½" lens.	For	7/16" mounting hole.	Fig. 31
No. 755-621	Convex	11/32" lens.	For	9/32" mounting hole.	Fig. 30
No. 857B-431	Faceted	½" lens.	For	11/16" mounting hole.	Fig. 32
No. 67B-111	Convex	¾" lens.	For	13/16" mounting hole.	Fig. 33

Assemblies for T-3¼ miniature screw base lamps

					Similar to
No. 810M-431	Faceted	½" lens.	For	11/16" mounting hole.	Fig. 29
No. 510-121	Convex	½" lens.	For	7/16" mounting hole.	Fig. 31
No. 555-621	Convex	11/32" lens.	For	9/32" mounting hole.	Fig. 30
No. 855-431	Faceted	½" lens.	For	11/16" mounting hole.	Fig. 32
No. 66M-111	Convex	¾" lens.	For	13/16" mounting hole.	Fig. 33

LENS COLOR: The final figure in the catalogue number indicates that lens has RED color. When color other than red is desired, change this digit to a figure from the listing below. Note that white lenses are translucent and are always furnished unfrosted.

Red—1 Green—2 Amber—3 Blue—4
White Translucent—5 Yellow—6 Clear (Colorless)—7

DIALIGHT CORPORATION
Foremost Manufacturer of Pilot Lights
BROOKLYN 37, N. Y.

PILOT LIGHT ASSEMBLIES

A SELECTION OF OPEN TYPES
For Candelabra Screw Base Lamps

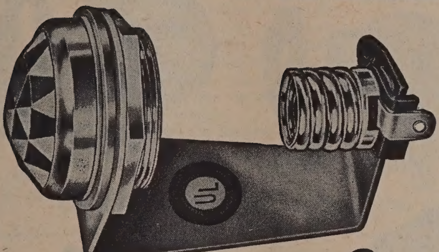


FIG. 24

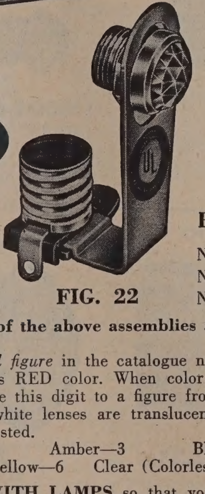


FIG. 22

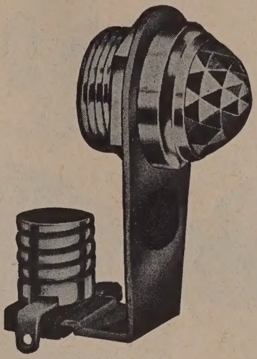
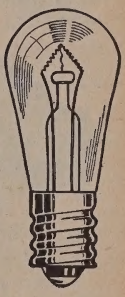


FIG. 23



For S-6 Incandescent Lamps, candelabra screw base

No. 10-18-14-431 Faceted ½″ Lens (for 7/16″ mounting hole) (Fig. 22)
No. 25-18-15-431 Faceted ⅝″ Lens (for 11/16″ mounting hole) (Fig. 23)
No. 31-18-16-431 Faceted 1″ Lens (for 1″ mounting hole) (Fig. 24)

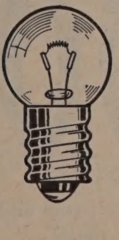
All of the above assemblies are listed by Underwriters' Laboratories, Inc.

LENS COLOR: The *final figure* in the catalogue number indicates that the lens has RED color. When color other than red is desired, change this digit to a figure from the listing below. Note that white lenses are translucent and are always furnished unfrosted.

Red—1	Green—2	Amber—3	Blue—4
White Translucent—5	Yellow—6	Clear (Colorless)—7	

ORDER COMPLETE WITH LAMPS so that you will be assured of receiving the pilot lights and correct lamps at one time, ready for immediate use.

Octagon lock nut and bracket on these two units welded into one-piece construction.



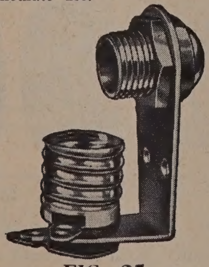


FIG. 25

For G-6 Low voltage lamps, candelabra screw base

No. 610-121 Convex ½″ lens
Fig. 25 (for 7/16″ mounting hole)

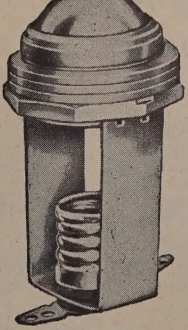
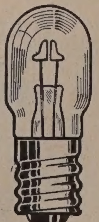


FIG. 26



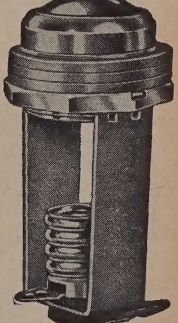


FIG. 27

For NE-45 Neon Glow Lamps, candelabra screw base

No. 67BN-831 Dome Plastic Lens (¾″ diam.) Fig. 26
No. 66N-131 Convex Glass Lens (¾″ diam.) Fig. 27
(Both mount in 13/16″ hole. Cap removable)

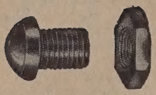
DIALIGHT CORPORATION

Foremost Manufacturer of Pilot Lights

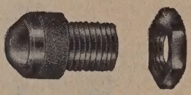
BROOKLYN 37, N. Y.

Lens Holders with Lenses for Panel Mounting

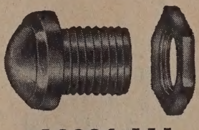
Screw Types Are Complete With Nut for Shank



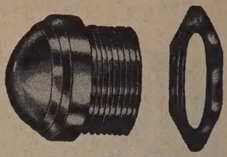
5006-631
9/32"-32 thread



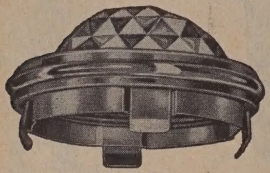
7005-631
3/8"-24 thread



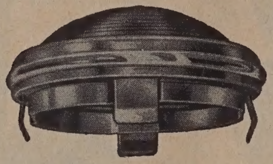
10006-111
7/16"-27 thread



25006-111
11/16"-27 thread



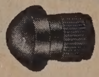
34-431
GLASS LENS



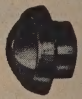
34-841
PLASTIC LENS

These holders snap into 1½" hole

PUSH-IN TYPES



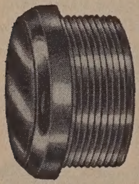
6004-631
9/32" hole



38003-631
⅜" hole

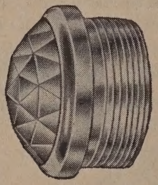
Shank, 3/16" long

FLAT



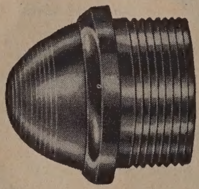
76006-231

FACETED



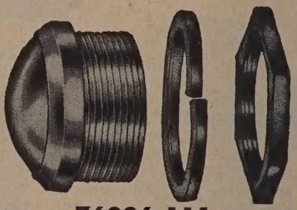
76006-431

TORPEDO



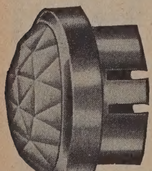
76006-531

CONVEX



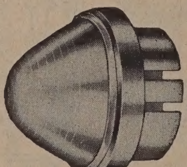
76006-111

FACETED



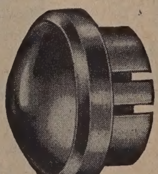
31-431

TORPEDO



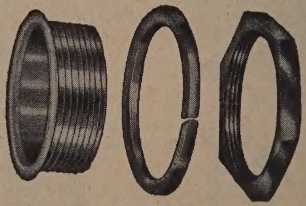
31-531

CONVEX



31-111

BUSHING



31246

The above two groups mount in 1" clearance hole. The upper series lock to the panel and are tamper proof. The lower series permit lamp replacement from the front of the panel.

LENS COLOR: The *final figure* in the catalogue number indicates that the lens has RED color. When color other than red is desired, change this digit to a figure from the listing below. Note that white lenses are translucent and are always furnished unfrosted.

Red—1 Green—2 Amber—3 Blue—4
White Translucent—5 Yellow—6 Clear (Colorless)—7

●

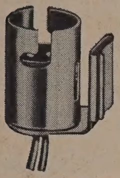
ORDER COMPLETE WITH LAMPS so that you will be assured of receiving the pilot lights and correct lamps at one time, ready for immediate use.

DIALCO SOCKETS — Bracket Mounted

Underwriters Labs. Listed— 75 Watts, 125 Volts —Appr. Canadian Standards Assoc.

Double Contact Candelabra Bayonet

12-200 Series



Cat. No. 12-258

12-200 Series Sockets are furnished with bakelite discs, including separately sprung contacts, and have 6″ wire leads. They can also be furnished with ceramic discs (called *1200 Series*) for heat-resistant applications.

5700 Series Sockets use tab terminals. These assemblies are ruggedly constructed with moulded bakelite housings and specially designed contacts.

5700 Series

Cat. No. 57-07

CANDELABRA SCREW

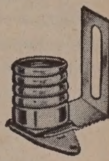
400 Series

Cat. No. 4-45

400 Series Sockets are housed in heavy moulded bakelite. They are equipped with built-in wire leads, 6″ long.

1800 Series Sockets are intended for use with lamps on commercial voltages. Terminals are locked in place and thoroughly insulated from the bracket and each other.

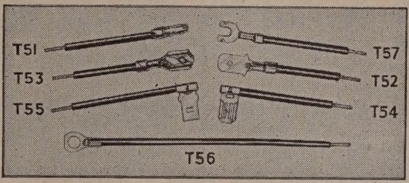
1800 Series



Cat. No. 18-79

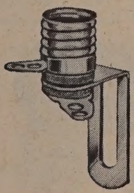
WIRE TERMINATIONS

All wire assemblies are furnished with 6″ long standard leads, ends stripped ½″. Standard insulation is vinyl plastic with copper conductors. Special insulations such as Asbestos, 105°C Plastic, Rubber, SRIR, etc., may be furnished.



A large variety of *solderless terminals* can be furnished with most wire lead assemblies. Some standard popular types are shown here. To assure your receiving the correct terminal, please specify our assembly part number as well as the terminal required.

600 Series



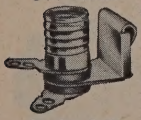
Cat. No. 6-06

Candelabra Screw

600 Series Sockets have soldering terminals, and can be furnished with the same basic brackets as shown in grouped illustration below.

Miniature Screw

500 Series



Cat. No. 5-03

500 Series Sockets are supplied with soldering terminals. This group, as well as those sockets in the *600* and *700 Series,* are also furnished for *Grounded* use. When grounded sockets are required, one terminal only will be furnished.

ORDER COMPLETE with LAMP so that you will be assured of receiving the proper socket and correct lamp at one time, ready for immediate use.

CHOICE OF BRACKETS →
The series of brackets shown at the right can be used with any of our 200, 500, 600, and 700 Series Sockets. All the sockets have 2 terminals.

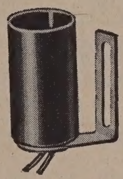
MINIATURE BAYONET SOCKETS

300 Series Sockets have moulded bakelite housing. They are listed by Underwriters Laboratories, and have Canadian Standards Association approval.

700 Series Sockets have soldering terminals. Some popular basic types are shown in illustration below.

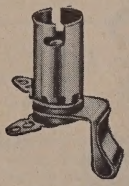
200 Series Sockets are supplied with insulating sleeves, eliminating any accidental grounding.

300 Series



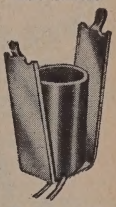
Cat. No. 3-05

700 Series

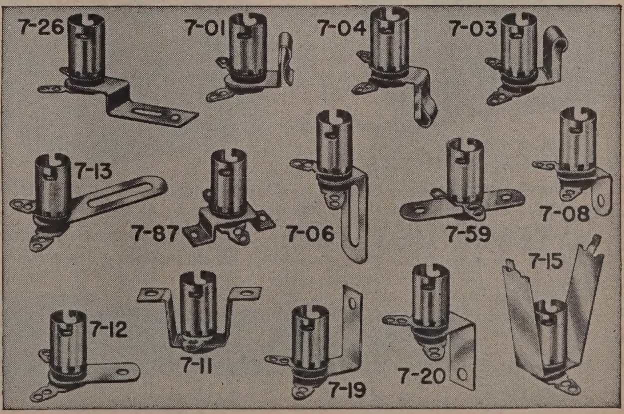


Cat. No. 7-02

200 Series



Cat. No. 2-15



DIALIGHT CORPORATION

Foremost Manufacturer of Pilot Lights

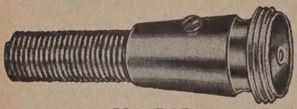
BROOKLYN 37, N. Y.

CONNECTORS FOR SINGLE CONDUCTOR CABLE FOR MICROPHONES - SPEAKERS - PICK-UPS - JACKS

(using cable shield for second conductor)

The fittings shown here are designed for use with standard metal shielded single conductor cable up to ¼″ diameter. These connectors are heavily constructed from solid brass and all exposed parts are chrome plated and highly polished.

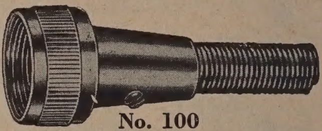
The cable end connectors are provided with rugged wire spring protectors which prevent sharp bends at the connection. The protector is soldered to the cable sheath and secured in the connector by a set screw so that all strain is relieved from the conductor.



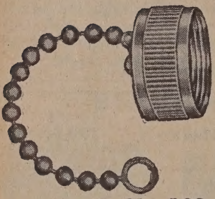
No. 101

No. 101 MALE CONNECTOR FOR CABLE — With spring protector to prevent sharp bending of cable. Solders to cable sheath — secured by set screw.

No. 100 FEMALE CONNECTOR FOR CABLE — With spring protector to prevent sharp bending of cable. Solders to cable sheath — secured by set screw.



No. 100



No. 103

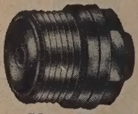
No. 51 MALE CONNECTOR FOR CHASSIS — Has sprung center contact which grounds before cable connection is broken preventing open circuit howls.

No. 103 CAP AND CHAIN — To protect unused male connectors. Chain secured by screw prevents loss when removed to make connection.

No. 50 MALE CONNECTOR FOR CHASSIS — Shell grounds to panel — or may be insulated by washers. Fit ⅜″-24 threaded hole or may be secured by nut.

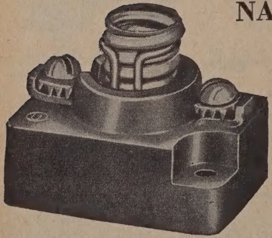
No. 50P MALE CONNECTOR FOR CHASSIS ***(Similar to No. 50 above)*** — Designed for force fit in hole in panel. Requires no nut to secure in place.

No. 51

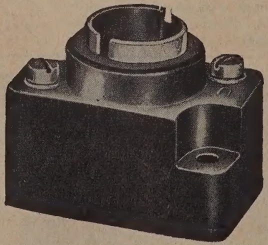


No. 50

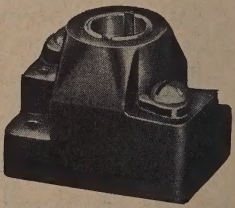
NAVY SPECIFICATION SOCKETS



Candelabra screw 9S2036-L
Candelabra screw 9S5038-L
(not illustrated)



Double Contact bayonet 9S4634-L



Miniature bayonet
9S4931-L

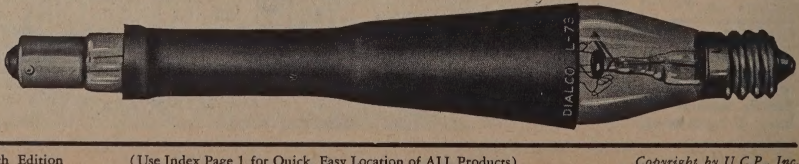
LAMP INSTALLER

The DIALCO lamp installer shown below is a useful tool in installing lamps and in servicing pilot lights.

No. L-73

●

No. L-45
For NE-45 Neon



MINIATURE LIGHTING

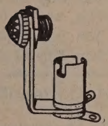
INDICATOR LIGHT ASSEMBLIES

LOOK FOR THIS DRAKE DISPLAY BOARD

AT YOUR DEALER

It shows a representative assortment of DRAKE units . . . will help you in selecting exactly the right Indicator Lights for your requirements.

UNIT NO. 5B



11/32" JEWEL . . . VERTICAL MOUNTING

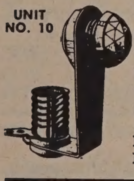
Smallest Miniature Lampholder Assemblies Made

MOUNTING: in 15/16" diameter hole, on panels up to ⅛" thick. Minimum center-to-center spacing, 9/16".

FEATURES: E-Z-TITE bezel—for fast assembly, fast replacement . . . vibration and shock resistance (to prevent loosening) . . . tested at 125 volts . . . faceted plastic lenses . . . bright nickel panel hardware—other parts cadmium . . . lamps, G3½, G4½ . . . Economy Style units.

NO. 5	Miniature Screw	$.36
NO. 5B	Miniature Bayonet	$.39

UNIT NO. 10



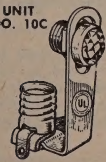
½" JEWEL . . VERTICAL MOUNTING

MOUNTING: in 7/16" hole on panels up to ¼" thick.

FEATURES: Faceted plastic lenses in standard colors . . . panel hardware, bright nickel—other parts cadmium . . . tested at 125 volts . . . *Economy Style units.*

NO. 10	Miniature Screw	$.41
NO. 10G	Miniature Bayonet	$.42

UNIT NO. 10C



½" JEWEL . . VERTICAL MOUNTING

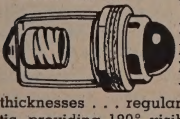
UNDERWRITERS APPROVED, 75 W.—125 V.

MOUNTING: in 7/16" hole, on panels up to ¼" thick.

FEATURES: takes minimum depth behind panel . . . slotted bracket hole permits adjustment of lamp filament behind lens for maximum illumination . . . faceted plastic lenses (FAC), in standard colors . . . panel hardware, bright nickel—other parts cadmium . . . *Economy Style units.*

No. 10C	Candelabra Screw	$.48

UNIT NO. 61N



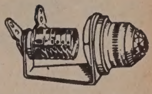
¾" JEWEL HORIZ. MOUNTING

MOUNTING: in 13/16" dia. hole, on panels up to 5/16" thick.

FEATURES: supplied with 3 fibre washers to compensate for panel thicknesses . . . regular hardware . . . lenses, domed plastic, providing 180° visibility . . . colors—colorless, red . . . takes NE 45 neon glowlamp . . . for UL unit, order No. A461N-IL.

NO. 61N	Candelabra Screw	$1.50

½" JEWEL . . HORIZ. MOUNTING



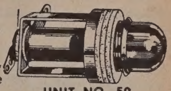
UNIT NO. 20S

MOUNTING: in 11/16" dia. hole . . . Min. center-to-center spacing, 5/16".

FEATURES: Lamp removable from front of panel . . . ½" faceted glass lens . . . bezel, bright nickel plated . . . tested at 125 V.

UNIT	LAMP-HOLDER	DEPTH BEHIND PANEL	PANEL THICKNESS	LIST
NO. 20	Min. Bayonet	1-13/32"	0 to 7/64"	$.63
NO. 20	Min. Bayonet	1-7/32"	¼"	$.65
NO. 40	Min. Bayonet	1-11/32"	½ to 15/64"	$.65
NO. 20S	Min. Screw	1-1/16"	0 to 15/64"	$.65
NO. 30S	Min. Screw	15/16"	¼"	$.65

½" JEWEL HORIZONTAL MOUNTING



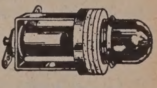
UNIT NO. 50

MOUNTING: in 11/16" diameter hole, *specially designed for use on more than one thickness of panel.* Supplied with 3 fibre washers which compensate for panel thicknesses.

FEATURES: Lamp removal from front of panel . . . faceted glass lens, standard colors . . . panel hardware, bright nickel—other parts cadmium . . . tested at 125 volts.

UNIT	LAMPHOLDER	DEPTH BEHIND PANEL FACE	LIST
NO. 50	Min. Bayonet	1-17/64"	$.86
NO. 50S	Min. Screw	1-13/64"	$.86

⅝" PLASTIC CAP HORIZONTAL MOUNTING



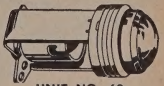
UNIT NO. 51

MOUNTING: in 11/16" hole, on panels up to ¼" thick.

FEATURES: Translucent plastic macro-dome gives wide angle vision, easily seen from sides . . . lamp removable from front of panel . . . supplied with three 1/16" thick fibre washers for adjustment to varying panel thicknesses . . . regular hardware . . . standard colors . . . tested at 125 V.

UNIT	LAMPHOLDER	DEPTH BEHIND PANEL FACE	LIST
51	Min. Bayonet	1-13/64"	$.76
51S	Min. Screw	1-9/64"	$.74

¾" JEWEL HORIZ. MOUNTING



UNIT NO. 60

MOUNTING: in 13/16" diameter hole, on panels up to ¼" thick.

FEATURES: Polished chrome slip-fit bezel for fast assembly and printed disc alignment . . . supplied with 3 fibre washers to compensate for panel thicknesses . . . miniature types tested at 125 Volts, candelabra types stand 1250 Volt breakdown. Regular hardware . . . lenses, convex—smooth, frosted on back (SFB) standard colors . . . Nos. A460N-IL and A460T-IL are Underwriters Listed for 75 W.—125 V. service.

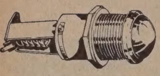
NO. 60	Miniature Bayonet	$1.45
NO. 60S	Miniature Screw	$1.43
NO. A460N-IL	Cand. Screw (for NE15 lamp)	$1.51
NO. A460T-IL	Cand. Screw (for 115V, 6W, T4½ lamp)	$1.52

ALL PRICES LIST

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

MINIATURE LIGHTING

INDICATOR LIGHT ASSEMBLIES



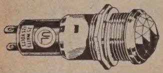
UNIT NO. 75

1" JEWEL . . . HORIZ. MOUNTING

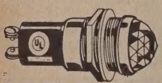
MOUNTING: in 1" diameter hole on panels up to ½" thick.

FEATURES: slip-fit bezel for easy installation . . . withstands voltage breakdown of 1000 volts . . . takes 6S6 and 7C7 lamps . . . Nos. 175 and 275 take any standard miniature lamp . . . highly polished chrome finish bezel, other parts burnished cadmium plated . . . convex lenses in standard colors; lenses also available faceted (FAC) and smooth plain (SP)—use *SP with neon glow lamps* . . . printed discs available for readout applications.

NO. 75	UL Listed	Candelabra Screw	**$1.49**
NO. 175		Miniature Screw	**$1.39**
NO. 275		Miniature Bayonet	**$1.42**



UNIT NO. 75AP



UNIT NO. BS75 AP-BH

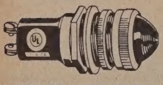
1" JEWEL . . . HORIZ. MOUNTING

UNDERWRITERS LISTED

MOUNTING: in 1" diameter hole on panels up to ½" thick.

FEATURES: heavy-duty candelabra screw base assembly designed for use on rugged equipment . . . socket assembly and mounting tube are one piece . . . lenses, faceted or smooth convex or beehive glass, standard colors . . . bright polished chrome bezel, other parts cadmium . . . Underwriters Approved for 125 volt, 75 W. service . . . depth behind panel 2¼".

NO. 75AP	Solder Terminals	Cand. Screw	**$1.72**
NO. BS75AP	Screw Terminals	Cand. Screw	**$1.91**



UNIT NO. BS78AP-BH

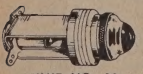
1" JEWEL . . . HORIZ. MOUNTING

UNDERWRITERS APPROVED

MOUNTING: in 1" diameter hole on panels up to ½" thick.

FEATURES: Heavy-duty candelabra screw base assembly . . . equipped with threaded bezel to prevent loosening from vibration . . . also available with water-tight and oil-tight seals . . . lenses, convex or beehive, faceted or smooth . . . bright polished chrome panel hardware, other parts cadmium . . . Underwriters Approved for 125 V., 75 W. service.

NO. 78AP	Solder Terminals	Cand. Screw	**$2.73**
NO. BS78AP	Screw Terminals	Cand. Screw	**$2.91**



UNIT NO. 80

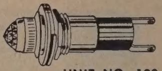
½" JEWEL . . . HORIZ. MOUNTING

POLARIZED VARIABLE INTENSITY

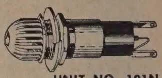
MOUNTING: in 11/16" diameter hole on panels up to ¼" thick.

FEATURES: Polaroid discs permit regulation of light intensity—a partial turn of lens dims light . . . supplied with 3 fibre washers to compensate for panel thicknesses . . . lens, smooth frosted on back, standard colors . . . bright nickel plated bezel, other parts cadmium.

NO. 80	Miniature Bayonet	**$1.72**



UNIT NO. 100



UNIT NO. 101N

TOTALLY ENCLOSED MINIATURE BAYONET ASSEMBLIES

UNDERWRITERS LISTED

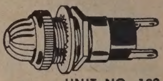
MOUNTING: in 11/16" diameter hole on panels up to ⅜" thick.

FEATURES: Available with ½" faceted glass lenses, or transparent plastic macrodome fluted on inside . . . latter style gives three times the visibility of the plain cap . . . units with built-in current-limiting resistors can be operated on any voltage over 65 V. AC and 90 V. DC and under 125 V. AC or DC . . . lenses available in standard colors . . . bright chrome plated bezel and flange.

NO. 100	convey glass lens	Min. Bay	**$1.19**
NO. 100N	built-in resistor	Min. Bay	**$1.37**
NO. 101	plastic macrodome	Min. Bay	**$1.03**
NO. 101N	100K built-in resist. NE51 lp.	Min. Bay	**$1.29**
NO. 101N-022	22K built-in resist. NE51H lp.	Min. Bay	**$1.29**

TOTALLY ENCLOSED MINIATURE BAYONET ASSEMBLIES

UNDERWRITERS LISTED



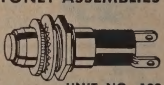
UNIT NO. 102

MOUNTING: in 11/16" diameter hole on panels up to ⅜" thick.

FEATURES: ⅝" glass macrodome lens provides 180° visibility for lamps of over 1 watt power consumption . . . gives a more Deluxe appearance than plastic . . . units with built-in current-limiting resistors can be operated on any voltage over 65 V. AC and 90 V. DC and under 125 V. AC or DC . . . lenses available in standard colors . . . bright chrome plated bezel and flange.

NO. 102	no resistor		**$1.95**
NO. 102N	100K built-in resistor	NE51 lamp	**$1.95**
NO. 102N-022	22K built-in resistor	NE51H lamp	**$1.95**

TOTALLY ENCLOSED MINIATURE BAYONET ASSEMBLIES

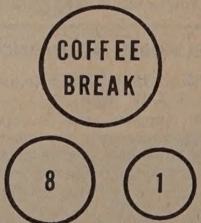


UNIT NO. 103

MOUNTING: in 11/16" diameter hole on panels up to ⅜" thick.

FEATURES: slip-fit bezel for easy alignment of readout lenses . . . E-Z-Tite flange for fast, secure mounting . . . units with built-in current-limiting resistors for High Brightness neon lamps . . . can be operated on voltages from 65 V. to 125 V. AC . . . lenses available in standard colors . . . printed discs or lens faces available for readout applications . . . bright chrome plated bezel and flange.

NO. 103	no resistor		**$1.52**
NO. 103N-022	22K built-in resistor	NE51H lamp	**$1.78**



PRINTED DISCS

For all kinds of indicating and warning purposes, printed plastic discs may be obtained for use with most DRAKE assemblies. Materials are non-oxydizing, heat-resistant. Any lettering or numerals may be used which fits within limits of disc. Prices are low.

ALL PRICES LIST

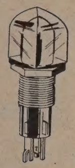
MINIATURE LIGHTING

INDICATOR LIGHT ASSEMBLIES

GLOW TYPE NEON INDICATOR LIGHTS

for maximum visibility and appearance

• POSTLITE •

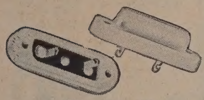

UNIT NO. 105

MOUNTING: in ½" diameter hole on panels up to 9/16" thick.

FEATURES: supplied complete with non-replaceable standard or High-Brightness neon glow lamp . . . special design one-piece body-and-lens construction of clear, colorless plastic . . . equipped with 100K built-in resistor for 125 volt circuits . . . head ⅝" square . . . overall length 2⅝".

• FLUSHLITE •

UNDERWRITERS LISTED

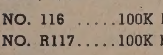

UNIT NO. 110

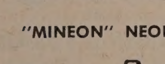
MOUNTING: with two ⅛" rivets or No. 6 screws—mounts on front or rear of panel.

FEATURES: supplied with non-replaceable standard or High Brightness neon glow lamp . . . special design one-piece body-and-lens construction of milky white plastic . . . equipped with 100K built-in resistor for 125 volt circuits . . . solder terminals mounted on laminated phenolic base . . . overall height 9/16" . . . overall length 1⅞" . . . base width 9/16".

NO. 105 POSTLITE...$1.08 • NO. 110 FLUSHLITE...$.75

"ECONOGLO" NEON GLOW INDICATOR ASSEMBLIES


UNIT NO. R116

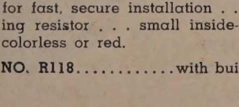

UNIT NO. R117

MOUNTING: No. R116, in a 5/16" diameter hole, from front, secured from behind with Tinnerman nut . . . No. R117, in ½" diameter hole, from front, secured by snap-in plug.

FEATURES: Designed to give maximum performance at minimum cost, with neon glow lamps . . . supplied with built-in 100K resistors . . . lenses, plain or inside fluted plastic, colorless or red . . . length in front of panel: R116, ⅜"—R117, 7/16".

NO. 116	100K built-in resistor, Tinnerman nut	**$.53**
NO. R117	100K built-in resistor, Snap-in plug	**$.61**

"MINEON" NEON GLOW INDICATOR ASSEMBLY


UNIT NO. R118
(shown full size)

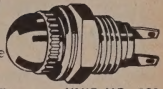
MOUNTING: in ⅜" diameter hole from rear of panel.

FEATURES: Extra-small—extends only 1⅛" back from front of panel . . . rigid construction with attractive black aluminum body . . . equipped with E-Z-Tite nut for fast, secure installation . . . built-in 100K current-limiting resistor . . . small inside-fluted or plain plastic lens, colorless or red.

NO. R118............with built-in resistor...........$1.17

"TINYLITE" MIDGET ASSEMBLY

HORIZONTAL MOUNTED

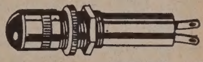

UNIT NO. 121
(shown full size)

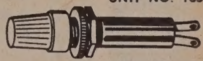
MOUNTING: in 7/16" or 15/32" hole on panels up to 9/32" thick.

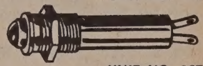
FEATURES: smallest available indicator midget screwlights with replaceable lamp and completely insulated from housing—occupies only about ⅓ cubic inch of space . . . lamp replaceable from front of panel . . . friction device prevents screw base from loosening because of vibration, etc. . . . *E-Z-Tite* flange for quick assembly . . . lenses: choice of smooth domed plastic, or flat plastic cap which can be hot-stamped with figures or letters; both styles give 180° visibility . . . standard colors . . . overall length (including terminals) 1-1/16" . . . supplied complete with midget screw lamp installed.

NO. 121-7	with 7 Volt lamp	**$1.12**
NO. 121-14	with 14 Volt lamp	**$1.21**
NO. 121-18	with 18 Volt lamp	**$1.38**

INDICATOR ASSEMBLIES FOR TELEPHONE SLIDE BASE LAMPS


UNIT NO. 135


UNIT NO. 136


UNIT NO. 137

MOUNTING: in 15/32" diameter holes or 23/32" centers.

FEATURES: designed especially for data processing equipment and other electronic instrumentation in less than standard voltage range—functions with T2 lamps, 24-55 volts. . . . relatively low cost . . . small diameter permits close grouping . . . lenses: convex glass—available with molded-in letter or numerals, fired black enamel filled, in standard colors; or nylon cap, in several colors, which protrudes 13/16" from panel for 180° visibility . . . length overall approx. 2½" . . . E-Z-Tite knurl on ring nuts for Nos. 136 and 137, for fast mounting . . . solder terminals.

NO. 135	11/32" D. convex glass lens	**$1.90**
NO. 136	plastic nylon cap, plain	**$1.41**
NO. 137	½" D. convex glass lens	**$1.84**

Small charge for numbers or letters on Nos. 135 and 137

"DORLITE"

UL LISTED

AUTOMATIC SWITCH-ON ILLUMINATING LIGHT ASSEMBLY

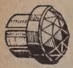
This unit has many interesting applications for use as a component in electrical and electronic devices—hi-fi, record cabinets, and other top, front or side opening equipment. It's also useful for illuminating closet and entrance doorways. A Deluxe unit, sturdily built, DORLITE combines an automatic on-off button with phenolic candelabra screw-base lampholder, assembled to the black enamelled bracket with screw or bolt hole. It is 2-17/32" long overall; comes with 24" plastic insulated 2-conductor cord. Front disc is chrome plated. Rated at 75W/125V/1 Amp . . . takes 7C7, 10C7, 6S6 or 15T7C lamps.

DORLITE..........complete except lamp..........$1.82

ALL PRICES LIST

MINIATURE LIGHTING

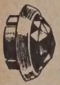
LENSES (JEWELS) and LAMPHOLDERS



11/32" LENS (JEWEL) — SLOTTED SHANK

Slip-fit type . . . faceted plastic lens, standard colors . . . statuary bronze plated bezel.

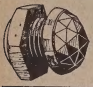
NO. 24.........Shank 1/4" long, 9/32" O.D.........$.14



½" LENS (JEWEL) — SLOTTED SHANK

Slip-fit type . . . faceted plastic lens, standard colors . . . bright nickel plated bezel.

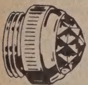
NO. 23.........Shank 3/16" long, 3/8" O.D.........$.18



½" LENS (JEWEL) — THREADED, WITH NUT

Screw-in type . . . faceted plastic lens, in standard colors . . . bright nickel plated.

NO. 16-17..Shank 3/8" long, 7/16" O.D...$.24

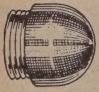


½" LENS (JEWEL) — THREADED

Screw-in type . . . faceted glass lens, standard colors . . . bright nickel plated.

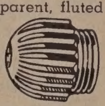
NO. 25..Shank 3/16" long, 15/32" O.D...$.29

⅝" PLASTIC MACRODOME LENSES



UNIT NO. 25P

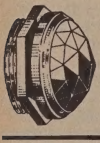
Screw-in types, designed to give widest possible (180°) visibility . . . transparent, fluted inside suggested for neon lamps—translucent plain for incandescent lamps.



UNIT NO. 25PF

NO. 25P......Plain....Shank 3/16" long, 5/8" O.D.....$.16

NO. 25PF...Fluted...Shank 3/16" long, 5/8" O.D....$.16

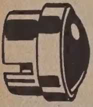


¾" LENS (JEWEL) — THREADED, WITH NUT

Faceted glass lens, standard colors . . . chrome plated bezel . . . hex nut, cadmium.

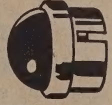
NO. 60A3-27.........Shank 3/8" long, 11/16" O.D.......$.86

11/16" LENS (JEWEL) — SLOTTED SHANK



UNIT NO. 60A

Slip-fit types . . . with convex SFB glass or plastic domed lenses, standard colors . . . chrome plated bezel.

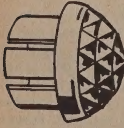


UNIT 0A-D

60A.............Shank ¼" long, ⅞" O.D.......$.62

60A-D...........Shank ¼" long, ⅞" O.D............$.62

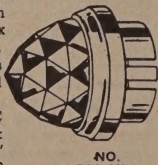
1½" LENS (JEWEL) — SLOTTED SHANK



NO. 75A

Slip-fit types . . . with faceted plastic convex or beehive lenses, standard colors . . . chrome plated bezels.

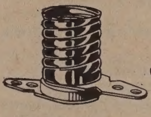
NO. 75A . . . (FAC or SP) . . . Shank 5/16" long, 1-3/32" O.D. ....$.63



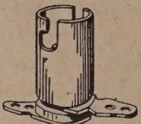
NO. 75A-BH

NO. 75A-BH..(FAC)..Shank 5/16" long, 1-3/32" O.D...$.72

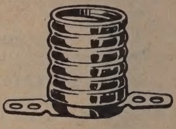
STOCK LAMPHOLDERS



117H
MINIATURE SCREW



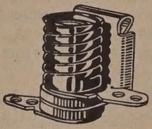
217H
MINIATURE
BAYONET



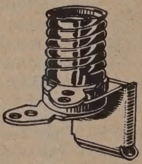
417H
CANDELABRA SCREW

Code numbers for Types:
MIN. SCREW — 100 SERIES; MIN. BAYONET — 200 SERIES;
CAND. SCREW — 400 SERIES.

CLIP BRACKET TYPES

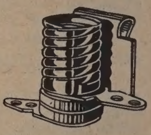


103AH - 203AH
403AH



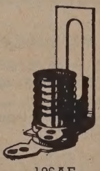
103CE
203CE - 403CE

WITH FLANGE BRACKETS

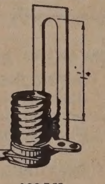


104AH - 204AH
404AH
WITH
FLAT BRACKETS

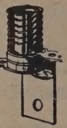
MISCELLANEOUS TYPES



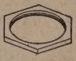
106AE
206AE
406AE



108AH
208AH
408AH



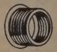
109CH
209CH
409CH



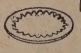
PART NO. 27 - STEEL HEX NUT

Cadmium plate . . . 11/16"—27 thread . . . 13/16" across flat . . . 3/32" thick........$.035

PART NO. 28 - BRASS MOUNTING BUSHING



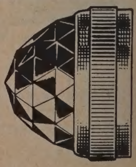
9/16"—27 fem. thd. . . . shank 3/8" long . . . 11/16"—27 . . . male thd. . . . 3/4" flange dia. . . . bright nickel plated.................$1.45



PART NO. 36L-INTERNAL TOOTHED LOCK WASHER

Cadmium plate . . . 45/64" I.D., 51/64" O.D., .030 thick ....$.02

1" LENS (JEWEL) — THREADED INSIDE



Screw-on type . . . with concentric-cut beehive glass lenses . . . standard colors . . . chrome plated bezels . . . full 180° visibility.

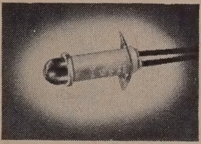
NO. 78A-BH . . . (FAC or SFB) . . . overall length, 31/32"..........$1.11

ALL PRICES LIST

Industrial Devices, Inc.

EDGEWATER, NEW JERSEY

OMNI-GLOW PILOT LIGHT



For instrument panels, appliances, switchboards, all electrical and electronic apparatus. Will give 10,000 to 25,000 hours of operating life.

Glow lamp and current-limiting resistor built in. All mechanical spring contacts are eliminated, providing a cost-saving, rugged unit free from failure due to vibration or shock.

Easy mounting — only ½″ hole required for any panel thickness. Speed nut assures permanent shock and vibration-proof attachment.

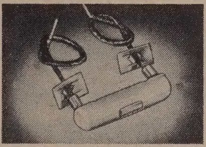
Draws less than 1/10 watt at 115 volts. Long life and high reliability provided over 75-150 volt range; can be used at higher voltage with decreased life.

1 15/16″ long overall, lens extends 17/32″ in front of panel. Black plastic (105°C) leads are 4½″ long, stripped and tinned ½″.

Four standard models available. Furnished complete with lamp and speed nut, OMNI-GLOW is UL and CSA approved.

Catalog Number	Description	List Price
1010A1	OMNI-GLOW Pilot Light (red lens)	$.90
1010A2	OMNI-GLOW Pilot Light (clear lens)	.90
1010A3	OMNI-GLOW Pilot Light (amber lens)	.90
1010A4	OMNI-GLOW Pilot Light (white lens)	.90

TINY-GLOW PILOT LIGHT

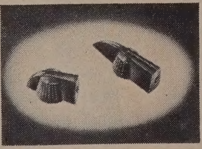


Midget size. For instrument panels, switchboards, electrical and electronic apparatus. Neon lamp draws less than 1 milliampere at 110 volts. Over 25,000 hours of actual service, operates over range of 75 to 250 volts A.C. or D.C.

Shock and vibration proof — all connections are soldered. Requires less back-of-panel space than any other pilot light. Polished chrome plated housing, ⅜″ brass mounting studs. Mounts with speed nuts (furnished) on two 13/64″ holes, 1⅜″ apart. Dimensions: 1 11/16″ x 7/16″ x ⅜″.

Catalog Number	Description	List Price
300	TINY-GLOW Pilot Light	$1.25

NYLON CONTROL KNOBS



Molded nylon pointer knobs. Nylon toughness eliminates metal bushings; nylon resilience provides positive, vibration-proof, high-torque lock against the shaft.

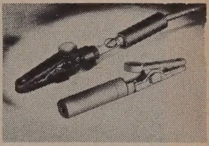
Nylon knobs are practically unbreakable, can't fade or chip, have high insulation resistance, are virtually immune to acid and solvents.

Knobs fit a ¼″ shaft. They are available in red or black, complete with set-screw.

Catalog Number	Description	List Price
1431-1	Nylon pointer knob, 1¼″ x 19/32″ x ¾″, black	$.25
1431-2	Same in red	.25
1432-1	Nylon pointer knob, 2″ x ⅝″ x ¾″, black	.30
1432-2	Same in red	.30

SAFE-T-KLIP

(U. S. Patent 2,754,490)



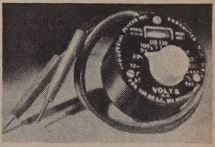
New convenience and safety through use of 100% insulated test clips. Nylon insulation covers entire clip, including nose, without bulky rubber boots or insulating tape. Danger of short circuit from clips touching each other or other components is eliminated. Test leads may be changed from one connection to another without cutting off power.

Tough nylon insulation can't loosen or come off, provides positive permanent protection in excess of 600 volts. Available in pairs (one red, one black) SAFE-T-KLIP incorporates a cadmium plated steel alligator clip ⅜″ wide, ⅝″ high.

Catalog Number	Description	List Price
1410A	SAFE-T-KLIP for use with lead wire provides screw terminal or solder. Assembled length 2 13/16″.	$1.75 pr.
	Color—black (Model No. 1410-A1)	.90 ea.
	Color—red (Model No. 1410-A2)	.90 ea.
1410B	SAFE-T-KLIP for use with standard .080″ test prod. Assembled length 2 11/32″.	1.75 pr.
	Color—black (Model No. 1410-B1)	.90 ea.
	Color—red (Model No. 1410-B2)	.90 ea.
1410C	SAFE-T-KLIP for use with banana plug. Assembled length 2 1/16″.	1.75 pr.
	Color—black (Model No. 1410-C1)	.90 ea.
	Color—red (Model No. 1410-C2)	.90 ea.

MINI-VOLT VOLTMETER

(U.S. Patent 2,644,134)



MINI-VOLT is an "abuse-proof" voltmeter, sufficiently accurate to indicate a 2 or 3 volt drop on 110 volt line. Virtually burn-out proof, this rugged unit is used by electricians, radio and TV repairmen, appliance servicemen, lab technicians, handymen.

Used to identify AC or DC lines, check rectifiers, filter capacitor, chokes; tests for blown fuses, grounded components, DC polarity; measures voltage drops with load, and 1001 other uses.

For use on AC (any frequency) or DC, MINI-VOLT, with an impedance of approximately ½-megohm, draws negligible current—ideal for electronic apparatus.

Glow lamp guaranteed for 25,000 hours operation. Furnished complete with extra heavy insulated 12-inch flexible test leads and test prods.

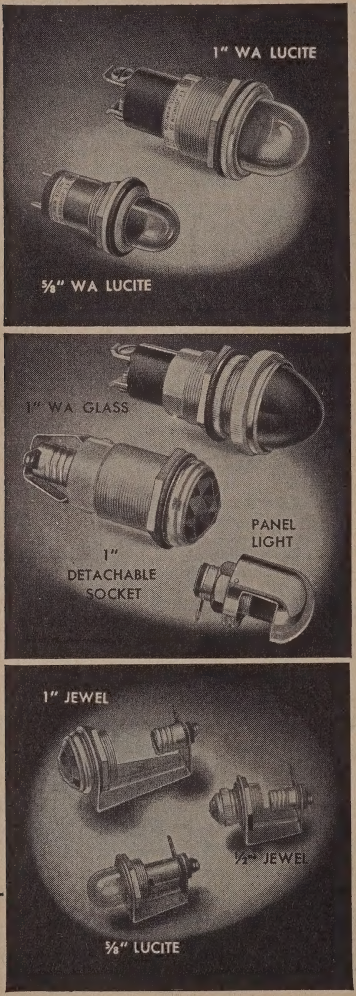
Lightweight, thoroughly insulated, and so rugged that instrument can be thrown into tool box or dropped to floor without damage. C.S.A. approval #8910.

Catalog Number	Description	List Price
400B	Range 65 to 660 volts	$3.75
401CC	Carrying Case	2.25

INDUSTRIAL DEVICES, INC. • EDGEWATER 7, NEW JERSEY

E. F. Johnson Company

WASECA, MINNESOTA


1" WA LUCITE
⅝" WA LUCITE
1" WA GLASS
PANEL LIGHT
1" DETACHABLE SOCKET
1" JEWEL
½" JEWEL
⅝" LUCITE

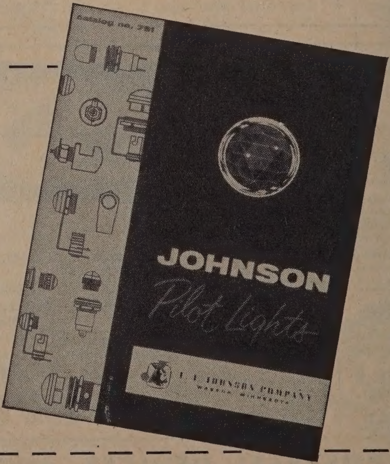
Quick and Easy... Pilot Light Selection!

Now you can save valuable replacement or specification time with Johnson Panel Indicators. Available in a wide variety of types, Johnson "preferred" units are immediately available at parts distributors throughout the country. Careful standardization, with an eye to replacement as well as interchangeability, makes Johnson Pilot Lights the first choice of leading manufacturers.

Available types include: continuous indication neon types; models for high and low voltage incandescent bulbs; standard or wide angle glass and lucite jewels in clear, red, green, amber, blue or opal. Specials, including those meeting military specifications are also available in production quantities. For full information, write today!

NEW PILOT LIGHT CATALOG!

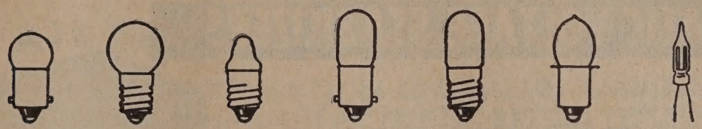
Write for your copy today. Complete specifications, prices and technical data . . . everything you need to pick a unit for original equipment manufacture or "in the field" replacement.


JOHNSON
Pilot Lights
E. F. JOHNSON COMPANY
WASECA, MINNESOTA

(See pages 646-667 for complete listing)

HUDSON Miniature Lamp Bulbs

for RADIOS - FLASHLIGHTS - COIN MACHINES - TOYS - APPLIANCES



LAMPS for RADIO PANEL, COIN MACHINE and OTHER SERVICE

LAMP NUMBER	RETAIL PRICE INCL. TAX	BULB	BASE	DESIGN VOLTS	AMPS (CP)
39	$0.30	T-3¼	Min. Bay.	6.3	.37
40	.15	T-3¼	Min. Sc.	6.3	.15
41	.15	T-3¼	Min. Sc.	2.5	.50
42	.20	T-3¼	Min. Sc.	3.2	.35
43	.15	T-3¼	Min. Bay.	2.5	.50
44	.15	T-3¼	Min. Bay.	6.3	.25
45	.15	T-3¼	Min. Bay.	3.2	.35
46	.15	T-3¼	Min. Sc.	6.3	.25
47	.15	T-3¼	Min. Bay.	6.3	.15
48	.15	T-3¼	Min. Sc.	2.0	.06
49	.15	T-3¼	Min. Bay.	2.0	.06
50	.15	G-3½	Min. Sc.	7.5	1 cp
51	.15	G-3½	Min. Bay.	14.4	1 cp
52	.20	G-3½	Min. Sc.	14.4	1 cp
53	.15	G-3½	Min. Bay.	14.4	1 cp
55	.15	G-4½	Min. Bay.	7.0	2 cp
57	.15	G-4½	Min. Bay.	14.0	2 cp
57X	.20	G-4½	Min. Bay.	14.0	2 cp
63	.20	G-6	S.C. Bay.	7.0	3 cp
81	.25	G-6	S.C. Bay.	6.5	6 cp
313	.35	T-3¼	Min. Bay.	28.0	.17
1458	.20	G-5	Min. Bay.	20.0	.25
1490	.17	T-3¼	Min. Bay.	3.2	.16
1816	.30	T-3¼	Min. Bay.	13.0	.33
1891	.17	T-3¼	Min. Bay.	14.0	.25

LAMPS for FLASHLIGHT, BICYCLE and OTHER SERVICE

LAMP NO.	RET. PRICE INCL. TAX	BULB	BASE	DESIGN VOLTS	AMPS	BATTERY
PR2	$0.20	B-3½	Min. Fig.	2.38	.50	2 D Cells
PR3	.20	B-3½	Min. Fig.	3.57	.50	3 D Cells
PR4	.20	B-3½	Min. Fig.	2.33	.27	2 C Cells
PR6	.20	B-3½	Min. Fig.	2.47	.30	2 D Cells
PR7	.20	B-3½	Min. Fig.	3.70	.30	3 D Cells
PR12	.20	B-3½	Min. Flgd.	5.95	.50	3 D Cells
13	.17	G-3½	Min. Sc.	3.70	.30	3 D Cells
14	.17	G-3½	Min. Sc.	2.47	.30	2 D Cells
27	.17	G-4½	Min. Sc.	4.9	.30	4 F Cells
31	.20	G-4½	Min. Sc.	6.15	.30	5 D Cells
112	.17	TL-3	Min. Sc.	1.20	.22	1 AA Cell
123	.17	G-3½	Min. Sc.	1.25	.30	1 C or D Cell
131	.17	G-3½	Min. Sc.	1.30	.10	1 D Cell
222	.17	TL-3	Min. Sc.	2.25	.25	2 AA Cells
233	.17	G-3½	Min. Sc.	2.33	.27	2 C Cells
502	.17	G-4½	Min. Sc.	5.10	.15	4 F Cells
605	.17	G-4½	Min. Sc.	6.15	.50	5 D Cells

NEON GLOW LAMPS

LAMP NO.	RET. PRICE INCL. TAX	BULB	BASE	CIRCUIT VOLTS	EXTERNAL RESISTANCE	WATTS NOMINAL
NE-2	$0.12	T-2	Unbased (Wire Term.)	105-115	200,000 Ohms	1/25
NE-2H	.12	T-2	Unbased (Wire Term.)	105-115	25,000 Ohms	1/25
NE-17	.90	T-4½	D.C. Bay.	105-115	30,000 Ohms	1/4
NE-32	1.20	G 10	D.C. Bay.	105-115	7,500 Ohms	1
NE-45	.85	T-4½	Cand. Sc.	105-115	None	1/4
NE-47	.85	T-4½	S.C. Bay.	105-115	30,000 Ohms	1/4
NE-48	.70	T-4½	D.C. Bay.	105-115	30,000 Ohms	1/4
NE-51	.23	T-3¼	Min. Bay.	105-115	200,000 Ohms	1/25
NE-51H	.23	T-3¼	Min. Bay.	105-115	25,000 Ohms	1/25
NE-57	.99	T-4½	Cand. Sc.	105-115	None	1/4
NE-58	.95	T-4½	Cand. Sc.	210-230	None	1/2

LAMPS for TOY TRAIN SERVICE

LAMP NUMBER	RETAIL PRICE INCL. TAX	BULB	BASE	DESIGN VOLTS	AMPS
1445	$0.20	G-3½	Min. Bay.	18.0	.15
1447	.20	G-3½	Min. Sc.	18.0	.15
1449	.15	G-3½	Min. Sc.	14.0	.20
1458	.20	G-5	Min. Bay.	20.0	.25
1490	.17	T-3¼	Min. Bay.	3.2	.16
1813	.25	T-3¼	Min. Bay.	14.4	.10
1815	.20	T-3¼	Min. Bay.	14.4	.20
1816	.30	T-3¼	Min. Bay.	13.0	.33
1847	.20	T-3¼	Min. Bay.	6.3	.15
1891	.17	T-3¼	Min. Bay.	14.0	.25
1892	.20	T-3¼	Min. Bay.	14.4	.12

APPLIANCE LAMPS

LAMP NUMBER	RETAIL PRICE INCL. TAX*	BULB	WATTS	BASE	VOLTAGE	RATED LIFE
6S6	.22	S6 Type	6	Candelabra Screw	120	1500 hrs
7C7	.22	C7 White or Clear	7	Candelabra Screw	115-125	3000
7C7W	.22	C7 Frosted	7	Candelabra Screw	115-125	3000

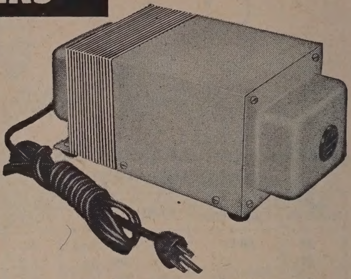
Manufactured by **HUDSON LAMP CO., Kearney, New Jersey**

SOLD THROUGH **OXFORD Components,** CHICAGO, ILL.

Division of **OXFORD ELECTRIC CORP.**

DEPENDABLE PERFORMANCE WITH ACME ELECTRIC

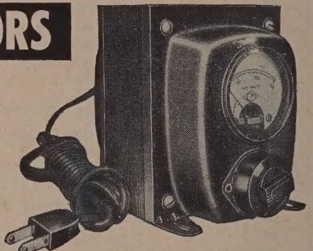
AUTOMATIC VOLTAGE STABILIZERS



This automatic voltage stabilizer has been specifically engineered to provide the necessary stabilization for television receivers up to 24". It is provided with a primary cord and plug for connection to any convenient 115/120 volt, 60 cycle circuit. A built-in receptacle accommodates connection for the TV set. This unit functions only when TV set is turned on. When set is not in use, a built-in relay disconnects primary circuit thus stopping coil magnetism. Operation is noiseless and completely automatic. Voltage fluctuation from 95 to 130 volts is automatically adjusted to stabilized 118 volts ±2% within 1/30th second.

Output capacity 200 VA
Length 11½"; width 5⅜"; height 5¼"
Weight 22 lbs

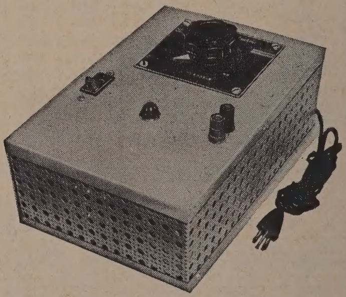
MANUAL TYPE VOLTAGE ADJUSTORS



The type 8394 M voltage adjustor is ideal for applications where a below normal or above normal voltage exists for relatively long periods of time each day Essentially this is a tapped winding transformer with four below normal voltage contacts and two above normal voltage contacts, to provide voltage correction over a range from 95 to 125 volts. Unit is furnished complete with cord and plug for connection to available circuit, built-in secondary receptacle and includes voltmeter and regulating switch.

Capacity 300 VA
Height 4¾"; width 4"; depth 5"
Weight 5 lbs.

D.C. POWER SUPPLY

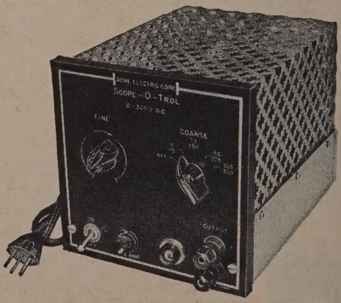


The type PS 6757 is a compact portable instrument that supplies a stabilized direct current, adjustable from 0/45 volts. It is ideal for use in transistor testing, circuit testing, to provide regulated voltage for light testing. Used in place of battery stacks, it provides a dependable direct current source of supply.

Supplied with grounded cord and plug set to connect to any convenient 60 cycle, 95/130 volt circuit. Filtered direct current output range from 0 to 45 volts, 0/2.5 amperes is continuously adjustable and stabilized ±1% at any setting regardless of alternating current fluctuation. Voltage regulation 5% between full load and no-load at full voltage setting.

Portable Model PS 6757
11½" x 7¾" x 4". Weight 23 lbs.
Rack Model PS 1-6757
19" x 5¼" x 7½". Weight 21 lbs.

SCOPE-O-TROL



This is a DC voltage reference supply particularly useful in oscilloscope analysis. It provides an opposing potential which cancels out the direct current increment of a circuit being checked, so that both DC and AC steady state voltages may be observed on the scope in their true form.

This instrument completely eliminates the common method of stacking batteries in various combinations thus completely avoiding the spurious response and great variations frequently resulting from instability of battery output.

Supplied with primary grounded cord and plug for connection to any 115 volt 60 cycle AC circuit. Regulated output range from 0 to 300 volts DC is stabilized at any desired setting. Coarse adjustment is in 75 volt steps. Fine adjustment potentiometer .25/degree. Ripple is less than 1 millivolt RMS. Current limiting and short circuit protection are inherent features.

Scope-O-Trol type PS-31510

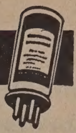
Input 115 volts, 60 cycle. Output 0-300 volts DC

Size: 6" x 6¼" x 9"; weight 7 lbs.

Acme ACME Electric

ACME ELECTRIC CORPORATION
MAIN OFFICE and PLANTS: CUBA, N.Y.
In Canada: Acme Electric Corp. Ltd., 50 Northline Rd., Toronto, Ontario

INSIST on ATR VIBRATORS-*Get the Best!!*



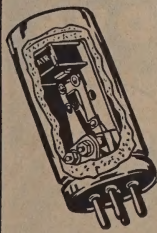
ATR Replacement Vibrator Specifications

FOR COMPLETE INFORMATION ON AUTO RADIO VIBRATORS FOR AUTOMOBILES MANUFACTURED PRIOR TO AND IN 1954 SEE ATR VIBRATOR MANUAL NO. 554. THIS MANUAL ALSO CONTAINS INFORMATION ON HOUSEHOLD, 2-WAY COMMUNICATION SETS AND:

- VIBRATOR LISTINGS BY RECEIVER NAME AND MODEL NUMBER.
- BUFFER REFERENCE CIRCUITS.
- SUBSTITUTION CHART ON DISCONTINUED VIBRATORS.
- VIBRATOR SPECIFICATIONS.
- VIBRATOR EQUIVALENT CHARTS.
- CROSS REFERENCE LISTINGS.
- AUTO BATTERY GROUND CHARTS.
- INSTALLATION NOTES.
- SERVICING PROCEDURE FOR AUTO RADIO VIBRATORS.

FOR ALL AUTO RADIO SETS SINCE 1954 USE ONE OF THE ATR VIBRATORS LISTED BELOW

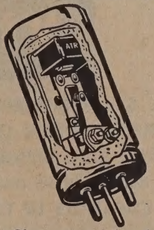
No. 340 (Boxed)
No. 1400 (Bulk)



4-Prong
6-Volt

For all 6-Volt Sets Since 1954

No. 1343 (Boxed)
No. 1843 (Bulk)

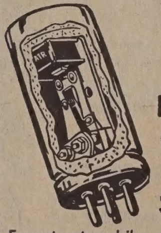


3-Prong
12-Volt

FOR ALL 12-VOLT GENERAL MOTORS SINCE 1954

Plus automobiles shown in box below.

No. 1340 (Boxed)
No. 1840 (Bulk)



4-Prong
12-Volt

For 12 Volt Cars other Than GM Since 1954

Except automobiles shown in box below.

ATR Type 1343 and 1843 also used in following automobiles: 1956 Ford (Philco), Lincoln (Bendix), and Mercury (Bendix); 1956 Chrysler (Philco); 1955-57 Packard; 1956-57 Plymouth (Philco); 1956 Studebaker (Philco) and 1957 Mercury (Philco).

EVERYBODY AGREES ATR AUTO-RADIO VIBRATORS *are TOPS*

Here's why-

ATR Vibrators, the heart of vibrator-operated power supplies, are proven units of the highest quality engineered to perfection. They are backed by more than twenty-six years of vibrator design and research, development and manufacturing — ATR pioneered in the vibrator field.

All ATR Products incorporate only the best materials and workmanship and are carefully manufactured under rigid engineering inspections and tests making them the finest that can be built.

...ATR Vibrators Feature

- ✓ **Ceramic Stack Spacers** with Two-Bolt Stack Construction — for adjustment permanency under any operating condition.
- ✓ **Instant Starting** — as a result of highly efficient magnetic circuit with formed base for more uniform operation on both high and low voltages.
- ✓ **Large Oversize Tungsten Contacts** having Full Wiping Action — for greater reliability and longer life.
- ✓ **Perforated Reed** of Highest Quality Swedish Spring Steel — for uniform flexibility and prevention of reed breakage.
- ✓ **Highest Precision Construction and Workmanship** — Practically all parts used are held to within a tolerance of 0.0005 of inch.
- ✓ **Value Plus** — as readily evidenced by the Larger Contacts, Ceramic Spacers and Precision Construction and Workmanship.

Communication Vibrators for SUPER SERVICE

As introduced in the 1954 May-June issues of many leading radio magazines, ATR COMMUNICATION VIBRATORS are truly THE WORLD'S FINEST. See reprint of ad on this page for feature specifications.

ATR COMMUNICATION VIBRATORS eliminate the problem of short-life call-backs on those tough two-way communication rigs. Yes, Sir! these ATR COMMUNICATION VIBRATORS deliver SUPER SERVICE.

ATR VIBRATORS FEATURE:

CERAMIC STACK SPACERS with Two-Bolt Stack Construction — for adjustment permanency under any operating condition.

INSTANT STARTING — as a result of highly efficient magnetic circuit with formed base for more uniform operation on both high and low voltages.

LARGE OVERSIZED TUNGSTEN CONTACTS having Full Wiping Action—for greater reliability and longer life.

PERFORATED REED of Highest Quality Swedish Spring Steel—for uniform flexibility and prevention of reed breakage.

HIGHEST PRECISION CONSTRUCTION AND WORKMANSHIP — Practically all parts used are held to within a tolerance of 0.0005 of an inch.

VALUE PLUS — as readily evidenced by the Larger Contacts, Ceramic Spacers and Precision Construction and Workmanship.

ATR INTRODUCES

ATR
ATR VIBRATOR
348
35404
For use only on approved 6 volt D.C. Circuits
PATENTS PENDING
ATR MFG CO., INC.
ST. PAUL, MINNESOTA
MADE IN U.S.A.

The World's Finest Communication VIBRATORS

featuring:

- CERAMIC STACK SPACERS
- ¼" DIAMETER POWER CONTACTS
- DRIVER-TYPE COIL CONSTRUCTION
- SPECIAL REED HINGE and WIRING
- POWER CAPABILITY UP TO 15 AMPERES

POLICE
POLICE
TAXI
FIRE
COMMERCIAL

A COMPLETE LINE OF REPLACEMENT

ATR VIBRATORS

FOR AUTOMOTIVE, HOUSEHOLD and TWO-WAY COMMUNICATION SETS

ATR VIBRATORS are proven units of the highest quality, engineered to perfection. They are backed by more than 26 years of vibrator design and research, development and manufacturing.
ATR pioneered in the vibrator field.

ATR
VIBRATOR MANUAL

FREE - ATR VIBRATOR MASTER MANUAL

ATR

"A" BATTERY ELIMINATORS

. . . FOR DEMONSTRATING AND TESTING AUTO RADIOS

6 VOLT OR 12 VOLT!

TRANSISTOR or VIBRATOR OPERATED!

LOW RIPPLE!!

Specially Designed for Testing and Operating Auto Radios and D.C. Electrical Apparatus on Regular A.C. Lines, 105-125 Volts, 50-60 Cycles.

SUGGESTED USES:

As a power supply for radio sets, aircraft instruments, relays, motors and other electrical and electronic equipments. In the laboratory, for supplying various low D.C. voltages.

Battery Eliminators may be treated as batteries in the sense that they can be connected in series for higher voltages at the same current output per unit or in parallel for the same output voltage per unit at higher currents.

- ✓ **Eliminates Storage Batteries and Battery Chargers.**
- ✓ **Operates the Equipment at Maximum Efficiency at All Times.**
- ✓ **Delivers Filtered Direct Current at the Correct Voltage for Proper Operation.**
- ✓ **Minimum Ripple**
- ✓ **Fully Automatic and Fool-Proof**
- ✓ **Adjustable Voltage Control**

V
6V
12V
ATR RECTIFIED POWER SUPPLY
FUSE

Featured cut illustrates Heavy Duty "A" Battery Eliminator, Model 620C-ELIT; equipped with Voltmeter, Ammeter and Voltage Control.

Illustrates Standard "A" Battery Eliminator, Model 610C-ELIF; equipped with Voltmeter, Ammeter and Voltage Control.

Equipped with Full-Wave Dry Disc Selenium Rectifier, Assuring Noiseless, Interference-Free Operation and Extreme Long Life and Reliability.

TYPE 610C-ELIF—Rated output 6 volts at 10 amperes continuous or 12 volts at 6 amperes continuous. Size 6½" x 9⅛" x 8½". Shipping weight, 22 lbs. Code word "SELIT." USER NET PRICE $49.95

TYPE 620C-ELIT—Rated output 6 volts at 20 amperes continuous or 12 volts at 10 amperes continuous. Uses dual rectifiers. Sizes 6½" x 12⅞" x 8½". Shipping weight, 33 lbs. Code word "HELIT." USER NET PRICE $66.95

Either 6 or 12 volt output obtainable by means of simple output toggle switching arrangement having locking device to prevent accidental switching.

All ATR Eliminators have as standard equipment: On-Off Switch, 8-Position Voltage Control, Meter(s), Fuse Protection, Rubber Mounting Feet, 6-ft. All-Rubber Cord Set and Cabinet of heavy gauge metal having attractive grey-hammerloid finish.

JOBBERS ATTENTION: ***See Pages 983 and 984 in this ATR Section for your Catalog Needs!***

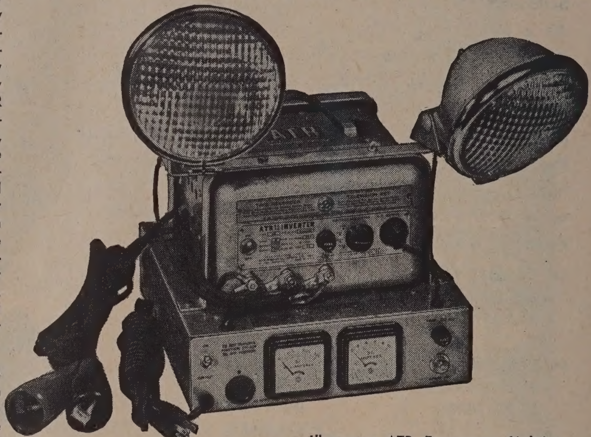
ATR EMERGENCY LIGHTING AND POWER UNITS

Completely Automatic Standby-Power Units Specially Designed to Permit the Instantaneous Continued Operation of Critical Lighting Equipment, PA Systems, Amplifiers, Intercom Systems, Burglar Alarms, Fire Alarms, Synchronous Electric Clocks, Electric Time and Recording Clocks, Incubators, Gas Valves, Telephone and Test Equipment, and Similar Critical Devices in the Event of 115 Volt AC Commercial Power Line Failure. For Use: In Hospitals, Banks, Hotels, Theatres, Factories, Office Buildings, Schools, Homes, and Many Other Areas of Operation.

ATR Emergency Lighting and Power Units are actually a combination of an ATR Inverter, automatic Battery Charger, and transfer panel. These Emergency Standby-Power Units are especially recommended for applications as mentioned above and feature RF frequency interference suppression, instant starting, frequency stability, and built-in power factor corrector. ATR Emergency Lighting and Power Units provide instantaneous operation of the equipment being protected, within approximately 1/20th of a second. They are designed for quiet long life operation at high efficiency and maximum reliability. All models indicated are equipped with ATR heavy duty plug-in type Inverter Vibrators. These Inverters also come equipped with four-point voltage regulators which make possible the correct output voltage for the power load being protected. These Inverters are recommended for use only with loads having power factors in excess of 70%. Additional external power factor correction is required in order to operate lower power factor loads as low as 50%.

The ATR Charger portion is completely automatic and will maintain the storage battery at full charge, with minimum gassing, from regular 115-volt AC 60 cycle power line. In the event of power line failure, the storage battery, which has been kept fully charged for this purpose from the regular power line, is connected automatically to the lamps, or to the Inverter, or both. The Inverter then supplies power automatically to the load being protected. When the commercial power is restored, the transfer unit automatically switches the "protected load" to commercial power and turns the Inverter and lights off. At this point, depending on the state of charge of the battery, the battery charger will deliver approximately 6-3 amperes to a 6-volt battery (or less to a 12-volt battery) for fast recharging. As soon as battery reaches full charge, the charger will automatically switch to a trickle charge of 100-150 milliamperes (adjustable) to maintain this full charge.

SERIES ETA



Illustrates ATR Emergency Lighting and Power Unit, Model ETS complete with lamps.

TYPE	*STORAGE BATTERY INPUT	A.C. OUTPUT 60 CYCLES	OUTPUT WATTAGE		DEALER NET PRICE COMPLETE WITH LAMPS
			INT.	CONT.	
661-ETM	6-volts	110-volts	80	60	$102.67
662-ETS	6	110	100	80	119.67
663-ETH	6	110	150	125	136.00
1232-ETS	12	110	125	100	119.67
1233-ETH	12	110	175	150	136.00
1234-ETJ	12	110	250	200	153.00

Above models come equipped with lamps, as illustrated. These lamps operate directly from storage battery. Each ATR model above permits maximum flexibility in its utilization; that is, lamps and power unit may be operated all at the same time or individually as the user may select. Models as above are available without lamps and, if so desired, please specify "less lamps."

All models designated above are housed in attractively finished grey-hammerloid metal cabinets. Dimensions of ETM Model complete with lamps, 11⅝" x 16" x 15"; shipping weight, 29½ lbs. Dimensions of ETS Model complete with lamps. 11⅝" x 16" x 16¼"; shipping weight, 36½ lbs. Dimensions of ETH Model complete with lamps, 11⅝" x 16" x 18"; shipping weight, 42½ lbs. Dimensions of ETJ Model complete with lamps, 12⅞" x 16" x 19¾"; shipping weight; 50½ lbs. All of the above models "less lamps" have similar dimensions except the 16" dimension is changed to 11" and the shipping weight is 4½ lbs. less.

* Recommend 100 ampere-hour lead-acid type automobile storage battery for general use; however, for minimum maintenance, we recommend 50-100 ampere-hour nickel-cadmium type battery. Both types are available direct from storage battery supplier.

ATR UNIVERSAL INVERTERS

Specially Designed for Operating Standard A.C. Tape Recorder, Television Set, Dictating Machine, Radio Set, Ham Gear, Public Address System, Amplifier, Record Player, Electric Razor, Food Mixer, Vacuum Cleaner, Sewing Machine, Business Machine, Electric Drill, Fluorescent and Incandescent Lamp, and Electronic Test Equipment from D.C. Voltages in Automobiles, Buses, Trucks, Boats, Trains, Planes, and D.C. Districts. Ideal for Emergency Lighting Applications for Civil Defense, Red Cross, Rescue Work, etc., Simply Using Extension Cords.

ATR Universal Inverters are actually a combination of 4 Inverter designs in one unit! These Inverters are especially recommended for applications as mentioned above and feature complete RF frequency interference suppression, instant starting, frequency stability, and built-in power factor corrector utilizing a simple toggle switch. With ATR Inverters, the need for special equipment is eliminated. They are designed for quiet, long-life operation at high efficiency and maximum reliability. All models indicated are equipped with ATR heavy duty plug-in Inverter Vibrators. These Inverters also come equipped with four-point voltage regulator which make possible the correct output voltage for minimum to maximum loads and also help compensate for input voltages which are lower or higher than normal. The operating efficiency is in excess of 75%. To figure approximate current consumption from storage battery, divide the rated input wattage of the recorder (or load) being operated by the storage battery voltage and further divide this answer by .75 which will give the actual current consumption based on the actual load and efficiency. The battery current consumption required for a tape recorder is normally less than that drawn by ordinary automobile headlight(s). These Universal Inverters are recommended only for use with loads having power factors in excess of 70%.

ATR
ATR INVERTER

Featured cut above illustrates Model 12U-RHG.

ATR Inverters should be used only for the applications as outlined.

"—P" models equipped with cigarette lighter cord set to plug into dash receptacle.

All ATR Universal Inverters are housed in attractively finished grey-hammerloid metal cabinets.

Dimensions of Standard (RSF) Model Universal Inverters, 8½" x 9⅞" x 5¼"; shipping weight 22 lbs.

Dimensions of Heavy Duty (RHG) Model Universal Inverters, 6⅞" x 11¼" x 8½"; shipping weight 27 lbs.

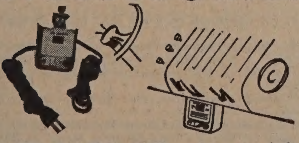
Dimensions of Super Heavy Duty (HSJ) Model Universal Inverters 6½" x 12⅞" x 8½"; shipping weight 37 lbs.

For correct replacement Vibrator, consult Inverter Vibrator Guide.

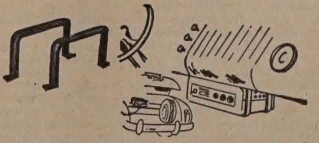
Type	Input D.C. Volts	A.C. Output 60 Cycles	Output Watt. Int.	Output Watt. Cont.	Shipping Weight	Dealer Price
6U-RSF	6	110 Volts	100	80	22 lbs.	$ 50.00
6U-RSF-P	6	110	100	80	22	50.00
6U-RHG	6	110	150	125	27	66.34
6U-HSJ	6	110	175	150	37	83.34
12U-RSF	12	110	125	100	22	50.00
12U-RSF-P	12	110	125	100	22	50.00
12U-RHG	12	110	175	150	27	66.34
12U-HSJ	12	110	250	200	37	83.34
*28U-RSF	28	110	125	100	22	59 97
*28U-RHG	28	110	175	150	27	79.67
*28U-HSJ	28	110	250	200	37	96.67
32U-RSF	32	110	150	100	22	59.97
32U-RHG	32	110	200	180	30	70.50
32U-HSJ	32	110	325	225	37	96.67
50U-RSF	50	110	150	100	22	59.97
50U-RHG	50	110	225	200	27	79.67
110U-RSF	110	110	250	150	22	50 00
110AU-RHG	110	110	325	250	27	59.97
110BU-RHG	110	110	450	350	30	70.50
110U-HSJ	110	110	600	400	37	96.67
220U-RSF	220	110	250	150	22	53.00
220U-RHG	220	110	325	250	27	66.34
220U-HSJ	220	110	500	300	37	103.34

* Recommended for 24 volt battery systems.

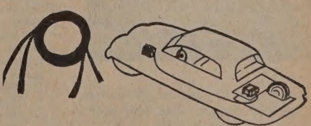
ACCESSORIES for 6, 12, and 28 Volt D.C. Input Inverters.



REMOTE CONTROL UNIT — for under-dash mounting permitting installation of Inverter in auto-trunk compartment. Dealer Price $5.97



MOUNTING BRACKETS — to securely mount Inverter in trunk compartment of car or under-dash, as illustrated. Dealer Price $3.30 pr.



EXTENSION CABLES — to provide additional cable lengths for installation of Inverter in trunk compartment. Dealer Price $6.63 pr.

JOBBERS ATTENTION: ***See Pages 983 and 984 in this ATR Section for your Catalog Needs!***

PORTABLE – Plug-in Type INVERTERS

Specially Designed for Operating Standard A.C. Dictating Machines, Record Players, Incandescent Lamps, Electric Razors, Electronic Test Equipment, and Other Small Electrical and Electronic Devices from D.C. Voltages in Automobiles, Buses, Trucks, Boats, Planes, Trains, and D.C. Districts.

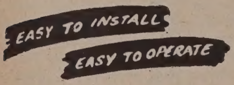
ATR Portable Inverters are light-weight plug-in units for applications as recommended above. These Inverters feature instant starting, frequency stability, and high efficiency and reliability. Inverters have partial RF filtering which is only suitable for small insensitive type radios. For sensitive radio sets, ATR Universal Inverters, catalog sheet 657U, must be used. The 6 and 12-volt units are equipped with cigarette lighter cord set to plug into dash receptacle; whereas, the other higher input voltage units are equipped with standard two-blade plug-in cord sets. With ATR Inverters the need for special equipment is eliminated. They are designed for quiet, long-life operation. All ATR Models indicated are equipped with ATR plug-in Inverter Vibrators. Models RME and RMF come equipped with a four-point voltage regulator which makes possible the correct output voltage for minimum to maximum loads. The battery current consumption required is normally less than that drawn by one ordinary automobile headlight. The operating efficiency is approximately 75%. To figure battery current consumption see catalog sheet 657U. These Inverters are recommended only for use with loads having power factors in excess of 80% and should be used only for the applications as outlined above and on the reverse side of this sheet. **These Portable Inverters are not recommended for tape recorder operation, except as specified in (2) below.**

ATR
ATR
VIBRATOR POWER SUPPLY
ATR MANUFACTURING CO. INC.

Illustrates ATR Mighty Midget (DME) Model Inverter having Cigarette Lighter Plug Attachment.

ATR
ATR INVERTER
FUSE
VOLTAGE REGULATOR

Illustrates ATR Medium (RME and RMF) Model Inverter having Four-Point Voltage Regulator and Cigarette Lighter Plug Attachment.



Illustrates Under-Dash Mounting for ATR Models RME and RMF. See Page 942 for available accessories.

Ideal for Emergency Lighting Applications for Civil Defense, Red Cross, Rescue Work, etc., Simply Using Extension Cords.

TYPE	INPUT D.C. VOLTS	A.C. OUTPUT 60 CYCLES	OUTPUT WATTAGE Int.	OUTPUT WATTAGE Cont.	SHIPPING WEIGHT	DEALER PRICE
6-DME (1)	6	110 Volts	40	30	5 lbs.	$16.63
6C-DME (1)	6/12	110	40	30	5	19.30
6-RMF (2)	6	110	80	60	12	33.00
6C-RMF (2)	6/12	110	80	60	12	36.64
12-DME (1)	12	110	50	40	5	16.63
12T-RME (2) (3)	12	110	125	90	12	33.00
*28-RME (2)	28	110	100	80	12	46.34
32-RME (2)	32	110	100	80	12	46.34
110-RME (2)	110	110	150	100	12	39.67

* Recommended for 24-Volt Battery Systems.

For Inverters having larger or smaller output capacities, or for operation on other D.C. input voltages, please consult available ATR Inverter catalog sheets.

All models designated above are housed in attractively finished grey-hammerloid metal cabinets. Dimensions of Medium (RME and RMF) Model Inverters, 8⅜" x 8" x 3¾"; shipping weight, 12 lbs. Dimensions of Mighty Midget (DME) Model Inverters, 5¼" x 4¾" x 2¾"; shipping weight, 5 lbs. For correct replacement vibrator, consult Inverter Vibrator Guide.

(1) These Inverters primarily recommended for Edison VP dictating machines. May also be used with Model 200 Soundscriber (with engine of car not running).

(2) Primarily recommended for Dictaphone's Time Master, Gray Audograph and DeJur Stenorette dictating machines, or other similar types. Also, highly recommended for Norelco Tape Recorder Model EL-3516 and Geloso Model G255-S.

(3) THIS INVERTER SPECIALLY DESIGNED AND RECOMMENDED ALSO FOR USE WITH RCA 8½" PORTABLE TV SET OR G.E. 9" PORTABLE TV SET IN AN AUTOMOBILE.

JOBBERS ATTENTION: ***See Pages 983 and 984 in this ATR Section for your Catalog Needs!***

ATR PRODUCTS

AMERICAN TELEVISION & RADIO Co.

Quality Products Since 1931

ALL ATR INVERTER PRODUCTS CHANGE D.C. STORAGE BATTERY CURRENT TO STANDARD 110 VOLT A.C. *Household* ELECTRICITY *Anywhere!*

UNIVERSAL ATR INVERTERS

IDEAL FOR PORTABLE TV AND TAPE RECORDERS!

Specially Designed for Operating A.C. Tape Recorder, Television Set, Dictating Machine, Radio Set, Ham Gear, Public Address System, Amplifier, Record Player, Electric Razor, Food Mixer, Vacuum Cleaner, Sewing Machine, Business Machine, Electric Drill, Fluorescent and Incandescent Lamp, and Electronic Test Equipment from D.C. Voltages in Automobiles, Buses, Trucks, Boats, Trains, Planes, and D.C. Districts. Ideal for Emergency Lighting Applications for Civil Defense, Red Cross, Rescue Work, etc., Simply Using Extension Cords.

Type	Input DC Volts	A.C. Output 60 Cycles	OUTPUT WATT. Int.	OUTPUT WATT. Cont.	Shipping Weight	Dealer Price
6U-RSF	6	110 Volts	100	80	22 lbs.	$ 50.00
6U-RSF-P	6	110	100	80	22	50.00
6U-RHG	6	110	150	125	27	66.34
6U-HSJ	6	110	175	150	37	83.34
12U-RSF	12	110	125	100	22	50.00
12U-RSF-P	12	110	125	100	22	50.00
12U-RHG	12	110	175	150	27	66.34
12U-HSJ	12	110	250	200	37	83.34
*28U-RSF	28	110	125	100	22	59.97
*28U-RHG	28	110	175	150	27	79.67
*28U-HSJ	28	110	250	200	37	96.67
32U-RSF	32	110	150	100	22	59.97
32U-RHG	32	110	200	180	30	70.50
32U-HSJ	32	110	325	225	37	96.67
50U-RSF	50	110	150	100	22	59.97
50U-RHG	50	110	225	200	27	79.67
110U-RSF	110	110	250	150	22	50.00
110AU-RHG	110	110	325	250	27	59.97
110BU-RHG	110	110	450	350	30	70.50
110U-HSJ	110	110	600	400	37	96.67
220U-RSF	220	110	250	150	22	53.00
220U-RHG	220	110	325	250	27	66.34
220U-HSJ	220	110	500	300	37	103.34

All ATR Inverters deliver 110 Volts A.C. 60 Cycles Current.

***Recommended for 24 Volt Battery System.**

ATR
SHAV-PAK

ATR SHAV-PAKS

EASY to OPERATE

Keep in Glove Compartment

PLUGS INTO CIGARETTE LIGHTER RECEPTACLE ON DASH

Specially Designed for Operating Standard A.C. Electric Shavers in Automobiles, Buses, Trucks, Boats, and Planes.

TYPE	INPUT D.C. VOLTS	OUTPUT WATTAGE	SHIPPING WEIGHT	DEALER PRICE
6-SPB	6	15	2½ lbs.	$7.97
12-SPB	12	15	2½	7.97

ATR SHAV-PAKS deliver 115 Volts A.C. 60 Cycles Current.

Features—

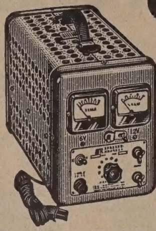
- Small Size
- Plug-in ATR Vibrator
- Fuse Protection
- Rubber Mounting Feet
- Steel Case
- Rugged Construction

"A" BATTERY ATR ELIMINATORS

FOR DEMONSTRATING AND TESTING AUTO RADIOS

6 Volt or 12 Volt

TRANSISTOR or VIBRATOR OPERATED!



Featured cut Illustrates Heavy Duty "A" Battery Eliminator, Model 620C-ELIT; equipped with Voltmeter, Ammeter and Voltage Control.

Specially Designed for Testing and Operating Auto Radios and D.C. Electrical Appliances on Regular A.C. Lines, 105-125 Volts, 50-60 Cycles.

SUGGESTED USES:

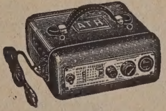
As a power supply for radio sets, aircraft instruments, relays, motors and other electrical and electronic equipments. In the laboratory, for supplying various low D.C. voltages.

Battery Eliminators may be treated as batteries in the sense that they can be connected in series for higher voltages at the same current output per unit or in parallel for the same output voltage per unit at higher currents.

TYPE 610C-ELIF—Rated output 6 volts at 10 amperes continuous or 12 volts at 6 amperes continuous. Size 6½" x 9⅛" x 8½". Shipping weight 22 lbs. Appearance similar to 620C-ELIT, above AS IS NET PRICE $49.95

TYPE 620C-ELIT—Rated output 6 volts at 20 amperes continuous or 12 volts at 10 amperes continuous. Uses dual rectifiers. Size 6½" x 12⅞" x 8½". Shipping weight 33 lbs. AS IS NET PRICE $66.95

Illustrates ATR Mighty Midget (DME) Model Inverter Having Cigarette Lighter Plug Attachment.



Illustrates ATR Medium (RME and RMF) Model Inverter Having Four-Point Voltage Regulator and Cigarette Lighter Plug Attachment.

ATR †DICTATING MACHINE INVERTERS

Specially Designed for Operating Standard A.C. Dictating Machines, Small Radios, Record Players, Mix-masters, Food Blenders, Electric Razors, Electronic Test Equipment, and Most Small Electrical and Electronic Devices from D.C. Voltages in Automobiles, Buses, Trucks, Boats, Planes, and Trains.

Type	Input D.C. Volts	A.C. Output 60 Cycles	OUTPUT WATT. Int.	OUTPUT WATT. Cont.	Shipping Weight	Dealer Price
6-DME (1)	6	110 Volts	40	30	5 lbs.	$16.63
6C-DME (1)	6/12	110	40	30	5	19.30
6-RMF (2)	6	110	80	60	12	33.00
6C-RMF (2)	6/12	110	80	60	12	36.64
12-DME (1)	12	110	50	40	5	16.63
12T-RME (2) (3)	12	110	125	90	12	33.00
*28-RME (2)	28	110	100	80	12	46.34
32-RME (2)	32	110	100	80	12	46.34
110-RME (2)	110	110	150	100	12	39.67

All ATR Inverters deliver 110 Volts A.C. 60 Cycles Current.

* Recommended for 24 volt battery systems.
Dimensions of Mighty Midget (DME) Model Inverters, 5¼"x4¾"x2¾".
Dimensions of Medium (RME) and (RMF) Model Inverters, 8⅜"x8"x3¾".

†DME AND RME MODELS NOT RECOMMENDED FOR TAPE RECORDERS.

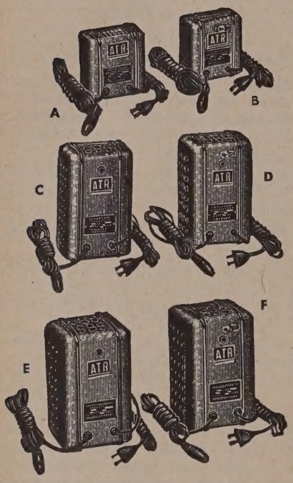
ATR PRODUCTS

AMERICAN TELEVISION & RADIO Co. *Quality Products Since 1931*

ALL ATR INVERTER PRODUCTS CHANGE D.C. STORAGE BATTERY CURRENT TO STANDARD 110 VOLT A.C. *Household* ELECTRICITY *Anywhere!*

AUTO Plug-In Type — Portable BATTERY CHARGERS

NO INSTALLATION — JUST PLUG INTO CIGARETTE LIGHTER RECEPTACLE



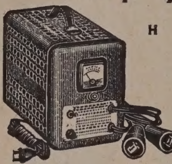
For keeping the storage battery fully charged right in the car, truck, boat, or plane! A storage battery necessity — needed more now than ever before — makes motor starting easy!

ATR Charger Model Number	As Illustrated Right	Nominal Battery DC Voltage	Maximum Charge Rate DC Amps.	Approx. Tapered Rate DC Amps.	Approx. Shipping Wt. in Pounds	Dealer Price
6CA4	A	6	4	2	5	$14.96
6CA6	C	6	6	3	7	20.21
6CA10	E	6	10	5	9	22.46
12CA4	A	12	3	1	5	16.46
12CA6	C	12	6	2	7	21.71
12CA10	E	12	10	4	9	24.71
612CA4	B	6 or 12	4	2	6	19.46
612CA6	D	6 or 12	6	3	8	22.46
612CA10	F	6 or 12	10	4	10	27.71
612CT20	G	6	20 (Hi)	9	18	43.13
			14 (Lo)	5		
		and 12	10 (Hi)	4		
			9 (Lo)	1		
612CT40	H	6	40 (Hi)	17	24	49.46
			27 (Lo)	10		
		and 12	20 (Hi)	6		
			15 (Lo)	1		

All Prices Subject to Change Without Notice.

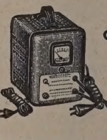
Clamp Type Portable BATTERY CHARGER

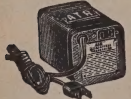
(as illustrated below)



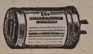
EASILY CONNECTED DIRECTLY TO STORAGE BATTERY TERMINALS BY MEANS OF LARGE BATTERY CLIPS.

Especially recommended for charging storage batteries in trucks, tractors, boats, and planes.





Illustrates ATR Electronic Tube Protector Model 300



Illustrates ATR Electronic Tube Protector Model 250

Electronic TUBE PROTECTOR

Specially designed to protect ALL Electronic Tubes in TV or Hi-Fi Sets, Amplifiers, and similar Electronic Equipment. Will double or triple tube life including picture tubes.

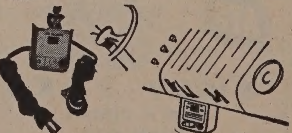
Type	INPUT A.C. Volts	A.C. OUTPUT Volts	A.C. OUTPUT Amps.	Shipping Weight	Dealer Price
250	115	115	1-3	1	$2.63
300	115	115	1-3	2	3.30

Two (2) models are available as illustrated.

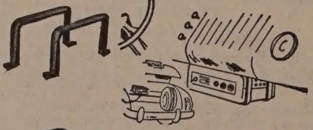
FEATURES

- Small Size
- Fuse Protection
- Metal Case
- Long Life
- Rugged Construction
- Automatic Operation

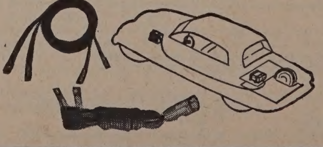
ACCESSORIES For all Mobile INVERTERS



REMOTE CONTROL UNIT — for under-dash mounting permitting installation of Inverter in auto trunk compartment.
Dealer Price $5.97



MOUNTING BRACKETS — to securely mount Inverter in trunk compartment of car or under-dash, as illustrated.
Dealer Price $3.30 pr.



EXTENSION CABLES — to provide additional cable lengths for installation of Inverter in trunk compartment.
Dealer Price $6.63 pr.

CIGARETTE LIGHTER CORD SET — to plug into cigarette lighter receptacle on dash.
Dealer Price $2.63

(Use Index Page 1 for Quick, Easy Location of ALL Products)
TRADE DISCOUNT APPLIES TO *LIST PRICE ONLY*

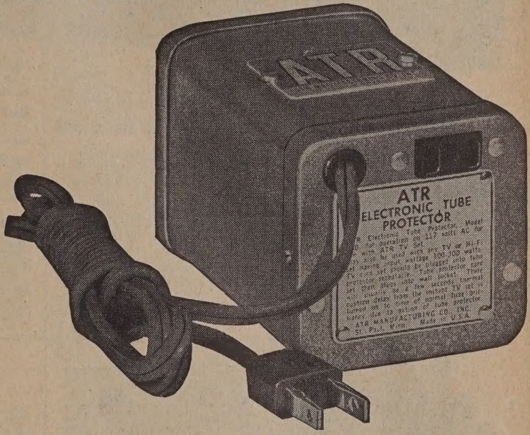
ATR

Electronic Tube PROTECTOR

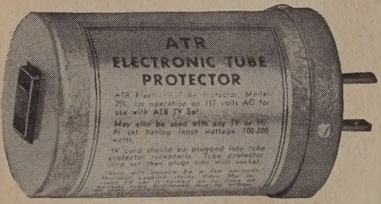
Specially Designed To Protect ALL Electronic Tubes in TV or Hi-Fi Sets, Amplifiers, and Similar Electronic Equipment. Will Double or Triple Tube Life Including Picture Tubes.

EASY TO OPERATE

ATR Electronic Tube Protectors should double or triple the life of all electronic tubes including picture tube in TV or Hi-Fi Sets, Amplifiers, Electronic Organs, and other similar electronic equipment. The ATR Electronic Tube Protector utilizes a thermal cushion-action principle which also protects all other components by eliminating initial damaging surge currents. The ATR Electronic Tube Protector can be used with any electronic equipment having input wattage of 100 to 300 watts. The Electronic Tube Protector plugs into the AC wall socket; whereas, the TV or Hi-Fi Set then plugs into the tube protector receptacle. There will usually be a few seconds thermal cushion-action delay from the instant TV set is turned on to time of normal tube brilliancy due to action of Tube Protector.



Illustrates ATR Electronic Tube Protector
Model 300



Illustrates ATR Electronic Tube Protector
Model 250

Two (2) models are available as illustrated

Features—

- Small Size
- Fuse Protection
- Metal Case
- Long Life
- Rugged Construction
- Automatic Operation

TYPE	INPUT A.C. Volts	A.C. OUTPUT Volts	A.C. OUTPUT Amperes	SHIPPING WEIGHT	Dealer Price
250	115	115	1-3	1	$2.63
300	115	115	1-3	2	3.30

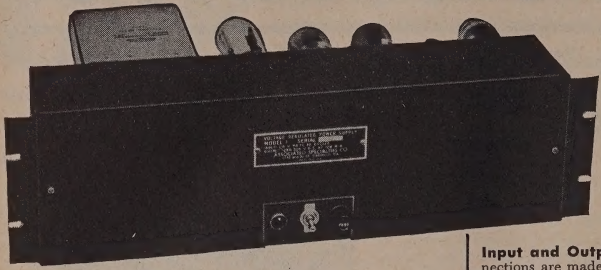
ATR Type 250 Electronic Tube Protector has dimensions 1¹⁵⁄₁₆″ OD x 3⅛″ in length. Housed in attractively finished golden brown hammerloid metal container. Plugs directly into wall socket as illlustrated on reverse side.

ATR Type 300 Electronic Tube Protector has dimensions 4″ x 2⅝″ x 2¾″. Housed in attractively finished golden brown hammerloid steel case having rubber mounting feet. Has cord set to plug into wall socket providing flexibility in positioning.

TRADE DISCOUNT APPLIES TO *LIST PRICE* ONLY

Associated Specialties Co.

OREFIELD, PA.



ELECTRONICALLY REGULATED D.C. CONSTANT VOLTAGE POWER SUPPLIES

RELAY RACK MOUNTING TYPES $52.50

MODEL 1-BK (BLACK RIPPLE FRONT PANEL)

MODEL 1-GR (GRAY RIPPLE FRONT PANEL)

Input: 105-125 volts AC. 50-60 cycles.

DC Output Voltage: Continuously variable from 200 to 325 volts DC for load currents 0 to 100 ma.

Regulation of DC Voltage: Better than 1% for loads of 0 to 100 ma. and line voltage variations from 105 to 125 volts.

Ripple Output: Less than 10 millivolts rms.

Isolated Output: Both positive and negative sides of the output are isolated from ground. Either side may be grounded or the output may be left floating.

AC Output for Filaments: An isolated AC voltage of 6.3 volts AC at 3 amperes is available at the output terminal connections.

Overload Protection: A fuse mounted on the front panel protects supply against external overloads or internal failure.

Input and Output Connections: All input and output connections are made to a single terminal strip conveniently located on the rear of the chassis.

Dimensions: Standard 19″ relay rack mounting. Panel Width: 19 inches; Panel Height: 5¼ inches; Depth Behind Panel: 7¼ inches.

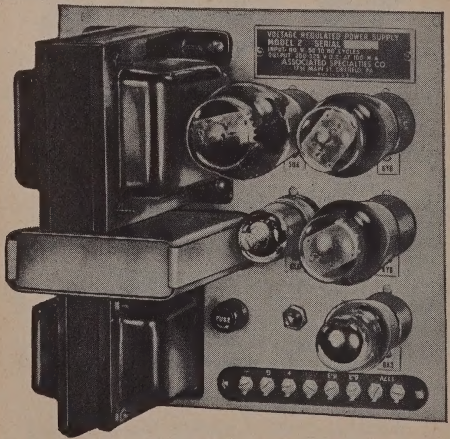
Cabinet Finish: Standard Black ripple enamel.

Controls: Rear Chassis—DC output voltage control. Front Panel—Pilot light, input power switch, and fuse.

Weight: Net weight is approximately 20 pounds.

High Quality Components: Only components of the highest quality are used in this equipment insuring you years of trouble-free dependable operation.

Accessibility: By removing two small screws, the front panel may be removed while the supply stays mounted on a relay rack or cabinet. This allows quick and easy inspection.



MODEL 2 SUB-CHASSIS MOUNTING $49.50

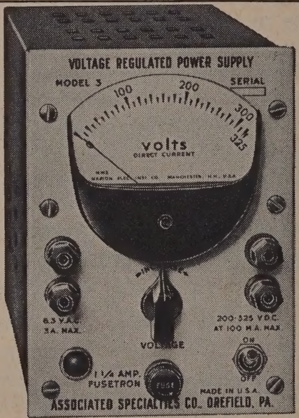
Sub-chassis mounting type regulated power supplies are designed to save space and money. They can be mounted on a chassis along with other components and thereby save space which would be used by a relay rack mounting supply. Savings are made in the size and cost of the cabinet required for a job along with the lower cost of the sub-chassis mounting supplies.

SAME AS MODEL 1 EXCEPT

Dimensions: 9″ wide, 8¾″ long, 4¾″ high above chassis, 1¾″ clearance required below chassis. Size of cut-out required, 8¼″ wide x 8″ high. Location of four mounting holes: 8⅝″ wide x 8$\frac{11}{32}$″ high.

Chassis Finish: Zinc plated or equivalent.

Controls: DC output voltage control adjustable from the top side of the chassis.



MODEL 3 CABINET MOUNTING $69.50

An ideal unit for bench work or assembly into equipment.

SAME AS MODEL 1 EXCEPT

Input Connections: A line cord at rear of cabinet.

Output Connections: 5 way binding posts.

Dimensions: 5″ wide, 7″ high, 16″ deep.

Panel Finish: Aluminum.

Cabinet Finish: Gray enamel.

Controls: D.C. output voltage on front panel.

Meters: Output voltage.

Weight: Net weight is approximately 20 pounds.

Weight: Net weight is approximately 14½ lbs.

MODEL P2 PANEL $9.00

Mounts two Model 2 power supplies side by side in a 19 inch relay rack space 8¾″ high.

Carter Motor GENEMOTORS, DC-AC CONVERTERS FREQUENCY CHANGERS

CARTER CUSTOM DYNAMOTORS

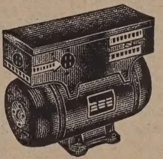
For railroad and marine radio-telephone, industrial communications systems, locomotives, telephone emergency standby power, etc. Heavy duty construction. Low rpm speed, small temperature rise assure extra long life. Filter not normally required. **Size:** 12⅝″ x 6¹¹⁄₁₆″ x 7¼″. Weight, 47 lbs.

Carter Number	Input Range	Output Volts	Output Recv.	Amps Trans.	Net Each
DS1220P	118-132	12.8	5	18	$172.50
HS1220P	67-74	12.8	5	18	172.50
CS1220P	33-37	12.8	5	18	172.50
WS1220P	45-50	12.8	5	18	172.50
DS640P	118-132	6.3	15	40	172.50
HS640P	67-74	6.3	15	40	172.50
CS640P	33-37	6.3	15	40	172.50

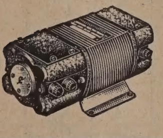
MARINE REFRIGERATOR-APPLIANCE CONVERTERS

Operates standard refrigerators, compressors, vacuum cleaners and other appliances from DC; for use aboard commercial and pleasure-boats. Converter operates only when power is called for. Input, from 24 to 230 v. DC. Size: 14″ x 6¾″ x 11″ high. Net Weight, 65 lbs.

Carter Number	DC Input	Net Each
RF24	24 v.	$336.75
RF28	28 v.	336.75
RF32	32 v.	336.75
RF48	48 v.	336.75
RF64	64 v.	336.75
RF115	115 v.	336.75
RF230	230 v.	336.75



DUOVOLT 6/12 VOLT GENEMOTORS

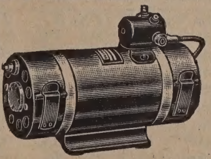


Will operate 30- to 100-watt mobile transmitters. Incorporates two separate six-volt windings, each having its own field. Six or twelve volt operation is obtained simply by connecting the four input leads in parallel or in series. May be transferred from one car to another regardless of battery voltage, without replacing generator and without wiring modification of hookup. Size: 3½″ high, 4¾″ wide, 8″ long. Weight, 11½ lbs.

Carter No.	Input		Input		Output		Duty	Net Each
	Volts	Amps	Volts	Amps	Volts	Amps		
450ABNS	6	29	12	14.5	400	.250	Int.	$73.88
4030VBNS	5.2	40	10.4	20	400	.300	Int.	74.25
4228VBNS	5.8	33	11.6	16.5	420	.280	Int.	74.25
4432VBNS	5.8	42	11.6	21	430	.325	Int.	74.63
520ABNS	6	28	12	14	500	.200	Int.	75.75
624VBNS	5.7	46	11.4	23	600	.240	Int.	75.75
6427VBNS	5.7	51	11.4	25.5	640	.270	Int.	77.25
7212ABNS	6.1	28	12.2	14	720	.125	Int.	77.25

CHANGE-A-VOLT DYNAMOTORS

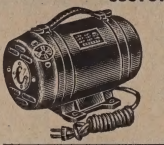
Operate 6 volt 2-way radio equipment from 12 volt systems without rewiring. Supplied complete with starting relay and switch, 12 volt fuse block and wiring to directly convert a 12 volt battery to a 6 volt radio supply. B615V delivers 15 amps continuously and 45 amps intermittent. 65% efficiency. Can also serve as battery equalizer when operating low voltage equipment. Size: 11⅛″ x 4½″ x 7¹⁄₁₆″ high. Weight, 25 lbs.



Carter No.	Input*		Net Each	Carter No.	Input†		Net Each
	Volts	Amps			Volts	Amps	
B615V	12	11.5	$88.50	**E128V**	24	6.0	$88.50
E615V	24	5.7	88.50	**J128V**	28	5.3	88.50
J615V	28	5.0	88.50	**C128V**	32	4.6	88.50
C615V	32	4.3	88.50	**HS128V**	70	2.2	88.50
HS615V	70	2.1	88.50	**D128V**	115	1.3	88.50
D615V	115	1.2	88.50	....	......	....	....

*Output 6 volts, 15 amps. †Output 12 volts, 8 amps.

CUSTOM CONVERTERS



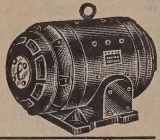
Dependable rotary power for operating office business machines, professional tape recorders, railroad, mobile and marine radio and radar equipment. Finest construction. Sealed ball bearings require no lubrication. Long life, continuous duty, high efficiency on all models. Only popular models listed here. For 50-cycle output, add **$3.75** to net prices. All models 100% power factor. Size: 200 watts, 12⅝″ w. x 6¾″ d. 7¼″ h.; 210 and 300 watts, 11⅝″ w.; 500 watts, 12⅝″ w; 750 watts, 13⅞″ w.

Carter Number	DC Inp.		Net Each	Carter Number	DC Inp.		Net Each
	V.	A.			V.	A.	
DS1020C5P	115†	2.6†	$157.50	**D1030CP**	115§	4.6§	$142.50
HS1020C5P	64†	5†	160.25	**E1050CP**	24#	33#	163.88
CS1020C5P	32†	9†	160.25	**C1050CP**	32#	25#	163.88
BR1021CP*	12‡	29‡	195.00	**D1050CP**	115#	7#	161.25
B1030CP	12§	45§	142.50	**C1075CP**	32▲	32▲	184.50
E1030CP	24§	22§	142.50	**D1075CP**	115▲	8.8▲	184.50
C1030CP	32§	19§	142.50				

Watts At 115 v. AC, 60 cps: †200 ‡210 §300 #500 ▲750

*Equipped with manual frequency control. For frequency control on all other models, add **$59.25** to net prices. Filter available; add **$30.00** to net prices.

MONARCH CONVERTERS

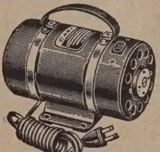


The Monarch series is ideal for heavy-duty industrial service, marine, mine, crane and railroad communications. Slow speed (1800 rpm.), long life, 4-pole design; ball bearing equipped. **No filter is necessary for most applications.** Size: 19″ x 11″ x 12″ high. Three-phase output available at no extra charge. 24 and 28 v. input available.

Carter Number	DC Input		Watts*	Net Each
	Volts	Amps		
C10150M	32	69	1500	$480.00
W10200M	48	60	2000	517.50
H10200M	64	45	2000	517.50
D10200M	115	25	2000	517.50
K10200M	230	12.5	2000	532.50

Note: DC starters necessary on above models; add **$70.50** to net.
*At 115 v. AC, 60 cps.

MARK II SUPER CONVERTERS



New, long life design increases brush life and assures dependable service. Smooth, quiet, ball bearing operation. Standard 100% P.F. models change DC to AC for operating amplifiers, office equipment, test instruments, radios and other high-power-factor equipment. Also available in 70% P.F. models to operate popular tape recorders from DC input. Many other catalog models available promptly from factory stock. A converter can be furnished to operate any tape recorder. Continuous duty. Size: 8¼″ x 4½″ x 5″ high. Weight, 13 lbs.

STANDARD 100% PF CONVERTERS

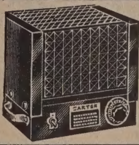
Carter No.	DC Input		Watts, AC at 60 cps, 115 v.	Net Each
	Volts	Amps		
D1040CB	115	.7	40	$86.25
D1010CB	115	1.7	100	88.50
D1015CB	115	2.0	150	89.25
B1040CB	12	8	40	79.50
B1010CB	12	15	100	81.75
B1015CB	12	23	150	82.50

Mark II Heavy Duty Super Converter. Continuous duty, less filter, 10¼″ long, 4½″ wide, 5″ high. Weight, 19 lbs.

Carter No.	Volts	Amps	Watts	Net Each
D1020CB	115	2.6	200	$99.00
D1025CB	115	3.2	250	99.00
B1020CB	12	30	200	92.25
B1025CB	12	34	250	92.25

AC TO AC FREQ. CHANGERS

Produces 115 v., 50 or 60 cycle AC output from 25 to 400 cycle input. For operating standard equipment on non-standard frequencies. Standard units are for single phase input and output. Three-phase input or output available on order. 70% PF models to run tape recorders, optional at no extra cost. For frequency control (meter), add **$30.00** to net price. Add **$70.50** to net price for manual DC starter (required on all models except 24, 28 and 32 v. DC input).



Carter No.	Output Watts	Net Each	Carter No.	Output Watts	Net Each
FC1020L	20	$185.25	**FC1025CP**	250	$363.75
FC1040L	40	186.00	**FC1050CP**	500	386.25
FC1060L	60	186.75	**FC1075CP**	750	408.75
FC1080C	80	237.75	**FC10100M**	1000	746.25
FC1010C	100	238.50	**FC10150M**	1500	780.00
FC1015C	150	239.25	**FC10200M**	2000	821.25
FC1020C	200	249.00			

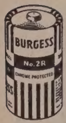
(Use Index Page 1 for Quick, Easy Location of ALL Products)

BURGESS BATTERIES

P6M

2U6

H233



2R

C5

P45M

XX45

BURGESS Number	NEDA Numbers	Other	Volts	Terminal Type	Overall Dimensions			Unit Package Quantities	Weight of Unit Package in Pounds	List Price Each
					L	W	H			
BURGESS ACTIVATORS FOR TRANSISTOR CIRCUITS										
NE	—	—	1½	Flashlight	7/16	(diam.)	1 11/64	48	4/5	$ .125
XX9	1900	239	9, 13½	Socket	1 9/32	29/32	2 17/32	1	2 oz.	1.50
D6	1603	276	9	Snap Type	2 9/16	2	3 5/32	1	1	1.80
2N6	1602	246	9	Snap Type	1⅜	1⅜	2¾	1	3/10	1.85
4D4	1400	274	6	Snap Type	2 17/32	2	7 5/16	1	2½	4.75
2U6	1604	216	9	Snap Type	1	39/64	1⅞	1	1 oz.	1.35
A4	—	—	6	Flat Contacts	1 9/32	1 9/32	2 11/32	1	¼	1.00
D6PI	1601	2506	3, 6, 9	Socket	2 19/32	1 7/16	7 27/32	1	1⅜	2.50
C6X	—	2356	9	Snap Type	2 5/16	1 1/32	6 1/16	1	⅝	1.60
P6	1600	226	9	Snap Type	31/32	31/32	1 31/32	1	⅛	1.10
P6M	1600	226	9	Snap Type	31/32	31/32	1 63/64	1	⅛	1.35
D5	26	707	7½	Snap Type	2 9/16	2	2 23/32	1	⅞	1.50
130	14	635	1½	Flashlight	63/64	(diam.)	1 15/16	12	1⅜	.25
230	13	A100	1½	Flashlight	1 21/64	(diam.)	2 25/64	24	5¼	.25
930	15	1015	1½	Flashlight	35/64	(diam.)	1 31/32	12	½	.20
M6	1605	266	9	Snap Type	1 13/16	1 13/16	2 7/16	1	⅖	1.50
D6S	1608	2761	9	Socket	2¼	1¼	7 29/32	1	1⅛	1.50
2Z3	1610	243	4½	Snap Type	1⅜	1⅜	2¾	1	⅜	1.59
BURGESS MERCURY ACTIVATORS										
HG-3	—	E3	1.3	Flat Contacts	63/64	(diam.)	21/32	4	⅕	.80
H233	1300	E233	4	Flat Contacts	1 1/32	(diam.)	1 31/32	1	¼	2.65
HG-502	—	E502	1.3	Flat Contacts	35/64	(diam.)	1 31/32	12	15/16	.95
BURGESS PORTABLE RADIO "A"										
Z4	2	724	6	Flat Contacts	1 3/16	1 3/16	2 7/32	1	⅕	1.00
F3	3	736	4½	Socket	4	1 7/16	4⅛	6	6½	1.35
4F	4	742	1½	Socket	2⅝	2⅝	4 3/32	6	8½	1.65
F4PI	6	744	6	Socket	2 21/32	2 21/32	4⅛	6	9	1.65
G3	7	746	4½	Socket	4 1/16	1⅞	4 11/16	6	7½	1.50
B5	8	713	7½	Socket	3 29/32	⅞	2 27/32	1	½	2.25
C5	9	717	7½	Socket	2 7/32	1 15/16	3 1/32	6	3⅝	1.50
T5	10	W360	7½	Socket	2 17/32	2 19/32	3 29/32	3	4	1.90
2F	11	W353	1½	Socket	2 19/32	1⅜	4¼	1	¾	1.10
2R	13	950	1½	Flashlight	1 21/64	(diam.)	2 25/64	48	11	.20
1	14	935	1½	Flashlight	63/64	(diam.)	1 15/16	24	2⅝	.20
Z	15	915	1½	Flashlight	35/64	(diam.)	1 31/32	12	½	.15
2D	18	720	1½	Socket	2 9/16	1 9/32	2 31/32	1	⅖	1.20
D3	19	726	4½	Socket	3⅞	1 5/16	2 15/16	6	4½	1.35
21R	20	964	1½	Flashlight	1 21/64	(diam.)	4⅛	12	4⅗	.45
37	—	—	1½	Flashlight	1 5/16	(diam.)	6⅛	1	⅕	.98
8R	23	960P	1½	Socket	1 3/32	(diam.)	3 15/16	1	¼	.85
F4X	—	—	6	Binding Post	5 5/16	1 13/32	4⅛	1	1¾	3.79
2F4	1	718	6	Socket	4	2 13/16	5 7/16	1	2½	3.90
6F	5	743	1½	Socket	4 3/32	2¾	4 1/16	1	2⅙	2.75
4FL	12	—	1½	Socket	4⅞	1⅜	5 9/16	1	1½	2.20
8F	17	741	1½	Socket	3 29/32	2 23/32	5½	1	3	3.45
2F4L	16	747	6	Socket	4	1½	10¾	2	6½	3.95
BURGESS PORTABLE RADIO "B" BATTERIES										
P45	211P	477	67½	Snap Type	1 29/32	1	5 9/32	6	3¾	3.10
XX45	200	467	67½	Snap Type	2¾	1 11/32	3 43/64	6	4½	3.50
P45M	211M	—	67½	Snap Type	1 29/32	1	5 9/32	6	4	4.00
XX30	201	455	45	Snap Type	2 17/32	31/32	3 21/32	6	3 3/10	2.75
M30	202	482	45	Socket	3 9/16	1¾	5½	1	2	3.85
K45	203	457	67½	Snap Type	2 11/16	1 5/16	2¼	6	2½	3.45
N60	204	490	90	Snap Type	3 11/16	1 9/32	3 19/32	6	6	4.50
Z30	205	738	45	Socket	3	2 5/16	4 1/16	2	2¾	3.95
A30	206	W359	45	Socket	3 9/16	2¼	4 5/16	2	3½	3.55
B30	207	484	45	Socket	4 1/16	2 17/32	5 5/16	2	4½	4.70
U200	722	493	300	Pin Jacks	2¾	2 9/32	3⅞	1	1	11.95
XX69	227	W361	103½	Flashlight	1 11/32	1 11/32	11 23/32	1	1	6.57
XX50	212	437	75	Snap Type	1 27/32	1 5/16	6 5/16	6	5¼	4.50
U30	213	415	45	Snap Type	1 3/32	19/32	3 17/32	1	⅛	2.50
P60	214	479	90	Snap Type	1 29/32	1	7 13/32	6	5	3.95
U15	209	412	22½	Flat Contact	1	39/64	1 31/32	1	1 oz.	1.50
UX45	217	416	67½	Snap Type	1 7/32	31/32	3 31/32	1	¼	2.95
N60X	216	495	90	Snap Type	1⅞	1 11/32	7⅛	1	1	4.95
A60	—	—	90	Socket	4 7/16	3⅜	4½	1	3⅓	7.95
W30PI	—	733	45	Socket	2 31/32	1 7/32	3 29/32	1	⅝	3.33
W20PI	—	—	30	Socket	1 5/16	1 13/16	3 7/32	1	½	2.47

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TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

BURGESS BATTERIES

BURGESS Number	NEDA Numbers	Other	Volts	Terminal Type	Overall Dimensions L	Overall Dimensions W	Overall Dimensions H	Unit Package Quantities	Weight of Unit Package in Pounds	List Price Each
BURGESS PORTABLE RADIO "A & B" BATTERIES										
G6B60	400	752	9A, 90B	Recessed Plug	13 29/32	2 13/16	4 21/32	1	7	$8.25
F6A60	401	753	7½, 9A, 90B	Socket	9 5/16	2 21/32	4 5/16	1	6	7.75
G6M60	402	754	7½, 9A, 90B	Socket	10 3/16	3⅛	4 1/32	1	6	9.45
T5Z50	403	755	6, 7½A, 75B	Socket	8½	3 11/32	2⅜	1	3½	7.25
T5Z50P	431	785	7½A, 75B	Recessed Plug	8½	3 11/32	2⅜	1	3½	6.90
F6A60P	406	757	9A, 90B	Recessed Plug	9 7/16	2¾	4 11/32	1	6	7.95
6TA60	410	W369	1½A, 90B	Socket	9 31/32	2¼	4 7/16	1	4½	7.85
2TXX40	412	W370	1½A, 60B	Socket	2 13/32	1 11/32	7 5/32	1	1½	5.85
T6Z60	405	756	7½, 9A, 90B	Socket	8 15/16	2 3/16	3 13/16	1	4½	6.95
T6Z60P	428	727	9A, 90B	Recessed Plug	8 15/16	2 3/16	3 13/16	1	4½	7.45
4TZ60	424	729	1½A, 90B	Socket	7⅝	2⅛	3¾	1	3¾	6.25
F4A50	411	W368	6A, 75B	Recessed Plug	9 3/32	2 23/32	3 21/32	1	4¾	9.50
G5A42	408	W367	7½A, 63B	Socket	9⅛	2 13/16	4 11/32	1	5	9.20
4GA42	407	W366	1½A, 63B	Socket	9 1/16	2⅛	4¾	1	4	8.80
BURGESS SEALED NICKEL CADMIUM CELLS AND BATTERIES *(L after cell number indicates types with solder lugs on terminals).										
CD1			1.25		.460 (diam.)		.225	1		1.45
CD2			1.25		.610 (diam.)		.236	1		1.00
CD3			1.25		.984 (diam.)		.275	1		1.15
*CD3L			1.25		.984 (diam.)		.300	1		1.25
CD4			1.25		.984 (diam.)		.350	1		1.20
*CD4L			1.25		.984 (diam.)		.375	1		1.40
CD5			1.25		1.700 (diam.)		.300	1		2.10
*CD5L			1.25		1.700 (diam.)		.325	1		2.20
CD6(AA)			1.25		.560 (diam.)		1.950	1		2.75
CD7(D)			1.25		1.300 (diam.)		2.425	1		5.00
CD21			6		1.065 (diam.)		1.525	1		7.15
CD22			6		1.065 (diam.)		1.975	1		7.50
CD23			6		1.800 (diam.)		1.725	1		14.50
CD24			9.6		1.065 (diam.)		2.650	1		11.60
CD25			9.6		1.065 (diam.)		3.200	1		12.10
CD26			9.6		1.800 (diam.)		2.575	1		22.50
CD27			12		1.065 (diam.)		2.925	1		14.00
CD28			12		1.065 (diam.)		3.600	1		15.20
CD29			12		1.800 (diam.)		3.100	1		27.95
CD30			6		1½	1½	3 13/16	1		26.40
CD31			6		3 13/16	1 17/32	3⅝	1		42.30
BURGESS INDUSTRIAL - ELECTRONIC - TRANSISTOR BATTERIES ("A" TYPES)										
Z	15	915	1½	Flashlight	35/64 (diam.)		1 31/32	12	½	.15
7	24	912	1½	Flashlight	13/32 (diam.)		1¾	12	¼	.15
1	14	935	1½	Flashlight	63/64 (diam.)		1 15/16	12	1¼	.20
2R	13	950	1½	Flashlight	1 21/64 (diam.)		2 25/64	48	10	.20
5R	...	...	1½	Flashlight	49/64 (diam.)		2 15/64	12	¾	.20
8R	23	960P	1½	Socket	1 3/32 (diam.)		3 15/16	1	¼	.85
9R	...	1015E	1½	Flashlight	35/64 (diam.)		1 63/64	12	½	.17
2Z	...	1016E	1½	Flashlight	1⅛	19/32	1 63/64	10	¾	.45
2FBP	700	W354	1½	Binding Post	2 21/32	1⅜	4 1/32	5	4 1/5	1.15
F2BP	701	W352	3	Binding Post	2 21/32	1⅜	4 1/32	5	4	1.15
F4BP	915	510S	6	Binding Post	2⅝	2⅝	4	1	1 2/5	1.19
2F2H	703	W356	3	Binding Post	2⅝	2⅝	4 1/16	5	7	1.55
422	704	750	3	Brass Straps	1 11/32	23/32	2 5/16	10	1 1/5	.85
432	705	751	4½	Brass Straps	1 31/32	21/32	2¼	10	2	1.00
532	706	703	4½	Brass Straps	2 15/32	13/16	2 23/32	1	3/10	1.02
2F4FL	...	...	6	Flexible Leads	4⅛	2 11/16	5½	1	2 4/5	2.35
44	...	...	1½	Binding Post	1 29/32 (diam.)		4 5/32	1	⅞	1.43
4	...	...	1½	Flashilght	41/64 (diam.)		2	50	3	.31
2BBP	...	...	1½	Binding Post	1 19/32	27/32	2 11/16	6	1½	1.65
B2BP	...	...	3	Binding Post	1⅝	13/16	2 11/16	6	1½	1.40
2F2BP	...	...	3	Binding Post	5 3/16	1 5/16	4 5/32	1	1 4/5	3.20
BURGESS INDUSTRIAL - ELECTRONIC - TRANSISTOR BATTERIES ("B" TYPES)										
4156	710	763	22½	Binding Post	3 17/32	2⅛	2 29/32	1	1	2.35
5156SC	708	778	22½	Spring Clip	4⅛	2½	2¾	5	8	4.45
5308	709	W376	45	Binding Post	4 1/16	2 9/16	5⅛	1	3	4.35
K10	224	417	15	Flat Contact	1¼	⅞	1 17/32	1	2 ozs.	1.65
K15	225	420	22½	Flat Contact	1¼	⅞	2 9/32	1	2 ozs.	1.75
K20	226	430	30	Flat Contact	1¼	15/16	2 23/32	1	3 ozs.	2.15

F6A60

CD3

CD7

F2BP

CD25

F4BP

5308

(Continued on next page)

BURGESS BATTERIES

Y15

U10

XX30PI

5540

2

TW1

4FH

BURGESS Number	NEDA Numbers	Other	Volts	Terminal Type	Overall Dimensions			Unit Package Quantities	Weight of Unit Package in Pounds	List Price Each
					L	W	H			
BURGESS INDUSTRIAL - ELECTRONIC - TRANSISTOR BATTERIES ("B" TYPES) (Cont.)										
U10	208	411	15	Flat Contact	1	39/64	1 7/16	1	1 oz.	$1.15
U15	209	412	22½	Flat Contact	1	39/64	1 31/32	1	1 oz.	1.50
U20	210	413	30	Flat Contact	1	39/64	2 17/32	1	2 ozs.	1.75
W30	——	——	45	Binding Post	3	1¼	3 25/32	1	3/5	3.15
XX15	——	425P	22½	Socket	1 11/32	15/16	3⅞	1	¼	1.95
XX22	——	433P	33	Socket	2 17/32	31/32	3⅛	1	⅓	2.45
XX30PI	——	455P	45	Socket	2 17/32	31/32	4 1/32	1	½	3.00
Y10	220	504	15	Flat Contact	19/32	19/32	1 23/64	1	1 oz.	1.15
Y15	221	505	22½	Flat Contact	19/32	19/32	1 31/32	1	1 oz.	1.50
Y20	223	506	30	Flat Contact	1 3/16	19/32	1 13/32	1	1 oz.	1.85
Y20S	222	507	30	Flat Contact	19/32	19/32	2 9/16	1	1 oz.	1.85
Z30NX	711	W350	45	Binding Post	3 1/32	1⅞	4 19/32	5	7 3/5	3.85
U200	722	493	300	Pin Jacks	2¾	2 9/32	3⅞	1	1	11.95
D30	——	487	45	Socket	5 1/16	2 1/32	7 5/16	1	4½	4.95
Z30T	——	——	45	Socket	3	2 5/16	4⅛	1	1½	3.75
W30BPX	——	W358	45	Binding Post	3	1¼	3 25/32	1	3/5	3.55
X30FL	——	——	45	Flexible Leads	2 15/16	1 5/16	4 13/16	1	4/5	5.82
Z30BP	——	W351	45	Binding Post	3 11/16	2 11/32	3 7/16	1	1 3/5	7.55
Z60BP	——	——	90	Binding Post	3¾	2 11/32	5 15/16	1	2 3/5	13.30
Z96P (9968)	——	——	144	Binding Post	2⅝	2⅝	13 5/16	1	3¾	26.00
5156PI	721	768	22½	Socket	4 7/64	2⅜	2 55/64	1	1 3/5	4.45
21308PI	727	W364P	45	Socket	8⅛	4 15/32	7 9/32	1	12 4/5	7.65
21308SC	715	W364F	45	Spring Clip	8⅛	4 15/32	7 9/32	1	12 4/5	7.65
10308PI	726	W363P	45	Socket	8 1/32	4 1/32	7 3/16	1	11½	6.90
10308SC	716	W363F	45	Spring Clip	8 1/32	4 1/32	7 3/16	1	12	6.90
2308PI	717	W365P	45	Socket	8 3/32	2 31/32	7¼	1	7 4/5	5.50
2308SC	723	W365F	45	Spring Clip	8 3/32	2 31/32	7¼	1	7 4/5	5.50
BURGESS INDUSTRIAL AND ELECTRONIC "C" BATTERIES										
2370PI	718	771	4½	Binding Post	4 1/64	1 27/64	2 63/64	5	3½	2.25
2370	712	761T	4½	Binding Post	3 15/16	1⅜	2⅞	5	3¾	1.90
5540	713	773	7½	Bndg Post Neg	4	⅞	2¾	5	2 2/5	2.35
5360	714	781	4½	Binding Post	2 13/32	27/32	2 21/32	10	2 1/5	1.25
W5BP	——	W362	7½	Binding Post	2 31/32	23/32	1¾	6	4/5	2.10
A3BPX	——	——	4½	Binding Post	1 31/32	23/32	2¼	1	¼	2.50
A8BP	——	——	12	Binding Post	2 25/32	1 25/64	2 15/32	1	½	3.80
A9BP	——	——	13½	Binding Post	2 3/32	2 3/32	2 13/32	1	½	4.20
B5P	——	——	7½	Socket	4 5/32	1 13/32	2 29/32	1	3/5	3.75
D6BP	909	——	9	Binding Post	4 3/32	2¾	3	1	1 3/5	3.10
2156	702	766	22½	Spring Clips	6 21/32	4 1/16	2 31/32	6	17½	6.25
BURGESS FARM RADIO "A" AND "A & B" BATTERIES										
20F2	720	X-125	3	Socket	11½	4	6⅛	1	14	9.30
20F	719	740	1½	Socket	7⅝	2 9/16	6 15/16	1	6 4/5	9.85
17GD60	413	759	1½A, 90B	Socket	15 11/16	4⅜	7 1/16	1	20	10.65
4SD60	414	758	1½A, 90B	Socket	10 11/16	4 5/16	6 13/16	1	15	9.65
S6D60	415	776	7½, 9A, 90B	Socket	9⅞	4⅛	7 13/16	1	17	14.95
BURGESS FLASHLIGHT AND LANTERN BATTERIES										
2 (24V)	13	950	1½	Flashlight	1 21/64 (diam.)		2⅜	48	11	.20
2 (Two-Pack)	13	950	1½	Flashlight	1 21/64 (diam.)		2⅜	72	16	.20
2(50 Bulk)	13	950	1½	Flashlight	1 21/64 (diam.)		2⅜	50	11	.20
210	——	1050	1½	Flashlight	1 21/64 (diam.)		2⅜	50	10	.25
1	14	935	1½	Flashlight	63/64 (diam.)		1 15/16	12	1¼	.20
Z	15	915	1½	Flashlight	35/64 (diam.)		1 31/32	12	½	.15
7	24	912	1½	Flashlight	13/32 (diam.)		1¾	12	¼	.15
N (Bare)	910	W468	1½	Flashlight	7/16 (diam.)		1 11/64	24	1/5	.125
F4H	908	509	6	Spring	2⅝	2⅝	4⅜	12	18	1.19
F4SC	917	510F	6	Spring Clip	2⅝	2⅝	4½	1	1½	1.19
4F2H	901	W357	3	Spring Clip	3 29/32	2 11/16	5 13/32	1	2 3/5	2.05
530	——	——	45	Socket	4 1/16	2 17/32	5 5/16	2	6	3.85
TW1	918	731	6	Binding Post	5⅜	2⅞	4 15/16	1	3 1/5	2.75
TW2	——	——	12	Binding Post	5⅜	2⅞	4 15/16	1	3 1/5	2.75
BURGESS IGNITION - TELEPHONE AND PROTECTIVE SYSTEM BATTERIES										
4FH	900	735	1½	Screw Terminal	2⅝	2⅝	4	12	16	1.25
4F2H	901	W357	3	Spring Clip	3 29/32	2 11/16	5 13/32	1	2 3/5	2.05
4F4H	902	706	6	Binding Post	8 5/16	2 13/16	5 13/16	1	6 1/5	4.98
4F5H	903	715	7½	Binding Post	7 3/16	3 31/32	5 13/16	1	7 2/5	7.25
4F6H	904	716	9	Binding Post	8½	3 31/32	5 13/16	1	9	8.25

(Continued on next page)

BURGESS BATTERIES

BURGESS IGNITION - TELEPHONE AND PROTECTIVE SYSTEM BATTERIES (Cont.)

* Battery also available with spring clip terminals ** Battery also available with screw terminals

BURGESS Number	NEDA Numbers	Other	Volts	Terminal Type	Overall Dimensions L	W	H	Unit Package Quantities	Weight of Unit Package in Pounds	List Price Each
*6 Ign.	905	6 Ign.	1½	Screw Terminal	2½ (diam.)		6⅝	12	22	$1.25
**6 Tel.	906	6 GL	1½	Spring Clip	2½ (diam.)		6⅝	12	24⅗	1.25
6 Ind.	911	6 Ind.	1½	Screw Terminal	2½ (diam.)		6⅝	12	22	1.35
S461	907	1461	6	Binding Post	10½	2¾	7 13/32	6	51	4.98
2Z2PI	...	W371	3	Socket	1 5/32	1 5/32	2 13/32	12	2½	1.02
4FH Hobby	900	735	1½	Screw Terminal	2⅝	2⅝	4	12	16	1.25
2FBP	700	W354	1½	Binding Post	2 21/32	1⅜	4 1/32	5	4⅕	1.15

BURGESS PHOTO-FLASH BATTERIES

BURGESS Number	NEDA Numbers	Other	Volts	Terminal Type	Overall Dimensions L	W	H	Unit Package Quantities	Weight of Unit Package in Pounds	List Price Each
120	...	835	1½	Flashlight	1 (diam.)		1 15/16	12	1¼	.25
220	...	850	1½	Flashlight	1 11/32 (diam.)		2 25/64	48	11	.25
920	...	815	1½	Flashlight	35/64 (diam.)		1 31/32	24	1	.20
U15	209	412	22½	Flat Contact	31/32	9/16	1 31/32	1	1 oz.	1.50
Y10	220	504	15	Flat Contact	19/32	19/32	1 23/64	1	1 oz.	1.15
Y15	221	505	22½	Flat Contact	19/32	19/32	1 31/32	1	1 oz.	1.50
U10	208	411	15	Flat Contact	1	39/64	1 7/16	1	1 oz.	1.15
U20	210	413	30	Flat Contact	1	39/64	2 17/32	1	2 ozs.	1.75
XX45	200	467	67½	Snap Type	2¾	1 11/32	3 43/64	6	4½	3.50
N60	204	490	90	Snap Type	3 11/16	1 9/32	3 19/32	6	6	4.50
XX150	...	489	225	Pin Jacks	4¼	2⅝	4¼	1	2½	9.95
U160	...	491	240	Flat Contact	2 9/16	1 5/16	4 13/32	1	¾	7.95
N150	...	492	225	Pin Jacks	3 9/16	2¾	4¾	1	2½	7.95
U320	...	497	510	Flat Contact	2 15/16	1 17/32	5 7/16	1	1½	15.95
D3	19	726	4½	Socket	3⅞	1 5/16	2 15/16	6	4½	1.35
K45	203	457	67½	Snap Type	2 11/16	1 5/16	2¼	6	2½	3.45
M30	202	482	45	Socket	3 9/16	1¾	5½	1	2	3.85

BURGESS RADAR LIGHTS

NOTICE: All Radar Lights are packed in individual cartons complete with battery.

BURGESS Number	Description	Unit Pkg. Quan.	Wt. of Un. Pkg. in Lbs.	LIST PRICE EACH		
				Head Only	Battery	Complete
TW3	Radar-Lite Spot-Flasher	1	5 1/10	$9.95	$2.75	$12.70
TW4	Radar-Lite Spot-Without Flasher	1	4¾	7.50	2.75	10.25
TW7	Radar-Lamp Chrome-Finish	1	4⅕	6.50	2.75	9.25
TW8	Radar-Lamp Copper-Finish	1	4⅕	6.50	2.75	9.25
TW9	Radar Bearcat Focusing Lantern	1	4⅛	4.50	2.75	7.25
TW12	12 Volt Radar-Lite (Uses TW2 Battery)	1	5	8.20	2.75	10.95
TW4E	Power Failure Operated Lantern (Spot Beam)	1	6	17.50	2.75	20.25
TW6E	Power Failure Operated Lantern (Flood Beam)	1	6	17.50	2.75	20.25
TW34	Radar-Flash	1	4⅕	3.95	2.75	6.70

BURGESS RADAR-MATE (less batteries)

BURGESS Number	Description	Unit Pkg. Quan.	Wt. of Un. Pkg. in Lbs.	List Price Each
JR1	4½ Volt Lantern. Uses 3 No. 2 (Size D) batteries. Batteries not included.	6	7	$4.98

BURGESS FLASHLIGHT CASES (less batteries)

BURGESS Number	Description	Unit Pkg. Quan.	Wt. of Un. Pkg. in Lbs.	List Price Each
159	Magnet Flashlight—2 Cell Prefocused	6	2⅛	$1.79
258 Assort.	7 Vanguard Flashlights (Includes 1 FREE)	1	2½	9.03
359	Family Special Flashlight—2 Cell Prefocused	8	2½	.98
57 Assort.	1-257, 4-357, 1-457	1	3⅜	12.84
257	Satellite Torch—2 Cell Junior Prefocused	3	¾	1.75
357	Satellite Torch—2 Cell Prefocused	6	2¾	1.95
459	Satellite Torch—3 Cell Prefocused	1	⅝	2.95
457	Satellite Torch—4 Cell Prefocused	1	¾	3.29
152	Penlight—Tu-Tone Colors	12	⅞	.88
251	Zebra Light (Complete with Cells)	12	¾	.69
350	2 Cell Tough Industrial Flashlight	6	3	1.90
450	3 Cell Tough Industrial Flashlight	1	½	2.15
453	2 Cell Industrial—Safety Light	1	½	5.00
953	Key Chain Zebra Light (Complete with Cells)	12	¾	.79
P92	Penlight (Heavy Duty) Assorted Colors	6	½	.88
LD34	Lens Display Kit—32 Popular Lenses	1	1½	3.20

No. 6 Ignition

220

U15

TW3

TW7

357

CORNELL-DUBILIER RADIART

CDE

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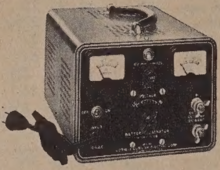
POWERCON LINE

INVERTERS
DC-AC



BATTERY ELIMINATORS
AC-DC

MOBLPAKS
DC-DC

SPORTSMAN, SR.
PORTABLE

- COMPLETE COVERAGE — Each inverter applicable to widest variety of uses. Good inventory turnover.
- SIMPLIFIED SERVICING — All components individually and readily accessible. No potted assemblies.
- SINE-WAVE-REGULATED — Models hold output steady as input or load varies and provide commercial wave form for best operation of sensitive equipment.
- POWER FACTOR CORRECTION — Auxiliary PF Correctors available to permit standard inverters to handle low PF loads. Special Inverters are not required.
- SPORTSMAN, SR. POWERCON — Combines a vibrator inverter, battery charger and a compartment for standard 12 volt auto battery, so that 110 volt AC power is available for operation of TV, radio, record players, etc.
- MOBLPAK POWERCONS — Supply up to 500 V. DC — 225 MA from 6 or 12 volt sources for mobile radio service.
- BATTERY ELIMINATORS — Compact, well filtered, conveniently styled power package for test bench.

REGULAR POWERCONS
(DC to 110 V.AC)

Model	Input Volts	Output Watts	Class	List Price
12SP2	12	20	SP	**$13.40**
12LM4	12	40	LM	**23.95**
12M6	12	60	M	**34.50**
12L8	12	80	L	**44.95**
12S10	12	100	S	**72.50**
12H15	12	150	H	**99.50**
12SH20	12	200	SH	**129.50**
28L8	28	80	L	**74.50**
28S10	28	100	S	**89.95**
28H15	28	150	H	**112.95**
28SH20	28	200	SH	**167.50**
32L8	32	80	L	**69.50**
32S12	32	125	S	**83.95**
32H18	32	180	H	**118.00**
32SH22	32	225	SH	**162.50**
110LM5	110	50	LM	**28.50**
110M7	110	70	M	**44.50**
110L10	110	100	L	**57.50**
110S15	110	150	S	**72.00**
110H25	110	250	H	**89.50**
110H35	110	350	H	**135.00**
110SH40	110	400	SH	**170.00**
220S15	220	150	S	**91.50**
220H25	220	250	H	**139.50**
220SH40	220	400	SH	**199.50**

BATTERY ELIMINATOR POWERCONS

Model	Input Volts	Output Watts	Class	List Price
110B6	110	6A–12 V.DC 10A– 6 V.DC	H	**$99.50**
110B12	110	10A–12 V.DC 20A– 6 V.DC	H	**127.50**

TRANSIPOWER TRANSISTORIZED MOBILE SUPPLIES

Model	Input Volts	Output Watts	List Price
12TP3	12	300 V.DC* 100 MA	**$45.00** User Net
12TP12	12	500 V.DC* 240 MA	**60.00** User Net

* Have taps at one-half rated voltage.

SINE-WAVE-REGULATED POWERCONS
(DC to AC)

Model	Input Volts	Output Watts	Class	List Price
12SW10	12	100	H	**$139.50**
12SW25	12	250	SH	**154.50**
110SW15	110	150	H	**139.50**
110SW40	110	400	SH	**199.50**

SPORTSMAN, SR. POWERCON
(110 V.AC from self-contained battery)

Model **12SS14** Input Volts 12

Output Watts 140 Class SS User Net **$79.50**

Note: Unit includes 140 Watt Inverter, built-in Battery Charger and compartment for standard 12 V. auto battery (not provided)

DICTATOR POWERCON (6/12 V.DC to 110 V.AC)

Model	Input Volts	Output Watts	Class	List Price
6/12D6	6/12	60	L	**$50.00**

MOBLPAK POWERCONS (Low DC to High DC)

Model	Input Volts	Output Watts	Class	List Price
12DC3	12	300 V.DC 100 MA	M	**$39.95**
6/12DC6	6/12	300 V.DC 200 MA	S	**74.85**
6/12DC12	6/12	500 V.DC 225 MA	S	**119.80**

POWERCON ACCESSORIES

LEAD KITS

Model No.	Explanation	List Price
LK-605	Dual #6 — 5 feet	**$8.95**
LK-612	Dual #6 — 12 feet	**16.50**
LK-616	Dual #6 — 16 feet	**20.50**
LK-805	Dual #8 — 5 feet	**6.25**
LK-812	Dual #8 — 12 feet	**10.75**
LK-816	Dual #8 — 16 feet	**13.00**
LK-1005	Dual #10 — 5 feet	**5.25**
LK-1012	Dual #10 — 12 feet	**8.50**
LK-1016	Dual #10 — 16 feet	**10.25**

MOUNTING KITS

Model No.	Explanation	List Price
MK-3544-1	For L and S cases	**$5.50**
MK-3544-2	For H case only	**6.00**
MK-3544-3	For SH case only	**7.50**

REMOTE CONTROL KITS
(For 6 and 12 volt models in L, S, H and SH cases)

Model No.	Explanation	List Price
RK-105	5′ extension cable	**$9.00**
RK-112	12′ extension cable	**11.00**
RK-116	16′ extension cable	**12.00**

MASTER FUSE KITS (2″ cartridge)

Model No.	Explanation	List Price
FK-220	20 ampere	**$3.50**
FK-230	30 ampere	**3.50**
FK-240	40 ampere	**4.50**
FK-250	50 ampere	**4.50**
FK-260	60 ampere	**4.50**

POWER FACTOR CORRECTORS

Model No.	Explanation	List Price
PF-1	60% PF loads 10-100 watts; 30% PF loads 10- 25 watts	**$19.95**
PF-2	60% PF loads 150-300 watts; 30% PF loads 50- 75 watts	**39.95**
PF-3	60% PF loads 350-500 watts; 30% PF loads 100-150 watts	**49.95**

1. Standard models deliver 110 volts, 60 cycle, AC power. Output watt ratings are based on continuous operation on high power factor loads. They should be reduced by the percent of power factor where inductive loads are involved.

2. All models are housed in cases of similar design and appearance. The class designations signify approximate size and weight as follows:

Class	Size	Weight
SP — Shaver Pack	2⅝ x 2½ x 3 7/32	2 lbs.
LM — Light Midget	3 x 3½ x 4 13/16	4 lbs.
M — Midget	3 15/16 x 4⅝ x 5 11/16	6 lbs.
L — Lightweight	5½ x 6¼ x 8	12 lbs.
S — Standard	5½ x 6¼ x 9	14 lbs.
H — Heavy	6½ x 7½ x 11	20 lbs.
SH — Super Heavy	8 x 9½ x 13	35 lbs.
SS — Sportsman, Sr.	9½ x 9½ x 14	20 lbs. (less bat.)

3. For complete information, refer to Cornell-Dubilier Bulletins EB-3006 for 6, 12 volts; EB-3007 for Power Factor Correctors; EB-3008 for 28, 32 volts; EB-3009 for Moblpak series; EB-3010 for 110, 220 volts; EB-3011 for Dictator Model only; EB-3012 for Battery Eliminators; EB-3013 for Accessories and installation procedures; EB-3015 for Sportsman, Sr.

CDE **CORNELL-DUBILIER**
RADIART

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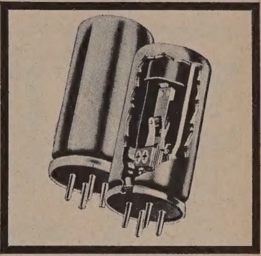
VIBRATORS

- **AUTO RADIO REPLACEMENT**
- **COMMUNICATIONS**
- **SPECIAL PURPOSE**
- **HEAVY DUTY**



AUTO-RADIO OR SPECIAL PURPOSE VIBRATORS

INTERRUPTER						SYNCHRONOUS					
6 Volt		6 Volt		12 Volt		6 Volt		6 Volt		12 Volt	
Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price
5300	**$4.95**	**5342**	**$3.80**	**6301**	**$5.15**	**5400**	**$8.10**	**5607**	**$9.05**	**6607**	**$10.45**
5301	**4.95**	**5363**	**6.70**	**6326**	**4.80**	**5404**	**8.10**	**5610**	**8.10**	**6609**	**10.45**
5303	**5.15**	**5366**	**6.70**	**6330**	**5.15**	**5406**	**8.10**	**5616**	**9.05**	**6610**	**9.05**
5304	**6.70**	**5370**	**5.15**	**6370**	**4.95**	**5407**	**8.10**	**5620**	**8.10**	**6614**	**9.05**
5307	**5.15**	**5506**	**7.55**	**6511**	**8.10**	**5408**	**8.10**			**6615**	**9.05**
5314	**5.15**	**5510**	**7.55**	**6513**	**8.10**	**5409**	**8.10**			**6616**	**10.45**
5320	**5.15**	**5513**	**8.10**	**6514**	**10.45**	**5410**	**8.10**				
5321	**5.15**	**5516**	**7.25**	**6517**	**8.10**	**5411**	**8.10**			Other Voltages	
5323	**4.40**	**5560**	**9.05**			**5425**	**9.65**				
5326	**4.40**			Other Voltages		**5426**	**8.10**			**5468-2**	**11.30**
5331	**5.15**					**5429**	**9.65**			**5469-2**	**10.30**
5333	**5.15**			**5300-32**	**7.55**	**5437**	**8.10**			**5615-24**	**9.05**
5335	**5.15**			**5314-4**	**5.15**	**5438**	**8.10**				
				5513-4	**8.10**	**5454**	**8.10**				
				5514-4	**8.10**						

COMMUNICATIONS VIBRATORS

INTERRUPTER						SYNCHRONOUS					
6 Volt		12 Volt for 6/12		12 Volt Only		6 Volt		12 Volt for 6/12		12 Volt Only	
Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price
5715	**$7.25**	**6715**	**$7.25**	**6715S**	**$7.25**	**5805**	**$8.10**	**6805**	**$8.10**	**6820S**	**$8.10**
5718	**7.25**	**6718**	**7.25**			**5820**	**8.10**	**6820**	**8.10**		
5721	**7.25**	**6721**	**7.25**			**5822**	**9.05**	**6821**	**7.25**		
5722	**9.05**	**6722**	**9.05**			**5824**	**10.45**	**6822**	**9.05**		
5725	**7.25**	**6725**	**7.25**					**6824**	**10.45**		

HEAVY-DUTY VIBRATOR SPECIFICATIONS

Type No.	Voltage	Frequency	List Price
6VB6	6	60 ± 2	**Note 1**
6VB6H	6	60 ± ½	**$14.20**
6VD6	6	60 ± 2	**Note 1**
6VD6H	6	60 ± ½	**24.70**
6VL6	6	60 ± 2	**12.90**
6VL10	6	100 ± 3	**12.90**
12VB6	12	60 ± 2	**Note 1**
12VB6H	12	60 ± ½	**14.20**
12VD6	12	60 ± 2	**Note 1**
12VD6H	12	60 ± ½	**24.70**
12VL6	12	60 ± 2	**12.90**
12VL6H	12	60 ± ½	**14.20**
12VL10	12	100 ± 3	**12.90**
28VB6	28	60 ± 2	**Note 1**
28VB6H	28	60 ± ½	**14.20**
28VD6H	28	60 ± ½	**24.70**
28VL6	28	60 ± 2	**12.90**
28VL10	28	100 ± 3	**12.90**

Type No.	Voltage	Frequency	List Price
32VB6	32	60 ± 2	**Note 1**
32VB6H	32	60 ± ½	**$14.20**
32VD6H	32	60 ± ½	**24.70**
32VL6	32	60 ± 2	**12.90**
32VL10	32	100 ± 3	**12.90**
64VL10	64	100 ± 3	**12.90**
110VB6	110	60 ± 2	**Note 1**
110VB6H	110	60 ± ½	**14.20**
110VC6H	110	60 ± ½	**24.70**
110VL6H	110	60 ± ½	**14.20**
110VL10	110	100 ± 3	**12.90**

Old Types Replaced by Above

2989	Replaced by	**32VB6H**
3047	Replaced by	**12VD6H**
3079	Replaced by	**110VC6H**
3087	Replaced by	**12VB6H**
3103	Replaced by	**6VB6H**
4123	Replaced by	**6VD6H**

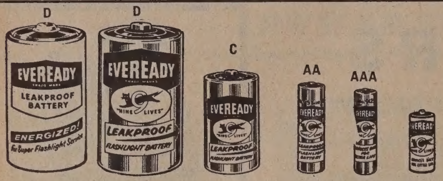
Type No.	Voltage	Frequency	List Price
Popular Old Types in Stock			
427	6	60 ± 2	**$12.90**
490	6	60 ± 3	**24.70**
491	6	60 ± 2	**24.70**
1315	110	60 ± 2	**14.20**
1315H	110	60 ± ½	**15.25**
3077	110	60 Adj.	**15.25**
11028	110	60 ± 2	**15.25**
Auto Radio Types—Small Powercons			
2522	110	60 ± 3	**9.10**
2529	6	60 ± 5	**4.40**
2530	12	60 ± 5	**4.40**
2531	6	60 ± 3	**8.10**
2532	12	60 ± 3	**8.10**
2533	110	60 ± 3	**4.40**
2563	6	60 ± 3	**10.90**
2564	24	60 ± 3	**10.90**
2565	110	60 ± 3	**10.90**

NOTE 1. This vibrator, which had a broad frequency tolerance, is no longer manufactured. Use similar type (such as 6VB6H) listed above, which has close frequency tolerance.

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

EVEREADY
TRADE-MARK

FLASHLIGHTS and BATTERIES


D
D
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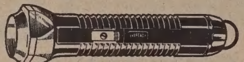
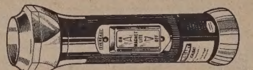
AAA
EVEREADY
LEAKPROOF BATTERY
ENERGIZED!
For Super Flashlight Service
EVEREADY
"NINE LIVES"
LEAKPROOF
FLASHLIGHT BATTERY
EVEREADY
LEAKPROOF
FLASHLIGHT BATTERY

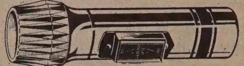
D-99 Heavy duty · 950 General-Purpose · 935 · 915 · 912 · 904



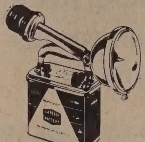
No. 1251 — 2-Cell Heavy Duty Spotlight. Rugged insulated case. Will not shatter, crack or dent. Unbreakable safety-glow lens-guard. Ring-hanger. List price (without batteries) $2.89. No. 1259—2-Cell Safety Flashlight. Approved by United States Bureau of Mines and listed with Underwriters Laboratories Inc. List price each (without batteries) **$4.15**. Both types available in 3-Cell sizes. (No. **1351**, **$3.29**; No. **1359**, **$4.35**.)



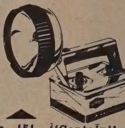
No. 316 Magnet Shop Lite, shock-resistant. Resists acids, alkalies, oils, greases, temperature extremes. Insulated against electric shock. List **$2.49** (without batteries). Also available No. 314 Shop Lite with jumbo switch. List price **$1.95** (without batteries).



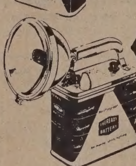
No. 5MF Magnet Lite with powerful permanent-type "Alinco" magnet. Uses two "Eveready" No. 950 or D-99 batteries and PR2 lamp. List price **$1.99** (without batteries). Also available 6-5MF display package containing 6 Magnet Lights. List Price **$11.94** per display package.



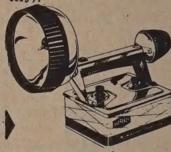
No. 100 "Big Jim" Lantern with red beacon flasher, weatherproof switches and wiring. Heavy-gauge, chrome-plated steel. Sealed beam visible up to 1 mile. List (without battery) **$10.75.**



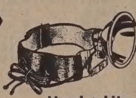
No. 151 "Captain" without red flasher but with all the other fine features of the No. 150. Ideal for marinas, airports, police and fire departments. List **$12.45** (without battery).



No. 101 "Big Jim" (without red beacon flasher) has the same fine features as #100. Ideal for boat, car camp, farm or general utility. List (without battery) **$8.00.**

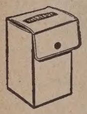


No. 150 NEW stainless steel, weatherproof "Captain" with automatic red flasher. Uses NEW 6 volt alkaline battery No. 520. Gives twice the light of other lanterns. A precision-engineered, super-powered light. List **$14.45** (without battery).



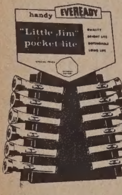
Head • Lite with long-range beam frees both hands for work at home or on the job. List **$3.29** each (without batteries).

Head • Lite No. 3452



Pouch for #3452 Head • Lite: rainproof — fits on belt or strap. List 69¢ each.

Pouch No. 1348


handy EVEREADY
"Little Jim" pocket lite

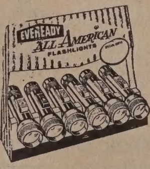
Display Package No. 15

"Little Jim", replica of the famous "Eveready" Masterlite Square Flashlight. Pocket-size, with unbreakable red safety-glow lens-guard. List price: ea. 69¢ (without batteries).

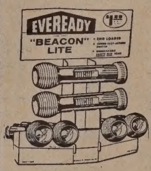
Display No. 15

Display Package No. 130B

"All-American" assortment of 14 flashlights in 5 decorator colors: turquoise, coral, red, white or black — safety-glow head and easy-to-work jumbo switch. List **$1.19** (without batteries).

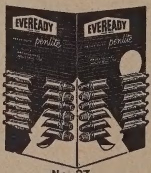

EVEREADY
ALL-AMERICAN
FLASHLIGHTS

Display No. 130B

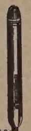

EVEREADY
"BEACON" LITE

Contains 6 "Beacon Lites." Chrome colored case with red or copper-colored case with green. List price **$1.29**

No. 20

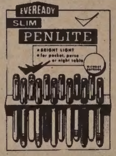

EVEREADY
penlite
EVEREADY
penlite

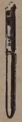
No. 23



No. 230

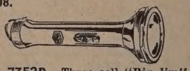
No. 23 contains 12 No. 230 Heavy-duty Penlites. No. 230 Penlite also available in individual boxes. List Price $0.98 each.


EVEREADY
SLIM
PENLITE
BRIGHT LIGHT
for pocket, purse or night table

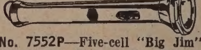


No. 212

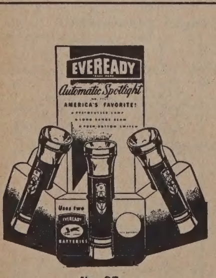
No. 21C contains 12 No. 212 Small Penlites. No. 212 Penlite also available in individual boxes. List **$0.98.**



No. 7352P—Three-cell "Big Jim" Searchlight. Uses 3 No. 950 or D-99 Batteries and Lamp No. PR3. List price **$3.95**

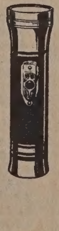


No. 7552P—Five-cell "Big Jim" Searchlight. Uses 5 No. 950 or D-99 Batteries and Lamp No. PR12. List price **$4.95**

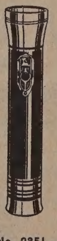

EVEREADY
Automatic Spotlight
AMERICA'S FAVORITE!
Uses two
EVEREADY
BATTERIES

No. 25

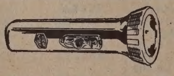
Contains 6 No. 2251 Spotlights. List price each **$1.85**



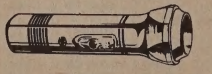
No. 2251— 2 cells List price— **$1.85**



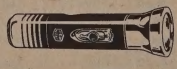
No. 2351— 3 cells List price— **$2.20**



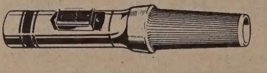
No. 7231P—Small Square Spotlight. Uses 2 No. 935 Batteries and Lamp No. PR4. List price ————**$1.85**



No. 7251P — Deluxe "Masterlite" heavy-gauge square flashlight with lens guard. Uses 2 No. 950 or D-99 Batteries and Lamp No. PR2. List price **$1.95** (without batteries).



No. 7251—Deluxe "Masterlite," all metal with square easy-grip case, Chrome with black. List **$1.95** (without batteries).



5MF5 — With 5" signal wand and Magnetic switch that holds flashlight to any steel object. Also available with 3" signal wand No. 5MF3 (List price **$2.19** without batteries).

EVEREADY
TRADE-MARK

BATTERIES FOR RADIO
ELECTRONIC AND OTHER APPLICATIONS

ENERGIZERS FOR TRANSISTOR RADIOS AND OTHER ELECTRONIC APPLICATIONS

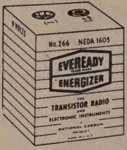
No. 1015
1½ VOLTS

SPECIAL
EVEREADY
ENERGIZER
ELECTRONIC APPLICATIONS
PATENTED
1½ VOLTS
No. 635

SPECIAL
EVEREADY
ENERGIZER
ELECTRONIC APPLICATIONS
PATENTED
No. A100
1½ VOLTS

No. 216
9 VOLTS

No. 226
EVEREADY
ENERGIZER
TRANSISTOR RADIO
No. 226
9 VOLTS

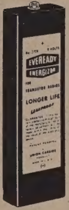

No. 266 NEDA 1605
EVEREADY
ENERGIZER
TRANSISTOR RADIO
No. 266
9 VOLTS

EVEREADY
ENERGIZER
No. 276
9 VOLTS

No. E9*
1.4 VOLTS

No. E233
EVEREADY
MERCURY TYPE
ENERGIZER
No. 233*
4.2 VOLTS
*Mercury

CATHODIC ENVELOPE BATTERIES
for Transistor Radios


2709
9 VOLTS

2713
6 VOLTS

EVEREADY
ENERGIZER
with built-in LONGER LIFE
Guaranteed LEAKPROOF
UNION CARBIDE
2356
9 VOLTS

ALKALINE ENERGIZER BATTERIES
for portable TV, Transistor Radio, and Mechanical power Applications

E91
1.5 VOLTS

EVEREADY
Alkaline Energizer
E95
1.5 VOLTS

No. 560 7.5 Volts
EVEREADY
ALKALINE BATTERY
Rechargeable
SERIES NO. 1
560
7.5 VOLTS

SEALED RECHARGEABLE NICKEL CADMIUM BATTERIES

N24
1.25 VOLTS

No. N24
EVEREADY

EVEREADY
Nickel Cadmium
RECHARGEABLE
N73
1.25 VOLTS

EVEREADY
Nickel Cadmium
N46
1.25 VOLTS

PORTABLE "B" TYPES

67½ VOLTS
No. 477

90 VOLTS
No. 479

45 VOLTS
No. 415

EVEREADY
"NINE LIVES"
RADIO B BATTERY
67½ VOLTS
No. 467

PORTABLE "A" TYPES

EVEREADY
"NINE LIVES"
RADIO "A" BATTERY
No. 707
7½ VOLTS

7½ VOLTS
No. 717

1½ VOLTS
No. 964

LANTERN BATTERIES

No. 520
New
6-Volt
alkaline
battery.

EVEREADY BATTERY
No. 731
6 VOLTS

EVEREADY
NINE LIVES
Weatherproof LANTERN BATTERY
No. 509
6 VOLTS
No. 510S
Screw Terminals
No. 510F
Fahnestock

DRY CELL

No. 6 · 1½ Volts
EVEREADY
IGNITOR
General Purpose
DRY CELL
1½ VOLTS
No. 6 IGNITOR

HOT-SHOT BATTERY

EVEREADY
Weatherproof
HOT SHOT
For Electric Fence Controllers
Ignition · Alarms · Lighting
6 VOLTS No. 1461
1462 6 VOLTS
1562 7½ VOLTS
1662 9 VOLTS

EMERGENCY LIGHTING

EVEREADY
Weatherproof
MULTIPLE BATTERY
FOR EMERGENCY LIGHTS, PORTABLE LIGHTS, IGNITION, ETC.
No. 715 7½ Volts
No. 706 6 Volts
No. 716 9 Volts

(Use Index Page 1 for Quick, Easy Location of ALL Products)

EVEREADY TRADE-MARK

COMPLETE LINE SPECIFICATIONS

EVEREADY TRADE-MARK

"Eveready" Battery Number	NEDA Number	Overall Dimensions in Inches L W H	Terminals & Voltages	Battery Weight lbs.	Battery Weight ozs.	Unit Pkg. Quan.	List Price Each	* Major Use
E1		0.625 Diam. x 0.650	Flat Contact—, +1.35		0.43	4	$ 0.58	Meters, Instruments, Signal Lights, Miniature Radios
E3		0.985 Diam. x 0.660	Flat Contact—, +1.35		0.93	4	0.80	
E4		1.195 Diam. x 0.660	Flat Contact—, +1.35		1.6	4	1.05	
No. 6 "Ignitor" Gen. Purpose	905 914	2⅝ Diam. x 6⅝	**Screw—, +1½	2	2	12	1.25	Ignition, Lighting
No. 6 "Gray Label" Telephone	906	2⅝ Diam. x 6⅝	***Fahnestock—, +1½	2	2	12	1.25	Telephone
No. 6 Railroad & Industrial	911	2⅝ Diam. x 6⅝	**Screw—, +1½	2	2	12	1.35	Ignition, Telephone
E9	15A	0.550 Diam. x 1.968	Flat Contact—, +1.40		1.05	2	0.75	Transistor Applications
E9N		0.550 Diam. x 1.968	Flat Contact—, +1.40		1.05	2	0.80	Transistor Radio
E12		0.640 Diam. x 1.968	Flat Contact—, +1.35		1.4	2	1.25	Instruments, Miscellaneous
N24		0.61 Diam. x 0.235	Flat Contact—, +1.25		0.12	1	1.00	Instruments, Hobby, Transistor Applications, Miscellaneous
N26		0.988 Diam. x 0.230	Flat Contact—, +1.25		0.32	1	1.10	
N26T		0.988 Diam. x 0.230 (plus tabs)	Solder Tabs—, +1.25		0.32	1	1.20	
N28		0.988 Diam. x 0.252	Flat Contact—, +1.25		0.4	1	1.15	
N28T		0.988 Diam. x 0.252 (plus tabs)	Solder Tabs—, +1.25		0.4	1	1.25	
N32		0.988 Diam. x 0.343	Flat Contact—, +1.25		0.44	1	1.20	
N32T		0.988 Diam. x 0.343 (plus tabs)	Solder Tabs—, +1.25		0.44	1	1.30	
N36		1.697 Diam. x 0.286	Flat Contact—, +1.25		1.16	1	2.10	
N36T		1.697 Diam. x 0.286 (plus tabs)	Solder Tabs—, +1.25		1.16	1	2.20	
E42		1-9/32 Diam. x 2.390	Flat Contact—, +1.35		5.85	1	3.15	Instruments
N45		17/32 Diam. x 1-31/32	Solder Tabs—, +1.25		0.8	1	3.00	
N46		17/32 Diam. x 1-31/32	Flat Contact—, +1.25		0.8	1	2.75	
N52		17/32 Diam. x 3-35/64	Solder Tabs—, +1.25		1.4	1	4.55	
N67		1-15/32 x 1-15/32 x 3-25/32	Wire Leads—, +6		8.3	1	26.40	Instruments, Hobby, Transistor Applications, Miscellaneous
N70		3-53/64 x 1-35/64 x 3⅝	Wire Leads—, +6	1	12	1	42.30	
N73		1-23/64 x 1-23/64 x 2-13/32	Nut & Stud; Tab—, +1.25		5.9	1	8.65	
N74		1-23/64 x 1-23/64 x 3-25/64	Nut & Stud; Tab—, +1.25		9.2	1	10.15	
N75		1-23/32 x 2 x 3-5/32	Nut & Stud—, +1.25		12.3	1	13.35	
N76		1-23/32 x 2 x 3-45/64	Nut & Stud—, +1.25		15.2	1	14.60	
N77		1-23/32 x 2 x 4-¼	Nut & Stud—, +1.25	1	1.6	1	15.95	
N79		1-1/16 x 3-37/64 x 4-15/16	Nut & Stud—, +1.25	1	12	1	19.70	
N81		1-25/64 x 3-37/64 x 4-15/16	Nut & Stud—, +1.25	2	2.9	1	23.95	
N83		1-45/64 x 3-37/64 x 4-15/16	Nut & Stud—, +1.25	2	9.6	1	28.45	
N85		2-1/64 x 3-37/64 x 4-15/16	Nut & Stud—, +1.25	3	1.6	1	32.75	
F91	15	9/16 Diam. x 1 31/32	Flat Contact—, +1½		1.8	12	0.50	Portable Radio
E94		1-11/32 Diam. x 1-7/32	Flat Contact—, +1½		1.8	12	0.50	Electronic Photoflash Communication Equipment
E95		1-11/32 Diam. x 2-13/32	Flat Contact—, +1½		4.1	12	0.75	
E97S		1-11/32 Diam. x 5-7/32	Ins. Screw—, +1½		9	12	1.10	Hobby
†D99		1-11/32 Diam. x 2-13/32	Flat Contact—, +1½		3.3	48	0.25	Flashlight, Toys
A100	13	1-11/32 Diam. x 2-13/32	Flat Contact—, +1½		3.3	48	0.25	Portable Radio "A", Transistor
E132		0.662 Diam. x 1.315	Flat Contact—, +2.70		0.9	2	1.25	Transistor Applications
E133		0.662 Diam. x 1.965	Flat Contact—, +4.20		1.4	2	1.75	Transistor Applications
E134		0.662 Diam. x 2.620	Flat Contact—, +5.40		1.9	2	2.25	Transistor Applications
E146		1-1/32 x ⅝ x 2	Min.Snap—, +8.40		1.6	12	2.25	Transistor Radio
E163		0.662 Diam. x 1.327	Flat Contact—, +4.20		0.87	2	1.60	Transistor Applications
E164		0.662 Diam. x 1.767	Flat Contact—, +5.60		1.16	2	2.00	Transistor Applications
E165		0.662 Diam. x 2.217	Flat Contact—, +7.00		1.45	2	2.45	Transistor Applications
E177	1606	35/64 Diam. x 1-29/32	Min. Snap—, +9.8		0.67	1	1.95	Transistor Radio
216	1604	1-1/32 x 11/16 x 1-29/32	Min. Snap—, +9		1.3	1	1.35	Transistor Radio
226	1600	1 Diam. x 1-15/16	Snap Type—, +9		2.0	1	1.35	Transistor Radio
E233	1300	1-1/64 Diam. x 1-31/32	Flat Contact—, +4.20		3	1	2.65	Transistor Radio
239	1900	1-21/64 x 1-1/32 x 2-11/16	Socket—, +9, +13-½		3	1	1.50	Transistor Radio
243	1610	1-13/32 x 1-11/32 x 2¾	Min. Snap—, +4½		4.5	1	1.70	Transistor Radio
246	1602	1-13/32 x 1-11/32 x 2¾	Min. Snap—, +9		4.5	1	1.85	Transistor Radio
266	1605	1-13/16 x 1-13/16 x 2-7/16	Snap Type—, +9		7	1	1.50	Transistor Radio
274	1400	2-9/16 x 2-1/32 x 7-29/32	Snap Type—, +6	2	7	1	4.75	Transistor Radio
276	1603	2-9/16 x 2-1/32 x 3-5/32	Snap Type—, +9		15	1	1.80	Transistor Radio
W-350	711	3-1/32 x 1⅞ x 4-31/32	Ins. Screw—, +22½, +45		14.5	5	3.85	Radio, Transceivers, Instruments
W-351		3⅝ x 2¼ x 3-11/16	Screw—, +22½, +45	1	5.5	1	7.55	Radio, Transceivers, Instruments
W-352	701	2-21/32 x 1-11/32 x 4-9/16	Ins. Screw—, +3		12.5	5	1.25	Electronic Devices, Instruments
W-353	11	2-19/32 x 1⅜ x 4¼	Socket—, +1½		12.5	1	1.10	Portable Radio
W-354	700	2-21/32 x 1-11/32 x 4⅜	Screw—, +1½		12.2	5	1.25	Instruments
W-355	*	1-9/16 x 13/16 x 2-15/16	Screw—, +1½		3	5	1.65	Instruments
W-356		2⅝ x 2⅝ x 4-9/16	Ins. Screw—, +3	1	6	5	1.55	Radio and Electric Devices
W-357	901	3⅞ x 2-11/16 x 5-13/16	Fahnestock—, +3	2	12	1	2.05	Model Ignition, Telephone
W-358		2-15/16 x 1-3/16 x 4⅛	Ins. Screw—, +45		8.75	1	3.55	Industrial
W-359	206	3-9/16 x 2¼ x 4½	Socket—, +45	1	11.8	1	3.55	Portable "B"
W-360	10	2-9/16 x 2-9/16 x 4-1/32	Socket—, +7½	1	3	3	1.90	Portable "A"
W-361	227	1-11/32 x 1-11/32 x 11-23/32	Flat Contacts—, +103½	1	4	1	6.57	Portable "B"
W-362		2-15/16 x 11/16 x 1¾	Screw+, —4½, —7½		1.5	1	2.10	Radio "C"
▲W-363F	*	8-1/32 x 4-1/16 x 7⅝	Fahnestock—, +22½, +45	10	5	1	6.90	Heavy Duty Radio "B"
▲W-364F	*	8⅛ x 4-7/16 x 7-11/16	Fahnestock—, +22½, +45	11	14	1	7.65	Heavy Duty Radio "B"
▲W-365F	723	8-1/16 x 2-15/16 x 7⅝	Fahnestock—, +22½, +45	7	7.5	1	5.50	Industrial "B"
W-366	407	9-1/32 x 2-1/32 x 4-23/32	Socket—"A", +1½ "A", —"B", +63 "B"	4	4	1	8.80	Portable Radio "A-B"
W-367	408	9⅛ x 2¾ x 4-7/16	Socket—"A", +7½ "A", —"B", +63 "B"	4	5	1	9.20	Portable Radio "A-B"
W-368	*	9-1/32 x 2-23/32 x 3-9/16	Recessed Plug—"A", +6 "A", —"B", +75 "B"	4		1	9.50	Portable Radio "A-B"
W-369	410	9-15/16 x 2-¼ x 4-23/32	Socket—"A", +1½ "A", —"B", +90 "B"	4	5	1	7.85	Portable Radio "A-B"
W-370	*	2-13/32 x 1-11/32 x 7-5/32	Socket—"A", +1½ "A", —"B", +60 "B"	1	1.5	1	5.85	Portable Radio "A-B"
W-371		1-5/32 x 1-5/32 x 2-9/16	Socket (including plug)—, +3		2.2	12	0.95	Model Ignition
E400		0.455 Diam. x 0.135	Flat Contact—, +1.35		0.04	6	0.36	Transistor Applications
E401		0.470 Diam. x 1.130	Flat Contact—, +1.35		0.4	2	0.52	Transistor Applications
411	208	1-1/32 x ⅝ x 1-29/64	Flat Contact—, +15		0.8	1	1.15	Pocket Radio "B", Instruments
412	215	1-1/32 x ⅝ x 2	Flat Contact—, +22½		1.2	1	1.50	Pocket Radio "B", Instruments
413	210	1-1/32 x ⅝ x 2-9/16	Flat Contact—, +30		1.4	1	1.75	Pocket Radio "B", Instruments
415	213	1-3/64 x ⅝ x 3-11/16	Min. Snap—, +45		2.5	1	2.50	Pocket Radio "B"
416	217	1-21/64 x 63/64 x 3½	Min. Snap—, +67½		4	1	2.95	Portable Radio "B"
417	224	1-5/16 x 31/32 x 1-9/16	Flat Contact—, +15		1.8	6	1.65	Pocket Radio "B", Instruments
420	225	1-5/16 x 31/32 x 2-3/16	Flat Contact—, +22½		2.5	6	1.75	Pocket Radio "B", Instruments
425P		1-23/64 x 1-1/32 x 3-15/16	Socket—, +22½		4.1	1	1.95	Instruments
430	*	1-5/16 x 1 x 2-13/16	Flat Contacts—, +30		3.2	1	2.15	Pocket Radio "B", Instruments
430P		1-23/64 x 1-1/32 x 3-11/32	Socket—, +30		3.2	1	2.15	Instruments
433P		2-21/32 x 1-1/64 x 3-1/16	Socket—, +33		6	1	2.45	Instruments
437	212	1-15/16 x 1-15/32 x 6-15/32	Snap Type—, +75		14.8	3	4.50	Portable Radio "B"
455	*	2-21/32 x 1 x 3-11/16	Snap Type—, +45		7.8	6	2.95	Portable Radio "B"
455P		2-21/32 x 1-1/64 x 3-29/32	Socket—, +45		8.6	1	3.00	Instruments
457	203	2-13/16 x 1⅜ x 2½	Snap Type—, +67½		7.4	6	3.45	Portable Radio "B"
467	200	2-13/16 x 1⅜ x 3-45/64	Snap Type—, +67½		12	6	3.50	Portable Radio "B"
477	211	1-29/32 x 63/64 x 5-7/16	Snap Type—, +67½		8.6	6	3.10	Portable Radio "B"
479	214	1-31/32 x 1-1/32 x 7-15/32	Snap Type—, +90		12	6	3.95	Portable Radio "B"
482	202	3-19/32 x 1-27/32 x 5½	Socket—, +45	1	15	6	3.85	Portable Radio "B"
484	207	3-31/32 x 2-17/32 x 5-5/16	Socket—, +45	3	2	1	4.70	Fluorescent Lantern
487		5⅛ x 2-1/16 x 7¼	Socket—, +22½, +45	4	2	6	4.95	Farm Radio "B"
489		4-11/32 x 2-11/16 x 4-3/16	Socket—, +225	2	12	1	9.95	Electronic Photoflash
490	204	3-23/32 x 1⅜ x 3-45/64	Snap Type—, +90		15	6	4.50	Portable Radio "B"
491		2-19/32 x 1-5/16 x 4½	Flat Recessed & Socket—, +240		13	1	7.95	Electronic Photoflash
492		3-9/16 x 2-29/32 x 4-29/32	Socket—, +180, +225	2	8	1	8.75	Electronic Photoflash
493	722	2-11/16 x 2-7/32 x 3-29/32	Pinjacks—, +300		14.5	1	11.95	Geiger Counter
495	*	1-15/16 x 1-15/32 x 7⅛	Snap Type—, +90	1		1	4.95	Portable Radio "B"

"Eveready" Battery Number	NEDA Number	Overall Dimensions in Inches L W H	Terminals & Voltages	Battery Weight lbs.	Battery Weight ozs.	Unit Pkg. Quan.	List Price Each	Major Use
497		3 x 1-19/32 x 5⅝	Flat Recessed—, +180, +510	1	10	1	$15.95	Electronic Photoflash
E502		0.550 Diam. x 1.968	Flat Contact—, +1.35	—	1.05	2	0.95	Transistor Applications
504	220	⅝ x 19/32 x 1⅜	Flat Contact—, +15	—	0.6	1	1.15	Pocket Radio "B", Instruments
505	221	⅝ x 19/32 x 1-63/64	Flat Recessed—, +22½	—	0.6	1	1.50	Pocket Radio "B", Instruments
506	223	1-13/64 x ⅝ x 1-27/64	Flat Contact—, +30	—	0.9	1	1.85	Pocket Radio "B", Instruments
507	222	⅝ x 19/32 x 2.605	Flat Contact—, +30	—	0.9	1	1.85	Pocket Radio "B", Instruments
509	908	2-11/16 x 2-11/16 x 4-7/16	Coil Springs—, +6	1	5	1	1.19	Lanterns
510F	917	2-11/16 x 2-11/16 x 4-9/32	Fahnestock—, +6	1	5	1	1.19	Miscellaneous
510S	*	2-11/16 x 2-11/16 x 4-5/32	Screw—, +6	1	5	1	1.19	Miscellaneous
520		5-17/32 x 4-21/32 x 2-21/32	Ins. Screw—, +6	2	8	1	4.50	Lantern
E520		0.495 Diam. x 0.286	Flat Contact—, +1.40	—	0.07	6	0.22	Transistor Applications
560		2-21/32 x 1-17/32 x 7-5/32	Socket—, +7½	1	10	1	5.25	Portable Television
621		2-9/16 Diam. x 13	Screw—, +3	4	10	12	3.90	Fishing Buoy
E625		0.615 Diam. x 0.238	Flat Contact—, +1.35	—	0.14	4	0.45	Transistor Applications
E630		0.615 Diam. x 0.238	Flat Contact—, +1.35	—	0.17	4	0.42	Transistor Radio
635	14	1-1/32 Diam. x 1-15/16	Flat Contact—, +1½	—	1.4	12	0.25	Portable Radio "A" Transistor
E640		0.625 Diam. x 0.440	Flat Contact—, +1.40	—	0.38	4	0.47	Transistor Applications
702		2-17/32 x ⅞ x 3⅛	Socket—, +4½	—	5	1	1.40	Shot Firing
703	*	2-7/16 x 27/32 x 3-1/16	Spring—, +4½	—	5	1	1.02	Instruments
704		2-11/16 x 1-11/32 x 4⅜	Socket—, +3	—	11.8	1	1.70	Shot Firing
706	902	8-5/16 x 2-13/16 x 6-7/16	Ins. Screw—, +6	5	14	1	5.98	Ignition, Emergency Lighting
707	26	2-9/16 x 2-1/32 x 2-13/16	Snap Type—, +7½	—	12	1	1.50	Portable Radio "A"
708		2⅝ x 2¾ x 4-13/16	Socket—, +22½	1	11	1	3.80	Shot Firing
713	8	3-29/32 x 53/64 x 2-27/32	Socket—, +7½	—	6.3	1	2.25	Portable Radio "A"
714		3-31/32 x 1-11/32 x 3½	Screw—, +4½	—	14.5	1	1.55	Telephone Test Sets
715	903	7¼ x 4-1/16 x 6-7/16	Ins. Screw—, +7½	7	10	1	7.25	Ignition, Emergency Lighting
716	*	8-37/64 x 4-1/16 x 6-7/16	Ins. Screw—, +9	8	8	1	8.25	Ignition, Emergency Lighting
717	9	2-5/32 x 1-15/16 x 3-1/32	Socket—, +7½	—	8	6	1.50	Portable Radio "A"
††718	1	3-29/32 x 2¾ x 5-7/16	Socket—, +6	2	4	1	3.90	Portable Radio "A"
720	18	2-25/32 x 1-13/32 x 3-1/32	Socket—, +1½	—	6.5	6	1.20	Portable Radio "A"
724	2	1-7/32 x 1-7/32 x 2-11/32	Flat Contact—, +6	—	2.5	1	1.00	Portable Radio "A"
726	19	4-3/32 x 1-7/16 x 2-15/16	Socket—, +4½	—	10.5	6	1.35	Portable Radio "A"
727	428	8⅞ x 2⅛ x 3-25/32	Recessed Plug—"A", +9 "A", —"B", +90 "B"	2	14	1	7.45	Portable Radio "A-B"
††729	*	3-27/32 x 2-7/32 x 7-13/16	Socket—"A", +1½ "A", —"B", +90 "B"	2	7	1	6.25	Portable Radio "A-B"
731	918	5-11/32 x 2-27/32 x 4-15/16	Ins. Screw—, +6	3	4	1	2.75	Lantern
735	900	2⅝ x 2⅝ x 4-9/32	Screw—, +1½	1	4	12	1.25	Model Ignition "Glo-Plug"
736	3	3-15/16 x 1-5/16 x 4-3/32	Socket—, +4½	1		6	1.35	Portable Radio "A"
738	205	3 x 2-5/16 x 4⅛	Socket—, +22½, +45	1	8	1	3.95	Portable Radio "B"
††740	719	4-19/32 x 3⅞ x 7¾	Socket—, +1½	6		1	9.85	Farm Radio "A"
††741	17	3⅞ x 2-11/16 x 5⅜	Socket—, +1½	2	10	1	3.45	Portable Radio "A"
742	4	2-9/16 x 2-9/16 x 3-31/32	Socket—, +1½	1	5	6	1.65	Portable Radio "A"
††743	5	3-13/16 x 2⅝ x 4-1/32	Socket—, +1½	1	15	3	2.75	Portable Radio "A"
744	*	2-21/32 x 2-21/32 x 3-31/32	Socket—, +6	1	5	6	1.65	Portable Radio "A"
746	7	3-15/16 x 1-5/16 x 4-21/32	Socket—, +4½	1	3	6	1.50	Portable Radio "A"
750	*	1-11/32 x 11/16 x 2-21/32	Spring—, +3	—	2	10	0.85	Instruments
751	705	2 x 11/16 x 2-21/32	Spring—, +4½	—	3	10	1.00	Instruments
752	400	14-1/16 x 2-11/16 x 4-1/16	Recessed Plug—"A", +9 "A", —"B", +90 "B"	6	2	1	8.25	Portable Radio "A-B"
752W	*	14-1/16 x 2-11/16 x 4-1/16	Recessed Plug—"A", +9 "A", —"B", +90 "B", —, +1½	6	8	1	9.25	Portable Radio "A-B"
753	401	9-7/32 x 2-23/32 x 4-5/16	Socket—"A", +7½ "A", +9 "A", —"B", +90 "B"	4	12	1	7.75	Portable Radio "A-B"
754	402	10-15/32 x 3¼ x 4	Socket—"A", +7½ "A", +9 "A", —"B", +90 "B"	6	1	1	9.45	Portable Radio "A-B"
755	403	8-9/16 x 3¾ x 2-7/16	Socket—"A", +6 "A", +7½ "A", —"B", +75 "B"	3	9	1	7.25	Portable Radio "A-B"
756	*	8⅞ x 2⅛ x 3-25/32	Socket—"A", +7½ "A", +9 "A", —"B", +90 "B"	2	14	1	6.95	Portable Radio "A-B"
757	406	9-7/32 x 2-23/32 x 4-7/32	Recessed Plug—"A", +9 "A", —"B", +90 "B"	4	12	1	7.95	Portable Radio "A-B"
759	*	15-11/16 x 4-1/32 x 6-15/16	Socket—"A", +1½ "A", —"B", +90 "B"	16	4	1	10.65	Farm Radio "A-B"
760		2-7/16 x 27/32 x 2-19/32	Wire Leads—, +4½	—	4.5	6	1.45	Telephone
761T	712	4-1/16 x 1-15/32 x 3½	Screw—, +1½, +3, +4½	—	14	5	1.90	Telephone Test Sets
762S	709	4-3/32 x 2-9/16 x 5-7/16	Ins. Screw—, +22½, +45	2	12	1	4.35	Instruments
763	710	3½ x 2-3/32 x 2-15/16	Screw—, +22½	—	14	1	2.35	Instruments
766T	*	6¾ x 4⅛ x 3-15/16	Fahnestock—, +16½, +18, +19½, +21, +22½	4	10	6	6.25	Switchboard Testing
768	721	4⅛ x 2-17/32 x 2-31/32	Socket+, —3, —4½, —16½, —22½	1	8.5	1	4.45	General Purpose
771	*	3-29/32 x 1⅜ x 3-1/16	Socket+, —3, —4½	—	13	5	2.25	Radio "C"
773	*	3-29/32 x ⅞ x 3⅛	5 Screw; 1 wire+, —1½, —3, —4½, —6, —7½	—	9	5	2.35	Radio "C"
774		4-1/32 x 1-13/32 x 3	Socket+, —7½	—	8.5	5	3.75	Instruments
776	*	7-27/32 x 4⅛ x 9⅞	Socket & Recessed Plug—"A", +7½ "A", +9 "A", —"B", +90 "B"	14	12	1	14.95	Home Receiver "A-B"
778	*	4⅛ x 2-17/32 x 3-7/16	Fahnestock+, —3, —4½ —6, —9, —10½, —16½, —22½	1	8	4	4.45	Instruments
781	*	2-15/32 x 55/64 x 3¼	Screw+, —4½	—	5	5	1.25	Instruments
785	431	8⅜ x 3⅝ x 2¼	Socket—"A", +7½ "A", —"B", +75 "B"	2	12	1	6.90	Portable Radio "A-B"
789		5-9/32 x 1-7/16 x 3¼	Flat—, +3	1	1.5	1	2.55	Finger Print Camera
799		8-5/32 x 4¼ x 8-19/32	Fahnestock—, +22½, +45, +49½	13	5	6	11.95	Camera Cranking
†904	910	0.445 Diam. x 1.180	Flat Contact—, +1½	—	0.22	24	0.125	Flashlight, Novelties
†912	24	13/32 Diam. x 1¾	Flat Contact—, +1½	—	0.3	12	0.15	Flashlight, Toys
†915		9/16 Diam. x 1-31/32	Flat Contact—, +1½	—	0.6	24	0.20	Flashlight, Toys
†935		1-1/32 Diam. x 1-15/16	Flat Contact—, +1½	—	1.4	12	0.20	Flashlight, Toys
†950		1-11/32 Diam. x 2-13/32	Flat Contact—, +1½	—	3	48	0.20	Flashlight, Toys
960P	23	1-11/32 Diam. x 4-1/16	Socket—, +1½	—	5	1	0.85	Portable Radio "A"
964	20	1-11/32 Diam. x 4-3/16	Flat Contact—, +1½	—	5.9	12	0.45	Portable Radio "A"
1015	15	9/16 Diam. x 1-31/32	Flat Contact—, +1½	—	0.6	24	0.25	Transistor Portable
1016		1-9/64 x 19/32 x 2-1/64	Flat Contact—, +1½	—	1.1	24	0.45	Pocket Radio "A"
1461	907	10-13/32 x 2-25/32 x 7-9/32	Ins. Screw—, +6	9	9	4	4.98	Ignition, Fence Controllers
1462		5⅜ x 5⅜ x 7¼	Ins. Screw—, +6	9	7	4	5.98	Ignition, Fence Controllers
1562	*	7-15/16 x 5 x 7½	Ins. Screw—, +7½	11	10	4	7.25	Ignition, Searchlights
1662	913	7-27/32 x 5-9/32 x 7-9/32	Ins. Screw—, +9	14	1	4	8.25	Ignition, Searchlights
2314	2400	1-21/64 x 1-1/32 x 2⅞	Socket+, —12, —21	—	3	1	2.25	Transistor Portable
2356	1612	2-9/32 x 1¼ x 6¼	Snap Type—, +9	1	1	1	1.60	Transistor Radio
2506	1601	8 x 2-13/16 x 1-9/16	Socket—, +3, +6, +9	1	8	1	2.50	Transistor Portable
2709	1613	1-13/32 x 47/64 x 4-11/16	Snap Type—, +9	—	4.5	1	1.50	Transistor Portable
2713	1403	1-13/32 x 47/64 x 4-11/16	Min. Snap—, +6	—	4	1	1.00	Transistor Portable
2731	1303	2-13/16 x 1¾ x 8-11/32	Socket—, +4½	3		1	2.75	Transistor Radio
2744	920	2-21/32 x 2-21/32 x 3⅞	Socket—, +6	1	14	1	1.60	Barricade Flasher, Miscellaneous
2745	924	2-21/32 x 2-21/32 x 4-7/16	Coil Springs—, +6	1	14	1	1.60	Barricade Flasher, Lantern
2746	925	2-21/32 x 2-21/32 x 4¼	Screw—, +6	1	14	1	1.60	Lighting, Miscellaneous
2761	1608	2-9/32 x 1¼ x 7-31/32	Socket—, +9	1	9	1	2.25	Transistor Portable
2762	1609	2-13/16 x 1¾ x 8-11/42	Socket—, +9	3		1	2.75	Transistor Radio
2780	923	5-11/32 x 2-27/32 x 4-5/32	Socket—, +12	3	8	1	3.40	Barricade Flasher, Miscellaneous
E302157		2½ x 1⅜ x 4¼	Socket—, +1.35	—	13.5	1	15.50	Radio Activity Detection Device
E302158		3¼ x 1⅜ x 4¼	Socket—, +47.25, +22.95, +2.70, +5.40	1	3	1	37.00	Radio Activity Detection Device
E302351		1-1/16 Diam. x 2⅝	Flat Contact—, +5.40	—	4.5	1	4.10	Indicator
E302478		1-9/32 Diam. x 3⅝	Flat Contact—, +9.80	—	9	1	6.60	Wire Recorder
E302642		1-9/32 Diam. x 2⅝	Flat Contact—, +7.00	—	5	1	5.25	Fire Alarm

*NED A number same as an "Eveready" battery number on a different battery. Omitted to prevent errors in shipping

**Equipped with screw terminals unless Fahnestock spring terminals are specified.

***Equipped with Fahnestock spring terminals unless screw terminals are specified.

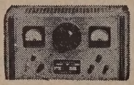
▲Furnished with Fahnestock spring terminals. If socket terminals required, specify W-363P, W-364P, W-365P.

†Flashlight types.

††Shipped from factory only.

DC POWER SUPPLIES SILICON & SELENIUM RECTIFIERS

SILICON POWER RECTIFIER



For transistor circuits & electronic equipment
MODEL G92F

INPUT: 115 volts AC 60 cycles, 1 phase
OUTPUT: 0-30. Volts DC, 0-10 Amperes D.C. continuous duty
REGULATION: No load to full load 15%
RIPPLE: Less than 0.5% RMS
METERS: 2% Accuracy

PRICE: $145.00 NET

*Also available in 5 Amperes
PRICE: $95.00 NET

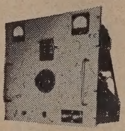
INDUSTRIAL POWER UNITS

MODEL A10

INPUT 115 or 230 AC Volts, 60 cycles—Single Phase.
DC OUTPUT 115 Volts DC 125 Watts
APPLICATION: Power sources for operating DC Motors, Relays, Solenoids, Magnetic Chucks.
DIMENSIONS: 11″ H x 9″ W x 6½″ D

PRICE $63.00 NET

SILICON INDUSTRIAL POWER UNIT

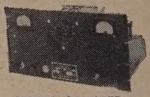


MODEL #G30-40F

INPUT: 115 or 230 Volts AC, 60 cycles, single phase
OUTPUT: 0-32 Volts DC, 0-40 Amperes DC, continuous duty
RIPPLE: 1% RMS
DIMENSIONS: 12¼″Hx19″Wx13″D
REGULATION: D.C.V. at full load: 32 minimum D.C.V. at 1/10 load: 35 maximum

PRICE $325.00

SILICON POWER RECTIFIER

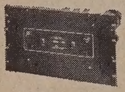


MODEL G30.10FR

INPUT: 115 Volts AC, 60 Cycles, Single Phase
OUTPUT: 0-30 Volts DC, 0-10 Amperes, continuous duty
CONTROL: Continuously variable over entire range
REGULATION: 7% No Load to Full Load
RIPPLE: 0.2% RMS
METERS: 2% Accuracy
DIMENSIONS: 19″Wx13″Dx10½″H

PRICE: $175.00 NET

SILICON RACK MOUNT SUPPLY

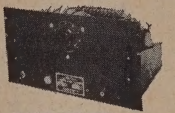


MODEL #GX30-10

INPUT: 115 Volts AC 60 Cycles, Single Phase
OUTPUT: 30 Volts DC 0-10 Amperes Continuous Duty
REGULATION: 10% No Load to Full Load
RIPPLE: Below 0.5% RMS
DIMENSIONS: 8¾″ H x 19″ W x 10″ D

PRICE: $125.00 NET

SELENIUM POWER SUPPLY



MODEL G48-6FM

INPUT: 115 Volts AC 60 Cycles—Single Phase
OUTPUT: 0-48 Volts DC, 0-6 Amperes
CONTROL: Continuously variable over entire range
RIPPLE: 1% RMS
DIMENSIONS: 19″ W x 13″ D x 10½″ H, Fits RETMA, Western Electric racks

PRICE: $190.00 NET

AIRCRAFT BATTERY ELIMINATOR

MODEL #G101F

INPUT: 115 Volts AC 60 cycles, single phase
OUTPUT: 0-30 Volts DC, 0-20 Amperes, continuous duty
RIPPLE: 0.5% RMS
Unique overload device prevents needle slam and shows overload condition
REGULATION: D.C.V. at full load: 30
D.C.V. at 1/10 load: 35
METERS: 2% Accuracy

PRICE: $200.00 NET
PRICE: $185.00 LESS DUST COVER
May be used for Rack or Bench

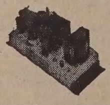
SILICON POWER SUPPLY

MODEL #GS 14-15F

INPUT: 115 Volts AC, 1 Phase, 60 cycles
OUTPUT: 0-14 Volts DC, 0-15 Amperes, continuous duty
RIPPLE: Less than 1% RMS
METER ACCURACY: 2%
DIMENSIONS: 9″ H x 17½″ W x 9″ D

PRICE: $125.00 NET

SELENIUM POWER SUPPLY

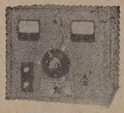


MODEL GX 30-5

INPUT: 115 Volts AC 60 cycles, single phase
OUTPUT: 30 Volts DC, 0-5 Amperes, DC Continuous Duty
REGULATION: 12% No Load to Full Load
RIPPLE: Below 1% RMS
DIMENSIONS: 7″ W x 15″ L x Overall Height 10″

PRICE: $70.00 NET

SILICON GENERAL PURPOSE RECTIFIER

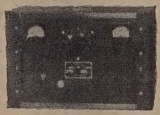


MODEL G-115

INPUT: 115 or 220 Volts AC 60 cycles, 1 Phase
OUTPUT: 0-32 Volts DC, 0-50 Amperes DC, Continuous duty variable over entire range
RIPPLE: 1% RMS
DIMENSIONS: 22″H x 19″W x 15″D

PRICE: $375.00 NET

DC POWER SUPPLY



MODEL G94F

INPUT: 115 Volts AC 60 cycles, 1 Phase
OUTPUT: 0-300 Volts DC Continuous Variable 0-1 Amperes, DC
RIPPLE: 100 MV RMS
DIMENSIONS: Rack 8¾″ H x 19″ L x 9½″ D
CABINET: 10½″Hx22″Lx12″D

PRICE: $240.00

SILICON POWER SUPPLY

MODEL GX30-20

INPUT: 115 Volts, 1 Phase, 60 cycles
OUTPUT: 0-34, Volts, DC
0-20 Amperes, continuous duty
REGULATION: No load to full load: 18%
RIPPLE: Below 1%
Silicon Rectifiers, High Efficiency
DIMENSIONS: 10″ x 17″ x 3″

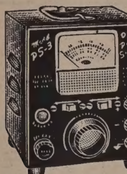
PRICE: $185.00 NET

GATES ELECTRONIC CO.

NEW YORK 60, N. Y.

Electro CHICAGO DC Power Supplies Rated Best by Test!

Regulated Transistorized Model "PS-3" for Transistor Circuit Work

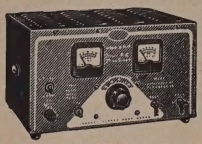


MODEL "PS-3"

Regulated low voltage DC power supply utilizing solid state circuitry throughout for extremely low ripple and dual-range output. Utilizes 2% D'Arsenval meter calibrated for three ranges. Zener diode reference in multi-transistor regulating circuit. "Floating" output terminals in addition to chassis terminal permit use of chassis as either positive or negative ground. Terminals use standard ¾" spacing. Can't be damaged by heavy overloads or short-circuits. Useful in design and servicing transistorized circuitry due to excellent transient response. Voltage remains essentially constant regardless of load (within ratings) at any output voltage setting; and regardless of AC supply voltage fluctuations. On-off switch combined with voltage adjustment; six-way binding posts; primary circuit fuse; neon pilot light; convenient meter range switches; 6 ft. line cord; gray wrinkle-finish steel; carrying handle; rubber feet. For 110-130 v. AC. 60 cps. Output voltage: 0-25 v. DC. Output current: 0-200 ma. 0-15 v.; 0-100 ma. 0-25 v. Ripple voltage: Less than 1 mv rms for all conditions of rated operation. Less than ½ mv for AC line voltage between 115 and 120 v. Regulation: 500 mv maximum for rated conditions. Ambient temperature: Operation at full load, up to 105° F. Size: 6¼" x 5" x 6". Shipping weight 5 lbs.

"PS-3"—Net... $\$69^{50}$

"D-612T" for Transistor/Tube-Vibrator Auto Radio Servicing



MODELS "D-612T," "H"

For servicing transistor auto sets 6/12 v. tube-vibrator types and transistor personal sets. Two ranges, both continuously variable; 0-16 v. and 0-8 v. Less than 0.5% ripple up to 5 amps. (a must for transistor servicing). Less than 2% ripple at 10 amps. Choke-input filter circuit; four bridge-type selenium rectifiers. Two panel meters provide constant check on output voltage and current. On-off switch and 0-8 and 0-16 v. selector switch. Fuse holder on panel. EPL patented conduction cooling provides large margin of safety; assures long rectifier life and greater current capacity. Built to withstand intermittent high overloads. For 105-125 v. AC. 50-60 cps. Rugged 18-gauge steel cabinet; baked-on blue-gray hammerloid finish; supplied with wing nuts, and terminal connectors. Size: 12" x 7" x 8½". Shipping weight 22 lbs.

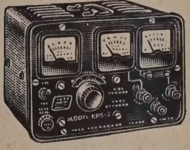
"D-612T"—Net... $\$56^{00}$

Dual Range "H" for Mobile Communication Work

Heavy duty unit for mobile communications work. Provides up to 20 amps. of 6-v current or 10 amps, of 12-v. current for continuous duty. Up to 50% overload for intermittent duty. Two or more may be placed in parallel or series for higher voltages or currents. Ample filtering assures less than 5% ripple at maximum rated current. Voltmeter 0-20 v.; ammeter 0-30 amps. Eight-position voltage adjustment tap. For 105-125 v. AC, 50-60 cps. Accessible fuse. Blue hammerloid finished 18-gauge steel cabinet. Size: 12" x 7" x 8½". Shipping weight 30 lbs.

"H"—Net... $\$79^{50}$

Dual Purpose "PS-2" for Transistor/12 Volt Servicing



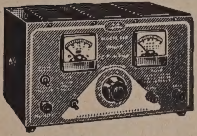
MODELS "PS-2" "KPS-2"

Dual-purpose, well filtered unit for servicing all transistor portable radios and newer 12-v. auto sets. Two output ranges, each with individual current meter and output terminals; 0-20 v. at 75 ma (meter reads 0-75 ma), with panel-mounted fuse in secondary circuit for transistor protection; 0-16 v. at 5 amps. (meter reads 0-10 amps.). Maximum ripple is 3 mv (0.15%) for 75 ma output; 60 mv (0.5%) for 5 amp. output. Voltage range, 0-20 v. Variable transformer control provides smooth output voltage adjustment. Special pi-type filter. Rugged selenium rectifiers use EPL patented conduction cooling for long life. Blue-gray metal case has recessed front panel and handy carrying handle. On-off switch, voltage adjust, primary circuit fuse, voltmeter, milliammeter, ammeter, terminals and milliampere fuse on front panel. For 105-125 v. AC, 50-60 cps. Size 8½" x 6" x 8". Shipping weight, 15 lbs.

"PS-2"—Factory wired—Net... $\$49^{95}$

"KPS-2" Kit—Net ... $43.50

Dual Range "EFB" for Transistor and Electronic Work



MODELS "EFB" "EB" "EF"

New model for transistor design and servicing—also powers all types of electronic equipment operating from DC. Two ranges: 0-32 v. for loads up to 4 amps. and 0-16 v. for loads up to 8 amps. Ripple less than 0.1%. Bridge type selenium rectifiers. Choke and pi-type filter circuit with internal bleeder for voltage regulation. On-off switch and 0-32 and 0-16 v. selector switch. Fuse holder on front panel. Two 2% D'Arsenval movement meters; voltmeter has two scales for easy reading. Variable voltage transformer provides extremely smooth incremental control. 18-gauge steel cabinet with baked-on blue-gray hammerloid finish. For 105-125 volts, 50-60 cps. Size 12" x 7" x 8½". Shipping weight 33 lbs.

"EFB"—Net... $\$120^{00}$

"EB"—Same specifications as "EFB", but with less filtering. Ripple at top load 5%. Shipping weight 25 lbs.

Net... $\$95^{00}$

"EFBR"—Similar to "EFB," but supplied with rack panel to fit Western Electric and EIA racks. Panel Size: 8¾" high by 19" wide. Braced for front panel mounting. Shipping weight, 44 lbs.

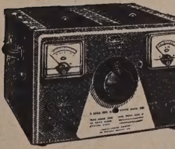
Net... $\$145^{00}$

Dual Range "EF" for Testing and Operating Electronic Equipment

Virtually unlimited in operation and testing of equipment requiring DC power. Variable voltage permits testing all equipment under almost any voltage input. Dual range: 0-28 v., 0-14 v., 0-5 amps. continuous rating (less than 1% ripple), 10 amps. intermittent rating. For 105-125 v. AC, 50-60 cps. D'Arsenval-type voltmeter and ammeter; 0-50 v., 2% and 0-6 amps., 2% accuracy. Bridge-type selenium rectifiers. Size: 12" x 7" x 8½". Shipping weight, 25 lbs.

"EF"—Net... $\$86^{50}$

"NFB" for Aircraft Electronic Equipment Work



MODELS "NFB" "NB"

Supplies most voltage and current requirements for aircraft electronic equipment. Many other uses. Continuously variable output: 0-32 v. for loads up to 15 amps. continuous. Regulation 16% no-load to full-load. Silicon rectifiers for higher efficiency. Ripple less than 0.75%. 2% D'Arsenval movement meters. Circuit breaker output switch. Pilot light and on-off switch. Variable voltage transformer provides smooth incremental control. 5-way output terminals. Blue-gray hammerloid 18-gauge steel cabinet. For 105-125 volts AC, 50-60 cps. Size: 14¼" x 14¼" x 9¾". Shipping weight, 81 lbs.

"NFB"—Net... $\$235^{00}$

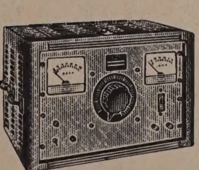
"NB"—similar to "NFB," but ripple 5% at 15 amps. Shipping weight, 70 lbs.

Net... $\$210^{00}$

"NFBR"—Similar to "NFB," but supplied with rack panel to fit Western Electric and EIA racks. Panel Size: 10½" high by 19" wide. Braced for front panel mounting. Shipping weight, 100 lbs.

Net... $\$265^{00}$

Universal Semi-Regulated "GFA" for High Voltage Servicing



MODEL "GFA"

New model for universal service. Continuously variable output: 0-125 v. for loads to 10 amps continuous. For high voltage range, regulation no-load to full-load 12%. Germanium rectifiers for higher efficiency. Special combination voltage regulating and filtering circuit. Ripple less than 1%. Circuit breaker output switch. Pilot light. 2% D'Arsenval movement meters with 4½" scales. Custom-built 16-gauge cabinet with gray wrinkle finish. Recessed front panel for protection of meter faces and operating controls. For 105-125 v. AC, 50-60 cps. Size 22" x 14¼" x 15¾". Shipping weight, 250 lbs.

"GFA"—Net... $\$550^{00}$

ELECTRO PRODUCTS LABORATORIES, INC. • CHICAGO 40, ILLINOIS

P R MALLORY & CO Inc.
MALLORY

DRY BATTERIES

Mercury and Zinc-Carbon

P.R. MALLORY & CO. INC.
INDIANAPOLIS 6, IND.

MERCURY BATTERIES

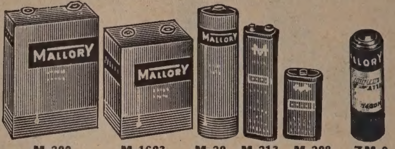
Full line covers radio and electronic applications. Flat terminals, unless otherwise noted.

Mallory Number	Volts *	Cap., MAH	Use	Size, In. L. x W. x H.	Wt., Oz.	Net Each
RM-1	1.4	1000	Electronic	5/8 dia. x 21/32	0.75	**$0.38**
RM-1R	1.35	1000	Electronic	5/8 dia. x 21/32	0.75	**.38**
RM-1RT†	1.35	1000	Electronic	5/8 dia. x 21/32	0.75	**.43**
RM-1RT2‡	1.35	1000	Electronic	5/8 dia. x 21/32	0.75	**.48**
RM-3R	1.35	2200	Electronic	1 dia. x 21/32	0.93	**.56**
RM-4R	1.35	3400	Electronic	1.2 dia. x 21/32	1.6	**.72**
RM-4RT†	1.35	3400	Electronic	1.2 dia. x 21/32	1.6	**.77**
RM-4Z	1.4	2400	Electronic	1.2 dia. x 1/2	1.2	**.58**
RM-12	1.4	3600	Electronic	5/8 dia. x 2	2.0	**.82**
RM-12R	1.35	3600	Electronic	5/8 dia. x 2	2.0	**.82**
RM-12RT†	1.35	3600	Electronic	5/8 dia. x 2	2.0	**.87**
RM-12RT2‡	1.35	3600	Electronic	5/8 dia. x 2	2.0	**.92**
RM-42	1.4	14000	Electronic	1.2 dia. x 2 3/8	5.9	**1.85**
RM-42R	1.35	14000	Electronic	1.2 dia. x 2 3/8	5.9	**2.25**
RM-42RT†	1.35	14000	Electronic	1.2 dia. x 2 3/8	5.9	**2.30**
RM-42RT2‡	1.35	14000	Electronic	1.2 dia. x 2 3/8	5.9	**2.35**
RM-400R	1.35	75	Electronic	29/64 dia. x 9/64	0.04	**.25**
RM-401R	1.35	800	Electronic	29/64 dia. x 1 1/8	0.4	**.36**
RM-411	14	120	Electronic	1 x 17/32 x 1 3/32	1	**2.50**
RM-412	22.4	120	Electronic	1 x 17/32 x 1 5/16	1	**3.50**
RM-413	28	120	Electronic	1 x 17/32 x 2 1/2	1.5	**4.50**
RM-415§	42	120	Electronic	1 x 17/32 x 3 1/2	2.5	**6.50**
RM-450R	1.35	350	Electronic	29/64 dia. x 5/16	0.18	**.34**
RM-502R	1.35	2400	Electronic	1/2 dia. x 1 31/32	1.05	**.65**
RM-601R	1.35	1800	Electronic	5/8 dia. x 1 5/32	1.2	**.65**
RM-625R	1.35	350	Electronic	5/8 dia. x 1/4	0.15	**.30**
RM-625RT†	1.35	350	Electronic	5/8 dia. x 1/4	0.15	**.35**
RM-625RT2‡	1.35	350	Electronic	5/8 dia. x 1/4	0.15	**.40**
RM-630	1.4	350	Electronic	5/8 dia. x 1/4	0.17	**.30**
RM-630R	1.35	350	Electronic	5/8 dia. x 1/4	0.17	**.30**
RM-640	1.4	500	Electronic	5/8 dia. x 7/16	0.38	**.30**
RM-640R	1.35	500	Electronic	5/8 dia. x 7/16	0.38	**.30**
RM-640RT2‡	1.35	500	Electronic	5/8 dia. x 7/16	0.38	**.40**
RM-675	1.4	175	Electronic	29/64 dia. x 13/64	0.07	**.26**
TR-113R	4.05	250	Electronic	21/32 dia. x 53/64	0.45	**1.29**
TR-114R	5.4	250	Electronic	21/32 dia. x 1 1/16	0.59	**1.50**
TR-114RT2‡	5.4	250	Electronic	21/32 dia. x 1 1/16	0.59	**1.60**
TR-115R	6.75	250	Electronic	21/32 dia. x 1 5/16	0.73	**1.64**
TR-120	2.8	800	Electronic	1 x 17/32 x 17/32	1	**1.10**
TR-132R	2.7	1000	Electronic	21/32 dia. x 1 5/16	1	**.84**
TR-133	4.2	1000	Radio, Paging sys.	21/32 dia. x 2	1.4	**1.18**
TR-133R	4.05	1000	Radio	21/32 dia. x 2	1.4	**1.18**
TR-134R	5.4	1000	Electronic	21/32 dia. x 2 39/64	1.9	**1.53**
TR-135R	6.75	1000	Electronic	21/32 dia. x 3 1/4	2.4	**1.85**
TR-136R	8.1	1000	Electronic	21/32 dia. x 3 29/32	2.9	**2.30**
TR-137	9.45	1000	Electronic	21/32 dia. x 4 9/16	3.46	**2.68**
TR-140	1.35	1600	Electronic	1 x 1/2 x 1 13/64	1	**1.12**
TR-145	7	250	Electronic	21/32 dia. x 1 3/16	0.58	**1.58**
TR-146§	8.4	350	Radio	1 x 19/32 x 1 15/16	1.6	**1.58**
TR-152R	2.7	350	Electronic	15/32 dia. x 1 1/8	0.42	**.72**
TR-153R	4.05	350	Electronic	15/32 dia. x 1 11/16	0.6	**.92**
TR-162R	2.7	500	Electronic	21/32 dia. x 7/8	0.58	**.87**
TR-163	4.2	500	TV tuner	21/32 dia. x 1 5/16	0.87	**1.10**
TR-163R	4.05	500	Electronic	21/32 dia. x 1 5/16	0.87	**1.10**
TR-164	5.6	500	Radio	21/32 dia. x 1 3/4	1.16	**1.35**
TR-164R	5.4	500	Electronic	21/32 dia. x 1 3/4	1.16	**1.35**
TR-165	7	500	TV tuner	21/32 dia. x 2 3/16	1.45	**1.64**
TR-165R	6.75	500	Electronic	21/32 dia. x 2 3/16	1.45	**1.64**
TR-175	7	350	Radio	31/64 dia. x 1 3/32	1	**1.02**
TR-177§	9.8	250	Radio	35/64 dia. x 1 29/32	1	**1.37**
TR-233	4.2	2200	Radio	1 1/64 dia. x 1 31/32	3	**1.80**
TR-234	5.6	2200	Electronic	1 dia. x 2 19/32	3.88	**2.44**
DM-9N	1.4	2400	Radio	1/2 dia. x 1 31/32	1	**.54**
ZM-9	1.4	2400	Radio	1/2 dia. x 1 31/32	1	**.51**

*Open circuit. †1 tab, 1 flat terminal. ‡2 tab terminals. §Snap terminals.

MERCURY POWER-PAK BATTERIES

Mallory Number	Volts*	Cap., MAH	Use	Terminals	Net Each
302125-M	7.0	2400	Fire alarm	Flat	**$ 4.25**
302157	1.35	28000	Radiation eqpt.	Sckt	**10.35**
302158	22.95, 2.7 47.25, 5.4	500	Radiation eqpt.	Sckt	**24.38**
302227	4.05	250	P.H. meter	Tabs	**1.65**
302229	5.4	250	P.H. meter	Tabs	**1.75**
302240	24.3	2400	Instruments	Leads	**22.50**
302249	6.75	250	Radiation eqpt.	Tabs	**2.28**
302250	9.45	250	Radiation eqpt.	Tabs	**2.45**
302257	1.35	14400	Test equipment	Leads	**7.40**
302271-M	1.35-13.5	3600/250	Electronic	Leads	**5.18**
302351-M	5.4	2200	Fire alarm	Flat	**2.67**
302354	5.4	250	Radiation eqpt.	Leads	**1.80**
302358	10.8	250	Radiation eqpt.	Leads	**2.83**
302360	8.1	250	Radiation eqpt.	Leads	**3.60**
302362	16.2	250	Radiation eqpt.	Leads	**3.87**
302424	6.75	1000	Instruments	Tabs	**2.57**
302425	48.6	250	"B"	Snaps	**16.51**
302435	6.75	250	Radiation eqpt.	Flat	**2.28**
302437	9.45	250	Radiation eqpt.	Flat	**2.30**
302462	97.2	1000	Transmitter "B"	Leads	**32.34**
302463	1.35	18000	Geophysical	Leads	**6.08**
302464	6.75	3600	Geophysical	Leads	**7.35**
302465	47.25	1000	Geophysical	Leads	**15.40**
302467	5.4	1000	Test equipment	Tabs	**1.85**
302478-M	9.8	2400	Recorder	Flat	**4.29**
302497	6.75	2200	Test equipment	Posts	**4.16**
302499	64.8	500	Missile	Leads	**28.50**
302502	94.5	250	Geophysical	Leads	**26.50**
302506	16.2, 4.05	250	Telemetry	Leads	**9.17**
302510	1.35	43200	Computer	Posts	**15.44**



MERCURY POWER-PAKS (CONTINUED)

Mallory Number	Volts*	Cap., MAH	Use	Terminals	Net Each
302519	5.4	7200	Test equipment	Leads	**$11.47**
302527	97.2	250	"B"	Leads	**26.50**
302530	10.8	14000	Missile	Posts	**38.48**
302539	21.5	250	Electronic	Sckt	**9.78**
302540	1.35	14000	Test equipment	Tabs	**2.86**
302554	97.2	250	"B"	Snaps	**26.50**
302558	64.8, 34.1	500	Missile	Leads	**25.50**
302579	29.7	250	Test equipment	Leads	**10.85**
302580	27	3400	Electronic	Sckt	**21.40**
302589	21.5	250	Electronic	Sckt	**12.20**
302599	4.2	2200	Radio (TR-233)	Flat	**1.80**
302604	5.4	250	Electronic	Flat	**1.37**
302609	12.15	250	Electronic	Flat	**2.70**
302642	7.0	2400	Fire alarm	Flat	**3.40**
302651	1.35	14000	Electronic	Leads†	**3.62**
302667	6.7	14000	Electronic	Leads	**22.37**
302702	2.7	2200	Geophysical	Leads	**2.67**
302795	10.75	3600	Electronic	Sckt	**15.37**
302800	75.6	1000	Electronic	Snaps	**27.50**
302830	12.06-6.7	1000/7200	Electronic	Sckts	**19.25**
302896	9.4, 1.35	3600	Recorder	Snaps‡	**15.80**
302904	5.4	3400	Meter	Leads	**4.32**
302905	6.75	3400	Test equipment	Leads	**5.65**
302907	9.45	3400	Electronic	Leads	**8.11**
302908	10.8	3400	Radiation eqpt.	Leads	**7.48**
303145	8.4	3600	Depth finder	Snap	**6.33**

*Open circuit. †Special leads. ‡Three negative leads.

ZINC-CARBON BATTERIES

Covers flashlight, lantern, radio, emergency lighting and industrial applications.

Mallory No.	Nom. Volts	Use	T*	Size, Inches L. x W. x H.	Wt., Oz.	Net Each
M-3	4.5	Radio "A"	a	3 15/16x1 5/16x4 3/32	16	**$0.95**
M-6	6	Radio "A"	a	2 9/16x2 9/16x3 31/32	9	**1.16**
M-9	7.5	Radio "A"	a	2 7/32x1 15/16x3 1/32	31	**1.05**
M-13F	1.5	Flashlight "D"	b	1 11/32 dia. x 2 13/32	3.3	**.13**
M-13R	1.5	Radio "D"	b	1 11/32 dia. x 2 13/32	3.3	**.155**
M-13X	1.5	Industrial "D"	b	1 11/32 dia. x 2 13/32	3.3	**#**
M-14F	1.5	Flashlight "C"	b	1 1/32 dia. x 1 15/16	1.5	**.13**
M-14R	1.5	Radio "C"	b	1 1/32 dia. x 1 15/16	1.5	**.155**
M-15F	1.5	"AA" penlight	b	9/16 dia. x 1 31/32	0.5	**.13**
M-15R	1.5	Radio penlight	b	9/16 dia. x 1 31/32	0.5	**.155**
M-20	1.5	Radio "A"	b	1 3/8 dia. x 4 11/64	6	**.32**
M-24F	1.5	Junior penlight	b	13/32 dia. x 1 3/4	0.3	**.095**
M-26	7.5	Radio "A"	c	2 9/16x2 1/32x2 13/16	12	**1.05**
M-200	67.5	Radio "B"	c	2 13/16x1 3/8x3 45/64	12	**2.45**
M-201	45	Radio "B"	c	2 21/32x1x3 11/16	9	**2.08**
M-202	45	Radio "B"	a	3 19/32x1 27/32x5 1/2	31	**2.70**
M-208	15	Electronic "B"	b	1 1/32x5/8x1 29/64	0.8	**.81**
M-210	30	Electronic "B"	b	1 1/32x5/8x2 9/16	1.4	**1.23**
M-211P	67.5	Radio "B"	c	1 29/32x63/64x5 7/16	8.5	**2.17**
M-212	75	Radio "B"	c	1 15/16x1 15/32x6 15/32	14	**3.15**
M-213	45	Radio "B"	c	1 3/64x5/8x3 11/16	3	**1.75**
M-214	90	Radio "B"	c	1 31/32x1 1/32x7 15/32	12	**2.77**
M-215	22.5	Radio "B"	b	1 1/32x5/8x2	1.5	**1.05**
M-216	90	Radio "B"	c	1 13/16x1 15/32x7 1/2	16	**3.47**
M-217	67.5	Radio "B"	c	1 21/64x63/64x3 1/2	4.6	**2.07**
M-400	9-90	Radio "A-B"	d	14 1/16x2 11/16x4 1/16	98.0	**5.78**
M-401	7 1/2, 9, 90	Radio "A-B"	a	9 7/32x2 23/32x4 5/16	76.0	**5.43**
M-405	7 1/2, 9, 90	Radio "A-B"	a	8 1/8x2 1/8x3 25/32	46.0	**4.87**
M-413	1 1/2, 90	Farm radio	a	15 11/16x4 1/32x6 15/16	260.0	**7.95**
M-504	15	Electronic "B"	b	5/8x19/32x1 3/8	0.6	**.81**
M-505	22.5	Electronic "B"	b	5/8x19/32x1 63/64	0.6	**1.05**
M-506	30	Electronic "B"	b	1 13/64x5/8x1 27/64	0.9	**1.30**
M-507	30	Electronic "B"	b	5/8x19/32x2 39/64	0.9	**1.30**
M-900	1.5	Ignition	e	2 5/8x2 5/8x4 9/32	20	**.84**
M-902	6	Lighting	e	8 5/16x2 13/16x6 7/16	94.0	**4.01**
M-903	7.5	Lighting	e	7 1/4x4 1/16x6 7/16	122.0	**4.86**
M-904	9	Lighting	e	8 37/64x4 1/16x6 7/16	136.0	**5.53**
M-905	1.5	Ignition	e	2 5/8 dia. x 6 5/8	34	**.84**
M-906	1.5	Telephone	f	2 5/8 dia. x 6 5/8	34	**.84**
M-907	6	Industrial	e	10 13/32x2 25/32x7 9/32	153	**3.34**
M-908	6	Metal lantern	g	2 11/16x2 11/16x4 7/16	21	**.79**
M-910F	1.5	Flashlight "N"	b	29/64 dia. x 1 3/16	0.22	**.08**
M-911	1.5	R.R., Indust.	e	2 5/8 dia. x 6 5/8	34	**.90**
M-914	1.5	Ignition	f	2 5/8 dia. x 6 5/8	34	**.84**
M-915	6	Lighting	e	2 11/16x2 11/16x4 5/32	21	**.79**
M-916	6	R.R. lantern	g	2 11/16x2 11/16x4 11/16	21	**.79**
M-918	6	Lighting	e	5 11/32x2 27/32x4 15/16	52	**1.83**
M-1600	9	Radio	c	1 dia x 1 15/16	1.8	**.95**
M-1602	9	Radio	c	1 13/32x1 11/32x2 3/4	4.5	**1.30**
M-1603	9	Radio	c	2 9/16x2 1/32x3 5/32	15	**1.26**
M-1604	9	Radio	c	1 1/32x11/16x1 29/32	1.3	**.95**
M-1605	9	Radio	c	1 13/16x1 13/16x2 7/16	7	**1.05**
M-1900	13.5	Radio	a	1 21/64x1 1/32x2 11/16	3	**1.05**

*Terminals: **a**—Socket. **b**—Flat. **c**—Snap. **d**—Recessed plug. **e**—Screw. **f**—Fahnestock clip. **g**—Coil spring. #Write for price.

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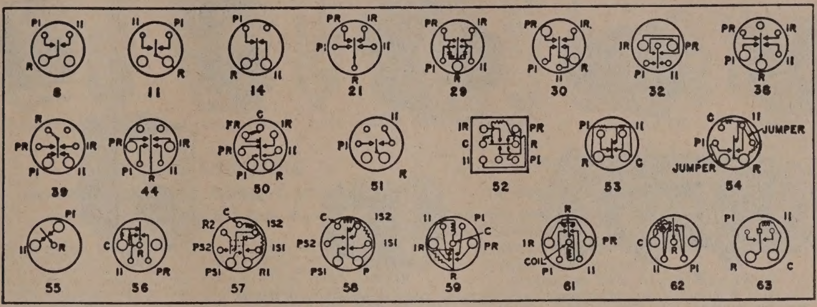
MALLORY

P.R. MALLORY & CO. INC.
INDIANAPOLIS 6, IND.

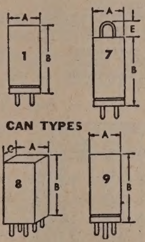
VIBRATORS
BUFFER CAPACITORS



BASE DIAGRAMS: C = Coil; FR = Frame; II = Inertia Interrupter; IR = Inertia Rectifier; IS = Inertia Spring; PI = Pull Interrupter; PR = Pull Rectifier; PS = Pull Spring; R = Reed.

MALLORY
VIBRATOR
FOR USE ON
6 VOLT BATTERY

Mallory Vibrators are assembled from carefully matched materials built to extremely close tolerances, assuring perfect balance and precise operation. Crude rubber insulation and heavy cans effectively deaden sound and vibration. Every Mallory vibrator is tested for output, starting voltage and wave form. If Mallory type number is not known refer to diagram at right or write for **VIBRATOR GUIDE, 15c** FREE when request is included with order for Mallory Vibrators.



CAN TYPES

COMMUNICATION TYPE VIBRATORS

Designed for mobile communications and other heavy duty uses. Engineered to the finest standards and will give long, trouble-free service when used as recommended.

Mallory No.	Volts	Type	Base Diag.	Size, Inches	Net Each
G1501	12	Int.	53	1½ x 2⅞	$4.14
G1502	12	Int.	54	1½ x 2⅞	2.94
G1801	12	Syn.	32	1½ x 2⅞	5.13
G1807	12	Syn.	44	1½ x 2⅞	5.13
1501	6	Int.	53	1½ x 2⅞	3.81
1512	6	Int.	54	1½ x 2⅞	4.14
1513	6/12	Int.	56	1½ x 2⅞	4.14
1514	6	Int.	53	1½ x 2⅞	4.14
1701	6	Int.	57	1½ x 3	5.76
1751	6	Int.	58	1½ x 3	5.88
1752	6/12	Int.	62	1½ x 3	5.82
1807	6	Syn.	44	1½ x 2⅞	4.62
1808	6	Syn.	38	1½ x 2⅞	4.62
1813	6	Syn.	32	1½ x 2⅞	4.62
1852	6	Syn.	59	1½ x 2⅞	5.82

BUFFER CAPACITORS

Tubular paper capacitors have case molded from high grade, mineral-filled bakelite; sealed against moisture and mechanical shock by epoxy resin. Double tinned copperweld wire leads. Tolerance, ±10%. Working voltage, 1600 v. DC; test 3200 v. DC.

Mallory No.	Capacity µf	Size, Inches Dia. x Length	Net Each
GEM-1621	.001	⅜ x 1¼	39c
GEM-16215	.0015	⅜ x 1¼	39c
GEM-1622	.002	⅜ x 1¼	39c
GEM-16225	.0025	7/16 x 1¼	45c
GEM-1623	.003	7/16 x 1¼	39c
GEM-16233	.0033	7/16 x 1¼	39c
GEM-1624	.004	7/16 x 1¼	39c
GEM-16247	.0047	½ x 1½	39c
GEM-1625	.005	½ x 1½	39c
GEM-16256	.0056	½ x 1½	39c
GEM-1626	.006	½ x 1½	39c
GEM-16268	.0068	½ x 1½	39c
GEM-1627	.007	½ x 1½	39c
GEM-16275	.0075	½ x 1½	39c
GEM-1628	.008	½ x 1½	39c
GEM-16282	.0082	½ x 1½	39c
GEM-1611	.01	½ x 1½	42c
GEM-161125	.0125	⅝ x 1⅞	42c
GEM-1612	.02	⅝ x 1⅞	36c
GEM-16122	.022	⅝ x 1⅞	45c
GEM-1613	.03	⅝ x 1⅞	42c
GEM-1614	.04	¾ x 2¼	42c
GEM-1615	.05	¾ x 2¼	42c

COMMON AUTO REPLACEMENT TYPES

Famous **"Gold Label"** models indicated by *.

Mallory No.	Volts	Type	Base Diag.	Can Type	Size, In. A x B x C	Net Each
G1601*	12	Int.	8	1	1½ x 2⅝	$2.82
G1602*	12	Int.	55	9	1½ x 2⅝	2.82
W1601	4	Int.	8	1	1½ x 2⅝	2.94
509P	6	Int.	8	1	1½ x 2⅞	2.49
716	6	Syn.	30	7	1 15/16 x 3½	4.62
903M	6	Int.	8	1	1½ x 2⅞	2.16
1501	6	Int.	53	1	1½ x 2⅞	3.81
1601*	6	Int.	8	1	1½ x 2⅝	2.82

COMPLETE VIBRATOR SPECIFICATIONS

Mallory No.	†	Volts	Type	Base Diag.	Can Type	Size, Inches A x B x C	Net Each
F294	1	32	Int.	8	1	1½x2⅞	$4.29
F826S	1, 2	32	Int.	8	1	1½x2⅞	4.62
G1501	1	12	Int.	53	1	1½x2⅞	4.14
G1502	...	12	Int.	54	.....	1½x2⅞	2.94
G1601	...	12	Int.	8	1	1½x2⅝	2.82
G1602	...	12	Int.	55	9	1½x2⅝	2.82
G1603S	1, 2	12	Int.	8	1	1½x2 15/16	4.62
G1604	...	12	Int.	8	1	1¼x2 3/16	4.62
G1801	...	12	Syn.	32	1	1½x2⅞	5.13
G1801S	1, 2	12	Syn.	32	1	1½x2 15/16	5.97
G1802S	1, 2	12	Syn.	21	1	1½x2 15/16	5.97
G1803	...	12	Int.	38	1	1½x3	5.97
G1807	...	12	Syn.	44	1	1½x2⅞	5.13
G1808	...	12	Syn.	38	1	1½x2⅞	5.13
M1501	...	24	Int.	53	1	1½x2⅞	4.14
T4002	...	2	Syn.	52	8	1½x2⅛x1½	6.42
T4003	...	2	Syn.	50	1	1 5/16x2⅛	5.88
W1601	3	4	Int.	8	1	1½x2⅝	2.94
W1802	3	4	Syn.	21	1	1½x2⅞	4.95
273C	...	6	Syn.	29	1	2x4½	5.49
294	...	6	Int.	8	1	1½x2⅞	2.94
298	...	6	Int.	51	1	1½x2⅞	3.81
509P	...	6	Int.	8	1	1½x2⅞	2.49
716	...	6	Syn.	30	7	1 15/16x3½	4.62
743	...	6	Syn.	38	1	1¼x2⅞	4.62
825S	1, 2	6	Int.	8	1	1½x2⅞	4.14
854	...	6	Int.	11	1	1½x2⅞	2.94
870	...	6	Int.	14	1	1½x2⅞	2.94
903M	...	6	Int.	8	1	1½x2⅞	2.16
954	...	6	Syn.	39	1	1½x3 5/16	4.62
1501‡	1	6	Int.	53	1	1½x2⅞	3.81
1512‡	...	6	Int.	54	1	1½x2⅞	4.14
1513‡	...	6/12	Int.	56	1	1½x2⅞	4.14
1514‡	...	6	Int.	53	1	1½x2⅞	4.14
1601	1	6	Int.	8	1	1½x2⅝	2.82
1603S	1, 2	6	Int.	8	1	1½x2 15/16	3.81
1604	...	6	Int.	8	1	1 5/16x2 3/16	2.94
1609	...	6	Int.	63	1	1½x2⅞	3.30
1701‡	...	6/12	Int.	57	1	1½x3	5.76
1751‡	...	6	Int.	58	1	1½x3	5.88
1752‡	...	6/12	Int.	62	1	1½x3	5.82
1801S	1, 2	6	Syn.	32	1	1½x2 15/16	5.13
1802	1	6	Syn.	21	1	1½x2⅞	4.62
1806	...	6	Syn.	61	1	1½x2⅞	4.62
1807‡	...	6	Syn.	44	1	1½x2⅞	4.62
1808‡	...	6	Syn.	38	1	1½x2⅞	4.62
1813‡	...	6	Syn.	32	1	1½x2⅞	4.62
1852‡	...	6	Syn.	59	1	1½x2⅞	5.82
GC7	4	Ground Cup			.....	....	.27
AR-1	5	Adapter			.....	....	.90
VP-1	...	Vibrator Puller			.....	....	1.65

†—**1:** For new equipment design only, other types for replacement purposes only. **2:** Hermetically sealed. **3:** Designed for photoflash applications. **4:** A grounding cup for 1½" dia. vibrators which makes low RF ground between vibrator can and power supply. **5:** Five special sockets for Practical Vibrator tester. Supplied as complete kit only. **Int.**—Interrupter. **Syn.**—Synchronous. ‡For Mobile communications and heavy duty uses.

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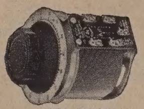
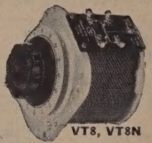
OHMITE® RESISTORS • RHEOSTATS • TAP SWITCHES
RELAYS • TANTALUM CAPACITORS
VARIABLE TRANSFORMERS • RF CHOKES

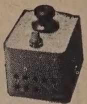
OHMITE "V.T." VARIABLE TRANSFORMERS

VT2, VT2N

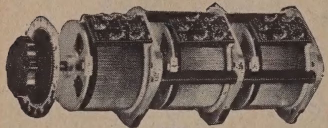

VT4, VT4N


VT8, VT8N

VT2E


VT2F

VT4E

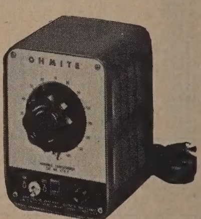

VT8-3

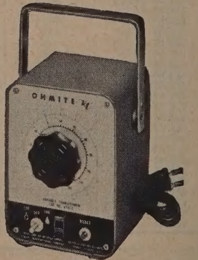
VT2-2

Toroidal core type autotransformers providing distortion-free continuously adjustable voltage from AC line. Highly advanced Ohmite design offers: Greater current capacity for equivalent size (in VT2 and VT4 sizes) **plus a sizable bonus in current in all units where output greater than line volts** ("overvoltage") **is not required** ("N" suffix); positive current transfer achieved with direct brush to slip spring shunt; rhodium plated brush track. **Mounting:** VT2 panel mounting by $\frac{3}{8}$-32 bushing; VT2 tandem units by $\frac{1}{4}$-20 bolts; all VT4 and VT8 types panel or table mounting by $\frac{1}{4}$-20 bolts—shaft slides to brush or base side. Adapter plate available for 4-hole mounting of single VT4, Stock No. 6512. Units not cased except where indicated. Frequency 60 to 400 cps except *50 to 400. Over-all dimensions include shaft. Suffixes "-2" and "-3" indicate number of units in tandem assembly (shipped with connection instructions). Cased units as follows: VT2E, VT4E, VT8E—fixed mounting, in-conduit-line; VT2F, VT4F, VT8F—portable with switch, outlet, fuse; VT8G—portable with overvoltage—no-overvoltage switch, outlet, circuit breaker, adjustable handle (not included in dimension).

VT4F

VT8E


VT8F


VT8G

SINGLE PHASE
SINGLE TRANSFORMERS—UNCASED

Ohmite No.	Max. Output		Feature or Connection	Size, Inches	Wt.††† Lbs.	Net††† Ea., 1-5▲
	Amps	Volts				
VT2	1.5	0-120/132	Basic 1.5 amp model	$2\frac{13}{16}$ dia. x $2\frac{5}{16}$	2.4	**$ 8.50**
VT2N	1.8	0-120	No overvoltage	$2\frac{13}{16}$ dia. x $2\frac{5}{16}$	2.4	**9.00**
VT4*	3.5	0-120/140	Basic 3.5 amp model	$4\frac{5}{8}$ x $4\frac{7}{32}$ x $3\frac{9}{16}$	5.25	**12.50**
VT4N*	4.75	0-120	No overvoltage	$4\frac{5}{8}$ x $4\frac{7}{32}$ x $3\frac{9}{16}$	5.25	**13.00**
VT8*	7.5	0-120/140	Basic 7.5 amp model	$4\frac{7}{8}$ x $5\frac{11}{16}$ x $5\frac{1}{2}$	10.25	**18.00**
VT8N*	10.0	0-120	No overvoltage	$4\frac{7}{8}$ x $5\frac{11}{16}$ x $5\frac{1}{2}$	10.25	**18.50**
VT8H*	3.0	0-240/280	240 v. input**	$4\frac{7}{8}$ x $5\frac{11}{16}$ x $5\frac{1}{2}$	10.25	**20.00**
VT8HN*	4.0	0-240	240 v. input. No overvoltage**	$4\frac{7}{8}$ x $5\frac{11}{16}$ x $5\frac{1}{2}$	10.25	**21.00**
SINGLE TRANSFORMERS—CASED						
VT2E	1.2	0-132‡	Fixed mounting	$3\frac{1}{4}$ x $2\frac{1}{2}$§§ x $4\frac{1}{4}$	2.8	**$12.50**
VT2F	1.5	0-132§	Portable	$3\frac{1}{4}$ x $2\frac{1}{2}$§§ x $4\frac{1}{4}$	3.2	**14.50**
VT4E	2.8	0-140‡	Fixed mounting	$4\frac{1}{2}$ x $4\frac{1}{2}$§§ x 6	7.4	**17.50**
VT4F*	3.5	0-140§	Portable	$4\frac{7}{8}$ x $4\frac{1}{2}$§§ x 6	7.8	**18.50**
VT8E*	6.0	0-140‡	Fixed mounting	$5\frac{5}{32}$ x 5## x $7\frac{3}{16}$	13.5	**23.00**
VT8F*	7.5	0-140§	Portable	$5\frac{13}{32}$ x 5## x $7\frac{5}{16}$	13.8	**24.00**
VT8G*	6.0	0-120/140§	De luxe portable	$5\frac{5}{32}$* x 5## x $7\frac{5}{16}$●	14.2	**28.50**
TWO-IN-TANDEM ASSEMBLIES††						
VT2-2	1.5	0-240/264	Series connection‡‡	$3\frac{13}{16}$ dia. x $6\frac{3}{16}$	5.25	**$25.00**
VT2N-2	1.8	0-240	Series connection‡‡	$3\frac{13}{16}$ dia. x $6\frac{3}{16}$	5.25	**26.00**
VT4-2*	3.5	0-240/280	Series connection‡‡	$4\frac{5}{32}$ x $4\frac{13}{16}$ x $8\frac{7}{8}$	11.3	**37.00**
VT4N-2*	4.75	0-240	Series connection‡‡	$4\frac{5}{32}$ x $4\frac{13}{16}$ x $8\frac{7}{8}$	11.3	**38.00**
VT8-2*	7.5	0-240/280	Series connection‡‡	$4\frac{7}{8}$ x $5\frac{11}{16}$ x $10\frac{5}{16}$	20.6	**44.50**
VT8N-2*	10.0	0-240	Series connection‡‡	$4\frac{7}{8}$ x $5\frac{11}{16}$ x $10\frac{5}{16}$	20.6	**45.50**
VT8H-2*	3.0	0-480/560	Series connection‡‡	$4\frac{7}{8}$ x $5\frac{11}{16}$ x $10\frac{5}{16}$	20.6	**48.50**
VT8HN-2*	4.0	0-480	Series connection‡‡	$4\frac{7}{8}$ x $5\frac{11}{16}$ x $10\frac{5}{16}$	20.6	**50.50**
THREE PHASE TWO-IN-TANDEM ASSEMBLIES††						
VT2-2	1.5	0-120/132	Open delta connection	$3\frac{13}{16}$ dia. x $6\frac{3}{16}$	5.25	**$25.00**
VT2N-2	1.8	0-120	Open delta connection	$3\frac{13}{16}$ dia. x $6\frac{3}{16}$	5.25	**26.00**
VT4-2*	3.5	0-120/140	Open delta connection	$4\frac{5}{32}$ x $4\frac{13}{16}$ x $8\frac{7}{8}$	11.3	**37.00**
VT4N-2*	4.75	0-120	Open delta connection	$4\frac{5}{32}$ x $4\frac{13}{16}$ x $8\frac{7}{8}$	11.3	**38.00**
VT8-2*	7.5	0-120/140	Open delta connection	$4\frac{7}{8}$ x $5\frac{11}{16}$ x $10\frac{5}{16}$	20.6	**44.50**
VT8N-2*	10.0	0-120	Open delta connection	$4\frac{7}{8}$ x $5\frac{11}{16}$ x $10\frac{5}{16}$	20.6	**45.50**
VT8H-2*	3.0	0-240/280	Open delta connection	$4\frac{7}{8}$ x $5\frac{11}{16}$ x $10\frac{5}{16}$	20.6	**48.50**
VT8HN-2*	4.0	0-240	Open delta connection	$4\frac{7}{8}$ x $5\frac{11}{16}$ x $10\frac{5}{16}$	20.6	**50.50**
THREE-IN-TANDEM ASSEMBLIES††						
VT2-3	1.5	0-240#	"Y" connection	$3\frac{13}{16}$ dia. x $8\frac{15}{16}$	8.0	**$40.00**
VT4-3†	3.5	0-240/280	"Y" connection	$4\frac{5}{32}$ x $4\frac{13}{16}$ x $12\frac{15}{16}$	17.0	**59.50**
VT8-3†	7.5	0-240/280	"Y" connection	$4\frac{7}{8}$ x $5\frac{11}{16}$ x $15\frac{1}{8}$	31.0	**64.00**
VT8H-3†	3.0	0-480/560	"Y" connection	$4\frac{7}{8}$ x $5\frac{11}{16}$ x $15\frac{1}{8}$	31.0	**70.00**

*Frequency 50 to 400 cps; all others 60 to 400. †May be used at 50 cps if connected for no-overvoltage output. ‡User wires for desired output. Dial normally calibrated for overvoltage. §Factory connected overvoltage output, may be also easily reconnected for no-overvoltage output. VT8G has overvoltage/no-overvoltage switch. #Overvoltage connection must not be used. **Also have taps for 120 v. input with 280 v. output for VT8H and 240 v. output for VT8HN. With use of 120 v. input the max. current rating applies up to 120 v. output but reduces to approx. 50% at max. output voltage. ††Tandem assemblies normally furnished without interconnection between units. ‡‡When series connected, load cannot be grounded. §§Add $\frac{7}{8}$" for knob thickness. ##Add 1" for knob thickness. *$6\frac{3}{8}$" including handle fittings. ●Case height only. †††Includes knob and dial. ▲Write for prices on Larger quantities.

ACCESSORIES

No. 6512 Adapter Plate—For four-hole mtg. of VT4. Matches other popular four-hole mtgs. **Size:** $\frac{1}{4}$"-20 tap, two sets of four panel mtg. holes: $2\frac{3}{4}$" centers and $3\frac{1}{4}$" centers. Net Ea., 1-5▲ **67c**

BRUSH-CONTACT ASSEMBLIES

No. 6514 (for No. VT2), **No. 6515** (for No. VT4) —Net Ea., 1-5▲........................**$1.00**

No. 6516 (for No. VT8), **No. 6516H** (for No. VT8H, HN only). Net Ea., 1-5▲.........**$1.25**

EXTRA DIALS

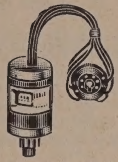
Ohmite No.	For VT No.	Dial Calibration	Net Ea., 1-5▲
5005	VT2	0-120, 0-132 C. W.	**25c**
5006	VT4, VT8	0-120, 0-140 C. W.	**50c**
5008	VT4, VT8	0-120, 0-140 C. C. W.	**50c**
5009	VT4, VT8	0-240, 0-280 C. W.	**50c**
5010	VT4, VT8	0-240, 0-280 C. C. W.	**50c**

Perma-Power® TV Accessories

C-301, C-311

C-201

C-401, C-402, C-403


C-411, C-412

C-211, C-221

K-101

T-101

T-201

TV TUBE BRITENERS

UNIVERSAL BRITENER MODEL C-301, C-311

BRITENS AND ISOLATES PARALLEL OR SERIES TV PICTURE TUBES

Multi-purpose isolation transformer type Britener. Operates on electrostatic or magnetic focus television picture tubes. Provides 6.3 volts to filament to relieve cathode-filament short problems or 7.8 volts to increase cathode emission. Simple switch permits quick, easy selection. Operates on either parallel or series wired filaments. Shipping Weight, 10 ounces.

Perma-Power Model C-301—For picture tubes with conventional duodecal base. Net Each.................... $2.67

Perma-Power Model C-311—For picture tubes with 110° button base. Net Each.................................. $2.98

GOLDEN C-BRITE MODEL C-201

BRITENS PARALLEL OR SERIES TV PICTURE TUBES

A dual purpose autoformer Britener. Features an exclusive reversible plug that adapts to either parallel or series wired filaments. Operates on electrostatic or magnetic focus television picture tubes. Provides an output of 7.8 volts. Gold-anodized aluminum housing. Shipping Weight, 8 ounces.

Perma-Power Model C-201—Net Each............... $1.49

VU BRITENERS MODELS C-401, C-402, C-411

Single-purpose autoformer Briteners. Provide 7.8 volts output. Operate on electrostatic or magnetic focus television picture tubes. Shipping Weight, 8 ounces.

Perma-Power Model C-401—For sets with parallel wired filaments only; duodecal base. Net Each................. 89c

Perma-Power Model C-402—For sets with series wired filaments only; duodecal base. Net Each.................. 89c

Perma-Power Model C-411—For sets with parallel wired filaments only; 110° button base. Net Each............ $1.49

VU BRITENERS MODELS C-403, C-412

A single purpose autoformer type britener. For heaters rated at 2.34 volts, 0.6 ampere; 2.68 volts, 0.450 ampere; 4.7 volts, 0.300 ampere; 6.3 volts, 0.300, 0.450, or 0.600 ampere; and 8.4 volts, 0.450 ampere. Operate on electrostatic or magnetic focus television picture tubes. Shipping Weight, 8 ounces.

Perma-Power Model C-403—For sets with series wired filaments only; duodecal base. Net Each................. $1.12

Perma-Power Model C-412—For sets with series wired filaments only; 110° button base. Net Each............. $1.75

110° C-BRITE MODELS C-211, C-221

BRITENS PARALLEL OR SERIES 110° TV PICTURE TUBES

Dual-purpose autoformer Briteners with quick selector switch for instant adaption to either series or parallel wired filaments. Operates on 110° television picture tubes. Provides an output of 7.8 volts. Shipping Weight, 8 ounces.

Perma-Power Model C-211—With button base. Net Ea.. $2.25

Perma-Power Model C-221—With shell base. Net Each. $2.25

TV SERVICE AIDS

TV TUBE RESTORER MODEL K-101

LOCATE AND CORRECT FOR:

- **OPEN CATHODE**
- **HEATER TO CATHODE SHORT**
- **OPEN CONTROL GRID**
- **CONTROL GRID TO CATHODE SHORT**
- **LOW EMISSION**
- **COMBINATIONS OF THESE DEFECTS**

Unique design is used in the Restorer so that one simple unit provides the cure for any defective picture tube in any television set. Operates on electrostatic or magnetic focus TV picture tubes, with either series or parallel wired filaments. Corrects for dozens of picture tube faults. Shipping Weight, 1 pound.

Perma-Power Model K-101—Net Each................ $3.98

TUBE RESTORER MODEL K-201 (NOT ILLUSTRATED)

FOR CORRECTION OF:

- **OPEN CONTROL GRID**
- **CONTROL GRID TO CATHODE SHORT**

Similar to the Model K-101 above, but corrects only open control grid and control grid to cathode short defects. Shipping Weight, 8 ounces.

Perma-Power Model K-201—Net Each................ $1.49

COLOR BRITE MODEL C-501

TO BRITEN COLOR TV PICTURE TUBES

Single-purpose autoformer Britener that extends the useful life of all three-gun color television picture tubes. Provides increased filament voltage to boost electron emission and return full contrast and color quality. Shipping Weight, 1 pound.

Perma-Power Model C-501—Net Each................ $5.85

COLOR GUN KILLER MODEL T-101

TO MAKE PURITY ADJUSTMENTS

Enables each gun of three-gun color television picture tubes to be operated either singly or in combinations so as to make purity adjustments. Avoids disconnecting or cutting of leads. Shipping Weight, 8 ounces.

Perma-Power Model T-101—Net Each................ $3.25

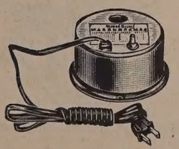
COLOR KINE ADAPTER MODEL T-201

TO TEST COLOR TV PICTURE TUBES

Enables each gun of a three-gun color television picture tube to be individually tested on tube testers that were designed to test black and white picture tubes. Shipping Weight, 8 ounces.

Perma-Power Model T-201—Net Each................ $2.69

PERMA-POWER MAGNEFORMER MODEL F100



- **MAGNETIZES AND DEMAGNETIZES SCREWDRIVERS, PLIERS, HAMMERS, PROBES, TWEEZERS AND OTHER SMALL TOOLS**
- **THREE SECOND OPERATION**
- **IDEAL FOR SERVICE TECHNICIANS, REPAIRMEN, ENGINEERS, HOBBYISTS**
- **PORTABLE**

Now, with this specially developed device, you can quickly, easily and economically magnetize or demagnetize all your small tools and special instruments. Portable, for use wherever and whenever needed, the Magneformer was designed for use by mechanics, opticians, service technicians, hobbyists, engineers, etc. Furnished complete with simple instructions and is fully guaranteed.

Perma-Power Model F100—Net Each................ $4.49

AUTOMATIC TV VOLTAGE REGULATOR MODEL D-200

Perma-Power
Automatic Voltage Regulator
MODEL D200
300 WATTS

- **RETURNS FULL HEIGHT AND WIDTH OF PICTURE WHEN LOW LINE VOLTAGE CAUSES DISTORTION OF PICTURE**
- **ELIMINATES INTERMITTENT SYNC AND OSCILLATOR DRIFT**
- **AUTOMATICALLY BOOSTS 10 VOLTS**

Returns full height and width of TV picture affected by low line voltage. This 300 watt model will handle most requirements from 90 to 135 volts. Boosts 10 volts automatically when line is below 110 volts. Increases set sensitivity. Reduces low line hazards. Simple plug-in installation. Turns on and off with the TV set. Shipping Weight, 2½ lbs.

Perma-Power Model D-200—Net Each................ $5.97

Perma-Power Model D-101—Manual model; can also be switched for high line voltage adjustments. Net Each.... $4.17

Perma-Power Co. • CHICAGO 18, ILLINOIS

PRECISE MEASUREMENTS COMPANY BUILDS
HIGH VOLTAGE POWER SUPPLIES

These well designed and constructed power packs are proven by many years of service in industry, laboratories, universities and by the United States Government. Only the best available selected material goes into these units. Listed below are some of our standard design models. Other voltages and currents available as we stock large quantities of specialized transformers and components to give you faster more efficient service. Since 50 per cent of our orders are for special supplies, we will cheerfully give you quotations on your specific requirements.

HANDY PORTABLE MODELS

PRECISE MEASUREMENTS COMPANY
MILLBROOK ROAD, FLEMINGTON, NEW JERSEY
KILOVOLTS
PRECISE MEASUREMENTS COMPANY
HIGH VOLTAGE OUTPUT
DANGER HIGH VOLTAGE!
POWER
INCREASE OUTPUT VOLTAGE
FUSE
ON
OFF
HIGH VOLTAGE POWER SUPPLY

New Mirror Scale Instrument Illustrated

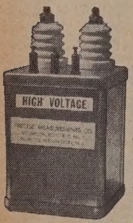
One of the most popular power supplies on the market. Completely redesigned for greater ruggedness and convenience of operation. Widely used for powering electronic equipment and for routine breakdown and insulation testing. Output voltage is well filtered D.C. which is adjustable with convenient front panel control. Input is 115 Volt, 60 cycle A.C. Equipment is available without meter, with one meter (4½"), with two meters or with larger 6" precision 1% mirror scale movement. Regulated models offer closely stabilized output voltage regardless of line or load changes.

Model	Maximum Voltage	Price	Price Regulated Model
6000-1 With Kilovolt Meter	1,000	$75.00	
6000	2,500	60.00	
6000-A With Kilovolt Meter	2,500	80.00	120.00
6005	5,000	75.00	
6005-A With Kilovolt Meter	5,000	95.00	135.00
6010	10,000	85.00	
6010-A With Kilovolt Meter	10,000	105.00	145.00
6015	15,000	95.00	
6015-A With Kilovolt Meter	15,000	115.00	155.00
6025-A With Kilovolt Meter	25,000	175.00	205.00

Mirror Scale Higher Accuracy Meter. Recommended for more exact calibration or test purposes. Add $35.00 to any meter equipped power supply.

For additional built-in current meter (both meters are 3 inch size), including automatic meter protector circuit, add $35.00 to any power supply.

PACKAGED POWER SUPPLIES



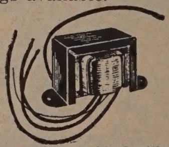
These conveniently packaged power units will be found ideal for applications requiring minimum size and weight. Features isolated high voltage terminals permitting either the positive or negative side to be grounded. Rectifier tubes are operated from separate filament transformers so that DC output voltage can be varied from zero to full rated value. Selenium rectifier types have extra cells to assure operation under high line voltage or light loading. All standard units have well filtered DC output. Power packs with AC output available on order.

Model	Output Voltage	Current
05-KV-5MA	500 Volts DC	5 Ma.
1-KV-5MA	1-KV-DC	5 Ma.
2-KV-5MA	2-KV-DC	5 Ma.
5KV-1MA	5-KV-DC	1 Ma.
5-KV-5MA	5-KV-DC	5 Ma.
10-KV-1MA	10-KV-DC	1 Ma.
10-KV-5MA	10-KV-DC	5 Ma.
15-KV-1MA	15-KV-DC	1 Ma.
15-KV-5MA	15-KV-DC	5 Ma.
20-KV-1MA	20-KV-DC	1 Ma.
20-KV-5MA	20-KV-DC	5 Ma.
30-KV-1MA	30-KV-DC	1 Ma.
30-KV-5MA	30-KV-DC	5 Ma.
50-KV-1MA	50-KV-DC	1 Ma.
50-KV-5MA	50-KV-DC	5 Ma.
75-KV-1MA	75-KV-DC	1 Ma.
100-KV-1MA	100-KV-DC	1 Ma.

TRANSFORMERS, HIGH VOLTAGE

For experimental, industrial, or production use. These units are small and compact and rated for constant service. Primary designed for 115 Volts, 60 Cycle. Secondary is isolated. Only standard models are listed. We can wind specials for any frequency or voltage. Metering windings available.

Model	Voltage	Current
1 KVT*	1 KV	5 MA
2 KVT*	2 KV	5 MA
3 KVT*	3 KV	5 MA
5 KVT*	5 KV	5 MA
10 KVT	10 KV	5 MA
15 KVT	15 KV	5 MA
25 KVT	25 KV	5 MA
50 KVT	50 KV	5 MA



* Primary tapped at 105/115/125V, secondary isolated with tap at half voltage point.

Also available with MYLAR insulation and dry EPOXY MOLDED

ANTI-STATIC TRANSFORMERS

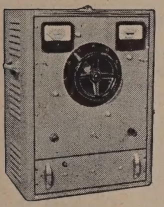
For elimination of static charges on plastics and paper. EPOXY MOLDED *Shock-Proof* construction. 115 Volt 60 cycle input.

Model	Voltage	Maximum Current
10 KVT-EXP	10 KV	5 MA
15 KVT-EXP	15 KV	5 MA

PRECISE MEASUREMENTS COMPANY • FLEMINGTON, NEW JERSEY

PRECISE MEASUREMENTS COMPANY BUILDS
HIGH VOLTAGE POWER SUPPLIES
FOR INDUSTRIAL APPLICATIONS

INDUSTRIAL POWER SUPPLIES



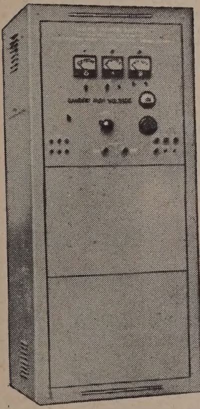
Regulated Types Available

These industrial type power supplies are built for service and efficiency. All are of the transformer type and employ husky components that have been selected for their power handling capacity. Controls are arranged so that operation is greatly simplified and a number of safety features are built in for maximum protection of personnel and equipment. Output is continuously variable from zero to full rated value. Polarity reversing models (as illustrated) can be had at additional cost.

Model	Voltage	Current	Price
F-500V	0-500	3 Amp	$800.00
F-6001	0-1000	2 Amp	975.00
F-6002	0-2000	1 Amp	985.00
F-6003-A1	0-3000	100 MA	375.00
F-6003-AV	0-3000	500 MA	550.00
F-6003-AK	0-3000	1 Amp	1100.00
F-6005-A1-H	0-5000	100 MA	550.00
F-6005-AV	0-5000	500 MA	750.00
F-6005-A1K	0-5000	1 Amp	1200.00
F-6010-A1	0-10,000	100 MA	800.00
F-6020-A05	0-20,000	50 MA	975.00
F-6050-T	0-50,000	½ MA	600.00
F-6100-T	0-100,000	½ MA	1100.00

Standard hum level 5% or less. .01% to 1% ripple available. All power supplies have automatic overload cutout control circuits. Regulated models available.

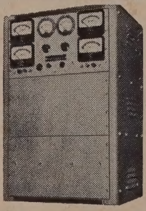
HEAVY DUTY POWER SUPPLIES



For use in applications where high voltages at extra high currents are required. Illustrated is our 100 K W Model, rated for 0 to 7,000 Volts at 14 Amperes DC. This unit is housed in a single convenient cabinet. Output voltage is regulated against line and load changes. Voltage is smoothly adjustable from zero to full output. Automatic circuits protect against overvoltage or over current conditions, turning off main power in a split second. Use of special transformer construction allows constant load drain at full rated output. All power supplies in this series is available with fixed or adjustable output and with or without regulation.

Model	Voltage	Current
A-10	0-1000	5 amperes
A-30	0-3000	5 amperes
A-31	0-3000	10 amperes
A-32	0-3000	20 amperes
A-50	0-5000	5 amperes
A-51	0-5000	10 amperes
A-72	0-7000	15 amperes
A-100	0-10,000	5 amperes
A-110	0-10,000	10 amperes
A-300	0-30,000	5 amperes

CONSTANT CURRENT POWER SUPPLIES

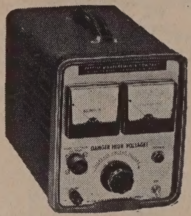


Designed for application where output current must remain constant regardless of loading resistance changes. Used for magnet fields, plating applications, gaseous lamps. Dependable magnetic current stabilizer has no moving parts, no tubes, no transistors to replace. Simply set current to desired level, no balancing or other adjustments needed. Ideal for lamp operation since operating state ionizing voltage in no way affects lamp current. Standard hum level 5%. Lower hum levels available on order.

Model	Maximum Voltage	Maximum Current
C-25-700	25 Volts	700 Amperes
C-70-70	70 Volts	70 Amperes
C-500-10	500 Volts	10 Amperes
C-Duel 500-10	500 or 1,000 Volts	10 or 20 Amperes
C-800-2	800 Volts	2 Amperes
C-1000-100	1000 Volts	100 Amperes

Duel 500 V - 500 V, 10 Ampere Power Supply. Isolated outputs may be seried or paralleled.

AC INSULATION AND BREAKDOWN TESTERS

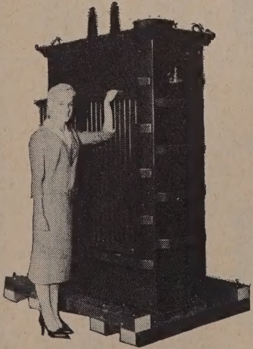


Used in testing insulation where AC voltages are desired. Dual instruments are also available which provide choice of AC or DC output with simple toggle switch selection. Units include kilovoltmeter, current meter and automatic overload cutout circuits.

Model	Voltage	VA	Price AC	Price AC and DC
3000	0 to 3,000	75	$150.00	$ 250.00
3010	0 to 3,000	300	250.00	400.00
3050	0 to 3,000	1,500	500.00	650.00
3100	0 to 6,000	3,000	700.00	1,100.00
5000	0 to 5,000	75	175.00	300.00
1000	0 to 10,000	75	200.00	350.00
1500	0 to 15,000	75	250.00	——

INDUSTRIAL SERVICE PACKAGED POWER SUPPLIES

For use in applications where large amounts of DC output power is required. Input is usually 220 Volt or 460 Volt, three phase (single phase types also available). Output is rectified DC which is completely isolated so that either side can be grounded. All units use new type WIDE AREA silicon rectifiers. No tubes or other delicate parts to replace or wear out. Low forward conducting resistance results in excellent voltage regulation. Special cell balance precautions guard against surge damage. Simply connect one of these units to the power lines and obtain direct current output. Variable voltage output is obtainable by adjusting input voltage. Standard models are listed below. Good delivery on other voltages and currents.



Model	Output Voltage	Current Amps.
100-100	100	100
100-1000	100	1000
500-50	500	50
500-500	500	500
1000-50	1000	50
1000-100	1000	100
3000-10	3000	10
3000-50	3000	50
5000-10	5000	10
5000-25	5000	25
10,000-2	10,000	2
10,000-5	10,000	5
20,000-2	20,000	2
20,000-5	20,000	5
30,000-2	30,000	2
30,000-5	30,000	5

PRECISE MEASUREMENTS COMPANY
FLEMINGTON, NEW JERSEY

RCA BATTERIES

RADIO • FLASHLIGHT • FARM • TRANSISTOR • INDUSTRIAL • SPECIAL

PORTABLE "A" TYPES

PORTABLE "B" TYPES

PORTABLE "A-B" TYPES

TRANSISTOR BATTERIES

RCA TYPE NO.	DEALER PRICE EA.*	LIST PRICE EA.*	VOLTAGE	INTERCHANGEABILITY GUIDE			STANDARD PKG.		MAX. DIMENSIONS (In.)		
				EVEREADY	NEDA	BURGESS	QTY.	WT. (lbs.)	L.	W. or DIAM.	HT.
PORTABLE "A" TYPES											
VS002	(Substitute Type VS067)										
VS004	1.15	1.65	1½	742	4	4F	12	16	2⅝	2⅝	4 1/16
VS009	1.16	1.65	6	744	6	4FP1	12	17	2 23/32	2 23/32	4 5/16
VS010	2.73	3.90	6	718	1	2F4	6	17	3⅞	2 13/16	5½
VS065	1.05	1.50	7½	717	9	C5	12	6½	2 7/32	1 15/16	3 1/32
VS067	.95	1.35	4½	736	3	F3	12	13	4	1 7/16	4 3/16
VS068	.70	1.00	6	724	2	Z4	12	2	1¼	1¼	2 7/16
VS069	.84	1.20	1½	720	18	2D	12	5½	2⅝	1⅜	2 15/16
VS072	.95	1.35	4½	726	19	D3	12	9	3 31/32	1 7/16	3
VS129	1.58	2.25	7½	713	8	B5	6	2½	4 1/16	15/16	3
VS236	.32	.45	1½	964	20	21R	48	19	—	1⅜(dia.)	4 11/64
VS315	1.05	1.50	7½	707	26	D5	6	6	2 9/16	2 1/32	2 13/16
PORTABLE "B" TYPES											
VS012	3.29	4.70	45	484	207	B30	6	19¾	3 31/32	2 17/32	5 5/16
VS013	2.70	3.85	45	482	202	M30	6	12⅖	3 19/32	1 27/32	5½
VS014	2.49	3.55	45	W359	206	A30	5	10⅛	3 7/16	2¼	4 9/16
VS015	2.76	3.95	22½-45	738	205	Z30	6	8	3	2 5/16	4⅛
VS016	2.45	3.50	67½	467	200	XX45	12	10	2 13/16	1⅜	3 45/64
VS055	2.08	2.95	45	455	201	XX30	12	6¾	2 21/32	1	3 11/16
VS082	2.42	3.45	67½	457	203	K45	12	6½	2 13/16	1⅜	2½
VS084	1.05	1.50	22½	412	215	U15	12	1	1 1/32	⅝	2
VS086	1.75	2.50	45	415	213	U30	12	2	1 3/64	⅝	3 11/16
VS090	3.15	4.50	90	490	204	N60	12	13	3 23/32	1⅜	3 45/64
VS217	3.15	4.15	75	437	212	XX50	12	12½	1 15/16	1 15/32	6 15/32
VS218	2.17	3.10	67½	477	211P	P45	12	6⅖	1 29/32	63/64	5 7/16
VS219	2.77	3.95	90	479	214	P60	12	9	1 31/32	1 1/32	7 15/32
VS316	3.47	4.95	90	495	216	N60X	6	7	1 15/16	1 15/32	7⅛
VS318	2.07	2.95	67½	416	217	UX45	6	1¾	1 21/64	63/64	3½
PORTABLE "A-B" TYPES											
VS019	5.43	7.75	7½-9-90	753	401	F6A60	6	32	9¼	2 13/16	4 7/16
VS047	5.78	8.25	9-90	752	400	G6B60	6	41¾	13 3/16	2 13/16	4 7/16
VS050	5.08	7.25	6-7½-75	755	403	T5Z50	6	23	8⅝	2½	3 11/16
VS057W	4.87	6.95	7½-9-90	756	405	T6Z60	6	19	8⅞	2¼	3⅞
VS058	5.57	7.95	9-90	757	406	F6A60P	6	31	9 13/16	2¾	4 7/16
VS059	5.22	7.45	9-90	727	428	T6Z60P	6	20	9 7/16	2¼	3 13/16
VS060	4.83	6.90	7½-75	785	431	T5Z50P	6	18	8 9/16	2 7/16	3 11/16
VS064	4.38	6.25	1½-90	729	425	4TZ60	6	16½	7 13/16	2¼	3 13/16
TRANSISTOR BATTERIES											
VS150**	.32	.47	1.4	E640	—	RM640	20	½	—	0.625	0.440
VS163**	1.10	1.60	4.2	E163	—	TR163R	10	¾	—	0.662	1.327
VS164**	1.35	2.00	5.6	E164	—	TR164	10	1	—	0.662	1.767
VS165**	1.64	2.45	6.5	—	—	TR165R	10	1	—	0.662	2.217
VS300A	.95	1.35	9	226	1600	P6M	12	1½	—	31/32	1 31/32
VS301	1.76	2.50	3, 6, 9	2506	1601	D6P1	12	18	8	1 9/16	2 13/16
VS304	1.05	1.50	13½	239	1900	XX9	12	2⅝	1 21/64	1 1/32	2 11/16
VS305	1.30	1.85	9	246	1602	2N6	12	3½	1 13/32	1 11/32	3 3/16
VS306	1.26	1.80	9	276	1603	D6	6	5¾	2 9/16	2 1/32	3 5/32
VS309A**	1.37	1.95	9	E177	1606	TR177	12	½	—	35/64	1 29/32
VS312**	1.58	2.25	8	E146	1604	TR146R	12	1¼	1	19/32	1 15/16
VS313**	.51	.75	1.4	E9	15	ZM9	96	10	—	9/16	1 31/32
VS321	1.93	2.75	4½	2731	—	—	12	36¾	2 13/16	1¾	8 11/32
VS322	1.05	1.50	9	266	1605	M6	12	5¾	1 13/16	1 13/16	2 7/16
VS323	.95	1.35	9	216	1604	2U6	12	1	1 1/32	11/16	1 29/32
VS324	1.19	1.70	4.5	243	1610	2Z3	12	3½	1 13/32	1 11/32	2¾
VS325	.71	1.00	6	2713	1403	—	6	1.8	1 13/32	47/64	4 11/16
VS334	.155	.25	1.5	1015	15	930	144	5¼	—	9/16	2
VS335	.155	.25	1.5	635	14	130	72	8¼	—	1	15/16
VS336	.155	.25	1½	A-100	13	230	192	40½	—	1 11/32	2 13/32
VS400**	1.80	2.65	4	E233	1300	TR233R	10	2½	—	1 1/32	1 31/32

■ Sealed-in-Steel. * Optional. **Mercury Types

Use Index Page 1 for Quick, Easy Location of ALL Products

TRADE DISCOUNT APPLIES TO *LIST PRICE* ONLY

RCA BATTERIES

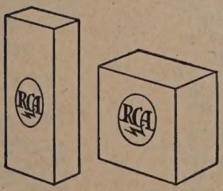
RADIO • FLASHLIGHT • FARM • TRANSISTOR • INDUSTRIAL • SPECIAL

LIGHTING TYPES

FARM TYPES

INDUSTRIAL and SPECIAL-PURPOSE TYPES

TYPES MADE TO ORDER



RCA TYPE NO.	DEALER PRICE EA.*	LIST PRICE EA.*	VOLTAGE	INTERCHANGEABILITY GUIDE			STANDARD PKG.		MAX. DIMENSIONS (in.)		
				EVEREADY	NEDA	BURGESS	QTY.	WT. (lbs.)	L.	W. or DIAM.	HT.
LIGHTING TYPES											
VS034A	.125	.20	1½	915	15	Z	144	6	—	9/16	2
VS035A	.125	.20	1½	935	14	1	240	26	—	1	1 15/16
VS036	.125	.20	1½	950	13	2R	192	38	—	1 5/16	2⅜
VS040C	.79	1.19	6	509	908	FH4	12	16½	2¾	2¾	4⅜
VS040S	.79	1.19	6	510S	915	F4BP	12	17	2¾	2¾	4¼
VS073	.08	.125	1½	904	910	N	96	1½	—	7/16	1 3/16
VS074	.095	.15	1½	912	24	7	120	2½	—	7/16	1¾
VS138	1.45	2.05	3	W357	901	4F2H	5	14½	3 15/16	2¾	6¼
VS317	1.83	2.75	6	731	918	TW1	4	13	5 7/16	2⅞	4 5/16
FARM TYPES											
VS022	7.95	10.65	1½-90	759	413	17GD60	3	52	16 1/16	4¼	6 11/16
VS119	10.47	14.95	7½-9-90	776	415	S6D60	3	47	8¼	4½	13⅞
INDUSTRIAL and SPECIAL-PURPOSE TYPES											
VS006C	.84	1.25	1½	6GL	914	—	12	27	—	2⅝	6⅝
VS006S	.84	1.25	1½	61GN	905	61GN	12	27	—	2⅝	6⅝
VS028	.88	1.25	4½	781	714	5360	5	1¾	2 17/32	15/16	3 1/16
VS029	1.65	2.35	1½-3-4½-6-7½	773	713	5540	10	5	4⅛	15/16	3
VS039	3.34	4.98	6	1461	907	S461	4	38	10⅜	2⅞	7⅜
VS070	.60	.85	1½	960P	23	8R	12	4½	—	1 5/16	3 15/16
VS083	.81	1.15	15	411	208	U10	12	¾	1 1/32	⅝	1 29/64
VS085	1.23	1.75	30	413	210	U20	12	1¼	1 1/32	⅝	2 9/16
VS093	8.37	11.95	300	493	722	U200	3	3½	2 11/16	2 7/32	3 29/32
VS100	.87	1.25	3	W352	701	F2BP	5	4¼	2 11/16	1 7/16	4 9/16
VS101	.87	1.25	1½	W354	700	2FBP	5	4¼	2⅝	1 7/16	4 9/16
VS102	1.61	2.35	—22½	763	710	4156	5	5	3¼	2⅛	2 13/16
VS103	4.01	5.98	6	706	902	4F4H	4	23½	8 5/16	2 13/16	6 5/16
VS106	.84	1.25	1½	735	900	4FH	12	15½	2 11/16	2 11/16	4 3/16
VS112	3.05	4.35	22½-45	W376	709	5308	5	15¼	4 3/16	2 11/16	6
VS114	2.69	3.85	22½-45	W350	711	Z30NX	5	6½	3	1⅞	4 15/16
VS126	3.84	5.50	22½-45	W365F	723	2308SC	5	39	8⅛	3¼	7 11/16
VS127W	5.02	7.20	22½-45	W363F	724	10308SC	4	44½	8 3/16	4 7/16	8
VS130	1.33	1.90	—1½-3-4½	761T	712	2370ST	5	5	4	1 7/16	3 1/16
VS131	3.12	4.45	—22½ ◆	778	708	5156SC	4	6½	4⅛	2½	3 5/16
VS132●	1.98	2.95	9	—	909	D6BP	5	7½	4 1/16	2 13/16	3
VS133	.68	1.02	4½	703	706	532	10	3	2⅜	15/16	3 1/16
VS134	.57	.85	3	750	704	422	10	1¼	1 7/16	¾	2 9/16
VS136	1.08	1.55	3	W356	703	2F2H	5	8	2 11/16	2 11/16	4¼
VS139	4.86	7.25	7½	715	903	4F5H	4	31½	7¼	4	6 5/16
VS140	5.53	8.25	9	716	904	4F6H	4	38	8½	4 1/16	6 7/16
VS141	.77	1.10	1½	W353	11	2F	6	5	2 21/32	1 7/16	4¼
VS142	.66	1.00	4½	751	705	432	10	2	2	¾	2 5/16
VS143**	.38	.59	1.34	E1	—	RM1R	40	2	—	0.625	0.650
VS144**	.82	1.25	1.34	E12	—	RM12R	10	1¼	—	0.640	1.968
VS145**	.25	.36	1.34	E400	—	RM400R	50	¼	—	0.455	0.135
VS147**	.30	.45	1.34	E630	—	RM630R	40	½	—	0.615	0.238
VS148**	.84	1.25	2.5	E132	—	TR132R	10	¾	—	0.662	1.315
VS149**	1.18	1.75	4	E133	—	TR133R	10	1	—	0.662	1.965
VS157W	5.53	7.90	22½-45	W364F	715	21308SC	4	51	8⅛	4⅝	7 11/16
VS317	1.83	2.75	6	731	918	TW1	4	13	5 7/16	2⅞	4 5/16
TYPES MADE TO ORDER											
VS126	3.84	5.50	22½-45	W365F	723	2308SC	5	39	8⅛	3¼	7 9/16
VS136	1.08	1.55	3	W356	703	2F2H	5	8	2 11/16	2 11/16	4 3/16
VS140	5.53	8.25	9	716	904	4F6H	4	38	8½	4 1/16	6 7/16
VS142	.66	1.00	4½	751	705	432	10	2	2	¾	2⅝
VS157W	5.53	7.90	22½-45	W364F	715	21308SC	4	51	8⅛	4⅝	7 11/16

● Wax coated. ◆ Other voltage taps: 3, 4½, 6, 9, 10½, 16½. * Optional. ■ Sealed-in-Steel.

RCA COMPONENTS DIVISION, Camden, N. J.

RAYTHEON

RECEIVING AND PICTURE TUBES • SEMICONDUCTOR PRODUCTS
MECHANICAL COMPONENTS • RAYTHEON/MACHLETT POWER TUBES
VOLTAGE REGULATORS • CAPTIVE HARDWARE • MICROWAVE TUBES

STANDARD VOLTAGE REGULATORS AVAILABLE FROM STOCK

I. Standard Line Voltage Regulators (± 1% Stabilization)

STYLE	CATALOG NUMBER	OUTPUT VOLT—AMPS	INPUT VOLTAGE RANGE	OUTPUT VOLTAGE	APPROX. SHIP. WT. IN LBS.
Normal Output Apparatus Style	RVA-15	15	95-130	117	3
	RVA-30	30	95-130	117	5
	RVA-60	60	95-130	117	9
	RVA-125	125	95-130	117	14
	RVA-250	250	95-130	117	24
	RVA-500	500	95-130	117	39
	RVA-1000	1000	95-130	117	
	RVA-2000	2000	95-130/175-235/190-260	117/234	
	RVA-3000	3000	95-130/175-235/190-260	117/234	
Normal Output Component Style	RVC-15	15	95-130	117	3
	RVC-30	30	95-130	117	5
	RVC-60	60	95-130	117	8
	RVC-125	125	95-130	117	12
	RVC-250	250	95-130	117	22
	RVC-500	500	95-130	117	37
Sinusoidal Output Apparatus Style	RSA-250	250	95-130	117	
	RSA-500	500	95-130	117	
	RSA-1000	1000	95-130	117	
	RSA-2000	2000	95-130/175-235/190-260	117/234	

II. Standard Filament Voltage Regulators (± 1% Stabilization)

STYLE	CATALOG NUMBER	OUTPUT VOLT—AMPS	INPUT VOLTAGE RANGE	OUTPUT VOLTAGE	APPROX. SHIP. WT. IN LBS.
Hermetically Sealed Apparatus Style	VR61DO	15	100-130	6.3	8
	VR6101	30	95-130	6.0/7.5	7
Component Style	RVC15-6.3	15	95-130	6.3	3
	RVC30-6.3	30	95-130	6.3	5
	RVC60-6.3	60	95-130	6.3	12

III. Standard Plate-Filament Voltage Regulators (± 3% Stabilization)

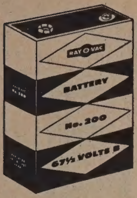
STYLE	CATALOG NUMBER	OUTPUT VOLT—AMPS	INPUT VOLTAGE RANGE	OUTPUT VOLTAGE	APPROX. SHIP. WT. IN LBS.
Component Style	RVC40-570	40	100-130	570 VCT 50MA 6.3VCT 2.5A 5.0V 2.0A	5
	RVC70-800	70	100-130	800 VCT 110MA 6.3VCT 3.0A 5.0V 2.0A	8
	RVC185-780	185	100-130	780 VCT 250MA 6.3VCT 4.0A 6.3VCT **8.0A 5.0V 3.0A	19

**Unregulated

RAY·O·VAC ®

BATTERIES FOR ALL RADIO, ELECTRONIC, LIGHTING & HOBBY NEEDS

A COMPLETE LINE OF POWERFUL BATTERIES



200

211M

B BATTERIES

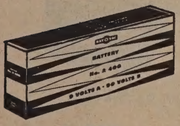
STOCK NO.	VOLTAGE	MAX. DIMENSIONS L	MAX. DIMENSIONS W	MAX. DIMENSIONS † O.A.H.	TERMINALS	COMPARATIVE GUIDE EVEREADY	COMPARATIVE GUIDE BURGESS	COMPARATIVE GUIDE RCA	LIST PRICE
200	67½	21 11/16	1⅜	3¾	RMA 119	467	XX45	VS016	3.50
201	45	2 21/32	1	3 11/16	RMA 119	455	XX30	VS055	2.95
202	45	3 9/16	1 13/16	5½	RMA 110	482	M30	VS013	3.85
203	67½	2¾	1⅜	2½	RMA 119	457	K45	VS082	3.45
204	90	3 11/16	1⅜	3¾	RMA 119	490	N60	VS090	4.50
205	22½, 45	3 1/16	2 5/16	4 1/16	RMA 111	738	Z30	VS015	3.95
206	45	3 7/16	2¼	4 9/16	RMA 111	W359	A30	VS014	3.55
207	45	4⅛	2⅝	5 5/16	RMA 111	484	B30	VS012	4.70
208	15	1 1/32	39/64	1 7/16	RMA 120	411	U10	VS083	1.15
A210*	30	1 1/64	39/64	2 17/32	RMA 120	413	U20	VS085	1.75
211M	67½	1 29/32	63/64	5 33/64	2 Snap Fasteners	—	P45M	VS216/215	3.95
211P	67½	1⅞	1	5 15/32	2 Snap Fasteners	477	P45	VS218	3.10
212	75	1 13/16	1⅜	6¼	2 Snap Fasteners	437	XX50	VS217	4.50
213	45	1 3/16	35/64	3 9/16	2 Snap Fasteners	415	U30	VS086	2.50
214	90	1⅞	1	7 15/32	2 Snap Fasteners	479	P60	VS219	3.95
215	22½	1 1/64	⅝	2	RMA 120	412	U15	VS084	1.50
217	67½	1 21/64	63/64	3½	Snap Fasteners	416	UX45	VS318	2.95

204

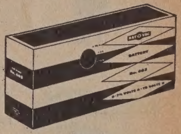
213

A B BATTERIES

STOCK NO.	VOLTAGE	DIMENSIONS L	DIMENSIONS W	DIMENSIONS † O.A.H.	TERMINALS	COMPARATIVE GUIDE EVEREADY	COMPARATIVE GUIDE BURGESS	COMPARATIVE GUIDE RCA	LIST PRICE
A400*	9, 90	13⅝	2¾	4 9/16	4 Prong Recessed Plug	752	G6B60	VS047	9.25
401	7½, 9, 90	9 3/16	2 23/32	4⅜	RMA 116	753	F6A60	VS019	7.75
403	6, 7½, 75	8 9/16	3 11/16	2 7/16	RMA 116	755	T5Z50	VS050	7.25
405	7½, 9, 90	8 11/16	2 3/16	3¾	RMA 116	756	T6Z60	VS057W	6.95
406	9, 90	9½	2 23/32	4⅜	4 Prong Recessed Plug	757	F6A60P	VS058	7.95
407	1½, 63	9⅛	2	4¾	4 Hole Socket	W366	4GA42	VS053	8.80
408	7½, 63	8⅝	2¾	4⅛	RMA 116	W367	G5A42	VS038	9.20
409	1½, 90	5½	2 11/16	7⅛	RMA 115	—	5DA60	VS043	6.13
410	1½, 90	10	2 5/16	4 13/16	RMA 115	W369	6TA60	VS054	7.85
413	1½, 90	15¾	4¼	6 13/16	RMA 115	759	17GD60	VS022	10.65
415	7½, 9, 90	8⅛	4 5/16	13⅝	RMA 116 & 4 Prong Plug	776	S6D60	VS119	14.95
422	6, 75	12⅝	2¾	4⅛	4 Prong Recessed Plug	—	G4B50	VS046	5.95
425	1½, 90	3 11/16	2¼	7 13/16	RMA 115	729	4TZ60	VS064	6.25
426	1½, 90	12 9/16	5⅜	6⅝	RMA 115 & 8 Hole Socket	—	18GD60	VS045	9.65
428	9, 90	8 11/16	2 3/16	3¾	4 Prong Recessed Plug	756P	T6Z60P	VS059	7.45
431	7½, 75	8 7/16	3 11/16	2⅜	5 Prong Recessed Plug			VS060	6.90



A400*



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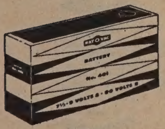

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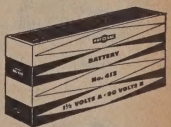
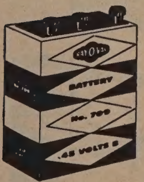


413

INDUSTRIAL AND SPECIAL-PURPOSE BATTERIES

STOCK NO.	VOLTAGE	DIMENSIONS L	DIMENSIONS W	DIMENSIONS † O.A.H.	TERMINALS	COMPARATIVE GUIDE EVEREADY	COMPARATIVE GUIDE BURGESS	COMPARATIVE GUIDE RCA	LIST PRICE
700	1½	2⅝	1⅜	4 9/16	2 Screw	W354	2FBP	VS101	1.25
701	3	2⅝	1⅜	4 9/16	2 Screw	W352	F2BP	VS100	1.25
703	3	2 11/16	2 11/16	4⅜	2 Screw	W356	2F2H	VS136	1.55
704	3	1⅜	¾	2 9/16	2 Flat Spring	750	422	VS134	.85
705	4½	2	¾	2⅝	2 Flat Spring	751	432	VS142	1.00
706	4½	2 15/32	13/16	3 1/16	2 Flat Spring	703	532	VS133	1.02
708	3, 4½, 6, 9, 10½, 16½, 22½	4⅛	2½	3 5/16	8 Spring Clip	778	5156SC	VS131	4.45
709	22½, 45	4⅛	2⅝	5 7/16	3 Screw	W376	5308	VS112	4.35
A710	22½	3 7/16	2⅛	2¾	Screw	4156	763	VS102	2.35
711	22½-45	2 31/32	1 27/32	5	3 Screw	W350	Z30NX	VS114	3.85
712	1½, 3, 4½	3 15/16	1⅜	3	4 Screw	761T	2370ST	VS130	1.90
713	1½, 3, 4½, 6, 7½	3 15/16	⅞	3	5 Screw 1 Pigtail	773	5540	VS029	2.35
714	4½	2 15/16	13/16	2⅞	2 Screw	781	5360	VS028	1.25
715	22½, 45	8⅛	4⅝	7 11/16	3 Spring Clip	W364F	21308SC	VS157	7.65
A716	22½, 45	8	4	7⅜	3 Spring Clip	W363F	10308SC	VS127	6.90
717	22½, 45	8 1/16	3 3/16	7 3/16	RMA 107	W365P	2308P1	VS026	5.00
718	3, 4½	3 15/16	1 5/16	2⅞	RMA 112	771	2370P1	VS030	2.25
721	3, 4½, 16½, 22½	4	2½	3	RMA 113	768	5156P1	VS031	4.45
722	300	2⅝	2 5/32	3 13/16	2 Flush Pin Jack	493	U200	VS093	11.95
723	22½, 45	8⅛	3¼	7 9/16	3 Spring Clip	W365F	2308SC	VS126	5.50
724	22½, 45	8	4	7⅜	3 Spring Clip	—	10308SC	VS127W	5.75
726	22½, 45	8 1/16	4 5/16	7 3/16	RMA 107	W363P	10308P1	—	5.75



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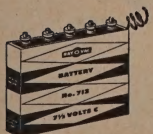


713

Rely on RAY·O·VAC® Batteries

SUPPORTED BY A COMPLETE MERCHANDISING PROGRAM

LIGHTING AND IGNITION BATTERIES

2LP

1LP

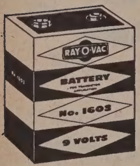
7R

6 Ign. SC.

941

STOCK NO.	VOLTAGE	MAX. DIMENSIONS			TERMINALS	COMPARATIVE GUIDE			LIST PRICE
		L	W	† O.A.H.		EVEREADY	BURGESS	RCA	
1LP (NEDA 14)	1 1/2	1 1/32 Diam.	—	1 31/32	Flashlight	935	1	VS035	.20
2LP	1 1/2	1 11/32 Diam.	—	2 13/32	Flashlight	950	2R	VS036	.20
3LP	1 1/2	1 11/32 Diam	—	2 13/32	Flashlight	1050	210	—	.25
5LP (NEDA 13)	1 1/2	1 11/32 Diam.	—	2 13/32	Flashlight	D99	—	—	.25
7LP	1 1/2	9/16 Diam.	—	1 31/32	Flashlight	915	Z	VS034	.20
7R (NEDA 15)	1 1/2	9/16 Diam.	—	1 31/32	Flashlight	915	Z	VS034	.15
400 (NEDA 24)	1 1/2	7/16 Diam.	—	1 49/64	Flashlight	912	7	VS074	.15
716 (NEDA 910)	1 1/2	29/64 Diam.	—	1 13/64	Flashlight	W468	N	VS073	.125
941 SP (NEDA 908)	6	2 11/16	2 11/16	4 7/8	2 Coil Spring	509	F4H	VS040C	1.19
941 SCREW (NEDA 915)	6	2 11/16	2 11/16	4 7/8	Screw	510S	F4BP	—	1.19
941 CLIP (NEDA 917)	6	2 11/16	2 11/16	4 7/8	Clip	510F	F4SC	—	1.19
941 RR (NEDA 916)	6	2 11/16	2 11/16	4 7/8	Spring	409	—	—	1.19
918	6	5 3/8	2 13/16	4 7/8	2 Screw	731	TW1	—	2.75
900	1 1/2	2 11/16	2 11/16	4 3/16	2 Screw	735	4FH	VS106	1.25
6 Ign. SC. (NEDA 905)	1 1/2	2 5/8 Diam.	—	6 9/16	2 Screw	6 Ign.	6 Ign.	VS006S	1.25
6 Ign. Clip (NEDA 914)	1 1/2	2 5/8 Diam.	—	6 5/8	2 Spring Clip	6 Ign. Clip	6 Ign. Cl.	VS006C	1.25
6 Tel CLIP (NEDA 906)	1 1/2	2 5/8 Diam.	—	6 5/8	2 Spring Clip	6 GL	6 Tel.	VS042C	1.25
641 (NEDA 907)	6	10 3/8	2 13/16	7 3/8	2 Screw	1461	S461	VS039	4.98
903	7 1/2	7 1/4	4	6 5/16	2 Screw	715	4F5H	VS139	7.25
904	9	8 9/16	4	6 17/32	2 Screw	716	4F6H	VS140	8.25

TRANSISTOR BATTERIES


1603

1600

STOCK NO.	VOLTAGE	MAX. DIMENSIONS			TERMINALS	COMPARATIVE GUIDE			LIST PRICE
		L	W	† O.A.H.		EVEREADY	BURGESS	RCA	
1600	9	31/32 diam.		1 31/32	2 Snap Fasteners	226	P6	VS300	1.35
1601	9, 6, 3	8	2 3/4	1 9/16	4-Hole Socket	2506	D6PI	VS301	2.50
1602	9	1 3/8	1 3/8	2 3/4	2 Snap Fasteners	246	2N6	VS305	1.85
1603	9	2 9/16	2 1/32	3 3/32	2 Snap Fasteners	276	D6	VS306	1.80
1604	9	1	19/32	1 31/32	2 Snap Fasteners	216	2U6	VS312	1.35
1605	9	1 13/16	1 1/4	2 5/16	Snap Fasteners	M6	266	—	1.50
1900	9, 13 1/2	1 1/4	7/8	2 3/16	3 Hole Socket	239	XX9	VS304	1.50

Note: 2LP or 5LP size D, 1LP size C and 7R or 7LP size AA 1 1/2 Volt batteries are also used in transistor applications. These batteries are listed under the lighting and ignition battery section.

A BATTERIES

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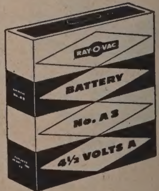
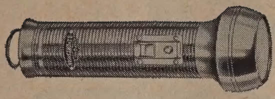

A3*

STOCK NO.	VOLTAGE	MAX. DIMENSIONS			TERMINALS	COMPARATIVE GUIDE			LIST PRICE
		L	W	† O.A.H.		EVEREADY	BURGESS	RCA	
A1*	6	3 7/8	2 3/4	5 1/2	RMA 104	718	2F4	VS010	3.90
A2*	6	1 5/32	1 5/32	2 11/32	Flashlight	724	Z4	VS068	1.00
A3*	4 1/2	4	1 3/8	4 1/8	RMA 103	736	F3	VS067	1.35
A4*	1 1/2	2 5/8	2 5/8	4	RMA 101	742	4F	VS004	1.65
A6*	6	2 5/8	2 5/8	4	RMA 104	744	F4PI	VS009	1.65
A7*	4 1/2	4	1 3/8	4 11/16	RMA 103	746	G3	VS002	1.50
8	7 1/2	4 1/16	15/16	3	RMA 105	713	B5	VS129	2.25
9	7 1/2	2 5/16	2	3 1/16	RMA 105	717	C5	VS065	1.50
11	1 1/2	2 9/16	1 5/16	4 1/4	RMA 101	W353	2F	VS141	1.10
12	1 1/2	3 3/4	1 3/8	5 11/16	RMA 101	—	4FL	VS005	1.86
13	1 1/2	1 11/32 Diam.	—	2 13/32	Flashlight	A100	230/2R	—	.25
14	1 1/2	1 1/32 Diam.	—	2 13/32	Flashlight	635	130	—	.25
15	1 1/2	9/16 Diam.	—	2 13/16	Flashlight	1015	930	—	.25
16	6	3 7/8	1 7/16	10 3/4	RMA 104	747	2F4L	VS011	3.95
18	1 1/2	2 9/16	1 5/16	1 31/32	RMA 101	720	2D	VS069	1.20
19	4 1/2	3 7/8	1 3/8	3	RMA 103	726	D3	VS072	1.35
20	1 1/2	1 3/8 Diam.	—	4 11/64	Flashlight	964	21R	VS236	.45
23	1 1/2	1 5/16 Diam.	—	4 1/16	RMA 101	960P	8R	VS070	.85
400 (NEDA 24)	1 1/2	7/16 Diam.	—	1 49/64	Flashlight	912	7	VS074	.15
26	7 1/2	2 19/32	2 1/16	2 7/8	2 Snap Fasteners	707	D5	VS315	1.50
27	6	3 7/8	2 3/4	5 1/2	RMA 105	—	2F4S	—	2.90

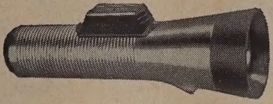
† Over-all height. * Prefix A added to NEDA number to eliminate duplication of existing Ray-O-Vac number.

RAY-O-VAC FIRST WITH NEDA NUMBERING

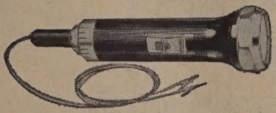
WORLD-FAMOUS FLASHLIGHTS
LANTERNS . . . HEADLIGHTS


S22F

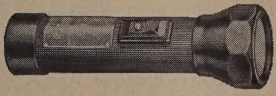
303


ML22

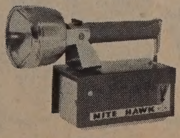
G32


N22T

AN22


BM32

L298 and L19


L202

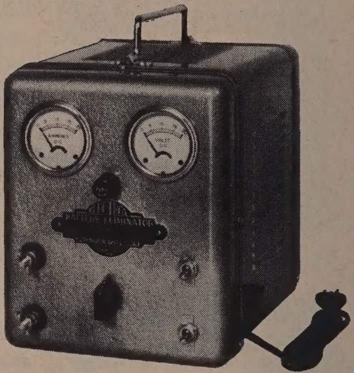
STOCK No.	DESCRIPTION	LIST PRICE
SPORTSMAN® LINE		
S21F	2-cell chrome knurled baby spotlight, ring hanger	$ 1.85
S22F	2-cell chrome knurled regular spotlight, ring hanger	1.95
S32F	3-cell chrome knurled spotlight, ring hanger	2.35
S33F	3-cell chrome searchlight with ring hanger	2.95
S53F	5-cell chrome searchlight with ring hanger	4.95
S62F	6-cell chrome spotlight — converts to 3-cell	4.95
301	Sealed beam SPORTSMAN® lantern, knurled barrel grip — price includes battery	10.25
303	Sealed beam SPORTSMAN® lantern has shock absorber and red signal flasher — price includes battery	12.70
304	SPORTSMAN® lantern with swivel head — allows diffused glow or piercing beam — price includes battery	9.25
RAY-O-VAC MAGNET LIGHTS		
ML12	2-cell baby, magnet independent of switch	1.89
ML22	2-cell regular, magnet independent of switch	1.99
RAY-O-VAC PENLIGHTS		
P20	2-cell pen size	.89
Z21P	2-cell size "AA"	.89
HEAVY-DUTY FLASHLIGHTS Rubber End Caps		
BR22	2-cell prefocused spotlight with 3-position switch	1.85
G22	2-cell prefocused spotlight with replaceable switch	2.60
G32	3-cell prefocused spotlight with replaceable switch	2.67
HEAVY-DUTY WORKMAN® FLASHLIGHTS		
N22	2-cell prefocused spotlight, replaceable lock switch	3.25
N22T	2-cell prefocused spotlight, continuity tester built into removable end cap	6.75
N32	3-cell prefocused spotlight, replaceable lock switch	3.65
UNDERWRITER-APPROVED SAFETY LIGHTS		
AN22	2-cell prefocused spotlight with safety head	3.98
AN32	3-cell prefocused spotlight with safety head	4.40
BM22	2-cell prefocused spotlight with safety head	3.45
BM32	3-cell prefocused spotlight with safety head	4.20
HUNTER® LANTERN		
398	Versatile HUNTER® lantern with 3″ reflector for piercing beam. Signal button on switch.	4.95
NITE HAWK® LINE		
L298	Headlight	3.29
L19	Battery pouch for headlight	.69
L202	Prefocused lantern with red signal flasher handle	8.98

RAY-O-VAC COMPANY, MADISON 10, WISCONSIN

A DIVISION OF THE ELECTRIC STORAGE BATTERY COMPANY

TODAY'S OUTSTANDING D. C. POWER SUPPLIES...

in performance! in reliability! in dollar-for-dollar value!



MODEL AR 5612

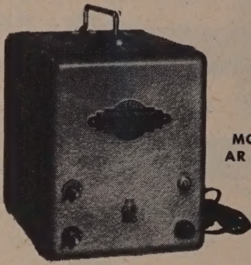
SCHAUER BATTERY ELIMINATORS FOR SERVICING BOTH 6 and 12 VOLT AUTO RADIOS

Again Schauer leads the field! Here are streamlined, new Battery Eliminators specifically engineered to meet the growing needs of auto radio service men. In one compact unit, quality-built D.C. Power Supplies which more than meet manufacturers' specifications for the operation and servicing of any 6- or 12-volt auto radio equipped with signal-seeking, push-button or manual tuners.

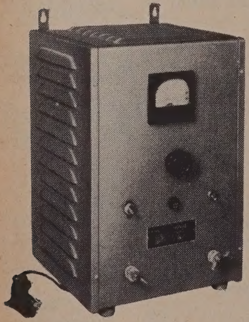
SCHAUER MODEL AR 5612 — Output adjustable by means of a rugged, silver contact tap switch. Toggle switch changes unit from 6-volt to 12-volt operation. Low range output: 7½ volts at 12 amps., continuous; 20 amps., intermittent. High range: 15 volts at 6 amps., continuous; 11 amps., intermittent. Components include Selenium rectifiers, transformer, condenser-type filters, accurate 0-20 V. and 0-20 A. meters, heavy wing-nut binding posts and carrying handle. Housed in sturdy steel case 7½" wide x 9½" deep x 9" high.

SCHAUER MODEL AR 4612 — Non-adjustable 6-volt and 12-volt Battery Eliminator. Built to same high-quality standards as Model AR 5612, above. Equipped with high-low switch to change from nominal 6-volt to nominal 12-volt operation.

Own SCHAUER Battery Eliminators — they're the choice of leading service men.



MODEL AR 4612



MODEL SA-48006

SCHAUER MODEL SA-48006 ADJUSTABLE 6-VOLT AND 12-VOLT BATTERY ELIMINATOR FOR AM AND FM 2-WAY AND MARINE RADIOS

A.C. Input: 115 volts, 60 cycle, single phase. D.C. Output: Unit delivers either 6 volts D.C. up to a maximum of 48 amperes; or 12 volts D.C. up to a maximum of 24 amperes. To maintain required voltage output under various load conditions, a ruggedly built, dial-type tap switch provides adjustment from less than 1 ampere up to the maximum rated output. A conveniently located switch is provided for changing to the voltage desired.

Equipment: Rectification is obtained through the use of Selenium dry plate rectifiers; ample filtering of the output is provided by an efficient choke and condenser combination; heavy-duty output terminals with wing nuts for connecting D.C. leads; precision D.C. voltmeter; cartridge type fuse; 6 feet of A.C. cord and plug. Case is 10" wide x 9½" deep x 15" high, finished in durable grey wrinkle, arranged for either bench or wall mounting.

SCHAUER BATTERY CHARGERS

A complete line of battery chargers for safe recharging of storage batteries. Available in models for charging 6-volt batteries, for 12-volt batteries, and other models for charging both 6-volt and 12-volt batteries. Four to 20 ampere capacities. Equipped with exclusive Schauer *"Charger Guard"*—an automatic corrector which acts instantly in case of an overload or short circuit. No manual resetting of the circuit breaker, and fuses are eliminated. Approved by Underwriters' Laboratories, Inc. Write for new Bulletin No. 2488.

RECTIFIER DIVISION

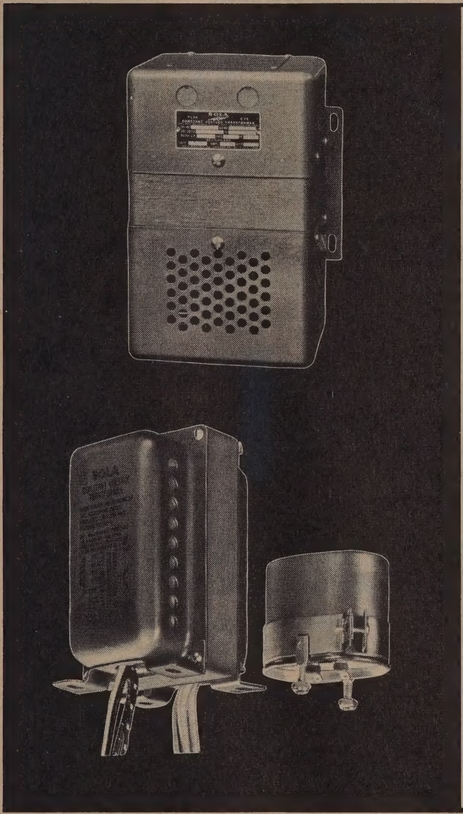
SCHAUER MANUFACTURING CORP.

Cincinnati 42, Ohio

SOLA

Constant Voltage Transformers

automatic, instantaneous voltage regulators



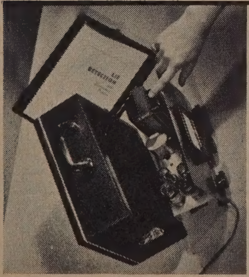
Sola Constant Voltage Transformers are static-magnetic voltage regulators. They are designed to provide a stabilized output voltage even though the input voltage varies over a considerable range. They have nine distinct advantages over electronic-type regulators or regulators which depend solely upon saturation of core materials for their regulating action:

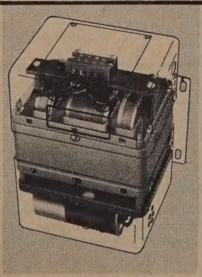
1. Ultra-fast regulating action. Response time is usually 1.5 cycles or less.
2. Absence of moving or renewable parts or manual adjustment eliminates need for routine maintenance and spare parts stock.
3. Completely automatic, continuous regulation. No manual adjustments are required.
4. Self-protecting against short circuits on output or load circuit.
5. Current-limiting characteristic protects load equipment from fault currents.
6. Availability of transformer ratio for step-up, step-down, plate and/or filament supply permits substitution in place of conventional, non-regulating transformers.
7. Relatively compact compared to other equipment for comparable regulation.
8. High degree of isolation between input and output circuits.
9. Negligible external field.

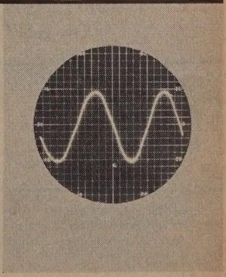
Sola static-magnetic transformers are supplied for a number of voltage-regulating requirements. They supply constant voltage in nominal line values, in filament and combination plate-and-filament values, and in variable voltage outputs.

The following pages list the widest range of stock ratings and types offered by any manufacturer of static-magnetic voltage regulators.

Manufactured by: **SOLA ELECTRIC CO.** BPC **A Division of Basic Products Corporation**







Standard Sinusoidal Type (CVS)

for built-in component or accessory use

SOLA

Sola Standard Sinusoidal Constant Voltage Transformers regulate voltage within ±1% regardless of input voltage variations as great as ±15%. Displaying fast regulating action, their response time is usually 1.5 cycles or less. With less than 3% total rms harmonic content in their output voltage wave, they are particularly suitable for use with rectifiers or other equipment which is sensitive to, or is affected by, harmonics in the supply voltage. Nine stock ratings are listed. Special designs are available in production quantities.

Electrical specifications 60 cycle single phase					Mechanical specifications			
Voltage Rating		Output Rating in Va	Catalog Number	Approx. net price each to industrial users	Nominal dimensions (inches)		Approx. Ship. Wt. in Lbs.	* Structure code
Regulated Output	Input Range				Outline	Mounting		
118	95-130	60	23-13-060(a)	$30.00	6¹⁵⁄₁₆ x 4 x 5³⁄₁₆	3 x 3½	10	W
	95-130X 190-260	120	23-22-112(a)	38.00	8 x 4 x 5³⁄₁₆	3 x 3½	14	W
		250	23-22-125(b)	52.00	9¾ x 5⅜ x 7⁷⁄₁₆	4⅛ x 4¾	28	W
		500	23-22-150(c)	81.00	12⅝ x 9 x 6⁷⁄₁₆	5⅝ x 8⅛	47	W
		1000	23-22-210(c)	135.00	17¹⁵⁄₁₆ x 9 x 6⁷⁄₁₆	5⅝ x 8⅛	80	W
118 x 236	95-130X 175-235X 190-260	2000	23-25-220	245.00	19⅝ x 12¾ x 10¹¹⁄₁₆	4½ x 11¾	183	W
		3000	23-25-230	330.00	21⅞ x 12¾ x 10¹¹⁄₁₆	6⁷⁄₁₆ x 11¾	270	W
	190-260X 380-520	5000	23-26-250	515.00	20⁹⁄₁₆ x 25¹³⁄₁₆ x 10¹¹⁄₁₆	5⁷⁄₁₆ x 24¹³⁄₁₆	475	Y
		7500	23-28-275	900.00	20⁹⁄₁₆ x 38¼ x 11¹⁄₁₆	5⁷⁄₁₆ x 37¼	710	Z

Letter in parentheses after catalog number designates unit sizes which may be converted for cord input, and receptacle or jack output. See adapter kit tabulation at bottom of next page.

Outline dimensions are the outside cubic dimensions of the unit, not including capacitor where furnished separately. Figures are nominal, subject to manufacturing tolerance of ±1/32 to ±1/8 inch.

Normal-Harmonic Type (CVN)

±1% regulated voltage for electrical and electronic equipment

These units provide the same ±1% regulation as the standard sinusoidal models above. They have an average of 14% total rms harmonic content in their output voltage. Along with the sinusoidal type, they offer simplicity, reliability and freedom from maintenance. They are reliable sources of voltage for most electrical loads such as filaments, relays, solenoids, other transformers serving ac loads — in fact, all loads not affected by harmonics in the supply voltage. This series includes those mechanical designs specially engineered for use as built-in components. Special designs are available in production quantities.

Electrical specifications 60 cycle single phase					Mechanical specifications			
Voltage Rating		Output Capacity in VA	Catalog Number	Approx. net price each to industrial users	Nominal Dimensions (Inches)		Approx. Ship. Wt. in Lbs.	* Structure Code
Regulated Output	Input Range				Outline	Mounting		
118	95-130	15	20-10-015	$15.00	5⁹⁄₁₆ x 2⅝ x 3½	5¹⁄₁₆ x 1⅛	4	D
			20-11-015	20.00	5½ x 3½ x 2¼	3 x 1½	4	S
			20-14-015	14.00	4⁵⁄₁₆ x 2⅜ x 2⁷⁄₁₆	1⅞ x 1¾	3	E
		30	20-14-030	16.00	4¹⁵⁄₁₆ x 2⅝ x 3⁵⁄₁₆	1⅞ x 2⅝	5	E
			20-13-030(a)	20.00	6 x 4 x 5³⁄₁₆	3 x 3½	7	W
		60	20-13-060(a)	25.00	6¹³⁄₁₆ x 4 x 5³⁄₁₆	3 x 3½	10	W
			20-14-060	21.00	4¹³⁄₁₆ x 3⅛ x 3⅞	2½ x 3⅞	8	E
118	95-130	120	20-14-112	29.00	4¹³⁄₁₆ x 3⅛ x 4¹⁵⁄₁₆	2½ x 3⅞	11	E
			20-13-112(a)	33.00	7⅞ x 4 x 5³⁄₁₆	3 x 3½	13	W
236	190-260	120	20-21-112	33.00	7⅞ x 4 x 5³⁄₁₆	3 x 3½	13	W
118	95-130	150	20-13-115(b)	40.00	8⅞ x 5⅜ x 7⁷⁄₁₆	4⅛ x 4¾	22	W
		250	20-13-125(c)	49.00	11⅛ x 6¹⁵⁄₁₆ x 6⁷⁄₁₆	4⅝ x 6⅛	25	W
	190-260x 380-520		20-23-125	49.00	11⅛ x 6¹⁵⁄₁₆ x 6⁷⁄₁₆	4⅝ x 6⅛	25	W
	95-130	500	20-13-150(c)	77.00	12½ x 6¹⁵⁄₁₆ x 6⁷⁄₁₆	4⅝ x 6⅛	36	W
	190-260x		20-23-150	77.00				
236	380-520		20-24-150	77.00				
118	95-130	1000	20-13-210(c)	128.00	15⅛ x 6¹⁵⁄₁₆ x 6⁷⁄₁₆	4⅝ x 6⅛	54	W
	190-260		20-20-210	128.00				
118x 236	95-130x 175-235x 190-260	2000	20-25-220	232.00	20 x 10½ x 9¹⁄₁₆	4⁹⁄₁₆ x 9½	166	W
		3000	20-25-230	315.00	22 x 10½ x 10¹¹⁄₁₆	6⁹⁄₁₆ x 9½	230	W
	190-260x 380-520	5000	20-27-250	490.00	21 x 14½ x 14⅜	7 x 13	279	W
		10000	20-26-310	925.00	21 x 29⁷⁄₁₆ x 14⅜	7 x 27¹⁵⁄₁₆	590	Y

Letter in parentheses after catalog number designates unit sizes which may be converted for cord input, and receptacle or jack output. See adapter kit tabulation at bottom of next page.

Outline dimensions are the outside cubic dimensions of the unit, not including capacitor where furnished separately. Figures are nominal, subject to manufacturing tolerance of ±1/32 to ±1/8 inch.

SOLA

Electronic Power Type

±1% regulation for filament voltage; ±3% regulation of plate-filament supply

Sola Electronic Power Type Constant Voltage Transformers are designed as components for simple assembly into electronic manufacturers' own product. The filament type provides 6.0 or 6.3 volts output, regulated within ±1% over line voltage variations as great as ±15%. The combination plate-and-filament type provides voltage regulated within ±3% for line voltages varying up to ±15%. Both types provide filaments with stabilized voltage supply, and thus contribute to reliable operation, long life, and reduced service expense for load equipment. Thirteen stock units are listed. Special designs available in production quantities.

For Filament Service (Type CVF)

Electrical specifications 60 cycle single phase					Mechanical specifications			
Voltage Rating		Output Capacity in Amps.	Catalog Number	Approx. Net Price Each to Industrial Users	Nominal Dimensions (Inches)		Approx. Ship Wt. in Lbs.	Structure Code
Regulated ±1% Output	Input Range				Outline	Mounting		
6.0	95-130	2.50	20-01-015	$15.00	5 9/16 x 2 5/8 x 3 1/2	5 1/16 x 1 1/8	6	D
			20-06-015	14.00	4 5/16 x 2 3/8 x 2 7/16	1 3/4 x 1 7/8	4	E
6.3	95-130	2.38	20-02-015	15.00	5 9/16 x 2 5/8 x 3 1/2	5 1/16 x 1 1/8	6	D
			20-03-015	20.00	4 15/16 x 2 3/8 x 2 7/16	1 3/4 x 1 7/8	4	S
			20-04-015	14.00	4 15/16 x 2 3/8 x 2 7/16	1 3/4 x 1 7/8	4	E
	95-130X 190-260	5.0	20-04-030	16.00	4 13/16 x 3 1/8 x 3 1/8	2 1/2 x 2 1/16	6	E
		10.0	20-04-065	20.00	4 13/16 x 3 1/8 x 3 3/4	2 1/2 x 2 11/16	7	E
		15.0	20-04-095	24.00	4 13/16 x 3 1/8 x 4 11/16	2 1/2 x 3 5/8	11	E
		20.0	20-04-113	31.00	7 x 4 1/2 x 5 1/8	3 5/8 x 3 9/16	20	E
		25.0	20-04-116	35.00	7 x 4 1/2 x 5 11/16	3 5/8 x 4 1/8	23	E

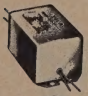
For Plate-Filament Service (Type CVE)

Electrical specifications 60 cycle single phase				Input range, 100-130 volts	Mechanical specifications			
Typical Rectifier Tube	Average D.C. Input Volts to Filter*	Filament Windings		Catalog Number	Approx. Net Price Each to Industrial Users	Nominal Dimensions (Inches)		Approx. Ship. Wt. in Lbs.	* Structure Code
		6.3 Volts	5.0 Volts			Outline	Mounting		
5Y3	275v D.C. @ 50 M.A.	2.5 amps C.T.	2.0 amps	7104	$12.00	4 13/16 x 3 1/8 x 3 3/16	2 1/2 x 2 1/8	6	E
5Y3	385v D.C. @ 100 M.A.	3.0 amps C.T.	2.0 amps	7106	15.00	4 13/16 x 3 1/8 x 3 15/16	2 1/2 x 2 7/8	8	E
5U4	380v D.C. @ 250 M.A.	No. 1: 4.0 amps No. 2: 8.0 amps unregulated	3.0 amps	7107	27.00	7 x 4 1/2 x 4 7/8	3 5/8 x 3 3/8	19	E

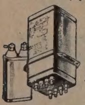
**Voltage values are taken at output of 5Y3GT rectifier for No. 7104 and No. 7106 transformers and at output of 5U4GA-GB for No. 7107. Guaranteed regulation of ±3% on plate voltage output is contingent on the use of Sola-regulated 5.0v filament supply winding for the rectifier tube.*

* Mechanical structures

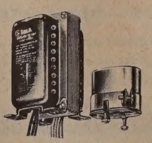
"Structure code" letter refers to one of these general types of mechanical assemblies:



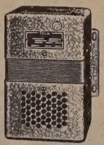
D—Drawn case; integral capacitor unit; flex leads.



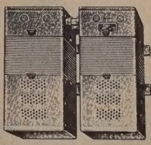
S—Hermetically-sealed case; separate capacitor; solder lugs.



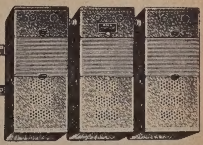
E—Exposed core; end bells; separate capacitor; flex leads.



W—Exposed core; end housings; screw-type terminals in outlet box.



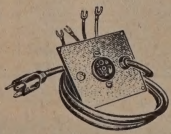
Y—Same as W, but duplex assembly.



Z—Same as W, but triplex assembly.

Cord/receptacle adapter kits

Adapter kits may be used when the convenience of input plug and output receptacle is preferred to the standard arrangement of terminals in the transformer housing. Kits are available for most transformers with ratings from 30 to 500va and are supplied at slight additional cost. Kits permit use of 2 and 3-wire input and have 2 and 3-wire output receptacles as well as output jacks. Cords and receptacles are designed for 118-volt nominal service only.



Code	Adapter Kit Catalog No.	Input Cord	Output Connections	Net price each to industrial users
(a)	999-004	2-wire	2-wire receptacle	$1.75
	999-018	3-wire	3-wire receptacle	2.50
	999-015	3-wire	2 jacks	3.00
(b)	999-005	2-wire	2-wire receptacle	1.75
	999-019	3-wire	3-wire receptacle	2.50
	999-016	3-wire	2 jacks	3.00
(c)	999-009	2-wire	2-wire receptacle	2.00
	999-020	3-wire	3-wire receptacle	2.50
	999-017	3-wire	2 jacks	3.00

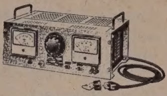
The transformers described in this folder are manufactured under one or more of the following United States Patents: Nos. 2,694,177; 2,753,513; 2,806,199, and patents pending.

Handy, portable units

for regulated supply voltage in lab—shop—home

SOLA

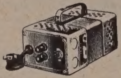
Regulated ac voltage supply fully adjustable from 0-130 volts



One outlet regulated ±1% and adjustable from 0 to 130 volts. One outlet for fixed value 115 volts regulated ±1%. Total rms harmonic content less than 3%. Regulating response 1.5 cycles or less. Self-protecting against short circuit. Portable for use in shop or laboratory; also mountable on standard 19-inch relay rack.

Catalog Number	Output Capacity in VA	Input Voltage	Voltage Rating: Regulated Voltage No. 1 Fixed	Voltage Rating: Regulated Voltage No. 2 Adjustable	Voltage Rating: Max. Current in Amperes	Nominal dimensions (inches)	Approx. shipping weight (lbs.)	Approx. net price each to industrial users
23-90-150	500	100-130	115	0-130	7.5	9 x 19 x 12½	83	$275.00

Regulated filament transformer for lab or shop bench use



The Portable Constant Voltage Filament Transformer provides stabilized 6.3 volt output. It is specially designed to serve as a standard source of closely regulated filament voltage for design, experimental, and test work in laboratories and shops. The unit has a handle, input cord, output jacks, and an on-off switch.

Catalog Number	Output Capacity in VA	Voltage Rating: Input Range	Voltage Rating: Regulated ±1% Output	Nominal dimensions (inches)	Approx. shipping weight (lbs.)	Approx. net price each to industrial users
20-05-030	30	95-130	6.3	6 1/16 x 4 13/16 x 4¾	8	$25.00

Regulated voltage supply for television receivers and other appliances

Moderately priced plug-in "TeleVolt" regulates voltage for home TV receivers within ±3% to eliminate flicker and distortion from line voltage variations. Cat. No. 72103 should be selected for sets carrying manufacturer's rating of 105 to 170 watts power input; No. 72104 for sets rated at 165 to 285 watts power input.

Input 95-130v, Nominal Output Value in 115-120 volt range; 60 cycle, single phase

Cat. No.	Output Capacity in VA	Nominal dimensions (inches)	Approx. Ship. Wt. in Lbs.	Approx. net price each to industrial users
72103	180	8 1/16 x 7¼ x 4½	20	$34.50
72104	300	8 15/16 x 7½ x 4½	27	$37.50

Sola DC power supplies: compact, regulated, for high-amp loads

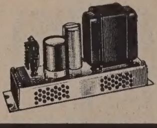
This combination of a special Sola Constant Voltage Transformer, semi-conductor rectifier, and high-capacitance filter yields a dc power supply compact in size, low in weight, and with other important advantages.

1. Output regulation of ±1% or less with ±10% line voltage variations.
2. Minimum output voltage change with wide, rapid load changes.
3. Low input power, with resultant good efficiency.
4. Ability to withstand high, short-time overloads without damage to components.
5. Ripple voltage of approximately 1% (rms) or less.
6. High overall economy by eliminating overload capacity needed in other types of power supplies for certain applications.
7. Low ratio of size and weight to power output.
8. Freedom from routine adjustment and maintenance.
9. Exceedingly low output impedance.

In addition to its important function of correcting line voltage variations, the Sola CV's inherent current-limiting action permits safe, economical use of the efficient semi-conductor rectifier with its low forward voltage drop and other advantages. This same current-limiting action also permits use of high-capacitance filter sections by controlling excessive charging currents which might damage rectifier junctions. The high-capacitance filter yields very low ripple voltage without need for heavy, bulky choke components, with their substantial and often-varying load voltage drops.

Fixed Designs

For intermittent, variable, or pulse loads



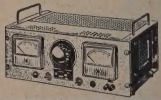
Specifications All Inputs 100-130 volts, 60 cps

Current Catalog Number	Former Catalog Number	Output Rating: Watts	Output Rating: Volts	Output Rating: Amps	Efficiency Approx. %	Ripple Voltage (rms)- % of Total	Approx. Shipping Weight Each—Pounds	Approx. Net Price Each
281024	28156	144	24	6.0	72	Less Than 1%	45	$145.00
281048	28120	192	48	4.0	77	Less Than 1%	45	135.00
281125	28152	250	125	2.0	82	Less Than 1%	55	145.00
281150	28106	300	150	2.0	80	Less Than 1%	50	145.00
281200	28193	200	200	1.0	76	Less Than ½%	45	140.00
281250	28192	250	250	1.0	81	Less Than ½%	55	150.00

DIMENSIONS—Above six stock units have identical dimensions; overall length, 19"; overall width, 5¼"; overall height, 9¾". All supplies furnished with drilling for standard relay rack mounting.

Adjustable Designs

Give all the advantages of fixed designs plus an output adjustable over a considerable range of voltages.



Specifications All Inputs 100-130 volts, 60 cps

Current Catalog Number	Former Catalog Number	Adjustable Output Voltage Range	Rated Loadings in Amperes: At max. Voltage Setting	Rated Loadings in Amperes: At min. Voltage Setting	Ripple* Voltage—% of Total Output	Approx. Shipping Weight Each—Pounds	Approx. Net Price Each
285110	28510	5-35	7.0	7.0	0.10	80	$325.00
285120	28520	25-60	4.0	6.0	0.05	80	325.00
285130	28530	30-90	2.8	4.0	0.04	80	295.00
285140	28540	60-180	1.4	2.0	0.03	80	295.00
285150	28550	150-250	1.0	1.5	0.02	80	295.00
285160	28560	250-400	0.6	0.75	0.02	80	295.00

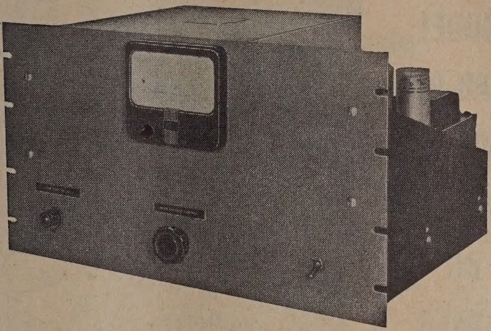
*Figures in this column are ripple voltages measured at full rated load and input of 115 volts.

DIMENSIONS—Above six stock units are for relay rack mounting on standard, 19" frame. Front panel is 7" high and chassis is 12¼" deep. Removable handles, for portability, are available as an accessory.

SOLA ELECTRIC CO. A Division of Basic Products Corporation

SPELLMAN HIGH VOLTAGE POWER SUPPLIES

RF TYPE - DC



MODEL 2040

40 KV DC POWER SUPPLY

A ruggedly built RF type power supply which is in constant use in laboratories and industrial plants throughout the world for condenser charging, electrostatic paint spraying and insulation testing, electrostatic flocking, etc. In wide use for spot knocking by TV tube manufacturers. Designed for constant use and will stand severe abuse. Available with either positive or negative 40 KV output. Voltage range is approx. 12 to 40 KV, continuously variable. The 12 to 40 KV variance in voltage is controlled through a knob on the front panel. Voltage supplied through a 6 ft. HV Safety Cable. Specify desired polarity when ordering. Specifications: Continuously variable 12 to 40 KV. 1 ma. at 30 KV. Input: 117V — 60 cycles. 19″ wide x 12¼″ high x 13″ deep.

With meter on front panel	$215 Net
Less meter	$165 Net

MODEL 2040C — Same as above except automatic overload cutout and reset button provided. Adjustable sensitivity 0.5 ma. to 2 ma.

With meter	$265 Net
Less meter	$215 Net

MODEL PN-30

REVERSIBLE POLARITY

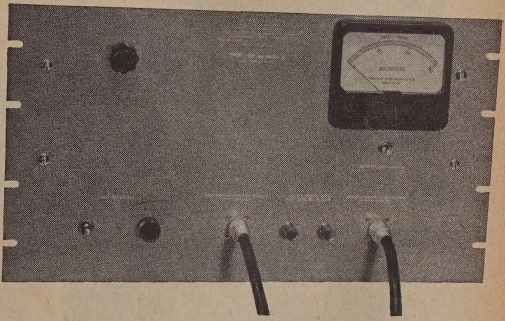
Continuously Variable 1-30 KV Unregulated DC Power Supply

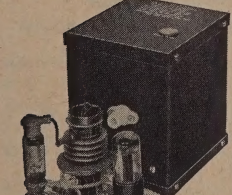
A light, compact unit in wide use for insulation testing, condenser charging, precipitators and laboratory research. Polarity reversible from front panel. Current output — 2 milliamperes at 20 KV: 1 ma. at 30 KV. Input — 117V AC 60 cycles. Dimensions: 19″ x 10½″ x 13″. ....$275 Net

Less meter ....$225 Net

MODEL PN-30C — Same as above except automatic overload and reset button provided. Adjustable sensitivity 0.5 ma. to 2.5 ma.

With meter	$325 Net
Less meter	$275 Net





MODEL 4575

5 KV — 1 ma. DC POWER SUPPLY

For an output voltage of 5 KV DC at 1 milliampere, the low voltage input requirement is 250 V at 50 milliamperes. By varying the DC input the output voltage can be varied from approx. 1 KV to 7½ KV. Dimensions: 5⅝″ high x 5″ deep x 4¼″ wide. In completely enclosed metal housing. $32.50 Net

MODEL 4575-2 Same as above with 2 ma. output at 5 KV. ....$42.50 Net

MODEL 4575PN — Reversible polarity. High voltage secondary floating or can be grounded. 1 ma. at 5 KV. $42.50 Net

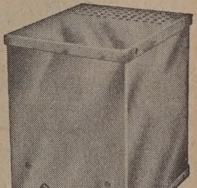
MODEL 4575-2PN — Reversible polarity. 2 ma. at 5 KV. ....$52.50 Net

MODEL 7512

12 KV — 1 ma. DC POWER SUPLLY

Voltage output of approx. 7.5 to 12 KV. 1 ma. of current may be drawn throughout the voltage range. To obtain an output voltage of 7.5 KV at 1 ma., low voltage input requirement is 300 V DC at 50 ma. By varying the DC input, the output voltage can be increased. Maximum input voltage of 425 V at 100 ma. will give an output of 12 KV at 1 ma. 5¾″ W., 8¼″ H., 6¾″ D. $42.50 Net

MODEL 7516 Same as above with output of 16 KV at .5 ma. ....$48.50 Net

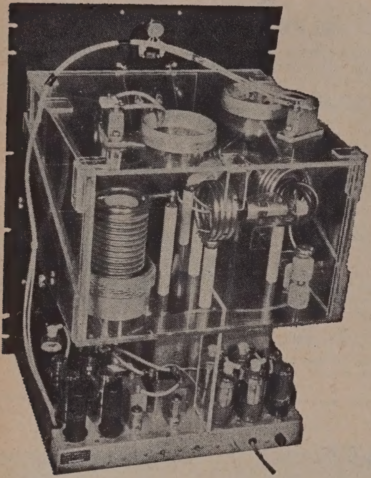


SPELLMAN HIGH VOLTAGE CO. | BRONX 67, N. Y.

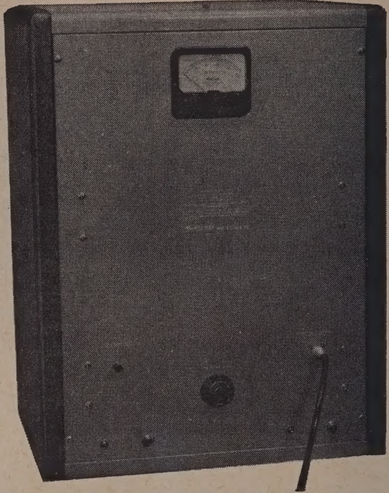
Net

SPELLMAN HIGH VOLTAGE POWER SUPPLIES

RF TYPE - DC



MODEL LAB-90 0-90 KV REGULATED DC POWER SUPPLY



Continuously variable 0 to 90 KV DC Power Supply. Ideal for kinematic electron diffraction equipment and high voltage condenser charging. Output current .7 ma. at 90 KV. 1 ma. at 80 KV. 2 ma. from 40 KV down. Voltage regulations better than 1% throughout entire range. Dimensions in cabinet: 28″ high x 21¾″ wide x 18″ deep.

LAB-90 Complete with HV meter .... $900 Net
Specify polarity output — positive or negative.

MODEL LAB-90C—Same as above except automatic overload cutout and reset button provided. Adjustable sensitivity. .5 ma. to 2.5 ma......... $950 Net

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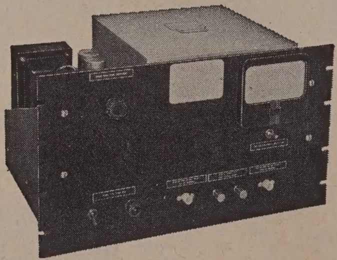
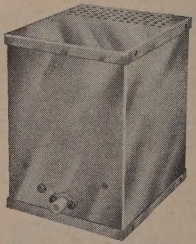


MODEL PN-15

FLOATING REVERSIBLE POLARITY
CONTINUOUSLY VARIABLE 1 TO 15 KV
UNREGULATED DC POWER SUPPLY

The high voltage output available through Alden HV connectors on front panel. Reversible and floating secondary — either positive or negative can be grounded or left floating. Current output 2 ma. at 15 KV. Voltage continuously variable through knob on front panel. Dimensions 8¾″ high x 19″ wide x 11″ deep.

Complete with meter .... $250 Net



MODEL 7516

16 KV — .5 ma. DC
POWER SUPPLY

Voltage output of approx. 7.5 to 16 KV—.5 ma. of current may be drawn throughout the voltage range. To obtain an output voltage of 7.5 KV at 1 ma., low voltage input requirement is 300 V DC at 50 ma. By varying the DC input, the output voltage can be increased. Maximum input voltage of 425 V at 100 ma. will give an output of 16 KV at .5 ma. 5¾″ W., 8¼″ H., 6¾″ D.

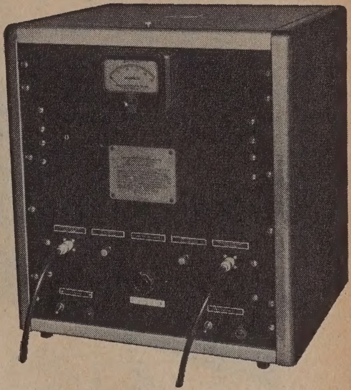
$48.50 Net

SPELLMAN HIGH VOLTAGE CO. | BRONX 67, N. Y.

SPELLMAN HIGH VOLTAGE RF TYPE - DC POWER SUPPLIES

MODEL LAB-60PN

REVERSIBLE POLARITY CONTINUOUSLY VARIABLE 0-60 KV DC REGULATED POWER SUPPLY



Current output 1 ma. at 60 KV 2 ma. may be drawn from 50 KV down. Regulations — no load to full load 1% at 1 ma. 21¾″ wide x 22¾″ high x 18″ deep. Dimensions in cabinet: 22¾″ high x 21″ wide x 18″ deep.

LAB-60PN — Reversible polarity — either positive or negative output controlled through switch on front panel. ....$820 Net

LAB-60 — Same as above not reversible. Specify polarity when ordering. ....$765 Net

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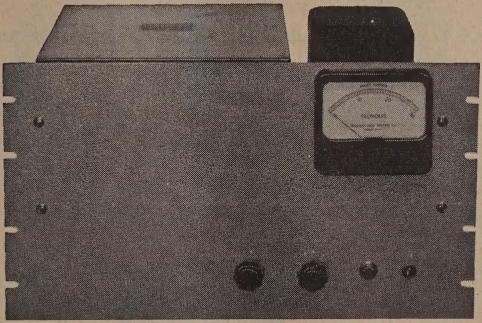


MODEL RG-30

CONTINUOUSLY VARIABLE 15-30 KV REGULATED DC POWER SUPPLY WITH REGULATED FOCUS VOLTAGE TAP

A continuous duty DC supply with highly filtered outputs and regulations better than 0.5% at 1 ma. — no load to full load. A variable focus tap 4-6 KV for use with 5WP11, 5TP4 and flying spot tubes. Dimensions: 19″ wide x 10½″ high x 13″ deep.

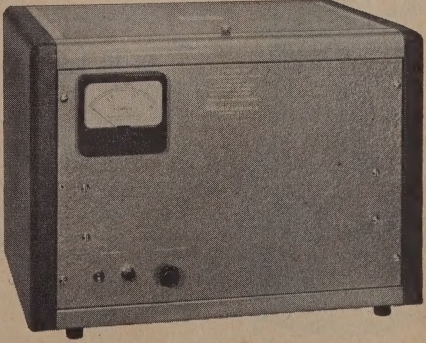
With HV meter $375 Net **Less meter $325 Net**

MODEL RG-40 is a 20-40 KV unit with focus tap designed for use with 5AZP4 projection tube. In wide use in projection television systems. Same specifications as RG-30 except .7 ma. at 40 KV.

With meter $375 Net **Less meter $325 Net**

MODEL LAB-30PN

DC POWER SUPPLY
REVERSIBLE POLARITY CONTINUOUSLY VARIABLE 1 TO 30 KV



Regulated DC Power Supply with regulations of 0.5% at 2 milliamperes. Polarity reversible from front panel. Standard Rack Model — 19″ wide x 12″ high x 13″ deep. Standard Bench Model — 21″ wide x 14″ high x 15″ deep.

With HV Meter $645 Net — Less Meter $595 Net

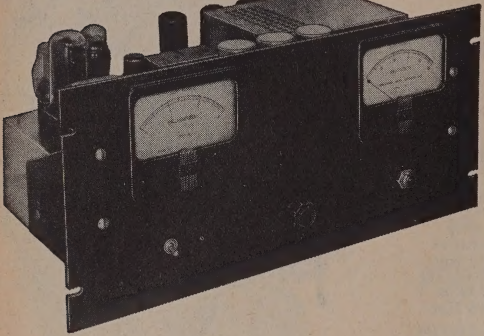
MODEL LAB-30 is a positive polarity output regulated High Voltage DC Power Supply with same electrical characteristics and dimensions as the LAB-30PN. Available in either positive or negative polarity.

With Meter $545 Net **Less Meter $495 Net**

SPELLMAN HIGH VOLTAGE CO. | BRONX 67, N. Y.

SPELLMAN HIGH VOLTAGE POWER SUPPLIES

RF TYPE - DC



MODEL RG-5
5 KV REGULATED
DC POWER SUPPLY

Output current 2 ma. Regulated against line and load 1%. Variable 4 to 6 KV. Complete with Current and Volt Meters ....$250 Net

MODEL RG-10, 10 KV REGULATED DC POWER SUPPLY

Output current 2 ma. Regulated against line and load 1%. Variable 8 to 12 KV.
Complete with Current and Volt Meters .... $260 Net

MODEL RG-15, 15 KV REGULATED DC POWER SUPPLY

Output current 2 ma. Regulated against line and load 1%. Variable 13 to 17 KV.
Complete with Current and Volt Meters ....$275 Net

DIMENSIONS: Panel Height 8¾″, Width 19″, Depth 11″.

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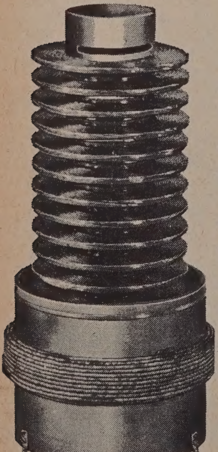
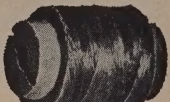
70 KV



Secondary Height	10″
Secondary Windings	4″ dia.
Consisting of 12 Pie Windings	
Primary— (separate from secondary)	
Height	4″
Diameter	5″
Secondary Voltage Output 70 KV	
Secondary Current 5 Milliamperes	
Approx. Frequency	70 KC
70KV Coil	**$75.00 Net**



RF FILAMENT TRANSFORMERS

A self-resonant auto transformer for use with type 1B3 Rectifier tube. Complete with instructions.

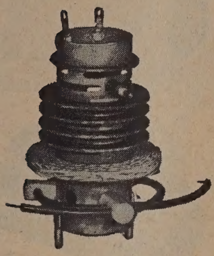
Will operate with Spellman HV coils **$1.50**

Tuning Padder for Filament Transformer .... **.58**

SPELLMAN HIGH VOLTAGE CO. | **BRONX 67, N. Y.**

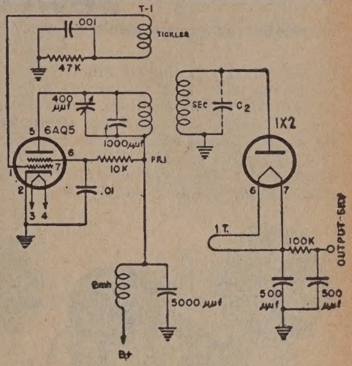
SPELLMAN HIGH VOLTAGE STEP-UP COILS

FOR RF POWER SUPPLIES

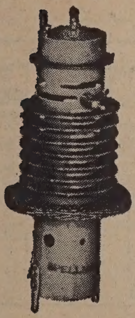


COIL MODEL 5 KV

Secondary Height	3½″
Secondary Windings Consisting of 4 Pie Windings	1¾″
Primary Diameter	2 ¼″
Secondary Voltage Output	5 KV
Secondary Current	2 Milliamperes
Approx. Frequency	300 KC
5KV Coil	**$7.00 Net**

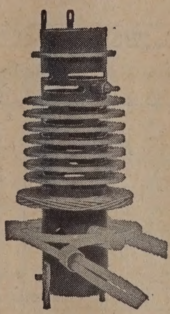

T-1
.001
TICKLER
47K
400 μμf
1000μμf
5 6AQ5
6
7
10K
PRI
1
2
3 4
.01
SEC
C2
1X2
6
7
1T.
100K
OUTPUT-5KV
8mh
5000 μμf
500 μμf
500 μμf
B+

COIL MODEL 10-15 KV

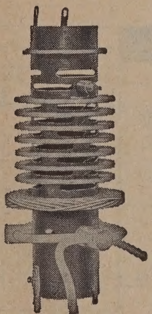


10-15 KV
$12.00 Net

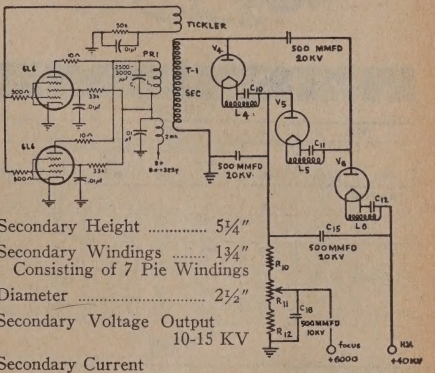
COIL MODEL 10-15 KV-1



COIL MODEL 10-15 KV-2

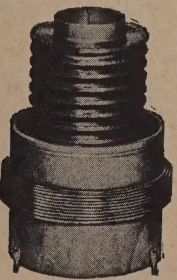


10-15 KV-1 with filament winding for single LB3 rectifier. ....$12.50 Net
10-15 KV-2 with 2 filament windings for two 1B3 rectifiers. ....$13.00 Net


TICKLER
PRI
T-1
SEC
6L6
6L6
V4
V5
V6
C10
C11
C12
L4
L5
L6
500 MMFD 20KV
500 MMFD 20KV
C15
500MMFD 20KV
R10
R11
R12
C18
500MMFD 10KV
focus +6000
H.V. +40KV
2mh

Secondary Height	5¼″
Secondary Windings Consisting of 7 Pie Windings	1¾″
Diameter	2½″
Secondary Voltage Output	10-15 KV
Secondary Current	2 Milliamperes
Approx. Frequency	175 KC

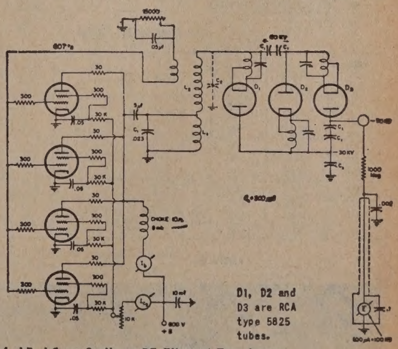
L4, L5, L6 are Spellman RF Filament Transformers



COIL MODEL 35 KV

Secondary Height	7″
Secondary Windings Consisting of 10 Pie Windings	3″ dia.
Primary (separate from secondary)	
Height	4″
Diameter	4¼″
Secondary Voltage Output	35 KV
Secondary Current	5 Milliamperes
Approx. Frequency	70 KC
35KV Coil	**$42.00 Net**
25KV—Same as 35 KV except Secondary Height	6″
25KV Coil	**$36.00 Net**

TECHNICAL INFORMATION AND CIRCUIT DIAGRAMS FURNISHED WITH EACH COIL


D1, D2 and D3 are RCA type 5825 tubes.
D1
D2
D3
300
30
30 K
30KV
CHOKE

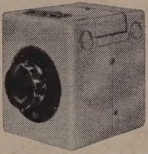
L4, L5, L6 are Spellman RF Filament Transformers

SPELLMAN HIGH VOLTAGE CO. | BRONX 67, N. Y.

POWERSTAT® Variable Transformers

POWERSTAT variable transformers feature excellent regulation, high efficiency, conservative ratings, zero waveform distortion and rugged construction.

POWERSTATS of the 116-216, 117-217, 126-226, 136-236, LW136 and 1156C-1256C Series are also available with motor-drives if desired. Motor-driven speeds are 5, 15, 30 or 60 seconds for full range travel except on 4P, 4PS, 4D, 6P, 6PS, 6D and 6Y models which do not have the 5 second speed. 117-217, 126-226 and 136-236 Series units are also available with 2- or 3-wire cord-plug sets. 1156C-1256C Series are available for requirements up to 217 KVA.



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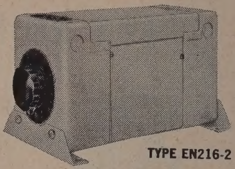

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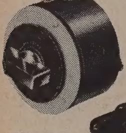
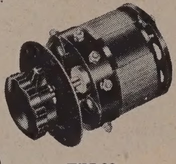


TYPE 10B

TYPE 2PF10



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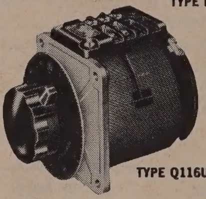

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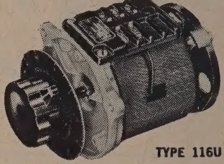

TYPE 116U

RATINGS AND SPECIFICATIONS

10B SERIES

INPUT Volts	INPUT Cycles	OUTPUT Volts	Const. Current Load Max. Amps.	Const. Current Load Max. KVA	Const. Impedance Load Max. Amps.	Const. Impedance Load Max. KVA	TYPE	Ship. Wt. Lbs.
Single Phase								
120	60	0-132	1.0	0.132	1.0	.132	2PF10	3.3
120	50/60	0-120	1.75*	0.21	2.5	.30	10B	2.4
120	60	0-132	1.75*	0.23	1.75*	.23		
240	50/60	0-240	1.75	0.42	2.5	.60	10B-2	5.6
240	60	0-264	1.75	0.46	1.75	.46		
Three Phase								
120	50/60	0-120	1.75	0.36	2.5	.52	10B-2	5.6
120	60	0-132	1.75	0.40	1.75	.40		
240	60	0-240	1.75	0.73	2.5	1.0	10B-3	8.3

20 SERIES

INPUT Volts	INPUT Cycles	OUTPUT Volts	Const. Current Load Max. Amps.	Const. Current Load Max. KVA	Const. Impedance Load Max. Amps.	Const. Impedance Load Max. KVA	TYPE	Ship. Wt. Lbs.
Single Phase								
120	50/60	0-120	3.0	0.36	5.0	.60	20	5.5
120	60	0-140	3.0	0.42	3.0	.42		
240	50/60	0-240	3.0	0.72	5.0	1.2	20-2	11
240	60	0-280	3.0	0.84	3.0	.84		
Three Phase								
120	50/60	0-120	3.0	0.62	5.0	1.0	20-2	11
120	60	0-140	3.0	0.73	3.0	.73		
240	60	0-240	3.0	1.2	5.0	2.1	20-3	16

116-216 and 117-217 SERIES†

INPUT Volts	INPUT Cycles	OUTPUT Volts	Const. Current Load Max. Amps.	Const. Current Load Max. KVA	Const. Impedance Load Max. Amps.	Const. Impedance Load Max. KVA	TYPE	Ship. Wt. Lbs.
Single Phase								
120	50/60	0-120	7.5	0.90	10.0	1.2	116	12
120	50/60	0-140	7.5	1.0	7.5	1.0		
120	60	0-120	10.0	1.2	13.0	1.6	117T	12
240	50/60	0-240	3.0	0.72	4.5	1.1	216	12
240	50/60	0-280	3.0	0.84	3.0	.84		
240	60	0-240	4.0	1.0	6.3	1.5	217T	12
240	50/60	0-240	7.5	1.8	10.0	2.4	116T-2	24
240	50/60	0-280	7.5	2.1	7.5	2.1		
240	60	0-240	10.0	2.4	13.0	3.1	117T-2	24
480	50/60	0-480	3.0	1.4	4.5	2.2	216T-2	24
480	50/60	0-560	3.0	1.7	3.0	1.7		
480	60	0-480	4.0	1.9	6.3	3.0	217T-2	24

116-216 and 117-217 SERIES† (contd.)

INPUT Volts	INPUT Cycles	OUTPUT Volts	Const. Current Load Max. Amps.	Const. Current Load Max. KVA	Const. Impedance Load Max. Amps.	Const. Impedance Load Max. KVA	TYPE	Ship. Wt. Lbs.
Three Phase								
120	50/60	0-120	7.5	1.6	10.0	2.1	116T-2	24
120	50/60	0-140	7.5	1.8	7.5	1.8		
120	60	0-120	10.0	2.1	13.0	2.7	117T-2	24
240	50/60	0-240	3.0	1.2	4.5	1.9	216T-2	24
240	50/60	0-280	3.0	1.5	3.0	1.5		
240	60	0-240	4.0	1.7	6.3	2.6	217T-2	24
240	50/60	0-240	7.5	3.1	10.0	4.2	116T-3	36
240	60	0-280	7.5	3.6	7.5	3.6		
240	60	0-240	10.0	4.2	13.0	5.4	117T-3	36
480	50/60	0-480	3.0	2.5	4.5	3.7	216T-3	36
480	60	0-560	3.0	2.9	3.0	2.9		
480	60	0-480	4.0	3.3	6.3	5.2	217T-3	36

EN116-EN216 and EN117-EN217 SERIES

INPUT Volts	INPUT Cycles	OUTPUT Volts	Const. Current Load Max. Amps.	Const. Current Load Max. KVA	Const. Impedance Load Max. Amps.	Const. Impedance Load Max. KVA	TYPE	Ship. Wt. Lbs.
Single Phase								
120	50/60	0-120	6.5	.78	10.0	1.2	EN116	15
120	50/60	0-140	6.5	.91	6.5	.91		
120	60	0-120	8.5	1.0	12.5	1.5	EN117	15
240	50/60	0-240	2.6	.62	4.0	.96	EN216	15
240	50/60	0-280	2.6	.73	2.6	.73		
240	60	0-240	3.5	.84	5.2	1.2	EN217	15
240	50/60	0-240	6.5	1.6	10.0	2.4	EN116-2	28
240	50/60	0-280	6.5	1.8	6.5	1.8		
240	60	0-240	8.5	2.0	12.5	3.0	EN117-2	28
480	50/60	0-480	2.6	1.2	4.0	1.9	EN216-2	28
480	50/60	0-560	2.6	1.5	2.6	1.5		
480	60	0-480	3.5	1.7	5.2	2.5	EN217-2	28
Three Phase								
120	50/60	0-120	6.5	1.4	10.0	2.1	EN116-2	28
120	50/60	0-140	6.5	1.6	6.5	1.6		
120	60	0-120	8.5	1.8	12.5	2.6	EN117-2	28
240	50/60	0-240	2.6	1.1	4.0	1.7	EN216-2	28
240	50/60	0-280	2.6	1.3	2.6	1.3		
240	60	0-240	3.5	1.5	5.2	2.2	EN217-2	28
240	50/60	0-240	6.5	2.7	10.0	4.2	EN116-3	39
240	60	0-280	6.5	3.2	6.5	3.2		
240	60	0-240	8.5	3.5	12.5	5.2	EN117-3	39
480	50/60	0-480	2.6	2.2	4.0	3.3	EN216-3	39
480	60	0-560	2.6	2.5	2.6	2.5		
480	60	0-480	3.5	2.9	5.2	4.3	EN217-3	39

FOOTNOTES

*Rating is 2.0 amperes when mounted on a metal panel.

†Also available with open construction for back-of-panel mounting (suffix U when ordering). Prefix Q if square frame is desired instead of round frame on open construction (U) types.

THE SUPERIOR ELECTRIC COMPANY
Bristol, Connecticut, U.S.A.

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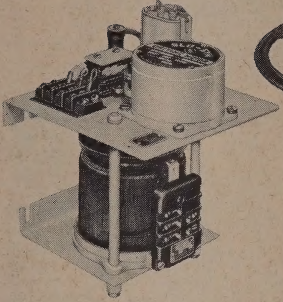
POWERSTAT® Variable Transformers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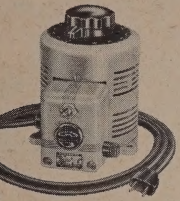
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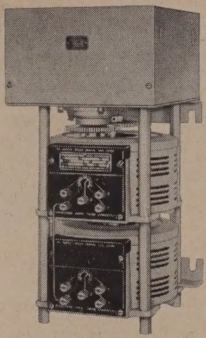
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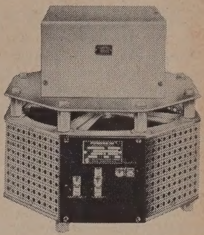
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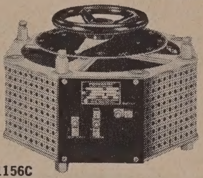
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126-226 SERIES**

INPUT		OUTPUT						
			Const. Current Load		Const. Impedance Load			
Volts	Cycles	Volts	Max. Amps.	Max. KVA	Max. Amps.	Max. KVA	TYPE	Ship. Wt. Lbs.
Single Phase								
120	50/60	0-120	12.5	1.5	18.0	2.2	126	17
120	50/60	0-140	12.5	1.8	12.5	1.8		
240	50/60	0-240	6.0	1.4	9.0	2.2	226	17
240	50/60	0-280	6.0	1.7	6.0	1.7		
240	50/60	0-240	12.5	3.0	18.0	4.3	126-2	32
240	50/60	0-280	12.5	3.5	12.5	3.5		
480	50/60	0-480	6.0	2.9	9.0	4.3	226-2	32
480	50/60	0-560	6.0	3.4	6.0	3.4		
Three Phase								
120	50/60	0-120	12.5	2.6	18.0	3.7	126-2	32
120	50/60	0-140	12.5	3.0	12.5	3.0		
240	50/60	0-240	6.0	2.5	9.0	3.7	226-2	32
240	50/60	0-280	6.0	2.9	6.0	2.9		
240	50/60	0-240	12.5	5.2	18.0	7.5	126-3	49
240	60	0-280	12.5	6.1	12.5	6.1		
480	50/60	0-480	6.0	5.0	9.0	7.5	226-3	49
480	60	0-560	6.0	5.8	6.0	5.8		

136-236 SERIES**

INPUT		OUTPUT						
			Const. Current Load		Const. Impedance Load			
Volts	Cycles	Volts	Max. Amps.	Max. KVA	Max. Amps.	Max. KVA	TYPE	Ship. Wt. Lbs.
Single Phase								
120	50/60	0-120	20.0	2.4	25.0	3.0	136	25
120	50/60	0-140	20.0	2.8	20.0	2.8		
120	50/60	0-120	40.0	4.8	50.0	6.0	136-2†	52
120	50/60	0-140	40.0	5.6	40.0	5.6		
240	50/60	0-240	9.0	2.2	12.5	3.0	236	25
240	50/60	0-280	9.0	2.5	9.0	2.5		
240	50/60	0-240	20.0	4.8	25.0	6.0	136-2	52
240	50/60	0-280	20.0	5.6	20.0	5.6		
480	50/60	0-480	9.0	4.3	12.5	6.0	236-2	52
480	50/60	0-560	9.0	5.0	9.0	5.0		
Three Phase								
120	50/60	0-120	20.0	4.2	25.0	5.2	136-2	52
120	50/60	0-140	20.0	4.8	20.0	4.8		
240	50/60	0-240	9.0	3.7	12.5	5.2	236-2	52
240	50/60	0-280	9.0	4.4	9.0	4.4		
240	50/60	0-240	20.0	8.3	25.0	10.4	136-3	76
240	60	0-280	20.0	9.7	20.0	9.7		
480	50/60	0-480	9.0	7.5	12.5	10.4	236-3	76
480	60	0-560	9.0	8.7	9.0	8.7		

LW136 SERIES††

INPUT		OUTPUT				
Volts	Cycles	Volts	Max. Amps.	Max. KVA	TYPE	Ship. Wt. Lbs.
Single Phase						
120/240	50/60	15-0-15	35.0	.52	LW136	25
120/240/480	50/60	30-0-30	35.0	1.0	LW136-2	52
120/240	50/60	45-0-45	35.0	1.6	LW136-3	76
120/240	50/60	0-30	25.0	.75	LW136	25
120/240/480	50/60	0-60	25.0	1.5	LW136-2	52
120/240	50/60	0-90	25.0	2.2	LW136-3	76
Three Phase						
120/240	50/60	0-30	25.0	1.3	LW136-2	52
120/240	50/60	0-30	43.3	2.2	LW136-3	76
120/240	50/60	0-52	25.0	2.2	LW136-3	76
240/480	60	0-35	43.3	2.6	LW136-3	76
240/480	60	0-60	25.0	2.6	LW136-3	76

1156C—1256C SERIES

INPUT		OUTPUT				
Volts	Cycles	Volts	Max. Amps.	Max. KVA	TYPE	Ship. Wt. Lbs.
Single Phase						
120	50/60	0-140	45.0	6.3	1156C	79
120	50/60	0-140	90.0	12.6	1156C-2P	160
120	50/60	0-140	135.0	18.9	1156C-3P	280
120	50/60	0-140	180.0	25.2	1156C-4P	410
120	50/60	0-140	270.0	37.8	1156C-6P	615
240	50/60	0-280	28.0	7.8	1256C	79
240	50/60	0-280	45.0	12.6	1156C-2S	152
240	50/60	0-280	56.0	15.7	1256C-2P	160
240	50/60	0-280	84.0	23.5	1256C-3P	280
240	50/60	0-280	90.0	25.2	1156C-4PS	390
240	50/60	0-280	112.0	31.4	1256C-4P	410
240	50/60	0-280	135.0	37.8	1156C-6PS	595
240	50/60	0-280	168.0	47.0	1256C-6P	600
480	50/60	0-560	28.0	15.7	1256C-2S	152
480	50/60	0-560	56.0	31.4	1256C-4PS	390
480	50/60	0-560	84.0	47.0	1256C-6PS	595
Three Phase						
120	50/60	0-140	45.0	10.9	1156C-2D	152
120	50/60	0-140	90.0	21.8	1156C-4D	390
120	50/60	0-140	135.0	32.7	1156C-6D	595
240	50/60	0-280	28.0	13.6	1256C-2D	152
240	60	0-280	45.0	21.8	1156C-3Y	225
240	50/60	0-280	56.0	27.2	1256C-4D	390
240	50/60	0-280	84.0	40.7	1256C-6D	595
240	60	0-280	90.0	43.6	1156C-6Y	575
480	60	0-560	28.0	27.2	1256C-3Y	225
480	60	0-560	56.0	54.3	1256C-6Y	575

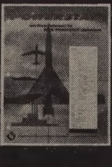
FOOTNOTES

†Requires also one paralleling choke type T5000.

**126-226 and 136-236 Series also available with open construction for back-of-panel mounting (suffix U when ordering).

††LW136 Series ratings are for use as low voltage isolated output transformer. Also permits connection for use as limited range transformer or as a line corrector. Full connections and ratings in Catalog P258G.

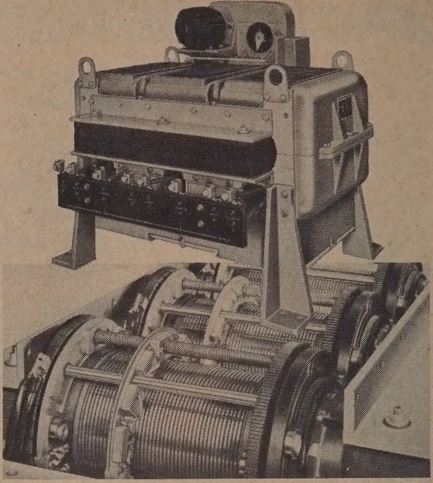
COMPLETE LITERATURE
containing full product information,
engineering data, outline drawings, connections,
ratings, charts and illustrations on all standard
and special use POWERSTATS
is available on request.
Specify whether 50/60 cycle,
400/800 cycle or complete file is desired.



H-C SERIES

POWERSTAT® Variable Transformers

POWERSTAT variable transformers of the H-C Series feature a completely new concept in variable transformer design. They introduce patented re-entry rings which permit extremely fine voltage adjustment (less than 0.17 volt per division) of the input voltage. Because of the new helical-wound coil design, the low-resistance brushes are always in contact with only one turn of the coil. Efficiency and current capacities are much higher than previously available in variable transformers. Size per KVA is relatively small. Well-suited for high current applications requiring cool, efficient operation. The design is a unique and exclusive POWERSTAT development covered by U.S. Patent No's. 2,864,992 and 2,896,179.



	INPUT			OUTPUT		
TYPE	Volts	Cycles	Phase	Volts	Max. Amps.	Max. KVA
2HC200T-3Y	240	60	3	0-270	200	93.5
2HC200LT-3Y	240	50/60	3	0-240	200	83
2HCB200T-3Y	240	60	3	0-270	360	168
2HCB200LT-3Y	240	50/60	3	0-240	360	149
4HC100T-3Y	480	60	3	0-540	100	93.5
4HC100LT-3Y	480	50/60	3	0-480	100	83
4HCB100T-3Y	480	60	3	0-540	200	187
4HCB100LT-3Y	480	50/60	3	0-480	200	166

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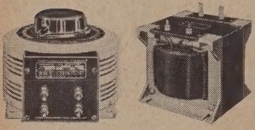
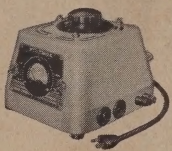
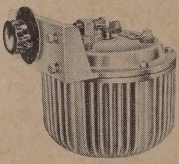
other variable voltage controls



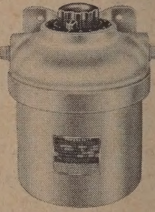
LINE CORRECTOR



VOLTBOX



OIL-COOLED



EXPLOSION-PROOF

LINE CORRECTOR SERIES

INPUT		OUTPUT				
Volts	Cycles	Volts	Max. Amps.	Max. KVA	TYPE	Ship. Wt. Lbs.
Used as Line Correçtors — SINGLE PHASE						
95-135	50/60	115	17.5	2.0	LC2102C	55
95-135	50/60	115	52.0	6.0	LC2106C	80
95-135	50/60	115	130.0	15.0	LC2115C	200
195-255	50/60	230	32.5	7.5	LC2207C	85
205-250	50/60	230	120.0	27.5	LC2228C	205
400-520	50/60	460	15.0	6.6	LC2407C	85
400-520	50/60	460	40.0	17.6	LC2418C	205
Used as Line Correctors — THREE PHASE						
195-255	50/60	230	25.0	10.0	LC3210YC	211
195-255	50/60	230	38.0	15.0	LC3215YC	226
195-255	50/60	230	50.0	20.0	LC3220YC	241
195-255	50/60	230	113.0	45.0	LC3245YC	615
195-255	50/60	230	175.0	70.0	LC3270DC	795
400-520	50/60	460	16.0	12.5	LC3412YC	200
400-520	50/60	460	22.0	17.5	LC3417YC	215
400-520	50/60	460	33.0	25.0	LC3425YC	230
400-520	50/60	460	66.0	50.0	LC3450YC	580
400-520	50/60	460	100.0	75.0	LC3475YC	630
420-500	50/60	460	131.0	100.0	LC34100YC	630

When units of the LC series are used as limited range adjustable transformers, the input voltage is the output voltage shown in the above chart and the output voltage is the input voltage shown in the above chart.

OIL-COOLED

INPUT		OUTPUT				
Volts	Cycles	Volts	Max. Amps.	Max. KVA	TYPE	Ship. Wt. Lbs.
120	50/60	0-120	15.0	1.8	0-116	32
120	50/60	0-140	15.0	2.1		
120	50/60	0-140	30.0	4.2	0-1126	100
240	50/60	0-240	6.0	1.4	0-216	32
240	50/60	0-280	6.0	1.7		
240	50/60	0-280	18.0	5.0	0-1226	105
EXPLOSION-PROOF						
120	50/60	0-120	7.5	.90	X-116	47
120	50/60	0-140	7.5	1.0		
120	50/60	0-140	12.0	1.7	X-1126	142
240	50/60	0-240	3.0	.72	X-216	47
240	50/60	0-280	3.0	.84		
240	50/60	0-280	6.0	1.7	X-1226	142
VOLTBOX® A-C POWER SUPPLIES						
120	50/60	0-140	7.5	1.0	UC1M	17
240	50/60	0-280	3.0	.84	UC2M	17

OTHER TYPES AVAILABLE ON SPECIAL ORDER

THE SUPERIOR ELECTRIC COMPANY

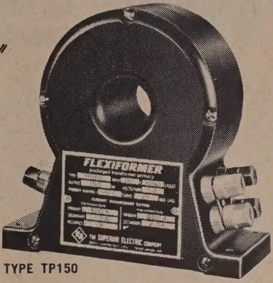
Bristol, Connecticut, U.S.A.

SEE OTHER SUPERIOR ELECTRIC PRODUCT PAGES IN SECTIONS 2100 AND 3500

FLEXIFORMER® *Packaged Transformer Primary*

A
"*Do-it-yourself*"
TRANSFORMER

- A MULTIPLE SOURCE OF A-C VOLTAGES
- A CURRENT TRANSFORMER


TYPE TP150

This "do-it-yourself" transformer is a self-contained toroidal primary coil complete with SUPERIOR 5-WAY Binding Posts for connections. The binding posts are colored for relative polarity identification. The primary consists of a strip-wound silicon steel core having a coil of 400 turns of #24 B&S gauge copper wire. When used as a source of a-c voltage, the center opening permits hand threading the proper number of secondary winding turns to obtain the desired output voltage. When used as a current transformer, the FLEXIFORMER winding becomes the secondary winding with the current induced by a wire passing through the center opening.

. . . AS A CURRENT TRANSFORMER

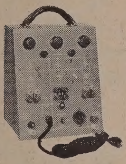
FLEXIFORMER type TP150 becomes the secondary winding when used as a current transformer. A current carrying conductor passing through the center opening serves as the primary. When used with a 0-1 ampere ammeter, currents up to 400 amperes can be measured with an accuracy of 1% at 60 cycles. Can be portable or fastened permanently in place.

. . . AS A SOURCE OF A-C VOLTAGE

FLEXIFORMER type TP150 has an input rating of 120 volts, 50/60 cycles single phase and an output rating of 150 VA. The voltage of the secondary is proportional to the number of turns hand wound through the center opening. The correct number of turns is determined by dividing the desired output voltage (plus approximately 25%) by 0.3.

POWERSTAT®

Decade Line Corrector


Type DLC1005

INPUT: 120 v., 50/60 cycles, single phase
OUTPUT: 5.0 amperes maximum

OUTPUT RANGE

	Line Corrector*	Variable Low Voltage Supply*
DIAL #1	90%-110%	10%-0-10%
DIAL #2	99%-101%	1.0%-0-1.0%
DIAL #3	99.9%-100.1%	0.1%-0-0.1%

*Percent of line voltage.

Can be used as either a variable low voltage supply or as a line corrector. Essentially consists of three POWERSTAT variable transformers individually connected to three buck-boost fixed-ratio transformers. SUPERIOR 5-WAY binding posts with jumpers are provided and arranged so that outputs can be inserted in the line or removed as desired. The output voltage adjustments can be made in any combination or individually as desired.

EXEL

Loading Reactor

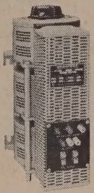
Type LR2

120 volts, 60 cycles
2.0 amperes at 120 volts
Inductive reactance 60 ohms
D-C resistance 4.0 ohms
Inductance 0.16 henrys

Designed to provide a convenient inductive load which can be made adjustable when used in conjunction with a POWERSTAT variable transformer. Used primarily for testing apparatus at various lagging power factors, i.e., to simulate an inductive load. Essentially consists of a gapped, strip-wound silicon steel toroid core, wire-wound and imbedded in epoxy compound. Entire assembly enclosed in a self-contained, durable, high grade phenolic case having two SUPERIOR 5-WAY binding posts for connections. At 60 cycles, the EXEL has essentially a linear current curve from 0 to nominal 2.0 amperes for continuous duty and up to 3.0 amperes for intermittent duty.

VARICELL®

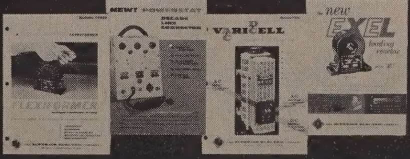
adjustable
A-C/D-C Power Supply


Type V4050-3

A-C INPUT:	240 v., 50/60 cycles, 3-phase (Primary delta connected) 480 v., 50/60 cycles, 3-phase (Primary wye connected)
A-C OUTPUT:	0-25 v., 40 amps., 3-phase (Secondary delta connected) 0-50 v., 25 amps., 3-phase (Secondary wye connected)
D-C OUTPUT:	0-35 v., 50 amps. (Secondary delta connected) 0-60 v., 30 amps. (Secondary wye connected)

Provides a source of adjustable low a-c or d-c voltage from a-c power lines. Essentially consists of a 3-phase, low voltage POWERSTAT variable transformer combined with a static d-c power supply. Power supply uses highly efficient silicon rectifier cells connected for full-wave 3-phase operation. The a-c and d-c outputs cannot be simultaneously loaded or externally interconnected. The a-c output can be used either single or three-phase.

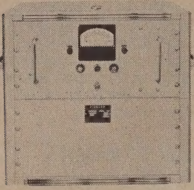
REQUEST BULLETINS AND DATA SHEETS
giving more detailed information about ratings, specifications and technical data on the FLEXIFORMER packaged transformer primary, VARICELL adjustable A-C/D-C power supply, POWERSTAT decade line corrector and EXEL loading reactor.



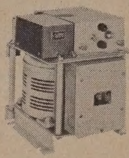
STABILINE® automatic *Voltage Regulators*

EMT SERIES

(Electro Mechanical Transistorized)



TYPE EMT4115



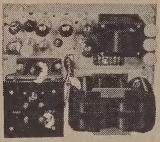
TYPE EMT4104UT

Consist of POWERSTAT variable transformer, detector circuit, auxiliary transformer. Highly efficient, correct faster than most automatic voltage regulators. Maintain constant voltage to loads up to 100 KVA without waveform distortion. Control circuit is completely transistorized.

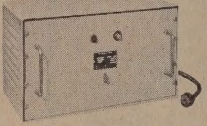
Nominal Output Voltage	Input Voltage Range	Output Voltage (adjustable)	Max. Output Amps.	Rated Output KVA	Cor. Rate (sec./volt)	TYPE
For 50/60 Cycle, Single Phase Operation						
115	95-135	110-120	17.5	2.0	.075	EMT4102†
	95-135	110-120	52.0	6.0	.075	EMT4106B†
	105-125	110-120	104.0	12.0	.15	EMT4112B*†
	95-135	110-120	130.0	15.0	.125	EMT4115
120	108-137	110-120	35.0	4.2	0.1	EMT4104 EMT4104U EMT4104UT
230‡	195-255	220-240	32.5	7.5	.083	EMT4207
	205-250	220-240	120.0	27.5	.111	EMT4228B
240‡	228-256	220-240	35.0	8.4	0.1	EMT4104 EMT4104U EMT4104UT
460	400-520	440-480	15.0	6.6	.041	EMT4407
	400-520	440-480	40.0	17.6	.041	EMT4418
For 50/60 Cycle, Three Phase Operation						
230‡	195-255	220-240	25.0	10.0	.083	EMT6210Y
			38.0	15.0	.083	EMT6215Y
			50.0	20.0	.083	EMT6220Y
			113.0	45.0	.25	EMT6245Y
			175.0	70.0	.25	EMT6270D
460	400-520	440-480	16.0	12.5	.041	EMT6412Y
			22.0	17.5	.041	EMT6417Y
			33.0	25.0	.041	EMT6425Y
			66.0	50.0	.125	EMT6450Y
			100.0	75.0	.125	EMT6475Y
460	420-500	440-480	131.0	100.0	.188	EMT64100Y

IE SERIES

(Instantaneous Electronic)



TYPE IE5102R

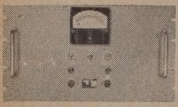


TYPE IE5101

Completely electronic with no moving parts. Hold output voltage to within ±0.1% for wide line variations and within ±0.15% for any load current change or load power factor change from .5 lagging to unity. Waveform distortion 3% maximum under all input and most load conditions.

Nominal Output Voltage	Input Voltage Range	Output Voltage (adjustable)	Max. Output Amps.	Rated Output KVA	TYPE
For 60 ± 10% Cycle Operation					
115	95-135	110-120	2.2	0.25	IE51002†
			4.5	0.5	IE51005†
			8.5	1.0	IE5101†
			22.0	2.5	IE5102†
			43.5	5.0	IE5105†
			87.0	10.0	IE5110
230	195-255	220-240	1.1	0.25	IE52002†
			2.2	0.5	IE52005†
			4.5	1.0	IE5201†
			11.0	2.5	IE5202†
			22.0	5.0	IE5205†
			43.5	10.0	IE5210
For 50 ± 10% Cycle Operation					
115	95-135	110-120	4.5	0.5	IEL51005†
			8.5	1.0	IEL5101†
			43.5	5.0	IEL5105†
230	195-255	220-240	2.2	0.5	IEL52005†
			4.5	1.0	IEL5201†
			11.0	2.5	IEL5202†
			22.0	5.0	IEL5205†

EMK SERIES

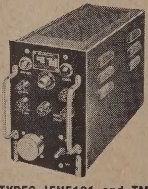


TYPE EMK4105R

Anticipates voltage corrections when output voltage varies from preset value. Accuracy ±1.0% of nominal output voltage, zero waveform distortion, very low internal impedance, virtually zero phase shift, efficiency better than 99%. Insensitive to magnitude and power factor of load and have no effect on system power factor.

Nominal Output Voltage	Input Voltage Range	Output Voltage (adjustable)	Maximum Output Amperes	Rated Output KVA	Correction Rate (sec/volt)	TYPE
For 50/60 Cycle, Single Phase Operation						
115	95-135	110-120	21.5	2.5	.02	EMK4105
	105-125	110-120	43.0	5.0	.04	EMK4105R

400 CYCLE SERIES



TYPES IEH5101 and TMH7101

Small, lightweight tubeless magnetic and instantaneous electronic types are available (refer to MR Series also). Maximum waveform distortion is 3.5% under all input line and most load conditions. Cabinet types meet MIL-E-5400. Feature excellent regulation and stabilization, low waveform distortion, no moving parts, rugged construction.

Nominal Output Voltage	Input Voltage Range	Output Voltage (adjustable)	Max. Output Amps.	Rated Output KVA	TYPE
For 400 ±5% Cycle Operation					
115	95-130	110-120	8.5	1.0	IEH5101† (Instantaneous Electronic) TMH7101 (Tubeless Magnetic)

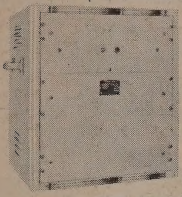
THE SUPERIOR ELECTRIC COMPANY

Bristol, Connecticut, U.S.A.

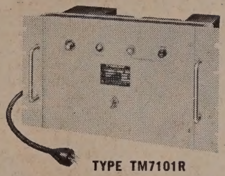
SEE OTHER SUPERIOR ELECTRIC PRODUCT PAGES IN SECTIONS 2100 AND 3500

STABILINE® automatic *Voltage Regulators*

TM SERIES
(Tubeless Magnetic)



TYPE TM7105



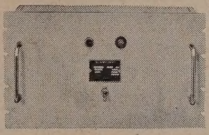
TYPE TM7101R

Have no tubes, transistors or moving parts. For unattended locations or where maintenance is impossible over long time periods. Response time for ordinary line and/or load changes is within ½ second; accuracy is within a 1.0 volt bandwidth. Waveform distortion is 4% or less.

Nominal Output Voltage	Input Voltage Range	Output Voltage (adjustable)	Max. Output Amps.	Rated Output KVA	TYPE
For 60 ± 5% Cycle Operation					
115	95-135	110-120	8.5	1.0	TM7101[†]
			43.5	5.0	TM7105[‡]

IET SERIES
(Instantaneous Electronic Transistorized)

TYPE IET51002

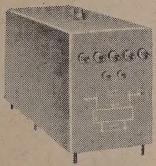


TYPE IET5101R

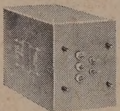
Feature a transistorized control circuit. Output voltage remains within a 0.5 volt bandwidth for any and all variations in line voltage, load current and load power factor (0.25 volt bandwidth for input voltage changes only; 0.25 volt bandwidth for load current and power factor changes from lagging 0.5 to unity). Less than 3% waveform distortion.

Nominal Output Voltage	Input Voltage Range	Output Voltage (adjustable)	Max. Output Amps.	Rated Output KVA	TYPE
For 60 ± 5% Cycle Operation					
115	95-135	110-120	2.2	0.25	IET51002[†]
			4.5	0.5	IET51005[†]
			8.5	1.0	IET5101[†]

MR SERIES



TYPE MR6F015

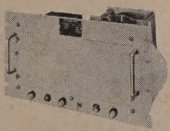


TYPE MRH6F005

Provide the constant RMS voltage required to maintain proper tube filament temperature. Response time is usually not more than 0.45 second for ordinary line or load changes and will not exceed 0.6 second under the most adverse conditions. Both 60 and 400 cycle types are available.

Nominal Output Voltage	Input Voltage Range	Output Voltage (adjustable)	Frequency (cycles)	Load Range In Amperes	Rated Output	TYPE
6.3	120V. RMS ± 10%	6.0-6.5	60 ± 10%	8.0-25.0	150 VA	MR6F015
6.3	120V. RMS ± 10%	6.0-6.5	400 ± 5%	2.5- 8.2	50 VA	MRH6F005

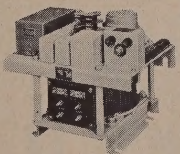
TYPE EM4108MBR



Meets MIL-E-4158B. All wiring is under chassis. Panel quickly removed for access to sensitivity and output voltage controls. Features 99% efficiency, zero waveform distortion, rapid correction and advanced control circuit.

Nominal Input Voltage	Input Voltage Range at Nominal Output Voltage	Output Voltage Range	Maximum Amperes	Rated Output KVA
For 57-63 Cycle Operation				
120	105-135	110-120	66.6	8.0

TYPE EMT25136U



Automatically provides gradual power run-up and constant automatic regulated voltage for vacuum tubes in sensitive electronic equipment. Regulation is within a 1.0 volt bandwidth for any output setting from 9 to 24 volts.

Nominal Input Voltage	Input Voltage Range	Output Voltage Range	Maximum Amperes	Maximum Voltage Run-up Time (Seconds)
For 50/60 Cycle Operation				
120	108-132	9-24	25.0	45[§]
240	216-256			

FOOTNOTES (all charts)

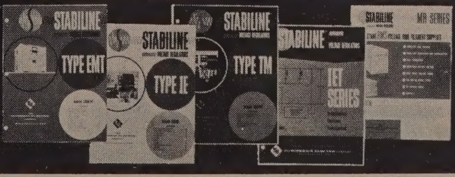
[†] Also available as rack models (suffix R when ordering).

[*] Can also be operated on an input range of 95 to 135 volts with a rating of 52.0 amperes, 6.0 KVA and a correction rate of .075 seconds per volt.

[‡] Units can be converted for 208 volt operation by simple tap changes. Input and output voltage ranges change in proportion.

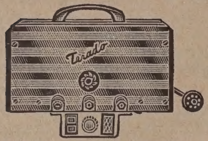
[§] Other speeds of 3, 6, 15, 30 or 60 seconds available on special order.

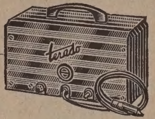
FOR MORE DETAILED INFORMATION about ratings, specifications and technical data on STABILINE automatic voltage regulators, request either the complete STABILINE literature file or individual bulletins describing the series that meet your particular requirements.

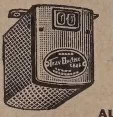


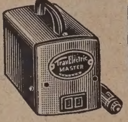
terado DC-AC Converters, Chargers, Relays

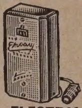
CHANGES BATTERY CURRENT TO 110 VOLT AC, 60 CYCLE

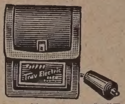

SUPREME AND CONTINENTAL


RECORDER


CHIEF


AUTOMATIC, SUPER, AND MASTER


ELECTRAL


AUTO-SHAVER

CONVERTERS

SUPREME

Converts 12 v. DC to AC; power output, 175-200 watts. Complete with wire for installation and remote control. Remote control has variable AC output switch and signal light indicating proper AC output voltage. Filtered for use with tape recorders. Steel case. **Size:** 10¾″ w. x 6″ d. x 6″ h. Shpg. Wt., 25 lbs.
Terado No. 50153—Net Each........ $73.34

CONTINENTAL

Same as Supreme, but transistorized and has capacity of 300-350 watts. Shpg. Wt., 30 lbs.
Terado No. 50191—
Net Each.......................... $98.67

RECORDER

Same case as "Supreme" less remote control. Input, 12 v. DC; output, 150-175 w. Plugs into cigarette lighter. Hi-low voltage selector switch to maintain proper output voltage. Filtered for use with tape recorders and portable TV. **Size:** 10¾″ w. x 6″ d. x 6″ h. Shpg. Wt., 21 lbs. $66.37
Terado No. 50175—Net Each........

CHIEF

Operates tape recorders, power tools, dictation machines, mixers, blenders, etc. Two models available. Direct connection to battery. Front AC receptacle. Toggle switch output control. Ventilated steel case. Easy to mount. **Size:** 3½″ w. x 6½″ d. x 4″ h. Shipping Weight, 8 lbs.
Terado No. 50137—Voltage input, 6 v. AC Power Output, 75-100 watts. Net. $46.66
Terado No. 50138—Voltage input, 12 v. AC Power Output, 100-125 watts. Net. $46.66

AUTOMATIC

Operates automatically from 6 or 12 v. DC without vibrator change or switching (6 v., 55-75 watts; 12 v., 85-110 watts). Easy installation into cigarette lighter. For dictation machines, radios, tape recorders, phonographs, heating pads, etc. Steel case. Seal brown baked enamel. **Size:** 3½″ w. x 6½″ d. x 4″ h. Shpg. Wt., 8 lbs. $38.65
Terado No. 50134—Net Each........

SUPER

Operates dictation machine, radios, phonograph, tape recorders, massaging equipment, etc. Two compact, lightweight models available. Simple installation into cigarette lighter. Steel case. Seal brown baked enamel. **Size:** 3½″ w. x 6½″ d. x 4″ h. Shipping Weight, 8 lbs.
Terado No. 50126—Voltage input, 6 v. AC Power Output, 60-75 watts. Net.. $33.32
Terado No. 50127—Voltage input, 12 v. AC Power Output, 75-100 watts. Net. $33.32

MASTER

Operates some dictation machines and tape recorders, radios and phonographs, emergency lighting, etc. Easy to install into cigarette lighter. Steel case. Seal brown baked enamel. **Size:** 3½″ w. x 6½″ d. x 4″ h. Shipping Weight, 6 lbs.
Terado No. 50121—Voltage input, 6 v. AC Power Output, 50-60 watts. Net.. $27.68
Terado No. 50122—Voltage input, 12 v. AC Power Output, 60-75 watts. Net.. $27.68

ELECTRAL

Glove compartment size converters, available in 6 v. or 12 v. input. Easy installation into cigarette lighter. Operates De Jur Stenorette, Geloso, G.B.C., Stenocord, Norelco dictation machines, radios, etc. Vinyl coated steel case with leatherette appearance. **Size:** 3″ w. x 2¼″ d. x 5½″ h. Shipping Weight, 3 lbs.
Terado No. 50174—Voltage input, 6 v. AC Power Output, 32-42 watts. Net.. $17.98
Terado No. 50167—Voltage input, 12 v. AC Power Output, 42-52 watts. Net.. $17.98

SENIOR

Operates radios, lights, phonographs and small tape recorders. Available in 6 v. or 12 v. input. Simple to install into cigarette lighter. Aluminum case. Seal brown baked enamel. **Size:** 2½″ w. x 4½″ d. x 2¼″ h. Shipping Weight, 3 lbs.
Terado No. 50115—Voltage input, 6 v. AC Power Output, 35-40 watts. Net.. $15.98
Terado No. 50116—Voltage input, 12 v. AC Power Output, 40-50 watts. Net.. $15.98

AUTO SHAVER

Operates all electric shavers by plugging into AC receptacle provided. Available in 6 v. or 12 v. input. Easy installation into cigarette lighter. Polyethylene non-breakable case. **Size:** 3⅝″ w. x 2¼″ d. x 4¼″ h. Shipping Weight, 2 lbs.
Terado No. 50102—Voltage input, 6 v. AC Power Output, 10-15 watts. Net Ea.. $9.31
Terado No. 50103—Voltage input, 12 v. AC Power Output, 15-20 watts. Net Each. $9.31

QUIK SHAVE

Speeds up electric shaver; cuts shaving time in half. Changes AC to DC. $3.93
Terado No. 50184—Net Each..........

BATTERY CHARGERS

Electronically engineered full wave silicon rectifier chargers. Miniaturization with full power charge rate.

DYN-A-MITE

Baked seal brown paint over aluminum case. Charge rate 1 amp, both 6 and 12 volts. **Size:** 1¾″ x 1¾″ x 3¼″. Wt., 1 lb. $5.90
Terado No. 50186—Net Each..........

TINY GIANT

Copper clad steel case. Charge rate 1½ amps, both 6 and 12 volts. Warning buzzer for improper connection. **Size:** 2⅛″ x 3″ x 5½″. Weight, 1½ lbs.
Terado No. 50185— $7.21
Net Each...........................

LEADER

Copper clad steel case. Charge rate 3 amps, 12 volts only. Warning buzzer for improper connection. **Size:** 2¼″ x 3″ x 5½″. Weight, 2 lbs.
Terado No. 50187— $10.47
Net Each.........................

CHAMPION

Copper clad steel case. Charge rate 4 amps, both 6 and 12 volts. Automatic circuit breaker protection. **Size:** 2¼″ x 3″ x 5½″. Weight, 2 lbs.
Terado No. 50188— $13.27
Net Each.........................

HI-POWER

Copper clad steel case. Charge rate 5 amps, 12 volts only. Cigarette lighter plug-in. Charge indicator light shows condition of battery. **Size:** 2¼″ x 3″ x 5½″. Weight, 3 lbs. $13.97
Terado No. 50180—Net Each........

CHALLENGER

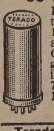
Brown baked enamel, ventilated steel case. Charge rate 6 amps, both 6 and 12 volts. Charge rate meter. Brackets for coiling wire provided. **Size:** 4″ x 5″ x 6″. Weight, 5 lbs. $20.27
Terado No. 50189—Net Each........

SUPER CHARGER

Brown baked enamel, ventilated steel case. Charge rate 10 amps, both 6 and 12 volts. Color coded meter shows condition of battery and charge rate. **Size:** 4″ x 5″ x 6″. Weight, 7½ lbs.
Terado No. 50181— $25.87
Net Each.........................

SERIES 6000 MICRO-RELAYS

60 MILLIWATT OPERATING POWER



Hermetically sealed, single pole double throw (Form C) silver contacts, rated at 1 amp at 24 v. non-inductive load. Operating temperature range −55° C to +85° C. Insulation: 500 v. at any terminal to ground. Excellent vibration characteristics due to short armature. Base fits 7-pin miniature tube socket. **Size:** ¾″ x 1¹¹⁄₁₆″ long.

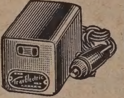
STOCK RELAYS

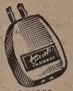
Terado No.	Coil Resistance	Operating Volts DC	Net Each*
B1330	24 ohms	1.5	$8.42
B1331	300 ohms	6	8.55
B1332	2,000 ohms	12	8.94
B1333	5,000 ohms	24	9.71
B1249†	8,000 ohms	20	10.55
B1334	8,000 ohms	24-28	10.55
B1335	10,000 ohms	32	10.91

*Write for quantity prices. †Used in most TV cameras.

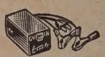
SPECIAL RELAYS AVAILABLE, WRITE FOR QUOTATIONS

292X-60B


SENIOR


QUIK SHAVE

BATTERY CHARGERS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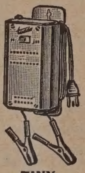
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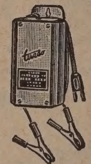
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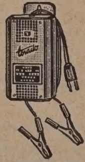
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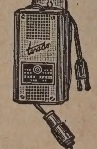
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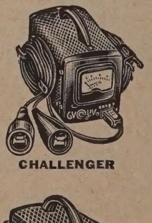
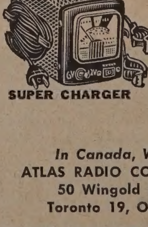

CHALLENGER


SUPER CHARGER

Export Sales Division
MORHAN EXPORTING CORP.
458 Broadway
New York 13, N. Y.

TERADO COMPANY
St. Paul 8, Minnesota

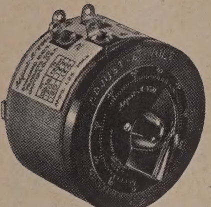
In Canada, Write
ATLAS RADIO CORP., LTD.
50 Wingold Ave.
Toronto 19, Ontario

Adjust-A-Volt®
VARIABLE TRANSFORMER

AUTO-TRANSFORMERS
BENCH AND PANEL MOUNTINGS
GANGED ASSEMBLIES

FOR CONTROL OF AC LINES POWER, HEAT, SPEED AND LIGHT

SPECIFICATIONS FOR THESE MODELS ON OPPOSITE PAGE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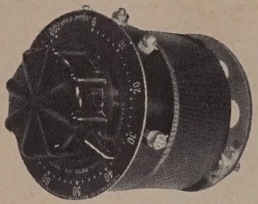
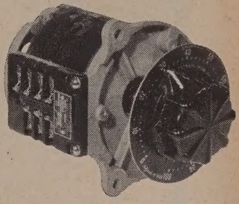
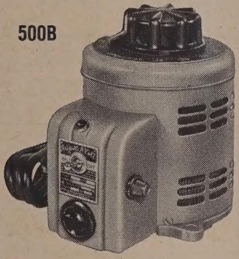

300BU


500BU

Type	Input Voltage	Load Rating, Maximum	Output Voltage Over-Voltage	Output Voltage Line Voltage	Output Current, Maximum	Driving Torque in.-oz.
100BU	120V	.165KVA	0-132V	0-120V	1.25A	5-10
300BU	115V	0.4KVA	0-135V	0-115V	3.0A	15-30
500BU	115V	1.0KVA	0-135V	0-115V	7.5A	20-40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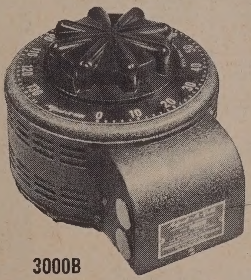
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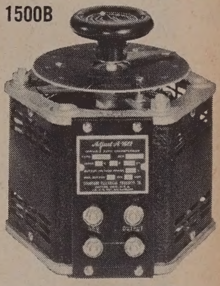
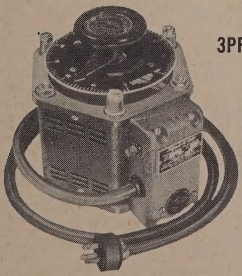
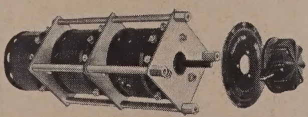

1500B

Type	Input Voltage	Load Rating, Maximum	Output Voltage Over-Voltage	Output Voltage Line Voltage	Output Current, Maximum	Driving Torque in.-oz.
500B	115V	1.0KVA	0-135V	0-115V	7.5A	20-40
1500B	115V	2.0KVA	0-135V	0-115V	15.0A	30-70
3000B	115V	4.0KVA	0-135V	0-115V	30.0A	30-70


3PF 1500B


300BU-3

ADJUST-A-VOLT FEATURES

- Smooth, continuous control
- No Waveform distortion
- High efficiency
- Excellent regulation
- 50/60 cycle operation
- Standard mountings
- LoRes Commutator surface on all models

Type	Input Voltage	Load Rating, Maximum	Output Voltage Over-Voltage	Output Voltage Line Voltage	Output Current, Maximum	Driving Torque in.-oz.
3PF1500B	115V	2.0KVA	0-135V	0-115V	15.0A	30-70
300BU-3	230V	1.2KVA	0-270V	0-230V	3.0A	25-50

STANDARD ELECTRICAL PRODUCTS CO. • DAYTON, OHIO

SEE NEXT PAGE FOR ALL GANGED MODELS AND THEIR APPLICATIONS

ADJUST-A-VOLT SPECIFICATIONS AND APPLICATION INDEX

	Input	OUTPUT						Approx. Wt. Lbs.		Net Price
	Volts	Volts	Amp. Max.	KVA Max.	Type	Description	Code Word	Net	Ship.	
SINGLE PHASE	120	0-115	1.25A	.165	100BU	Uncased with terminal strip.	YOOBU	2	3	$ 8.50
	115	0-115	3.0	0.34	300BU	Uncased with terminal strip.	TREED	4	6	$ 12.50
		0-135	3.0	0.40						
	115	0-115	7.5	0.86	500B	With case, line cord-plug, input receptacle, switch and fuse.	FEDEN	11	12	$ 23.00
		0-135	7.5	1.0	500BU	Uncased with terminal box.	FIVED	10	11	18.00
					3PF500B	With case, 3 prong plug-cord, output receptacle, switch and fuse.	PLEAD	11	12	30.00
					3TF500B	With case, 3 prong twist blade plug-cord, output receptacle and fuse.	TELFE	11	12	30.00
	115	0-115*	15.0	1.7	1500B	With case and terminal board.	TOODE	21	25	$ 46.00
		0-135	15.0	2.0	F1500B	With case, fuse and terminal cover.	FOODE	21	25	50.00
					2PF1500B	With case, 2 prong plug-line cord, output receptacle and fuse.	POODE	22	26	56.00
					3PF1500B	With case, 3 prong straight blade plug-cord, output receptacle and fuse.	MOODE	22	26	56.00
					3TF1500B	With case, 3 prong twist blade plug-cord, output receptacle and fuse.	LOODE	22	26	56.00
	115	0-115*	30.0	3.4	1500B-2	2-gang, Parallel Circuit.	DOUBE	43	50	$ 96.00
		0-135	30.0	4.0	3000B	With case and terminal cover.	THIRT	23	27	55.00
					3000BU	Without case and terminal cover.	UTAHA	22	26	49.00
	115	0-115	60.0	6.9	3000B-2	2-gang, Parallel Circuit, requires paralleling Choke, Type 30L-1.	TOUBE	52	62	$126.00
		0-135	60.0	8.0						
	115	0-115	90.0	10.3	3000B-3	3-gang, Parallel Circuit, requires paralleling Chokes, 1 ea., Types 30L-1 and 30L-2.	MOUBE	79	83	$182.00
		0-135	90.0	12.1						
	230	0-230	3.0	0.69	520B	With case, line cord-plug, output receptacle, switch and fuse.	CRANY	11	12	$ 26.00
		0-270	3.0	0.81	520BU	Uncased with terminal box.	BRANY	10	11	20.00
	115	0-270	3.0‡	0.35	3PF520B	With case, 3 prong straight blade plug-cord, output receptacle and fuse.	PANNY	11	12	33.00
					3TF520B	With case, 3 prong twist blade plug-cord, output receptacle and fuse.	TANNY	11	12	33.00
	230	0-230	7.5	1.7	500B-2	2-gang, Series Circuit, cased.	DEBEN	22	25	$ 49.00
		0-270	7.5	2.0	500BU-2	2-gang, Series Circuit, uncased.	UBBEN	21	25	44.00
	230	0-230*	9.0	2.1	1520B	With case and terminal board.	DANNY	21	25	$ 46.00
		0-270	9.0	2.4	F1520B	With case, fuse and terminal cover.	FANNY	21	25	50.00
	115	0-270	9.0‡	1.05	2PF1520B	With case, 2 prong plug-line cord, output receptacle and fuse—No switch.	MANNY	21	25	56.00
					3PF1520B	With case, 3 prong straight blade plug-cord, output receptacle and fuse—No switch.	CANNY	21	25	56.00
					3TF1520B	With case, 3 prong twist blade plug-cord, output receptacle and fuse—No switch.	JANNY	21	25	56.00
	230	0-230*	15.0	3.4	1500B-2	2-gang, Series Circuit.	DOUBE	43	50	$ 96.00
		0-270	15.0	4.0	F1500B-2	2-gang, Series Circuit, fused output.	JOODE	43	50	104.00
	230	0-230*	18.0	4.1	1520B-2	2-gang, Parallel Circuit.	TWODE	43	50	$ 96.00
		0-270	18.0	4.8						
	115	0-270	18.0‡	2.1						
	230	0-230	12.0	2.8	3020B	With case and terminal cover.	RANNY	23	26	$ 55.00
		0-270	12.0	3.2	3020BU	Without case and terminal cover.	VOLTA	22	26	49.00
	115	0-270	12.0‡	1.4						
	230	0-230	24.0	5.5	3020B-2	2-gang, Parallel Circuit, requires one paralleling Choke, Type 30L-1.	ZOOAD	50	61	$126.00
		0-270	24.0	6.5						
	115	0-270	24.0‡	2.8						
	230	0-230	36.0	8.3	3020B-3	3-gang, Parallel Circuit, requires paralleling Chokes, 1 ea., Types 30L-1 and 30L-2.	ZOOBA	75	88	$182.00
		0-270	36.0	9.7						
	115	0-270	36.0‡	4.2						
	460	0-460	3.0	1.4	520B-2	2-gang, Series Circuit.	ZANNY	22	25	$ 53.50
		0-540	3.0	1.6	520BU-2	2-gang, Series Circuit.	VANNY	21	25	48.50
	230	0-540	3.0‡	0.7						
	460	0-460*	9.0	4.1	1520B-2	2-gang, Series Circuit.	TWODE	43	50	$ 96.00
		0-540	9.0	4.9						
	230	0-540	9.0‡	2.1						
	460	0-460	12.0	5.5	3020B-2	2-gang, Series Circuit.	ZOOAD	50	61	$126.00
		0-540	12.0	6.5						
	230	0-540	12.0‡	2.8						
THREE PHASE	115	0-115	3.0	0.6	300BU-2	2-gang, Open Delta Circuit, uncased.	WREED	10	14	$ 36.50
		0-135	3.0	0.7						
	115	0-115	7.5	1.5	500B-2	2-gang, Open Delta Circuit, cased.	DEBEN	22	25	$ 49.00
		0-135	7.5	1.8	500BU-2	2-gang, Open Delta Circuit, uncased.	UBBEN	21	25	44.00
	115	0-115*	15.0	3.0	1500B-2	2-gang, Open Delta Circuit.	DOUBE	43	50	$ 96.00
		0-135	15.0	3.5						
	115	0-115	30.0	6.0	3000B-2	2-gang, Open Delta Circuit.	TOUBE	50	61	$126.00
		0-135	30.0	7.0						
	230	0-230†	3.0	1.2	300BU-3	3-gang, Wye Circuit, uncased.	MEADE	14	20	$ 58.75
	230	0-230	3.0	1.2	520B-2	2-gang, Open Delta Circuit, cased.	ZANNY	22	25	$ 53.50
		0-270	3.0	1.4	520BU-2	2-gang, Open Delta Circuit, uncased.	VANNY	21	25	48.50
	115	0-270	3.0‡	0.6						
	230	0-230	7.5	3.0	500B-3	3-gang, Wye Circuit, cased.	MEBEN	35	45	$ 67.25
		0-270†	7.5	3.5	500BU-3	3-gang, Wye Circuit, uncased.	ZUBEN	34	45	60.75
	230	0-230*	9.0	3.6	1520B-2	2-gang, Open Delta Circuit.	TWODE	43	50	$ 96.00
		0-270	9.0	4.2						
	115	0-270	9.0‡	1.8						
	230	0-230*	15.0	6.0	1500B-3	3-gang, Wye Circuit.	DOODE	65	75	$147.00
		0-270†	15.0	7.0						
	230	0-230	12.0	4.8	3020B-2	2-gang, Open Delta Circuit.	ZOOAD	50	61	$126.00
		0-270	12.0	5.6						
	115	0-270	12.0‡	2.4						
	230	0-230	30.0	12.0	3000B-3	3-gang, Wye Circuit.	MOUBE	50	61	$182.00
		0-270†	30.0	14.0						
	460	0-460	3.0	2.4	520B-3	3-gang, Wye Circuit, cased.	TURNE	35	45	$ 75.25
		0-540†	3.0	2.8	520BU-3	3-gang, Wye Circuit, uncased.	YURNE	34	45	68.25
	230	0-540†	3.0‡	1.2						
	460	0-460*	9.0	7.2	1520B-3	3-gang, Wye Circuit.	MORKE	65	75	$147.00
		0-540†	9.0	8.4						
	230	0-540†	9.0‡	3.6						
	460	0-460	12.0	9.6	3020B-3	3-gang, Wye Circuit.	ZOOBA	70	82	$182.00
		0-540†	12.0	11.2						
	230	0-540†	12.0‡	4.8						

*Over-voltage connection (0 to 17% above line voltage) or line voltage connection is available to the user by the type of connections made, however, line voltage connection on Types 1500B and 1520B must be specified.

† Ganged units of these types when connected for over-voltage operate from 60 cycle service only.

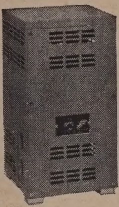
‡ Output current reduces to approx. 44% at full voltage.

Adjust-A-Volt®
VARIABLE TRANSFORMER

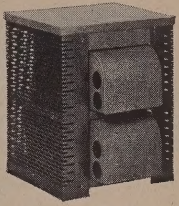
MOTORIZED
FOR REMOTE CONTROL OPERATION

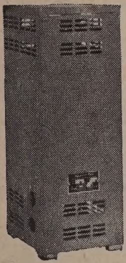
ELECTRICAL SPECIFICATIONS EQUIVALENT TO TYPES LISTED ON SPECIFICATION INDEX PAGE

M 0711
M 0721

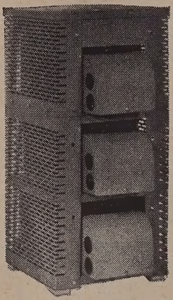


M 3011
M 3021



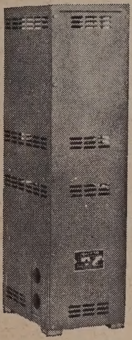


0712
0722



M 3012
M 3022

M 0713
M 0723



M 3013
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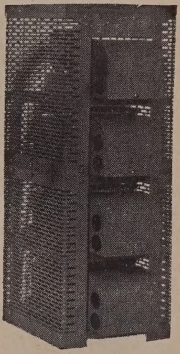


TYPE	ELECTRICAL EQUIVALENT OF	OVERALL DIMENSIONS (INCHES)	SHIPPING WTS.	NET PRICE
M 0711-*	500B	7 5/16 x 6 5/16 x 12 5/16	22	**123.00**
M 0712-*	500B-2	7 5/16 x 6 5/16 x 17 1/4	33	**149.00**
M 0713-*	500B-3	7 5/16 x 6 5/16 x 22 9/16	43	**167.25**
M 0721-*	520B	7 5/16 x 6 5/16 x 12 11/16	22	**126.00**
M 0722-*	520B-2	7 5/16 x 6 5/16 x 17 15/16	33	**153.50**
M 0723-*	520B-3	7 5/16 x 6 5/16 x 22 9/16	43	**175.25**
M 3011-*	3000B	9 7/8 x 8 3/8 x 12 3/8	48	**155.00**
M 3012-*	3000B-2	9 7/8 x 8 3/8 x 16 15/16	79	**226.00**
M 3013-*	3000B-3	9 7/8 x 8 3/8 x 21 3/4	104	**282.00**
M 3021-*	3020B	9 7/8 x 8 3/8 x 12 3/8	48	**155.00**
M 3022-*	3020B-2	9 7/8 x 8 3/8 x 16 15/16	79	**226.00**
M 3023-*	3020B-3	9 7/8 x 8 3/8 x 21 3/4	104	**282.00**

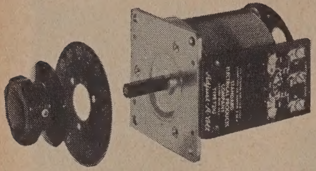
* Motor Speeds for Full Range Travel are available as follows: 6, 13, 26 and 45 seconds. A speed must be designated after the type number such as M 0711-06 for a 6 second speed, M 3011-45 for a 45 second speed etc.

STANDARD ELECTRICAL PRODUCTS CO. • DAYTON, OHIO

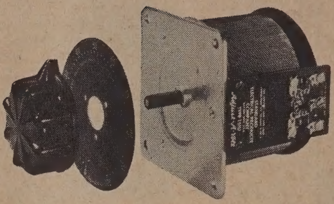
WRITE FOR COMPLETE ADJUST-A-VOLT CATALOG

Adjust-A-Volt®
VARIABLE TRANSFORMER

NEW PANEL-MOUNTED AUTO-TRANSFORMERS

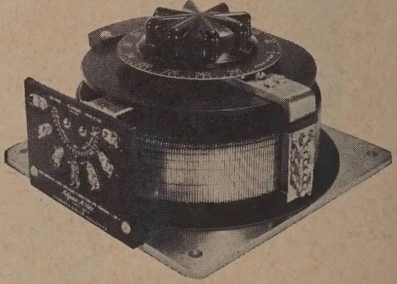


Type T21U



Type T51U

Type T502U



Type	T21U	T51U	T502U
INTERCHANGEABLE WITH OTHER SQUARE BASE UNITS.			
Input Voltage	115	115	230
Load Rating (KVA)	0.36	0.90	7.5
Output Voltage	0-135V	0-135V	0-270V
Maximum Current (Amp.)	3.1	7.8	32.5
Rated Current (Amp.)	2.4	6.0	25
Shipping Wgt.	4.5 lbs.	7.5 lbs.	61 lbs.
Net Price	$13.50	$17.00	$120.00

NEW IMPROVED DESIGN FEATURES

TERMINAL BOARD—mounted with lock nut on permanently attached aluminum bracket . . . no screws in base to come loose.

Brush Assembly is mechanically tied to rotor plate with 2 screws, can't spring loose under impact. Type T502U has six independently replaceable brushes.

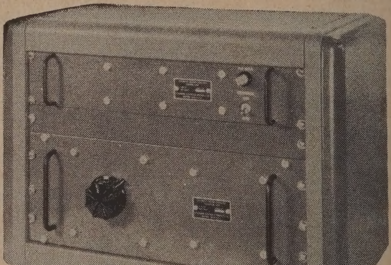
MOUNTING HOLES fully threaded plated steel inserts 5/16″ long in aluminum bases gives over twice effective thread length. Ganged units are available.

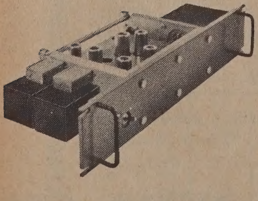
WRITE FOR COMPLETE ADJUST-A-VOLT CATALOG

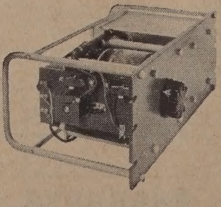
MILITARIZED AUTOMATIC VOLTAGE REGULATORS

115 and 230 volt models for correction ranges ±10% and ±20% up to ¼% accuracy—No waveform distortion.

Unaffected by frequency deviations. Detailed specifications upon request. We invite your inquiries for commercial automatic voltage regulators.







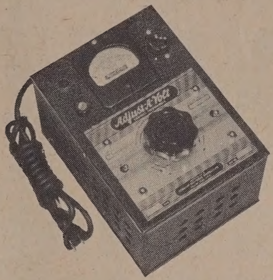
6 KVA Power Capacity for 115 Volt, 50-60 cycle service.

STANDARD ELECTRICAL PRODUCTS CO. • DAYTON, OHIO

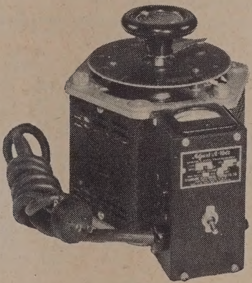
Adjust-A-Volt®
VARIABLE TRANSFORMER

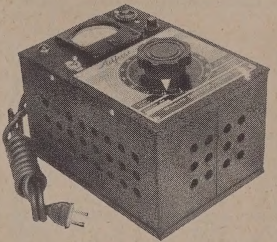
VARIABLE ISOLATION
ELECTROSTATICALLY SHIELDED
METERED • CASED

LR/NA


LRL

1500BD/1520BD




PAL-7/MAL-7

UNMETERED ISOLATION TRANSFORMER MODELS

Type	Code	Input Voltage	Output Voltage	Amp Max.	Max. (V.A.)	Overall Dimensions	Shipping Weight (1 Unit)	Net Price
LR-5	LARKE	115	70-140	5.0	500	6¾"x9⅛"x5"	27 lbs.	$29.50
LR-10	LAMBE	115	70-140	10.0	1000	6¾"x9⅛"x9"	40 lbs.	57.50

METERED ISOLATION TRANSFORMER MODELS

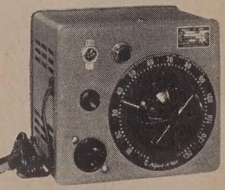
Type	Code	Input Voltage	Output Voltage	Amp Max.	Max. (V.A.)	Overall Dimensions	Shipping Weight (1 Unit)	Net Price
LRL-5	BARKE	115	0-140	5.0	500	6¾"x9⅛"x6⅝"	29 lbs.	$41.50
LRL-10	BAMBE	115	0-140	10.0	1000	6¾"x9⅛"x9⅝"	42 lbs.	69.50

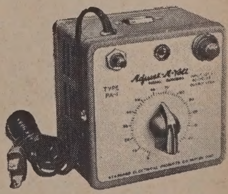
UNMETERED AUTO-TRANSFORMER MODELS

Type	Code	Input Voltage	Output Voltage	Amp Max.	Max. (V.A.)	Overall Dimensions	Shipping Weight (1 Unit)	Net Price
PA-3	NANNE	115	0-135	3.0	400	6½"x6⅛"x5½"	10 lbs.	$18.75
PA-1	PANNE	120	0-132	1.25	165	3⅞"x3⅞"x3½"	3 lbs.	13.50
NA-10	NAMMY	230	0-140	15.0	1500	6¾"x9⅛"x9"	40 lbs.	55.50
MA-10	MAMMY	230	0-280	7.5	1500	6¾"x9¼"x6 13/32"	40 lbs.	52.50

METERED AUTO-TRANSFORMER MODELS

Type	Code	Input Voltage	Output Voltage	Amp Max.	Max. (V.A.)	Overall Dimensions	Shipping Weight (1 Unit)	Net Price
MAL-7	QUALM	230	0-270	3.0	810	6¾"x9¼"x6 13/32"	15 lbs.	$49.50
PAL-7	PADDE	115	0-135	7.5	1000	6¾"x9¼"x6 13/32"	15 lbs.	40.50
1500BD	LATTE	115	0-135	15.0	2000	8"x10 9/16"x8 3/16"	35 lbs.	64.00
1520BD	RALEN	230	0-270	9.0	2400	8"x10 9/16"x8 3/16"	35 lbs.	64.00


PA-3


PA-1

STANDARD ELECTRICAL PRODUCTS CO. • DAYTON, OHIO

WRITE FOR COMPLETE ADJUST-A-VOLT CATALOG

TECHNICAL APPARATUS BUILDERS

"TABTRON" "SILTAB"® RECTIFIERS

Engineered for Industry

FOR ALL YOUR DC POWER REQUIREMENTS

"TECHNICAL APPARATUS BUILDERS" mfgr. Power Rectifiers to your specs. From one amp up to and above 1000 amps, convection or fan cooled, single or 3 phase. "NEMA" & Jan. Specs.

SILTAB

"SILTAB"® SILICON JUNCTION FINNED STACKS —65°C TO +150°C CONVECTION COOLED*

Single Phase — Dated and Guaranteed — Single Phase

Full Wave Bridge

Max. DC Amps	36VAC 32VDC		70VAC 62VDC		140VAC 125VDC		280VAC 250VDC		840VAC 750VDC		1120VAC 1000VDC		1400VAC 1250VDC		2800VAC 2500VDC	
1	JA35	$3.45	JA70	$4.20	JA140	$4.90	JA280	$5.75	JA840	$16.30	JA1120	$24.15	JA1400	$30.00	JA2800	$59.75
2	JE35	5.30	JE70	6.75	JE140	7.60	JE280	9.90	JE840	36.70	JE1120	42.85	JE1400	48.75	JE2800	97.00
3	JF35	8.00	JF70	15.40	JF140	17.10	JF280	20.80	JF840	74.30	JF1120	89.00	JF1400	99.45	JF2800	188.00
6	JJ35	9.75	JJ70	27.00	JJ140	24.90	JJ280	35.00	JJ840	99.45	JJ1120	129.75	JJ1400	161.90	JJ2800	336.00
10	JK35	15.00	JK70	23.60	JK140	28.45	JK280	40.75	JK840							
24	JN35	22.00	JN70	27.75	JN140	33.45	JN280	47.15								
36	JR35	24.90	JR70	32.75	JR140	79.60	JR280	102.45								
50	JS35	32.00	JS70	54.75	JS140	111.60	JS280	162.90								
75	JU35	59.90	JU70	87.30	JU140	121.00										
100	JT35	84.15	JT70	110.30	JT140	130.60	JT280	174.75								
150	JO35	95.45	JO70	136.75	JO140	180.30	JO280	321.90								
200	JY35	149.00	JY70	170.00	JY140	306.00	JY280	350.00								
400	JV35	241.00	JV70	261.00	JV140	495.00	JV280	561.00								

Full-Wave Center Tap

Max. DC Amps	36VCT 18-0-18 16VDC		72VCT 36-0-36 32VDC	
1	SA36	$2.90	SA72	$3.45
2	SE36	3.60	SE72	4.30
3	SF36	4.75	SF72	8.10
6	SJ36	6.00	SJ72	15.00

—3φ—THREE PHASE FULL WAVE BRIDGE—3φ—

DC Amps	36VAC 48VDC		105VAC 144VDC		185VAC 248VDC		280VAC 375VDC	
2	YE36	$9.30	YE105	$11.45	YE185	$14.75	YE280	$16.90
6	YJ36	23.60	YJ105	28.45	YJ185	39.90	YJ280	49.75
60	YS36	57.45	YS105	84.75	YS185	108.60	YS280	144.90
100	YT36	117.15	YT105	153.75	YT185	216.60	YT280	270.90
200	YY36	189.45	YY105	243.75	YY185	299.15	YY280	522.60
400	YV36	274.90	YV105	479.45	YV185	585.75	YV280	990.30
600	YX36	522.90	YX105	721.75	YX185	849.60	YX280	Query

DC Amps	C.T.3φ Star 18V to CT 24VDC		H.W.3φWYE 36VAC/ 42VDC	
2	FE36	$9.00	HE36	$4.75
6	FJ36	23.00	HJ36	11.90
60	FS36	57.00	HS36	28.60
100	FT36	117.00	HT36	58.15
200	FY36	189.00	HY36	94.60
400	FV36	274.00	HV36	137.30

*Forced Air Cooling 2000LFM Increase Amp Rating Silicon 2X. Capacitive, battery & motor loads derate 20% Fuse Input AC & Output DC to protect Silicon Rectifiers — USE FAST ACTING "AMTRAP" FUSES AVAILABLE FROM US.

"TEKSEL" SELENIUM RECTIFIER STACKS

Full Wave Bridge — Single Phase — Full Wave Bridge Dated and One Year Guaranteed

Max. DC Amps	18VAC 14VDC		36VAC 28VDC		54VAC 42VDC		72VAC 56VDC		130VAC 100VDC		144VAC 118VDC		266VAC 217VDC		DC Amps Max.
0.5	BV18	$1.00	BV36	$1.90	BV54	$2.90	BV72	$3.85	BV130	$5.00	BV144	$6.75	BV266	$9.75	0.5
1	BA18	1.40	BA36	2.30	BA54	3.45	BA72	4.90	BA130	8.75	BA144	10.65	BA266	16.00	1
2	BE18	2.30	BE36	3.20	BE54	5.25	BE72	6.25	BE130	11.70	BE144	14.00	BE266	21.90	2
3	BF18	2.90	BF36	4.15	BF54	6.40	BF72	8.60	BF130	14.40	BF144	17.25	BF266	39.75	3
4	BG18	3.65	BG36	7.35	BG54	11.40	BG72	16.00	BG130	24.85	BG144	28.50	BG266	47.60	4
6	BJ18	4.40	BJ36	8.75	BJ54	12.75	BJ72	18.75	BJ130	32.60	BJ144	36.00	BJ266	63.45	6
10	BK18	6.35	BK36	12.60	BK54	19.50	BK72	26.30	BK130	41.90	BK144	48.75	BK266	95.00	10
12	BL18	8.00	BL36	15.75	BL54	21.95	BL72	30.95	BL130	45.00	BL144	52.50	BL266	103.60	12
15	BW18	10.30	BW36	20.90	BW54	29.30	BW72	40.00	BW130	54.30	BW144	64.45	BW266	108.15	15
20	BM18	12.90	BM36	25.30	BM54	37.45	BM72	49.90	BM130	78.75	BM144	90.00	BM266	169.00	20
24	BN18	16.00	BN36	32.00	BN54	44.60	BN72	57.50	BN130	85.00	BN144	96.50	BN266	188.75	24
30	BQ18	19.45	BQ36	37.30	BQ54	56.00	BQ72	74.75	BQ130	117.30	BQ144	136.75	BQ266	249.60	30
36	BR18	24.75	BR36	47.90	BR54	69.30	BR72	89.90	BR130	142.90	BR144	188.00	BR266	299.45	36
50	BS18	33.45	BS36	63.75	BS54	121.50	BS72	135.75	BS130	192.75	BS144	227.00	BS266	398.90	50

Three Phase 3φ — Full Wave Bridge — Dated & One Year Guaranteed

Max. DC Amps	16VAC 20VDC		30VAC 36VDC		120VAC 150VDC		208VAC 256VDC		240VAC 300VDC		420VAC 460VDC		Center Tap Full Wave 30VAC 12VDC		Max. DC Amps
1	PA16	$3.75	PA30	$4.90	PA120	$17.90	PA208	$33.75	PA240	$36.00	PA420	$63.20	CA30	$2.40	1
2	PE16	5.95	PE30	7.45	PE120	21.75	PE208	39.90	PE240	42.00	PE420	66.90	CE30	2.90	2
4	PG16	8.60	PG30	9.90	PG120	33.15	PG208	62.15	PG240	65.00	PG420	99.75	CG30	3.60	4
6	PJ16	9.90	PJ30	12.90	PJ120	46.90	PJ208	81.75	PJ240	85.00	PJ420	108.60	CJ30	4.70	6
10	PK16	12.75	PK30	16.60	PK120	62.45	PK208	116.00	PK240	122.00	PK420	197.45	CK30	6.45	10
12	PL16	15.90	PL30	18.45	PL120	66.60	PL208	132.15	PL240	139.00	PL420	212.60	CL30	7.60	12
20	PM16	21.30	PM30	28.75	PM120	120.75	PM208	163.90	PM240	174.00	PM420	239.15	CM30	9.45	20
24	PN16	24.90	PN30	29.75	PN120	139.30	PN208	269.75	PN240	280.00	PN420	362.00	CN30	12.75	24
30	PQ16	30.60	PQ30	41.45	PQ120	185.90	PQ208	348.30	PQ240	366.00	PQ420	517.00	CQ30	14.90	30
36	PR16	40.15	PR30	46.90	PR120	216.45	PR208	379.60	PR240	Query	PR420	Query	CR30	Query	36
50	PS16	66.30	PS30	72.60	PS120	268.15	PS208	411.00	PT240	Query	PS420	Query	CS30	Query	50
100	PT16	133.60	PT30	99.00	PT120	374.00	PT208	Query	PS240	Query	PT420	Query	CT30	Query	100

"TABTRAN" RECTIFIER TRANSFORMERS AND CHOKES

Transformer Number	Secondaries	Second AC Amps	Primary Volts	Net Price	Wgt. Lbs.	L	W	A	B	E	V
TR4000R	Dual (2) Sec'd each 0-16V.	1	115	$ 3.75	1-1/2"	3-1/8"	—	2-3/4"	2-5/16"	2"	3-1/6"
TR4001	Dual (2) Sec'd each 0-9-15-18	1	115	4.75	2"	2-1/2"	1-3/4"	3"	2-1/2"	2-5/16"	7/32"
TR4002	Volts at rated current per	2	115	6.60	3-1/4"	2-1/2"	2-9/16"	3"	2-1/2"	3-1/8"	7/32"
TR4003	each winding.	5	115	8.70	6-1/4"	3-1/2"	2-9/16"	4-1/8"	3-1/2"	3-1/2"	7/32"
	Secondary series connected.										
TR4005	Taps give 0-3-6-9-12-15-18-21-	12	115	16.60	12-1/2"	3-3/4"	4"	4-1/2"	3-3/4"	5-1/2"	9/32"
TR4006	24-27-30-33-36 Volts	24	115	34.75	20-1/2"	4-3/8"	4-1/16"	5-1/4"	4-3/8"	6"	5/16"
TR4007	Secondary parallel. 0-9-15-18	50	115 & 220	58.90	39-1/2	5-3/8"	5-7/16"	6-3/8"	5-3/8"	7"	5/16"
TR4008	Volts at twice (2X) the current.	100	115 & 220	125.00	112	7-1/8"	9"	8-5/8"	7-1/4"	12-1/2"	3/8"
TR4009	165V. Tap 160, 150, 125	5	115 & 220	49.60	30	4-1/2"	4-1/2"	6-3/4"	6"	6-1/2"	9/32"
TR4010	165V. Tap 160, 150, 125	10	115 & 220	84.75	33-1/4	5-7/8"	4-1/2"	7"	6"	6-3/4"	5/16"
TR4011	330V. Tap 320, 300, 250	5	115 & 220	69.00	33	5-7/8"	5"	7"	6-1/8"	6-1/4"	5/16"
TR4012	330V. Tap 320, 300, 250	10	115 & 220	117.45	49	8-3/8"	3-3/4"	9-5/8"	7-1/8"	6"	

Choke Number	Inductance Henries	AC Amps	Resistance Ohms	IR Drop Volts	Net Price	Wgt. Lbs.	L	W	A	B	E	V
CR6001	0.1	1	1.4	1.4	$ 3.75	1-1/2	3-1/8"	—	2-3/4"	2-5/16"	2"	3/16"
CR6002	0.1	2	0.67	1.34	5.60	3-1/2	3-3/16"	2"	3-3/4"	3-1/8"	2-5/8"	7/32"
CR6007	0.01	4	0.1	0.04	5.95	3-1/2	2-3/4"	2-5/16"	3-3/8"	2-7/8"	3"	3/16"
CR6003	0.07	5	0.6	3.00	9.99	8-1/4	3-7/16"	3-1/16"	4-1/8"	3-1/2"	3-3/4"	7/32"
CR6004	0.01	12	0.1	1.2	14.45	8-1/4	3-1/2"	3-1/8"	4-1/8"	3-1/2"	3-7/8"	3/16"
CR6005	0.004	24	0.025	0.60	26.90	12	3-3/4"	3-3/8"	4-1/2"	3-7/8"	4-3/4"	9/32"
CR6006	0.001	50	0.001	0.05	45.00	17	4-15/16"	3-3/8"	5-3/4"	4-3/8"	5-1/2"	9/32"

ALL PRICES AND SPECIFICATIONS SUBJECT TO CHANGE.

ALL PRICES AND SPECIFICATIONS SUBJECT TO CHANGE

"TABTRAN" ISOLATION AND CONTROL TRANSFORMERS — ENCLOSED POWER TYPE ELECTRO-STATIC-SHIELDED

PRIMARY 115 230V & SECONDARY 115/230V 1φ 60 CYS. — ALSO 230/460V SPECIFY! (ADD LETTER D = DTPP)

TPP050/50W	$11.00	TPP150/150W	$17.00	TPP750/750W	$40.00
TPP075/75W	13.00	TPP250/250W	22.00	TPP1000/1000W	49.00
TPP100/100W	14.00	TPP500/500W	32.00	TPP2000/2KW	73.00

WE CAN SUPPLY ALL VOLTAGES — FREQUENCIES AND CURRENTS! WRITE!

TABTRON

TECHNICAL APPARATUS BUILDERS

Write for all DC Power Requirements
Eng. Dept. Specialists in Design. Mfgrs. of D.C.
Power Supplies. "TABTRON"®, "TABPAK"®,
"REG-O-TAB"®, "REG-O-VAC"®, "TABSTAT"®

PACKAGED DC POWER ENGINEERED FOR INDUSTRY

TABTRON® — TABPAK® — TABTRAN® — TABSTAT® — TABAMP® — VACDAC® — MAGREGPAK®

DC POWER FOR INDUSTRY — AVIONICS — MISSILE — ELECTRONIC — CHEMICAL — AUTOMOTIVE — MARINE USE

Type	Description—D.C. Volts & AMPS	Code Word	Shipping Wt.-Lbs.	Size Height	Price	Fig.
T6000SJ3ø	4X0-8VDC @ 200A/2%/Ripple VDC	AFRAY	850	83"	$1,350.00	2
T9V300A3øSJ	0-9VDC @ 300 Amp/4% Ripple	ABUYS	275	36"	405.00	3
T9V600A3øSJ	0-9VDC @ 600 Amp/4% Ripple	AGGEN	600	83"	729.00	2
T12V25AC	0-12VDC @ 25A/5% Ripple	AGAIN	80	10½"	150.00	4
T12V50ACSJ	0-12VDC @ 50A/5% Ripple	AGAPE	115	10½"	225.00	4
T16V10ACC	0-16VDC @ 10A 0.5% Ripple @ 5Amp	AGTEA	38	10½"	52.00	4
T32V5A	0-32VDC @ 5 Amps/47% Ripple DC	ABBRE	33	9"	63.00	9
T32V5ACC	0-32VDC @ 5 Amps/1% Ripple VDC	ABDIC	72	10½"	84.00	4
T32V5A2CC	0-32VDC @ 5 Amps/0.1% Ripple VDC	ABEAM	100	10½"	108.00	4
T32V12A	0-32VDC @ 12 Amps/47% Ripple VDC	ABETS	63	10½"	145.00	4
T32V12ACC	0-32VDC @ 12 Amps/1% Ripple VDC	ABIDE	81	10½"	174.00	4
T32V12A2CC	0-32VDC @ 12 Amps/0.1% Ripple VDC	ABJEC	102	10½"	225.00	4
T32V20A2C	0-32VDC @ 20 Amps/0.5% Ripple VDC	ABLES	90	10½"	234.00	4
T32V24ACC	0-32VDC @ 24 Amps/1% Ripple VDC	ABUND	150	10½"	245.00	4
T32V24A2CC	0-32VDC @ 24 Amps/0.1% Ripple VDC	ABUT	182	19¼"	320.00	5
T32V50A	0-32VDC @ 50 Amps/47% Ripple VDC	ABYSM	120	19¼"	310.00	5
T32V50ACCSJ	0-32VDC @ 50 Amps/1% Ripple VDC	ACADE	196	19¼"	400.00	5
T130V1A	0-130VDC @ 1 Amp/47% VDC	ADVAX	40	10½"	99.00	4
T130V1ACC	0-130VDC @ 1 Amp/1% Ripple VDC	ADVER	75	10½"	124.00	4
T130V5A	0-130VDC @ 5 Amps/47% Ripple VDC	ACRES	75	10½"	240.00	4
T130V5ACC	0-130VDC @ 5 Amps/1% Ripple VDC	ACEDA	150	10½"	299.00	4
T130V10A	0-130VDC @ 10 Amp/47% Ripple VDC	ACMES	180	19¼"	290.00	5
T130V10ACC	0-130VDC @ 10 Amp/1% Ripple VDC	ACORN	230	19¼	453.75	5
T230V1ASJ	0-230VDC @ 1 Amp/47% Ripple VDC	ADVIZ	65	10½"	169.00	4
T230V1ACCSJ	0-230VDC @ 1 Amp/1% Ripple VDC	ADVOW	135	10½"	220.00	4

"MAGREGPAK"® *Magnetic Regulated & Filtered*

0 TO 32 WVDC REGULATION 1% AT 24 TO 32VDC

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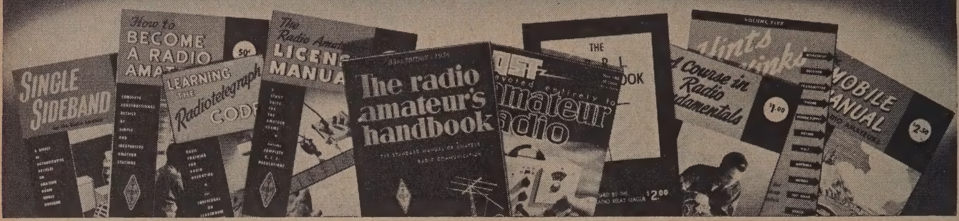
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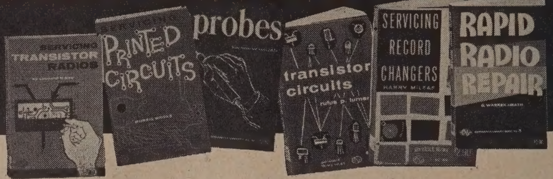

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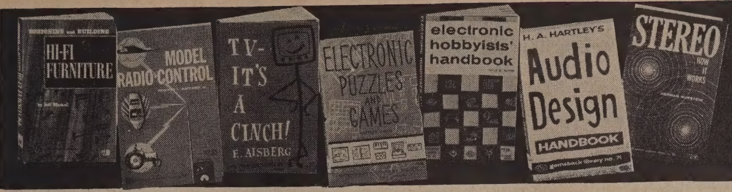
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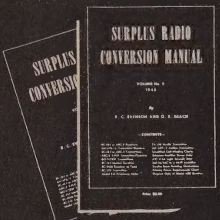

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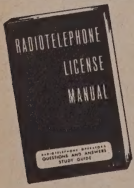

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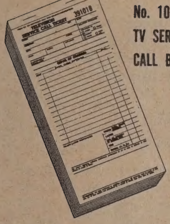

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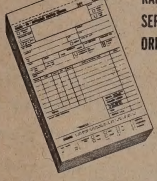

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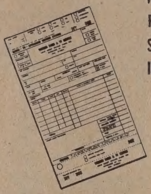

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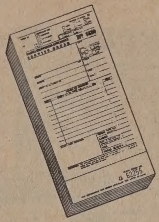

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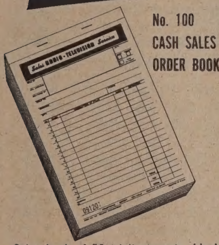

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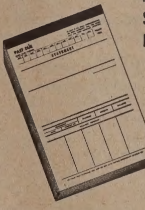

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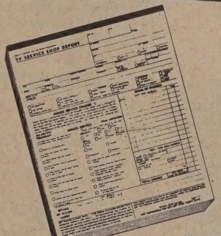

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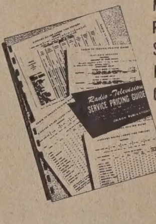

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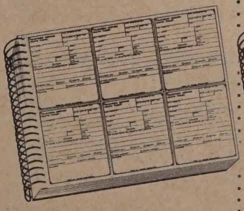

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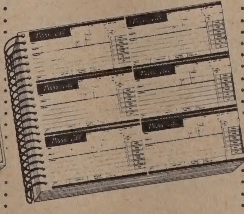

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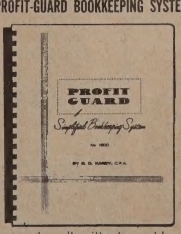

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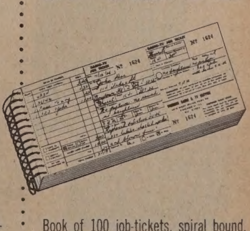

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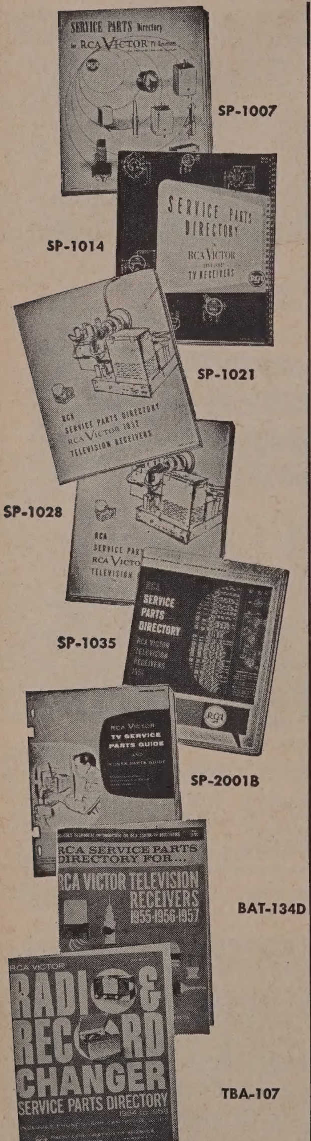

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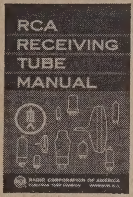

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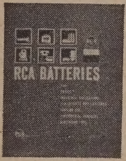

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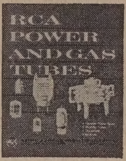

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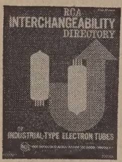

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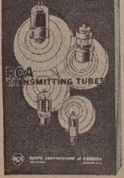

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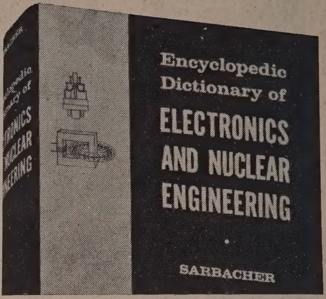
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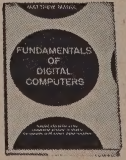

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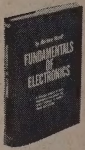

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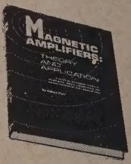

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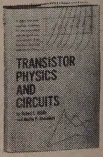

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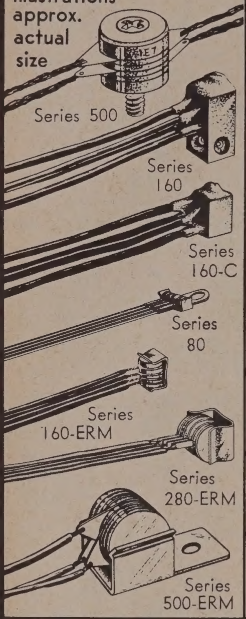

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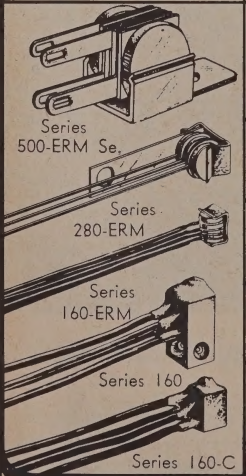
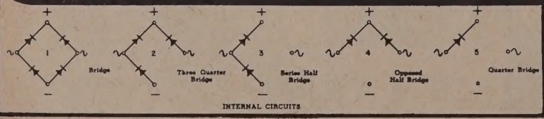
T	4	"	" "	"	100 ma.	" "	"	1.53
H	5	"	" "	"	50 ma.	" "	"	1.20
B	1	.166"	.012 sq. in.	"	10 ma.	#2 screw	Solid fill	2.10
BTH	Series 2	"	" "	"	7 ma.	" "	"	1.86
BHS	160 3	"	" "	"	5 ma.	" "	"	1.53
BT	4	"	" "	"	10 ma.	" "	"	1.53
BH	5	"	" "	"	5 ma.	" "	"	1.20
B-C	1	"	" "	"	10 ma.	Fuse clip	"	2.10
BTH-C	Series 2	"	" "	"	7 ma.	" "	"	1.86
BHS-C	160-C 3	"	" "	"	5 ma.	" "	"	1.53
BT-C	4	"	" "	"	10 ma.	" "	"	1.53
BH-C	5	"	" "	"	5 ma.	" "	"	1.20
A	1	.080"	.0012 sq. in.	5V	1 ma.	#2 screw	Bonded vinyl	2.10
ATH	**Series** 2	.080"	.0012 sq. in.	"	1 ma.	#2 screw	Bonded vinyl	1.86
AHS	**80** 3	.080"	.0012 sq. in.	"	500 ua.	#2 screw	Bonded vinyl	1.53
AT	4	.080"	.0012 sq. in.	"	500 ua.	#2 screw	Bonded vinyl	1.53
AH	5	.080"	.0012 sq. in.	"	500 ua.	#2 screw	Bonded vinyl	1.20
B-ERM*	1	"	" "	"	10 ma.	Leads	Lacquer	1.59
BTH-ERM*	Series 2	"	" "	"	7 ma.	" "	"	1.35
BHS-ERM*	160- 3	"	" "	"	5 ma.	" "	"	1.05
BT-ERM*	ERM 4	"	" "	"	10 ma.	" "	"	1.05
BH-ERM*	5	"	" "	"	5 ma.	" "	"	.75
I-ERM*	1	.280"	.035 sq. in.	"	30 ma.	" "	"	1.59
ITH-ERM*	Series 2	"	" "	"	20 ma.	" "	"	1.35
IHS-ERM*	280 3	"	" "	"	15 ma.	" "	"	1.05
IT-ERM*	ERM 4	"	" "	"	30 ma.	" "	"	1.05
IH-ERM*	5	"	" "	"	15 ma.	" "	"	.75
M-ERM*	1	.500"	.123 sq. in.	"	100 ma.	#6 screw	"	1.59
TH-ERM*	Series 2	"	" "	"	75 ma.	" "	"	1.35
HS-ERM*	500 3	"	" "	"	50 ma.	" "	"	1.05
T-ERM*	ERM 4	"	" "	"	100 ma.	" "	"	1.05
H-ERM*	5	"	" "	"	50 ma.	" "	"	.75



SELENIUM TYPES, wire leads or lugs as shown

TYPE	CIRCUIT	CELL SIZE	ACTIVE AREA	INPUT	OUTPUT	MOUNTING	FINISH	PRICE
SeM-ERM*	Series 1	.500"	.15 sq. in.	25V	60 ma.	#6 screw	Lacquer	$1.23
SeTH-ERM*	500 2	"	" "	"	40 ma.	" "	"	1.08
SeHS-ERM*	ERM 3	"	" "	"	30 ma.	" "	"	.87
SeT-ERM*	Se. 4	"	" "	"	60 ma.	" "	"	.87
SeH-ERM*	5	"	" "	"	30 ma.	" "	"	.66
SeI*	1	.280"	.06 sq. in.	"	20 ma.	Bracketerminal	"	.66
SeITH*	Series 2	"	" "	"	15 ma.	" "	"	.60
SeIHS*	280 3	"	" "	"	10 ma.	" "	"	.51
SeIT*	ERM 4	"	" "	"	20 ma.	" "	"	.51
SeIH*	5	"	" "	"	10 ma.	" "	"	.42
SeB-ERM*	1	.166"	.02 sq. in.	"	10 ma.	Leads	"	.87
SeBTH-ERM*	Series 2	"	" "	"	7 ma.	" "	"	.81
SeBHS-ERM*	160 3	"	" "	"	5 ma.	" "	"	.69
SeBT-ERM*	ERM 4	"	" "	"	10 ma.	" "	"	.69
SeBH-ERM*	5	"	" "	"	5 ma.	" "	"	.57
SeB	1	"	" "	"	10 ma.	#2 screw	Solid fill	2.10
SeBTH	Series 2	"	" "	"	7 ma.	" "	"	1.86
SeBHS	160 3	"	" "	"	5 ma.	" "	"	1.53
SeBT	4	"	" "	"	10 ma.	" "	"	1.53
SeBH	5	"	" "	"	5 ma.	" "	"	1.20
SeB-C	1	"	" "	"	10 ma.	Fuse clip	"	2.10
SeBTH-C	Series 2	"	" "	"	7 ma.	" "	"	1.86
Se-BHS-C	160-C 3	"	" "	"	5 ma.	" "	"	1.53
SeBT-C	4	"	" "	"	10 ma.	" "	"	1.53
SeBH-C	5	"	" "	"	5 ma.	" "	"	1.20

*Resilient structure (U. S. Pat. No. 2,656,493) maintains optimum stack pressure independent of temperature changes; also provides lowest price and smallest size.



CONANT LABORATORIES,
6500 "O" STREET,
LINCOLN, NEBR.

INTERNATIONAL RECTIFIER

EXECUTIVE OFFICES: EL SEGUNDO, CALIFORNIA

SILICON ZENER VOLTAGE REGULATORS

MINIATURE STYLE M DIODES (FIG. A)

Rated 750 milliwatts. **Size:** 0.250" O.D. x .270" l. with 1¼" leads. Ratings and characteristics are at 25° C. ambient. Suffix "T10" denotes 10% voltage tolerance; other tolerances available on special request.

Int'l No.	Jedec Type	Zener Volts ±10%	I_z Max. DC Ma	Typical Imp. Z_z Ohms	Typical Imp. @ I_z Ma	Nom. Temp. %/°C	Net 1-99*
MZ3.9T10	1N1507	3.9	180	14	35	−0.04	**$4.35**
MZ4.7T10	1N1508	4.7	150	12	30	0	**4.35**
MZ5.6T10	1N1509	5.6	130	5.2	26	+0.03	**3.65**
MZ6.8T10	1N1510	6.8	110	1.5	22	+0.05	**3.65**
MZ8.2T10	1N1511	8.2	90	1.5	18	+0.06	**3.65**
MZ10T10	1N1512	10	75	1.8	15	+0.07	**3.65**
MZ12T10	1N1513	12	60	2.8	12	+0.075	**3.65**
MZ15T10	1N1514	15	50	5	10	+0.08	**3.65**
MZ18T10	1N1515	18	40	9	8	+0.085	**3.65**
MZ22T10	1N1516	22	33	19	6	+0.09	**3.65**
MZ27T10	1N1517	27	26	50	5	+0.095	**3.65**

SYTLE S 1-WATT DIODES (FIG. A)

Rated 1 watt. **Size:** 0.375" O.D. x 0.287" l. with 1¼" leads. Ratings and characteristics at 25° C ambient.

1Z3.9T10	1N1518	3.9	250	9	50	−0.04	**$6.20**
1Z4.7T10	1N1519	4.7	200	8.5	40	0	**6.20**
1Z5.6T10	1N1520	5.6	175	5.5	35	+0.03	**4.00**
1Z6.8T10	1N1521	6.8	150	1.6	30	+0.05	**4.00**
1Z8.2T10	1N1522	8.2	120	1.1	25	+0.06	**4.00**
1Z10T10	1N1523	10	100	1.5	20	+0.07	**4.00**
1Z12T10	1N1524	12	80	2.4	15	+0.075	**4.00**
1Z15T10	1N1525	15	65	5.4	13	+0.08	**4.00**
1Z18T10	1N1526	18	55	11	10	+0.085	**4.00**
1Z22T10	1N1527	22	45	18	9	+0.09	**4.00**
1Z27T10	1N1528	27	35	28	7	+0.095	**4.00**

STYLE T 3.5-WATT DIODES (FIG. B)

Rated 3.5 watts. Stud mounting 10-32 threaded with washer and nut. **Size:** 1.222" l. x 7/16" dia., overall.

3Z3.9T10	1N1588	3.9	850	2.6	150	−0.04	**$7.50**
3Z4.7T10	1N1589	4.7	700	2.3	125	0	**7.50**
3Z5.6T10	1N1590	5.6	625	1.4	110	+0.03	**6.50**
3Z6.8T10	1N1591	6.8	525	.58	100	+0.05	**6.50**
3Z8.2T10	1N1592	8.2	425	.5	80	+0.06	**6.50**
3Z10T10	1N1593	10	350	.7	70	+0.07	**6.50**
3Z12T10	1N1594	12	275	1.4	50	+0.075	**6.50**
3Z15T10	1N1595	15	225	3.4	40	+0.08	**6.50**
3Z18T10	1N1596	18	200	6	35	+0.085	**6.50**
3Z22T10	1N1597	22	160	9	30	+0.09	**6.50**
3Z27T10	1N1598	27	125	13	25	+0.095	**6.50**

STYLE T 10-WATT DIODES (FIG. B)

Rated 10 watts. Stud mounting 10-32 threaded with washer and nut. **Size:** 1.328" l. x 7/16" dia., overall.

10Z3.9T10	1N1599	3.9	2500	.84	500	+0.04	**$8.50**
10Z4.7T10	1N1600	4.7	2000	.68	400	0	**8.50**
10Z5.6T10	1N1601	5.6	1750	.3	350	+0.03	**7.50**
10Z6.8T10	1N1602	6.8	1500	.2	300	+0.05	**7.50**
10Z8.2T10	1N1603	8.2	1200	.25	250	+0.06	**7.50**
10Z10T10	1N1604	10	1000	.55	200	+0.07	**7.50**
10Z12T10	1N1605	12	850	.95	170	+0.075	**7.50**
10Z15T10	1N1606	15	650	1.5	140	+0.08	**7.50**
10Z18T10	1N1607	18	550	2	110	+0.085	**7.50**
10Z22T10	1N1608	22	450	3	90	+0.09	**7.50**
10Z27T10	1N1609	27	350	4.5	70	+0.095	**7.50**

STYLE HZ 5-WATT BATHTUB (FIG. C)

Rated 5 watts. Mounting holes on 2⅛" centers. Solder lug terminals. **Size:** 1 13/16" l. x 1" w. x 25/32" h., less lugs and mounting tabs. Ratings and characteristics at 25° C case temperature.

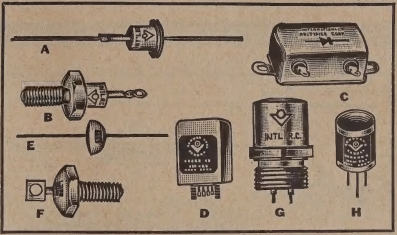
Int'l No.	Zener Voltage Range	I_z Max. Ma	Dyn. Resis. Z_z Ohms	Dyn. Resis. I_z Ma	Temp. % /°C	Net 1-99
HZ 27	24-30	200	7	40	0	**$37.10**
HZ 33	30-36	150	10	30	+0.03	**37.10**
HZ 47	43-51	110	20	22	+0.05	**26.60**
HZ 68	62-75	75	60	14	+0.065	**26.60**
HZ 100	91-110	50	180	10	+0.08	**26.60**
HZ 150	130-160	35	370	7	+0.09	**32.55**

MINIATURE VOLTAGE REFERENCE PACKS (FIG. D)

Constant current, regardless of temperature or line voltage variations, assures high stability. Operates directly from unregulated power source. Each unit encapsulated in standard miniature MIL-T-27 case with glass hermetic headers. Models RV8-PC and RV8-PC-A encapsulated in miniature epoxy housing to fit printed circuit boards. Special designs for military and commercial uses available on request. **Voltage Regulation:** ±0.01% typical at ±10% line voltage variation. **Output Ripple:** Less than 0.004%, AC operated types. **Temperature Range:** −55°C to +125°C except R6V- types, −55°C to +75°C. **Thermal Stability:** ±0.002%/°C.

Int'l No.	Input† Volts	Input† Watts	Freq. cps	Output VDC	Size, Inches W. x D. x H.	Net 1-9*
RV8	28	0.84	DC	8.4	1 x 1 x 1⅜	**$ 74.80**
RV8-A*	28	0.84	DC	8.4	1 x 1 x 1⅜	**88.00**
4RV8	115	1.25	400	8.4	1 5/16 x 1 5/16 x 1¾	**106.70**
4RV8-A*	115	1.25	400	8.4	1 5/16 x 1 5/16 x 1¾	**126.50**
6RV8	115	1.25	60	8.4	1⅝ x 1⅝ x 2⅜	**90.20**
6RV8-A*	115	1.25	60	8.4	1⅝ x 1⅝ x 2⅜	**107.80**
4RV16	115	2.5	400	16.8	1⅝ x 1⅝ x 2⅜	**143.00**
4RV16-A*	115	2.5	400	16.8	1⅝ x 1⅝ x 2⅜	**169.40**
6RV16	115	2.5	60	16.8	1⅝ x 1⅝ x 2⅜	**140.80**
6RV16-A*	115	2.5	60	16.8	1⅝ x 1⅝ x 2⅜	**165.00**
RV8-PC‡	28	0.84	DC	8.4	1" dia. x 1¼	**66.00**
RV8PC-A*‡	28	0.84	DC	8.4	1" dia. x 1¼	**77.00**

*Thermal stability, ±0.001%/°C. †±10%. ‡Fig. H.



"TRI-SEALED" SILICON ZENER DIODES

Manufactured by "Tri-Seal" process, assuring low cost and positive protection against extremes of temperature and shock. Give low dynamic impedance and sharp zener "knees" over the entire operating current range. **Operating Temperature Range:** −20° C to +130° C. Diodes available with 5% tolerance. Write for prices.

MINIATURE STYLE MEZ 500-MW DIODES (NOT ILLUS.)

Int'l Type	E_z Volts	I_z DC Ma	Z_z Ohms	I_z Max.	Nom. Temp. %/°C.	Net 1-99*
MEZ5.6T10	5.6	18	12	90	+.03	**$2.74**
MEZ6.8T10	6.8	15	2	73	+.05	**2.74**
MEZ8.2T10	8.2	12	2	60	+.06	**2.74**
MEZ10T10	10.0	10	2.5	50	+.07	**2.74**
MEZ12T10	12.0	8	3.2	40	+.075	**2.74**
MEZ15T10	15.0	7	6	33	+.08	**2.74**
MEZ18T10	18.0	6	18	28	+.085	**2.74**
MEZ22T10	22.0	5	26	22	+.09	**2.74**
MEZ27T10	27.0	4	55	18	+.095	**2.74**

STYLE 1EZ 1-WATT DIODES (FIG. E)

1EZ5.6T10	5.6	35	5.5	175	+.03	**$3.00**
1EZ6.8T10	6.8	30	1.6	150	+.05	**3.00**
1EZ8.2T10	8.2	25	1.1	120	+.06	**3.00**
1EZ10T10	10.0	20	1.5	100	+.07	**3.00**
1EZ12T10	12.0	15	2.4	80	+.075	**3.00**
1EZ15T10	15.0	13	5.4	65	+.08	**3.00**
1EZ18T10	18.0	10	11.0	55	+.085	**3.00**
1EZ22T10	22.0	9	18.0	45	+.09	**3.00**
1EZ27T10	27.0	7	28.0	35	+.095	**3.00**

STYLE 10EZ 10-WATT DIODES (FIG. F)

10EZ5.6T10	5.6	350	.3	1750	+.03	**$5.63**
10EZ6.8T10	6.8	300	.2	1500	+.05	**5.63**
10EZ8.2T10	8.2	250	.25	1200	+.06	**5.63**
10EZ10T10	10.0	200	.55	1000	+.07	**5.63**
10EZ12T10	12.0	170	.95	850	+.075	**5.63**
10EZ15T10	15.0	140	1.5	650	+.08	**5.63**
10EZ18T10	18.0	110	2.0	550	+.085	**5.63**
10EZ22T10	22.0	90	3.0	450	+.09	**5.63**
10EZ27T10	27.0	70	4.5	350	+.095	**5.63**

SILICON ZENER VOLTAGE REFERENCE ELEMENTS (FIG. G)

Electrical characteristics at 25° C ambient.

Int'l Type	Voltage Reference* Min.‡	Voltage Reference* Avg.‡	Voltage Reference* Max.‡	Dynamic Resistance* Min.†	Dynamic Resistance* Avg.†	Dynamic Resistance* Max.†	Net 1-49*
1N430	8.0	8.4	8.8	....	11.0	15.0	**$18.00**

*At 10 ma bias current. ‡Volts. †Ohms.

ST SERIES HIGH VOLTAGE SILICON TUBE REPLACEMENT RECTIFIER

These high voltage rectifiers are specifically designed to supplant vacuum tube and mercury vapor tube rectifiers where the superior characteristics of silicon (no warm-up time, long life, high temperature operation, minimum heat generation, rugged, compact package) are desired. These units furnish substantial savings in space and weight. Equipped with tube bases to allow direct replacement.

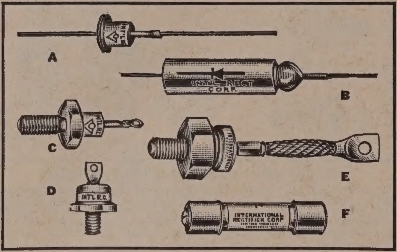
Typical Ratings, Characteristics & Tube Replacement Types

JEDEC Types	Int'l Type No.	Max. RMS Input Voltage Volts	Max. Rectified DC Output Ma @ 75°C)	Av.DC Forward Voltage Drop, at Rated Load Volts	Replaces Tube Types:	Net 1-99
1N2630	ST-1	1050	85	2.25	6X4, 12X4	**$20.45**
1N2631	ST-2	1130	600	3.0	5AW4, 5AX4, 5AZ4, 5AU4, 5W4 5Y3, 5U4, 5T4, 6004, 5Z4	**25.00**
1N2632	ST-2A	1950	250	6.0	5R4, 5R4W	**20.45**
1N2633	ST-3	1130	600	3.0	6AX5, 6W5, 6X5, 6ZY5, OZ4, 5839, 5852, 5X4	**24.40**
1N2634	ST-4	1130	600	3.0	5z3, 80, 82, 83, 83V	**24.40**
1N2635	ST-5	1050	85	2.25	6X4, 12X4 (High Altitude Types)	**14.40**
1N2636	ST-6	1050	85	2.25	84/6Z4	**14.40**
—	ST-8	880	80	3.9	OZ4, 6X5	**13.00**
—	ST-9	7000	1250	32	8008	**137.50**
—	ST-10	7000	1250	32	872A	**137.50**

★WRITE FOR PRICES ON LARGER QUANTITIES.

INTERNATIONAL RECTIFIER

EXECUTIVE OFFICES: EL SEGUNDO, CALIFORNIA



SILICON DIODES

MINIATURE POWER DIODES (FIG. A)

Twin series of highly reliable silicon diodes meet extreme miniaturization needs with optimum power dissipation. Ratings from 50 to 500 PIV. Housing acts as heat exchanger permitting maximum dissipation; suitable for missile and airborne equipment uses. Ratings are absolute maximum at 60 cps, resistive or inductive load.

Peak Inv. Volts	JEDEC Type	Output Ma*	Net 1-99*	JEDEC Type	Output Ma*	Net 1-99*
50	1N1701	300	$0.75	1N1707	500	$1.53
100	1N1702	300	.87	1N1708	500	1.78
200	1N1703	300	1.01	1N1709	500	2.15
300	1N1704	300	1.23	1N1710	500	2.87
400	1N1705	300	1.57	1N1711	500	4.33
500	1N1706	300	2.59	1N1712	500	6.50

*Rectified DC output at 50° C ambient.

HIGH VOLTAGE POWER DIODES (FIG. B)

High temperature operation and optimum reliability at elevated and sub-zero temperatures in high voltage silicon cartridge rectifiers. Ideally suited for radar power supplies, high voltage bias supplies, and airborne or guided missile instrumentation.

Int'l. No.	JEDEC Type	Peak Inv. Volts	Max. Input Volts RMS	Max. Rect. DC Output, Ma	Net 1-99
EM1J2	1N596	600	420	125	$ 5.00
FM1J2	1N597	800	560	125	6.00
GM1J2	1N598	1000	700	125	8.50
CM1K4	1N1406	600	420	100	5.00
DM1K4	1N1407	800	560	100	5.50
EM1K4	1N1408	1000	700	100	8.00
EM1L4	1N1409	1200	840	100	8.00
EM1L5	1N1410	1500	1050	100	9.00
EM1L6	1N1411	1800	1260	100	11.00
FM1L5	1N1412	2000	1400	100	13.50
FM1L6	1N1413	2400	1680	100	15.50

STUD MOUNTED POWER DIODES (FIG. C)

For high temperature uses up to 150° C; can withstand exposure of −60° C to +170° C. Junction is sealed in all-welded, hermetically sealed, shock-proof housing.

POWER SUPPLY, MAGNETIC AMPLIFIER TYPES

Power supply types are for industiral rectifier uses; magnetic amplifier types meet low leakage current and high forward conductance requirements. Max. DC rectified output 800 ma. Ratings are absolute maximum at 100° C ambient.

Peak Inv. Volts	Max. Input RMS Volts	Power Supply Type No.	Net 1-99*	Mag. Ampl. Type No.	Net 1-99*
50	35	3AT1	$1.40	3AT2	$1.89
100	70	3BT1	1.53	3BT2	2.02
150	105	3CT1	1.62	3CT2	2.03
200	140	3DT1	1.80	3DT2	2.43
300	210	3ET1	2.43	3ET2	2.98
400	280	3FT1	3.42	3FT2	4.22
500	350	3GT1	5.15	3GT2	6.02
600	420	3HT1	7.45	3HT2	8.72

MILITARY TYPES

Ratings and characteristics at 135° C ambient. Meet rigid military requirements. JETEC numbers are JAN types.

JETEC No.	Peak Inv. Volts	Max. Input RMS Volts	Max. Rectified DC Output, Ma	Net 1-99
1N253	95	65	1000	$ 2.10
1N254	190	135	400	2.45
1N255	380	270	400	4.95
1N256	570	400	200	10.00

INDUSTRIAL POWER DIODES (FIG. A)

Specifically designed for industrial power uses; hermetically sealed for high reliability with high power capabilities. Rectified DC output ratings to 750 ma at 50° C are obtained over a PIV range of 100 to 500 volts. Optimum mechanical stability assured by all-welded, hermetically sealed, shock-proof housing. Ratings are absolute maximum at 60 cps, resistive or inductive load.

Int'l No.	Peak Inv. Volts	Rectified DC Output at 100° C Ambient	Net 1-99*
SD-91A	100	500	$0.67
SD-92A	200	500	.86
SD-93A	300	500	1.13
SD-94A	400	500	1.47
SD-95A	500	500	1.91

SILICON DIODES (Continued)

HIGH TEMPERATURE DIODES (FIG. A)

Optimum reliability, high efficiency and reduced space requirements result from design. Provide maximum forward conductance under elevated temperature without additional heat sink; saving space and assembly time and cost. Excellent forward and reverse characteristics result in high rectification efficiency. Ratings are absolute maximum, 60 cps resistive or inductive load.

JETEC No.	Peak Inv. Volts	Max Input RMS Volts*	Max. Rectified DC Output, Ma*	Net 1-99*
1N536	50	35	250	$0.85
1N537	100	70	250	1.00
1N538	200	140	250	1.40
1N539	300	210	250	1.80
1N540	400	280	250	2.65
1N1095	500	350	250	2.60
1N1096	600	420	250	3.25

*At 150° C ambient.

SILICON RECTIFIERS

MEDIUM POWER TYPES

Hermetically sealed units use the latest ceramic techniques; engineered for long term reliability in a wide variety of power applications. Meet the most rigid military specifications; provide added stability under extreme temperature (−65° C to 200° C), humidity, shock and vibration. For insulating hardware add letter **"W"** after **"H"**. For reverse polarity add letter **"R"** after **"H"**. Available at no additional cost.

25 TO 45 AMPERES (FIG. D)

Int'l No.	Peak Inv. Volts	RMS Max.	Recommended Max. RMS Volts	Net 1-99*
25H5	50	35	12	$ 4.36
25H10	100	70	24	5.14
25H15	150	105	36	6.11
25H20	200	140	48	7.27
25H25	250	175	60	8.68
25H30	300	210	72	10.68
25H35	350	245	84	12.03
25H40	400	280	96	14.16
25H45	450	310	108	14.60
25H50	500	350	120	19.59
25H60	600	420	140	26.87

45 TO 150 AMPERES (FIG. E)

Machine thread types. For Reverse Polarity: Add letter "R" to part number; example: 45LR5, 45MR5, etc.

Style L 5/8" No.	Style M 1/2" No.	Peak Inv. Volts	RMS Max.	Recom. Max. RMS Volts	Net 1-99
45L5	45M5	50	35	12	$11.06
45L10	45M10	100	70	24	13.29
45L15	45M15	150	105	36	15.71
45L20	45M20	200	140	48	18.96
45L25	45M25	250	175	60	22.94
45L30	45M30	300	210	72	27.45
45L35	45M35	350	245	84	32.88
45L40	45M40	400	280	96	39.43
45L45	45M45	450	310	108	48.21
45L50	45M50	500	350	120	56.94
45L60	45M60	600	420	144	62.80
45L70	45M70	700	490	168	75.60
45L80	45M80	800	560	192	89.50

70 TO 250 AMPERES (FIG. E)

Style U No.	Peak Inv. Volts	RMS Max.	Recommended Max. RMS Volts	Net 1-99
70U5	50	35	12	$15.03
70U10	100	70	25	18.04
70U15	150	105	36	20.81
70U20	200	140	50	25.51
70U25	250	175	62	31.48
70U30	300	210	75	37.93
70U35	350	245	83	43.50
70U40	400	280	95	49.66

HIGH VOLTAGE CARTRIDGE TYPE (FIG. F)

Provide high temperature operation, high efficiency and miniaturization to a wide range of high voltage applications. Meet the most rigorous military requirements; optimum reliability over −55° C to +150° C temperature range. Standard types listed are normal convection cooling. Ratings are absolute maximum at 75° C ambient. Horizontal mounting. Half wave resistive load 60 cps. High Current types available. Write for prices and specifications.

Int'l No.	JETEC Type	Peak Inv. Volts	Max. Rect. DC Output Ma	Fwd. DC Volt Drop*	Lgth., In.	Net 1-99
CF1B10	1N1133	1500	75	15.0	2½	$ 8.25
EF1A5	1N1134	1500	100	7.5	1 13/16	9.00
CF1B12	1N1135	1800	65	18.0	2½	10.50
EF1A6	1N1136	1800	85	9.0	1 13/16	11.00
CF1B16	1N1137	2400	50	24.0	2½	14.25
EF1A8	1N1138	2400	60	12.0	1 13/16	15.50
DF1C18	1N1139	3600	65	27.0	4 5/16	22.95
EF1B12	1N1140	3600	65	18.0	2½	27.00
DF1C24	1N1141	4800	60	36.0	4 5/16	36.00
EF1B16	1N1142	4800	50	24.0	2½	36.00
DF1C30	1N1143	6000	50	45.0	4 5/16	38.25
EF1C20	1N1143A	6000	65	30.0	4 5/16	45.00
DF1D36	1N1144	7200	50	54.0	6 1/16	45.80
EF1C24	1N1145	7200	60	36.0	4 5/16	50.50
DF1D40	1N1146	8000	45	60.0	6 1/16	51.00
EF1D40	1N1147	12000	45	60.0	6 1/16	81.00
FF1D35	1N1148	14000	50	52.0	6 1/16	94.50
FF1D40	1N1149	16000	45	60.0	6 1/16	108.00

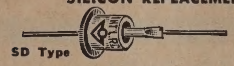
*At rated DC current volts.

★WRITE FOR PRICES ON LARGER QUANTITIES

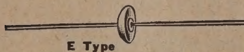
INTERNATIONAL RECTIFIER

EXECUTIVE OFFICES: EL SEGUNDO, CALIFORNIA

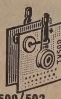
SILICON REPLACEMENT RECTIFIERS



SD Type



E Type



TV-500/502

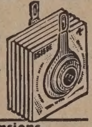
These rectifiers are becoming the standards in radios, T.V.'s, remotecontrols, phonographs, etc. For utmost reliability, specify the hermetically sealed "SD" and TV types. For low cost production or replacement, the "E" types will suffice.

International Number	Max. D.C. Ma	Max. RMS Volts	Peak Inv. Volt	Net 1-9*
SD-91=	300	70	100	$ .65
SD-92	300	140	200	.80
SD-93	300	210	300	1.10
SD-94	300	280	400	1.35
SD-95	300	350	500	1.71
SD-500	500	130	400	1.35
SD-500-92*	500	130	400	2.90
SD-500-95*	500	130	400	6.80
SD-500-97*	500	130	400	13.40
TV-500	750	130	400	1.86
TV-502	750	260	800	3.30
2E4	200	140	400	.68
5E4*	350	140	400	.75
5E4-90*	350	140	400	.72
5E4-96*	350	140	400	7.35
5E5	350	175	500	1.15
5E6	350	210	600	1.20

* no suffix = indv. boxed.
−90 suffix = bulk pack.
−92 suffix = plastic box of two.
−95 suffix = plastic box of five.
−96 suffix = plastic box of ten.
−97 suffix = plastic box of ten.

Boxes of SD500 include conversion hardware (except individual box.)

RADIO-TV REPLACEMENT RECTIFIERS

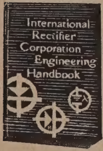


The basic replacement rectifier line, offering the widest range. Input ratings from 25 to 195 volts AC and up. DC output current 10 to 1200 ma. Also useful for amateur and experimental applications. All types have eyelet mounting but stud, nut and bracket included, if required.

HIGH DENSITY TYPES

Catalog No.	Output Current Range, ma	Max. RMS Volts	Min. Series Re-sistor, Ohms	Dimensions, Inches: Nom. Plate Size	Dimensions, Inches: Max. Mtg. Dimen.	Net Each (1-9)
T065-T075	to 75	130	22	0.67 x 0.67	9/16	$ .60
T075-T150	75–150	130	15	1 x 1	3/4	.69
T200-T300	150–300	130	5	1.25 x 1.25	1 5/16	1.30
T350-T400	300–400	130	5	1.5 x 1.5	1 5/16	1.37
T450-T500	400–500	130	5	1.5 x 1.5	1 5/16	1.50
T550-T650	500–650	130	5	2 x 2	2	1.74

ENGINEERING HANDBOOKS



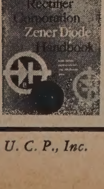
INTERNATIONAL RECTIFIER ENGINEERING HANDBOOK

Another manual combining theoretical articles along with the practical on the application of rectifiers to today's electronic equipment. Indispensable, time-saving reference for the design engineer.
Price Each.................... $1.50

SILICON AND SELENIUM PHOTOCELL HANDBOOK

The "International Rectifier Photocell Handbook" contains theory, application data and actual circuitry involving the use of both silicon solar cells and selenium photocells in radios, relay circuits, control, photometer and many other light-powered devices. Also contains complete technical data, cell characteristics and listings on all International Rectifier photovoltaic devices. Price...... $2.00

International
Rectifier
Corporation
Photocell
Handbook



ZENER DIODE HANDBOOK

Provides complete detailed information and actual circuitry applications involving the use of zener diodes. Covers diode usage in AC, DC, audio, RF, computer, and numerous other applications, including use as voltage regulators.
Price Each.................... $2.00

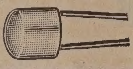
SILICON SOLAR CELLS

These rugged basic building blocks deliver up to hundreds of watts of power for many uses. Series connected assemblies 1 cm x 2 cm cells in epoxy resin Insulated solder terminals. Weatherproof and shock proof. Characteristics are at 100 mw/cm² solar energy radiation (1 sun), 30° C cell temperature.

International Number	No. Cells	Conv. Effi-ciency %*	Max. Pwr. Output, Mw	Typical Output Volts*	Typical Current Ma	Net 1-99*
SD-1020A	1	4 to 6	7-10.5	0.32	27	$ 5.40
SD-1020B	1	6 to 8	10.5-14	0.35	35	6.75
SD2-1020A	2	4 to 6	14-21	0.64	27	8.80
SD2-1020B	2	6 to 8	21-28	0.70	35	11.70
SM5-1020A	5	4 to 6	35-52.5	1.60	27	18.50
SM5-1020B	5	6 to 8	52.5-70	1.75	35	26.10

*At maximum power.

SELENIUM DIODES



Subminiature selenium diodes with pigtail leads for easy wiring into crowded chassis. Stable in ambient temperature range of −50° C to +100° C. DC output listed is measured into capacitive load. Body is gray color unless otherwise noted.

Int'l No.	Jedec Type	DC Outout Volts	DC Outout Ma	Max. RMS Input, Volts	Maxi-mum Freq., Kc	Tip Color	Net 1-99
1S1	**1N1625**	20	0.1	26	200	Brown*	$0.37
2S1	**1N1626**	40	0.1	52	200	Red*	.41
1T1	**1N1625A**	20	0.2	26	200	Brown†	.37
2T1	**1N1626A**	40	0.2	52	200	Red†	.41
1U1	**1N1627**	20	1.5	26	100	Brown	.32
2U1	**1N1628**	40	1.5	52	100	Red	.41
3U1	**1N1629**	60	1.5	78	100	Orange	.45
4U1	**1N1630**	80	1.5	104	100	Yellow	.48
5U1	**1N1631**	100	1.5	130	100	Green	.52
6U1	**1N1632**	120	1.5	156	100	Blue	.56
7U1	**1N1633**	140	1.5	182	100	Violet	.60
8U1	**1N1634**	160	1.5	208	100	Gray	.63
1V1	**1N1635**	20	5.0	26	25	‡	.37
2V1	**1N1636**	40	5.0	52	25	‡	.41
3V1	**1N1637**	60	5.0	78	25	‡	.45
4V1	**1N1638**	80	5.0	104	25	‡	.48
5V1	**1N1639**	100	5.0	130	25	‡	.52
1Y1	**1N1640**	20	11.0	26	10	‡	.37
2Y1	**1N1641**	40	11.0	52	10	‡	.41
3Y1	**1N1642**	60	11.0	78	10	‡	.45

*Body is yellow. †Body is green. ‡Has part number stamped on.

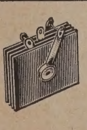
SELENIUM RECTIFIERS

HIGH CURRENT DENSITY STACKS (NOT ILLUS.)

Ideal for limited space and weight applications; delivers approx. twice the rectified DC output of standard units. Save 50% in volume for a given rating. Low fwd v. drop; high inverse voltage.

Int'l No.	DC Output Volts	DC Output Amps	Input AC Volts	Size, Inches H. x W. x D.	Stud	Net 1-9
J14C04	0-14	0.4	36	1 x 1 x 1 1/8	8-32	$ 0.71
J14C1	0-14	1.5	36	1 1/2 x 1 1/2 x 1 1/8	8-32	1.04
J14C5	0-14	4.8	36	3 x 3 x 1 1/8	3/8-16	2.61
J14C8	0-14	8.4	36	4 x 4 x 1 7/8	3/8-16	3.67
J14C17	0-14	17.4	36	6 x 5 x 2 1/8	3/8-16	5.66
J29B04	0-29	0.4	36	1 x 1 x 1 1/2	8-32	1.17
J29B1	0-29	1.5	36	1 1/2 x 1 1/2 x 1 1/2	8-32	1.71
J29B5	0-29	4.8	36	3 x 3 x 2 5/8	3/8-16	4.82
J29B8	0-29	8.4	36	4 x 4 x 2 5/8	3/8-16	6.70
J29B17	0-29	17.0	36	6 x 5 x 3 1/4	3/8-16	9.95
J58B04	0-58	0.4	72	1 x 1 x 2 1/4	8-32	2.33
J58B1	0-58	1.5	72	1 1/2 x 1 1/2 x 2 1/4	8-32	3.37
J58B5	0-58	4.8	72	3 x 3 x 4 3/16	3/8-16	9.06
J58B8	0-58	8.4	72	4 x 4 x 4 3/16	3/8-16	12.56
J58B17	0-58	17.0	72	6 x 5 x 5 5/8	3/8-16	19.89
J116B04	0-116	0.4	144	1 x 1 x 3 13/16	8-32	4.17
J116B1	0-116	1.5	144	1 1/2 x 1 1/2 x 3 13/16	8-32	6.11
J116B5	0-116	4.8	144	3 x 3 x 7 3/16	3/8-16	17.18
J116B8	0-116	8.4	144	4 x 4 x 7 3/16	3/8-16	24.07
J116B17	0-116	17.0	144	6 x 5 x 10 1/4	3/8-16	37.84
J135B04	0-135	0.4	180	1 x 1 x 4 9/16	8-32	5.08
J135B1	0-135	1.5	180	1 1/2 x 1 1/2 x 4 9/16	8-32	7.45
J135B5	0-135	4.8	180	3 x 3 x 8 11/16	3/8-16	21.22
J135B8	0-135	8.4	180	4 x 4 x 8 11/16	3/8-16	29.78
J135B17	0-135	17.0	180	6 x 5 x 12 9/16	3/10-16	46.82

FULL WAVE BRIDGE RECTIFIERS



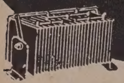
Int'l No.	Max. DC Ma	Max. RMS Volts	Dimensions, Inches H.	Dimensions, Inches W.	Dimensions, Inches D.	Net 1-99*
Q1B	100	25	.67	.67	3/4	$0.84
Q4B	100	130	.67	.67	1 1/16	1.56
A1B	180	25	1.0	1.0	3/4	1.22
B1B	300	25	1.2	1.2	3/4	1.28
C1B	600	25	1.5	1.5	3/4	1.46
M1B	1200	25	2.0	2.0	3/4	1.72

SINGLE PLATE HALF WAVE RECTIFIERS

Int'l No.	Max. DC Ma	Max. RMS Volts	Min. Series Rstr. Ohms	Dimensions, Inches H.	Dimensions, Inches W.	Dimensions, Inches D.	Net 1-99*
Q1H	65	25	47	.67	.67	7/16	$0.36
A1H	100	25	22	1.0	1.0	7/16	.38
B1H	150	25	15	1.2	1.2	7/16	.40
C1H	250	25	5	1.5	1.5	7/16	.42
M1H	500	25	5	2.0	2.0	7/16	.56

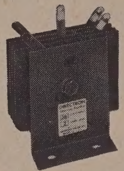
★WRITE FOR PRICES ON LARGER QUANTITIES.

DIRECTRON



Industrial Selenium Rectifiers, Transformers, Chokes and Power Supplies

18/6



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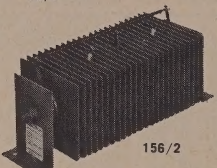

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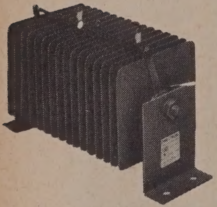

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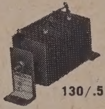

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FULL WAVE BRIDGE RECTIFIERS, SINGLE PHASE, RESISTIVE-INDUCTIVE LOADS ALL PRICES SHOWN ARE USER NET PRICES

Max. Amps.	18v. in— 14v. out	36v. in— 28v. out	54v. in— 42v. out	130v. in— 100v. out
½	$1.05	$1.50	$2.50	$5.00
1	1.20	2.20	3.20	8.00
2	2.10	3.00	4.50	10.00
3	2.70	4.00	6.00	14.00
4	3.60	7.50	10.00	24.00
6	4.50	9.00	12.00	32.00
10	6.60	12.00	18.00	39.00
12	8.20	16.00	22.00	44.00
15	10.50	20.00	27.00	54.00
20	12.50	25.00	36.00	77.00
24	15.00	30.00	42.00	82.00
30	19.10	37.00	55.00	
36	24.00	48.00		

For Half-Wave, Center-Tap, Doubler, Tripler or 3-Phase, Quotations on Request. Custom Built Stacks—24 Hour Service

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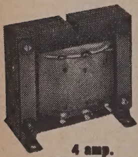
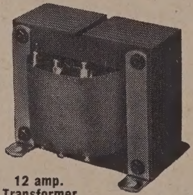


4 amp. Transformer



12 amp. Transformer

SELENIUM RECTIFIER TRANSFORMERS

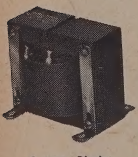
Transformers are with 2 — 18 volt center-tapped windings. Connected in series delivers 36 volts as rated. Connected in parallel — delivers 18 volts at twice rated current. (Taps 9, 18, 27, 36 V.)

	User's Net Price		User's Net Price
1 Amp	$ 5.25	12 Amps	$16.75
2 Amps	7.20	24 Amps	35.75
4 Amps	8.75	30 Amps	45.00
8 Amps	15.00	50 Amps	59.75

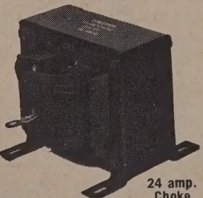
Primary taps at 100, 105, 110 and 115 volts now available on 12 amp, 24 amp, 30 amp and 50 amp transformers. No extra charge. Custom built transformers — 48 hour service.

With Two 28V Center Tapped Windings—56 Volt:

2 Amps	$ 8.50
4 Amps	12.50
6 Amps	22.50
12 Amps	30.00



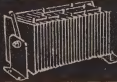
4 amp. Choke



24 amp. Choke

HIGH CURRENT CHOKES

			User's Net Price
1 Amp	.1 hy	1.5 ohm	$ 4.95
2 Amps	.04 hy	.9 ohm	6.00
4 Amps	.07 hy	.6 ohm	7.95
8 Amps	.03 hy	.3 ohm	12.00
12 Amps	.01 hy	.1 ohm	14.95
20 Amps	.004 hy	.05 ohm	15.00
24 Amps	.004 hy	.025 ohm	27.00
30 Amps	.003 hy	.01 ohm	36.00
50 Amps	.001 hy	.001 ohm	45.00
100 Amps	.0005 hy	.005 ohm	54.00

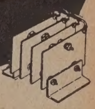


Mfd. by SANFORD MILLER COMPANY

BROOKLYN 6, N. Y.

SILICON POWER RECTIFIERS

HY-A-SIL
High - Ampere - Silicon



FEATURES

- High operating temperature, 190°C (Up to 120°C ambient)
- High operating voltage (Up to 600 p.i.v.)
- High efficiency (99% compared to about 75% for selenium)
- Excellent regulation (4% compared to about 15% for selenium)

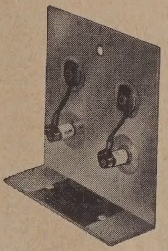
Stock No.	Type	AC Input Volts up to	DC Output Volts up to	Max. Amps Self Cooled	Max. Amps Fan Cooled	Size and Weight	User Net Price
SL-CT-A	Center-Tap	18-0-18	16	50	100	B	$17.50
SL-CT-B	Center-Tap	36-0-36	32	50	100	B	22.50
SL-CT-D	Center-Tap	72-0-72	64	50	100	B	36.00
SL-CT-F	Center-Tap	140-0-140	125	50	100	B	44.00
SK-CT-A	Center-Tap	18-0-18	16	100	200	C	30.00
SK-CT-B	Center-Tap	36-0-36	32	100	200	C	34.00
SK-CT-D	Center-Tap	72-0-72	64	100	200	C	37.00
SK-CT-F	Center-Tap	140-0-140	125	100	200	C	48.00
SM-CT-A	Center-Tap	18-0-18	16	200	400	D	45.00
SM-CT-B	Center-Tap	36-0-36	32	200	400	D	60.00
SM-CT-D	Center-Tap	72-0-72	64	200	400	D	62.00
SM-CT-F	Center-Tap	140-0-140	125	200	400	D	76.00
SO-CT-B	Center-Tap	36-0-36	32	400	800	E	100.00
SA-BR-D	1φ Bridge	140	125	1	*	—	9.00
SA-BR-F	1φ Bridge	280	250	1	*	—	10.50
SC-BR-D	1φ Bridge	140	125	2	*	—	10.50
SC-BR-F	1φ Bridge	280	250	2	*	—	12.00
SD-BR-A	1φ Bridge	36	32	6	12	F	18.00
SD-BR-D	1φ Bridge	140	125	6	12	F	30.00
SD-BR-F	1φ Bridge	280	250	6	12	F	39.00
SE-BR-A	1φ Bridge	36	32	10	20	G	21.00
SE-BR-D	1φ Bridge	140	125	10	20	G	36.00
SE-BR-F	1φ Bridge	280	250	10	20	G	44.00
SF-BR-A	1φ Bridge	36	32	20	40	H	24.00
SF-BR-D	1φ Bridge	140	125	20	40	H	40.00
SF-BR-F	1φ Bridge	280	250	20	40	H	48.00
SL-BR-A	1φ Bridge	36	32	50	100	J	33.00
SL-BR-B	1φ Bridge	72	64	50	100	J	39.00
SL-BR-D	1φ Bridge	140	125	50	100	J	70.00
SL-BR-F	1φ Bridge	280	250	50	100	J	110.00
SG-BR-A	1φ Bridge	36	32	70	140	J	40.00
SG-BR-B	1φ Bridge	72	64	70	140	J	50.00
SG-BR-D	1φ Bridge	140	125	70	140	J	80.00
SG-BR-F	1φ Bridge	280	250	70	140	J	130.00
SK-BR-A	1φ Bridge	36	32	100	200	K	60.00
SK-BR-B	1φ Bridge	72	64	100	200	K	68.00
SK-BR-D	1φ Bridge	140	125	100	200	K	90.00
SK-BR-F	1φ Bridge	280	250	100	200	K	150.00
SM-BR-A	1φ Bridge	36	32	200	400	L	100.00
SM-BR-B	1φ Bridge	72	64	200	400	L	120.00
SM-BR-D	1φ Bridge	140	125	200	400	L	180.00
SM-BR-F	1φ Bridge	280	250	200	400	L	260.00
SO-BR-B	1φ Bridge	72	64	400	800	M	270.00
SO-BR-F	1φ Bridge	280	250	400	800	M	570.00
SL-PH-A	3φ Bridge	36	48	75	150	N	60.00
SL-PH-B	3φ Bridge	72	96	75	150	N	85.00
SL-PH-C	3φ Bridge	105	144	75	150	N	120.00
SL-PH-D	3φ Bridge	140	188	75	150	N	180.00

All above ratings based on 30°C ambient. Fan-cooled ratings based on air velocity of 1000 linear ft/minute. For resistive or inductive loads, as rated. For capacitive or battery loads, derate amperage 20%. Doublers, triplers, 3 phase half wave and 3 phase center-tap also available. Custom-built stacks, 24 hour service.

DIMENSIONS WITH BRACKETS

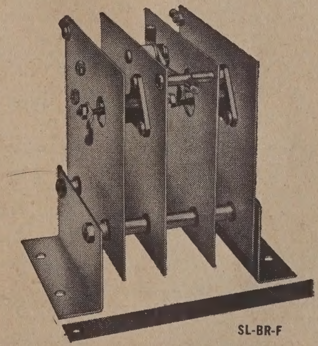
Size	Length	Height	Width	Weight
B	3″	6″	5″	12 oz.
C	3″	6″	6″	1 lb.
D	4″	8″	7″	2 lbs.
E	4″	9″	8″	6 lbs.
F	6″	5″	5″	1¼ lbs.
G	6″	6″	5″	1½ lbs.
H	6″	6″	6″	2 lbs.
J	6″	6″	5″	1½ lbs.
K	7″	8″	7″	4 lbs.
L	8″	9″	8″	6 lbs.
M	8″	11″	10″	6 lbs.
N	8″	6″	5″	4 lbs.

*Not suitable for fan-cooling

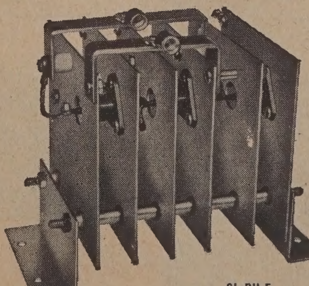


SC-BR-F

SA-BR-D

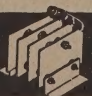


SL-BR-F

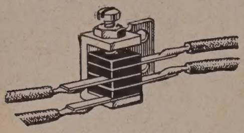


SL-PH-F

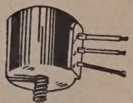
Mfd. by SANFORD MILLER COMPANY



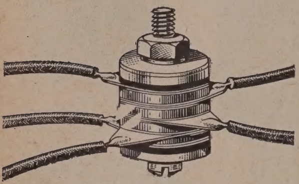
SCHAUER INSTRUMENT RECTIFIERS



TYPE A4A



TYPE
BP2B



TYPE C4A

Schauer copper oxide rectifiers for instrument and other uses are processed and individually tested to meet the requirements of the user. Versatile processing techniques make possible variations in characteristics for special or unusual applications. Each rectifier is rated conservatively for long life and dependable operation.

Size "B" Rectifiers are encapsulated—fully sealed in special formula polyester plastic in attractive red color. Cells are specially processed with vacuum evaporated gold contact areas to give maximum efficiency, stable operation and low aging characteristics. All rectifiers are supplied with 3″ leads, color-coded. (Red, positive; black, negative; yellow, A.C.) Plastic encapsulated rectifiers have lead insulation imbedded in the plastic for better sealing, eliminating short circuits at the rectifier. Lead lengths of other than 3″ can be supplied on special order.

"A" SIZE CELLS have good frequency response above the audio range and can be used at higher frequencies. Recommended for meter applications needing 1MA or less for operation. Can be used for other applications requiring up to 5 MA.

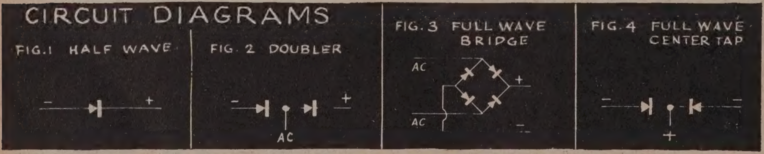
"B" SIZE CELLS are for meter, relay and other applications requiring 1MA up to their maximum rating. Recommended for commercial and low audio frequency operation.

"C" SIZE CELLS—are for general applications requiring larger output currents and operation of meters, relays and other apparatus. Special process cells for varistor applications.

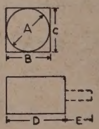
Write, wire or telephone for complete information. We welcome your inquiries concerning any special rectification problem.

NOTE: The Schauer Mfg. Corp. is the exclusive manufacturer of replacement Westinghouse copper oxide rectifiers.

Max. Cont. Rating			Circuit Diagram Fig.	Cell Dia. Inches	No. of Cells	Leads	Mounting Screw Size	DIMENSIONS*					Type
D.C. M.A.	D.C. Volts	Max. RMS Volts						(Dia.) A	B	C	D	E	
3	6.0		2	3/16 sq.	2	3	Hole for 2–56		3/8	1/4	9/16		A2C
5	3.0	5.0	3	3/16 sq.	4	4	Hole for 2–56		3/8	1/4	9/16		A4A
13	3.0		1	7/16	1	2	6–32	9/16			7/16	9/32	BP1C
13	6.0		2	7/16	2	3	6–32	9/16			1/2	5/16	BP2B
26	1.5	2.5	4	7/16	2	3	6–32	9/16			1/2	5/16	BP2C
26	3.0	5.0	3	7/16	4	5	6–32	9/16			23/32	5/16	BP4A
32	3.0		1	3/4	1	0	10–32	3/4			11/16	5/16	C1C
32	6.0		2	3/4	2	0	10–32	3/4			3/4	5/16	C2C
32	9.0		1	3/4	3	0	10–32	3/4			7/8	1/4	C3C
64	3.0	5.0	3	3/4	4	5	10–32	3/4			31/32	5/16	C4A



*Dimensions



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	POSITIVE BASE MODELS							NEGATIVE BASE MODELS						
JEDEC NO.	1N1341	1N1342	1N1344	1N1345	1N1346	1N1347	1N1348	1N1341R	1N1342R	1N1344R	1N1345R	1N1346R	1N1347R	1N1348R
SRC NO.	6C05	6C10	6C20	6C30	6C40	6C50	6C60	6C05R	6C10R	6C20R	6C30R	6C40R	6C50R	6C60R
P.I.V.	50	100	200	300	400	500	600	50	100	200	300	400	500	600
D.C. CURRENT RATING (AMP)	6	6	6	6	6	6	6	6	6	6	6	6	6	6

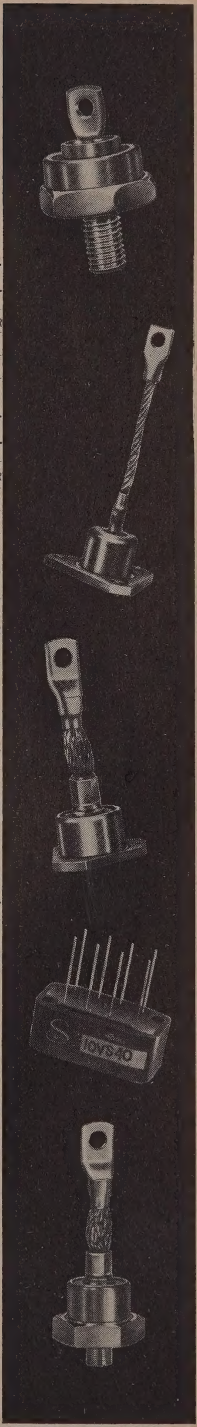
	12 AMP MODELS													
	POSITIVE BASE MODELS							NEGATIVE BASE MODELS						
JEDEC NO.	1N1199	1N1200	1N1202	1N1203	1N1204	1N1205	1N1206	1N1199R	1N1200R	1N1202R	1N1203R	1N1204R	1N1205R	1N1206R
SRC NO.	12C05	12C10	12C20	12C30	12C40	12C50	12C60	12C05R	12C10R	12C20R	12C30R	12C40R	12C50R	12C60R
P.I.V.	50	100	200	300	400	500	600	50	100	200	300	400	500	600
D.C. CURRENT RATING (AMP)	12	12	12	12	12	12	12	12	12	12	12	12	12	12

	35 AMP MODELS													
	POSITIVE BASE MODELS							NEGATIVE BASE MODELS						
JEDEC NO.	1N1183	1N1184	1N1186	1N1187	1N1188	1N1189	1N1190	1N1183R	1N1184R	1N1186R	1N1187R	1N1188R	1N1189R	1N1190R
SRC NO.	35C05	35C10	35C20	35C30	35C40	35C50	35C60	35C05R	35C10R	35C20R	35C30R	35C40R	35C50R	35C60R
P.I.V.	50	100	200	300	400	500	600	50	100	200	300	400	500	600
D.C. CURRENT RATING (AMP)	35	35	35	35	35	35	35	35	35	35	35	35	35	35

	160 AMP MODELS													
	POSITIVE BASE MODELS							NEGATIVE BASE MODELS						
JEDEC NO.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
SRC NO.	160E05	160E10	160E20	160E30	160E40	160E50	160E60	160E05R	160E10R	160E20R	160E30R	160E40R	160E50R	160E60R
P.I.V.	50	100	200	300	400	500	600	50	100	200	300	400	500	600
D.C. CURRENT RATING (AMP)	160	160	160	160	160	160	160	160	160	160	160	160	160	160

	240 AMP MODELS													
	POSITIVE BASE MODELS							NEGATIVE BASE MODELS						
JEDEC NO.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
SRC NO.	240E05	240E10	240E20	240E30	240E40	240E50	240E60	240E05R	240E10R	240E20R	240E30R	240E40R	240E50R	240E60R
P.I.V.	50	100	200	300	400	500	600	50	100	200	300	400	500	600
D.C. CURRENT RATING (AMP)	240	240	240	240	240	240	240	240	240	240	240	240	240	240

	400 AMP MODELS													
	POSITIVE BASE MODELS							NEGATIVE BASE MODELS						
JEDEC NO.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
SRC NO.	400E05	400E10	400E20	400E30	400E40	400E50	400E60	400E05R	400E10R	400E20R	400E30R	400E40R	400E50R	400E60R
P.I.V.	50	100	200	300	400	500	600	50	100	200	300	400	500	600
D.C. CURRENT RATING (AMP)	400	400	400	400	400	400	400	400	400	400	400	400	400	400



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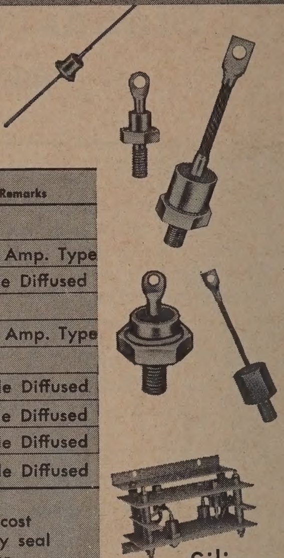


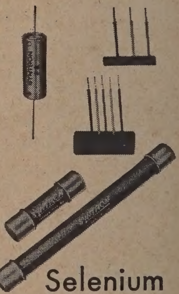
Silicon

Silicon Power Rectifiers

Series	PIV Range	Typical Current Range	Case Type	Mounting Torque	Polarity	Remarks
10	50-600	0.5-1.6A	Top Hat	—	Standard	Alloy
11	50-600	0.5-1.6A	Top Hat	—	Standard	Mag. Amp. Type
21	50-800	1.0-13.0A	7/16 hex	50 in. lbs.	Std. & Rev.	Double Diffused
22	50-600	0.75-1.6A	7/16 hex	50 in. lbs.	Standard	Alloy
23	50-600	0.75-1.6A	7/16 hex	50 in. lbs.	Standard	Mag. Amp. Type
30	50-400	3.0-15A	11/16 hex	100 in. lbs.	Standard	Alloy
31	50-800	3.0-20A	11/16 hex	100 in. lbs.	Std. & Rev.	Double Diffused
33	50-800	5.0-35A	11/16 hex	100 in. lbs.	Std. & Rev.	Double Diffused
40	50-400	20-100A	1" hex	150 in. lbs.	Std. & Rev.	Double Diffused
50	50-400	50-250A	1¼ hex	600 in. lbs.	Std. & Rev.	Double Diffused
EP-2	50-400	3-20A	Special	50 in. lbs.	Std. & Rev.	Low cost epoxy seal power rectifiers
EP-3	50-400	5-35A	Special	100 in. lbs.	Std. & Rev.	
EP-4	50-400	20-100A	Special	600 in. lbs.	Std. & Rev.	
EP-5	50-400	50-250A	Special	800 in. lbs.	Std. & Rev.	

Selenium Cartridge Rectifiers

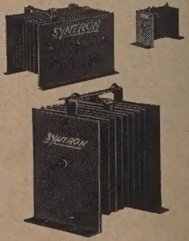
Series	PIV Range	Current Range	Case	Remarks
PR	48—20,000	1-20 MA	Phenolic Radial Lead	May be drilled for oil immersion at increased current rating
PF	48—20,000	1-20 MA	Phenolic Ferrule	
PP	48—20,000	1-20 MA	Phenolic Pig Tail	
GF	48—10,000	2-10 MA	Glass Ferrule	Hermetically sealed



Selenium

Selenium Power Stacks

Series	RMS Cell Voltage Range	Typical Current Range	Remarks
single phase half wave	26-45	150 MA— 90 Amp.	7 finishes available for special environmental conditions. Cell sizes from 1" x 1" to 12" x 16"
single phase full wave bridge	26-45	300 MA—180 Amp.	
three phase full wave bridge	26-45	450 MA—600 Amp.	



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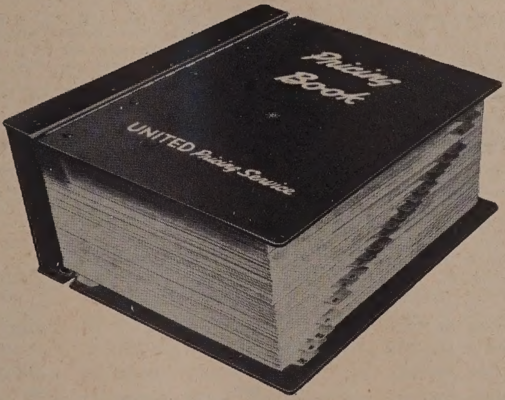

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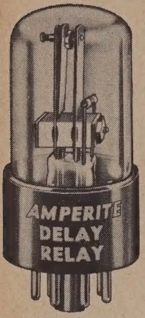
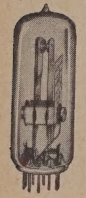


STANDARD



MINIATURE

AMPERITE THERMOSTATIC DELAY RELAYS

Amperite Thermostatic Delay Relays are actuated by a heater . . can therefore be used on A.C., D.C., or pulsating current. Being hermetically sealed, Amperite Relays are not affected by altitude, moisture, or other atmospheric conditions. **REPLACED AS EASILY AS A RADIO TUBE.**

CIRCUITS SPST: Available only — normally open or normally closed.

HEATER VOLTAGES AVAILABLE: 2.5, 5.0, 6.3, 12.6, 26, 50, 115V.
For 220V use a 6500 ohm-5 watt resistor in series with 115V heater.

HEATER WATTAGE: Standard and Miniature Relays—all voltages—2w prox. All heaters may be operated continuously. Heaters will not be damaged by a 50% voltage overload for duration of 1 hour or less.

FLASHERS: 1 watt prox.

EFFECT OF HEATER VOLTAGE VARIATION ON DELAY

FIGURE 1 — Effect of change in heater voltage on delay in seconds. Only low voltage heaters (2.5 to 26 V.) incorporate heater voltage regulations as shown in this diagram.

For 22 to 30 V. supply: We recommend Amperite Delay Relays with 26 V. heaters for airplanes and similar power supplies. These heaters are regulated for battery variation of 22 to 30 V. as shown in this diagram.

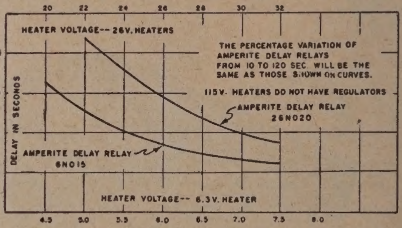


Figure 1

CONTACT RATING

	Delay	Contact Rating Non-Inductive	DC Voltage Breakdown Contact-to-Contact	 Heater-to-Contact
STANDARD	2 to 10 Sec.	115V — 3a AC	250V	500V
RELAYS	15 to 180 Sec.	115V — 3a AC	800V	800V
		220V — 1a AC	800V	800V
MINIATURE	2 to 10 Sec.	115V — 2a AC	250V	500V
RELAYS	15 to 180 Sec.	115V — 2a AC	800V	800V
		220V — 1a AC	800V	800V
FLASHERS		115V — ½a AC	250V	500V

CONTACT DROP: —0.1V — Prox. at 1A.

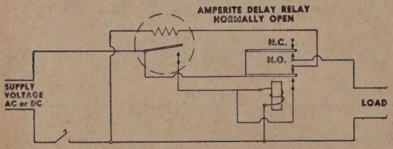
AMBIENT TEMPERATURES: Relays are compensated for temperatures of — 55° to + 80°C. (Relays can be operated from — 80°C to + 125°C without damage). Tolerances given are for 20°C. Ambient temperature tolerances depend on type. Low voltage heaters 26V or less have better ambient compensation than high voltage heaters.

DELAYS AVAILABLE: From 2 to 180 seconds. Relays can be used in series to obtain longer delays. The delay of any individual relay can be increased up to 50% by using a resistor in series with the heater. Relays with short delays such as 2 to 5 seconds can be increased 100%.

LIFE of any individual relay will depend on the service the contacts are subjected to. With a 115 V. — 2A A.C. non inductive load the contacts will withstand at least 250,000 operations.

SHELF LIFE of Amperite Delay Relays is over 10 years. The relay will keep within specification even after being held for 10 years or more.

INDUCTIVE A.C. LOADS: When breaking an inductive A.C. load, use a condenser of .01 to .1 mfd. across contacts.



INSTANTANEOUS RECYCLE: This can be obtained by using a normally open Amperite Delay Relay in conjunction with a DPDT Magnetic Relay as shown at left. If normally closed is required — use a **normally open** Amperite Delay Relay — and use the NC contacts on the magnetic relay. Choose the Amperite Delay Relay for the voltage required and the delay required (e.g. — 115N030 — would be used on 115 volt supply — for a 30 second delay).

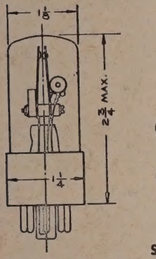
LONG RECYCLE RELAYS: are also available. For example, Amperite Delay Relay 115N07T has a delay in closing of 3 to 8 seconds. After heater is disconnected, contacts will remain closed for 30 seconds minimum. Write us about your requirements.

THERMOSTATIC AMPERITE DELAY RELAYS

GLASS ENCLOSED • HERMETICALLY SEALED • A.C., D.C., OR PULSATING CURRENT

BREAKING D.C. CURRENT: When Relay contacts open D.C. Current above 50 volts, a condenser with a resistor in series with the condenser must be connected across the contacts. The following condenser values are approximate.

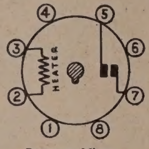
	50 V. D.C.	115 V. D.C.	230 V. D.C.
0 to .5 Amps................	None	.1 MF	.25 MF
.5 to 1.5 Amps................	"	.25 "	.25 "
1.5 to 3 Amps................	.25 MF	1 "	.5 "



Standard Octal Base

BASE WIRING:

STANDARD

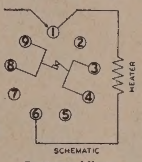


Bottom View Schematic Diagram

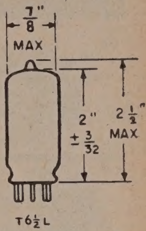
Standard Radio Octal:
Prongs 2-3-heater;
Prongs 5-7-contacts.

9-Pin Miniature:
Prongs 1-6 heater;
Prongs 3-4, 1 contact;
Prongs 8-9, 2nd contact

MINIATURE



Bottom View Schematic Diagram

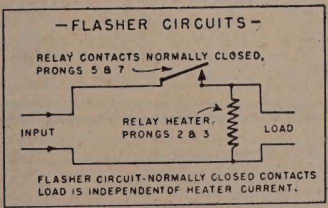


9-Pin Miniature Base

STANDARD AND MINIATURE TYPES OF AMPERITE DELAY RELAYS AND FLASHERS....List $4.00 ea.

MINIATURE TYPES: Designated by letter T. (e.g. 6N05T). Types shown in Bold Type are the more popular types, and are more readily available. Miniature type relays available in 2-120 Seconds Delay, EXCEPT those with a 6.3V Heater which are available in 2-180 Seconds. All Standard Octal Base Types are available in 2-180 Seconds Delay.

Delay-Seconds	Tolerance Seconds at 20°C	NORMALLY OPEN CONTACTS						NORMALLY CLOSED CONTACTS					
		HEATER VOLTAGES						HEATER VOLTAGES					
		2.5 V.	5.0 V.	6.3 V.	12.6 V.	26 V. (22-30)	115 V.	2.5 V.	5.0 V.	6.3 V.	12.6 V.	26 V. (22-30)	115 V.
2	± 1	2N02	5N02	6N02	12N02	26N02	115N02	2C2	5C2	6C2	12C2	26C2	115C2
3	± 1	2N03	5N03	**6N03**	12N03	**26N03**	**115N03**	2C3	5C3	**6C3**	12C3	**26C3**	**115C3**
5	± 2	2N05	5N05	**6N05**	12N05	**26N05**	**115N05**	2C5	5C5	**6C5**	12C5	**26C5**	**115C5**
8	± 3	2N08	5N08	**6N08**	12N08	**26N08**	**115N08**	2C8	5C8	**6C8**	12C8	**26C8**	**115C8**
10	± 3	2N010	5N010	**6N010**	12N010	**26N010**	**115N010**	2C10	5C10	**6C10**	12C10	**26C10**	**115C10**
15	± 3	2N015	5N015	**6N015**	12N015	**26N015**	**115N015**	2C15	5C15	**6C15**	12C15	**26C15**	**115C15**
20	± 4	2N020	5N020	**6N020**	12N020	**26N020**	**115N020**	2C20	5C20	**6C20**	12C20	**26C20**	**115C20**
30	± 8	**2N030**	**5N030**	**6N030**	**12N030**	**26N030**	**115N030**	2C30	5C30	**6C30**	12C30	**26C30**	**115C30**
45	± 10	2N045	5N045	**6N045**	12N045	**26N045**	**115N045**	2C45	5C45	**6C45**	12C45	**26C45**	**115C45**
60	± 12	**2N060**	5N060	**6N060**	12N060	**26N060**	**115N060**	2C60	5C60	**6C60**	12C60	**26C60**	**115C60**
75	± 15	2N075	5N075	**6N075**	12N075	**26N075**	**115N075**	2C75	5C75	**6C75**	12C75	**26C75**	**115C75**
90	± 15	2N090	5N090	**6N090**	12N090	**26N090**	**115N090**	2C90	5C90	**6C90**	12C90	**26C90**	**115C90**
120	± 30	2N0120	5N0120	**6N0120**	12N0120	**26N0120**	**115N0120**	2C120	5C120	**6C120**	12C120	**26C120**	**115C120**
150	± 30	2N0150	5N0150	**6N0150**	12N0150	**26N0150**	**115N0150**	2C150	5C150	**6C150**	12C150	**26C150**	**115C150**
180	± 40	2N0180	5N0180	**6N0180**	12N0180	**26N0180**	**115N0180**	2C180	5C180	**6C180**	12C180	**26C180**	**115C180**


—FLASHER CIRCUITS—
RELAY CONTACTS NORMALLY CLOSED, PRONGS 5 & 7
RELAY HEATER, PRONGS 2 & 3
INPUT
LOAD
FLASHER CIRCUIT-NORMALLY CLOSED CONTACTS LOAD IS INDEPENDENT OF HEATER CURRENT.

Flashers operate approximately ⅓ on, ⅔ off. The percentage time on can be increased by reducing the voltage of the heater.

Normally closed flashers are standard, and are indicated by the letter "*F.*" The number following letter "F" denotes flashes per minute. *For example a 6F30 flasher,* has 6.3V heater, normally closed 30 FPM with a ± 10 flashes per minute tolerance. A 6F30T, would be the same type but in 9-pin miniature. Flashers are available from 30 to 90 *Flashes per minute* with tolerances as shown in the chart below:

FLASHERS have contact rating of 115V — ½a AC, non-inductive.

Tolerance FPM — 20°C	Standard Flashers Available		
± 10	**6F30**	**26F30**	**115F30**
± 12	**6F45**	**26F45**	**115F45**
± 15	**6F60**	**26F60**	**115F60**
± 15	**6F75**	**26F75**	**115F75**
± 20	**6F90**	**26F90**	**115F90**

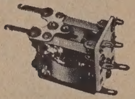
TRADE DISCOUNT APPLIES TO *LIST PRICE* ONLY

ELGIN
ADVANCE
RELAYS

300 DISTRIBUTORS STOCK.......

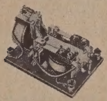
ELGIN ADVANCE RELAYS

AM

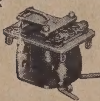


CB

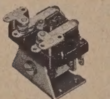
LE



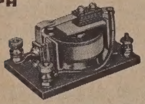
MK



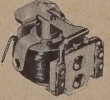
PG



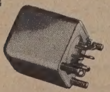
PH



RC



VG



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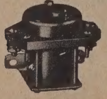


ANTENNA TYPES

AM SERIES (midget) 1.343 x 2.062 x 1.0″; 2 oz.

TYPE	COIL RES. (OHMS)	CONTACTS[A]	NET
AM/2C/6VA	4	DPDT 2 amps	4.70
AM/2C/115VA	1600	DPDT 2 amps	5.05
AM/2C/6VD	25	DPDT 2 amps	4.20
AM/2C/12VD	100	DPDT 2 amps	4.20

AH SERIES (small) 1.468 x 2.812 x 1.656″; 5.7 oz.

AH/2C/6VD	16	DPDT 10 amps	11.75
AH/2C/12VD	4	DPDT 10 amps	11.75
AH/2C/6VA	1.6	DPDT 10 amps	13.00
AH/2C/115VA	450	DPDT 10 amps	13.00
AH/2C1C/115VA	450	DPDT+SPDT (aux) 10 amps	14.25

AT SERIES (heavy duty) 1.656 x 3.593 x 2.781″; 12.6 oz.

AT/2C/115VA	450	DPDT 10 amps	13.20

COAXIAL TYPES

CB SERIES[J] 2.031 x 4.062 x 3.281″; 11.1 oz.

CB/1C/6VD	18	SPDT 5 amps	12.00
CB/1C/12VD	70	SPDT 5 amps	12.00
CB/1C/24VD	280	SPDT 5 amps	12.00
CB/1C/115VA	280	SPDT 5 amps	12.15
CB/1C2C/6VD	18	SPDT (int) DPDT (aux) 5 amps	13.00
CB/1C2C/12VD	70	SPDT (int) DPDT (aux) 5 amps	13.00
CB/1C2C/24VD	280	SPDT (int) DPDT (aux) 5 amps	13.00
CB/1C2C/115VA	280	SPDT (int) DPDT (aux) 5 amps	13.25

CE SERIES[J] (small) 1.812 x 3.0 x 2.062″; 4.1 oz.

CE/1C/6VD	20	SPDT 2 amps	12.90
CE/1C/12VD	80	SPDT 2 amps	12.90
CE/1C/115VA	750	SPDT 2 amps	13.20
CE/1C2C/6VD	20	SPDT (int) DPDT (aux) 2 amps	13.75
CE/1C2C/12VD	80	SPDT (int) DPDT (aux) 2 amps	13.75
CE/1C2C/115VA	750	SPDT (int) DPDT (aux) 2 amps	14.35

LATCHING TYPES

LE SERIES (electrical) 2.375 x 3.781 x 2.562″; 11 oz.
LH SERIES (manual) 1.937 x 3.156 x 2.781″; 11 oz.

LE/2C/6VA	.63	DPDT 15 amps	12.00
LE/2C/115VA	160	DPDT 15 amps	12.00
LE/2C/24VD	100	DPDT 15 amps	11.65
LH/2C/115VA	250	DPDT 15 amps	10.15

MINIATURE TYPES

MK SERIES 0.796 x 0.968 x 0.625″; 11 grams

MK/1C/6VD	50	SPDT 1 amp	4.95
MK/1C/12VD	200	SPDT 1 amp	4.95
MK/1C/24VD	800	SPDT 1 amp	4.95
MK/2C/6VD	30	DPDT 1 amp	5.95
MK/2C/12VD	120	DPDT 1 amp	5.95
MK/2C/24VD	500	DPDT 1 amp	5.95
MK/2C/5000D	5000	DPDT 1 amp	6.95

POWER TRANSFER TYPES

PG SERIES (general purpose) 1.875 x 1.50 x 1.656″; 4.4 oz.

PG/2C/6VA	1.4	DPDT 15 amps	7.50
PG/2C/24VA	25	DPDT 15 amps	7.50
PG/2C/115VA	400	DPDT 15 amps	7.50
PG/2C/220VA	1600	DPDT 15 amps	7.95
PG/2C/6VD	16	DPDT 15 amps	6.90
PG/2C/12VD	63	DPDT 15 amps	6.90
PG/2C/24VD	250	DPDT 15 amps	6.90
PG/1Z/6VD	16	SPDT 30 amps	8.95
PG/1Z/115VA	400	SPDT 30 amps	10.40

PH SERIES (keying) 1.625 x 3.50 x 2.50″; 6.1 oz.

PH/1A/6VD	16	SPST-NO 20 amps	6.60
PH/1A/115VA	400	SPST-NO 20 amps	7.20
PH/1C/6VD	16	SPDT 20 amps	7.30
PH/1C/115VA	400	SPDT 20 amps	7.85

PV SERIES (very heavy-duty) 1.625 x 3.25 x 2.25″; 6.8 oz.

PV/1A/6VD	16	SPST-NO 30 amps	7.35
PV/1A/115VA	450	SPST-NO 30 amps	7.70
PV/1C/6VD	16	SPDT 30 amps	8.55
PV/1C/115VA	450	SPDT 30 amps	8.70

RADIO CONTROL TYPES

RC SERIES (miniature) 0.75 x 0.656 x 0.937″; 0.46 oz.

RC/1C/5000D[B]	5000	SPDT 0.2 amps[D]	5.75
RC/1C/7250D[C]	7250	SPDT 0.2 amps[D]	5.75

ROTARY TYPES

VG SERIES (miniature) 1.125 x 0.875 x 0.875″; 1.5 oz.

VG/2C/6VD	25	DPDT 5 amps[E]	20.50
VG/2C/12VD	100	DPDT 5 amps[E]	20.50
VG/2C/24VD	500	DPDT 5 amps[E]	20.50

SOLENOID CONTACTOR TYPES

ES SERIES (heavy-duty) 2.50 x 2.687 x 1.875″; 11 oz.

ES/1A/12VD	28	SPST-NO 50 amps	8.80
ES/1A/24VD	112	SPST-NO 50 amps	8.80

TELEPHONE TYPES

TA, TD[K], & TQ[L] SERIES (miniature) 2.50 x 1.625 x 1.437″; 2.0 oz.

TA/2C/115VA	900	DPDT 2 amps	6.45
TA/4C/115VA	900	4PDT 2 amps	8.45
TD/2C/24VD	630	DPDT 5 amps	5.45
TQ/2C/24VD	600	DPDT 3 amps	5.75
TQ/4C/24VD	300	4PDT 3 amps	7.75

TIME DELAY TYPES

DB & DM SERIES (5 - 60 sec. delay) 1.656 x 3.781 x 2.718″; 7.8 oz.

DB/2C/115VA	450	DPDT 15 amps	13.60
DM/1C/115VA	450	SPDT 15 amps	12.80
DM/2C/115VA	450	DPDT 15 amps	14.35
DM/2C/220VA	1600	DPDT 15 amps	14.85

THERMAL DELAY TYPES

DT SERIES (5 - 60 sec. delay) 0.812 x 1.906 x 1.281″; 1.4 oz.

TYPE	COIL VOLT	CONTACTS[A]	NET
DT/1A/115VA	115VAC	SPST-NO 2 amps	2.75
DT/1B/115VA	115 VAC	SPST-NC 2 amps	2.75

OVERLOAD TYPES

OE & OF SERIES (elec. reset) 2.437 x 4.406 x 3.625″; 13.5 oz.

TYPE	ADJ. RANGE IN MA	CONTACTS[A]	NET
OE/2B (115VAC Reset)	250-500	DPST-NC 15 amps	12.40
OF/2B(115VAC Reset)	500-1000	DPST-NC 15 amps	12.55

POWER CONTROL TYPES

PC SERIES (1, 2, 3 & 4 pole) 1.906 x 3.062 x 2.593″; 8 oz.

AC RELAYS		6-12-24-115VDC	220VAC
TYPE	CONTACTS[A]	NET	NET
PC/1C	SPDT	3.95	4.95
PC/2C	DPDT	5.95	6.95
PC/3C	3PDT	8.45[F]	9.65
PC/4C	4PDT	10.95[F]	12.45
DC RELAYS		6-12-24VDC	110VDC
PC/1C	SPDT	3.95	4.45
PC/2C	DPDT	5.95	6.55
PC/3C	3PDT	8.45	8.95
PC/4C	4PDT	10.95	11.45

NOTES

A. Contacts rated at 115 VAC or 26.5 VDC resistive load.
B. Pull-in current 1.5 MA.
C. Pull-in current 1.0 MA.
D. Contacts rated at 110 VAC, 60 CPS or 28 VDC resistive load.
E. Contacts rated at 115 VAC or 28 VDC resistive load.
F. PC/3C and PC/4C not available in 12 VAC types.
G. Contacts rated at 0.25 amp, 28 VDC resistive load.
H. Contacts rated at 2 amps resistive at 115 VAC or 32 VDC.
J. Can be supplied with SO239 'N' or 'BNC' connectors for military use.
K. Can be supplied to meet requirements of MIL-R-5757C.
L. Meets requirements of MIL-R-5757C, Class A and MIL-R-6106A (ASG), Class 0.
M. GHP/3C not available in 12 VAC type.

ELGIN ADVANCE RELAYS | ELGIN NATIONAL WATCH CO.

300 DISTRIBUTORS STOCK.......

ELGIN ADVANCE RELAYS

ELGIN
ADVANCE
RELAYS

SENSITIVE TYPES

SV SERIES (very sensitive) 1.562 x 2.625 x 2.062"; 6.5 oz.

TYPE	COIL RES. (OHMS)	COIL CURRENT (MA)	CONTACTS[A]	NET
SV/1C/.005D	.005	1000	SPDT 1 amp	7.95
SV/1C/1000D	1000	2.25	SPDT 1 amp	8.25
SV/1C/1600D	1600	1.80	SPDT 1 amp	8.40
SV/1C/2200D	2200	1.50	SPDT 1 amp	8.40
SV/1C/3500D	3500	1.20	SPDT 1 amp	8.40
SV/1C/5500D	5500	0.95	SPDT 1 amp	8.75
SV/1C/8700D	8700	0.75	SPDT 1 amp	9.40
SV/1C/10000D	10000	0.70	SPDT 1 amp	9.40
SV/1C/14000D	14000	0.60	SDPT 1 amp	10.10
SV/1C/20000D	20000	0.50	SPDT 1 amp	11.10
SV/1C/30000D	30000	0.40	SPDT 1 amp	11.85
SV/1C/40000D	40000	0.35	SPDT 1 amp	13.30

SO SERIES (miniature) 1.218 x 1.250 x 1.125"; 3.0 oz.

SO/1C/1000D	1000	6.2	SPDT 1.5 amps	5.45
SO/1C/4000D	4000	3.2	SPDT 1.5 amps	5.85
SO/1C/6500D	6500	2.5	SPDT 1.5 amps	6.35
SO/1C/10000D	10000	2.0	SPDT 1.5 amps	6.70

SUB-MINIATURE TYPES

NM SERIES (neomite) 0.530 x 0.392 x 0.196"; 0.09 oz.

TYPE[G]	COIL RES. (OHMS)	DC COIL VOLT. NOM.	PULL-IN CURRENT MAX. (MA)	NET
NM/1C/50	50	4	44	24.00
NM/1C/200	200	8	22	24.00
NM/1C/500	500	12	14	24.00
NM/1C/1K	1000	16	10	24.00
NM/1C/2K	2000	24	7	24.00

GENERAL PURPOSE TYPES LOW COST GH RELAYS

GHA SERIES (5 Amps resistive, 2 Amps inductive[A])

GHB SERIES (10 Amps resistive, 5 Amps inductive[A])

GHP SERIES (5-Amp Relay; 5 Amps resistive, 2 Amps inductive[A])

GHE SERIES (5-Amp Plate Circuit: 5 Amps resistive, 2 Amps inductive[A])

GHA, GHB, GHP SERIES:

NOMINAL POWER REQUIRED:

DC Relays: 1 to 2 watts nominal

AC Relays: 2 to 3 Volt Amperes nominal

VOLTAGE	RESISTANCE (OHMS)	VOLTAGE	RESISTANCE (OHMS)
6	25	6	4
12	100	12	16
24-28	400	24	63
100-120	8000	115	1600
		220	5000

GHE, PLATE CIRCUIT SERIES:

NOMINAL PULL-IN POWER REQUIRED:

1C — 130 milliwatts
2C — 260 milliwatts
3C — 350 milliwatts

Standard Resistance and Factory Adjusted Pull-In Current Values:

RESISTANCE (OHMS)	PICK-UP CURRENT (MA MAX.) 1C	2C	3C
2500	7.2	10.0	11.8
5000	5.0	7.2	8.3
10000	3.6	5.0	5.8

OPEN SERIES 1.109 x 1.734 x 1.078"; 3 oz.

AC RELAYS TYPE	CONTACTS[A]	6-12-24-115VAC NET	220VAC NET
GHA/1C	SPDT	3.05	3.55
GHA/2C	DPDT	3.55	4.05
GHA/3C	3PDT	4.05	4.55

DC RELAYS TYPE	CONTACTS[A]	6-12-24VDC NET	110VDC NET
GHA/1C	SPDT	3.05	3.55
GHA/2C	DPDT	3.35	3.85
GHA/3C	3PDT	3.75	4.25

AC RELAYS		6-24-115VAC
GHB/1C	SPDT	3.50
GHB/2C	DPDT	4.05
GHB/3C	3PDT	4.60

DC RELAYS		6-12-24VDC
GHB/1C	SPDT	3.50
GHB/2C	DPDT	3.80
GHB/3C	3PDT	4.40

DUSTITE PLASTIC ENCLOSURE SERIES 2.687 x 1.406 x 1.406"; 3 oz.

AC RELAYS		6-12-24-115VAC	220VAC
GHP/1C	SPDT	5.10	(Not Stocked)
GHP/2C	DPDT	5.75	6.25
GHP/3C	3PDT	7.05[N]	7.55

DC RELAYS		6-12-24VDC	110VDC
GHP/1C	SPDT	5.15	5.65
GHP/2C	DPDT	5.65	6.15
GHP/3C	3PDT	6.95	7.45

PLATE CIRCUIT SERIES

		2500 ohms	5000 ohms	10000 ohms
TYPE	CONTACTS[A]	NET	NET	NET
GHE/1C	SPDT	5.40	5.85	6.25
GHE/2C	DPDT	6.30	6.70	7.10
GHE/3C	3PDT	7.80	8.25	8.65

CRYSTAL CAN SIZE

MV SERIES 0.875 x 0.359"; 0.45 oz.

Vibration: 10 to 34 cycles per second at maximum excursions of .4", 34 to 2000 CPS 20G's acceleration.

Shock: 50G for 11 milliseconds.

TYPE[H]	COIL RESISTANCE AT 25° C.	PULL-IN CURRENT (MAX.)	NOMINAL VOLTAGE	NET
MV/2C/30D	30	85	6	13.60
MV/2C/120D	120	44	12	13.60
MV/2C/600D	600	21	26	13.60
MV/2C/1000D	1000	16	35	13.85
MV/2C/2500D	2500	10	55	15.05
MV/2C/5000D	5000	7	78	16.90
MV/2C/10000D	10000	5	110	19.35

ORDERING INFORMATION FOR MV SERIES ONLY:

TERMINAL ARRANGEMENT		MOUNTING ARRANGEMENT	
Solder-Hook	Code 1	Side Studs	Code 1 (add .25)
Plug-in Pin	Code 2	Top Studs	Code 2 (add .25)
3" leads	Code 3 (add .35)	2 Hole Bracket	Code 3
		Plain Can Plug-in	Code 4
		4 Hole Bracket	Code 5
		Side Angle Brackets	Code 6

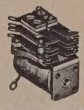
EXAMPLE:

3" leads (code 3), top studs (code 2) with 110 volt DC coil

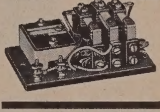
MV 2C 5,000 D-32

Price: 16.90 + .35 for 3" leads + .25 for top studs = 17.50

TQ

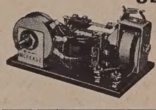


DM

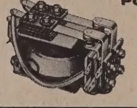


DT

OE

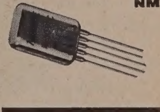


PC

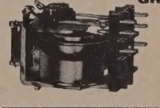


SV

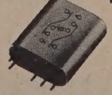
NM



GH



MV



NOMENCLATURE

Type numbers consist of series number, contact arrangement (including auxiliary contacts when applicable) and either AC or DC voltage or resistance in that order.

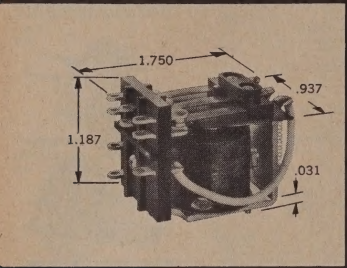
Examples: CE/1C2C/6VD
CE — series number
1C — contact arrangement
2C — auxiliary contact arrangement
6VD — voltage (6VDC)

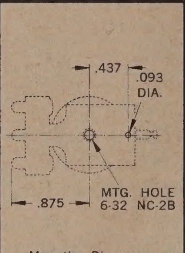
MK/2C/5000D
MK — series number
2C — contact arrangement
5000D — resistance (5000 ohms

ELGIN ADVANCE RELAYS | ELGIN NATIONAL WATCH CO.

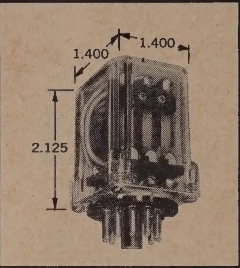
globe electrical mfg. co.

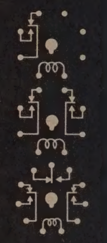
gardena,
california





Mounting Diagram





Wiring Diagram

General Purpose Midget Relay

GENERAL DESCRIPTION: Available open-faced, or in a clear polystyrene dustite enclosure using 8 or 11 pin plug-in bases.

COIL: Plate Circuits and coil operating voltages as listed in table.

CONTACTS: Fine Silver rated af 5 amperes, @ 28V. D-C or 115V. A-C. Mounted on beryllium copper blades. Silver Cadimum Oxide rated at 10 amperes @ 28V. D-C or 115V. A-C. Mounted on beryllium copper blades. (1, 2, or 3P DT)

AMBIENT TEMPERATURES: Open-faced model: 125°C Dustite enclosure: 85°C

		D-C	5 Ampere Contacts				10 Ampere Contacts			
		Resist-	Open		Dustite		Open		Dustite	
Voltage	Current	ance	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
PLATE	9 to 30MA	2,500 Ω	1W1 2W1 3W1	$3.50 4.20 4.90	1WC1 2WC1 3WC1	$5.50 6.60 8.10	1W20 2W20 3W20	$3.75 4.45 5.95	1WC20 2WC20 3WC20	$5.80 6.75 8.55
PLATE	7 to 20MA	5,000 Ω	1W2 2W2 3W2	3.95 4.60 5.45	1WC2 2WC2 3WC2	5.95 7.00 8.45	1W21 2W21 3W21	4.20 4.85 5.70	1WC21 2WC21 3WC21	6.25 7.15 8.90
PLATE	4 to 14MA	10,000 Ω	1W3 2W3 3W3	4.35 5.00 5.85	1WC3 2WC3 3WC3	6.35 7.40 8.85	1W22 2W22 3W22	4.60 5.25 6.10	1WC22 2WC22 3WC22	6.65 7.55 9.30
6V. D-C	200MA	30 Ω	1W4 2W4 3W4	3.05 3.35 3.75	1WC4 2WC4 3WC4	5.10 5.65 6.95	1W23 2W23 3W23	3.50 3.80 4.40	1WC23 2WC23 3WC23	5.55 6.10 7.60
12V. D-C	120MA	100 Ω	1W5 2W5 3W5	3.05 3.35 3.75	1WC5 2WC5 3WC5	5.10 5.65 6.95	1W24 2W24 3W24	3.50 3.80 4.40	1WC24 2WC24 3WC24	5.55 6.10 7.60
24V. D-C	53MA	450 Ω	1W6 2W6 3W6	3.05 3.35 3.75	1WC6 2WC6 3WC6	5.10 5.65 6.95	1W25 2W25 3W25	3.50 3.80 4.40	1WC25 2WC25 3WC25	5.55 5.10 7.60
115V. D-C	15MA	8,000 Ω	1W7 2W7 3W7	3.55 3.85 4.55	1WC7 2WC7 3WC7	5.65 6.15 7.45	1W26 2W26 3W26	4.00 4.30 5.20	1WC26 2WC26 3WC26	6.05 6.60 8.40
6V. A-C	400MA	5 Ω	1W8 2W8 3W8	3.05 3.55 4.05	1WC8 2WC8 3WC8	5.15 5.75 7.05	1W27 2W27 3W27	3.50 4.00 4.70	1WC27 2WC27 3WC27	5.60 6.40 7.70
12V. A-C	150MA	20 Ω	1W9 2W9 3W9	3.05 3.55 4.05	1WC9 2WC9 3WC9	5.15 5.75 7.05	1W28 2W28 3W28	3.50 4.00 4.70	1WC28 2WC28 3WC28	5.60 6.40 7.70
24V. A-C	120MA	70 Ω	1W10 2W10 3W10	3.05 3.55 4.05	1WC10 2WC10 3WC10	5.15 5.75 7.05	1W29 2W29 3W29	3.50 4.00 4.70	1WC29 2WC29 3WC29	5.60 6.40 7.70
115V. A-C	25MA	1,500 Ω	1W11 2W11 3W11	3.05 3.55 4.05	1WC11 2WC11 3WC11	5.15 5.75 7.05	1W30 2W30 3W30	3.50 4.00 4.70	1WC30 2WC30 3WC30	5.60 6.40 7.70
230V. A-C	8MA	8,000 Ω	1W12 2W12 3W12	3.55 4.05 4.25	1WC12 2WC12 3WC12	5.75 6.25 7.55	1W31 2W31 3W31	4.00 4.50 5.20	1WC31 2WC31 3WC31	6.10 6.90 8.20

Discount	1-24	25-49	50-99	100-249	250-499	500-999	1000-2499	2500-4999	5000-OVER
Schedule	LIST	5%	10%	20%	30%	35%	40%	45%	50%

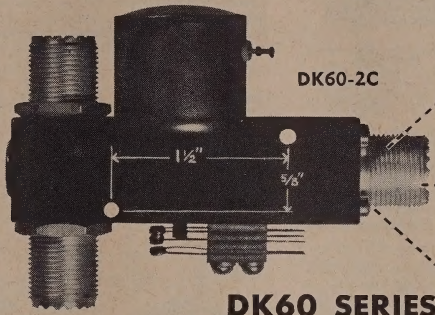
Dow-Key Coaxial Relays

4 VERSATILE MODELS, A.C. or D.C.

DISTRIBUTED INTERNATIONALLY

Size
2¾"x3¾"x1⅛"

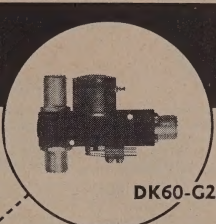
Wt.
Less than 9 ozs.



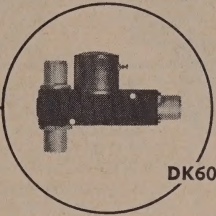
DK60-2C

DK60 SERIES

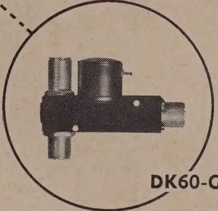
- **r. f. SPECIFICATIONS:**
  Low VSWR: less than 1.15:1 from 0 to 500 mc — **Low Losses:** Pure silver contacts. All other parts used in crucial positions are plated with fine silver. (Gold plating available at extra cost, special order.) — **Low Cross-Talk:** (greater than 80 db) in DK60-G and DK60-G2C through the use of a patented "isolated connector" arrangement which opens the disconnected conductor and simultaneously provides an electrostatic shield between it and the rest of the circuit — **High Power Rating:** (a) one kilowatt through straight connectors (b) to 10 watts through "isolated connector" — excellent for video switching — **Single Pole Double Throw r.f. contacts:** r.f. leakage — extremely low, below leakage of typical r.f. connectors. A wide variety of connectors available. Example: UHF, N, C, and others in both straight and "isolated" models.
- **MECHANICAL SPECIFICATIONS:**
  High Contact Pressures: Long-Life Expectancy greater than one million operations — **Continuous Duty.** Teflon feed-through terminals used on coil to provide connection ease — **Small, Compact:** only 2¾"x3¾"x1⅛" — **Lightweight:** less than 9 ounces — Dow designed UHF (standard) or type N (slight additional cost) r.f. connectors available. Specify if type N connector required.
- **ELECTRICAL SPECIFICATIONS:**
  Wide variety of coil voltages: 6, 12, 24, 28, 32, 48, 110, 220 D.C. volts at 2.0 watts; 6, 12, 24, 110, 220 A.C. volts at 6 volt-amps 50-60 cps. (Special voltage or resistances available on request.) — **Less than 40°C temperature rise above ambient:** maximum operating temperature is 100°C except on special order — Auxiliary contacts available for power control — DPDT at 5a. 110 v a.c. on DK60-2C and DK60-G2C.



DK60-G2C



DK60



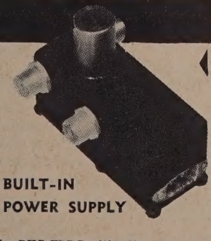
DK60-G

STANDARD RELAYS INCLUDE:

DK60 — SPDT r.f. switch
DK60-G — SPDT r.f. switch with special "isolated" connector in de-energized position.
DK60-2C — SPDT r.f. switch with DPDT auxiliary contacts.
DK60-G2C — SPDT r.f. switch with DPDT auxiliary contacts and special "isolated" connector" in de-energized position.

Other combinations available on request. r.f. relays built to specifications.

DOW TR SWITCHES



BUILT-IN POWER SUPPLY

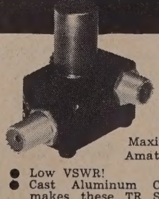
◀ DKC-TRP **DKC-TRM-1 ▶**

Rated maximum amateur legal power, vacuum tube T-R switch, utilizes grid-blocking scheme when in transmit mode. In receive mode, circuit provides a small amount of gain between the antenna and receiver. Has standard UHF coaxial connectors. Employs circuitry with large signal handling capabilities to reduce locally-generated cross-modulation types of interference.

DOW-KEY DKC-TRP

Designed to operate in 1.8 to 30 mc range requiring NO EXTERNAL D.C. POWER SUPPLY. Built-in supply may be operated from 120-volt A.C. circuit. Approximately 15 watts of power required.

The DKC-TRPC with directional coupler includes several features not found in normal T-R switch systems. THESE INCLUDE: (1) Essentially one-way transmission into the receiver from the antenna is accomplished if the antenna feedpoint VSWR is close (less than 1.2:1) to unity (measured with 50 ohm generator resistance). Typical directivity ratios are better than 20 db over a 3 to 30 mc band. (2) Because of the one-way transmission feature, noise generated in the final amplifier of a transmitter on standby is not allowed to enter receiver. This eliminates the "diode noise" problem prevalent in many T-R switch installations. (3) Since the transfer impedance between transmitter and receiver is extremely small (when a matched antenna system is used) no shunting of received signal by the transmitter output circuit will result. This eliminates the variations in received signals due to transmitter tuning.



DKC-TRM-1

Rated at
Maximum Legal
Amateur Power!

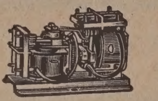
- Low VSWR!
- Cast Aluminum Construction makes these TR Switches as TVI Proof as the Power Source!
- DKC-TRM-1 May be Converted to 12 volt Heater Operation by Merely Changing a Tube!
- Switch Allows Break-In Operation with a Single Antenna System!
- Practically Instantaneous Operation!
- LOW COST!

DKC-TRM-1, 1.8 to 60 mc
DKC-TR2-A, 144 to 148 mc

Manufactured and Guaranteed by DOW-KEY COMPANY, Thief River Falls, Minnesota

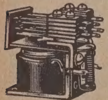
GUARDIAN *Highest Quality* Industrial Controls

INTERLOCKING RELAY-AC



Two interlocking AC relays in sturdy metal frame bracket. Used to maintain circuits continuously without coil power consumption. Unit is electrically pulse operated with mechanical hold and electrical release. Contacts rated at 8 amps., 60 cps, non-inductive. Size, 1 13/16"x1¾"x2⅞". Shipping wt., 5.5 oz.

Mfg. No.	Volts 60 cps	Coil Res. Ohms	Cont. Comb.	Quantities 1-24	25-49	50-99
IR-1200/1200-GG115	115 AC	800	4PDT	$10.25	$9.23	$8.71



ALL PURPOSE ECONOMY RELAY AC—DC

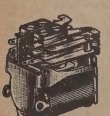
Type IR-500-505. Compact, lightweight relay capable of unusually heavy power control for its size. Long life, high quality relay, available in a variety of AC and DC voltages with a selection of contact combinations. Contact rating at 60 cycles, 115 V. non-inductive load. Size, 1 11/16"x1½"x1". Shipping wt., 4 oz.

6 VOLTS—AC

Mfg. No.	Coil Res.	Cont. Amps.	Cont. Comb.	Quantities 1-24	25-49	50-99
IR-500-A6	1.7	10	SPST*	$2.50	$2.25	$2.13
IR-500-C6	1.7	10	SPDT	2.80	2.52	2.38
IR-500-G6	1.7	10	DPDT	3.10	2.79	2.64
IR-500-GG6	1.7	8	4PDT	4.30	3.87	3.66
24 VOLTS—AC						
IR-500-A24	24	10	SPST*	2.50	2.25	2.13
IR-500-C24	24	10	SPDT	2.80	2.52	2.38
IR-500-G24	24	10	DPDT	3.10	2.79	2.64
IR-500-GG24	24	8	4PDT	4.30	3.87	3.66
115 VOLTS—AC						
IR-500-A115	725	10	SPST*	2.50	2.25	2.13
IR-500-C115	725	10	SPDT	2.80	2.52	2.38
IR-500-G115	725	10	DPDT	3.10	2.79	2.64
IR-500-GG115	725	8	4PDT	4.30	3.87	3.66
230 VOLTS—AC						
IR-500-G230	2950	10	DPDT	3.70	3.33	3.15
6 VOLTS—DC						
IR-505-A6	12	10	SPST*	2.50	2.25	2.13
IR-505-C6	12	10	SPDT	2.80	2.52	2.38
IR-505-G6	12	10	DPDT	3.10	2.79	2.64
IR-505-GG6	12	8	4PDT	4.30	3.87	3.66
12 VOLTS—DC						
IR-505-A12	50	10	SPST*	2.50	2.25	2.13
IR-505-C12	50	10	SPDT	2.80	2.52	2.38
IR-505-G12	50	10	DPDT	3.10	2.79	2.64
IR-505-GG12	50	8	4PDT	4.30	3.87	3.66
24 VOLTS—DC						
IR-505-A24	200	10	SPST*	2.50	2.25	2.13
IR-505-C24	200	10	SPDT	2.80	2.52	2.38
IR-505-G24	200	10	DPDT	3.10	2.79	2.64
IR-505-GG24	200	8	4PDT	4.30	3.87	3.66
110 VOLTS—DC						
IR-505-A110	4000	10	SPST*	3.05	2.75	2.59
IR-505-C110	4000	10	SPDT	3.15	2.84	2.68
IR-505-G110	4000	10	DPDT	3.50	3.15	2.98
IR-505-GG110	4000	8	4PDT	4.70	4.23	4.00

*Normally Open

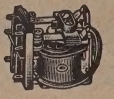
TELEPHONE TYPE RELAY-AC-DC



Small size, lightweight communications relay. Armature is formed outward, away from coil permitting use of longer coil without increasing length of unit for faster and more efficient operation. Armature releases when current is reduced approx. 50% of attract value. Size, 1 5/16"x1 11/32"x1". Shipping wt. 3.5 oz.

60 CYCLES—AC COILS

Mfg. No.	Volts	Coil Res. Ohms	Contact Amps.	Cont. Comb.	Quantities 1-24	25-49	50-99
IR-590-C115	115	700	1½	SPDT	$4.25	$3.83	$3.61
IR-590-G115	115	700	1½	DPDT	4.75	4.28	4.04
DC COILS							
IR-595-GG24	24	165	1½	4PDT	5.65	5.09	4.80
IR-595-GG115	115	4600	1½	4PDT	6.35	5.72	5.40



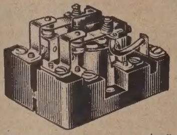
MEDIUM POWER RELAY AC—DC

Type IR-1200. Small sized, this highly efficient relay is rated at 8 amps., 60 cycles, 115 V. non-inductive load. Heavy solder lug type terminals molded in phenolic block, with barriers for over-surface insulation. Built to meet Underwriters' Laboratories specifications. Applicable to automation, communications, remote control, selectors, switching devices and experimental uses. Size, 1⅝"x1"x1¼". Shipping wt., 2.5 oz.

60 CYCLES—AC

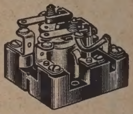
Mfg. No.	Volts	Coil Res.	Cont. Amps.	Cont. Comb.	Quantities 1-24	25-49	50-99
1200-G6	6	2	8	DPDT	$3.60	$3.24	$3.06
1200-GC6	6	2	8	3PDT	4.00	3.60	3.40
1200-G24	24	33	8	DPDT	3.60	3.24	3.06
1200-GC24	24	33	8	3PDT	4.00	3.60	3.40
1200-G115	115	800	8	DPDT	3.60	3.24	3.06
1200-GC115	115	800	8	3PDT	4.00	3.60	3.40
DC							
1205-G6	6	12	8	DPDT	3.30	2.97	2.81
1205-GC6	6	12	8	3PDT	3.70	3.33	3.15
1205-G24	24	192	8	DPDT	3.30	2.97	2.81
1205-GC24	24	192	8	3PDT	3.70	3.33	3.15

POWER RELAYS



25 Amperes

Mounting: 2 holes for 8/32 screws on 1⅞" centers.



2200 D.P.D.T. Size: 3⅜" L. x 2½" W. x 2 3/16" H. Wt. 11 oz.

2210 D.P.S.T. (normally open) Size: 2 11/16" L. x 2½" W. x 2 3/16" H. Wt. 10 oz.

Series 2200 and 2210 power relays are rated at 25 amperes, continuous duty at 230 volts A.C., with 75% power factor. Operating power requirement for A.C. is 9.5 volt amperes, 60 cycles. Coil drain approximately .080 amperes at 115 volts, 60 cycles. Approx. wt. of replacement coil assemblies is 6 ounces.

2200 and 2210 Power Relays

Mfg. No.	Volts AC	Quantities 1-24	25-49	50-99
2200-DPDT-6	6	$6.10	$5.49	$5.19
2200-DPDT-24	24	6.10	5.49	5.19
2200-DPDT-115	115	6.10	5.49	5.19
2200-DPDT-230	230	6.50	5.85	5.53
2210-DPST-N.O.-6	6	5.25	4.73	4.46
2210-DPST-N.O.-24	24	5.25	4.73	4.46
2210-DPST-N.O.-115	115	5.25	4.73	4.46
2210-DPST-N.O.-230	230	5.60	5.04	4.76

Replacement Coils for Either Relay

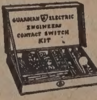
Mfg. No.	Volts AC	Quantities 1-24	25-49	50-99
2200-6A	6	$2.25	$2.03	$1.91
2200-24A	24	2.25	2.03	1.91
2200-115A	115	2.25	2.03	1.91
2200-230A	230	2.50	2.25	2.13

POWER RELAY REPLACEMENT CONTACT SWITCH PARTS

Available for Series 2200, only—Replacement Contact Switch Parts for easy right or left S.P.D.T. assembly. No solder needed. Package contains one normally open and one normally closed contact bracket, complete moving blade and terminal. Left or Right Switch Assemblies determined by viewing relay from armature hinge end with contacts up.

Mfg. No.	Quantities 1-24	25-49	50-99
CS-2200—LEFT	1.85	1.67	1.57
CS-2200—RIGHT	1.85	1.67	1.57

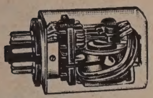
Engineer's CONTACT SWITCH KIT



Indispensable to those who design, build, repair or test electrical controls. Contains large assortment of switch blades, contacts, separators, adapters, fish papers, bushings, etc. All standard high-quality Guardian parts.

Engineer's Switch Kit.................. Net Ea. $10.95

Available NOW from your STOCKING DISTRIBUTOR



ENCLOSED PLUG-IN RELAY AC—DC

Type-1210. Small sized relay in NEW Lucite enclosure for efficient, dust-free, and trouble-free operation. This transparent, lightweight Lucite case has high impact strength, unaffected by weather, and is resistant to temperatures of 200° F. Relay is powerful and economical. Relay available with 8 pin octal plug for DPDT and 11 pin for 3 PDT. Contacts rated for 8 amperes, 60 cycles, 115 V. AC non-inductive. Size, 2²³⁄₃₂"x1⅜"x1⅜". Shipping wt., 3.5 oz.

AC

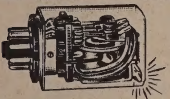
Mfg. No.	Volts	Coil Res.	Cont. Amps.	Cont. Comb.	Quantities 1-24	25-49	50-99
1210-G6	6	2	8	DPDT	5.70	5.13	4.85
1210-GC6	6	2	8	3PDT	7.10	6.39	6.04
1210-G24	24	33	8	DPDT	5.70	5.13	4.85
1210-GC24	24	33	8	3PDT	7.10	6.39	6.04
1210-G115	115	115	8	DPDT	5.70	5.13	4.85
1210-GC115	115	115	8	3PDT	7.10	6.39	6.04

DC

Mfg. No.	Volts	Coil Res.	Cont. Amps.	Cont. Comb.	Quantities 1-24	25-49	50-99
1215-G6	6	12	8	DPDT	5.80	5.22	4.93
1215-GC6	6	12	8	3PDT	7.25	6.53	6.16
1215-G24	24	192	8	DPDT	5.80	5.22	4.93
1215-GC24	24	192	8	3PDT	7.25	6.53	6.16

ENCLOSED PLATE CIRCUIT PLUG-IN RELAY-DC

Mfg. No.	Oper. Mils	Coil Res.	Cont. Amps.	Cont. Comb.	Quantities 1-24	25-49	50-99
1215-G2.5	10 M.A.	2500	8	DPDT	$6.00	$5.40	$5.10
1215-G5	7.2 M.A.	5000	8	DPDT	6.10	5.49	5.19
1215-G10	5 M.A.	10000	8	DPDT	6.40	5.76	5.44
1215-GC2.5	12.0 M.A.	2500	8	3PDT	7.00	6.30	5.95
1215-GC5	8.5 M.A.	5000	8	3PDT	7.20	6.48	6.12
1215-GC10	6.0 M.A.	10000	8	3PDT	7.50	6.75	6.38



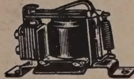
ENCLOSED PLUG-IN RELAY—AC with Built-In Neon Lamp to Indicate Circuit Faults

Type-1210-N

The Guardian Series 1210-N plug-in relay utilizes a miniature neon lamp connected across coil terminals. The lamp lights each time the coil is energized, or indicates a circuit fault when lamp is "dark." Ideal for detecting circuit faults in relay banks, mass relay arrangements, or where relays are visibly located at intermediate switching points of the circuitry. Precludes the use of circuit testers. Available with 8 pin octal plug for D.P.D.T. and 11 pin for 3 P.D.T. Contacts rated 8 amperes at 115 VAC, 60 c., non-inductive load. Size, 2²³⁄₃₂"x1⅜"x1⅜". Shipping wt., 3.5 oz.

AC

Mfg. No.	Volts	Coil Res.	Cont. Amps.	Cont. Comb.	Quantities 1-24	25-49	50-99
1210-N-G115	115 AC	1000	8	DPDT	$6.30	$5.67	$5.36
1210-N-GC115	115 AC	1000	8	3PDT	7.70	6.93	6.55

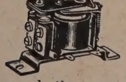


SENSITIVE AC RELAY

Type IR-120. Designed as an economical unit for requirements not exceeding single pole, double throw combinations. Armature carries the contact blade and both are common to the field piece. Contact rating at 60 cycles, 115 V. non-inductive load. Size, 3"x1⅞"x1½". Shipping wt., 4.5 oz.

60 CYCLES—AC

Mfg. No.	Volts	Coil Res.	Cont. Amps.	Cont. Comb.	Quantities 1-24	25-49	50-99
IR-120-C24	24	25	8	SPDT	$3.05	$2.75	$2.59
IR-120-C115	115	600	8	SPDT	3.50	3.15	2.98
IR-120-C230	230	2500	8	SPDT	5.30	4.77	4.51



HEAVY DUTY INDUSTRIAL RELAY -AC

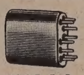
Type IR-220. Rugged unit breaks up to 20 amperes, at 230 volts. Armature is equipped with bakelite contact mounting block carrying ⁵⁄₁₆" dual contacts. Bakelite is tested at 1500 volts breakdown to ground. Contacts are silver alloy. Relay is available in single pole, single throw, normally open contact combination only. Contact rating at 60 cycles, 230 V. non-inductive load. Size, 3"x1⅞"x1¾". Shipping wt., 5.5 oz.

60 CYCLES—AC

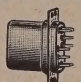
Mfg. No.	Volts	Coil Res.	Cont. Amps.	Cont. Comb.	Quantities 1-24	25-49	50-99
IR-220-A24	24	25	20	SPST*	$3.95	$3.56	$3.36
IR-220-A115	115	600	20	SPST*	4.45	4.01	3.78
IR-220-A230	230	2500	20	SPST*	4.95	4.46	4.21

*Normally Open

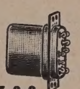
MICRO-MINIATURE RELAYS-DC



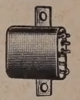
1005-1-1
Plug-In



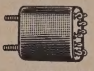
1005-1-2
Plug-In with Mtg. Bracket



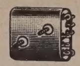
1005-2-2
Solder Hook with Mtg. Bracket



1005-2-3
Solder Hook with Mtg. Bracket



1005-2-4
Solder Hook with 4-40 Mtg. Studs



1005-2-5
Solder Hook with 4-40 Mtg. Studs

Concentrating maximum power in minimum space, the Series 1005 is the leader in micro-miniature relays. A few outstanding features are:

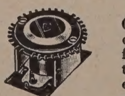
- Standard contact rating 3 amperes @ 125° C.
- Applicable specifications MIL-R-25018 and MIL-R-5757-C.
- Switches currents as low as 10 microamps at 30 millivolts.
- "Fluxless Solder" sealing eliminates possibilities of internal contamination.
- With the exception of coil lead splices (which are soldered) all internal electrical connections are welded.
- All production is 100% Mass Spectrometer leak tested.
- Complete Certified Test Reports are available.
- Unit is available in a variety of mounting arrangements and header terminations.

Six versions of the famous Guardian Series 1005 micro-miniature Hermetically Sealed Relay are immediately available from your nearby Guardian franchised stocking distributor in quantities ranging from a single unit, samples for testing, or additional quantities at factory prices.

SPECIFICATIONS:

Contact Arrangement: DPDT
Contact Rating: 3 amps non-inductive load at 28 volts dc @ +125° C
Operating Voltage: 26.5 volts dc nominal, 32 volts dc maximum
Pull-In: 18 volts dc maximum
Release: 8 volts dc maximum, 1 volt dc minimum
Operate and Release Time: 6 milliseconds maximum
Rated Duty: continuous
Operating Temperature: −65° C to +125° C
Coil Resistance: 600 ohms ±10%
Insulation Resistance: 10,000 megohms minimum at 100 volts dc @ 25° C
Dielectric Strength: 1000 volts RMS (750 volts RMS across contacts) at sea level **Seal:** hermetic (dry nitrogen)
Vibration Resistance: 20 G's minimum to 2000 CPS per MIL-R-5757-C, 15 G's to 1500 CPS per MIL-R-25018
Shock: 50 G's minimum for 11 milliseconds
Life Test: 100,000 operations minimum at rated contact load, at +125° C
Weight: 0.35 ounces (type 1005-1-1) 0.41 ounces (type 1005-2-2)
Size: .800" max. w., x .875" max. l., x .359" max. d.
Applicable Specifications: MIL-R-25018, class-B — MIL-R-5757-C

Mfg. No.	Volts	Coil Res.	Cont. Amps.	Cont. Comb.	Quantities 1-24	25-49	50-99
IR-1005-1-1	26.5 DC	600	3 max.	DPDT	$13.80	$12.42	$11.73
IR-1005-1-2	26.5 DC	600	3 max.	DPDT	13.80	12.42	11.73
IR-1005-2-2	26.5 DC	600	3 max.	DPDT	13.80	12.42	11.73
IR-1005-2-3	26.5 DC	600	3 max.	DPDT	13.80	12.42	11.73
IR-1005-2-4	26.5 DC	600	3 max.	DPDT	13.80	12.42	11.73
IR-1005-2-5	26.5 DC	600	3 max.	DPDT	13.80	12.42	11.73



32 POLE RELAY-DC

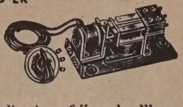
Group selector relay can simultaneously make common up to 32 circuits. All circuits insulated from ground. Contact blades molded in thermosetting phenolic. All contacting members completely enclosed. Phenolic plunger housing, 32 poles made common upon energization. Size, 2⁷⁄₃₂"x1¹⁷⁄₃₂"x2⅛". Shipping wt., 6 oz.

Mfg. No.	Volts	Coil Res. Ohms	Contacts	Quantities 1-24	25-49	50-99
IR-805-S	24-DC	72	32 P Shorting Relay	$4.30	$3.87	$3.66

GUARDIAN *Highest Quality* Industrial Controls

ELECTRICAL RESET OVERLOAD RELAY

Type-X-300-ER



Applicable for use in industrial panel installation, provides precise protection from current surges and continuous overloads. Remote panel installation of control potentiometer simplifies adjustment of relay to operate on any current value from 250 to 750 milliamperes. Auxiliary for pilot light indication of "overload" or "clear" position. Reset relay can be operated from any point convenient to operator. Insulation between coil and ground rated at 3,000 volts.

			Quantities		
Mfg. No.	Size	Shpg. Wt.	1-24	25-49	50-99
X-300-ER	4¾x2x1¹⁵⁄₁₆	13 oz.	$8.85	$7.97	$7.52

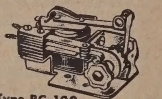
SEQUENCE RATCHET RELAY-AC

Type IR-M-120-115

Small but rugged 4 PDT stepper with 3-position switch operation, center position "off." Large cam assures precision "step" action. 24 pt. ratchet. Fine silver contacts rated for 10 amps., 115 volts, 60 cps. Unit rated at intermittent duty. Size, 3"x2¼"x2⁵⁄₁₆". Shipping wt., 10 oz.

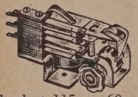
	Volts	Coil Res.			Max. Steps	Quantities		
Mfg. No.	60 cps	Ohms	VA.	Watts	/sec.	1-24	25-49	50-99
IR-M-120-115	115 AC	50	100	70	10	$11.75	$10.58	$9.99

IMPULSE RATCHET RELAYS-AC



Type RC-100

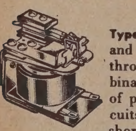
Ratchet type, on-off relay. Each momentary impulse causes relay to reverse the position of its cam actuated contacts. Heavy duty ¼" silver contacts rated at 1500 watts non-inductive, 115 volts, 60 cycles or up to 20 amperes locked rotor current, motor load control on 115 volts, 60 cycles. Intermittent duty coil can be operated by push button for remote on-off control of lights, motors, appliances, speakers, among others. Coil requires approx. 38. VA. (DPDT). Size, 3¼"x1⅞"x2³⁄₁₆". Shipping wt., 8 oz.



Type 670. For on/off control of lighting, motors, appliances and speaker applications, among others. Highly reliable operation over 1,000,000 steps. Each impulse (up to 10 steps per second) reverses contacts. Contact arrangements to D.P.D.T. and ratings to 12½ amperes resistive load at 115 v., 60 c. Intermittent duty coil with voltages to 230 VAC or 110 VDC. Available single, or in quantities at factory prices indicated below. Size, 3" x 1¾" x 2¹⁄₁₆". Shipping weight 7.5 oz.

	Volts	Coil Res.	Cont.	Quantities		
Mfg. No.	60 cps.	Ohms	Comb.	1-24	25-49	50-99
RC-100-AR-115	115 AC	125	4PST	$6.00	$5.40	$5.10
RC-100-BR-115	115 AC	125	SPDT & DPST	6.25	5.63	5.31
RC-100-CR-115	115 AC	125	SPDT	5.75	5.18	4.89
RC-100-GR-115	115 AC	125	DPDT	5.85	5.27	4.97
670-C115	115 AC	125	SPDT	5.75	5.18	4.89
670-G-115	115 AC	125	DPDT	5.85	5.27	4.97

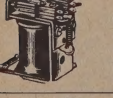
LATCHING ON/OFF RELAY-AC



Type IR-610L. Midget Latching Relay with single coil and 5 ampere contact rating for single pole, single throw, or single pole, double throw, contact combinations. Recommended for positive ON/OFF control of positioning devices, remote controls, lighting circuits and many additional applications. Impulse as short as 20 M.S. energizes coil to reverse position of snap-action switches. Holds last position of switch with coil de-energized. Size: 2⅛" L. x 1⅛" W. x 1⅝" H. Shipping Wt. 4 oz.

60 CYCLES—AC				Quantities		
Mfg. No.	Volts	Cont. Amps.	Cont. Comb.	1-24	25-49	50-99
IR-610L-A115	115 AC	5	SPST	$3.80	$3.42	$3.23
IR-610L-C115	115 AC	5	SPDT	3.95	3.56	3.36

PLATE CIRCUIT RELAY -DC



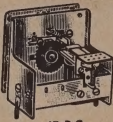
Type IR-625 with extra long coil for greater sensitivity. Adaptable to voltage operating as well as sensitive plate circuit control installations. Coil impregnated for reliability and longer life. Average power requirement, 0.2 watts. Contacts, fine silver. Size, 2⅛"x2"x1½". Shipping wt., 5.5 oz.

	Oper.	Coil Res.	Contact	Cont.	Quantities		
Mfg. No.	Mils	Ohms	Amps	Comb.	1-24	25-49	50-99
IR-625-2.5	9M.A.	2,500	8	DPDT	$3.85	$3.47	$3.27
IR-625-5	6.3M.A.	5,000	8	DPDT	4.25	3.83	3.61
IR-625-10	4.5M.A.	10,000	8	DPDT	5:25	4.73	4.46

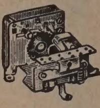
STEPPING RELAYS

For accurate sequence selecting, pulse multiplying, pulse dividing, circuit selecting, automatic homing, remote homing, counting and latching.

CONTINUOUS ROTATION



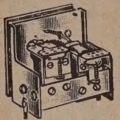
IR-P.C.



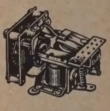
IR-M.C.

Type IR-P.C. Constructed with micro-finished shaft and Oilite shaft bearing. Beryllium copper pawl control shutter. Selection contacts are terminated on a phenolic board, solder beaded for easy soldering. Mechanical life expectancy estimated 4,000,000 steps. Will operate satisfactorily at 15% below or 10% above rated voltage. **Type IR-M.C.** is a smaller continuous rotation operation stepper similar to the P.C. with life expectancy of 2,000,000 steps.

ELECTRICAL RESET



IR-P.E.R.

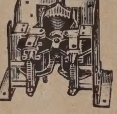


M.E.R.

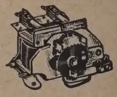
Type IR-P.E.R. Constructed with micro-finished shaft and Oilite shaft bearing. Positive mechanical stops limit total number of "steps" in any single unit. Returns automatically to home or start position when reset coil is energized.

Type M.E.R. A direct drive (steps on energization) with positive mechanical reset interlock actuated by the reset magnet and unlocked on the first energization of the step magnet. Assures positive reset on as short a pulse as one-hundredth of a second or even from its own selection contacts. Unit is capable of counting in groups up to 21, then resetting automatically. By interconnecting two or more Steppers, count can be increased to any desired total counting by tens, or any convenient multiple. Will control a sequence of operation and then automatically reset to starting position.

ADD AND SUBTRACT



IR-R.A.S.



IR-M.A.S.

Type IR-R.A.S. Non-ferrous shutters control motion of the pawl to extend life of unit and prevent skipping of the ratchet. Steps one step at a time in either direction, depending upon which one of two coils may be energized.

Type IR-M.A.S. Midget Add and Subtract Stepper is similar to the R.A.S. A zero position switch is opened at home position.

Guardian Steppers are *intermittent duty units* rated at 10% duty cycle (out of each hour), maximum energization single period, 5 minutes. See chart for details.

DATA CHART FOR STEPPING RELAYS

Mfg. No.	Coil* Voltage	Volt Amperes	Watts	Number of Points	No. of Active Contacts ***	Max. Steps Per Second
IR-PC-115	115 AC	70	45	40	40	20
IR-MC-115	115 AC	30	18	24	24	20
IR-PER-115	115 AC	70-25**	45-15**	40	36	20
MER-115	115 AC	30-9**	18-7**	24	22	20
IR-RAS-115	115 AC	100	45	40	38	10
IR-MAS-115	115 AC	15	10	30	****	10

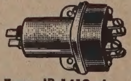
Mfg. No.	SIZE			Shpg. Wt.	Quantities		
	Length	Width	Height		1-24	25-49	50-99
IR-PC-115	3⅜	3	3⁹⁄₁₆	17 oz.	$18.15	$16.34	$15.43
IR-MC-115	2³⁄₁₆	3	3¼	9½ oz.	13.00	11.70	11.05
IR-PER-115	3	3⅜	3⁹⁄₁₆	22 oz.	24.20	21.78	20.57
MER-115A	3¼	2³⁄₁₆	3¼	11½ oz.	14.00	12.60	11.90
IR-RAS-115	3¹⁄₁₆	4⅛	3⁹⁄₁₆	29½ oz.	25.30	22.77	21.51
IR-MAS-115	1¹⁵⁄₁₆	3⅛	3	11 oz.	15.95	14.36	13.56

*Steppers will operate satisfactorily at 15% below or 10% above rated voltage.

**Listings are for stepping coil and reset coil, respectively.

***Includes Zero (0) position. ****Zero (0) position switch only.

POWERLOID®-AC



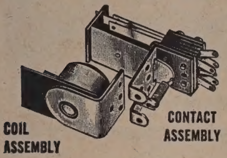
Type IR-1410-A

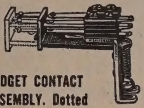
Rugged, totally enclosed control with contact rating, 3 H.P. U/L motor load at 230 volts, or 8,000 watts resistive heater load. This unique unit, exclusive with Guardian, is a solenoid operated heavy duty relay. A.M.P. terminals on coil; screw-type terminals on contacts. Contacts, S.P.S.T.N.O.D.B., Size, 3⅝"x2¹⁄₃₂"x2". Shipping wt., 5.5 oz.

		Coil Res.	Cont.	Quantities		
Mfg. No.	Volts	Ohms	Comb.	1-24	25-49	50-99
IR-1410-A-115	115 AC	450	SPST DB	$4.30	$3.87	$3.66

Available NOW from your STOCKING DISTRIBUTOR

UNIVERSAL SERIES 200 RELAY with completely interchangeable COIL and CONTACT ASSEMBLIES




MIDGET CONTACT ASSEMBLY. Dotted lines show size of STANDARD unit.

Coil and contact assemblies for building your own relays. Many possible combinations are available, covering most electrical and electronic applications. Select the two basic parts, a coil assembly and a contact switch assembly, from the chart listing. The coil assembly consists of the coil and the field piece; the contact assembly consists of switch blades, armature, return spring and mounting bracket. Use contact switch parts to add poles. All contacts rated at 60 cycles A.C., non-inductive. Shipping weight, 4 oz., each unit. Standard contact assembly is $2\frac{7}{8}$" long, $1\frac{3}{4}$" high, 1" wide. Midget assembly is $1\frac{5}{8}$" long. Mounting, all Series 200 relays: (2) 6-32 mtg. holes, .687" centers.

CONTACT SWITCH PARTS

Use contact switch parts 200-3 for adding poles to contact switch assemblies 200-1 and 200-2. Use midget contact switch parts 200-M3 for adding poles to midget contact switch assemblies 200-M1 and 200-M2.

	Quantities				Quantities		
Mfg. No.	1-24	25-49	50-99	Mfg. No.	1-24	25-49	50-99
200-3	$1.50	$1.35	$1.28	200-M3	$1.50	$1.35	$1.28

SERIES 200 RELAY

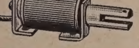
Mfg. No.	Volts	Coils	Quantities 1-24	25-49	50-99
200-6A	6	A.C.	$1.75	$1.58	$1.49
200-12A	12	A.C.	1.75	1.58	1.49
200-24A	24	A.C.	1.75	1.58	1.49
200-115A	115	A.C.	2.05	1.85	1.74
200-230A	230	A.C.	2.70	2.43	2.30
200-6D	6	D.C.	1.90	1.71	1.62
200-12D	12	D.C.	1.90	1.71	1.62
200-24D	24	D.C.	1.90	1.71	1.62
200-32D	32	D.C.	1.90	1.71	1.62
200-110D	110	D.C.	2.50	2.25	2.13
200-5,000D		PLATE COIL	2.20	1.98	1.87
200-10,000D		PLATE COIL	2.50	2.25	2.13

CONTACT SWITCH ASSEMBLIES

Mfg. No.	Type	Contact Amps.	Cont. Comb.	Quantities 1-24	25-49	50-99
200-1	STANDARD	8	SPDT	$1.50	$1.35	$1.28
200-2	STANDARD	8	DPDT	2.00	1.80	1.70
200-4	STANDARD	12.5	DPDT	2.25	2.03	1.91
200-5	STANDARD	8	4PDT	3.50	3.15	2.98
200-M1	MIDGET	10	SPDT	1.40	1.26	1.19
200-M2	MIDGET	10	DPDT	1.75	1.58	1.49
200-M5	MIDGET	8	4PDT	2.85	2.57	2.42

GUARDIAN INDUSTRIAL SOLENOIDS

CONTINUOUS OR INTERMITTENT SERVICE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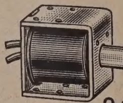
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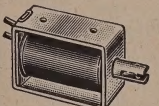
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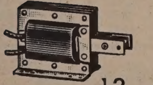
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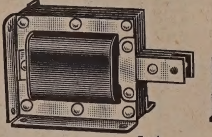
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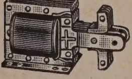
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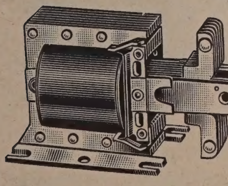
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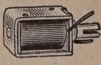
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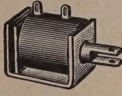
24

Available in both intermittent and continuous duty types. Intermittent types should not be energized for more than 5 consecutive minutes, or be permitted to rise more than 85° C. above 24° C. ambient, without giving sufficient time to cool between operation cycles. Continuous duty types are designed so they will not rise more than 85° C. above the 24° C. ambient temperature when operated at rated load. Plunger has slotted end with ⅛" diameter hole for coupling.

AC ASSEMBLIES

Mfg. No.	Volts	Duty	Ohms	Amps	Lift Oz.*	Net Each, Lots of 1-24	25-49	50-99
1A1	115	I	300	.17	8	$2.35	$2.12	$2.00
1A1	115	C	675	.076	3	2.35	2.12	2.00
2	115	I	60	.50	27	3.20	2.88	2.72
2	115	C	166	.155	10.5	3.20	2.88	2.72
4	115	I	37	.64	24	3.20	2.88	2.72
4	115	C	133	.14	6	3.20	2.88	2.72
11	24	I	5.1	1.10	20	2.70	2.43	2.30
11	24	C	12	.33	8	2.70	2.43	2.30
11	115	I	125	.225	20	2.70	2.43	2.30
11	115	C	300	.072	8	2.70	2.43	2.30
12	115	I	100	.27	32	4.15	3.74	3.53
12	115	C	150	.155	22	4.15	3.74	3.53
14	115	I	11	1.4	110	5.50	4.95	4.68
14	115	C	18	.52	65	5.50	4.95	4.68
16	115	I	41	.54	96	3.20	2.88	2.72
16	115	C	85	.20	55	3.20	2.88	2.72
16	230	I	224	.215	96	3.40	3.06	2.89
16	230	C	355	.10	55	3.40	3.06	2.89
18	115	I	8.8	1.45	304	4.50	4.05	3.83
18	115	C	19.7	.39	145	4.50	4.05	3.83
18	230	I	45.2	.590	304	4.70	4.23	4.00
18	230	C	78	.20	145	4.70	4.23	4.00
24	115	I	310	.130	19	2.95	2.66	2.51
24	115	C	500	.07	12	2.95	2.66	2.51

DC ASSEMBLIES

Mfg. No.	Volts	Duty	Ohms	Amps	Lift Oz.*	Net Each, Lots of 1-24	25-49	50-99
1A1	24	I	42.6	.58	5	$2.35	$2.12	$2.00
1A1	24	C	74.4	.32	2	2.35	2.12	2.00
1A1	115	I	803	.14	5	2.35	2.12	2.00
1A1	115	C	2070	.05	2	2.35	2.12	2.00
4	24	I	15	1.6	57	3.20	2.88	2.72
4	24	C	50	.48	20	3.20	2.88	2.72
4	115	I	346	.33	57	3.20	2.88	2.72
4	115	C	1210	.09	20	3.20	2.88	2.72
11	6	I	1.98	3.00	39	2.70	2.43	2.30
11	6	C	4.5	1.35	21	2.70	2.43	2.30
11	24	I	32	.750	39	2.70	2.43	2.30
11	24	C	80	.300	21	2.70	2.43	2.30
22	6	I	5	1.20	24	2.60	2.34	2.21
22	6	C	9	.667	13	2.60	2.34	2.21
22	24	I	75	.320	24	2.60	2.34	2.21
22	24	C	144	.167	13	2.60	2.34	2.21

*Maximum; obtained during "cold" operation when plunger is down.

SIZE, WEIGHT AND STROKE

Type	Adjustable Stroke	Size, Inches L. x W. x H.	Shpg. Wt., Oz.
1A1	$\frac{1}{8}$"-$\frac{1}{2}$"†	$1\frac{3}{4} \times \frac{15}{16} \times 1\frac{1}{16}$	4.5
2	$\frac{1}{8}$"-$\frac{7}{8}$"	$1\frac{9}{16} \times 1\frac{7}{16} \times 1\frac{5}{8}$	10
4	$\frac{1}{8}$"-$1\frac{1}{8}$"	$2 \times 1\frac{7}{16} \times 1\frac{5}{8}$	14.5
11	$\frac{1}{8}$"-1"	$1\frac{5}{16} \times 1\frac{27}{32} \times 1\frac{3}{16}$	7.5
12	$\frac{1}{8}$"-1"	$1\frac{5}{8} \times 1\frac{3}{16} \times 1\frac{7}{16}$	6
14	$\frac{1}{8}$"-$1\frac{1}{2}$"	$2\frac{7}{16} \times 1\frac{7}{16} \times 2\frac{1}{16}$	19
16	$\frac{1}{8}$"-$\frac{3}{4}$"‡	$1\frac{5}{8} \times 1\frac{1}{8} \times 1\frac{7}{16}$	7.5
18	$\frac{1}{8}$"-1"	$2\frac{1}{2} \times 1\frac{13}{16} \times 2\frac{1}{16}$	16.5
22	$\frac{1}{16}$"-$\frac{3}{8}$"	$1\frac{1}{8} \times \frac{3}{4} \times \frac{3}{4}$	2.5
24	$\frac{1}{16}$"-$\frac{5}{8}$"	$1\frac{1}{4} \times 1 \times \frac{7}{8}$	3

†AC models; DC models $\frac{1}{8}$"-$\frac{3}{8}$". ‡Intermittent models; continuous models, $\frac{1}{8}$"-$\frac{5}{8}$". In chart, (I) indicates intermittent duty type, (C) indicates continuous duty type.

Write Today for the Name of Your Nearest Distributor

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MANUFACTURING COMPANY

"Everything Under Control"

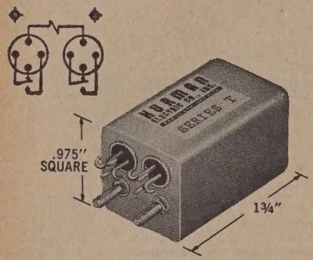
CHICAGO 7, ILLINOIS

KURMAN RELAYS

At KURMAN SALES AGENCIES, yesterday's SPECIALS are today's STANDARDS . . . stocked in your own backyard at Factory Prices!

Complete electrical operating characteristics of all standard stock relays on pages 1072-74.

SENSITIVE RELAYS

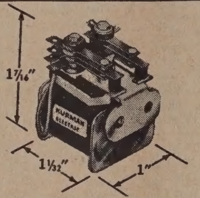


SERIES T002

SUB-MINIATURE — DC

Highest quality sensitive relay meeting both military and commercial DC requirements. Sensitivity—40 milliwatts—DPDT. Wide range of coil resistances up to 20,000 ohms. Special versions as low as 10 milliwatts. Mounting: 2 #4-40 screws on ½" centers.

Relay No.	(Ohms) Coil Resistance	Operating Current	Cont. Arr.	Contact Rating (Amps)	Net Ea. 1-10
T002-2000	2000	4.5 MA	DPDT	2	$15.10
T002-5000	5000	2.8 MA	DPDT	2	16.25
T002-8000	8000	2.2 MA	DPDT	2	16.75

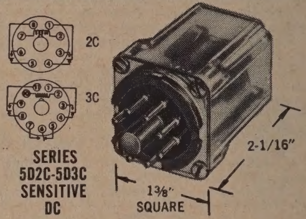


SERIES 52C-54C SENSITIVE DC

The 52C, DPDT and 54C, 4PDT are the smallest, lightest plate circuit relays offering self-wiping contacts. Either of three adjustments can be specified—25 milliwatts per pole (2 amp contacts); 50 milliwatts per pole (5 amp contacts) and "OFF THE SHELF" 100 milliwatts per pole (5 amp contacts). Coil resistances ar e available up to 20,000 ohms. Variations can be supplied up to 4PDT including hermetic sealing. Mounting: two No. 6/32 tapped holes on 0.437" centers.

100 MILLIWATTS PER POLE

Relay No.	(Ohms) Coil Resistance	Cont. Arr.	Contact Rating (Amps)	1-10 Net Ea.
52C-500	500	DPDT	5	$5.30
52C-2500	2500	DPDT	5	5.30
52C-5000	5000	DPDT	5	5.70
52C-8000	8000	DPDT	5	5.90
52C-10000	10000	DPDT	5	6.00
54C-500	500	4PDT	5	6.70
54C-2500	2500	4PDT	5	6.70
54C-5000	5000	4PDT	5	6.90
54C-8000	8000	4PDT	5	7.20
54C-10000	10000	4PDT	5	7.40

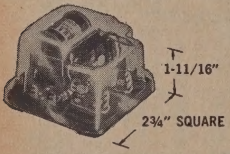


SERIES 5D2C-5D3C SENSITIVE DC

All standard operating characteristics of Series 52C are available in this new polystyrene high heat cover. Three adjustment ranges are provided—25 milliwatts per pole; 50 milliwatts per pole and "OFF THE SHELF" 100 milliwatts per pole. Variations can be supplied with contact arrangements up to 3PDT only. Mounting 8 pin octal plug for 5D2C; 11 pin for 5D3C.

100 MILLIWATTS PER POLE

Relay No.	(Ohms) Coil Resistance	Cont. Arr.	Contact Rating (Amps)	1-10 Net Ea.
5D2C-500	500	DPDT	5	$6.30
5D2C-2500	2500	DPDT	5	6.30
5D2C-5000	5000	DPDT	5	6.60
5D2C-8000	8000	DPDT	5	6.90
5D2C-10000	10000	DPDT	5	7.00
5D3C-500	500	3PDT	5	7.50
5D3C-2500	2500	3PDT	5	7.50
5D3C-5000	5000	3PDT	5	7.80
5D3C-8000	8000	3PDT	5	8.10
5D3C-10000	10000	3PDT	5	8.20



SERIES 310 MICROAMP DC SERIES 321 MICROAMP AC

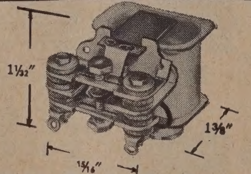
High sensitivity relay—2 milliwatts. Ideal for all low power in-put circuits where available current is at a premium. Typical applications include high speed keying, remote control, or battery operated devices. May be field adjusted to handle currents up to 3 amps at reduced sensitivity. Transparent plastic dust cover. Mounting: Two .196" clearance holes on 2⅛" x 2⅛" centers.

DC RELAYS

Relay No.	(Ohms) Coil Resistance	Operating Current	Cont. Arr.	Contact Rating (Amps)	1-10 Net Ea.
310DC35	470	2.1 MA	SPDT	1	$8.85
310DC37	1200	1.3 MA	SPDT	1	8.85
310DC40	4680	0.7 MA	SPDT	1	8.85
310DC42	11700	0.4 MA	SPDT	1	10.75
310DC44	29250	0.25 MA	SPDT	1	12.40

AC RELAYS

Relay No.	Operating Voltage	Contact Arrangement	Contact Rating (Amps)	1-10 Net Ea.
321DC78	6 V	SPDT	2	$9.25
321DC81	12 V	SPDT	2	9.25
321DC84	24 V	SPDT	2	9.25
321DC91	110 V	SPDT	2	9.50



SERIES 51C — MIDGET — AC or DC

Smallest, lightest plate circuit relay offering self-wiping contacts. Standard adjustment—10 milliwatts* DC operation; 0.3 VA AC operation. Adjustable 2 amp. SPDT screw contacts. New rigid front pile-up.

Variations—including 5 amp contacts, H. S. military relays, coils to 20,000 ohms available. Mounting: 2 #6-32 tapped holes on 0.437" centers.

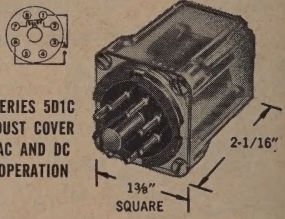
*51CB44D factory adjusted for 5 milliwatt operation — others can be field adjusted — 1 amp contact rating.

DC RELAYS

Relay No.	(Ohms) Coil Resistance	Operating Current	Cont. Arr.	Contact Rating (Amps.)	1-10 Net Ea.
51CA37D	500	4.5 MA	SPDT	2	$4.95
51CA40D	2000	2.3 MA	SPDT	2	4.95
51CA42D	5000	1.4 MA	SPDT	2	5.50
51CA43D	8000	1.2 MA	SPDT	2	5.50
51CB44D	13000	0.6 MA	SPDT	1	5.95

AC RELAYS

Relay No.	Operating Voltage	Contact Arrangement	Contact Rating (Amps.)	1-10 Net Ea.
51C83A	6 V	SPDT	2	$5.35
51C86A	12 V	SPDT	2	5.35
51C89A	24 V	SPDT	2	5.35



SERIES 5D1C DUST COVER AC AND DC OPERATION

All standard operating characteristics of series 51C available in this new polystyrene enclosed plug in unit. Easily removable case permits field adjustment without special equipment. Mounting: 8 pin octal plug in.

DC RELAYS

Relay No.	(Ohms) Coil Resistance	Operating Current	Cont. Arr.	Contact Rating (Amps)	1-10 Net Ea.
5D1CA37D	500	4.5 MA	SPDT	2	$5.95
5D1CA40D	2000	2.3 MA	SPDT	2	5.95
5D1CA42D	5000	1.4 MA	SPDT	2	6.50
5D1CA43D	8000	1.2 MA	SPDT	2	6.50
5D1CB44D	13000	0.6 MA	SPDT	1	6.95

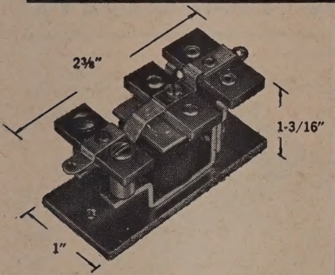
AC RELAYS

Relay No.	Operating Voltage	Contact Arrangement	Contact Rating (Amps)	1-10 Net Ea.
5D1C83A	6 V	SPDT	2	$8.35
5D1C86A	12 V	SPDT	2	8.35
5D1C89A	24 V	SPDT	2	8.35

IMMEDIATE DELIVERY

of stock relays at factory prices will save you engineering and purchasing time

POWER AND ANTENNA RELAYS



SERIES 261C—ECONOMY POWER

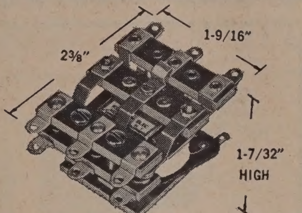
Both space and cost economy have been carefully balanced in the design of this heavy duty power relay. SPDT contacts rated at carrying continuous loads of 20 amps are standard. AC or DC operation. Mounting: 2 #6-32 tapped holes on 1-3/16" centers.

DC RELAYS

Type	Contact Arr.	Contact Rating (Amps)	6, 12 24 V Net	110 V Net
261C	SPDT	20	$5.45	$6.00

AC RELAYS

Type	Contact Arr.	Contact Rating (Amps)	6, 12 24, 115 V Net	230 V Net
261C	SPDT	20	$5.45	$6.00



SERIES 262C-263C—MEDIUM POWER

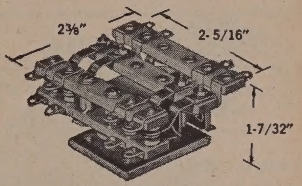
The DPDT and 3PDT relays feature self-wiping contacts, which will continuously handle 20 amp loads. AC or DC coils. This high speed relay will handle the majority of all power applications. Standard operating power; 1 watt—DPDT; 1½ watts—3PDT. Mounting: 4 #6-32 tapped holes on 13/16" x 1-3/16" centers.

DC RELAYS

Type	Contact Arr.	Contact Rating (Amps)	6, 12 24 V Net	110 V Net
262C	DPDT	20	$6.45	$7.00
263C	3PDT	20	6.95	7.50

AC RELAYS

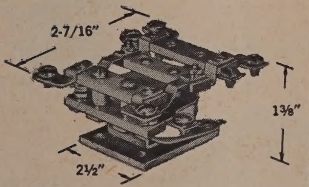
Type	Contact Arr.	Contact Rating (Amps)	6, 12 24, 115 V Net	230 V Net
262C	DPDT	20	$6.45	$7.00
263C	3PDT	20	6.95	7.50



SERIES 264C—MEDIUM POWER—DC

Special version of Series 26 for DC application only. Available as 4PDT. With a minimum of operating power, it is now possible to handle up to 4 power control circuits at one time. Mounting: 4 #6-32 tapped holes on 13/16" x 1-3/16" centers.

Type	Contact Arr.	Contact Rating (Amps)	6, 12 24 V Net	110 V Net
264C	4PDT	10	$8.55	$9.15



SERIES 26L—SCREW TERMINALS

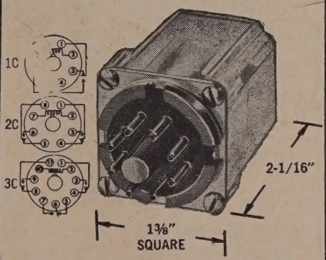
Heavy duty industrial control relay for all applications requiring high speed operation, long life and reliable high current contacts. All contacts rated at 30 amp. Heavy duty screw terminals. Mounting: two 3/16" diameter holes on 1⅞" centers.

DC RELAYS

Type	Contact Arr.	Contact Rating (Amps)	6, 12 24 V Net	110 V Net
26L2C	DPDT	30	$6.95	$7.50

AC RELAYS

Type	Contact Arr.	Contact Rating (Amps)	6, 12 24, 115 V Net	230 V Net
26L2C	DPDT	30	$6.95	$7.50



SERIES 26D—DUST COVER

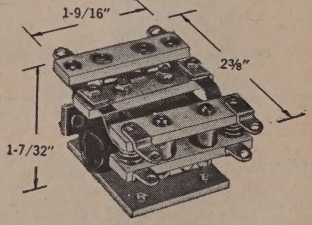
Midget version of standard Series 26 in clear polystyrene enclosure. Available up to 3PDT with standard contacts rated at 10 amps. Mounting: 8 pin octal plug in for standard DPDT; 11 pin octal type plug in for 3PDT.

DC RELAYS

Type	Contact Arr.	Contact Rating (Amps)	6, 12 24 V Net	110 V Net
26D1C	SPDT	10	$5.45	$5.95
26D2C	DPDT	10	6.45	7.00
26D3C	3PDT	10	7.95	8.50

AC RELAYS

Type	Contact Arr.	Contact Rating (Amps)	6, 12 24, 115 V Net	230 V Net
26D1C	SPDT	10	$5.45	$6.15
26D2C	DPDT	10	6.45	8.00
26D3C	3PDT	10	7.95	8.50



SERIES 252C-253C—ANTENNA

Powerful antenna change-over relay, capable of transferring up to 1500 watts RF load. High speed DPDT self-wiping contacts. AC or DC operation. Low loss handling of RF energy is insured by the use of G-7 insulating bridges. Present use includes the 450 megacycle range. Standard operating power—1 watt. Mounting: 4 #6-32 tapped holes on 13/16" x 1-3/16" centers.

DC RELAYS

Type	Contact Arr.	Contact Rating (Amps)	6, 12 24 V Net	110 V Net
252C	DPDT	1.5 KW RF	$7.50	$8.10
253C	3PDT	1.5 KW RF (2C) 20 amp (1C)	8.50	8.60

AC RELAYS

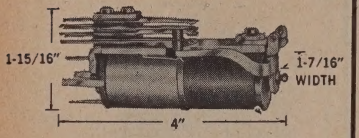
Type	Contact Arr.	Contact Rating (Amps)	6, 12 24 V 115 V Net
252C	DPDT	1.5 KW RF	$7.50
253C	3PDT	1.5 KW RF (2C) 20 amp (1C)	8.00

All prices are for orders from 1-10 relays. Write for quantity discounts.

KURMAN RELAYS

Complete electrical operating characteristics of all standard stock relays on pages 1072-74.

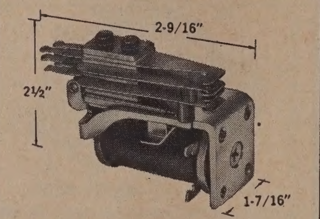
MICRO-MINIATURE AND TELEPHONE TYPE RELAYS



SERIES A — LONG FORM — DC

Designed for applications requiring rapid opening and closing of up to 15 individual circuits (forms A-E). Single or double wound coils with resistances up to 75,000 ohms. The heavy duty armature hinge with a non-loosening knurled armature pin provides an extra long operational life. Tinned solder terminals for rear of panel wiring. For sensitivity, ruggedness, reliability, multiple switching and economy, the Series A has no equal. Mounting: 2 #8-32 tapped holes on ¾" centers.

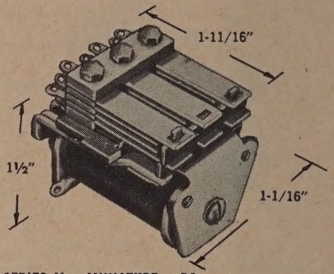
Relay No.	Contact Arr.	Coil Volt	Coil (Ohms)	Contact Rating (Amps)	Net 1-10
A004-6	**4PDT**	**6**	**40**	**3**	**$8.65**
A004-12	**4PDT**	**12**	**140**	**3**	**9.10**
A004-24	**4PDT**	**24**	**600**	**3**	**9.20**
A004-110	**4PDT**	**110**	**10,000**	**3**	**10.30**



SERIES E — SHORT FORM — DC

Featuring all the benefits of the long form relay, and incorporating a shortened coil and heel piece, this relay is desired where space economy is a factor. Extremely fast contact switching — ideal for computer applications. High reliability—designed for hundreds of millions of operations. Sensitive versions as low as 100 milliwatt per pole. Mounting: 4 #8-32 tapped mounting holes on ⅝" x ¾" centers.

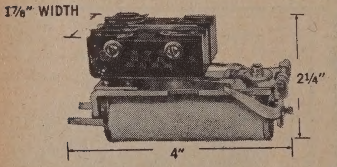
Relay No.	Contact Arr.	Coil Volt	Coil (Ohms)	Contact Rating (Amps)	Net 1-10
E004-6	**4PDT**	**6**	**40**	**3**	**$7.65**
E004-12	**4PDT**	**12**	**145**	**3**	**8.10**
E004-24	**4PDT**	**24**	**590**	**3**	**8.20**
E004-110	**4PDT**	**110**	**10,000**	**3**	**9.30**



SERIES M — MINIATURE — DC

Ideal for all applications where space, weight and economy are factors. Short springs and light-weight armature provide fast action, reliability and long life. Up to 18 contact arms, forms (A-D). Good shock and vibration characteristics. DC operation only. Mounting: 2 #4-40 tapped holes on ¾" centers.

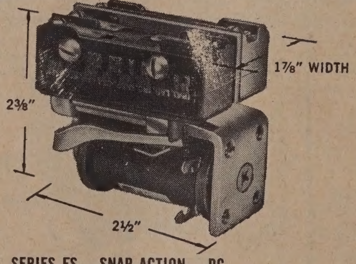
Relay No.	Contact Arr.	Coil Volt	Coil (Ohms)	Contact Rating (Amps)	Net 1-10
M004-6	**4PDT**	**6**	**30**	**3**	**$6.30**
M004-12	**4PDT**	**12**	**120**	**3**	**6.30**
M004-24	**4PDT**	**24**	**480**	**3**	**6.30**
M004-110	**4PDT**	**110**	**12,000**	**3**	**7.25**



SERIES AS — SNAP ACTION — DC

Special version of Series A shown above, offered with either one or two snap action switches. For sensitive switching of power control circuits, carrying currents of up to 15 amps per pole. Mounting: 2 #8-32 tapped holes on ¾" centers.

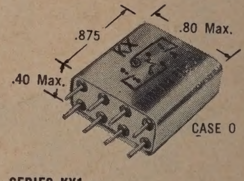
Relay No.	Contact Arr.	Coil Volt	Coil (Ohms)	Contact Rating (Amps)	Net 1-10
AS2-6	**DPDT**	**6**	**40**	**15**	**$12.00**
AS2-12	**DPDT**	**12**	**140**	**15**	**12.45**
AS2-24	**DPDT**	**24**	**600**	**15**	**12.55**
AS2-110	**DPDT**	**110**	**10,000**	**15**	**13.70**



SERIES ES — SNAP ACTION — DC

Either one or two snap action switches mounted on standard Series E frame, offering sensitive operation, handling high currents in ⅝ of the volume of the Series AS. Mounting: 4 #8-32 tapped holes on ⅝" x ¾" centers.

Relay No.	Contact Arr.	Coil Volt	Coil (Ohms)	Contact Rating (Amps)	Net 1-10
ES2-6	**DPDT**	**6**	**23**	**15**	**$11.50**
ES2-12	**DPDT**	**12**	**92**	**15**	**11.95**
ES2-24	**DPDT**	**24**	**370**	**15**	**12.05**
ES2-110	**DPDT**	**110**	**8,250**	**15**	**13.20**



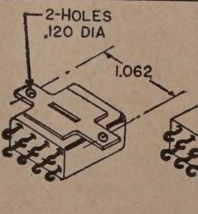
SERIES KX1 — MICRO-MINIATURE — DC

Equipped with special DPDT 2 amp contacts rated to carry any load from dry circuit to full rating. Features at 1/10" grid spaced header. Nominal operating power—250 milliwatts.

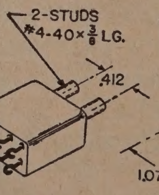
New torsional rotation balanced armature offers 20G, 2,000 cycle vibration and 50G shock immunity. Proven reliability under all environmental conditions. A frictionless bearing assures repeatability and long life.

MICRO-MINIATURE RELAYS—DC

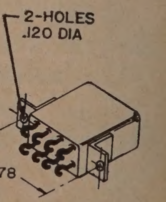
Relay No.	Case Style	Header	Cont. Arr.	Contact Rating (Amps)	6, 12, 24 VDC Net 1-10
KX1P20	**0**	**Plug-in**	**DPDT**	**2 amp**	**$15.95**
KX1H2D	**D**	**Solder**	**DPDT**	**2 amp**	**16.20**
KX1H2C	**C**	**Solder**	**DPDT**	**2 amp**	**16.20**
KX1H2E	**E**	**Solder**	**DPDT**	**2 amp**	**16.20**



Case D



Case C



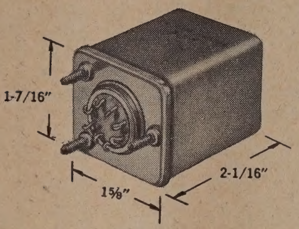
Case E

IMMEDIATE DELIVERY

of stock relays at factory prices will save you engineering and purchasing time

At KURMAN SALES AGENCIES, yesterday's SPECIALS are today's STANDARDS . . . stocked in your own backyard at Factory Prices!

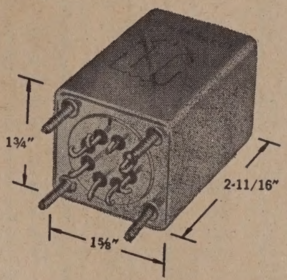
HERMETICALLY SEALED



SM004E — MINIATURE TELEPHONE

Hermetically sealed version of Series M. This relay equipped with 4PDT contacts rated at amp. Operating from a 26.5 V DC nominal input source. Solder lug terminals. Hermetic enclosure makes the relay impervious to all detrimental atmospheric conditions, including contaminating gases, dust salt, etc. Mounting: 3 #6-32 studs on 15/16" x 1-3/16" centers.

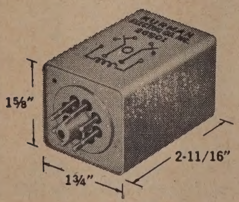
Relay Type	Contact Arrangement	Contact Rating (Amps)	Coil Voltage	1-10
SM004E	4PDT	3	26.5 V DC	$11.60 Net



#26S20 — HEAVY DUTY

Hermetically sealed version of Series 26, equipped with heavy duty construction, offering contacts rated at 25 amps. Relay operates at 115 V AC nominal, and offers a standard DPDT construction. Can be externally wired for double-make or break arrangements. Excellent for all industrial and other remote power controls. Mounting: 4 #6-32 studs on 1¼" x 1⅛" centers.

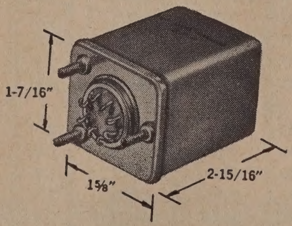
Relay Type	Contact Arrangement	Contact Rating (Amps)	Coil Voltage	1-10
26S20	DPDT	25	115 V AC	$14.80 Net



#26S01 — MEDIUM POWER

Hermetically sealed Series 26 relay. DPDT contacts—rated at 10 amps. 115 V AC nominal coil operation. Equipped with octal plug-in. Small enclosures. Mounting: 8 pin octal plug-in.

Relay Type	Contact Arrangement	Contact Rating (Amps)	Coil Voltage	1-10
26S01	DPDT	10	115 V AC	$12.85 Net



SM004F — 400 CYCLE

Special version of Series M relay equipped with internal rectifiers. Nominal operation—110 V AC, 400 cycle (this relay can be used on frequencies as low as 60 cps). 4PDT contacts rated at 3 amp. Excellent vibration and shock characteristics. Solder lug terminals. Mounting: 3 #6-32 studs on 15/16" x 1-3/16" centers.

Relay Type	Contact Arrangement	Contact Rating (Amps)	Coil Voltage	1-10
SM004F	4PDT	3	115 V AC-400 cps	$13.60 Net

All prices and specifications are subject to change without notice. Prices shown are for quantities of 1-10. Consult a Kurman Sales Agency for discounts on larger quantities.

KURMAN relays-engineering specifications

Complete electrical operating characteristics of all standard stock relays available off-the-shelf at factory prices.

SENSITIVE DC RELAYS

(See Illustrations and Dimensions on Preceeding Pages)

Relay No.	Resistance (ohms) ± 10%	Contact Arrangements	OPERATE CHARACTERISTICS						Oper. time† (milli-secs)		Contact rating + (amp)		Coil Impreg.
			Current (ma)			Approx. Voltage * (volts)							
			Pull In	Max.	Drop out	At Pull In I	at Max. I	at Drop Out I	at †† Nom. I	at Max. I	28 VDC	115 VAC	
T002-2000	2000	DPDT	4.5	35	1.5	9	70	3.0	20-40	5	2	2	no
T002-5000	5000	DPDT	2.8	22	1.0	14	100	5	20-40	5	2	2	no
T002-8000	8000	DPDT	2.3	18	0.8	18	128	6.4	20-40	5	2	2	no
310DC35	470	SPDT	2.1	65	0.2	1.0	31	0.09	10-20	2-3	0.5	1	no
310DC37	1200	SPDT	1.3	41	0.13	1.56	49	0.15	10-20	2-3	0.5	1	no
310DC40	4680	SPDT	0.65	20	0.06	3.0	98	0.3	10-20	2-3	0.5	1	yes
310DC42	11700	SPDT	0.41	13	0.04	4.8	152	0.48	10-20	2-3	0.5	1	yes
310DC44	29250	SPDT	0.26	8	0.02	7.6	243	0.7	10-20	2-3	0.5	1	yes
51CA37D	500	SPDT	4.5	63	0.45	2.2	31.5	0.22	10-20	2-3	2	2	no
51CA40D	2000	SPDT	2.3	32	0.22	4.5	63	0.45	10-20	2-3	2	2	yes
51CA42D	5000	SPDT	1.4	20	0.14	7.0	100	0.7	10-20	2-3	2	2	yes
51CA43D	8000	SPDT	1.2	16	0.11	9	126	0.9	10-20	2-3	2	2	yes
51CB44D	13000	SPDT	0.6	12	0.06	8.2	161	0.8	10-20	2-3	1	1	yes
52C-500	500	DPDT	20	63	1.2	10	32	0.6	8-16	3-8	5	5	no
52C-2500	2500	DPDT	8.8	28	0.5	22	70	1.3	8-16	3-8	5	5	yes
52C-5000	5000	DPDT	6.3	20	0.3	32	100	1.9	8-16	3-8	5	5	yes
52C-8000	8000	DPDT	5.0	16	0.30	40	128	2.4	8-16	3-8	5	5	yes
52C-10000	10000	DPDT	4.4	14	0.2	44	140	2.6	8-16	3-8	5	5	yes
54C-500	500	4PDT	28.2	63	2.8	14.2	32	1.4	8-16	3-8	5	5	no
54C-2500	2500	4PDT	12.6	28	1.3	32	70	3.2	8-16	3-8	5	5	yes
54C-5000	5000	4PDT	8.9	20	0.9	45	100	4.5	8-16	3-8	5	5	yes
54C-8000	8000	4PDT	7.0	16	0.7	56	128	5.6	8-16	3-8	5	5	yes
54C-10000	10000	4PDT	6.3	14	0.6	63	140	6.3	8-16	3-8	5	5	yes
5D1CA37D	500	SPDT	4.5	63	0.45	2.2	31.5	0.22	10-20	2-3	2	2	no
5D1CA40D	2000	SPDT	2.3	32	0.22	4.5	63	0.45	10-20	2-3	2	2	yes
5D1CA42D	5000	SPDT	1.4	20	0.14	7.0	100	0.7	10-20	2-3	2	2	yes
5D1CA43D	8000	SPDT	1.2	16	0.11	9	126	0.9	10-20	2-3	2	2	yes
5D1CB44D	13000	SPDT	0.6	12	0.06	8.2	161	0.8	10-20	2-3	1	1	yes
5D2C-500	500	DPDT	20	63	1.2	10	32	0.6	8-16	3-8	5	5	no
5D2C-2500	2500	DPDT	8.8	28	0.5	22	70	1.3	8-16	3-8	5	5	yes
5D2C-5000	5000	DPDT	6.3	20	0.3	32	100	1.9	8-16	3-8	5	5	yes
5D2C-8000	8000	DPDT	5.0	16	0.30	40	128	2.4	8-16	3-8	5	5	yes
5D2C-10000	10000	DPDT	4.4	14	0.2	44	140	2.6	8-16	3-8	5	5	yes
5D3C-500	500	3PDT	24.4	63	2.5	12.2	32	1.2	8-16	3-8	5	5	no
5D3C-2500	2500	3PDT	10.9	28	1.1	27.2	70	2.8	8-16	3-8	5	5	yes
5D3C-5000	5000	3PDT	7.7	20	0.7	39	100	3.9	8-16	3-8	5	5	yes
5D3C-8000	8000	3PDT	6.0	16	0.6	48	128	4.8	8-16	3-8	5	5	yes
5D3C-10000	10000	3PDT	5.4	14	0.5	54	140	5.4	8-16	3-8	5	5	yes

NOTES:

* Voltage rating of current operated relays is specified at nominal resistance and may vary directly with actual resistance

* * Current rating of voltage operated relays is specified at nominal resistance and may vary inversely with actual resistance

† When energized from a high impedance power source.

† † For timing purposes, nominal current is considered 5% above pull-in current

+ All ratings are for 100,000 operations minimum, with resistive load.

++ Not specified uses two internal rectifiers. Varies with source frequency ranging 47-440 CPS

All figures are based on 20°C. ambient temperature operation.

ALL SHADED AREAS ARE APPROXIMATE VALUES

See preceding pages for symbol descriptions

KURMAN relays-engineering specifications (continued)

Complete electrical operating characteristics of all standard stock relays available off-the-shelf at factory prices.

DC RELAYS

(See Illustrations and Dimensions on Preceeding Pages)

Relay No.	Resistance (ohms) ±10%	Contact Arrangements	OPERATE CHARACTERISTICS							Oper. time† (milli-secs)		Contact Rating+ (amps)		Coil Impreg.
			Approx DC Current** (ma)			Approx DC Voltage (volts)								
			at Pull In V	at Nom. V	at Drop Out V	Pull In	Nom.	Max.	Drop Out	Nom. V	Max. V	28 VDC	115 VAC	
DC MEDIUM POWER AND ANTENNA RELAYS														
26D1C6DC	27	SPDT	185	222	18.5	5	6	9	0.5	10-15	5-10	10	10	no
26D1C12DC	108	SPDT	84	112	8.8	9	12	18	1.0	10-15	5-10	10	10	no
26D1C24DC	428	SPDT	42	56	4.2	18	24	36	2.0	10-15	5-10	10	10	no
26D1C110DC	6800	SPDT	11	16	1.1	75	110	140	10	10-15	5-10	10	10	yes
26D2C6DC	27	DPDT	185	222	18.5	5	6	9	0.5	10-15	5-10	10	10	no
26D2C12DC	108	DPDT	88	112	8.8	9.5	12	18	1.0	10-15	5-10	10	10	no
26D2C24DC	428	DPDT	47	56	4.7	20	24	36	2.0	10-15	5-10	10	10	no
26D2C110DC	6800	DPDT	12	16	1.2	80	110	140	10	10-15	5-10	10	10	yes
26D3C6DC	17	3PDT	294	350	29	5	6	7	0.5	10-15	5-10	10	10	no
26D3C12DC	68	3PDT	147	176	15	10	12	14	1.0	10-15	5-10	10	10	no
26D3C24DC	270	3PDT	74	89	7.4	20	24	28	2.0	10-15	5-10	10	10	no
26D3C110DC	6800	3PDT	13	16	1.3	90	110	140	10	10-15	5-10	10	10	yes
261C6DC	43	SPDT	108	140	10.8	5	6	13	0.5	10-15	5-10	20	20	no
261C12DC	170	SPDT	56	71	5.6	9.5	12	26	1.0	10-15	5-10	20	20	no
261C24DC	680	SPDT	26	35	2.6	18	24	52	2.0	10-15	5-10	20	20	no
261C110DC	6800	SPDT	10.4	16	1.0	70	110	165	10	10-15	5-10	20	20	yes
262C6DC	27	DPDT	185	222	18.5	5	6	10	0.5	10-15	5-10	20	20	no
262C12DC	108	DPDT	88	112	8.8	9.5	12	21	1.0	10-15	5-10	20	20	no
262C24DC	428	DPDT	42	56	4.2	18	24	41	2.0	10-15	5-10	20	20	no
262C110DC	6800	DPDT	12	16	1.1	80	110	165	10	10-15	5-10	20	20	yes
263C6DC	17	3PDT	265	350	29	4.5	6	8	0.5	10-15	5-10	20	20	no
263C12DC	68	3PDT	147	176	14.7	9.5	12	16	1.0	10-15	5-10	20	20	no
263C24DC	270	3PDT	78	89	7.8	20	24	33	2.0	10-15	5-10	20	20	no
263C110DC	6800	3PDT	12.5	16	1.25	85	110	165	10	10-15	5-10	20	20	yes
26L2C6DC	27	DPDT	185	222	18.5	5	6	10	0.5	10-15	5-10	20	30	no
26L2C12DC	108	DPDT	88	112	8.8	9.5	12	21	1.0	10-15	5-10	20	30	no
26L2C24DC	428	DPDT	48	56	4.8	20	24	41	2.0	10-15	5-10	20	30	no
26L2C110DC	6800	DPDT	12	16	1.2	80	110	165	10	10-15	5-10	20	30	yes
252C6DC	27	DPDT	185	222	18.5	5	6	10	0.5	10-15	5-10	1.5 KW RF		no
252C12DC	108	DPDT	88	112	8.8	9.5	12	21	1.0	10-15	5-10			no
252C24DC	428	DPDT	42	56	4.2	18	24	41	2.0	10-15	5-10			no
252C110DC	6800	DPDT	12	16	1.1	80	110	165	10	10-15	5-10			yes
253C6DC	17	3PDT	265	350	29	4.5	6	8	0.5	10-15	5-10	1C-20 amp 2C-1.5 KW RF		no
253C12DC	68	3PDT	140	176	14.7	9.5	12	16	1.0	10-15	5-10			no
253C24DC	270	3PDT	74	89	7.4	20	24	33	2.0	10-15	5-10			no
253C110DC	6800	3PDT	12.7	16	1.3	85	110	165	10	10-15	5-10			yes
DC TELEPHONE RELAYS														
A004-6	40	4PDT	125	150	25	5	6	20	1.0	15-20	5-10	3	3	no
A004-12	140	4PDT	68	86	14	9.5	12	37	1.9	15-20	5-10	3	3	no
A004-24	600	4PDT	33	40	6.6	20	24	77	4	15-20	5-10	3	3	no
A004-110	10K	4PDT	9.5	11	1.9	95	110	300	19	15-20	5-10	3	3	no
E004-6	40	4PDT	125	150	25	5	6	15	1.0	15-20	5-10	3	3	no
E004-12	145	4PDT	65	83	13	9.5	12	30	1.9	15-20	5-10	3	3	no
E004-24	590	4PDT	34	41	6.8	20	24	60	4	15-20	5-10	3	3	no
E004-110	10K	4PDT	9.5	11	1.9	95	110	240	19	15-20	5-10	3	3	no
M004-6	30	4PDT	166	200	33	5	6	11	1.0	15-20	5-10	3	3	no
M004-12	120	4PDT	79	100	16	9.5	12	22	1.9	15-20	5-10	3	3	no
M004-24	480	4PDT	42	50	8.4	20	24	44	4	15-20	5-10	3	3	no
M004-110	12K	4PDT	8	9.2	1.6	95	110	220	19	15-20	5-10	3	3	yes
AS2-6	40	DPDT	125	150	12.5	5	6	20	0.5	15-20	5-10	6	15	no
AS2-12	140	DPDT	68	203	6.8	9.5	12	37	0.9	15-20	5-10	6	15	no
AS2-24	600	DPDT	33	40	3.3	20	24	77	2.0	15-20	5-10	6	15	no
AS2-110	10K	DPDT	9.5	11	0.95	95	110	300	9.5	15-20	5-10	6	15	no
ES2-6	23	DPDT	218	260	22	5	6	12	0.5	15-20	5-10	6	15	no
ES2-12	92	DPDT	98	130	10	9.5	12	24	0.9	15-20	5-10	6	15	no
ES2-24	370	DPDT	54	65	5.4	20	24	47	2.0	15-20	5-10	6	15	no
ES2-110	8250	DPDT	10.5	13.4	1.1	95	110	220	9.5	15-20	5-10	6	15	no
DC MICRO-MINIATURE AND HERMETICALLY SEALED RELAYS														
KX1P20 KX1H2C KX1H2D KX1H2E -6	35	DPDT DPDT DPDT DPDT	92		9.2	3.4	6	7.2	0.3	5	3-5	2	2	no
KX1P20 KX1H2C KX1H2D KX1H2E -12	150	DPDT DPDT DPDT DPDT	45		4.5	6.7	12	14.5	0.7	5	3-5	2	2	no
KX1P20 KX1H2C KX1H2D KX1H2E -24	600	DPDT DPDT DPDT DPDT	21		2.1	13	24	30	1.3	5	3-5	2	2	no
SM004E	300	4PDT	60	89	10	18	26.5	35	3	15-20	10-15	3	3	no

NOTES:
- * Voltage rating of current operated relays is specified at nominal resistance and may vary directly with actual resistance
- ** Current rating of voltage operated relays is specified at nominal resistance and may vary inversely with actual resistance
- † When energized from a high impedance power source.
- †† For timing purposes, nominal current is considered 5% above pull-in current
- + All ratings are for 100,000 operations minimum, with resistive load
- ++ Not specified uses two internal rectifiers. Varies with source frequency ranging 47-440CPS

All figures are based on 20 C. ambient temperature operation

ALL SHADED AREAS ARE APPROXIMATE VALUES

KURMAN

relays-engineering specifications (continued)

Complete electrical operating characteristics of all standard stock relays available off-the-shelf at factory prices.

AC RELAYS

(For Illustrations and Dimensions of Sensitive Relays see Preceding Pages)

Relay No.	Resistance (ohms) ±10%	Contact Arrangements	OPERATE CHARACTERISTICS				Oper. Time† (milli-secs)		Contact rating† (amps)		Coil Impregnation
			Approx. AC Current (ma) at nom. voltage	AC Voltage (in volts)							
				min.	nom.	max.	Nom. V	Max. V	28 VDC	115 VAC	
AC SENSITIVE RELAYS											
321DC78	19	SPDT	59	5.2	6	17	16	16	2	2	no
321DC81	73	SPDT	29	10	12	33	16	16	2	2	no
321DC84	292	SPDT	15	20	24	66	16	16	2	2	no
321DC91	7300	SPDT	3.2	95	115	300	16	16	2	2	yes
51C83A	32	SPDT	64	4.7	6	9.1	16	16	2	2	no
51C86A	125	SPDT	32	9.3	12	18	16	16	2	2	no
51C89A	500	SPDT	16	18.5	24	36	16	16	2	2	no
5D1C83A	32	SPDT	64	4.7	6	9.1	16	16	2	2	no
5D1C86A	125	SPDT	32	9.3	12	18	16	16	2	2	no
5D1C89A	500	SPDT	16	18.5	24	36	16	16	2	2	no
AC MEDIUM POWER RELAYS											
26D1C6AC	3	SPDT	675	5.5	6	6.8	16	16	10	10	no
26D1C12AC	12	SPDT	335	9.5	12	13.5	16	16	10	10	no
26D1C24AC	49	SPDT	170	21	24	27	16	16	10	10	no
26D1C115AC	1200	SPDT	35	90	115	130	16	16	10	10	no
26D1C230AC	4900	SPDT	17	190	230	260	16	16	10	10	yes
26D2C6AC	3	DPDT	675	5.5	6	6.8	16	16	10	10	no
26D2C12AC	12	DPDT	335	9.5	12	13.5	16	16	10	10	no
26D2C24AC	49	DPDT	170	21	24	27	16	16	10	10	no
26D2C115AC	1200	DPDT	35	95	115	130	16	16	10	10	no
26D2C230AC	4900	DPDT	17	190	230	260	16	16	10	10	yes
26D3C6AC	3	3PDT	675	5.5	6	6.8	16	16	10	10	no
26D3C12AC	12	3DPT	335	10.5	12	13.5	16	16	10	10	no
26D3C24AC	49	3PDT	170	22	24	27	16	16	10	10	no
26D3C115AC	1200	3PDT	35	95	115	130	16	16	10	10	no
26D3C230AC	4900	3PDT	17	195	230	260	16	16	10	10	yes
261C6AC	2.7	SPDT	835	5.2	6	7	16	16	20	20	no
261C12AC	11	SPDT	417	9.5	12	14	16	16	20	20	no
261C24AC	43	SPDT	208	20	24	28	16	16	20	20	no
261C115AC	1080	SPDT	44	95	115	130	16	16	20	20	no
261C230AC	4280	SPDT	22	190	230	260	16	16	20	20	yes
262C6AC	2.5	DPDT	675	5.5	6	6.9	16	16	20	20	no
262C12AC	10	DPDT	335	10	12	14	16	16	20	20	no
262C24AC	39	DPDT	170	21	24	27	16	16	20	20	no
262C115AC	980	DPDT	35	95	115	130	16	16	20	20	no
262C230AC	3900	DPDT	17	195	230	270	16	16	20	20	yes
263C6AC	2.5	3PDT	675	5.5	6	6.9	16	16	20	20	no
263C12AC	10	3PDT	335	10.5	12	14	16	16	20	20	no
263C24AC	39	3PDT	170	21	24	27	16	16	20	20	no
263C115AC	980	3PDT	35	95	115	130	16	16	20	20	no
263C230AC	3900	3PDT	17	190	230	270	16	16	20	20	yes
26L2C6AC	2.5	DPDT	675	5.5	6	6.9	16	16	30	30	no
26L2C12AC	10	DPDT	335	10	12	14	16	16	30	30	no
26L2C24AC	39	DPDT	170	21	24	27	16	16	30	30	no
26L2C115AC	980	DPDT	35	95	115	130	16	16	30	30	no
26L2C230AC	3900	DPDT	17	190	230	270	16	16	30	30	yes
252C6AC	2.5	DPDT	675	5.5	6	6.9	16	16	1.5 KW RF		no
252C12AC	10	DPDT	335	10	12	14	16	16			no
252C24AC	39	DPDT	170	21	24	27	16	16			no
252C115AC	980	DPDT	35	95	115	130	16	16			no
253C6AC	2.5	3PDT	675	5.5	6	6.9	16	16	1C—20 amp		no
253C12AC	10	3PDT	335	10.5	12	14	16	16	2C—1.5 KW, RF		no
253C24AC	39	3PDT	170	21	24	27	16	16			no
253C115AC	980	3PDT	35	95	115	130	16	16			no
AC HERMETICALLY SEALED RELAYS											
26S01	980	DPDT	35	95	115	130	16	16	10	10	no
26S20	980	DPDT	35	95	115	130	16	16	25	25	no
SM004F	++	4PDT	++		115	130	20	20	3	3	no

ORDERING INFORMATION: Relays PREVIOUSLY ORDERED are readily identified by the Kurman type number, which is placed on the relay. Please include this number when re-ordering.

Relays shown on these pages are STANDARD relays in stock for immediate shipment. From these pages a relay can be chosen meeting the needs of most electrical or electronic applications.

VARIATIONS of these relays, are available, as shown in our GS catalog, with slightly extended delivery schedules.

Please SPECIFY the Kurman relay type and coil voltage or resistance, AC or DC.

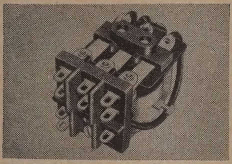
CONTACT LEGEND; S—Single; D—Double; P—Pole; T—Throw; N—Normally; O—Open; C—Closed.

All prices and specifications are subject to change without notice.

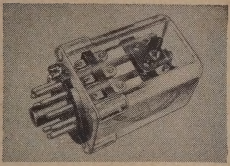
See preceding pages for symbol descriptions

RELAYS LINE ELECTRIC ORANGE NEW JERSEY

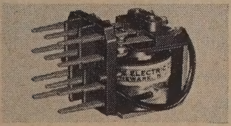
INDUSTRIAL RELAYS • FOOTSWITCHES • BUZZERS • COILS



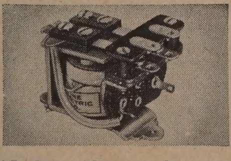
MK — General Purpose — Open type Relay up to 3PDT. 5 or 10 amp contact rating. Voltages up to 230 volts, A.C. or D.C. Details in Bulletin #10.



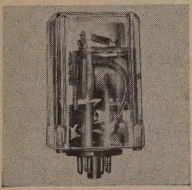
MKP—General Purpose—Plug in type Relay. Contact arrangements up to 3PDT. 5 or 10 amp contact rating. Voltages up to 230 volts, A.C. or D.C. Details in Bulletin #10.



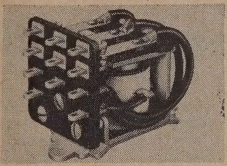
MKT—Printed Circuit—Open type Relay up to 3PDT. 5 or 10 amp contact rating. Voltages up to 230 volts, A.C. or D.C. Details in Bulletin #11.



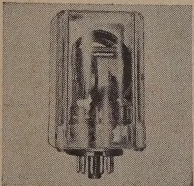
LR—General Purpose—Open type Relay up to DPDT. 10 or 15 amp contact rating. Voltages up to 230 volts, A.C. or D.C. Details in Bulletin #20.



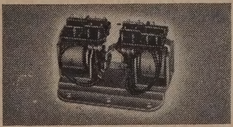
LRP—General Purpose—Plug in type Relay up to DPDT. 10 or 15 amp contact rating. Voltages up to 230 volts, A.C. or D.C. 8 or 11 pin headers available. Details in Bulletin #20.



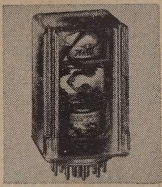
LG—Heavy duty—Open type Relay up to 3PDT. 15 amp contact rating. Voltages up to 230 volts, A.C. or D.C. Details in Bulletin #30.



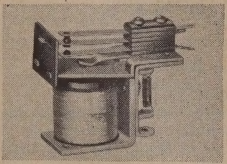
LGP—Heavy duty—plug in type Relay up to 3PDT. 15 amp contact rating Voltages up to 230 volts, A.C. or D.C. 8 or 11 pin headers available. Details in Bulletin #30.



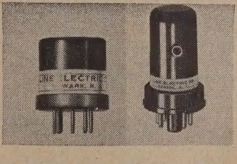
RL — Mechanical Latch — Open type Relay up to 6PDT. 5 or 10 amp contact rating. Voltages up to 230 volts, A.C. or D.C. Details in Bulletin #40.



RLP—Mechanical Latch—Plug in type Relay up to 5PDT. Voltages up to 230 volts, 5 or 10 amp contact rating. A.C. or D.C. 8, 11, or 20 Pin headers available. Details in Bulletin #40.

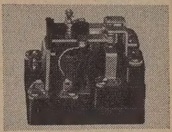


W—General purpose—multi leaf Relay up to 4PDT. 10 or 15 amp load contacts. Voltages up to 230 volts, A.C. or D.C. Details in Bulletin #50.



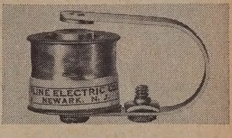
THERMALINE — Thermal Time Delay Relay. SPST NO or NC. 3 amp contact rating. Delays from ¼ sec. to 3 minutes. Voltages up to 230 volts, A.C. or D.C. Details in Bulletin #60.

GT—Telephone Type Relay up to 6PDT in D.C. 4PDT in A.C. 5 amp contact rating. Voltages up to 110 volts, A.C. or D.C. Details in Bulletin #70.



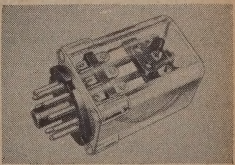
ST — Power Relay, heavy duty DPDT. 15 amp. 1 HP contact rating. Voltages up to 440 VAC, 230 D.C. Details in Bulletin #80.

A.C., D.C. BUZZERS — General purpose buzzer. 3 models available. Voltages from 8 to 48 VAC, 6 to 48 VDC. Details in Bulletin #200.



A.C. BUZZERS — OEM and General purpose, non-contact type. 6 to 440 VAC only. Details in Bulletin #201.

PEDALINE FOOT SWITCH — Available with or without linecord. Several switching arrangements available. 5 to 15 amp contact rating. Voltages from 6 to 230 volts A.C., D.C. Details in Bulletin #210.

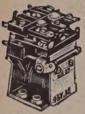


SPOT-LIGHT RELAYS — General purpose relay w/built-in light up to 3PDT. 5 to 15 amp contact rating. Plug-in type. Metal or plastic enclosure. 8 or 11 pin header. 6 to 230 volts, A.C., D.C. Details in Bulletin #304.

The information contained in this page is condensed, therefore we invite you to request our complete catalog which includes prices, dimensional information and other pertinent data.

OHMITE® RESISTORS • RHEOSTATS • TAP SWITCHES
RELAYS • TANTALUM CAPACITORS
VARIABLE TRANSFORMERS • RF CHOKES

OHMITE ALL-PURPOSE RELAYS



MODEL DO RELAY

AC or DC OPERATION

Ideal for mobile equipment applications where severe shock and vibration are encountered. Coil drain: 3-watts DC, 6 watts 60 cycle AC. Contact ratings: 10 amps. at 115 v. AC; 32 volt DC non-inductive load. Insulation tested at 1500 v. AC. Size, (4 pole) 2¼ x 2$\frac{1}{16}$ x 1$\frac{13}{16}$″; (3 pole) 2¼ x 1⅝ x 1$\frac{13}{16}$″.

Stock No.	Type	Coil Data †V.A.C.	Coil Data Amps.	Net 1-24	Stock No.	Type	Coil Data V.D.C.	Coil Data Amps.	Net 1-24
DOX-50T	3PDT	6	2.10	$7.87	**DOX-145T**	3PDT	6	.487	$6.80
DOX-183T	4PDT	6	2.10	8.96	**DOX-186T**	4PDT	6	.487	7.87
DOX-49T	3PDT	12	1.13	7.86	**DOX-51T**	3PDT	12	.231	6.80
DOX-184T	4PDT	12	1.13	8.96	**DOX-102T**	4PDT	12	.231	7.87
DOX-181T	3PDT	24	.57	7.86	**DOX-141T**	3PDT	24	.105	6.80
DOX-185T	4PDT	24	.57	8.96	**DOX-137T**	4PDT	24	.105	7.87
DOX-226T	‡DPST*	115	.110	7.83	**DOX-93T**	3PDT	110	.022	6.80
DOX-227T	‡3PST	115	.110	7.13	**DOX-187T**	4PDT	110	.022	7.87
DOX-46T	3PDT	115	.110	7.87	**DOX-182T**	3PDT	220	.014	7.42
DOX-228T	‡4PST	115	.110	8.01	**DOX-188T**	4PDT	220	.014	8.49
DOX-53T	4PDT	115	.110	8.96					
DOX-61T	3PDT	230	.060	7.87					
DOX-130T	4PDT	230	.060	8.96					

‡ Normally open
† AC Voltage is 60 cycle
* Double Break Contacts

MODEL DOSY RELAY

FOR PLATE CIRCUIT OPERATION

The high operating sensitivity makes the DOSY relay adaptable to a wide range of electronic control circuits, such as plate circuit controls, etc. Other industrial applications may be as an overload or underload control where the relay would be used in a DC circuit in which it is desirable to obtain a signal indication when the control current increases above a predetermined maximum or drops below a predetermined minimum.

The insulation is of high grade, molded phenolic material. At 115 v. AC or 32 v. DC, non-inductive load, Model DOSY relay has a contact rating of 15 amperes.

There are two DPDT types, one having 10,000 ohms coil resistance (maximum pull-in current of 8 ma. DC); the other having 5,000 ohms coil resistance.

Stock No.	Type	Coil Data D.C. Ohms	Coil Data Max. Pull-in Current	Net Each 1-24
DOSYX-67T	DPDT	10,000	8 MA	$5.54
DOSYX-68T	DPDT	5,000	11 MA	5.54
DOSYX-69T	SPDT	10,000	5 MA	5.11
DOSYX-70T	SPDT	5,000	7 MA	5.11

ADDITIONAL RELAYS AVAILABLE

In addition to the listings of the Ohmite stock relays shown on this page, Ohmite has eight additional standard types of relays available. These can be promptly made to order. Therefore, if none of the relays shown on this page exactly suits your needs, we suggest you write to us and allow Ohmite engineers to make a recommendation designed to meet your requirements. All Ohmite relays — both standard and made-to-order — are exceptionally high quality, rugged relays designed to give the maximum in precision performance, dependability, and long life. Metal parts are plated where necessary for corrosion resistance. Springs are made of nickel-silver or phosphor-bronze and the contacts are fine silver. Special contact materials can be supplied when desired.

MODEL DOS RELAY

AC or DC OPERATION

Quality, general-purpose relays originally designed to meet rigorous aircraft specs. Extremely compact yet rugged. Coil drain: 2.5 watts DC, 3 watts at 60 cycles AC. Contact ratings: DP, 15 amps. at 115 v. AC or 32v. DC non-inductive load; SP, 25 amps. Molded phenolic insulation; tested at 1500 v. AC. 1⅞ x 1⅝ x 1$\frac{13}{32}$″.

Stock No.	Type	Coil Data †V.A.C.	Coil Data Amps.	Net 1-24	Stock No.	Type	Coil Data V.D.C.	Coil Data Amps.	Net 1-24
DOSX-229T	‡SPST*	6	.650	$4.40	**DOSX-158T**	DPDT	6	.550	$4.51
DOSX-230T	‡DPST	6	.650	4.50	**DOSX-66T**	DPDT	12	.210	4.51
DOSX-30T	DPDT	6	.650	4.97	**DOSX-9T**	DPDT	24	.105	4.51
DOSX-16T	DPDT	12	.380	4.97	**DOSX-237T**	‡SPST*	110	.022	3.99
DOSX-231T	‡SPST*	24	.166	4.40	**DOSX-238T**	‡DPST	110	.022	4.09
DOSX-232T	‡DPST	24	.166	4.50	**DOSX-59T**	DPDT	110	.022	4.51
DOSX-162T	DPDT	24	.166	4.97	**DOSX-177T**	DPDT	220	.013	5.04
DOSX-233T	‡SPST*	115	.043	4.40					
DOSX-234T	‡DPST	115	.043	4.50					
DOSX-7T	DPDT	115	.043	4.97					
DOSX-235T	‡SPST*	230	.030	4.40					
DOSX-236T	‡DPST	230	.030	4.50					
DOSX-12T	DPDT	230	.030	4.97					

‡ Normally open
† AC Voltage is 60 cycle
* Double Break Contacts

MODEL CRU RELAY

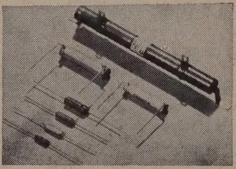
AC or DC OPERATION

Precision-engineered, general-application relays. Used in recorders, vending machines, etc. Features small size and extremely rugged construction. Designed for long life performance. Has nickel-silver springs and pure silver contacts. Coil drain: 2.75 watts DC, 5.6 watts 60 cycle AC. Contact ratings: 5 amps. at 115 v. AC; 32 v. DC non-inductive load. Insulation tested at 750 v. AC between all insulated metal parts and between insulated metal parts and ground. 2$\frac{7}{16}$ x 2 x 1$\frac{3}{32}$″.

Stock No.	Type	Coil Data †V.A.C.	Coil Data Amps.	Net 1-24	Stock No.	Type	Coil Data V.D.C.	Coil Data Amps.	Net 1-24
CRUX-192T	SPDT	6	1.20	$2.75	**CRUX-198T**	SPDT	6	.40	$2.57
CRUX-193T	DPDT	6	1.20	3.23	**CRUX-199T**	DPDT	6	.40	3.03
CRUX-171T	4PDT	6	1.20	4.20	**CRUX-133T**	4PDT	6	.40	3.95
CRUX-194T	SPDT	24	.38	2.75	**CRUX-200T**	SPDT	24	.10	2.57
CRUX-195T	DPDT	24	.38	3.23	**CRUX-201T**	DPDT	24	.10	3.03
CRUX-196T	4PDT	24	.38	4.20	**CRUX-165T**	4PDT	24	.10	3.95
CRUX-197T	SPDT	115	.075	2.75	**CRUX-202T**	SPDT	110	.022	3.33
CRUX-175T	DPDT	115	.075	3.23	**CRUX-145T**	DPDT	110	.022	3.79
CRUX-163T	4PDT	115	.075	4.20	**CRUX-137T**	4PDT	110	.022	4.71

†AC Voltage is 60 cycle

OHMITE R.F. PLATE CHOKES



This series of seven Ohmite single layer wound solenoid radio frequency plate chokes covers the entire frequency range of 3 to 520 megacycles. The four highest frequency chokes are wound on low power factor plastic cores while the other three units are wound on steatite tubes. The single layer winding is designed to avoid adverse harmonic effects within the recommended operating range and also prevents breakdown from high r.f. potentials.

Stock Number	Operating Range Megacycles	Micro-henries	Core Dimensions	Net Each 1-9
Z-7	3 to 20 Mc.	84.0	6″ x $\frac{9}{16}$″	**$1.37**
Z-14	7 to 35 Mc.	44.0	2″ x $\frac{7}{16}$″	**.68**
Z-28	20 to 60 Mc.	21.0	1¾″ x $\frac{5}{16}$″	**.57**
Z-50	35 to 110 Mc.	7.0	⅞″ x $\frac{9}{32}$″	**.46**
Z-144	80 to 200 Mc.	1.8	¾″ x $\frac{3}{16}$″	**.43**
Z-235	160 to 350 Mc.	0.84	¾″ x $\frac{3}{16}$″	**.43**
Z-460	320 to 520 Mc.	0.20	½″ x $\frac{5}{32}$″	**.43**

Non-magnetic Brackets Furnished with Z-7. The Z-14 and Z-28 are rated at 600 ma. All others 1000 ma.

POTTER & BRUMFIELD *Relays*

IN STOCK AT LEADING ELECTRONIC PARTS DISTRIBUTORS

STOCK CATALOG 100
ISSUED MAY 1960

INDEX BY TYPE

TELEPHONE TYPE		PLATE CIRCUIT & SENSITIVE		POWER TYPE		GENERAL PURPOSE		SPECIAL PURPOSE		SPECIAL PURPOSE	
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BS	1	GB	2	AB	3	GA	5	AP	6	SC	8
LS	1	KCP	2	ABC	3	GP	5	KB	6	SL	8
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MC	2	PW	3	MR	4	KL	5	KT	7	MS Cover	7
MG	2	RS	3	PR	4	MP	6	PC	7	"P" Case	6
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ALPHABETICAL INDEX

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AG	4	GP KIT	5	KRP	6	MC	2	PC	7	SL	8
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BS	1	KB	6	LB	2	MH	1	PR Cover	4	SP	5
CA	4	KCP	2	LK	7	MP	6	PS	4	SS	3
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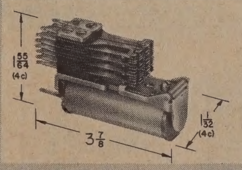
KEY TO SUFFIXES

SUFFIX	STANDS FOR	EXAMPLE	SUFFIX	STANDS FOR	EXAMPLE
A —	Alternating Current	BS17A	P —	Enclosed in Plastic Dust Cover	MG11DP
D —	Direct Current	BS17D	R —	With Built-in Rectifier	MH17AMR
DD —	DC in a sealed "D" can	MH23DD	S —	Sealed in can	PW5DS, SM5DS
G —	10 amp. Silver Cad.-Oxide Contacts	KRP5AG	T —	Sealed in "T" can	MG11DT
L —	Plate Circuit	SM5L	Y —	U/L Listed	AB11AY
M —	Sealed in "M" can	MH17AM			

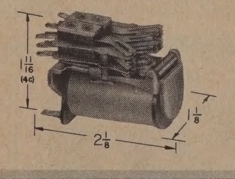
See ordering information on page 8.

TELEPHONE TYPE RELAYS

BS SERIES Long coil telephone type. Suited for computer and automatic test equipment applications requiring large numbers of poles. Tinned, pierced solder type terminals for rear panel wiring. Mounting: Two No. 8-32 NC 2B tapped holes on ¾" centers. Contacts arms: Bifurcated with 1/16" dia. twin palladium contacts. Weight: Approximately 9 ozs.

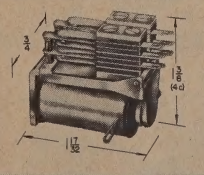


LS SERIES Short springs and light weight armature provide fast action without sacrificing reliability and long life. Stainless steel hinge bearing designed to give 100 million operations. Tinned, pierced solder type terminals. Mounting: Two No. 6-32 tapped holes on ¾" centers. Bifurcated contact arms with 1/16" dia. twin palladium contacts. Weight: Approximately 4 ozs.



MH SERIES MINIATURE TYPE

Ideal for miniature program applications where space and weight are factors. Sealed AC MH17AMR operates with a built-in rectifier. Mounting: Open model, MH11L, one No. 6-32 threaded stud 11/32" long plus locating boss. All other open models have four No. 3-48 holes on ⅜" x ⅜" centers. Sealed models, M enclosures, three 6-32 NC 2 threaded studs on 1¼" x ½" centers. D enclosures, three 6-32 threaded studs on 1 3/16" x 15/16" centers. All sealed models have hook end solder terminals. All models have ⅛" dia. gold-flashed silver contacts. Weight: Open models 2½ oz. max. Sealed models 5 ozs. max.



	COILS			CONTACTS		
TYPE	Voltage or Current	Resistance in Ohms	Nominal Power	Arrange-ment	Rate in Amps	NET
BS17A	115V	71	17.9VA	4PDT	4	$ 9.00
BS17D	24V	1,000	576MW	4PDT	4	7.40
BS17D	48V	1,600	1.4W	4PDT	4	7.75
BS17D	110V	6,500	1.8W	4PDT	4	8.00
BS17L	5.5MA	10,000	300MW	4PDT	4	8.00
BS23A	115V	71	17.9VA	6PDT	4	10.50
BS23D	24V	1,000	576MW	6PDT	4	8.95
BS23D	48V	1,600	1.4W	6PDT	4	9.30
BS23D	110V	6,500	1.8W	6PDT	4	9.50
BS23L	7.6MA	10,000	600MW	6PDT	4	9.50
LS17D	24V	300	1.8W	4PDT	4	6.55
LS17D	48V	1,300	1.8W	4PDT	4	6.60
LS17D	110V	8,000	1.8W	4PDT	4	6.85
LS23D	24V	300	1.8W	6PDT	4	8.05
LS23D	48V	1,300	1.8W	6PDT	4	8.15
LS23D	110V	8,000	1.8W	6PDT	4	8.35
MH11L	4.5MA	10,000	200MW	DPDT	3	6.05
MH11LM†	4.5MA	10,000	200MW	DPDT	3	10.20
MH17AMR†	24V	365	2VA	4PDT	5	26.25
MH17AMR†	115V	6,200	2VA	4PDT	5	19.95
MH17D	6V	23	1.6W	4PDT	5	6.05
MH17D	12V	96	1.6W	4PDT	5	6.05
MH17D	24V	365	1.6W	4PDT	5	6.05
MH17DM†	6V	23	1.6W	4PDT	5	12.20
MH17DM†	12V	96	1.6W	4PDT	5	12.20
MH17DM†	24V	365	1.6W	4PDT	5	12.20
MH23D	6V	13.3	2.5W	6PDT	5	7.60
MH23D	12V	62.3	2.5W	6PDT	5	7.60
MH23D	24V	245	2.5W	6PDT	5	7.60
MH23D	110V	5,000	2.5W	6PDT	5	8.10
MH23DD†	6V	13.3	2.5W	6PDT	5	16.25
MH23DD†	12V	62.3	2.5W	6PDT	5	16.25
MH23DD†	24V	245	2.5W	6PDT	5	16.25
MH23DD†	110V	5,000	2.5W	6PDT	5	16.85

† Sealed Relay

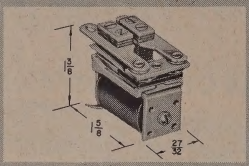
POTTER & BRUMFIELD DIVISION OF AMERICAN MACHINE & FOUNDRY COMPANY
PRINCETON, INDIANA TELEPHONE: FULTON 5-5251 TWX: PRINCETON 73

4/15/60

Potter & Brumfield Relays

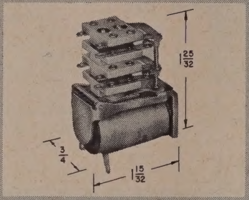
TELEPHONE TYPE RELAYS

MB SERIES Miniature DC contactor. Designed for very high current applications. Extra rugged construction insures long life. Handles 150 ampere surges for 0.3 ms. Contact arms: Stationary, heavy brass, ¼" dia. silver contacts pierced solder terminals. Movable, ¼" x 13/16" silver bar contact. Mounting: Four No. 3-48 tapped holes on ⅜" x ⅜" centers. Weight: 2 ozs.



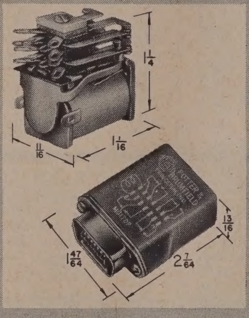
TYPE	COILS Voltage or Current	COILS Resistance in Ohms	COILS Nominal Power	CONTACTS Arrangement	CONTACTS Rate In Amps	NET
MB3D	**6V**	**13.3**	**2.7W**	**SPST-NO-DB**	**60**	**$ 5.40**
MB3D	12V	62.3	2.7W	SPST-NO-DB	60	5.50
MB3D	24V	245	2.7W	SPST-NO-DB	60	5.50
MB3D	110V	5,000	2.7W	SPST-NO-DB	60	5.90

MC SERIES Built with ceramic contact spaces for RF switching to minimize losses at high frequencies. Intercontact capacitance 1.5 mmfd. max. Tinned, pierced solder type terminals. Mounting: Four No. 3-48 tapped holes on ⅜" x ⅜" centers. Contacts: 3/32" dia. palladium. Weight: 2 ozs.



TYPE	Voltage or Current	Resistance in Ohms	Nominal Power	Arrangement	Rate In Amps	NET
MC5A	**6V**	**2.5**	**4.6VA**	SPDT	1	**5.00**
MC5A	115V	800	4.6VA	SPDT	1	5.00
MC5D	6V	23	1.6W	SPDT	1	4.40
MC5D	12V	96	1.6W	SPDT	1	4.40
MC5D	24V	365	1.6W	SPDT	1	4.40
MC11A	6V	2.5	4.6VA	DPDT	1	6.90
MC11A	115V	800	4.6VA	DPDT	1	6.90
MC11D	6V	23	1.6W	DPDT	1	6.35
MC11D	12V	96	1.6W	DPDT	1	6.35
MC11D	24V	365	1.6W	DPDT	1	6.35
MC11D	110V	6,200	1.6W	DPDT	1	6.85

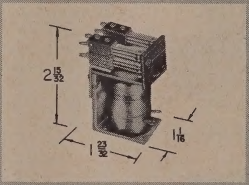
MG SERIES Sub-miniature telephone type relay for aircraft, computer and other applications requiring good shock and vibration characteristics. Furnished open, sealed or in nylon dust cover. Mounting: Open model has four No. 3-48 tapped holes on ⅜" x ⅜" centers. Sealed model has three No. 4-40 threaded studs on 1" x ½" centers. Dust cover model has plug-in header that fits Amphenol receptacle No. 57-20140 or similar. Contacts: 3/32" dia. silver. Weight: Open 1.2 ozs.; Dust cover 2.00 ozs.; Sealed 2.75 ozs.



TYPE	Voltage or Current	Resistance in Ohms	Nominal Power	Arrangement	Rate In Amps	NET
MG11D	**6V**	**23**	**1.6W**	**DPDT**	**2**	**5.20**
MG11D	12V	90	1.6W	DPDT	2	5.20
MG11D	24V	365	1.6W	DPDT	2	5.20
MG11D	110V	7,560	1.6W	DPDT	2	5.65
MG11DP§	6V	23	1.6W	DPDT	2	9.45
MG11DP§	12V	90	1.6W	DPDT	2	9.45
MG11DP§	24V	365	1.6W	DPDT	2	9.45
MG11DP§	110V	7,560	1.6W	DPDT	2	10.05
MG11DT†	6V	23	1.6W	DPDT	2	10.50
MG11DT†	12V	90	1.6W	DPDT	2	10.50
MG11DT†	24V	365	1.6W	DPDT	2	10.50
MG11DT†	110V	7,560	1.6W	DPDT	2	11.10
MG17D	6V	23	1.6W	4PDT	2	6.95
MG17D	12V	90	1.6W	4PDT	2	6.95
MG17D	24V	365	1.6W	4PDT	2	6.95
MG17D	110V	7,560	1.6W	4PDT	2	7.40
MG17DP§	6V	23	1.6W	4PDT	2	11.55
MG17DP§	12V	90	1.6W	4PDT	2	11.55
MG17DP§	24V	365	1.6W	4PDT	2	11.55
MG17DP§	110V	7,560	1.6W	4PDT	2	12.15
MG17DT†	6V	23	1.6W	4PDT	2	12.60
MG17DT†	12V	90	1.6W	4PDT	2	12.60
MG17DT†	24V	365	1.6W	4PDT	2	12.60
MG17DT†	110V	7,560	1.6W	4PDT	2	13.20

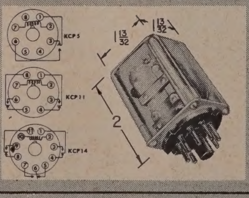
PLATE CIRCUIT & SENSITIVE RELAYS

GB SERIES (See GA series for similar voltage actuated relays.) Sensitivity 115 milliwatts for single pole and 275 milliwatts for 4 pole. Medium cost, high quality relay. Pull-in is not adjustable. Mounting: No. 8-32 tapped core and locating half-punch. Contacts: 3/16" dia. silver. Weight: Approximately 5 ozs.



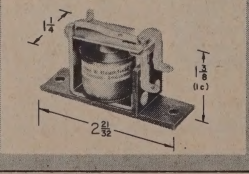
TYPE	Voltage or Current	Resistance in Ohms	Nominal Power	Arrangement	Rate In Amps	NET
GB5D	**6.8MA**	**2,500**	**115MW**	**SPDT**	**5**	**3.45**
GB5D	4.8MA	5,000	115MW	SPDT	5	3.60
GB5D	3.4MA	10,000	115MW	SPDT	5	4.10
GB11D	7MA	2,500	125MW	DPDT	5	4.85
GB11D	5MA	5,000	125MW	DPDT	5	4.95
GB11D	3.53MA	10,000	125MW	DPDT	5	5.50
GB17D	10.5MA	2,500	275MW	4PDT	5	5.80
GB17D	7.4MA	5,000	275MW	4PDT	5	5.95
GB17D	5.25MA	10,000	275MW	4PDT	5	6.40

KCP SERIES Low cost plate circuit relay enclosed in clear cellulose acetate cover. Sensitivity 125 mw single pole; 250 mw double pole; 375 mw three pole. Mounting: Standard octal plug-in type. Eight pin for KCP5 and KCP11. Eleven pin for KCP14. Contacts: ⅛" dia. gold-flashed silver. Weight: Approximately 3 ozs. See KCP-KRP hold down spring when vibration, inverted or horizontal mounting are factors.



TYPE	Voltage or Current	Resistance in Ohms	Nominal Power	Arrangement	Rate In Amps	NET
KCP5§	**7.2MA**	**2,500**	**125MW**	**SPDT**	**2**	**5.90**
KCP5§	5MA	5,000	125MW	SPDT	2	6.00
KCP5§	3.6MA	10,000	125MW	SPDT	2	6.40
KCP11§	10MA	2,500	250MW	DPDT	2	6.30
KCP11§	7.2MA	5,000	250MW	DPDT	2	6.40
KCP11§	5MA	10,000	250MW	DPDT	2	6.80
KCP14§	12.3MA	2,500	375MW	3PDT	2	7.75
KCP14§	8.7MA	5,000	375MW	3PDT	2	7.85
KCP14§	6.1MA	10,000	375MW	3PDT	2	8.25

LB SERIES Designed for top performance, long life at an unusually low cost. Each coil is wound with a given coil resistance and factory adjusted to operate on minimum current requirements. Mounting: Two 3/16" dia. holes on 2 7/32" centers. Contacts: ⅛" dia. silver. Weight: Approximately 2 ozs.



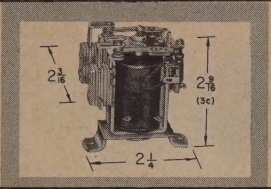
TYPE	Voltage or Current	Resistance in Ohms	Nominal Power	Arrangement	Rate In Amps	NET
LB5	**9MA**	**2,500**	**200MW**	**SPDT**	**5**	**2.45**
LB5	6.3MA	5,000	200MW	SPDT	5	2.65
LB5	4.5MA	10,000	200MW	SPDT	5	2.85

† Sealed Relay
§ Enclosed Relay

Potter & Brumfield Relays

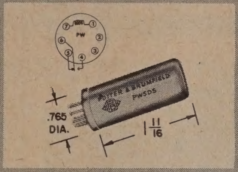
PLATE CIRCUIT and SENSITIVE RELAYS

LM SERIES (See KL for similar voltage actuated relays.) Sensitivity 100 milliwatts for single pole and 200 milliwatts for double pole. Medium cost, high quality relay with 7/32" dia. silver contacts. Pull-in adjustable by tail spring adjusting screw. Mounting: Two No. 6-32 tapped holes on 1 13/16" centers. Weight: Approximately 5 ozs. DC Coils only.



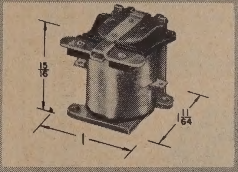
TYPE	COILS Voltage or Current	Resistance in Ohms	Nominal Power	CONTACTS Arrange-ment	Rate in Amps	NET
LM5	**6.3MA**	**2,500**	**100MW**	**SPDT**	**5**	**$ 3.90**
LM5	4.5MA	5,000	100MW	SPDT	5	4.10
LM5	3.2MA	10,000	100MW	SPDT	5	4.40
LM11	9MA	2,500	200MW	DPDT	5	5.55
LM11	6.3MA	5,000	200MW	DPDT	5	5.75
LM11	4.5MA	10,000	200MW	DPDT	5	6.30

PW SERIES (In both voltage and current actuated models.) Sensitivity 40 mw for current actuated models. 175 mw for voltage actuated models. Precision, light weight, hermeticaly sealed relay for aircraft and missile applications. Will withstand 10G vibration to 500 cps. Mounting: Standard 7-pin miniature tube base. Weight: Approx. 1 oz.



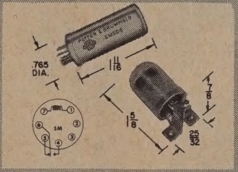
TYPE	COILS Voltage or Current	Resistance in Ohms	Nominal Power	CONTACTS Arrange-ment	Rate in Amps	NET
PW5DS†	**6V**	**202**	**180MW**	**SPDT**	**2**	**10.25**
PW5DS†	12V	810	180MW	SPDT	2	10.25
PW5DS†	24V	3,240	180MW	SPDT	2	10.25
PW5LS†	2.8MA	5,000	40MW	SPDT	2	10.60
PW5LS†	2.0MA	10,000	40MW	SPDT	2	11.00

RS SERIES (In both voltage and current actuated models.) 60 mw. sensitivity. Low-cost, small, light weight, sensitive relay for radio-sonde, light dimmer and model applications. Mounting: Two No. 4-40 tapped holes on diagonal ¾" x ⅝" centers. Contacts: Bar palladium. Weight: 1½" ozs.



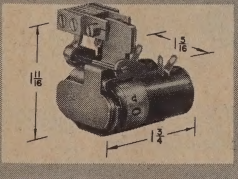
TYPE	COILS Voltage or Current	Resistance in Ohms	Nominal Power	CONTACTS Arrange-ment	Rate in Amps	NET
RS5D	**6V**	**335**	**110MW**	**SPDT**	**2**	**2.60**
RS5D	12V	1,350	110MW	SPDT	2	2.75
RS5D	5MA	2,500	60MW	SPDT	2	2.85
RS5D	3.5MA	5,000	60MW	SPDT	2	3.15
RS5D	2.5MA	10,000	60MW	SPDT	2	3.60

SM SERIES (In both voltage and current actuated models.) Sensitivity 75 mw for current actuated models. Medium cost, light weight, dust covered (right) or hermetically sealed (left) relay for light contact loads found in computers, model airplanes and similar applications. Extremely long mechanical life because of reed armature. Mounting: Sealed, standard 7-pin miniature tube socket; dust cover, two 3/32" dia. holes on 17/32" centers. Contacts: Stationary silver; movable rhodium. Weight: 1 oz. max.



TYPE	COILS Voltage or Current	Resistance in Ohms	Nominal Power	CONTACTS Arrange-ment	Rate in Amps	NET
SM5D§	**6V**	**80**	**500MW**	**SPDT**	**.25**	**5.10**
SM5D§	12V	360	500MW	SPDT	.25	5.10
SM5D§	24V	900	500MW	SPDT	.25	5.10
SM5DS†	6V	80	500MW	SPDT	.25	6.25
SM5DS†	12V	360	500MW	SPDT	.25	6.25
SM5DS†	24V	900	500MW	SPDT	.25	6.25
SM5L§	3.9MA	5,000	75MW	SPDT	.25	5.40
SM5L§	2.7MA	10,000	75MW	SPDT	.25	5.95
SM5LS†	3.9MA	5,000	75MW	SPDT	.25	6.55
SM5LS†	2.7MA	10,000	75MW	SPDT	.25	7.00

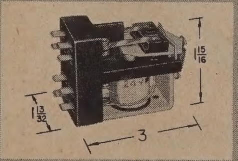
SS SERIES Ultra sensitive precision relay. 10 mw sensitivity. Dual series-connected coils with balanced armature on needle-point bearings for all low energy circuits such as instruments and bridge balancing. May also be used as a differential relay by connecting the two coils in separate circuits. Mounting: Two No. 6-32 tapped holes on 23/32" centers. Contacts: ⅛" dia. silver. Weight: Approx. 3½ ozs.



TYPE	COILS Voltage or Current	Resistance in Ohms	Nominal Power	CONTACTS Arrange-ment	Rate in Amps	NET
SS5D	**1MA**	**10,000**	**10MW**	**SPDT**	**2**	**12.60**

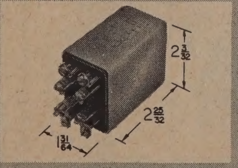
POWER TYPE RELAYS

AB SERIES For appliance and general purpose applications when rugged construction, long life and quiet operation are required. All equipped with terminals to fit snap-on connectors and may also be applied to printed circuits using dip soldering. Snap-on and screw connectors packed with each relay. All AC models carry U/L and CSA° labels. Mounting: Two No. 8-32 tapped holes, on 1¼" centers. Weight: Approx. 5 ozs. Silver contacts.



TYPE	COILS Voltage or Current	Resistance in Ohms	Nominal Power	CONTACTS Arrange-ment	Rate in Amps	NET
AB11AY	**6V**	**1.3**	**6.4VA**	**DPDT**	**10**	**5.30**
AB11AY	12V	5.1	6.4VA	DPDT	10	5.30
AB11AY	24V	23	6.4VA	DPDT	10	5.30
AB11AY	115V	510	6.4VA	DPDT	10	5.30
AB11AY	230V	2,050	6.4VA	DPDT	10	5.70
AB11D	6V	18	2.0W	DPDT	10	5.20
AB11D	12V	72	2.0W	DPDT	10	5.20
AB11D	24V	288	2.0W	DPDT	10	5.20
AB11D	110V	6,050	2.0W	DPDT	10	5.70

ABC SERIES Medium duty power relay with dust cover. For small motors, industrial control and similar applications. All equipped with terminals to fit snap on connectors and may also be applied to printed circuits using dip soldering. Snap on and screw connectors packed with each relay. All AC models carry U/L and CSA° labels. Mounting: One No. 8-32 threaded stud ⅜" long and locating tab on 9/16" centers. Contacts: ¼" dia. silver. Weight: Approx. 7 ozs.



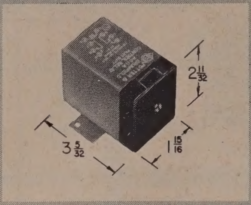
TYPE	COILS Voltage or Current	Resistance in Ohms	Nominal Power	CONTACTS Arrange-ment	Rate in Amps	NET
ABC11AY§	**6V**	**1.3**	**6.4VA**	**DPDT**	**10**	**6.40**
ABC11AY§	12V	5.1	6.4VA	DPDT	10	6.40
ABC11AY§	24V	23	6.4VA	DPDT	10	6.40
ABC11AY§	115V	510	6.4VA	DPDT	10	6.40
ABC11AY§	230V	2,050	6.4VA	DPDT	10	6.80
ABC11D§	6V	18	2.0W	DPDT	10	6.30
ABC11D§	12V	72	2.0W	DPDT	10	6.30
ABC11D§	24V	288	2.0W	DPDT	10	6.30
ABC11D§	110V	6,050	2.0W	DPDT	10	6.80

°Canadian Standards Association

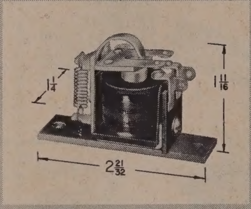
† Sealed Relay
§ Enclosed Relay

Potter & Brumfield Relays

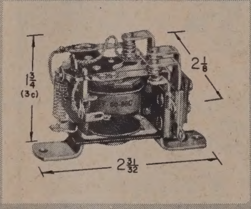
AG SERIES Excellent for Machine Tool and product automation controls. Screw terminals molded in phenolic base. All AC models carry U/L and CSA° labels. (The AG is an SP relay in a special enclosure.) Mounting: Welded bracket with two 3/16" dia. holes on 2 3/8" x 5/8" diagonal centers. Contacts: 3/16" dia. silver. Weight: 9½ ozs.



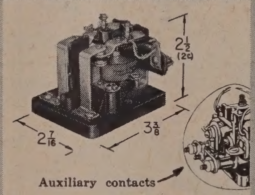
CA SERIES Low cost, high capacity power relay. Small over-all dimensions. Solder terminals. Mounting: Two 3/16" dia. holes on 2 7/32" centers. Contacts: 3/16" dia. silver. Weight: 3 ozs.



MR SERIES A medium duty power relay that can handle small motors, transmitters, and general purpose applications. Mounting: Two 5/32" dia. holes on 2 5/8" centers for 1 and 3 pole and 2 1/4" centers for 2 pole. Contacts: 7/32" dia. silver. Weight: 4 ozs. Enclosure: See MS/MR cover.

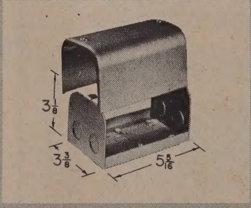


PR SERIES Heavy duty relay for industrial control applications requiring long life and fast action. Heavy duty screw type terminals. All AC models except PR11AL5 carry U/L and CSA° labels. Mounting: Two 3/16" dia. holes on 1 7/8" centers. Weight: 11 ozs. max. Contacts: 5/16" dia. silver. Enclosure: See "PR" cover. The PR11AL5 relay is equipped with 3/16" dia. silver SPDT auxiliary contacts rated at 5 amps.

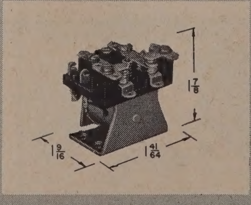


"PR" COVER A sheet steel base with aluminum cover finished in gray hammertone baked enamel with four knockouts for ½" conduit. Mounting: Three No. 10 holes on 1 7/8" x 4 1/8" centers. Fits all PR relays. Type 35DO13.

NET $3.00



PS SERIES Extremely compact long life power relay. Ideal for mobile communications, appliances and similar applications. Solder type terminals. Mounting: Four No. 6-32 tapped holes on ½" x 1 5/16" centers. Contacts: ¼" dia. silver. Weight: 4 ozs.



POWER TYPE RELAYS

TYPE	COILS			CONTACTS		NET
	Voltage or Current	Resistance in Ohms	Nominal Power	Arrangement	Rate in Amps	
AG11AY§	**12V**	**13.25**	**3.25VA**	**DPDT**	**5**	**$ 9.20**
AG11AY§	115V	1,250	3.25VA	DPDT	5	9.20
AG11D§	24V	360	1.6W	DPDT	5	9.10
CA3A	**6V**	**2.75**	**3.25VA**	**SPST-NO-DB**	**10**	**3.20**
CA3A	24V	50	3.25VA	SPST-NO-DB	10	3.20
CA3A	115V	1,250	3.25VA	SPST-NO-DB	10	3.20
CA3D	12V	96	1.6W	SPST-NO-DB	10	2.90
CA3D	24V	360	1.6W	SPST-NO-DB	10	2.90
MR2A	**24V**	**50**	**3.25VA**	**SPST-NC**	**8**	**3.30**
MR3A	6V	2.75	3.25VA	SPST-NO-DB	10	3.85
MR3A	24V	50	3.25VA	SPST-NO-DB	10	3.85
MR3A	115V	1,250	3.25VA	SPST-NO-DB	10	3.85
MR3D	6V	24	1.6W	SPST-NO-DB	10	3.50
MR3D	12V	96	1.6W	SPST-NO-DB	10	3.50
MR3D	24V	360	1.6W	SPST-NO-DB	10	3.50
MR5A	6V	2.75	3.25VA	SPDT	8	3.45
MR5A	12V	13.25	3.25VA	SPDT	8	3.45
MR5A	24V	50	3.25VA	SPDT	8	3.45
MR5A	115V	1,250	3.25VA	SPDT	8	3.45
MR5A	230V	4,600	3.25VA	SPDT	8	3.85
MR5D	6V	24	1.6W	SPDT	8	3.20
MR5D	12V	96	1.6W	SPDT	8	3.20
MR5D	24V	360	1.6W	SPDT	8	3.20
MR5D	110V	8,000	1.6W	SPDT	8	3.70
MR11A	6V	2.75	3.25VA	DPDT	8	4.85
MR11A	12V	13.25	3.25VA	DPDT	8	4.85
MR11A	24V	50	3.25VA	DPDT	8	4.85
MR11A	115V	1,250	3.25VA	DPDT	8	4.85
MR11A	230V	4,600	3.25VA	DPDT	8	5.25
MR11D	6V	24	1.6W	DPDT	8	4.60
MR11D	12V	96	1.6W	DPDT	8	4.60
MR11D	24V	360	1.6W	DPDT	8	4.60
MR11D	110V	8,000	1.6W	DPDT	8	5.10
MR14A	6V	2.75	3.25VA	3PDT	8	5.80
MR14A	12V	13.25	3.25VA	3PDT	8	5.80
MR14A	24V	50	3.25VA	3PDT	8	5.80
MR14A	115V	1,250	3.25VA	3PDT	8	5.80
MR14A	230V	4,600	3.25VA	3PDT	8	6.20
MR14D	6V	24	1.6W	3PDT	8	5.45
MR14D	12V	96	1.6W	3PDT	8	5.45
MR14D	24V	360	1.6W	3PDT	8	5.45
MR14D	110V	8,000	1.6W	3PDT	8	5.95
PR1AY	**24V**	**12**	**9.8VA**	**SPST-NO**	**25**	**4.05**
PR3AY	6V	0.86	9.8VA	SPST-NO-DB	25	4.15
PR3AY	12V	3.2	9.8VA	SPST-NO-DB	25	4.15
PR3AY	24V	12	9.8VA	SPST-NO-DB	25	4.15
PR3AY	115V	290	9.8VA	SPST-NO-DB	25	4.15
PR3AY	230V	1,200	9.8VA	SPST-NO-DB	25	4.50
PR3D	6V	18	2.0W	SPST-NO-DB	25	4.15
PR3D	12V	71	2.0W	SPST-NO-DB	25	4.15
PR3D	24V	288	2.0W	SPST-NO-DB	25	4.15
PR3D	110V	6,050	2.0W	SPST-NO-DB	25	4.75
PR5AY	6V	0.86	9.8VA	SPDT	25	4.35
PR5AY	12V	3.2	9.8VA	SPDT	25	4.35
PR5AY	24V	12	9.8VA	SPDT	25	4.35
PR5AY	115V	290	9.8VA	SPDT	25	4.35
PR5AY	230V	1,200	9.8VA	SPDT	25	4.75
PR5D	6V	18	2.0W	SPDT	25	4.35
PR5D	12V	71	2.0W	SPDT	25	4.35
PR5D	24V	288	2.0W	SPDT	25	4.35
PR5D	110V	6,050	2.0W	SPDT	25	4.95
PR7AY	6V	0.86	9.8VA	DPST	25	4.90
PR7AY	12V	3.2	9.8VA	DPST	25	4.90
PR7AY	24V	12	9.8VA	DPST	25	4.90
PR7AY	115V	290	9.8VA	DPST	25	4.90
PR7AY	230V	1,200	9.8VA	DPST	25	5.35
PR7D	6V	18	2.0W	DPST	25	4.90
PR7D	12V	71	2.0W	DPST	25	4.90
PR7D	24V	288	2.0W	DPST	25	4.90
PR7D	110V	6,050	2.0W	DPST	25	5.50
PR11AY	6V	0.86	9.8VA	DPDT	25	6.45
PR11AY	12V	3.2	9.8VA	DPDT	25	6.45
PR11AY	24V	12	9.8VA	DPDT	25	6.45
PR11AY	115V	290	9.8VA	DPDT	25	6.45
PR11AY	230V	1,200	9.8VA	DPDT	25	6.95
PR11AL5	6V	0.86	9.8VA	DPDT	20	8.15
PR11AL5	12V	3.2	9.8VA	DPDT	20	8.15
PR11AL5	24V	12	9.8VA	DPDT	20	8.15
PR11AL5	115V	290	9.8VA	DPDT	20	8.15
PR11AL5	230V	1,200	9.8VA	DPDT	20	8.55
PR11D	6V	18	2.0W	DPDT	25	6.45
PR11D	12V	71	2.0W	DPDT	25	6.45
PR11D	24V	288	2.0W	DPDT	25	6.45
PR11D	110V	6,050	2.0W	DPDT	25	7.05
PS11A	**6V**	**1.2**	**6VA**	**DPDT**	**10**	**8.00**
PS11A	24V	17	6VA	DPDT	10	8.00
PS11A	115V	375	6VA	DPDT	10	8.00
PS11A	230V	1,800	6VA	DPDT	10	8.40
PS11D	6V	14	2.7W	DPDT	10	6.85
PS11D	12V	54	2.7W	DPDT	10	6.85
PS11D	24V	230	2.7W	DPDT	10	6.85
PS11D	110V	4,800	2.7W	DPDT	10	7.25

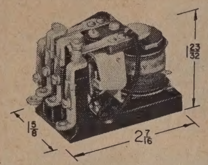
°Canadian Standards Association

§ Enclosed Relay

Potter & Brumfield Relays

POWER TYPE RELAYS

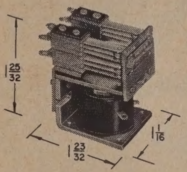
SP SERIES Medium duty relays, with balanced armature. Frequently used in industrial equipment, control circuits, transmitter keying circuit or any application requiring fast, positive operation with high resistance to mechanical shock and vibration. Mounting: Two No. 6-32 tapped holes on 1 3/16″ centers. Contacts: 3/16″ dia. silver. Weight: 4 ozs. (For enclosed SP see AG relay. For dust cover see "MS/MR" cover.)



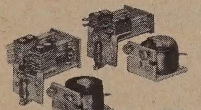
TYPE	COILS			CONTACTS		NET
	Voltage or Current	Resistance in Ohms	Nominal Power	Arrange-ment	Rate in Amps	
SP11A	**6V**	**2.75**	**3.25VA**	**DPDT**	**5**	**$ 6.80**
SP11A	12V	13.25	3.25VA	DPDT	5	6.80
SP11A	24V	50	3.25VA	DPDT	5	6.80
SP11A	115V	1,250	3.25VA	DPDT	5	6.80
SP11D	6V	24	1.6W	DPDT	5	6.55
SP11D	12V	96	1.6W	DPDT	5	6.55
SP11D	24V	360	1.6W	DPDT	5	6.55
SP11D	110V	8,000	1.6W	DPDT	5	7.05

GENERAL PURPOSE RELAYS

GA SERIES Low cost, all purpose, multiple contact, voltage switching relay. Used for many industrial control applications. Tinned, pierced solder type terminals. Contacts: 3/16″ dia. silver, designed for maximum self-cleaning action. Mounting: No. 8-32 tapped core with locating boss. Weight: 3½ ozs.



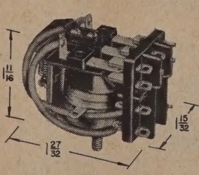
GP SERIES Separate AC and DC coils to match with 2PDT or 4PDT switches. AC coils (GPA) available in 6, 12, 24, 115 and 230 volts. DC coils (GPD) available in 6, 12, 24 and 110 volts; current coils: 2,500 and 10,000 ohms. Contacts: 3/16″ dia. silver.



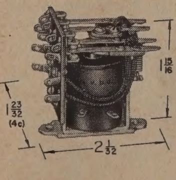
GP-100 A complete kit of GP Series coils and switches consisting of the following: AC coils: Two 6 V., two 12 V., four 24 V., six 115 V., two 230 V. DC coils: Two 6 V., two 12 V., two 24 V., four 110 V. Also two 2.500 and four 10.000 ohm coils; eighteen DPDT switch assemblies. Fourteen 4PDT switch assemblies. The complete kit is ideal for experimenters, school and industrial laboratories.

NET $133.65

KA SERIES A small, low cost, highly efficient general purpose relay for handling light power loads such as small motors, solenoids and other relays, and general automation work. All AC models carry U/L and CSA* labels. Mounting: One No. 6-32 threaded stud and locating tab. Contacts: Movable, 1/8″ dia. silver; stationary, 5/32″ dia. wide silver overlay. Weight 2 ozs.



KL SERIES Multiple contact relay. Varied contact combinations and high dielectric phenolic insulation affords extreme versatility and utility. Widely used in such applications as industrial controls, elevator controls, communications equipment and electronic measuring devices. Mounting: All models—Two No. 6-32 tapped holes on 1 7/16″ centers. Contacts: 1/8″ dia. gold-flashed silver. Weight: 5 ozs.



TYPE	Voltage or Current	Resistance in Ohms	Nominal Power	Arrange-ment	Rate in Amps	NET
GA11A	**6V**	**1.7**	**6VA**	**DPDT**	**5**	**3.35**
GA11A	12V	6.8	6VA	DPDT	5	3.35
GA11A	24V	24	6VA	DPDT	5	3.35
GA11A	115V	725	6VA	DPDT	5	3.35
GA11D	6V	18	2.0W	DPDT	5	3.35
GA11D	12V	72	2.0W	DPDT	5	3.35
GA11D	24V	288	2.0W	DPDT	5	3.35
GA11D	110V	6,050	2.0W	DPDT	5	3.80
GA14A	6V	1.7	6VA	3PDT	5	4.05
GA14A	12V	6.8	6VA	3PDT	5	4.05
GA14A	24V	24	6VA	3PDT	5	4.05
GA14A	115V	725	6VA	3PDT	5	4.05
GA14D	6V	18	2.0W	3PDT	5	4.05
GA14D	12V	72	2.0W	3PDT	5	4.05
GA14D	24V	288	2.0W	3PDT	5	4.05
GA17A	6V	1.7	6VA	4PDT	5	4.85
GA17A	12V	6.8	6VA	4PDT	5	4.85
GA17A	24V	24	6VA	4PDT	5	4.85
GA17A	115V	725	6VA	4PDT	5	4.85
GA17A	230V	2,950	6VA	4PDT	5	5.25
GA17D	6V	18	2.0W	4PDT	5	4.85
GA17D	12V	72	2.0W	4PDT	5	4.85
GA17D	24V	288	2.0W	4PDT	5	4.85
GA17D	110V	6,050	2.0W	4PDT	5	5.30
GPA	**6V**	**1.7**	**6VA**	**None**	**-**	**1.65**
GPA	12V	6.8	6VA	None	-	1.65
GPA	24V	24	6VA	None	-	1.65
GPA	115V	725	6VA	None	-	1.65
GPA	230V	2,950	6VA	None	-	2.10
GPD	**—**	**2,500**	**—**	**None**	**-**	**1.50**
GPD	—	10,000	—	None	-	2.10
GPD	6V	18	2.0W	None	-	2.10
GPD	12V	72	2.0W	None	-	2.10
GPD	24V	288	2.0W	None	-	2.10
GPD	110V	6,050	2.0W	None	-	3.15
GP11	**Switch**	**Assembly**		**DPDT**	**5**	**1.70**
GP17	Switch	Assembly		4PDT	5	2.95
KA5AY	**6V**	**5.1**	**2VA**	**SPDT**	**5**	**3.20**
KA5AY	12V	21	2VA	SPDT	5	3.20
KA5AY	24V	75	2VA	SPDT	5	3.20
KA5AY	115V	2,250	2VA	SPDT	5	3.20
KA5AY	230V	9,110	2VA	SPDT	5	3.60
KA5D	6V	32.1	1.2W	SPDT	5	3.05
KA5D	12V	120	1.2W	SPDT	5	3.05
KA5D	24V	472	1.2W	SPDT	5	3.05
KA5D	110V	10,000	1.2W	SPDT	5	3.65
KA11AY	6V	5.1	2VA	DPDT	5	3.85
KA11AY	12V	21	2VA	DPDT	5	3.85
KA11AY	24V	75	2VA	DPDT	5	3.85
KA11AY	115V	2,250	2VA	DPDT	5	3.85
KA11AY	230V	9,110	2VA	DPDT	5	4.25
KA11D	6V	32.1	1.2W	DPDT	5	3.40
KA11D	12V	120	1.2W	DPDT	5	3.40
KA11D	24V	472	1.2W	DPDT	5	3.40
KA11D	110V	10,000	1.2W	DPDT	5	4.00
KA14AY	6V	5.1	2VA	3PDT	5	4.25
KA14AY	12V	21	2VA	3PDT	5	4.25
KA14AY	24V	75	2VA	3PDT	5	4.25
KA14AY	115V	2,250	2VA	3PDT	5	4.25
KA14AY	230V	9,110	2VA	3PDT	5	4.65
KA14D	6V	32.1	1.2W	3PDT	5	3.85
KA14D	12V	120	1.2W	3PDT	5	3.85
KA14D	24V	472	1.2W	3PDT	5	3.85
KA14D	110V	10,000	1.2W	3PDT	5	4.45
KL5A	**6V**	**2.25**	**2.9VA**	**SPDT**	**5**	**3.85**
KL5A	115V	760	2.9VA	SPDT	5	3.85
KL5D	6V	36	1.1W	SPDT	5	3.60
KL5D	12V	140	1.1W	SPDT	5	3.60
KL5D	24V	600	1.1W	SPDT	5	3.60
KL11A	6V	2.25	2.9VA	DPDT	5	4.80
KL11A	12V	7.8	2.9VA	DPDT	5	4.80
KL11A	24V	33	2.9VA	DPDT	5	4.80
KL11A	115V	760	2.9VA	DPDT	5	4.80
KL11D	6V	36	1.1W	DPDT	5	4.60
KL11D	12V	140	1.1W	DPDT	5	4.60
KL11D	24V	600	1.1W	DPDT	5	4.60
KL11D	110V	10,000	1.1W	DPDT	5	5.10
KL14A	6V	2.25	2.9VA	3PDT	5	5.35
KL14A	24V	33	2.9VA	3PDT	5	5.35
KL14A	115V	760	2.9VA	3PDT	5	5.35
KL14D	6V	36	1.1W	3PDT	5	5.15
KL14D	12V	140	1.1W	3PDT	5	5.15
KL14D	24V	600	1.1W	3PDT	5	5.15
KL14D	110V	10,000	1.1W	3PDT	5	5.75
KL17A	6V	2.25	2.9VA	4PDT	5	5.30
KL17A	12V	7.8	2.9VA	4PDT	5	6.30
KL17A	24V	33	2.9VA	4PDT	5	6.30
KL17A	115V	760	2.9VA	4PDT	5	6.30
KL17D	6V	36	1.1W	4PDT	5	6.00
KL17D	12V	140	1.1W	4PDT	5	6.00
KL17D	24V	600	1.1W	4PDT	5	6.00
KL17D	110V	10,000	1.1W	4PDT	5	6.60

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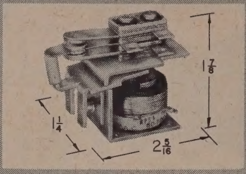
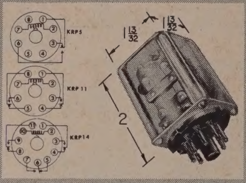
*Canadian Standards Association

Potter & Brumfield Relays

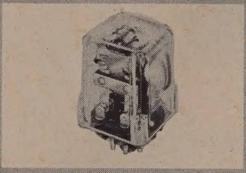
MP SERIES Snap action relay. Small size, heavy duty, low price SPDT relay used with capacitor-start, induction-run motors up to 1½" HP. Relay coil is connected across motor start winding; contacts are in series with capacitor. Mounting: Four No. 6-32 tapped holes on ⅞" x ¾" centers. Contacts: ⅜" dia. fine silver. Weight: 3½ ozs.



KRP SERIES Versatile, multi-contact arrangement. Enclosed in a clear cellulose acetate dust cover. Standard 8-pin octal-type plug for KRP5 and KRP11, 11-pin for KRP14. Weight: Approx. 3 ozs. Contacts: 5 amp, 3/16" dia. gold-flashed silver. 10 amp 3/16" dia. silver cadmium. See KCP-KRP hold down spring for special mounting applications. See KRP neon indicator lamp relay for current monitoring applications.

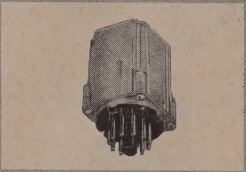


KRP11AN NEON INDICATOR LAMP RELAY A general purpose relay incorporating a NE-2 neon lamp to indicate current or voltage availability in power circuit. Contacts: 3/16" dia. silver cadmium. Enclosure: Clear cellulose acetate dust cover. Mounting: Standard octal plug. Weight: Approx. 3 ozs. See KCP-KRP hold down spring for special mountings.



"P"— CASE A clear cellulose acetate case for mounting rectifiers, capacitors, resistors or a combination of these. Available with octal-type plug with 8 or 11-pins. Comes complete with four screws. See KCP-KRP Hold Down Spring for special mounting applications.

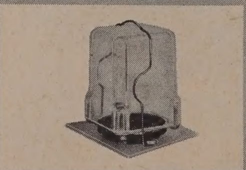
35DO70 Case (8-pin plug)	NET $.55
35DO72 Case (11-pin plug)	NET $.70



KCP-KRP HOLD DOWN SPRING

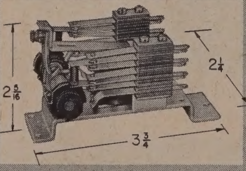
Designed to insure secure mounting of relay in any position. Fits all KCP or KRP plug-in relays. Durable stainless steel spring can be moved aside for relay removal or installation. Mounting: Two 5/32" dia. holes on 1 9/16" centers; will accommodate machine screws or rivets. Available in quantities of 50 per box.

9-KR-15	NET $5.00



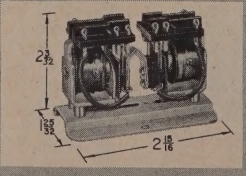
AP SERIES RATCHET, IMPULSE

A reliable compact unit for applications requiring on-off or reversing action on alternate operations. Positive ratchet operation at all speeds on impulses as short as 60 ms. Intermittent operation only. Mounting: Three 5/32" dia. holes on 3⅜" x ⅞" triangular centers. Contacts: 3/16" dia. silver. Weight: 7 ozs.



KB SERIES LATCHING RELAY

Both release and trip coils must be for the same voltage. One coil operates relay to set latch and other coil releases it. Ideal for memory work and overload applications. Operates on momentary impulse to either coil. Mounting: Two 5/32" dia. holes on 1⅜" centers. Weight: 6 ozs. Contacts: ⅛" dia. silver rated 5 amps; "G" suffix indicates silver cadmium contacts on movables rated 10 amps. AC relays with 5 amp. contacts carry U/L and CSA* labels.



*Canadian Standards Association

GENERAL PURPOSE RELAYS

	COILS			CONTACTS		
TYPE	Voltage or Current	Resistance in Ohms	Nominal Power	Arrangement	Rate in Amps	NET
MP5A	6V	1.7	6VA	SPDT	25	$6.00
MP5A	12V	6.8	6VA	SPDT	25	6.00
MP5A	24V	24.0	6VA	SPDT	25	6.00
MP5A	115V	725	6VA	SPDT	25	6.00
MP5A	230V	2,950	6VA	SPDT	25	6.25
MP5D	6V	18	2.0W	SPDT	25	6.00
MP5D	12V	72	2.0W	SPDT	25	6.00
MP5D	24V	288	2.0W	SPDT	25	6.00
MP5D	110V	6,050	2.0W	SPDT	25	6.80
KRP5A§	6V	5.1	2VA	SPDT	5	5.45
KRP5A§	24V	75	2VA	SPDT	5	5.45
KRP5A§	115V	2,250	2VA	SPDT	5	5.45
KRP5AG§	6V	5.1	2VA	SPDT	10	5.55
KRP5AG§	24V	75	2VA	SPDT	10	5.55
KRP5AG§	115V	2,250	2VA	SPDT	10	5.55
KRP5D§	6V	32.1	1.2W	SPDT	5	5.40
KRP5D§	12V	120	1.2W	SPDT	5	5.40
KRP5D§	24V	472	1.2W	SPDT	5	5.40
KRP5D§	110V	10,000	1.2W	SPDT	5	6.00
KRP5DG§	6V	32.1	1.2W	SPDT	10	5.50
KRP5DG§	12V	120	1.2W	SPDT	10	5.50
KRP5DG§	24V	472	1.2W	SPDT	10	5.50
KRP5DG§	110V	10,000	1.2W	SPDT	10	6.10
KRP11A§	6V	5.1	2VA	DPDT	5	6.05
KRP11A§	12V	21	2VA	DPDT	5	6.05
KRP11A§	24V	75	2VA	DPDT	5	6.05
KRP11A§	115V	2,250	2VA	DPDT	5	6.05
KRP11A§	230V	9,110	2VA	DPDT	5	6.45
KRP11AG§	6V	5.1	2VA	DPDT	10	6.25
KRP11AG§	12V	21	2VA	DPDT	10	6.25
KRP11AG§	24V	75	2VA	DPDT	10	6.25
KRP11AG§	115V	2,250	2VA	DPDT	10	6.25
KRP11AG§	230V	9,100	2VA	DPDT	10	6.65
KRP11AN§	115V	9,100	2VA	DPDT	10	7.00
KRP11D§	6V	32.1	1.2W	DPDT	5	6.00
KRP11D§	12V	120	1.2W	DPDT	5	6.00
KRP11D§	24V	472	1.2W	DPDT	5	6.00
KRP11D§	110V	10,000	1.2W	DPDT	5	6.60
KRP11DG§	6V	32.1	1.2W	DPDT	10	6.20
KRP11DG§	12V	120	1.2W	DPDT	10	6.20
KRP11DG§	24V	472	1.2W	DPDT	10	6.20
KRP11DG§	110V	10,000	1.2W	DPDT	10	6.80
KRP14A§	6V	5.1	2VA	3PDT	5	7.50
KRP14A§	12V	21	2VA	3PDT	5	7.50
KRP14A§	24V	75	2VA	3PDT	5	7.50
KRP14A§	115V	2,250	2VA	3PDT	5	7.50
KRP14A§	230V	9,110	2VA	3PDT	5	7.90
KRP14AG§	6V	5.1	2VA	3PDT	10	7.80
KRP14AG§	12V	21	2VA	3PDT	10	7.80
KRP14AG§	24V	75	2VA	3PDT	10	7.80
KRP14AG§	115V	2,250	2VA	3PDT	10	7.80
KRP14AG§	230V	9,100	2VA	3PDT	10	8.20
KRP14D§	6V	32.1	1.2W	3PDT	5	7.45
KRP14D§	12V	120	1.2W	3PDT	5	7.45
KRP14D§	24V	472	1.2W	3PDT	5	7.45
KRP14D§	110V	10,000	1.2W	3PDT	5	8.05
KRP14DG§	6V	32.1	1.2W	3PDT	10	7.75
KRP14DG§	12V	120	1.2W	3PDT	10	7.75
KRP14DG§	24V	472	1.2W	3PDT	10	7.75
KRP14DG§	110V	10,000	1.2W	3PDT	10	8.35

SPECIAL PURPOSE RELAYS

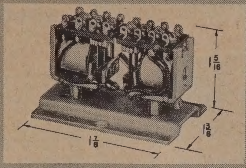
AP11A	6V	0.6	18.5VA	DPDT	5	8.70
AP11A	12V	2.28	18.5VA	DPDT	5	8.70
AP11A	24V	8.8	18.5VA	DPDT	5	8.70
AP11A	115V	240	18.5VA	DPDT	5	8.70
AP11A	230V	900	18.5VA	DPDT	5	9.15
AP11D	6V	4.0	9.0W	DPDT	5	8.70
AP11D	12V	15.5	9.0W	DPDT	5	8.70
AP11D	24V	65	9.0W	DPDT	5	8.70
AP11D	110V	1,350	9.0W	DPDT	5	9.35
AP17A	6V	0.6	18.5VA	4PDT	5	10.50
AP17A	12V	2.28	18.5VA	4PDT	5	10.50
AP17A	24V	8.8	18.5VA	4PDT	5	10.50
AP17A	115V	240	18.5VA	4PDT	5	10.50
AP17A	230V	900	18.5VA	4DPT	5	10.95
AP17D	6V	4.0	9.0W	4DPT	5	10.50
AP17D	12V	15.5	9.0W	4DPT	5	10.50
AP17D	24V	65	9.0W	4DPT	5	10.50
AP17D	110V	1,350	9.0W	4DPT	5	11.15
KB17AY	6V	2.3	5VA	4PDT	5	10.50
KB17AY	12V	10	5VA	4PDT	5	10.50
KB17AY	24V	42	5VA	4PDT	5	10.50
KB17AY	115V	1,030	5VA	4PDT	5	10.50
KB17AY	230V	4,100	5VA	4DPT	5	11.30
KB17AG	6V	2.3	5VA	4PDT	10	10.60
KB17AG	12V	10	5VA	4PDT	10	10.60
KB17AG	24V	42	5VA	4PDT	10	10.60
KB17AG	115V	1,030	5VA	4PDT	10	10.60
KB17AG	230V	4,100	5VA	4PDT	10	11.40
KB17D	6V	13.1	2.7W	4PDT	5	9.45
KB17D	12V	52.0	2.7W	4PDT	5	9.45
KB17D	24V	230	2.7W	4PDT	5	9.45
KB17D	110V	4,560	2.7W	4PDT	5	10.65
KB17DG	6V	13.1	2.7W	4PDT	10	9.65
KB17DG	12V	52.0	2.7W	4PDT	10	9.65
KB17DG	24V	230	2.7W	4PDT	10	9.65
KB17DG	110V	4,560	2.7W	4PDT	10	10.85
KB23AY	6V	1.8	7.8VA	6PDT	5	12.60
KB23AY	24V	27	7.8VA	6PDT	5	12.60
KB23AY	115V	700	7.8VA	6PDT	5	12.60
KB23AY	230V	2,750	7.8VA	6PDT	5	13.40
KB23AG	6V	1.8	7.8VA	6PDT	10	12.80
KB23AG	12V	7.2	7.8VA	6PDT	10	12.80
KB23AG	24V	27	7.8VA	6PDT	10	12.80
KB23AG	115V	700	7.8VA	6PDT	10	12.80
KB23AG	230V	2,750	7.8VA	6PDT	10	13.60
KB23D	6V	13.1	2.7W	6PDT	5	11.45
KB23D	12V	52.0	2.7W	6PDT	5	11.45
KB23D	24V	230	2.7W	6PDT	5	11.45
KB23D	110V	4,560	2.7W	6PDT	5	12.65
KB23DG	6V	13.1	2.7W	6PDT	10	11.75
KB23DG	12V	52.0	2.7W	6PDT	10	11.75
KB23DG	24V	230	2.7W	6PDT	10	11.75
KB23DG	110V	4,560	2.7W	6PDT	10	12.95

§ Enclosed Relay

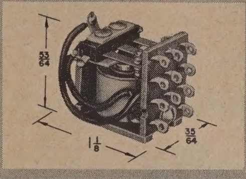
Potter & Brumfield Relays

SPECIAL PURPOSE RELAYS

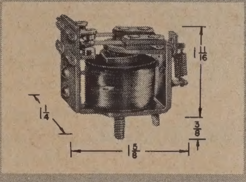
KE SERIES Sub-miniature latching relay with mechanical latch and electric release. Operates on momentary impulse to either coil. For intermittent duty only. Mounting: Sealed, three No. 6-32 threaded studs on 1¼" x ½" centers. Open two 5/32" dia. holes on 1 1/16" centers. Contacts: 3/32" dia. silver. Weight: Open, 4 ozs.; sealed, 6 ozs.



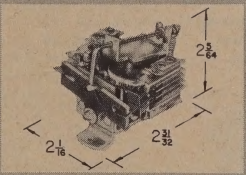
KM SERIES Sub-miniature, 3-pole relay for multiple switching. For use where size and weight are critical factors. Solder lug terminals. Mounting: No. 2-56 tapped core and locating boss. Contacts: 3/32" dia. silver. Weight: Approx. ⅞ oz.



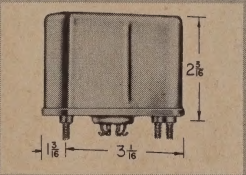
KT SERIES ANTENNA SWITCHING RELAY Glass base insulation for minimum RF loss to switch 300 ohm line. Mounting: One No. 6-32 threaded stud. Contacts: ⅛" dia. silver. Weight: 1½" ozs.



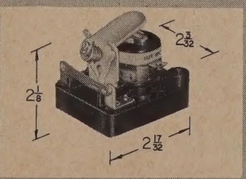
PC SERIES Single coil impulse latching relay for on-off and current reversal switching on alternate pulses. Operates on 60 millisecond pulses to the coil. Mounting: Two 5/32" dia. holes on 2⅝" x ⅝" centers. Weight: 5 ozs. Contacts: ⅛" dia. gold-flashed silver cadmium.



LK SERIES Hermetically sealed latching relay. Mechanical latch, electrical release. Cover has glass insulated header fitted with hook end solder terminals. Mounting: Three No. 8-32 threaded studs on 2½" x ½" centers. Contacts: 5/32" dia. silver. Weight: 6½ ozs.

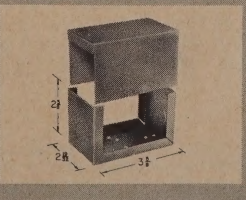


MS SERIES MOTOR STARTING RELAYS For starting capacitor start, induction-run motors. Operates on back EMF of running winding. Armature gap can be altered to change pull-in. Meets all U/L spacing requirements. Mounting: Two 5/32" dia. holes on 1 9/16" centers. Contacts: ¾ HP, 7/32" dia. fine silver. 3 HP, 7/32" dia. silver cadmium. Weight: 5 ozs. max. Enclosure: See "MS/MR" cover.



"MS/MR" COVER Provides neater installation, easier maintenance; minimizes broken leads, protects against dust, dirt, solder shorts and accidental jars. Sealed knockout holes for standard conduit fittings. Relay mounts on pre-drilled base. Fits MS, MR and SP relays.

35D130 NET $1.90



TYPE	COILS			CONTACTS		NET
	Voltage or Current	Resistance in Ohms	Nominal Power	Arrange-ment	Rate in Amps	
KE17D‡	6V	13	2.8W	4PDT	2	$ 9.45
KE17D‡	12V	50	2.8W	4PDT	2	9.45
KE17D‡	24V	230	2.8W	4PDT	2	9.45
KE17DM†‡	6V	13	2.8W	4PDT	2	20.50
KE17DM†‡	12V	50	2.8W	4PDT	2	20.50
KE17DM†‡	24V	230	2.8W	4PDT	2	20.50
KE23D‡	6V	13	2.8W	6PDT	2	12.10
KE23D‡	12V	50	2.8W	6PDT	2	12.10
KE23D‡	24V	230	2.8W	6PDT	2	12.10
KE23DM†‡	6V	13	2.8W	6PDT	2	26.25
KE23DM†‡	12V	50	2.8W	6PDT	2	26.25
KE23DM†‡	24V	230	2.8W	6PDT	2	26.25
KM5D	6V	36	1.1W	SPDT	2	3.35
KM5D	12V	144	1.1W	SPDT	2	3.35
KM5D	24V	500	1.1W	SPDT	2	3.35
KM11D	6V	36	1.1W	DPDT	2	3.70
KM11D	12V	144	1.1W	DPDT	2	3.70
KM11D	24V	500	1.1W	DPDT	2	3.70
KM14D	6V	36	1.1W	3PDT	2	4.25
KM14D	12V	144	1.1W	3PDT	2	4.25
KM14D	24V	500	1.1W	3PDT	2	4.25
KT11A	6V	5.1	2VA	DPDT	5	3.70
KT11A	115V	2,250	2VA	DPDT	5	3.70
KT11D	6V	32.1	1.2W	DPDT	5	3.70
KT11D	12V	120	1.2W	DPDT	5	3.70
PC11A	6V	0.6	18.5VA	DPDT	7.5	5.50
PC11A	12V	2.28	18.5VA	DPDT	7.5	5.50
PC11A	24V	8.8	18.5VA	DPDT	7.5	5.50
PC11A	115V	240	18.5VA	DPDT	7.5	5.50
PC11A	230V	900	18.5VA	DPDT	7.5	5.90
PC11D	6V	4.0	9.0W	DPDT	7.5	5.35
PC11D	12V	15.5	9.0W	DPDT	7.5	5.35
PC11D	24V	65.0	9.0W	DPDT	7.5	5.35
PC11D	110V	1,350	9.0W	DPDT	7.5	5.85
PC17A	6V	0.6	18.5VA	4PDT	7.5	7.60
PC17A	12V	2.28	18.5VA	4PDT	7.5	7.60
PC17A	24V	8.8	18.5VA	4PDT	7.5	7.60
PC17A	115V	240	18.5VA	4PDT	7.5	7.60
PC17A	230V	900	18.5VA	4PDT	7.5	8.00
PC17D	6V	4.0	9.0W	4PDT	7.5	7.45
PC17D	12V	15.5	9.0W	4PDT	7.5	7.45
PC17D	24V	65	9.0W	4PDT	7.5	7.45
PC17D	110V	1,350	9.0W	4PDT	7.5	7.95
LK17AH†	115V	1,030	5VA	4PDT	5	19.95
LK17DH†	24V	230	2.7VA	4PDT	5	19.45
MS2AY	115V	530	5.9VA	SPST-NC	¾HP	3.55
MS2AY	230V	2,100	5.9VA	SPST-NC	¾HP	3.95
MS4AY	115V	530	5.9VA	SPST-NC-DB	3HP	4.15
MS4AY	230V	2,100	5.9VA	SPST-NC-DB	3HP	4.55

‡ Intermittent Duty only
† Sealed Relay

POTTER & BRUMFIELD

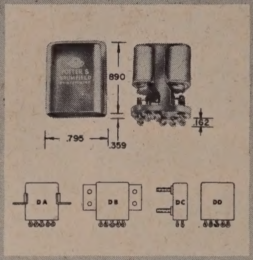
IS A MEMBER OF THE

NATIONAL ASSOCIATION OF RELAY MANUFACTURERS

Potter & Brumfield Relays

SC SERIES Micro-miniature permanent magnet relay for low power, high shock/vibration applications. 100g shock, 30g vibration to 2000cps with no contact openings. Ambient temperature range: —65°C. to +125°C. Features single coil action and conforms to standard micro-miniature coil operation except polarized connections because of magnetic circuit. Positive terminal marked with red dot. Mounting: SC11D°°, —DA, —DB, DC and DD correspond to similarly designed SL mountings. Weight: ¾ oz.

°°Cinch No. 54A20730 and Armel No. HRK-1, 8-pin receptacles available from distributors for plug-in applications.



SPECIAL PURPOSE RELAYS

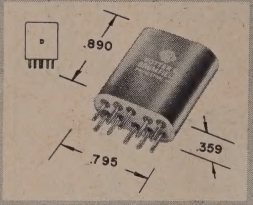
TYPE	COILS			CONTACTS		NET
	Voltage or Current	Resistance in Ohms	Nominal Power	Arrangement	Rate in Amps	
SC11D†	**6V**	**35**	**1W**	**DPDT**	**2***	**15.75**
SC11D†	12V	135	1W	DPDT	2	15.75
SC11D†	24V	550	1W	DPDT	2	15.75
SC11D†	36V	1,250	1W	DPDT	2	16.25
SC11DA†	6V	35	1W	DPDT	2	15.75
SC11DA†	12V	135	1W	DPDT	2	15.75
SC11DA†	24V	550	1W	DPDT	2	15.75
SC11DA†	36V	1,250	1W	DPDT	2	16.25
SC11DB†	6V	35	1W	DPDT	2	15.75
SC11DB†	12V	135	1W	DPDT	2	15.75
SC11DB†	24V	550	1W	DPDT	2	15.75
SC11DB†	36V	1,250	1W	DPDT	2	16.25
SC11DC†	24V	550	1W	DPDT	2	15.75
SC11DD†	24V	550	1W	DPDT	2	15.75
SL11D†	**6V**	**40**	**1W**	**DPDT**	**2***	**17.25**
SL11D†	12V	160	1W	DPDT	2	17.25
SL11D†	24V	630	1W	DPDT	2	17.25
SL11D†	36V	1,400	1W	DPDT	2	18.50
SL11DA†	6V	40	1W	DPDT	2	17.25
SL11DA†	12V	160	1W	DPDT	2	17.25
SL11DA†	24V	630	1W	DPDT	2	17.25
SL11DA†	36V	1,400	1W	DPDT	2	18.50
SL11DB†	6V	40	1W	DPDT	2	17.25
SL11DB†	12V	160	1W	DPDT	2	17.25
SL11DB†	24V	630	1W	DPDT	2	17.25
SL11DB†	36V	1,400	1W	DPDT	2	18.50
SL11DC†	24V	630	1W	DPDT	2	17.25
SL11DD†	24V	630	1W	DPDT	2	17.25

† Sealed Relay

* @28VDC

SL SERIES Dual coil micro-miniature magnetic latching relay with same shock/vibration, resistance and ambient temperature range as SC. Coils may be connected in series for polar operation. Mounting: SL11D° for plug-in applications: —DA has shoulder flangers with two .104″ x .136″ holes on a 1.062″ center; —DB has a welded bracket with four .125″ dia. holes on 1.062″ x .281″ centers; —DC has two No. 4-40 NC 2A threaded studs on .488″ x .220″ diagonal centers; —DD has plain case with hook end solder terminals.

°Viking No. P/N VB10/3DV 1 10-pin receptacles available from distributors for plug-in applications.



ORDERING INSTRUCTIONS —— File-O-Matic Sec. 23

All relay contacts are rated at 115 volt-60 cycle, non inductive load.

When ordering specify relay type and coil voltage or resistance.

Example: PR5AY, 115 Volts AC, 60 cycles or LB5, 2500 ohms resistance.

To operate 110V DC relays on 220V DC use a 5 watt wire-wound resistor of a value approximately the relay coil resistance in series with the relay coil.

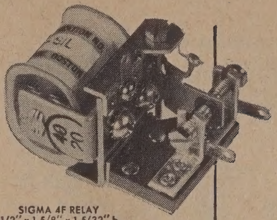
CONTACT LEGEND: S-Single; D-Double; P-Pole; T-Throw; N-Normally; O-Open; C-Closed; B-Break; M-Make.

Prices and Specifications subject to change without notice. For latest prices refer to United Pricing Service.

SIGMA SENSITIVE RELAYS

PLATE CIRCUIT RELAY . . . SERIES 4

Single-pole, double-throw, general purpose relay with 20 and 50 mw. sensitivity. Balanced armature. Operates in any position. Spring tension and air gaps screwdriver adjustable in open style only. Silver (SIL) contacts rated 2 amp. 28 VDC/120 VAC for 100,000 operations. 4F-8,000-S SIL widely used for radio controlled models. Available in other mountings and enclosures.


SIGMA 4F RELAY
1-1/2" x 1-5/8" x 1-5/32" h.
Wt. 2-1/4 oz.

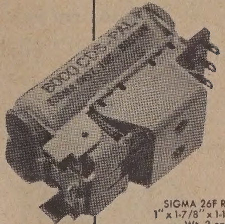
TYPICAL ADJUSTMENTS

Relay	Coil Ohms	Operate Ma. DC	Net Each
4F-1,000-S SIL	1,000	4.5	$6.05
4F-2,500-S SIL	2,500	3.0	6.05
4F-5,000-S SIL	5,000	2.0	6.35
4F-8,000-S SIL	8,000	1.6	6.60

RADIO CONTROL MODEL RELAY . . . SERIES 26

Single-pole, double-throw, balanced armature relay with adjustments from 4 mw. to 20 mw. sensitivity. Silver (SIL), gold alloy (GSP), and palladium (PAL) contacts for CDS adjustment rated 0.5 amp. at 28 VDC/120 VAC. 26F-8,000-CDS SIL (unenclosed only) exceptionally rugged and especially designed for R/C models. Uses less plate current thus prolonging tube life.

"S", "G" and "W" adjustments available unenclosed or hermetically sealed.


SIGMA 26F RELAY
1" x 1-7/8" x 1-1/16" h.
Wt. 2 oz.

TYPICAL ADJUSTMENTS

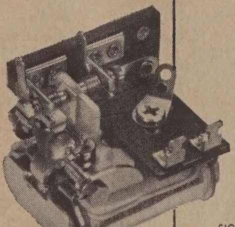
Relay	Operate Ma. DC	Net Each
26F-1,000-S SIL	2.3	$7.80
26F-8,000-CDS SIL	0.7	9.55
26F-12,000-G SIL	0.9	10.80

EXTRA SENSITIVE PRECISION RELAY . . . SERIES 5

Extremely precise, rugged AC* and DC general purpose sensitive relay. Balanced armature, single-pole, double-throw. Suitable for wide range of adjustments from 1.0 mw. to 1.5 watts. Contact rating varies up to 3 amp. at 28 VDC/120 VAC for 100,000 operations, depending on contact material and adjustment.

*AC operation accomplished by means of built-in rectifiers.

Available in other mountings and enclosures.


SIGMA 5F RELAY
1-3/4" x 1-5/16" x 1-11/16" h.
(including terminals)
Wt. 4-1/4 oz.

TYPICAL ADJUSTMENTS

Relay	Coil Ohms	Operate Ma. DC	Net Each
5F-1,000-S SIL	1,000	2.3	$8.25
5F-2,500-S SIL	2,500	1.4	8.25
5F-5,000-S SIL	5,000	1.0	8.80
5F-10,000-S SIL	10,000	0.7	9.65

SMALL LOW-COST RELAY . . . SERIES 11

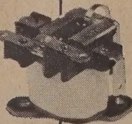
Small, single-pole double-throw AC and DC relay. DC operating sensitivities 50 mw. in "G" Adjustment, 200 mw. in "W" Adjustment. AC version: 0.3 v-a. in "ACS" Adjustment. Contacts rated 1 amp. ("G" and "ACS"), 5 amp. ("W") at 28 VDC/120 VAC. Available unenclosed only in four mounting styles:

11F — 2 tapped holes, uninsulated

11F2 — Insulated base

11F3 — Insulated base, interchangeable with relays of other manufacture

11FP — Shoulder lug mounting for use in printed circuits


SIGMA 11F RELAY
1-5/32" x 1-5/32" x 1" h.
Wt. 1 oz.

TYPICAL ADJUSTMENTS

AC Types	Coil Volts	Operate Voltage	Net Each	DC Types	Coil Ohms	Operate Ma. DC	Net Each
11FZ-25-ACS SIL	6	4.8	$2.50	11F-1,000-G SIL	1,000	7.0	$1.75
11FZ-150-ACS SIL	12	9.5	2.50	11F-2,300-G SIL	2,300	4.6	1.75
11FZ-550-ACS SIL	24	18	2.50	11F-6,000-G SIL	6,000	2.9	1.95
11FZ-9,000-ACS SIL	120	75	2.95	11F-9,000-G SIL	9,000	2.4	2.15

Limited quantities available through stocking distributors in major cities. All prices subject to change without notice.

SIGMA

SIGMA INSTRUMENTS, INC. So. Braintree 85, Mass.

SIGMA SENSITIVE RELAYS

HIGH SPEED POLAR SWITCHING RELAY . . . SERIES 72

For high speed switching and pulse repeating applications. Capable of switching 500 pulses per second with virtual elimination of contact bounce. High immunity to extremes of temperature, vibration and shock. Form "Z" side-stable. Maintenance and adjustment manual available for easy field repair and adjustment. Removable nylon cover.

TYPICAL ADJUSTMENTS

Relay	Operate Ma. DC either way, either coil	Recommended Drive for Max. Speed Operate Current, Ma, DC	Recommended Drive for Max. Speed Source Voltage	Net Each
72AOZ-160-TS TCP	1.4	15	50 VDC	$33.00
72AOZ-160-TG TCP	3.6	6.0	50 VDC	33.00

POLARITY SHOWN
CLOSES 6 TO 7
BOTTOM VIEW

SIGMA 72AOZ RELAY
1-7/16" dia. x 2-5/8" h.
Wt 3-1/2 oz. max.

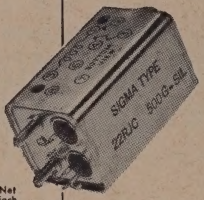
MISSILE TYPE RELAY . . . SERIES 22

Miniature DC relay widely used in special commercial and military applications. "G" adjustment operates at sensitivities of 20 mw. SPDT and 40 mw. DPDT. Contact rating at 28 VDC/120 VAC silver (SIL) 2 amp; palladium (PAL) and gold (GSP) 0.5 amp. "HG" adjustment operates at 20 and 40 mw. "W" adjustment operates at 40 and 80 mw. New "S" Adjustment sensitivity 12 mw. SPDT, 20 mw. DPDT. Silver alloy (SGP) contact rated 1.0 amp at 28 VDC/120 VAC. Both adjustments vibration resistant: "HG" 10 g to 500 cps, "W" 15 g to 500 cps, 5 g to 2,000 cps.

TYPICAL ADJUSTMENTS

SPDT Relay	Coil Ohms	Operate Ma. DC	Net Each
22RJC-1,000-G SIL	1,000	4.5	$13.00
22RJC-2,500-G SIL	2,500	2.8	13.50
22RJC-5,000-G SIL	5,000	2.0	14.00
22RJC-8,000-G SIL	8,000	1.6	14.50

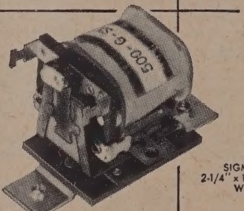
DPDT Relay	Coil Ohms	Operate Ma. DC	Net Each
22RJCC-1,000-G SIL	1,000	6.3	14.50
22RJCC-2,500-G SIL	2,500	4.0	15.00
22RJCC-5,000-G SIL	5,000	2.8	15.50
22RJCC-8,000-G SIL	8,000	2.3	16.00



SIGMA 22RJC RELAY
1" square x 1-3/4" h.
Wt. 3 oz.

SINGLE-POLE AC AND DC RELAY . . . SERIES 41

General purpose, highly sensitive, rugged design. Quiet enough for electric blanket controls. Contact rating from 0.5 amp. to 5.0 amp. at 28 VDC/120 VAC.
AC operation by pole shading with sensitivity down to 0.06 volt-ampere. "K" adjustment adapted for high speed keying, largely free of contact bounce when operated SPST, normally open. Tungsten (TUN) contacts only, rated at 1.0 amp. 28 VDC/120 VAC. Other mountings and enclosures available.



SIGMA 41F RELAY
2-1/4" x 1-1/4" x 1-5/16" h.
Wt. 2-1/2 oz.

TYPICAL ADJUSTMENTS

AC TYPES	Operate Voltage	Nominal Voltage	Contact Rating amp.	Net Each
41FZ-10-ACG SIL	4.0	6	5	$3.50
41FZ-35-ACS SIL	5.0	6	2	4.00
41FZ-200-ACG SIL	18	24	5	3.50
41FZ-500-ACS SIL	19	24	2	4.00
41FZ-5,000-ACG SIL	90	115	5	3.65
41FZ-10,000-ACS SIL	85	115	2	4.45
41FZ-12,000-ACG SIL	140	230	5	4.15

DC TYPES	Coil Ohms	Operate Ma. DC	Net Each
41F-5-S SIL	5	90	$3.85
41F-50-S SIL	50	30	3.85
41F-200-S SIL	200	15	3.85
41F-1,000-S SIL	1,000	6.5	3.85
41F-5,000-S SIL	5,000	3.0	4.00
41F-10,000-S SIL	10,000	2.0	4.25

Contact rating — 2 amp.

DOUBLE-POLE AC AND DC RELAY . . . SERIES 42

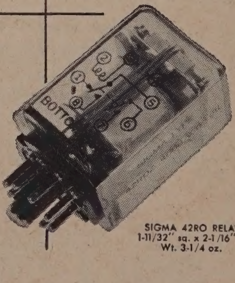
General purpose, double-pole version of Series 41. Shown with plastic dust cover. Operates under 0.2 watt DC and under 0.5 volt-ampere AC.

TYPICAL ADJUSTMENTS

AC TYPES	Operate Voltage	Nominal Voltage	Contact Rating amp.	Net Each
42ROZ-8-ACG SIL	4.0	6	5	$6.20
42ROZ-25-ACS SIL	5.0	6	2	7.15
42ROZ-200-ACG SIL	19.0	24	5	6.20
42ROZ-340-ACS SIL	19.0	24	2	7.15
42ROZ-4,000-ACG SIL	90.0	120	5	6.20
42ROZ-7,000-ACS SIL	90.0	120	2	7.35

DC TYPES	Coil Ohms	Operate Ma. DC	Net Each
42RO-5-G SIL	5	200	$6.20
42RO-50-G SIL	50	65	6.20
42RO-200-G SIL	200	32	6.20
42RO-1,000-G SIL	1,000	14	6.20
42RO-5,000-G SIL	5,000	6.5	6.40
42RO-10,000-G SIL	10,000	4.5	6.60

Contact rating — 5 amp.



SIGMA 42RO RELAY
1-11/32" sq. x 2-1/16" h.
Wt. 3-1/4 oz.

Limited quantities available through stocking distributors in major cities. All prices subject to change without notice.

SIGMA

SIGMA INSTRUMENTS, INC. So. Braintree 85, Mass.

SIGMA SENSITIVE RELAYS

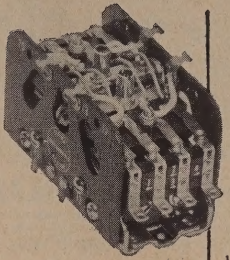
SIGMA

POLARIZED MULTIPOLE RELAY . . . SERIES 6

Up to four pole, double-throw in either single or dual coil arrangement. Sensitive enough for low power electronic circuits. Fast enough for follow-up systems.
Contacts rated 2 and 5 amp. at 28 VDC/120 VAC.
"X" — 3-position center stable (up to 4 Form K)
"Y" — Magnetic bias (up to 4 Form C)
"Z" — Magnetic latching (up to 4 Form C)
Available hermetically sealed or unenclosed.

TYPICAL ADJUSTMENTS

Relay	Coil Ohms	Operate Ma. DC	Net Each
Single coil			
6FX2A2A-5,000-G SIL	5,000	1.9	$29.90
6FX2A2A-10,000-G SIL	10,000	1.5	30.50
Dual Coil			
6FX2A2A-2,500-GD SIL	2500/2500	4.2	30.75
6FX2A2A-5,000-GD SIL	5000/5000	3.0	31.60



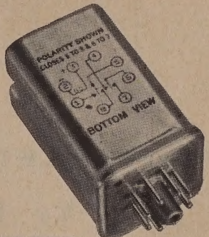
SIGMA 6FX4C RELAY
1-7/8" x 3-7/16" x 1-7/8" h.
Wt. 10 oz.

DOUBLE-POLE 3-POSITION POLAR RELAY . . . SERIES 23

For single or double pole 3-position switching with single or dual coil. Unusual magnetic circuit restores armature to mid-position between fixed contacts improving mechanical and thermal stability. Sensitivity varies from 6 mw. to 24 mw. Silver (SIL) contacts rated 2 amp. at 28 VDC/120 VAC for 100,000 operations. Hermetically sealed only. Also available Form "Y" Magnetic bias.

TYPICAL ADJUSTMENTS

Relay	Coil	Operate Ma. DC	Net Each
Single Coil			
23JOXC-4,000-G SIL	4,000	1.2	$53.40
23JOXCC-6,000-G SIL	6,000	1.4	54.25
Dual Coil			
23JOXC-2,500-GD SIL	2500/2500	2.2	55.15
23JMXCC-4,200-GD SIL	4200/4200	2.3	59.50



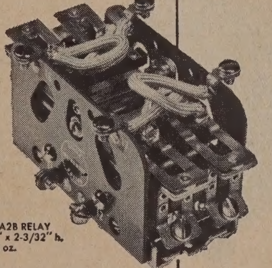
SIGMA 23JOX RELAY
1-5/8" sq. x 2-9/16" h.
Wt. 8-5/8 oz.

LATCHING POWER RELAY . . . SERIES 61

Heavy duty Form "Z" 2-position, single or dual coil; modification of Series 6. For switching heavy loads with small coil power. Load switched by momentary signal of appropriate polarity. Remains magnetically latched until signal of opposite polarity received. 2A2B only. Silver cadmium (SC) contacts only, rated 20 amp. at 28 VDC/120 VAC. Also available Form "Y" Magnetic bias

TYPICAL ADJUSTMENTS

Relay	Operate Each Polarity	Net Each
Single Coil		
61FZ2A2B-10,000-G SC	50 VDC	$23.75
Dual Coil		
61FZ2A2B-10,000-GD SC	72 VDC	26.25



SIGMA 61FZ2A2B RELAY
3-1/2" x 2-3/16" x 2-3/32" h.
Wt. 10 oz.

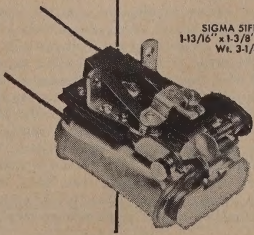
SENSITIVE POWER RELAY . . . SERIES 51

Single-pole, double-break, normally-closed DC, for control of loads up to 1 kw. Used in commercial photoelectric streetlighting control. Rated for 1,000 watt incandescent 120 VAC loads with inrush currents in the order of 100 amp. Double-break contact construction eliminates faulty circuit operation due to sticking contacts. Unenclosed style (FB) only.

TYPICAL ADJUSTMENTS

Relay	Operate Ma. DC	Net Each
51FB-5,000-G SIL	4.5	$10.20

SIGMA 51FB RELAY
1-13/16" x 1-3/8" x 1-5/16" h.
Wt. 3-1/4 oz.



Limited quantities available through stocking distributors in major cities. All prices subject to change without notice.

SIGMA

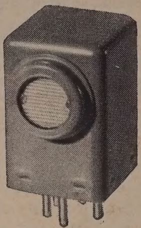
SIGMA INSTRUMENTS, INC. So. Braintree 85, Mass.

SIGMA SENSITIVE RELAYS

PHOTORELAY . . . SERIES 8

A miniature tubeless photorelay with a cadmium sulfide photocell. For furnace flame-out controls, pinball machines, elevators, conveyors, etc. 5-pin plug-in base, dust-proof can, operates at 5 foot-candles or less, releases at 0.1 foot-candle or more. 2 operations per second guaranteed minimum. 120 VAC 50/60 cps at temperature range of −40° to 75°C.

Model for slowly changing light source also available.

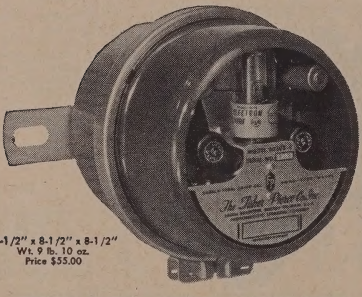


SIGMA CdS PHOTORELAY MODEL 8RCOIA
1-1/2" square x 1-7/8" h.
Wt. 3 oz . . . Price $15.00

PHOTOELECTRIC LIGHTING CONTROLS

by FISHER-PIERCE

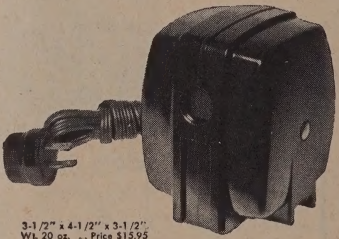
AFFILIATE OF SIGMA INSTRUMENTS, INC.



11-1/2" x 8-1/2" x 8-1/2"
Wt. 9 lb. 10 oz.
Price $55.00

EXTERIOR LIGHTING CONTROL . . . MODEL 63305-C

Rugged, stable and reliable photoelectric unit for controlling aircraft obstruction lighting on towers, smoke stacks, bridges, buildings, etc., and other types of outdoor lighting. Automatically switches lights on as daylight drops to CAA-recommended turn-on point (35 foot-candles), off when daylight returns. No seasonal adjustment needed; unaffected by time of day or weather. Load rating 3000 watts. Contactor SPST, double break. Adjustable turn-on range 25–45 foot-candles; standard factory setting, 35 f-c. Supply voltage 105–130, 50/60 cycles; power consumption 10–11 watts daytime, 6–7 watts nighttime. Features pre-aged tubes for 20,000 hours min. life; highest quality components; fail-safe operation; time delay to prevent accidental turn-off by transient lights; weatherproof housing; standard meter socket with mounting bracket; glass-enclosed plug-in chassis.



3-1/2" x 4-1/2" x 3-1/2"
Wt. 20 oz. . . Price $15.95

INTERIOR LIGHTING CONTROL . . . MODEL 6502

Dependable, low cost, tubeless device for automatic turn-on of lights as darkness approaches, turn-off when daylight returns. No setting or resetting needed. Light to be controlled is simply plugged into 6502 plug, which is then connected to any 110V, 60 cycle AC outlet. "Eye" of control is faced toward daylight. Maximum lamp load 300 watts; handles heavier loads by energizing auxiliary relays. Compact, sturdy bakelite case. Max. power consumption 2 watts. Ideal for controlling lights in store windows, outdoor telephones, greenhouses, poultry houses, porches, etc., and in many other commercial and industrial applications.

All prices subject to change without notice.

SIGMA INSTRUMENTS, INC.

So. Braintree 85, Mass.

USRE *leading the art with quality relays*

U. S. RELAY-ELECTRONICS A DIVISION OF A. S. R. PRODUCTS CO.

U. S. RELAY ELECTRONICS, AZUSA CALIF.

ALL RELAYS LISTED IN THIS CATALOG HAVE BEEN CODED TO THIS EASY SELECTION GUIDE.

STEP 000 XX 00 X 00 X 00 XX

1. TYPE OF RELAY

2. ENCLOSURE STYLE

- **A.** OPEN
- **B.** PLASTIC COVER
- **C.** ROUND
- **D.** RECTANGULAR
- **E.** SQUARE
- **F.** CRYSTAL CASE
- **G.** HERMETICALLY SEALED
- **H.** DUST COVER
- **J.** METAL CASE

3. CONTACT ARRANGEMENT

- **1.** SPST-NO
- **2.** SPST-NC
- **3.** SPST-NO-DB
- **4.** SPDT
- **5.** SPDT-DB
- **6.** 2PST-NO
- **7.** 2PST-NC
- **8.** 2PST-NO-DB
- **9.** 2PST-NC-DB
- **10.** 2PDT
- **11.** 2PDT-DB
- **12.** 3PST-NO
- **13.** 3PST-NC
- **14.** 3PDT
- **15.** 4PST-NO
- **16.** 4PST-NC
- **17.** 4PDT
- **18.** 5PST-NO
- **19.** 5PST-NC
- **20.** 5PDT
- **21.** 6PST-NO
- **22.** 6PST-NC
- **23.** 6PDT

4. CONTACT RATING (RESISTIVE)
AMPERES @ 28VDC OR 115VAC

- **A** — 2
- **B** — 3
- **C** — 5
- **D** — 10
- **E** — 12.5
- **G** — 15
- **H** — 20
- **J** — 25
- **K** — 50
- **L** — 25, 50
- **M** — 1 H.P. @ 115V
  1½ H.P. @ 230V
- **N** — DRY CIRCUIT

5. COIL VOLTAGE OR CURRENT

- **1.** 6VAC
- **2.** 12VAC
- **3.** 24VAC
- **4.** 36VAC
- **5.** 48VAC
- **6.** 115VAC
- **7.** 220VAC
- **8.** 6VDC
- **9.** 12VDC
- **10.** 24VDC
- **11.** 36VDC
- **12.** 48VDC
- **13.** 115VDC
- **14.** 115VAC 400CPS
- **15.** 115VAC 60-400CPS
- **16.** 9 TO 30 MA
- **17.** 7 TO 20 MA
- **18.** 5 TO 14 MA

6. OPERATING TEMPERATURE RANGE

- **A.** −55°C TO +71°C
- **B.** −65°C TO +125°C
- **C.** OTHER — AS NOTED ON INDIVIDUAL SPECS.

7. MOUNTING STYLE

- **1.** AXIAL MOUNTED
- **2.** SIDE MOUNTED
- **3.** STUD MOUNTED (2 STUDS)
  (3 STUDS) *(4 STUDS)
- **4** BRACKET MOUNTED
- **5.** TAPPED HOLE MOUNTED
- **6.** OCTAL PLUG-IN MOUNTED
- **7.** CONNECTOR PLUG-IN MOUNTED

8. TERMINAL STYLE

- **A.** OPEN RELAY-SOLDER LUG
- **B.** STUDS
- **C.** SCREW
- **D.** SOLDER HOOK
- **E.** FLATTENED & PIERCED
- **F.** PLUG-IN
- **G.** OCTAL
- **H.** AN PLUG
- **J.** LEADS

For other combinations, consult local representative or U. S. R. E. sales department.

TYPICAL EXAMPLE:

STEP	1 SERIES	2 ENCLOSURE	3 CONTACT ARRANGEMENT	4 CONTACT RATING	5 COIL VOLTS	6 TEMPERATURE	7 MOUNTING STYLE	8 TERMINAL STYLE
➡	141	BH PLASTIC DUST COVER	1 SPST-NO.	M 1 H.P. @ 115V	1 6VAC	A −55°C TO +71°C	4 BRACKET MOUNTED	C SCREW

PART NO. 141BH1M1A4B

FOR ANY OTHER RELAY REQUIREMENT YOU MIGHT HAVE, SEND U. S. RELAY-ELECTRONICS YOUR SPECIFICATIONS USING THIS SIMPLE CODE.

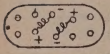
U.S. RELAY-ELECTRONICS A DIVISION OF A·S·R PRODUCTS CO.

101 SERIES Type 101 is a micro miniature latching relay that offers BIG RELAY performance in crystal can size. Designed for continuous use at —65°C to +125°C temperature range. Relay has been designed to meet Military Specifications, MIL-R-25018 & MIL-R-5757C. Contacts have a minimum life expectancy of 100,000 operations at rated load.

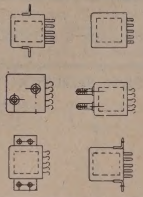
Completely adaptable for missile, military, computer and industry usage where size weight and environmental extremes are critical.

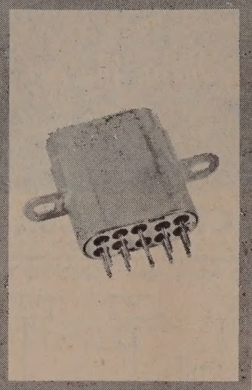
NOTE: All types listed will be supplied with terminal style D (Solder Hook). See Step 8 — Page 1. Other terminal styles available Style F (Plug-in) mates with Viking Electric receptacle V10. Style J (3 inch leads).

Relays available for Dry Circuit (10 Microamps @ 25 Millivolts). Indicate *N* in Step 4 when ordering.



SCHEMATIC





		COILS	CONTACTS	
TYPE	Voltage	Resistance in Ohms	Arrangement	Rate in Amps
101F10A8B1D	**6VDC**	**40**	**2PDT**	**2**
101F10A9B1D	12VDC	160	2PDT	2
101F10A10B1D	24VDC	630	2PDT	2
101F10A11B1D	36VDC	1400	2PDT	2
101F10A12B2D	48VDC	2500	2PDT	2
101F10A8B2D	**6VDC**	**40**	**2PDT**	**2**
101F10A9B2D	12VDC	160	2PDT	2
101F10A10B2D	24VDC	630	2PDT	2
101F10A11B2D	36VDC	1400	2PDT	2
101F10A12B2D	48VDC	2500	2PDT	2
101F10A8B3D	**6VDC**	**40**	**2PDT**	**2**
101F10A9B3D	12VDC	160	2PDT	2
101F10A10B3D	24VDC	630	2PDT	2
101F10A11B3D	36VDC	1400	2PDT	2
101F10A12B3D	48VDC	2500	2PDT	2
101F10A8B4D	**6VDC**	**40**	**2PDT**	**2**
101F10A9B4D	12VDC	160	2PDT	2
101F10A10B4D	24VDC	630	2PDT	2
101F10A11B4D	36VDC	1400	2PDT	2
101F10A12B4D	48VDC	2500	2PDT	2
101F10A8B5D	**6VDC**	**40**	**2PDT**	**2**
101F10A9B5D	12VDC	160	2PDT	2
101F10A10B5D	24VDC	630	2PDT	2
101F10A11B5D	36VDC	1400	2PDT	2
101F10A12B5D	48VDC	2500	2PDT	2
101F10A8B6D	**6VDC**	**40**	**2PDT**	**2**
101F10A9B6D	12VDC	160	2PDT	2
101F10A10B6D	24VDC	630	2PDT	2
101F10A1 B5D	36VDC	1400	2PDT	2
101F10A12B6D	48VDC	2500	2PDT	2

64 SERIES A rugged, general purpose relay designed to meet applicable requirements of MIL-R-6106 spec. Easily adaptable to aircraft and airborne equipment where reliability and compactness are desired. Relays hermetically sealed and processed in contaminate free atmosphere.

DC Relays are adjusted to pick up at 75% max. of nominal voltage.

AC Relays are adjusted to pick up at 80% max. of nominal voltage.

Relays listed are with solder-hook terminals. Other variations of AC, DC coils and terminal style available.

STYLE G 8 pin octal plug in 5 & 10 Amp
Also 15 Amp. 2 PDT (DC Coils only)
STYLE H AN Plugs (5 & 10 Amp.) 2 PDT, 4 PDT

Any contact arrangements and contact ratings available for 115 VAC, 400 CPS in temperature range of A (—55 to plus 71°C) or B (—65°C to plus 125°C).

Enclosure Styles

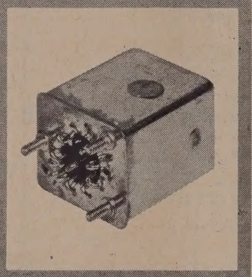
D. Rectangular (Not including terminals).
1. 1 7/16 x 1 21/32 x 2 1/16 Max. (Hermetically sealed).

Mounting Styles — Enclosures

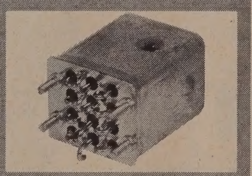
1. 1 Plug-in Octal (to 2 PDT, 15 Amp.)
2. Plug-in (AN Plug) (to 4 PDT, 10 Amp.)
3. (3) 6-32 Studs, 2 Studs spaced .938 on base of isosceles triangle and 1 stud spaced 1.187 on altitude.
4. (4) 6-32 Studs spaced on corners of a rectangle .625 x 1312 (This style available only with 4 PDT rectangular terminal pattern.)

Terminal Styles

D. Solder Hook (Circular and rectangular pattern)
F. Plug-in (5 Amp. only) 14-pin
Plug-in (10 Amp. only) special
G. Octal (to 2 PDT)
H. AN Plug — (to 4 PDT)



TYPE	Voltage	Resistance in Ohms	Arrangement	Rate in Amps
64D4H1A3D	**6VAC**	**2.6**	**SPDT**	**20**
64D4H3A3D	24VAC	40	SPDT	20
64D4H6A3D	115VAC	950	SPDT	20
64D4H7A3D	220VAC	3500	SPDT	20
64D4J8A3D	6VDC	11	SPDT	25
64D4J9A3D	12VDC	50	SPDT	25
64D4J10A3D	24VDC	185	SPDT	25
64D4J12A3D	48VDC	740	SPDT	25
64D10D1A3D	**6VAC**	**2.6**	**2PDT**	**10**
64D10D3A3D	24VAC	40	2PDT	10
64D10D6A3D	115VAC	950	2PDT	10
64D10D7A3D	220VAC	3500	2PDT	10
64D10G8A3D	6VDC	11	2PDT	15
64D10G9A3D	12VDC	50	2DPT	15
64D10G10A3D	24VDC	185	2PDT	15
64D10G12A3D	48VDC	740	2PDT	15
64D17C1A3D	**6VAC**	**2.6**	**4PDT**	**5**
64D17C3A3D	24VAC	40	4PDT	5
64D17C6A3D	115VAC	950	4PDT	5
64D17C7A3D	220VAC	3500	4PDT	5
64D17D8A3D	6VDC	11	4PDT	10
64D17D9A3D	12VDC	50	4PDT	10
64D17D10A3D	24VDC	185	4PDT	10
64D17D12A3D	48VDC	740	4PDT	10



TYPE	Voltage	Resistance in Ohms or VA	Arrangement	Rate in Amps
64D17D8A4D	**6VDC**	**11**	**4PDT**	**10**
64D17D9A4D	12VDC	50	4PDT	10
64D17D10A4D	24VDC	185	4PDT	10
64D17D12A4D	48VDC	740	4PDT	10
64D17D14A4D	115VAC 400CPS	4VA	4PDT	10
	TEMP. RANGE B	**(—65°C to+125°C)**		
64D17D8B4D	**6VDC**	**11**	**4PDT**	**10**
64D17D9B4D	12VDC	50	4PDT	10
64D17D10B4D	24VDC	185	4PDT	10
64D17D12B4D	48VDC	740	4PDT	10
64D17D14B4D	115VAC 400CPS	4VA	4PDT	10

40 SERIES A general purpose relay designed for high reliability and use in airborne equipment.

Completely adaptable for use in computers, industrial control and appliances where long life and reliability are essential.

AC Coils adjusted to pull-in at 80% nominal voltage.

DC Coils adjusted to pull-in at 75% max. of nominal voltage.

Relay will operate safely within —55°C to plus 71°C.

GENERAL PURPOSE MIDGET RELAY

DESCRIPTION: Highly versatile, highly efficient. Available in open type, or enclosed in a clear polystyrene DUST-TIGHT case using 8 or 11 pin octal plug.

CONTACTS: Available in standard contact arrangements to 3 PDT. Contacts rated @ 5 Amperes or 10 Amperes @ 28 VDC or 115 VAC.

COIL: Coils impregnated with high quality EPOXY varnish for long life. Resistances are available for voltages listed below. Relays are adjusted to pull-in at 75% of nominal DC voltage and 80% of nominal AC voltage.

AMBIENT TEMPERATURE: Relays will safely operate within temperature ranges of —55°C to + 71°C.

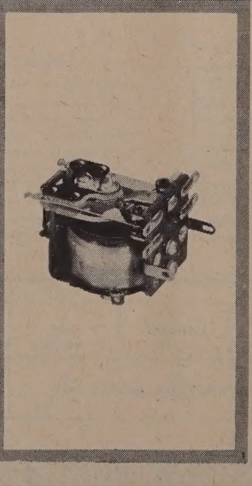
DIELECTRIC STRENGTH: Relays are tested at 1000 VRMS hipot.

MOUNTING STYLES

1. 6-32 Stud (Open)
2. 6-32 Tapped Core (Open)

Enclosures

3. Plug-in (Octal)
4. Plug-in (AN Plug)
5. (3) 6-32 studs — 2 studs spaced. .938 on base of Isoceles triangle and 1 stud spaced 1.187 on altitude.
6. (2) 6-32 studs located 1 15/32 between centers,
7. L-Shaped Bracket,



TYPE	Voltage	Resistance in Ohms	Arrangement	Rate in Amps
40A4C1A1A	**6VAC**	**4.7**	**SPDT**	**5**
40A4C2A1A	12VAC	21	SPDT	5
40A4C3A1A	24VAC	59	SPDT	5
40A4C6A1A	115VAC	1440	SPDT	5
40A4C7A1A	220VAC	5500	SPDT	5
40A4C8A1A	6VDC	28	SPDT	5
40A4C9A1A	12VDC	100	SPDT	5
40A4C10A1A	24VDC	450	SPDT	5
40A4C13A1A	115VDC	8500	SPDT	5
40A10C1A1A	**6VAC**	**4.7**	**2PDT**	**5**
40A10C2A1A	12VAC	21	2PDT	5
40A10C3A1A	24VAC	59	2PDT	5
40A10C6A1A	115VAC	1440	2PDT	5
40A10C7A1A	220VAC	5500	2PDT	5
40A10C8A1A	6VDC	28	2PDT	5
40A10C9A1A	12VDC	100	2PDT	5
40A10C10A1A	24VDC	450	2PDT	5
40A10C13A1A	115VDC	8500	2PDT	5
40A14C1A1A	**6VAC**	**4.7**	**3PDT**	**5**
40A14C2A1A	12VAC	21	3PDT	5
40A14C3A1A	24VAC	59	3PDT	5
40A14C6A1A	115VAC	1440	3PDT	5
40A14C7A1A	220VAC	5500	3PDT	5
40A14C8A1A	6VDC	28	3PDT	5
40A14C9A1A	12VDC	100	3PDT	5
40A14C10A1A	24VDC	450	3PDT	5
40A14C13A1A	115VDC	8500	3PDT	5
40A4D1A1A	**6VAC**	**4.7**	**SPDT**	**10**
40A4D2A1A	12VAC	21	SPDT	10
40A4D3A1A	24VAC	59	SPDT	10
40A4D6A1A	115VAC	1440	SPDT	10
40A4D7A1A	220VAC	5500	SPDT	10
40A4D8A1A	6VDC	28	SPDT	10
40A4D9A1A	12VDC	100	SPDT	10
40A4D10A1A	24VDC	450	SPDT	10
40A4D13A1A	115VDC	8500	SPDT	10
40A10D1A1A	**6VAC**	**4.7**	**2PDT**	**10**
40A10D2A1A	12VAC	21	2PDT	10
40A10D3A1A	24VAC	59	2PDT	10

(Continued)

U. S. RELAY-ELECTRONICS A DIVISION OF A·S·R PRODUCTS CO.

U. S. RELAY ELECTRONICS, AZUSA, CALIF.

TYPE	COILS Voltage	COILS Resistance in Ohms or VA	CONTACTS Arrangement	CONTACTS Rate in Amps
40C1D14A6E	**115VAC 400 Cycle**	**2VA**	**SPST-NO**	**10**
40C2D14A6E	115VAC 400 Cycle	2VA	SPST-NC	10
40C3D14A6E	115VAC 400 Cycle	2VA	SPDT	10
40C6D14A6E	115VAC 400 Cycle	2VA	2PST-NO	10
40C7D14A6E	115VAC 400 Cycle	2VA	2PST-NC	10
40C10D14A6E	115VAC 400 Cycle	2VA	2PDT	10
40C12D14A6E	115VAC 400 Cycle	2VA	3PST-NO	10
40C13D14A6E	115VAC 400 Cycle	2VA	3PST-NC	10
40D10D1A7B	**6VAC**	**4.7**	**2PDT**	**10**
40D10D2A7B	12VAC	21	2DPT	10
40D10D3A7B	24VAC	59	2PDT	10
40D10D6A7B	115VAC	1440	2PDT	10
40D10D7A7B	220VAC	5500	2PDT	10
40D10D8A7B	6VDC	12	2PDT	10
40D10D9A7B	12VDC	59	2PDT	10
40D10D10A7B	24VDC	220	2PDT	10
40D10D13A7B	115VDC	5500	2PDT	10
40D10D14A7B	115VAC 400 Cycle (Rectified)	2VA	2PDT	10
	—65°C to +125°C			
40D10D8B7B	**6VDC**	**12**	**2PDT**	**10**
40D10D9B7B	12VDC	59	2PDT	10
40D10D10B7B	24VDC	220	2PDT	10
40D10D13B7B	115VDC	5500	2PDT	10
40D10D14B7B	115VAC 400 Cycle (Rectified)	2VA	2PDT	10

40 SERIES ENCLOSURE STYLES.

A. Open
B. Plastic Cover
    1. Polystyrene — Octal Plug in to 3 PDT
C. Round (Not including terminals)
    a. $1\frac{5}{8}$ Dia. x 2 (Dust Cover)
    b. $1\frac{5}{8}$ Dia. x 2
    c. $1\frac{13}{16}$ Dia. x $2\frac{9}{16}$
    d. 2 Dia. x $2\frac{9}{16}$
D. Rectangular (Not including terminals)
    a. 1 23.32 x $2\frac{5}{16}$ x 2.2 Max.
    b. $1\frac{7}{16}$ x $1\frac{21}{32}$ x $2\frac{1}{16}$ Max.

40 SERIES

PLATE CIRCUIT RELAY

DESCRIPTION: Current operated relay for plate circuit and other low wattage application. Available in open type or enclosed in a clear polystyrene DUST-TIGHT case using 8 or 11 pin octal plug.

CONTACTS: Available in standard contact arrangements to 3 PDT. Contacts rated at 5 Amps @ 28 VDC or 115 VAC.

COIL: Coils impregnated with high quality EPOXY varnish for long life. Adjusted to pull-in or operate thru-out current values listed below.

AMBIENT TEMPERATURE: Relays will safely operate within temperature ranges of —55°C to plus 71°C.

DIELECTRIC STRENGTH: Relays are tested at 1000 VRMS hipot.

40 SERIES Relays are available in many different types of covers and configurations. (Round, rectangular, open and metal hermetically sealed.)

TYPE	COILS Current or Voltage	COILS Resistance in Ohms	CONTACTS Arrangement	CONTACTS Rate in Amps
40A10D6A1A	1440	115VAC	2PDT	10
40A10D7A1A	5500	220VAC	2PDT	10
40A10D8A1A	28	6VDC	2PDT	10
40A10D9A1A	100	12VDC	2PDT	10
40A10D10A1A	450	24VDC	2PDT	10
40A10D13A1A	8500	115VDC	2PDT	10
40A14D1A1A	**4.7**	**6VAC**	**3PDT**	**10**
40A14D2A1A	21	12VAC	3PDT	10
40A14D3A1A	59	24VAC	3PDT	10
40A14D6A1A	1440	115VAC	3PDT	10
40A14D7A1A	5500	220VAC	3PDT	10
40A14D8A1A	28	6VDC	3PDT	10
40A14D9A1A	100	12VDC	3PDT	10
40A14D1CA1A	450	24VDC	3PDT	10
40A14D13A1A	8500	115VDC	3PDT	10
40A4C16A1A	**9 to 30 ma**	**2500**	**SPDT**	**5**
40A4C17A1A	7 to 20 ma	5000	SPDT	5
40A4C18A1A	5 to 14 ma	10000	SPDT	5
40A10C16A1A	**9 to 30 ma**	**2500**	**2PDT**	**5**
40A10C17A1A	7 to 20 ma	5000	2PDT	5
40A10C18A1A	5 to 14 ma	10000	2PDT	5
40A14C16A1A	**9 to 30 ma**	**2500**	**3PDT**	**5**
40A14C17A1A	7 to 20 ma	5000	3PDT	5
40A14C18A1A	5 to 14 ma	10000	3PDT	5
40B4C16A3G	**9 to 30 ma**	**2500**	**3PDT**	**5**
40B4C17A3G	7 to 20 ma	5000	SPDT	5
40B4C18A3G	5 to 14 ma	10000	SPDT	5
40B10C16A3G	**9 to 30 ma**	**2500**	**2PDT**	**5**
40B10C17A3G	7 to 20 ma	5000	2PDT	5
40B10C18A3G	5 to 14 ma	10000	2PDT	5
40B14C16A3G	**9 to 30 ma**	**2500**	**3PDT**	**5**
40B14C17A3G	7 to 20 ma	5000	3PDT	5
40B14C18A3G	5 to 14 ma	10000	3PDT	5

TYPICAL TIME DELAY RELAYS

TIME DELAY RELAYS

TD SERIES

SPDT, 2PDT, 3PDT, 4PDT.

Contact ratings, 2 Amp, 5 Amp, 10 Amp.
Transistorized Time Delay. Units are available with factory preset time delay or externally adjustable time delay.
TIME DELAY LIMITS: 50 milliseconds to 300 seconds. Time delays exceeding these limits are available on special order.
TIMING ACCURACY RATINGS (STANDARD): ±5%, ±10%.
INPUT VOLTAGE: 28VDC standard; other voltages on request.
TEMPERATURE: —55°C to +85°C, —55°C to +125°C.
ENCLOSURE: Rectangular or cylindrical case, hermetically sealed.

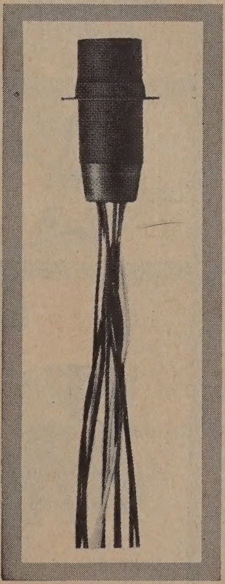
Special units are available combining time delay with other logic functions to produce sequence timers, repeat cycle timers; intervalometers and other special control devices.

TRANSISTORIZED TIME DELAY

TYPE TD 100 SERIES

SPDT, 2PDT and 3PDT

TIME DELAY: 30 millisecs. to 3 mins. ±5%
NOMINAL VOLTAGE RANGE: 28 VDC Standard; other voltages on request.
CONTACT LOAD AT 29 VDC: 2 Amp. Res.
TEMPERATURE: —65°C to +85°C
RESET TIME: Instantaneous for SPDT and 2PDT; reset time for 3PDT depends upon delay period.
Hermetically sealed, potted leads optional.



CONTROLLED PRODUCTION

In new contaminate-free laboratory and production-facilities, U. S. Relay tests and produces complete lines of relays and "customerized" control systems. Here, under dust-free, electrostatically filtered conditions, the unkind extremes of temperature, humidity, altitude and random-noise vibrations are anticipated, and provided for, in highly dependable products for an ever-changing space age.

For information write to U. S. Relay Company, the Electronic Division of A•S•R Products Corp., 717 N. Coney Avenue, Azusa, California.

U. S. RELAY

SOLID STATE TIMING UNITS

ST SERIES

Transistorized timing circuit combined with solid state switching devices to meet extreme environmental requirements with maximum miniaturization. Factory preset or adjustable time delays.
TIME DELAY LIMITS: 0.001 secs. to 300 secs. Time delays exceeding these limits are available on special order.
TIMING ACCURACY RATINGS (STANDARD): ±5%, ±10%.
INPUT VOLTAGE: 28VDC standard; other voltages on request.
TEMPERATURE: —55°C to +85°C, —55°C to +125°C.
ENCLOSURE: Rectangular case, hermetically sealed.

Special units are available combining time delay, with other logic functions to produce sequence timers, repeat cycle timers, intervalometers and other special control devices which are completely free of moving parts.

SOLID STATE SWITCHES
(Transistor Relay Drivers)

RD SERIES

Transistorized amplifiers designed for low level operation of power relays, contactors and other power switching devices. These units may also be used independently as switching devices for DC loads.
Units are temperature compensated to exhibit uniform current gain over the temperature range.
TYPICAL MINIMUM CURRENT GAIN: 200.
NOMINAL VOLTAGE RANGE: 5 to 30 VDC standard; other voltages on request.
INPUT RESISTANCE TYPICAL: 5,000 ohms.
TEMPERATURE RANGE: —65°C to +71°C, —65°C to +125°C.
ENCLOSURE Hermetically sealed.
Special units are available with input DC electrically isolated from the output and 2PDT output configurations.

U. S. RELAY-ELECTRONICS A DIVISION OF A·S·R PRODUCTS CO.

U. S. RELAY ELECTRONICS, AZUSA, CALIF. ④

call your parts distributor for

THE ALL NEW SUB-MINIATURE RELAYS

141 SERIES. Available in enclosure style B only (Dust Cover).

Steel Base Mounting 2-slots (.156 x .187) located on 1.5063 centers for #6 screws.

Size 1 31/32 x 2 3/32 x 1 53/64.

Available in screw type terminals

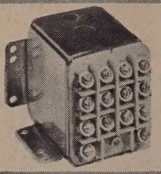
	COILS			CONTACTS
TYPE	Voltage	Resistance in Ohms	Arrangement	Rate in Amps or H.P.
141B1M1A1B	**6VAC**	**2.1**	**SPST-NO**	**1HP@115VAC**
141B1M2A1B	12VAC	8.1	SPST-NO	1½HP@230VAC
141B1M3A1B	24VAC	3.2	SPST-NO	SAME FOR ALL MODELS
141B1M5A1B	48VAC	160	SPST-NO	
141B1M6A1B	115VAC	800	SPST-NO	
141B1M7A1B	220VAC	3200	SPST-NO	
141B2M1A1B	**6VAC**	**2.1**	**SPST-NC**	
141B2M2A1B	12VAC	8.1	SPST-NC	
141B2M3A1B	24VAC	3.2	SPST-NC	
141B2M5A1B	48VAC	160	SPST-NC	
141B2M6A1B	115VAC	800	SPST-NC	
141B2M7A1B	220VAC	3200	SPST-NC	
141B4M1A1B	**6VAC**	**2.1**	**SPDT**	
141B4M2A1B	12VAC	8.1	SPDT	
141B4M3A1B	24VAC	3.2	SPDT	
141B4M5A1B	48VAC	160	SPDT	
141B4M6A1B	115VAC	800	SPDT	
141B4M7A1B	220VAC	3200	SPDT	

47 SERIES Adaptable for use in computers, industrial control and appliances where long life and reliability are essential. AC Coils adjusted to pull in at 80% of nominal voltage. DC Coils adjusted to pull in at 75% Max. of nominal voltage. Relay will operate safely within —55°C to +71°C. Other variations of terminal style available.

eg. Style G 8 pin octal plug In, Style H AN Plugs. All DC combinations available in temperature range B (—65°C to +125°C).

Step 2 **Enclosure Styles.**
- A. Open
- D. Rectangular (Not including terminals)
  - 1. 2 1/16 x 2 3/8 x 2 1/8 max. (Hermetically sealed)
  - 2. 2 1/8 x 2.687 x 3.312 max. (Hermetically sealed)

Step 7 **Mounting Styles.**
- **Open** 1. Mounted by steel base 1 5/8 x 1 3/4 (4) tapped holes 6-32 located on rectangle 1/2 x 1 5/16
- **Sealed** 2. Plug-in (AN Plug)
  - 3. L-shaped bracket with 12 mtg. holes .173 dia.



TYPE	Voltage	Resistance in Ohms	Arrange-ment	Rate in Amps
47D17D8A3B	**6VDC**	**8.5**	**4PDT**	**10**
47D17D9A3B	12VDC	34	4PDT	10
47D17D10A3B	24VDC	135	4PDT	10
47D17D13A3B	115VDC	540	4PDT	10
47D17D14A3B	115VAC 400 Cycle (Rectified)	4VA	4PDT	10
	—65°C to +125°C			
47D17D8B3B	**6VDC**	**8.5**	**4PDT**	**10**
47D17D9B3B	12VDC	34	4PDT	10
47D17D10B3B	24VDC	135	4PDT	10
47D17D13B3B	115VDC	540	4PDT	10
47D17D14B3B	115VAC 400 Cycle (Rectified)	4VA	4PDT	10
47A10E8A1A	**6VDC**	**8.4**	**2PDT**	**12.5**
47A10E9A1A	12VDC	34	2PDT	12.5
47A10E10A1A	24VDC	135	2PDT	12.5
47A10E12A1A	48VDC	540	2PDT	12.5
47A10E13A1A	115VDC	2160	2PDT	12.5
47A14E8A1A	**6VDC**	**8.4**	**3PDT**	**12.5**
47A14E9A1A	12VDC	34	3PDT	12.5
47A14E10A1A	24VDC	1.35	3PDT	12.5
47A14E12A1A	48VDC	540	3PDT	12.5
47A14E13A1A	115VDC	2160	3PDT	12.5
47A17E8A1A	**6VDC**	**8.4**	**4PDT**	**12.5**
47A17E9A1A	12VDC	34	4PDT	12.5
47A17E10A1A	24VDC	135	4PDT	12.5
47A17E12A1A	48VDC	540	4PDT	12.5
47A17E13A1A	115VDC	2160	4PDT	12.5

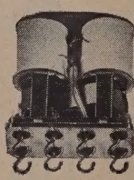
200 SERIES Micro-miniature relay with a 200 Grid. Terminal Pattern. Designed for continuous use at 65°C to plus 125°C. Meets MIL-R-25018. AM.2, Class B Type II, Grade 4 Specifications except contact bounce. Contacts have a min. life expectancy of 100,000 operatoins @ 2 AMP 28 VDC.

Adaptable for missile, military, computer and industrial usage where size, weight and environmental conditions are critical.

NOTE: All types listed will be supplied with terminal style D (Solder Hook) See step 8, page 1. Other terminal styles available. Style F (Plug-in) mates with Viking Electric receptacle A8. Style J. (3 inch leads) also available.

Relays available for dry circuit (10 Micro-amps @ 25 Millivolts). Indicate N in step 4 when ordering.

400 Series available in 6 mounting styles—style 1 shown.



200D10A8B1D	**6VDC**	**35**	**2PDT**	**2**
200D10A9B1D	12VDC	150	2PDT	2
200D10A10B1D	24VDC	600	2PDT	2
200D10A11B1D	36VDC	1350	2PDT	2
200D10A12B1D	48VDC	2400	2PDT	2
200D10A8B2D	**6VDC**	**35**	**2PDT**	**2**
200D10A9B2D	12VDC	150	2PDT	2
200D10A10B2D	24VDC	600	2PDT	2
200D10A11B2D	36VDC	1350	2PDT	2
200D10A12B2D	48VDC	2400	2PDT	2
200D10A8B3D	**6VDC**	**35**	**2PDT**	**2**
200D10A9B3D	12VDC	150	2PDT	2
200D10A10B3D	24VDC	600	2PDT	2
200D10A11B3D	36VDC	1350	2PDT	2
200D10A12B3D	48VDC	2400	2PDT	2
200D10A8B4D	**6VDC**	**35**	**2PDT**	**2**
200D10A9B4D	12VDC	150	2PDT	2
200D10A10B4D	24VDC	600	2PDT	2
200D10A11B4D	36VDC	1350	2PDT	2
200D10A12B4D	48VDC	2400	2PDT	2
200D10A8B5D	**6VDC**	**35**	**2PDT**	**2**
200D10A9B5D	12VDC	150	2PDT	2
200D10A10B5D	24VDC	600	2PDT	2
200D10A11B5D	36VDC	1350	2PDT	2
200D10A12B5D	48VDC	2400	2PDT	2
200D10A8B6D	**6VDC**	**35**	**2PDT**	**2**
200D10A9B6D	12VDC	150	2PDT	2
200D10A10B6D	24VDC	600	2PDT	2
200D10A11B6D	36VDC	1350	2PDT	2
200D10A12B6D	48VDC	2400	2PDT	2

308, 309, 314 and 316 SERIES

U.S. Relay-Electronics subminiature relay series 308, 309, 314 and 316 are suitable for use in airborne, missile electronic equipment, ground support equipment and other critical applications requiring maximum reliability under extreme environmental conditions. Designed for continuous operation at —65°C to +125°C temperature range. Contacts have a minimum life expectancy of 100,000 operations at rated load.

The 308 and 309 series meet applicable portions of MIL-R-25018. The 314 and 316 series meet applicable portions of MIL-R-6106C. and vibration at 10G, 75-500 cps.

The 308, 309, 314 and 316 series are available in 4 mounting styles.

308C23A8B1D	**6VDC**	**15**	**6PDT**	**2**
308C23A9B1D	12VDC	60	6PDT	2
308C23A10B1D	24VDC	240	6PDT	2
308C23A12B1D	48VDC	960	6PDT	2
308C23A13B1D	115VDC	6000	6PDT	2
308C23A8B2D	**6VDC**	**15**	**6PDT**	**2**
308C23A9B2D	12VDC	60	6PDT	2
308C23A10B2D	24VDC	240	6PDT	2
308C23A12B2D	48VDC	960	6PDT	2
308C23A13B2D	115VDC	6000	6PDT	2
308C23A8B3D	**6VDC**	**15**	**6PDT**	**2**
308C23A9B3D	12VDC	60	6PDT	2
308C23A10B3D	24VDC	240	6PDT	2
308C23A12B3D	48VDC	960	6PDT	2
308C23A13B3D	115VDC	6000	6PDT	2
308C23A8B4D	**6VDC**	**15**	**6PDT**	**2**
308C23A9B4D	12VDC	60	6PDT	2
308C23A10B4D	24VDC	240	6PDT	2
308C23A12B4D	48VDC	960	6PDT	2
308C23A13B4D	115VDC	6000	6PDT	2

(Continued)

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U. S. RELAY ELECTRONICS, AZUSA, CALIF.

⑤

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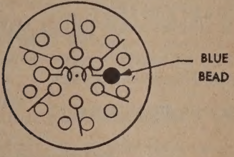

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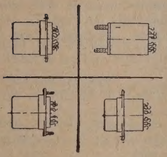
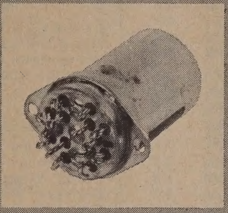
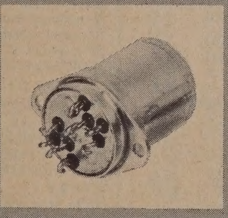


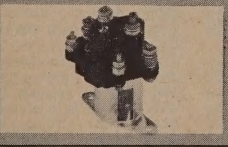
	COILS		CONTACTS	
TYPE	Voltage	Resistance in Ohms	Arrangement	Rate in Amps
309C17A8B1D	**6VDC**	**15**	**4PDT**	**2**
309C17A9B1D	12VDC	60	4PDT	2
309C17A10B1D	24VDC	240	4PDT	2
309C17A12B1D	48VDC	960	4PDT	2
309C17A13B1D	115VDC	6000	4PDT	2
309C17A8B2D	**6VDC**	**15**	**4PDT**	**2**
309C17A9B2D	12VDC	60	4PDT	2
309C17A10B2D	24VDC	240	4PDT	2
309C17A12B2D	48VDC	960	4PDT	2
309C17A13B2D	115VDC	6000	4PDT	2
309C17A8B3D	**6VDC**	**15**	**4PDT**	**2**
309C17A9B3D	12VDC	60	4PDT	2
309C17A10B3D	24VDC	240	4PDT	2
309C17A12B3D	48VDC	960	4PDT	2
309C17A13B3D	115VDC	6000	4PDT	2
309C17A8B4D	**6VDC**	**15**	**4PDT**	**2**
309C17A9B4D	12VDC	60	4PDT	2
309C17A10B4D	24VDC	240	4PDT	2
309C17A12B4D	48VDC	960	4PDT	2
309C17A13B4D	115VDC	6000	4PDT	2
314C10D8B1D	**6VDC**	**9.4**	**2PDT**	**10**
314C10D9B1D	12VDC	37.5	2PDT	10
314C10D10B1D	24VDC	150	2PDT	10
314C10D12B1D	48VDC	600	2PDT	10
314C10D13B1D	115VDC	3800	2PDT	10
314C10D8B2D	**6VDC**	**9.4**	**2PDT**	**10**
314C10D9B2D	12VDC	37.5	2PDT	10
314C10D10B2D	24VDC	150	2PDT	10
314C10D12B2D	48VDC	600	2PDT	10
314C10D13B2D	115VDC	3800	2PDT	10
314C10D8B3D	**6VDC**	**9.4**	**2PDT**	**10**
314C10D9B3D	12VDC	37.5	2PDT	10
314C10D10B3D	24VDC	150	2PDT	10
314C10D12B3D	48VDC	600	2PDT	10
314C10D13B3D	115VDC	3800	2PDT	10
314C10D8B4D	**6VDC**	**9.4**	**2PDT**	**10**
314C10D9B4D	12VDC	37.5	2PDT	10
314C10D10B4D	24VDC	150	2PDT	10
314C10D12B4D	48VDC	600	2PDT	10
314C10D13B4D	115VDC	3800	2PDT	10
316C17D8B1D	**6VDC**	**9.4**	**4PDT**	**10**
316C17D9B1D	12VDC	37.5	4PDT	10
316C17D10B1D	24VDC	150	4PDT	10
316C17D12B1D	48VDC	600	4PDT	10
316C17D13B1D	115VDC	3800	4PDT	10
316C17D8B2D	**6VDC**	**9.4**	**4PDT**	**10**
316C17D9B2D	12VDC	37.5	4PDT	10
316C17D10B2D	24VDC	150	4PDT	10
316C17D12B2D	48VDC	600	4PDT	10
316C17D13B2D	115VDC	3800	4PDT	10
316C17D8B3D	**6VDC**	**9.4**	**4PDT**	**10**
316C17D9B3D	12VDC	37.5	4PDT	10
316C17D10B3D	24VDC	150	4PDT	10
316C17D12B3D	48VDC	600	4PDT	10
316C17D13B3D	115VDC	3800	4PDT	10
316C17D8B4D	**6VDC**	**9.4**	**4PDT**	**10**
316C17D9B4D	12VDC	37.5	4PDT	10
316C17D10B4D	24VDC	150	4PDT	10
316C17D12B4D	48VDC	600	4PDT	10
316C17D13B4D	115VDC	3800	4PDT	10





28 SERIES Heavy duty solenoid contactor, adaptable for trouble free use in aircraft, industrial control and circuits where heavy currents are encountered. Contacts SPST-NO-DB rated 50 Amp. @ 29 VDC on the N.C. contacts & 50 Amp. on energized contacts. Contacts capable of making and breaking resistive, inductive or Motor loads.

Step 2 C — Round (including terminals with terminal panel) 2¹⁄₁₆ x 2¹³⁄₁₆ x 2²⁹⁄₃₂ Max. (Dust Cover).
Step 7 Mounting Styles.
1. Steel Base — (2) — ⁷⁄₃₂ Dia. Holes located 2.187 between centers.



TYPE	Voltage or Current	Resistance in Ohms or VA	Arrangement	Rate in Amps.
28C3K8A1C	**6VDC**	**6.9**	**SPST-NO-DB**	**50**
28C3K9A1C	12VDC	28	SPST-NO-DB	50
28C3K10A1C	24VDC	110	SPST-NO-DB	50
28C3K12A1C	48VDC	440	SPST-NO-DB	50
28C3K15A1C	115VAC 60-400CPS	8VA	SPST-NO-DB	50
28C5L8A1C	**6VDC**	**6.9**	**SPDT-DB**	**25-50**
28C5L9A1C	12VDC	28	SPDT-DB	25-50
28C5L10A1C	24VDC	110	SPDT-DB	25-50
28C5L12A1C	48VDC	440	SPDT-DB	25-50
28C5L15A1C	115VAC 60-400CPS	8VA	SPDT-DB	25-50

12 SERIES

Description:
The 12 series is suitable for aircraft, computer and commercial applications where small size, good vibration and shock characteristics are required. Available in open type or enclosed in a hermetically sealed metal case. Header is standard solder terminals.

Contacts:
Available in standard contact arrangements to 4 PDT. Contacts rated @ 5 Amps. @ 28 VDC or 115 VAC.

Coil:
Coils impregnated with high quality EPOXY varnish for long life. Adjust to Pull-in at 75% max. nominal DC Voltage.

Ambient Temperature:
The 12 series relays will operate safely within the temperature range of —55° to +85°C.

Dielectric Strength:
The 12 series relays are tested at 1000 VRMS hipot.

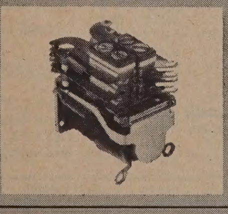
12 Series Step 2: Enclosure styles:
- A. Open
- D. Rectangular (not including terminals)
  - 1..1¹⁵⁄₁₆ x 1²¹⁄₆₄ x 1.750 Max.

Step 8: Terminal Styles:
- A. Open Relay — Solder lug
- D. Solder hook
- F. 14 — pin plug-in
  - (Hermetically sealed)

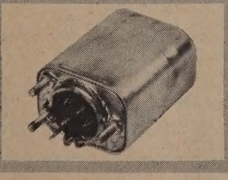
Step 7: Mounting Styles: (Open)
1. Mounted by (4) 3-48 NC-28 tapped holes located .375 x .375

Enclosures:

2. (3) 4-40 Studs. 2 studs spaced .500 on base of isoceles triangle and 1 stud spaced 1.000 on altitude.



TYPE	Voltage	Resistance in Ohms	Arrangement	Rate in Amps
12A4C8A1A	**6VDC**	**36**	**SPDT**	**5**
12A4C9A1A	12VDC	150	SPDT	5
12A4C10A1A	24VDC	600	SPDT	5
12A4C12A1A	48VDC	2400	SPDT	5
12A10C8A1A	**6VDC**	**36**	**2PDT**	**5**
12A10C9A1A	12VDC	150	2PDT	5
12A10C10A1A	24VDC	600	2PDT	5
12A10C12A1A	48VDC	2400	2PDT	5
12A14C8A1A	**6VDC**	**18**	**3PDT**	**5**
12A14C9A1A	12VDC	75	3PDT	5
12A14C10A1A	24VDC	300	3PDT	5
12A14C12A1A	48VDC	1200	3PDT	5
12A17C8A1A	**6VDC**	**18**	**4PDT**	**5**
12A17C9A1A	12VDC	75	4PDT	5
12A17C10A1A	24VDC	300	4PDT	5
12A17C12A1A	48VDC	1200	4PDT	5
12D4C8A2D	**6VDC**	**36**	**SPDT**	**5**
12D4C9A2D	12VDC	150	SPDT	5
12D4C10A2D	24VDC	600	SPDT	5
12D4C12A2D	48VDC	2400	SPDT	5
12D10C8A2D	**6VDC**	**36**	**2PDT**	**5**
12D10C9A2D	12VDC	150	2PDT	5
12D10C10A2D	24VDC	600	2PDT	5
12D10C12A2D	48VDC	2400	2PDT	5
12D14C8A2D	**6VDC**	**18**	**3PDT**	**5**
12D14C9A2D	12VDC	75	3PDT	5
12D14C10A2D	24VDC	300	3PDT	5
12D14C12A2D	48VDC	1200	3PDT	5
12D17C8A2D	**6VDC**	**18**	**4PDT**	**5**
12D17C9A2D	12VDC	75	4PDT	5
12D17C10A2D	24VDC	300	4PDT	5
12D17C12A2D	48VDC	1200	4PDT	5



In addition to many other relays designed and qualified to current military specifications, U.S. Relay-Electronics has the following units listed on QUALIFIED PRODUCTS LIST (QPL 6106-11)

AN3303-1
AN3304-1
AN3306-1
AN3306-2
AN3307-1
AN3307-2
AN3308-1
AN3308-2
AN3310-1
AN3310-2
AN3311-1
AN3311-2
AN3312-1
AN3312-2
AN3315-1
AN3350-1
AN3350-2
AN3353-2
AN3370-1
AN3370-2
AN3371-1
AN3371-2
MS25024-1
MS25024-2
MS24171-D1

AEROVOX *Resistors*

*CARBOFILM PRECISION RESISTORS

Commercial Stock Values Carbofilm Resistors ±1%

OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	Megohms
3.0	35	330	3500	27,000	330,000	3.5
3.3	36	350	3600	30,000	350,000	3.6
3.5	39	360	3900	33,000	360,000	3.9
3.6	40	390	4000	35,000	390,000	4.0
3.9	43	400	4300	36,000	400,000	4.3
4.0	44.5	430	4450	39,000	430,000	4.5
4.3	45	450	4500	40,000	450,000	4.7
4.5	47	470	4700	43,000	470,000	5.0
4.7	50	500	5000	45,000	500,000	5.1
5.0	51	510	5100	47,000	510,000	5.5
5.1	55	550	5500	50,000	550,000	5.6
5.5	56	560	5600	51,000	560,000	6.0
5.6	59.5	600	5950	55,000	600,000	6.2
6.0	60	620	6000	56,000	620,000	6.5
6.2	62	650	6200	60,000	650,000	6.8
6.5	65	680	6500	62,000	680,000	7.0
6.8	68	700	6800	65,000	700,000	7.5
7.5	70	750	7000	68,000	750,000	8.0
8.0	74.5	800	7450	70,000	800,000	8.2
8.2	75	820	7500	75,000	820,000	8.5
8.5	80	850	8000	80,000	850,000	9.0
9.0	82	900	8200	82,000	900,000	9.1
9.1	85	910	8500	85,000	910,000	10.0
10.0	89.5	1000	8950	90,000		12.0
11.0	90	1100	9000	91,000		12.5
12.0	91	1200	9100		MEGOHMS	
12.5	99.5	1250	9950	100,000	1.0	13.0
13.0	100	1300	10,000	110,000	1.1	15.0
14.5	110	1450	11,000	120,000	1.2	16.0
15.0	120	1500	12,000	125,000	1.25	18.0
16.0	130	1600	12,500	130,000	1.3	20.0
17.5	150	1750	13,000	150,000	1.5	22.0
18.0	160	1800	13,500	160,000	1.6	25.0
20.0	175	2000	15,000	175,000	1.8	27.0
22.0	180	2200	16,000	180,000	2.0	30.0
22.5	200	2250	17,500	200,000	2.2	33.0
24.0	220	2400	18,000	220,000	2.225	36.0
25.0	225	2500	20,000	225,000	2.4	39.0
27.0	240	2700	22,000	240,000	2.5	43.0
29.5	250	2950	22,500	250,000	2.7	47.0
30.0	270	3000	24,000	270,000	3.0	50.0
33.0	300	3300	25,000	300,000	3.3	100.0†

†Only stock value above 50 megohms is 100 megohms furnished in ±2% tolerance.

Packaging: Small quantities packaged individually in sealed plastic tubes. Also available in larger quantities, protected by paper sleeves and packed in bulk.

AEROVOX CORPORATION
Carbofilm Resistor

These precision resistors are the result of years of intensive research in developing components with extreme accuracy and stability. Carbofilm resistors are intended for circuits calling for the accuracy and stability of wire-wound resistors with the marked economy of carbon resistors. They serve a real need in test equipment and laboratory instruments.

Carbofilm Characteristics

TEMPERATURE COEFFICIENT....
Temperature coefficient of deposited carbon resistors increases with resistance value and varies from —0.00018 per °C. for lowest values to —0.0005 per °C. for the higher values over the temperature range of —55°C to +85°C.

HUMIDITY....
Will meet the requirements of MIL-STD-202 Method 106.

OVERLOAD....
Application of a D.C. Test potential 2½ times the rated continuous working voltage, but not exceeding twice the maximum voltage specified in MIL-R10509B for a period of 5 seconds will not cause a change in excess of .5%.

LOAD LIFE....
A maximum change of 1% may be expected with operation at full rated wattage applied intermittently 1½ hours on—½ hour off for a period of 1,000 hours at 40°C., provided voltage ratings of MIL-R10509B are not exceeded.

ACCURACY....
Guaranteed tolerance of plus/minus 1% at 25°C. (77°F.).

AGING....
Due to manufacturing process and control, changes attributed to aging are negligible. The average change in resistance for self-aging is approximately 0.2% per year.

NOISE....
Noise level will not exceed .2 microvolts per volt.

TEMPERATURE CYCLING...
After 5 complete temperature cycles there is an average change of 0.21% with a maximum change of less than 0.5%.

LOW TEMPERATURE OPERATION...
Maximum changes are less than 1%.

FREQUENCY...
The excellent high frequency characteristics of these resistors can be determined approximately from the following formula:

F = Frequency in Megacycles
Rac = Resistance at frequency F
Ro = D.C. resistance in megohms

$$\text{When } F \times Ro = 1 \text{ then ratio of } \frac{Rac}{Ro} = .90$$

$$\text{When } F \times Ro = 10 \text{ then ratio of } \frac{Rac}{Ro} = .60$$

VOLTAGE COEFFICIENT...
Voltage coefficient does not exceed .002% per volt.

DERATING....
Full load operation at 40°C.—Derate to zero load at 120°C.

TYPE	SIZES	MIN. OHMS	MAX. MEGOHMS	MIL-R10509B Max. DC Voltage	Equiv. to MIL-R-10509B			MARKING
					Type	Char.	Tol.	
**CPS-½ watt	0.162D x 19/32L	7	2	350	RN20	X	1%	RN20 Number
CP-½ watt	0.230D x 11/16L	3	5	350	——	—	—	Type, Value, Tolerance
CPL-½ watt	0.230D x 15/16L	5,100,000	7.5	500	RN25	—	—	Type, Value, Tolerance
CP-1 watt	0.293D x 15/16L	10	15	500	——	X	1%	Type, Value, Tolerance and RN25 Number
CP-2 watt	0.293D x 2 1/16L	50	100	750	RN30	X	1%	Type, Value, Tolerance and RN30 Number

**CPS½ available in both commercial and Mil-Bell values.

*Trademark

To expedite deliveries Aerovox reserves the right to furnish CPS ½ resistors in place of CP ½ for all values between 7 ohms and 2 megohms. CPS ½ resistors are also available in MIL-BELL values as listed on Form #NPJ-115.

Present Inventory is furnished with our W65 coating as present stocks are depleted they will be replaced with the new Aeroglaze® coated units (CPX). For sizes of CPX units request Bulletin NPJ116.

AEROVOX *Resistors*

INDUSTRIAL SECTION
*CARBOMOLD RESISTORS

CARBOMOLD PRECISION RESISTORS

Stability—precision—reliability—obtained by rigid manufacturing tolerances and maintained under adverse operating conditions by encapsulation of the carbofilm resistor unit in a strongly reinforced, moisture and heat resistant plastic. These units will withstand rough production handling.

CARBOMOLD CHARACTERISTICS

TESTING
All testing conducted in accordance with MIL-R-10509C requirements.

MOISTURE RESISTANCE . . .
Will meet or surpass the requirements of MIL-R-10509C.

TEMPERATURE CYCLING . . .
After 5 complete temperature cycles there is an average change of 0.21% with a maximum change less than 0.5%.

LOW TEMPERATURE EXPOSURE . . .
Maximum changes are less than 1%.

TEMPERATURE COEFFICIENT . . .
Temperature coefficient of deposited carbon resistors increases with resistance value and varies from —0.00018 per °C for lowest values to —0.0005 per °C. for the higher values over the temperature range of —55°C. to +85C.

OVERLOAD . . .
Application of a D.C. Test potential 2½ times the rated continuous working voltage, but not exceeding twice the maximum voltage specified in MIL-R10509C for a period of 5 seconds will not cause a change in excess of .5%.

LOAD LIFE . . .
A maximum change of 1% may be expected with operation at full rated wattage applied intermittently 1½ hours on—½ hour off for a period of 1,000 hours at 40°C., provided voltage ratings of MIL-R-10509C are not exceeded.

ACCURACY . . .
Guaranteed tolerance of plus/minus 1% at 25°C. (77°F.).

AGING . . .
Average change in resistance for self-aging, approximately 0.2% in a year.

NOISE . . .
Noise level will not exceed .2 microvolts per volt.

DERATING . . .
Full load operation at 70°C—Derate to zero load at 150°C.

VOLTAGE COEFFICIENT . . .
Voltage coefficient does not exceed .002% per volt.

PACKAGING . . .
Small quantities packaged individually in sealed plastic tubes. Also available in larger quantities packed in bulk.

**MIL-BELL STOCK VALUES CARBOMOLD RESISTORS ±1%

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
10.0	20.5	42.2	86.6	178	365	750	1540	3160	6490
10.2	21.0	43.2	88.7	182	374	768	1580	3240	6650
10.5	21.5	44.2	90.9	187	383	787	1620	3320	6810
10.7	22.1	45.3	93.1	191	392	806	1650	3400	6980
11.0	22.6	46.4	95.3	196	402	825	1690	3480	7150
11.3	23.2	47.5	97.6	200	412	845	1740	3570	7320
11.5	23.7	48.7	100	205	422	866	1780	3650	7500
11.8	24.3	49.9	102	210	432	887	1820	3740	7680
12.1	24.9	51.1	105	215	442	909	1870	3830	7870
12.4	25.5	52.3	107	221	453	931	1910	3920	8060
12.7	26.1	53.6	110	226	464	953	1960	4020	8250
13.0	26.7	54.9	113	232	475	976	2000	4120	8450
13.3	27.4	56.2	115	237	487	1000	2050	4220	8660
13.7	28.0	57.6	118	243	499	1020	2100	4320	8870
14.0	28.7	59.0	121	249	511	1050	2150	4420	9090
14.3	29.4	60.4	124	255	523	1070	2210	4530	9310
14.7	30.1	61.9	127	261	536	1100	2260	4640	9530
15.0	30.9	63.4	130	267	549	1130	2320	4750	9760
15.4	31.6	64.9	133	274	562	1150	2370	4870	10000
15.8	32.4	66.5	137	280	576	1180	2430	4990	10200
16.2	33.2	68.1	140	287	590	1210	2490	5110	10500
16.5	34.0	69.8	143	294	604	1240	2550	5230	10700
16.9	34.8	71.5	147	301	619	1270	2610	5360	11000
17.4	35.7	73.2	150	309	634	1300	2670	5490	11300
17.8	36.5	75.0	154	316	649	1330	2740	5620	11500
18.2	37.4	76.8	158	324	665	1370	2800	5760	11800
18.7	38.3	78.7	162	332	681	1400	2870	5900	12100
19.1	39.2	80.6	165	340	698	1430	2940	6040	12400
19.6	40.2	82.5	169	348	715	1470	3010	6190	12700
20.0	41.2	84.5	174	357	732	1500	3090	6340	13000

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Meg-ohms	Meg-ohms	Meg-ohms	Meg-ohms
13300	27400	56200	115000	237000	487000	1.00	2.05	4.22	8.66
13700	28000	57600	118000	243000	499000	1.02	2.10	4.32	8.87
14000	28700	59000	121000	249000	511000	1.05	2.15	4.42	9.09
14300	29400	60400	124000	255000	523000	1.07	2.21	4.53	9.31
14700	30100	61900	127000	261000	536000	1.10	2.26	4.64	9.53
15000	30900	63400	130000	267000	549000	1.13	2.32	4.75	9.76
15400	31600	64900	133000	274000	562000	1.15	2.37	4.87	10.0
15800	32400	66500	137000	280000	576000	1.18	2.43	4.99	
16200	33200	68100	140000	287000	590000	1.21	2.49	5.11	
16500	34000	69800	143000	294000	604000	1.24	2.55	5.23	
16900	34800	71500	147000	301000	619000	1.27	2.61	5.36	
17400	35700	73200	150000	309000	634000	1.30	2.67	5.49	
17800	36500	75000	154000	316000	649000	1.33	2.74	5.62	
18200	37400	76800	158000	324000	665000	1.37	2.80	5.76	
18700	38300	78700	162000	332000	681000	1.40	2.87	5.90	
19100	39200	80600	165000	340000	698000	1.43	2.94	6.04	
19600	40200	82500	169000	348000	715000	1.47	3.01	6.19	
20000	41200	84500	174000	357000	732000	1.50	3.09	6.34	
20500	42200	86600	178000	365000	750000	1.54	3.16	6.49	
21000	43200	88700	182000	374000	768000	1.58	3.24	6.65	
21500	44200	90900	187000	383000	787000	1.62	3.32	6.81	
22100	45300	93100	191000	392000	806000	1.65	3.40	6.98	
22600	46400	95300	196000	402000	825000	1.69	3.48	7.15	
23200	47500	97600	200000	412000	845000	1.74	3.57	7.32	
23700	48700	100000	205000	422000	866000	1.78	3.65	7.50	
24300	49900	102000	210000	432000	887000	1.82	3.74	7.68	
24900	51100	105000	215000	442000	909000	1.87	3.83	7.87	
25500	52300	107000	221000	453000	931000	1.91	3.92	8.06	
26100	53600	110000	226000	464000	953000	1.96	4.02	8.25	
26700	54900	113000	232000	475000	976000	2.00	4.12	8.45	

TYPE	SIZES	Std. Min. Ohms	Std. Max. Megohms	MIL-R-10509C Max. DC Voltage	Equivalent to MIL-R-10509C			MARKING
					Type	Char.	Tol.	
CPM-⅛	.150 x .400	10	1.0	250	RN60	B	F	RN60 Number
CPM-¼	.220 x .590	10	2.0	300	RN65	B	F	RN65 Number
CPM-½	.250 x .745	10	2.49	350	RN70	B	F	Type, Value, Tolerance, RN70 Number
CPM-1	.375 x $1\frac{7}{64}$	10	5.11	500	RN75	B	F	Type, Value, Tolerance, RN75 Number
CPM-2	.375 x $2\frac{7}{32}$	30	10.0	750	RN80	B	F	Type, Value, Tolerance, RN80 Number

** CPS ½ available in both commercial and MIL-BELL values.

* Trade Mark

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The
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MASTER

Centralab Controls, Variable Resistors

NEW PUSH-PULL, PUSH-PUSH SWITCH CONTROLS

Switch type controls for radio, TV and hi-fi applications. Rated ½ watt; breakdown 900 v. AC rms to ground. Switch rated 3 amps, 125 v. AC; SPST type. Size: 15/16" dia. x 29/32" deep, push-push type; 13/16" deep, push-pull type. Mount using 5/8" l. x 3/8"-32 threaded bushing with mounting nut.

ADASHAFT® TYPE

Any Model.............**$1.44**

Resis., Ohms	Taper	CRL Number Push-Pull	CRL Number Push-Push
2500	C2	**APL-702**	....
250K	C2	....	**APS-51**
500K	C1	**APL-59**	....
500K	C2	**APL-60**	....
500K	*	**APL-91**	....
1 meg.	C2	**APL-70**	....
1 meg.	C7	**APL-697**	**APS-697**
1 meg.	C12	**APL-72**	....
1 meg.	C16	**APL-74**	....
2 meg.	C2	**APL-76**	**APS-76**
2 meg.	C16	**APL-82**	....

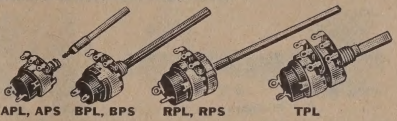
*37% Tap 200K.

UNIVERSAL SHAFT

Any Model—Net Each **$1.53**

Resis., Ohms	Taper	CRL Number Push-Pull	CRL Number Push-Push
2500	C2	**BPL-702**	....
250K	C2	....	**BPS-51**
500K	C1	**BPL-59**	....
500K	C2	**BPL-60**	....
500K	*	**BPL-91**	....
1 meg.	C2	**BPL-70**	....
1 meg.	C7	**BPL-697**	**BPS-697**
1 meg.	C12	**BPL-72**	....
1 meg.	C16	**BPL-74**	....
2 meg.	C2	**BPL-76**	**BPS-76**
2 meg.	C16	**BPL-82**	....

*37% Tap 200K.



FASTATCH® TYPE

Any Model—Net Each **$1.74**

Resis., Ohms	Taper	CRL Number Push-Pull	CRL Number Push-Push
500K	C2	**RPL-41**	....
500K	C16	**RPL-46**	....
1 meg.	C2	**RPL-52**	**RPS-52**
1 meg.	C12	**RPL-57**	**RPS-57**
2 meg.	C1	**RPL-67**	**RPS-67**
2 meg.	C2	**RPL-68**	**RPS-68**
2 meg.	C16	**RPL-75**	**RPS-75**
3 meg.	C16	**RPL-80**	....

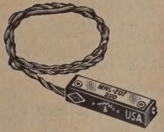
TWIN TYPE

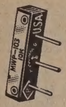
Any Model—Net Each **$2.67**

Resis., Ohms	Taper	Taps	CRL No. Push-Pull
250K	...	88K, 155K	**TPL-101**
500K	C1	....	**TPL-102**
500K	...	82K, 165K	**TPL-103**
1 meg.	C1	....	**TPL-104**
1 meg.	C2	....	**TPL-105**
5 meg.	C2	....	**TPL-106**
500K	*	....	**TPL-107**

*Front, C2; rear, C3.

MODEL 7 MINIATURE LINEAR MOTION VARIABLE RESISTORS


Teflon Lead Type


Printed-Circuit Lead Type

GENERAL FEATURES

Insulation Resistance: 5000 megs min. at 500 v. DC at 25° C and less than 50% RH. **Dielectric Strength:** 350 v. rms at 3.4" Hg (50,000 ft.) for 1 minute; 1000 v. rms at sea level. **Stop Strength:** 15 in.-oz. **Temperature Cycling:** No discontinuity or permanent resistance change of more than 1%, −55° C to +85° C, Method 102, Condition A. **No. of Turns:** 12½ or 25, screw adjustment. **Volume:** .11 cu. in. component density. **Weight:** .16 oz. average, including three 12" leads.

CRL Type	Description	Terminals	Resistance Range	Max. End Resis.	Power Watts	Max. Oper. Temp.	Tol.	Size, Inches H. x W. x L.
GCL	Gen. Purpose Composition	Teflon leads	10K ohms-2.5 meg.	1% of total	0.25 @ 50° C	+125° C	±20%	5/16 x 1/4 x 1 1/4
GCP	Gen. Purpose Composition	P-C leads	10K ohms-2.5 meg.	1% of total	0.25 @ 50° C	+125° C	±20%	5/16 x 1/4 x 1 1/4
GWL	Gen. Purpose Wire-wound	Teflon leads	10-20K ohms	1% of total	0.25 @ 50° C	+125° C	±5%	5/16 x 1/4 x 1 1/4
GWP	Gen. Purpose Wire-wound	P-C leads	10-20K ohms	1% of total	0.25 @ 50° C	+125° C	±5%	5/16 x 1/4 x 1 1/4
MWL*	High Temp. Wire-wound	Teflon leads	10-20K ohms	1% of total	1 @ 70° C	+175° C	±5%	23/64 x 19/64 x 1 11/32
MWP*	High Temp. Wire-wound	P-C leads	10-20K ohms	1% of total	1 @ 70° C	+175° C	±5%	23/64 x 19/64 x 1 11/32

*Encapsulated types.

Unique design of contact arm, wiper carriage and constant torque adjustment screw result in electrically stable, smooth, noise-free unit. Capable of operating under the most severe commercial or military requirements. Assembled under a microscope. Custom adjusted to guarantee no contact bounce when subjected to vibration test of 20-2000 cps at 30G for 10 minutes in each of three planes. Constant quality vigilance from raw stock to final testing guarantees reliability under adverse environments. Reliability in excess of the highest current military specifications. Used since 1956 for airborne guidance and other military applications. Now available for a wide range of commercial uses.

TYPE GCL
GENERAL PURPOSE COMPOSITION STRANDED TEFLON LEADS

Centralab Number	Resistance, Ohms	Net Each
GCL-103	10K	**$4.86**
GCL-203	20K	**4.86**
GCL-503	50K	**4.86**
GCL-104	100K	**4.86**
GCL-204	200K	**4.86**
GCL-504	500K	**4.86**
GCL-105	1 meg.	**4.86**
GCL-255	2.5 meg.	**4.86**

TYPE GCP
GENERAL PURPOSE COMPOSITION PRINTED CIRCUIT LEADS

Centralab Number	Resistance, Ohms	Net Each
GCP-103	10K	**$4.86**
GCP-203	20K	**4.86**
GCP-503	50K	**4.86**
GCP-104	100K	**4.86**
GCP-204	200K	**4.86**
GCP-504	500K	**4.86**
GCP-105	1 meg.	**4.86**
GCP-255	2.5 meg.	**4.86**

TYPE GWL
GENERAL PURPOSE WIRE-WOUND STRANDED TEFLON LEADS

Centralab Number	Resistance, Ohms	Net Each
GWL-100	10	**$4.86**
GWL-200	20	**4.86**
GWL-500	50	**4.86**
GWL-101	100	**4.86**
GWL-201	200	**4.86**
GWL-501	500	**4.86**
GWL-102	1K	**4.86**
GWL-202	2K	**4.86**
GWL-502	5K	**4.86**
GWL-103	10K	**4.86**
GWL-203	20K	**6.48**

TYPE MWL ENCAPSULATED
HIGH TEMPERATURE WIRE-WOUND STRANDED TEFLON LEADS

Centralab Number	Resistance, Ohms	Net Each
MWL-100	10	**$7.56**
MWL-200	20	**7.56**
MWL-500	50	**7.56**
MWL-101	100	**7.56**
MWL-201	200	**7.56**
MWL-501	500	**7.56**
MWL-102	1K	**7.56**
MWL-202	2K	**7.56**
MWL-502	5K	**7.56**
MWL-103	10K	**7.56**
MWL-203	20K	**9.18**

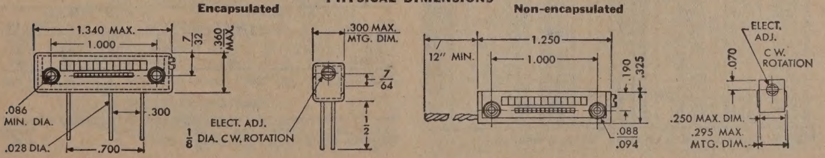
TYPE GWP
GENERAL PURPOSE WIRE-WOUND PRINTED CIRCUIT LEADS

Centralab Number	Resistance, Ohms	Net Each
GWP-100	10	**$4.86**
GWP-200	20	**4.86**
GWP-500	50	**4.86**
GWP-101	100	**4.86**
GWP-201	200	**4.86**
GWP-501	500	**4.86**
GWP-102	1K	**4.86**
GWP-202	2K	**4.86**
GWP-502	5K	**4.86**
GWP-103	10K	**4.86**
GWP-203	20K	**6.48**

TYPE MWP ENCAPSULATED
HIGH TEMPERATURE WIRE-WOUND PRINTED CIRCUIT LEADS

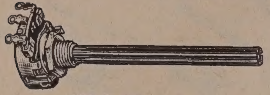
Centralab Number	Resistance, Ohms	Net Each
MWP-100	10	**$7.56**
MWP-200	20	**7.56**
MWP-500	50	**7.56**
MWP-101	100	**7.56**
MWP-201	200	**7.56**
MWP-501	500	**7.56**
MWP-102	1K	**7.56**
MWP-202	2K	**7.56**
MWP-502	5K	**7.56**
MWP-103	10K	**7.56**
MWP-203	20K	**9.18**

PHYSICAL DIMENSIONS

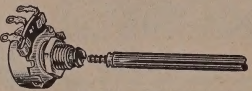


Centralab Radiohms,® Accessories

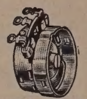
UNIVERSAL SHAFT AND ADASHAFT® RADIOHMS®


"B" Radiohm

"KR"


"AB" and Shaft Breakdown

"TT"


"ST", "STR',

TYPES "B" AND "AB" RADIOHMS®

Model B and AB controls are rated at ½ watt. **Size:** 15/16" diameter, 7/16" deep. **Breakdown:** 900 v. AC rms to ground. **Mounting:** ⅜" long ⅜"-32 thread bushing; equipped with mounting nut. Any model converts easily to switch type by merely snapping on "KR" switch. **Model B Shaft:** ¼" diam. x 3⅜" long from mtg. surface. Universal fluted knurled type; fits split knurl, shallow flat, deep flat, slotted, or round applications. **Model AB Shaft:** Patented stub, screwdriver slot shaft 5/16" long from mtg. surface. Use as is, or extended, using AK shafts.

CRL Type "B" Plain Radiohm—Any model. Net Each.... **93c**

CRL Type "AB" Plain Radiohm—Any model. Net Each... **84c**

PLAIN "B" AND "AB" CONTROLS

Ohms	Taper	Specify No. B- or AB-	Ohms	Taper	Specify No. B- or AB-
100	C-1	**1**	100,000	C-1	**40**
200	C-1	**2**	100,000	C-2	**41**
500	C-1	**4**	150,000	C-1	**43**
750	C-5	**415**	150,000	C-2	**44**
1,000	C-1	**5**	200,000	C-1	**46**
1,000	C-5	**505**	250,000	C-1	**50**
1,500	C-5	**515**	250,000	C-2	**51**
2,000	C-1	**6**	250,000	C-5	**52**
2,500	C-1	**7**	500,000	C-1	**59**
2,500	C-2	**702**	500,000	C-2	**60**
2,500	C-5	**705**	500,000	C-3	**613**
3,000	C-1	**8**	500,000	C-4	**58**
4,000	C-1	**9**	500,000	C-5	**61**
5,000	C-1	**10**	500,000	C-6	**616**
5,000	C-2	**11**	500,000	C-7	**617**
5,000	C-5	**12**	750,000	C-1	**66**
7,500	C-1	**13**	1 meg.	C-1	**69**
10,000	C-1	**14**	1 meg.	C-2	**70**
10,000	C-2	**15**	1 meg.	C-4	**744**
10,000	C-4	**18**	1 meg.	C-5	**68**
10,000	C-5	**17**	1 meg.	C-7	**697**
10,000	C-6	**16**	1.5 meg.	C-1	**742**
15,000	C-5	**19**	2 meg.	C-1	**75**
15,000	C-6	**20**	2 meg.	C-2	**76**
20,000	C-1	**22**	2 meg.	C-5	**77**
20,000	C-5	**23**	2.5 meg.	C-1	**83**
20,000	C-6	**24**	3 meg.	C-1	**84**
25,000	C-1	**26**	3 meg.	C-2	**85**
25,000	C-2	**25**	3 meg.	C-5	**855**
25,000	C-4	**29**	4 meg.	C-1	**86**
25,000	C-5	**27**	4 meg.	C-2	**862**
25,000	C-6	**28**	5 meg.	C-1	**87**
50,000	C-1	**31**	5 meg.	C-2	**88**
50,000	C-2	**32**	7 meg.	C-7	**89**
50,000	C-5	**34**	7.5 meg.	C-1	**90**
75,000	C-1	**35**	10 meg.	C-1	**98**
75,000	C-5	**36**			

MODEL "B" SWITCH-TYPE RADIOHMS®

Universal DPST switch type units.

CRL No.	Max. Ohms	Taper	Use For	Net Ea.
B-60-S	½ Meg.	C2	SPST, DPST or 3-wire	**$1.35**
B-70-S	1 Meg.	C2	SPST, DPST or 3-wire	**1.35**

SINGLE TAPPED "B" AND "AB" RADIOHMS®

Ohms	Taper	Tap	Type B		Type AB	
			CRL No.	Net Ea.	CRL No.	Net Ea.
50,000	C-11	25K	**BT-33**	**$1.35**	**ABT-33**	**$1.26**
100,000	C-11	50K	**BT-39**	**1.35**	**ABT-39**	**1.26**
200,000	C-11	100K	**BT-47**	**1.35**	**ABT-47**	**1.26**
250,000	C-11	125K	**BT-53**	**1.35**	**ABT-53**	**1.26**
250,000	C-12	50K	**BT-54**	**1.35**	**ABT-54**	**1.26**
250,000	C-13	75K	**BT-55**	**1.35**	**ABT-55**	**1.26**
250,000	C-16	125K*	**BT-56**	**1.35**	**ABT-56**	**1.26**
350,000	C-12	70K	**BT-57**	**1.35**	**ABT-57**	**1.26**
½ Meg.	C-11	250K	**BT-65**	**1.35**	**ABT-65**	**1.26**
½ Meg.	C-12	100K	**BT-66**	**1.35**	**ABT-66**	**1.26**
½ Meg.	C-13	150K	**BT-67**	**1.35**	**ABT-67**	**1.26**
½ Meg.	C-15	50K†	**BT-63**	**1.35**	**ABT-63**	**1.26**
½ Meg.	C-16	250K*	**BT-64**	**1.35**	**ABT-64**	**1.26**
½ Meg.	C-17	50K‡	**BT-62**	**1.35**	**ABT-62**	**1.26**
1 Meg.	C-11	500K	**BT-71**	**1.35**	**ABT-71**	**1.26**
1 Meg.	C-12	200K	**BT-72**	**1.35**	**ABT-72**	**1.26**
1 Meg.	C-13	300K	**BT-73**	**1.35**	**ABT-73**	**1.26**
1 Meg.	C-16	500K*	**BT-74**	**1.35**	**ABT-74**	**1.26**
1 Meg.	C-17	100K	**BT-7417**	**1.35**	**ABT-7417**	**1.26**
2 Meg.	C-11	1 Meg.	**BT-78**	**1.35**	**ABT-78**	**1.26**
2 Meg.	C-12	400K	**BT-79**	**1.35**	**ABT-79**	**1.26**
2 Meg.	C-13	600K	**BT-80**	**1.35**	**ABT-80**	**1.26**
2 Meg.	C-15	200K	**BT-81**	**1.35**	**ABT-81**	**1.26**
2 Meg.	C-16	1 Meg.*	**BT-82**	**1.35**	**ABT-82**	**1.26**
3 Meg.	C-15	300K†	**BT-8515**	**1.35**	**ABT-8515**	**1.26**
3 Meg.	C-17	300K‡	**BT-8517**	**1.35**	**ABT-8517**	**1.26**

*62½% rotation. †50% rotation. ‡37½% rotation.

DUAL TAPPED "B" AND "AB" RADIOHMS®

Ohms	Taps	Type B		Type AB	
		CRL No.	Net Ea.	CRL No.	Net Ea.
15,000	Taps 5K and 10K	**BT-154**	**$1.35**	**ABT-154**	**$1.26**
250,000	Taps 50K and 125K	**BT-155**	**1.35**	**ABT-155**	**1.26**
250,000	Taps 41K and 82K	**BT-156**	**1.35**	**ABT-156**	**1.26**
½ Meg.	Taps 82K and 165K	**BT-159**	**1.35**	**ABT-159**	**1.26**
½ Meg.	Taps 100K and 250K	**BT-160**	**1.35**	**ABT-160**	**1.26**
1 Meg.	Taps 165K and 330K	**BT-164**	**1.35**	**ABT-164**	**1.26**
1 Meg.	Taps 200K and 500K	**BT-165**	**1.35**	**ABT-165**	**1.26**
1.5 Meg.	Taps 250K and 500K	**BT-167**	**1.35**	**ABT-167**	**1.26**
2 Meg.	Taps 250K and 500K	**BT-174**	**1.35**	**ABT-174**	**1.26**
2 Meg.	Taps 400K and 1 Meg.	**BT-175**	**1.35**	**ABT-175**	**1.26**
2.5 Meg.	Taps 300K and 625K	**BT-176**	**1.35**	**ABT-176**	**1.26**
3.3 Meg.	Taps 330K and 1650K	**BT-180**	**1.35**	**ABT-180**	**1.26**

NEW "TT" TWIST TAB RADIOHMS®

Ideal for rear service adjust TV controls and other shock hazard uses. Features U/L Approved phenolic shaft, ⅜" long from mtg. surface, knurled full length; screwdriver slotted end. Composition element rated ½ watt; 15/16" dia. x 7/16" d. Breakdown, 900 v. AC rms to ground. Includes 2" polyethylene shaft extension. Shipping Weight, 2 oz.

CRL No.	Ohms	Taper	Net Each	CRL No.	Ohms	Taper	Net Each
TT-2	200	C-1	**60c**	**TT-59**	500K	C-1	**60c**
TT-4	500	C-1	**60c**	**TT-60**	500K	C-2	**60c**
TT-411	750	C-1	**60c**	**TT-66**	750K	C-1	**60c**
TT-511	1500	C-1	**60c**	**TT-69**	1 meg.	C-1	**60c**
TT-8	3000	C-1	**60c**	**TT-70**	1 meg.	C-2	**60c**
TT-10	5000	C-1	**60c**	**TT-742**	1.5 meg.	C-1	**60c**
TT-14	10K	C-1	**60c**	**TT-75**	2 meg.	C-1	**60c**
TT-26	25K	C-1	**60c**	**TT-83**	2.5 meg.	C-1	**60c**
TT-31	50K	C-1	**60c**	**TT-84**	3 meg.	C-1	**60c**
TT-35	75K	C-1	**60c**	**TT-86**	4 meg.	C-1	**60c**
TT-40	100K	C-1	**60c**	**TT-87**	5 meg.	C-1	**60c**
TT-46	200K	C-1	**60c**	**TT-90**	7.5 meg.	C-1	**60c**
TT-50	250K	C-1	**60c**				

"SR" AND "STR" ADD-ON CONTROLS

Snap-on rear units added to "B" or "AB" controls provide ganged twin controls for stereo applications. Convert to switch type by using snap-on "KR" Fastatch switches.

TYPE SR

CRL No.	Ohms	Taper	Net Each	CRL No.	Ohms	Taper	Net Each
SR-4	500	C-1	**$1.14**	**SR-59**	500K	C-1	**$1.14**
SR-6	2000	C-1	**1.14**	**SR-60**	500K	C-2	**1.14**
SR-13	7500	C-1	**1.14**	**SR-613**	500K	C-3	**1.14**
SR-26	25K	C-1	**1.14**	**SR-58**	500K	C-4	**1.14**
SR-25	25K	C-2	**1.14**	**SR-617**	500K	C-7	**1.14**
SR-31	50K	C-1	**1.14**	**SR-69**	1 meg.	C-1	**1.14**
SR-32	50K	C-2	**1.14**	**SR-70**	1 meg.	C-2	**1.14**
SR-323	50K	C-3	**1.14**	**SR-68**	1 meg.	C-5	**1.14**
SR-40	100K	C-1	**1.14**	**SR-75**	2 meg.	C-1	**1.14**
SR-41	100K	C-2	**1.14**	**SR-76**	2 meg.	C-2	**1.14**
SR-42	100K	C-3	**1.14**	**SR-84**	3 meg.	C-1	**1.14**
SR-50	250K	C-1	**1.14**	**SR-85**	3 meg.	C-2	**1.14**
SR-51	250K	C-2	**1.14**	**SR-87**	5 meg.	C-1	**1.14**
SR-513	250K	C-3	**1.14**	**SR-88**	5 meg.	C-2	**1.14**

TYPE STR TAPPED

CRL No.	Ohms	Taper, Tap	CRL No.	Ohms	Taper, Tap	Net Each
STR-53	250K	C-11, 125K	**STR-82**	2 meg.	C-16, 1 meg.	**$1.14**
STR-56	250K	C-16, 125K	**STR-159**	500K	82K & 165K	**1.14**
STR-65	500K	C-11, 250K	**STR-160**	500K	100K & 250K	**1.14**
STR-66	500K	C-12, 100K	**STR-167**	1.5 meg.	250K & 500K	**1.14**
STR-64	500K	C-16, 250K	**STR-174**	2 meg.	250K & 500K	**1.14**
STR-71	1 meg.	C-11, 500K	**STR-175**	2 meg.	400K & 1 meg.	**1.14**
STR-74	1 meg.	C-16, 500K	**STR-180**	3.3 meg.	330K & 1650K	**1.14**

TYPE "KR" FASTATCH® SWITCHES

For use with Models A, AB and SR Radiohms.

125 v. AC Switches				10 v. DC Switches			
CRL No.	Use	Amps	Net Ea.	CRL No.	Use	Amps	Net Ea.
KR-1	SPST	5	**42c**	**KR-4**	SPST	15	**66c**
KR-2	DPST	3	**51c**	**KR-6†**	SPST	15	**66c**
KR-3	DP*	3	**51c**	**KR-7**	DPST	15	**66c**

*One pole "off", one "on"; jumper for SPDT. †With dummy lug.

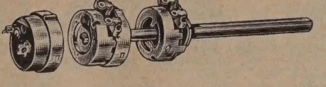
SWITCH SHIELDS

For use with switch type units only where AC shielding is needed or specified by Underwriter's Lab.

CRL No. KR-5—Net Package of 5.......................... **72c**

Centralab Radio and TV Radiohms®

FASTATCH® DUAL RADIOHMS®



No tools needed . . . just snap them together. Saves stocking and availability headaches for radio and TV controls. Ideal also for labs and manufacturers that need special dual concentric controls. Nothing to bend. Fastatch Duals are completely assembled, tested and guaranteed front and rear units. Closely held tolerances insure perfect fit and operation. Front and rear units are stocked separately; just 134 cover all current and FUTURE dual concentric specifications.

FASTATCH® DUAL, FRONT UNIT

Outer shaft is 3⁵⁄₁₆″ long from mounting surface, with double flat mill . . . brass for quick cutting to proper length. Use for single or double flat or round shaft. Scores make easy cutting for single or double slot. With mounting nut.

FASTATCH® DUAL, REAR UNIT

Distinctive blue aluminum inner shaft is 3¾″ long from mounting surface. Easily cut to proper length. Diameter .187″ with .156″ flat. Fits .187″ to .202″ flat shaft knob—spring adapter furnished for other knob types convert to switch type with type KR switches.

CRL Fastatch® Dual Radiohm® Controls—Front or Rear Unit (Carbon). Net Each........................ **$1.14**

CRL No.		Max. Ohms	Taper or Tap	CRL No.		Max. Ohms	Taper or Tap
Front Unit	Rear Unit			Front Unit	Rear Unit		
F1-0	.....	300	C1	**F1-42**	**R2-42**	500K	C4
F1-1	**R2-1**	500	C1	**F3-42**	**R4-42**	500K	C11, 250K
F1-2	.....	750	C1	**F1-44**	**R2-44**	500K	C12, 100K
F3-2	.....	750	C5	.....	**R2-45**	500K	C14, 150K
F1-3	.....	750	500	.....	**R2-46**	500K	C16, 250K
F1-4	**R2-4**	1000	C1	**F1-47**	**R2-47**	500K	C17, 50K
F1-5	**R2-5**	1000	C5	.....	**R2-48**	500K	150K
F1-6	**R2-6**	1500	C1	**F1-49**	.....	750K	C2
F1-7	**R2-7**	1500	C5	**F1-50**	.....	850K	C1
F1-8	.....	1500	187, 375	**F1-51**	**R2-51**	1 Meg	C1
F1-9	**R2-9**	2000	C1	**F1-52**	**R2-52**	1 Meg	C2
F1-10	**R2-10**	2000	C5	**F1-53**	**R2-53**	1 Meg	C3
F1-11	.....	2000	1500	**F1-54**	**R2-54**	1 Meg	C4
F3-11	.....	2000	250-500	**F1-55**	.....	1 Meg	C7
F1-12	**R2-12**	2500	C1	**F1-56**	**R2-56**	1 Meg	C11, 500K
.....	**R2-13**	2500	C2	.....	**R2-57**	1 Meg	C12, 200K
.....	**R2-14**	2500	C3	.....	**R2-58**	1 Meg	C13, 250K
F1-15	.....	2500	C5	**F1-59**	**R2-59**	1 Meg	C14, 300K
F1-16	.....	2500	500	.....	**R2-60**	1 Meg	C16, 500K
F1-17	.....	2500	625	.....	**R2-61**	1 Meg	C17, 100K
.....	**R2-18**	3500	C5	.....	**R2-62**	1 Meg	300K
F1-19	**R2-19**	5000	C1	**F1-63**	.....	1 Meg	*
F1-20	.....	5000	C3	**F1-64**	**R2-64**	1½ Megs	C1
F1-21	.....	5000	C5	**F1-65**	.....	1½ Megs	C7
.....	**R2-22**	7500	C1	.....	**R2-66**	1½ Megs	**
F1-23	**R2-23**	10K	C1	**F1-67**	**R2-67**	2 Megs	C1
F1-24	.....	10K	C2	**F1-68**	**R2-68**	2 Megs	C2
F1-25	**R2-25**	10K	C5	**F1-69**	.....	2 Megs	C4
F1-26	.....	15K	5K-10K	.....	**R2-70**	2 Megs	C5
F1-27	**R2-27**	25K	C1	**F1-71**	.....	2 Megs	C7
F1-28	.....	35K	C1	.....	**R2-72**	2 Megs	C11, 1 Meg
F1-29	**R2-29**	50K	C1	**F1-73**	**R2-73**	2 Megs	C12, 400K
F1-30	**R2-30**	75K	C1	**F1-74**	**R2-74**	2 Megs	C13, 200K
F1-31	**R2-31**	100K	C1	.....	**R4-74**	2 Megs	C14, 600K
F1-32	**R2-32**	125K	C1	**F1-75**	**R2-75**	2 Megs	C16, 1 Meg
F1-33	**R2-33**	200K	C1	**F1-76**	**R2-76**	2½ Megs	C1
F1-34	**R2-34**	250K	C1	**F1-77**	**R2-77**	2½ Megs	C7
F1-35	**R2-35**	250K	C2	**F1-78**	**R2-78**	3 Megs	C1
.....	**R2-36**	250K	C4	**F1-79**	**R2-79**	3 Megs	C2
F1-37	**R2-37**	250K	C5	.....	**R2-80**	3 Megs	C16, 1½ Megs
F3-37	**R4-37**	250K	C14,75K				
.....	**R2-38**	330K	C12,66K	**F1-81**	**R2-81**	3 Megs	900K
F1-39	.....	350K	C2	**F1-82**	.....	4 Megs	C7
F1-40	**R2-40**	500K	C1	**F1-83**	**R2-83**	5 Megs	C7
F1-41	**R2-41**	500K	C2	.....	**R2-84**	5 Megs	C3

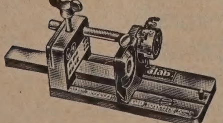
*200K and 500K. **250K and 500K.

5-WATT WIRE-WOUND FRONT SECTION RADIOHMS®

5-Watt WW Fastatch Front Units—Taper, C-1, 1³⁄₃₂″ diameter. Net Each.................................. **$1.35**

CRL No.	Max. Ohms	CRL No.	Max. Ohms	CRL No.	Max. Ohms
F7-50	250	**F7-68**	1000	**F7-82**	2500
F7-53	300	**F7-72**	1500	**F7-85**	3000
F7-59	500	**F7-75**	2000	**F7-90**	5000
F7-65	750	**F7-78**	2250	**F7-96**	10000

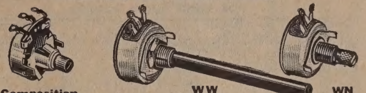
MODEL SK-2 SHAFT-KUT TOOL



Precision instrument makes cutting shafts to exact size a simple job. Cuts any standard solid or hollow shaft accurately to ¹⁄₆₄″. Constructed of case hardened steel; designed to last a lifetime. Complete with mounting screws and operating instructions.

CRL No. SK-2—Net Each........ **$4.95**

WIRE-WOUND RADIOHMS®



SNAP-TITE* RADIOHMS®

For hidden or rear TV controls, rated ½ watt. Installs simply: Push into mounting hole, turn until locating lugs fit in holes provided; may be used where no locating lugs are needed. Size: ⁵⁄₁₆″ diam. x ⁷⁄₁₆″ deep. ¼″ diam. molded plastic shaft ½″ long, knurled and slotted. *Trade Mark.

CRL No.	Max. Ohms	Taper	Net Each	CRL No.	Max. Ohms	Taper	Net Each
BX-10	5,000	C1	**51c**	**BX-69**	1 meg.	C1	**51c**
BX-31	50K	C1	**51c**	**BX-742**	1.5 meg.	C1	**51c**
BX-40	100K	C1	**51c**	**BX-75**	2 meg.	C1	**51c**
BX-46	200K	C1	**51c**	**BX-83**	2.5 meg.	C1	**51c**
BX-59	500K	C1	**51c**	**BX-84**	3 meg.	C1	**51c**

5-WATT WIRE-WOUND RADIOHMS®

New design packs 5-watt capacity into a 2-watt size unit: 1³⁄₃₂″ dia. x ⁹⁄₁₆″ deep. Model WW has full round aluminum shaft ¼″ dia. x 3″ long. Model WN has fingertip knurled, slotted shaft ¼″ dia. x ¾″ long Specify by using WN or WW as prefix.

CRL Type WW or WN—Any model 1 through 15K ohms. Net Each.. **$1.14**

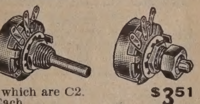
CRL Type WW or WN—20K through 30K ohms. Net...**$1.50**

CRL Type WW or WN—40K or 50K ohms Net Each... **1.80**

CRL Type WW or WN—75K or 100K ohms. Net Each.. **2.46**

Ohms	CRL No. WW- or WN-	Ohms	CRL No. WW- or WN-	Ohms	CRL No. WW- or WN-	Ohms	CRL No. WW- or WN-
1	**010**	25	**250**	400	**401**	7500	**752**
2	**020**	30	**300**	500	**501**	10K	**103**
3	**030**	40	**400**	750	**751**	15K	**153**
4	**040**	50	**500**	1000	**102**	20K	**203**
5	**050**	60	**600**	1500	**152**	25K	**253**
6	**060**	75	**750**	2000	**202**	30K	**303**
8	**080**	100	**101**	2500	**252**	40K	**403**
10	**100**	200	**201**	3000	**302**	50K	**503**
15	**150**	250	**251**	4000	**402**	75K	**753**
20	**200**	300	**301**	5000	**502**	100K	**104**

1/4 WATT RADIOHMS®



Smaller than a dime: .671″ diam. Model JP has plain round shaft ⅛″ diam. x ¾″ long. Model JL has slotted shaft ⅛″ diam. x ½″ long. Bushings are ¼″-32 thread; ¼″ long for JP; split locking type ⅜″ long with jam nut for JL. Tolerance: 20%. Taper type C1 except marked *, which are C2.

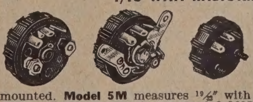
CRL Type JP Radiohms—Net Each.................... **$3.51**

CRL Type JL Radiohms—Net Each....................**$3.66**

Ohms	CRL Numbers		Ohms	CRL Numbers	
	JP	JL		JP	JL
1000	**JP-102**	**JL-102**	50K	**JP-503**	**JL-503**
1500	**JP-152**	**JL-152**	100K	**JP-104**	**JL-104**
2500	**JP-252**	**JL-252**	250K	**JP-254**	**JL-254**
5000	**JP-502**	**JL-502**	500K	**JP-504**	**JL-504**
7500	**JP-752**	**JL-752**	500K	**JP2-504***	....
10K	**JP-103**	**JL-103**	1 Meg.	**JP-105**	**JL-105**
10K	**JP2-103***	....	2.5 Meg.	**JP-255**	**JL-255**
25K	**JP-253**	**JL-253**			

KC-3, KC-4 and KC-5—Knobs for JP and JL Radiohms. Black, White and Red. respectively. Net Package of 5.... **90c**

1/10 WATT RADIOHMS®



Model B16 can be reduced to ⅝″ diam. by removing knob; with knob is ²³⁄₃₂″. Plain type is stud mounted, using two 1-72NF-2 thd. x .140″ on .427″ centers. Switch type is bracket mounted. **Model 5M** measures ¹⁹⁄₃₂″ with knob, reduces to .502″ without knob. Mount is standard 0-80NF-2A thd. x .134″ long brass studs on .285″ centers. Switch type only.

CRL Model B16 Plain—Net Each.................... **$1.50**

CRL Model B16 Switch—Net Each....................**$2.40**

TYPE B16 SERIES

CRL No.		Max. Ohms	Taper	CRL No.		Max. Plain	Taper
Plain	Switch			Plain	Switch		
B16-107	....	500	C1	**B16-119**	....	50K	C1
B16-109	....	1000	C1	**B16-121**	....	100K	C1
B16-111	....	2500	C1	**B16-123**	....	250K	C1
B16-112	**B16-212**	2500	C2	**B16-118**	**B16-218**	½ Meg.	C2
B16-113	....	5000	C1	**B16-120**	**B16-220**	1 Meg.	C2
B16-114	**B16-214**	5000	C2	**B16-122**	**B16-222**	2 Meg.	C2
B16-115	....	10000	C1	**B16-124**	**B16-224**	3 Meg.	C2
B16-116	**B16-216**	10000	C2	**B16-128**	**B16-228**	5 Meg.	C2
B16-117	**B16-217**	25000	C2				

TYPE SM SERIES

CRL No.	Max. Ohms	Taper	CRL No.	Max. Ohms	Taper	Net Each
SM2-252-S	2500	C2	**SM2-103-S**	10000	C2	**$3.75**
SM2-502-S	5000	C2	**SM2-253-S**	25000	C2	

Centralab Auto Radio Controls, Switches

AUTO RADIO CONTROL REPLACEMENTS

FOR BUICK AUTO RADIOS

Centralab Number	Year Auto	Radio Mfr.	Radio Model No.	Original Part No.	Net Each
M/U-3	42, 46-53	Motorola	BK2A, BK3A6	18B512084	**$2.13**
BD-50/3	50-53	Delco	980868, 980899, 980847, 980979, 980980, 981111, 981320, 981321, 981322, 981323	7263119	**2.52**
BD-54/5	54	Delco	981550, 981551	7264309	**2.52**
BD-54/5	55	Delco	981651, 981652	7265742	**2.52**
BD-56	56	Delco	981707, 981708	7266996	**2.52**
BD-57	57	Delco	981813, 981814	7268944	**2.52**
BD-58	58	Delco	981902, 981903	7271329	**2.52**
BD-59	59	Delco	981968	7273993	**2.52**

FOR CHEVROLET AUTO AND TRUCK RADIOS

CD-49/0-A	49-50	Delco	986389, 986241	1218641	**$2.52**
CD-51-A	51-52	Delco	986516	1219708	**2.52**
M/U-3	51-52	Motorola	CT2A, CT2M, CT2A6, CT52M6	18B512084	**2.13**
CD-53/4-A	53-54	Delco	986669, 986771*	7264211	**2.52**
CD-55	55	Delco	987087	7265265	**2.52**
CD-55/6-B	55-56	Delco	987088, 987366	7265220	**2.52**
CD-55/6-A	55-56	Delco	987086, 987364, 3725156 (Corvette)	7265302 1220909	**2.52**
CD-56	56	Delco	987368	7266842	**2.52**
CD-57-A	57	Delco	987577	7269211 1220961	**2.52**
CD-57-C	57	Delco	987575, 987693	7269199 1220963	**2.52**
CD-57-B	57	Delco	987573	7269186 1220962	**2.52**
M/U-6	57	Motorola	CTA7X, CTM7X	18K541128	**2.13**
CD-58-B	58	Delco	987724	7270450	**2.52**
CD-58-A	58	Delco	987727	7270479 1221118	**2.52**
M/U-7	58	Motorola	CTA8X, CTM8X	18B542657	**2.13**
CD-59-B	59	Delco	987891	7273367	**2.52**
M/U-9	59	Motorola	CTA9X, CTM9X	18C543337	**2.13**
CD-59-A	59-60	Delco	987888, 988275	7273302 1221260	**2.13**
M/U-3	48-53	Motorola	GMT2A*,-2M*, -3A6*	18B512084	**2.13**

FOR DESOTO AUTO RADIOS

DEM-57/8	57-58	Motorola	MOPAR 846,919, 919HR, 923	18B539819	**$2.13**
DEM-59	59	Motorola	MOPAR 857	18K561733	**2.13**

FOR DODGE AUTO AND TRUCK RADIOS

DOM-57	57	Motorola	MOPAR 845,918	18K539820	**$2.13**
DOM-58	58	Motorola	MOPAR 852	18K560417	**2.13**
DOM-59	59	Motorola	MOPAR 856	18B561732	**2.13**
M/U-1	53	Motorola	610T*	18K512740	**2.13**

FOR EDSEL AUTO RADIOS

FB-59	59	Bendix	94BE	2090035-3	**$2.13**

FOR FORD AUTO AND TRUCK RADIOS

FB-49/0	49-50	Bendix	M1, M1A, M1A1	L222808	**$2.13**
FM-50	50	Motorola	OMF	18B591266	**2.13**
FB-51	51	Bendix	M2	L219586-2	**2.13**
FM-51	51	Motorola	1MF	18B501153	**2.13**
FB-52/3	52-53	Bendix	M4, M4A	L219586-3	**2.13**
FM-52/3	52-53	Motorola	2MF, 3MF	18B511635	**2.13**
FB-54	54	Bendix	M4B, M4BA, M4BP	L219586-7	**2.13**
FM-54	54	Motorola	4MF	18B530018	**2.13**
FB-55	55	Bendix	5BF	L219656-1	**1.41**
FM-55	55	Motorola	5MF, 5MF8	18B531299	**1.41**
FB-56	56	Bendix	6BF	L219681-1	**2.13**
FM-56	56	Motorola	66MF, 66MFP, 69MF	18B534483	**2.13**
A/U-3	57	Automat.	FT-227, FTP-37	80A618C	**2.52**
FB-57	57	Bendix	75BF	2090035-1	**2.13**
FM-57	57	Motorola	75MF	18K539059	**2.13**
FB-58	57-58	Bendix	74BF, 84BF	2090035-2	**2.13**
FM-57/8	57-58	Motorola	74MF,84MF,84MFM	18B541819	**2.13**
A/U-3	58	Automat.	F-128, -C, FP-238, -C	80A618C	**2.52**
FB-59	59	Bendix	94BF	2090035-3	**2.13**
FM-59	59	Motorola	94MF, 94MFM	18B561597	**2.13**
A/U-3	59	Automat.	F-139, FP-249	80A618C	**2.52**
A/U-3	59	Automat.	F-139*, FP-249*	80A618C	**2.52**
FB-57/8-T	57-58	Bendix	74BT*, 84BT*	2090253-1	**1.41**

FOR GMC TRUCK RADIOS

M/U-3	48-53	Motorola	GMT2A, GMT2M, GMT3A6	18B512084	**$2.13**
CD-53/4-A	54-59	Delco	2233396, 2233398	7264211	**2.52**

FOR HENRY J AUTO RADIOS

M/U-1	51-53	Motorola	HJ2A, HJ2M, HJ3A6	18K512740	**$2.13**
CD-53/4-A	56	Delco	694866	7264211	**2.52**

FOR HUDSON AUTO RADIOS

M/U-3	51-53	Motorola	HT3A6	18B512084	**$2.13**

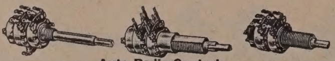
FOR KAISER AUTO RADIOS

M/U-3	51-53	Motorola	KR2A, KR2M, KR3A6	18B512084	**$2.13**

FOR PACKARD AUTO RADIOS

M/U-3	51-53	Motorola	PD2A, PD2M, -3A6	18B512084	**$2.13**

*Truck radio.



Auto Radio Controls

SP Switch

FOR OLDSMOBILE AUTO RADIOS

Centralab Number	Year Auto	Radio Mfr.	Radio Model No.	Original Part No.	Net Each
OD-51-A	51	Delco	982700	7260294	**$2.52**
M/U-3	51-52	Motorola	OE2A, OE2M, OE2A6	18B512084	**2.13**
OD-53-A	53	Delco	983004	7263540	**2.52**
OD-54/6	54-56	Delco	983091, 983205, 983336	7264128	**2.52**
OD-57-B	57	Delco	989002	7268847	**2.52**
OD-57-A	57	Delco	989001	7269055	**2.52**
OD-58	58	Delco	989127, 989129	7270679	**2.52**
OD-59	59	Delco	989170, 989171	7272855	**2.52**

FOR PLYMOUTH AUTO RADIOS

PM-56	56	Motorola	MOPAR 916, 916HR	18B536704	**$2.13**
PM-57	57	Motorola	MOPAR 849	18B540376	**1.41**
PP-57	57	Philco	P5701, MOPAR 848	33-5580-12	**1.41**
PM-58	58	Motorola	MOPAR 854	18B560415	**1.41**
PP-58	58	Philco	P-5801, MOPAR 848	33-5580-21	**1.41**
PP-59	59	Philco	P-5901, MOPAR 855	33-5580-27	**2.13**

FOR PONTIAC AUTO RADIOS

M/U-1	46-52	Motorola	PC2A, PC2A6, PC2M	18K512740	**$2.13**
POD-56	56	Delco	988623	7268308	**2.52**
A/U-1	57	Automat.	CTR-6A	80-69	**2.52**
POD-57	57	Delco	988671	7270189	**2.52**
POD-58-A	58	Delco	988823	7270939	**2.52**
POD-58-B	58	Delco	988822	7271446	**2.52**
POD-59	59	Delco	988976, 988977	7273623	**2.52**

FOR RAMBLER AUTO RADIOS

A/U-1	58-59	Automat.	RAP-89, RP-519	80-69	**$2.52**
RM-58/59	58-59	Motorola	83MR (8990543), 93MR (8990582)	18B560804	**2.13**
RM-59	59	Motorola	94MA (8990576)	18B561728	**2.13**

FOR RIVERSIDE AUTO RADIOS

A/U-3	58-59	Automat.	FJB-6679A, FJB-6684, FJB-6687	80A618C	**$2.52**

FOR STUDEBAKER AUTO RADIOS

M/U-1	50-52	Motorola	SR2A, SR2A6, SR2M	18K512740	**$2.31**
M/U-3	53	Motorola	SR3A6	18B512084	**2.13**
M/U-7	59	Motorola	AC2971 (SM9T)	17B542657	**2.13**

FOR WILLYS JEEP RADIOS

CD-53/4-A	56-58	Delco	694866, 815395	7264211	**$2.52**

FOR MOTOROLA UNIVERSAL RADIOS

Used in many autos and trucks.

Centralab Number	Year Auto	Radio Model Number	Original Part No.	Net Each
M/U-2	55-57	395, -12; 396, -12; 397; 404	18B531560	**$1.41**
M/U-4	55-58	5M, 5M-12, 6M, 6M-12, 7M, 8M	18K533457	**2.13**
M/U-5	57	7MX	18B540768	**2.13**
M/U-8	58, 60	8MX, 600X, 10M, 10MX	18K542446	**2.13**

FOR AUTOMATIC UNIVERSAL AUTO RADIOS
AMERICAN-MADE AUTOMOBILES

CRL No.	Radio Model Number, Year and Auto Model	Net Each
A/U-1*	**MP-69, MP-126** 42, 46-58 Buick; 49-59 Cadillac; 53-54 Chevrolet & Chev. Truck; 49-54, 56 Chrys.; 49-56 DeSoto; 42, 46-54 Ford; 42, 46-58 Ford Tr.; 48-59 GMC Truck; 42, 46-58 Mercury; 49-58 Olds; 51-54 Plymouth	**$2.52**
A/U-2†	**MU-34, R-54, RT-7** for 42, 46-59 Buick; 49-59 Cadillac; 51-59 Chevrolet; 48-59 Chev. Truck; 49-59 Chrysler, DeSoto & Dodge; 58-59 Edsel; 42, 46-59 Ford, Ford Truck & Mercury; 48-59 GMC Truck; 59 Lark; 49-58 Olds; 56-59 Plymouth; 57-59 Pontiac; 58-59 Rambler	**1.41**

FOREIGN-MADE AUTOMOBILES

A/U-1‡	**VP-12** Alfa-Romeo; **MP-126** Austin-Healy, Austin "A-40", Jaguar "XK-120", MG "Magnette", Triumph "TR-2", Vauxhall; **W-716** Opel, Porsche "1600", Taunus, Volkswagen, Volvo; **MP-69** Porsche; **W-76** Volkswagen	**$2.52**
A/U-2†	**R-54** Alfa-Romeo, Austin-Healy, Austin "A-40", English Ford, Fiat, Hillman, Jaguar "XK-140", Mercedes-Benz, MG, Morris, Renault, Riley "1.5", Saab, Simca, Triumph "TR-2", Vauxhall; **MU-34** Borgward, Citroen, DKW, Karmann Ghia, Lloyd, Opel, Porsche "Speedster", Renault "4CV" & Dauphine, Volkswagen; **RT-7** Fiat	**1.41**

Original Part Number: *80-69, RV-69; †80-57D; ‡80-69.

AUTO RADIO ON/OFF SWITCH REPLACEMENTS

CRL No. SP-1 Switch—Replacement for 1951-1954 Plymouth, Dodge, DeSoto and Chrysler. Net Each.................. **45c**

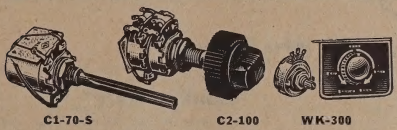
CRL No. SP-4 Switch—Replacement for 1946-1956 Ford, Lincoln, Mercury, Plymouth, Dodge, DeSoto and Chrysler auto radios. Net Each.. **45c**

CRL No. SP-6 Switch—Replacement for 1955-56 Lincoln & Mercury, 1956-57 Ford Thunderbird, 1957-58 Ford and 1958 Mercury auto radios. Net Each.................................. **60c**

CRL No. SP-7 Switch—Replacement for 1942, 1946-48 Plymouth, Dodge, DeSoto and Chrysler MOPAR No. 802 auto radios. Net Each.. **45c**

CRL No. SP-8 Switch—Replacement for 1956-57 Mercury and 1957 Lincoln auto radios. Net Each...................... **45c**

Centralab Special Components, Kits



CENTRALAB COMPENTROLS®

JUNIOR COMPENTROLS

Volume control and special Packaged Electronic Circuit network improves apparent bass and treble of amplifiers, radios, etc., when volume is at a low level. Does not introduce noticeable signal loss. Switched units have SPST switch with insulated shield to prevent hum. Universal shaft 3″ long. Control, 15/16″ dia. Shipping Weight, 5 oz.

CRL No. C1-60 (½ Meg.) or **C1-70** (1 Meg.)—Plain. Net. **$2.75**

CRL No. C1-60-S (½ Meg.) or **C1-70-S** (1 Meg.)—Switched. Net Each..**$3.30**

SENIOR COMPENTROLS

Dual concentric; incorporates level set to adjust amount of compensation. Universal replacement for any value. Dual knobs supplied. Shipping Weight, 6 oz.

CRL No. C2-100—Net Each........................ **$4.50**

CRL No. 200—Same but Fastatch design with separate front and rear units. Includes special boost plates. Net Each.......**$4.50**

STEREO-TWIN COMPENTROLS

Twin compensated volume control provides synchronized compensation for dual-channel stereo systems. Shipping Wt., 6 oz.

CRL No. C2-60 (½-meg) or **C2-70** (1 meg)—Without switch. Net Each.................................... **$4.50**

COMPENSATED TONE CONTROL

A compensated tone control as used in Baxandall circuit—not to be confused with two other Senior Compentrols above, which are compensated volume controls. Shipping Weight, 5 oz.

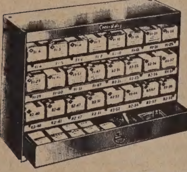
CRL No. C3-300—Net Each........................ **$4.50**

DUAL SPEAKER CONTROL KIT

Primarily designed for rear seat radio speaker uses. Provides for gradual reduction of volume of one speaker while increasing volume of the other; or, balances both speakers. Includes 5-watt control, combination mounting bracket and dial plate, black and chrome knob, mounting screws and installation instructions. Shipping Weight, 5 oz.

CRL No. WK-300 Kit—Net Each.................... **$1.80**

FDK-100 FASTATCH® DUAL CONCENTRIC CONTROL KIT



Provides a handy stock of the 12 most popular front units and the 12 most popular rear units in the Fastatch control system; plus, a stock of switches and adapters. Over 720 different dual concentric control combinations, including switched types, may be assembled from this compact stock. Controls and switches can be snapped together in a jiffy. In sturdy steel shelf cabinet, labeled and ready for use.

CRL No. FDK-100 Kit—Net Each.... **$32.70**

FRONT AND REAR UNITS

Quan. Each	CRL No. Front Unit	Ohms	Taper	CRL No. Rear Unit	Ohms	Taper
1	**F1-4**	1000	C1	**R2-31**	100K	C1
1	**F1-5**	1000	C5	**R2-35**	250K	C2
1	**F1-6**	1500	C1	**R2-36**	250K	C4
1	**F1-7**	1500	C5	**R4-37**	250K	C14*
1	**F1-10**	2000	C5	**R2-40**	500K	C1
1	**F1-15**	2500	C5	**R2-41**	500K	C2
1	**F1-21**	5000	C5	**R2-47**	500K	C17†
1	**F1-25**	10K	C5	**R2-51**	1 Meg.	C1
1	**F1-29**	50K	C1	**R2-52**	1 Meg.	C2
1	**F1-40**	500K	C1	**R2-56**	1 Meg.	C11‡
1	**F1-51**	1 Meg.	C1	**R2-57**	1 Meg.	C12§
1	**F1-67**	2 Meg.	C1	**R2-58**	1 Meg.	C13#

Taps: *75K. †50K. ‡500K. §200K. #250K.

TYPE KR FASTATCH® SWITCHES

125 v. AC Switches				10 v. DC Switches			
Quan. Each	CRL No.	Amps	Type	Quan. Each	CRL No.	Amps	Type
5	**KR-1**	5	SPST	1	**KR-4**	15	SPST
2	**KR-2**	3	DPST	1	**KR-7**	15	DPST
1	**KR-3**	3	DP*				

*One pole "on", one "off".

ADAPTER BUSHINGS

Quan.	CRL No.	Description
1	**AK-26**	Auto Radio; 7/16″-28 thread; nuts, lockwashers
1	**AK-28**	Auto Radio; ½″-28 thread; nuts, lockwashers

BK-100 UNIVERSAL SHAFT RADIOHMS® KIT

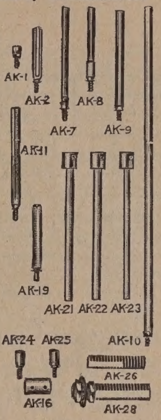
Contains 24 type "B" controls in the 12 fastest moving values. Controls plus 10 "KR" Fastatch switches for all service needs. Sturdy steel cabinet, labeled, ready for use.

CRL No. BK-100 Kit—Net Each.................... **$26.88**

ADASHAFT® SHAFTS, COUPLERS, EXTENSIONS

CRL No.	Description	Net Pkge. 5
AK-1	⅜″ L., screw slot	**$0.60**
AK-2	1 9/16″ L., slot .078″ W.	**.90**
AK-7	3″ L., flat side .156″	**.90**
AK-8	2⅛″ L. x 3/16″ round	**.90**
AK-9	3¼″ L. x ¼″ round	**.90**
AK-10	10″ L., flat mill .216″ x 4 5/16″ long	**1.80**
AK-11	Universal, 4″ long; slot, knurl and flat side	**1.11**
AK-16	¼″ to ¼″ or 3/16″ shaft coupler	**1.50**
AK-19	Insul. nylon 2 1/16″ L.	**1.95**
AK-21	4″ x ¼″ Dia. Exten., flat .218″ wide	**2.10**
AK-22	4″ x ¼″ Dia. Exten., flat .154″ wide	**2.10**
AK-23	4″ x 3/16″ Dia. Exten., flat .172″ wide	**2.10**
AK-24	⅜″ L. x ¼″ full round	**.60**
AK-25	⅜″ L. x ¼″, flat .218″	**.60**
AK-26	Auto adapt bush, ⅜″-7/16″	**.45***
AK-28	Auto bush., ⅜″-½″	**.45***
AK-29	2 9/16″ L. x .235″ full rd.	**1.50**
AK-30	Ground Lug	**.30†**
AK-31	⅜″-32 bush. adj. to 1″	**.45***

*Net Each. †Net per dozen.



DESCRIPTION OF TAPERS

C-1—Linear; uniform resistance change from either end. **C-2**—Semi-log. (audio) 10% center. **C-3**—Right hand semi-log. Reversed C-2. **C-4**—Modified log, 20% center. **C-5**—Right hand mod. log, 20% center. **C-6**—Mod. log., 40% center. **C-7**—Symet. straight line; slow change. **C-11**—Tapped 50% rotation, 50% resis. **C-12**—Tapped 37½% rotation, 20% resis. **C-13**—Tapped 50% rotation, 30% resistance. **C-14**—Tapped 62% rotation, 30% resistance. **C-15**—Tapped 50% rotation, 10% resistance. **C-16**—Tapped 62% rotation, 50% resistance. **C-17**—Tapped 37½% rotation, 10% resistance.

WALL PLATES

Chrome plated; for mounting speaker controls. Complete with mounting screws. Size, 2¾″ x 4½″.

CRL No. P-223 (⅜″ center hole) **or P-224** (Blank plate)—Net Each...................................... **63c**

BK-100 RADIOHMS® KIT (CONT'D)

TYPE KR FASTATCH® SWITCHES

Quan. Each	CRL No.	Amps at 125 v. AC	Type	Quan. Each	CRL No.	Amps at 125 v. AC	Type
6	**KR-1**	5	SPST	1	**KR-3**	3	DI
3	**KR-2**	3	DPST		1 pole "on", 1 "off"		

CONTENTS: CONTROLS

Quan. Each	CRL No.	Ohms	Taper	Quan. Each	CRL No.	Ohms	Taper
1	**B-5**	1,000	C1	6	**B-60**	500K	C2
1	**B-10**	5,000	C1	2	**B-69**	1 Meg.	C1
1	**B-14**	10,000	C1	4	**B-70**	1 Meg.	C2
2	**B-31**	50,000	C1	1	**B-75**	2 Meg.	C1
2	**B-40**	100K	C1	1	**B-76**	2 Meg.	C2
2	**B-59**	500K	C1	1	**B-87**	5 Meg.	C1

ABK-100 ADASHAFT® RADIOHMS® KIT

Contains 24 type "AB" Adashaft controls in 10 popular values. Combined with Fastatch switches and assorted shafts, kit provides flexible stock of replacement controls. Sturdy, steel shelf cabinet, labeled and ready for use.

CRL No. ABK-100 Kit—Contents as listed, plus 21 assorted shafts and couplers. Net Each............... **$27.21**

CONTENTS: CONTROLS

Quan. Each	CRL No.	Ohms	Taper	Quan. Each	CRL No.	Ohms	Taper
1	**AB-5**	1000	C1	6	**AB-60**	500K	C2
2	**AB-10**	5000	C1	2	**AB-69**	1 Meg.	C1
2	**AB-31**	50K	C1	4	**AB-70**	1 Meg.	C2
2	**AB-40**	100K	C1	1	**AB-75**	2 Meg.	C1
2	**AB-59**	500K	C1	2	**AB-87**	5 Meg.	C1

TYPE KR FASTATCH® SWITCHES

Quan. Each	CRL No.	Amps at 125 v. AC	Type	Quan. Each	CRL No.	Amps at 125 v. AC	Type
5	**KR-1**	5	SPST	1	**KR-3**	3	DP
2	**KR-2**	3	DPST		1 pole "on", 1 "off"		

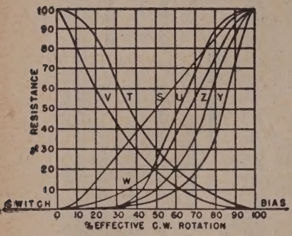
WWK-100 5-WATT WIRE-WOUND KIT

Contains 24 controls in the 14 best selling 5-watt wire-wound line plus extra drawer space for expansion. Cabinet is sturdy, steel shelf type, labeled and set up, ready for use.

CRL No. WWK-100 Kit—Net Each.................. **$27.36**

Quan. Each	CRL Number	Ohms	Quan. Each	CRL Number	Ohms
1	**WW-100**	10	2	**WW-152**	1500
1	**WW-500**	50	1	**WW-202**	2000
3	**WW-101**	100	2	**WW-252**	2500
1	**WW-201**	200	1	**WW-302**	3000
1	**WW-501**	500	3	**WW-502**	5000
1	**WW-751**	750	3	**WW-103**	10K
3	**WW-102**	1000	1	**WW-153**	15K

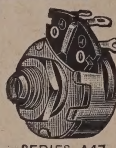
COMPOSITION-ELEMENT CONTROLS



Graph Explanation:
Taper S—Straight or uniform resistance change with rotation.
Taper T — Right-hand 30% resistance at 50% of C.C.W. rotation.
Taper U — Left-hand 1% resistance at 33⅓% of C.W. rotation.
Taper V — Right-hand 20% resistance at 50% of C.C.W. rotation.
Taper W—Left-hand 20% resistance at 50% of C.W. rotation.
Taper Z—Left-hand (Log. audio) 10% resistance at 50% of C.W. rotation.
Taper Y — Left-hand 5% resistance at 50% of C.W. rotation.

SERIES "A47" ½-WATT CONTROLS

Composition-element controls in the popular $^{15}/_{16}$" dia. size. Series "A47" controls are field-assembled with the selected "Pick-A-Shaft"* and "Ad-A-Switch"*. These controls are also available with factory-assembled shafts at no extra charge, by omitting prefix "A" from catalog number and designating the type shaft desired when ordering. Example: 47-100K-S with FKS-¼ shaft.



SERIES A47
(INDUSTRIAL)
SERIES 47

CAT No.	OHMS	TAPER
A47-500-S	500	S
A47-750-S	750	S
A47-1000-S	1000	S
A47-1500-S	1500	S
A47-2000-S	2000	S
A47-2500-S	2500	S
A47-3000-S	3000	S
A47-4000-S	4000	S
A47-5000-S	5000	S
A47-7500-S	7500	S
A47-10K-S	10K	S
A47-10K-V	10K	V
A47-10K-W	10K	W
A47-10K-Z	10K	Z
A47-15K-S	15K	S
A47-15K-V	15K	V
A47-15K-W	15K	W
A47-20K-S	20K	S
A47-25K-S	25K	S
A47-25K-W	25K	W
A47-25K-V	25K	V
A47-30K-S	30K	S
A47-40K-S	40K	S
A47-50K-S	50K	S
A47-50K-W	50K	W
A47-50K-Z	50K	Z
A47-75K-S	75K	S
A47-75K-V	75K	V
A47-100K-S	100K	S
A47-100K-Z	100K	Z
A47-150K-S	150K	S
A47-200K-S	200K	S
A47-250K-S	250K	S
A47-250K-Z	250K	Z
A47-300K-S	300K	S
A47-500K-S	500K	S
A47-500K-Z	500K	Z
A47-750K-S	750K	S
A47-750K-Z	750K	Z
A47-1 Meg-S	1 Meg.	S
A47-1 Meg-Z	1 Meg.	Z
A47-1.5 Meg-S	1.5 Meg.	S
A47-2 Meg-Z	2 Meg.	Z
A47-2 Meg-S	2 Meg.	S
A47-2.5 Meg-S	2.5 Meg.	S
A47-3 Meg-S	3 Meg.	S
A47-3-Meg.-Z	3 Meg.	Z
A47-4 Meg-S	4 Meg.	S
A47-4 Meg-Z	4 Meg.	Z
A47-5 Meg-Z	5 Meg.	Z
A47-5 Meg-S	5 Meg.	S
A47-7.5 Meg-S	7.5 Meg.	S
A47-10 Meg-S	10 Meg.	S

LIST PRICE $1.55 Standard Packing—10 per Carton.

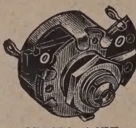
SERIES "AD47" ½-WATT DUAL CONTROLS

These composition-element controls are ganged together so that both sections are operated by a single shaft in corresponding rotation. Available with "Pick-A-Shaft"* and "Ad-A-Switch* features, for audio, radio-TV and industrial applications. Controls take any shaft listed on page R-24, including High Voltage Coupler and Insulated Shafts. Your choice of 13 shafts listed (this does not include insulated shaft) with each control. Tolerances of plus/minus 20% up to and including 100K ohms; plus/minus 30% above 100K. Controls take Series SWE Switches. Items not listed are special; prices and information on request.

Cat. No.	Panel	Taper	Rear	Taper
AD47-50-S	50K	S	50K	S
AD47-100K-S	100K	S	100K	S
AD47-250K-S	250K	S	250K	S
AD47-250K-Z	250K	Z	250K	Z
AD47-500K-Z	500K	Z	500K	Z
AD47-1 Meg.-S	1 Meg.	S	1 Meg.	S
AD47-1 Meg.-Z	1 Meg.	Z	1 Meg.	Z
AD47-2 Meg.-S	2 Meg.	S	2 Meg.	S
AD47-2 Meg.-V	2 Meg.	V	2 Meg.	V
AD47-5 Meg.-S	5 Meg.	S	5 Meg.	S

LIST PRICE $3.75 Standard Packing — Individual Carton.

SERIES "A47F"



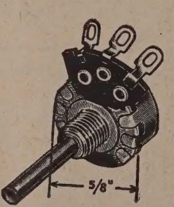
SERIES A47F
(INDUSTRIAL)
SERIES 47F

These are the popular $^{15}/_{16}$" dia. composition-element controls which are replacing the larger 1-⅛" dia. units, without sacrifice in rating or performance. Series "A47F" controls are field-assembled with the selected "Pick-A-Shaft"* and "Ad-A-Switch"*. "A47F" controls have taps 1, 2, 3 located at 30%, 50% and 70% of rotation, respectively. These controls are also available with factory-assembled shafts at no extra charge, by omitting prefix "A" from catalog number and designating the type of shaft desired when ordering. Example: 47F-200K with FS-3 shaft.

Cat. No.	Res. Ohms.	Tap No. 1 30%	Tap No. 2 50%	Tap No. 3 70%
A47F-50K	50K		25K	
A47F-200K	200K			100K
A47F-250K	250K			50K
A47F1-250K	250K		125K	
A47F-350K	350K	75K		
A47F1-350K	350K		75K	
A47F-500K	500K			100K
A47F1-500K	500K	25K		
A47F2-500K	500K			200K
A47F3-500K	500K		100K	
A47F4-500K	500K		50K	
A47F5-500K	500K		250K	
A47F-1 Meg.	1 Meg.	250K		
A47F1-1 Meg.	1 Meg.			200K
A47F2-1 Meg.	1 Meg.		50K	
A47F3-1 Meg.	1 Meg.		100K	
A47F4-1 Meg.	1 Meg.		225K	
A47F5-1 Meg.	1 Meg.		500K	
A47F-2 Meg.	2 Meg.	20K		
A47F1-2 Meg.	2 Meg.	5000		
A47F2-2 Meg.	2 Meg.	15K		
A47F3-2 Meg.	2 Meg.		1 Meg.	
A47F4-2 Meg.	2 Meg.		200K	
A47F5-2 Meg.	2 Meg.		400K	
A47F6-2 Meg.	2 Meg.		500K	
A47F-3 Meg.	3 Meg.		250K	

LIST PRICE $2.25. Standard Packing—10 per Carton. *Reg. U.S. Pat. Off.

SERIES 44 — 0.02 WATT CONTROLS



Composition Element Controls rated at 0.2 watt, designed specifically for miniaturized applications such as transistorized circuits, pocket radios, hearing aids, etc. Stocked controls have Clarostat "W" taper (20% log audio). Other tapers available on special order. **Series 44 is** without switch, while Series 44S has factory-attached 0.5 am. 25 v.d.c. DPST switch. Other ohmages available on special order. 200 ohms to 5 meg. linear; 1500 to 2.5 meg. tapered. Also available on special order, controls with 0.5 a. 25 v.d.c. SPST switch. Items not listed are special. Prices and information on request.

Without Switch Cat No.
44-5K-W
44-10K-W
LIST PRICE $1.55

With DPST Switch Cat. No.
44S-5K-W
44S-10K-W
44S-25K-W
44S-500K-W
LIST PRICE $2.55
Standard Packing — 10 Per Carton

SERIES B47 ½-WATT TAB-MOUNT

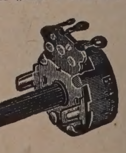
Composition element controls designed for radio and TV applications, where bushingless controls are required. Phenolic shaft insures insulation if control is used on a "hot" chassis. Items not listed are special, for which information and prices will be supplied on request.

Cat. No.
B47-500-S
B47-750-S
B47-1500-S
B47-2500-S
B47-3000-S
B47-5000-S

Cat. No.
B47-10K-S
B47-25K-S
B47-50K-S
B47-100K-S
B47-150K-S
B47-200K-S

Cat. No.
B47-250K-S
B47-330K-Z
B47-500K-S
B47-500K-Z
B47-1 Meg-S
B47-1 Meg-Z

Cat. No.
B47-1.5 Meg-S
B47-2 Meg-S
B47-2.5 Meg-S
B47-3 Meg-S
B47-5 Meg-S
B47-5 Meg-Z
B47-7.5 Meg-S



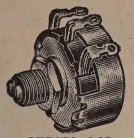
LIST PRICE $1.00
Standard Packing—10 per Carton.

PRODUCTS OF
THE HOUSE OF RESISTORS®
CLAROSTAT®
RESISTORS · CONTROLS
RESISTANCE DEVICES

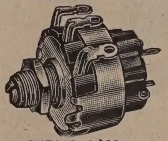
WIRE-WOUND CONTROLS

These are "Pick-A-Shaft"* controls which take any one of 12 shafts listed on page R-24 including High Voltage Coupler and insulated shaft. Your choice of any one of the 12 shafts listed (this does not include insulated shaft) with each control. Tolerances of these controls are in accordance with RETMA standards. Overall resistance tolerance of plus/minus 10% for all values. All controls are linear. Available with factory-assembled shafts at no extra charge, by omitting the prefix "A" from the catalog number and designating the type of shaft desired when ordering. Example: 43-500 with FKS-¼ shaft, or 43S-10K with FS-3 shaft and SPST switch.

SERIES "A43" and "A43S" 2-WATT CONTROLS



SERIES A43
(INDUSTRIAL)
SERIES 43



SERIES A43S
(INDUSTRIAL)
SERIES 43S

"A43" is without switch, while "A43S" has factory-attached SPST switch. When ordering "A43S" controls, specify type of switch. Controls with other than SPST switch are special. Prices and information on request.

Without Switch Cat. No.	With SPST Switch Cat. No.	Res. Ohms	Without Switch Cat. No	With SPST Switch Cat. No.	Res. Ohms
A43-5	A43S-5	5	A43-400	A43S-400	400
A43-10	A43S-10	10	A43-500	A43S-500	500
A43-20	A43S-20	20	A43-750	A43S-750	750
A43-25	A43S-25	25	A43-1,000	A43S-1,000	1,000
A43-30	A43S-30	30	A43-1,500	A43S-1,500	1,500
A43-40	A43S-40	40	A43-2,000	A43S-2,000	2,000
A43-50	A43S-50	50	A43-2,500	A43S-2,500	2,500
A43-75	A43S-75	75	A43-3,000	A43S-3,000	3,000
A43-100	A43S-100	100	A43-4,000	A43S-4,000	4,000
A43-150	A43S-150	150	A43-5,000	A43S-5,000	5,000
A43-200	A43S-200	200	A43-7,500	A43S-7,500	7,500
A43-300	A43S-300	300	A43-10K	A43S-10K	10K

LIST PRICE $1.55 (Without Switch) — $2.45 (With SPST Switch)

Standard Packing: 10 per Carton.

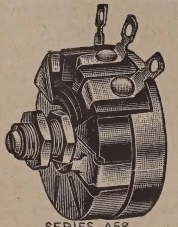
SERIES "A58" and "A58S" 3- WATT CONTROLS

"A58" is without switch, while "A58S" has factory-attached SPST switch. Available with factory-assembled shafts, at no extra charge, by omitting prefix "A" from catalog number, and designating type of shaft desired when ordering. Example: 58-50K with KSS-3 shaft, or 58S-25K with RS-3 shaft and SPST switch. Controls with other than SPST switch are special. Prices and information on request.

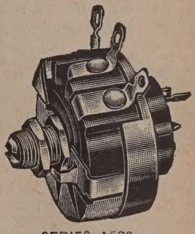
Without Switch Cat. No.	Res. Ohms	List Price	Without Switch Cat. No.	Res. Ohms	List Price
A58-1	1	$1.55	A58-4000	4,000	$1.55
A58-2	2	1.55	A58-5,000	5,000	1.55
A58-4	4	1.55	A58-7,500	7,500	1.55
A58-6	6	1.55	A58-10K	10K	1.55
A58-10	10	1.55	A58-15K	15K	2.00
A58-15	15	1.55	A58-20K	20K	2.00
A58-20	20	1.55	A58-25K	25K	2.00
A58-25	25	1.55	A58-30K	30K	2.70
A58-30	30	1.55	A58-40K	40K	2.70
A58-40	40	1.55	A58-50K	50K	2.70
A58-50	50	1.55			
A58-60	60	1.55			
A58-75	75	1.55			
A58-100	100	1.55			
A58-200	200	1.55			
A58-300	300	1.55			
A58-400	400	1.55			
A58-500	500	1.55			
A58-750	750	1.55			
A58-1,000	1,000	1.55			
A58-1,500	1,500	1.55			
A58-2,000	2,000	1.55			
A58-2,500	2,500	1.55			
A58-3,000	3,000	1.55			

With SPST Switch Cat. No.	Res. Ohms	List Price
A58S-1	1	$2.45
A58S-2	2	2.45
A58S-4	4	2.45
A58S-6	6	2.45
A58S-10	10	2.45
A58S-15	15	2.45
A58S-20	20	2.45
A58S-25	25	2.45
A58S-30	30	2.45
A58S-40	40	2.45

Standard Packing: 10 per Carton.



SERIES A58
(INDUSTRIAL)
SERIES 58



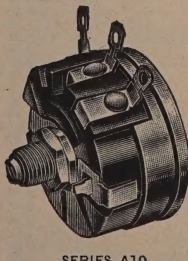
SERIES A58S
(INDUSTRIAL)
SERIES 58S

With SPST Switch Cat. No.	Res. Ohms	List Price			
A58S-50	50	$2.45	A58S-2,000	2,000	$2.45
A58S-60	60	2.45	A58S-2,500	2,500	2.45
A58S-75	75	2.45	A58S-3,000	3,000	2.45
A58S-100	100	2.45	A58S-4,000	4.000	2.45
A58S-200	200	2.45	A58S-5,000	5,000	2.45
A58S-300	300	2.45	A58S-7,500	7,500	2.45
A58S-400	400	2.45	A58S-10K	10K	2.45
A58S-500	500	2.45	A58S-15K	15K	2.85
A58S-750	750	2.45	A58S-20K..	20K	2.85
A58S-1,000	1,000	2.45	A58S-25K	25K	2.85
A58S-1,500	1,500	2.45	A58S-30K	30K	3.60
			A58S-40K	40K	3.60
			A58S-50K	50K	3.60

Standard Packing: 10 per Carton.

SERIES "A10" and "A10S" 4-WATT CONTROLS

"A10" is without switch, while "A10S" has factory-attached SPST switch. Also available with factory-assembled shaft at no extra charge, by omitting prefix "A" from catalog number. See above for examples. Controls with other than SPST switch are special. Price and information on request.



SERIES A10
(INDUSTRIAL)
SERIES 10

Without Switch Cat. No.	With SPST Switch Cat. No.	Res. Ohms	Without Switch List Price	With SPST Switch List Price	Without Switch Cat. No.	With SPST Switch Cat. No.	Res. Ohms	Without Switch List Price	With SPST Switch List Price
A10-1	A10S-1	1	$2.25	$3.15	A10-750	A10S-750	750	$2.25	$3.15
A10-2	A10S-2	2	2.25	3.15	A10-1,000	A10S-1,000	1,000	2.25	3.15
A10-4	A10S-4	4	2.25	3.15	A10-1,500	A10S-1,500	1,500	2.25	3.15
A10-6	A10S-6	6	2.25	3.15	A10-2,000	A10S-2,000	2,000	2.25	3.15
A10-10	A10S-10	10	2.25	3.15	A10-2,500	A10S-2,500	2,500	2.25	3.15
A10-15	A10S-15	15	2.25	3.15	A10-3,000	A10S-3,000	3,000	2.25	3.15
A10-20	A10S-20	20	2.25	3.15	A10-4,000	A10S-4,000	4,000	2.25	3.15
A10-25	A10S-25	25	2.25	3.15	A10-5,000	A10S-5,000	5,000	2.25	3.15
A10-30	A10S-30	30	2.25	3.15	A10-7,500	A10S-7,500	7,000	2.25	3.15
A10-40	A10S-40	40	2.25	3.15	A10-10K	A10S-10K	10K	2.25	3.15
A10-50	A10S-50	50	2.25	3.15	A10-15K	A10S-15K	15K	2.65	3.50
A10-60	A10S-60	60	2.25	3.15	A10-20K	A10S-20K	20K	2.65	3.50
A10-75	A10S-75	75	2.25	3.15	A10-25K	A10S-25K	25K	2.65	3.50
A10-100	A10S-100	100	2.25	3.15	A10-30K	A10S-30K	30K	3.05	4.25
A10-200	A10S-200	200	2.25	3.15	A10-40K	A10S-40K	40K	3.35	4.25
A10-300	A10S-300	300	2.25	3.15	A10-50K	A10S-50K	50K	3.35	4.25
A10-400	A10S-400	400	2.25	3.15	A10-75K	A10S-75K	75K	4.10	4.95
A10-500	A10S-500	500	2.25	3.15	A10-100K	A10S-100K	100K	4.10	4.95

*Reg. U. S. Pat. Off.

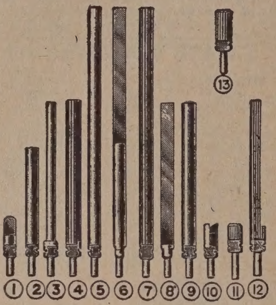
Standard Packing: 10 per Carton.

PRODUCTS OF
THE HOUSE OF RESISTORS® CLAROSTAT® RESISTORS · CONTROLS
RESISTANCE DEVICES

SHAFTS FOR "PICK-A-SHAFT"* CONTROLS

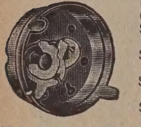
For use with all Clarostat "Pick - A - Shaft"* controls, either carbon or wire-wound. Your choice of shaft furnished with each control.

(1) SS-⅜" length—(Male) to take female fitting.
(2) RS-2—Round shaft, 2" long.
(3) RS-$\frac{3}{16}$—Round shaft $\frac{3}{16}$" dia., 3" long.
(4) KSS-3—Knurled, split shaft, 3" long.
(5) RS-5—Round shaft, 5" long.
(6) FS-5—Flatted shaft, 5" long.
(7) KSS-5—Knurled, split shaft, 5" long.
(8) FS-3—Flatted shaft, 3" long.
(9) RS-3—Round shaft, 3" long.
(10) DFS-½—Double flatted Philco Type, ½" long.
(11) FKS-¼—Fine knurled slotted shaft, ¼" long.
(12) KFS-3—Knurled flatted shaft, 3" long.
(13) FKS-½—Fine knurled slotted shaft, ½" long.



List Price, Each Shaft $0.55

SERIES "SWE" SWITCHES FOR "AD-A-SWITCH"* CONTROLS

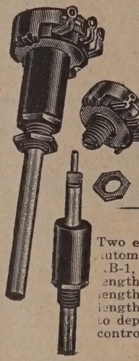


U. S. Pat. 2,642,506

For use with "A47" and "A47F" controls. Underwriters' Laboratories Inc. approved.

Cat. No.	Wiring	List Price
SWE-12	S.P.S.T. — Single Pole Single Throw, 5A.-125V. A.C.	$0.75
SWE-13	S.P.S.T. — Single Pole Single Throw, 15A.-10V. D.C.	1.10
SWE-20	D.P.S.T. — Double Pole Single Throw, 3A.-125V. A.C.	.85
SWE-21	Mod. D.P.S.T. one pole on, one off or with Jumper S.P.D.T., 3A.-125V. A.C.-D.C.	.85
SWE-23	D.P.S.T., 15A.-10V. D.C.	1.10

Standard Packing: 10 per Carton.



HIGH VOLTAGE COUPLER

High-voltage shaft unit for operation up to 10K volts. Attaches to any Clarostat "Pick-A-Shaft" control, composition-element or wire-wound. Also available as a factory-attached unit on order. For example: "47-500K-S" unit with factory-attached high voltage coupler, order as a "47-500K-S-HVC." Manufacturers Series 47 - ½ meg.-S-HVC.

Cat. No.		List Price
59-186	Spacer and Bushing Assembly	**$1.40**
RN-3	Non-Metallic Shaft, Round, 3" long	**1.40**

BUSHINGS

Two extension bushings for the make-up of automobile replacement controls. Series XB-1, ½" d. x 2¼" l.; Series XB-2, same length but 7/16" d. Threaded on outside full length with 28 thread; 1/32" flat milled full length. Threaded ⅜" x 32 on inside, one end, to depth of ½". Adaptable to any Clarostat control using ⅜" x 32 bushing.

List Price $0.65

SERIES "BE" 15/16" ROTARY SWITCH

U. S. Pat. 2,642,506

Underwriters' Laboratories Inc. approved

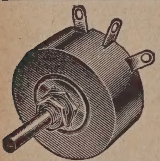
Cat. No.	Wiring	List Price
BE-12 SPST	— Single-Pole Single-Throw, 5A-125 V. A.C.	$1.25
BE-20 DPST	— Double-Pole Single-Throw, 3A-125 V. A.C.	1.35
BE-21 (Mod.) DPST	— Double-Pole Single-Throw 3A-125 V. A.C. or D.C.	1.35

Mod. DPST has one pole "on," one pole "off"; or with Jumper it is SPDT).

Standard Packing—Individual Carton.

*Reg. U. S. Pat. Off.

POWER RHEOSTATS



U. S. Pat. 2,346,598

Clarostat Power Rheostats maintain their full power rating at settings as low as one-third rotation without excessive temperature rise. Standard overall resistance tolerance plus/minus 10%. Closer tolerances are available upon special order.

The metal cored winding is embedded in a cold-setting, inorganic cement and is thereby bonded to the ceramic body. Unit mounts through a single hole. A locking pin is provided for rear panel mounting.

SERIES 25 — 25-WATT

Cat. No.	Total Res. Ohms	Max. Cur. at Total Res. Amps.	Max. Cur. Up to ⅓ Res. Amps.	List Price
25-1	1	5.000	7.500	$6.45
25-2	2	3.536	5.304	5.70
25-3	3	2.887	4.330	5.70
25-6	6	2.041	3.062	5.70
25-8	8	1.768	2.652	5.70
25-10	10	1.581	2.372	5.70
25-15	15	1.291	1.936	5.70
25-25	25	1.000	1.500	5.70
25-35	35	.845	1.268	5.70
25-50	50	.707	1.061	5.70
25-75	75	.577	.866	5.70
25-100	100	.500	.750	5.70
25-125	125	.447	.671	5.70
25-175	175	.378	.567	5.70
25-250	250	.316	.474	5.70
25-350	350	.267	.401	5.70
25-500	500	.224	.335	5.70
25-750	750	.183	.274	5.70
25-1,000	1,000	.158	.237	6.45
25-1,500	1,500	.129	.194	6.45
25-2,500	2,500	.100	.150	6.45
25-3,500	3,500	.085	.127	6.80
25-5,000	5,000	.071	.107	7.15

Standard Packing: Individual Carton.

SERIES 50 — 50-WATT

Cat. No.	Total Res. Ohms	Max. Cur. at Total Res. Amps.	Max. Cur. Up to ⅓ Res. Amps.	List Price
50-0.5	0.5	10.000	15.000	$7.15
50-1	1	7.071	10.607	7.15
50-2	2	5.000	7.500	7.15
50-4	4	3.536	5.304	6.45
50-6	6	2.887	4.330	6.45
50-8	8	2.500	3.750	6.45
50-12	12	2.041	3.062	6.45
50-16	16	1.768	2.652	6.45
50-22	22	1.508	2.261	6.45
50-35	35	1.195	1.793	6.45
50-50	50	1.000	1.500	6.45
50-80	80	.791	1.186	6.45
50-125	125	.632	.949	6.45
50-150	150	.577	.866	6.45
50-225	225	.471	.707	6.45
50-300	300	.408	.612	6.45
50-500	500	.316	.474	6.45
50-800	800	.250	.375	6.80
50-1,000	1,000	.224	.335	6.80
50-1,600	1,600	.177	.265	6.80
50-2,500	2,500	.141	.212	6.80
50-3,500	3,500	.120	.179	7.15
50-5,000	5,000	.100	.150	7.15
50-8,000	8,000	.079	.118	8.60
50-10K	10K	.071	.106	8.60

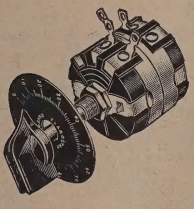
Standard Packing: Individual Carton.

PRODUCTS OF THE HOUSE OF RESISTORS® CLAROSTAT® RESISTORS · CONTROLS RESISTANCE DEVICES

SOUND-SYSTEM CONTROLS

For proper control of volume and tone alike, Clarostat offers a choice of several controls, such as L- and T-pads, output attenuators, and individual-speaker volume controls as used for drive-in theatre installations. These are not ordinary radio controls but rather sound-system controls designed and built for critical requirements.

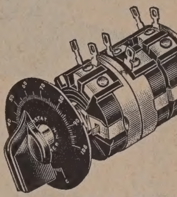
CONSTANT-IMPEDANCE CONTROLS



Self-compensating volume controls known as L-pads and T-pads for use in sound systems. Rated at 2½ watts DC, but will handle up to 10 watts audio. Continuous range from 0.5 to 30 decibels attenuation in 90% rotation. Last 10% affords infinite attenuation. With Clarostat constant-impedance L-pads and T-pads the input and output impedances of associated circuits can be kept within the limits of a constant required value. Knob and dial plate furnished with each control.

CIT Cat. No.	CIL Cat. No.	Res. Ohms	CIT Cat. No.	CIL Cat. No.	Res. Ohms
CIT-4	CIL-4	4	CIT-200	CIL-200	200
CIT-6	CIL-6	6	CIT-250	CIL-250	250
CIT-8	CIL-8	8	CIT-500	CIL-500	500
CIT-15	CIL-15	15	CIT-600	CIL-600	600
CIT-50	CIL-50	50	CIT-1,000	CIL-1,000	1,000
CIT-100	CIL-100	100	CIT-2,000	CIL-2,000	2,000

CIT—LIST PRICE $5.25 **CIL—LIST PRICE $4.65** Standard Packing: Individual Carton.



U. S. Pat. 2,434,248

CONSTANT IMPEDANCE OUTPUT ATTENUATORS

Series "CIB" rated at 10 watts, but will handle up to 30 watts in audio circuit. Linear attenuation provided in 3 decibel steps up to 24db, then 30db followed by infinity. Equipped with dial plate and bar knob. One-hole mounting, ⅜″ bushing diameter. 1″ shaft. This control has been developed to meet the need for a constant-impedance attenuator capable of handling considerable power without measurable insertion loss. Recommended as an output level control for power amplifiers, or as an input attenuator for individual or for a group of speakers in a public address system.

Cat. No.	Res. Ohms	Cat. No.	Res. Ohms
CIB-6	6	CIB-200	200
CIB-8	8	CIB-250	250
CIB-15	15	CIB-500	500
CIB-50	50	CIB-600	600

NET PRICE $7.70 Standard Packing: Individual Carton.

SPECIAL DRIVE-IN THEATRE L-PAD

To meet the needs of theater sound systems, more especially those of drive-in theaters, a special 8 ohm L-Pad is now available, containing two separate windings of 5 ohms and 40 ohms. Also 50 ohm linear rheostat and 35 ohm tapered rheostat, as listed. Units have ⅜-32 bushing ⅜" long, and 1½" round shaft.

Cat. No. CM8727-1 8 ohm L-Pad
List Price $3.00

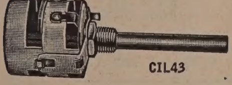
Cat. No. CM17083 50 ohm linear rheostat **List Price $2.20**

Cat. No. CM17084 35 ohm tapered rheostat **List Price $2.20**

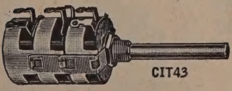
SPACE-SAVER CONSTANT-IMPEDANCE ATTENUATORS

Characterized by reduced depth and diameter, these attenuators are ideal for use in remote control of speakers since they are small enough to be installed in standard electrical boxes in the home, office, stockroom, etc.

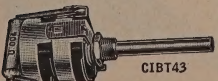
These controls are rated 2 watts D.C., but will handle up to 4 watts of audio, depending upon the type signal being handled. (As the frequency becomes constant, wattage reduces to 2 watts or the same as the D.C. rating).



CIL43



CIT43



CIBT43

Cat. No. CIL43 (L-Pad)	Cat. No. CIT43 (T-Pad)	Cat. No. CIBT43 (Bridged T-Pad)	Impedance
CIL43-4	CIT43-4	CIBT43-4	4 ohms
CIL43-6	CIT43-6	CIBT43-6	6 ohms
CIL43-8	CIT43-8	CIBT43-8	8 ohms
CIL43-15	CIT43-15	CIBT43-15	15 ohms
CIL43-50	CIT43-50	CIBT43-50	50 ohms
CIL43-100	CIT43-100	CIBT43-100	100 ohms
CIL43-200	CIT43-200	CIBT43-200	200 ohms
CIL43-250	CIT43-250	CIBT43-250	250 ohms
CIL43-500	CIT43-500	CIBT43-500	500 ohms

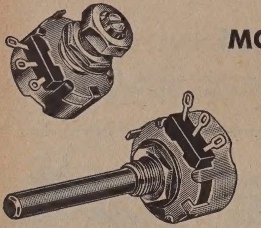
LIST PRICE CIL43 $4.65 LIST PRICE CIT43 $5.25

LIST PRICE CIBT43 $6.05

Standard Packing — Individual Carton

- Attenuation range of 0 to 30 db over 90% of rotation, 60 db in remaining 10% of rotation. Attenuation will increase approximately linearly to 30 db with counter-clockwise rotation.
- Insertion loss less than 0.5 db.
- Input impedance within plus/ minus 20%.
- The CIT43 and CIBT43 (Bridged T Pad) have constant input and output impedances, while the CIL43 has constant impedance in the input only.
- Shafts and bushings are insulated from the circuit elements.
- Pads have ⅜-32 x ⅜″ long bushing.
- ¼″ dia. round shafts 1½″ long beyond bushing.
- All pads supplied with bar knob and dial plates, as shown above.
- Dia. 1⅛″. Depth of body from mounting surface: CIL43 — 1 5/32″; CIT43 — 1¾″; CIBT43 — 1½″.

PRODUCTS OF
THE HOUSE OF RESISTORS®
CLAROSTAT®
RESISTORS · CONTROLS
RESISTANCE DEVICES



MOLDED COMPOSITION-ELEMENT POTENTIOMETERS

A new 2-watt Molded Composition Element Potentiometer totally enclosed and sealed against moisture and other environmentals. Meets the need for a high quality resistance device incorporating high-stability under extreme climatic and operational conditions. For use in critical applications, such as, test equipment, military requirements, computers, servo systems and industrial metering devices.

$1\frac{1}{16}$" diameter and $\frac{9}{16}$" deep, wiper assembly of one piece construction. Carbon to carbon contact insures exceptionally low noise level. Stainless steel shaft. Gold plated terminals.

Electrical tolerances are plus/minus 10% for all values up to 1 meg. 1 meg. and above plus/minus 20%.

Cat. No. 53C1	Cat. No. 53C2	Res. Ohms	Taper
53C1-50-S	53C2-50-S	50	S
53C1-100-S	53C2-100-S	100	S
53C1-250-S	53C2-250-S	250	S
53C1-500-S	53C2-500-S	500	S
53C1-750-S	53C2-750-S	750	S
53C1-1000-S	53C2-1000-S	1000	S
53C1-1500-S	53C2-1500-S	1500	S
53C1-2000-S	53C2-2000-S	2000	S
53C2-2500-S	53C2-2500-S	2500	S
53C1-5000-S	53C2-5000-S	5000	S
53C1-7500-S	53C2-7500-S	7500	S
53C1-10K-S	53C2-10K-S	10K	S
53C1-15K-S	53C2-15K-S	15K	S
53C1-20K-S	53C2-20K-S	20K	S
53C1-25K-S	53C2-25K-S	25K	S
53C1-50K-S	53C2-50K-S	50K	S
53C1-75K-S	53C2-75K-S	75K	S
53C1-100K-S	53C2-100K-S	100K	S
53C1-150K-S	53C2-150K-S	150K	S
53C1-200K-S	53C2-200K-S	200K	S
53C1-250K-S	53C2-250K-S	250K	S
53C1-500K-S	53C2-500K-S	500K	S
53C1-750K-S	53C2-750K-S	750K	S
53C1-1 Meg-S	53C2-1 Meg-S	1 Meg	S
53C1-1.5 Meg-S	53C2-1.5 Meg-S	1.5 Meg	S
53C1-2 Meg-S	53C2-2 Meg-S	2 Meg	S
53C1-2.5 Meg-S	53C2-2.5 Meg-S	2.5 Meg	S
53C1-3 Meg-S	53C2-3 Meg-S	3 Meg	S
53C1-4 Meg-S	53C2-4 Meg-S	4 Meg	S
53C1-5 Meg-S	53C2-5 Meg-S	5 Meg	S
53C1-10 Meg-S	53C2-10 Meg-S	10 Meg	S

53C1 LIST PRICE $3.25 53C2 LIST PRICE $4.25

Standard Packing — Individual Carton.

"Z" TAPER

53C1-100K-Z	100K
53C1-250K-Z	250K
53C1-500K-Z	500K
53C1-1 Meg-Z	1 Meg
53C1-2.5 Meg-Z	2.5 Meg

LIST PRICE $3.75

REVERSED "Z" TAPER

53C1-10K-RZ	10K
53C1-25K-RZ	25K
53C1-50K-RZ	50K

LIST PRICE $3.75

DUAL POTENTIOMETERS

D53C1 10K-S
D53C1 25K-S
D53C1 50K-S
D53C1 100K-S
D53C1 250K-S
D53C1 500K-S
D53C1 1 Meg-S

LIST PRICE $9.75

Standard Packing—Ind. Carton.

Items not listed are special. Prices and information supplied upon request.

SERIES "43C1" and "43C2" 2-WATT CONTROLS

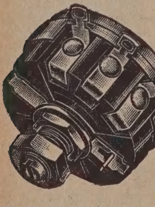
Electrical tolerance is plus/minus 5% for all ohmages. Independent linearity is to plus/minus 2%. All controls rated 2 watts.

43C1 Cat. No.	43C2 Cat. No.	Res. Ohms
43C1-5	43C2-5	5
43C1-10	43C2-10	10
43C1-20	43C2-20	20
43C1-25	43C2-25	25
43C1-30	43C2-30	30
43C1-40	43C2-40	40
43C1-50	43C2-50	50
43C1-75	43C2-75	75
43C1-100	43C2-100	100
43C1-150	43C2-150	150
43C1-200	43C2-200	200
43C1-300	43C2-300	300
43C1-400	43C2-400	400
43C1-500	43C2-500	500
43C1-750	43C2-750	750
43C1-1000	43C2-1000	1000
43C1-1500	43C2-1500	1500
43C1-2000	43C2-2000	2000
43C1-2500	43C2-2500	2500
43C1-3000	43C2-3000	3000
43C1-4000	43C2-4000	4000
43C1-5000	43C2-5000	5000
43C1-7500	43C2-7500	7500
43C1-10K	43C2-10K	10K
43C1-15K	43C2-15K	15K
43C1-20K	43C2-20K	20K
43C1-25K	43C2-25K	25K
43C1-30K	43C2-30K	30K
43C1-40K	43C2-40K	40K
43C1-50K	43C2-50K	50K

LIST PRICES

43C1-5 to 43C1-10K	$2.25
43C1-15K to 43C1-25K	3.00
43C1-30K to 43C1-50K	$3.35
43C2-5 to 43C2-10K	3.75
43C2-15K to 43C2-25K	$4.25
43C2-30K to 43C2-50K	5.00

SERIES 58C1 AND 58C2 3-WATT CONTROLS



Electrical tolerance is plus/minus 5% for all ohmages. Independent linearity is to plus/minus 1%. All controls rated 3 watts.

58C1 Cat. No.	58C2 Cat. No.	Res. Ohms
58C1-1	58C2-1	1
58C1-2	58C2-2	2
58C1-4	58C2-4	4
58C1-6	58C2-6	6
58C1-10	58C2-10	10
58C1-15	58C2-15	15
58C1-20	58C2-20	20
58C1-25	58C2-25	25
58C1-30	58C2-30	30
58C1-40	58C2-40	40
58C1-50	58C2-50	50
58C1-60	58C2-60	60
58C1-75	58C2-75	75
58C1-100	58C2-100	100
58C1-200	58C2-200	200
58C1-300	58C2-300	300
58C1-400	58C2-400	400
58C1-500	58C2-500	500
58C1-750	58C2-750	750
58C1-1000	58C2-1000	1000
58C1-1500	58C2-1500	1500
58C1-2000	58C2-2000	2000
58C1-2500	58C2-2500	2500
58C1-3000	58C2-3000	3000
58C1-5000	58C2-5000	5000
58C1-7500	58C2-7500	7500
58C1-10K	58C2-10K	10K
58C1-15K	58C2-15K	15K
58C1-20K	58C2-20K	20K
58C1-25K	58C2-25K	25K
58C1-30K	58C2-30K	30K
58C1-40K	58C2-40K	40K
58C1-50K	58C2-50K	50K

LIST PRICES

58C1-1 to 58C1-10K	$2.25
58C1-15K to 58C1-25K	3.00
58C1-30K to 58C1-50K	3.35
58C2-1 to 58C2-10K	$4.25
58C2-15K to 58C2-25K	4.25
58C2-30K to 58C2-50K	5.00

SERIES "10C1" and "10C2" 4-WATT CONTROLS

Electrical tolerance is plus/minus 5% for all ohmages. Independent linearity to plus/minus 1%. All controls rated 4 watts.

1 to 50K ohms available on special order. Prices and information on request.

10C1 Cat. No.	10C2 Cat. No.	Res. Ohms
10C1-75K	10C2-75K	75K
10C1-100K	10C2-100K	100K

List Prices

10C1 .... $4.75 10C2 .... $6.00

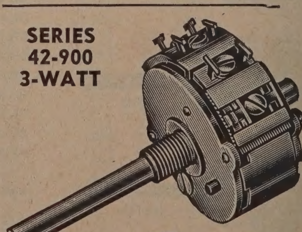
WIRE-WOUND PRECISION POTENTIOMETERS

Series 42-900 is a superlative-grade precision potentiometer with such features as selection of either limited or continuous rotation by simple manipulation; gold-plated bushings, terminals, secrews; front and rear plates of green anodized aluminum; rear shaft extension for coupling to other potentiometers, switch, servoes, etc. Wiring diagram on rear plate indicates terminal connections. Especially intended to meet the needs of your prototypes, laboratory testing, instrument-grade assemblies, etc.

Exceeds MIL-R-19 specifications where applicable.

	*Net Price
42-900—100K ohms	$19.00
42-900— 50K ohms	19.00
42-900— 20K ohms	16.00
42-900— 10K ohms	16.00
42-900—5000 ohms	14.00
42-900—2500 ohms	14.00
42-900—1000 ohms	14.00
42-900— 500 ohms	14.00
42-900— 100 ohms	14.00
42-900— 50 ohms	14.00

SERIES 42-900 3-WATT

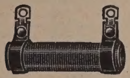


U. S. Pat, 2,676,226

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

PRODUCTS OF
THE HOUSE OF RESISTORS®
CLAROSTAT®
RESISTORS • CONTROLS
RESISTANCE DEVICES

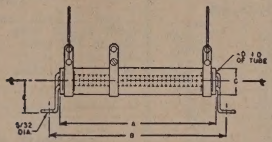
"GREENOHM"* WIRE-WOUND RESISTORS



FIXED TYPES Wire-wound resistors for most rugged applications. Will withstand tremendous overloads and temperature changes without alterating resistance values or appearance. Wire windings on high grade ceramic tubing and coated with special inorganic cement. In accordance with RETMA standards, overall tolerances are ± 5% for resistors of 50 ohms and higher. For resistors of 49.9 ohms and lower, overall tolerances are ± 10%.

ADJUSTABLE TYPES Same electrically and mechanically as Fixed types, but incorporating sliding band or bands for tapping any desired resistance values. Slider band tightened by means of screw. In accordance with RETMA standards, overall tolerances are ± 10%.

DIMENSIONS BY TYPES



SERIES	WATTS	A	B	C	D	E
PR-5-F	5	1	1-7/16	5/16	3/16	7/16
PR-10-F	10	1-3/4	2-3/16	5/16	3/16	7/16
PR-10-FA	10	1-3/4	2-3/16	5/16	3/16	7/16
PR-20-K	20	2	2-1/2	9/16	3/8	9/16
P-25-K	25	2-1/2	3	9/16	3/8	9/16
P-25-KA	25	2-1/2	3	9/16	3/8	9/16
K-40-N	40	3-1/2	4-1/8	3/4	1/2	7/8
K-50-N	50	4-1/2	5-1/8	3/4	1/2	7/8
K-50-NA	50	4-1/2	5-1/8	3/4	1/2	7/8
K-80-N	80	6-1/2	7-1/8	3/4	1/2	7/8
K-80-NA	80	6-1/2	7-1/8	3/4	1/2	7/8
K-100-W	100	6-1/2	7-1/8	1-1/8	3/4	1-1/8
K-100-WA	100	6-1/2	7-1/8	1-1/8	3/4	1-1/8
K-160-W	160	8-1/2	9-1/8	1-1/8	3/4	1-1/8
K-160-WA	160	8-1/2	9-1/8	1-1/8	3/4	1-1/8
K-200W	200	10-1/2	11-1/8	1-1/8	3/4	1-1/8
K-200-WA	200	10-1/2	11-1/2	1-1/8	3/4	1-1/8

FIXED RESISTORS

5-WATT SERIES PR-5-F

These resistors conform to E1A specification for type RRW-125 and 128.

Ohms	Ohms	Ohms	Ohms
1	75	800	5,000
2	100	900	6,000
3	125	1,000	7,000
4	150	1,100	7,500
5	200	1,200	8,000
7.5	225	1,250	8,500
10	250	1,500	9,000
12	300	1,750	10K
15	350	2,000	
20	400	2,250	
25	450	2,500	
30	500	3,000	
35	600	3,500	
40	700	4,000	
50	750	4,500	

LIST PRICE $0.55

Standard Packing — 10 per Carton.
Mounting brackets supplied at extra cost.

25-WATT SERIES P-25-K

Ohms	Ohms	Ohms	Ohms
1	750	10K	
2	800	12K	
3	1,000	15K	
5	1,250	20K	
7.5	1,500	25K	
10	2,000	30K	
15	2,250	35K	
20	2,500	40K	
25	3,000	45K	
50	3,500	50K	
75	4,000	60K	
100	4,500	70K	
150	5,000	75K	
200	6,000	80K	
250	7,000	85K	
300	7,500	90K	
400	8,000	100K	
500	9,000		

LIST PRICES:

1 ohm to 5,000	$0.85
6,000 to 15K ohms	.95
20K to 50K ohms	1.10
60K ohms	1.25
70K ohms	1.40
75K ohms	1.45
80K ohms	1.50
85K ohms	1.65
90K ohms	1.75
100K ohms	1.95

Mounting brackets at no extra cost.
Standard Packing — Individually Boxed.

10-WATT SERIES PR-10-F

These resistors conform to military specifications for type RW29, and E1A type RRW-126 and 129.

Ohms	Ohms	Ohms	Ohms
1	200	2,000	14.5K
2	225	2,250	15K
3	250	2,500	16K
4	300	3,000	17.5K
5	350	3,500	18K
7.5	400	4,000	20K
10	450	4,500	22.5K
12	500	5,000	25K
15	600	6,000	30K
20	700	7,000	35K
25	750	7,500	40K
30	800	8,000	50K
35	900	8,500	
40	1,000	9,000	
50	1,100	10K	
75	1,200	11K	
100	1,250	12K	
125	1,500	12.5K	
150	1,750	13.5K	

LIST PRICE $0.60

Mounting brackets supplied at extra cost.
Standard Packing — 10 per Carton.

40-WATT SERIES K-40-N

These resistors conform to E1A specification for type RRW-131.

Res.	Res.	Res.	Res.
5	250	5,000	40K
10	300	6,000	50K
15	400	7,500	60K
20	500	8,500	70K
25	750	10K	80K
50	1,000	12.5K	90K
75	1,500	15K	100K
100	2,000	20K	125K
125	2,500	25K	150K
150	3,000	30K	175K
200	4,000	35K	200K

LIST PRICES:

5 ohms to 5,000 ohms	$1.00
6,000 to 25K ohms	1.10
30K to 100K ohms	1.30
125K to 150K ohms	1.55
175K ohms	1.65
200K ohms	1.75

Mounting brackets at no extra cost.
Standard Packing — Individually Boxed.

20-WATT SERIES PR-20-K

These resistors conform to E1A specifications for type RRW-127.

Ohms	Ohms	Ohms	Ohms
5	850	7,000	70K
10	1,000	7,500	75K
25	1,200	8,000	80K
50	1,250	9,000	85K
75	1,500	10K	90K
100	1,750	12.5K	95K
150	1,850	15K	100K
200	2,000	20K	
250	2,250	25K	
300	2,500	30K	
350	2,750	35K	
400	3,000	40K	
500	3,500	45K	
650	4,000	50K	
700	4,500	55K	
750	5,000	60K	
800	6,000	65K	

LIST PRICES:

5 ohms to 15K ohms	$0.70
20K to 50K ohms	.95
55K to 100K ohms	1.20

Mounting brackets supplied at extra cost.
Standard Packing — 5 per Carton.

50-WATT SERIES K-50-N

These resistors conform to E1A specification for type RRW-132.

Res.	Res.	Res.	Res.
1	500	5,000	35K
5	750	6,000	40K
10	1,000	7,500	50K
25	1,250	8,000	60K
50	1,500	9,000	70K
75	2,000	10K	75K
100	2,250	12K	80K
150	2,500	12.5K	100K
200	3,000	15K	125K
250	3,500	20K	150K
300	4,000	25K	175K
400	4,500	30K	200K

LIST PRICES:

1 ohm to 5,000	$1.20
6,000 to 25K ohms	1.50
30K to 100K ohms	1.85
125K ohms	2.20
150K to 175K ohms	2.50
200K ohms	3.30

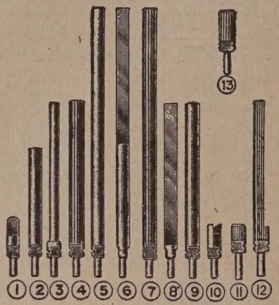
Mounting brackets supplied at no extra cost.
Standard Packing — Individually Boxed.

PRODUCTS OF
THE HOUSE OF RESISTORS® CLAROSTAT® RESISTORS • CONTROLS
RESISTANCE DEVICES

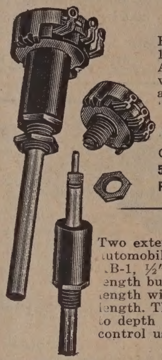
SHAFTS FOR "PICK-A-SHAFT"* CONTROLS

For use with all Clarostat "Pick - A - Shaft"* controls, either carbon or wire-wound. Your choice of shaft furnished with each control.

(1) SS-⅜" length—(Male) to take female fitting.
(2) RS-2—Round shaft, 2" long.
(3) RS-$\frac{5}{16}$—Round shaft $\frac{5}{16}$" dia., 3" long.
(4) KSS-3—Knurled, split shaft, 3" long.
(5) RS-5—Round shaft, 5" long.
(6) FS-5—Flatted shaft, 5" long.
(7) KSS-5—Knurled, split shaft, 5" long.
(8) FS-3—Flatted shaft, 3" long.
(9) RS-3—Round shaft, 3" long.
(10) DFS-½—Double flatted Philco Type, ½" long.
(11) FKS-¼—Fine knurled slotted shaft, ¼" long.
(12) KFS-3—Knurled flatted shaft, 3" long.
(13) FKS-½—Fine knurled slotted shaft, ½" long.



List Price, Each Shaft $0.55



HIGH VOLTAGE COUPLER

High-voltage shaft unit for operation up to 10K volts. Attaches to any Clarostat "Pick-A-Shaft" control, composition-element or wire-wound. Also available as a factory-attached unit on order. For example: "47-500K-S" unit with factory-attached high voltage coupler, order as a "47-500K-S-HVC." Manufacturers Series 47 - ½ meg.-S-HVC.

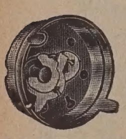
Cat. No.		List Price
59-186	Spacer and Bushing Assembly	$1.40
RN-3	Non-Metallic Shaft, Round, 3" long	1.40

BUSHINGS

Two extension bushings for the make-up of automobile replacement controls. Series XB-1, ½" d. x 2¼" 1.; Series XB-2, same length but 7/16" d. Threaded on outside full length with 28 thread; 1/32" flat milled full length. Threaded ⅜" x 32 on inside, one end, to depth of ½". Adaptable to any Clarostat control using ⅜" x 32 bushing.

List Price $0.65

SERIES "SWE" SWITCHES FOR "AD-A-SWITCH"* CONTROLS



U. S. Pat. 2,642,506

For use with "A47" and "A47F" controls. Underwriters' Laboratories Inc. approved.

Cat. No.	Wiring	List Price
SWE-12	S.P.S.T. — Single Pole Single Throw, 5A.-125V. A.C.	$0.75
SWE-13	S.P.S.T. — Single Pole Single Throw, 15A.-10V. D.C.	1.10
SWE-20	D.P.S.T. — Double Pole Single Throw, 3A.-125V. A.C.	.85
SWE-21	Mod. D.P.S.T. one pole on, one off or with Jumper S.P.D.T., 3A.-125V. A.C.-D.C.	.85
SWE-23	D.P.S.T., 15A.-10V. D.C.	1.10

Standard Packing: 10 per Carton.

U. S. Pat. 2,642,506

SERIES "BE" 15/16" ROTARY SWITCH

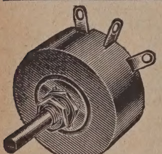
Underwriters' Laboratories Inc. approved

Cat. No.	Wiring	List Price
BE-12 SPST	— Single-Pole Single-Throw, 5A-125 V. A.C.	$1.25
BE-20 DPST	— Double-Pole Single-Throw, 3A-125 V. A.C.	1.35
BE-21 (Mod.) DPST	— Double-Pole Single-Throw 3A-125 V. A.C. or D.C.	1.35

Mod. DPST has one pole "on," one pole "off"; or with Jumper it is SPDT).

Standard Packing—Individual Carton.

*Reg. U. S. Pat. Off.



U. S. Pat. 2,346,598

POWER RHEOSTATS

Clarostat Power Rheostats maintain their full power rating at settings as low as one-third rotation without excessive temperature rise. Standard overall resistance tolerance plus/minus 10%. Closer tolerances are available upon special order.

The metal cored winding is embedded in a cold-setting, inorganic cement and is thereby bonded to the ceramic body. Unit mounts through a single hole. A locking pin is provided for rear panel mounting.

SERIES 25 — 25-WATT

Cat. No.	Total Res. Ohms	Max. Cur. at Total Res. Amps.	Max. Cur. Up to ⅓ Res. Amps.	List Price
25-1	1	5.000	7.500	$6.45
25-2	2	3.536	5.304	5.70
25-3	3	2.887	4.330	5.70
25-6	6	2.041	3.062	5.70
25-8	8	1.768	2.652	5.70
25-10	10	1.581	2.372	5.70
25-15	15	1.291	1.936	5.70
25-25	25	1.000	1.500	5.70
25-35	35	.845	1.268	5.70
25-50	50	.707	1.061	5.70
25-75	75	.577	.866	5.70
25-100	100	.500	.750	5.70
25-125	125	.447	.671	5.70
25-175	175	.378	.567	5.70
25-250	250	.316	.474	5.70
25-350	350	.267	.401	5.70
25-500	500	.224	.335	5.70
25-750	750	.183	.274	5.70
25-1,000	1,000	.158	.237	6.45
25-1,500	1,500	.129	.194	6.45
25-2,500	2,500	.100	.150	6.45
25-3,500	3,500	.085	.127	6.80
25-5,000	5,000	.071	.107	7.15

Standard Packing: Individual Carton.

SERIES 50 — 50-WATT

Cat. No.	Total Res. Ohms	Max. Cur. at Total Res. Amps.	Max. Cur. Up to ⅓ Res. Amps.	List Price
50-0.5	0.5	10.000	15.000	$7.15
50-1	1	7.071	10.607	7.15
50-2	2	5.000	7.500	7.15
50-4	4	3.536	5.304	6.45
50-6	6	2.887	4.330	6.45
50-8	8	2.500	3.750	6.45
50-12	12	2.041	3.062	6.45
50-16	16	1.768	2.652	6.45
50-22	22	1.508	2.261	6.45
50-35	35	1.195	1.793	6.45
50-50	50	1.000	1.500	6.45
50-80	80	.791	1.186	6.45
50-125	125	.632	.949	6.45
50-150	150	.577	.866	6.45
50-225	225	.471	.707	6.45
50-300	300	.408	.612	6.45
50-500	500	.316	.474	6.45
50-800	800	.250	.375	6.80
50-1,000	1,000	.224	.335	6.80
50-1,600	1,600	.177	.265	6.80
50-2,500	2,500	.141	.212	6.80
50-3,500	3,500	.120	.179	7.15
50-5,000	5,000	.100	.150	7.15
50-8,000	8,000	.079	.118	8.60
50-10K	10K	.071	.106	8.60

Standard Packing: Individual Carton.

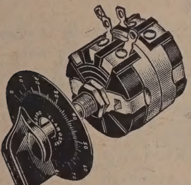
PRODUCTS OF
THE HOUSE OF RESISTORS®
CLAROSTAT®
RESISTORS · CONTROLS
RESISTANCE DEVICES

®

SOUND-SYSTEM CONTROLS

For proper control of volume and tone alike, Clarostat offers a choice of several controls, such as L- and T-pads, output attenuators, and individual-speaker volume controls as used for drive-in theatre installations. These are not ordinary radio controls but rather sound-system controls designed and built for critical requirements.

CONSTANT-IMPEDANCE CONTROLS

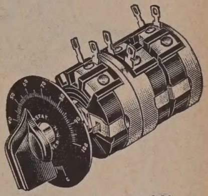


Self-compensating volume controls known as L-pads and T-pads for use in sound systems. Rated at 2½ watts DC, but will handle up to 10 watts audio. Continuous range from 0.5 to 30 decibels attenuation in 90% rotation. Last 10% affords infinite attenuation. With Clarostat constant-impedance L-pads and T-pads the input and output impedances of associated circuits can be kept within the limits of a constant required value. Knob and dial plate furnished with each control.

CIT Cat. No.	CIL Cat. No.	Res. Ohms	CIT Cat. No.	CIL Cat. No.	Res. Ohms
CIT-4	CIL-4	4	CIT-200	CIL-200	200
CIT-6	CIL-6	6	CIT-250	CIL-250	250
CIT-8	CIL-8	8	CIT-500	CIL-500	500
CIT-15	CIL-15	15	CIT-600	CIL-600	600
CIT-50	CIL-50	50	CIT-1,000	CIL-1,000	1,000
CIT-100	CIL-100	100	CIT-2,000	CIL-2,000	2,000

CIT—LIST PRICE $5.25 **CIL—LIST PRICE $4.65**

Standard Packing: Individual Carton.



U. S. Pat. 2,434,248

CONSTANT IMPEDANCE OUTPUT ATTENUATORS

Series "CIB" rated at 10 watts, but will handle up to 30 watts in audio circuit. Linear attenuation provided in 3 decibel steps up to 24db, then 30db followed by infinity. Equipped with dial plate and bar knob. One-hole mounting, ⅜" bushing diameter. 1" shaft. This control has been developed to meet the need for a constant-impedance attenuator capable of handling considerable power without measurable insertion loss. Recommended as an output level control for power amplifiers, or as an input attenuator for individual or for a group of speakers in a public address system.

Cat. No.	Res. Ohms	Cat. No.	Res. Ohms
CIB-6	6	CIB-200	200
CIB-8	8	CIB-250	250
CIB-15	15	CIB-500	500
CIB-50	50	CIB-600	600

NET PRICE $7.70

Standard Packing: Individual Carton.

SPECIAL DRIVE-IN THEATRE L-PAD

To meet the needs of theater sound systems, more especially those of drive-in theaters, a special 8 ohm L-Pad is now available, containing two separate windings of 5 ohms and 40 ohms. Also 50 ohm linear rheostat and 35 ohm tapered rheostat, as listed. Units have ⅜-32 bushing ⅜" long, and 1½" round shaft.

Cat. No. CM8727-1 8 ohm L-Pad
List Price $3.00

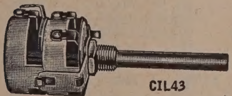
Cat. No. CM17083 50 ohm linear rheostat **List Price $2.20**

Cat. No. CM17084 35 ohm tapered rheostat **List Price $2.20**

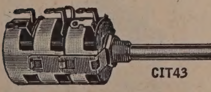
SPACE-SAVER CONSTANT-IMPEDANCE ATTENUATORS

Characterized by reduced depth and diameter, these attenuators are ideal for use in remote control of speakers since they are small enough to be installed in standard electrical boxes in the home, office, stockroom, etc.

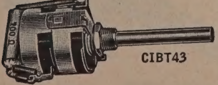
These controls are rated 2 watts D.C., but will handle up to 4 watts of audio, depending upon the type signal being handled. (As the frequency becomes constant, wattage reduces to 2 watts or the same as the D.C. rating).



CIL43



CIT43



CIBT43

Cat. No. CIL43 (L-Pad)	Cat. No. CIT43 (T-Pad)	Cat. No. CIBT43 (Bridged T-Pad)	Impedance
CIL43-4	CIT43-4	CIBT43-4	4 ohms
CIL43-6	CIT43-6	CIBT43-6	6 ohms
CIL43-8	CIT43-8	CIBT43-8	8 ohms
CIL43-15	CIT43-15	CIBT43-15	15 ohms
CIL43-50	CIT43-50	CIBT43-50	50 ohms
CIL43-100	CIT43-100	CIBT43-100	100 ohms
CIL43-200	CIT43-200	CIBT43-200	200 ohms
CIL43-250	CIT43-250	CIBT43-250	250 ohms
CIL43-500	CIT43-500	CIBT43-500	500 ohms

LIST PRICE CIL43 $4.65 LIST PRICE CIT43 $5.25

LIST PRICE CIBT43 $6.05

Standard Packing — Individual Carton

- Attenuation range of 0 to 30 db over 90% of rotation, 60 db in remaining 10% of rotation. Attenuation will increase approximately linearly to 30 db with counter-clockwise rotation.
- Insertion loss less than 0.5 db.
- Input impedance within plus/ minus 20%.
- The CIT43 and CIBT43 (Bridged T Pad) have constant input and output impedances, while the CIL43 has constant impedance in the input only.
- Shafts and bushings are insulated from the circuit elements.
- Pads have ⅜-32 x ⅜″ long bushing.
- ¼″ dia. round shafts 1½″ long beyond bushing.
- All pads supplied with bar knob and dial plates, as shown above.
- Dia. 1⅛″. Depth of body from mounting surface: CIL43 — 1 5/32″; CIT43 — 1¾″; CIBT43 — 1½″.

PRODUCTS OF
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CLAROSTAT®
RESISTORS · CONTROLS
RESISTANCE DEVICES

"GREENOHM V"™ ADJUSTABLE RESISTORS (VITREOUS ENAMEL)

10-WATT SERIES VP-10-FA

Core: 1¾" x 5/16"
Lug terminals — Mtg. brackets furnished

Resistance Ohms				
1	25	350	1500	5000
2	50	400	2000	6000
3	75	500	2250	7000
5	100	600	2500	7500
7.5	150	750	3000	8000
10	200	800	3500	8500
15	250	1000	4000	9000
20	300	1250	4500	10K

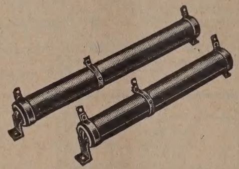
Standard Packing — 10 per Carton

25-WATT SERIES VP-25-KA

Core: 2" x 9/16"
Lug terminals — Mtg. brackets furnished

Resistance Ohms				
1	50	750	3500	9000
2	75	800	4000	10K
3	100	1000	4500	12K
5	150	1250	5000	15K
7.5	200	1500	6000	20K
10	250	2000	7000	25K
15	300	2250	7200	
20	400	2500	7500	
25	500	3000	8000	

Standard Packing — Individually Boxed



50-WATT SERIES VP-50-KA

Core: 4" x 9/16"
Lug terminals — Mtg. brackets furnished

Resistance Ohms				
1	150	1500	7000	30K
2	200	2000	7200	40K
3	250	2250	7500	50K
4	300	2500	8000	60K
5	400	3000	9000	80K
10	500	3500	10K	100K
25	750	4000	12K	
50	800	4500	15K	
75	1000	5000	20K	
100	1250	6000	25K	

Standard Packing — Individually Boxed

75-WATT SERIES VP-75-KA

Core: 6" x 9/16"
Lug terminals — Mtg. brackets furnished

Resistance Ohms				
1	200	2000	7200	35K
2	250	2250	7500	40K
3	300	2500	8000	45K
4	400	3000	9000	50K
5	500	3500	10K	60K
10	750	4000	12K	80K
15	800	4500	15K	100K
25	1000	5000	20K	
50	1250	6000	25K	
100	1500	7000	30K	

Standard Packaging — Individually Boxed

100-WATT SERIES VK-100-NA

Core: 6½" x ¾"
Lug terminals — Mtg. brackets furnished

Resistance Ohms				
1	10	500	10K	40K
2	25	1000	15K	50K
3	50	1500	20K	75K
4	100	2500	25K	100K
5	250	5000	30K	

Standard Packing — Individually Boxed

160-WATT SERIES VK-160-WA

Core: 8½" x 1⅛"
Lug terminals — Mtg. brackets furnished

Resistance Ohms				
1	10	500	10K	40K
2	25	1000	15K	50K
3	50	1500	20K	75K
4	100	2500	25K	100K
5	250	5000	30K	

Standard Packing — Individually Boxed

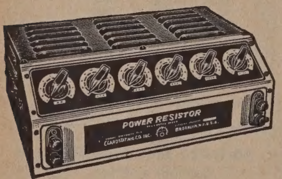
200-WATT SERIES VK-200-WA

Core: 10½" x 1⅛"
Lug terminals — Mtg. brackets furnished

Resistance Ohms				
1	10	500	10K	40K
2	25	1000	15K	50K
3	50	1500	20K	75K
4	100	2500	25K	100K
5	250	5000	30K	

Standard Packing — Individually Boxed

POWER RESISTOR DECADE BOX



The Resistance Decade Box Model No. 2400 allows changing resistance at a flip of the switch in a working circuit. Any value obtainable from 1 ohm to 999,999 in steps of one ohm and at a maximum power rating of 225 watts using a maximum of 1000 volts D.C. or 660 volts A.C.

Resistance changing switches are of the type that prevents a resistance breakdown between steps, thus protecting delicate meters and measuring instruments in the circuit. Pointer knobs indicate at a glance the resistance value being used.

Clarostat "Greenohm" resistors are used throughout. These are inorganic-cement-coated wire-wound power resistors. The resistors are mounted on rigid metal supports. A baffle plate separating the resistor bank from the switch assembly protects the latter against heat.

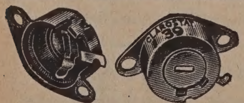
The heavy-gauge metal case is finished in frosted gray wrinkle, with an etched black-and-aluminum front panel. 13 in. long; 8½ in. deep; 5¾ in. high. Weight, 11 lbs.

SUGGESTED USES: Resistance determination. Load Resistance. Meter Multiplier. Calibrating Meters. Providing any desired ohmage as a universal power resistor.

	Maximum Current Ratings:	Resistance Tolerance
Decade No. 1	5 amp.	5%
Decade No. 2	1.5 amp.	2%
Decade No. 3	.5 amp.	2%
Decade No. 4	.15 amp.	2%
Decade No. 5	.05 amp.	2%
Decade No. 6	.005 amp.	2%

NET PRICE $110.00

SERIES 39 "HUMDINGER"* WIRE-WOUND CONTROLS



Compact. Inexpensive. 2-watt rating. Screwdriver adjusted by slot in drive plate. Mounting ears. For hum balance, centering, hold and locking, linearity, AGC sensitivity, etc.

LIST PRICE $0.70
Standard Packing: 10 per Carton.

Cat. No.	Total Res. Ohms	Min. Res. Ohms	Cat. No.	Total Res. Ohms	Min. Res. Ohms	Cat. No.	Total Res. Ohms	Min Res. Ohms
39-5	5	——	39-500	500	——	39-1000-100	1,000	100
39-8	8	——	39-500-100	500	100	39-1500	1,500	——
39-50	50	——	39-600	600	——	39-2000	2,000	——
39-75	75	——	39-650	650	——	39-2000-100	2,000	100
39-100	100	——	39-700	700	——	39-3000	3,000	——
39-125	125	——	39-700-200	700	200	39-3000-700	3,000	700
39-150	150	——	39-800	800	——	39-4000	4,000	——
39-200	200	——	39-800-50	800	50	39-4000-350	4,000	350
39-300	300	——	39-1000	1,000	——	39-4000-1000	4,000	1,000
						39-5000	5,000	——

*Reg. U. S. Pat. Off.

PRODUCTS OF
THE HOUSE OF RESISTORS®
CLAROSTAT®
RESISTORS · CONTROLS
RESISTANCE DEVICES

"FIXTOHM*" PRECISION RESISTORS

SERIES CVF

½-WATT RATING
± 1% TOLERANCE

These resistors are equivalent to Military types RN15 and RN20. Working voltage exceeds 350 volts.

51
*51.1
56
*56.2
*61.9
62
68
*68.1
75.0
82
*82.5
*90.9
91
*100
*110
120
*121
130
*133
*147
150
160
*162
175

*178
180
*196
200
*215
220
225
*237
240
250
*261
270
*287
300
*316
330
*348
350
360
*383
390
400
*422
430

450
*464
470
500
510
*511
550
560
*562
600
*619
620
*650
680
*681
*750
800
820
*825
850
900
*909
1200
1250

1300
1450
1500
1600
1750
1800
2000
2200
2250
2400
2500
2700
2950
3000
3300
3500
3600
3900
4000
4300
8500
8900
9000
9100

9950
*1K
*1.1K
4450
4500
4700
5000
5100
5500
5600
5950
6000
6200
6500
6800
7000
7450
8000
8200
*1.21K
*1.33K
*1.47K
*1.62K
*1.78K

*1.96K
*2.15K
*2.37K
*2.61K
*2.87K
*3.16K
*3.48K
*3.83K
*4.22K
*4.64K
*5.11K
*5.62K
*6.19K
*6.81K
*7.50K
*8.25K
*9.09K
*10K
*11K
12K
*12.1K
12.5K
13K
*13.3K

13.5K
*14.7K
15K
16K
*16.2K
17.5K
*17.8K
18K
*19.6K
20K
*21.5K
22K
*22.5K
*23.7K
24K
25K
*26.1K
27K
*28.7K
30K
*31.6K
33K
*34.8K
36K

*38.3K
39K
40K
*42.2K
43K
45K
*46.4K
47K
50K
51K
*51.1K
55K
56K
*56.2K
60K
*61.9K
62K
65K
68K
*68.1K
70K
*75K
80K
82K

*82.5K
85K
90K
*90.9K
91K
*100K
*110K
120K
*121K
125K
130K
*133K
*147K
150K
160K
*162K
175K
*178K
180K
*196K

200K
*215K
220K
225K
*237K
240K
250K
*261K
270K
*287K
300K
*316K
330K
*348K
350K
360K
*383K
390K
400K
*422K

430K
450K
*464K
470K
500K
510K
*511K
550K
560K
*562K
600K
*619K
620K
650K
680K
*681K
700K
*750K
800K
820K

*825K
850K
900K
*909K
1M
1.1M
1.2M
1.21M
1.25M
1.3M
1.33M
1.47M
1.5M
1.6M
1.62M
1.78M
1.8M
1.96M
2.0M

LIST PRICE $1.00

SERIES CVC

1-WATT RATING
± 1% TOLERANCE

These resistors are equivalent to Military type RN25. Working voltage exceeds 500 volts.

100
*100
110
120
130
*147
150
160
175
180
*196
200
220
225
240
250
*261
270
*287

300
330
350
360
*383
390
400
430
450
470
500
510
*511
550
560
600
620
650
680

*750
800
820
850
900
1200
1250
1300
1450
1500
1600
1750
1800
2000
2250
2400
2500
2700
2950

3000
3300
3500
3600
3900
4000
4300
4450
4500
4700
5000
5100
5500
5600
5950
6000
6200
6500
6800

7000
7450
8000
8200
8500
8900
8950
9000
9100
9950
*1K
*1.47K
*1.96K
*2.61K
*2.87K
*3.83K
*5.11K
*7.50K
*10K

12K
12.5K
13K
13.5K
*14.7K
15K
16K
17.5K
18K
*19.6K
20K
22K
22.5K
24K
25K
*26.1K
27K
*28.7K
30K

33K
36K
*38.3K
39K
40K
43K
45K
47K
50K
51K
*51.1K
55K
56K
60K
62K
65K
68K
70K
*75K

80K
82K
85K
90K
91K
*100K
120K
125K
130K
*147K
150K
160K
175K
180K
*196K
200K
220K
225K
240K

250K
*261K
270K
*287K
300K
330K
350K
360K
1M
*383K
390K
400K
430K
450K

470K
500K
510K
*511K
550K
560K
600K
620K
650K
680K
700K
*750K
800K
820K

850K
900K
1.2M
1.25M
1.3M
*1.47M
1.5M
1.6M
1.8M
*1.96M
2.0M
2.2M
2.225M
2.4M

2.5M
*2.61M
2.7M
*2.87M
3.0M
3.3M
3.5M
3.6M
*3.83M
3.9M
4.0M
4.3M
4.5M
4.7M

LIST PRICE
100 Ohms to 5 Meg. $1.00

SERIES CVD

2-WATT RATING
± 1% TOLERANCE

These resistors are manufactured to Military Specifications for type RN30. Working voltage exceeds 750 volts.

200
220
225
240
250
270
300
330
350
360
390
400
430
450
470
500
510
550

560
600
620
650
680
800
820
850
900
1200
1250
1300
1450
1500
1600
1750
1800
2000

2200
2250
2400
2500
2700
2950
3000
3300
3500
3600
3900
4000
4300
4450
4500
4700
5000
5100

5500
5600
5950
6000
6200
6500
6800
7000
7450
8000
8200
8500
8900
8950
9000
9100
9950
12K

12.5K
13K
13.5K
15K
16K
17.5K
18K
20K
22K
22.5K
24K
25K
27K
30K
33K
36K
39K
40K

43K
45K
47K
50K
51K
55K
56K
60K
62K
65K
68K
70K
80K
82K
85K
90K
91K
120K

125K
130K
150K
160K
175K
180K
200K
220K
225K
240K
250K
270K
300K
330K
350K
360K
390K
400K

430K
450K
470K
500K
510K
*511K
550K
560K
600K
620K
650K
680K
700K
*750K
800K
820K
850K
900K

*1M
1.2M
1.25M
1.3M
*1.47M
1.5M
1.6M
1.8M
3.3M
*1.96M
2.0M

2.15M
*2.15M
2.2M
2.225M
2.4M
2.5M
*2.61M
2.7M
*2.87M
3.0M
3.5M

3.6M
3.9M
5.6M
6.0M
4.0M
4.3M
4.5M
4.7M
5.0M
5.1M
*5.11M

5.5M
6.2M
6.5M
6.8M
7.0M
*7.5M
8.0M
8.2M
8.5M
9.0M
*10M

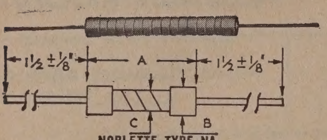
LIST PRICE
200 Ohms to 10 Meg. $1.80

FIXED • ADJUSTABLE and VARIABLE RESISTORS • CARBON SPECIALTIES

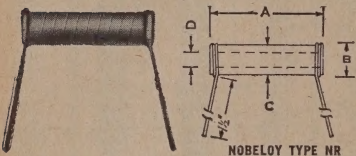
CONTINENTAL-WIRT ELECTRONICS CORP., Phila. 44, Pa.

PYROLYTIC METAL FILM

A metallic resistance element is deposited on a low loss ceramic carrier using a pyrochemic process developed and patented by Continental Wirt. A layer of vitreous enamel protects metal film against unusual atmospheric conditions. They are calibrated to value by means of spiralled grooves cut into the film to increase the resistance path. Leads are securely affixed to an extremely low resistance metal contact film, assuring positive contact.



NOBLETTE TYPE NA



NOBELOY TYPE NR

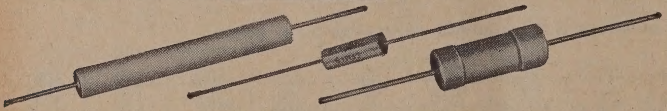
Type	Wattage	Voltage	Resistance Range	Dimensions A	Dimensions B	Dimensions C	Dimensions D	Wt. (oz.)	List Price ±1%
NA15*	½	350	½ ohm to 1 meg	17/32" ± 1/16"	5/32" ± .010	.130"		.026	$.80
NA25*	1	500	½ ohm to 1 meg	15/16" ± 1/16"	9/32" ± .010	.250"		.075	1.00
			1.1 meg. to 5 meg.						1.25
NA30*	2	750	2 ohms to 1 meg.	2 1/16" ± 1/16"	9/32" ± .010	.250"		.120	1.25
			1.1 meg. to 10 meg.						1.70
NR20**	½	350	½ ohm to 1 meg	⅝" ± 1/16"	11/32" ± .010	.250"	.156"	.083	$.85
			1.1 meg. to 3 meg.						1.00
NR25**	1	500	½ ohm to 1 meg	⅞" ± 1/16"	11/32" ± .010	.250"	.156"	.099	1.00
			1.1 meg. to 5 meg.						1.25
NR30**	2	750	1 ohm to 1 meg.	2" ± 1/16"	11/32" ± .010	.250"	.156"	.138	1.25
			1.1 meg. to 10 meg.						1.65
NR50**	5	1000	2 ohms to 1 meg.	2" ± 1/16"	19/32" ± .010	.500"	.312"	.448	2.00
			26 ohms to 1 meg.						1.50
			1.1 meg. to 15 meg.						2.00

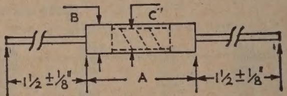
STANDARD RESISTANCE VALUES FOR 1 to 10 DECADE ±1%

1.00	1.15	1.33	1.54	1.78	2.05	2.37	2.74	3.16	3.65	4.22	4.87	5.62	6.49	7.50	8.66
1.02	1.18	1.37	1.58	1.82	2.10	2.43	2.80	3.24	3.74	4.32	4.99	5.76	6.65	7.68	8.87
1.05	1.21	1.40	1.62	1.87	2.15	2.49	2.87	3.32	3.83	4.42	5.11	5.90	6.81	7.87	9.09
1.07	1.24	1.43	1.65	1.91	2.21	2.55	2.94	3.40	3.92	4.53	5.23	6.04	6.98	8.06	9.31
1.10	1.27	1.47	1.69	1.96	2.26	2.61	3.01	3.48	4.02	4.64	5.36	6.19	7.15	8.25	9.53
1.13	1.30	1.50	1.74	2.00	2.32	2.67	3.09	3.57	4.12	4.75	5.49	6.34	7.32	8.45	9.76

NOTE: In addition to above table, resistance values conforming to EIA Standards for composition resistors are also available.

DEPOSITED CARBON FILM





Hermetically Sealed—Conform to MIL-R-10509. Fully insulated for hi-frequency use. Carbon deposited on ceramic and encased in non-hygroscopic ceramic tube. High temperature solder sealed ±½, 1, or 5%. ¼, ½, 1 or 2 watts.

Molded — Rugged construction for high production handling and excellent moisture protection. ±½%, 1 or 5%. ½ or 1 watt sizes.

Coated—Low cost precision. Highly recommended for test equipment, meters or hi-frequency circuits. ±1, 2, or 5%. ¼, ½, 1 or 2 watt sizes.

Type	Watts	Voltage	Resistance Range	Dimensions A	Dimensions B	C	Wt. (oz.)	List Price ±1%
CF10	¼	300	10 ohms to 1 meg.	½" ± 1/16"	3/32" ± .010"	.062"	.011	$1.13
CF15	½	350	10 ohms to 1 meg.	9/16" ± 1/16"	5/32" ± .010"	.125"	.030	.60
			1.1 meg. to 2 meg.					.67
			2.1 meg. to 5 meg.					.73
			5.0 meg. to 10 meg.					1.20
CF25	1	500	50 ohms to 1 meg.	15/16" ± 1/16"	9/32" ± .010"	.250"	.102	.90
			1.1 meg to 10 meg.					1.06
			10.1 meg. to 20 meg.					1.50
			20.1 meg. to 50 meg.					1.66
CF30	2	1000	100 ohms to 1 meg.	2 1/16 ± 1/16"	9/32" ± .010"	.250"	.184	1.13
			1.1 meg. to 20 meg.					1.36
			20 meg. to 50 meg.					1.73
			50 meg. to 100 meg.					2.63
CFM15	½	350	10 ohms to 1 meg.	½				.97
			1.1 meg. to 2 meg.					1.03
			2.1 meg. to 5 meg.					1.13
			5.0 meg. to 10 meg.					1.51
CFM25	1	500	50 ohms to 1 meg.	1				1.36
			1.1 meg. to 10 meg.					1.50
			10.1 meg. to 20 meg.					1.96
			20.1 meg. to 50 meg.					2.10
CFH10	¼	300	10 ohms to 1 meg.	.625" ± .031"	.187" ± .031"		.032	2.32
CFH15	¼	350	10 ohms to 1 meg.	.687" ± .062" − .000"	.250" ± .031"		.062	2.03
			1.1 meg. to 2 meg.					2.14
			2.1 meg. to 5 meg.					2.20
			5.1 meg. to 10 meg.					2.66
CFH25	1	500	50 ohms to 1 meg.	1.062" ± .062"	.375" ± .062" − .031"		.197	2.40
			1.1 meg. to 10 meg.					2.50
			10.1 meg. to 20 meg.					2.93
			20.1 meg. to 50 meg.					3.06
CFH30	2	1000	100 ohms to 1 meg.	2.156" ± .093" − .031"	.375" ± .062" − .031"		.360	2.56
			1.1 meg. to 20 meg.					2.76
			20 meg. to 50 meg.					3.16
			50 meg. to 100 meg.					4.00

Wire Wound POTENTIOMETERS and RHEOSTATS

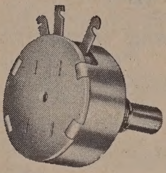
CONTINENTAL-WIRT ELECTRONICS CORP., Phila. 44, Pa.

2 WATT INSULATED SHAFT

For general purpose applications requiring high quality, durability and economy.

Mechanical Features
Housing: Tin-plated steel.
Mounting: Standard ⅜"-32 bushing.
Shaft: Standard ¼" round, knurled or slotted.
Rotation: 295° ±5° effective.
Torque: 1½ inch ounce minimum, 5 inch ounce maximum.
Stop torque—8 inch pounds.

Electrical Features
Rating: 2 watts.
Range: Standard values from 2 to 15,000 ohms from stock. Other values on special order.
Accuracy: ±10%. Closer tolerances available.
Characteristic: Linear taper is standard. Others available.
Life test: 25,000 cycles.


Series F888

Alternate Features
Tab mounting and locating tabs can be furnished.

PHENOLIC HOUSED INSULATED

Style WCB, 3 watts, 10 ohms to 70,000 ohms, 1³⁵⁄₆₄" dia., ²⁷⁄₃₂" depth. List price $2.00 to $2.90 depending on resistance.
Style WCA, 4 watt, 10 ohms to 100,000 ohms. 1²⁵⁄₃₂" dia., ³¹⁄₃₂" depth. List price $2.10 to $3.20 depending on resistance.
Style WCD, Dual Control, to 25,000 ohms front panel; to 50,000 ohms rear panel, 1²⁵⁄₃₂" dia. 1⅛" depth. List price $3.75 to $5.00 depending on resistance. Winding completely insulated. Contact arm of front winding grounded.

Standard Tolerance: ±10% (±5% tolerance available on special order).

Rotary Contact: Insulated from mounting bushing.

Standard Shaft: ¼" round aluminum, ⅜" long, FOEB; flatted, screw driver and knurled types also available if specified.

Standard Mounting Bushing: ⅝"—32 x ⅜" long; brass.

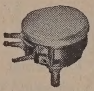
Mounting Nut: One ⁵⁄₁₆" hex nut supplied with each control.

Terminals: Hot tin dipped.

Optional Application: Types WCD and WCA may be used as a rheostat or potentiometer depending upon terminal connections selected.

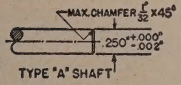
STYLE WCB

STYLE WCA

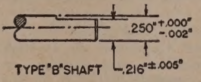

STYLE WCD

SHAFTS

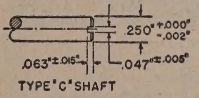
Available with Phenolic Housed Controls Type "A" Shaft is standard and will be furnished unless otherwise specified with order. Type "B", "C", and "D" Shafts available at additional cost.



TYPE "A" SHAFT Round (Standard)



TYPE "B" SHAFT Flatted



TYPE "C" SHAFT Slotted

TYPE "D" SHAFT Knurled
(Same as Type "A" except knurled)

METAL HOUSED MINIATURES

					LIST PRICES		
Model No.	Type	Mounting	Rotor	Terminal Orientation*	5 ohm to 1K	1100 ohm to 3K	3100 ohm to 5K
WC807A	Rheostat	Rivet	Grounded	Parallel	.40	.45	.50
WC808A	Rheostat	Rivet	Insulated	Parallel	.60	.65	.75
WC815A	Rheostat	Rivet	Grounded	Perpendicular	.40	.45	.50
WC816B	Rheostat	Prin. Circ.	Grounded	Perpendicular	.40	.45	.50
WC816D	Potentio.	Prin. Circ.	Grounded	Perpendicular	.50	.55	.60
WC817A	Potentio.	Rivet	Grounded	Parallel	.50	.55	.60
WC818A	Potentio.	Rivet	Insulated	Parallel	.75	.80	.90

*Referred to mounting plane.

RATING: 1.5 Watts
RESISTANCE RANGE: 1 ohm to 10,000 ohms
STANDARD TOLERANCE: ±20% Wt. 0.2 oz. each, diameter ¾".
Adjustment: Slot is provided in rotor mechanism for screw driver adjustment from front or back.
Also available with stops in pre-selected positions and in other resistance values on special order.

Standard Stock Resistance Values (Ohms)
1, 5, 10, 15, 25, 50, 60, 75, 100, 150, 200, 250, 300, 400, 500, 600, 750, 1000, 1500, 2000, 2500, 3000, 4000, 5000, 7500, 10,000

WC 807A
Rheostat
Grounded Rotor

WC 808A
Rheostat
Insulated Rotor

WC 815A
Rheostat
with Terminal
Back of Panel

WC 816B
Rheostat
Printed Circuit

WC 817A
Potentiometer
Grounded Rotor

WC 818A
Potentiometer
Insulated Rotor

CONTINENTAL WIRT

RESISTORS, SUPPRESSORS and CONDENSERS

CONTINENTAL-WIRT ELECTRONICS CORP., Phila. 44, Pa.

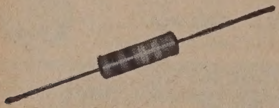
WIRE WOUND RESISTORS

WIRE WOUND FIXED (POWER TYPE)

Ceramic core, vitreous enamel coated. All standard values 5 to 200 watts. ±5% standard. Special types also available.

WIRE WOUND ADJUSTABLE (POWER TYPE)

Ceramic base, tough moisture-resistant high temperature coating. 3 to 20 watts. Specials available.



WIRE WOUND (LOW POWER)

Axial lead, insulated, molded in phenolic. ⅓ watt (.27 ohms to 10 ohms); ½ watt and 1 watt (.27 to 24 ohms). ±2, 5, or 10% standard. 1% available on special order.

TABLE OF SIZES AND RATINGS

Fixed Type No.	Adjustable Type No.	Wattage	Dimensions Length	Dimensions Dia.	Resistance Min.	Range Max.	Wt. (oz.) Fixed	Wt. (oz.) Adjust.
VFR-1		5	1″	5/16″	1 ohm	10K	0.4	
VFR-3	VAR-3	10	1¾″	5/16″	1 ohm	25K	0.44	0.88
VFR-4	VAR-4	20	2″	½″	1 ohm	50K	0.8	1.2
VFR-7	VAR-7	25	2″	¾″	1 ohm	50K	1.2	1.5
VFR-12	VAR-12	50	4″	¾″	5 ohms	100K	2.0	2.6
VFR-15	VAR-15	75	6″	¾″	5 ohms	100K	3.0	4.0
VFR-19	VAR-19	100	6½″	1⅛″	5 ohms	100K	4.9	5.8
VFR-22	VAR-22	160	8½″	1⅛″	5 ohms	100K	11.6	12.5
VFR-23	VAR-23	200	10½″	1⅛″	5 ohms	100K	15.0	16.0

STANDARD TOLERANCE: Fixed Types (50 ohms and higher) ±5%; below 50 ohms ±10%; Adjustable Types ±10%.

RESISTANCE VAUES: All resistors available in resistance values as listed in EIA Standards.

LIST PRICE

FIXED Resistance Range*	VFR-1 5W	VFR-3 10W	VFR-4 20W	VFR-7 25W	VFR-12 50W	VFR-15 75W	VFR-19 100W	VFR-22 160W	VFR-23 200W
1 Ohm to 1K	.70	.75	.95	1.10	1.60	2.25	2.40	3.00	3.20
1.1K " 5K	.75	.80	1.00	1.15	1.75	2.35	2.50	3.10	3.30
5.1K " 10K	.80	.85	1.10	1.25	1.90	2.50	2.60	3.30	3.40
11K " 25K		.95	1.25	1.40	2.10	2.70	3.00	3.50	3.70
26K " 50K			1.45	1.60	2.40	3.00	3.20	3.70	4.00
51K " 75K					2.70	3.30	3.50	4.00	4.20
76K " 100K					3.00	3.60	3.80	4.30	4.50

ADJUSTABLE	VAR-3	VAR-4	VAR-7	VAR-12	VAR-15	VAR-19	VAR-22	VAR-23
1 Ohm to 1K	1.30	1.50	1.60	2.20	3.00	3.50	3.80	4.00
1.1K " 5K	1.40	1.60	1.70	2.30	3.10	3.60	3.90	4.10
5.1K " 10K	1.50	1.70	1.80	2.40	3.20	3.70	4.00	4.20
11K " 25K		1.90	2.00	2.60	3.40	3.90	4.20	4.40
26K " 50K			2.30	2.90	3.70	4.20	4.50	4.70
51K " 75K				3.20	4.00	4.50	4.80	5.00
76K " 100K				3.70	4.50	5.00	5.30	5.50

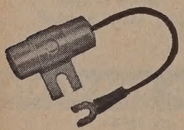
*Consult table for minimum and maximum resistance for each type.

Type	Wattage	Resistance Range	Dimensions Length	Dimensions Dia.	List Price ±5%	List Price ±10%
WM10	⅓	.27 ohms to 10 ohms	7/16″	⅛″	$.25	$.20
WM20	½	.27 ohms to 24 ohms	⅝″	7/32″	.30	.25
WM25	1	.27 ohms to 24 ohms	1″	9/32″	.35	.30

TINNED COPPER LEADS: WM10 — #21AWG; WM20 and WM25 — #20AWG.

RESISTANCE VALUES: All resistors available in resistance values as listed in EIA Standards.

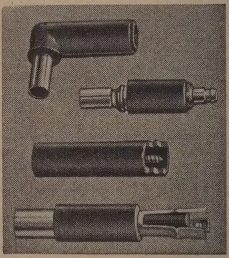
SUPPRESSORS AND CONDENSERS



Distributor and Spark Plug Suppressors . . . Easy to Install . . . Fit All Cars, Including 12-volt. Continental Suppressors are exactingly engineered to effectively remove radio noise from ignition spark discharge at the plugs and high-tension distributor.

Type	Application	Dimensions Length & Dia.	Mounting	List Price
S20A	Sparkplug	1½ x ½	Angle	$.61
S19	Sparkplug	1 27/32 x ½	Vertical	.50
S21	Sparkplug	1 27/32 x ½	Vertical	.59
S23	Sparkplug	1 21/32 x ½	Angle	.53
S27	Sparkplug	1⅛ x ½	Vertical-Screw	.55
C11	Distributor	1½ x ½	Cable	.42
T24	Distributor	1½ x ½	Angle-Snap	.67
T20	Distributor	2⅜ x ½	Vertical-Snap	.70

Net Unit Weight:—Approx. .033 Oz.



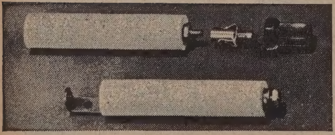
DISTRIBUTOR AND SPARK PLUG SUPPRESSORS

GENERATOR CONDENSERS

FIT ALL CARS . . . UNIVERSAL TYPES

Type	Application	CAP. MFD.	Dimensions Length & Dia. in inches	List Price
GB 025	Universal	.25	1⅝ x ⅝	$.75
GB 05	Universal	.5	1⅝ x ⅝	.80

Net Unit Weight:—Approx. 1.0 Oz.



OIL BURNER SUPPRESSORS

Eliminate uncomfortable radio-TV interference due to ignition discharge action of oil burner igniting coil.

OIL BURNER SUPPRESSORS

Type	Dimensions Length & Dia. in inches	Terminals	List Price
OB15	3½ x ¾	Rajah	$3.10
OB15A	3½ x ¾	U-Bracket	2.80

Net Unit Weight:—Approx. 1.8 Oz.

COMPOSITION RESISTORS and SWIT

)und POWER RESISTORS

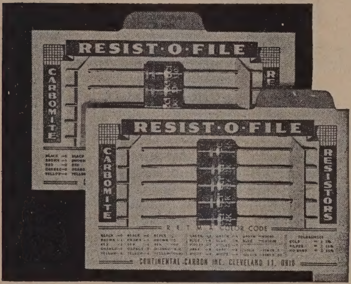
CONTINENTAL-WIRT ELECTRONICS CORP., Phila. 44, Pa.

Insulated fixed composition resistors for re
1000 volts max. Compact design saves spac
ating conditions. In addition to Type M, andund precision power resist-
offers complete assortments of ½, 1 and 2 long life stability, carefully
on 3 x 5 cards. :tronic circuits where space

are wound with the best ı ceramic spool. Complete from terminal to terminal. yer silicone coating protects stable performance under al conditions. Eight watt- 3, 5, 7 and 10; ten sizes; .05 ohm to 175K ohms, de- l type; precision tolerance 3%.

Bulletin R-23

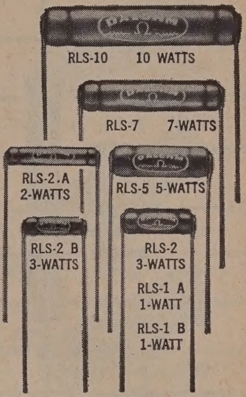
RESIST-O-FILE TYPE MR


RESIST·O·FILE
CARBOMITE
RESIST·O·FILE
CARBOMITE
RESISTORS
R. E. T. M. A. COLOR CODE
CONTINENTAL CARBON INC. CLEVELAND 11, OHIO

TYPE
M20
M25
M30

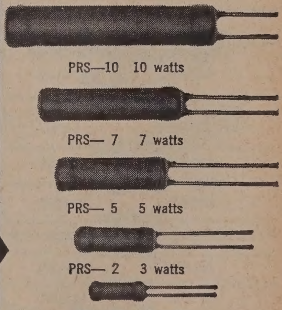
Five Type ial leads for printed circuit
3 x 5 indeages—1, 2, 3, 5, 7 and 10;
tem adds :e range from .05 ohm to
ng on size and type; pre-
file storage: ± .05% to ± 3%.

Bulletin R-30


RLS-10 10 WATTS
RLS-7 7-WATTS
RLS-2.A 2-WATTS
RLS-5 5-WATTS
RLS-2 B 3-WATTS
RLS-2 3-WATTS
RLS-1 A 1-WATT
RLS-1 B 1-WATT

ɔdified RS TYPE encapsu- ɔing material; then encased tal tube. They are suitable or better heat dissipation. stor will surpass the most ıock and vibration require- s—2, 3, 5, 7 and 10; seven ge from .5 ohm to 175K size and type; precision 05% to ± 3%.

Bulletin R-25


PRS—10 10 watts
PRS— 7 7 watts
PRS— 5 5 watts
PRS— 2 3 watts
PRS—2B 3 watts

s are identical to RS TYPE ɔplied with parallel leads. o meet precision power re- ɘd circuits, where space is wattages—3, 5, 7 and 10; range from .05 ohm to 175K ı size and type; precision 5% to ± 3%.

Bulletin R-49

RATINGS: 125V AC-DC. Also available in 3 amp 125V AC; 1 amp or .5 amp 125 DC; 4 amp 125V AC only.

KNOBS: Standard black, 11/32" h., 7/32" w., 5/16" l. Also available in colors and in height between 3/16" and ¾".

HOUSINGS: One-piece steel with corrosion resistant coating. Special finishes available.

MOUNTING HOLES: Clearance type standard. Extruded and tapped 4-40 and 6-32 available on some types. 1⅛" and 1⅝" mounting centers standard.

TERMINALS AND CONTACTS: Silver plated. All standard switches available with "short terminal." Special designs also available.

BASES: Made from high dielectric strength, moisture resistant phenolic.

MAXIMUM LIFE SWITCHES: Specially constructed "Lifetime" switches, capable of over 100,000 cycles for low current 1.5 and 0.75 amp 125V AC-DC application available in all sixteen types shown.

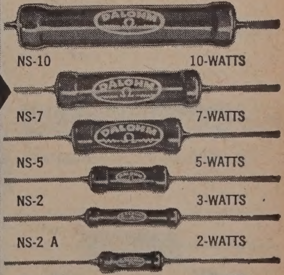
EXTENSION PLUNGER FRAME: Available for push-pull control. Ganging mechanism also available for two or three switches mounted together.

CONTACT RESISTANCE: Less than 0.006 ohms at 20 milliamperes.

MAX. TEMPERATURE ABOVE AMBIENT: 10° C at rated load.

LIFE: Minimum of 6000 cycles at 6 to 10 cpm, making and breaking contact at rated load.

INSULATION: Min. of 10 megohms resistance between contacts and housing after 48 hours test at 95-100% rel. humidity and 50°C.


NS-10 10-WATTS
NS-7 7-WATTS
NS-5 5-WATTS
NS-2 3-WATTS
NS-2 A 2-WATTS
NS-2 B 3-WATTS

ı wound resistor designed to ɔower requirements in elec- ɘ space is at a premium. racteristics are achieved g technique which provides layers. Five wattages—2, 3, ɘs; resistance range from 1 lepending on size and type; ange: ± .05% to ± 3%.

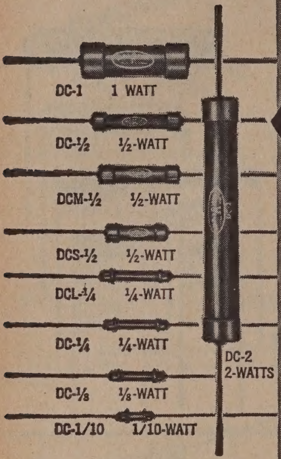
ıdial leads for printed cir- ailable in same sizes, toler- NS TYPE shown above.

Bulletin R-34

For complete technical literature, engineering assistance, or information about special adaptations write to the factory. List your specifications and requirements in detail. Your inquiry will receive prompt attention.

from **DALOHM**
Better things in
smaller packages
DALE PRODUCTS, INC.
Columbus, Nebraska

Deposited Carbon RESISTORS


DC-1 1 WATT
DC-½ ½-WATT
DCM-½ ½-WATT
DCS-½ ½-WATT
DCL-¼ ¼-WATT
DC-¼ ¼-WATT
DC-⅛ ⅛-WATT
DC-1/10 1/10-WATT
DC-2
2-WATTS

DALOHM deposited carbon resistors assure stability and accurate, dependable performance in high frequency applications.

DC TYPE is a low cost miniature resistor designed for good protection from moisture, salt spray and other environmental conditions. Ideal for high frequency applications. Seven wattages—1/10 ⅛, ¼, ½, 1, 2 and 5; ten sizes: resistance range from 10 ohms to 200 megohms, depending on size and type; precision tolerance: ± 1% or higher as required.

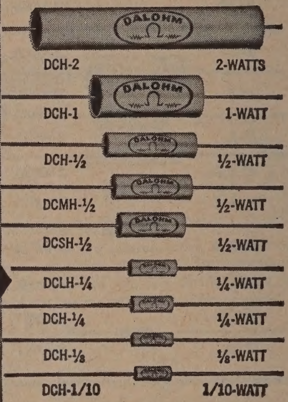
DC-5 5-WATTS

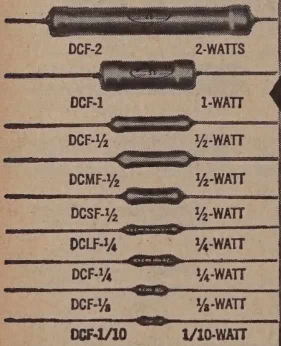
Request Bulletin R-24

DCH TYPE is a deposited carbon resistor hermetically sealed in a non-hygroscopic ceramic envelope to provide a completely insulated, high temperature resistor with improved electrical characteristics. It has the best stability available in deposited carbon resistors. Seven wattages—1/10, ⅛, ¼, ½, 1, 2 and 5; ten sizes; resistance range from 5 ohms to 150 megohms, depending on size and type; precision tolerance ± 1% or higher as required.

DCH-5 5-WATTS

Request Bulletin R-27


DCH-2 2-WATTS
DCH-1 1-WATT
DCH-½ ½-WATT
DCMH-½ ½-WATT
DCSH-½ ½-WATT
DCLH-¼ ¼-WATT
DCH-¼ ¼-WATT
DCH-⅛ ⅛-WATT
DCH-1/10 1/10-WATT

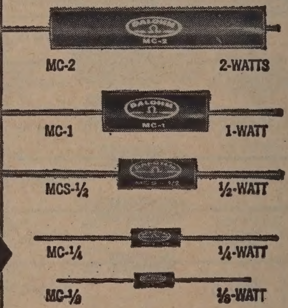

DCF-2 2-WATTS
DCF-1 1-WATT
DCF-½ ½-WATT
DCMF-½ ½-WATT
DCSF-½ ½-WATT
DCLF-¼ ¼-WATT
DCF-¼ ¼-WATT
DCF-⅛ ⅛-WATT
DCF-1/10 1/10-WATT

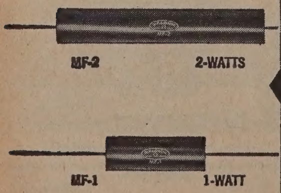
DCF TYPE has a special coating which makes it a completely insulated resistor, yet it retains miniature size. Designed for complete protection from moisture, salt spray and other severe environmental conditions. Assures outstanding stability for carbon film resistors. It has excellent high frequency characteristics. Six wattages—1/10, ⅛, ¼, ½, 1 and 2; nine sizes; resistance range from 10 ohms to 50 megohms, depending on size and type; precision tolerance: ± 1% or higher as required.

Request Bulletin R-42

MC TYPE designed for complete protection from moisture, salt spray and other severe environmental conditions. MC is a deposited carbon resistor completely insulated and protected from environmental or mechanical damage by molded housings. It assures outstanding stability and has excellent high frequency characteristics. Five wattages—⅛, ¼, ½, 1 and 2; five sizes; resistance range from 5 ohms to 50 megohms, depending on size and type; precision tolerance: ± 1% or higher as required.

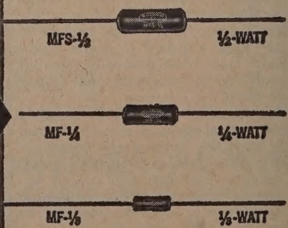
Request Bulletin R-35


MC-2 2-WATTS
MC-1 1-WATT
MCS-½ ½-WATT
MC-¼ ¼-WATT
MC-⅛ ⅛-WATT


MF-2 2-WATTS
MF-1 1-WATT

MF TYPE is a molded metal film resistor that combines advantages of Dalohm's molding techniques with advanced high vacuum evaporated metal film procedures to provide the best characteristics of wire wound resistors while retaining miniature size. It has inherently good R.F. characteristics, low noise levels, high stability, complete insulation, low and controllable temperture coefficients, and the ability to withstand rigorous environmental conditions. Resistance range from 100 ohms to 4 megohms, depending on size; tolerance ± 1%; five wattages—⅛, ¼, ½, 1 and 2; five sizes.

Request Bulletin R-43

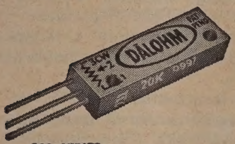

MFS-½ ½-WATT
MF-¼ ¼-WATT
MF-⅛ ⅛-WATT

from **DALOHM**
Better things in
smaller packages
DALE PRODUCTS, INC.
Columbus, Nebraska

Wire Wound TRIMMER POTENTIOMETERS

For complete technical data on all Dalohm T-Pots, request Bulletin R-52.

1200 SERIES



900 SERIES

1200 SERIES is a sealed, precision, miniature T-Pot with welded construction throughout; meets requirements of MIL-R-27208 and MIL-R-22097. Rated at 1 watt; resistance range from 10 ohms to 50K ohms; tolerance ±5% standard, special resistance values and/or tolerances available.

Request Bulletin R-51

900 SERIES is a sealed, precision sub-miniature T-Pot with welded construction throughout, meeting requirements of MIL-R-27208 and MIL-R-22097. Rated at 1 watt; resistance range from 10 ohms to 30K ohms; tolerance ±5% standard, special resistance values and/or tolerances available.

Request Bulletin R-50

100 SERIES is a ruggedly constructed T-Pot. Rated at .8 watt; resistance range from 10 ohms to 50K ohms; standard tolerance ±5%. Special resistance values/available; also tolerances down to ±1%.

Ask for Bulletin R-32D

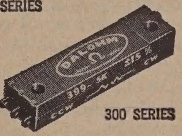
200 SERIES is identical to 100 Series with ±10% standard tolerance and resistance range to 100K ohms.

300 SERIES is similar to both the 100 Series and 200 Series T-Pots but with ±15% standard tolerance and resistance range 10 ohms to 20K ohms.

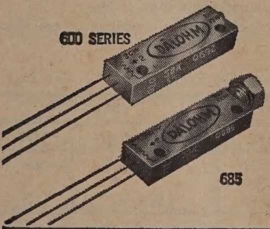
Request Bulletins R-32, R-37 and R-38

100 SERIES

200 SERIES



300 SERIES

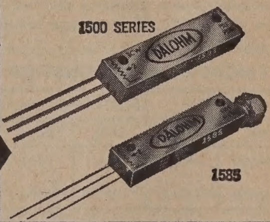


600 SERIES is a sub-miniature precision T-Pot with sealed case and welded construction throughout; is resistant to stringent environmental conditions. 600 Series rated at 1 watt; Type 685, panel mounted. Resistance range from 10 ohms to 30K ohms; tolerance ±5% standard.

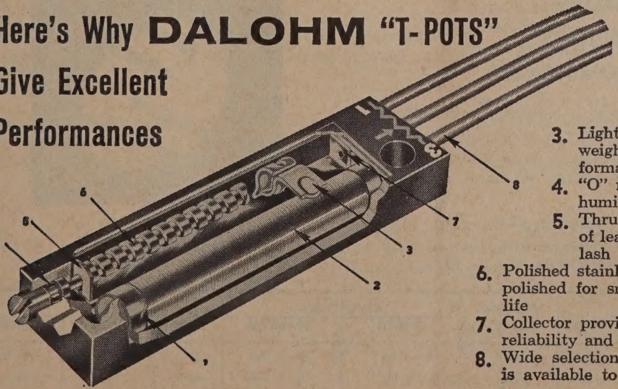
Request Bulletins R-41, R-47

1500 SERIES is a miniature, precision T-Pot with sealed case and welded construction throughout; is resistant to stringent environmental conditons. 1500 Series rated at 1 watt; Type 1585, panel mounted. Resistance range from 10 ohms to 50K ohms; tolerance ±5% standard.

Request Bulletins R-44, R-46



Here's Why DALOHM "T-POTS" Give Excellent Performances



1. Welded termination
2. Longer winding mandrel (ceramic) giving better resolution, better heat dissipation, higher values and allows use of larger wire diameter
3. Lightweight precious metal wiper with low weight-pressure ratio provides best performance under vibration and shock
4. "O" ring seal provides protection against humidity, dust and salt spray
5. Thrust spring maintains constant position of lead screw eliminating lead screw backlash
6. Polished stainless steel lead screw is ultrasonically polished for smooth operation and long rotational life
7. Collector provides dual current path for improved reliability and low rotational noise level
8. Wide selection of external terminal configurations is available to meet any requirements

ELECTRONICS DISTRIBUTOR DIVISION

ERIE RESISTOR CORPORATION—ERIE, PA.

National Distributors for Corning Glass Works Electronic Components

CORNING FUSION-SEALED RESISTORS—TYPE NF

Corning NF Fusion Sealed Resistors have been especially designed for missile, computer, and high frequency circuits where the ultimate in reliable performance is a must.

These resistors are made by fusion sealing a glass encapsulation around a tin-oxide resistive element similar to the ones used in other Corning Resistors. This glass encapsulation has a glass-to-metal seal at the leads insuring zero moisture absorption for the unit, and providing the ultimate in reliable performance against environmental conditions. These Corning NF Resistors can even be boiled in salt water for days without affecting their electrical characteristics.

The tin-oxide film at the heart of these resistors is extremely stable, inherently impervious to moisture, and unaffected by heat of soldering or repeated overloads.

Corning NF Resistors exceed the performance required of Mil-C-10509C, Characteristic B, and are available in ¼ and ⅛ watt sizes with a resistance range from 100 ohms to 360K ohms.

CHARACTERISTICS

Tolerance—Standard tolerance is 1%.

Load Life—The average change in resistance after 1000 hours at rated wattage is less than 0.3%. Load life change is guaranteed less than 1% when tested as specified in Mil-R-10509C under Char. B.

Moisture Resistance—These resistors are guaranteed to have less than 3% resistance change when tested as specified in Mil-R-10509C, Char. B. Typical value of 0.1% resistance change when tested in this way for 30 days.

Temperature Coefficient—A temperature coefficient of ±.03%/°C, measured over a range of −55° C to +150° C is guaranteed.

Shelf Life—One year of aging shows less than 0.1% resistance change.

Noise—The magnitude of noise level is 0.1 microvolt per volt.

Short Time Overload—A standard 5 second overload of 6.25 times rated power causes a permanent resistance change of less than 0.5%. The average resistance change for this test is 0.03%.

Dielectric Withstanding Voltage—When tested as specified in Mil-R-10509C, resistance change does not exceed 0.05% and the typical value is 0.01%.

Insulation Resistance—The average insulation resistance is 100,000 megohm with a minimum of 10,000 megohm.

Terminal Strength—Resistance change due to terminal strength tests in Mil-R-10509C, Char. B. is negligible and is guaranteed less than 0.5%.

Hot Spot—Maximum hot spot temperature is 150° C.

Temperature Cycling—The average resistance change when tested as specified in Mil-R-10509C, Char. B. is 0.1%. Corning NF Resistors are guaranteed to have less than 0.5% maximum resistance change after this test.

Low Temperature Exposure—Average resistance change when tested as specified in Mil-R-10509C, is .03% and is guaranteed to be less than 1.5%.

Effect of Solder—Average change due to normal soldering is 0.1% with maximum change less than 0.5%.

Voltage Coefficient—Negligible factor averaging less than 0.001%/v.

PHYSICAL CHARACTERISTICS

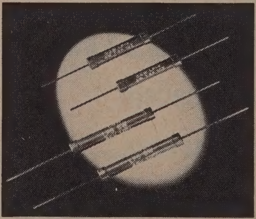
TYPE		RESISTANCE (ohms)		WATTAGE	VOLTAGE RATING	DIMENSIONS (inches)		LEADS	
MIL	CGW	MIN.	MAX.			LENGTH	DIAMETER	LENGTH (in.)	AWG
RN60B	NF60	100	100K	⅛	250v	.406±.031	.151±.005	1½±⅛	22
RN65B	NF65	100	360K	¼	300v	.625±.025	$.210^{+.010}_{-.005}$	1½±⅛	22

CORNING FILM TYPE RESISTORS...TYPE N

CORNING TYPE N RESISTORS

MIL-R-10509B SPECIFICATIONS

RELIABLE • STABLE • ECONOMICAL



Corning Type N Fixed Film Resistors consist of a metallic oxide film integrally bonded to PYREX brand glass at red heat. The rugged film is non-inductive, inherently impervious to moisture, and unaffected by heat of soldering, repeated overloads or normal production handling.

SPECIFICATIONS

Tolerance—Standard tolerances are 1, 2, and 5%. Special resistance-matched pairs as well as ½% tolerance resistors are supplied. Tolerance calibrated at 25°C. ambient.

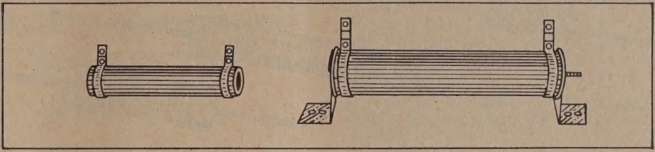
TYPE		RESISTANCE		WATTAGE	VOLTAGE RATING	DIMENSIONS		TERMINAL		
MIL	CGW	MIN.	MAX.			LENGTH	DIAMETER	TYPE	A.W.G.	LENGTH
RN20	N-20	10	500 K	½	350V	19/32 ± 1/16"	11/64 ± 1/32"	Axial	20	1-½ ± ⅛"
RN25	N-25	10	1.5 Meg.	1	500V	15/16 ± 1/16"	19/64 ± 1/32"	Axial	20	1-½ ± ⅛"
RN30	N-30	30	4.2 Meg.	2	750V	2-1/16" ± 1/16"	19/64 ± 1/32"	Axial	20	1-½ ± ⅛"

ELECTRONICS DISTRIBUTOR DIVISION

ERIE RESISTOR CORPORATION—ERIE, PA.

National Distributors for Corning Glass Works Electronic Components

CORNING TYPE R HIGH-POWER RESISTORS TO MIL-R-11804B SPECIFICATION



Corning Type R Power Resistors have a range of 10–1,000,000 ohms, ratings of 7-115 watts, and are non-inductive. They are designed for stable long-life service under the most adverse operating conditions. Noise and frequency characteristics are exceptionally good. Moisture resistance and overload capacity are superior.

Cores — The glass tube cores are made from a PYREX brand glass insuring highest resistivity even at elevated temperatures, low expansion, and unusual resistance to chemical and mechanical attack, as well as thermal shock. The cores are impervious, and the glass has been developed to eliminate electrolysis and voltage creepage.

Resistance Film — The resistive film of metallic oxides is as rugged as the glass. It is permanently and integrally bonded to the core at red heat. Expansions are matched. The film is practically noninductive at all usable frequencies.

Terminals — Silver metallized bands are fired onto the film conductor and core. Lug-type terminals of silver-plated copper alloy strip are expansion fitted over the silver bands to insure a perfect electrical and mechanical junction.

Silicone Coating — The coating is tough, moisture and acid resistant, and a good conductor of heat. It adds to the thermal shock resistance but is not essential to overall performance.

Mounting Brackets — These are supplied with the resistors at extra charge. They are made to MIL-R-11804B requirements.

Range — Resistance range varies with size and power. It is summarized on Table I. Standard tolerance is ±5% for striped or spiraled units..

Ratings — Power ratings are based on 25°C. operating ambient. Maximum operating ambient may be as high as 200°C. and hot spot temperature 235°C.

Temperature Coefficient — The value of temperature coefficient in the range of 25-85°C. is less than ±.035% per deg. C. Type R resistors meet the requirements of MIL-R-11804B.

Stability — The average change of resistance after 500 hours operation at maximum dissipation at 25°C. ambient is 4%.

Overload — A standard 5-second overload of 6.25 times the rated power causes a permanent resistance change of less than 0.5%.

Humidity — Type R resistors more than meet the specifications for maximum resistance change of MIL-R-11804B.

Voltage Coefficient — The voltage coefficient averages less than .001% per volt.

Noise — Available data show an inherent noise level of less than .1 microvolt per volt.

Frequency Characteristics — The thin film construction of R type resistors makes them inherently noninductive. Inductance is of the order of magnitude of that of the terminals. They are particularly suited to sharp pulse work.

Design Information — The power ratings in Table I are for horizontal operation. When vertically operated, the dissipation may be safely increased by about 12%. Power ratings may be increased 4 times by forced air cooling.

TABLE 1

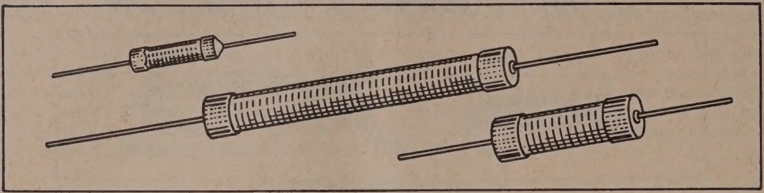
STYLE	RATED WATTS	OHMIC VALUES		Temperature Rise at Rated Load in Centigrade	Maximum Oper. Temperature in Centigrade
		Min.	Max.		
R 31	7	10	70,000	200	225
R 33	13	30	150,000	200	225
R 35	25	20	300,000	200	225
R 37	55	20	500,000	200	225
R 39	115	40	1,000,000	200	225

ELECTRONIC DISTRIBUTOR DIVISION

ERIE RESISTOR CORPORATION — ERIE, PA.

National Distributors of Corning Glass Works Electronic Components

CORNING FIXED FILM RESISTORS—TYPE S



CORNING S TYPE RESISTORS
Mil-R-11804C, Characteristic P

Corning S Type Resistors have been especially developed to meet the problems of reduced space and high ambient temperatures. These resistors are applicable in miniature power units, computers, missiles, aircraft instruments, and other circuits where weight or shelf life are important.

These Corning resistors may be used at full rating at 120° C ambient, or may be used at double rating at 40° C ambient for miniaturized power applications.

S Type Corning resistors are made by bonding a rugged metallic oxide film into the skin of Pyrex brand rod at red heat. This metallic oxide film is extremely stable, inherently impervious to moisture and unaffected by heat of soldering, repeated overloads, or normal production handling. Electronically controlled spiralling, assembly of end caps and leads, and application of high temperature silicone baked lacquer complete the resistor manufacture. Plastic standoff insulating sleeves over end caps and fungus-resistant coating per Mil-V-173A are available for special applications.

CHARACTERISTICS

Tolerance—Standard tolerances are 1, 2, 5, and 10%. Tolerance is calibrated at 25°C ambient.

Load Life—The average change in resistance after 1000 hours operation at rated dissipation is less than 0.35%. Load life change is guaranteed less than 1.0%.

Moisture Resistance—Corning S resistors more than meet the specifications for maximum resistance change of Mil-R-11804C.

Power Rating—Full rating at 120°C ambient. Double rating at 40°C ambient for miniaturized power applications. See derating curve.

Temperature Coefficient—The value of temperature coefficient in the range of −55°C to +235°C, referred to 25°C, is less than ±0.03% per °C.

Shelf Life—One year of aging shows less than 0.1% resistance change.

Noise—The magnitude of noise level is 0.1 microvolt per volt.

Short Time Overload—A standard 5 second overload of 10 times rated wattage causes a permanent resistance change of less than 1%.

Terminal Strength—Resistance changes due to military spec. terminal strength tests average less than 0.03%.

Hot Spot—Maximum hot spot temperature is 235°C.

Frequency Characteristic—Non-inductive up to and over 250mc even when spiraled. The capacitative component varies from 0.2 to 0.8 uuf.

Low Temperature Exposure—Average resistance change after operation at −65° C for 45 min. is 0.03% and is guaranteed less than 1.5%.

Effect of Solder—Average change due to normal soldering is 0.02% with maximum change less than 0.5%.

Voltage Coefficient—Voltage coefficient averages less than 0.001% per volt.

PHYSICAL CHARACTERISTICS

TYPE		RESISTANCE		WATTAGE		Voltage	DIMENSIONS		AXIAL TERMINALS	
MIL	CGW	Min.	Max.	120°C.	40°C.	Rating	Length	Diameter	A.W.G.	Length
RD60	S-20	10	500 K	½	1	350	19/32 ± 1/16″	11/64 ± 1/32″	20	1½ ± ⅛″
RD65	S-25	10	1.5 Meg.	1	2	500	15/16 ± 1/16″	19/64 ± 1/32″	20	1½ ± ⅛″
RD70	S-30	30	4.2 Meg.	2	4	750	2 1/16 ± 1/16″	19/64 ± .1/32″	20	1½ ± ⅛″

ELECTRONIC DISTRIBUTOR DIVISION

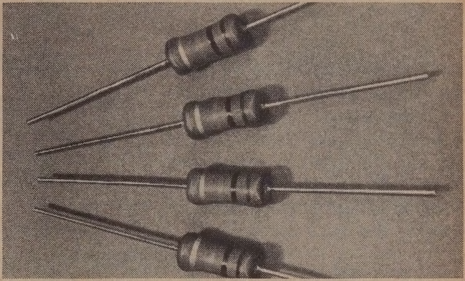
ERIE RESISTOR CORPORATION — ERIE, PA.

National Distributors of Corning Glass Works Electronic Components

CORNING TYPE C-42 RESISTORS

CORNING RESISTORS FOR CARBON COMPOSITION REPLACEMENT

- LOW COST
- LOW POWER
- METALLIC FILM



Corning's C-42 Resistors have been designed to replace the carbon composition resistor with a low cost, highly reliable metallic film resistor. C-42 Resistors should be considered for Radio, TV, and allied products, or where excellent thermal, frequency, and stability characteristics are needed for high quality-low cost applications.

At the heart of the C-42 you'll find a PYREX brand glass core which has been coated at red heat with a very thin film of metallic oxide. Automatic resistance spiralling of this film together with assembly of caps, axial leads, and silicone base insulation are all electronically controlled.

CHARACTERISTICS

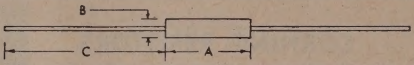
EFFECT OF SOLDERING	Average change due to normal soldering is 1/10% with maximum change of less than ½%. All leads hot tinned to facilitate soldering.
HUMIDITY	When tested as specified in MIL-R-11B, resistance change is 1% maximum.
INSULATION DIELECTRIC WITHSTANDING VOLTAGE	Withstands a "V" block test at 1000 V rms for 5 seconds.
LOAD LIFE	At rated load and ambient temperature, the average resistance change after 1000 hours is 3% and maximum change is 5%.
LOW TEMPERATURE EXPOSURE	Maximum resistance change after 24 hours at −63°C is ½%.
LOW TEMPERATURE OPERATION	Maximum resistance change at −55°C is 1%.
MARKING	Resistors are legibly and permanently color coded.
MOISTURE RESISTANCE	Resistance change is less than 3% after 240 hours of testing as specified in MIL-R-11B.
NOISE	The inherent noise level is less than 0.1 microvolt per volt.
OVERLOAD	Loaded to 2.5 times rated voltage for 5 seconds, the maximum resistance change is 1%.
SHELF LIFE	0.2% per year maximum change.
TEMPERATURE COEFFICIENT	Max. of 250 ppm measured between −55°C to 125°C from 25°C ambient.
TEMPERATURE CYCLING	1% maximum resistance change after cycling as specified in MIL-R-11B.
VOLTAGE COEFFICIENT	0.001% per volt.

C-42 PHYSICAL CHARACTERISTICS

Res. Range		Std. Tolerance	Length	Diameter	Leads (AWG)	Power Rating DC Ambient	Hot Spot Max. °C
Min.	Max.						
125 ohms	1.5 meg.	5%, 10%	11/16 ± 1/32″	.318″ nom. ±.018″	#17	2W 70°C	180

now, one source ELECTRA *offers you all of these precision resistors*

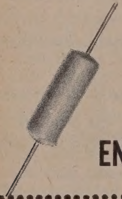
All Electra resistors are designed to meet or exceed Mil-R-10509C. Your request will bring complete specifications and characteristics on any or all types by return mail. For complete details, see your local representative, or write for catalog and price schedules.



DEPOSITED CARBON

Electra Part No.	Mil Style	Wattage	Mil Resistance Range	Manufactured Resistance Range	Maximum Rated Voltage	Length A ±1/32	Dia. B ±1/32	Leads Dia.	Lead Length C ±1/8
DC 1/10		1/10		10 ohms to 300 K	250	1/4	3/32	#22	1-1/2
DC 1/8		1/8		5 ohms 800 K	250	5/16	3/32	#26	1-1/2
DC 1/8X		1/8		100 ohms 1 meg	250	5/16	3/32	#22 capless	1-1/2
DC 1/4A	RN10X	1/4	5 ohms 1 meg	5 ohms 2 meg	300	15/32	3/32	#22	1-1/2
DC 1/4X		1/4		100 ohms 2 meg	300	7/16	1/8	#22 capless	1-1/2
DC 1/2C		1/2		3 ohms 4 meg	350	1/2	11/64	#20	1-1/2
DC 1/2A	RN20X	1/2	10 ohms 2.0 meg	4 ohms 5 meg	350	5/8	11/64	#20	1-1/2
DC 1/2B		1/2		10 ohms 5 meg	350	23/32	7/32	#20	1-1/2
DC 1/2		1/2		10 ohms 5 meg	500	13/16	11/64	#20	1-1/2
DC 1	RN25X	1	10 ohms 4.99 meg	8 ohms 26 meg	500	*15/16	19/64	#20	1-1/2
DC 2	RN30X	2	30 ohms 10 meg	15 ohms 90 meg	750	*2-1/16	19/64	#20	1-1/2

*Tol. ± 1/16



DEPOSITED CARBON PLASTIC ENCAPSULATED

						± .001	± .010		±1/8
DCM 1/10		1/10		10 ohms to 300 K	250	.260	.125	#22	1-1/2
DCM 1/8	RN60B	1/8	10 ohms 1 meg	4 ohms 3 meg	250	.410	.142	#22	1-1/2
DCM 1/4	RN65B	1/4	10 ohms 2 meg	5 ohms 7 meg	300	.600	.225	#22	1-1/2
DCM 1/2	RN70B	1/2	10 ohms 2.5 meg	4 ohms 8 meg	350	.755	.270	#20	1-1/2
DCM 1	RN75B	1	10 ohms 5.11 meg	5 ohms 28 meg	500	1.115	.400	#20	1-1/2
DCM 2	RN80B	2	30 ohms 10 meg	10 ohms 100 meg	750	*2.240	.400	#20	1-1/2

*Tol. ± .030

DEPOSITED CARBON HERMETICALLY SEALED

						± .001	± .010		±1/8
HC 40		1/8		8 ohms 1 meg	150	*.281	.160	#22	1-1/2
HC 10	RN60B	1/8	10 ohms 1 meg	8 ohms 1 meg	250	.427	.155	#22	1-1/2
HC 8	RN65B	1/4	10 ohms 2 meg	8 ohms 5 meg	300	**.640	.240	#22	1-1/2
HC 12	RN70B	1/2	10 ohms 2.5 meg	10 ohms 10 meg	350	.833	.250	#20	1-1/2
HC 6	RN75B	1	10 ohms 5.11 meg	8 ohms 25 meg	500	1.115	.400	#20	1-1/2
HC 7	RN80B	2	30 ohms 10 meg	20 ohms 50 meg	750	*2.240	.400	#20	1-1/2

*Tol. ± 1/32 ** ± .015

PRECISION CARBON FILM (HIGH TEMPERATURE)

CF 1/8	RN60B	1/8	10 ohms 1 meg	10 ohms 4 meg	250	.375 +1/16 −1/32	.125 +.040 −.010	#22	1-1/2 ±1/8
CF 1/4	RN65B	1/4	10 ohms 2 meg	5 ohms 12 meg	300	.625 +1/32 −1/16	.1875 +1/16 −1/32	#22	1-1/2 ±1/8
CF 1/2	RN70B	1/2	10 ohms 2.5 meg	5 ohms 12 meg	350	.750 +3/32 −1/16	.250 +1/32 −1/32	#20	1-1/2 ±1/8

PRECISION MOLDED METAL FILM

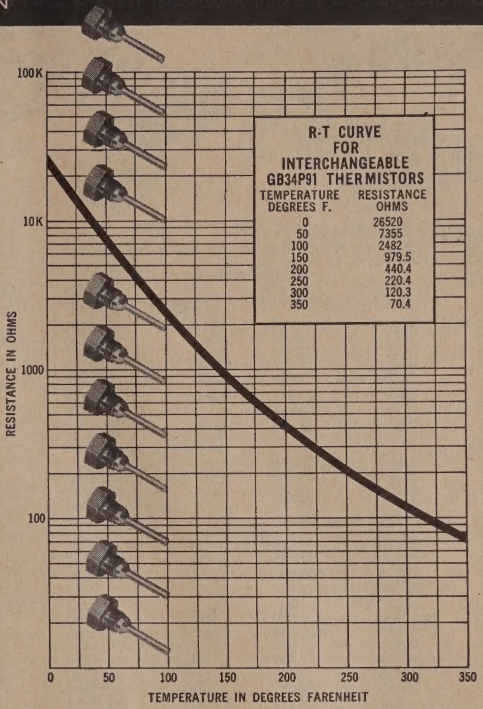
MF 1/8	RN60C	1/8	100 ohms 301 K	30 ohms 500 K	250	.406 ±.015	.135 ±.010	#22	1-1/2 ±1/8
MF 1/4	RN65C	1/4	100 ohms 499 K	50 ohms 1 meg	300	.594 ±.015	.210 ±.015	#22	1-1/2 ±1/8
MF 1/2	RN70C	1/2	100 ohms 1 meg	50 ohms 1.5 meg	350	.750 ±.020	.265 ±.015	#20	1-1/2 ±1/8
MF 1	RN75C	1	100 ohms 2 meg	50 ohms 4 meg	500	1.105 ±.020	.395 ±.020	#20	1-1/2 ±1/8
MF 2		2		100 ohms 10 meg	750	2.239 ±.020	.400 ±.020	#20	1-1/2 ±1/8

Electra MANUFACTURING COMPANY Kansas City, Mo.

BREAKTHROUGH! IN THERMISTOR DESIGN

Fenwal Electronics' new "identical" thermistors permit complete interchangeability! What do you need from a thermistor in the way of performance? Reliability? Extreme stability? High shock resistance? Long life? Fenwal Electronics can supply it. But Fenwal Electronics' thermistors provide an additional important characteristic all their own: **they can be supplied with identical resistance temperature curves.**

That means that now, for the first time, you can have complete interchangeability. It means you can rely absolutely on consistently accurate resistance changes versus temperature of Fenwal Electronics' thermistors. It means also you can now achieve accurate, multi-point temperature indication or control through a single system without having to calibrate out each individual sensor.

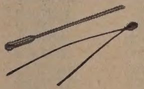


R-T CURVE FOR INTERCHANGEABLE GB34P91 THERMISTORS

TEMPERATURE DEGREES F.	RESISTANCE OHMS
0	26520
50	7355
100	2482
150	979.5
200	440.4
250	220.4
300	120.3
350	70.4

FROM FENWAL ELECTRONICS . . . THE MOST COMPLETE LINE OF PRECISION THERMISTORS

GLASS PROBES & BEADS



— 0.006" to 0.100" diameter. Resistance values: 500 ohms to 100 megohms

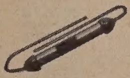
DISCS . . .

— 0.1" to 1" diameter. Resistance values: 5 ohms to 1,000 ohms

WASHERS . . .

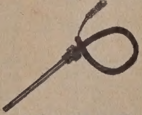
— .75" diameter. Resistance values: 5 ohms to 3000 ohms

RODS . . .



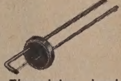
— 0.053" to 0.173" diameter varying lengths. Resistance values: 500 ohms to 500,000 ohms

PROBE Assemblies . . .



— Built to your specific requirements,* enclosed and mounted in individual housings or "packages" and ready to install

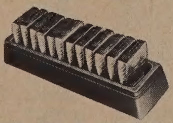
E-I Matched pairs



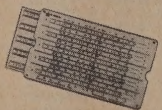
— Thermistor beads matched to voltage current characteristics and mounted on special hermetically sealed stems, designed for use in thermal conductivity gas analysis instruments.

FROM FENWAL ELECTRONICS . . . MORE HELP ON THERMISTOR PROBLEMS

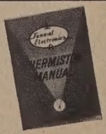
- Complete thermistor engineering service backed by 20 years field experience



- Thermistor Experimental Kit — to help you expedite operations at the bread board stage. Just $19.95 at electronics jobbers



- New Thermistor "Computer" — 5" X 8" "computer" reduces lengthy computations to single "slide rule" setting. Yours for the asking



- New Thermistor Catalog EMC-3

PROBES
Fenwal Electronics

- New Probe and Housing Brochure — Gives selection of probe designs

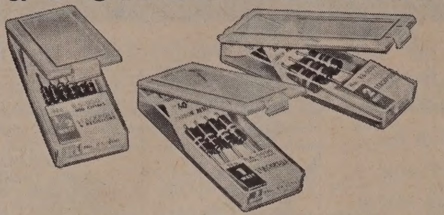
For complete information, or the name of the Fenwal Representative in your area, write:

Fenwal Electronics
FRAMINGHAM, MASSACHUSETTS

*Probes can be supplied individually calibrated at all desired temperatures. When interchangeability is required, they can be supplied with identical resistance-temperature characteristics.

GC ELECTRONICS

G-C STACKPOLE RESISTORS



RED ½ WATT
BLUE 1 WATT
GREEN 2 WATT

Packed in the exclusive self-service packs scientifically packaged to prevent bent leads. All popular sizes packed in handy storage re-usable clear plastic boxes. Boxes color coded for ease in selecting wattage. Also available in bulk quantities.

½ WATT PLASTIC BOX OF 6 $1.20 LIST PRICE (BULK 10% TOL.)

OHM Value	ORDER NUMBERS Box of 6 Part No.	Box of 6 IBM Code No.	Bulk Part No.	Bulk IBM Code No.
10	GS10	26-000	BS10	26-000BU
12	GS12	26-002	BS12	26-002BU
15	GS15	26-004	BS15	26-004BU
18	GS18	26-006	BS18	26-006BU
22	GS22	26-008	BS22	26-008BU
27	GS27	26-010	BS27	26-010BU
33	GS33	26-012	BS33	26-012BU
39	GS39	26-014	BS39	26-014BU
47	GS47	26-016	BS47	26-016BU
56	GS56	26-018	BS56	26-018BU
68	GS68	26-020	BS68	26-020BU
82	GS82	26-022	BS82	26-022BU
100	GS100	26-024	BS100	26-024BU
120	GS120	26-026	BS120	26-026BU
150	GS150	26-028	BS150	26-028BU
180	GS180	26-030	BS180	26-030BU
220	GS220	26-032	BS220	26-032BU
270	GS270	26-034	BS270	26-034BU
330	GS330	26-036	BS330	26-036BU
390	GS390	26-038	BS390	26-038BU
470	GS470	26-040	BS470	26-040BU
560	GS560	26-042	BS560	26-042BU
680	GS680	26-044	BS680	26-044BU
820	GS820	26-046	BS820	26-046BU
1000	GS1000	26-048	BS1000	26-048BU
1200	GS1200	26-050	BS1200	26-050BU
1500	GS1500	26-052	BS1500	26-052BU
1800	GS1800	26-054	BS1800	26-054BU
2200	GS2200	26-056	BS2200	26-056BU
2700	GS2700	26-058	BS2700	26-058BU
3300	GS3300	26-060	BS3300	26-060BU
3900	GS3900	26-062	BS3900	26-062BU
4700	GS4700	26-064	BS4700	26-064BU
5600	GS5600	26-066	BS5600	26-066BU
6800	GS6800	26-068	BS6800	26-068BU
8200	GS8200	26-070	BS8200	26-070BU
10000	GS10000	26-072	BS10000	26-072BU
12000	GS12000	26-074	BS12000	26-074BU
15000	GS15000	26-076	BS15000	26-076BU
18000	GS18000	26-078	BS18000	26-078BU
22000	GS22000	26-080	BS22000	26-080BU
27000	GS27000	26-082	BS27000	26-082BU
33000	GS33000	26-084	BS33000	26-084BU
39000	GS39000	26-086	BS39000	26-086BU
47000	GS47000	26-088	BS47000	26-088BU
56000	GS56000	26-090	BS56000	26-090BU
68000	GS68000	26-092	BS68000	26-092BU
82000	GS82000	26-094	BS82000	26-094BU
100000	GS100000	26-096	BS100000	26-096BU
120000	GS120000	26-098	BS120000	26-098BU
150000	GS150000	26-100	BS150000	26-100BU
180000	GS180000	26-102	BS180000	26-102BU
220000	GS220000	26-104	BS220000	26-104BU
270000	GS270000	26-106	BS270000	26-106BU
330000	GS330000	26-108	BS330000	26-108BU
390000	GS390000	26-110	BS390000	26-110BU
470000	GS470000	26-112	BS470000	26-112BU
560000	GS560000	26-114	BS560000	26-114BU
680000	GS680000	26-116	BS680000	26-116BU
820000	GS820000	26-118	BS820000	26-118BU
1.0 Meg.	GS 1.0 Meg.	26-120	BS 1.0 Meg.	26-120BU
1.2 Meg.	GS 1.2 Meg.	26-122	BS 1.2 Meg.	26-122BU
1.5 Meg.	GS 1.5 Meg.	26-124	BS 1.5 Meg.	26-124BU
1.8 Meg.	GS 1.8 Meg.	26-126	BS 1.8 Meg.	26-126BU
2.2 Meg.	GS 2.2 Meg.	26-128	BS 2.2 Meg.	26-128BU
2.7 Meg.	GS 2.7 Meg.	26-130	BS 2.7 Meg.	26-130BU
3.3 Meg.	GS 3.3 Meg.	26-132	BS 3.3 Meg.	26-132BU
3.9 Meg.	GS 3.9 Meg.	26-134	BS 3.9 Meg.	26-134BU
4.7 Meg.	GS 4.7 Meg.	26-136	BS 4.7 Meg.	26-136BU
5.6 Meg.	GS 5.6 Meg.	26-138	BS 5.6 Meg.	26-138BU
6.8 Meg.	GS 6.8 Meg.	26-140	BS 6.8 Meg.	26-140BU
8.2 Meg.	GS 8.2 Meg.	26-142	BS 8.2 Meg.	26-142BU
10.0 Meg.	GS 10.0 Meg.	26-144	BS 10.0 Meg.	26-144BU
12.0 Meg.	GS 12.0 Meg.	26-146	BS 12.0 Meg.	26-146BU
15.0 Meg.	GS 15.0 Meg.	26-148	BS 15.0 Meg.	26-148BU
18.0 Meg.	GS 18.0 Meg.	26-150	BS 18.0 Meg.	26-150BU
22.0 Meg.	GS 22.0 Meg.	26-152	BS 22.0 Meg.	26-152BU

1 WATT PLASTIC BOX OF 4 $1.20 LIST PRICE (BULK 10% TOL.)

OHM Value	ORDER NUMBERS Box of 4 Part No.	Box of 4 IBM Code No.	Bulk Part No.	Bulk IBM Code No.
10	GA10	26-200	BA10	26-200BU
12	GA12	26-202	BA12	26-202BU
15	GA15	26-204	BA15	26-204BU
18	GA18	26-206	BA18	26-206BU
22	GA22	26-208	BA22	26-208BU
27	GA27	26-210	BA27	26-210BU
33	GA33	26-212	BA33	26-212BU
39	GA39	26-214	BA39	26-214BU
47	GA47	26-216	BA47	26-216BU
56	GA56	26-218	BA56	26-218BU
68	GA68	26-220	BA68	26-220BU
82	GA82	26-222	BA82	26-222BU
100	GA100	26-224	BA100	26-224BU
120	GA120	26-226	BA120	26-226BU
150	GA150	26-228	BA150	26-228BU
180	GA180	26-230	BA180	26-230BU
220	GA220	26-232	BA220	26-232BU
270	GA270	26-234	BA270	26-234BU
330	GA330	26-236	BA330	26-236BU
390	GA390	26-238	BA390	26-238BU
470	GA470	26-240	BA470	26-240BU
560	GA560	26-242	BA560	26-242BU
680	GA680	26-244	BA680	26-244BU
820	GA820	26-246	BA820	26-246BU
1000	GA1000	26-248	BA1000	26-248BU
1200	GA1200	26-250	BA1200	26-250BU
1500	GA1500	26-252	BA1500	26-252BU
1800	GA1800	26-254	BA1800	26-254BU
2200	GA2200	26-256	BA2200	26-256BU
2700	GA2700	26-258	BA2700	26-258BU
3300	GA3300	26-260	BA3300	26-260BU
3900	GA3900	26-262	BA3900	26-262BU
4700	GA4700	26-264	BA4700	26-264BU
5600	GA5600	26-266	BA5600	26-266BU
6800	GA6800	26-268	BA6800	26-268BU
8200	GA8200	26-270	BA8200	26-270BU
10000	GA10000	26-272	BA10000	26-272BU
12000	GA12000	26-274	BA12000	26-274BU
15000	GA15000	26-276	BA15000	26-276BU
18000	GA18000	26-278	BA18000	26-278BU
22000	GA22000	26-280	BA22000	26-280BU
27000	GA27000	26-282	BA27000	26-282BU
33000	GA33000	26-284	BA33000	26-284BU
39000	GA39000	26-286	BA39000	26-286BU
47000	GA47000	26-288	BA47000	26-288BU
56000	GA56000	26-290	BA56000	26-290BU
68000	GA68000	26-292	BA68000	26-292BU
82000	GA82000	26-294	BA82000	26-294BU
100000	GA100000	26-296	BA100000	26-296BU
120000	GA120000	26-298	BA120000	26-298BU
150000	GA150000	26-300	BA150000	26-300BU
180000	GA180000	26-302	BA180000	26-302BU
220000	GA220000	26-304	BA220000	26-304BU
270000	GA270000	26-306	BA270000	26-306BU
330000	GA330000	26-308	BA330000	26-308BU
390000	GA390000	26-310	BA390000	26-310BU
470000	GA470000	26-312	BA470000	26-312BU
560000	GA560000	26-314	BA560000	26-314BU
680000	GA680000	26-316	BA680000	26-316BU
820000	GA820000	26-318	BA820000	26-318BU
1.0 Meg.	GA 1.0 Meg.	26-320	BA 1.0 Meg.	26-320BU
1.2 Meg.	GA 1.2 Meg.	26-322	BA 1.2 Meg.	26-322BU
1.5 Meg.	GA 1.5 Meg.	26-324	BA 1.5 Meg.	26-324BU
1.8 Meg.	GA 1.8 Meg.	26-326	BA 1.8 Meg.	26-326BU
2.2 Meg.	GA 2.2 Meg.	26-328	BA 2.2 Meg.	26-328BU
2.7 Meg.	GA 2.7 Meg.	26-330	BA 2.7 Meg.	26-330BU
3.3 Meg.	GA 3.3 Meg.	26-332	BA 3.3 Meg.	26-332BU
3.9 Meg.	GA 3.9 Meg.	26-334	BA 3.9 Meg.	26-334BU
4.7 Meg.	GA 4.7 Meg.	26-336	BA 4.7 Meg.	26-336BU
5.6 Meg.	GA 5.6 Meg.	26-338	BA 5.6 Meg.	26-338BU
6.8 Meg.	GA 6.8 Meg.	26-340	BA 6.8 Meg.	26-340BU
8.2 Meg.	GA 8.2 Meg.	26-342	BA 8.2 Meg.	26-342BU
10.0 Meg.	GA 10.0 Meg.	26-344	BA 10.0 Meg.	26-344BU
12.0 Meg.	GA 12.0 Meg.	26-346	BA 12.0 Meg.	26-346BU
15.0 Meg.	GA 15.0 Meg.	26-348	BA 15.0 Meg.	26-348BU
18.0 Meg.	GA 18.0 Meg.	26-350	BA 18.0 Meg.	26-350BU
22.0 Meg.	GA 22.0 Meg.	26-352	BA 22.0 Meg.	26-352BU

G-C STACKPOLE RESISTORS

GC ELECTRONICS

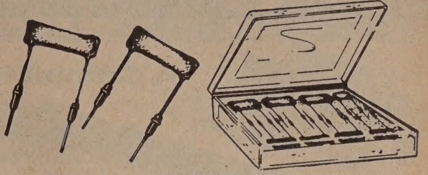
2 Watt

PLASTIC BOX OF 3
LIST PRICE 1.20
(BULK 10% TOL.)

ORDER NUMBERS

OHM Value	Box of 3 Part No.	Box of 3 IBM Code No.	Bulk Part No.	Bulk IBM Code No.
10	GB10	26-400	BB10	26-400BU
12	GB12	26-402	BB12	26-402BU
15	GB15	26-404	BB15	26-404BU
18	GB18	26-406	BB18	26-406BU
22	GB22	26-408	BB22	26-408BU
27	GB27	26-410	BB27	26-410BU
33	GB33	26-412	BB33	26-412BU
39	GB39	26-414	BB39	26-414BU
47	GB47	26-416	BB47	26-416BU
56	GB56	26-418	BB56	26-418BU
68	GB68	26-420	BB68	26-420BU
82	GB82	26-422	BB82	26-422BU
100	GB100	26-424	BB100	26-424BU
120	GB120	26-426	BB120	26-426BU
150	GB150	26-428	BB150	26-428BU
180	GB180	26-430	BB180	26-430BU
220	GB220	26-432	BB220	26-432BU
270	GB270	26-434	BB270	26-434BU
330	GB330	26-436	BB330	26-436BU
390	GB390	26-438	BB390	26-438BU
470	GB470	26-440	BB470	26-440BU
560	GB560	26-442	BB560	26-442BU
680	GB680	26-444	BB680	26-444BU
820	GB820	26-446	BB820	26-446BU
1000	GB1000	26-448	BB1000	26-448BU
1200	GB1200	26-450	BB1200	26-450BU
1500	GB1500	26-452	BB1500	26-452BU
1800	GB1800	26-454	BB1800	26-454BU
2200	GB2200	26-456	BB2200	26-456BU
2700	GB2700	26-458	BB2700	26-458BU
3300	GB3300	26-460	BB3300	26-460BU
3900	GB3900	26-462	BB3900	26-462BU
4700	GB4700	26-464	BB4700	26-464BU
5600	GB5600	26-466	BB5600	26-466BU
6800	GB6800	26-468	BB6800	26-468BU
8200	GB8200	26-470	BB8200	26-470BU
10000	GB10000	26-472	BB10000	26-472BU
12000	GB12000	26-474	BB12000	26-474BU
15000	GB15000	26-476	BB15000	26-476BU
18000	GB18000	26-478	BB18000	26-478BU
22000	GB22000	26-480	BB22000	26-480BU
27000	GB27000	26-482	BB27000	26-482BU
33000	GB33000	26-484	BB33000	26-484BU
39000	GB39000	26-486	BB39000	26-486BU
47000	GB47000	26-488	BB47000	26-488BU
56000	GB56000	26-490	BB56000	26-490BU
68000	GB68000	26-492	BB68000	26-492BU
82000	GB82000	26-494	BB82000	26-494BU
100000	GB100000	26-496	BB100000	26-496BU
120000	GB120000	26-498	BB120000	26-498BU
150000	GB150000	26-500	BB150000	26-500BU
180000	GB180000	26-502	BB180000	26-502BU
220000	GB220000	26-504	BB220000	26-504BU
270000	GB270000	26-506	BB270000	26-506BU
330000	GB330000	26-508	BB330000	26-508BU
390000	GB390000	26-510	BB390000	26-510BU
470000	GB470000	26-512	BB470000	26-512BU
560000	GB560000	26-514	BB560000	26-514BU
680000	GB680000	26-516	BB680000	26-516BU
820000	GB820000	26-518	BB820000	26-518BU
1.0 Meg.	GB 1.0 Meg.	26-520	BB 1.0 Meg.	26-520BU
1.2 Meg.	GB 1.2 Meg.	26-522	BB 1.2 Meg.	26-522BU
1.5 Meg.	GB 1.5 Meg.	26-524	BB 1.5 Meg.	26-524BU
1.8 Meg.	GB 1.8 Meg.	26-526	BB 1.8 Meg.	26-526BU
2.2 Meg.	GB 2.2 Meg.	26-528	BB 2.2 Meg.	26-528BU
2.7 Meg.	GB 2.7 Meg.	26-530	BB 2.7 Meg.	26-530BU
3.3 Meg.	GB 3.3 Meg.	26-532	BB 3.3 Meg.	26-532BU
3.9 Meg.	GB 3.9 Meg.	26-534	BB 3.9 Meg.	26-534BU
4.7 Meg.	GB 4.7 Meg.	26-536	BB 4.7 Meg.	26-536BU
5.6 Meg.	GB 5.6 Meg.	26-538	BB 5.6 Meg.	26-538BU
6.8 Meg.	GB 6.8 Meg.	26-540	BB 6.8 Meg.	26-540BU
8.2 Meg.	GB 8.2 Meg.	26-542	BB 8.2 Meg.	26-542BU
10.0 Meg.	GB 10.0 Meg.	26-544	BB 10.0 Meg.	26-544BU
12.0 Meg.	GB 12.0 Meg.	26-546	BB 12.0 Meg.	26-546BU
15.0 Meg.	GB 15.0 Meg.	26-548	BB 15.0 Meg.	26-548BU
18.0 Meg.	GB 18.0 Meg.	26-550	BB 18.0 Meg.	26-550BU
22.0 Meg.	GB 22.0 Meg.	26-552	BB 22.0 Meg.	26-552BU

SEND FOR FREE CATALOG

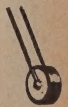


GC 5 WATT FUSE RESISTORS

INDIVIDUALLY PACKED OR HANDY KITS

Replacement For	Part Number		List Price
RCA, Philco, Truetone, Westinghouse, Western Auto, Gamble-Skogmo	25-980	4.7 ohm fuse resistor Each	$. .65
	25-980-D	Standard Pack Display of 20	13.00
	25-996-1	Kit of 10 each of 4.7 ohm fuse resistors in plastic box	3.30
Magnavox, Muntz, Sears, Travler, Hallicrafters, Motorola	25-982	5 ohm fuse resistor Each	$ .65
	25-982-D	Standard Pack Display of 20	13.00
	25-996-2	Kit of 10 each of 5 ohm fuse resistors in plastic box	3.30
Arvin, Western Auto, Bendix, Muntz, Montgomery Ward, Sylvania, Sonora, RCA, Philco, Raytheon	25-984	5.6 ohm fuse resistor Each	$ .65
	25-984-D	Standard Pack Display of 20	13.00
	25-996-3	Kit of 10 each of 5 ohm fuse resistors in plastic box	3.30
Zenith	25-986	6 ohm fuse resistor Each	$ .65
	25-986-D	Standard Pack Display of 20	13.00
	25-996-4	Kit of 10 each of 6 ohm fuse resistors in plastic box	3.30
Admiral, Crosley, Zenith, Sears, Westinghouse, Sylvania, Sentinel, Philco, Emerson, Olympic, Hallicrafters, Motorola, Hoffman, Magnavox, Majestic	25-988	7.5 ohm fuse resistor Each	$ .65
	25-988-D	Standard Pack Display of 20	13.00
	25-996-5	Kit of 10 each of 7.5 ohm fuse resistors in plastic box	3.30
Firestone, Western Auto, Muntz, Gamble-Skogmo, Raytheon, Montgomery Ward	25-990	9 ohm fuse resistor Each	$ .65
	25-990-D	Standard Pack Display of 20	13.00
	25-996-6	Kit of 10 each of 9 ohm fuse resistors in plastic box	3.30
Admiral	25-992	10 ohm fuse resistor Each	$ .65
	25-992-D	Standard Pack Display of 20	13.00
	25-996-7	Kit of 10 each of 10 ohm fuse resistors in plastic box	3.30
Admiral, Motorola, Stromberg-Carlson	25-994	22 ohm fuse resistor Each	$ .65
	25-994-D	Standard Pack Display of 20	13.00
	25-996-8	Kit of 10 each of 22 ohm fuse resistors in plastic box	3.30
	25-996	Kit of 10 assorted fuse resistors in plastic box contains: 6 — 7.5 ohm 1 — 5.6 ohm 1 — 4.7 ohm 1 — 9 ohm 1 — 22 ohm	3.30

GC GLO-BAR THERMISTORS

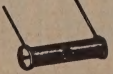


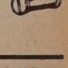
Resistance—Hot—20 ohms at 600 M. A. Cold—250 ohms—No load. Used on G.E. No. RRW051.

Cat. No. 25-912 9214 List $ 1.50
25-912-D 9214-D Disp. 20
Std. Pack 20 30.00

Resistance—50 ohms—Hot—150 M. A. Used on Philco Part No. 33-1343-3. Used in Over 40 models of Philco AC-DC Radios.

Cat. No. 25-922-9266 List $ 1.20
25-922-D 9266-D Disp. 20
Std. Pack 20 24.00





6 ohms—Hot. Used on Motorola Part 6B 744326.

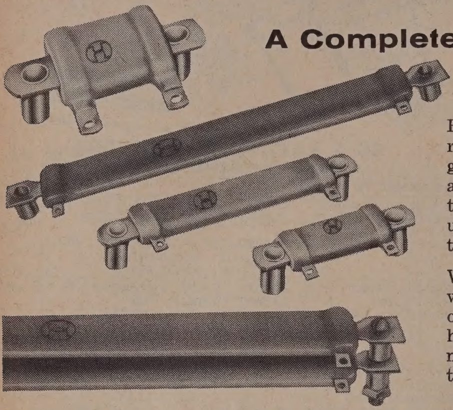
Cat. No. 25-932 None. List $ 1.65
25-932-D None. Disp. 20
Std. Pack 20 33.00

19 ohms—Hot. Used on Motorola Part 6R 720260.

Cat. No. 25-934 None List $ 1.50
25-934-D None. Disp. 20
Std. Pack 20 30.00

"Gray Line"

HARDWICK, HINDLE • INC
BLUE RIBBON RESISTORS



A Complete Line of Flat and Stack Mounting Power Resistors

Blue Ribbon wire-wound power resistors are made of quality materials with matched coefficients of expansion and are covered by H-H gray vitreous enamel for complete protection against environment and overload. The aluminum through bracket improves heat dissipation, minimizes hot spots, and allows a higher wattage rating per unit of space. Bracket construction facilitates stacking and adds additional space saving.

When BR resistors are stack mounted they must be derated to keep within rated operating temperatures. Watt ratings shown are based on the use of a steel panel 10 inches square x .040 thick supported horizontally. For non-metallic panels reduce rating 15%. When mounted as described in an ambient temperature not exceeding 40°C the maximum temperature rise of the resistor will not exceed 300°C.

10 WATT Type ¾ BRS-37 Mounting Centers 1″			
STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
B350	5	1.41	$ .92
B351	10	1.00	.92
B352	15	.82	.92
B353	25	.63	.92
B354	50	.45	.92
B355	100	.32	.92
B356	150	.26	.92
B357	250	.20	.92
B358	500	.14	.92
B359	1000	.10	.92
B360	1500	.081	.92
B361	2500	.063	.92
B362	5000	.045	.98
B363	10000	.032	1.03
B364	15000	.026	1.05

15 WATT Type 1 BRS-37 Mounting Centers 1¼″			
STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
B401	5	1.73	$ .97
B402	10	1.22	.97
B403	15	1.00	.97
B404	25	.78	.97
B405	50	.55	.97
B406	100	.39	.97
B407	150	.32	.97
B408	250	.25	.97
B409	500	.17	.97
B410	1000	.12	.97
B411	1500	.10	.97
B412	2500	.078	.97
B413	5000	.055	1.00
B414	10000	.039	1.04
B415	15000	.032	1.11
B416	20000	.027	1.15
B417	25000	.025	1.20

20 WATT Type 2 BRS-37 Mounting Centers 2⁵⁄₁₆″			
STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
B450	5	2.00	$ .99
B451	10	1.41	.99
B452	15	1.16	.99
B453	25	.89	.99
B454	50	.63	.99
B455	100	.45	.99
B456	150	.36	.99
B457	250	.28	.99
B458	500	.20	.99
B459	1000	.14	.99
B460	1500	.12	.99
B461	2500	.089	.99
B462	5000	.063	1.04
B463	10000	.045	1.16
B464	15000	.036	1.20
B465	20000	.032	1.26
B466	25000	.028	1.33
B467	50000	.020	1.44

20 WATT Type 1 BRM-37 Mounting Centers 1⁵⁄₁₆″			
STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
B501	5	2.00	$ .96
B502	10	1.41	.96
B503	15	1.16	.96
B504	25	.89	.96
B505	50	.63	.96
B506	100	.45	.96
B507	150	.36	.96
B508	250	.28	.96
B509	500	.20	.96
B510	1000	.14	.96
B511	1500	.12	.96
B512	2500	.089	.96
B513	5000	.063	.98
B514	8000	.050	1.04

30 WATT Type 1½ BRM-37 Mounting Centers 1¹³⁄₁₆″			
STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
B550	5	2.46	$ .98
B551	10	1.73	.98
B552	15	1.42	.98
B553	25	1.10	.98
B554	50	.77	.98
B555	100	.55	.98
B556	150	.45	.98
B557	250	.35	.98
B558	500	.25	.98
B559	1000	.17	.98
B560	1500	.14	.98
B561	2500	.11	.98
B562	5000	.076	1.04
B563	10000	.049	1.15
B564	15000	.045	1.19

When Resistors are mounted on a non-metallic base the nominal watt rating should be reduced by approximately 15%.

30 WATT Type 1¼″ BR-37 Mounting Centers 2″			
STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
B101	5	2.46	$1.28
B102	10	1.73	1.28
B103	15	1.42	1.28
B104	25	1.10	1.28
B105	50	.77	1.28
B106	100	.55	1.28
B107	150	.45	1.28
B108	250	.35	1.28
B109	500	.25	1.28
B110	1000	.17	1.28
B111	1500	.14	1.28
B112	2500	.11	1.28
B113	5000	.076	1.37
B114	10000	.049	1.48

40 WATT Type 2″ BR-37 Mounting Centers 2¾″			
STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
B201	5	2.83	$1.32
B202	10	2.00	1.32
B203	15	1.63	1.32
B204	25	1.26	1.32
B205	50	.89	1.32
B206	100	.63	1.32
B207	150	.52	1.32
B208	250	.40	1.32
B209	500	.28	1.32
B210	1000	.20	1.32
B211	1500	.16	1.32
B212	2500	.13	1.32
B213	5000	.089	1.43
B214	10000	.063	1.60
B215	15000	.045	1.67

55 WATT Type 3½″ BR-37 Mounting Centers 4¼″			
STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
B301	5	3.32	$1.53
B302	10	2.34	1.53
B303	15	1.92	1.53
B304	25	1.48	1.53
B305	50	1.05	1.53
B306	100	.74	1.53
B307	150	.61	1.53
B308	250	.47	1.53
B309	500	.33	1.53
B310	1000	.23	1.53
B311	1500	.19	1.53
B312	2500	.15	1.53
B313	5000	.10	1.63
B314	10000	.074	1.79
B315	15000	.061	1.87
B316	25000	.047	2.05

75 WATT Type 6″ BR-37 Mounting Centers 6¾″			
STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
B601	5	3.87	$1.93
B602	10	2.74	1.93
B603	15	2.24	1.93
B604	25	1.73	1.93
B605	50	1.22	1.93
B606	100	.86	1.93
B607	150	.71	1.93
B608	250	.55	1.93
B609	500	.39	1.93
B610	1000	.27	1.93
B611	1500	.22	1.93
B612	2500	.17	1.93
B613	5000	.12	2.00
B614	10000	.086	2.16
B615	15000	.070	2.24
B616	25000	.054	2.43
B617	50000	.033	2.60

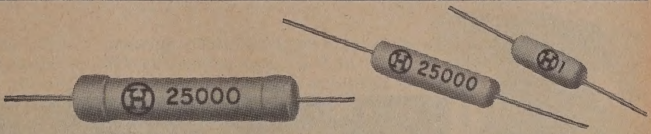
Adjustable resistors with a bare edge can be furnished for obtaining intermediate resistance values. Standard tolerance ±5% on all stock units. Tapped units and closer tolerances to 1% available.

Specify short stud on BRS for unit mounting if height is at a premium.

Packaged one unit per box. Made in accordance with MIL-R-26C.

HARDWICK, HINDLE · INC AXIAL-LEAD RESISTORS

The Quality
INDUSTRIAL LINE
since 1924



The "free air" wattage ratings of these axial lead resistors are based on a hot spot temperature rise of 300°C. (540°F.) in an ambient temperature not exceeding 40°C. (104°F.). These are the finest quality vitreous enameled wire-wound resistors made with application-tested parts and employing precision assembly. Since parts have matched heat expansion, crazing and cracks are eliminated. All welded construction.

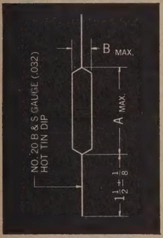
Standard Sizes:

Resistor Type	Tube Dimensions A	Tube Dimensions B	Watt Rating Nominal	Recommended Resist. Range Min. ohms	Recommended Resist. Range Max. ohms
9/16 GA	9/16"	1/4"	3 Watts	1	10,000
1 WA	1"	11/32"	5 Watts	1	25,000
1¾ ZA	1¾"	13/32"	10 Watts	1	50,000

Standard tolerance is ±5% for all stock units.

3 WATT SIZE — Type 9/16 EA — 9/16" long x 1/4" o.d.

STOCK NO.	OHMS	MAX. AMPS.	NET PRICE	STOCK NO.	OHMS	MAX. AMPS.	NET PRICE	STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
701	1.0	1.73	$ .59	719	125	.155	$ .59	737	1250	.049	$ .62
702	1.5	1.41	.59	720	150	.141	.59	738	1500	.045	.62
703	2.0	1.22	.59	721	200	.122	.59	739	1750	.041	.62
704	3.0	1.00	.59	722	225	.115	.59	740	2000	.039	.62
705	4.0	.86	.59	723	250	.109	.59	741	2250	.036	.62
706	5.0	.78	.59	724	300	.1	.59	742	2500	.035	.62
707	7.5	.63	.59	725	350	.093	.59	743	3000	.032	.62
708	10	.55	.59	726	400	.087	.59	744	3500	.029	.62
709	12	.50	.59	727	450	.082	.59	745	4000	.027	.62
710	15	.45	.59	728	500	.078	.59	746	4500	.026	.62
711	20	.39	.59	729	600	.071	.59	747	5000	.025	.62
712	25	.35	.59	730	700	.065	.59	748	6000	.022	.66
713	30	.32	.59	731	750	.063	.59	749	7000	.020	.66
714	35	.285	.59	732	800	.061	.59	750	7500	.020	.66
715	40	.274	.59	733	900	.058	.59	751	8000	.019	.66
716	50	.245	.59	734	1000	.055	.59	752	9000	.018	.66
717	75	.200	.59	735	1100	.052	.62	753	10000	.017	.66
718	100	.173	.59	736	1200	.050	.62				



Made in accordance with MIL-R-26. Packaged 10 units per box.

5 WATT SIZE — Type 1 WA — 1" long x 11/32" o.d.

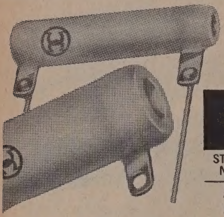
STOCK NO.	OHMS	MAX. AMPS.	NET PRICE	STOCK NO.	OHMS	MAX. AMPS.	NET PRICE	STOCK NO.	OHMS	MAX. AMPS.	NET PRICE	STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
801	1.0	2.23	$ .62	816	50	.316	$ .62	831	750	.081	$ .62	846	4500	.033	$ .66
802	1.5	1.82	.62	817	75	.258	.62	832	800	.079	.62	847	5000	.032	.66
803	2.0	1.58	.62	818	100	.224	.62	833	900	.074	.62	848	6000	.029	.70
804	3.0	1.29	.62	819	125	.200	.62	834	1000	.070	.62	849	7000	.027	.70
805	4.0	1.12	.62	820	150	.182	.62	835	1100	.067	.66	850	7500	.026	.70
806	5.0	1.0	.62	821	200	.158	.62	836	1200	.064	.66	851	8000	.025	.70
807	7.5	.818	.62	822	225	.149	.62	837	1250	.063	.66	852	9000	.024	.70
808	10	.7	.62	823	250	.141	.62	838	1500	.057	.66	853	10000	.022	.70
809	12	.645	.62	824	300	.129	.62	839	1750	.053	.66	854	12500	.020	.78
810	15	.575	.62	825	350	.120	.62	840	2000	.050	.66	855	15000	.018	.78
811	20	.500	.62	826	400	.112	.62	841	2250	.047	.66	856	17500	.017	.78
812	25	.447	.62	827	450	.105	.62	842	2500	.045	.66	857	18000	.017	.78
813	30	.408	.62	828	500	.100	.62	843	3000	.041	.66	858	20000	.016	.78
814	35	.378	.62	829	600	.091	.62	844	3500	.037	.66	859	22500	.015	.82
815	40	.353	.62	830	700	.084	.62	845	4000	.035	.66	860	25000	.014	.82

10 WATT SIZE — Type 1¾ ZA — 1¾" long x 13/32" o.d.

STOCK NO.	OHMS	MAX. AMPS.	NET PRICE	STOCK NO.	OHMS	MAX. AMPS.	NET PRICE	STOCK NO.	OHMS	MAX. AMPS.	NET PRICE	STOCK NO.	OHMS	MAX. AMPS.	NET PRICE	STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
901	1.0	3.16	$ .95	915	40	.5	$ .68	929	600	.129	$ .68	943	3000	.057	$ .73	957	12500	.028	$ .95
902	1.5	2.58	.95	916	50	.447	.68	930	700	.119	.68	944	3500	.053	.73	958	13500	.027	.95
903	2.0	2.235	.95	917	75	.365	.68	931	750	.115	.68	945	4000	.050	.73	959	15000	.026	.95
904	3.0	1.825	.68	918	100	.316	.68	932	800	.111	.68	946	4500	.047	.73	960	16000	.025	.95
905	4.0	1.58	.68	919	125	.283	.68	933	900	.105	.68	947	5000	.045	.73	961	17500	.024	.95
906	5.0	1.414	.68	920	150	.258	.68	934	1000	.100	.68	948	6000	.041	.84	962	18000	.023	.95
907	7.5	1.155	.68	921	200	.223	.68	935	1100	.095	.73	949	7000	.038	.84	963	20000	.022	.95
908	10	1	.68	922	225	.217	.68	936	1200	.091	.73	950	7500	.036	.84	964	22500	.021	1.00
909	12	.910	.68	923	250	.200	.68	937	1250	.089	.73	951	8000	.035	.84	965	25000	.020	1.00
910	15	.816	.68	924	300	.182	.68	938	1500	.081	.73	952	8500	.034	.84	966	30000	.018	1.00
911	20	.707	.68	925	350	.169	.68	939	1750	.075	.73	953	9000	.033	.84	967	35000	.017	1.00
912	25	.632	.68	926	400	.158	.68	940	2000	.071	.73	954	10000	.032	.84	968	40000	.016	1.00
913	30	.575	.68	927	450	.149	.68	941	2250	.066	.73	955	11000	.030	.95	969	45000	.015	1.12
914	35	.535	.68	928	500	.141	.68	942	2500	.063	.73	956	12000	.029	.95	970	50000	.014	1.12

"Gray Line"

HARDWICK, HINDLE · INC
FIXED RESISTORS



Vitreous Enameled Construction

Eight stock sizes of Hardwick, Hindle fixed resistors provide an exceptionally wide choice of resistance values to meet varied applications. Ratings are in accordance with NEMA standards, being based on a temperature rise of 300°C in free air. Data on types, sizes and values not included here, and on fixed resistors with intermediate taps, special mountings, modified terminals, etc. will be furnished on request. All stock sizes are supplied complete with mounting brackets.

5 WATT
Type 1Z-34
1" long x 5/16" o.d.

STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
A1	1	2.23	$ .57
A2	3	1.29	.57
A3	5	1.00	.57
A4	7.5	.81	.57
A5	10	.71	.57
A6	15	.58	.57
A7	25	.45	.57
A8	50	.32	.57
A9	75	.26	.57
A10	100	.22	.57
A11	150	.18	.57
A12	200	.16	.57
A13	250	.14	.57
A14	400	.11	.57
A15	500	.10	.57
A16	750	.082	.57
A17	1000	.070	.57
A18	1250	.063	.61
A19	1500	.057	.61
A20	2000	.050	.61
A21	2500	.045	.61
A22	3000	.041	.61
A23	4000	.035	.61
A24	5000	.032	.61
A25	7500	.026	.58
A26	10000	.022	.58
A27	12500	.020	.65
A28	15000	.018	.65
A29	20000	.016	.65
A30	25000	.013	.68

10 WATT
Type 1¾Z-34
1¾" long x 5/16" o.d.

STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
A101	1	3.16	$ .57
A102	3	1.83	.57
A103	5	1.41	.57
A104	7.5	1.16	.57
A105	10	1.00	.57
A106	15	.82	.57
A107	25	.63	.57
A108	50	.45	.57
A109	75	.37	.57
A110	100	.32	.57
A111	150	.26	.57
A112	200	.22	.57
A113	250	.20	.57
A114	400	.16	.57
A115	500	.14	.57
A116	750	.12	.57
A117	1000	.10	.57
A118	1250	.089	.61
A119	1500	.081	.61
A120	2000	.071	.61
A121	2500	.063	.61
A122	3000	.057	.61
A123	4000	.050	.61
A124	5000	.045	.61
A125	7500	.036	.70
A126	10000	.032	.70
A127	12500	.028	.79
A128	15000	.026	.79
A129	20000	.022	.79
A130	25000	.020	.83

20 WATT
Type 2H-34
2" long x 7/16" o.d.

STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
A201	5	2.00	$ .68
A202	10	1.41	.68
A203	25	.89	.68
A204	50	.63	.68
A205	75	.52	.68
A206	100	.45	.68
A207	150	.36	.68
A208	200	.32	.68
A209	250	.28	.68
A210	400	.22	.68
A211	500	.20	.68
A212	750	.16	.68
A213	1000	.14	.68
A214	1250	.13	.70
A215	1500	.12	.70
A216	2000	.10	.70
A217	2500	.089	.70
A218	3000	.081	.70
A219	4000	.070	.70
A220	5000	.063	.70
A221	6000	.057	.83
A222	7500	.051	.83
A223	10000	.043	.83
A224	12500	.035	.85
A225	15000	.032	.85
A226	25000	.024	.99
A227	35000	.021	.99
A228	40000	.019	.99
A229	50000	.017	1.15

25 WATT
Type 2JX-35
2" long x 9/16" o.d.

STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
1001	5	2.24	$ .72
1002	10	1.58	.72
1003	25	1.00	.72
1004	50	.71	.72
1005	75	.58	.72
1006	100	.50	.72
1007	150	.41	.72
1008	200	.35	.72
1009	250	.32	.72
1010	500	.22	.72
1011	750	.18	.72
1012	1000	.16	.72
1013	1500	.13	.75
1014	2000	.12	.75
1015	2500	.10	.75
1016	3000	.091	.75
1017	3500	.084	.75
1018	4000	.079	.75
1019	5000	.070	.75
1020	6000	.064	.85
1021	7500	.057	.85
1022	10000	.050	.85
1023	12000	.042	.90
1024	15000	.036	.90
1025	20000	.031	.90
1026	25000	.028	1.04

5, 10 and 20 watts sizes packaged 10 units per box;
25 through 200 watt sizes packaged one unit per box.

50 WATT
Type 4JX-35
4" long x 9/16" o.d.
Mounting Centers 4¾"

STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
2000	1	7.07	$1.55
2001	5	3.16	1.11
2002	10	2.23	1.11
2003	25	1.41	1.11
2004	50	1.00	1.11
2005	75	.82	1.11
2006	100	.71	1.11
2007	150	.58	1.11
2008	200	.50	1.11
2009	250	.45	1.11
2010	500	.32	1.11
2011	750	.26	1.11
2012	1000	.22	1.11
2013	1500	.18	1.14
2014	2000	.16	1.14
2015	2500	.14	1.14
2016	3000	.13	1.14
2017	4000	.11	1.14
2018	5000	.10	1.14
2019	7500	.081	1.23
2020	10000	.071	1.23
2021	12000	.064	1.35
2022	15000	.057	1.35
2023	20000	.050	1.35
2024	25000	.045	1.54
2025	35000	.032	1.54
2026	50000	.026	1.72

100 WATT
Type 6½L-35
6½" long x ¾" o.d.
Mounting Centers 7⅜"

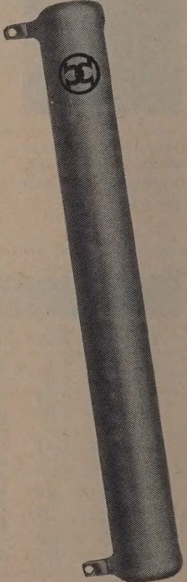
STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
3000	1	10.00	$2.16
3001	3	5.77	2.16
3002	5	4.47	1.54
3003	10	3.16	1.54
3004	25	2.00	1.54
3005	50	1.41	1.54
3006	75	1.15	1.54
3007	100	1.00	1.54
3008	250	.63	1.54
3009	500	.45	1.54
3010	1000	.32	1.54
3011	1500	.26	1.60
3012	2000	.22	1.60
3013	2500	.20	1.60
3014	3000	.18	1.60
3015	4000	.16	1.60
3016	5000	.14	1.60
3017	7500	.12	1.73
3018	10000	.10	1.73
3019	15000	.081	1.87
3020	20000	.071	1.87
3021	25000	.063	2.13
3022	30000	.058	2.13
3023	35000	.054	2.13
3024	40000	.050	2.13
3025	50000	.045	2.21
3026	60000	.041	2.21
3027	75000	.032	2.45

160 WATT
Type 8½FX-57
8½" long x 1⅛" o.d.
Mounting Centers 9⅜"

STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
4001	5	5.66	$3.19
4002	10	4.00	2.28
4003	25	2.53	2.28
4004	50	1.79	2.28
4005	75	1.46	2.28
4006	100	1.26	2.28
4007	150	1.03	2.28
4008	250	.80	2.28
4009	500	.57	2.28
4010	750	.46	2.28
4011	1000	.40	2.28
4012	1500	.33	2.32
4013	2000	.28	2.32
4014	2500	.25	2.32
4015	3000	.23	2.32
4016	5000	.18	2.32
4017	7500	.15	2.53
4018	10000	.13	2.53
4019	15000	.10	2.71
4020	20000	.089	2.71
4021	25000	.080	2.80
4022	30000	.073	2.80
4023	40000	.063	2.80
4024	50000	.057	2.89
4025	75000	.046	3.08
4026	100000	.040	3.26

200 WATT
Type 10½FX-57
10½" long x 1⅛" o.d.
Mounting Centers 11⅜"

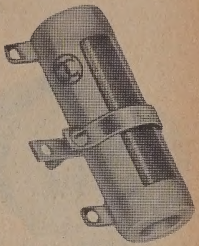
STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
5001	5	6.32	$3.44
5002	10	4.47	2.46
5003	25	2.83	2.46
5004	50	2.00	2.46
5005	75	1.64	2.46
5006	100	1.41	2.46
5007	150	1.15	2.46
5008	250	.89	2.46
5009	500	.63	2.46
5010	750	.52	2.46
5011	1000	.45	2.46
5012	1500	.37	2.53
5013	2000	.32	2.53
5014	2500	.28	2.53
5015	3000	.26	2.53
5016	5000	.20	2.53
5017	7500	.16	2.71
5018	10000	.14	2.71
5019	15000	.12	2.89
5020	20000	.10	2.89
5021	25000	.089	2.98
5022	30000	.082	2.98
5023	40000	.071	2.98
5024	50000	.063	3.08
5025	75000	.052	3.26
5026	100000	.045	3.46



HARDWICK, HINDLE · INC
ADJUSTABLE RESISTORS

The Quality
INDUSTRIAL LINE
since 1924

This resistor, embodying features originated by Hardwick, Hindle possesses the many advantages of Vitreous Enamel Construction, plus an adjustable feature. The winding is closely and evenly spaced, assuring ample insulation between turns. Where winding is exposed in the track, its underside is tightly embedded in the enamel, the upper surface only being exposed for contact with adjustable band.



10 WATT—Type K-10
1¾" long x 5/16" o.d.
Mounting Centers 2 3/16"
Terminal 37

STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
C10	1	3.16	$1.14
C11	3	1.83	1.14
C12	5	1.41	1.14
C13	7.5	1.16	1.14
C14	10	1.00	1.14
C15	25	.82	1.14
C16	50	.63	1.14
C17	75	.45	1.14
C18	100	.32	1.14
C19	150	.26	1.14
C20	200	.22	1.14
C21	250	.20	1.14
C22	400	.16	1.14
C23	500	.14	1.14
C24	750	.12	1.14
C25	1000	.10	1.14
C26	1250	.089	1.18
C27	1500	.081	1.18
C28	2000	.071	1.18
C29	2500	.063	1.18
C30	3000	.057	1.18
C31	4000	.050	1.18
C32	5000	.045	1.18
C33	7500	.036	1.27
C34	10000	.032	1.27

25 WATT—Type K-25
2" long x 9/16" o.d.
Mounting Center 2¾"
Terminal 35

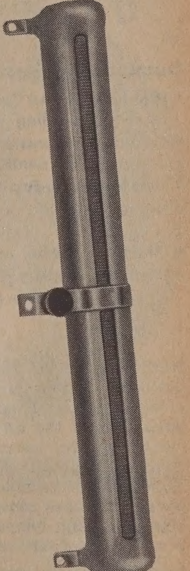
STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
6001	1	5.00	$1.29
6002	2	3.54	1.29
6003	3	2.88	1.29
6004	5	2.24	1.29
6005	10	1.58	1.29
6006	20	1.12	1.29
6007	25	1.00	1.29
6008	50	.71	1.29
6009	75	.58	1.29
6010	100	.50	1.29
6011	200	.35	1.29
6012	300	.29	1.29
6013	400	.25	1.29
6014	500	.22	1.29
6015	750	.18	1.29
6016	800	.17	1.29
6017	1000	.16	1.29
6018	1250	.14	1.32
6019	1500	.13	1.32
6020	2000	.12	1.32
6021	2500	.10	1.32
6022	3000	.091	1.32
6023	3500	.084	1.32
6024	4000	.079	1.32
6025	5000	.070	1.32
6026	6000	.064	1.42
6027	7000	.060	1.42
6028	8000	.055	1.42
6029	10000	.050	1.42
6030	15000	.036	1.47
6031	20000	.031	1.47
6032	25000	.028	1.61

50 WATT—Type K-50
4" long x 9/16" o.d.
Mounting Center 4¾"
Terminal 35

STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
7001	5	3.16	$1.68
7002	10	2.23	1.68
7003	25	1.41	1.68
7004	50	1.00	1.68
7005	75	.82	1.68
7006	100	.71	1.68
7007	200	.50	1.68
7008	250	.45	1.68
7009	300	.41	1.68
7010	400	.35	1.68
7011	500	.32	1.68
7012	750	.26	1.68
7013	800	.25	1.68
7014	1000	.22	1.68
7015	1500	.18	1.71
7016	2000	.16	1.71
7017	2500	.14	1.71
7018	3000	.13	1.71
7019	4000	.11	1.71
7020	5000	.10	1.71
7021	6000	.091	1.80
7022	7000	.084	1.80
7023	7500	.081	1.80
7024	8000	.079	1.80
7025	9000	.074	1.80
7026	10000	.071	1.80
7027	12000	.064	1.92
7028	15000	.057	1.92
7029	20000	.050	1.92
7030	25000	.045	2.11
7031	30000	.036	2.11
7032	40000	.029	2.11
7033	50000	.026	2.29

75 WATT—Type K-75
6" long x 9/16" o.d.
Mounting Centers 6¾"
Terminal 35

STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
8001	5	3.87	$1.87
8002	10	2.74	1.87
8003	15	2.24	1.87
8004	25	1.73	1.87
8005	50	1.22	1.87
8006	100	.86	1.87
8007	200	.61	1.87
8008	300	.50	1.87
8009	400	.43	1.87
8010	500	.39	1.87
8011	750	.32	1.87
8012	1000	.27	1.87
8013	1500	.22	1.92
8014	2000	.19	1.92
8015	2500	.17	1.92
8016	3000	.16	1.92
8017	4000	.14	1.92
8018	5000	.12	1.92
8019	6000	.11	2.01
8020	7000	.10	2.01
8021	7500	.10	2.01
8022	10000	.086	2.01
8023	15000	.070	2.13
8024	20000	.061	2.13
8025	25000	.054	2.32
8026	30000	.050	2.32
8027	40000	.043	2.32
8028	50000	.033	2.52
8029	60000	.030	2.52
8030	80000	.026	2.78
8031	100000	.023	2.93



100 WATT—Type K-100
6½" long x ¾" o.d.
Mounting Centers 7⅜"
Terminal 35

STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
9001	5	4.47	$2.11
9002	10	3.16	2.11
9003	25	2.00	2.11
9004	50	1.41	2.11
9005	100	1.00	2.11
9006	250	.63	2.11
9007	500	.45	2.11
9008	1000	.32	2.11
9009	1500	.26	2.17
9010	2500	.20	2.17
9011	5000	.14	2.17
9012	10000	.10	2.30
9013	15000	.081	2.44
9014	20000	.071	2.44
9015	25000	.063	2.70
9016	30000	.058	2.70
9017	40000	.050	2.70
9018	50000	.045	2.78
9019	75000	.032	3.02
9020	100000	.028	3.32

160 WATT—Type K-160
8½" long x 1⅛" o.d.
Mounting Centers 9⅜"
Terminal 57

STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
9030	5	5.66	$4.07
9031	10	4.00	3.16
9032	25	2.53	3.16
9033	50	1.79	3.16
9034	100	1.26	3.16
9035	250	.80	3.16
9036	500	.57	3.16
9037	1000	.40	3.16
9038	1500	.33	3.20
9039	2500	.25	3.20
9040	5000	.18	3.20
9041	10000	.13	3.41
9042	15000	.10	3.59
9043	20000	.089	3.59
9044	25000	.080	3.68
9045	30000	.073	3.68
9046	40000	.063	3.68
9047	50000	.057	3.77
9048	75000	.046	3.96
9049	100000	.040	4.14

200 WATT—Type K-200
10½" long x 1⅛" o.d.
Mounting Centers 11⅜"
Terminal 57

STOCK NO.	OHMS	MAX. AMPS.	NET PRICE
9060	5	6.32	$4.32
9061	10	4.47	3.34
9062	25	2.83	3.34
9063	50	2.00	3.34
9064	100	1.41	3.34
9065	250	.89	3.34
9066	500	.63	3.34
9067	1000	.45	3.34
9068	2500	.28	3.41
9069	5000	.20	3.41
9070	10000	.14	3.59
9071	15000	.12	3.77
9072	20000	.10	3.77
9073	25000	.089	3.77
9074	30000	.082	3.77
9075	40000	.071	3.77
9076	50000	.063	3.96
9077	75000	.052	4.14
9078	100000	.045	4.34

All sizes of Adjustable Resistors listed are furnished complete with mounting brackets and one adjustable contact band.

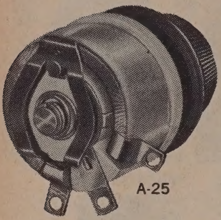
Tolerance of ±10% measured without the adjustable band.

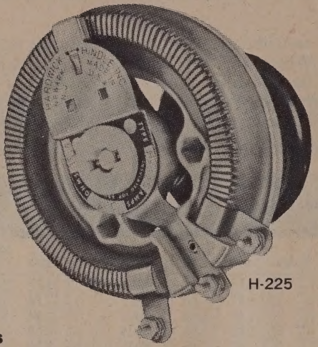
Adjustable Contact Bands

RESISTOR O.D.	TERMINAL TYPE	STOCK NO.	
		SCREW DRIVER	BAKELITE KNOB*
5/16"	K	1791-2	1791-2-X
9/16"	K	1791-8	1791-8-X
3/4"	341	1793-2	1793-2-X
1-1/8"	341	1793-4	1793-4-X

*Available on request at extra cost.

"Gray Line" HARDWICK, HINDLE · INC RHEOSTATS—


A-25


H-225

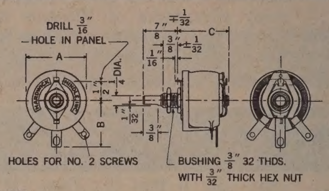
Outstanding Features

- Highly perfected "bus bar" brush construction—affording minimum resistance to collector ring.
- Contact arm tension automatically adjusting for continuous pressure over winding surface.
- Greater safety factor due to high temperature enamel.
- Higher terminal strength with strong corrosion resistant alloy.
- Minimum number of parts in new trouble free design.
- Designed to comply with current standards of:
  - (a) Military Specifications MIL-R-22
  - (b) E.I.A.
  - (c) N.E.M.A.
  - (d) Listed by Underwriters Laboratories, Inc. (Types H-50 through and including H-150)

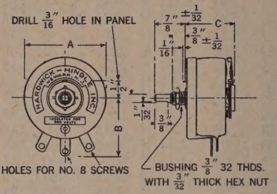
Hardwick, Hindle rheostats are exceptionally rugged without being over-designed or dependent on untried principles of construction. They exhibit "market quality" characteristics to meet the most exacting specifications, and special design features assure long life and protection under extremes of humidity and abnormal atmospheric conditions. The "buss bar" contact arm automatically adjusts for complete, continuous contact, and smooth, flexible control. Our blue-gray, high temperature enamel—thermo shock proof—gives increased service life with an extreme factor of safety.

In addition to the complete standard line of rheostats listed at the right, Hardwick, Hindle, Inc. welcomes the opportunity to work with you in the development of rheostats or potentiometers to your specifications. Tapered windings, tandem assemblies, special resistances, and many other electrical or mechanical modifications can be supplied.

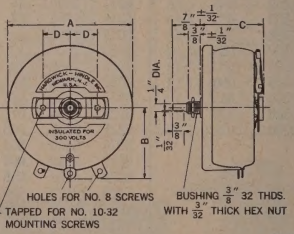
Hardwick, Hindle rheostats are packaged one unit per box.


DRILL 3/16" HOLE IN PANEL
A
B
C
7/8" ± 1/32
3/8" ± 1/32
1/16"
1/2"
1/4" DIA.
1/32"
3/8"
HOLES FOR NO. 2 SCREWS
BUSHING 3/8" 32 THDS. WITH 3/32" THICK HEX NUT

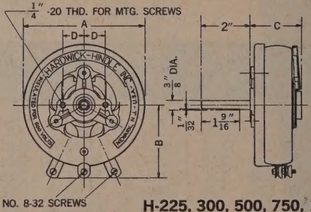
A-25


DRILL 3/16" HOLE IN PANEL
A
B
C
7/8" ± 1/32
3/8" ± 1/32
1/16"
1/2"
1/32"
3/8"
HOLES FOR NO. 8 SCREWS
BUSHING 3/8" 32 THDS. WITH 3/32" THICK HEX NUT

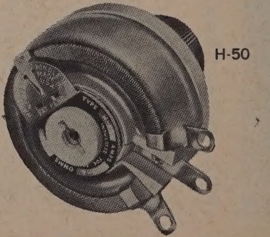
H-50, 75, 100


A
D
D
B
C
7/8" ± 1/32
3/8" ± 1/32
1/4" DIA.
3/8"
1/32"
HOLES FOR NO. 8 SCREWS
TAPPED FOR NO. 10-32 MOUNTING SCREWS
BUSHING 3/8" 32 THDS. WITH 3/32" THICK HEX NUT

H-150


1/4" -20 THD. FOR MTG. SCREWS
A
D
D
B
2"
C
3/8" DIA.
1/32"
1 9/16"
NO. 8-32 SCREWS

H-225, 300, 500, 750, 1000


H-50

Sizes and Ratings

TYPE & WATTAGE	OHM RANGE		MAX AMPS.*		DIMENSIONS (INCHES)				
	MIN.	MAX.	MIN. OHMS	MAX. OHMS	A	B	C	D	ROTATION
A–25	0.50	5000	7.06	.07	1 9/16	1	1 11/32	—	285°
H–50	0.50	10000	10.00	.07	2 3/8	1 9/16	1 7/16	—	300°
H–75	0.50	10000	12.30	.09	2 3/4	1 3/4	1 21/32	—	300°
H–100	0.50	10000	14.20	0.10	3 1/8	1 29/32	1 23/32	—	300°
H–150	0.50	10000	17.30	0.12	4	2 7/16	1 31/32	7/8	300°
H–225	1.0	2500	15.00	0.30	5	2 15/16	2 3/32	7/8	310 ± 5°
H–300	1.0	2500	17.25	0.35	6	3 13/32	2 1/4	1 3/16	315 ± 5°
H–500	1.0	2500	22.30	0.45	8	4 9/32	2 3/32	1 1/2	325 ± 3°
H–750	1.0	2500	27.40	0.55	10	5 1/2	2 23/32	1 7/8	330 ± 3°
H–1000	1.0	2500	31.60	0.63	12	6 5/16	2 3/4	3	335 ± 3°

*Free air ratings thru all or any part of winding; reduce by 50% for enclosed units.

25 WATTS TO 1000 WATTS

The Quality
INDUSTRIAL LINE
since 1924

TYPE A-25
25 Watt Rheostat

STOCK NO.	OHMS	MAX. AMPS.	APPROX. NO. STEPS	NET PRICE
0201	0.50	7.06	17	$4.63
0202	0.75	5.77	17	4.63
0203	1.0	5.00	17	4.63
0204	1.5	4.08	34	4.63
0205	2.5	3.16	34	4.11
0206	5.0	2.22	34	4.11
0207	7.5	1.82	34	4.11
0208	10	1.58	90	4.11
0209	15	1.29	90	4.11
0210	25	1.00	100	4.11
0211	50	.706	100	4.11
0212	75	.577	135	4.11
0213	100	.500	112	4.11
0214	150	.408	146	4.11
0215	250	.316	146	4.11
0216	500	.222	180	4.11
0217	750	.182	214	4.11
0218	1000	.158	248	4.63
0219	1500	.129	292	4.63
0220	2500	.100	303	4.99
0221	3500	.084	336	4.99
0222	5000	.070	387	4.99

TYPE H-50
50 Watt Rheostat

STOCK NO.	OHMS	MAX. AMPS.	APPROX. NO. STEPS	NET PRICE
0301	0.50	10.0	25	$5.15
0302	0.75	8.16	25	5.15
0303	1.0	7.06	52	5.15
0304	1.5	5.77	52	5.15
0305	2.5	4.48	52	5.15
0306	5.0	3.16	52	5.15
0307	7.5	2.58	52	5.15
0308	10	2.22	98	4.63
0309	15	1.82	98	4.63
0310	25	1.41	98	4.63
0311	50	1.00	129	4.63
0312	75	.816	153	4.63
0313	100	.706	157	4.63
0314	150	.577	187	4.63
0315	250	.448	258	4.63
0316	500	.316	308	4.63
0317	750	.258	294	4.90
0318	1000	.222	390	4.90
0319	1500	.182	364	4.90
0320	2500	.141	485	4.90
0321	5000	.100	590	5.15
0322	7500	.082	714	5.15
0323	10000	.070	750	5.15

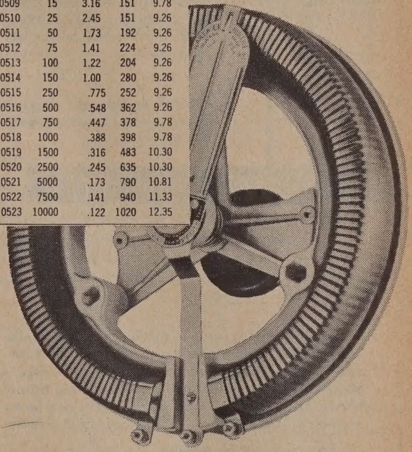
TYPE H-100
100 Watt Rheostat

STOCK NO.	OHMS	MAX. AMPS.	APPROX. NO. STEPS	NET PRICE
0401	0.50	14.2	30	$7.72
0402	0.75	11.6	30	7.72
0403	1.0	10.0	30	7.72
0404	1.5	8.16	30	7.72
0405	2.5	6.34	54	7.72
0406	5.0	4.48	54	7.72
0407	7.5	3.66	54	7.72
0408	10	3.16	54	7.72
0409	15	2.58	112	7.72
0410	25	2.00	108	7.21
0411	50	1.42	127	7.21
0412	75	1.16	151	7.21
0413	100	1.00	160	7.21
0414	150	.816	190	7.21
0415	250	.634	250	7.21
0416	500	.448	302	7.21
0417	750	.366	303	7.21
0418	1000	.316	317	7.72
0419	1500	.258	375	7.72
0420	2500	.200	494	7.72
0421	5000	.141	640	8.24
0422	7500	.115	760	8.76
0423	10000	.100	740	9.26

TYPE H-150
150 Watt Rheostat

STOCK NO.	OHMS	MAX. AMPS.	APPROX. NO. STEPS	NET PRICE
0501	0.50	17.30	26	$9.78
0502	0.75	14.10	30	9.78
0503	1.00	12.25	40	9.78
0504	1.5	10.00	37	9.78
0505	2.5	7.75	39	9.78
0506	5.0	5.48	79	9.78
0507	7.5	4.47	75	9.78
0508	10	3.88	77	9.78
0509	15	3.16	151	9.78
0510	25	2.45	151	9.26
0511	50	1.73	192	9.26
0512	75	1.41	224	9.26
0513	100	1.22	204	9.26
0514	150	1.00	280	9.26
0515	250	.775	252	9.26
0516	500	.548	362	9.26
0517	750	.447	378	9.78
0518	1000	.388	398	9.78
0519	1500	.316	483	10.30
0520	2500	.245	635	10.30
0521	5000	.173	790	10.81
0522	7500	.141	940	11.33
0523	10000	.122	1020	12.35

Note: Knobs supplied on stock units upon request at extra charge. Tolerance ±10% on all stock units.


H-1000

H-H RESISTORS, RHEOSTATS and POTENTIOMETERS

EIA MEMBER

MEMBER PACE PRODUCERS OF ASSOCIATED COMPONENTS FOR ELECTRONICS, INC.

—the Reliable Line!

HARDWICK, HINDLE • INC

NEWARK 5, NEW JERSEY

TYPE H-225
225 Watt Rheostat

STOCK NO.	OHMS	MAX. AMPS.	APPROX. NO. STEPS	NET PRICE
0530	1	15.00	55	$14.11
0531	1.5	12.30	55	14.11
0532	2	10.60	55	14.11
0533	2.5	9.50	55	14.11
0534	3	8.66	55	14.11
0535	4	7.50	55	14.11
0536	5	6.71	55	14.11
0537	7.5	5.49	115	14.11
0538	10	4.74	115	14.11
0539	15	3.87	115	14.11
0540	25	3.00	115	14.11
0541	50	2.12	256	14.11
0542	75	1.73	306	14.11
0543	100	1.50	315	14.11
0544	150	1.22	385	14.11
0545	200	1.06	357	14.11
0546	250	.950	350	14.11
0547	300	.866	335	14.11
0548	400	.750	448	14.11
0549	500	.671	450	14.11
0550	700	.567	495	14.11
0551	750	.549	533	14.11
0552	900	.500	500	14.11
0553	1000	.474	555	14.11
0554	1200	.433	526	14.11
0555	1500	.387	630	14.11
0556	1750	.358	620	14.11
0557	2500	.300	670	14.11

TYPE H-300
300 Watt Rheostat

STOCK NO.	OHMS	MAX. AMPS.	APPROX. NO. STEPS	NET PRICE
0601	1	17.25	49	$15.29
0602	1.5	14.15	47	15.29
0603	2	12.24	49	15.29
0604	2.5	10.95	70	15.29
0605	3	10.00	73	15.29
0606	4	8.66	70	15.29
0607	5	7.75	66	15.29
0608	7.5	6.32	71	15.29
0609	10	5.48	136	15.29
0610	15	4.47	144	15.29
0611	25	3.46	145	15.29
0612	50	2.45	245	15.29
0613	75	2.00	260	15.29
0614	100	1.73	327	15.29
0615	150	1.41	394	15.29
0616	200	1.22	420	15.29
0617	250	1.09	525	15.29
0618	300	1.00	420	15.29
0619	400	.866	440	15.29
0620	500	.775	440	15.29
0621	700	.655	502	15.29
0622	750	.633	540	15.29
0623	900	.578	521	15.29
0624	1000	.548	580	15.29
0625	1200	.500	690	15.29
0626	1500	.449	680	15.29
0627	1750	.414	790	15.29
0628	2500	.346	862	15.29

TYPE H-500
500 Watt Rheostat

STOCK NO.	OHMS	MAX. AMPS.	APPROX. NO. STEPS	NET PRICE
0701	1	22.3	70	$22.09
0702	1.5	18.2	64	22.09
0703	2	15.8	68	22.09
0704	2.5	14.1	67	22.09
0705	3	12.9	65	22.09
0706	4	11.2	96	22.09
0707	5	10.0	96	22.09
0708	7.5	8.17	98	22.09
0709	8	7.90	97	22.09
0710	10	7.07	105	22.09
0711	12.5	6.30	103	22.09
0712	15	5.77	202	22.09
0713	16	5.60	192	22.09
0714	25	4.47	195	22.09
0715	40	3.54	205	22.09
0716	50	3.16	200	22.09
0717	75	2.58	395	22.09
0718	80	2.52	382	22.09
0719	100	2.23	450	22.09
0720	125	2.00	505	22.09
0721	150	1.82	544	22.09
0722	175	1.69	500	22.09
0723	250	1.41	570	22.09
0724	325	1.24	515	22.09
0725	500	1.00	620	22.09
0726	750	.817	740	22.09
0727	1000	.707	780	22.09
0728	1500	.577	940	22.09
0729	2000	.500	986	22.09
0730	2500	.447	940	22.09

TYPE H-750
750 Watt Rheostat

STOCK NO.	OHMS	MAX. AMPS.	APPROX. NO. STEPS	NET PRICE
0801	1	27.4	85	$31.20
0802	1.5	22.3	85	31.20
0803	2	19.4	81	31.20
0804	2.5	17.3	87	31.20
0805	3	15.8	83	31.20
0806	4	13.6	87	31.20
0807	5	12.2	122	31.20
0808	7.5	10.0	129	31.20
0809	8	9.65	122	31.20
0810	10	8.65	121	31.20
0811	12.5	7.75	120	31.20
0812	15	7.07	127	31.20
0813	16	6.82	120	31.20
0814	25	5.47	240	31.20
0815	50	3.87	238	31.20
0816	75	3.19	250	31.20
0817	80	3.06	266	31.20
0818	100	2.74	265	31.20
0818	150	2.23	500	31.20
0820	160	2.17	485	31.20
0821	200	1.94	472	31.20
0822	250	1.73	470	31.20
0823	300	1.58	500	31.20
0824	400	1.37	472	31.20
0825	500	1.22	565	31.20
0826	600	1.12	677	31.20
0827	750	1.00	670	31.20
0828	1000	.865	715	31.20
0829	1200	.791	860	31.20
0830	1500	.707	840	31.20
0831	1800	.646	1020	31.20
0832	2500	.547	1085	31.20

TYPE H-1000
1000 Watt Rheostat

STOCK NO.	OHMS	MAX. AMPS.	APPROX. NO. STEPS	NET PRICE
0901	1	31.60	81	$36.45
0902	1.5	25.80	84	36.45
0903	2	22.40	109	36.45
0904	2.5	20.00	105	36.45
0905	3	18.30	113	36.45
0906	4	15.80	106	36.45
0907	5	14.10	105	36.45
0908	7.5	11.50	158	36.45
0909	8	11.20	168	36.45
0910	10	10.00	166	36.45
0911	12.5	8.95	165	36.45
0912	15	8.16	156	36.45
0913	16	7.90	166	36.45
0914	25	6.33	160	36.45
0915	50	4.47	331	36.45
0916	75	3.65	303	36.45
0917	100	3.16	320	36.45
0918	150	2.58	306	36.45
0919	175	2.39	645	36.45
0920	225	2.11	585	36.45
0921	250	2.00	640	36.45
0922	300	1.83	605	36.45
0923	400	1.58	640	36.45
0924	500	1.41	635	36.45
0925	750	1.15	820	36.45
0926	1000	1.00	862	36.45
0927	1500	.816	1030	36.45
0928	2500	.633	1300	36.45

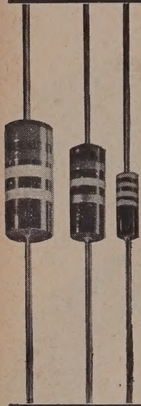
Note: Knobs supplied on stock units upon request at extra charge.

G-H RESISTORS — CAPACITORS

HIGH QUALITY
FIXED COMPOSITION

PAPER DIELECTRIC
CUSTOM MANUFACTURED

5% and 10% TOLERANCE, ½, 1 and 2 WATT RATINGS



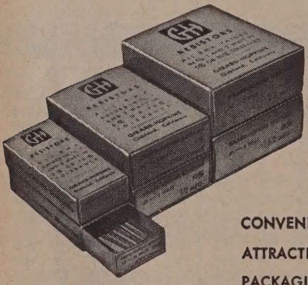
2W 1W 1/2W (ACTUAL SIZE)

Fixed composition resisters of highest quality, feature permanent electrical characteristics, small physical size for a given wattage rating, great mechanical strength. Leads are differentially tempered—prevent sharp bends near the resistor body while still permitting easy forming to fit a particular wiring arrangement.

Resistor bodies are molded brown phenolic with coding in brilliant colors.

These resistors are now supplied in attractive new containers. Three convenient sizes with pull-out sections accommodate standard quantities of ½, 1 and 2 watt resistors.

A G-H innovation, Gold and Silver container ends, permits instant identification of 5% or 10% tolerance units. Quantity, wattage and resistance values are also clearly printed on these ends. These attractive black and green containers with Gold and Silver ends provide a space-saving, functional shelf display.



CONVENIENT
ATTRACTIVE
PACKAGING

5% Tolerance

ONE-HALF, ONE AND TWO WATT RATINGS

10	82	680	5600	47,000	390,000	3.3 meg.
11	91	750	6200	51,000	430,000	3.6 "
12	100	820	6800	56,000	470,000	3.9 "
13	110	910	7500	62,000	510,000	4.3 "
15	120	1000	8200	68,000	560,000	4.7 "
16	130	1100	9100	75,000	620,000	5.1 "
18	150	1200	10,000	82,000	680,000	5.6 "
20	160	1300	11,000	91,000	750,000	6.2 "
22	180	1500	12,000	100,000	820,000	6.8 "
24	200	1600	13,000	110,000	910,000	7.5 "
27	220	1800	15,000	120,000	1.0 meg.	8.2 "
30	240	2000	16,000	130,000	1.1 "	9.1 "
33	270	2200	18,000	150,000	1.2 "	10.0 "
36	300	2400	20,000	160,000	1.3 "	11.0 "
39	330	2700	22,000	180,000	1.5 "	12.0 "
43	360	3000	24,000	200,000	1.6 "	13.0 "
47	390	3300	27,000	220,000	1.8 "	15.0 "
51	430	3600	30,000	240,000	2.0 "	16.0 "
56	470	3900	33,000	270,000	2.2 "	18.0 "
62	510	4300	36,000	300,000	2.4 "	20.0 "
68	560	4700	39,000	330,000	2.7 "	22.0 "
75	620	5100	43,000	360,000	3.0 "	

Available in 1 watt only

2.7 ohms
3.0 ohms
3.3 ohms
3.6 ohms
3.9 ohms
4.3 ohms
4.7 ohms
5.1 ohms
5.6 ohms
6.2 ohms
6.8 ohms
7.5 ohms
8.2 ohms
9.1 ohms

Standard packages, 50 resistors.

All Standard RTMA Values

10% Tolerance

ONE-HALF, ONE AND TWO WATT RATINGS

10	120	1500	18,000	220,000	2.7 meg.
12	150	1800	22,000	270,000	3.3 "
15	180	2200	27,000	330,000	3.9 "
18	220	2700	33,000	390,000	4.7 "
22	270	3300	39,000	470,000	5.6 "
27	330	3900	47,000	560,000	6.8 "
33	390	4700	56,000	680,000	8.2 "
39	470	5600	68,000	820,000	10.0 "
47	560	6800	82,000	1.0 meg.	12.0 "
56	680	8200	100,000	1.2 "	15.0 "
68	820	10,000	120,000	1.5 "	18.0 "
82	1000	12,000	150,000	1.8 "	22.0 "
100	1200	15,000	180,000	2.2 "	

Available in 1 watt only

2.7 ohms.
3.3 ohms.
3.9 ohms.
4.7 ohms.
5.6 ohms.
6.8 ohms.
8.2 ohms.

Standard packages, 50 resistors

PAPER DIELECTRIC CAPACITORS

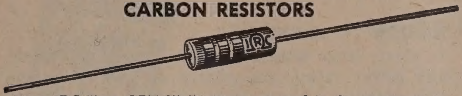
Custom-manufactured to customers specifications. Can be supplied in any practical capacity, working voltage and tolerance. Containers and terminal arrangements may be in accordance with customers drawings. Capacitors can be manufactured for AC or DC operation—impregnated with Wax, Tensoil or in the stable, highly superior oil impregnant, G-H PERMANOL.

GIRARD-HOPKINS

IRC®

INSULATED RESISTORS

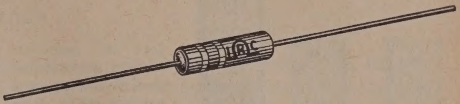
TYPE GBT-SR FIXED COMPOSITION CARBON RESISTORS



More IRC Type GBT-SR Resistors are used in the electronic industry than any other brand of fixed composition resistors. For original equipment, IRC GBT-SR's are by far the leading choice of Electronic Engineers—particularly since the new GBT-½ ½ watt and GBT-1 1 watt give new appearance, new sizes . . . IRC's unsurpassed solderability has been maintained and no wax coating to gum up end equipment. For replacement, Service Technicians favor IRC GBT-SR's over all other brands combined.

IRC's exclusive filament-type resistance element is combined with superior construction features to provide a stable resistor of extremely low operating temperature and excellent power dissipation in a compact, light weight, fully insulated unit.

TYPE BW INSULATED WIRE WOUND RESISTORS



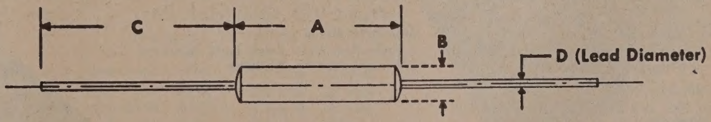
Type BW's are exceptionally stable, inexpensive wire wound resistors for low range requirements. These small, completely insulated units are similar in appearance to insulated composition resistors but are readily identified by the double width of the first color code band.

The wire element is uniformly and tightly wound on an insulated core. Tinned, solid wire leads are keyed to the element by a specially designed terminal. Leads are anchored inside the insulation and cannot turn or pull loose.

IRC TYPE NUMBER	GBT-½	GBT-1	SR-2	BW-½	BW-1	BW-2
Element Style	Carbon Filament	Carbon Filament	Carbon Filament	Wire Wound	Wire Wound	Wire Wound
Equivalent MIL TYPE	RC20	RC32	RC42	RU3 Max. 470 ohms	RU4 Max. 2200 ohms	RU6 Max. 3300 ohms
MIL CHARACTERISTICS	GF	GF	GF	B	B	
Rating in Watts 70° Ambient—GBT-SR 40° Ambient—BW	½	1	2	½	1	2
Minimum Resistance	10 Ohms	10 Ohms	10 Ohms	0.24 Ohm	0.47 Ohm	1.0 Ohm
Maximum Resistance	22 Meg.	22 Meg.	22 Meg.	820 Ohms	5100 Ohms	8200 Ohms
Rated Voltage	350V	500V	500V			
Dimensions (Fig. 1)						
A—Body Length	25/64"	9/16"	11/16"	5/8"	1¼"	1¾"
B—Body Diameter	9/64"	7/32"	5/16"	13/64"	¼"	21/64"
C—Lead Length	1½±⅛"	1½±⅛"	1½±⅛"	1½±⅛"	1½±⅛"	1½±⅛"
D—Lead Diameter	1/32"	1/32"	3/64"	1/32"	1/32"	1/32"

Figure 1

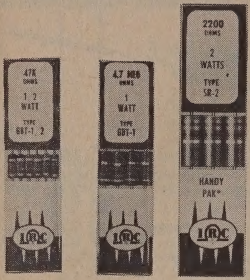
Dimensions



STANDARD STOCK VALUES— ±5% and ± 10% tolerance (±10% tolerance in bold type. All values available in ±5%).

OHM	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	MEGS	MEGS
—	**1.0**	**10**	**100**	**1,000**	**10K**	**100K**	**1.0**	**10**
—	1.1	11	110	1,100	11K	110K	1.1	11
—	**1.2**	**12**	**120**	**1,200**	**12K**	**120K**	**1.2**	**12**
—	1.3	13	130	1,300	13K	130K	1.3	13
—	**1.5**	**15**	**150**	**1,500**	**15K**	**150K**	**1.5**	**15**
—	1.6	16	160	1,600	16K	160K	1.6	16
—	**1.8**	**18**	**180**	**1,800**	**18K**	**180K**	**1.8**	**18**
—	2.0	20	200	2,000	20K	200K	2.0	20
—	**2.2**	**22**	**220**	**2,200**	**22K**	**220K**	**2.2**	**22**
0.24	2.4	24	240	2,400	24K	240K	2.4	—
0.27	**2.7**	**27**	**270**	**2,700**	**27K**	**270K**	**2.7**	—
0.30	3.0	30	300	3,000	30K	300K	3.0	—
0.33	**3.3**	**33**	**330**	**3,300**	**33K**	**330K**	**3.3**	—
0.36	3.6	36	360	3,600	36K	360K	3.6	—
0.39	**3.9**	**39**	**390**	**3,900**	**39K**	**390K**	**3.9**	—
0.43	4.3	43	430	4,300	43K	430K	4.3	—
0.47	**4.7**	**47**	**470**	**4,700**	**47K**	**470K**	**4.7**	—
0.51	5.1	51	510	5,100	51K	510K	5.1	—
0.56	**5.6**	**56**	**560**	**5,600**	**56K**	**560K**	**5.6**	—
0.62	6.2	62	620	6,200	62K	620K	6.2	—
0.68	**6.8**	**68**	**680**	**6,800**	**68K**	**680K**	**6.8**	—
0.75	7.5	75	750	7,500	75K	750K	7.5	—
0.82	**8.2**	**82**	**820**	**8,200**	**82K**	**820K**	**8.2**	—
0.91	9.1	91	910	9,100	91K	910K	9.1	—

IRC HANDY-PAKS and extra value premium kits



Each IRC Handy-Pak* contains several carbon composition resistors of one type and resistance value . . . to save you unnecessary shopping.

Three types include: 6 ½-watt resistors; 4 1-watt resistors; and 3 2-watt resistors.
*Patent Pending

New IRC Handy-Paks were designed with the up-to-date Serviceman and efficient technician in mind. Here is the neatest, most compact resistor package available in the whole electronics industry. And it is exclusive from IRC. Fussing and fuming over stocking small parts is all over as far as carbon composition resistors are concerned. IRC Handy-Paks are easier to buy, easier to stock and easier to use. Ready for you now . . . added convenience for the world's finest resistors.

EASIER TO IDENTIFY!

In clear, large letters the type, resistance value and power rating are printed on every Handy-Pak. Correct identification is fast and certain with Handy-Paks.

QUICKER TO FIND!

In any stocking arrangement, Handy-Paks can be quickly indexed by power rating and resistance. Your resistor stock remains orderly from the time you buy it until you use it.

HANDIER TO USE!

IRC Handy-Paks open at both ends. The package slides out of the slimline plastic sleeve. Simply withdraw one or more resistors and slide the package back into the protective shield. Leads are kept straight, and resistors are always factory-clean.

EASIER TO CHECK INVENTORY!

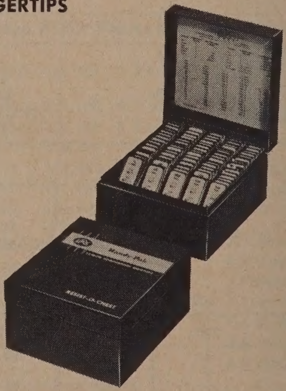
The actual resistors are clearly visible. You always know what you have. Identification tab tears off conveniently for reordering reminder.

---

4 PREMIUM KITS TO KEEP THE HANDY-PAKS AT YOUR FINGERTIPS

RESIST-O-CHEST

End "cigar box confusion." Select from 10 popular carbon composition resistor stocks, all in sturdy metal chests. Hinged lid and metal separators keep resistor Handy-Paks in order . . . right at your fingertips. Compact 5⅝ x 3⅜ x 6¼" size takes little bench space. Identification data clearly visible. Included at regular price of these 10 fast-moving assortments —



Assortment No. 42
6 each, Type GBT½ ½-watt (10% tolerance)
204 ½-watt resistors, 34 values

Assortment No. 46
4 each, Type GBT1 1-watt (10% tolerance)
136 1-watt resistors, 34 values

Assortment No. 49A
3 each, Type SR-2 2-watt (10% tolerance)
102 2-watt resistors, 34 values

ohms: 47, 100, 150, 220, 470
1000, 1500, 2200, 2700, 3300
4700, 6800, 8200, 10K, 15K
22K, 27K, 33K, 39K, 47K
56K, 68K, 100K, 150K, 220K
270K, 330K, 470K, 1.0 meg, 1.5 meg
2.2 meg, 3.3 meg, 4.7 meg, 10 meg

Assortment No. 43
6 each, Type GBT½ ½-watt (10% tolerance) 462 ½-watt resistors, 77 values

Assortment No. 47
4 each, Type GBT1 1-watt (10% tolerance) 308 1-watt resistors, 77 values

Assortment No. 50A
3 each, Type SR-2 2-watt (10% tolerance)
231 2-watt resistors, 77 values

ohms: 10, 12, 15, 18, 22, 27, 33, 39
47, 56, 68, 82, 100, 120, 150, 180
220, 270, 330, 390, 470, 560, 680, 820
1000, 1200, 1500, 1800, 2200, 2700, 3300, 3900
4700, 5600, 6800, 8200, 10K, 12K, 15K, 18K
22K, 27K, 33K, 39K, 47K, 56K, 68K, 82K
100K, 120K, 150K, 180K, 220K, 270K, 330K, 390K
470K, 560K, 680K, 820K, 1.0 meg, 1.2 meg, 1.5 meg, 1.8 meg
2.2 meg, 2.7 meg, 3.3 meg, 3.9 meg, 4.7 meg, 5.6 meg, 6.8 meg, 8.2 meg
10 meg, 12 meg, 15 meg, 18 meg, 22 meg

IRC®

HANDY-PAKS and extra value premium kits

RESIST-O-CADDY

Ideal for in-home servicing. Pliable plastic pouch folds to 6¾ x 3⅞ x 1½" . . . fits easily in tube caddy or tool chest. Individual pockets hold resistor Handy-Paks secure and orderly. Accurate inventory always visible. RESIST-O-CADDY included with these "best-seller" assortments (at regular price of assortments)

Assortment #41

6 each, Type GBT½ ½-watt (10% tolerance) 120 ½-watt resistors, 20 values

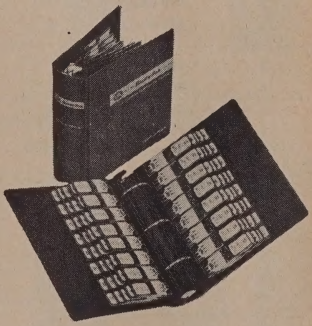
Assortment #45

4 each, Type GBT1 1 watt (10% tolerance) 80 1-watt resistors, 20 values

ohms:	47	470	2200	22K	100K	470K	4.7 meg
	100	1000	4700	27K	220K	1.0 meg	10 meg
	150	1500	10K	47K	270K	2.2 meg	

RESIST-O-PEDIA

For technicians, here's a unique convenience for stocking carbon composition resistors. Attractive blue and yellow hardback binder measures 9 x 8¼ x 2⅞". 3-ring "fingered" inserts hold resistor Handy-Paks. Indexed stock saves searching . . . speeds servicing. Complete resistor identification always visible. Choose from these popular assortments (Resist-O-Pedia included in cost of assortments.)



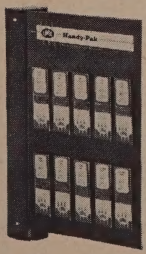
Assortment #44

6 each, Type GBT½ ½-watt (10% tolerance) 462 ½-watt resistors, 77 values

Assortment #48

4 each, Type GBT1 1-watt (10% tolerance) 308 1-watt resistors, 77 values

ohms:	10	47	220	1000	4700	22K	100K	470K	2.2 meg	10 meg
	12	56	270	1200	5600	27K	120K	560K	2.7 meg	12 meg
	15	68	330	1500	6800	33K	150K	680K	3.3 meg	15 meg
	18	82	390	1800	8200	39K	180K	820K	3.9 meg	18 meg
	22	100	470	2200	10K	47K	220K	1.0 meg	4.7 meg	22 meg
	27	120	560	2700	12K	56K	270K	1.2 meg	5.6 meg	
	33	150	680	3300	15K	68K	330K	1.5 meg	6.8 meg	
	39	180	820	3900	18K	82K	390K	1.8 meg	8.2 meg	



RESIST-O-PANEL

Swing panel is all-metal 7" wide x 12¼" high, slotted to accommodate Handy-Paks. Wall brackets are supplied. Can be used singly or in sets to provide a visible resistor stock that saves bench space. IRC Resist-O-Panel included with any of 4 popular assortments (at regular price of Assortments)

Assortment #64

6 each, Type GBT½ ½-watt (10% tolerance) 60 ½-watt resistors, 10 values

Assortment #68

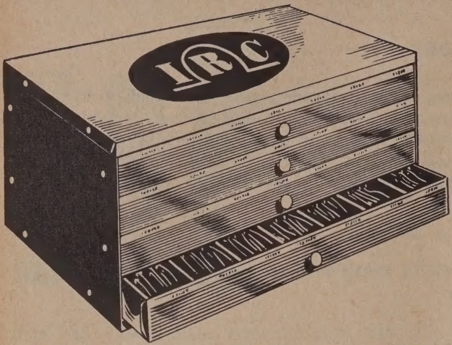
4 each, Type GBT1 1-watt (10% tolerance) 40 1-watt resistors, 10 values

Assortment #80

3 each, Type SR2 2-watt (10% tolerance) 30 2-watt resistors, 10 values

1000	1500	10K	22K	47K	100K	220K	470K	1 meg	2.2 meg

IRC RESIST-O-CABINETS



ALL METAL RESIST-O-CABINETS

4 practical assortments of most frequently used IRC Resistors.

4 "non-spill" drawers with 28 identified compartments. Attractive blue, yellow and silver finish. Designed for stacking. Cabinets measure 5-3/8" x 5-15/16" x 10-7/8".

½ WATT ASSORTMENT #4A

150 GBT½ ½-Watt Resistors.

QUANTITY	RANGE
3	47 ohms
4	100 ohms
3	220 ohms
3	270 ohms
4	470 ohms
8	1,000 ohms
4	1,500 ohms
4	2,200 ohms
4	2,700 ohms
5	3,300 ohms
7	4,700 ohms
7	10K ohms
5	22K ohms
5	27K ohms
5	33K ohms
8	47K ohms
4	56K ohms
4	68K ohms
8	100K ohms
7	220K ohms
8	270K ohms
5	330K ohms
8	470K ohms
8	1.0 meg.
7	2.2 meg.
4	3.3 meg.
5	4.7 meg.
3	10.0 meg.

1 WATT ASSORTMENT #5A

125 GBT1 1-Watt Resistors.

QUANTITY	RANGE
3	47 ohms
3	100 ohms
3	150 ohms
3	220 ohms
3	270 ohms
3	470 ohms
7	1,000 ohms
3	1,500 ohms
5	2,200 ohms
3	2,700 ohms
3	3,300 ohms
5	4,700 ohms
7	10K ohms
3	15K ohms
5	22K ohms
7	27K ohms
4	33K ohms
4	39K ohms
7	47K ohms
4	68K ohms
7	100K ohms
3	150K ohms
3	220K ohms
7	270K ohms
7	470K ohms
7	1.0 meg.
3	2.2 meg.
3	4.7 meg.

2 WATT ASSORTMENT #3A

120 BW-2 and SR-2 2-Watt Resistors.

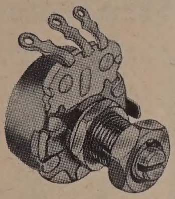
QUANTITY	RANGE
2	4.7 ohms
2	10 ohms
1	15 ohms
2	22 ohms
1	27 ohms
1	33 ohms
1	39 ohms
3	47 ohms
2	68 ohms
3	82 ohms
4	100 ohms
3	150 ohms
3	220 ohms
3	270 ohms
4	330 ohms
4	470 ohms
5	1,000 ohms
4	1,500 ohms
4	2,200 ohms
4	3,300 ohms
3	3,900 ohms
4	4,700 ohms
5	6,800 ohms
7	8,200 ohms
7	10K ohms
5	15K ohms
7	22K ohms
4	27K ohms
7	47K ohms
5	100K ohms
3	220K ohms
3	470K ohms
4	1.0 meg.

COMB. ASSORTMENT #6A

139 Insulated Resistors & Type DCF Tolerance Resistors.

RANGE	½ Watt	1 Watt	2 Watt	DCF
47 ohms	2	1	1	-
100 ohms	2	1	1	-
150 ohms	2	1	-	-
220 ohms	2	1	-	-
270 ohms	2	1	-	-
470 ohms	2	1	1	-
1,000 ohms	4	4	-	1
1,500 ohms	2	1	-	-
2,200 ohms	2	1	-	-
2,700 ohms	2	1	-	-
3,300 ohms	2	2	-	-
4,700 ohms	3	1	1	-
10K ohms	3	4	1	1
15K ohms	2	2	-	-
22K ohms	2	2	1	-
27K ohms	2	4	-	-
33K ohms	2	1	-	-
39K ohms	2	1	-	-
47K ohms	4	3	1	-
68K ohms	2	2	-	-
100K ohms	4	4	-	1
150K ohms	2	2	-	-
220K ohms	3	1	-	-
270K ohms	4	2	-	-
470K ohms	4	3	-	-
1.0 meg.	4	4	-	1
2.2 meg.	3	3	-	-
4.7 meg.	2	1	-	-
5.0 meg.	-	-	-	1

MILITARY VARIABLE RESISTORS



245 variable resistors, in 6 styles cover the latest MIL-R-94B composition and MIL-R-19A wire wound specifications. Each control is available in two shaft styles, plain and locking bushings.

GENERAL SPECIFICATIONS

	MIL-R-19A			MIL-R-94B			
	RA20	RA30	Char.	RV2	RV4	RV5	RV6
Resistance Range (ohms)	3-15K	3-25K	X & Y	100-2.5 megs	100-5 megs	250-2.5 megs	1000-1.0 MEGS
Rotational Life	5% max, 25,000 cycles		X Y	10% max, 15,000 cycles 10% max, 25,000 cycles			
Load Life	3% max, 1,000 hours, rated load, 40°C		X Y	12% max, 1,000 hours, rated load, 70°C 10% max, 1,000 hours, rated load, 70°C			
Moisture Resistance	10% max, Method 106, MIL-STD-202, 3.5 megs min insulation resistance		X Y	10% average, 14% max, Method 106, MIL-STD-202, 50 megs min insulation resistance 6% average, 10% max, Method 106, MIL-STD-202, 100 megs min insulation resistance			
Low Temp. Storage	4% max		X Y	4% max 2% max			
Low Temp. Operation	4% max		X Y	4% max 3% max			
Thermal Cycling	4% max		X Y	10% max 6% max			
Acceleration	3% max		X & Y	3% max			
Shock	2% max		X & Y	2% max			
High Freq. Vibration	2% max		X & Y	2% max			
Temp. Range	—63°C to +105°C		X & Y	—63°C to 150°C			

MILITARY COMPOSITION VARIABLE RESISTORS CERTIFIED TO MIL-R-94B

STYLE RV5 ½ WATT MINIATURE COMPOSITION

Resistance	CTS TYPE 65 7/8" Slotted Shaft 1/4" Long Bushing Linear Resistance Taper		CTS TYPE 65LT 1/2" Slotted Shaft 3/8" Long Locking Bushing Linear Resistance Taper	
250 ± 10%	RV5NAXSD251A	RV5NAYSD251A	RV5LAXSB251A	RV5LAYSB251A
500 ± 10%	RV5NAXSD501A	RV5NAYSD501A	RV5LAXSB501A	RV5LAYSB501A
1,000 ± 10%	RV5NAXSD102A	RV5NAYSD102A	RV5LAXSB102A	RV5LAYSB102A
2,500 ± 10%	RV5NAXSD252A	RV5NAYSD252A	RV5LAXSB252A	RV5LAYSB252A
5,000 ± 10%	RV5NAXSD502A	RV5NAYSD502A	RV5LAXSB502A	RV5LAYSB502A
10,000 ± 10%	RV5NAXSD103A	RV5NAYSD103A	RV5LAXSB103A	RV5LAYSB103A
25,000 ± 10%	RV5NAXSD253A	RV5NAYSD253A	RV5LAXSB253A	RV5LAYSB253A
50,000 ± 10%	RV5NAXSD503A	RV5NAYSD503A	RV5LAXSB503A	RV5LAYSB503A
100,000 ± 10%	RV5NAXSD104A	RV5NAYSD104A	RV5LAXSB104A	RV5LAYSB104A
250,000 ± 10%	RV5NAXSD254A	RV5NAYSD254A	RV5LAXSB254A	RV5LAYSB254A
500,000 ± 10%	RV5NAXSD504A	RV5NAYSD504A	RV5LAXSB504A	RV5LAYSB504A
1.0 Meg. ± 20%	RV5NAXSD105B	RV5NAYSD105B	RV5LAXSB105B	RV5LAYSB105B
2.5 Meg. ± 20%	RV5NAXSD255B	RV5NAYSD255B	RV5LAXSB255B	RV5LAYSB255B

STYLE RV6 ½ WATT MINIATURE COMPOSITION

Resistance	CTS TYPE 300 7/8" Slotted Shaft 1/4" Long Bushing Linear Resistance Taper	CTS TYPE 300LT 5/8" Slotted Shaft 1/2" Long Locking Bushing Linear Resistance Taper
1,000 ± 10%	RV6NAYSD102A	RV6LAYSA102A
2,500 ± 10%	RV6NAYSD252A	RV6LAYSA252A
5,000 ± 10%	RV6NAYSD502A	RV6LAYSA502A
10,000 ± 10%	RV6NAYSD103A	RV6LAYSA103A
25,000 ± 10%	RV6NAYSD253A	RV6LAYSA253A
50,000 ± 10%	RV6NAYSD503A	RV6LAYSA503A
100,000 ± 10%	RV6NAYSD104A	RV6LAYSA104A
250,000 ± 10%	RV6NAYSD254A	RV6LAYSA254A
500,000 ± 10%	RV6NAYSD504A	RV6LAYSA504A
1.0 Meg. ± 20%	RV6NAYSD105B	RV6LAYSA105B

STYLE RV2 1 WATT COMPOSITION

Resistance	CTS TYPE 90 7/8" Slotted Shaft 3/8" Long Bushing Linear Resistance Taper		CTS TYPE 90LT 5/8" Slotted Shaft 1/2" Long Locking Bushing Linear Resistance Taper	
100 ± 10%	RV2NAXSD101A	RV2NAYSD101A	RV2LAXSA101A	RV2LAYSA101A
250 ± 10%	RV2NAXSD251A	RV2NAYSD251A	RV2LAXSA251A	RV2LAYSA251A
500 ± 10%	RV2NAXSD501A	RV2NAYSD501A	RV2LAXSA501A	RV2LAYSA501A
1,000 ± 10%	RV2NAXSD102A	RV2NAYSD102A	RV2LAXSA102A	RV2LAYSA102A
2,500 ± 10%	RV2NAXSD252A	RV2NAYSD252A	RV2LAXSA252A	RV2LAYSA252A
5,000 ± 10%	RV2NAXSD502A	RV2NAYSD502A	RV2LAXSA502A	RV2LAYSA502A
10,000 ± 10%	RV2NAXSD103A	RV2NAYSD103A	RV2LAXSA103A	RV2LAYSA103A
25,000 ± 10%	RV2NAXSD253A	RV2NAYSD253A	RV2LAXSA253A	RV2LAYSA253A
50,000 ± 10%	RV2NAXSD503A	RV2NAYSD503A	RV2LAXSA503A	RV2LAYSA503A
100,000 ± 10%	RV2NAXSD104A	RV2NAYSD104A	RV2LAXSA104A	RV2LAYSA104A
250,000 ± 10%	RV2NAXSD254A	RV2NAYSD254A	RV2LAXSA254A	RV2LAYSA254A
500,000 ± 10%	RV2NAXSD504A	RV2NAYSD504A	RV2LAXSA504A	RV2LAYSA504A
1.0 Meg. ± 20%	RV2NAXSD105B	RV2NAYSD105B	RV2LAXSA105B	RV2LAYSA105B
2.5 Meg. ± 20%	RV2NAXSD255B	RV2NAYSD255B	RV2LAXSA255B	RV2LAYSA255B

STYLE RV4 2 WATT COMPOSITION

Resistance	CTS TYPE 96 7/8" Slotted Shaft 3/8" Long Bushing Linear Resistance Taper	CTS TYPE 96LT 5/8" Slotted Shaft 1/2" Long Locking Bushing Linear Resistance Taper	7/8" Slotted Shaft 1/2" Long Locking Bushing Linear Resistance Taper
100 ± 10%	RV4NAYSD101A	RV4LAYSA101A	RV4LAYSD101A
250 ± 10%	RV4NAYSD251A	RV4LAYSA251A	RV4LAYSD251A
500 ± 10%	RV4NAYSD501A	RV4LAYSA501A	RV4LAYSD501A
1,000 ± 10%	RV4NAYSD102A	RV4LAYSA102A	RV4LAYSD102A
2,500 ± 10%	RV4NAYSD252A	RV4LAYSA252A	RV4LAYSD252A
5,000 ± 10%	RV4NAYSD502A	RV4LAYSA502A	RV4LAYSD502A
10,000 ± 10%	RV4NAYSD103A	RV4LAYSA103A	RV4LAYSD103A
25,000 ± 10%	RV4NAYSD253A	RV4LAYSA253A	RV4LAYSD253A
50,000 ± 10%	RV4NAYSD503A	RV4LAYSA503A	RV4LAYSD503A
100,000 ± 10%	RV4NAYSD104A	RV4LAYSA104A	RV4LAYSD104A
250,000 ± 10%	RV4NAYSD254A	RV4LAYSA254A	RV4LAYSD254A
500,000 ± 10%	RV4NAYSD504A	RV4LAYSA504A	RV4LAYSD504A
1.0 Meg. ± 10%	RV4NAYSD105A	RV4LAYSA105A	RV4LAYSD105A
1.0 Meg. ± 20%	RV4NAYSD105B	RV4LAYSA105B	—
2.5 Meg. ± 20%	RV4NAYSD255B	RV4LAYSA255B	—
5.0 Meg. ± 20%	RV4NAYSD505B	RV4LAYSA505B	—

MILITARY WIRE WOUND VARIABLE RESISTORS CERTIFIED TO MIL-R-19A

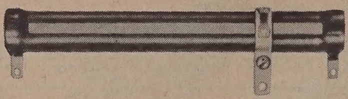
STYLE RA20 2 WATT WIRE WOUND

Resistance	CTS TYPE 252 7/8" Slotted Shaft 3/8" Long Bushing Linear Resistance Taper	CTS TYPE 252LT 5/8" Slotted Shaft 1/2" Long Locking Bushing Linear Resistance Taper	7/8" Slotted Shaft 1/2" Long Locking Bushing Linear Resistance Taper
3 ± 10%	RA20NASD3R0A	RA20LASB3R0A	RA20LASD3R0A
10 ± 10%	RA20NASD100A	RA20LASB100A	—
25 ± 10%	RA20NASD250A	RA20LASB250A	RA20LASD250A
50 ± 10%	RA20NASD500A	RA20LASB500A	RA20LASD500A
75 ± 10%	RA20NASD750A	RA20LASB750A	—
100 ± 10%	RA20NASD101A	RA20LASB101A	RA20LASD101A
200 ± 10%	RA20NASD201A	RA20LASB201A	—
250 ± 10%	RA20NASD251A	RA20LASB251A	RA20LASD251A
500 ± 10%	RA20NASD501A	RA20LASB501A	RA20LASD501A
1,000 ± 10%	RA20NASD102A	RA20LASB102A	RA20LASD102A
2,500 ± 10%	RA20NASD252A	RA20LASB252A	RA20LASD252A
5,000 ± 10%	RA20NASD502A	RA20LASB502A	RA20LASD502A
7,500 ± 10%	RA20NASD752A	RA20LASB752A	RA20LASD752A
10,000 ± 10%	RA20NASD103A	RA20LASB103A	RA20LASD103A
15,000 ± 10%	RA20NASD153A	RA20LASB153A	RA20LASD153A

STYLE RA30 4 WATT WIRE WOUND

Resistance	CTS TYPE 25 7/8" Slotted Shaft 3/8" Long Bushing Linear Resistance Taper	CTS TYPE 25LT 5/8" Slotted Shaft 1/2" Long Locking Bushing Linear Resistance Taper
10 ± 10%	RA30NASD100A	RA30LASB100A
25 ± 10%	RA30NASD250A	RA30LASB250A
50 ± 10%	RA30NASD500A	RA30LASB500A
100 ± 10%	RA30NASD101A	RA30LASB101A
200 ± 10%	RA30NASD201A	RA30LASB201A
250 ± 10%	RA30NASD251A	RA30LASB251A
500 ± 10%	RA30NASD501A	RA30LASB501A
750 ± 10%	RA30NASD751A	RA30LASB751A
1,000 ± 10%	RA30NASD102A	RA30LASB102A
2,500 ± 10%	RA30NASD252A	RA30LASB252A
5,000 ± 10%	RA30NASD502A	RA30LASB502A
7,500 ± 10%	RA30NASD752A	RA30LASB752A
10,000 ± 10%	RA30NASD103A	RA30LASB103A
15,000 ± 10%	RA30NASD153A	RA30LASB153A
25,000 ± 10%	RA30NASD253A	RA30LASB253A

IRC RESISTEG COATED ADJUSTABLE POWER WIRE WOUND RESISTORS



The adjustable feature of these IRC resistors provides an ideal solution to odd resistance values and to handling a variety of line voltages. For voltage divider applications, one or more adjustable bands may be used.

IRC adjustable power resistors are standard Resisteg coated tubular units with a track of exposed wire to allow for adjustment. Adjustable resistor wattage ratings apply only when all the resistance is in the circuit. Resistor should not be adjusted with voltage applied.

TYPE 2DA 25 watts. Core size: 2" long x 9/16" dia. Terminals: 12A. One adjustable band: type X-2. Resistance tolerance: ±10%. Mounting hardware included: Z-1 brackets. Standard package: 1.

	Maximum			Maximum	
Ohms	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**
1	5000	5.00	1250	141	176
2	3450	7.07	1500	129	193
3	2880	8.66	2000	111	223
5	2236	11.1	2250	105	237
7.5	1825	13.7	2500	100	250
10	1580	15.8	3000	91	274
15	1290	19.4	3500	84	296
20	1118	22.3	4000	79	316
25	1000	25.0	4500	74	335
50	707	35.4	5000	70	353
75	577	43.3	6000	64	387
100	500	50.0	7000	59	418
150	408	61.2	7500	57	434
200	353	70.0	8000	55	447
250	316	79.0	9000	52	474
300	288	86.0	10K	50	500
400	250	100	12K	45	548
500	223	111	15K	40	612
750	185	137	20K	35	707
800	176	141	25K	31	790
1000	158	158			

TYPE 5EA 75 watts. Core size: 5" long x ¾" dia. Terminals: 12A. One adjustable band. Resistance tolerance: ±10%. Mounting hardware included: Z-2 brackets. Standard package: 1.

	Maximum			Maximum	
Ohms	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**
1	8660	8.6	1500	223	335
2	6120	12.2	2500	173	432
3	5000	15.0	5000	122	611
4	4330	17.3	10K	86	866
5	3870	19.3	15K	70	1060
10	2740	27.4	20K	61	1224
25	1730	43.2	25K	54	1370
50	1225	61.1	30K	50	1500
100	866	86.6	40K	43	1732
250	548	137	50K	38	1936
500	387	193	75K	31	2370
1000	274	274	100K	27	2740

TYPE 8½HA 160-175 watts. Core size: 8½" long x 1⅛" dia. Terminals: 4A. One adjustable band. Resistance tolerance: ±10%. Mounting hardware included: Z-3 brackets. Standard package: 1.

	Maximum			Maximum	
Ohms	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**
1	13228	13.2	1500	341	512
2	9350	18.7	2500	264	661
3	7640	22.9	5000	187	935
4	6620	26.4	10K	132	1322
5	5920	29.7	15K	108	1620
10	4180	41.8	20K	93	1870
25	2640	66.1	25K	83	2090
50	1870	93.5	30K	76	2291
100	1322	132	40K	66	2645
250	837	209	50K	59	2960
500	592	296	75K	48	3620
1000	418	418	100K	41	4180

TYPE 1¾AA 10-12 watts. Core size: 1¾" long by 5 16" dia. Terminals: 12A. One adjustable band: type A. Resistance tolerance: ±10%. Standard package: 1. Mounting hardware included: Z-0 brackets.

	Maximum			Maximum	
Ohms	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**
1	3470	3.47	750	126	99.8
2	2450	4.90	800	122	97.9
3	2000	6.00	1000	109	109
5	1550	7.75	1250	98	122
7.5	1266	9.49	1500	89	134
10	1095	10.9	2000	77	155
15	895	13.4	2250	73	164
20	775	15.5	2500	69	173
25	693	17.3	3000	63	189
50	490	24.5	3500	58	204
75	400	30.0	4000	54	219
100	346	34.6	4500	51	232
150	283	42.4	5000	49	245
200	245	49.0	6000	44	268
250	219	54.7	7000	41	290
300	200	60.0	7500	40	300
350	185	64.8	8000	38	310
400	173	69.2	8500	37	319
500	155	77.5	9000	36	328
600	141	84.8	10K	34	346

TYPE 4DA 50 watts. Core size: 4" long x 9/16" dia. Terminals: 12A. One adjustable band. Resistance tolerance: ±10%. Mounting hardware included: Z-2 brackets. Standard package: 1.

	Maximum			Maximum	
Ohms	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**
1	7070	7.07	2500	141	353
2	5000	10.00	3000	129	387
3	4080	12.20	3500	119	417
4	3540	14.10	4000	112	447
5	3160	15.80	4500	105	474
10	2236	22.3	5000	100	500
25	1415	35.3	6000	91	547
50	1000	50.0	7000	84	591
75	816	61.2	7500	81	612
100	707	70.7	8000	79	632
150	578	86.6	9000	74	670
200	500	100	10K	70	707
250	448	111	12K	64	775
300	408	122	15K	57	866
400	353	141	20K	50	1000
500	316	158	25K	44	1118
750	258	193	30K	40	1224
800	250	200	40K	35	1414
1000	224	223	50K	31	1580
1250	200	249	60K	28	1732
1500	182	273	80K	25	2000
2000	158	316	100K	22	2230
2250	149	334			

TYPE 6½EA 100 watts. Core size: 6½" long x ¾" dia. Terminals: 12A. One adjustable band. Resistance tolerance: ±10%. Mounting hardware included: Z-2 brackets. Standard package: 1.

	Maximum			Maximum	
Ohms	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**
1	10000	10.0	1500	258	387
2	7070	14.1	2500	200	500
3	5770	17.3	5000	141	707
4	5000	20.0	10K	100	1000
5	4470	22.4	15K	81	1224
10	3160	31.6	20K	70	1414
25	2000	50.0	25K	63	1581
50	1414	70.7	30K	57	1732
100	1000	100	40K	50	2000
250	632	158	50K	44	2236
500	447	224	75K	36	2738
1000	316	316	100K	31	3160

TYPE 10½HA 200-225 watts. Core size: 10½" long x 1⅛" dia. Terminals: 4A. One adjustable band. Resistance tolerance: ±10%. Mounting hardware included: Z-3 brackets. Standard package: 1.

	Maximum			Maximum	
Ohms	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**
1	15000	15.0	1500	387	580
2	10600	21.2	2500	300	750
3	8660	25.9	5000	212	1060
4	7500	30.0	10K	150	1500
5	6708	33.5	15K	122	1830
10	4750	47.4	20K	106	2120
25	3000	75.0	25K	95	2370
50	2120	106	30K	86	2600
100	1500	150	40K	75	3000
250	950	237	50K	67	3350
500	670	335	75K	54	4100
1000	475	474	100K	47	4750

RESISTEG COATED FIXED POWER WIRE WOUND RESISTORS

TYPE 1A—5-8 watts. Resisteg coating. Core size: 1" long x 5/16" dia. Terminals: 13A. Resistance tolerance: ±5%. Mounting hardware included: none. Standard package—5.

	Maximum			Maximum			Maximum	
Ohms	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**
1	2830	2.83	200	200	40.0	2250	59	134
1.5	2310	3.47	225	188	42.4	2500	56	141
2	2000	4.00	250	179	44.7	3000	51	155
3	1632	4.90	300	163	49.0	3500	47	167
4	1414	5.66	350	151	52.9	4000	44	179
5	1265	6.32	400	141	56.6	4500	42	189
7.5	1032	7.75	450	133	60.0	5000	40	200
10	894	8.94	500	126	62.2	6000	36	219
12	817	9.80	600	115	69.3	7000	33	236
15	731	10.9	700	107	75.0	7500	32	245
20	633	12.6	750	103	77.5	8000	31	253
25	566	14.1	800	100	80.0	9000	29	268
30	517	15.5	900	94	85.0	10K	28	283
35	478	16.7	1000	89	89.5	12.5K	25	316
40	447	17.9	1100	85	94.0	15K	23	346
50	400	20.0	1200	81	98.0	17.5K*	21	374
75	327	24.5	1250	80	100	20K*	20	400
100	283	28.3	1500	73	109	22.5K*	18	424
125	253	31.6	1750	67	118	25K*	17	447
150	231	34.6	2000	63	126			

*No. 1 Terminal

TYPE 2C 20 watts. Resisteg coating. Core size: 2" long x 7/16" dia. Terminals: 13A. Resistance tolerance: ±5%. Mounting hardware included: none. Standard package—5.

	Maximum			Maximum			Maximum	
Ohms	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**
1	4470	4.47	900	149	134	12.5K	40	500
2	3160	6.32	1000	141	141	15K	36	547
3	2580	7.74	1200	129	155	20K	31	632
4	2236	8.94	1250	126	158	25K	28	707
5	2000	10.0	1500	115	173	30K	25	775
10	1415	14.1	1750	107	187	35K	23	836
25	894	22.3	2000	100	200	40K	22	894
50	633	31.6	2250	94	211	45K	21	948
75	517	38.7	2500	89	222	50K	20	1000
100	447	44.7	2750	85	234	55K	19	1048
150	365	54.8	3000	81	245	60K	18	1095
200	316	63.2	3500	75	264	65K	17	1140
250	282	70.7	4000	70	283	70K	16	1180
300	258	77.4	4500	66	300	75K	16	1224
350	238	83.7	5000	63	316	80K	15	1264
400	223	89.5	6000	57	346	85K*	15	1303
500	200	100	7000	53	374	90K*	14	1340
650	175	114	7500	51	387	95K*	14	1378
700	169	118	8000	50	400	100K*	14	1414
750	163	122	9000	47	424			
800	158	126	10K	44	447			

*No. 1 Terminal

TYPE 4D 50 watts. Resisteg coating. Core size, 4" long x 9/16" dia. Terminals: 12A. Resistance tolerance: ±5%. Mounting hardware included: Z-1 brackets. Standard package—1.

	Maximum			Maximum			Maximum	
Ohms	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**
1	7070	7.07	750	258	193	20K	50	1000
2	5000	10.00	800	250	200	25K	44	1118
3	4080	12.20	1000	224	223	35K	38	1322
4	3540	14.10	1500	182	273	50K	31	1580
5	3160	15.80	2000	158	316	75K	25	1936
10	2236	22.3	2500	141	353	100K	22	2230
25	1415	35.3	3000	129	387	125K	20	2500
50	1000	50.0	4000	112	447	150K	18	2738
75	816	61.2	5000	100	500	175K	16	2958
100	707	70.7	7500	81	612	200K	15	3160
150	578	86.6	8000	79	632	250K	14	3530
200	500	100	10K	70	707			
250	448	111	12K	64	775			
500	316	158	15K	57	866			

TYPE 8½H 160-175 watts. Resisteg coating. Core size: 8½" long x 1⅛" dia. Terminals: 4A. Resistance tolerance: ±5%. Mounting hardware included: Z-3 brackets. Standard package—1.

	Maximum			Maximum			Maximum	
Ohms	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**
1	13228	13.2	150	1080	162	10K	132	1322
2	9350	18.7	250	837	209	15K	108	1620
3	7640	22.9	500	592	296	20K	93	1870
4	6620	26.4	750	483	362	25K	83	2090
5	5920	29.7	1000	418	418	30K	76	2291
10	4180	41.8	1500	341	512	40K	66	2645
25	2640	66.1	2000	296	591	50K	59	2960
50	1870	93.5	2500	264	661	60K	54	3240
75	1525	114	3000	241	724	75K	48	3620
100	1322	132	5000	187	935	100K	41	4180
125	1180	148	7500	152	1145			

TYPE 1¾A 10-12 watts. Resisteg coating. Core size: 1¾" long x 5/16" dia. Terminals: 13A. Resistance tolerance: ±5%. Mounting hardware included: none. Standard package—5.

	Maximum			Maximum			Maximum	
Ohms	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**
1	3470	3.47	350	185	64.7	7000	41	287
1.5	2830	4.24	400	173	69.2	7500	40	300
2	2450	4.90	450	163	73.3	8000	38	304
3	2000	6.00	500	155	77.5	8500	37	319
4	1732	6.93	600	141	84.6	9000	36	328
5	1550	7.75	700	131	91.7	10K	34	340
7.5	1266	9.49	750	126	94.5	11K	33	363
10	1095	10.9	800	122	97.6	12K	31	372
12	1000	12.0	900	115	103	12.5K	31	387
15	895	13.4	1000	109	109	13.5K	29	391
20	775	15.5	1100	104	114	15K	28	420
25	693	17.3	1200	100	120	16K	27	432
30	633	19.0	1250	98	122	17.5K	26	458
35	586	20.5	1500	89	133	18K	25	464
40	548	21.9	1750	83	145	20K	24	480
50	490	24.5	2000	77	154	22.5K	23	517
75	400	30.0	2250	73	164	25K	21	525
100	346	34.6	2500	69	172	30K	20	600
125	310	38.7	3000	63	189	35K	18	630
150	283	42.4	3500	58	199	40K	17	680
200	245	49.0	4000	54	216	45K	16	720
225	231	51.9	4500	51	229	50K	15	750
250	219	54.7	5000	49	245			
300	200	60.0	6000	44	264			

TYPE 2D 25 watts. Resisteg coating. Core size: 2" long x 9/16" dia. Terminals: 12A. Resistance tolerance: ±5%. Mounting hardware included: Z-1 brackets. Standard package—1.

	Maximum			Maximum			Maximum	
Ohms	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**
1	5000	5.00	500	223	111	12K	45	548
2	3540	7.07	750	185	137	15K	40	612
3	2880	8.66	800	176	141	20K	35	707
4	2500	10.0	1000	158	158	25K	31	790
5	2236	11.1	1500	129	193	30K	28	866
10	1580	15.8	2000	111	223	35K	26	935
15	1290	19.4	2500	100	250	40K	25	1000
25	1000	25.0	3000	91	274	50K	22	1118
50	707	35.4	3500	84	296	60K	20	1224
75	577	43.3	4000	79	316	70K	18	1320
100	500	50.0	5000	70	353	80K	17	1414
150	408	61.2	6000	64	387	100K	15	1580
200	353	70.7	7500	57	434			
250	316	79.0	10K	50	500			

TYPE: 6½E 100 watts. Resisteg coating. Core size: 6½" long x ¾" dia. Terminals: 12A. Resistance tolerance: ±5%. Mounting hardware included: Z-2 brackets. Standard package—1.

	Maximum			Maximum			Maximum	
Ohms	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**
1	10000	10.0	150	818	122	10K	100	1000
2	7070	14.1	250	632	158	15K	81	1224
3	5770	17.3	500	447	224	20K	70	1414
4	5000	20.0	750	365	274	25K	63	1581
5	4470	22.4	1000	316	316	30K	57	1732
10	3160	31.6	1500	258	387	40K	50	2000
25	2000	50.0	2000	223	447	50K	44	2236
50	1414	70.7	2500	200	500	60K	40	2449
75	1155	86.6	3000	182	547	75K	36	2738
100	1000	100	5000	141	707	100K	31	3160
125	895	111	7500	115	865			

TYPE 10½H 200-225 watts. Resisteg coating. Core size: 10½" long x 1⅛" dia. Terminals: 4A Resistance tolerance: ±5%. Mounting hardware included: Z-3 brackets. Standard package—1.

	Maximum			Maximum			Maximum	
Ohms	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**	**Ohms**	**Mils**	**Volts**
1	15000	15.0	250	950	237	15K	122	1830
2	10600	21.2	500	670	335	20K	106	2120
3	8660	25.9	750	548	410	25K	95	2370
4	7500	30.0	1000	475	474	30K	86	2600
5	6708	33.5	1500	387	580	40K	75	3000
10	4750	47.4	2000	335	670	50K	67	3350
25	3000	75.0	2500	300	750	60K	61	3675
50	2120	106	3000	274	820	75K	54	4100
75	1730	129	5000	212	1060	100K	47	4750
100	1500	150	7500	173	1300			
150	1225	183	10K	150	1500			

IRC RESISTEG COATED FIXED POWER WIRE WOUND RESISTORS

MILITARY STYLE POWER RESISTORS

IRC's exclusive Resisteg Coating accounts directly for the superior stability of IRC power resistors. This coating is cured at temperatures below 205°F.—1000° less than required for other type coats. With low temperature curing, winding turns do not shift together. The wire is not "work-hardened" since excessive tension is not needed to prevent shifting. There are no failures from arc-over. And, RESISTEG COATED POWER RESISTORS NEED NO DERATING—even at high resistance values they operate at FULL RATED POWER! Low-temperature cured. Resisteg is an exclusive IRC feature.

RW29V 11 watts, military stamping, no hardware. Standard package: 1.

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1.0	4.5	20	90	400	1800
1.1	5.0	22	100	450	2000
1.2	5.6	25	110	500	2200
1.4	6.3	28	120	560	2500
1.6	7.1	31	140	630	2800
1.8	8.0	35	160	710	3100
2.0	9.0	40	180	800	3500
2.2	10	45	200	900	4000
2.5	11	50	220	1000	4500
2.8	12	56	250	1100	5000
3.1	14	63	280	1200	5600
3.5	16	71	310	1400	
4.0	18	80	350	1600	

RW30V 11 watts, military stamping, no hardware. Standard package: 1.

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1.0	4.0	16	63	250	1000
1.1	4.5	18	71	280	1100
1.2	5.0	20	80	310	1200
1.4	5.6	22	90	350	1400
1.6	6.3	25	100	400	1600
1.8	7.1	28	110	450	1800
2.0	8.0	31	120	500	2000
2.2	9.0	35	140	560	2200
2.5	10	40	160	630	2500
2.8	11	45	180	710	
3.1	12	50	200	800	
3.5	14	56	220	900	

RW31V 14 watts, military stamping, no hardware. Standard package: 1.

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1.0	4.5	20	90	400	1800
1.1	5.0	22	100	450	2000
1.2	5.6	25	110	500	2200
1.4	6.3	28	120	560	2500
1.6	7.1	31	140	630	2800
1.8	8.0	35	160	710	3100
2.0	9.0	40	180	800	3500
2.2	10	45	200	900	4000
2.5	11	50	220	1000	4500
2.8	12	56	250	1100	5000
3.1	14	63	280	1200	5600
3.5	16	71	310	1400	6300
4.0	18	80	350	1600	

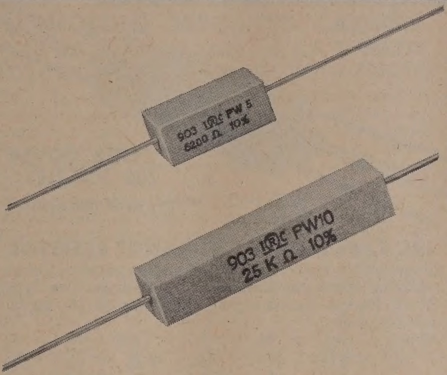
RW32V 17 watts, military stamping, no hardware. Standard package: 1.

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1.0	5.0	25	120	630	3100
1.1	5.6	28	140	710	3500
1.2	6.3	31	160	800	4000
1.4	7.1	35	180	900	4500
1.6	8.0	40	200	1000	5000
1.8	9.0	45	220	1100	5600
2.0	10	50	250	1200	6300
2.2	11	56	280	1400	7100
2.5	12	63	310	1600	8000
2.8	14	71	350	1800	9000
3.1	16	80	400	2000	10K
3.5	18	90	450	2200	
4.0	20	100	500	2500	
4.5	22	110	560	2800	

RW33V 26 watts, military stamping, no hardware. Standard package: 1.

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1.0	5.6	31	180	1000	5600
1.1	6.3	35	200	1100	6300
1.2	7.1	40	220	1200	7100
1.4	8.0	45	250	1400	8000
1.6	9.0	50	280	1600	9000
1.8	10	56	310	1800	10K
2.0	11	63	350	2000	11K
2.2	12	71	400	2200	12K
2.5	14	80	450	2500	14K
2.8	16	90	500	2800	16K
3.1	18	100	560	3100	18K
3.5	20	110	630	3500	
4.0	22	120	710	4000	
4.5	25	140	800	4500	
5.0	28	160	900	5000	

IRC AXIAL LEAD POWER WIRE WOUND RESISTORS

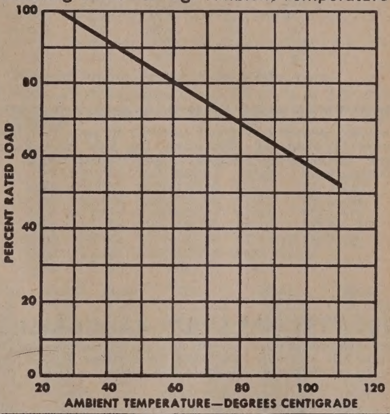

903 IRC PW 5
6200 Ω 10%
903 IRC PW10
25 K Ω 10%

These popular axial lead power resistors are the industry favorites for 5 and 10 watt applications. The compact shape fits among other components more easily. The axial lead design speeds installation. And, the superior solderability of the terminals assures sound connections every time.

A precisely wound element is sealed in a ceramic case—fully protected and insulated. Conservative rating permits continuous operation at full power. Resistance, wattage and tolerance are permanently marked on resistor body. Standard tolerance is 10%.

Popular Assortment of 20 PW10 resistors is available for handy bench stock. The values are selected on the basis of 10 watt usage. Resistors are mounted on plastic covered card with hole for hanging. Assortment 20A.

IRC PW5 and PW10
Derating Curve For High Ambient Temperature



STANDARD STOCK VALUES

PW5

Ohms:	1	50	600	2250
	2	75	700	2500
	3	100	750	3000
	4	120	800	3300
	5	125	820	3500
	7.5	150	900	3900
	10	200	1000	4000
	15	250	1200	4500
	20	300	1250	5000
	25	350	1500	6000
	30	400	1750	
	40	500	2000	

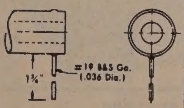
PW10

Ohms:	1	120	1000	6000
	2	125	1200	7000
	3	150	1250	7500
	4	200	1500	8000
	5	250	1750	8200
	7.5	300	2000	8500
	10	350	2250	9000
	15	400	2500	10,000
	20	500	3000	12,000
	25	600	3300	12,500
	30	700	3500	15,000
	40	750	3900	20,000
	50	800	4000	25,000
	75	820	4500	
	100	900	5000	

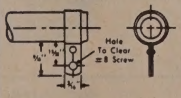
POWER WIRE WOUND RESISTOR HARDWARE

TERMINALS

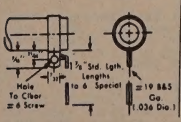
Type 1
Available for some values in Type 1A and 2C


#19 B&S Ga.
(.036 Dia.)
1¾"

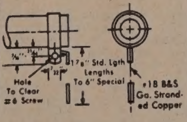
Type 4A
For 8½H, 8½HA, 10½H and 10½HA


Hole
To Clear
#8 Screw

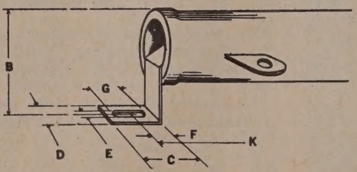
Type 12A
For 1¾AA, 2D, 2DA, 4D, 4DA, 5EA, 6½E and 6½EA


Hole
To Clear
#6 Screw
1⅞" Std. Lgth.
Lengths
to 6 Special
#19 B&S
Ga.
(.036 Dia.)

Type 13A
For 1A, 1¾A and 2C


Hole
To Clear
#6 Screw
1⅞" Std. Lgth
Lengths
To 6" Special
#18 B&S
Ga. Stranded Copper

BRACKETS



BRACKET TYPE	USE WITH O.D.	RESISTOR TYPE	B	C	D	E	F	G	K
Z-0	5/16"	A	19/32"	1/2"	5/16"	11/64"	15/64"	17/64"	Core Length + 15/32"
Z-1	9/16"	D	1¼"	9/16"	5/16"	11/64"	5/16"	19/64"	Core Length + 5/8"
Z-2	3/4"	E	1 7/16"	5/8"	3/8"	11/64"	11/32"	23/64"	Core Length + 11/16"
Z-3	1⅛"	H	2 1/16"	11/16"	1/2"	3/16"	13/32"	1/4"	Core Length + 13/16"
Z-4	7/16"	C	5/8"	29/64"	1/4"	9/64"	1/4"	9/64"	Core Length + 1/2"

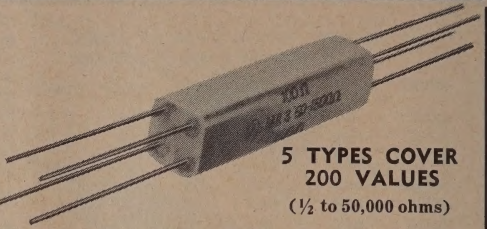
ADJUSTABLE BANDS

Resistor	Band	Resistor	Band
1¾AA	A	5EA, 6½EA	E
2DA, 4DA	D	8½HA, 10½HA	H

IRC MULTI-RANGE POWER RESISTORS

COMPLETE 10-WATT COVERAGE

This sensational resistor means that never again will technicians or servicemen need to be delayed to order an odd resistance value. 5 Multi-Range Resistors cover all 10-watt needs . . . 200 values, 0.5 to 50,000 ohms! This unit consists of four ten-watt resistance elements sealed in a special steatite housing. Various interconnections of the elements provide replacement for 47 different values, except for the MR5 Multi-Range Resistor. Axial leads speed serving . . . Conservatively rated—10 watts or more.



5 TYPES COVER 200 VALUES

(½ to 50,000 ohms)

IRC TYPE MR1 MULTI-RANGE RESISTOR

Provides exceptionally broad coverage of ten-watt resistors between 0.5 ohm and 15 ohms. The MR1 Multi-Range Resistor has elements of 1, 2, 4, and 8 ohms.

ohms:	0.5	0.91	2.2	3.0	4.8	9.1
	0.56	1.0	2.4	3.3	5.0	10
	0.62	1.1	2.5	3.6	5.6	11
	0.68	1.2	2.6	3.9	6.0	12
	0.75	1.3	2.7	4.0	7.0	13
	0.8	1.5	2.75	4.5	8.0	14
	0.82	1.6	2.8	4.6	8.2	15
	0.9	2.0	2.9	4.7	9.0	

IRC TYPE MR2 MULTI-RANGE RESISTOR

Provides exceptionally broad coverage of ten-watt resistors between 5 ohms and 150 ohms. The MR2 Multi-Range Resistor has elements of 10, 20, 40 and 80 ohms.

ohms:	5.0	9.1	22	30	48	91
	5.6	10	24	33	50	100
	6.2	11	25	36	56	110
	6.8	12	26	39	60	120
	7.5	13	27	40	70	130
	8.0	15	27.5	45	80	140
	8.2	16	28	46	82	150
	9.0	20	29	47	90	

IRC TYPE MR3 MULTI-RANGE RESISTOR

Provides exceptionally broad coverage of ten-watt resistors between 50 ohms and 1500 ohms. The MR3 Multi-Range Resistor has elements of 100, 200, 400, and 800 ohms.

ohms.	50	91	220	300	480	910
	56	100	240	330	500	1000
	62	110	250	360	560	1100
	68	120	260	390	600	1200
	75	130	270	400	700	1300
	80	150	275	450	800	1400
	82	160	280	460	820	1500
	90	200	290	470	900	

IRC TYPE MR4 MULTI-RANGE RESISTOR

Provides exceptionally broad coverage of ten-watt resistors between 500 ohms and 15K ohms. The MR4 Multi-Range Resistor has elements of 1K, 2K, 4K, and 8K ohms.

ohms:	500	910	2.2K	3K	4.8K	9.1K
	560	1K	2.4K	3.3K	5K	10K
	620	1.1K	2.5K	3.6K	5.6K	11K
	680	1.2K	2.6K	3.9K	6K	12K
	750	1.3K	2.7K	4K	7K	13K
	800	1.5K	2.75K	4.5K	8K	14K
	820	1.6K	2.8K	4.6K	8.2K	15K
	900	2K	2.9K	4.7K	9K	

IRC TYPE MR5 MULTI-RANGE RESISTOR

Provides exceptionally broad coverage of ten-watt resistors between 3K and 50K. The MR5 Multi-Range Resistor has elements of 10K, 10K, 15K, and 15K ohms.

ohms:	3K	7.5K	15K	30K
	5K	10K	20K	40K
	6K	12.5K	25K	50K

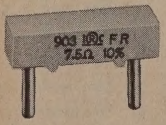
ANOTHER MULTI-RANGE FEATURE . . . EXCLUSIVE IRC HANDY-PAKS!

For greater convenience and ease of stocking and handling, Multi-Range Resistors are supplied in Handy-Paks only . . . 2 of a type to a Pak. Slimline plastic sleeve protects modern, reusable package which opens at both ends.

MULTI-RANGE KIT #55 ASSORTMENT

Complete 10-watt power resistor coverage at your fingertips. Your stock is always visible. Identification of type, value, etc. shows through the plastic case. You always know what you have, and have what is needed with an IRC Multi-Range Resistor Kit. Kit gives complete 10-watt coverage of 200 values. Contains 5 Handy-Paks – 2 of each Type MR resistor . . . 10 Multi-Range units. Rigid, clear-plastic box with hinged lid. Measures only 5¼" x 3½" x 1¼".

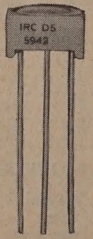
NEW FUSE RESISTOR IRC TYPE FR



New IRC Fuse-Resistor. Modern design in rectangular ceramic shell. Equipped with plug-in terminals. Available in three popular resistance values. Attractively packaged.

FR5 —Fuse-Resistor 5.0 ohms
FR5.6—Fuse-Resistor 5.6 ohms
FR7.5—Fuse-Resistor 7.5 ohms

IRC DUAL DIODES



New IRC Universal Selenium Dual Diodes for horizontal phase detectors and remote control in TV Receivers. Also used in radio control devices for model planes, and other circuits. Two basic types: (1) common cathode; (2) series diodes. Sealed in plastic housing. Attractively packaged.

D4 (replaces former D1 and D2). Common cathode dual diode to replace the following Mfrs.' Parts: G.E. K115J510-1, -2; Hallicrafter 027-300-226, 27C226; Hoffman 10031, 744002; Motorola 48K741255; Philco 34-8037, -1, -2, -3; Muntz (2)SR-0004, SR-0006.

D5 (replaces former D3). Series connected dual diode to replace the following Mfrs.' Parts: Admiral 93A5-2, 93B5-3, -4, -5; Citizenship Radio 34-8037; Emerson 817062; Magnavox 530045-1, -2; Motorola 48K741752, 48B742698; Silvertone B48-110; Webcor 65P124; Zenith 63-3977.

IRC®

UNMOLDED AND MOLDED DEPOSITED CARBON RESISTORS

UNMOLDED DEPOSITED CARBON

TYPE DC 1% ACCURACY. ½, 1, & 2 WATTS STYLE RN20X, RN25X, RN30X (MIL-R-10509B)

IRC Deposited Carbon Precision Resistors offer a unique combination of close tolerance, stability and economy. Pure crystalline carbon is bonded to selected ceramic cores to produce a resistor ideally suited to the requirements of instrumentation, advanced electronics and critical television circuits.

Deposited Carbon Presistors provide a combination of characteristics not found in any other resistor type. The wide range of values, accuracy, high stability, low voltage coefficient, excellent frequency characteristics, predictable temperature characteristics, high voltage rating, low noise level and small size of PRESISTORS make them superior to many popular applications.

IRC Type DC Deposited Carbon Presistors are available in three sizes: ½ watt (body size 9/16″ x 3/32″), 1 watt (body size 15/16″ x 9/32″), and 2 watts (body size 2 1/16″ x 9/32″). Accuracy ±1% (25°C).

MOLDED DEPOSITED CARBON

TYPE MDC 1% ACCURACY. ½ WATT STYLE RN70B (MIL-R-10509C)

IRC's Molded Deposited Carbon Presistor is a precision film type resistor that incorporates the added advantages of a fully insulated unit. The molded insulation provides improved load life characteristics, better insulation resistance and greater resistance to moisture effects. The Molded Deposited Carbon Presistor provides all the advantages of the ceramic solder sealed types without the hazards of seal leakage, breakage and low dielectric strength.

Type MDC Molded Deposited Carbon Presistors are particularly suited for applications where an unmolded deposited carbon unit cannot be used due to the risk of mechanical damage to its coating, insulation breakdown and excessive moisture conditions.

Wattage Rating: ½ watt at 70°C. ambient (per MIL-R-10509B) derated to 0 at 165°C. Dimensions: 23/32″ x ¼″ (body size).

MILITARY VALUES

TYPE DCC—every value shown from 10 ohms to 2.0 meg.

TYPE DCF—all values shown in bold face type

TYPE DCH—all values shown in bold face type

TYPE MDC—all values shown from 10 ohms to 2.49 meg.

STANDARD STOCK VALUES

TYPE DCC — ½ WATT — 1% TOLERANCE

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
51	100	200	390	750	1500	3000	5600	11K	22K	43K	82K	160K	330K	620K	1.2 meg.
56	110	220	430	820	1600	3300	6200	12K	24K	47K	91K	180K	360K	680K	1.3 meg.
62	120	240	470	910	1800	3600	6800	13K	27K	51K	100K	200K	390K	750K	1.5 meg.
68	130	270	510	1000	2000	3900	7500	15K	30K	56K	110K	220K	430K	820K	1.6 meg.
75	150	300	560	1100	2200	4300	8200	16K	33K	62K	120K	240K	470K	910K	1.8 meg.
82	160	330	620	1200	2400	4700	9100	18K	36K	68K	130K	270K	510K	1.0 meg.	2.0 meg.
91	180	360	680	1300	2700	5100	10K	20K	39K	75K	150K	300K	560K	1.1 meg.	

TYPE DCF — 1 WATT — 1% TOLERANCE

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
100	250	500	1100	2500	5000	11K	25K	50K	110K	250K	500K	1.1 meg.	2.5 meg.	5.0 meg.
110	270	510	1200	2700	5100	12K	27K	51K	120K	270K	510K	1.2 meg.	2.7 meg.	5.1 meg.
120	300	560	1300	3000	5600	13K	30K	56K	130K	300K	560K	1.3 meg.	3.0 meg.	5.6 meg.
130	330	620	1500	3300	6200	15K	33K	62K	150K	330K	620K	1.5 meg.	3.3 meg.	6.2 meg.
150	360	680	1600	3600	6800	16K	36K	68K	160K	360K	680K	1.6 meg.	3.6 meg.	6.8 meg.
160	390	750	1800	3900	7500	18K	39K	75K	180K	390K	750K	1.8 meg.	3.9 meg.	7.5 meg.
180	400	820	2000	4000	8200	20K	40K	82K	200K	400K	820K	2.0 meg.	4.0 meg.	8.2 meg.
200	430	910	2200	4300	9100	22K	43K	91K	220K	430K	910K	2.2 meg.	4.3 meg.	9.1 meg.
220	470	1000	2400	4700	10K	24K	47K	100K	240K	470K	1.0 meg.	2.4 meg.	4.7 meg.	10.0 meg.
240														

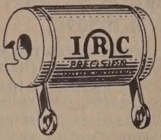
TYPE DCH — 2 WATTS — 1% TOLERANCE

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
200	470	1100	2700	6200	15K	36K	82K	200K	470K	1.0 meg.	2.4 meg.	4.7 meg.	10. meg.	24. meg.
220	510	1200	3000	6800	16K	39K	91K	220K	500K	1.1 meg.	2.5 meg.	5.0 meg.	11. meg.	27. meg.
240	560	1300	3300	7500	18K	43K	100K	240K	510K	1.2 meg.	2.7 meg.	5.1 meg.	12. meg.	30. meg.
270	620	1500	3600	8200	20K	47K	110K	270K	560K	1.3 meg.	3.0 meg.	5.6 meg.	13. meg.	
300	680	1600	3900	9100	22K	51K	120K	300K	620K	1.5 meg.	3.3 meg.	6.2 meg.	15. meg.	
330	750	1800	4300	10K	24K	56K	130K	330K	680K	1.6 meg.	3.6 meg.	6.8 meg.	16. meg.	
360	820	2000	4700	11K	27K	62K	150K	360K	750K	1.8 meg.	3.9 meg.	7.5 meg.	18. meg.	
390	910	2200	5100	12K	30K	68K	160K	390K	820K	2.0 meg.	4.0 meg.	8.2 meg.	20. meg.	
430	1000	2400	5600	13K	33K	75K	180K	430K	910K	2.2 meg.	4.3 meg.	9.1 meg.	22. meg.	

TYPE MDC — ½ WATT — 1% TOLERANCE

100	191	365	698	1330	2550	4870	9090	17.4K	33.2K	63.4K	121K	232K	442K	845K	1.62 meg.
102	196	374	715	1370	2610	4990	9310	17.8K	34.0K	64.9K	124K	237K	453K	866K	1.65 meg.
105	200	383	732	1400	2670	5110	9530	18.2K	34.8K	66.5K	127K	243K	464K	887K	1.69 meg.
107	205	392	750	1430	2740	5230	9760	18.7K	35.7K	68.1K	130K	249K	475K	909K	1.74 meg.
110	210	402	768	1470	2800	5360	10.0K	19.1K	36.5K	69.8K	133K	255K	487K	931K	1.78 meg.
113	215	412	787	1500	2870	5490	10.2K	19.6K	37.4K	71.5K	137K	261K	499K	953K	1.82 meg.
115	221	422	806	1540	2940	5620	10.5K	20.0K	38.3K	73.2K	140K	267K	511K	976K	1.87 meg.
118	226	432	825	1580	3010	5760	10.7K	20.5K	39.2K	75.0K	143K	274K	523K	1.00 meg.	1.91 meg.
121	232	442	845	1620	3090	5900	11.0K	21.0K	40.2K	76.8K	147K	280K	536K	1.02 meg.	1.96 meg.
124	237	453	866	1650	3160	6040	11.3K	21.5K	41.2K	78.7K	150K	287K	549K	1.05 meg.	2.00 meg.
127	243	464	887	1690	3240	6190	11.5K	22.1K	42.2K	80.6	154K	294K	562K	1.07 meg.	2.05 meg.
130	249	475	909	1740	3320	6340	11.8K	22.6K	43.2K	82.5K	158K	301K	576K	1.10 meg.	2.10 meg.
133	255	487	931	1780	3400	6490	12.1K	23.2K	44.2K	84.5K	162K	309K	590K	1.13 meg.	2.15 meg.
137	261	499	953	1820	3480	6650	12.4K	23.7K	45.3K	86.6K	165K	316K	604K	1.15 meg.	2.21 meg.
140	267	511	976	1870	3570	6810	12.7K	24.3K	46.4K	88.7K	169K	324K	619K	1.18 meg.	2.26 meg.
143	274	523	1000	1910	3650	6980	13.0K	24.9K	47.5K	90.9K	174K	332K	634K	1.21 meg.	2.32 meg.
147	280	536	1020	1960	3740	7150	13.3K	25.5K	48.7K	93.1K	178K	340K	649K	1.24 meg.	2.37 meg.
150	287	549	1050	2000	3830	7320	13.7K	26.1K	49.9K	95.3K	182K	348K	665K	1.27 meg.	2.43 meg.
154	294	562	1070	2050	3920	7500	14.0K	26.7K	51.1K	97.6K	187K	357K	681K	1.30 meg.	2.49 meg.
158	301	576	1100	2100	4020	7680	14.3K	27.4K	52.3K	100K	191K	365K	698K	1.33 meg.	
162	309	590	1130	2150	4120	7870	14.7K	28.0K	53.6K	102K	196K	374K	715K	1.37 meg.	
165	316	604	1150	2210	4220	8060	15.0K	28.7K	54.9K	105K	200K	383K	732K	1.40 meg.	
169	324	619	1180	2260	4320	8250	15.4K	29.4K	56.2K	107K	205K	392K	750K	1.43 meg.	
174	332	634	1210	2320	4420		15.8K	30.1K	57.6K	110K	210K	402K	768K	1.47 meg.	
178	340	649	1240	2370	4530	8450	16.2K	30.9K	59.0K	113K	215K	412K	787K	1.50 meg.	
182	348	665	1270	2430	4640	8660	16.5K	31.6K	60.4K	115K	221K	422K	806K	1.54 meg.	
187	357	681	1300	2490	4750	8870	16.9K	32.4K	61.9K	118K	226K	432K	825K	1.58 meg.	

IRC® PRECISION WIRE WOUND RESISTORS

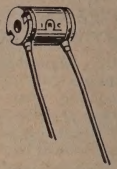


IRC Precision Wire Wound Resistors are designed and manufactured to exacting standards necessary to insure consistent accuracy in critical applications.

The ceramic winding forms have high insulating qualities, high mechanical strength and low coefficient of expansion. Insulation provides greater humidity protection and also contributes to longer trouble-free service.

Maximum temperature coefficient of .0027% per degree C is standard on all IRC Precision Wire Wound Resistors at no added cost.

IRC Precision Wire Wound Resistors have either radial lug or radial lead terminal, designed to eliminate any strain on the winding. These terminals offer excellent solderability.

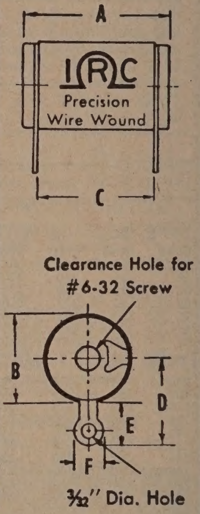


RADIAL LUG TYPE

IRC Type No.	WW2J	WW3J	WW4J	WW5J
Rating in Watts				
65° C. Ambient	2	.50	1	1
Former MIL Rating	1	.35	.50	.50
Maximum Volts	2000	400	700	1000
Dimensions (inches)				
A Dimension	2 1/8	9/16	1	1 1/4
B Dimension	29/32	19/32	19/32	25/32
C Dimension	1 25/32	3/8	25/32	31/32
D Dimension	25/32	5/8	5/8	23/32
E Dimension	5/16	5/16	5/16	5/16
F Dimension	3/16	3/16	3/16	3/16

STANDARD STOCK VALUES: 1% Tolerance

Type WW2J	Type WW3J			Type WW4J			Type WW5J
Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
600K	0.1	1,500	30K	0.1	2,000	40K	600K
750K	0.2	2,000	35K	0.2	2,500	50K	750K
900K	0.5	2,500	40K	0.5	3,000	60K	900K
1.0 Meg.	1.0	3,000	50K	1.0	3,500	75K	1.0 Meg.
1.5 Meg.	5	3,500	60K	5	4,000	100K	
2.0 Meg.	10	4,000	75K	10	5,000	125K	
2.5 Meg.	25	5,000	100K	25	7,500	150K	
	50	7,500	125K	50	10K	175K	
	100	10K	150K	100	12.5K	200K	
	200	12.5K	175K	200	15K	225K	
	250	15K	200K	250	20K	250K	
	300	20K	225K	300	22.5K	300K	
	500	22.5K		500	25K	400K	
	1,000	25K		1,000	30K	500K	
				1,500	35K		



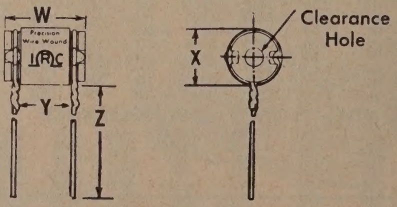
RADIAL LEAD TYPE

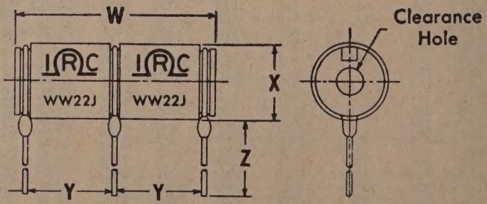
IRC TYPE No.	WW10J
Rating in Watts	
65°C. Ambient	.25
Former MIL Rating	.15
Maximum Volts	150
Dimensions	
Lead Diameter (AWG)	#22
W Dimension	13/32"
X Dimension	9/32"
Y Dimension	9/32"
Z Dimension	2*
Clearance hole to fit	#2 Screw

*Lengths shown are standard. 2", 3" and 4" also available upon request.

STANDARD STOCK VALUES: 1% Tolerance

Type WW10J		
Ohms	Ohms	Ohms
10	2,000	20K
25	2,500	25K
50	3,000	30K
100	3,500	40K
200	4,000	50K
250	5,000	60K
300	7,500	75K
500	10K	100K
1,000	12.5K	
1,500	15K	

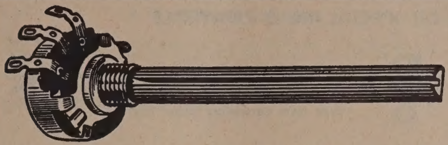




Special non-stock types, tolerances and values available on request.

Use Index Page 1 for Quick, Easy Location of ALL Products

RADIO-TV TECHNICIANS' TYPE Q VOLUME CONTROLS



IRC's Type Q Control is the basic control for servicing all sets, It is carefully engineered to meet most replacement requirements with a minimum stock. The quality appearance and "cushioned turn" of the Q Control assure customer satisfaction. Easier installation and dependable performance provide more profitable servicing.

KNOB MASTER STANDARD FIXED SHAFT

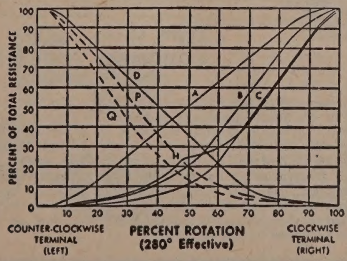
Standard shaft is knurled, flatted and slotted and fits most knobs without alteration. For knurled or spring type push-on knobs, cut to length. For over-size, worn or web type knobs, split shaft slot lengthwise and spread ends. For positioned knobs, bend down control locating pins and rotate control base for correct knob position.

¼" LONG BUSHING

Shorter bushing and compact 15/16" design suit Q Controls to all small sets, yet handle large set needs as well.

Ohms	Taps	Type Q Control	Taper
250	—	Q11-201	A
500	—	Q11-103	A
750	—	Q11-105	A
750	—	Q17-105	P
750	250	Q17-105X	S
1000	—	Q11-108	A
1000	—	Q17-108	P
1500	—	Q11-109	A
1500	—	Q17-109	Q
2000	—	Q11-110	A
2000	—	Q17-110	Q
2000	250 & 500	Q17-110XX	S
2500	—	Q13-111	C
2500	—	Q17-111	Q
3000	—	Q11-112	A
3000	—	Q17-112	Q
5000	—	Q11-114	A
5000	—	Q13-114	C
5000	—	Q17-114	Q
7500	—	Q11-115	A
10K	—	Q11-116	A
10K	—	Q13-116	C
10K	—	Q14-116	D
10K	—	Q17-116	Q
15K	10K	Q13-118X	S
15K	5000 & 10K	Q13-118XX	S
15K	5000	Q17-118X	S
15K	5000 & 10K	Q17-118XX	S
20K	—	Q11-119	A
20K	—	Q16-119	S
25K	—	Q11-120	A
25K	—	Q13-120	C
25K	—	Q14-120	D
30K	—	Q11-121	A
35K	—	Q11-122	A
50K	—	Q11-123	A
50K	—	Q13-123	C
50K	—	Q14-123	D
75K	—	Q11-125	A
100K	—	Q11-128	A
100K	—	Q13-128	C
125K	—	Q11-228	A
150K	—	Q11-328	A
150K	—	Q13-328	C
150K	19K & 38K	Q17-328XX	S
200K	—	Q11-129	A
250K	—	Q11-130	A
250K	—	Q13-130	C
250K	60K	Q18-130X	H
250K	125K	Q13-130X	S
250K	60K & 120K	Q18-130XX	S
300K	—	Q11-131	A
350K	—	Q11-132	A
350K	—	Q13-132	C
350K	35K	Q17-132X	S
350K	75K	Q18-132X	H
500K	—	Q11-133	A
500K	—	Q13-133	C
500K	—	Q14-133	D
500K	—	Q17-133	Q
500K	25K	Q17-133X	S
500K	50K	Q18-133X	S
500K	125K	Q13-133X	H
500K	250K	Q19-133X	S
500K	100K & 200K	Q18-133XX	S
600K	—	Q11-134	A
750K	—	Q11-136	A
1.0 Meg.	—	Q11-137	A
1.0 Meg.	—	Q13-137	C
1.0 Meg.	—	Q14-137	D
1.0 Meg.	—	Q17-137	Q
1.0 Meg.	35K	Q17-137X	S
1.0 Meg.	100K	Q18-137X	S
1.0 Meg.	250K	Q13-137X	H
1.0 Meg.	500K	Q19-137X	S
1.0 Meg.	500K	QVC-539X	S
1.0 Meg.	50K & 100K	Q17-137XX	S
1.0 Meg.	250K & 500K	Q18-137XX	S
1.5 Meg.	—	Q11-138	A
1.5 Meg.	250K	Q13-138X	S
2.0 Meg.	—	Q11-139	A
2.0 Meg.	—	Q13-139	C
2.0 Meg.	—	Q17-139	Q
2.0 Meg.	50K	Q19-139X	S
2.0 Meg.	150K	Q17-139X	S
2.0 Meg.	500K	Q13-139X	H
2.0 Meg.	1.0 Meg.	Q18-139X	S
2.0 Meg.	250K & 500K	Q18-139XX	S
2.0 Meg.	500K & 1 Meg.	Q13-139XX	S
2.5 Meg.	—	Q11-239	A
3.0 Meg.	—	Q11-140	A
3.0 Meg.	—	Q13-140	C
3.0 Meg.	—	Q17-140	Q
3.0 Meg.	900K	Q13-140X	S
3.0 Meg.	1.5 Meg.	Q18-140X	S
5.0 Meg.	—	Q11-141	A
5.0 Meg.	—	Q12-141	S
5.0 Meg.	—	Q13-141	C
5.0 Meg.	—	Q17-141	Q
7.5 Meg.	—	Q11-142	A
10.0 Meg.	—	Q11-143	A

STANDARD TAPERS FOR Q CONTROLS



A—For potentiometer or rheostat where uniform resistance change is required.

B—Semi-logarithmic curve for tone control or audio circuit control.

C—Logarithmic curve for audio circuit control or antenna shunt control.

D—Tapered at both ends to provide control of grid bias and antenna circuit. Used where control of grid bias is important in controlling volume.

H—Tapped logarithmic curve for audio level control for automatic bass compensation.

P—Semi-logarithmic curve—reverse taper for use in contrast and picture control circuits in television.

Q—Semi-logarithmic curve—reverse taper for use in contrast and picture control circuits in television.

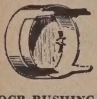
S—Special taper—based on specific specifications.

CTS IRC

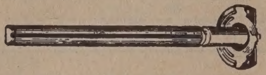
Q CONTROL ACCESSORIES

ASSEMBLE YOUR OWN STANDARD OR SPECIAL IRC Q CONTROLS

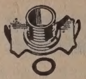
For those who would like to use their IRC Base-Element stock for assembly of standard controls, the component parts are available. Plain Q Control assemblies with 1-Base-Element, 1-Interchangeable Fixed Shaft, 1-QCB Bushing and 1-QCC Cover. Switch type Q control assembles with 1-Base-Element, 1-Interchangeable Fixed Shaft, 1-QCB Bushing and 1 of either 76-1 or 76-2 Switch.



QCC-COVER—For plain or tapped controls. Pkg. of 5.

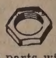


QCB-BUSHING — ⅜-32 thread, ¼″ long. Pkg. of 5.



IRC VOLUME CONTROL GROUNDING LUG—Same as supplied with IRC Type Q Controls. Fits ⅜″ bushing. Lug length from hole center—1-3/16″. Type QCL Grounding Lugs. Pkg. of 5.

STANDARD Q CONTROL LOCKNUT—Hex nut for ⅜-32 thread, 9/16″ across flats. Type QCN. Pkg. of 10.



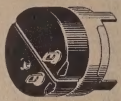
New SK1 (QPK) Kit assembles above standard Q control parts with IRC base elements. Contents: AQ Knob Master Shaft, QCB Ground Plate/Bushing, QCC Universal Cover, R-1 Resilient Retainer Ring, QCN Mounting Nut.

Q CONTROL PARTS KIT

Package of parts for assembly of specific Q Control types. Includes shaft, bushing and cover. Add desired Base-Element.

SK1—Formerly QPK, Includes AQ shaft for Q Control assembly.
SK2—Includes RQ shaft for RQ Control assembly.
SK3—Includes SQ shaft for SQ Control assembly.
SK7—Knob Master Shaft Kit for Pull-Push Switch Assembly
SK8—Same as SK7 except shaft is similar to NQ shaft with 3½″ A dimension

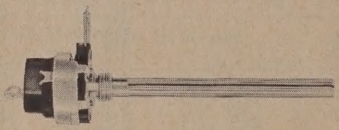
SWITCHES FOR TYPE Q CONTROLS



Easily attached power switches for Type Q Controls. Attractively finished to match control.

76-1—Single pole, single throw
76-2—Double pole, single throw
76-4—Single pole, double throw or Make one - Break one Spot Killer Switch.

SINGLE Q CONTROL WITH PULL-PUSH SWITCH ASSEMBLED



¼″ diameter Knob-Master Shaft

Ohms	Stock No.
500	PPQ 11-103-7
200K	PPQ 11-129-7
1.0 Meg.	PPQ 11-137-7
250K	PPQ 13-130-7
500K	PPQ 13-133-7
1.0 Meg.	PPQ 13-137-7
1.0 Meg.	PPQ 13-137X-7
2.0 Meg.	PPQ 18-139X-7

Can be also made up from Base Element and SK7 Parts Kit.

³⁄₁₆″ diameter shaft flatted and slotted

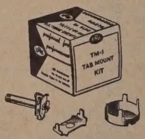
Ohms	Stock No.
1.0 Meg.	PPQ 11-137-8
1.0 Meg.	PPQ 13-137-8
2.0 Meg	PPQ 13-139-8
500K	PPQ 19-133X-8
1.0 Meg.	PPQ 13-137X-8
1.0 Meg.	PPQ 18-137X-8
1.0 Meg.	PPQ 19-137X-8
2.0 Meg.	PPQ 18-139X-8
3.0 Meg.	PPQ 18-140X-8

Can be also made up from Base Element and SK8 Parts Kit.

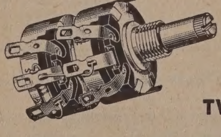
IRC TAB-MOUNT KITS

Since assembly of Tab-Mount Controls is so simple, IRC supplies four 3-Part Tab-Mount Kits which will assemble with any standard plain or tapped IRC Base-Element to provide satisfactory Tab-Mount Controls. Each TM Kit includes a Tab-type Ground Plate, a control cover and a finger-knurled and screw-driver slotted shaft of appropriate length for universal replacement. Packaged with instruction sheet but without necessary Base-Element.

TM-1 —IRC Tab-Mount Kit—Shaft ¼″ long.
TM-2 —IRC Tab-Mount Kit—Shaft ⅝″ long.
TM-3 —IRC Tab-Mount Kit—Shaft 1″ long.
TM-4 —IRC Tab-Mount Kit—Shaft 1½″ long.



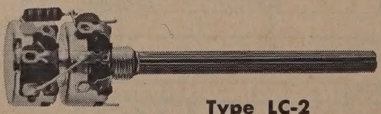
SPECIAL PURPOSE CONTROLS



Type QJ-3
TV ATTENUATOR

- Reduces overloading effects on TV sets in strong signal areas.
- Diminishes interstation interference caused by nearby or powerful stations.
- Minimizes buzz due to high signal level in intercarrier systems.
- Permits easy adjustment of signal RIGHT AT SET.
- Frequently prevents mismatch of antenna load to set.

IRC's QJ-3 TV Attenuator permits ready adjustment of signal input to TV sets. In most cases, it corrects or substantially reduces such conditions as:—Adjacent channel interference, background picture on weaker stations, poor definition, picture and sound breakover. Also useful in service work—duplicating fringe area signals when shop is near strong local station.



Type LC-2
LOUDNESS CONTROL

A continuously compensated control that boosts lows and highs as volume is decreased—maintains depth and brilliance even at whisper level. Type LC-2 replaces makeshift compensating units—tapped volume controls, stepped-type loudness controls, bass and treble boost circuits. Automatically maintains proper balance of all frequencies in the audio spectrum at any listening level. Simplicity itself—as easy to wire into an audio circuit as any standard three-terminal volume control. Complete instructions included, showing applications. Type 76-1, 76-2 or 76-4 switch can be added to this control.

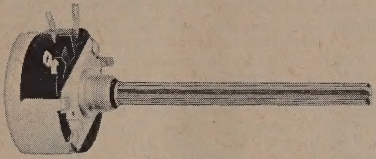
UNIVERSAL WIRE WOUND CONTROLS

4 WATT WIRE WOUNDS

International Resistance Company's new Universal Wire Wound Control, engineered to handle all 2-watt and 4-watt requirements, may be used as a replacement for former types W, WK, 4WK, and 4WS.

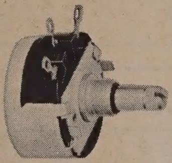
Dimensions: 1¼" in diameter, 45/64" deep behind mounting face without switch; 1-7/32" with switch.

Available in the following types:



TYPE WPK

⅜-32 x ¼" long bushing with popular Q Type Knob Master Shaft 3" long from mounting face.



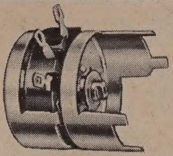
TYPE WPS

⅜-32 x ¼" long bushing with combination finger knurl and screwdriver slot shaft ¾" long from mounting face.

Switches are available for use with types WPK and WPS. Windings are not compensated and the resistance in approximately 15% rotation will be lost.

Switch type 76-11 SPST

Switch type 76-12 DPST



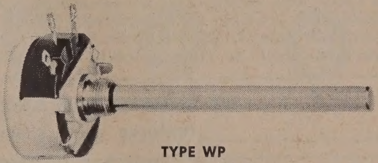
TYPE WM

Type WM Universal Wire Wound Multi-sections. Adds to WPK or WPS to make dual or triple section controls. Supplied assembled but may be assembled in field by use of WM Kit and desired WP Base-Element. Switches cannot be used.

PARTS KIT FOR WPK-WPS

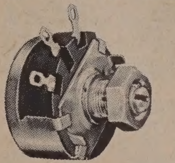
Package of parts which, with addition of desired WP Base-Element, will assemble WPK or WPS Controls. Includes shaft, bushing, cover and coupling plate.

SK4—Parts kit for WPK Control
SK5—Parts kit for WPS Control



TYPE WP

Constructed with ⅜-32 x ⅜" bushing and ¼" diameter, full round shaft 3" long from mounting face.



TYPE WPRL

A new line of IRC distributor industrial controls with short screw-driver slot shaft ¼" diameter and approximately ½" long from mounting face, with ⅜" locking type bushing and locking nut. 10% resistance tolerance. Linear taper.

STOCK VALUES OF TYPE WPK AND WPS CONTROLS

Ohms	Tap	Taper	Type WPK Control	Type WPS Control
10	—	U	WPK10	—
10	5.	U	—	WPS10X5
15	7.5	U	—	WPS15X7.5
20	—	U	WPK20	—
20	10	U	—	WPS20X10
25	—	U	—	WPS25
25	12.5	U	—	WPS25X12.5
30	—	U	WPK30	—
30	15	U	—	WPS30X15
40	—	U	—	WPS40
40	20	U	—	WPS40X20
50	—	U	WPK50	—
50	25	U	—	WPS50X25
60	—	U	—	WPS60
80	40	U	—	WPS80X40
100	—	U	WPK100	—
100	50	U	—	WPS100X50
140	70	U	—	WPS140X70
150	75	U	—	WPS150X75
200	—	U	WPK200	—
200	100	U	—	WPS200X100
250	—	U	WPK250	WPS250
300	—	U	WPK300	—
400	—	U	WPK400	—
500	—	U	WPK500	WPS500
500	—	L	—	WPS500L
600	—	U	WPK600	—
650	—	U	WPK650	—
750	—	U	WPK750	—
750	—	L	WPK750L	—
750	—	R	WPK750R	—
750	250	S	—	—
1000	—	U	WPK1000	WPS1000
1350	—	U	WPK1350	—
1350	—	R	WPK1350R	—
1500	—	U	WPK1500	WPS1500
1500	—	L	WPK1500L	—
1500	500	S	—	—
2000	—	U	WPK2000	WPS2000
2000	—	L	WPK2000I	—
2250	—	U	—	WPS2250
2250	—	L	WPK2250L	WPS2250L
2500	—	U	WPK2500	WPS2500
2500	—	R	WPK2500R	—
3000	—	U	WPK3000	WPS3000
3000	—	R	—	—
3300	—	L	—	—
4000	—	U	—	WPS4000
4000	—	L	WPK4000L	WPS4000L
5000	—	U	WPK5000	WPS5000
5000	—	L	WPK5000L	—
5000	—	R	—	—
6000	—	U	WPK6000	—
6000	—	L	WPK6000L	—
7500	—	U	WPK7500	—
7500	—	L	WPK7500L	—
10000	—	U	WPK10000	WPS10000L
12500	—	U	WPK12500	—
15000	—	U	WPK15000	—
20000	—	U	WPK20000	—
25000	—	U	WPK25000	—
30000	—	U	WPK30000	—
40000	—	U	WPK40000	—
50000	—	U	WPK50000	—

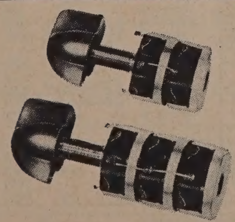
STANDARD TAPERS

L Taper—Left Hand Taper with approximately 15% of total resistance at 50% rotation when measured from Left Terminal to Center Terminal facing shaft end of control with terminals down.

R Taper—Right Hand Taper with approximately 50% rotation when measured from Right Terminal to Center Terminal facing shaft end of control with terminals down.

U Taper—Standard Linear Taper.

L AND T PAD CONSTANT IMPEDANCE CONTROLS



For use in sound systems and for speaker control. Handle up to 10 watts of audio power (3 watts D.C.) L Pad provides constant input impedance; T Pad provides constant input and output impedances.

IRC L and T Pads provide unusual convenience features small size: Diameter—1¼"; depth behind panel—1⁹⁄₃₂" (L Pad) and 1²⁷⁄₃₂" (T Pad). ⅞" bushing mounts Pad on panels up to ¾" thick. Interchangeable bushing available for metal panels. Shaft length is correct for knob supplied—no shaft cutting necessary.

Each IRC Pad is individually boxed and includes knob and dial plate.

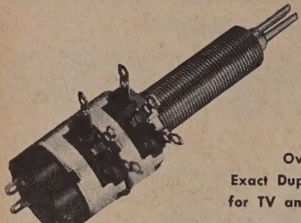
L PADS

Stock No.	Impedance
LP4	4 ohms
LP8	8 ohms
LP15	15 ohms
LP500	500 ohms

T PADS

Stock No.	Impedance
TP4	4 ohms
TP8	8 ohms
TP15	15 ohms
TP500	500 ohms

TELEVISION AND AUTO SET CONTROL ACCESSORIES



Over 1250
Exact Duplicate Controls
for TV and Auto Radios

For those who prefer factory-assembled special controls, IRC provides an exceptionally broad line of over 1250 Exact Duplicate Controls. Each control is specified closely to manufacturers' original control specifications—required. Carbon and wire-wound elements are used for panel and rear sections as required.

The IRC Exact Duplicate Line now includes over 240 concentric dual controls for auto radios. Modern in design, these new controls bring many unique and desirable features to provide convenience, economy and long life. The new IRC Printed-Silver Tone Switch eliminates contact fatigue—assures positive, no bump contact. Simple detent assures positive positioning independent of switch action. Control position feature of 7/16″ and ½″ bushings permits exact duplication of original. Short control depth fits most crowded locations. Power switches amply rated for both TV and Auto Radios. Consult Howard A. Sams Replacement Manual (RGC-2 or later) or S020F Numerical Listing for needed controls.

IRC CONCENTRIKIT ASSEMBLES EXACT DUPLICATE CONTROLS
features quick assembly—no modification of parts.

17 Basic CONCENTRIKITS

IRC Concentrikits are the common parts to various types of Exact Duplicate Controls. When assembled with parts shown in Howard A. Sams Replacement Manual (RGC-2 or later), they will produce any IRC Exact Duplicate TV or Auto Radio Controls. No cutting or filing of shafts or bushings—one minute assembly.

Concentrikit	Control Depth	Panel Section	Rear Section	Bushing	Use
K-2	*	C	C	⅜″ x ⅜″	TV & Auto
K-3	*	W	C	⅜″ x ⅜″	TV
K-4	*	C	C	⅜″ x ¾″	TV (Motorola)
K-5	*	C	C	⅜″ x ¼″	TV (Hallicrafters)
K-6	**	C	C	⅜″ x ⅜″	TV & Auto
K-7	**	C	C	⅜″ x ¾″	TV
K-8	**	C	C	none	Auto
K-9	**	TS	C	none	Auto
K-10	**	W	W	⅜″ x ⅜″	TV
K-11	**	W	C	⅜″ x ¼″	TV
K-12	**	C	W	⅜″ x ⅜″	TV
K-13	**	W	W	⅜″ x ¼″	TV
K-14	**	W	W	⅜″ x ¾″	TV
K-15	**	C	C	⅜″ x ¼″	TV
K-16	**	C	C	⅜″ x ⅜″	Pull-Push
K-17	**	C	C	⅜″ x ¾″	Pull-Push
K-18	**	C	C	⅜″ x ¼″	Pull-Push

*—Standard **—Short C—Carbon W—Wire TS—Tone Switch

IRC Printed-Silver Tone Switch Elements

Sensational new development in concentric tone switch permits assembly of special Exact Duplicate Auto Radio Controls in field. Assemblies like standard IRC Base Elements—no loose parts. Packed with detent-type panel cover.

Stock No.	Description
BS1	4 Position Tone Switch Element for Ford
BS2	4 Position Tone Switch Element for Delco
BS3	3 Position Tone Switch Element for Philco
BS4	4 Position Tone Switch Element for Delco
BS5	4 Position Tone Switch Element for Lincoln and Mercury

IRC EXACT DUPLICATE BUSHINGS
featuring Adjustable Positioning

A wide assortment of Exact Duplicate Bushings provide easy, quick assembly of Auto Radio Controls without cutting, filing or modication. New adjustable ground plate permits positioning of flats or notched mounting face to duplicate original control positioning. Individually packaged.

IRC EXACT DUPLICATE BUSHINGS

Stock No.	Dimensions	Type
S6	7/16″ x 15/16″	Double-flat
S7	7/16″ x 1 1/32″	Double-flat
S8	7/16″ x 1⅝″	Double-flat
S9	7/16″ x 1⅞″	Double-flat
S10	½″ x 0.2″	Single-flat
S11	½″ x 9/16″	Single-flat
S12	½″ x 15/16″	Single-flat
S13	½″ x 1″	Single-flat
S14	½″ x 1¼″	Single-flat
S15	½″ x 1 1/2″	Single-flat
S16	½″ x 1⅝″	Single-flat
S17	½″ x 1⅞″	Single-flat
S18	½″ x 2″	Single-flat
S19	½″ x 2⅛″	Single-flat
S20	½″ x 2¼″	Single-flat
S21	½″ x 1⅛″	Notched
S22	½″ x 1 3/16″	Notched
S23	½″ x 1 9/32″	Notched
S24	½″ x 1⅜″	Notched
S25	½″ x 1 7/16″	Notched
S26	½″ x 1 17/32″	Notched
S27	½″ x 1 21/32″	Notched
S28	½″ x 1¾″	Notched
S29	½″ x 1 13/16″	Notched
S30	½″ x 1⅞″	Notched
S31	½″ x 2″	Notched
S32	½″ x 2⅛″	Notched
S33	⅜″ x ¼″	——
S34	⅜″ x ⅜″	——
S35	½″ x 13/32″	Single-flat
S36	½″ x ⅝″	Single-flat
S37	½″ x 1/2″	Single-flat
S38	½″ x 27/32″	Single-flat
S39	½″ x ¾″	Single-flat
S40	½″ x 11/16″	Single-flat
S41	½″ x 13/16″	Notched
S42	½″ x 1 9/16″	Single-flat
S43	½″ x 1⅛″	Single-flat
S44	⅜″ x .590″	——
S45	⅜″ x 13/16″	——
S46	7/16″ x ⅝″	Double-flat
S47	7/16″ x 13/32″	Double-flat
S48	½″ x 5/16″	Single-flat
S49	½″ x 1″	Notched
S50	½″ x 1 11/16″	Single-flat
S51	7/16″x1¼″	Double-flat
S52	⅜″x⅞″	—

N1	Mounting Nut for 7/16″ Bushings—Pkg. of 10
N2	Mounting Nut for ½″ Bushings—Pkg. of 10
N3	Mounting Nut for ½″ (9/16″ across flats) Bushings—Pkg. of 10

Base-Elements and Exact Duplicate Shafts for CONCENTRIKIT assembly are listed on 3 pages following →

CONCENTRIKIT BASE-ELEMENTS

A relatively small stock of CTS-IRC Base-Elements provides a very wide coverage of electrical requirements of many concentric duals. Each unit is a complete molded control base with element, terminals and collector ring installed. There are no loose parts.

Two types of Base-Elements are available:

Type B—Carbon Base-Elements can be assembled with Q parts to make up Q Control or with Concentrikit parts to make up TV and Auto Controls.

Type W—Wirewound Base-Elements can be assembled with parts into standard controls or used with Concentrikit for TV concentric dual controls.

Two Base-Elements are required for each concentric dual.

BASE ELEMENT STOCK VALUES

Carbon and Wirewound Base-Elements by Resistance Value

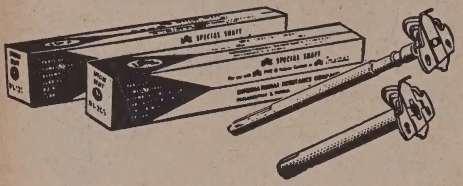
Ohms	Tap	T	Stock No.
10	—	U	W11-010
10	5	U	W11-010X
15	7.5	U	W11-015X
20	—	U	W11-020
20	10	U	W11-020X
25	—	U	W11-025
25	12.5	U	W11-025X
30	—	U	W11-030
30	15	U	W11-030X
40	—	U	W11-040
40	20	U	W11-040X
50	—	U	W11-050
50	25	U	W11-050X
60	—	U	W11-060
80	40	U	W11-080X
100	—	A	B11-084
100	—	U	W11-084
100	50	U	W11-084X
140	70	U	W11-092X
150	75	U	W11-094X
200	—	U	W11-100
200	100	U	W11-100X
250	—	A	B11-201
250	—	U	W11-201
300	—	A	B11-102
300	—	U	W11-102
400	—	U	W11-202
500	—	A	B11-103
500	—	U	W11-103
500	—	L	W13-103
600	—	U	W11-104
650	—	U	W11-204
750	—	A	B11-105
750	—	U	W11-105
750	—	L	W13-105
750	—	P	B17-105
750	—	R	W17-105
750	250	S	B17-105X
750	250	S	W17-105X
1000	—	A	B11-108
1000	—	U	W11-108
1000	—	P	B17-108
1000	150	S	B17-108X
1200	—	Q	B17-208
1350	—	U	W11-308
1350	—	R	W17-308
1500	—	A	B11-109
1500	—	U	W11-109
1500	—	L	W13-109
1500	180	S	B15-109X
1500	—	Q	B17-109
1500	185 & 375	S	B17-109XX
1500	500	S	W17-109X
2000	—	A	B11-110
2000	—	U	W11-110
2000	—	L	W13-110
2000	—	Q	B17-110
2000	550	S	B17-110X
2000	250 & 500	S	B17-110XX
2250	—	U	W11-210
2250	—	L	W13-210
2500	—	A	B11-111
2500	—	U	W11-111
2500	—	C	B13-111
2500	250	S	B15-111X
2500	—	Q	B17-111
2500	—	R	W17-111
2500	500	S	B17-111X
2500	625	S	B27-111X
3000	—	A	B11-112
3000	—	U	W11-112
3000	—	Q	B17-112
3000	—	R	W17-112
3000	150	S	B17-112X
3300	—	L	W13-212
4000	—	U	W11-113
4000	—	L	W13-113
5000	—	A	B11-114
5000	—	U	W11-114
5000	—	C	B13-114
5000	500	S	B15-114X
5000	—	L	W13-114
5000	—	Q	B17-114
5000	—	R	W17-114
5000	1000	S	B17-114X
6000	—	U	W11-214
6000	—	L	W13-214
7500	—	A	B11-115
7500	—	U	W11-115
7500	—	L	W13-115
10K	—	A	B11-116
10K	—	U	W11-116
10K	—	C	B13-116
10K	—	D	B14-116
10K	300	S	B15-116X
10K	—	Q	B17-116
11.5K	—	Q	B17-117
12.5K	—	U	W11-217
15K	—	A	B11-118
15K	—	U	W11-118
15K	10K	S	B13-118X
15K	5000 & 10K	S	B13-118XX
15K	5000	S	B17-118X
15K	5000 & 10K	S	B17-118XX
20K	—	A	B11-119
20K	—	U	W11-119
20K	—	S	B16-119
25K	—	A	B11-120
25K	—	U	W11-120
25K	—	C	B13-120
25K	—	D	B14-120
30K	—	A	B11-121
30K	—	U	W11-121
35K	—	A	B11-122
40K	—	U	W11-222
50K	—	A	B11-123
50K	—	U	W11-123
50K	—	C	B13-123
50K	—	D	B14-123
75K	—	A	B11-125
100K	—	A	B11-128
100K	—	C	B13-128
100K	—	Q	B17-128
125K	—	A	B11-228
150K	—	A	B11-328
150K	—	C	B13-328
150K	19K & 38K	S	B17-328XX
200K	—	A	B11-129
250K	—	A	B11-130
250K	—	C	B13-130
250K	60K	H	B18-130X
250K	125K	S	B13-130X
250K	60K & 120K	S	B18-130XX
300K	—	A	B11-131
350K	—	A	B11-132
350K	—	C	B13-132
350K	35K	S	B17-132X
350K	75K	H	B18-132X
500K	—	A	B11-133
500K	—	C	B13-133
500K	—	D	B14-133
500K	—	Q	B17-133
500K	25K	S	B17-133X
500K	50K	S	B18-133X
500K	75K	S	B15-133X
500K	125K	H	B13-133X
500K	180K	S	B20-133X
500K	167K & 330K	S	B20-133XX
500K	250K	S	B19-133X
500K	100K & 200K	S	B18-133XX
600K	—	A	B11-134
750K	—	A	B11-136
1.0M	—	A	B11-137
1.0M	—	C	B13-137
1.0M	—	D	B14-137
1.0M	—	Q	B17-137
1.0M	35K	S	B17-137X
1.0M	100K	S	B18-137X
1.0M	250K	H	B13-137X
1.0M	500K	S	B19-137X
1.0M	500K	S	BVC539X
1.0M	50K & 100K	S	B17-137XX
1.0M	250K & 500K	S	B18-137XX
1.25M	750K	S	B18-237X
1.5M	—	A	B11-138
1.5M	—	C	B13-138
1.5M	250K	S	B13-138X
1.5M	—	Q	B17-138
2.0M	—	A	B11-139
2.0M	—	C	B13-139
2.0M	—	Q	B17-139
2.0M	50K	S	B19-139X
2.0M	150K	S	B17-139X
2.0M	500K	H	B13-139X
2.0M	1.0M	S	B18-139X
2.0M	250K & 500K	S	B18-139XX
2.0M	500K & 1.0M	S	B13-139XX
2.5M	—	A	B11-239
2.5M	—	Q	B17-239
3.0M	—	A	B11-140
3.0M	—	C	B13-140
3.0M	—	Q	B17-140
3.0M	900K	S	B13-140X
3.0M	1.5M	S	B18-140X
4.0M	—	A	B11-240
4.0M	open at 25K	S	B12-240
5.0M	—	A	B11-141
5.0M	—	S	B12-141
5.0M	—	S	B12-241
5.0M	open at 500K	S	B12-341
5.0M	—	C	B13-141
5.0M	1.0M	C	B13-141X
5.0M	—	Q	B17-141
5.0M	2.5M	S	B18-141X
7.5M	—	A	B11-142
10.0M	—	A	B11-143

T—Taper (Wirewound tapers described on page 1149, carbon tapers on page 1147) M—Megohms

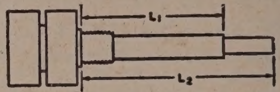
CTS IRC

CONCENTRIKIT EXACT DUPLICATE SHAFTS

DEPENDABLE MECHANICAL FIT FOR YOUR TV REPLACEMENTS



Save time—be assured of accurate fit! IRC now provides a complete line of Exact Duplicate Shafts for CONCENTRIKIT—factory-tailored for dependable mechanical fit. No filing, slotting, soldering or cutting required! Many shafts are flatted as well as slotted to provide wider replacement coverage. Each shaft is a complete assembly, including contactor. Factory-lubricated, packaged in cellophase and in individual carton.



Exact Duplicate Shaft Stock Numbers indicate shaft length measured from mounting face when installed in control (L_1 is Outer Shaft length; L_2 is Inner Shaft length). First digit is number of whole inches in shaft length; remaining two digits indicate number of additional 32nds of an inch. Thus, P1-210 has shaft lengths of 2-10/32″ or 2-5/16″. Exception is Inner Shafts when used with K-3 CONCENTRIKIT where 3/32″ should be subtracted to determine shaft length.

EXACT DUPLICATE OUTER SHAFTS

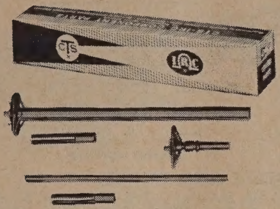
Shaft Type	Slot Width-Depth	Flat Length	Round Knurled Band	Type Base Element	Concentrikit
P1	1/8″ x 3/8″	17/32″	—	Q	K-2, -4, -5
P2	1/16″ x 1/2″	17/32″	—	Q	K-2, -4, -5
P3	1/8″ x 3/8″	17/32″	—	W	K-3, -10, -11, -13, -14
P4	1/8″ x 3/8″	3/4″	—	W	K-3, -10, -11, -13, -14
P5	1/16″ x 3/8″	17/32″	—	W	K-3, -10, -11, -13, -14
P6	1/8″ x 3/8″	11/16″	—	Q	K-2, -4, -5
P7	.120″ x 3/8″	17/32″	—	Q	K-2, -4, -5
P8	—	—	1/8″ wide	W	K-3, -10, -11, -13, -14
P9	—	—	1/8″ wide	Q	K-2, -4, -5
P10	1/8″ x 7/16″	17/32″	—	Q	K-2, -4, -5
P11	3/64″ x 1/16″	—	—	Q	K-2, -4, -5
P12	1/8″ x 3/16″	—	—	Q	K-2, -4, -5
P13	1/8″ x 1/4″	—	—	Q	K-6, -7, -8, -12, -15
P14	1/8″ x 3/16″	—	—	Q	K-6, -7, -8, -12, -15
P15	1/8″ x 1/4″	—	—	Tone SW.	K-9
P16	.132″ x 3/16″	—	—	Q	K-6, -7, -8, -12, -15
P17	1/8″ x 3/8″	5/8″	—	Q	K-6, -7, -8, -12, -15
P18	3/64″ x 1/16″	—	—	W	K-3, -10, -11, -13, -14
P19	3/64″ x 1/16″	—	—	Q	K-6, -7, -8, -12, -15
P20	—	—	1/8″ wide	Q	K-6, -7, -8, -12, -15
P21	1/8″ x 7/16″	5/8″	—	Q	K-6, -7, -8, -12, -15

EXACT DUPLICATE INNER SHAFTS

Shaft Type	Diam.	Slot Width - Depth	Flat Length	Round Knurled Band	Type Base Element	Concentrikit
R1	.187″	1/16″ x 1/2″	1/2″	—	Q	All but K-10, -12, -13, -14, -16, -17, -18
R2	.202″	1/16″ x 1/2″	1/2″	—	Q	All but K-10, -12, -13, -14, -16, -17, -18
R3	.190″	20 Tooth Split Knurl (Zenith)			Q	All but K-10, -12, -13, -14, -16, -17, -18
R4	.180″	Round and Slotted (Motorola)			Q	All but K-10, -12, -13, -14, -16, -17, -18
R5	.187″	Rear Extension Type (RCA)			Q	All but K-10, -12, -13, -14, -16, -17, -18
R6	.202″	Rear Extension Type (Dumont)			Q	All but K-10, -12, -13, -14, -16, -17, -18
R7	.189″	18 Tooth Split Knurl (Zenith)			Q	All but K-10, -12, -13, -14, -16, -17, -18
R8	.187″	1/16″ x 1/2″	1/2″	—	W	K-10, -12, -13, -14 only
R9	.187″	1/16″ x 1/2″	5/8″	—	Q	All but K-10, -12, -13, -14, -16, -17, -18
R10	.187″	—	—	1/8″ wide	W	K-10, -12, -13, -14 only
R11	.187″	—	—	1/8″ wide	Q	All but K-10, -12, -13, -14, -16, -17, -18
R12	.202″	—	—	7/32″	Q	All but K-10, -12, -13, -14, -16, -17, -18
R13	.180″	Round with 5/8″ deep slot (Motorola)			Q	All but K-10, -12, -13, -14, -16, -17, -18
R14	.202″	1/16″ x 1/2″	5/8″	—	Q	All but K-10, -12, -13, -14, -16, -17, -18
R15	.202″	3/64″ x 1/16″	—	—	Q	All but K-10, -12, -13, -14, -16, -17, -18
R16	.187″	1/16″ x 1/2″	25/32″	—	Q	All but K-10, -12, -13, -14, -16, -17, -18
R17	.202″	1/16″ x 1/2″	11/16″	—	Q	All but K-10, -12, -13, -14, -16, -17, -18
R18	.202″	1/16″ x 1/2″	1/2″	—	W	K-10, -12, -13, -14 only
R19	.202″	3/64″ x 1/16″	—	—	W	K-10, -12, -13, -14 only
R20	.187″	3/64″ x 1/16″	—	—	Q	All but K-10, -12, -13, -14, -16, -17, -18
R21	.180″	1/16″ x 5/8″ (Motorola)			Q	All but K-10, -12, -13, -14, -16, -17, -18
R22	.202″	Rear Extension Type (G.E., Hotpoint)			Q	K13
R23	.187″	.156″ x ½″ (Pull-Push Type)			Q	K-16, -17, -18
R24	.187″	¹⁄₁₆″ x ½″ (Pull-Push Type)			Q	K-16

CTS® IRC®

CONCENTRIKIT EXACT DUPLICATE SHAFTS



For use with CONCENTRIKITS in place of Exact Duplicate Shafts. Requires shaft modification to desired specification. KS-2 Shaft Kit is for controls in which both sections are carbon. Use with K-2, K-4 or K-5 CONCENTRIKIT.

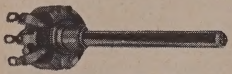
Stock No.	Shaft Length
R15-005	5/32"
R15-009	9/32"
R19-011	11/32"
P19-012	3/8"
P14-014	7/16"
R15-014	7/16"
R19-014	7/16"
P18-015	15/32"
P8-016	1/2"
P14-016	1/2"
P19-016	1/2"
P1-017	17/32"
R15-017	17/32"
P9-018	9/16"
P11-018	9/16"
P18-018	9/16"
P14-019	19/32"
P15-019	19/32"
P1-020	5/8"
P8-020	5/8"
P9-021	21/32"
P13-022	11/16"
P16-023	23/32"
P1-024	3/4"
P11-024	3/4"
P14-024	3/4"
P17-024	3/4"
R1-024	3/4"
P14-026	13/16"
P15-026	13/16"
R12-026	13/16"
P16-027	27/32"
P1-028	7/8"
P3-028	7/8"
P6-028	7/8"
P17-028	7/8"
R1-028	7/8"
R2-028	7/8"
R10-028	7/8"
R11-028	7/8"
R15-028	7/8"
P14-029	29/32"
P21-029	29/32"
R12-029	29/32"
P1-030	15/16"
P2-031	31/32"
P17-031	31/32"
R11-031	31/32"
P3-100	1"
P8-100	1"
R1-100	1"
P9-101	1 1/32"
P20-101	1 1/32"
P1-102	1 1/16"
P6-102	1 1/16"
P11-102	1 1/16"
P14-102	1 1/16"
P15-102	1 1/16"
P17-102	1 1/16"
R1-103	1 3/32"
R2-103	1 3/32"
P3-104	1 1/8"
P9-104	1 1/8"
P13-104	1 1/8"
P20-104	1 1/8"
P17-105	1 5/32"
R1-105	1 5/32"
R2-105	1 5/32"
P1-106	1 3/16"
P3-106	1 3/16"
P8-106	1 3/16"
P15-106	1 3/16"
R4-106	1 3/16"
R16-106	1 3/16"
R23-107	1 7/32"
P17-108	1 1/4"
R1-108	1 1/4"
R11-108	1 1/4"
R12-108	1 1/4"
P1-109	1 9/32"
P7-109	1 9/32"
P10-110	1 5/16"
R2-110	1 5/16"
R9-110	1 5/16"
P3-111	1 11/32"
R1-111	1 11/32"
P1-112	1 3/8"
P6-112	1 3/8"
P9-112	1 3/8"
P14-112	1 3/8"
P15-112	1 3/8"
P17-112	1 3/8"
R9-112	1 3/8"
R11-112	1 3/8"
R16-112	1 3/8"
P13-113	1 13/32"
R1-113	1 13/32"
P1-114	1 7/16"
P3-114	1 7/16"
P15-114	1 7/16"
R23-114	1 7/16"
P4-115	1 15/32"
P17-115	1 15/32"
R1-115	1 15/32"
R2-115	1 15/32"
R9-115	1 15/32"
P1-116	1 1/2"
P2-116	1 1/2"
P3-116	1 1/2"
P9-116	1 1/2"
P13-116	1 1/2"
R14-116	1 1/2"
R2-117	1 17/32"
P1-118	1 9/16"
P2-118	1 9/16"
P3-118	1 9/16"
P13-118	1 9/16"
P14-118	1 9/16"
P17-118	1 9/16"
R1-118	1 9/16"
R11-118	1 9/16"
R16-118	1 9/16"
R2-119	1 19/32"
R12-119	1 19/32"
R23-119	1 19/32"
P15-120	1 5/8"
P17-120	1 5/8"
P1-121	1 21/32"
P3-121	1 21/32"
P4-121	1 21/32"
P14-121	1 21/32"
P6-122	1 11/16"
P12-122	1 11/16"
P13-122	1 11/16"
P15-122	1 11/16"
R1-122	1 11/16"
R12-122	1 11/16"
R23-122	1 11/16"
P1-123	1 23/32"
P3-123	1 23/32"
P17-123	1 23/32"
P4-124	1 3/4"
P9-124	1 3/4"
R2-124	1 3/4"
R11-124	1 3/4"
P6-125	1 25/32"
P14-125	1 25/32"
R23-125	1 25/32"
P1-126	1 13/16"
P17-126	1 13/16"
R1-126	1 13/16"
P3-127	1 27/32"
R2-127	1 27/32"
R16-127	1 27/32"
P1-128	1 7/8"
P2-128	1 7/8"
P9-128	1 7/8"
P13-128	1 7/8"
R14-128	1 7/8"
R23-128	1 7/8"
P3-129	1 29/32"
P17-129	1 29/32"
R12-129	1 29/32"
P6-130	1 15/16"
P14-130	1 15/16"
P15-130	1 15/16"
R1-130	1 5/16"
P3-131	1 31/32"
R2-131	1 31/32"
R12-131	1 31/32"
P1-200	2"
P2-200	2"
P6-200	2"
P13-200	2"
P15-200	2"
R1-200	2"
R2-200	2"
R11-200	2"
R18-200	2"
R22-200	2"
R23-200	2"
R21-201	2 1/32"
P6-202	2 1/16"
P14-202	2 1/16"
R1-202	2 1/16"
R9-202	2 1/16"
R23-202	2 1/16"
P3-203	2 3/32"
R17-203	2 3/32"
P1-204	2 1/8"
P12-204	2 1/8"
P14-204	2 1/8"
P15-204	2 1/8"
P17-204	2 1/8"
R2-204	2 1/8"
R3-204	2 1/8"
R14-204	2 1/8"
R24-204	2 1/8"
R1-205	2 5/32"
R9-205	2 5/32"
R16-205	2 5/32"
R23-205	2 5/32"
P1-206	2 3/16"
P5-206	2 3/16"
P7-206	2 3/16"
P14-206	2 3/16"
P15-206	2 3/16"
R2-206	2 3/16"
R12-206	2 3/16"
R17-206	2 3/16"
R1-207	2 7/32"
P3-208	2 1/4"
P14-208	2 1/4"
P17-208	2 1/4"
R6-208	2 1/4"
R7-208	2 1/4"
R9-208	2 1/4"
R20-208	2 1/4"
P2-209	2 9/32"
P9-209	2 9/32"
R1-209	2 9/32"
R2-209	2 9/32"
P1-210	2 5/16"
P3-210	2 5/16"
P13-210	2 5/16"
R1-210	2 5/16"
R4-210	2 5/16"
P6-211	2 11/32"
P14-211	2 11/32"
R9-211	2 11/32"
R14-211	2 11/32"
R23-211	2 11/32"
P1-212	2 3/8"
P3-212	2 3/8"
P9-212	2 3/8"
P20-212	2 3/8"
R1-212	2 3/8"
R2-212	2 3/8"
R4-212	2 3/8"
R7-212	2 3/8"
R8-213	2 13/32"
R20-213	2 13/32"
P2-214	2 7/16"
P3-214	2 7/16"
P13-214	2 7/16"
P14-214	2 7/16"
P17-214	2 7/16"
R1-214	2 7/16"
R9-214	2 7/16"
R14-214	2 7/16"
R5-215	2 15/32"
P1-216	2 1/2"
R1-216	2 1/2"
R2-216	2 1/2"
R11-216	2 1/2"
R17-216	2 1/2"
R23-216	2 1/2"
P3-217	2 17/32"
P13-217	2 17/32"
P2-218	2 9/16"
P6-218	2 9/16"
P15-218	2 9/16"
R1-218	2 9/16"
R2-218	2 9/16"
R11-219	2 19/32"
P1-220	2 5/8"
R1-220	2 5/8"
R2-220	2 5/8"
R21-220	2 5/8"
R4-221	2 21/32"
P1-222	2 11/16"
P2-222	2 11/16"
P7-222	2 11/16"
R2-222	2 11/16"
R9-222	2 11/16"
P3-223	2 23/32"
R1-223	2 23/32"
R3-223	2 23/32"
R23-223	2 23/32"
P1-224	2 3/4"
P6-224	2 3/4"
P17-224	2 3/4"
P10-225	2 25/32"
P1-226	2 13/16"
P2-226	2 13/16"
P3-226	2 13/16"
R1-226	2 13/16"
R2-226	2 13/16"
R4-226	2 13/16"
R23-226	2 13/16"
P10-227	2 27/32"
R1-228	2 7/8"
R4-228	2 7/8"
P1-229	2 29/32"
R7-229	2 29/32"
R14-229	2 29/32"
R23-229	2 29/32"
R2-230	2 15/16"
P1-300	3"
P17-300	3"
R1-300	3"
R2-300	3"
P1-302	3 1/16"
P6-302	3 1/16"
R14-302	3 1/16"
P14-303	3 3/32"
P1-304	3 1/8"
R1-304	3 1/8"
P1-306	3 3/16"
R2-306	3 3/16"
R4-306	3 3/16"
R24-306	3 3/16"
P1-308	3 1/4"
P10-308	3 1/4"
R1-308	3 1/4"
R2-308	3 1/4"
R14-308	3 1/4"
P1-310	3 5/16"
P17-310	3 5/16"
R2-310	3 5/16"
R1-312	3 3/8"
R2-312	3 3/8"
R23-312	3 3/8"
R16-313	3 13/32"
P1-314	3 7/16"
R2-314	3 7/16"
R9-314	3 7/16"
P17-316	3 1/2"
R1-316	3 1/2"
R13-316	3 1/2"
P1-317	3 17/32"
R2-318	3 9/16"
P1-320	3 5/8"
R2-322	3 11/16"
R4-322	3 11/16"
R1-323	3 23/32"
R9-324	3 3/4"
P1-325	3 25/32"
R1-326	3 13/16"
R2-329	3 29/32"
R3-331	3 31/32"
R13-331	3 31/32"
P1-400	4"
P3-400	4"
R2-401	4 1/32"
P1-405	4 5/32"
P3-405	4 5/32"
R14-409	4 9/32"
R14-414	4 7/16"
R1-417	4 17/32"
R1-420	4 5/8"
R2-420	4 5/8"
P8-424	4 3/4"
R2-426	4 13/16"
R14-426	4 13/16"
R2-429	4 29/32"
R10-431	4 31/32"

INDUSTRIAL CONTROLS

IRC Distributor Controls for Industry offer commercial users a wide selection of resistance values and two industrial shaft types. Shafts are fixed. This combination of wide selection of values and speedy Distributor delivery holds many advantages for industrial purchasers. These Industrial Controls are adaptations of the new, compact 15/16" Q Control. Power rating is ½ watt, 500 volts maximum. Electrical rotation is the same with or without switch. ⅜" bushing is brass and held to close tolerance for snug shaft fit.

Terminals are heavily tinned for easy soldering, and may be bent without becoming noisy. Two locating lugs are provided, either or both of which may be bent down if not needed. Molded base. Both Types PQ and RQ are supplied in standard tapers.

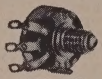
SINGLE CONTROLS



TYPE PQ

TYPE PQ. Full round ¼" shaft, approximately 3" from mounting face, with ⅜" long bushing. Available in 33 stock values as shown. Regular IRC stock numbers are used with prefix **PQ.**

TYPE RQ. Very short screw-driver slot shaft, ¼" diameter and approximately ½" long from mounting face with ⅜" long bushing. Available in 33 values as shown. Regular IRC stock numbers are used with prefix **RQ.**

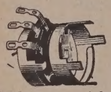


TYPE RQ

TYPE RQL

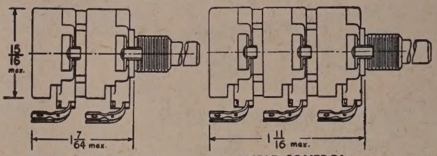
TYPE RQL. IRC's new line of 10% tolerance Locking Type Bushing Controls. Screw-driver slot shaft ¼" diameter and approximately ½" long from mounting face, with a ⅜" split type bushing, and locking nut.

MULTISECTIONS



IRC MULTISECTIONS are complete control sections that can be added like a switch to any Q, PQ, RQ or RQL Control. With these units, the Radio Technician or Engineer is provided with an endless variety of dual, triple or even quadruple controls. Duals assembled from IRC MULTISECTIONS will accommodate Type 76 switches. Available in a selection of 25 values, as shown in following table. Each MULTISECTION adds 13/32" to basic control.

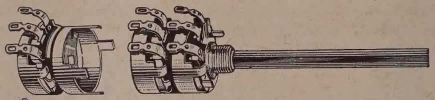
MULTISECTION DIMENSIONS



DUAL CONTROL **TRIPLE CONTROL**

DUALS AND TRIPLES

IRC Type PQ, RQ and RQL Industrial Controls are supplied as single controls. Duel Control and Triple Control combinations are available by adding IRC MULTISECTIONS.



2 WATT INDUSTRIAL COMPOSITION MILITARY GRADE VARIABLE RESISTOR

Resistance	CTS TYPE 95 2" Plain Shaft ⅜" Long Bushing Lin. Resistance Taper	CTS TYPE 95LT ⅝" Slotted Shaft ½" Long Locking Bushing Lin. Resistance Taper
100 ± 10%	95D101	95LD101
250 ± 10%	95D251	95LD251
500 ± 10%	95D501	95LD501
1,000 ± 10%	95D102	95LD102
2,500 ± 10%	95D252	95LD252
5,000 ± 10%	95D502	05LD502
10,000 ± 10%	95D103	95LD103
25,000 ± 10%	95D253	95LD253
50,000 ± 10%	95D503	95LD503
100,000 ± 10%	95D104	95LD104
250,000 ± 10%	95D254	95LD254
500,000 ± 10%	95D504	95LD504
1.0 Meg ± 20%	95D105	95LD105
2.5 Meg ± 20%	95D255	95LD255
5.0 Meg ± 20%	95D505	95LD505

STOCK VALUES OF TYPES PQ, RQ, RQL CONTROLS AND MULTISECTIONS

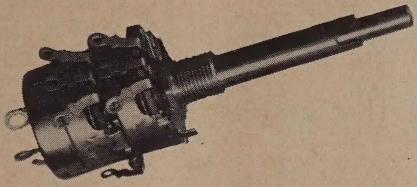
OHMS	TAPER	TYPE PQ	TYPE RQ	TYPE RQL	MULTISECTIONS
500	A	PQ11-103	RQ11-103	RQL11-103	M11-103
1,000	A	PQ11-108	RQ11-108	RQL11-108	M11-108
2,000	A	PQ11-110	RQ11-110	RQL11-110	M11-110
3,000	A	PQ11-112	RQ11-112	RQL11-112	M11-112
5,000	A	PQ11-114	RQ11-114	RQL11-114	M11-114
7,500	A	PQ11-115	RQ11-115	—	—
10K	A	PQ11-116	RQ11-116	RQL11-116	M11-116
10K	C	PQ13-116	RQ13-116	—	—
10K	D	PQ14-116	RQ14-116	—	—
10K	Q	—	—	—	M17-116
20K	A	PQ11-119	RQ11-119	RQL11-119	—
25K	A	PQ11-120	RQ11-120	RQL11-120	M11-120
25K	D	PQ14-120	RQ14-120	—	—
30K	A	PQ11-121	RQ11-121	RQL11-121	M11-121
50K	A	PQ11-123	RQ11-123	RQL11-123	M11-123
50K	C	PQ13-123	RQ13-123	RQL13-123	—
50K	D	PQ14-123	RQ14-123	—	—
100K	A	PQ11-128	RQ11-128	RQL11-128	M11-128
100K	C	PQ13-128	RQ13-128	—	M13-128
200K	A	PQ11-129	RQ11-129	RQL11-129	—
250K	A	PQ11-130	RQ11-130	RQL11-130	M11-130
250K	C	PQ13-130	RQ13-130	RQL13-130	M13-130
500K	A	PQ11-133	RQ11-133	RQL11-133	M11-133
500K	C	PQ13-133	RQ13-133	RQL13-133	M13-133
1.0 Meg.	A	PQ11-137	RQ11-137	RQL11-137	M11-137
1.0 Meg.	C	PQ13-137	RQ13-137	RQL13-137	M13-137
1.5 Meg.	A	PQ11-138	RQ11-138	RQL11-138	—
1.5 Meg.	C	—	—	—	M13-138
2.0 Meg.	A	PQ11-139	RQ11-139	RQL11-139	M11-139
2.0 Meg.	C	PQ13-139	RQ13-139	RQL13-139	M13-139
2.5 Meg.	A	PQ11-239	RQ11-239	RQL11-239	—
3.0 Meg.	A	PQ11-140	RQ11-140	RQL11-140	—
3.0 Meg.	C	PQ13-140	RQ13-140	—	M13-140
3.0 Meg.	Q	—	—	—	M17-140
5.0 Meg.	A	PQ11-141	RQ11-141	RQL11-141	M11-141
10.0 Meg.	A	PQ11-143	RQ11-143	RQL11-143	M11-143

STOCK VALUES OF TYPE WP AND WPRL CONTROLS AND MULTISECTIONS

Ohms	Taper	*MAX. Current in Amps	Type WP	Type WPRL	Multi-sections
2	U (Lin.)	1.414	WP2	WPRL2	—
3	U	1.152	WP3	WPRL3	—
5	U	.895	WP5	WPRL5	—
6	U	.817	WP6	WPRL6	—
8	U	.707	WP8	WPRL8	—
10	U	.633	WP10	WPRL10	—
15	U	.517	WP15	WPRL15	—
20	U	.447	WP20	WPRL20	—
25	U	.400	WP25	WPRL25	—
30	U	.365	WP30	WPRL30	—
40	U	.316	WP40	WPRL40	—
50	U	.283	WP50	WPRL50	WM50
60	U	258	WP60	WPRL60	—
75	U	.231	WP75	WPRL75	—
100	U	.200	WP100	WPRL100	WM100
200	U	.141	WP200	WPRL200	WM200
250	U	.126	WP250	WPRL250	WM250
300	U	.115	WP300	WPRL300	—
400	U	.100	WP400	WPRL400	—
500	U	.090	WP500	WPRL500	WM500
750	U	.073	WP750	WPRL750	—
1,000	U	.063	WP1000	WPRL1000	WM1000
1,500	U	052	WP1500	WPRL1500	WM1500
2,000	U	.045	WP2000	WPRL2000	WM2000
2,500	U	.040	WP2500	WPRL2500	WM2500
3,000	U	.036	WP3000	WPRL3000	WM3000
4,000	U	.031	WP4000	WPRL4000	—
5,000	U	.028	WP5000	WPRL5000	WM5000
7,500	U	.023	WP7500	WPRL7500	—
7,500	L (L.H.Log.)	.016	—	—	WM7500L
10,000	U	.020	WP10000	WPRL10000	WM10000
15,000	U	.0163	WP15000	WPRL15000	—
20,000	U	.014	WP20000	WPRL20000	—
25,000	U	0126	WP25000	WPRL25000	—
30,000	U	.0115	WP30000	WPRL30000	—
40,000	U	.010	WP40000	WPRL40000	—
50,000	U	.0089	WP50000	WPRL50000	—

* Maximum current is given for a single control operating at an ambient temperature of 40°C and mounted on a metal chassis. Multiple controls must be so derated that hot spot temperature (ambient plus temperature rise) will not exceed 110°C on any winding.

AUTO RADIO CONTROLS



113 CONTROLS FOR 248 DIFFERENT MAKES AND MODELS OF AUTOMOBILES

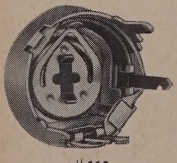
The finest line of exact replacement auto radio switches . . . 113 controls for 248 different makes and models of automobiles . . . A greater, up-to-date selection for a greater number of applications. All of these factors are yours with the IRC line of Auto' Radio Controls.

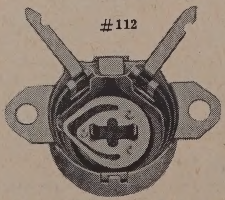
CTS-IRC Part No.	Car Mfg.	Year	Radio Mfg.	Radio Model No.	Original Part No.
5308	Ford	1948-50	Bendix	M1, M1A, M1A1	L222808
5309	Ford	1950	Motorola	OMF	18B591266
5310	Ford	1951	Bendix	M2	L219586-2
5311	Ford	1951	Motorola	1MF	18B501153
5312	Ford	1952-53	Bendix	M4, M4A	L219586-3
5313	Ford	1952-53	Motorola	2MF, 3MF	18K511635
5314	Ford	1954	Bendix	M4B, M4BA, M4BP	L219586-7
5315	Ford	1954	Motorola	4MF	18B530018
5316	Ford	1955	Bendix	5BF, R5BF	L219656-1
5317	Ford	1955	Motorola	5MF, 5MF8	18B531299
5318	Ford	1956	Bendix	R6BF	L219681-1
5319	Ford	1956	Motorola	66MF, 66MFP, 69MF	18B534483
5320	Ford	1957	Bendix	R75BF	2090035-1
5321	Ford	1957	Motorola	75MF	18K539059
5322	Ford	1957	Motorola	78MF	18B539379
5323	Ford	1957-58	Bendix	R74BF, R84BF	2090035-2
5324	Ford	1957-58	Motorola	74MF, 84MF	18B541819
5325	Ford	1957-58	Motorola	76MF(SR), 86MF	18B542373
5342	Chevrolet	1949-50	Delco	986240, 986388	7258084
5343	Chevrolet	1950	Delco	986389	1218641
5344	Chevrolet	1951-52	Delco	986516	1219708
5345	Chevrolet	1951-52	Delco	986515	7261385
5346	Oldsmobile	1951-52	Motorola	OE2A, OE2M	18B512084
	Buick	1946-53		BK2A, BK3A6	
	Chevrolet	1951-52		CT2A, CT2M	
	GMC & Chevy Truck	1948-53		GMT2A, GMT2M	
	Kaiser	1951-53		KR2A, KR2M	
	Packard	1951-53		PD2A, PD2M	
5347	Chevrolet	1953-54	Delco	986669	7262941
5348	Chevrolet	1953-54	Delco	986669, 986771	7264211
	GMC Truck	1954-58		2233396, 2233398	
	Willys	1956		694866	
5349	Chevrolet	1953-54	Delco	986668	7264210
5350	Universal	1954-56	Motorola	5M, 5M-12	18K33457
	Chevrolet	1953-56		6M	
	Pontiac	1955-56		6M-12	
	Olds & Buick	1954-56		6M-12	
	Volkswagen	1953-56		6M	
	Studebaker	1953-56		6M, 6M-12	
5351	Chevrolet	1955	Delco	987087	7265265
5352	Chevrolet	1955-56	Delco	987088, 987366	7265220
5353	Chevrolet	1955-57	Delco	987086, 987364, 3725156	7265302
5354	Chevrolet	1955-58	Delco	987187	7266193
	GMC Truck	1955-56		2233478, 2233480	
5355	Chevrolet	1956	Delco	987368	7266842
5356	Chevrolet	1957	Delco	987577	7269211
5357	Chevrolet	1957	Delco	987575, 987693	7269199
5358	Chevrolet	1957	Delco	987573	7269186
5359	Chevrolet	1957	Motorola	7MX	18B540768
	Pontiac	1957		7MX	
	Buick	1957		7MX	
	Studebaker	1957		7MX	
5360	Chevrolet	1957	Motorola	CTA7X, CTM7X	18K541128
5361	GMC Truck	1947-52	Delco	2233029, 2233297	7256188
	Chevy Truck	1950-52		986067, 986443	
5362	Chevrolet	1957	Delco		7270202
5373	Plymouth	1952	Motorola	Mopar 606	18A501616
5374	Plymouth	1953	Motorola	Mopar 608	18B521635
5375	Plymouth	1953	Philco	P-5206 Mopar 819	33-5557-11
5376	Plymouth	1954-55	Motorola	Mopar 836	18A533014
5377	Plymouth	1955	Motorola	Mopar 613	18K532909
5378	Plymouth	1955	Philco	P-5506 Mopar 832	33-5557-15
	Chrysler	1955	Philco	C-5509 Mopar 835, C-5609	
5379	Plymouth	1956	Motorola	Mopar 841	18K536152
5380	Plymouth	1956	Motorola	Mopar 916	18B536704
5381	Plymouth	1956	Philco	P-5606 Mopar 840	33-5580-4
5382	Plymouth	1957	Motorola	Mopar 849	18B540376
5383	Plymouth	1957	Philco	P-5701 Mopar 848	33-5580-12
				P-5702 Mopar 848	
5384	Plymouth	1958	Motorola	Mopar 854	18B560415
5385	Plymouth	1958	Philco	P-5801 Mopar 848	33-5580-21
5386	Plymouth	1955	Philco	P-5506	33-5557-14
5398	Mercury	1955-56	Bendix	R6BM	L219660-2
	Lincoln	1955-56		R6BM	
	Continental	1956		6BC	
5399	Mercury	1957	Philco	M-5841, M-5741	33-5570-2
5400	Mercury	1958	Bendix	R84BM, R85BM-5	N219689-4

AUTO RADIO CONTROLS

CTS-IRC Part No.	Car Mfg.	Year	Radio Mfg.	Radio Model No.	Original Part No.
5411	Buick	1950-53	Delco	980868, 980899, 980979, 980980, 981111, 981320, 981321, 981322, 981323	7263119
5412	Buick	1954	Delco	981550, 981551	7264309
5413	Buick	1955	Delco	981651, 981652	7265742
5414	Buick	1956	Delco	981707, 981708	7266096
5415	Buick	1957	Delco	981813, 981814	7268944
5423	Cadillac	1950-52	Delco	7258865, 7260405, 7259825, 7260905, 7260705	7259240
5424	Cadillac	1953	Delco	7262645, 7262695, 7263525, 7263545, 7263835	7263321
5425	Cadillac	1954-55	Delco	7264165, 7264185, 7264195, 7265825, 7265845, 7265855	7264638
5426	Cadillac	1956	Delco	7266505, 7266535, 7266565	7266982
5427	Cadillac	1957	Delco	7268005, 7268035, 7268065	7269443
5435	Chrysler	1953	Philco	C-5109 Mopar 812, C-5209 Mopar 817 C-5110 Mopar 813, C-5211 C-5111 Mopar 815, C-5212 C-5112 Mopar 816	83-5557-10
5436	Chrysler	1953-54	Philco	C-5409 Mopar 824, C-5410 Mopar 830, C-5411	33-5557-13
5437	Chrysler	1955	Philco	C-5595 Mopar 902, C-5596 Mopar 903,	33-5557-16
	Chrysler	1956		C-5696 Mopar 912	
5438	Chrysler	1957	Philco	C-5705 Mopar 847	33-5580-16
5439	Chrysler	1957	Philco	C-5707	33-5580-13
5449	DeSoto	1954	Motorola	Mopar 829	18A530623
5450	DeSoto	1955-56	Motorola	Mopar 901, 911	18B532633
5451	DeSoto	1957	Motorola	Mopar 846, 919, 919 HR	18B539819
	DeSoto	1958		Mopar 923	
5459	Dodge	1953	Motorola	Mopar 609	18B521099
5460	Dodge	1954-55	Motorola	Mopar 833	18K533013
5461	Dodge	1955	Motorola	Mopar 614, 621	18B532519
5462	Dodge	1955-56	Motorola	Mopar 900, 901, 910	18K532955
5463	Dodge	1957	Motorola	Mopar 845, 918	18K539820
5464	Dodge	1958	Motorola	Mopar 502	18B561317
5473	Oldsmobile	1949	Delco	982420	1219582
5474	Oldsmobile	1951	Delco	982700	7260294
5475	Oldsmobile	1953	Delco	983004	7263540
5476	Oldsmobile	1954-55	Delco	983090, 983204	7264242
5477	Oldsmobile	1954-56	Delco	983091, 983205, 983336	7264128
5478	Oldsmobile	1956	Delco	983334	7266887
5479	Oldsmobile	1957	Delco	989002	7268847
5480	Oldsmobile	1957	Delco	989001	7269055
5494	Packard	1956	Delco	480487, 6480487	7267632
5501	Pontiac	1949-50	Delco	984296, 984570	7257708
5502	Pontiac	1951-52	Delco	984592, 984688	7260043
5503	Pontiac	1953-54	Delco	984817	7262482
5504	Pontiac	1955-56	Delco	984961, 988568	7265495
5505	Pontiac	1956	Delco	988623	7268308
5506	Pontiac	1957	Delco	988672	7269149
5507	Pontiac	1957	Delco		7269638
5517	Studebaker	1953	Philco	S-5327-AC-2300, S-5523 S-5323-AC-2301, S-5527 S-5524, S-5528, S-5529	33-5570
5522	Universal	1954	Motorola	397,404	18B531560
	Universal	1955		395,395-12	
	Universal	1956		396,396-12	
5550	Chevrolet	1958	Delco	987724	7270450
5551	Chevrolet	1958	Delco	987727	7270479
5552	Oldsmobile	1958	Delco	989127, 989129	7270679
5553	Buick	1958	Delco	981902	7271329
5554	Pontiac	1958	Delco	988822	7271446
5555	Chevrolet	1959	Delco	987888	7273302
5556	Chevrolet	1959	Delco	987891	7273367
5557	Pontiac	1959	Delco	988976	7273623
5558	Buick	1959	Delco	981968	7273993
5559	Plymouth	1959	Motorola	Mopar 860	
	Chrysler	1959	Motorola	Mopar 861	18B561364
5560	Ford	1959	Motorola	94MF, 94MFM	18B561597
5561	Ford	1959	Motorola	95MF	18B561599
5562	Ford	1959	Bendix	94BF	
	Edsel	1959	Bendix	94BE	2090035-3
5563	American Motors	1959	Motorola	94MA	18B561728
5564	Dodge	1959	Motorola	Mopar 856	18B561732

CTS-IRC BUZZ & BIAS SENSITIVITY CONTROLS


#110


#112

Two new miniature controls for hum balance, centering, hold, locking, etc. Designed for screw driver adjustment. Type 110 available in 5 values; Type 112 available in 21 values.

Type 110

Stock No.	Value
110-60	60 ohms
110-100	100 ohms
110-600	600 ohms
110-1000	1000 ohms
110-3000	3000 ohms

Type 112

Stock No.	Value
112-50	50 ohms
112-100	100 ohms
112-150	150 ohms
112-200	200 ohms
112-300	300 ohms
112-500	500 ohms
112-500-100	500 ohms fixed min. 100 ohms
112-600	600 ohms
112-650	650 ohms

Type 112 (cont'd)

Stock No.	Value
112-800	800 ohms
112-800-50	800 ohms fixed min. 50 ohms
112-1000	1000 ohms
112-1000-100	1000 ohms fixed min. 100 ohms
112-1500	1500 ohms
112-2000	2000 ohms
112-2000-100	2000 ohms fixed min. 100 ohms
112-3000	3000 ohms
112-4000	4000 ohms
112-4000-350	4000 ohms fixed min. 350 ohms
112-4000-1000	4000 ohms fixed min. 1000 ohms
112-5000	5000 ohms

LECTROHM
INCORPORATED • CHICAGO 30, ILLINOIS

VITREOUS ENAMELED RESISTORS
Fixed Wire-Wound Types

C5 SERIES — 5 WATT
DIMENSIONS .... 5/16 x 3/16 x 1"
TERMINALS .... Pigtail type leads 1½"
MAXIMUM RESISTANCE .... 10,000 ohms

Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	2240	$ .45	600	91	$ .45
2	1580	.45	700	84	.45
3	1290	.45	750	81	.45
4	1110	.45	800	79	.45
5	1000	.45	900	74	.45
10	707	.45	1000	70	.48
15	575	.45	1100	67	.48
20	500	.45	1200	64	.48
25	447	.45	1250	63	.48
30	408	.45	1500	57	.48
35	374	.45	1750	53	.48
40	346	.45	2000	50	.48
50	316	.45	2250	47	.48
75	258	.45	2500	44	.48
100	222	.45	3000	41	.48
125	200	.45	4000	35	.48
150	182	.45	4500	33	.48
200	158	.45	5000	31	.48
225	149	.45	6000	29	.51
250	141	.45	7000	27	.51
300	129	.45	7500	26	.51
350	119	.45	8000	25	.51
400	111	.45	9000	23	.51
500	100	.45	10000	22	.51

C10 SERIES — 10 WATT
DIMENSIONS .... 5/16 x 3/16 x 1¾"
TERMINALS .... Pigtail type leads 1½"
MAXIMUM RESISTANCE .... 50,000 ohms

Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	3150	$ .48	1500	79	$ .54
2	2230	.48	1750	74	.54
3	1825	.48	2000	69	.54
5	1415	.48	2250	64	.54
7.5	1155	.48	2500	61	.54
10	1000	.48	3000	58	.54
15	815	.48	3500	53	.54
20	707	.48	4000	50	.54
25	630	.48	4500	47	.54
50	447	.48	5000	44	.54
75	365	.48	6000	41	.60
100	315	.48	7000	38	.60
150	258	.48	7500	36	.60
200	223	.48	8000	35	.60
225	212	.48	8500	34	.60
250	200	.48	9000	33	.60
300	182	.48	10000	32	.60
350	169	.48	12000	29	.66
400	158	.48	12500	28	.66
450	150	.48	13500	27	.66
500	141	.48	15000	25	.66
600	129	.48	16000	25	.66
700	119	.48	17500	24	.66
750	115	.48	18000	23	.66
800	111	.48	20000	22	.66
900	105	.48	22500	21	.72
1000	100	.48	25000	20	.72
1100	95	.54	30000	18	.81
1200	91	.54	40000	15	.81
1250	89	.54	45000	15	.81
			50000	14	.81

C20 or E20 SERIES — 20 WATT
DIMENSIONS .... 7/16 x 5/16 x 2"
TERMINALS .... Pigtail type leads 1½"
(C20)
Solder lug type terminal;
hole diameter .1718"
(E20)
MOUNTING BRACKET .... B-33; Centers 2¾"
MAXIMUM RESISTANCE .... 100,000 ohms

Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
5	2000	$ .63	2500	89	$ .66
10	1414	.63	3000	81	.66
15	1153	.63	4000	70	.66
20	1000	.63	5000	63	.66
25	894	.63	6000	57	.72
40	707	.63	7000	53	.72
50	633	.63	7500	51	.72
60	574	.63	8000	50	.72
75	517	.63	10000	45	.72
100	448	.63	12500	40	.78
125	400	.63	15000	36	.78
150	365	.63	20000	32	.78
200	316	.63	25000	28	.90
250	283	.63	30000	26	.90
300	258	.63	35000	24	.90
350	238	.63	40000	22	.90
400	223	.63	45000	21	1.05
500	200	.63	50000	20	1.05
600	182	.63	55000	18	1.05
700	169	.63	60000	16	1.05
750	163	.63	65000	15	1.20
800	158	.63	70000	14	1.20
1000	141	.63	75000	13	1.20
1100	134	.66	80000	12	1.20
1250	126	.66	90000	11	1.38
1500	115	.66	95000	10.5	1.38
2000	100	.66	100000	10	1.38

E25 SERIES — 25 WATT
DIMENSIONS .... 9/16 x 5/16 x 2"
TERMINALS .... Solder lug type
MOUNTING BRACKET .... B-33; Centers 2¾"
MAXIMUM RESISTANCE .... 100,000 ohms

Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	5000	$ .66	2500	100	$ .75
3	2890	.66	3000	91	.75
5	2240	.66	3500	84	.75
10	1580	.66	4000	79	.75
15	1290	.66	5000	71	.75
25	1000	.66	6000	64	.75
50	707	.66	7500	57	.75
75	575	.66	10000	50	.75
100	500	.66	12000	46	.75
150	400	.66	15000	41	.78
200	353	.66	20000	35	.78
250	316	.66	25000	32	.90
300	288	.66	30000	29	.90
400	250	.66	35000	27	1.02
500	224	.66	40000	25	1.02
750	182	.66	50000	20	1.20
1000	158	.66	60000	16	1.20
1250	141	.69	70000	14	1.38
1500	129	.69	80000	12	1.38
2000	112	.69	100000	10	1.38

E50 SERIES — 50 WATT
DIMENSIONS .... 9/16 x 5/16 x 4"
TERMINALS .... Solder lug type
MAXIMUM RESISTANCE .... 250,000 ohms
MOUNTING BRACKET .... B-33; Centers 4¾"

Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
5	3165	$1.08	8000	79	$1.26
10	2230	1.08	10000	71	1.26
25	1414	1.08	12000	65	1.38
50	1000	1.08	12500	63	1.38
100	707	1.08	15000	57	1.38
200	500	1.08	20000	50	1.38
250	440	1.08	25000	45	1.53
500	300	1.08	30000	41	1.53
750	250	1.08	40000	35	1.53
1000	215	1.08	50000	32	1.71
1500	180	1.14	60000	29	1.71
2000	155	1.14	75000	26	1.92
2500	140	1.14	100000	19	2.10
3000	125	1.14	125000	15	2.22
4000	110	1.14	150000	13	2.31
5000	100	1.14	175000	11	2.40
6000	90	1.26	200000	9	2.49
7000	85	1.26	225000	8	2.79
7500	80	1.26	250000	7	2.79

E75 SERIES — 75 WATT
DIMENSIONS .... 9/16 x 5/16 x 6"
TERMINALS .... Solder lug type
MAXIMUM RESISTANCE .... 100,000 ohms
MOUNTING BRACKET .... B-33; Centers 6¾"

Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	8650	$1.32	2500	171	$1.38
2	6120	1.32	3000	160	1.38
3	5010	1.32	4000	135	1.38
4	4340	1.32	5000	121	1.38
5	3870	1.32	6000	111	1.50
10	2740	1.32	7500	100	1.50
25	1730	1.32	8000	96	1.50
50	1220	1.32	10000	86	1.50
100	865	1.32	12000	80	1.62
150	705	1.32	12500	78	1.62
200	610	1.32	15000	70	1.62
250	550	1.32	20000	61	1.62
300	500	1.32	25000	55	1.83
400	430	1.32	30000	50	1.83
500	385	1.32	35000	46	1.83
750	318	1.32	40000	43	1.83
800	305	1.32	45000	41	1.95
1000	270	1.32	50000	39	1.95
1500	225	1.38	75000	31	2.13
2000	192	1.38	100000	27	2.37

E100 SERIES — 100 WATT
DIMENSIONS .... ¾ x ½ x 6½"
TERMINALS .... Solder lug type
MOUNTING BRACKET .... B-34; Centers 7⅜"
MAXIMUM RESISTANCE .... 100,000 ohms

Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	10000	$1.59	2000	222	$1.68
2	7070	1.59	2500	200	1.68
3	5770	1.59	3000	181	1.68
4	5000	1.59	5000	141	1.68
5	4470	1.59	7500	114	1.80
10	3160	1.59	10000	100	1.80
25	2000	1.59	15000	81	1.98
50	1414	1.59	20000	70	1.98
75	1153	1.59	25000	63	2.10
100	1000	1.59	30000	58	2.10
150	816	1.59	40000	50	2.10
250	632	1.59	50000	45	2.22
500	447	1.59	60000	41	2.22
750	365	1.59	75000	36	2.37
1000	316	1.59	100000	32	2.52
1500	257	1.68			

E160 SERIES — 160 WATT
DIMENSIONS .... 1⅛ x ¾ x 8½"
TERMINALS .... Solder lug type
MOUNTING BRACKET .... B-35; Centers 9⅜"
MAXIMUM RESISTANCE .... 100,000 ohms

Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	12650	$2.75	3500	215	$2.01
2	8940	2.75	4000	200	2.01
3	7300	2.75	4500	185	2.01
4	6320	2.75	5000	180	2.01
5	5660	2.75	7500	145	2.16
10	4000	1.98	10000	125	2.16
25	2530	1.98	15000	105	2.34
50	1788	1.98	20000	90	2.34
75	1460	1.98	25000	80	2.40
100	1260	1.98	30000	73	2.40
200	900	1.98	35000	68	2.40
500	570	1.98	40000	64	2.40
1000	400	1.98	50000	57	2.49
1500	330	2.01	60000	52	2.49
2000	280	2.01	70000	48	2.64
2500	250	2.01	80000	45	2.82
3000	230	2.01	100000	40	2.82

E200 SERIES — 200 WATT
DIMENSIONS .... 1⅛ x ¾ x 10½"
TERMINALS .... Solder lug type
MOUNTING BRACKET .... B-35; Centers 11⅜"
MAXIMUM RESISTANCE .... 100,000 ohms

Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	14140	$3.00	3500	240	$2.16
2	10000	3.00	4000	225	2.16
3	8160	3.00	4500	210	2.34
4	7070	3.00	5000	200	2.34
5	6310	3.00			
10	4470	2.13	7500	165	2.34
25	2830	2.13	10000	140	2.34
50	2000	2.13	15000	115	2.49
75	1635	2.13	20000	100	2.49
100	1400	2.13	25000	90	2.58
250	900	2.13	30000	82	2.58
500	630	2.13	35000	76	2.58
1000	450	2.13	40000	71	2.58
1500	365	2.16	50000	63	2.64
2000	315	2.16	60000	58	2.64
2500	280	2.16	75000	52	2.82
3000	260	2.16	100000	45	3.00

ORDER BY SERIES NUMBER AND RESISTANCE REQUIRED.

LECTROHM

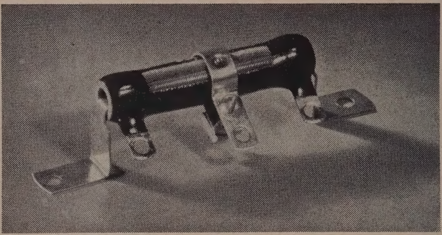
INCORPORATED • CHICAGO 30, ILLINOIS

VITREOUS ENAMELED RESISTORS

FIXED AND ADJUSTABLE WIRE-WOUND TYPES

Years ahead in manufacturing techniques, LECTROHM Resistors offer absolutely top quality at consistently lower prices. New winding methods and improved enameling processes are the result of continuing research.

Your wire-wound resistor requirements, whether in small or large quantities, are given immediate attention. Large factory stocks of standard types are maintained for your convenience. Special types to fit particular applications are provided quickly and at low cost.



Adjustable Wire-Wound Types

D10 SERIES — 10 WATT

DIMENSIONS .... 5/16 x 3/16 x 1¾″
MOUNTING BRACKET .... B-32; Centers 2¼″
TERMINALS .... Solder lug type
MAXIMUM RESISTANCE .... 10,000 ohms

Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	3150	$ .96	750	115	$ .96
2	2230	.96	800	111	.96
3	1825	.96	1000	100	.96
5	1415	.96	1250	89	1.02
7.5	1155	.96	1500	79	1.02
10	1000	.96	2000	69	1.02
15	815	.96	2250	64	1.02
20	707	.96	2500	61	1.02
25	630	.96	3000	58	1.02
50	447	.96	3500	53	1.02
75	365	.96	4000	50	1.02
100	315	.96	4500	47	1.02
150	258	.96	5000	45	1.02
200	223	.96	6000	41	1.08
250	200	.96	7000	38	1.08
300	182	.96	7500	36	1.08
350	169	.96	8000	35	1.08
400	158	.96	8500	34	1.08
500	141	.96	9000	33	1.08
600	129	.96	10000	31	1.08

D25 SERIES — 25 WATT

DIMENSIONS .... 7/16 x 5/16 x 2″
MOUNTING BRACKET .... B-33; Centers 2¾″
TERMINALS .... Solder lug type
MAXIMUM RESISTANCE .... 25,000 ohms

Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	5000	$1.23	1250	141	$1.26
2	3535	1.23	1500	129	1.26
3	2890	1.23	2000	112	1.26
5	2240	1.23	2500	100	1.26
7.5	1825	1.23	3000	91	1.26
10	1580	1.23	3500	84	1.26
15	1290	1.23	4000	79	1.26
20	1117	1.23	4500	74	1.26
25	1000	1.23	5000	71	1.26
50	707	1.23	6000	64	1.32
75	575	1.23	7000	60	1.32
100	500	1.23	7500	57	1.32
150	400	1.23	8000	55	1.32
200	353	1.23	8500	54	1.32
250	316	1.23	9000	52	1.32
300	288	1.23	10000	50	1.32
400	250	1.23	12000	46	1.38
500	224	1.23	15000	41	1.38
750	182	1.23	20000	35	1.38
300	177	1.23	25000	32	1.50
1000	158	1.23			

D50 SERIES — 50 WATT

DIMENSIONS .... 9/16 x 5/16 x 4″
MOUNTING BRACKET .... B-33; Centers 4¾″
TERMINALS .... Solder lug type
MAXIMUM RESISTANCE .... 100,000 ohms

Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
5	3160	$1.56	3000	129	$1.62
10	2230	1.56	4000	112	1.62
25	1410	1.56	5000	100	1.62
50	1000	1.56	7500	81	1.74
75	816	1.56	10000	70	1.74
100	707	1.56	12000	64	1.86
150	577	1.56	15000	57	1.86
200	500	1.56	20000	50	1.86
250	447	1.56	25000	44	2.04
300	408	1.56	30000	41	2.04
400	354	1.56	40000	35	2.04
500	316	1.56	50000	32	2.16
750	258	1.56	60000	29	2.16
1000	224	1.56	75000	26	2.43
1500	182	1.62	80000	24	2.43
2000	158	1.62	100000	19	2.58
2500	141	1.62			

D75 SERIES — 75 WATT

DIMENSIONS .... 9/16 x 5/16 x 6″
MOUNTING BRACKET .... B-33; Centers 6¾″
TERMINALS .... Solder lug type
MAXIMUM RESISTANCE .... 100,000 ohms

Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
5	3870	$1.80	3500	146	$1.86
10	2740	1.80	5000	121	1.86
15	2236	1.80	7500	100	1.98
25	1730	1.80	10000	86	1.98
50	1220	1.80	15000	70	2.10
100	865	1.80	20000	61	2.34
250	550	1.80	25000	55	2.34
300	500	1.80	30000	50	2.34
400	430	1.80	40000	43	2.34
500	385	1.80	50000	39	2.40
750	318	1.80	60000	35	2.40
1000	270	1.80	75000	31	2.64
1500	225	1.86	80000	30	2.64
2000	192	1.86	100000	27	2.85
2500	171	1.86			

D100 SERIES — 100 WATT

DIMENSIONS .... ¾ x ½ x 6½″
MOUNTING BRACKET .... B-34; Centers 7⅜″
TERMINALS .... Solder lug type
MAXIMUM RESISTANCE .... 100,000 ohms

Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
5	4470	$2.37	2500	200	$2.43
10	3162	2.37	3000	180	2.43
25	2000	2.37	5000	140	2.43
50	1414	2.37	7500	115	2.55
75	1155	2.37	10000	100	2.55
100	1000	2.37	15000	80	2.70
150	815	2.37	20000	70	2.70
250	632	2.37	25000	63	2.88
500	447	2.37	30000	58	2.88
750	365	2.37	40000	50	2.88
1000	315	2.37	50000	45	3.00
1250	280	2.43	60000	41	3.00
1500	250	2.43	75000	36	3.12
2000	220	2.43	100000	32	3.27

D160 SERIES — 160 WATT

DIMENSIONS .... 1⅛ x ¾ x 8½″
MOUNTING BRACKET .... B-35; Centers 9⅜″
TERMINALS .... Solder lug type
MAXIMUM RESISTANCE .... 100,000 ohms

Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
5	5660	$3.51	4500	185	$2.76
10	4000	2.73	5000	180	2.76
25	2530	2.73	7500	145	2.94
50	1788	2.73	10000	125	2.94
75	1460	2.73	15000	105	3.09
100	1260	2.73	20000	90	3.09
200	900	2.73	25000	80	3.18
500	570	2.73	30000	73	3.18
1000	400	2.73	35000	68	3.18
1500	330	2.76	40000	64	3.18
2000	280	2.76	50000	57	3.24
2500	250	2.76	60000	52	3.24
3000	230	2.76	70000	48	3.42
3500	215	2.76	80000	45	3.60
4000	200	2.76	100000	40	3.60

D200 SERIES — 200 WATT

DIMENSIONS .... 1⅛ x ¾ x 10½″
MOUNTING BRACKET .... B-35; Centers 11⅜″
TERMINALS .... Solder lug type
MAXIMUM RESISTANCE .... 100,000 ohms

Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
5	6310	$3.75	4500	210	$2.94
10	4470	2.88	5000	200	2.94
25	2830	2.88	7500	165	3.12
50	2000	2.88	10000	140	3.12
75	1635	2.88	15000	115	3.24
100	1400	2.88	20000	100	3.24
250	900	2.88	25000	90	3.30
500	630	2.88	30000	82	3.30
1000	450	2.88	35000	76	3.30
1500	365	2.94	40000	71	3.30
2000	315	2.94	50000	63	3.42
2500	280	2.94	60000	58	3.57
3000	260	2.94	75000	52	3.57
3500	240	2.94	100000	45	3.75
4000	225	2.94			

Order by series number and resistance required.

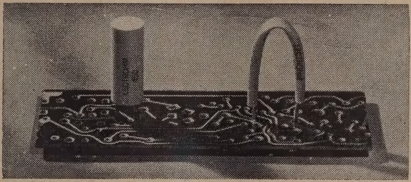
LECTROHM

INCORPORATED • CHICAGO 30, ILLINOIS

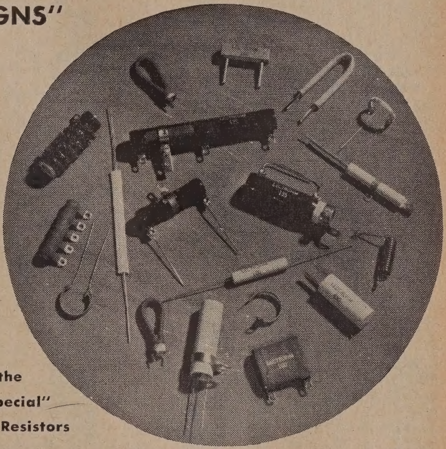
LECTROHM IS CREATING NEW DESIGNS AND MATERIALS IN WIRE WOUND RESISTORS FOR NEW ASSEMBLY METHODS

In addition to supplying the electronics industry with superior vitreous enameled wire-wound power resistors in the familiar sizes and ratings, LECTROHM is producing whole new groups of types, each designed to solve a special problem. Miniaturization and printed circuit restrictions in space and ventilation no longer are complicated by conventional power resistor size standards. New coating materials and winding methods developed by LECTROHM permit an infinite variety of configurations yet retain operating and life characteristics expected of the finest grade vitreous enameled types. LECTROHM engineers will fit the resistor size and shape to your design.

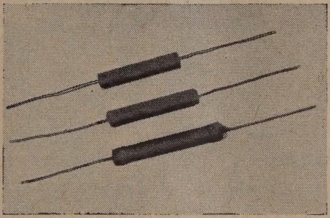
LECTROHM LEADS IN "SPECIAL DESIGNS"



Printed Circuit Upright — Printed Circuit Flexible



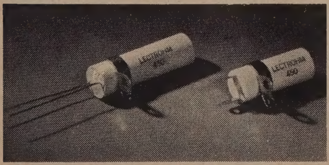
Some of the
many "Special"
Lectrohm Resistors



LECTROHM AXIAL LEAD WIREWOUNDS

For added convenience in mounting in many types of assembly.

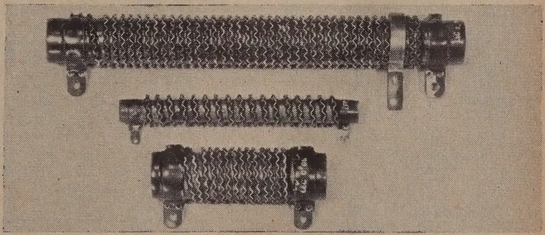
3 to 10 watts. 10 to 50,000 Ohms.



LECTROHM ABOVE-CHASSIS TYPE

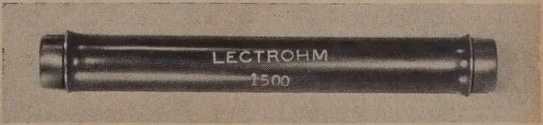
More efficient use of space designed to eliminate heat beneath the chassis. Lectrohm engineers will create resistors to fit your available space.

5 to 25 watts. 10 to 15,000 Ohms.



RIB-ON-EDGE LECTROHM (STANDARD SIZES AND VALUES)

155 to 420 watts. .06 to 22 Ohms.



VITREOUS ENAMELED LECTROHM FERRULE TYPE (STANDARD SIZES AND VALUES)

13 to 190 watts. To 100,000 Ohms.

Use Index Page 1 for Quick, Easy Location of ALL Products

P R MALLORY & CO Inc
MALLORY

P. R. MALLORY & CO. INC.
INDIANAPOLIS 6, IND.

INDUSTRIAL CONTROLS

P2 Series • M Series • K Series • C Series

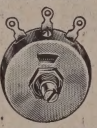
P2 PRINTED CIRCUIT CARBON CONTROLS

Recommended as original or replacement control in printed circuit applications. 15/16" dia. with special mounting tabs and with a 1/4" x 3 1/2" universal shaft.

Without Switch—Net Each........**99c**
With Switch—Net Each.........**$1.41**

Mallory No.	Ohms Resis.	Tap #1	Tap #2	Taper	Sw.
P2-14A-D	10K	.....	.....	1	DPST
P2-16A	1 meg.	.....	.....	1	......
P2-16T35	1 meg.	300K	.....	...	......
P2-16A-D	1 meg.	.....	.....	1	DPST
P2-16A-S	1 meg.	.....	.....	1	SPST
P2-16L-D	1 meg.	.....	.....	4	DPST
P2-26A	2 meg.	.....	.....	1	......
P2-26A-S	2 meg.	.....	.....	1	SPST
P2-26DT65	2 meg.	300K	600K	1	......
P2-36L	3 meg.	.....	.....	4	......
P2-53L-S	5K	.....	.....	4	SPST
P2-55A	500K	.....	.....	1	......
P2-55A-S	500K	.....	.....	1	SPST
P2-55L-S	500K	.....	.....	4	SPST
P2-55T254	500K	250K	.....	1	......
P2-153A-D	15K	.....	.....	1	DPST
P2-252A-S	2.5K	.....	.....	1	SPST

FOUR-WATT WIRE-WOUND POTENTIOMETERS, RHEOSTATS



Used on bias control and voltage dividers; also for replacement of positioning, hold, focus and other controls of TV sets. Rugged. Rheostats feature "off" position (no connection) type of construction. Insulated contact arm. Pots have three, rheostats have two terminals. Total rotation 294°; effective electrical rotation 275° ±5%. **No. 4 linear taper.** Voltage breakdown 1000 v. DC.
One control (with hex nut) to earton.

POTENTIOMETERS

Mallory Number	Ohms Resis.	Capacity in Amps	Net Each
M1PK	1	2.00	**$1.35**
M3PK	3	1.15	**1.35**
M6PK	6	.82	**1.35**
M10PK	10	.63	**1.35**
M15PK	15	.52	**1.35**
M20PK	20	.45	**1.35**
M25PK	25	.40	**1.35**
M30PK	30	.37	**1.35**
M40PK	40	.32	**1.35**
M50PK	50	.28	**1.35**
M60PK	60	.26	**1.35**
M75PK	75	.23	**1.35**
M100PK	100	.20	**1.35**
M200PK	200	.14	**1.35**
M300PK	300	.116	**1.35**
M400PK	400	.10	**1.35**
M500PK	500	.09	**1.35**
M600PK	600	.082	**1.35**
M1MPK	1K	.063	**1.35**
M1.5MPK	1.5K	.052	**1.35**
M2MPK	2K	.045	**1.35**
M2.5MPK	2.5K	.04	**1.35**
M3MPK	3K	.037	**1.35**
M4MPK	4K	.032	**1.35**
M5MPK	5K	.028	**1.35**
M10MPK	10K	.02	**1.35**
M15MPK	15K	.016	**1.47**
M20MPK	20K	.014	**1.47**
M25MPK	25K	.013	**1.47**
M50MPK	50K	.009	**1.74**
M70MPK	70K	.0075	**1.74**
M75MPK	75K	.0073	**2.46**
M100MPK	100K	.0063	**2.46**

CENTER-TAPPED POTENTIOMETERS

MT10PK	10	.63	**$1.32**
MT20PK	20	.45	**1.32**
MT30PK	30	.37	**1.32**

RHEOSTATS*

M05RK	0.5	2.80	**93c**
M1RK	1	2.00	**93c**
M2RK	2	1.40	**93c**
M3RK	3	1.15	**93c**
M4RK	4	1.00	**93c**
M6RK	6	.82	**93c**
M10RK	10	.63	**93c**
M15RK	15	.52	**93c**
M20RK	20	.45	**93c**
M25RK	25	.40	**93c**
M30RK	30	.37	**93c**
M40RK	40	.32	**93c**
M50RK	50	.28	**93c**
M60RK	60	.26	**93c**
M75RK	75	.23	**93c**
M100RK	100	.20	**93c**

*"Open" or "Off" position counter-clockwise

TYPE "K" VITREOUS WIRE-WOUND POWER RHEOSTATS

Outstanding features are: Hinged-spring contact arm; low contact resistance; low wear; easy cleaning and brush replacement and anti-backlash characteristic. Each rheostat is of porcelain vitreous enamel construction, designed to give adequate ventilation. Precise uniform winding is permanently sealed into position around a high quality ceramic core. All current-carrying parts electrically insulated by dimensionally stable ceramic parts. Values shown below are for continuous operation in free air. **75, 225 and 500-watt "K" Rheostats available in many values.**
A knob and dial plate are supplied with each Type K rheostat.

TYPE 25K 25 WATTS

1 9/16" O.D. 295° angle of rotation.

Mallory No.	Ohms	Max. Amps	Steps	Net Each
25K1P	1	5.000	28	**$4.62**
25K2P	2	3.540	28	**4.08**
25K3P	3	2.880	53	**4.08**
25K6P	6	2.040	51	**4.08**
25K8P	8	1.770	56	**4.08**
25K10P	10	1.580	54	**4.08**
25K15P	15	1.290	88	**4.08**
25K25P	25	1.000	117	**4.08**
25K35P	35	.845	129	**4.08**
25K50P	50	.707	149	**4.08**
25K75P	75	.575	174	**4.08**
25K100P	100	.500	184	**4.08**
25K125P	125	.447	187	**4.08**
25K175P	175	.378	178	**4.08**
25K250P	250	.316	200	**4.08**
25K350P	350	.267	227	**4.08**
25K500P	500	.222	256	**4.08**
25K750P	750	.182	303	**4.08**
25K1000P	1000	.155	318	**4.62**
25K1500P	1500	.129	310	**4.62**
25K2500P	2500	.100	405	**4.62**
25K3500P	3500	.084	432	**4.89**
25K5000P	5000	.070	471	**4.89**

TYPE 50K 50 WATTS

2 13/32" O.D. 300° angle of rotation.

50K.5P	.5	10.00	25	**$5.16**
50K1P	1	7.07	37	**5.16**
50K2P	2	5.00	42	**5.16**
50K4P	4	3.54	66	**4.62**
50K6P	6	2.89	79	**4.62**
50K8P	8	2.50	84	**4.62**
50K12P	12	2.04	100	**4.62**
50K16P	16	1.76	106	**4.62**
50K22P	22	1.50	145	**4.62**
50K35P	35	1.19	145	**4.62**
50K50P	50	1.00	163	**4.62**
50K80P	80	.79	210	**4.62**
50K125P	125	.63	204	**4.62**
50K150P	150	.58	244	**4.62**
50K225P	225	.47	298	**4.62**
50K300P	300	.41	268	**4.62**
50K500P	500	.32	205	**4.62**
50K800P	800	.25	363	**4.89**
50K1000P	1000	.22	354	**4.89**
50K1600P	1600	.176	449	**4.89**
50K2500P	2500	.14	455	**4.89**
50K3500P	3500	.12	500	**5.16**
50K5000P	5000	.10	550	**5.16**
50K8000P	8000	.08	690	**5.16**

TYPE 100K 100 WATTS

3 1/8" O.D. 300° angle of rotation.

100K.5P	.5	14.20	30	**$7.71**
100K1P	1	10.00	40	**7.71**
100K2P	2	7.07	42	**7.71**
100K3P	3	5.77	56	**7.71**
100K5P	5	4.47	59	**7.71**
100K7.5P	7.5	3.65	96	**7.23**
100K10P	10	3.16	101	**7.23**
100K16P	16	2.50	128	**7.23**
100K25P	25	2.00	160	**7.23**
100K50P	50	1.41	200	**7.23**
100K75P	75	1.15	240	**7.23**
100K100P	100	1.00	250	**7.23**
100K200P	200	.71	315	**7.23**
100K300P	300	.58	302	**7.23**
100K400P	400	.50	316	**7.23**
100K500P	500	.45	342	**7.23**
100K750P	750	.37	406	**7.23**
100K1000P	1000	.32	435	**7.71**
100K1500P	1500	.26	520	**7.71**
100K2000P	2000	.22	544	**7.71**
100K2500P	2500	.20	535	**7.71**
100K5000P	5000	.14	692	**8.22**
100K7500P	7500	.12	820	**8.76**
100K10000P	10000	.10	840	**9.24**

TYPE 150K 150 WATTS

4 1/8" O.D. 305° angle of rotation.

Mallory No.	Ohms	Max. Amps	Steps	Net Each
150K.5P	.5	17.30	31	**$9.81**
150K1P	1	12.30	38	**9.81**
150K2P	2	8.66	51	**9.81**
150K3P	3	7.07	73	**9.81**
150K5P	5	5.48	77	**9.81**
150K7.5P	7.5	4.47	70	**9.81**
150K10P	10	3.87	145	**9.24**
150K15P	15	3.16	138	**9.24**
150K25P	25	2.45	142	**$9.24**
150K35P	35	2.07	198	**9.24**
150K50P	50	1.73	182	**9.24**
150K75P	75	1.41	218	**9.24**
150K100P	100	1.22	229	**9.24**
150K150P	150	1.00	276	**9.24**
150K200P	200	.87	289	**9.24**
150K250P	250	.77	360	**9.24**
150K350P	350	.66	350	**9.24**
150K500P	500	.55	400	**9.24**
150K750P	750	.45	460	**9.81**
150K1250P	1250	.35	490	**9.81**
150K1800P	1800	.290	555	**10.30**
150K2250P	2250	.26	547	**10.30**
150K3000P	3000	.22	729	**10.30**
150K4500P	4500	.18	689	**10.80**
150K7500P	7500	.14	930	**11.31**
150K10000P	10000	.12	980	**12.33**

TYPE 300K 300 WATTS

6 1/16" O.D. 315° angle of rotation.

300K1P	1	17.30	48	**13.89**
300K2P	2	12.25	60	**13.89**
300K3P	3	10.00	64	**13.89**
300K4P	4	8.66	80	**13.89**
300K5P	5	7.75	80	**13.89**
300K7.5P	7.5	6.32	100	**13.89**
300K10P	10	5.48	139	**13.89**
300K15P	15	4.47	128	**13.89**
300K25P	25	3.46	182	**13.89**
300K50P	50	2.45	228	**13.89**
300K75P	75	2.00	271	**13.89**
300K100P	100	1.73	287	**13.89**
300K150P	150	1.41	338	**13.89**
300K200P	200	1.22	361	**13.89**
300K300P	300	1.00	427	**13.89**
300K400P	400	.87	460	**13.89**
300K700P	700	.66	555	**13.89**
300K900P	900	.58	564	**13.89**
300K1200P	1200	.50	605	**13.89**
300K1500P	1500	.45	755	**13.89**
300K1750P	1750	.41	691	**13.89**
300K2500P	2500	.35	785	**13.89**

TWO-WATT WIRE-WOUND POTENTIOMETERS

1 1/16" diameter variable resistor that will dissipate 2 watts over the entire element for continuous operation. For use in test and special instruments, bias control and bridge circuits. Linear taper only. Contact arm is grounded. Total rotation 280°; effective electrical rotation 255°. Provided with short shaft, milled screwdriver slot. Will take standard knobs. Furnished with hex. nut. Shipping Weight, 4 ozs.

POTENTIOMETERS

Mallory No.	Ohms Resis.	Carrying Capacity in Amps	Net Each
C6P	6	.58	**$1.08**
C10P	10	.45	**1.08**
C15P	15	.37	**1.08**
C20P	20	.32	**1.08**
C30P	30	.26	**1.08**
C40P	40	.22	**1.08**
C50P	50	.2	**1.08**
C100P	100	.14	**1.08**
C200P	200	.1	**1.08**
C400P	400	.07	**1.08**
C1MP	1K	.045	**1.20**
C3MP	3K	.025	**1.20**
C5MP	5K	.02	**1.47**
C6MP	6K	.018	**1.47**
C10MP	10K	.014	**1.47**
C15MP	15K	.011	**1.47**

RHEOSTATS*

Mallory No.	Ohms Resis.	Carrying Capacity in Amps	Net Each
C6R	6	.58	**93c**
C10R	10	.45	**93c**
C15R	15	.37	**93c**
C20R	20	.32	**93c**
C30R	30	.26	**93c**
C40R	40	.22	**93c**
C50R	50	.2	**93c**
C100R	100	.14	**93c**

*"Open" or "off" position counter-clockwise.

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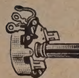
P.R. MALLORY & CO Inc
MALLORY

SPECIAL CONTROLS

P.R. MALLORY & CO. INC.
INDIANAPOLIS 6, IND.

TAB MOUNT CARBON AND WIRE-WOUND CONTROLS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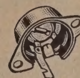
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PHENOLIC SHAFT CONTROLS

For use as hidden or rear panel controls on monochrome and color TV sets where a bushingless control is needed. Ideal for "hot" chassis where shaft must be insulated. Tab mounting; tabs insert in slots provided in chassis; lock in place with twisting action. Phenolic hex shaft 1" long with screwdriver slot; control 15/16" dia.

Phenolic Shaft Tab Control—Any model. Net Each.................. **60c**

Mallory No. PTA-	Resis. Ohms	Taper	Mallory No. PTA-	Resis. Ohms	Taper
52L	500	4	**1254L**	1.25 meg.	4
751L	750	4	**26L**	2 meg.	4
152L	1500	4	**355L**	3.5 meg.	4
252L	2500	4	**46A**	4 meg.	1
53L	5000	4	**56R**	5 meg.	2
352L	3500	4	**755L**	7.5 meg.	4
54L	50K	4	**855L**	8.5 meg.	4
15L	100K	4	**754L**	750K	4
35L	300K	4	**55L**	500K	4
55R	500K	2	**56L**	5 meg.	4

THEATER SPEAKER CONTROLS

For use with Motiograph, Simplex, International and other outdoor theater motion picture equipment. Pigtail rotor connections. Corrosion-resistant finish for long, noise-free life. Metal case 1 1/16" dia. Mechanical rotation 280° (±3°); 255° (±5°), electrical. With mounting nut.

Mallory Number	Description	Net Each
TSA-10	4-ohm L-pad	**$1.47**
TSA-35	35-ohm potentiometer	**1.08**
TSA-6	6-ohm potentiometer	**1.08**

SHAFT EXTENSIONS

Mallory No. DS-36—Extension shaft, ¼" x 3", for U, UT, UDT, TA, R and M controls. Also couples front to rear section for single shaft, dual control. With 1 knurled and slotted and 1 flatted shaft end knob adapters. Net Each.................. **33c**

Mallory No. DS-37—3/16" dia. shaft for use with U, UT, UDT, TA, R and M contrcls. Net Each.......................... **33c**

METAL SHAFT CONTROLS

Same as phenolic shaft types except round tubular brass shaft (2" x ¼" dia.) that can be cut to size. For use as front panel, rear panel or hidden controls. Tab mounting. Three shaft ends supplied; one knurled, one flatted, and one finger knurled.

Metal Shaft Tab Control—Any model. Net Each................ **$1.17**

Mallory No. TA-	Resis. Ohms	Taper	Mallory No. TA-	Resis. Ohms	Taper
52L	500	4	**334A**	330K	1
751L	750	4	**55R**	500K	2
13L	1000	4	**55A**	500K	1
152L	1500	4	**55L**	500K	4
352L	3500	4	**16A**	1 meg.	1
53L	5000	4	**16L**	1 meg.	4
14L	10K	4	**155L**	1.5 meg.	4
153L	15K	4	**26A**	2 meg.	1
253L	25K	4	**26L**	2 meg.	4
54A	50K	1	**26T16**	2 meg.*	4
54L	50K	4	**255L**	2.5 meg.	4
15L	100K	4	**36L**	3 meg.	4
184L	180K	4	**56R**	5 meg.	2
254L	250K	4	**56L**	5 meg.	4

*Tap at 1 meg.

TYPE PP PUSH-PULL CONTROLS

Carbon element controls with a push-pull type SPST switch permanently attached.

Mallory Number	Resis. Ohms	Tap, Ohms	Taper	Net Each
PP13R	1K	....	2	$1.35
PP15A	100K	....	1	1.35
PP16A	1 meg.	....	1	1.35
PP16L	1 meg.	....	4	1.35
PP16T15	1 meg.	100K	1	1.35
PP16T25	1 meg.	200K	1	1.77
PP16T55	1 meg.	500K	2	1.77
PP16DT55	1 meg.	250K-500K	4	1.77
PP25L	200K	....	4	1.35
PP254A	250K	....	1	1.35
PP254DT154	250K	100K-150K	4	1.77
PP26A	2 meg.	....	1	1.35
PP26T16	2 meg.	1 meg.	4	1.77
PP26DT16	2 meg.	500K-1 meg.	1	1.77
PP36DT26	3 meg.	1 meg.-2 meg.	4	1.77
PP55T25	500K	200K	4	1.77
PP46T26	4 meg.	2 meg.	4	1.77
PP55A	500K	....	1	1.35
PP55DT1683	500K	48K-168K	4	1.77
PP55L	500K	....	4	1.35
PP55T254	500K	250K	1	1.77
PP56L	5 meg.	....	4	1.35
PP155L	1.5 meg.	....	4	1.35

TYPE FL SENSITIVITY CONTROLS

Replace sensitivity controls in radios and TV for hum, balance, linearity, AGC, hold, etc. Screwdriver slot for adjustment—no shaft. Rated 2 watts, control is insulated to withstand more than 500 v. AC from terminal to case. Mounting holes in ears take ⅛" bolts or rivets. Single axial terminal can be bent to radial position if required.

FLANGE MOUNT RHEOSTATS

Mallory No. FL-	Resis. Ohms	Net Ea.	Mallory No. FL-	Resis. Ohms	Net Ea.
6	6	42c	**600S***	600	42c
15	15	42c	**750**	750	42c
75	75	42c	**1K**	1K	42c
100	100	42c	**2K**	2K	42c
150	150	42c	**2KS***	2K	42c
200	200	42c	**3K**	3K	42c
250	250	42c	**4K**	4K	42c
500	500	42c	**5K**	5K	42c
600	600	42c			

*Stops at 100 ohms.

FLANGE MOUNT POTENTIOMETERS

40P	40	42c	**200P**	200	42c
100P	100	42c	**250P**	250	42c

PRINTED CIRCUIT RHEOSTATS

New tab mount version of above rheostats.

Mallory No. PFL-	Resis. Ohms	Net Ea.	Mallory No. PFL-	Resis. Ohms	Net Ea.
1.5	1.5	60c	**3K**	3K	60c
15	15	60c	**4K**	4K	60c
100	100	60c	**5K**	5K	60c
600	600	60c	**60A***	60	60c
1K	1K	60c	**100A***	100	60c
1.5K	1.5K	60c			

*Has polyethylene knob.

TV FOCUS CONTROLS

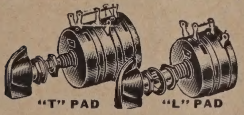
Replacements for TV focus controls, units are 4-watt wire-wound with special taper. Voltage breakdown, 1000 v. DC; mechanical rotation 294°, ±2°; electrical rotation 275°, ±5°. Have 2" round shaft with screwdriver slot; 1⅝" dia.

Mallory No. TVF140—Max. 1500 ohms resistance. Net Each....... **$1.35**

Mallory No. TVF143—Max. 2500 ohms resistance. Net Each............ **$1.35**

INDUSTRIAL WIRE-WOUND CONTROLS

T AND L PAD ATTENUATORS



For controlling level of low impedance audio circuits and for volume controls. May be used with audio amplifiers having peak audio rating of 15 watts. Have continuous DC dissipation rating of 4 watts. Bushing, ⅜" dia. x ⅜" long. Shaft, 2", grooved at popular lengths for easy cutting. With bar knob, dial plate with matched rotation, nut and washer.

"T" Pad Attenuators—Net Each........................ **$3.09**

Mallory No.	Ohms Imped.	Mallory No.	Ohms Imped.
T2	2	**T200**	200
T4	4	**T250**	250
T6	6	**T500**	500
T8	8	**T600**	600
T15	15	**T1000**	1000
T50	50	**T2000**	2000
T100	100	**T3000**	3000

"L" Pad Attenuators—Net Each........................ **$2.73**

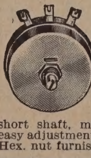
L2	2	**L250**	250
L4	4	**L500**	500
L6	6	**L600**	600
L8	8	**L1000**	1000
L15	15	**L2000**	2000
L50	50	**L3000**	3000
L100	100	**L4000**	4000
L200	200		

CONTROLS FOR HI-FI APPLICATIONS

Tandem LL Pads or LA pads for Hi-Fi.

Mall. No.	Type	Resis. Ohms	Case Size	Net Each
LL8	LL	8	1⅝" x 2 5/16"	$5.97
LL16	LL	16	1⅝" x 2 5/16"	5.97
LL50	LL	50	1⅝" x 2 5/16"	5.97
L8A	LA	8	1⅝" x 1⅛"	2.85
L16A	LA	16	1⅝" x 1⅛"	2.85

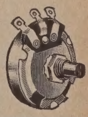
SEVEN-WATT WIRE-WOUND POTENTIOMETERS



Suitable for precision instruments such as resistance bridges and where a control of medium currents or voltages is required. Supplied with grounded contact arm. 307° total rotation; 295° effective electrical rotation. Will dissipate 7 watts. Provided with short shaft, milled screw-driver slot for easy adjustment. Will take standard knobs. Hex. nut furnished. No. 4 taper.

Mallory No.	Ohms Resistance	Carrying Capacity in Amps	Net Each
E5MP	5K	.042	$2.76
E10MP	10K	.03	2.94
E20MP	20K	.021	3.00
E25MP	25K	.019	3.09
E50MP	50K	.0135	3.15
E75MP	75K	.011	3.24
E100MP	100K	.0095	3.30
E125MP	125K	.0085	3.30
E150MP	150K	.0078	3.36

TYPE R WIRE-WOUND POTS



For replacement of TV controls requiring 2 watt unit. Also for V-divider and bias applications. High quality, dust-proof, 1 9/32" overall dia. 900 v. insulation. No. 4 taper. Thumb knurled, screwdriver slotted stub shaft. Bushing, ⅜". One Pal-nut with each control.

Mallory No.	Ohms	Net Each	Mallory No.	Ohms	Net Each
R2L	2	$0.93	**R50CT†**	50	$1.32
R3L	3	.93	**R100L**	100	.93
R5L	5	.93	**R250L**	250	.93
R6L	6	.93	**R500L**	500	.93
R8L	8	.93	**R750L**	750	.93
R10L	10	.93	**R1000L**	1000	.93
R10CT†	10	1.32	**R1500L**	1500	.93
R15L	15	.93	**R2500L**	2500	.93
R20L	20	.93	**R3000L**	3000	.93
R20CT†	20	1.32	**R5000L**	5000	.93
R25L	25	.93	**R7500L**	7500	1.08
R30L	30	.93	**R10ML**	10000	1.08
R30CT†	30	1.32	**R15ML**	15000	1.08
R50L	50	.93	**R20ML**	20000	1.08

†Center-tapped Controls

SWITCHES FOR TYPE R POTS

Mall. No.	Description	Net
US30	Single Pole, Single Throw	42c
US32	Double Pole, Single Throw	54c

THERE IS A MALLORY CONTROL FOR ALL REPLACEMENT OR O. E. M. REQUIREMENTS.

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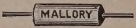
P R MALLORY & CO Inc
MALLORY

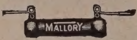
WIRE-WOUND RESISTORS, KITS

P.R. MALLORY & CO. INC.
INDIANAPOLIS 6, IND.

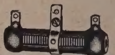
Type FAL, TAL—Axial lead wire-wound type with rigid resistance for entire operating range. Withstand two times their wattage in free air. Ceramic coated and completely sealed. **Type H (Fixed) and 1A (Adjustable)**—Vitreous enamel coated. Adjustable units come with two mtg. feet and clip. **To Order:** Use type No. from top of column followed by resistance value.



AXIAL LEAD



FIXED TYPE



ADJUSTABLE TYPE

Ohms	Axial Lead Types		Fixed Vitreous Types						Adjustable Vitreous Types				
	5 Watt FAL Net Ea.	10 Watt TAL Net Ea.	5 Watt HHJ Net Ea.	10 Watt 1HJ Net Ea.	20 Watt 2HJ Net Ea.	50 Watt 5HJ Net Ea.	100 Watt 10HJ Net Ea.	200 Watt 20HJ Net Ea.	10 Watt 1AV Net Ea.	25 Watt 2AV Net Ea.	50 Watt 5AV Net Ea.	100 Watt 10AV Net Ea.	200 Watt 20AV Net Ea.
1			$0.44*	$0.50*					$0.97	$1.21			
1.5			.44*										
2			.44*	.50*					.97				
3			.44*	.50*					.97	1.21			
4			.44*	.50*									
5			.44*	.50*	$0.63				.97	1.21	$1.57		
7.5			.44*	.50*					.97				
10	$0.30	$0.36	.44*	.50*	.63	$1.16			.97	1.21	1.57		
12	.30	.36	.44	.50									
15	.30	.36	.44	.50	.63				.97	1.21			
20	.30	.36	.44	.50					.97				
25			.44	.50	.63	1.16	$1.64	$2.17	.97	1.21	1.57		
26	.30	.36											
30	.30	.36	.44	.50									
35	.30	.36	.44	.50									
40	.30	.36	.44	.50									
50	.30	.36	.44	.50	.63	1.16	1.64	2.17	.97	1.21	1.57	$2.35	$2.89
75	.30	.36	.44	.50	.63			2.17	.97	1.21	1.57		
100	.30	.36	.44	.50	.63	1.16	1.64	2.17	.97	1.21	1.57	2.35	2.89
125	.30	.36	.44	.50									
150	.30	.36	.44	.50	.63		1.64		.97	1.21	1.57		
200	.30	.36	.44	.50	.63				.97	1.21	1.57		
225	.30	.36		.50									
250	.30	.36	.44	.50	.63	1.16	1.64	2.17	.97	1.21	1.57		
300	.30	.36	.44	.50	.63				.97	1.21			
350		.36	.44	.50					.97				
400		.36	.44	.50	.63				.97	1.21	1.57		
450	.30	.36	.44	.50									
500	.30	.36	.44	.50	.63	1.16	1.64	2.17	.97	1.21	1.57	2.35	2.89
600	.30	.36	.44	.50					.97				
700	.30	.36	.44	.50									
750	.30	.36	.44	.50	.63	1.16	1.64	2.17	.97	1.21	1.57		
800	.30	.36	.44	.50					.97				
900	.30	.36	.44	.50									
1,000	.30	.36	.44	.50	.63	1.16	1.64	2.17	.97	1.21	1.57	2.35	2.89
1,100			.50	.53									
1,200	.30	.36	.50	.53									
1,250		.36	.50	.53	.64				1.01	1.24			
1,500	.30	.36	.50	.53	.64	1.16	1.67	2.20	1.01	1.24	1.63		2.94
1,750	.30	.36	.50	.53	.64								
2,000	.30	.36	.50	.53	.64	1.16	1.67	2.20	1.01	1.24	1.63	2.42	2.94
2,250	.30	.36	.50	.53	.64				1.01				
2,500	.30	.36	.50	.53	.64	1.16	1.67	2.20	1.01	1.24	1.63	2.42	2.94
2,700	.30												
2,750					.64								
3,000	.30	.36	.50	.53	.64			2.20	1.01	1.24	1.63	2.42	
3,300	.30	.36											
3,500	.30	.36	.50	.53	.64				1.01	1.24			
3,800		.36											
4,000	.30	.36	.50	.53	.64				1.01	1.24	1.63	2.42	
4,500		.36	.50	.53	.64				1.01				
4,700	.30												
5,000	.30	.36	.50	.53	.64	1.16	1.67	2.20	1.01	1.24	1.63	2.42	2.94
5,600		.36											
6,000		.36		.61	.71				1.07	1.34			
6,800		.36											
7,000				.61					1.07				
7,500		.36		.61	.71	1.27	1.78	2.33	1.07	1.34	1.73	2.56	
8,000				.61					1.07				
8,200		.36		.61									
8,500				.61					1.07				
9,000		.36		.61					1.07				
10,000		.36		.61	.71	1.27	1.78	2.33	1.07	1.34	1.73	2.56	3.10
11,000				.68									
12,000				.68						1.37			
12,500				.68	.79	1.40							
13,500				.68									
14,300				.68									
15,000				.68	.79	1.40	1.96			1.37	1.87	2.72	
16,000				.68									
17,500				.68									
18,000				.68									
20,000				.68	.79	1.40	1.96	2.48		1.37	1.87	2.72	3.25
22,500				.72									
25,000				.72	.91	1.54	2.15			1.51	2.03	2.89	3.32
30,000				.72†	.91	1.54	2.15	2.57			2.03	2.89	3.32
35,000				.72†	.91							2.89	
40,000				.72†	.91†	1.54	2.15	2.57			2.03	2.89	
45,000				.72†									
50,000				.72†	.99†	1.70	2.23	2.66			2.18	3.02	3.41
75,000					1.16†	1.93	2.36	2.81				3.14	3.58
100,000					1.16†	2.11	2.51	2.99					

*Tol., ±10%; all others ±5%. †Stocked only in low temperature enamel coating; operating voltage normally encountered rarely exceed values listed.

TUBE SIZES FOR ABOVE RESISTORS

Axial Lead Types: FAL—5/16" x 1". **TAL**—5/16" x 1¾". **Fixed Types: HHJ**—5/16" x 1". **1HJ**—/16" x 1¾". **2HJ**—7/16" x 2". **5HJ**—9/16" x 4". **10HJ**—¾" x 6½". **20HJ**—1⅛" x 10½". **Adjustable Types: 1AV**—5/16" x 1¾". **2AV**—9/16" x 2". **5AV**—9/16" x 4". **10AV**—¾" x 6½". **20AV**—1⅛" x 10½".

EXTRA MOUNTING FEET

Number	For Resistor Type	Ea.
30V	HHJ, 1HJ, and 1AV	6c
31V	2AV, 5AV and 5HJ	7c
32V	20HJ and 20AV	7c
33V	10HJ and 10AV	7c

EXTRA ADJUSTABLE CLIPS

Number	For Resistor Type	Ea.
1V	10-watt Variohms*	25c
3V	25 and 50-watt Variohms*	25c
4V	10AV 100-watt Variohms*	25c
6V	200-watt, 1⅛" Variohms*	31c

*Registered Trade Mark.

YARD-OHM RESISTANCE KITS

All necessary materials for construction of flexible resistors of wide range. 1 yd. resistance wire, 1 yd. insulated braid, 24 spiral leads.

Dissipation, all types, ½ watt/inch. Yard-Ohm Kit, any value. Net Ea. **51c**

Mall. No.	Ohms/ Inch	Amps	Mall. No.	Ohms/ Inch	Amps
YO-1	1	.707	YO-50	50	.100
YO-5	5	.315	YO-100	100	.071
YO-10	10	.223	YO-250	250	.044
YO-25	25	.141	YO-500	500	.031

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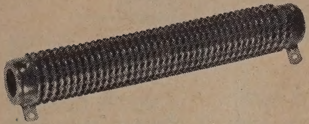
MILWAUKEE RESISTOR COMPANY

MILWAUKEE 4, WISCONSIN



300 WATT RIBWOUND

vitreous enameled

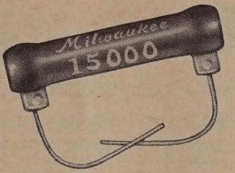
FIXED AND ADJUSTABLE

Core: 1⅛" x 8½"—Mounting Centers 9⅜"

Stock Values

Ohms	Volts	Amps	List Price Fixed	List Price Adj.
.10	5.47	54.7	6.48	7.88
.15	6.71	44.7	6.48	7.88
.20	7.78	38.7	6.48	7.88
.25	8.66	34.6	5.42	6.82
.375	10.6	28.3	5.42	6.82
.50	12.2	24.5	5.42	6.82
.6	13.4	22.3	5.42	6.82
.75	15.0	20.0	5.42	6.82
1	17.3	17.3	5.42	6.82
1.25	19.2	15.5	5.42	6.82
1.5	21.2	14.1	5.42	6.82
1.75	22.9	13.1	5.42	6.82
2.0	24.5	12.2	5.42	6.82
2.5	27.4	10.9	5.42	6.82
3.0	30.0	10.0	5.42	6.82
3.5	32.4	9.3	5.42	6.82
4.0	34.6	8.6	5.42	6.82
5.0	38.7	7.7	5.42	6.82
6.0	42.4	7.1	5.42	6.82
6.75	45.0	6.7	5.42	6.82
8.0	49.0	6.1	5.42	6.82
9	52.0	5.8	5.42	6.82
10	54.8	5.5	5.42	6.82
12	60.0	5.0	5.42	6.82
15	67.0	4.5	5.42	6.82
17	71.4	4.2	5.42	6.82
20	77.4	3.8	5.42	6.82
25	86.5	3.47	5.42	6.82
33	99.5	3.03	5.42	6.82

These Milwaukee Ribwound Resistors are edgewound with ribbon wire on high grade steatite cores. They are coated with top quality vitreous enamel insuring a positive locking of the resistance ribbon wire. They are for applications of low voltage at high current requirements. They can be furnished with steel L type brackets and thrubolt mounting or with spring clips at extra charge. **Ribwound resistors are also available in other wattages.**



FIXED RESISTORS

vitreous enameled

Wound on steatite form inductively or non-inductively. Silver soldered between resistance wire and lug. General use for voltage dropping, current limiting, etc. 5-10-20-25-50-75-100-160-200 watts.

5 WATT—FIXED Core: 5/16" x 1" — Stocked Values

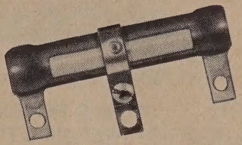
Ohms	Amps	Ohms	Amps	Ohms	Amps
1	2.23	100	.220	1,500	.057
2	1.58	125	.220	1,750	.053
3	1.29	150	.180	2,000	.050
4	1.12	200	.160	2,250	.047
5	1.00	225	.150	2,500	.045
7.5	.810	250	.140	3,000	.041
10	.710	300	.130	3,500	.037
12.5	.630	350	.120	4,000	.035
15	.580	400	.110	4,500	.033
20	.500	450	.105	5,000	.032
25	.450	500	.100	6,000	.029
30	.410	600	.091	7,000	.027
35	.380	750	.082	7,500	.026
40	.350	800	.079	8,000	.025
50	.320	1000	.070	9,000	.024
75	.260	1250	.063	10,000	.022

	Vitreous Enameled List ea.	B-13 Silicone List ea.
1 thru 1,000 ohms	$.81	$.57
1250 thru 5,000 ohms	.87	.60
6000 thru 10,000 ohms	.92	.63

10 WATT—FIXED Core: 5/16" x 1-3/4" Stocked Values

Ohms	Amps	Ohms	Amps	Ohms	Amps
1	3.16	225	.21	4,500	.047
2	2.24	250	.20	5,000	.045
3	1.83	300	.18	6,000	.041
4	1.58	350	.17	7,000	.038
5	1.41	400	.16	7,500	.036
7.5	1.16	450	.15	8,000	.035
10	1.00	500	.14	9,000	.034
12.5	.91	600	.13	10,000	.032
15	.82	750	.12	12,500	.028
20	.71	800	.11	15,000	.026
25	.63	1000	.100	17,500	.024
30	.58	1250	.089	20,000	.022
35	.53	1500	.081	22,500	.021
40	.50	1750	.075	25,000	.020
50	.45	2000	.071	30,000	.018
75	.37	2250	.066	35,000	.017
100	.32	2500	.063	40,000	.016
125	.28	3000	.057	45,000	.015
150	.26	3500	.053	50,000	.014
200	.22	4000	.050		

	Vitreous Enameled List ea.	B-13 Silicone List ea.
1 thru 1,000 ohms	$ .90	$ .63
1,250 thru 5,000 ohms	.97	.67
6,000 thru 10,000 ohms	1.10	.77
12,500 thru 20,000 ohms	1.25	.87
22,500 thru 40,000 ohms	1.32	.92
45,000 thru 50,000 ohms	1.47	1.02



ADJUSTABLE RESISTORS

vitreous enameled

For use where close or odd resistance values are required. Use of several bands provides for convenient multi-tap use. Invaluable for making fine adjustments in circuits. 10-25-50-75-100-160-200 watts.

10 WATT—ADJUSTABLE Core: 5/16" x 1-3/4"—Stocked Values

Ohms	Amps	Ohms	Amps	Ohms	Amps
1	3.16	200	.22	2,500	.063
2	2.24	250	.20	3,000	.057
3	1.83	300	.18	3,500	.053
5	1.41	350	.17	4,000	.050
7.5	1.16	400	.16	4,500	.047
10	1.00	500	.14	5,000	.045
15	.82	600	.13	6,000	.041
20	.71	750	.12	7,000	.038
25	.63	800	.11	7,500	.036
50	.45	1000	.10	8,000	.035
75	.37	1250	.089	9,000	.033
100	.32	1500	.081	10,000	.032
150	.26	2000	.071		

	Vitreous Enameled List ea.	B-13 Silicone
1 thru 1,000 ohms	$1.80	Not Available
1,001 thru 5,000 ohms	1.87	Not Available
5,001 thru 10,000 ohms	2.00	Not Available

20 WATT—FIXED Core: 7/16" x 2" — Stocked Values

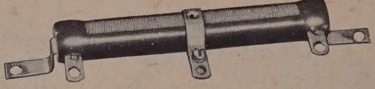
Ohms	Amps	Ohms	Amps	Ohms	Amps
5	2.00	1,500	.12	15,000	.032
10	1.41	2,000	.10	20,000	.027
25	.89	2,500	.089	25,000	.024
50	.63	3,000	.081	30,000	.022
75	.52	3,500	.075	35,000	.021
100	.45	4,000	.070	40,000	.019
150	.36	4,500	.066	50,000	.017
200	.32	5,000	.063	60,000	.016
250	.28	6,000	.057	65,000	.015
300	.26	7,000	.053	70,000	.014
350	.24	7,500	.051	75,000	.013
400	.22	8,000	.050	80,000	.012
500	.20	9,000	.047	90,000	.011
750	.16	10,000	.043	95,000	.010
1000	.14	12,500	.035	100,000	.010
1250	.12				

	Vitreous Enameled List ea.	B-13 Silicone List ea.
1 thru 1,000 ohms	$1.07	$ .75
1,001 thru 5,000 ohms	1.10	.77
5,001 thru 10,000 ohms	1.32	.92
10,001 thru 20,000 ohms	1.35	.95
20,001 thru 40,000 ohms	1.57	1.10
40,001 thru 60,000 ohms	1.82	1.27
60,001 thru 80,000 ohms	2.17	1.52
80,001 thru 100,000 ohms	2.48	1.74

B-13 SILICONE RESISTORS—These units are coated with a silicone bonded quartz. They are available only in fixed style in 5-10-20 watts.

MILWAUKEE RESISTOR COMPANY

MILWAUKEE 4, WISCONSIN



25 WATT VITREOUS ENAMELED

Core: 9/16″ x 2″—Mounting Centers 2-3/4″

Ohms	Max. Amps.	List Price	
		Fixed	Adj.
1	5.00	$1.13	$2.03
2	3.54	1.13	2.03
3	2.88	1.13	2.03
4	2.56	1.13	2.03
5	2.24	1.13	2.03
10	1.58	1.13	2.03
15	1.29	1.13	2.03
20	1.12	1.13	2.03
25	1.00	1.13	2.03
50	.71	1.13	2.03
75	.58	1.13	2.03
100	.50	1.13	2.03
150	.41	1.13	2.03
200	.35	1.13	2.03
250	.32	1.13	2.03
500	.22	1.13	2.03
750	.18	1.13	2.03
1,000	.16	1.13	2.03
1,250	.14	1.18	2.08
1,500	.13	1.18	2.08
2,000	.12	1.18	2.08
2,500	.10	1.18	2.08
3,000	.091	1.18	2.08
3,500	.084	1.18	2.08
4,000	.079	1.18	2.08
4,500	.074	1.18	2.08
5,000	.070	1.18	2.08
6,000	.064	1.35	2.25
7,000	.060	1.35	2.25
7,500	.058	1.35	2.25
8,000	.055	1.35	2.25
9,000	.052	1.35	2.25
10,000	.050	1.35	2.25
12,500	.040	1.42	2.32
15,000	.036	1.42	2.32
20,000	.031	1.42	2.32
25,000	.028	1.65	2.55
40,000	.022	1.65	
50,000	.020	1.92	
60,000	.018	1.92	
70,000	.016	2.25	
80,000	.014	2.25	
100,000	.010	2.60	

50 WATT VITREOUS ENAMELED

Core: 9/16″ x 4″—Mounting Centers 4-3/4″

Ohms	Max. Amps.	List Price	
		Fixed	Adj.
1	7.00	2.45	3.35
2	5.00	1.75	3.35
3	4.10	1.75	2.65
4	3.45	1.75	2.65
5	3.16	1.75	2.65
10	2.23	1.75	2.65
25	1.41	1.75	2.65
50	1.00	1.75	2.65
75	.82	1.75	2.65
100	.71	1.75	2.65
150	.58	1.75	2.65
200	.50	1.75	2.65
250	.45	1.75	2.65
300	.41	1.75	2.65
400	.35	......	2.65
500	.32	1.75	2.65
750	.26	1.75	2.65
1,000	.22	1.75	2.65
1,250	.20	......	2.70
1,500	.18	1.80	2.70
2,000	.16	1.80	2.70
2,500	.14	1.80	2.70
3,000	.13	1.80	2.70
4,000	.11	1.80	2.70
4,500	.10	......	2.70
5,000	.10	1.80	2.70
6,000	.091	......	2.85
7,000	.084	......	2.85
7,500	.081	1.82	2.85
8,000	.079	1.82	2.85
9,000	.074	......	2.85
10,000	.071	1.82	2.85
12,500	.063	2.13	3.03
15,000	.057	2.13	3.03
20,000	.050	2.13	3.03
25,000	.045	2.43	3.33
30,000	.036	......	3.33
35,000	.032	2.43	......
40,000	.029	2.43	3.33
50,000	.026	2.72	3.62
60,000	.024	......	3.62
75,000	.021	3.12	4.02
100,000	.018	3.37	4.27

75 WATT VITREOUS ENAMELED

Core: 9/16″ x 6″—Mounting Centers 6-3/4″

Ohms	Max. Amps.	List Price	
		Fixed	Adj.
5	3.87	2.05	2.95
10	2.74	2.05	2.95
25	1.73	2.05	2.95
50	1.22	2.05	2.95
75	1.00	2.05	2.95
100	.86	2.05	2.95
150	.69	2.05	2.95
200	.61	2.05	2.95
250	.55	2.05	2.95
300	.50	2.05	2.95
400	.43	2.05	2.95
500	.39	2.05	2.95
750	.32	2.05	2.95
1,000	.27	2.05	2.95
1,250	.24	2.13	3.03
1,500	.22	2.13	3.03
2,000	.19	2.13	3.03
2,500	.17	2.13	3.03
3,000	.16	2.13	3.03
3,500	.15	2.13	3.03
4,000	.14	2.13	3.03
5,000	.12	2.13	3.03
6,000	.11	2.28	3.18
7,000	.10	2.28	3.18
7.500	.10	2.28	3.18
8,000	.096	2.28	3.18
9,000	.091	2.28	3.18
10,000	.086	2.28	3.18
12,500	.077	2.47	3.37
15,000	.070	2.47	3.37
20,000	.061	2.47	3.37
25,000	.054	2.77	3.67
30,000	.050	2.77	3.67
35,000	.046	2.77	3.67
40,000	.043	2.77	3.67
50,000	.033	3.08	3.98
60,000	.030	3.08	3.98
75,000	.027	3.50	4.40
100,000	.023	3.73	4.63

100 WATT VITREOUS ENAMELED

Core: ¾″ x 6½″—Mounting Centers 7⅜″

Ohms	Max. Amps.	List Price	
		Fixed	Adj.
5	4.47	2.45	3.35
10	3.16	2.45	3.35
25	2.00	2.45	3.35
50	1.41	2.45	3.35
75	1.15	2.45	3.35
100	1.00	2.45	3.35
150	.816	2.45	3.35
250	.63	2.45	3.35
500	.45	2.45	3.35
750	.365	2.45	3.35
1,000	.32	2.45	3.35
1,500	.26	2.53	3.43
2,000	.223	2.53	3.43
2,500	.20	2.53	3.43
3,000	.18	2.53	3.43
5,000	.14	2.53	3.43
7,500	.115	2.73	3.63
10,000	.10	2.73	3.63
15,000	.081	2.95	3.85
20,000	.071	2.95	3.85
25,000	.063	3.35	4.25
30,000	.058	3.35	4.25
40,000	.050	3.35	4.25
50,000	.045	3.50	4.40
60,000	.041	3.50	4.40
75,000	.032	3.88	4.78
100,000	.028	4.37	5.27

160 WATT VITREOUS ENAMELED

Core: 1⅛″ x 8½″—Mounting Centers 9⅜″

Ohms	Max. Amps.	List Price	
		Fixed	Adj.
5	5.66	5.05	6.45
10	4.00	3.62	5.02
25	2.53	3.62	5.02
50	1.79	3.62	5.02
75	1.46	3.62	5.02
100	1.26	3.62	5.02
150	1.03	3.62	5.02
250	.80	3.62	5.02
500	.57	3.62	5.02
750	.46	3.62	5.02
1,000	.40	3.62	5.02
1,500	.33	3.67	5.07
2,000	.28	3.67	5.07
2,500	.25	3.67	5.07
3,000	.23	3.67	5.07
5,000	.18	3.67	5.07
7,500	.15	4.00	5.40
10,000	.13	4.00	5.40
15,000	.10	4.30	5.70
20,000	.089	4.30	5.70
25,000	.080	4.43	5.83
30,000	.073	4.43	5.83
40,000	.063	4.43	5.83
50,000	.057	4.57	5.97
60,000	.051	4.57	5.97
75,000	.046	4.88	6.28
100,000	.040	5.17	6.57

200 WATT VITREOUS ENAMELED

Core: 1⅛″ x 10½″—Mounting Centers 11⅜″

Ohms	Max. Amps.	List Price	
		Fixed	Adj.
5	6.32	5.45	6.85
10	4.47	3.90	5.30
25	2.83	3.90	5.30
50	2.00	3.90	5.30
75	1.64	3.90	5.30
100	1.41	3.90	5.30
150	1.15	3.90	5.30
250	.89	3.90	5.30
500	.63	3.90	5.30
750	.52	3.90	5.30
1,000	.45	3.90	5.30
1,500	.37	4.00	5.40
2,000	.32	4.00	5.40
2,500	.28	4.00	5.40
3,000	.258	4.00	5.40
5,000	.20	4.00	5.40
7,500	.16	4.30	5.70
10,000	.14	4.30	5.70
15,000	.12	4.47	5.83
20,000	.10	4.47	5.83
25,000	.089	4.73	6.03
30,000	.082	4.73	6.03
40,000	.071	4.73	6.03
50,000	.063	4.48	6.28
60,000	.058	4.88	6.28
75,000	.052	5.17	6.57
100,000	.045	5.48	6.88

MILWAUKEE RESISTOR COMPANY

MILWAUKEE 4, WISCONSIN

RADIO-TV REPLACEMENT SPECIALTIES

MILWAUKEE
T-V FUSE
RESISTORS

MILWAUKEE COMBINATION FUSE RESISTORS

The only patented fuse resistor — O.E.M. specified

OHMIC VALUES: 4.5, 5, 5.6, 7.5, 9, 18, 22, 33, 47, 100, and 150................$.55 each list

PLASTIC CADDY KITS, 10 EA. OF SINGLE VALUE OR ASSORTED........................$5.50 list

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REPLACEMENT
STOCK
MILWAUKEE
'W' RESISTORS
5, 10, 15 WATTS

MILWAUKEE "W" SERIES

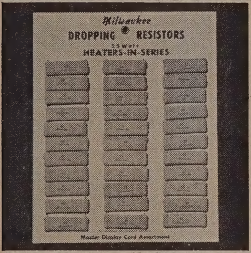
A 15 watt Silicone Coated Resistor at a 5 watt Price.
Stock One Resistor Instead of Three for 5, 10 and 15 watt Applications!

OHMS:	5	15	35	55	470	1500	2500	3900	7000	8700
	7.5	20	40	125	750	1750	2750	4400	7500	9000
	10	25	45	225	1000	2000	3000	5600	8000	10K
	12.5	30	50	400	1250	2250	3300	6000	8200	

Other values also available.

MASTER DISPLAY CARD—ASS'T. OF 39 VALUES ABOVE:......................$36.60 list

BULK PRICE:......................$ .55 list ea.


Milwaukee
DROPPING RESISTORS
25 Watt
HEATERS-IN-SERIES
Master Display Card Assortment

MILWAUKEE HEATER-IN-SERIES DROPPING RESISTORS

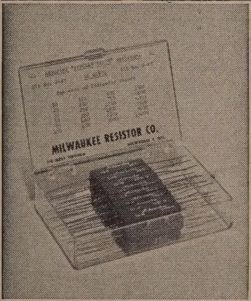
Original equipment replacement — 25 watt — for radio — TV — Phono circuits.

OHMAGES: 6.7, 10, 12, 15, 17, 18, 20, 22, 26, 27, 28, 30, 33, 34, 35, 38, 39, 40, 41, 42, 44, 45, 47, 50, 51, 52, 54, 57, 60, 61, 74.

MASTER DISPLAY CARD, ONE EACH ABOVE VALUES:......................$36.60 list

BOX OF 5 SINGLE VALUE:......................$ 5.50 list

UNIT PRICE:......................$ 1.10 list ea.


MILWAUKEE RESISTOR CO.

MILWAUKEE B-T (BATHTUB) RESISTORS — 5 and 10 WATT

Ceramic encased — kits or bulk — 5 thru 10,000 ohms.

No. 1 BT CADDY KIT — 10 WATT — 24 pieces —
2 each most popular values:......................$11.92 list

No. 2 BT CADDY KIT — 10 WATT — 24 pieces —
1 each of popular values:......................$11.92 list

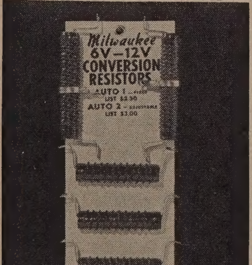
COMBINATION — 2 KITS — 1 ea. No. 1 BT and No. 2 BT
(NO OVERLAP OF VALUES) ....$21.00 list

PLASTIC CADDY KIT—10 WATT—24 of single value......................$11.92 list

PLASTIC CADDY KIT— 5 WATT—24 of single value......................$10.33 list

UNIT PRICE— 5W. (5 through 6,000 ohms)......................$ .55 list ea.

UNIT PRICE—10W. (5 through 15,000 ohms)......................$ .65 list ea.


Milwaukee
6V—12V
CONVERSION
RESISTORS
AUTO 1
LIST $2.50
AUTO 2
LIST $3.00

MILWAUKEE 6V-AUTO-12V CONVERSION RESISTORS

Heavy-duty ribwound — highest quality — vitreous enameled. No burnouts — No variation in resistance — Complete with mounting brackets.

AUTO No. 1 FIXED—For equipment drawing 5-7 amps......................$ 2.50 list ea.

6 piece display card......................$15.00 list

AUTO No. 2—ADJ. For perfect balance V-A......................$ 3.00 list ea.

3 piece display card......................$ 9.00 list

ALSO 5 PIECE DISPLAY CARD—3 No. 1's and 2 No. 2's......................$13.50 list

OHMITE® RESISTORS • RHEOSTATS • TAP SWITCHES
RELAYS • TANTALUM CAPACITORS
VARIABLE TRANSFORMERS • RF CHOKES

RITEOHM® PRECISION RESISTORS — ±1% TOLERANCE

"Riteohm" precision resistors are offered from stock in a variety of types. This distinguished line of precision resistors, finds universal application in laboratory and test equipment, in vital military and commercial equipment, in every application demanding high precision and assured stability.

SERIES 85, 86 ENCAPSULATED: Completely enveloped in a special, Ohmite-compounded resin, the encapsulated resistor offers the ultimate in stability, protection against humidity and damage. The specially enameled alloy resistance wire is pie-wound on highest quality steatite or epoxy bobbins. Series 85 features axial lead terminals. Series 86 has lug terminals. Temperaure coefficient of resistance is 0±30ppm/°C.

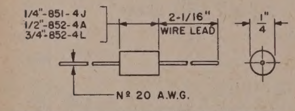
Voltages listed for Series 85 and 86 resistors produce the rated watts up to the established limit of 150 volts per pie. For non-standard values, closer tolerances or special construction, consult factory.

SERIES 77 METAL FILM: Consists of a thin film of special metal alloy permanently bonded to glass. This element is hermetically sealed in a high temperature tubular plastic case with a special resin. Series 77 resistors feature extremely low reactance at high frequencies, and noise level comparable to wirewounds. Useful in high frequency or pulse circuits where wirewounds are unsuitable and in high gain circuits where the noise level of composition types is excessive. Two temperature coefficients of resistance available: 0±25-ppm/°C and 0±50ppm/°C. Resistance values shown are selected from MIL Standard MS-90169, MIL-R-10509 and Bell Tel. Labs.

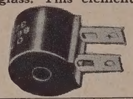
SERIES 85 ENCAPSULATED WIREWOUND — TOL. ±1%

Ohms	Max. Voltage	Net Each 1-24
Type 851-4J, 1 Pie, ⅛ Watt*		
10	1.12	**$1.75**
25	1.77	**1.75**
50	2.60	**1.40**
100	3.54	**1.40**
200	5.00	**1.40**
250	5.60	**1.40**
300	6.13	**1.40**
500	7.91	**1.40**
1,000	11.2	**1.40**
1,500	13.7	**1.40**
2,000	15.8	**1.40**
2,500	17.7	**1.40**
3,000	19.4	**1.40**
3,500	21.0	**1.40**
4,000	22.4	**1.40**
5,000	25.0	**1.40**
7,500	30.6	**1.40**
10,000	35.4	**1.40**
12,500	39.6	**1.40**
15,000	43.3	**1.40**
20,000	50.0	**1.54**
Type 851-4J (Cont.)		
22,500	53.2	**$1.54**
25,000	56.0	**1.54**
30,000	61.3	**1.54**
40,000	70.7	**1.54**
50,000	79.1	**1.54**
60,000	86.8	**1.77**
75,000	97.0	**1.77**
100,000	112.0	**1.89**
Type 852-4A, 2 Pie, ¼ Watt*		
125,000	177	**2.00**
150,000	195	**2.00**
175,000	210	**2.16**
200,000	225	**2.16**
225,000	238	**2.53**
250,000	250	**2.53**
300,000	275	**2.76**
Type 852-4L, 2 Pie, ⅓ Watt*		
400,000	300	**3.11**
500,000	300	**3.61**

*at 125°C ambient.



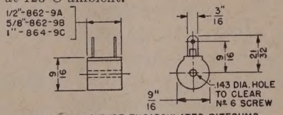
TYPE 85-AXIAL LEAD ENCAPSULATED RITEOHMS.



SERIES 86 ENCAPSULATED WIREWOUND —TOL. ±1%

Ohms	Max. Voltage	Net Each 1-24
Type 862-9A, 2 Pie, ¼ Watt*		
0.1	.16	**$2.72**
0.2	.22	**2.72**
0.5	.35	**2.15**
1	.50	**2.15**
5	1.15	**2.15**
10	1.57	**2.15**
25	2.50	**2.15**
50	3.50	**1.80**
100	5.00	**1.80**
200	7.07	**1.80**
250	7.90	**1.80**
300	8.70	**1.80**
500	11.2	**1.80**
1,000	15.7	**1.80**
1,500	19.5	**1.80**
2,000	22.5	**1.80**
2,500	25.0	**1.80**
3,000	27.5	**1.80**
3,500	29.5	**1.80**
4,000	31.5	**1.80**
5,000	35.0	**1.80**
7,500	43.0	**1.80**
10,000	50.0	**1.80**
12,500	56.0	**1.80**
15,000	60.1	**1.80**
20,000	70.7	**1.94**
22,500	75.0	**1.94**
Type 862-9A (Cont.)		
25,000	79	**$1.94**
30,000	87	**1.94**
40,000	100	**1.94**
50,000	112	**1.94**
60,000	122	**2.17**
75,000	137	**2.17**
100,000	157	**2.29**
125,000	177	**2.40**
150,000	195	**2.40**
175,000	210	**2.56**
200,000	225	**2.56**
225,000	237	**2.93**
250,000	250	**2.93**
300,000	275	**3.16**
400,000	300	**3.51**
500,000	300	**4.01**
Type 862-9B, 2 Pie, ½ Watt*		
600,000	300	**4.89**
750,000	300	**5.48**
900,000	300	**6.20**
1 Meg.	300	**6.93**
Type 864-9C, 4 Pie, 1 Watt*		
1.5 Meg.	600	**12.35**
2 Meg.	600	**15.62**
2.5 Meg.	600	**18.88**

*at 125°C ambient.



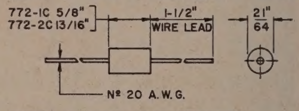
TYPE 86-LUG TYPE ENCAPSULATED RITEOHMS.

SERIES 77 METAL FILM (½ Watt at 125°C) TOL. ±1%

Net 1-24, Any Value, 0±25ppm/°C T.C. . . **$2.20**
Net 1-24, Any Value. 0±50ppm/°C T.C.* . **1.32**

Ohms	Max. Volts
Type 772-1C	
51.1	5.05
75	6.12
100	7.07
121	7.78
147	8.57
178	9.42
215	10.4
261	11.4
316	12.6
383	13.8
464	15.2
562	16.8
619	17.6
681	18.5
750	19.4
825	20.6
909	21.6
1,000	22.4
1,100	23.4
1,210	24.6
1,330	25.8
1,470	27.1
1,620	28.5
1,780	29.8
1,960	31.3
2,150	32.8
2,370	34.4
Type 772-1C	
2,610	36.1
2,870	37.9
3,160	39.7
3,480	41.7
3,830	43.7
4,220	45.9
4,640	48.1
5,110	50.5
5,620	53.0
6,190	55.6
6,810	58.3
7,500	61.2
8,250	64.2
9,090	67.4
10,000	70.7
11,000	73.2
12,100	77.8
13,300	81.5
14,700	85.7
16,200	90.0
17,800	94.2
19,600	99.0
21,500	104
23,700	109
26,100	114
28,700	120
31,600	126
Type 772-1C	
34,800	132
38,300	138
42,200	145
46,400	152
51,100	160
56,200	168
61,900	176
68,100	185
75,000	194
82,500	206
90,900	216
100,000	224
110,000	234
121,000	246
133,000	258
147,000	271
162,000	285
178,000	298
196,000	313
215,000	328
237,000	344
Type 772-2C	
261,000	361
287,000	379
316,000	397
348,000	417
383,000	437

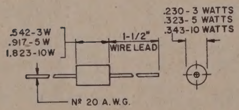
*Insert "H" after 1st three digits of Type No.



SERIES 77 METAL FILM RESISTORS

SERIES 88 MOLDED WIREWOUND RESISTORS — TOL. ±1%

Furnished in power ratings of 3, 5 and 10 watts depending upon resistance. Single layer wound on ceramic core, Series 88 units feature a pressure-molded jacket of tough, resilient, silicone-ceramic material. Negligible inductance at audio frequencies. Temperature coefficient of resistance is 0±20ppm/°C. Values shown are selected from MIL Standard MS90169, MIL-R-10509 and Bell Tel. Labs.



SERIES 88 MOLDED WIREWOUND

Ohms	Max. Volts	Net 1-24
3 Watt*		
1	1.73	**$ .94**
1.21	1.91	**.94**
1.47	2.10	**.94**
1.78	2.31	**.94**
2.15	2.54	**.94**
2.61	2.80	**.94**
3.16	3.16	**.68**
3.83	3.39	**.68**
4.64	3.73	**.68**
5.62	4.10	**.68**
6.81	4.52	**.68**
8.25	4.97	**.68**
10.0	5.48	**.68**
11.0	5.74	**.68**
12.1	6.02	**.68**
13.3	6.32	**.68**
14.7	6.64	**.68**
16.2	6.97	**.68**
17.8	7.30	**.68**
19.6	7.66	**.68**
21.5	8.02	**.68**
23.7	8.43	**.68**
26.1	8.85	**.68**
28.7	9.28	**.68**
31.6	9.74	**.68**
34.8	10.2	**.68**
3 Watt* (Cont.)		
38.3	10.7	**$ .68**
42.2	11.3	**.68**
46.4	11.8	**.68**
51.1	12.4	**.68**
56.2	13.0	**.68**
61.9	13.6	**.68**
68.1	14.3	**.68**
75.0	15.0	**.68**
82.5	15.7	**.68**
90.9	16.5	**.68**
100	17.3	**.68**
110	18.2	**.68**
121	19.1	**.68**
133	20.0	**.68**
147	21.0	**.68**
162	22.1	**.68**
178	23.1	**.68**
196	24.3	**.68**
215	25.4	**.68**
237	26.7	**.68**
261	28.0	**.68**
287	29.3	**.68**
316	31.6	**.68**
348	32.3	**.68**
383	33.9	**.68**
422	35.6	**.68**
3 Watt* (Cont.)		
464	37.3	**$ .68**
511	39.2	**.68**
562	41.0	**.68**
619	43.0	**.68**
681	45.2	**.68**
750	47.4	**.68**
825	49.7	**.68**
909	52.2	**.68**
1,000	54.8	**.68**
1,100	57.4	**.75**
1,210	60.2	**.75**
1,330	63.2	**.75**
1,470	66.4	**.75**
1,620	69.7	**.75**
1,780	73.0	**.75**
1,960	76.6	**.75**
2,150	80.2	**.75**
2,370	84.3	**.75**
2,610	88.5	**.75**
2,870	92.8	**.75**
3,160	97.4	**.75**
3,480	102	**.75**
3,830	107	**.75**
4,220	113	**.75**
4,640	118	**.75**
5,110	124	**.78**
3 Watt* (Cont.)		
5,620	130	**$ .78**
6,190	136	**.78**
6,810	143	**.78**
7,500	150	**.78**
8,250	157	**.78**
9,090	165	**.78**
10,000	173	**.78**
5 Watt*		
11,000	234	**.80**
12,100	246	**.80**
13,300	258	**.80**
14,700	271	**.80**
16,200	285	**.84**
17,800	298	**.84**
19,600	313	**.84**
21,500	328	**.89**
23,700	344	**.89**
10 Watt*		
26,100	510	**.89**
28.700	536	**.89**
31,600	562	**.89**
34,800	590	**.89**
38,300	619	**.89**
42,200	649	**.96**
46,400	680	**.96**
51,100	715	**.96**

*at 25°C ambient

OHMITE® RESISTORS • RHEOSTATS • TAP SWITCHES
RELAYS • TANTALUM CAPACITORS
VARIABLE TRANSFORMERS • RF CHOKES

VITREOUS ENAMELED RHEOSTATS

Eleven sizes in wirewound, vitreous enameled rheostats are stocked by Ohmite distributors all over the country and at the Ohmite factory. This selection, the most extensive available to industry, covers a range from 12½ to 1000 watts, in ratings that meet the major portion of design, production and emergency needs. Ratings of 12½, 25 50, 75, 100, 150, 225, 300, 500, 750 and 1000 watts are standard.

FEATURES OF CONSTRUCTION: Ohmite rheostats are designed to produce permanently smooth, close control. The construction is all ceramic and metal; there is nothing to smoke, char, shrink, or shift. All models have insulated shafts with provision to keep the rheostat from turning on the panel. The resistance wire is wound over a solid ceramic core. Each turn is a separate resistance step and is locked against shifting by vitreous enamel. The core and base are also bonded by vitreous enamel.

The pivoted universal-action-mounted contact brush is of copper-graphite or silver-graphite on the heavier current rheostats. It rides upon a large flat surface and assures perfect contact without wear on the wire. Pressure at the contact and at the center lead are independent. Ohmite Rheostat Models H, J, G, K, L, P, and N, all marked Series A, are listed under the Underwriters' Laboratories Reexamination Service.

RATING: The current carrying capacities shown in the tables are for use in *free air;* when units are enclosed, these currents should be reduced possibly as much as 30% to 50%, depending upon the degree of ventilation. The rated current will cause the rheostat to dissipate its rated wattage when the full resistance is in the circuit.

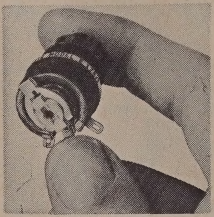
MODEL "E" — 12.5 WATT

Unenclosed and Enclosed

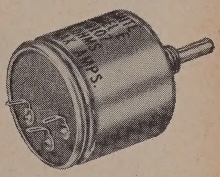
Diameter ⅞″—Depth behind panel 11/16″—Shaft ⅛″ Diameter. Rotation 300°—Mounting for panels up to ⅛″ by means of ¼″-32 Bushing and Hex. Nut—Non-turn lug requires ⅛″ hole ¼″ below center of shaft—Stock No. 5151 Knob Recommended.

Enclosure including terminals 1 7/32″ long by 1 3/64″ diameter.

Total Ohms	Max. Amps.	Unenclosed Stock No.	Unenclosed Net 1-4	Enclosed Stock No.	Enclosed Net 1-4
1	3.53	0101	$4.63	W0101	$6.31
2	2.50	0102	4.63	W0102	6.31
3	2.04	0103	4.63	W0103	6.31
6	1.44	0104	4.63	W0104	6.31
8	1.25	0105	4.63	W0105	6.31
10	1.12	0106	4.63	W0106	6.31
15	.91	0107	4.11	W0107	5.79
25	.71	0108	4.11	W0108	5.79
35	.60	0109	4.11	W0109	5.79
50	.50	0110	4.11	W0110	5.79
75	.41	0111	4.11	W0111	5.79
100	.35	0112	4.11	W0112	5.79
125	.32	0113	4.11	W0113	5.79
175	.27	0114	4.11	W0114	5.79
250	.22	0115	4.11	W0115	5.79
350	.19	0116	4.11	W0116	5.79
500	.16	0117	4.11	W0117	5.79
750	.13	0118	4.11	W0118	5.79
1,000	.11	0119	4.63	W0119	6.31
1,500	.091	0120	4.63	W0120	6.31
2,500	.071	0121	4.63	W0121	6.31
3,500	.060	0122	4.90	W0122	6.58
5,000	.050	0123	4.90	W0123	6.58



Model "E"



Enclosed Model "E"

MODEL "J", Series A — 50 WATT

Diameter 2 5/16″—Depth behind panel 1⅜″—Shaft ¼″ Diameter. Rotation 300°—Mounting for panels up to ¼″ by means of ⅜″-32 Bushing and Hex Nut—Non-turn lug requires 3/16″ hole ½″ below center of shaft—Stock No. 5150 Knob Recommended.

Stock No.	Total Ohms	Max. Amps.	Net 1-4	Stock No.	Total Ohms	Max. Amps.	Net 1-4
0308	0.5	10.000	$5.15	0321	150	.575	$4.63
0309	1	7.070	5.15	0322	225	.470	4.63
0310	2	5.000	5.15	0323	300	.408	4.63
0311	4	3.530	5.15	0324	500	.316	4.63
0312	6	2.880	5.15	0325	800	.250	4.90
0313	8	2.500	4.63	0326	1,000	.224	4.90
0314	12	2.040	4.63	0327	1,600	.176	4.90
0315	16	1.760	4.63	0328	2,500	.141	4.90
0316	22	1.500	4.63	0329	3,500	.119	5.15
0317	35	1.190	4.63	0330	5,000	.100	5.15
0318	50	1.000	4.63	0331	8,000	.079	5.15
0319	80	.790	4.63	0332	10,000	.070	5.15
0320	125	.630	4.63				

MODEL "H", Series A — 25 WATT

Diameter 1 9/16″—Depth behind panel 1⅜″—Shaft ¼″ diameter. Rotation 295°—Mounting for panels up to ¼″ by means of ⅜″-32 Bushing and Hex. Nut—Non-turn lug requires 3/16″ hole ½″ below center of shaft—Stock No. 5150 Knob Recommended.

Stock No.	Total Ohms	Max. Amps.	Net 1-4	Stock No.	Total Ohms	Max. Amps.	Net 1-4
0140	1	5.000	$4.63	0152	125	.445	$4.11
0141	2	3.540	4.63	0153	175	.375	4.11
0142	3	2.880	4.63	0154	250	.316	4.11
0143	6	2.040	4.63	0155	350	.267	4.11
0144	8	1.770	4.63	0156	500	.222	4.11
0145	10	1.580	4.63	0157	750	.182	4.11
0146	15	1.290	4.11	0158	1,000	.155	4.63
0147	25	1.000	4.11	0159	1,500	.129	4.63
0148	35	.845	4.11	0160	2,500	.100	4.63
0149	50	.707	4.11	0161	3,500	.084	4.90
0150	75	.575	4.11	0162	5,000	.070	4.90
0151	100	.500	4.11				

MODEL "G" — 75 WATT

Diameter 2¾″—Depth behind panel 1¾″—Shaft ¼″ Diameter. Rotation 300°—Mounting for panels up to ¼″ by means of ⅜″-32 Bushing and Hex. Nut—Non-turn lug requires 3/16″ hole ½″ below center of shaft—Stock No. 5150 Knob Recommended.

Stock No.	Total Ohms	Max. Amps	Net 1-4	Stock No.	Total Ohms	Max. Amps.	Net 1-4
1100	0.5	12.300	$6.97	1112	200	.612	$6.41
1101	1	8.660	6.97	1113	300	.500	6.41
1102	2	6.120	6.97	1114	400	.433	6.41
1103	3	5.000	6.97	1115	500	.388	6.41
1104	5	3.880	6.97	1116	750	.316	6.97
1105	7.5	3.160	6.97	1117	1,000	.274	6.97
1106	10	2.740	6.97	1118	1,500	.224	6.97
1107	16	2.170	6.41	1119	2,000	.194	6.97
1108	25	1.730	6.41	1120	2,500	.173	6.97
1109	50	1.230	6.41	1121	5,000	.123	7.45
1110	75	1.000	6.41	1122	7,500	.100	8.00
1111	100	.866	6.41	1123	10,000	.087	8.00

Net

OHMITE® RESISTORS • RHEOSTATS • TAP SWITCHES
RELAYS • TANTALUM CAPACITORS
VARIABLE TRANSFORMERS • RF CHOKES

VITREOUS ENAMELED RHEOSTATS

MODEL "K", Series A — 100 WATT

Diameter 3⅛″—Depth behind panel 1¾″—Shaft ¼″ Diameter. Rotation 300°—Mounting for panels up to ¼″ by means of ⅜″-32 Bushing and Hex. Nut—Non-turn lug requires 3/16″ hole ½″ below center of shaft—Stock No. 5150 Knob Recommended.

Stock No.	Total Ohms	Max. Amps.	Net 1-4	Stock No.	Total Ohms	Max. Amps.	Net 1-4
0440	0.5	14.100	$7.72	0452	200	.707	$7.21
0441	1	10.000	7.72	0453	300	.575	7.21
0442	2	7.070	7.72	0454	400	.500	7.21
0443	3	5.750	7.72	0455	500	.447	7.21
0444	5	4.470	7.72	0456	750	.365	7.21
0445	7.5	3.650	7.72	0457	1,000	.316	7.72
0446	10	3.160	7.72	0458	1,500	.258	7.72
0447	16	2.500	7.21	0459	2,000	.224	7.72
0448	25	2.000	7.21	0460	2,500	.200	7.72
0449	50	1.410	7.21	0461	5,000	.141	8.24
0450	75	1.150	7.21	0462	7,500	.115	8.76
0451	100	1.000	7.21	0463	10,000	.100	9.26

MODEL "L", Series A — 150 WATT

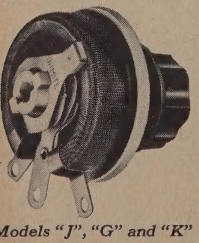
Diameter 4″—Depth behind panel 2″—Shaft ¼″ Diameter. Rotation 300°—Mounting for panels up to ¼″, ⅜″-32 Bushing and Hex. Nut or two 10-32 x ¾″ flat head screws, mounting centers ⅞″ each side of center of shaft on line perpendicular to center terminal.—Stock No. 5150 Knob Recommended.

Stock No.	Total Ohms	Max. Amps.	Net 1-4	Stock No.	Total Ohms	Max. Amps.	Net 1-4
0524	0.5	17.300	$9.78	0537	150	1.000	$ 9.26
0525	1	12.300	9.78	0538	200	.865	9.26
0526	2	8.650	9.78	0539	250	.775	9.26
0527	3	7.070	9.78	0540	350	.655	9.26
0528	5	5.480	9.78	0541	500	.548	9.26
0529	7.5	4.470	9.78	0542	750	.447	9.78
0530	10	3.880	9.78	0543	1,250	.346	9.78
0531	15	3.613	9.78	0544	1,800	.288	10.30
0532	25	2.450	9.26	0545	2,250	.259	10.30
0533	35	2.070	9.26	0546	3,000	.224	10.30
0534	50	1.735	9.26	0547	4,500	.182	10.81
0535	75	1.415	9.26	0548	7,500	.141	11.33
0536	100	1.225	9.26	0549	10,000	.122	12.35

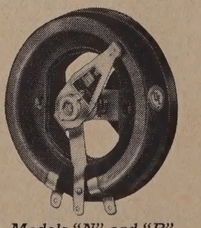
MODEL "P" — 225 WATT

Diameter 5″—Depth behind panel 2⅛″—Shaft ⅜″ Diameter. Rotation 310°—Mounting for panels up to 1¼″, two ¼″-20 x 1½″ flat head screws, mounting centers ⅞″ each side of center of shaft on center line of cross-bar.—Stock No. 5105 Knob Recom'd. Three 8-32 Terminal Screws, Nuts and Washers are supplied.

Stock No.	Total Ohms	Max. Amps.	Net 1-2	Stock No.	Total Ohms	Max. Amps.	Net 1-2
1250	1	15.000	$14.11	1261	100	1.500	$14.11
1251	2	10.600	14.11	1262	150	1.220	14.11
1252	3	8.660	14.11	1263	200	1.060	14.11
1253	4	7.500	14.11	1264	300	.866	14.11
1254	5	6.710	14.11	1265	400	.750	14.11
1255	7.5	5.490	14.11	1266	700	.567	14.11
1256	10	4.740	14.11	1267	900	.500	14.11
1257	15	3.870	14.11	1268	1,200	.433	14.11
1258	25	3.000	14.11	1269	1,500	.387	14.11
1259	50	2.120	14.11	1270	1,750	.358	14.11
1260	75	1.730	14.11	1271	2,500	.300	14.11



Models "J", "G" and "K"



Models "N" and "R"
("P", "T" and "U" Similar)

MODEL "N", Series A — 300 WATT

Diameter 6″—Depth behind panel 2⅜″—Shaft ⅜″ Diameter. Rotation 315°—Mounting for panels up to 1¼″, two ¼″-20 x 1½″ flat head screws, mounting centers 1 3/16″ each side of center of shaft on center line of cross-bar.—Stock No. 5105 Knob Recom'd. Three 8-32 Terminal Screws, Nuts and Washers are supplied.

Stock No.	Total Ohms	Max. Amps.	Net 1-2	Stock No.	Total Ohms	Max. Amps.	Net 1-2
0650	1	17.320	$15.29	0661	100	1.730	$15.29
0651	2	12.240	15.29	0662	150	1.410	15.29
0652	3	10.000	15.29	0663	200	1.220	15.29
0653	4	8.660	15.29	0664	300	1.000	15.29
0654	5	7.750	15.29	0665	400	.866	15.29
0655	7.5	6.320	15.29	0666	700	.655	15.29
0656	10	5.480	15.29	0667	900	.578	15.29
0657	15	4.470	15.29	0668	1,200	.500	15.29
0658	25	3.460	15.29	0669	1,500	.447	15.29
0659	50	2.450	15.29	0670	1,750	.414	15.29
0660	75	2.000	15.29	0671	2,500	.346	15.29

MODEL "R" — 500 WATT

Diameter 8″—Depth behind panel 2⅛″—Shaft ⅜″ Diameter. Rotation 325°—Mounting for panels up to 1¼″, two ¼″-20 x 1½″ flat head screws, mounting centers 1½″ each side of center of shaft on center line of cross-bar.—Stock No. 5105 Knob Recom'd. Three 8-32 Terminal Screws, Nuts and Washers are supplied.

Stock No.	Total Ohms	Max. Amps.	Net 1-2	Stock No.	Total Ohms	Max. Amps.	Net 1-2
0849	1.0	22.300	$22.09	0872	50	3.160	$22.09
0850	1.5	18.200	22.09	0861	80	2.520	22.09
0851	2	15.800	22.09	0862	125	2.000	22.09
0852	2.5	14.100	22.09	0863	175	1.690	22.09
0853	3	12.900	22.09	0864	250	1.410	22.09
0854	4	11.200	22.09	0865	325	1.240	22.09
0855	5	10.000	22.09	0866	500	1.000	22.09
0856	8	7.900	22.09	0867	750	.817	22.09
0857	12.5	6.300	22.09	0868	1,000	.707	22.09
0858	16	5.600	22.09	0869	1,500	.577	22.09
0859	25	4.470	22.09	0870	2,000	.500	22.09
0860	40	3.540	22.09	0871	2,500	.447	22.09

MODEL "T" — 750 WATT

Diameter 10″—Depth behind panel 3″—Shaft ⅜″ Diameter. Rotation 330°—Mounting for panels up to 1¼″, two ¼″-20 x 1½″ flat head screws, mounting centers 1⅞″ each side of center of shaft on center line of cross-bar.—Stock No. 5105 Knob Recom'd. Three 8-32 Terminal Screws, Nuts and Washers are supplied.

Stock No.	Total Ohms	Max. Amps.	Net 1-2	Stock No.	Total Ohms	Max. Amps.	Net 1-2
1300	1	27.400	$31.20	1312	50	3.870	$31.20
1301	1.5	22.300	31.20	1313	80	3.060	31.20
1302	2	19.400	31.20	1314	100	2.740	31.20
1303	2.5	17.300	31.20	1315	160	2.170	31.20
1304	3	15.800	31.20	1316	200	1.940	31.20
1305	4	13.600	31.20	1317	300	1.580	31.20
1306	5	12.200	31.20	1318	400	1.370	31.20
1307	8	9.650	31.20	1319	600	1.117	31.20
1308	10	8.650	31.20	1320	750	1.000	31.20
1309	12.5	7.750	31.20	1321	1,200	.791	31.20
1310	16	6.820	31.20	1322	1,800	.646	31.20
1311	25	5.470	31.20	1323	2,500	.547	31.20

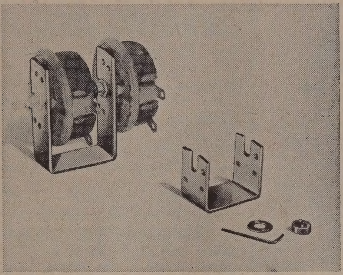
MODEL "U" — 1000 WATT

Diameter 12″ — Depth behind panel 3″ — Shaft ⅜″ Diameter. Rotation 335°—Mounting for panels up to 1¼″, two ¼″-20 x 1½″ flat head screws, mounting centers 3″ each side of center of shaft on center line of cross-bar.—Stock No. 5105 Knob Recom'd. Three 8-32 Terminal Screws, Nuts and Washers are supplied.

Stock No.	Total Ohms	Max. Amps.	Net 1-2	Stock No.	Total Ohms	Max. Amps.	Net 1-2
1450	1	31.600	$36.45	1462	50	4.470	$36.45
1451	1.5	25.800	36.45	1463	75	3.650	36.45
1452	2	22.400	36.45	1464	100	3.160	36.45
1453	2.5	20.000	36.45	1465	175	2.390	36.45
1454	3	18.300	36.45	1466	225	2.110	36.45
1455	4	15.800	36.45	1467	300	1.830	36.45
1456	5	14.100	36.45	1468	400	1.580	36.45
1457	8	11.200	36.45	1469	500	1.410	36.45
1458	10	10.000	36.45	1470	750	1.150	36.45
1459	12.5	8.950	36.45	1471	1,000	1.000	36.45
1460	16	7.900	36.45	1472	1,500	.816	36.45
1461	25	6.330	36.45	1473	2,500	.633	36.45

OHMITE® RESISTORS • RHEOSTATS • TAP SWITCHES
RELAYS • TANTALUM CAPACITORS
VARIABLE TRANSFORMERS • RF CHOKES

RHEOSTAT TANDEM COUPLING KITS



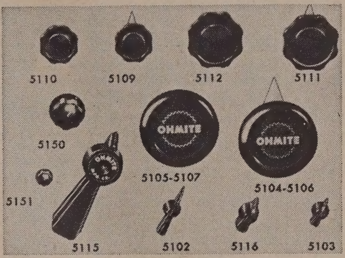
Inexpensive kits assemble standard Ohmite Model G, H, J, K, L or E (miniature) rheostats. Each kit consists of a steel "U" frame, a coupling with set screw, mica washer, Allen wrench and assembly instructions. Rheostat shafts are joined by the coupling which is fastened to the shaft of the rear unit. Projections on the coupling fit a recess in the rear hub of the front unit. Stock No. 6533 kit, mounts Model G, K or L units but accommodates Models H or J in the rear position. Stock No. 6532 unit mounts Models H or J but accommodates Models G, K or L in the rear position. Stock No. 6591 kit assembles only Model E (miniature) rheostats.

Stock No. 6532 — Max Panel 1/8″.........**Net Each (1-4) $2.01**
Stock No. 6533 — Max Panel 5/32″........**Net Each (1-4) 2.51**
Stock No. 6591 — Max Panel 1/16″........**Net Each (1-4) 2.01**

BLACK BAKELITE KNOBS

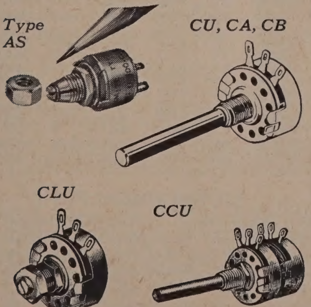
Stock No.	Description	Knob Dia.	Hole Dia.	Net Ea. 1-2
5102	Bar Knob, 2¼″ long		¼″	**$ .50**
5103	Bar Knob, 1¼″ long		¼″	**.21**
5104	Handwheel with Pointer	3¼″	⅜″	**1.38**
5105	Handwheel without Pointer	3¼″	⅜″	**1.16**
5106	Handwheel with Pointer	3¼″	¼″	**1.38**
5107	Handwheel without Pointer	3¼″	¼″	**1.16**
5109	Finger-Grip with Pointer	1⅝″	¼″	**.89**
5110	Finger-Grip without Pointer	1⅝″	¼″	**.82**
5111	Finger-Grip with Pointer	2⅜″	¼″	**1.32**
5112	Finger-Grip without Pointer	2⅜″	¼″	**1.21**
***5115**	Bar Knob, 4¾″ long		⅜″	**3.00**
5116	Bar Knob, 1½″ long		¼″	**.50**
5150	Skirted Finger-Grip	1½″	¼″	**.29**
5151	Finger-Grip	¾″	⅛″	**.29**
5152A	Like 5104 but shorter pointer	3¼″	¼″	**1.60**

*Requires pin and tapped hole in shaft.



MOLDED COMPOSITION POTENTIOMETERS, ½ and 2 WATTS

Exceptional reliability along with small size for rated wattage, is provided in Ohmite's molded composition potentiometers. Type AB units, 1$\frac{5}{32}$″ in diameter and rated two watts at 70°C ambient, are available in a number of styles and find universal application as rheostats or potentiometers in industrial, military or other high quality electronic devices. Type AS is a new Miniature Potentiometer for miniature or lightweight assemblies. Although only ½″ in diameter, it is rated for continuous duty at ½ watt at 70°C ambient. Because of their molded composition elements, these units outlast and outperform film type units. Noise level is exceedingly low and units will pass ARMY-NAVY salt spray test, Specification QQ-M-151. Single control Type AB units extend ⅝″ behind panel; dual control 1$\frac{17}{64}$″. Type AS Miniature unit extends $\frac{11}{16}$″ behind panel. A SPST switch for Type AB units is available.

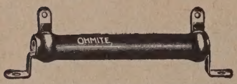


Resistance Ohms Tol. ±10% except *±20%	TYPE AB— 2 WATT					TYPE AS ½ Watt Min. Locking
	Single Unit, 2″ Shaft			Locking	Dual	
	Style CU Linear	Style CA CW Log.	Style CB CCW Log.	Style CLU Linear	Style CCU Linear	Linear
50	CU 5001			CLU 5001		
100	CU 1011			CLU 1011		3601
150	CU 1511			CLU 1511		
250	CU 2511			CLU 2511		3602
350	CU 3511			CLU 3511	Resistance Shown is for Each Unit	
500	CU 5011			CLU 5011		3603
750	CU 7511			CLU 7511		
1,000	CU 1021			CLU 1021		3604
1,500	CU 1521			CLU 1521		
2,500	CU 2521			CLU 2521		3605
3,500	CU 3521			CLU 3521		
5,000	CU 5021			CLU 5021		3606
7,500	CU 7521			CLU 7521		
10,000	CU 1031		CB 1031	CLU 1031	CCU 1031	3607
15,000	CU 1531			CLU 1531		
25,000	CU 2531		CB 2531	CLU 2531	CCU 2531	3608
35,000	CU 3531			CLU 3531		
50,000	CU 5031		CB 5031	CLU 5031	CCU 5031	3609
75,000	CU 7531			CLU 7531		
100,000	CU 1041	CA 1041		CLU 1041	CCU 1041	3610
150,000	CU 1541			CLU 1541		
250,000	CU 2541	CA 2541		CLU 2541	CCU 2541	3611
350,000	CU 3541			CLU 3541		
500,000	CU 5041	CA 5041		CLU 5041	CCU 5041	3612
.75 meg.*	CU 7542			CLU 7542		
1.0 meg.*	CU 1052	CA 1052		CLU 1052	CCU 1052	3613
1.5 meg.*	CU 1552			CLU 1552		
2.5 meg.*	CU 2552	CA 2552		CLU 2552		3614
3.5 meg.*	CU 3552			CLU 3552		
5.0 meg.*	CU 5052			CLU 5052		3615

CU..................................	**Net Price $1.95**
CA and CB..........................	**Net Price 2.25**
CLU................................	**Net Price 2.55**
CCU................................	**Net Price 5.85**
CS-1 Switch (unmounted) for CU, CA, CB, CLU........	**Net Price .66**
Type AS Miniature Potentiometer..................	**Net Price 5.10**

**OHMITE® RESISTORS • RHEOSTATS • TAP SWITCHES
RELAYS • TANTALUM CAPACITORS
VARIABLE TRANSFORMERS • RF CHOKES**

OHMITE VITREOUS ENAMELED FIXED AND DIVIDOHM® RESISTORS



25 WATT FIXED RESISTOR

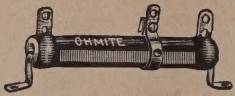
Core: 2″ x 9/16″ — Mounting Centers 2¾″

		Fixed Resist.		Adj. Resist.	
Res. Ohms	Max. Amps.	Stock No.	Net 1-9	Stock No.	Net 1-9
1	5.00	0200J	$0.72	0360	$1.29
2	3.54	0200K	.72	0360B	1.29
3	2.88	0200L	.72	0361	1.29
5	2.24	0200A	.72	0362	1.29
7.5	1.82			0362B	1.29
10	1.58	0200B	.72	0363	1.29
15	1.29	0200R	.72	0364	1.29
20	1.12			0364B	1.29
25	1.00	0200C	.72	0365	1.29
50	.71	0200D	.72	0366	1.29
75	.58	0200E	.72	0367	1.29
100	.50	0200F	.72	0368	1.29
150	.41	0200G	.72	0369	1.29
200	.35	0200H	.72	0370	1.29
250	.32	0201	.72	0371	1.29
300	.29			0371B	1.29
400	.25			0371C	1.29
500	.22	0202	.72	0372	1.29
750	.18	0203	.72	0373	1.29
800	.17	0204	.72	0374	1.29
1,000	.16	0205	.72	0375	1.29
1,250	.14			0375B	1.32
1,500	.13	0206	.75	0376	1.32
2,000	.12	0207	.75	0377	1.32
2,250	.11			0377B	1.32
2,500	.10	0208	.75	0378	1.32
3,000	.091	0209	.75	0379	1.32
3,500	.084	0210	.75	0380	1.32
4,000	.079	0211	.75	0381	1.32
4,500	.074			0381B	1.32
5,000	.070	0212	.75	0382	1.32
6,000	.064	0213	.85	0383	1.42
7,000	.060			0383B	1.42
7,500	.057	0214	.85	0384	1.42
8,000	.055			0384B	1.42
9,000	.052			0384C	1.42
10,000	.050	0215	.85	0385	1.42
12,000	.042	0216	.90	0386	1.47
15,000	.036	0217	.90	0387	1.47
20,000	.031	0218	.90	0388	1.47
25,000	.028	0219	1.04	0389	1.61
40,000	.022	0222	1.04		
50,000	.020	0224	1.21		
100,000	.010	0229	1.64		

100 WATT FIXED RESISTOR

Core: 6½″ x ¾″ — Mounting Centers 7⅜″

		Fixed Resist.		Adj. Resist.	
Res. Ohms	Max. Amps.	Stock No.	Net 1-9	Stock No.	Net 1-9
5	4.47	0600A	$1.54	0956	$2.11
10	3.16	0600B	1.54	0957	2.11
25	2.00	0601	1.54	0958	2.11
50	1.41	0602	1.54	0959	2.11
75	1.15	0603	1.54		
100	1.00	0604	1.54	0960	2.11
150	.816	0605	1.54		
250	.63	0606	1.54	0960B	2.11
500	.45	0607	1.54	0961	2.11
750	.365	0608	1.54		
1,000	.32	0609	1.54	0962	2.11
1,500	.26	0610	1.60	0962B	2.17
2,000	.223	0611	1.60		
2,500	.20	0612	1.60	0963	2.17
3,000	.18	0613	1.60		
5,000	.14	0614	1.60	0964	2.17
7,500	.115	0615	1.73		
10,000	.10	0616	1.73	0965	2.30
15,000	.081	0617	1.87	0966	2.44
20,000	.071	0618	1.87	0967	2.44
25,000	.063	0619	2.13	0968	2.70
30,000	.058	0620	2.13	0969	2.70
40,000	.050	0621	2.13	0970	2.70
50,000	.045	0622	2.21	0971	2.78
60,000	.041	0623	2.21		
75,000	.032	0624	2.45	0972	3.02
100,000	.028	0625	2.75	0973	3.32



50 WATT FIXED RESISTOR

Core: 4″ x 9/16″ — Mounting Centers 4¾″

		Fixed Resist.		Adj. Resist.	
Res. Ohms	Max. Amps.	Stock No.	Net 1-9	Stock No.	Net 1-9
5	3.16	0400A	$1.11	0560	$1.68
10	2.23	0400B	1.11	0561	1.68
25	1.41	0400C	1.11	0562	1.68
50	1.00	0400D	1.11	0563	1.68
75	.82	0400E	1.11	0564	1.68
100	.71	0400F	1.11	0565	1.68
150	.58	0400G	1.11	0566	1.68
200	.50	0400H	1.11	0567	1.68
250	.45	0401	1.11	0568	1.68
300	.41			0568B	1.68
400	.35			0568C	1.68
500	.32	0402	1.11	0569	1.68
750	.26	0403	1.11	0570	1.68
1,000	.22	0405	1.11	0572	1.68
1,250	.20			0572B	1.71
1,500	.18	0406	1.14	0573	1.71
2,000	.16	0407	1.14	0574	1.71
2,500	.14	0408	1.14	0575	1.71
3,000	.13	0409	1.14	0576	1.71
3,500	.12			0576B	1.71
4,000	.11	0410	1.14	0577	1.71
4,500	.10			0577B	1.71
5,000	.10	0411	1.14	0578	1.71
6,000	.091			0578B	1.80
7,000	.084			0578C	1.80
7,500	.081	0412	1.23	0579	1.80
8,000	.079	0413	1.23	0580	1.80
9,000	.074			0580B	1.80
10,000	.071	0414	1.23	0581	1.80
12,000	.064	0415	1.35	0582	1.92
15,000	.057	0416	1.35	0583	1.92
20,000	.050	0417	1.35	0584	1.92
25,000	.045	0418	1.54	0585	2.11
30,000	.036			0586	2.11
35,000	.032	0419	1.54		
40,000	.029			0587	2.11
50,000	.026	0420	1.72	0588	2.29
60,000	.024			0589	2.29
75,000	.021	0421	1.97		
80,000	.021			0590	2.54
100,000	.018	0422	2.13	0591	2.70

160 WATT FIXED RESISTOR

Core: 8½″ x 1⅛″ — Mounting Centers 9⅜″

		Fixed Resist.		Adj. Resist.	
Res. Ohms	Max. Amps.	Stock No.	Net 1-9	Stock No.	Net 1-9
5	5.66	0700A	$3.19	1156	$4.07
10	4.00	0700B	2.28	1157	3.16
25	2.53	0701	2.28	1158	3.16
50	1.79	0702	2.28	1159	3.16
75	1.46	0703	2.28		
100	1.26	0704	2.28	1160	3.16
150	1.03	0705	2.28		
250	.80	0706	2.28	1160B	3.16
500	.57	0707	2.28	1161	3.16
750	.46	0708	2.28		
1,000	.40	0709	2.28	1162	3.16
1,500	.33	0710	2.32	1162B	3.20
2,000	.28	0711	2.32		
2,500	.25	0712	2.32	1163	3.20
3,000	.23	0713	2.32		
5,000	.18	0714	2.32	1164	3.20
7,500	.15	0715	2.53		
10,000	.13	0716	2.53	1165	3.41
15,000	.10	0717	2.71	1166	3.59
20,000	.089	0718	2.71	1167	3.59
25,000	.080	0719	2.80	1168	3.68
30,000	.073	0720	2.80	1169	3.68
40,000	.063	0721	2.80	1170	3.68
50,000	.057	0722	2.89	1171	3.77
60,000	.051	0723	2.89		
75,000	.046	0724	3.08	1172	3.96
100,000	.040	0725	3.26	1173	4.14

These all-welded construction resistors have welded high-strength alloy terminals. For perfect electrical connection, the resistance wire is welded to the terminal. Units are wire-wound on ceramic cores and protected by Ohmite Vitreous Enamel. Furnished with mounting brackets and on DIVIDOHM with one adjustable lug.

75 WATT SIZE — Dividohm

Core: 6″ x 9/16″ — Mounting Centers 6¾″

Adjustable Res.			Adjustable Res.		
Res. Ohms	Max. Amps.	Stock No.	Res. Ohms	Max. Amps.	Stock No.
5	3.87	0769	5,000	.12	0783
10	2.74	0770	6,000	.11	0783B
15	2.24	0771	7,000	.10	0783C
25	1.73	0772	7,500	.10	0784
50	1.22	0773	8,000	.096	0784B
100	.86	0774	9,000	.091	0784C
200	.61	0774B	10,000	.086	0785
250	.55	0775	12,000	.079	0785B
300	.50	0775B	15,000	.070	0786
400	.43	0775C	20,000	.061	0787
500	.39	0776	25,000	.054	0788
750	.32	0777	30,000	.050	0789
1,000	.27	0778	35,000	.046	0790
1,250	.24	0778B	40,000	.043	0791
1,500	.22	0779	45,000	.035	0792
2,000	.19	0780	50,000	.033	0793
2,500	.17	0781	60,000	.030	0794
3,000	.16	0781B	80,000	.026	0795
3,500	.15	0782	100,000	.023	0796
4,000	.14	0782B			

Net (1-9), 5 thru 1,000 ohms	**$1.87**
Net (1-9), 1,250 thru 5,000 ohms	**1.92**
Net (1-9), 6,000 thru 10,000 ohms	**2.01**
Net (1-9), 12,000 thru 20,000 ohms	**2.13**
Net (1-9), 25,000 thru 40,000 ohms	**2.32**
Net (1-9), 45,000 thru 60,000 ohms	**2.52**
Net (1-9), 80,000 ohms	**2.78**
Net (1-9), 100,000 ohms	**2.93**

200 WATT FIXED RESISTOR

Core: 10½″ x 1⅛″—Mounting Centers 11⅜″

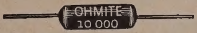
		Fixed Resist.		Adj. Resist.	
Res. Ohms	Max. Amps.	Stock No.	Net 1-9	Stock No.	Net 1-9
5	6.32	0900A	$3.44	1356	$4.32
10	4.47	0900B	2.46	1357	3.34
25	2.83	0901	2.46	1358	3.34
50	2.00	0902	2.46	1359	3.34
75	1.64	0903	2.46		
100	1.41	0904	2.46	1360	3.34
150	1.15	0905	2.46		
250	.89	0906	2.46	1360B	3.34
500	.63	0907	2.46	1361	3.34
750	.52	0908	2.46		
1,000	.45	0909	2.46	1362	3.34
1,500	.37	0910	2.53	1362B	3.41
2,000	.32	0911	2.53		
2,500	.28	0912	2.53	1363	3.41
3,000	.258	0913	2.53		
5,000	.20	0914	2.53	1364	3.41
7,500	.16	0915	2.71		
10,000	.14	0916	2.71	1365	3.59
15,000	.12	0917	2.89	1366	3.77
20,000	.10	0918	2.89	1367	3.77
25,000	.089	0919	2.98	1368	3.86
30,000	.082	0920	2.98	1369	3.86
40,000	.071	0921	2.98	1370	3.86
50,000	.063	0922	3.08	1371	3.96
60,000	.058	0923	3.08		
75,000	.052	0924	3.26	1372	4.14
100,000	.045	0925	3.46	1373	4.34

ADJUSTABLE LUGS

Bakelite Knob			Screw Driver Type		
Res. Dia.	Stock No.	Net 1-9	Res. Dia.	Stock No.	Net 1-9
9/16″	0359	$0.31	5/16″	1058	$0.14
¾″	1959	.31	9/16″	0358	.14
1⅛″	2159	.40	¾″	1958	.14
			1⅛″	2158	.23

OHMITE® RESISTORS • RHEOSTATS • TAP SWITCHES RELAYS • TANTALUM CAPACITORS VARIABLE TRANSFORMERS • RF CHOKES

OHMITE® STOCK AXIAL-LEAD RESISTORS



Ohmite axial-lead, vitreous-enameled resistors are compact, wire-wound units available in *three stock sizes:* 3-Watt ($\frac{9}{16}$" x ¼"), 5-Watt (1$\frac{1}{16}$" x $\frac{11}{32}$"), and 10-watt (1$\frac{15}{16}$" x $\frac{13}{32}$") . . . The resistance wire and terminal lead are both welded to the end cap, utilizing the patented Ohmite welding technique. All have 1½" tinned wire leads, are simple to mount, and occupy small space.

Axial-lead resistors are especially suited for printed circuits, terminal board, and point-to-point wiring applications.

The standard resistance tolerance is ±5%, 50 ohms and higher; tolerance below 50 ohms is ±10%.

Ohms	Ohms	Ohms	Ohms
1.0	125	1,200	9,000
1.5	150	1,250	10,000
2.0	200	1,500	†11,000
3.0	225	1,750	†12,000
4.0	250	2,000	*12,500
5.0	300	2,250	†13,500
7.5	350	2,500	*15,000
10	400	3,000	†16,000
12	450	3,500	*17,500
15	500	4,000	*18,000
20	600	4,500	*20,000
25	700	5,000	*22,500
30	750	6,000	*25,000
35	800	7,000	†30,000
40	900	7,500	†35,000
50	1,000	8,000	†40,000
75	1,100	†8,500	†45,000
100			†50,000

*5 and 10-watt size only.
†10-watt size only.

3-WATT SIZE

Net (1-9), 1 thru 1,000 ohms **$0.59**
Net (1-9), 1,100 thru 5,000 ohms . . . . **.62**
Net (1-9), 6,000 thru 10,000 ohms . . . . **.66**

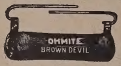
5-WATT SIZE

Net (1-9), 1 thru 1,000 ohms **$0.62**
Net (1-9), 1,100 thru 5,000 ohms . . . . **.66**
Net (1-9), 6,000 thru 10,000 ohms . . . . **.70**
Net (1-9), 12,500 thru 20,000 ohms . . . . . . **.78**
Net (1-9), 22,500 and 25,000 ohms . . . . . . **.82**

10-WATT SIZE

Net (1-9), 1 thru 2 ohms **$0.95**
Net (1-9), 3 thru 1,000 ohms . . . . **.68**
Net (1-9), 1,100 thru 5,000 ohms . . . . **.73**
Net (1-9), 6,000 thru 10,000 ohms . . . . **.84**
Net (1-9), 11,000 thru 20,000 ohms . . . . . . **.95**
Net (1-9), 22,500 thru 40,000 ohms **1.00**
Net (1-9), 45,000 and 50,000 ohms **1.12**

Popular OHMITE "BROWN DEVIL"® RESISTORS



5 Watt—1" x 5/16" Core Size

Ohms	Amps	Ohms	Amps	Ohms	Amps
1	2.23	200	.160	2,250	.047
1.5	1.82	225	.150	2,500	.045
2	1.58	250	.140	3,000	.041
3	1.29	300	.130	3,500	.037
4	1.12	350	.120	4,000	.035
5	1.00	400	.110	4,500	.033
7.5	.810	450	.100	5,000	.032
10	.710	500	.100	6,000	.029
12	.640	600	.091	7,000	.027
15	.580	700	.084	7,500	.026
20	.500	750	.082	8,000	.025
25	.450	800	.079	9,000	.024
30	.410	900	.074	10,000	.022
35	.380	1,000	.070	12,500	.020
40	.350	1,100	.067	15,000	.018
50	.320	1,200	.064	17,500	.017
75	.260	1,250	.063	20,000	.016
100	.220	1,500	.057	22,500	.014
125	.200	1,750	.053	25,000	.013
150	.180	2,000	.050		

Net (1-9), 1 thru 1,000 ohms **$0.52**
Net (1-9), 1,100 thru 5,000 ohms . . . . **.55**
Net (1-9), 6,000 thru 10,000 ohms . . . . **.58**
Net (1-9), 12,500 thru 20,000 ohms . . . . . . **.65**
Net (1-9), 22,500 and 25,000 ohms . . . . . . **.68**

10 Watt—1¾" x 5/16" Core Size

Ohms	Amps	Ohms	Amps	Ohms	Amps
0.5	4.47	300	.18	5,000	.045
1	3.16	350	.17	6,000	.041
2	2.24	400	.16	7,000	.038
3	1.83	450	.15	7,500	.036
4	1.58	500	.14	8,000	.035
5	1.41	600	.13	8,500	.034
7.5	1.16	700	.12	10,000	.032
10	1.00	750	.12	11,000	.030
12	.91	800	.11	12,000	.029
15	.82	900	.11	12,500	.028
20	.71	1,000	.10	13,500	.027
25	.63	1,100	.095	15,000	.026
30	.58	1,200	.091	16,000	.025
35	.53	1,250	.089	17,500	.024
40	.50	1,500	.081	18,000	.023
50	.45	1,750	.075	20,000	.022
75	.37	2,000	.071	22,500	.021
100	.32	2,250	.066	25,000	.020
125	.28	2,500	.063	30,000	.018
150	.26	3,000	.057	35,000	.017
200	.22	3,500	.053	40,000	.016
225	.21	4,000	.050	45,000	.015
250	.20	4,500	.047	50,000	.014

Net (1-9), 0.5 thru 1,000 ohms **$0.57**
Net (1-9), 1,100 thru 5,000 ohms . . . . **.61**
Net (1-9), 6,000 thru 10,000 ohms . . . . **.70**
Net (1-9), 11,000 thru 20,000 ohms . . . . . . **.79**
Net (1-9), 22,500 thru 40,000 ohms . . . . . . **.83**
Net (1-9), 45,000 and 50,000 ohms . . . . . . **.93**

WITH WELDED TERMINALS

High quality, small size, wire-wound resistors ideal for voltage dropping, bias units, bleeders, etc. They're extra-sturdy, all-ceramic, vitreous enameled. These all-welded construction units have welded high-strength alloy terminals. For perfect electrical connection, the resistance wire is welded to the terminal. They give time-proved protection against shock, vibration, heat and humidity. Their long record of continuous trouble-free service—their wide use in all climates of the world—prove their complete reliability and economy. All units can be conveniently mounted by means of their 1½" tinned wire leads. Standard resistance tolerance is ±5%.

20 Watt—2" x 7/16" Core Size

Ohms	Amps	Ohms	Amps	Ohms	Amps
0.5	6.32	800	.15	10,000	.043
1.0	4.47	850	.15	12,500	.035
2.0	3.16	1,000	.14	15,000	.032
3.0	2.58	1,200	.13	20,000	.027
4.0	2.24	1,250	.12	25,000	.024
5	2.00	1,500	.12	30,000	.022
10	1.41	1,750	.11	35,000	.021
25	.89	2,000	.10	40,000	.019
50	.63	2,250	.094	45,000	.018
75	.52	2,500	.089	50,000	.017
100	.45	2,750	.085	55,000	.016
150	.36	3,000	.081	60,000	.016
200	.32	3,500	.075	65,000	.015
250	.28	4,000	.070	70,000	.014
300	.26	4,500	.066	75,000	.013
350	.24	5,000	.063	80,000	.012
400	.22	6,000	.057	85,000	.012
500	.20	7,000	.053	90,000	.011
650	.18	7,500	.051	95,000	.010
700	.17	8,000	.050	100,000	.010
750	.16	9,000	.047		

Net (1-9), 0.5 ohms **$0.95**
Net (1-9), 1.0 thru 1,000 ohms . . . . **.68**
Net (1-9), 1,200 thru 5,000 ohms . . . . **.70**
Net (1-9), 6,000 thru 10,000 ohms . . . . **.83**
Net (1-9), 12,500 thru 20,000 ohms . . . . . . **.85**
Net (1-9), 25,000 thru 40,000 ohms . . . . . . **.99**
Net (1-9), 45,000 thru 60,000 ohms **1.15**
Net (1-9), 65,000 thru 80,000 ohms **1.37**
Net (1-9), 85,000 thru 100,000 ohms **1.57**

10 WATT DIVIDOHM® ADJUSTABLE RESISTORS

Core: 1¾" x $\frac{5}{16}$" — Mounting Centers 2¼"

Adjustable Res.			Adjustable Res.		
Res. Ohms	Max. Amps	Stock No.	Res. Ohms	Max. Amps	Stock No.
1	3.16	1001	75	.37	1011
2	2.24	1002	100	.32	1012
3	1.83	1003	150	.26	1013
5	1.41	1004	200	.22	1014
7.5	1.16	1005	250	.20	1015
10	1.00	1006	300	.18	1016
15	.82	1007	350	.17	1017
20	.71	1008	400	.16	1018
25	.63	1009	500	.14	1019
50	.45	1010	600	.13	1020

Adjustable Res.			Adjustable Res.		
Res. Ohms	Max. Amps	Stock No.	Res. Ohms	Max. Amps	Stock No.
750	.12	1021	4,000	.050	1031
800	.11	1022	4,500	.047	1032
1,000	.10	1023	5,000	.045	1033
1,250	.089	1024	6,000	.041	1034
1,500	.081	1025	7,000	.038	1035
2,000	.071	1026	7,500	.036	1036
2,250	.066	1027	8,000	.035	1037
2,500	.063	1028	8,500	.034	1038
3,000	.057	1029	9,000	.033	1039
3,500	.053	1030	10,000	.032	1040

Net (1-9), 1 thru 1,000 ohms **$1.14**
Net (1-9), 1,250 thru 5,000 ohms **1.18**
Net (1-9), 6,000 thru 10,000 ohms **1.27**

OHMITE® RESISTORS • RHEOSTATS • TAP SWITCHES RELAYS • TANTALUM CAPACITORS VARIABLE TRANSFORMERS • RF CHOKES

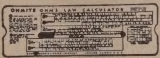
LITTLE DEVIL® RESISTOR ASSORTMENTS FOR SERVICE USE

Serviceman's assortments of 150 Ohmite "Little Devil," ¼-watt or ½-watt, or 125, 1-watt or 2-watt insulated composition resistors, in the 40 values (10 ohms to 10 megohms) most frequently used by servicemen. CAB-4 has 37 resistance values. The assortment is offered at the price of the resistors alone—the cabinet is furnished without extra cost! Cabinet is only 9" long, 4¾" high, and 5¼" deep.

Assortment	Stock No.	Quantity of Resistors	Wattages	Net Price
SERVICE ±10% tolerance (40 resistance values)	**CAB-4**	150	¼ watt	$19.50
	CAB-10	150	½ watt	18.00
	CAB-2	125	1 watt	22.50
	CAB-3	125	2 watt	30.00

NEW OHM'S LAW CALCULATOR

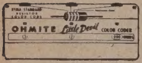
Redesigned! This new, improved version of the famous Ohmite Ohm's Law Calculator — popular the world over with servicemen, engineers and students — now has scales for solving parallel resistance problems, AND a standard slide rule. More useful than ever! With one setting of the slide the calculator gives the answer to any Ohm's Law problem—reading directly in ohms, volts, amperes, and watts. Three of the new scales on the back provide a quick, one-setting means of solving parallel resistance problems. The slide rule scales will multiply, divide, find squares, and square roots.



Ohm's Law Calculator (Cardboard) .... **Net Price $0.25**

Ohm's Law Calculator (Plastic) .... **Net Price 1.50**

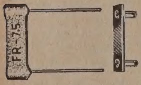
LITTLE DEVIL COLOR CODER



Here is a handy little device that makes it easy to determine the resistance and tolerance values of EIA color coded composition resistors. Just turn the color wheels until the color corresponds to the color band on the resistor and read the resistance value directly in ohms in the windows.

Little Devil Color Coder.................Net Price $ .10

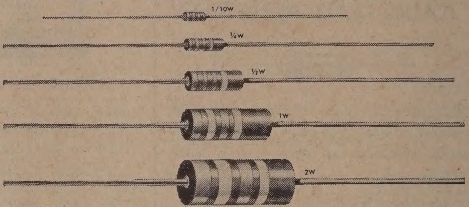
OHMITE FUSE RESISTOR



FR-7.5
Net Price $0.45 Each

Designed for replacement in all television receivers, the FR-7.5 Fuse Resistor is provided with 1½" tinned lead wires for easy installation directly in the TV circuit. May also be soldered to the plug-in terminal strip which is provided. 7.5 ohms.

OHMITE "LITTLE DEVIL" RESISTORS



All sizes have molded insulation except the 1⁄10 watt size which is coated with insulating material. Other noted advantages are great stability, low noise level, low voltage coefficient, high insulation breakdown voltage and rapid heat dissipation. "Little Devils" may be used at full rated wattage at 70°C (158°F) ambient temperature.

In the ¼, ½, 1 and 2 watt sizes, "Little Devils" meet stringent government requirements (MIL-R-11B) for "best quality" characteristics. They are available from stock in the standard EIA resistance values *in the tolerances and resistance ranges shown in the price table below.* Ratings for maximum continuous RMS voltage drop are high: 150 volts for 1⁄10 watt units, 250 volts for ¼ watt, 350 volts for ½ watt, 500 volts for 1 watt, and 750 volts for 2 watt units.

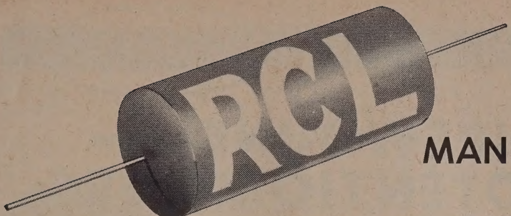
STANDARD EIA VALUES: Figures in large, bold type are ±10% EIA values. *All* values listed are ±5% values. Price table lists the various sizes and indicates the tolerances and resistance ranges in which they are supplied.

Ohms	Ohms	Ohms	Ohms	Ohms	Megs.	Megs.	Megs.
2.7	**39**	300	**2,200**	16,000	**0.1**	0.75	**5.6**
3.3	43	**330**	2,400	**18,000**	0.11	**0.82**	6.2
3.9	**47**	360	**2,700**	20,000	**0.12**	0.91	**6.8**
4.7	51	**390**	3,000	**22,000**	0.13	**1.0**	7.5
5.6	**56**	430	**3,300**	24,000	**0.15**	1.1	**8.2**
6.8	62	**470**	3,600	**27,000**	0.16	**1.2**	9.1
8.2	**68**	510	**3,900**	30,000	**0.18**	1.3	**10.0**
10	75	**560**	4,300	**33,000**	0.20	**1.5**	11.0
11	**82**	620	**4,700**	36,000	**0.22**	1.6	**12.0**
12	91	**680**	5,100	**39,000**	0.24	**1.8**	13.0
13	**100**	750	**5,600**	43,000	**0.27**	2.0	**15.0**
15	110	**820**	6,200	**47,000**	0.30	**2.2**	16.0
16	**120**	910	**6,800**	51,000	**0.33**	2.4	**18.0**
18	130	**1,000**	7,500	**56,000**	0.36	**2.7**	20.0
20	**150**	1,100	**8,200**	62,000	**0.39**	3.0	**22.0**
22	160	**1,200**	9,100	**68,000**	0.43	**3.3**	..
24	**180**	1,300	**10,000**	75,000	**0.47**	3.6	..
27	200	**1,500**	11,000	**82,000**	0.51	**3.9**	..
30	**220**	1,600	**12,000**	91,000	**0.56**	4.3	...
33	240	**1,800**	13,000	.....	0.62	**4.7**	..
36	**270**	2,000	**15,000**	.....	**0.68**	5.1	...

PRICES, RESISTANCE RANGES, DIMENSIONS

Size Watts	Size Length	Size Dia.	Resistance Range	Equiv. Mil. Type	Quan. 1-99 Net Price & Code ±5%	Quan. 1-99 Net Price & Code ±10%
1/10	.140"	.067"	10 Ohms thru 1.0 Megohm	—	—	**24¢ LIDVS**
1/4	¼"	.090"	47 Ohms thru 22.0 Megohms	RC-07	**26¢ LIDED**	**13¢ LIDSM**
1/2	⅜"	9⁄64"	10 Ohms thru 22.0 Megohms	RC-20	**24¢ LIDFA**	**12¢ LIDLO**
1	9⁄16"	7⁄32"	10 Ohms thru 22.0 Megohms	RC-32	**36¢ LIDBU**	**18¢ LIDME**
			2.7 thru 8.2 Ohms	RC-32	—	**36¢ LIDME**
2	11⁄16"	5⁄16"	10 Ohms thru 22.0 Megohms	RC-42	**48¢ LIDOC**	**24¢ LIDHI**

For more complete information on OHMITE PRODUCTS, ask for Ohmite Stock Catalog.



R. C. L.
MANUFACTURING COMPANY
ELECTRONIC SPECIALTIES

RIVERSIDE, NEW JERSEY

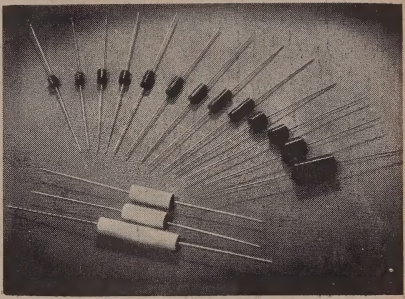
WIRE-WOUND POWER AND PRECISION RESISTORS

Wire-wound precision and power resistors made under exact atmospheric conditions to meet all requirements of the electronic industry. RCL resistors are silicone coated by our own special process, using low-temperature coefficient materials.

AXIAL LEAD PRECISION RESISTORS

RCL Type	Military Spec. Mil-R-93 & Mil-R-9444	Maximum * Resistance Value	Commercial † Wattage Rating	Military ‡ Wattage Rating	Wire Gauge AWG
7009		100K	⅛	—	#22
7010	AFRT 10	200KΩ	¼	⅛	#22
7011		150	¼	—	#22
7020	AFRT 11	500KΩ	⅓	¼	#22
7030	AFRT 12	750KΩ	½	⅓	#20
7040	ARFT 13	1.5 Meg.	1.0	¾	#20
7051		1.0 Meg.	½	—	#20
7050	RB 52 AFRT 14	2.0 Meg.	1.0	1.0	#20
7060	AFRT 15	3.5 Meg.	2.0	2.0	#20

Prices on Axial Lead Precision Resistors Quoted on Request

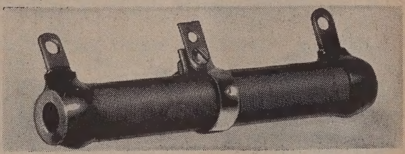


PRECISION WIRE-WOUND RESISTORS

RADIAL LUG PRECISION RESISTORS

RCL Type	Military Specs. Mil-R-93 & Mil-R-9444	Maximum * Resistance Value	Commercial † Wattage Rating	Military Wattage Rating	Mounting Hole Dia.
6010	RB09	600KΩ	¼	—	.144
6020	RB15	1.0 Meg.	⅛	¼	.144
6030	RB16	1.5 Meg.	½	⅓	.144
6040	RB17	3.0 Meg.	1.0	½	.144
6041	RB17	1.5 Meg.	1.0	½	.144
6050	RB18	5.0 Meg.	1.0	½	.144
6060	RB19	10 Meg.	2.0	1	.144

Prices on Radial Lead Precision Resistors Quoted on Request



POWER WIRE-WOUND RESISTORS

FIXED AND ADJUSTABLE POWER RESISTORS

Standard Band Widths 3/16″ and 1/4″

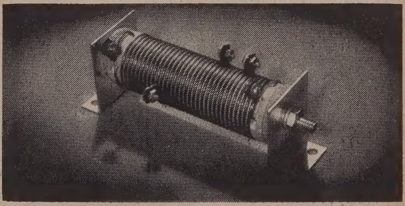
RCL TYPE		Mil-R-26	Maximum	Wattage	LIST PRICE	
Fixed	Adj.	Type	Resistance	Rating	Fixed	Adj.
2010	2011	RW 30	2,500Ω	5	$ .65	$ .72
2020	2021	RW 29	10,000Ω	10	.81	.89
2030	2031	RW 32	25,000Ω	20	.87	.96
2040	2041		25,000Ω	25	.93	1.02
2050	2051		50,000Ω	50	2.32	2.55
2060	2061	RW 36	100,000Ω	75	3.90	4.29
2070	2071		100,000Ω	100	3.42	3.76
2080	2081		125,000Ω	150	3.83	4.21
2090	2091	RW 47	150,000Ω	200	4.08	4.49

NOTES:

* Maximum resistance value is based on .0009″ E alloy wire.

† Commercial wattage rating is based on a 40°C. ambient.

‡ Military wattage rating is based on ambient specified in the applicable specification.



ADJUSTABLE POWER RESISTORS

ORDERING INFORMATION

When ordering R.C.L. precision wire-wound resistors, please specify the following: Quantity, R.C.L. style and/or Military Specification style; resistance value in absolute ohms (1 absolute ohm equals 0.9995 International ohm); resistance tolerance, temperature coefficient; and specific requirements that may apply to your particular application.

SPECTROL ELECTRONICS CORPORATION

EIGHT WIREWOUND PRECISION POTENTIOMETERS AND THREE MULTIDIALS

In Stock... Available at factory prices from your local distributor

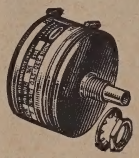
Thirty-eight electronics parts houses throughout the US and Canada can furnish off the shelf delivery of these popular models. In addition, 31 Spectrol Sales Engineering representatives located throughout the western world will assist you with special and other potentiometer requirements.

The eight precision potentiometers and 3 multidials described below satisfy most production and design requirements.

MODEL 130 1-5/16" Diameter

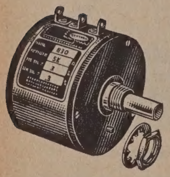
The Model 130 is a single-turn unit developed to provide economy in a quality precision potentiometer. With Spectrol's characteristic clean and rugged design, the 130 performs dependably up to 105°C and functions reliably under severe humidity conditions. It is available in resistance ranges from 10 to 30,000 ohms with a standard linearity tolerance of ±0.5%.

MODEL 230 1-3/4" Diameter



Spectrol's Model 230 high resistance precision potentiometer is a reliable single turn unit with resistance values up to 200,000Ω in a compact package only 1¾" in diameter. The Model 230 is economy priced, yet built to the highest standards of performance. For limited access phasing, the unit can be locked at any angle by simple adjustment of a single clamp screw.

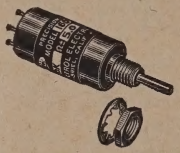
MODEL 830 1-13/16" Diameter



The Spectrol Model 830 is an economical 3-turn general purpose precision potentiometer featuring Spectrol quality and reliability at a competitive price. The 830 is available in resistance ranges from 20 to 120,000Ω with a standard linearity of ±0.25%.

The Model 830 incorporates many design features not normally found at this price. These include front and rear lids secured with machine screws; clean, smooth outline; 1000 ounce-inch stops and shaft bearings at both ends.

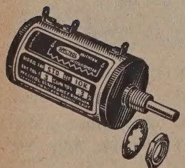
MODEL 160 1/2" Diameter



Ideally suited for applications where high resolution is needed in a small package, Spectrol's ultra miniature 10 turn precision potentiometer is available with up to 100,000 ohms in a metal sheathed half-inch diameter.

Tough and reliable, the economy priced 160 is a precision instrument made to the highest standards of potentiometer construction.

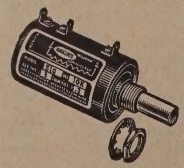
MODEL 500 7/8" Diameter



The Spectrol Model 500 is a quality 10-turn miniature precision potentiometer only ⅞" in diameter with ⅛" diameter shaft. It is available in resistance ranges from 25 to 120,000Ω with a standard linearity tolerance of ±0.25%.

Definite superiority of design guarantees low-noise performance and consistently reliable operation. Low starting torque, low running torque, high resolution, and close linearity are achieved by new and improved construction, both inside and out.

MODEL 510 7/8" Diameter

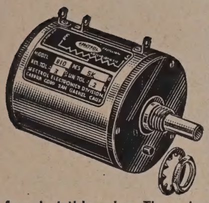


The Spectrol Model 510 is a quality 10-turn miniature precision potentiometer only ⅞" in diameter with ¼" dia. shaft. It is available in resistance ranges from 25 to 120,000Ω with a standard linearity tolerance of ±0.25%.

Featuring a new type of construction, the 510 readily adapts itself to high volume production techniques allowing overall reduction in manufacturing costs.

SPECTROL ELECTRONICS CORPORATION

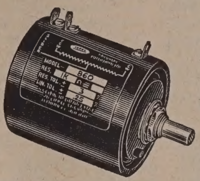
MODEL 810 1-13/16" Diameter



The Model 810 is the result of a development program to produce a competitively priced 10-turn precision potentiometer and maintain the Spectrol quality and reliability. The 810 is available in resistance ranges from 50 to 400,000 ohms with a standard linearity tolerance of ±0.25%.

This economy model incorporates many design features not normally found at this price. These include front and rear lids secured with machine screws, clean, smooth outline, 1000 ounce-inch stops and shaft bearings at both ends. A new design throughout with emphasis on consistent performance.

MODEL 860 1-13/16" Diameter



The Spectrol Model 860 precision 10 turn potentiometer is made especially for applications where low price plus steady, dependable operation is of prime importance.

Available in a resistance range from 50 ohms to 400K ohms, with std. linearity of ±0.25% and special linearity of ±0.1%, the tough 860 is the best buy for those "work horse" pot jobs.

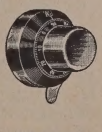
SPECIFICATIONS	MODEL 130	MODEL 230	MODEL 830	MODEL 160
Resistance tolerance	±3.0%	±3.0%	±3.0%	±5.0%
Linearity tolerance	±0.5%	±0.3%	±0.25%	±0.5%
Mechanical rotation	continuous	continuous	1080° +4° —0°	3600° +20° —0°
Electrical rotation	352° ±2°	354° ±1°	1080° +4° —0°	3600° +5° —0°
Power rating (40°C. Amb.)	2.75 watts	2.5 watts	4.75 watts	2.5 watts
Life expectancy (shaft rev's)	1,000,000	1,000,000	2,000,000	1,000,000
Voltage breakdown	1000V RMS	1000V RMS	1000V RMS	500V RMS
Temperature range	—55°C. to +105°C.	—55°C. to +105°C.	—55°C. to +105°C.	—55°C. to 105°C.
Weight (approx.)	1.5 oz.	3.0 oz.	3.0 oz.	0.5 oz.
Torque (max.)	St'g 1.0 oz. in. Rn'g 0.7 oz. in.	St'g 1.0 oz. in. Rn'g 0.7 oz. in.	St'g 1.75 oz. in. Rn'g 1.25 oz. in.	St'g 1.0 oz. in. Rn'g 0.75 oz. in.
Resistance values in stock	1K, 5K, 10K, 20K, 30K	1K, 5K, 10K, 20K, 30K, 50K, 100K and 200K	1K, 5K, 10K, 20K, 30K, 50K	500 ohms, 1K, 5K, 10K, 20K, 30K, 50K
List Price	$8.50 each	$15.00 each	$10.00 each	$12.00 each

SPECIFICATIONS	MODEL 500	MODEL 510	MODEL 810	MODEL 860
Resistance tolerance	±3.0%	±3.0%	±3.0%	±3.0%
Linearity tolerance	±0.25%	±0.25%	±0.25%	±0.25%
Mechanical rotation	3600° +5° —0°	3600° +10° —0°	3600° +4° —0°	3600° +4° —0°
Electrical rotation	3600° +5° —0°	3600° +10° —0°	3600° +4° —0°	3600° +4° —0°
Power rating (40°C. Amb.)	3 watts	3 watts	8 watts	8 watts
Life expectancy (shaft rev's)	1,000,000	1,000,000	1,000,000	1,000,000
Voltage breakdown	1000V RMS	1000V RMS	1000V RMS	1000V RMS
Temperature range	—55°C. to +105°C.	—55°C to +105°C.	—55°C. to +105°C.	—55°C. to +105°C.
Weight (approx.)	1.0 oz.	1.5 oz.	4.5 oz.	4.5 oz.
Torque (max.)	St'g 0.5 oz. in. Rn'g 0.4 oz. in.	St'g 0.5 oz. in. Rn'g 0.4 oz. in.	St'g 1.75 oz. in. Rn'g 1.25 oz. in.	St'g 1.75 oz. in. Rn'g 1.25 oz. in.
Resistance values in stock	1K, 5K, 10K, 20K, 30K, 50K, 100K	1K, 5K, 10K, 20K, 30K, 50K, 100K	100 and 500 ohms, 1K, 2K, 5K 10K, 20K, 30K, 50K, 100K	100 and 500 ohms, 1K, 2K, 5K, 10K, 20K, 30K, 50K, 100K
List Price	$15.00 each	$12.00 each	$12.00 each	$10.00 each

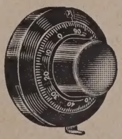
MULTIDIAL PRECISION 10 TURN INDICATING DIALS

Mounting directly on your pot shaft with no panel drilling, the MULTIDIAL indicates each shaft turn in precise divisions of 1/100, and totals each completed turn with a snap — just one number visible for instant reading. The convenient locking mechanism grips and releases at a finger touch without disturbing your setting.

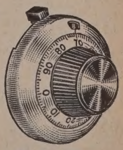
Available in 2 space saving sizes, 1" dia. and 1-13/16" dia. The MULTIDIAL can be modified too, with verniers and other features tailored to your particular requirements.



Model 10
1 inch Diam.



Model 20
1-13/16 inch Diam.



Model 30
1-3/16 inch Diam.

For complete electrical and mechanical specifications, contact your nearest Spectrol distributor or write, call or wire direct. Please address Dept. R60.

SPECTROL

ELECTRONICS CORPORATION

WESTBURY, L. I., NEW YORK
SAN GABRIEL, CALIFORNIA

SPRAGUE RESISTORS

IMPROVED AXIAL-LEAD BLUE JACKET® WIREWOUND RESISTORS

- Minified Resistors Designed for Thorough Reliability and Utmost Stability Under Extreme Operating Conditions, Particularly in Miniaturized Equipment
- Matched Coefficient of Expansion Allows Uniform Expansion of Vitreous-Enamel Coating, Ceramic Base and End-Cap: Eliminating Cracks, Crazing and Protects from Corrosive Fumes and Humidity.
- Windings and Leads are Welded to End-Cap for Superior Mechanical Strength.
- Power Ratings are Based on 350° Hot-Spot Temperature
- Resistance Tolerance ±5%
- Characteristic V MIL-Types are Listed Below: Characteristic G is Available in the Following Wattage Ratings: RW59-2.5W, RW57-5W, RW58-8W. To Order, Change V to G in Type Number.

SPRAGUE
5 WATTS

CATALOG NUMBERS—AXIAL-LEAD BLUE JACKET® WIREWOUND RESISTORS

Ohms	2 Watts D x L 3/16 x 3/8	3 Watts D x L 13/64 x 17/32	5 Watts D x L 13/64 x 15/16	7 Watts D x L 5/16 x 1 1/8	10 Watts D x L 5/16 x 1 3/4
1	240E1R05	242E1R05	243E1R05	244E1R05	247E1R05
1.5	240E1R55	242E1R55	243E1R55	244E1R55	247E1R55
2	250E2R05	242E2R05	243E2R05	244E2R05	247E2R05
3	240E3R05	242E3R05	243E3R05	244E3R05	247E3R05
4	240E4R05	242E4R05	243E4R05	244E4R05	247E4R05
5	240E5R05	242E5R05	243E5R05	244E5R05	247E5R05
7.5	240E7R55	242E7R55	243E7R55	244E7R55	247E7R55
10	240E1005	242E1005	243E1005	244E1005	247E1005
12	240E1205	242E1205	243E1205	244E1205	247E1205
15	240E1505	242E1505	243E1505	244E1505	247E1505
18	240E1805	242E1805	—	—	—
20	240E2005	242E2005	243E2005	244E2005	247E2005
22	240E2205	242E2205	—	—	—
25	240E2505	242E2505	243E2505	244E2505	247E2505
27	240E2705	242E2705	—	—	—
30	240E3005	242E3005	243E3005	244E3005	247E3005
33	240E3305	242E3305	—	—	—
35	—	—	243E3505	244E3505	247E3505
39	240E3905	242E3905	—	—	—
40	240E4005	242E4005	243E4005	244E4005	247E4005
47	240E4705	242E4705	—	—	—
50	240E5005	242E5005	243E5005	244E5005	247E5005
56	240E5605	242E5605	—	—	—
68	240E6805	242E6805	—	—	—
75	240E7505	242E7505	243E7505	244E7505	247E7505
82	240E8205	242E8205	—	—	—
100	240E1015	242E1015	243E1015	244E1015	247E1015
120	240E1215	242E1215	243E1215	244E1215	247E1215
150	240E1515	242E1515	243E1515	244E1515	247E1515
180	240E1815	242E1815	—	—	—
200	240E2015	242E2015	243E2015	244E2015	247E2015
220	240E2215	242E2215	243E2215	244E2215	247E2215
250	240E2515	242E2515	243E2515	244E2515	247E2515
270	240E2715	242E2715	—	—	—
300	240E3015	242E3015	243E3015	244E3015	247E3015
330	240E3315	242E3315	—	—	—
350	—	—	243E3515	244E3515	247E3515
390	240E3915	242E3915	—	—	—
400	240E4015	242E4015	243E4015	244E4015	247E4015
450	—	—	243E4515	—	—
470	240E4715	242E4715	—	—	—
500	240E5015	242E5015	243E5015	244E5015	247E5015
560	240E5615	242E5615	—	—	—
600	240E6015	242E6015	242E6015	244E6015	247E6015
680	240E6815	242E6815	—	—	—
700	240E7015	242E7015	243E7015	244E7015	247E7015
750	—	—	243E7515	244E7515	247E7515
800	240E8015	242E8015	243E8015	244E8015	247E8015
820	240E8215	242E8215	—	—	—
900	240E9015	242E9015	243E9015	244E9015	247E9015
1000	240E1025	242E1025	243E1025	244E1025	247E1025
1100	—	—	243E1125	244E1125	247E1125
1200	240E1225	242E1225	243E1225	244E1225	247E1225
1400	240E1425	242E1425	243E1425	244E1425	247E1425
1500	240E1525	242E1525	243E1525	244E1525	247E1525
1800	240E1825	242E1825	243E1825	244E1825	247E1825
2000	240E2025	242E2025	243E2025	244E2025	247E2025
2200	240E2225	242E2225	243E2225	244E2225	247E2225
2500	240E2525	242E2525	243E2525	244E2525	247E2525
2700	240E2725	242E2725	—	—	—
3000	240E3025	242E3025	243E3025	244E3025	247E3025
3300	240E3325	242E3325	—	244E3325	247E3325
3500	240E3525	—	243E3525	244E3525	247E3525
3900	—	242E3925	—	244E3925	247E3925
4000	—	242E4025	243E4025	244E4025	247E4025
4500	—	—	243E4525	244E4525	247E4525
4700	—	242E4725	—	—	—
5000	—	242E5025	243E5025	244E5025	247E5025
5600	—	242E5625	—	—	—
6000	—	242E6025	243E6025	244E6025	247E6025
6800	—	242E6825	—	—	—
7000	—	—	243E7025	244E7025	247E7025
7500	—	242E7525	243E7525	244E7525	247E7525
8000	—	242E8025	243E8025	244E8025	247E8025
8200	—	242E8225	—	—	—
9000	—	242E9025	243E9025	244E9025	247E9025
10000	—	242E1035	243E1035	244E1035	247E1035
11000	—	—	—	244E1135	247E1135
12000	—	—	243E1235	244E1235	247E1235
14000	—	—	243E1435	244E1435	247E1435
15000	—	—	243E1535	244E1535	247E1535
16000	—	—	—	244E1635	247E1635
17000	—	—	—	244E1735	—
18000	—	—	243E1835	244E1835	247E1835
20000	—	—	243E2035	244E2035	247E2035
22000	—	—	243E2235	244E2235	247E2235
25000	—	—	243E2535	244E2535	247E2535
30000	—	—	243E3035	244E3035	247E3035
35000	—	—	—	—	247E3535
40000	—	—	—	—	247E4035
45000	—	—	—	—	247E4535
50000	—	—	—	—	247E5035

MIL CHARACTERISTIC "V" AXIAL-LEAD BLUE JACKET® WIREWOUND RESISTORS

Ohms	3 Watts D x L 1/4 x 1/2	6.5 Watts D x L 3/8 x 1	11 Watts D x L 7/16 x 1 7/8
1.0	RW59V1R0	RW57V1R0	RW58V1R0
1.1	RW59V1R1	RW57V1R1	RW58V1R1
1.2	RW59V1R2	RW57V1R2	RW58V1R2
1.4	RW59V1R4	RW57V1R4	RW58V1R4
1.6	RW59V1R6	RW57V1R6	RW58V1R6
1.8	RW59V1R8	RW57V1R8	RW58V1R8
2.0	RW59V2R0	RW57V2R0	RW58V2R0
2.2	RW59V2R2	RW57V2R2	RW58V2R2
2.5	RW59V2R5	RW57V2R5	RW58V2R5
2.8	RW59V2R8	RW57V2R8	RW58V2R8
3.1	RW59V3R1	RW57V3R1	RW58V3R1
3.5	RW59V3R5	RW57V3R5	RW58V3R5
4.0	RW59V4R0	RW57V4R0	RW58V4R0
4.5	RW59V4R5	RW57V4R5	RW58V4R5
5.0	RW59V5R0	RW57V5R0	RW58V5R0
5.6	RW59V5R6	RW57V5R6	RW58V5R6
6.3	RW59V6R3	RW57V6R3	RW58V6R3
7.1	RW59V7R1	RW57V7R1	RW58V7R1
8.0	RW59V8R0	RW57V8R0	RW58V8R0
9.0	RW59V9R0	RW57V9R0	RW58V9R0
10	RW59V100	RW57V100	RW58V100
11	RW59V110	RW57V110	RW58V110
12	RW59V120	RW57V120	RW58V120
14	RW59V140	RW57V140	RW58V140
16	RW59V160	RW57V160	RW58V160
18	RW59V180	RW57V180	RW58V180
20	RW59V200	RW57V200	RW58V200
22	RW59V220	RW57V220	RW58V220
25	RW59V250	RW57V250	RW58V250
28	RW59V280	RW57V280	RW58V280
31	RW59V310	RW57V310	RW58V310
35	RW59V350	RW57V350	RW58V350
40	RW59V400	RW57V400	RW58V400
45	RW59V450	RW57V450	RW58V450
50	RW59V500	RW57V500	RW58V500
56	RW59V560	RW57V560	RW58V560
63	RW59V630	RW57V630	RW58V630
71	RW59V710	RW57V710	RW58V710
80	RW59V800	RW57V800	RW58V800
90	RW59V900	RW57V900	RW58V900
100	RW59V101	RW57V101	RW58V101
110	RW59V111	RW57V111	RW58V111
120	RW59V121	RW57V121	RW58V121
140	RW59V141	RW57V141	RW58V141
160	RW59V161	RW57V161	RW58V161
180	RW59V181	RW57V181	RW58V181
200	RW59V201	RW57V201	RW58V201
220	RW59V221	RW57V221	RW58V221
250	RW59V251	RW57V251	RW58V251
280	RW59V281	RW57V281	RW58V281
310	RW59V311	RW57V311	RW58V311
350	RW59V351	RW57V351	RW58V351
400	RW59V401	RW57V401	RW58V401
450	RW59V451	RW57V451	RW58V451
500	RW59V501	RW57V501	RW58V501
560	RW59V561	RW57V561	RW58V561
630	RW59V631	RW57V631	RW58V631
710	RW59V711	RW57V711	RW58V711
800	RW59V801	RW57V801	RW58V801
900	RW59V901	RW57V901	RW58V901
1000	RW59V102	RW57V102	RW58V102
1100	RW59V112	RW57V112	RW58V112
1200	RW59V122	RW57V122	RW58V122

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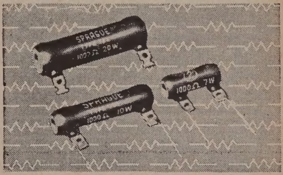
SPRAGUE RESISTORS

MIL CHARACTERISTIC "V" AXIAL-LEAD BLUE JACKET® WIREWOUND RESISTORS, continued

Ohms	3 Watts D x L ¼ x ½	6.5 Watts D x L ⅜ x 1	11 Watts D x L 7/16 x 1⅞	Ohms	3 Watts D x L ¼ x ½	6.5 Watts D x L ⅜ x 1	11 Watts D x L 7/16 x 1⅞	Ohms	3 Watts D x L ¼ x ½	6.5 Watts D x L ⅜ x 1	11 Watts D x L 7/16 x 1⅞
1400	RW59V142	RW57V142	RW58V142	3500	—	RW57V352	RW58V352	9000	—	—	RW58V902
1600	RW59V162	RW57V162	RW58V162	4000	—	—	RW58V402	10000	—	—	RW58V103
1800	RW59V182	RW57V182	RW58V182	4500	—	—	RW58V452	11000	—	—	RW58V113
2000	RW59V202	RW57V202	RW58V202	5000	—	—	RW58V502	12000	—	—	RW58V123
2200	—	RW57V222	RW58V222	5600	—	—	RW58V562	14000	—	—	RW58V143
2500	—	RW57V252	RW58V252	6300	—	—	RW58V632	16000	—	—	RW58V163
2800	—	RW57V282	RW58V282	7100	—	—	RW58V712	18000	—	—	RW58V183
3100	—	RW57V312	RW58V312	8000	—	—	RW58V802	20000	—	—	RW58V203

TAB-TERMINAL BLUE JACKET® WIREWOUND RESISTORS



- Withstand Severe Humidity Conditions and Repeated Temperature Cycling
- Matched Coefficient of Expansion Allows Uniform Expansion of Vitreous-Enamel Coating, Ceramic Base and Terminal Band; Eliminating Cracks, Crazing and Protects from Corrosive Fumes and Humidity.
- Characteristic V MIL-Types are Listed on Next Page. Characteristic G is Available in the Following Wattage Ratings: RW29- 8W, RW30- 8W, RW31-10W, RW32-12W, RW33-18W, RW35-38W, RW36-54W, RW37-78W, RW38-110W, RW47-145W. To Order, Change V to G.

INDUSTRIAL TAB-TERMINAL BLUE JACKET® WIREWOUND RESISTORS

	TAB WITH RADIAL WIRE LEADS			WITH TAB TERMINALS ONLY								
Ohms	5 Watts D x L 5/16 x 1	10 Watts D x L 5/16 x 1¾	20 Watts D x L 9/16 x 2	5 Watts D x L 5/16 x 1	10 Watts D x L 5/16 x 1¾	20 Watts D x L 9/16 x 2	35 Watts D x L ¾ x 3	50 Watts D x L ¾ x 1½	100 Watts D x L ⅛ x 6½	160 Watts D x L 1⅛ x 10½	200 Watts D x L 1⅛ x 8½	Ohms
1	97E1R09	98E1R09	99E1R09	57E1R09	10E1R09	58E1R09	15E1R09	—	—	—	—	1
1.5	97E1R59	98E1R59	—	57E1R59	10E1R59	—	—	—	—	—	—	1.5
2	97E2R09	98E2R09	—	57E2R09	10E2R09	—	15E2R09	22E2R09	—	—	—	2
3	97E3R09	98E3R09	99E3R09	57E3R09	10E3R09	58E3R09	15E3R09	22E3R09	—	—	—	3
4	97E4R09	98E4R09	—	57E4R09	10E4R09	—	15E4R09	22E4R09	24E4R09	—	—	4
5	97E5R09	98E5R09	99E5R09	57E5R09	10E5R09	58E5R09	15E5R09	22E5R09	24E5R09	—	—	5
6	—	—	—	—	—	—	—	—	—	25E6R09	—	6
7	—	—	—	—	—	—	—	—	—	—	26E7R09	7
7.5	97E7R59	98E7R59	—	57E7R59	10E7R59	—	—	—	—	—	—	7.5
10	97E1009	98E1009	99E1009	57E1009	10E1009	58E1009	15E1009	22E1009	24E1009	25E1009	26E1009	10
12	97E1209	98E1209	—	57E1209	10E1209	—	—	—	—	—	—	12
15	97E1509	98E1509	99E1509	57E1509	10E1509	58E1509	15E1509	—	—	25E1509	—	15
20	97E2009	98E2009	—	57E2009	10E2009	—	—	—	—	—	—	20
25	97E2509	98E2509	99E2509	57E2509	10E2509	58E2509	15E2509	22E2509	24E2509	25E2509	26E2509	25
30	97E3009	98E3009	—	57E3009	10E3009	—	—	—	—	—	—	30
35	97E3509	98E3509	—	57E3509	10E3509	—	—	—	—	—	—	35
40	97E4009	98E4009	—	57E4009	10E4009	—	—	—	—	—	—	40
50	97E5005	98E5005	99E5005	57E5005	10E5005	58E5005	15E5005	22E5005	24E5005	25E5005	26E5005	50
75	97E7505	98E7505	99E7505	57E7505	10E7505	58E7505	15E7505	22E7505	24E7505	25E7505	26E7505	75
100	97E1015	98E1015	99E1015	57E1015	10E1015	58E1015	15E1015	22E1015	24E1015	25E1015	26E1015	100
120	97E1215	98E1215	—	57E1215	10E1215	—	—	—	24E1215	—	—	120
150	97E1515	98E1515	99E1515	57E1515	10E1515	58E1515	15E1515	22E1515	24E1515	25E1515	26E1515	150
180	—	—	99E1815	—	—	58E1815	—	—	—	—	—	180
200	97E2015	98E2015	99E2015	57E2015	10E2015	58E2015	15E2015	22E2015	—	25E2015	—	200
220	97E2215	98E2215	—	57E2215	10E2215	—	—	—	—	—	—	220
250	97E2515	98E2515	99E2515	57E2515	10E2515	58E2515	15E2515	22E2515	24E2515	25E2515	26E2515	250
300	97E3015	98E3015	99E3015	57E3015	10E3015	58E3015	15E3015	22E3015	—	—	—	300
350	97E3515	98E3515	99E3515	57E3515	10E3515	58E3515	—	—	—	—	—	350
400	97E4015	98E4015	99E4015	57E4015	10E4015	58E4015	15E4015	22E4015	—	—	—	400
450	97E4515	98E4515	—	57E4515	10E4515	—	—	—	—	—	—	450
500	97E5015	98E5015	99E5015	57E5015	10E5015	58E5015	15E5015	22E5015	24E5015	25E5015	26E5015	500
600	97E6015	98E6015	—	57E6015	10E6015	—	—	—	—	—	—	600
650	—	—	99E6515	—	—	58E6515	—	—	—	—	—	650
700	97E7015	98E7015	99E7015	57E7015	10E7015	58E7015	—	—	—	—	—	700
750	97E7515	98E7515	99E7515	57E7515	10E7515	58E7515	15E7515	22E7515	24E7515	25E7515	26E7515	750
800	97E8015	98E8015	99E8015	57E8015	10E8015	58E8015	15E8015	22E8015	—	—	—	800
850	—	—	99E8515	—	—	58E8515	15E8515	—	—	—	—	850
900	97E9015	98E9015	—	57E9015	10E9015	—	—	—	—	—	—	900
1000	97E1025	98E1025	99E1025	57E1025	10E1025	58E1025	15E1025	22E1025	24E1025	25E1025	26E1025	1000
1100	97E1125	98E1125	—	57E1125	10E1125	—	—	—	—	—	—	1100
1200	97E1225	98E1225	99E1225	57E1225	10E1225	58E1225	15E1225	—	24E1225	—	—	1200
1400	97E1425	98E1425	99E1425	57E1425	10E1425	58E1425	—	—	—	—	—	1400
1500	97E1525	98E1525	99E1525	57E1525	10E1525	58E1525	15E1525	22E1525	24E1525	25E1525	26E1525	1500
1600	97E1625	—	99E1625	57E1625	—	58E1625	—	—	—	—	—	1600
1800	97E1825	98E1825	99E1825	57E1825	10E1825	58E1825	—	—	—	—	—	1800
2000	97E2025	98E2025	99E2025	57E2025	10E2025	58E2025	15E2025	22E2025	24E2025	25E2025	26E2025	2000
2200	97E2225	98E2225	99E2225	57E2225	10E2225	58E2225	—	—	—	—	—	2200
2400	97E2425	—	99E2425	57E2425	—	58E2425	—	—	—	—	—	2400
2500	97E2525	98E2525	99E2525	57E2525	10E2525	58E2525	15E2525	22E2525	24E2525	25E2525	26E2525	2500
2800	—	—	99E2825	—	—	58E2825	—	—	—	—	—	2800
3000	97E3025	98E3025	99E3025	57E3025	10E3025	58E3025	15E3025	22E3025	24E3025	25E3025	26E3025	3000
3500	97E3525	98E3525	99E3535	57E3525	10E3525	58E3525	15E3525	—	24E3525	25E3525	26E3525	3500
4000	97E4025	98E4025	99E4025	57E4025	10E4025	58E4025	15E4025	22E4025	24E4025	25E4025	26E4025	4000
4500	97E4525	98E4525	99E4525	57E4525	10E4525	58E4525	—	—	24E4525	25E4525	26E4525	4500

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SPRAGUE RESISTORS

INDUSTRIAL TAB-TERMINAL BLUE JACKET® WIREWOUND RESISTORS, continued

	TAB WITH RADIAL WIRE LEADS			WITH TAB TERMINALS ONLY								
Ohms	5 Watts D x L 5/16 x 1	10 Watts D x L 5/16 x 1 3/4	20 Watts D x L 9/16 x 2	5 Watts D x L 5/16 x 1	10 Watts D x L 5/16 x 1 3/4	20 Watts D x L 9/16 x 2	35 Watts D x L 3/4 x 3	50 Watts D x L 3/4 x 4 1/2	100 Watts D x L 1/8 x 6 1/2	160 Watts D x L 1 1/8 x 8 1/2	200 Watts D x L 1 1/8 x 10 1/2	Ohms
6000	97E5025	98E5025	99E5025	57E5025	10E5025	58E5025	15E5025	22E5025	24E5025	25E5025	26E5025	5000
6000	97E6025	98E6025	99E6025	57E6025	10E6025	58E6025	15E6025	22E6025	—	—	—	6000
6500	—	98E6525	—	—	10E6525	—	—	—	—	—	—	6500
7000	97E7025	98E7025	99E7025	57E7025	10E7025	58E7025	—	—	—	—	—	7000
7500	97E7525	98E7525	99E7575	57E7525	10E7525	58E7525	15E7525	22E7525	24E7525	25E7525	26E7525	7500
8000	97E8025	98E8025	99E8025	57E8025	10E8025	58E8025	—	22E8025	—	—	—	8000
8500	—	98E8525	—	—	10E8525	—	15E8525	—	—	—	—	8500
9000	—	98E9025	—	—	10E9025	—	—	—	—	—	—	9000
9500	—	98E9525	—	—	10E9525	—	—	—	—	—	—	9500
10000	—	98E1035	99E1035	—	10E1035	58E1035	15E1035	22E1035	24E1035	25E1035	26E1035	10000
11000	—	98E1135	—	—	10E1135	—	—	—	—	—	—	11000
12000	—	98E1235	99E1235	—	10E1235	58E1235	15E1235	22E1235	—	—	—	12000
14000	—	—	—	—	—	—	—	22E1435	—	—	—	14000
15000	—	98E1535	99E1535	—	10E1535	58E1535	15E1535	22E1535	24E1535	25E1535	26E1535	15000
16000	—	98E1635	—	—	10E1635	—	—	—	—	—	—	16000
18000	—	98E1835	—	—	10E1835	—	—	—	—	—	—	18000
20000	—	98E2035	99E2035	—	10E2035	58E2035	15E2035	22E2035	24E2035	25E2035	26E2035	20000
22000	—	98E2235	—	—	10E2235	—	—	—	—	—	—	22000
25000	—	98E2535	99E2535	—	10E2535	58E2535	15E2535	22E2535	24E2535	25E2535	26E2535	25000
30000	—	98E3035	99E3035	—	10E3035	58E3035	15E3035	22E3035	24E3035	25E3035	26E3035	30000
35000	—	—	99E3535	—	—	58E3535	15E3535	22E3535	24E3535	25E3535	26E3535	35000
40000	—	—	99E4035	—	—	58E4035	15E4035	22E4035	24E4035	25E4035	26E4035	40000
45000	—	—	99E4535	—	—	58E4535	—	22E4535	—	—	—	45000
50000	—	—	—	—	—	—	15E5035	22E5035	24E5035	25E5035	26E5035	50000
60000	—	—	—	—	—	—	15E6035	—	24E6035	25E6035	26E6035	60000
65000	—	—	—	—	—	—	—	22E6535	—	—	—	65000
70000	—	—	—	—	—	—	15E7035	—	24E7035	—	—	70000
75000	—	—	—	—	—	—	15E7535	22E7535	24E7535	25E7535	26E7535	75000
80000	—	—	—	—	—	—	—	—	—	25E8035	—	80000
90000	—	—	—	—	—	—	—	22E9035	—	—	—	90000
100000	—	—	—	—	—	—	—	—	24E1045	25E1045	26E1045	100000

MIL-R-26C TAB-TERMINAL BLUE JACKET® WIREWOUND RESISTORS

Ohms	11 Watts D x L 1/2 x 1 3/4	11 Watts D x L 19/32 x 1	14 Watts D x L 19/32 x 1 1/2	17 Watts D x L 19/32 x 2	26 Watts D x L 19/32 x 3	55 Watts D x L 29/32 x 4	78 Watts D x L 1 5/16 x 4	113 Watts D x L 1 5/16 x 6	159 Watts D x L 1 5/16 x 8	210 Watts D x L 1 5/16 x 10 1/2
1.0	RW29V1R0	RW30V1R0	RW31V1R0	RW32V1R0	RW33V1R0	RW35V1R0	RW36V1R0	RW37V1R0	RW38V1R0	RW47V1R0
1.1	RW29V1R1	RW30V1R1	RW31V1R1	RW32V1R1	RW33V1R1	RW35V1R1	RW36V1R1	RW37V1R1	RW38V1R1	RW47V1R1
1.2	RW29V1R2	RW30V1R2	RW31V1R2	RW32V1R2	RW33V1R2	RW35V1R2	RW36V1R2	RW37V1R2	RW38V1R2	RW47V1R2
1.4	RW29V1R4	RW30V1R4	RW31V1R4	RW32V1R4	RW33V1R4	RW35V1R4	RW36V1R4	RW37V1R4	RW38V1R4	RW47V1R4
1.6	RW29V1R6	RW30V1R6	RW31V1R6	RW32V1R6	RW33V1R6	RW35V1R6	RW36V1R6	RW37V1R6	RW38V1R6	RW47V1R6
1.8	RW29V1R8	RW30V1R8	RW31V1R8	RW32V1R8	RW33V1R8	RW35V1R8	RW36V1R8	RW37V1R8	RW38V1R8	RW47V1R8
2.0	RW29V2R0	RW30V2R0	RW31V2R0	RW31V2R0	RW33V2R0	RW35V2R0	RW36V2R0	RW37V2R0	RW38V2R0	RW47V2R0
2.2	RW29V2R2	RW30V2R2	RW31V2R2	RW32V2R2	RW33V2R2	RW35V2R2	RW36V2R2	RW37V2R2	RW38V2R2	RW47V2R2
2.5	RW29V2R5	RW30V2R5	RW31V2R5	RW32V2R5	RW33V2R5	RW35V2R5	RW36V2R5	RW37V2R5	RW38V2R5	RW47V2R5
2.8	RW29V2R8	RW30V2R8	RW31V2R8	RW32V2R8	RW33V2R8	RW35V2R8	RW36V2R8	RW37V2R8	RW38V2R8	RW47V2R8
3.1	RW29V3R1	RW30V3R1	RW31V3R1	RW32V3R1	RW33V3R1	RW35V3R1	RW36V3R1	RW37V3R1	RW38V3R1	RW37V3R1
3.5	RW29V3R5	RW30V3R5	RW31V3R5	RW32V3R5	RW33V3R5	RW35V3R5	RW36V3R5	RW37V3R5	RW38V3R5	RW47V3R5
4.0	RW29V4R0	RW30V4R0	RW31V4R0	RW32V4R0	RW33V4R0	RW35V4R0	RW36V4R0	RW37V4R0	RW38V4R0	RW47V4R0
4.5	RW29V4R5	RW30V4R5	RW31V4R5	RW32V4R5	RW33V4R5	RW35V4R5	RW36V4R5	RW37V4R5	RW38V4R5	RW47V4R5
5.0	RW29V5R0	RW30V5R0	RW31V5R0	RW32V5R0	RW33V5R0	RW35V5R0	RW36V5R0	RW37V5R0	RW38V5R0	RW47V5R0
5.6	RW29V5R6	RW30V5R6	RW31V5R6	RW32V5R6	RW33V5R6	RW35V5R6	RW36V5R6	RW37V5R6	RW38V5R6	RW47V5R6
6.3	RW29V6R3	RW30V6R3	RW31V6R3	RW32V6R3	RW33V6R3	RW35V6R3	RW36V6R3	RW37V6R3	RW38V6R3	RW47V6R3
7.1	RW29V7R1	RW30V7R1	RW31V7R1	RW32V7R1	RW33V7R1	RW35V7R1	RW36V7R1	RW37V7R1	RW38V7R1	RW47V7R1
8.0	RW29V8R0	RW30V8R0	RW31V830	RW32V8R0	RW33V8R0	RW35V8R0	RW36V8R0	RW37V8R0	RW33V8R0	RW47V8R0
9.0	RW29V9R0	RW30V9R0	RW31V9R0	RW32V9R0	RW33V9R0	RW35V9R0	RW36V9R0	RW37V9R0	RW38V9R0	RW47V9R0
10	RW29V100	RW30V100	RW31V100	RW32V100	RW33V100	RW35V100	RW36V100	RW37V100	RW38V100	RW47V100
11	RW29V110	RW30V110	RW31V110	RW32V110	RW33V110	RW35V110	RW36V110	RW37V110	RW38V110	RW47V110
12	RW29V120	RW30V120	RW31V120	RW32V120	RW33V120	RW35V120	RW36V120	RW37V120	RW38V120	RW47V120
14	RW29V140	RW30V140	RW31V140	RW32V140	RW33V140	RW35V140	RW36V140	RW37V140	RW38V140	RW47V140
16	RW29V160	RW30V160	RW31V160	RW32V160	RW33V160	RW35V160	RW36V160	RW37V160	RW38V160	RW47V160
18	RW29V180	RW30V180	RW31V180	RW32V180	RW33V180	RW35V180	RW36V180	RW37V180	RW38V180	RW47V180
20	RW29V200	RW30V200	RW31V200	RW32V200	RW33V200	RW35V200	RW36V200	RW37V200	RW38V200	RW47V200
22	RW29V220	RW30V220	RW31V220	RW32V220	RW33V220	RW35V220	RW36V220	RW37V220	RW38V220	RW47V220
25	RW29V250	RW30V250	RW31V250	RW32V250	RW33V250	RW35V250	RW36V250	RW37V250	RW38V250	RW47V250
28	RW29V280	RW30V280	RW31V280	RW32V280	RW33V280	RW35V280	RW36V280	RW37V280	RW38V280	RW47V280
31	RW29V310	RW30V310	RW31V310	RW32V310	RW33V310	RW35V310	RW36V310	RW37V310	RW38V310	RW47V310
35	RW29V350	RW30V350	RW31V350	RW32V350	RW33V350	RW35V350	RW36V350	RW37V350	RW38V350	RW47V350
40	RW29V400	RW30V400	RW31V400	RW32V400	RW33V400	RW35V400	RW36V400	RW37V400	RW38V400	RW47V400
45	RW29V450	RW30V450	RW31V450	RW32V450	RW33V450	RW35V450	RW36V450	RW37V450	RW38V450	RW47V450
50	RW29V500	RW30V500	RW31V500	RW32V500	RW33V500	RW35V500	RW36V500	RW37V500	RW38V500	RW47V500
56	RW29V560	RW30V560	RW31V560	RW32V560	RW33V560	RW35V560	RW36V560	RW37V560	RW38V560	RW47V560
63	RW29V630	RW30V630	RW31V630	RW32V630	RW33V630	RW35V630	RW36V630	RW37V630	RW38V630	RW47V630
71	RW29V710	RW30V710	RW31V710	RW32V710	RW33V710	RW35V710	RW36V710	RW37V710	RW38V710	RW47V710
80	RW29V800	RW30V800	RW31V800	RW32V800	RW33V800	RW35V800	RW36V800	RW37V800	RW38V800	RW47V800
90	RW29V900	RW30V900	RW31V900	RW32V900	RW33V900	RW35V900	RW36V900	RW37V900	RW38V900	RW47V900

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SPRAGUE RESISTORS

MIL-R-26C TAB-TERMINAL BLUE JACKET® RESISTORS, continued

Ohms	11 Watts D x L ½ x 1¾	11 Watts D x L 19/32 x 1	14 Watts D x L 19/32 x 1½	17 Watts D x L 19/32 x 2	26 Watts D x L 19/32 x 3	55 Watts D x L 29/32 x 4	78 Watts D x L 1 5/16 x 4	113 Watts D x L 1 5/16 x 6	159 Watts D x L 1 5/16 x 8	210 Watts D x L 1 5/16 x 10½
100	RW29V101	RW30V101	RW31V101	RW32V101	RW33V101	RW35V101	RW36V101	RW37V101	RW38V101	RW47V101
110	RW29V111	RW30V111	RW31V111	RW32V111	RW33V111	RW35V111	RW36V111	RW37V111	RW38V111	RW47V111
120	RW29V121	RW30V121	RW31V121	RW32V121	RW33V121	RW35V121	RW36V121	RW37V121	RW38V121	RW47V121
140	RW29V141	RW30V141	RW31V141	RW32V141	RW33V141	RW35V141	RW36V141	RW37V141	RW38V141	RW47V141
160	RW29V161	RW30V161	RW31V161	RW32V161	RW33V161	RW35V161	RW36V161	RW37V161	RW38V161	RW47V161
180	RW29V181	RW30V181	RW31V181	RW32V181	RW33V181	RW35V181	RW36V181	RW37V181	RW38V181	RW47V181
200	RW29V201	RW30V201	RW31V201	RW32V201	RW33V201	RW35V201	RW36V201	RW37V201	RW38V201	RW47V201
220	RW29V221	RW30V221	RW31V221	RW32V221	RW33V221	RW35V221	RW36V221	RW37V221	RW38V221	RW47V221
250	RW29V251	RW30V251	RW31V251	RW32V251	RW33V251	RW35V251	RW36V251	RW37V251	RW38V251	RW47V251
280	RW29V281	RW30V281	RW31V281	RW32V281	RW33V281	RW35V281	RW36V281	RW37V281	RW38V281	RW47V281
310	RW29V311	RW30V311	RW31V311	RW32V311	RW33V311	RW35V311	RW36V311	RW37V311	RW38V311	RW47V311
350	RW29V351	RW30V351	RW31V351	RW32V351	RW33V351	RW35V351	RW36V351	RW37V351	RW38V351	RW47V351
400	RW29V401	RW30V401	RW31V401	RW32V401	RW33V401	RW35V401	RW36V401	RW37V401	RW38V401	RW47V401
450	RW29V451	RW30V451	RW31V451	RW32V451	RW33V451	RW35V451	RW36V451	RW37V451	RW38V451	RW47V451
500	RW29V501	RW30V501	RW31V501	RW32V501	RW33V501	RW35V501	RW36V501	RW37V501	RW38V501	RW47V501
560	RW29V561	RW30V561	RW31V561	RW32V561	RW33V561	RW35V561	RW36V561	RW37V561	RW38V561	RW47V561
630	RW29V631	RW30V631	RW31V631	RW32V631	RW33V631	RW35V631	RW36V631	RW37V631	RW38V631	RW47V631
710	RW29V711	RW30V711	RW31V711	RW32V711	RW33V711	RW35V711	RW36V711	RW37V711	RW38V711	RW47V711
800	RW29V801	RW30V801	RW31V801	RW32V801	RW33V801	RW35V801	RW36V801	RW37V801	RW38V801	RW47V801
900	RW29V901	RW30V901	RW31V901	RW32V901	RW33V901	RW35V901	RW36V901	RW37V901	RW38V901	RW47V901
1000	RW29V102	RW30v102	RW31V102	RW32V102	RW33V102	RW35V102	RW36V102	RW37V102	RW38V102	RW47V102
1100	RW29V112	RW30V112	RW31V112	RW32V112	RW33V112	RW35V112	RW36V112	RW37V112	RW38V112	RW47V112
1200	RW29V122	RW30V122	RW31V122	RW32V122	RW33V122	RW35V122	RW36V122	RW37V122	RW38V122	RW47V122
1400	RW29V142	RW30V142	RW31V142	RW32V142	RW33V142	RW35V142	RW36V142	RW37V142	RW38V142	RW47V142
1600	RW29V162	RW30V162	RW31V162	RW32V162	RW33V162	RW35V162	RW36V162	RW37V162	RW38V162	RW47V162
1800	RW29V182	RW30V182	RW31V182	RW32V182	RW33V182	RW35V182	RW36V182	RW37V182	RW38V182	RW47V182
2000	RW29V202	RW30V202	RW31V202	RW32V202	RW33V202	RW35V202	RW36V202	RW37V202	RW38V202	RW47V202
2200	RW29V222	RW30V222	RW31V222	RW32V222	RW33V222	RW35V222	RW36V222	RW37V222	RW38V222	RW47V222
2500	RW29V252	RW30V252	RW31V252	RW32V252	RW33V252	RW35V252	RW36V252	RW37V252	RW38V252	RW47V252
2800	RW29V282	—	RW31V282	RW32V282	RW33V282	RW35V282	RW36V282	RW37V282	RW38V282	RW47V282
3100	RW29V312	—	RW31V312	RW32V312	RW33V312	RW35V312	RW36V312	RW37V312	RW38V312	RW47V312
3500	RW29V352	—	RW31V352	RW32V352	RW33V352	RW35V352	RW36V352	RW37V352	RW38V352	RW47V352
4000	RW29V402	—	RW31V402	RW32V402	RW33V402	RW35V402	RW36V402	RW37V402	RW38V402	RW47V402
4500	RW29V452	—	RW31V452	RW32V452	RW33V452	RW35V452	RW36V452	RW37V452	RW38V452	RW47V452
5000	RW29V502	—	RW31V502	RW32V502	RW33V502	RW35V502	RW36V502	RW37V502	RW38V502	RW47V502
5600	RW29V562	—	RW31V562	RW32V562	RW33V562	RW35V562	RW36V562	RW37V562	RW38V562	RW47V562
6300	—	—	RW31V632	RW32V632	RW33V632	RW35V632	RW36V632	RW37V632	RW38V632	RW47V632
7100	—	—	—	RW32V712	RW33V712	RW35V712	RW36V712	RW37V712	RW38V712	RW47V712
8000	—	—	—	RW32V802	RW33V802	RW35V802	RW36V802	RW37V802	RW38V802	RW47V802
9000	—	—	—	RW32V902	RW33V902	RW35V902	RW36V902	RW37V902	RW38V902	RW47V902
10000	—	—	—	RW32V103	RW33V103	RW35V103	RW36V103	RW37V103	RW38V103	RW47V103
11000	—	—	—	—	RW33V113	RW35V113	RW36V113	RW37V113	RW38V113	RW47V113
12000	—	—	—	—	RW33V123	RW35V123	RW36V123	RW37V123	RW38V123	RW47V123
14000	—	—	—	—	RW33V143	RW35V143	RW36V143	RW37V143	RW38V143	RW47V143
16000	—	—	—	—	RW33V163	RW35V163	RW36V163	RW37V163	RW38V163	RW47V163
18000	—	—	—	—	RW33V183	RW35V183	RW36V183	RW37V183	RW38V183	RW47V183
20000	—	—	—	—	—	RW35V203	RW36V203	RW37V203	RW38V203	RW47V203
22000	—	—	—	—	—	RW35V223	RW36V223	RW37V223	RW38V223	RW47V223
25000	—	—	—	—	—	RW35V253	RW36V253	RW37V253	RW38V253	RW47V253
28000	—	—	—	—	—	RW35V283	RW36V283	RW37V283	RW38V283	RW47V283
31000	—	—	—	—	—	RW35V313	RW36V313	RW37V313	RW38V313	RW47V313
35000	—	—	—	—	—	RW35V353	RW36V353	RW37V353	RW38V353	RW47V353
40000	—	—	—	—	—	RW35V403	RW36V403	RW37V403	RW38V403	RW47V403
45000	—	—	—	—	—	—	RW36V453	RW37V453	RW38V453	RW47V453
50000	—	—	—	—	—	—	RW36V503	RW37V503	RW38V503	RW47V503
56000	—	—	—	—	—	—	RW36V563	RW37V563	RW38V563	RW47V563
63000*	—	—	—	—	—	—	—	RW37V633	RW38V633	RW47V633
71000	—	—	—	—	—	—	—	RW37V713	RW38V713	RW47V713
80000	—	—	—	—	—	—	—	RW37V803	RW38V803	RW47V803
90000*	—	—	—	—	—	—	—	RW37V903	RW38V903	RW47V903
100000	—	—	—	—	—	—	—	—	RW38V104	RW47V104
110000	—	—	—	—	—	—	—	—	RW38V114	RW47V114
120000	—	—	—	—	—	—	—	—	RW38V124	RW47V124
140000	—	—	—	—	—	—	—	—	RW38V144	—
160000	—	—	—	—	—	—	—	—	—	RW47V164
180000	—	—	—	—	—	—	—	—	—	RW47V184

MOUNTING HARDWARE FOR TAB TERMINAL BLUE JACKET® RESISTORS

Order Mounting Hardware with Resistors as Required.

Specify Quantity, Resistor, Catalog Number, and Style of Mounting. Hardware not available separately.

THROUGH-BOLT VERTICAL TYPE MOUNTING HARDWARE

Available for sizes up through 50 watts:

Style G—2 Metal flat or centering Washers, Bolt, Nut and Lockwasher

Style H—Style G Hardware plus 2 Mica Washers

Style J—Style G Hardware plus 2 Ceramic Washers

THROUGH-BOLT HORIZONTAL TYPE MOUNTING HARDWARE

Available for all ratings:

Style D—2 Mounting Brackets, 2 Metal Centering Washers (when required), Bolt, Nut and Lockwasher

Style E—Style D Hardware plus 2 Mica Washers

Style F—Style D Hardware plus 2 Ceramic Washers

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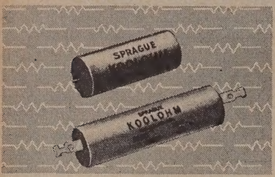
SPRAGUE RESISTORS

IMPROVED INDUSTRIAL AXIAL-LEAD KOOLOHM® WIREWOUND RESISTORS



- New Smaller Size Koolohm® Insulated-Shell Resistors
- New Smaller Size, Insulated-Shell Design for Severe Duty Cycles Encountered in Heavy-Duty Industrial Electric Equipment
- Windings and Leads are Welded to End-Cap for Superior Mechanical Strength
- Ceramic Insulated Wire is Space Wound and Cemented to Prevent Turn-to-Turn Shorting
- Non-Porous Tubular Ceramic Shells Sealed with High-Temperature Silicone Cement Provides Unexcelled Insulation and Mechanical Protection
- Available in Standard or Non-Inductive Types

STANDARD TYPES

Ohms	3 Watts D x L ¼ x 9/16	5 Watts D x L ¼ x 1	7 Watts D x L 15/32 x 1 5/16	10 Watts D x L 15/32 x 1 29/32	14 Watts D x L 15/32 x 1 29/32
1	450E1R05	452E1R05	454E1R05	456E1R05	458E1R05
1.5	450E1R55	452E1R55	454E1R55	456E1R55	458E1R55
2	450E2R05	452E2R05	454E2R05	456E2R05	458E2R05
3	450E3R05	452E3R05	454E3R05	456E3R05	458E3R05
4	450E4R05	452E4R05	454E4R05	456E4R05	458E4R05
5	450E5R05	452E5R05	454E5R05	456E5R05	458E5R05
7.5	450E7R55	452E7R55	454E7R55	456E7R55	458E7R55
10	450E1005	452E1005	454E1005	456E1005	458E1005
12	450E1205	452E1205	454E1205	456E1205	458E1205
15	450E1505	452E1505	454E1505	456E1505	458E1505
18	450E1805	—	—	—	—
20	450E2005	452E2005	454E2005	456E2005	458E2005
22	450E2205	—	—	—	—
25	450E2505	452E2505	454E2505	456E2505	458E2505
27	450E2705	—	—	—	—
30	450E3005	452E3005	454E3005	456E3005	458E3005
33	450E3305	—	—	—	—
35	—	452E3505	454E3505	456E3505	458E3505
39	450E3905	—	—	—	—
40	450E4005	452E4005	454E4005	456E4005	458E4005
47	450E4705	—	—	—	—
50	450E5005	452E5005	454E5005	456E5005	458E5005
56	450E5605	—	—	—	—
68	450E6805	—	—	—	—
75	450E7505	452E7505	454E7505	456E7505	458E7505
82	450E8205	—	—	—	—
100	450E1015	452E1015	454E1015	456E1015	458E1015
120	450E1215	452E1215	454E1215	456E1215	458E1215
150	450E1515	452E1515	454E1515	456E1515	458E1515
180	450E1815	—	—	—	—
200	450E2015	452E2015	454E2015	456E2015	458E2015
220	450E2215	452E2215	454E2215	456E2215	458E2215
250	450E2515	452E2515	454E2515	456E2515	458E2515
270	450E2715	—	—	—	—
300	450E3015	452E3015	454E3015	456E3015	458E3015
330	450E3315	—	—	—	—
350	—	452E3515	454E3515	456E3515	458E3515
390	450E3915	—	—	—	—
400	450E4015	452E4015	454E4015	456E4015	458E4015
450	—	452E4515	—	—	—
470	450E4715	—	—	—	—
500	450E5015	452E5015	454E5015	456E5015	458E5015
560	450E5615	—	—	—	—
600	450E6015	452E6015	454E6015	456E6015	458E6015
680	450E6315	—	—	—	—
700	450E7015	452E7015	454E7015	456E7015	458E7015
750	—	452E7515	454E7515	456E7515	458E7515
800	450E8015	452E8015	454E8015	456E8015	458E8015
820	450E8215	—	—	—	—
900	450E9015	452E9015	454E9015	456E9015	458E9015
1000	450E1025	452E1025	454E1025	456E1025	458E1025
1100	—	452E1125	454E1125	456E1125	458E1125
1200	450E1225	452E1225	454E1225	456E1225	458E1225
1400	450E1425	452E1425	454E1425	456E1425	458E1425
1500	450E1525	452E1525	454E1525	456E1525	458E1525
1800	450E1825	452E1825	454E1825	456E1825	458E1825
2000	450E2025	452E2025	454E2025	456E2025	458E2025
2200	450E2225	452E2225	454E2225	456E2225	458E2225
2500	450E2525	452E2525	454E2525	456E2525	458E2525
2700	450E2725	—	—	—	—

STANDARD TYPES cont.

3 Watts D x L ¼ x 9/16	5 Watts D x L ¼ x 1	7 Watts D x L 15/32 x 1 5/16	10 Watts D x L 15/32 x 1 29/32	14 Watts D x L 15/32 x 1 29/32	Ohms
450E3025	452E3025	454E3025	456E3025	458E3025	3000
450E3325	—	454E3325	456E3325	458E3325	3300
—	452E3525	454E3525	456E3525	458E3525	3500
450E3925	—	454E3925	456E3925	458E3925	3900
450E4025	452E4025	454E4025	456E4025	458E4025	4000
—	452E4525	454E4525	456E4525	458E4525	4500
450E4725	—	—	—	—	4700

NON-INDUCTIVE TYPES

3 Watts	5 Watts	7 Watts	10 Watts	14 Watts	Ohms
451E1R05	453E1R05	455E1R05	457E1R05	459E1R05	1
451E1R55	453E1R55	455E1R55	457E1R55	459E1R55	1.5
451E2R05	453E2R05	455E2R05	457E2R05	459E2R05	2
451E3R05	453E3R05	455E3R05	457E3R05	459E3R05	3
451E4R05	453E4R05	455E4R05	457E4R05	459E4R05	4
451E5R05	453E5R05	455E5R05	457E5R05	459E5R05	5
451E7R55	453E7R55	455E7R55	457E7R55	459E7R55	7.5
451E1005	453E1005	455E1005	457E1005	459E1005	10
451E1205	453E1205	455E1205	457E1205	459E1205	12
451E1505	453E1505	455E1505	457E1505	459E1505	15
451E1805	—	—	—	—	18
451E2005	453E2005	455E2005	457E2005	459E2005	20
451E2205	—	—	—	—	22
451E2505	453E2505	455E2505	457E2505	459E2505	25
451E2705	—	—	—	—	27
451E3005	453E3005	455E3005	457E3005	459E3005	30
451E3305	—	—	—	—	33
—	452E3505	455E3505	457E3505	459E3505	35
451E3905	—	—	—	—	39
451E4005	453E4005	455E4005	457E4005	459E4005	40
451E4705	—	—	—	—	47
451E5005	453E5005	455E5005	457E5005	459E5005	50
451E5605	—	—	—	—	56
451E6805	—	—	—	—	68
451E7505	453E7505	455E7505	457E7505	459E7505	75
451E8205	—	—	—	—	82
451E1015	453E1015	455E1015	457E1015	459E1015	100
451E1215	453E1215	455E1215	457E1215	459E1215	120
451E1515	453E1515	455E1515	457E1515	459E1515	150
451E1815	—	—	—	—	180
—	453E2015	455E2015	457E2015	459E2015	200
—	453E2215	455E2215	457E2215	459E2215	220
—	453E2515	455E2515	457E2515	459E2515	250
—	—	—	—	—	270
—	453E3015	455E3015	457E3015	459E3015	300
—	—	—	—	—	330
—	453E3515	455E3515	457E3515	459E3515	350
—	—	—	—	—	390
—	453E4015	455E4015	457E4015	459E4015	400
—	—	—	—	—	450
—	—	—	—	—	470
—	—	455E5015	457E5015	459E5015	500
—	—	—	—	—	560
—	—	—	457E6015	459E6015	600
—	—	—	—	—	680
—	—	—	457E7015	459E7015	700
—	—	—	457E7515	459E7515	750
—	—	—	457E8015	459E8015	800
—	—	—	—	—	820
—	—	—	457E9015	459E9015	900
—	—	—	457E1025	459E1025	1000

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(Use Index Page 1 for Quick, Easy Location of ALL Products)

SPRAGUE RESISTORS

INDUSTRIAL AXIAL-LEAD KOOLOHM® WIREWOUND RESISTORS, continued

STANDARD TYPES cont.

Ohms	3 Watts D x L ¼ x 9/16	5 Watts D x L ¼ x 1	7 Watts D x L 15/32 x 1 5/16	10 Watts D x L 15/32 x 1 29/32	14 Watts D x L 15/32 x 1 29/32
5000	450E5025	452E5025	454E5025	456E5025	458E5025
5600	450E5625	—	—	—	—
6000	450E6025	542E6025	454E6025	456E6025	458E5025
6800	450E6825	—	—	—	—
7000	—	452E7025	454E7025	456E7025	458E7025
7500	450E7525	452E7525	454E7525	456E7525	458E7525
8000	450E8025	452E8025	454E8025	456E8025	458E8025
8200	450E8225	—	—	—	—
9000	450E9025	452E9025	454E9025	456E9025	458E9025
10000	450E1035	452E1035	454E1035	456E1035	458E1035
11000	—	—	454E1135	456E1135	458E1135
12000	—	452E1235	454E1235	456E1235	458E1235
14000	—	452E1435	454E1435	456E1435	458E1435
15000	—	452E1535	454E1535	456E1535	458E1535

STANDARD TYPES cont.

3 Watts D x L ¼ x 9/16	5 Watts D x L ¼ x 1	7 Watts D x L 15/32 x 1 5/16	10 Watts D x L 15/32 x 1 29/32	14 Watts. D x L 15/32 x 1 29/32	Ohms
—	—	454E1635	456E1635	458E1635	16000
—	452E1835	454E1835	456E1835	458E1835	18000
—	452E2035	454E2035	456E2035	458E2035	20000
—	—	454E2235	456E2235	—	22000
—	—	454E2535	456E2535	—	25000
—	—	454E3035	456E3035	—	30000
—	—	454E3535	456E3535	—	35000
—	—	454E4035	456E4035	—	40000
—	—	—	456E4535	—	45000
—	—	—	456E5035	—	50000
—	—	—	456E6035	—	60000
—	—	—	456E7035	—	70000

MIL-R-26C CHARACTERISTIC V AXIAL-LEAD KOOLOHM® RESISTORS

Ohms	7 Watts D x L 15/32 x 1 3/8	14 Watts D x L 15/32 x 2
1.0	RW55V1R0	RW56V1R0
1.1	RW55V1R1	RW56V1R1
1.2	RW55V1R2	RW56V1R2
1.4	RW55V1R4	RW56V1R4
1.6	RW55V1R6	RW56V1R6
1.8	RW55V1R8	RW56V1R8
2.0	RW55V2R0	RW56V2R0
2.2	RW55V2R2	RW56V2R2
2.5	RW55V2R5	RW56V2R5
2.8	RW55V2R8	RW56V2R8
3.1	RW55V3R1	RW56V3R1
3.5	RW55V3R5	RW56V3R5
4.0	RW55V4R0	RW56V4R0
4.5	RW55V4R5	RW56V4R5
5.0	RW55V5R0	RW56V5R0
5.6	RW55V5R6	RW56V5R6
6.3	RW55V6R3	RW56V6R3
7.1	RW55V7R1	RW56V7R1
8.0	RW55V8R0	RW56V8R0
9.0	RW55V9R0	RW56V9R0
10	RW55V100	RW56V100

Ohms	7 Watts D x L 15/32 x 1 3/8	14 Watts D x L 15/32 x 2
11	RW55V110	RW56V110
12	RW55V120	RW56V120
14	RW55V140	RW56V140
16	RW55V160	RW56V160
18	RW55V180	RW56V180
20	RW55V200	RW56V200
22	RW55V220	RW56V220
25	RW55V250	RW56V250
28	RW55V280	RW56V280
31	RW55V310	RW56V310
35	RW55V350	RW56V350
40	RW55V400	RW56V400
45	RW55V450	RW56V450
50	RW55V500	RW56V500
56	RW55V560	RW56V560
63	RW55V630	RW56V630
71	RW55V710	RW56V710
80	RW55V800	RW56V800
90	RW55V900	RW56V900
100	RW55V101	RW56V101
110	RW55V111	RW56V111

Ohms	7 Watts D x L 15/32 x 1 3/8	14 Watts D x L 15/32 x 2
120	RW55V121	RW56V121
140	RW55V141	RW56V141
160	RW55V161	RW56V161
180	RW55V181	RW56V181
200	RW55V201	RW56V201
220	RW55V221	RW56V221
250	RW55V251	RW56V251
280	RW55V281	RW56V281
310	RW55V311	RW56V311
350	RW55V351	RW56V351
400	RW55V401	RW56V401
450	RW55V451	RW56V451
500	RW55V501	RW56V501
560	RW55V561	RW56V561
630	RW55V631	RW56V631
710	RW55V711	RW56V711
800	RW55V801	RW56V801
900	RW55V900	RW56V901
1000	RW55V102	RW56V102
1100	RW55V112	RW56V112
1200	RW55V122	RW56V122

Ohms	7 Watts D x L 15/32 x 1 3/8	14 Watts D x L 15/32 x 2
1400	RW55V142	RW56V142
1600	RW55V162	RW56V162
1800	RW55V182	RW56V182
2000	RW55V202	RW56V202
2200	RW55V222	RW56V222
2500	RW55V252	RW56V252
2800	RW55V282	RW56V282
3100	RW55V312	RW56V312
3500	RW55V352	RW56V352
4000	RW55V402	RW56V402
4500	RW55V452	RW56V452
5000	RW55V502	RW56V502
5600	RW55V562	RW56V562
6300	RW55V632	RW56V632
7100	RW55V712	RW56V712
8000	RW55V802	RW56V802
9000	RW55V902	RW56V902
10000	—	RW56V103
11000	—	RW56V113
12000	—	RW56V123
14000	—	RW56V143
16000	—	RW56V163

COMMERCIAL TAB-TYPE KOOLOHM® WIREWOUND RESISTORS

STANDARD TYPES

Ohms	25 Watts D x L 23/32 x 2 7/8	50 Watts D x L 7/8 x 4	120 Watts D x L 1 1/16 x 8 15/16
5	25KT5R0	50KT5R0	120KT5R0
10	25KT100	50KT100	120KT100
25	25KT250	50KT250	120KT250
50	25KT500	50KT500	120KT500
75	25KT750	50KT750	120KT750
100	25KT101	50KT101	120KT101
150	25KT151	50KT151	120KT151
200	25KT201	50KT201	120KT201
250	25KT251	50KT251	120KT251
390	—	—	120KT391
500	25KT501	50KT501	120KT501
600	25KT601	50KT601	120KT601
750	25KT751	50KT751	120KT751
1000	25KT102	50KT102	120KT102
1500	25KT152	50KT152	120KT152
2000	25KT202	50KT202	120KT202
2500	25KT252	50KT252	120KT252
3000	25KT302	50KT302	120KT302
4000	25KT402	50KT402	120KT402
5000	25KT502	50KT502	120KT502
7500	25KT752	50KT752	120KT752

STANDARD TYPES cont.

Ohms	25 Watts D x L 23/32 x 2 7/8	50 Watts D x L 7/8 x 4	120 Watts D x L 1 1/16 x 8 15/16
10000	25KT103	50KT103	120KT103
12000	25KT123	50KT123	120KT123
15000	25KT153	50KT153	120KT153
20000	25KT203	50KT203	120KT203
25000	25KT253	50KT253	120KT253
40000	25KT403	50KT403	120KT403
50000	25KT503	50KT503	120KT503
75000	25KT753	50KT753	120KT753
100000	25KT104	50KT104	120KT104

NON-INDUCTIVE TYPES

Ohms	25 Watts	50 Watts	120 Watts
5	25NIT5R0	50NIT5R0	120NIT5R0
10	25NIT100	50NIT100	120NIT100
25	25NIT250	50NIT250	120NIT250
50	25NIT500	50NIT500	120NIT500
75	25NIT750	50NIT750	120NIT750
100	25NIT101	50NIT101	120NIT101
150	25NIT151	50NIT151	120NIT151
200	25NIT201	50NIT201	120NIT201
250	25NIT251	50NIT251	120NIT251
390	—	—	120NIT391

NON-INDUCTIVE TYPES cont.

Ohms	25 Watts D x L 23/32 x 2 7/8	50 Watts D x L 7/8 x 4	120 Watts D x L 1 1/16 x 8 15/16
500	25NIT501	50NIT501	120NIT501
600	25NIT601	50NIT601	120NIT601
750	25NIT751	50NIT751	120NIT751
1000	25NIT102	50NIT102	120NIT102
1500	25NIT152	50NIT152	120NIT152
2000	25NIT202	50NIT202	120NIT202
2500	25NIT252	50NIT252	120NIT252
3000	25NIT302	50NIT302	120NIT302
4000	25NIT402	50NIT402	120NIT402
5000	25NIT502	50NIT502	120NIT502
7500	25NIT752	50NIT752	120NIT752
10000	25NIT103	50NIT103	120NIT103
12000	25NIT123	50NIT123	120NIT123
15000	25NIT153	60NIT153	120NIT153
20000	25NIT203	50NIT203	120NIT203
25000	25NIT253	50NIT253	120NIT253
—	—	50NIT403	120NIT403
—	—	50NIT503	120NIT503
—	—	—	120NIT753
—	—	—	120NIT104

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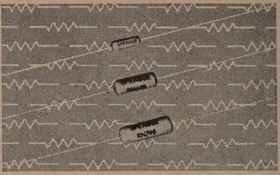
SPRAGUE RESISTORS

FILMISTOR® MOLDED DEPOSITED CARBON RESISTORS

- High Stability Under Toughest Load and Humidity Conditions
- Close Tolerance: ±1% is Standard
- Molded Case for Positive Moisture Protection
- Meet MIL-R-10509C Characteristic B Specifications
- Low-Contact Resistance, Low-Noise End Terminals
- All Sprague Resistors are Furnished with Standard MIL Markings



NOTE: Order by Sprague Type and MIL-Style as shown, Coding Resistance Value as Described Below:

EXAMPLE:

408E	/ RN75	B	158	4	F
Sprague Type	MIL-Style	Characteristic	Significant Figures	No. of Zeros	±1% Tol.

The Above Indicates 1,580,000 Ohms. For Values Below 100 Ohms, the Last Significant Figure is Replaced by R to Represent the Decimal Point and the Last Number then Becomes a Significant Figure. Example: 408E / RN75B17R4F Would Have Value of 17.4Ω

TYPES, SIZES AND ELECTRICAL RATINGS

Sprague	MIL-Type	Watts	Diam.	Length	Min. Ω	Max. Ω	Max. Volt.	Lead AWG
405E	RN60B	⅛	.135±.005	.400±.010	10	2 meg.	200	No. 22
406E	RN65B	¼	.200±.010	.600±.010	10	1 meg.	300	No. 22
407E	RN70B	½	.250±.010	.750±.010	10	3.16 meg.	350	No. 22
408E	RN75B	1	.375 $^{+.010}_{-.010}$	1.062±.020	10	3.11 meg.	500	No. 20
409E	RN80B	2	.375 $^{+.010}_{-.010}$	2.220±.020	30.0	10 meg.	750	No. 20

STANDARD RESISTANCE VALUES FOR FILMISTOR RESISTORS

Bold Face Type Indicates Items Most Frequently Stocked by Industrial Distributors

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
10.0	32.4	102	324	1.02 K	3.24 K	10.2 K	32.4 K	**100** K	**316** K	**1.00** meg.	**3.16** meg.
10.2	33.2	105	332	1.05 K	3.32 K	10.5 K	33.2 K	102 K	324 K	1.02 meg.	3.24 meg.
10.5	34.0	107	340	1.07 K	3.40 K	10.7 K	34.0 K	105 K	332 K	1.05 meg.	3.32 meg.
10.7	34.8	**110**	**348**	**1.10** K	**3.48** K	**11.0** K	**34.8** K	107 K	340 K	1.07 meg.	3.40 meg.
11.0	35.7	113	357	1.13 K	3.57 K	11.3 K	35.7 K	**110** K	**348** K	**1.10** meg.	**3.48** meg.
11.3	36.5	115	365	1.15 K	3.65 K	11.5 K	36.5 K	113 K	357 K	1.13 meg.	3.57 meg.
11.5	37.4	118	374	1.18 K	3.74 K	11.8 K	37.4 K	115 K	365 K	1.15 meg.	3.65 meg.
11.8	**38.3**	**121**	**383**	**1.21** K	**3.83** K	**12.1** K	**38.3** K	118 K	374 K	1.18 meg.	3.74 meg.
12.1	39.2	124	392	1.24 K	3.92 K	12.4 K	39.2 K	**121** K	**383** K	**1.21** meg.	**3.83** meg.
12.4	40.2	127	402	1.27 K	4.02 K	12.7 K	40.2 K	124 K	392 K	1.24 meg.	3.92 meg.
12.7	41.2	130	412	1.30 K	4.12 K	13.0 K	41.2 K	127 K	402 K	1.27 meg.	4.02 meg.
13.0	**42.2**	**133**	**422**	**1.33** K	**4.22** K	**13.3** K	**42.2** K	130 K	412 K	1.30 meg.	4.12 meg.
13.3	43.2	137	432	1.37 K	4.32 K	13.7 K	43.2 K	**133** K	**422** K	**1.33** meg.	**4.22** meg.
13.7	44.2	140	442	1.40 K	4.42 K	14.0 K	44.2 K	137 K	432 K	1.37 meg.	4.32 meg.
14.0	45.3	143	453	1.43 K	4.53 K	14.3 K	45.3 K	140 K	442 K	1.40 meg.	4.42 meg.
14.3	**46.4**	**147**	**464**	**1.47** K	**4.64** K	**14.7** K	**46.4** K	143 K	453 K	1.43 meg.	4.53 meg.
14.7	47.5	150	475	1.50 K	4.75 K	15.0 K	47.5 K	**147** K	**464** K	**1.47** meg.	**4.64** meg.
15.0	48.7	154	487	1.54 K	4.87 K	15.4 K	48.7 K	150 K	475 K	1.50 meg.	4.75 meg.
15.4	49.9	158	499	1.58 K	4.99 K	15.8 K	49.9 K	154 K	487 K	1.54 meg.	4.87 meg.
15.8	**51.1**	**162**	**511**	**1.62** K	**5.11** K	**16.2** K	**51.1** K	158 K	499 K	1.58 meg.	4.99 meg.
16.2	52.3	165	523	1.65 K	5.23 K	16.5 K	52.3 K	**162** K	**511** K	**1.62** meg.	**5.11** meg.
16.5	53.6	169	536	1.69 K	5.36 K	16.9 K	53.6 K	165 K	523 K	1.65 meg.	5.23 meg.
16.9	54.9	174	549	1.74 K	5.49 K	17.4 K	54.9 K	169 K	536 K	1.69 meg.	5.36 meg.
17.4	**56.2**	**178**	**562**	1.78 K	**5.62** K	**17.8** K	**56.2** K	174 K	549 K	1.74 meg.	5.49 meg.
17.8	57.6	182	576	1.82 K	5.76 K	18.2 K	57.6 K	**178** K	**562** K	**1.78** meg.	**5.62** meg.
18.2	59.0	187	590	1.87 K	5.90 K	18.7 K	59.0 K	182 K	576 K	1.82 meg.	5.76 meg.
18.7	60.4	191	604	1.91 K	6.04 K	19.1 K	60.4 K	187 K	590 K	1.87 meg.	5.90 meg.
19.1	**61.9**	**196**	**619**	**1.96** K	**6.19** K	**19.6** K	**61.9** K	191 K	604 K	1.91 meg.	6.04 meg.
19.6	63.4	200	634	2.00 K	6.34 K	20.0 K	63.4 K	**196** K	**619** K	**1.96** meg.	**6.19** meg.
20.0	64.9	205	649	2.05 K	6.49 K	20.5 K	64.9 K	200 K	634 K	2.00 meg.	6.34 meg.
20.5	66.5	210	665	2.10 K	6.65 K	21.0 K	66.5 K	205 K	649 K	2.05 meg.	6.49 meg.
21.0	**68.1**	**215**	**681**	**2.15** K	**6.81** K	**21.5** K	68.1 K	210 K	665 K	2.10 meg.	6.65 meg.
21.5	69.8	221	698	2.21 K	6.98 K	22.1 K	**69.1** K	**215** K	**681** K	**2.15** meg.	**6.81** meg.
22.1	71.5	226	715	2.26 K	7.15 K	22.6 K	69.8 K	221 K	698 K	2.21 meg.	6.98 meg.
22.6	73.2	232	732	2.32 K	7.32 K	23.2 K	71.5 K	226 K	715 K	2.26 meg.	7.15 meg.
23.2	**75.0**	**237**	**750**	**2.37** K	**7.50** K	**23.7** K	73.2 K	232 K	732 K	2.32 meg.	7.32 meg.
23.7	76.8	243	768	2.43 K	7.68 K	24.3 K	**75.0** K	**237** K	**750** K	**2.37** meg.	**7.50** meg.
24.3	78.7	249	787	2.49 K	7.87 K	24.9 K	76.8 K	243 K	768 K	2.43 meg.	7.68 meg.
24.9	80.6	255	806	2.55 K	8.06 K	25.5 K	78.7 K	249 K	787 K	2.49 meg.	7.87 meg.
25.5	**82.5**	**261**	**825**	**2.61** K	**8.25** K	**26.1** K	80.6 K	255 K	806 K	2.55 meg.	8.06 meg.
26.1	84.5	267	845	2.67 K	8.45 K	26.7 K	**82.5** K	**261** K	**825** K	**2.61** meg.	**8.25** meg.
26.7	86.6	274	866	2.74 K	8.66 K	27.4 K	84.5 K	267 K	845 K	2.67 meg.	8.45 meg.
27.4	88.7	280	887	2.80 K	8.87 K	28.0 K	86.6 K	274 K	866 K	2.74 meg.	8.66 meg.
28.0	**90.9**	**287**	**909**	**2.87** K	**9.09** K	**28.7** K	88.7 K	280 K	887 K	2.80 meg.	8.87 meg.
28.7	93.1	294	931	2.94 K	9.31 K	29.4 K	**90.9** K	**287** K	**909** K	**2.87** meg.	**9.09** meg.
29.4	95.3	301	953	3.01 K	9.53 K	30.1 K	93.1 K	294 K	931 K	2.94 meg.	9.31 meg.
30.1	97.6	309	976	3.09 K	9.76 K	30.9 K	95.3 K	301 K	953 K	3.01 meg.	9.53 meg.
30.9	**100**	**316**	**1.0 K**	**3.16** K	**10.00** K	**31.6** K	97.6 K	309 K	976 K	3.09 meg.	9.76 meg.
31.6											10 meg.

For Applications Requiring the Extra Moisture Protection of Ceramic-Case Filmistors, Substitute the Following Sprague Type Numbers:

Wattage Rating	⅛ W.	¼ W.	½ W.	1 W.	2 W.
Ceramic-Case Filmistor	400E	401E	402E	403E	404E

All prices and sizes subject to change without notice.

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VECO DESIGNERS' AND EXPERIMENTORS' KITS

WILL HELP YOU IN CIRCUIT DESIGN AND EXPERIMENTAL WORK

Creative personnel, designers and experimentors find these kits invaluable in the solution of circuitry problems and the preparation of prototype models, as well as in experimentation with a wide variety of thermistor and varistor applications.

VECO DESIGNERS' KITS

Each kit includes units covering a wide resistance range and physical size. VECO Designers' Kits are furnished with technical characteristics, curves and schematics to assist in the solution of circuitry designs and problems concerning the use and application of VECO thermistors and varistors.

VECO Number	Resistance @ 25°C (ohms)	Net Price (Postpaid)
KD 25	Designers' Disc Kit Contains one each: 11E2, 12E2, 15D1, 18E2, 21E21, 22E6, 23D34, 25D4, 31E2, 32D12, 33D10, 35D6, 41D2	$12.50
KP 50	Designers' Probe Kit Contains one each: 21A3, 31A11, 41A11, 51A11, 61A11, 71A11	16.50
KR 75	Designers' Rod Kit Contains one each: 33S1, 36S1, 41R1, 41S2, 43R1, 45R1, 51R1, 51R2	11.50
KTB1	Designers' Bead Kit Contains one each: 21A2, 31A2, 32A48, 41A2, 43A2, 51A2, 51A30, 61A2	19.50
KW 125	Designers' Washer Kit Contains 2 each: 11X1, 12X15, 14X4, 21W1, 22W6, 24W6, A828	13.50
KV 100	Designers' Varistor Kit Contains one each: 023L4, 023W1, 063L4, 114LI, 124W1, 143W1, 155L2, 165W2, A818	14.50
KV 1001	Designers' Varistor Kit Contains one each: 023L9, 063L9, 114L2, 124L1, 124L2, 134L1, 155L3, 175L1, 195L1	7.50

VECO EXPERIMENTORS' KITS

Designed to acquaint the experimentor, technician, engineer or designer with a wide variety of VECO thermistor and varistor applications. Each kit includes forms showing typical circuitry and specific characteristics of units in kit.

M-168 Experimentors' Kit, 7 assorted units for $ 5.00 net, postpaid
M-168A Experimentors' Kit, 10 assorted units for $10.00 net, postpaid

VECO THERMISTORS & VARISTORS

VECO Number	Resistance @ 25°C (ohms)	List Price
SMALL BEAD THERMISTORS .014" Dia.		
32A5	2,000 ±25%	$4.00
32A48	2,000 ±25%	3.00
34A2	3,500 ±15%	5.00
38C2	8,000 ±25%	3.80
43A1	30,000 ±25%	4.20
43A2	30,000 ±25%	4.00
51A30	100,000 ±25%	4.00
MEDIUM & LARGE BEADS .043" to .088" Dia.		
21A2	100 ±20%	$3.80
25A2	500 ±20%	4.00
31A2	1,000 ±20%	2.90
32A12	2,000 ±20%	2.90
32A13	2,000 ±20%	2.70
35A1	5,000 ±20%	2.90
41A2	10,000 ±20%	2.90
43A4	30,000 ±20%	2.90
45A2	50,000 ±20%	2.90
51A2	100,000 ±15%	2.70
55A2	500,000 ±20%	3.20
61A2	1 meg ±20%	3.40
GLASS THERMISTOR PROBES ½" Long		
21A3	100 ±20%	$3.80
31A11	1,000 ±20%	2.70
32A11	2,000 ±20%	2.40
35A11	5,000 ±20%	2.70
41A11	10,000 ±20%	2.70
43A11	30,000 ±20%	2.70
51A11	100,000 ±15%	2.60
55A11	500,000 ±20%	3.20
61A11	1 meg ±20%	3.30
71A11	10 meg ±20%	4.00

VECO Number	Resistance @ 25°C (ohms)	List Price
GLASS THERMISTOR PROBES 2" Long		
32A1	2,000 ±20%	$2.80
34A3	3,500 ±30%	2.80
41A1	10,000 ±20%	3.70
45A1	50,000 ±20%	3.70
51A1	100,000 ±15%	3.00
61A1	1 meg ±20%	4.30
GLASS THERMISTOR RODS & BULBS		
32A3	2,000 ±25%	$6.40
37A1	7,000 ±20%	4.20
44A1	35,000 ±25%	2.20
45B2	50,000 ±40%	3.00
46A2	60,500 ±29%	3.00
49A1	85,000 ±25%	2.20
65A1	5.4 meg ±32%	7.00
71A2	12 meg ±20%	5.80
MATCHED PAIR OF THERMISTOR BEADS ON HERMETIC SEALS		
A33	2,000 ±25%	$15.00
DISC THERMISTORS .1" to 1.0" Dia.		
11E2	10 ±10%	$1.00
12E2	20 ±10%	1.00
15D1	50 ±10%	1.50
18E2	75 ±10%	1.00
21D2	100 ±10%	1.00
21E2	100 ±10%	1.00
21E21	100 ±10%	1.00
22E6	200 ±10%	1.00
23D7	295 ±10%	1.00
23D34	300 ±10%	1.00
23E3	310 ±10%	1.20
25D4	500 ±10%	1.00
25E2	500 ±10%	1.00

VECO Number	Resistance @ 25°C (ohms)	List Price
27D1	725 ± 5%	3.40
28D1	760 ± 5%	3.40
31D4	1,000 ±10%	1.00
31D7	1,200 ±10%	1.20
31E2	1,000 ±10%	1.00
32D12	2,000 ±10%	1.00
33D2	3,000 ±10%	1.00
33D10	3,000 ±10%	1.00
35D2	5,000 ±10%	1.00
35D6	5,000 ±10%	1.00
41D2	10,000 ±10%	1.00
WASHER THERMISTORS .2" to .770" Dia.		
11X1	10 ±10%	$1.30
12X15	20 ±10%	1.30
14X2	38 ±10%	1.50
14X4	40 ±10%	1.30
21W1	100 ±10%	1.30
21W4	130 ±10%	1.50
22X1	150 ±10%	1.30
22W2	180 ±10%	1.50
22W6	200 ±10%	1.30
23W1	315 ±10%	1.50
24W6	400 ±10%	1.30
24W1	415 ±10%	1.50
ROD THERMISTORS .5" to 1.6" Long		
33S1	3,150 ±10%	$1.30
36S1	6,300 ±10%	1.30
38S1	8,000 ±10%	1.30
41R1	10,000 ±10%	1.30
41S1	10,000 ±10%	1.30
41S2	10,000 ±10%	1.60
43R1	31,500 ±10%	1.30
45R1	50,000 ±10%	1.30

VECO Number	Resistance @ 25°C (ohms)	List Price
51R1	100,000 ±10%	1.30
51R2	100,000 ±10%	1.60
VARISTORS		
023L4	1.5V min. @ 1 ma.	$ .80
023L9	6V @ 5 ma. DC	1.00
023W1	9.09V to 12.3 V @ 25 ma.	1.80
063L4	4.6V min. @ 1 ma.	.55
063L9	10V @ 5 ma. DC	1.00
114L1	16V to 24V @ 15 ma.	1.40
114L2	15V @ 5 ma. DC	1.00
124L1	25V @ 5 ma. DC	1.00
124L2	35V @ 5 ma. DC	1.00
124W1	26.8V to 32.2 V @ 15 ma.	3.00
134L1	50V @ 5 ma. DC	1.00
143W1	13.2V to 20.3V @ 50 μa	2.00
155L2	40.8V to 55.2V @ 1 ma.	4.20
155L3	75V @ 5 ma. DC	1.00
165W2	95V to 120V @ 10 ma.	5.00
175L1	100V @ 5 ma. DC	1.00
195L1	120V @ 5 ma. DC	1.00
MOUNTING ACCESSORIES		
A815	Mounting Kit for 1 washer	$1.00
A816	Mounting Kit for 3 washers	1.25
A818	Mounting Kit w/Bracket for 1 washer	1.50
A828	Mounting Kit w/Bracket for 3 washers	1.75
A819	Packing Gland—Probe	4.00

TECHNICAL LITERATURE

VECO THERMISTOR AND VARISTOR DATA BOOK containing historical background, technical data, typical circuitry, curves and other valuable information $1.00

Literature covering technical data pertaining to VECO products available FREE. Write for literature catalog SB52. The new Technical Catalog of VECO products (tenth edition) appears in **section 4700 of Electronics Engineers Master** or may be obtained through your local jobber.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

VECO
Trade mark

Victory ENGINEERING CORPORATION
UNION, NEW JERSEY

Manufacturers of THERMISTORS, VARISTORS, ELECTRONIC CONTROLS, CHOPPERETTES AND SPECIAL INSTRUMENTATIONS

TRU-OHM

VITREOUS ENAMELED

POWER RESISTORS

- FIXED
- ADJUSTABLE
- TRU-RIB
- AXIAL LEAD

Our new, modern plant occupies 80,000 square feet devoted to producing the finest power rheostats and wire wound resistors available. If you need a rheostat or resistor, whether it be right from stock or to your specifications, we assure you of courteous service, prompt delivery and quality merchandise.

FIXED VITREOUS ENAMELED RESISTORS

5 WATT FRL-5

Welded Construction

Core: 5/16" x 3/16" x 1"

Terminal

OHMS	MILLIAMPS	VOLTS
1	2230	2.2
1.5	1820	2.7
2	1580	3.2
3	1290	3.9
4	1120	4.5
5	1000	5.0
7.5	816	6.1
10	707	7.1
12	646	7.8
15	576	8.6
20	500	10
25	447	11
30	409	12
35	378	13
40	353	14
50	316	16
75	258	19
100	223	22
125	200	25
150	182	27
200	158	32
225	149	33
250	141	35
300	129	39
350	119	42
400	112	45
450	105	47
500	100	50
600	91	55
700	84	59
750	81	61
800	79	63
900	74	67
1000	71	71
1100	67	74
1200	64	77
1250	63	79
1500	58	87
1750	53	93
2000	50	100
2250	47	106
2500	45	112
3000	41	123
3500	38	133
4000	35	140
4500	33	149
5000	32	160
6000	29	174
7000	27	189
7500	26	195
8000	25	200
9000	23	207
10,000	22	220

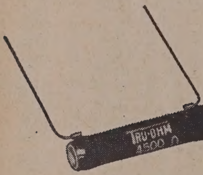
FIXED VITREOUS ENAMELED RESISTORS

10 WATT FRL-10

Welded Construction

Core: 5/16" x 3/16" x 1¾"

Terminal



OHMS	MILLIAMPS	VOLTS
1	3160	3.1
1.5	2580	3.8
2	2230	4.4
3	1820	5.4
4	1580	6.3
5	1410	7.0
7.5	1150	8.6
10	1000	10
12	914	11
15	816	12
20	707	14
25	631	16
30	577	17
35	535	19
40	500	20
50	447	22
75	365	27
100	316	31
125	283	35
150	254	38
200	223	44
225	211	47
250	200	50
300	182	54
350	169	59
400	158	63
450	149	67
500	141	70
600	129	77
700	120	84
750	115	86
800	112	89
900	105	94
1000	100	100
1100	95	104
1200	91	109
1250	89	111
1500	82	123
1750	76	133
2000	71	142
2250	67	151
2500	63	158
3000	57	171
3500	53	185
4000	50	200
4500	47	212
5000	45	225
6000	41	246
7000	38	266
7500	36	270
8000	35	280
8500	34	289
9000	33	297
10,000	30	300
11,000	27	300
12,000	25	300
12,500	24	300
13,500	22	300
14,300	21	300
15,000	20	300
16,000	19	300
17,500	17	300
18,000	16	300
20,000	16	320
22,500	15	337
25,000	15	375
30,000	14	420
35,000	13	455
40,000	12	480
45,000	11	495
50,000	10	500

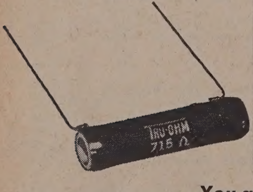
FIXED VITREOUS ENAMELED RESISTORS

20 WATT FRL-20

Welded Construction

Core: 7/16" x ¼" x 2"

Terminal



OHMS	MILLIAMPS	VOLTS
1	4480	4.4
3	2580	7.7
5	2000	10
10	1410	14
15	1150	17
25	895	22
50	633	31
75	516	39
100	447	44
150	365	54
175	338	59
200	316	63
250	283	71
300	258	77
350	239	84
400	223	89
500	200	100
650	175	114
700	169	118
750	164	123
800	158	126
850	154	131
1000	141	141
1200	129	155
1250	126	157
1500	115	172
1750	107	187
1850	104	192
2000	100	200
2250	94	211
2400	91	218
2500	89	222
2750	85	234
3000	81	243
3500	75	262
4000	70	280
4500	67	301
5000	63	315
6000	57	342
7000	53	371
7500	51	382
8000	50	400
10,000	44	440
12,500	36	450
15,000	31	465
20,000	24	480
25,000	20	500
30,000	17	510
35,000	15	525
40,000	14	560
45,000	13	585
50,000	12	600
55,000	11	605
60,000	10.8	648
65,000	10.5	684
70,000	10	700
75,000	9.5	712
80,000	9.3	744
85,000	9.1	773
90,000	8.8	792
95,000	8.6	816
100,000	8.4	840

You are guaranteed to receive 24 hour delivery as we maintain jobber stock items!

TRU-OHM RESISTORS are made to meet and exceed MIL-R-26C Specifications!

TRU-OHM

Mfd. by TRU-OHM PRODUCTS DIVISION OF MODEL ENG. & MFG, INC.
General Sales Office: Chicago 18, Ill.

VITREOUS ENAMELED RESISTORS

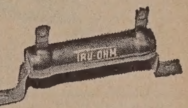
OHMS	100% RATING		OHMS	100% RATING		OHMS	100% RATING	
	VOLTS	AMPS		VOLTS	AMPS		VOLTS	AMPS
1	5.0	5.000	400	100	.250	7500	427	.057
2	7.0	3.535	500	111	.223	10,000	500	.050
3	8.6	2.885	750	136	.182	12,000	505	.042
4	10	2.500	800	141	.177	15,000	510	.034
5	11	2.236	850	145	.171	20,000	520	.026
10	15	1.580	1000	158	.158	25,000	530	.022
15	19	1.291	1250	176	.141	30,000	540	.018
25	25	1.000	1500	193	.129	35,000	550	.016
50	35	.707	2000	222	.111	40,000	560	.014
75	43	.577	2500	250	.100	50,000	585	.012
100	50	.500	3000	273	.091	60,000	610	.010
150	61	.408	3500	294	.084	70,000	630	.009
200	70	.353	4000	316	.079	75,000	635	.008
250	79	.316	5000	350	.070	80,000	640	.008
300	86	.289	6000	384	.064	100,000	700	.007
1	7	7.070	500	158	.316	12,500	787	.063
2	10	5.000	750	193	.258	15,000	855	.057
3	12	4.070	800	200	.250	20,000	960	.048
4	14	3.535	1000	223	.223	25,000	1024	.041
5	15	3.160	1500	273	.182	30,000	1080	.036
10	22	2.236	2000	316	.158	35,000	1120	.032
25	35	1.414	2500	350	.141	40,000	1140	.029
50	50	1.000	3000	384	.129	50,000	1150	.023
75	61	.816	4000	444	.111	75,000	1200	.016
100	70	.707	5000	500	.100	100,000	1250	.012
150	86	.577	6000	545	.091	125,000	1300	.010
200	100	.500	7500	608	.081	150,000	1350	.009
250	111	.447	8000	632	.079	175,000	1375	.008
300	122	.408	10,000	700	.070	200,000	1400	.007
400	141	.353	12,000	768	.064	225,000	1450	.006
						250,000	1500	.006
1	8	8.660	400	173	.433	8000	769	.096
2	12	6.120	500	193	.387	10,000	860	.086
3	15	5.000	750	237	.316	12,000	948	.079
4	17	4.330	800	242	.306	12,500	962	.077
5	19	3.875	1000	274	.274	15,000	1050	.070
10	27	2.740	1500	334	.223	20,000	1220	.061
25	43	1.732	2000	386	.193	25,000	1225	.049
50	61	1.225	2500	432	.173	30,000	1260	.042
100	86	.866	3000	474	.158	35,000	1270	.036
150	106	.707	4000	548	.137	40,000	1280	.032
200	122	.612	5000	610	.122	45,000	1310	.029
250	137	.548	6000	666	.111	50,000	1320	.026
300	150	.500	7500	750	.100	75,000	1340	.018
						100,000	1360	.013
1	10	10.000	500	223	.447	10,000	1000	.100
2	14	7.070	750	274	.365	15,000	1217	.081
3	17	5.770	1000	316	.316	20,000	1400	.070
4	20	5.000	1250	356	.285	25,000	1415	.053
5	22	4.470	1500	388	.259	30,000	1425	.047
10	31	3.160	2000	448	.224	35,000	1430	.042
25	50	2.000	2500	500	.200	40,000	1440	.036
50	70	1.414	3000	543	.181	50,000	1450	.029
75	86	1.150	3500	595	.170	60,000	1460	.024
100	100	1.000	4000	640	.160	70,000	1470	.021
125	112	.895	4500	675	.150	75,000	1474	.019
150	122	.816	5000	705	.141	100,000	1500	.015
250	157	.630	7500	864	.115			
1	12	12.650	250	200	.800	10,000	1260	.126
2	18	8.940	500	282	.565	15,000	1560	.104
3	21	7.300	750	346	.461	20,000	1780	.089
4	25	6.320	1000	400	.400	25,000	2000	.080
5	28	5.650	1500	489	.326	30,000	2010	.067
10	40	4.000	2000	564	.282	35,000	2015	.057
15	49	3.265	2500	630	.252	40,000	2020	.050
25	63	2.525	3000	693	.231	50,000	2030	.040
50	89	1.786	3500	753	.215	60,000	2040	.034
75	109	1.460	4000	800	.200	75,000	2065	.027
100	126	1.265	4500	832	.185	80,000	2080	.025
150	155	1.033	5000	895	.179	100,000	2100	.021
200	178	.894	7500	1096	.146			
1	14	14.140	750	387	.516	15,000	1725	.115
2	20	10.000	1000	447	.447	20,000	2000	.100
3	24	8.162	1500	547	.365	25,000	2225	.089
4	28	7.070	2000	632	.316	30,000	2460	.082
5	31	6.325	2500	707	.283	35,000	2470	.071
10	44	4.470	3000	776	.259	40,000	2480	.062
25	70	2.828	3500	840	.240	50,000	2500	.050
50	100	2.000	4000	900	.225	60,000	2500	.042
75	122	1.635	4500	945	.210	75,000	2500	.033
100	141	1.414	5000	1000	.200	100,000	2500	.025
150	173	1.152	7500	1222	.163	125,000	2500	.020
250	224	.895	10,000	1410	.141	150,000	2500	.016
500	316	.632						

TRU-OHM

FIXED VITREOUS ENAMELED RESISTORS
25 WATT TYPE FR-25

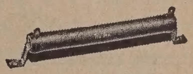
Core: 9/16″ x 5/16″ x 2″
Mounting Centers 2-3/4″
With Bracket #P-3747
Standard Lug #12

FIXED VITREOUS ENAMELED RESISTORS
50 WATT TYPE FR-50



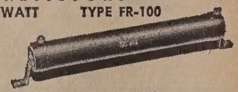
Core: 9/16″ x 5/16″ x 4″
Mounting Centers 4-3/4″
With Bracket #P-3747
Standard Lug #12

FIXED VITREOUS ENAMELED RESISTORS
75 WATT TYPE FR-75



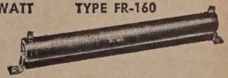
Core: 9/16″ x 5/16″ x 6″
Mounting Centers 6-3/4″
With Bracket #P-3747
Standard Lug #12

FIXED VITREOUS ENAMELED RESISTORS
100 WATT TYPE FR-100



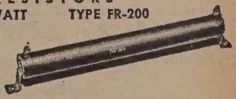
Core: 3/4″ x 1/2″ x 6-1/2″
Mounting Centers 7-1/4″
With Bracket #P-3689
Standard Lug #12

FIXED VITREOUS ENAMELED RESISTORS
160 WATT TYPE FR-160



Core: 1-1/8″ x 3/4″ x 8-1/2″
Mounting Centers 9-1/4″
With Bracket #P-4898
Standard Lug #14

FIXED VITREOUS ENAMELED RESISTORS
200 WATT TYPE FR-200



Core: 1-1/8″ x 3/4″ x 10-1/2″
Mounting Centers 11-1/4″
With Bracket #P-4898
Standard Lug #14

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TRU-OHM

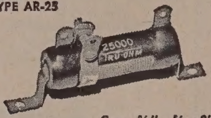
VITREOUS ENAMELED RESISTORS

ADJUSTABLE
Vitreous Enameled
RESISTORS
10 WATT TYPE AR-10

Core: 5⁄16" x 3⁄16" x 1¾"
Mounting Centers—2¼"
With Bracket #P4989
Standard Lug #10

OHMS	100% RATING		OHMS	100% RATING		OHMS	100% RATING	
	VOLTS	AMPS		VOLTS	AMPS		VOLTS	AMPS
1	3.1	3.160	200	44	.223	2500	158	.063
2	4.4	2.230	250	50	.200	3000	171	.057
3	5.4	1.820	300	54	.182	3500	185	.053
5	7.0	1.410	350	59	.169	4000	200	.050
7.5	8.6	1.150	400	63	.158	4500	212	.047
10	10	1.000	500	70	.141	5000	225	.045
15	12	.816	600	77	.129	6000	246	.041
20	14	.707	750	86	.115	7000	226	.038
25	16	.631	800	89	.112	7500	270	.036
50	22	.447	1000	100	.100	8000	280	.035
75	27	.365	1250	111	.089	8500	289	.034
100	31	.316	1500	123	.082	9000	297	.033
150	38	.254	2000	142	.071	10,000	300	.030
			2250	151	.067			

ADJUSTABLE
Vitreous Enameled
RESISTORS
25 WATT TYPE AR-25



Core: 9⁄16" x 5⁄16 x 2"
Mounting Centers—2¾"
With Bracket #P3747
Standard Lug #12

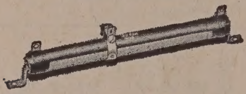
OHMS	100% RATING		OHMS	100% RATING		OHMS	100% RATING	
	VOLTS	AMPS		VOLTS	AMPS		VOLTS	AMPS
1	5.0	5.000	250	79	.316	3500	294	.084
2	7.0	3.535	300	86	.289	4000	316	.079
3	8.6	2.885	400	100	.250	4500	332	.074
5	11	2.236	500	111	.223	5000	350	.070
7.5	13	1.825	750	136	.182	6000	384	.064
10	15	1.580	800	141	.177	7000	420	.060
15	19	1.291	850	145	.171	7200	425	.059
20	22	1.117	1000	158	.158	7500	427	.057
25	25	1.000	1250	176	.141	8000	440	.055
50	35	.707	1500	193	.129	9000	468	.052
75	43	.577	2000	222	.111	10,000	500	.050
100	50	.500	2250	236	.105	12,000	505	.042
150	61	.408	2500	250	.100	15,000	510	.034
200	70	.353	3000	273	.091	20,000	520	.026
						25,000	530	.022

ADJUSTABLE
Vitreous Enameled
RESISTORS
50 WATT TYPE AR-50

Core: 9⁄16" x 5⁄16" x 4"
Mounting Centers—4¾"
With Bracket P3747
Standard Lug #12

OHMS	100% RATING		OHMS	100% RATING		OHMS	100% RATING	
	VOLTS	AMPS		VOLTS	AMPS		VOLTS	AMPS
1	7	7.070	750	193	.258	7500	608	.081
2	10	5.000	800	200	.250	8000	632	.079
3	12	4.070	1000	223	.223	9000	665	.074
4	14	3.535	1250	250	.200	10,000	700	.070
5	15	3.160	1500	273	.182	12,000	768	.064
10	22	2.236	2000	316	.158	15,000	855	.057
25	35	1.414	2250	335	.149	20,000	960	.048
50	50	1.000	2500	350	.141	25,000	1024	.041
75	61	.816	3000	384	.129	30,000	1080	.036
100	70	.707	3500	416	.119	40,000	1140	.029
150	86	.577	4000	444	.111	50,000	1150	.023
200	100	.500	4500	472	.105	60,000	1175	.019
250	111	.447	5000	500	.100	75,000	1200	.016
300	122	.408	6000	545	.091	80,000	1225	.015
400	141	.353	7000	588	.084	100,000	1250	.012
500	158	.316	7200	598	.083			

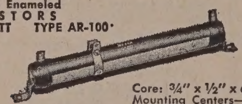
ADJUSTABLE
Vitreous Enameled
RESISTORS
75 WATT TYPE AR-75



Core: 9⁄16" x 5⁄16" x 6"
Mounting Centers—6¾"
With Brackets P-3747
Standard Lug #12

OHMS	100% RATING		OHMS	100% RATING		OHMS	100% RATING	
	VOLTS	AMPS		VOLTS	AMPS		VOLTS	AMPS
1	8	8.660	750	237	.316	8000	769	.096
2	12	6.120	800	242	.306	9000	819	.091
3	15	5.000	1000	274	.274	10,000	860	.086
4	17	4.330	1250	280	.244	12,000	948	.079
5	19	3.875	1500	334	.223	15,000	1050	.070
10	27	2.740	2000	386	.193	20,000	1220	.061
15	33	2.236	2250	409	.182	25,000	1225	.049
25	43	1.732	2500	432	.173	30,000	1260	.042
50	61	1.225	3000	474	.158	35,000	1270	.036
75	75	1.000	3500	511	.146	40,000	1280	.032
100	86	.866	4000	548	.137	45,000	1310	.029
200	122	.612	4500	581	.129	50,000	1320	.026
250	137	.548	5000	610	.122	60,000	1330	.022
300	150	.500	6000	666	.111	70,000	1340	.019
400	173	.433	7000	721	.103	80,000	1350	.017
500	193	.387	7200	735	.102	100,000	1360	.013

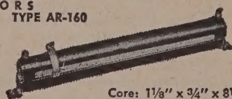
ADJUSTABLE
Vitreous Enameled
RESISTORS
100 WATT TYPE AR-100



Core: ¾" x ½" x 6½"
Mounting Centers—7¼"
With Brackets P-3689
Standard Lug #12

OHMS	100% RATING		OHMS	100% RATING		OHMS	100% RATING	
	VOLTS	AMPS		VOLTS	AMPS		VOLTS	AMPS
1	10	10.000	400	200	.500	7500	864	.115
2	14	7.070	500	223	.447	10,000	1000	.100
3	17	5.770	750	274	.365	15,000	1217	.081
4	20	5.000	1000	316	.316	20,000	1400	.070
5	22	4.470	1500	388	.259	25,000	1415	.053
10	31	3.160	2000	448	.224	30,000	1425	.047
25	50	2.000	2500	500	.200	40,000	1440	.036
50	70	1.414	3000	543	.181	50,000	1450	.029
100	100	1.000	4000	640	.160	60,000	1460	.024
200	141	.707	5000	705	.141	75,000	1474	.019
250	157	.630	6000	774	.129	100,000	1500	.015

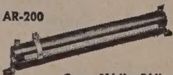
ADJUSTABLE
Vitreous Enameled
RESISTORS
160 WATT TYPE AR-160



Core: 1⅛" x ¾" x 8½"
Mounting Centers—9¼"
With Brackets P-4898
Standard Lug #14

OHMS	100% RATING		OHMS	100% RATING		OHMS	100% RATING	
	VOLTS	AMPS		VOLTS	AMPS		VOLTS	AMPS
1	12	12.650	250	200	.800	7,500	1096	.146
2	18	8.940	500	282	.565	10,000	1260	.126
3	21	7.300	1,000	400	.400	15,000	1560	.104
4	25	6.320	1,500	489	.326	20,000	1780	.089
5	28	5.650	2,000	564	.282	25,000	2000	.080
10	40	4.000	2,500	630	.252	30,000	2010	.067
15	49	3.265	3,000	693	.231	40,000	2020	.050
25	63	2.525	3,500	753	.215	50,000	2030	.040
50	89	1.786	4,000	800	.200	60,000	2040	.034
100	126	1.265	4,500	832	.185	75,000	2065	.027
200	178	.894	5,000	895	.179	80,000	2080	.025
						100,000	2100	.021

ADJUSTABLE
Vitreous Enameled
RESISTORS
200 WATT TYPE AR-200



Core: 1⅛" x ¾" x 10½"
Mounting Centers—11¼"
With Brackets P-4898
Standard Lug #14

OHMS	100% RATING		OHMS	100% RATING		OHMS	100% RATING	
	VOLTS	AMPS		VOLTS	AMPS		VOLTS	AMPS
1	14	14.140	1,000	447	.447	15,000	1725	.115
2	20	10.000	1,500	547	.365	20.000	2000	.100
3	24	8.162	2,000	632	.316	25,000	2225	.089
4	28	7.070	2,500	707	.283	30,000	2460	.082
5	31	6.325	3,000	776	.259	40,000	2480	.062
10	44	4.470	3,500	840	.240	50.000	2500	.050
25	70	2.828	4,000	900	.225	60,000	2500	.042
50	100	2.000	4,500	945	.210	75.000	2500	.033
100	141	1.414	5,000	1000	.200	100,000	2500	.025
250	224	.895	7,500	1222	.163			
500	316	.632	10,000	1410	.141			

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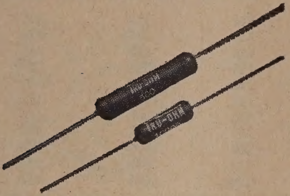
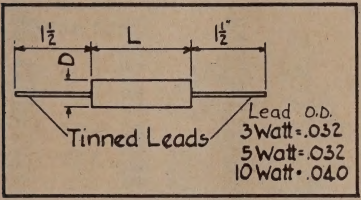
AXIAL LEAD Vitreous Enamel RESISTOR • TYPE VAL



TRU-OHM Vitreous enameled wire wound resistors with axial leads are available in a wide range of resistance values and wattage ratings.



WATTAGE	RESISTANCE RANGES	CORE DIA.	CORE LENGTH	LEAD DIA.	LEAD LENGTH
3	1-10000	5/32	7/16"	.032	1½"
5	1-25000	¼	⅞"	.032	1½"
10	1-50000	5/16	1¾"	.040	1½"
20	1-100000	½	2⅛"	.040	1½"

STANDARD RESISTANCE TOLERANCE ±5%

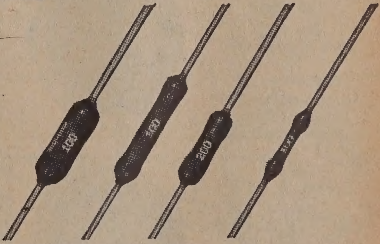
All welded construction, resistant to thermal shock and humidity are assured by thermally matching the expansion rates of core, enamel and end cad. Continuous operating temperature 340°C. Max. 40°C. ambient. These commercial units are engineered to meet and exceed the rigid requirements of the MIL-R-26-C specifications.

AXIAL LEAD PRECISION WIRE WOUND RESISTORS

With Exclusive Silicone Coating

TYPE S•AL Series

Miniature size — all welded construction — precision tolerances ±5% is standard for all types. ±2%, ±1% and ±½% tolerances are available at additional cost. Maximum power in minimum space.



STANDARD TYPES

TYPE	WATTAGE	LEAD SIZE Lgth.	LEAD SIZE Dia.	DIMENSIONS Lgth.	DIMENSIONS Dia.	CORE SIZE Lgth.	CORE SIZE Dia.	RESISTANCE Min.	RESISTANCE Max.
S • AL-1	1	1½	.032	5/32	⅜	⅛	5/16	1 Ω	3000 Ω
S • AL-3	3	1½	.032	7/32	½	5/32	7/16	1 Ω	5500 Ω
S • AL-5	5	1½	.032	5/16	29/32	¼	⅞	1 Ω	14000 Ω
S • AL-7	7	1½	.032	⅜	1 1/32	5/16	1	1 Ω	20000 Ω
S • AL-10	10	1½	.032	⅜	1 25/32	5/16	1¾	1 Ω	50000 Ω
S • AL-15	15	1½	.040	½	1 11/16	7/16	1½	1 Ω	55000 Ω
S • AL-20	20	1½	.040	½	2 3/16	7/16	2	1 Ω	90000 Ω

SPECIAL TYPES

TYPE	WATTAGE	LEAD SIZE Lgth.	LEAD SIZE Dia.	DIMENSIONS Lgth.	DIMENSIONS Dia.	CORE SIZE Lgth.	CORE SIZE Dia.	RESISTANCE Min.	RESISTANCE Max.
S • AL-1A	1	1½	.025	3/32	13/32	1/16	⅜	1 Ω	1500 Ω
S • AL-1B	1	1½	.025	3/32	17/32	1/16	½	1 Ω	3500 Ω
S • AL-2	2	1½	.032	3/16	13/16	⅛	¾	1 Ω	12000 Ω
S • AL-3A	3	1½	.032	3/16	9/16	⅛	9/16	1 Ω	6000 Ω
S • AL-3B	3	1½	.032	¼	⅝	3/16	⅝	1 Ω	8000 Ω
S • AL-7A	7	1½	.032	5/16	1 7/32	¼	1 3/16	1 Ω	39000 Ω

NOTE 1:

All S • AL Resistors are made to order.

Materials for Standard Types are Stock items.

Materials for Special Types must be purchased to order.

NOTE 2:

Overall Dimension Tolerances are ±1/32 on Diameter and ±1/16 on Length. (Tolerance on Length of 1 Watt Size is ±1/32.)

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General Sales Office: Chicago 18, Ill.

TRU-OHM

POWER RHEOSTATS

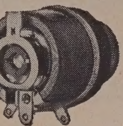
VITREOUS ENAMELED

Manufactured to meet and exceed MIL-R-22 Specifications

R-25

25 Watts —

Dia. — 1 9/16"
Back of panel dim.
1 5/16"
Shaft Dia. ¼"
Approx. 295° Rotat'n
Panel mtg. to ¼"
by ⅜"—32 bushing

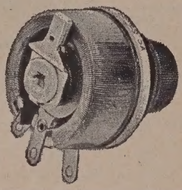


CAT. NO.	RESISTANCE	MAX. AMPS.
100	1	5.000
101	2	3.540
102	3	2.880
103	6	2.040
104	8	1.770
105	10	1.580
106	15	1.290
107	25	1.000
108	35	.845
109	50	.707
110	75	.575
111	100	.500
112	125	.445
113	175	.375
114	250	.316
115	350	,267
116	500	.222
117	750	.182
118	1000	.155
119	1500	.129
120	2500	.100
121	3500	.084
122	5000	.070

R-50

50 Watts

Dia. — 2 5/16
Back of panel dim.
1 7/16"
Shaft—Dia. ¼"
Approx. rotat'n 300°
Panel mtg. to ¼"
by ⅜"—32 bushing

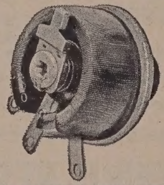


CAT. NO.	RESISTANCE	MAX. AMPS.
200	0.5	10.000
201	1	7.070
202	2	5.000
203	4	3,540
204	6	2.880
205	8	2.500
206	12	2.040
207	16	1.760
208	22	1.500
209	35	1.190
210	50	1.000
211	80	.790
212	125	.630
213	150	.574
214	225	.470
215	300	.408
216	500	.316
217	800	.250
218	1000	.223
219	1600	.176
220	2500	.141
221	3500	.119
222	5000	.100
223	8000	.079
224	10.000	.070

R-75

75 Watts

Dia.—2¾"
Back of panel dim.
1¾"
Shaft—Dia. ¼"
Approx. rotat'n 300°
Panel mtg. to ¼"
by ⅜—32 bushing

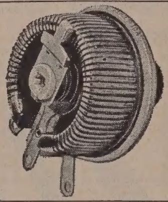


CAT. NO.	RESISTANCE	MAX AMPS.
300	0.5	12.300
301	1	8.660
302	2	6.120
303	3	5.000
304	5	3.880
305	7.5	3.160
306	10	2.740
307	16	2.170
308	25	1.730
309	50	1.230
310	75	1.000
311	100	.866
312	200	.612
313	300	.500
314	400	.433
315	500	.388
316	750	.316
317	1,000	.274
318	1,500	.224
319	2,000	.194
320	2,500	.173
321	5,000	.123
322	7,500	.100
323	10,000	.087

R-100

100 Watts

Dia. 3⅛"
Back of panel dim.
1¾"
Shaft—Dia. ¼"
Approx. rotat'n 300°
Panel mtg. to ¼"
by ⅜—32 bushing

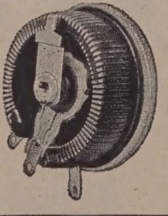


CAT. NO.	RESISTANCE	MAX. AMPS.
400	0.5	14.100
401	1	10.000
402	2	7.070
403	3	5.750
404	5	4.470
405	7.5	3.650
406	10	3.160
407	16	2.500
408	25	2.000
409	50	1.410
410	75	1.150
411	100	1.000
412	200	.707
413	300	.575
414	400	.500
415	500	.447
416	750	.365
417	1,000	.316
418	1,500	.258
419	2,000	.224
420	2,500	.200
421	5,000	.141
422	7,500	.115
423	10,000	.100

R-150

150 Watts

Dia.—4"
Back of panel Dim. 2"
Shaft Dia. ¼"
Approx. rotat'n 300°
Panel mtg. to ¼"
by ⅜—32 bushing or two 10-32 Flat Head Screws — mtg. centers ⅞" each side from shaft center.

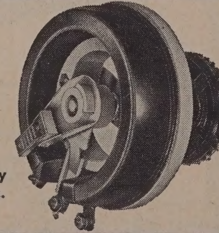


CAT. NO.	RESISTANCE	MAX. AMPS.
500	0.5	17.300
501	1	12.300
502	2	8.650
503	3	7.070
504	5	5.480
505	7.5	4.470
506	10	3.880
507	15	3.163
508	25	2.450
509	35	2.070
510	50	1.735
511	75	1.415
512	100	1.225
513	150	1.000
514	200	.865
515	250	.775
516	350	.655
517	500	.548
518	750	.447
519	1,250	.346
520	1,800	.288
521	2,250	.259
522	3,000	.224
523	4,500	.182
524	7,500	.141
525	10,000	.122

R-300

300 Watts

Dia. 6"
Back of panel dim.
2¼"
Shaft Dia. ⅜"
Approx. rotat'n 315°
Panel mtg. to 1¼"
by two ¼ — 20 by 1½ Flat Head mtg. Screws



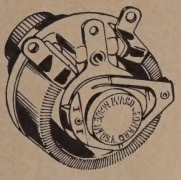
CAT. NO.	RESISTANCE	MAX. AMPS.
700	1	17.32
701	2	12.24
702	3	10.00
703	4	8.66
704	5	775
705	7.5	6.32
706	10	5.48
707	15	4.47
708	25	3.46
709	50	2.45
710	75	2.00
711	100	1.73
712	150	1.41
713	200	1.22
714	300	1.00
715	400	.87
716	700	.66
717	900	.58
718	1,200	.50
719	1,500	.45
720	1,750	.41
721	2,500	.35

You are guaranteed to receive 24 hour delivery as we maintain jobber stock items!

Mfd. by TRU-OHM PRODUCTS DIVISION OF MODEL ENG. & MFG. INC. **General Sales Office: Chicago 18, Ill.**

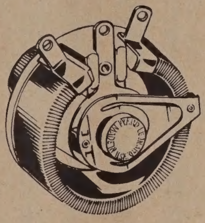
Vitrohm® RING RHEOSTATS

WARD LEONARD



TYPE 25R

TYPE 50R



25-Watt — 50-Watt

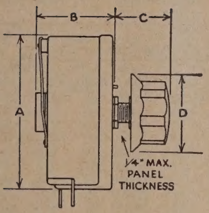
The Ward Leonard 25-watt (Type 25R) and 50-watt (Type 50R) Ring Rheostats are especially suited for use in electronic and electrical circuits where gradual and positive resistance change is essential. Balanced contact arms, self-lubricating metal graphite contact shoes, and no backlash in the drive shaft combine to assure uniform contact pressure and smooth operation.

Standard shaft length for back-of-board mounting on ¼″ panel.

25 WATTS **TYPE 25R**
Dimensions: A-1⁹⁄₁₆″ B-1⅛″ C-1″ D-1½″

50 WATTS **TYPE 50R**
Dimensions: A-2⁵⁄₁₆″ B-1⅛″ C-1″ D-1½″

Current M.A.	Approx. No. of Steps	Price With Knob	Ohms	Current M.A.	Approx. No. of Steps	Price With Knob
5000	32	$4.92	1	7070	45	$5.44
3540	32	4.92	2	5000	56	5.44
2880	51	4.92	3	*	*	*
*	*	*	4	3540	56	5.44
2040	85	4.92	6	2880	94	5.44
1770	95	4.92	8	2500	94	4.92
1580	95	4.92	10	2230	94	4.92
1280	102	4.40	15	1810	113	4.92
1000	102	4.40	25	1415	144	4.92
840	102	4.40	35	1190	144	4.92
707	97	4.40	50	1000	180	
574	129		75	812	144	4.92
500	162	4.40	100	707	216	4.92
407	190	4.40	150	574	252	4.92
316	200	4.40	250	447	245	4.92
267	220	4.40	350	374	288	4.92
223	245	4.40	500	316	324	4.92
181	292	4.40	750	256	373	5.19
158	315	4.92	1000	223	390	5.19
128	369	4.92	1500	181	396	5.19
100	388	4.92	2500	141	547	5.19
84	388	5.19	3500	119	547	5.44
70	595	5.19	5000	100	786	5.44
*	*	*	7500	81	905	5.44
*	*	*	10000	70	947	5.44



DIMENSION SKETCH

SEE DIMENSIONS HEADING EACH TABLE

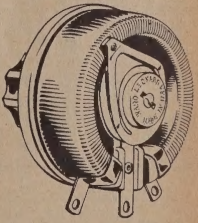
The Ring Rheostats shown on this page are standard values and sizes carried in stock at ~~our~~ factory and by our Distributors. Information concerning Rheostats of special construction available on request.

STANDARD RESISTANCE TOLERANCE ±10%

100-Watt — 150-Watt

The Ward Leonard 100-watt (Type 100R) and 150-watt (Type 150R) Ring Type Rheostats are of sturdy construction for electrical applications, such as control of fractional h.p. motors, rectifiers, voltage regulators, and some electronic circuits, such as filament and battery control.

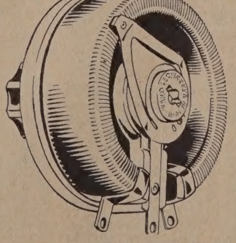
TYPE 100R



100 WATTS **TYPE 100R**
Dimensions: A-3⁵⁄₃₂″ B-1½″ C-1″ D-1½″

150 WATTS **TYPE 150R**
Dimensions: A-4″ B-1¾″ C-1″ D-1½″

Current M.A.	Approx No. of Steps	Price With Knob	Ohms	Current M.A.	Approx. No. of Steps	Price With Knob
10000	30	$8.01	1	12240	39	$10.07
7070	56	8.01	2	8660	39	10.07
5740	66	8.01	3	7070	70	10.07
4470	56	8.01	5	5470	73	10.07
3640	66	8.01	7.5	4470	70	10.07
3160	104	8.01	10	3870	70	10.07
2560	113	8.01	15	3160	120	10.07
2000	144	7.50	25	2440	152	9.55
1415	180	7.50	50	1730	190	9.55
1150	180	7.50	75	1415	228	9.55
1000	216	7.50	100	1224	228	9.55
707	252	7.50	200	866	265	9.55
574	252	7.50	300	707	303	9.55
500	252	7.50	400	612	342	9.55
447	324	7.50	500	547	342	9.55
364	396	7.50	750	447	418	10.07
316	410	8.01	1000	387	432	10.07
223	410	8.01	2000	273	575	10.59
200	410	8.01	2500	244	456	10.59
141	685	8.53	5000	173	865	11.62
115	820	9.05	7500	141	1000	11.62
100	820	9.55	10000	122	1000	12.64



TYPE 150R

300 WATT TYPE 300 R
Dimensions: A-6″ B-2³⁄₁₆″ Shaft—⅜″ x 2″

Resistance Values 1 to 2500 ohms
Price with Knob $16.45

Vitrohm® RESISTORS

WARD LEONARD

Wire-wound, power type, vitreous enamel resistors designed for high reliability. Coated with famous crazeless VITROHM enamel.

5 WATTS   Size—1″ x 5/16″   TYPE 5F

Ohms	m.a.	Price
1	2230	$0.52
1.5	1820	.52
2	1580	.52
3	1290	.52
4	1117	.52
5	1000	.52
7.5	811	.52
10	707	.52
12	644	.52
15	577	.52
20	500	.52
25	450	.52
30	408	.52
35	378	.52
40	353	.52
50	316	.52
75	257	.52
100	223	$0.52
125	200	.52
150	182	.52
200	158	.52
225	148	.52
250	141	.52
300	129	.52
350	119	.52
400	112	.52
450	105	.52
500	100	.52
600	91	.52
700	84	.52
750	81	.52
800	79	.52
900	74	.52
1000	70	.52
1100	67	.56
1200	64	$0.56
1250	63	.56
1500	57	.56
1750	53	.56
2000	50	.56
2250	47	.56
2500	45	.56
3000	40	.56
3500	37	.56
4000	35	.56
4500	33	.56
5000	31	.56
6000	28	.58
7000	26	.58
7500	25	.58
8000	25	.58
9000	23	.58
10000	22	.58

10 WATTS   Type 10F—Fixed   Type 10A—Adj.

Size—1¾″ x 5/16″ Mtg. Centers—2⅛″

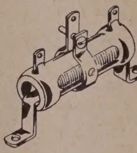
Ohms	m.a.	Price Fixed	Price Adj.
1	3160	$0.57	$1.14
1.5	2580	.57	*
2	2235	.57	1.14
3	1825	.57	1.14
4	1580	.57	*
5	1415	.57	1.14
7.5	1155	.57	1.14
10	1000	.57	1.14
12	913	.57	*
15	815	.57	1.14
20	707	.57	1.14
25	630	.57	1.14
30	577	.57	*
35	534	.57	*
40	500	.57	*
50	450	.57	1.14
75	365	.57	1.14
100	316	.57	1.14
125	283	.57	*
150	258	.57	1.14
200	224	.57	1.14
225	211	.57	*
250	200	.57	1.14
300	182	.57	1.14
350	169	.57	1.14
400	158	.57	1.14
450	149	.57	*
500	142	.57	1.14
600	129	.57	1.14
700	120	.57	*
750	115	.57	1.14
800	112	.57	1.14
900	105	.57	*
1000	100	.57	1.14
1100	95	.61	*
1200	91	$0.61	*
1250	89	.61	$1.18
1500	81	.61	1.18
1750	75	.61	*
2000	70	.61	1.18
2250	66	.61	*
2500	63	.61	1.18
3000	58	.61	1.18
3500	53	.61	1.18
4000	50	.61	1.18
4500	47	.61	1.18
5000	45	.61	1.18
6000	41	.70	1.27
7000	38	.70	1.27
7500	36	.70	1.27
8000	35	.70	1.27
8500	34	.70	1.27
9000	33	.70	1.27
10000	32	.70	1.27
11000	30	.77	
12000	29	.77	
12500	28	.77	
13500	27	.77	
15000	25.5	.77	
16000	25	.77	
17500	24	.77	
18000	23	.77	
20000	22	.77	
22500	21	.83	
25000	20	.83	
30000	18	.83	
35000	17	.83	
40000	16	.83	
45000	15	.92	
50000	14	.92	

20 WATTS • TYPE 20F

Size—2″ x 9/16″ Mtg. Centers—2⅝″

Ohms	Current m.a.	Price
1	4480	$0.68
3	2580	.68
5	2000	.68
10	1410	.68
15	1150	.68
25	900	.68
50	630	.68
75	517	.68
100	450	.68
150	365	.68
175	340	.68
200	320	.68
250	285	.68
300	258	.68
350	240	.68
400	224	.68
500	200	.68
650	175	.68
700	169	.68
750	163	.68
800	155	.68
850	153	$0.68
1000	141	.68
1200	130	.70
1250	125	.70
1500	115	.70
1750	107	.70
1850	104	.70
2000	100	.70
2250	94	.70
2400	91	.70
2500	90	.70
2750	85	.70
3000	81	.70
3500	76	.70
4000	70	.70
4500	67	.70
5000	63	.70
6000	57	.83
7000	53	.83
7500	51	.83
8000	50	.83
10000	45	$0.83
12500	40	.85
15000	36	.85
20000	32	.85
25000	28	.99
30000	26	.99
35000	24	.99
40000	22	.99
45000	21	1.15
50000	20	1.15
55000	18	1.15
60000	16	1.15
65000	15	1.37
70000	14	1.37
75000	13	1.37
80000	12	1.37
85000	11.5	1.57
90000	11	1.57
95000	10.5	1.57
100000	10	1.57

Types 5F, 10F, and 20F. Furnished with wire terminal leads. Brackets supplied on request.



Type 10A, 25A, 50A, 80A, 100A, 160A, 200A. Furnished with mounting brackets and one adjustable band.

Order by Type Number and Resistance Value.

Asterisks (*) in Tables Indicate that Resistors are not Stock Items.

ADJUSTABLE BANDS

Screw Driver Type

Size of Resistor	Cat. No.	Price
10 Watts	609Z	$0.26
25 Watts	612A	.26
50 Watts	612B	.26
80 Watts	612B	.26
100 Watts	615D	.26
160 Watts	615D	.26
200 Watts	615D	.26

Bakelite Knob Type

Size of Resistor	Cat. No.	Price
25 Watts	610A	$0.40
50 Watts	610B	.40
80 Watts	610B	.40
100 Watts	619D	.40
160 Watts	619D	.40
200 Watts	619D	.40

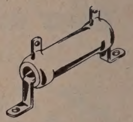
80 WATTS • TYPE 80A

Size—6½″ x ¾″
Mtg. Centers—7¼″

Ohms	Current m.a.	Price
1	8940	$2.39
2	6320	2.39
3	5160	1.87
4	4470	1.87
5	4000	1.87
10	2830	1.87
15	2310	1.87
25	1790	1.87
50	1260	1.87
75	1030	1.87
100	894	1.87
200	632	1.87
250	565	1.87
300	515	1.87
400	447	1.87
500	400	1.87
750	325	1.87
800	316	1.87
1000	282	1.87
1250	253	1.92
1500	231	1.92
2000	200	1.92
2250	188	1.92
2500	178	1.92
3000	161	$1.92
3500	151	1.92
4000	141	1.92
4500	133	1.92
5000	126	1.92
6000	115	2.01
7000	107	2.01
7500	103	2.01
8000	100	2.01
9000	94	2.01
10000	89	2.01
15000	73	2.13
20000	63	2.13
25000	57	2.32
30000	51	2.32
35000	48	2.32
40000	45	2.32
45000	41	2.52
50000	40	2.52
60000	36	2.52
70000	33	2.78
80000	31	2.78
100000	28	2.93

HEAVY DUTY RESISTORS

Types 25F, 50F, 100F, 160F, 200F Furnished with lug terminals and mounting brackets.



25 WATTS   Type 25F—Fixed   Type 25A—Adj.

Size—2″ x ⅝″ Mtg. Centers—2⅝″

Ohms	m.a.	Price Fixed	Price Adj.
1	5000	$0.72	$1.29
2	3535	.72	1.29
3	2890	.72	1.29
4	2500	.72	*
5	2230	.72	1.29
7.5	1825	*	1.29
10	1580	.72	1.29
15	1290	.72	1.29
20	1115	*	1.29
25	1000	.72	1.29
50	710	.72	1.29
75	580	.72	1.29
100	500	.72	1.29
150	410	.72	1.29
200	354	.72	1.29
250	315	.72	1.29
300	289	.72	1.29
400	250	.72	1.29
500	224	.72	1.29
750	182	.72	1.29
800	177	.72	1.29
850	170	.72	1.29
1000	158	.72	1.29
1250	140	.75	1.32
1500	129	.75	1.32
2000	112	.75	1.32
2250	105	*	1.32
2500	100	$0.75	$1.32
3000	90	.75	1.32
3500	85	.75	1.32
4000	80	.75	1.32
4500	74	*	1.32
5000	70	.75	1.32
6000	65	.85	1.42
7000	60	*	1.42
7500	58	.85	1.42
8000	56	*	1.42
8500	54	.85	1.42
9000	52	*	1.42
10000	50	.85	1.42
12000	46	.90	1.47
15000	41	.90	1.47
20000	34	.90	1.47
25000	32	1.04	1.61
30000	29	1.04	
35000	27	1.04	
40000	25	1.04	
50000	20	1.21	
60000	17	1.21	
70000	14	1.42	
75000	13	1.42	
80000	12	1.42	
100000	10	1.64	

50 WATTS   Type 50F—Fixed   Type 50A—Adj.

Size—4½″ x ¾″ Mtg. Centers—5¼″

Ohms	m.a.	Price Fixed	Price Adj.
1	7070	$1.55	$2.12
2	5000	1.11	1.68
3	4080	1.11	1.68
4	3535	1.11	1.68
5	3160	1.11	1.68
10	2235	1.11	1.68
25	1415	1.11	1.68
50	1000	1.11	1.68
75	815	1.11	1.68
100	707	1.11	1.68
150	575	1.11	1.68
200	500	1.11	1.68
250	445	1.11	1.68
300	408	1.11	1.68
400	353	1.11	1.68
500	316	1.11	1.68
750	258	1.11	1.68
800	250	1.11	1.68
1000	224	1.11	1.68
1250	200	*	1.71
1500	180	1.14	1.71
2000	160	1.14	1.71
2250	150	*	1.71
2500	141	1.14	1.71
3000	130	1.14	1.71
3500	120	*	1.71
4000	110	1.14	1.71
4500	105	*	1.71
5000	100	$1.14	$1.71
6000	91	1.23	1.80
7000	85	*	1.80
7500	82	1.23	1.80
8000	79	1.23	1.80
9000	75	*	1.80
10000	71	1.23	1.80
12000	65	1.35	1.92
12500	63	1.35	*
15000	58	1.35	1.92
20000	50	1.35	1.92
25000	45	1.54	2.11
30000	41	1.54	2.11
35000	38	1.54	*
40000	35	1.54	2.11
45000	33	1.72	*
50000	32	1.72	2.29
60000	29	*	2.29
75000	23	1.97	2.54
80000	21	*	2.54
100000	17	2.13	2.70
125000	14	2.57	
150000	12	2.70	
175000	10	2.79	
200000	9	2.89	
225000	8	3.24	
250000	7	3.24	

100 WATTS   Type 100F—Fixed   Type 100A—Adj.

Size—6½″ x 1⅛″ Mtg. Centers—7¼″

Ohms	m.a.	Price Fixed	Price Adj.
1	10000	$2.16	$2.73
2	7070	2.16	2.73
3	5770	2.16	2.73
4	5000	1.54	2.11
5	4470	1.54	2.11
10	3160	1.54	2.11
25	2000	1.54	2.11
50	1410	1.54	2.11
75	1150	1.54	*
100	1000	1.54	2.11
125	895	1.54	*
150	815	1.54	*
200	707	*	2.11
250	630	1.54	2.11
400	500	*	2.11
500	447	1.54	2.11
750	365	1.54	2.11
1000	316	1.54	2.11
1250	285	1.60	*
1500	260	1.60	2.17
2000	225	1.60	2.17
2500	200	$1.60	$2.17
3000	180	1.60	2.17
3500	170	1.60	*
4000	158	1.60	2.17
4500	150	1.60	2.17
5000	141	1.60	2.17
6000	130	*	2.30
7500	115	1.73	2.30
10000	100	1.73	2.30
15000	80	1.87	2.44
20000	70	1.87	2.44
25000	63	2.13	2.70
30000	58	2.13	2.70
35000	54	2.13	*
40000	50	2.13	2.70
50000	45	2.21	2.78
60000	41	2.21	2.78
70000	38	2.45	*
75000	36	2.45	3.02
100000	32	2.75	3.32

Vitrohm RESISTORS

Order by Type Number and Resistance Value. Asterisks (*) in Table indicate that Resistors are not Stock items.

WARD LEONARD

160 WATTS Type 160F—Fixed Type 160A—Adj.
Size—8½" x 1⅛" Mtg. Centers—9¼"

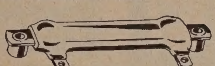
Ohms	m.a.	Fixed	Adj.	Ohms	m.a.	Fixed	Adj.
1	12650	$3.21	$4.09	2500	252	$2.32	$3.20
2	8940	3.21	4.09	3000	230	2.32	3.20
3	7300	3.21	4.09	3500	215	2.32	3.20
4	6320	3.21	4.09	4000	200	2.32	3.20
5	5650	3.21	4.09	4500	185	2.32	3.20
10	4000	2.28	3.16	5000	178	2.32	3.20
15	3265	2.28	3.16	7500	146	2.53	3.41
25	2525	2.28	3.16	10000	126	2.53	3.41
50	1785	2.28	3.16	15000	105	2.71	3.59
75	1460	2.28	*	20000	90	2.71	3.59
100	1265	2.28	3.16	25000	80	2.80	3.68
150	1035	2.28	*	30000	73	2.80	3.68
200	894	2.28	3.16	35000	68	2.80	*
250	800	2.28	3.16	40000	64	2.80	3.68
500	565	2.28	3.16	50000	57	2.89	3.77
750	460	2.28	*	60000	52	2.89	3.77
1000	400	2.28	3.16	75000	46	3.08	3.96
1500	326	2.32	3.20	80000	45	3.08	3.96
2000	280	2.32	3.20	100000	40	3.26	4.14

200 WATTS Type 200F—Fixed Type 200A—Adj.
Size—10½" x 1⅛" Mtg. Centers—11¼"

Ohms	m.a.	Fixed	Adj.	Ohms	m.a.	Fixed	Adj.
1	14140	$3.46	$4.34	3500	240	$2.53	$3.41
2	10000	3.46	4.34	4000	225	2.53	3.41
3	8162	3.46	4.34	4500	210	2.53	3.41
4	7070	3.46	4.34	5000	200	2.53	3.41
5	6320	3.46	4.34	7500	163	2.71	3.59
10	4470	2.46	3.34	10000	141	2.71	3.59
25	2825	2.46	3.34	15000	115	2.89	3.77
50	2000	2.46	3.34	20000	100	2.89	3.77
75	1630	2.46	*	25000	90	2.98	3.86
100	1414	2.46	3.34	30000	82	2.98	3.86
150	1150	2.46	*	35000	76	2.98	*
250	900	2.46	3.34	40000	71	2.98	3.86
500	632	2.46	3.34	50000	63	3.08	3.96
750	515	2.46	*	60000	58	3.08	3.96
1000	447	2.46	3.34	75000	52	3.26	4.14
1500	365	2.53	3.41	100000	45	3.46	4.34
2000	315	2.53	3.41	125000	40	*	4.57
2500	282	2.53	3.41	150000	35	*	4.83
3000	260	2.53	3:41				

STRIPOHMS

Order by Type Number and Resistance Value



Vitreous enameled wire-wound resistors built on a strong refractory core, and provided with low mounting brackets. Particularly suited for applications where space is limited. Specially adapted to stacking for networks.

The "Ministrip" is smaller in size than the standard Stripohm. May be stacked by using 1/32" washers. Rated at 20 watts.

MINISTRIP

20 WATTS • TYPE 20S

2" Long—Mtg. Centers 2⁵⁄₁₆"
Width ⁷⁄₁₆"

Ohms	Current m.a.	Price	Ohms	Current m.a.	Price
1	4480	$0.99	1500	115	$0.99
3	2580	.99	2000	100	.99
5	2000	.99	2500	90	.99
10	1410	.99	3000	81	1.04
15	1150	.99	3500	76	1.04
25	900	.99	4000	70	1.04
50	630	.99	5000	63	1.04
100	450	.99	7500	51	1.10
150	365	.99	10000	45	1.16
200	320	.99	15000	36	1.20
250	285	.99	20000	32	1.26
400	224	.99	25000	28	1.33
500	200	.99	30000	26	1.38
750	163	.99	35000	24	1.38
1000	141	.99	40000	22	1.44
1250	125	.99	50000	20	1.44

30 WATTS • TYPE 30S
1¼" Long—Mtg. Centers 2"

Ohms	Current m.a.	Price	Ohms	Current m.a.	Price
1	5480	$1.42	500	244	$1.42
3	3160	1.42	750	200	1.42
5	2450	1.42	1000	173	1.42
10	1730	1.42	1250	154	1.42
15	1420	1.42	1500	142	1.42
25	1095	1.42	2000	122	1.42
50	774	1.42	2500	100	1.42
100	547	1.42	3000	100	1.52
150	447	1.42	3500	92	1.52
200	387	1.42	4000	86	1.52
250	346	1.42	5000	77	1.52
400	273	1.42			

40 WATTS • TYPE 40S
2" Long—Mtg. Centers 2¾"

Ohms	Current m.a.	Price	Ohms	Current m.a.	Price
1	6320	$1.47	750	230	$1.47
3	3650	1.47	1000	200	1.47
5	2830	1.47	1250	180	1.47
10	2000	1.47	1500	163	1.47
15	1630	1.47	2000	141	1.47
25	1270	1.47	2500	126	1.47
50	894	1.47	3000	114	1.59
100	632	1.47	3500	106	1.59
150	510	1.47	4000	100	1.59
200	447	1.47	5000	88	1.59
250	400	1.47	7500	73	1.65
400	315	1.47	10000	63	1.77
500	283	1.47	15000	51	1.86

55 WATTS • TYPE 55S
3½" Long—Mtg. Centers 4¼"

Ohms	Current m.a.	Price	Ohms	Current m.a.	Price
1	7420	$1.70	1250	209	$1.70
3	4280	1.70	1500	191	1.70
5	3320	1.70	2000	165	1.70
10	2350	1.70	2500	148	1.70
15	1910	1.70	3000	135	1.81
25	1480	1.70	3500	129	1.81
50	1050	1.70	4000	117	1.81
100	741	1.70	5000	104	1.81
150	604	1.70	7500	84	1.87
200	522	1.70	10000	74	1.99
250	469	1.70	15000	60	2.08
400	370	1.70	20000	52	2.15
500	331	1.70	25000	47	2.28
750	270	1.70	30000	42	2.39
1000	234	1.70			

65 WATTS • TYPE 65S
4¾" Long—Mtg. Centers 5½"

Ohms	Current m.a.	Price	Ohms	Current m.a.	Price
1	8060	$1.95	1500	208	$1.95
3	4650	1.95	2000	180	1.95
5	3610	1.95	2500	161	1.95
10	2550	1.95	3000	146	2.04
15	2080	1.95	3500	136	2.04
25	1610	1.95	4000	127	2.04
50	1140	1.95	5000	114	2.04
100	806	1.95	7500	92	2.12
150	658	1.95	10000	80	2.23
200	570	1.95	15000	65	2.31
250	509	1.95	20000	57	2.40
400	403	1.95	25000	51	2.53
500	360	1.95	30000	46	2.62
750	294	1.95	35000	43	2.62
1000	254	1.95	40000	40	2.73
1250	228	1.95	50000	36	2.73

75 WATTS
TYPE 75S
6" Long
Mtg. Centers 6¾"

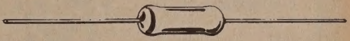
Ohms	Current m.a.	Price
1	8660	$2.12
3	5000	2.12
5	3870	2.12
10	2740	2.12
15	2235	2.12
25	1730	2.12
50	1220	2.12
100	866	2.12
150	707	2.12
200	612	2.12
250	550	2.12
400	433	2.12
500	387	2.12
750	315	2.12
1000	274	2.12
1250	245	2.12
1500	224	2.12
2000	193	2.12
2500	173	2.12
3000	158	2.22
3500	146	2.22
4000	137	2.22
5000	122	2.22
7500	100	2.28
10000	87	2.40
15000	71	2.48
20000	61	2.57
25000	55	2.70
30000	50	2.80
35000	46	2.80
40000	43	2.89
50000	37	2.89
60000	35	3.03
65000	33	3.03

AXIOHMS

Vitreous enameled wire-wound resistors with 1½" tinned copper leads for self-mounting.

The same fine materials used in the manufacture of Ward Leonard Vitrohm Resistors are used in making Axiohms.

Order by Type Number and Resistance Value.



3 WATTS Size—½" x ³⁄₁₆" **TYPE 3X**

Ohms	Current m.a.	Price	Ohms	Current m.a.	Price	Ohms	Current m.a.	Price
1	1732	$0.59	100	173	$0.59	1100	52	$0.62
1.5	1414	.59	125	155	.59	1200	50	.62
2	1225	.59	150	141	.59	1250	49	.62
3	1000	.59	200	122	.59	1500	45	.62
4	866	.59	225	115	.59	1750	41	.62
5	775	.59	250	110	.59	2000	39	.62
7.5	632	.59	300	100	.59	2250	37	.62
10	548	.59	350	93	.59	2500	35	.62
12	500	.59	400	87	.59	3000	32	.62
15	447	.59	450	82	.59	3500	29	.62
20	387	.59	500	77	.59	4000	27	.62
25	346	.59	600	71	.59	4500	26	.62
30	316	.59	700	66	.59	5000	25	.62
35	293	.59	750	63	.59	6000	22	.66
40	274	.59	800	61	.59	6500	21	.66
50	245	.59	900	58	.59			
75	200	.59	1000	55	.59			

5 WATTS Size—1" x ¹¹⁄₃₂" **TYPE 5X**

1	2230	$0.61	125	200	$0.61	1250	63	$0.67
1.5	1820	.61	150	182	.61	1500	57	.67
2	1580	.61	200	158	.61	1750	53	.67
3	1290	.61	225	148	.61	2000	50	.67
4	1117	.61	250	141	.61	2250	47	.67
5	1000	.61	300	129	.61	2500	45	.67
7.5	811	.61	350	119	.61	3000	40	.67
10	707	.61	400	112	.61	3500	37	.67
12	644	.61	450	105	.61	4000	35	.67
15	577	.61	500	100	.61	4500	33	.67
20	500	.61	600	91	.61	5000	31	.67
25	450	.61	700	84	.61	6000	28	.70
30	408	.61	750	81	.61	7000	26	.70
35	378	.61	800	79	.61	7500	25	.70
40	353	.61	900	74	.61	8000	25	.70
50	316	.61	1000	70	.61	9000	23	.70
75	257	.61	1100	67	.67	10000	22	.70
100	223	.61	1200	64	.67			

10 WATTS Size—1¾" x ¹³⁄₃₂" **TYPE 10X**

1	3160	$0.68	300	182	$0.68	6000	41	$0.84
1.5	2580	.68	350	169	.68	7000	38	.84
2	2235	.68	400	158	.68	7500	36	.84
3	1825	.68	450	149	.68	8000	35	.84
4	1580	.68	500	142	.68	8500	34	.84
5	1415	.68	600	129	.68	9000	33	.84
7.5	1155	.68	700	120	.68	10000	32	.84
10	1000	.68	750	115	.68	11000	30	.94
12	913	.68	800	112	.68	12000	29	.94
15	815	.68	900	105	.68	12500	28	.94
20	707	.68	1000	100	.68	13500	27	.94
25	630	.68	1100	95	.74	15000	25.5	.94
30	577	.68	1200	91	.74	16000	25	.94
35	534	.68	1250	89	.74	17500	24	.94
40	500	.68	1500	81	.74	18000	23	.94
50	450	.68	1750	75	.74	20000	22	.94
75	365	.68	2000	70	.74	22500	21	.99
100	316	.68	2250	66	.74	25000	20	.99
125	283	.68	2500	63	.74	30000	18	.99
150	258	.68	3000	58	.74	35000	17	.99
200	224	.68	3500	53	.74	40000	16	.99
225	211	.68	4000	50	.74	45000	15	1.11
250	200	.68	4500	47	.74	50000	14	1.11
			5000	45	.74			

WORKMAN TV INC.

SARASOTA, FLORIDA.

Model F4.7
4.7 Ohms
5 watts.
LIST .65

Model #FB1
Universal
LIST 1.65

Model F10
10 Ohms
5 watts.
LIST .65

Model F5
5 Ohms
5 watts.
LIST .65

Exactohm FUSED RESISTOR

EXACT REPLACEMENT VALUES FOR ALL TV AND RADIOS FROM ADMIRAL TO ZENITH

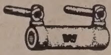
MODEL #FRK-KIT OF 10 ASSORTED VALUES.
LIST 5.76

Model F22
22 Ohms
5 watts.
LIST .65

Model F5.6
5.6 Ohms
5 watts.
LIST .65

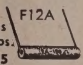
Model F150
150 Ohms
5 watts.
LIST .65

Model F6
6 Ohms
5 watts.
LIST .65



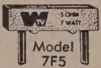
Model R7
7.5 ohms-3 amps.
LIST .72

Model F80
7.5 Ohms
3 Amps
LIST .65



Model F12A
150 Ohms
0.12 Amps.
LIST .65

Model F9
9 Ohms
5 watts.
LIST .65

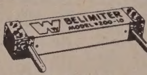


Model 7F5
5 Ohms
7 Watts
LIST .72

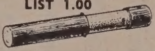
Model 15F7.5
7.5 Ohms 15 Watts
LIST .96

BELIMITER

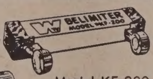
BY BEL FUSE, INC.



Model 200-10
LIST .82



Model LC-200
LIST 1.00



Model KF-200
LIST 1.00

NEW PROTECTIVE DEVICE USED IN DAMPER CIRCUIT OF RCA TV RECEIVERS INSTEAD OF CONVENTIONAL FUSE

"WISSH" CONTACT CLEANER

Model H32
LIST 5.42

Kit containing full quart with 3 dispensers. Non-Flammable. Does not contain carbon Tetrachloride.

SUPER WISSH
AEROSOL CONTACT CLEANER

Super fast action
Model S6 **LIST 3.50**

Modern Handy Aerosol Spray Applicator with Pin-Point control of spray.
Model H6 **LIST 1.65**

Globar

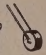
HEAVY DUTY TEMPERATURE SENSITIVE RESISTORS FOR ALL TV & RADIOS FROM ADMIRAL TO ZENITH

Model FR2
LIST 2.80

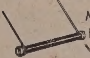
Model T1
LIST 1.60

Model FR19
LIST 1.50

Model 051
LIST 1.50

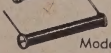


Model FR9
LIST 1.65



Model 041
LIST 1.60

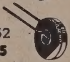
Model FR11
LIST 1.50



Model 054
LIST 2.20

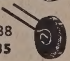
Model FR50
LIST 1.20

Model FR31
LIST 1.60



Model 052
LIST 1.85

Model FR43
LIST 2.00



Model 088
LIST 1.85

Model FR100
LIST 1.20

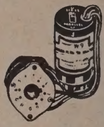
Model FR.49
LIST 1.60

Model FR5-8
LIST 1.50

Model FR5K
LIST .79

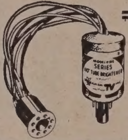
SUPER BRIGHTENERS.

GUARANTEED OUTPUT 9 VOLTS
8.5 VOLTS ISOLATION



For Standard Tubes.

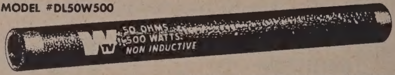
W2—Parallel —LIST 2.65
W3—Series —LIST 2.90
W4—Isolation —LIST 3.70
W9—Universal—LIST 4.15



For 110° Picture Tubes.

W5–Parallel (RCA Type)–LIST 3.90
W6–Series (RCA Type)–LIST 4.15
W7–Parallel (SYL. Type)—LIST 3.90
W8–Series (SYL. Type)—LIST 4.15

MODEL #DL50W500



50Ω 500 WATT

SPECIAL GLOBAR RESISTORS FOR DUMMY LOADS

Resistance Values up to 1800 Ohms, Wattages up to 118 Watts

PRICES AND DELIVERY QUOTED ON REQUEST.

SERVICE AIDS

XTEND-IT

24" Extension Harness for RCA and Sylvania Type 110° Picture Tubes.

Model X1
LIST 2.15

Model X2
LIST 2.15

ADAPT-IT

Model D1
LIST 2.63

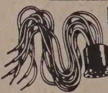
Model D2
LIST 2.63

Model D3
LIST 2.63

Model D4
LIST 2.63

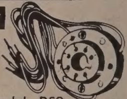
Convert RCA Sylvania type 110° CRT base to Standard (Duo-Decal) Converts RCA 110°CRT base to Sylvania or Sylvania to RCA

REPLACEMENT SOCKET



RCA or Sylvania type 110° CRT socket assembly with 24" leads.

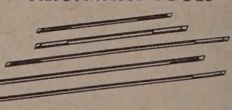
Model RS1
LIST 1.00



Model RS2
LIST 1.00

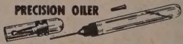
ALIGNMENT TOOLS

MODEL	LIST
DS-7 7"x⅛"	1.25
DS-8 8"x3/16"	1.25
DS-12 12"x⅛"	1.40
DS-14 14"x3/16	1.65
DS-16 16"x⅛"	1.65



110° PICTURE TUBE
PIN STRAIGHTENER
Model ST1
LIST .85

PRECISION OILER



Model PO-1 **LIST 1.10**

WORKMAN TV INC.
SARASOTA, FLORIDA.

SERVICE ACCESSORIES

HANDI PLUG

High quality phono plug with strain relief handle and finger-pull.
Model #HP LIST .25

POWER TRANSISTOR MOUNTING KIT

Model #TMK LIST .95

POWDERED IRON CORES

kit of assorted cores which cover most needs in TV and radio servicing.
Model #PS10 LIST .95

WIREWOUND RESISTORS

10 WATT ERECTOHM

Direct replacement wire wound, filament resistors.
8 POPULAR VALUES
Model #E10 LIST 1.40

30 WATT ERECTOHM

Direct replacement wire wound, filament resistors.
18 POPULAR VALUES
Model #30W LIST 1.60

10 WATT WIREWOUND RESISTOR

48 POPULAR VALUES
Model #10W LIST .65

CANDOHM

Exact replacement for 41 POPULAR VALUES

SQUARE-OHM

Exact Replacement For Transistor Auto Radios.

MODEL		LIST
T27	0.27 Ohm - 5 Watt	.48
T33	0.33 Ohm - 5 Watt	.48
T47	0.47 Ohm - 5 Watt	.48

POWER-OHM

Wirewound Filament Resistor

41 Ohms—25 Watts
Model #148 LIST 1.56

51 Ohms— 30 Watts
Model #151 LIST 2.00

CARBON BAR RESISTORS

HIGH VOLTAGE FILTER RESISTOR FOR DOUBLER CIRCUITS

Model #1L	Model #1.5L	Model #2L	Model #2.5L
1 meg-4 watts.	1.5 meg-4 watts.	2 meg- 4 watts.	2.5 meg-4 watts.
LIST .95	LIST .95	LIST .95	LIST .95

HIGH VOLTAGE FILTER RESISTOR FOR DOUBLER CIRCUITS

Model #1M	Model #1.5M	Model #2M	Model #2.5M
1 meg-4 watts.	1.5 meg-4 watts.	2 meg- 4 watts.	2.5 meg-4 watts.
LIST 1.25	LIST 1.25	LIST 1.25	LIST 1.25

4 WATT NON INDUCTIVE RESISTORS

Model #4W5
5600 OHMS 4 watts.
LIST .95

Model #4W6
6800 OHMS 4 watts.
LIST .95

LO-OHM

Direct replacements for Series High Voltage Filament Dropping Resistors

Model #1W2	Model #1W3	Model #1W4	Model #1W5
2.2 OHMS	3.3 OHMS	4.4 OHMS	5.5 OHMS
LIST 1.10	LIST 1.10	LIST 1.10	LIST 1.10

12 TO 6 VOLT DC DROPPING RESISTORS

For 6 volt Radios and Equipment in 12 volt systems.
Model #GD1 LIST 4.50

50 WATT WIREWOUND
Tapped for 2, 4 or 6 ampere loads
Model #GD2 LIST 3.30

50 WATT WIREWOUND
Rated for 5 to 6 ampere load.
Model #GD3 LIST 2.50

50 WATT WIREWOUND
Rated for 7 to 8 ampere load
Model #GD4 LIST 2.50

PNP TRANSISTORS

MODEL	DESCRIPTION	LIST
3MC	HF, General Purpose Frequency=3 mc Max.	5.00
6MC	HF, General Purpose Frequency=6 mc Max.	7.95
12MC	HF, General Purpose Frequency=12 mc Max.	12.00
20MC	HF, General Purpose Frequency=20 mc Max.	15.80
BE6	NORMAL GAIN Converter - Oscillator - Mixer	4.70
BA6	NORMAL GAIN I. F. Amplifier	4.25
AT6	NORMAL GAIN Audio Driver	4.05
B5	NORMAL GAIN Audio Output	4.05
BE6A	HIGH GAIN Converter - Oscillator - Mixer	5.45
BA6A	HIGH GAIN I. F. Amplifier	4.70
AT6A	HIGH GAIN Audio Driver	4.50
B5A	HIGH GAIN Audio Output	4.70
15V-MG	MEDIUM GAIN Audio Driver	2.20
20V-LG	LOW GAIN Audio, General Purpose Voltage (Vce)=20 volts Max.	2.65
20V-MG	MEDIUM GAIN Audio, General Purpose Voltage (Vce)=20 volts Max.	3.25
20V-HG	HIGH GAIN Audio, General Purpose Voltage (Vce)=20 volts Max.	4.05
30V-LG	LOW GAIN Audio, General Purpose Voltage (Vce)=30 volts Max.	4.40
30V-MG	MEDIUM GAIN Audio General Purpose Voltage (Vce)=30 volts Max.	5.90
30V-HG	HIGH GAIN Audio, General Purpose Voltage (Vce)=30 volts Max.	6.70

PNP POWER OUTPUT TRANSISTORS

MODEL	DESCRIPTION	LIST
Power 40	replacement for Very High Wattage type	9.70
Power 25	replacement for High Wattage type	7.80
Power 12	replacement for Medium Wattage type	5.90
Power 6	replacement for Low Wattage type	3.20

Up to date Cross Reference Sheet Available

Association coded for ease of identification. Example BA6 has same purpose as 12 BA6 tube.

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for industrial, communications and entertainment applications . . . a complete line, featuring:

Amperex P. A. D. T. Post Alloy Diffused VHF Transistors for converter, mixer and oscillator applications

Amperex P-N-P and N-P-N transistors for audio, computer and switching applications.

Amperex germanium and silicon diodes, including silicon reference and power rectifier types

Implemented and fully proven by Amperex, a unique manufacturing technique originating with Philips of the Netherlands now enables Amperex to provide you with production VHF Post Alloy Diffused Transistors of unparalleled laboratory quality at truly reasonable prices.

The new Amperex "Post-Alloy-Diffused" P-N-P Transistors combine the best qualities of both the alloy and the diffusion approaches to transistor construction. As a result of the special "self-jigging" techniques, a maximum degree of uniformity is achieved, thus eliminating the need for "selection."

Correspondingly, special Amperex precision tooling methods and fully automated high volume manufacturing equipment, are the user's guarantee of a complete line of semiconductor diode and UHF transistor types offering maximum stability, reliability and uniformity at minimum cost.

The accelerated development of new Amperex transistor and diode types and the unlimited availability of those presently listed, is further assured by the inauguration of a new Amperex semiconductor plant in Slatersville, Rhode Island.

The facilities of the Amperex applications laboratory and the Amperex R & D laboratory are always available to customers for consultation on applications problems.

AMPEREX SEMICONDUCTOR PLANT, SLATERSVILLE, R. I.

transistors *representative of the* **Amperex** *line*

		Vce (volts) max	Ic (mA) max	Pc (mW) @25°C	h_{fe}	@ Ie (mA)	$f_{\alpha b}$ (Mc/s)
RF types	2N1515	20	10	83	60	1	70
	2N1516	20	10	83	100	1	180
	2N1517	20	5	83	100	—	180
AF types	2N1314	32	3500	13000	33	1000	0.15
	OC22	32	1000	10000	150	1000	2.5
	OC30	32	1400	3600	35	100	0.3
	OC74	20	300	550	65	300	1.5
INDUSTRIAL SWITCHING and **COMPUTER** types	OC23	40	1000	10000	150	1000	2.5
	OC28	60/80	6000	13000	32	1000	0.2
	2N284	32	250	165	45	250	0.9
	OC200 (Si)	25	50	250	20	1	1
	OC201 (Si)	25	50	250	30	1	4

		Vce (volts) max	Ic (mA) max	Pc (mW) @25°C	Dark Current (µA)	At	Light Current (µA)	At	Peak Spectral Response (µ)
PHOTO-TRANSISTOR type	OCP70	7.5	20	25	−325	I_B =0 V_{CE} = −4.5V	750	V_{CE} = −2V Ill.=75 ft. c. Temp=2700°K	1.55

diodes *representative of the* **Amperex** *line*

GERMANIUM GENERAL PURPOSE types
Full line of EIA point contact and gold bonded types including computer diodes. Packaging for automation.

SILICON GENERAL PURPOSE types

	Max. Continuous Operating Inverse Voltage (Volts)	Maximum Peak Inverse Voltage (Volts)	Maximum Peak Rectified Current (MA)	Maximum Average Rectified Current (MA)	Maximum Inverse Current (Microamps)	Voltage (Volts)
OA200	50	50	150	50	.05	50
1N459	175	200	—	40	025	175

SILICON REFERENCE OAZ200 to OAZ207 (40mA, at 4.7 to 9.1V)

PHOTOCELLS "ORP" SERIES Cadmium sulphide cells with spectral response in visible and infra-red regions.

PHOTODIODES OAP12 (infra-red sensitivity)

ask Amperex
for your copy of the condensed semiconductor catalog . . . for price and delivery information . . . and for detailed technical specifications.

AMPEREX ELECTRONIC CORPORATION, **Hicksville, L. I., N. Y.**
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Reliable products
through Advanced Engineering

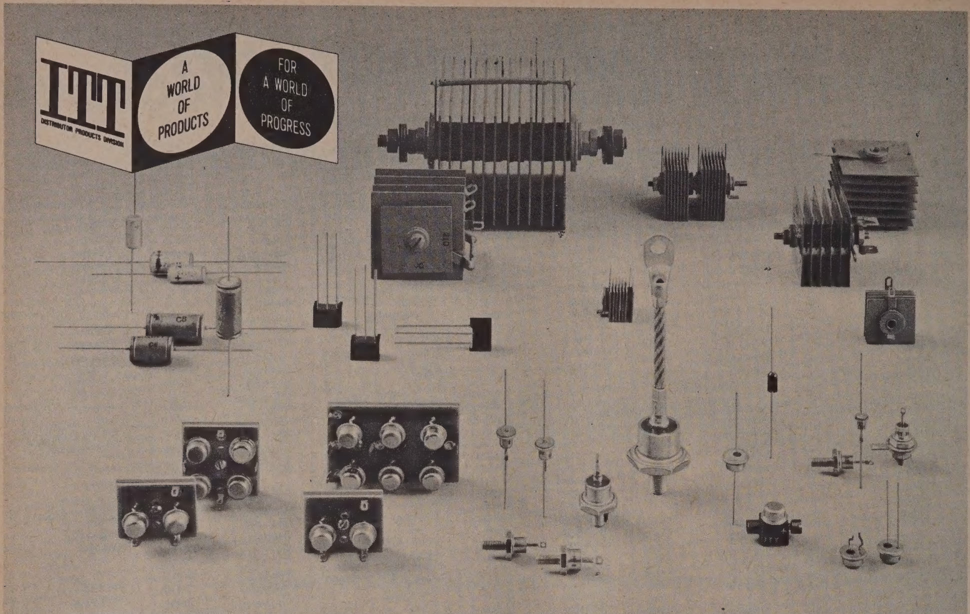
CBS semiconductors

INDUSTRIAL SEMICONDUCTORS
(Available through CBS MWD Semiconductor Distributors)

TYPE	USER PRICE
GENERAL-PURPOSE DIODES	
1N34/A	$ .42
1N35	1.80
1N38/A/B	.90
1N39A (P)	8.75
1N48	.33
1N51	.33
1N52	.83
1N54/A	.90
1N55/A	1.87
1N56/A	.80
1N58/A	.90
1N60	.50
1N63	1.27
1N64	.50
1N65	.53
1N67/A(G)	.84
1N68/A (G)	1.20
1N69/A(P)	.48
1N70/A(P)	.71
1N75(G)	.90
1N81/A(P)	.87
1N82(P)	.83
1N82A(P)	1.15
1N82A(G)	2.04
1N90(G)	.45
1N116(G)	.75
1N126/A(G)	.51
1N127/A(G)	1.05
1N128(G)	.80
1N191(G)	.75
1N192(G)	.62
1N198(G)	1.28
1N290(G)	1.65
1N294(G)	.60
1N295(G)	.40
1N541(G)	.53
1N636(G)	.40
LD-47(G)	.40
LD-145(G)	.40
COMPUTER DIODES	
1N95	.60
1N96	.68
1N97	1.02
1N98	1.08
1N99	1.20
1N100	1.46
1N107	1.35
1N108	1.20
1N117	.75
1N118	.90
1N273	1.43
1N276	1.88
1N278	2.25
1N279	.90
1N281	.83
1N283	1.37
1N287	.80
1N288	.95
1N289	1.35
1N298	.98
1N447	1.10
1N497	.75
1N498	.98
1N499	1.28
1N500	1.50
1N631	1.13
1N634	1.13
1N699	2.03
1N770	1.95
LD-70	1.20
LD-71	1.13
LD-123	.53
LD-125	.45
LD-141	.68
LD-143	.63
NPN HIGH FREQUENCY TRANSISTORS	
2N312	6.08
2N356	4.26
2N356A	4.88
2N357	5.34
2N358	7.29
2N377	2.69
2N385	3.45
2N388	4.64
2N438	2.93
2N438A	3.38
2N439	4.05
2N439A	4.73
2N440	5.78
2N440A	7.50
2N444	2.25
2N445	3.00
2N446	4.05
2N447	5.40
2N556	5.25
2N558	5.25
2N634	6.60
2N635	9.00
2N636	10.50
2N1000	9.00
2N1012	7.20
DIFFUSED SILICON DIODES	
1N625	1.92
1N626	2.30
1N627	2.63
1N628	2.93
1N629	3.23
1N482	2.03
1N483	2.70
1N484	3.15
1N485	3.30
Mounting Hardware Kit for JO-3 package .35 ea.	
PNP POWER TRANSISTORS	
2N101 LT-5209	7.50
2N143 LT-5201	10.50
2N155	2.78
2N156	3.75
2N157	5.25
2N157A	9.00
2N158	5.25
2N158A	6.75
2N158JAN	6.00
2N235A	2.78
2N236A	3.15
2N235B	3.08
2N236B	3.75
2N242	2.78
2N257	2.95
2N285A	3.68
2N297A	4.65
2N301	2.73
2N301A	4.83
2N399	3.23
2N1078	9.38
2N1291	4.13
2N1293	6.75
2N1295	9.00
2N1297	10.50
2N1320	4.13
2N1322	6.75
2N1324	9.00
2N1326	10.50
2N1328	4.13
2N1331	9.00
2N1333	10.50
2N1433	11.07
2N1434	12.75
2N1435	12.38
2N1437	9.00
2N1438	9.00
2N1453	4.13
2N1454	4.85
2N1455	5.25
2N1456	6.75
2N1457	7.50
2N1458	13.50
2N1461	4.13
2N1462	4.85
2N1463	4.85
2N1460	6.75
2N1465	12.00
2N1466	12.00
2N1504	8.25
LT-5026	4.50
LT-5027	4.50
LT-5028	4.50
LT-5032	7.50
LT-5033	7.50
LT-5034	7.50
LT-5045	12.00
LT-5108	6.75
LT-5153	5.25
NPN POWER TRANSISTORS	
2N102 LT-5210	7.50
2N144 LT-5202	10.50
2N326	14.10
2N1292	13.50
2N1294	18.00
2N1296	25.50
2N1298	33.00
2N1321	13.50
2N1323	18.00
2N1325	25.50
2N1327	33.00
2N1329	10.50
2N1330	13.50
2N1332	18.00
2N1334	25.50

ENTERTAINMENT AND GENERAL-PURPOSE SEMICONDUCTOR PRODUCTS
(available through all CBS Distributors)

TYPE	CASE	USER PRICE	DESCRIPTION
		DIODES . . .	
1N34A	P-G	.42	60V General Purpose
1N38B/A	P-G	.90	100V General Purpose
LD47	G	.40	Video Detector
1N48	P-G	.33	70V Gen'l Purpose Detector
1N51	P-G	.33	40V General Purpose
1N52	P-G	.83	70V General Purpose
1N54A	P-G	.90	50V General Purpose
1N56A	P-G	.80	40V High Conduction
1N58A	P-G	.90	100V General Purpose
1N60	P-G	.50	25 Video Detector
1N64	P-G	.50	15V Video Detector
1N65	P-G	.53	70V General Purpose
1N67A	G	.84	80V High Reverse Resis.
1N69A	P	.48	60V General Purpose
1N70A	P	.71	100V General Purpose
1N75	G	.90	100V General Purpose
1N81A(wl)	P	.87	40V General Purpose
1N82A	P	1.15	UHF Mixer
1N90	G	.45	60V General Purpose
1N116	G	.75	60V High Reverse Resis.
1N126A	G	.51	60V General Purpose
1N127A	G	1.05	100V General Purpose
1N128	G	.80	40V General Purpose
LD145	G	.40	Video FM Radio
1N198	G	1.28	80V (60V at 75°C)
1N294	G	.60	60V General Purpose
1N295	G	.40	40V Video Detector
1N541	G	.53	AM-FM Detector
1N636	G	.41	20V Video Detector
		TRANSISTORS	
2N155		2.78	PNP Power Auto Radio
2N217		1.51	PNP—AF Amplifier
2N235A		2.78	PNP—AF Power
2N235B		3.08	PNP—AF Power
2N236A		3.15	PNP—AF Power
2N236B		3.75	PNP—AF Power
2N242		3.75	PNP—AF Power
2N242		2.78	PNP—AF Power
2N247		3.08	PNP—RF, IF Amplifier
2N255A		1.35	PNP—Power, 15V-20W
2N256A		1.50	PNP—Power, 30V-20W
2N257		2.93	PNP—AF Power
2N285A		3.68	PNP—AF Power
2N301		2.73	PNP—AF Power
2N301A		4.50	PNP—AF Power
2N373		1.74	PNP—IF Amplifier
2N374		1.81	PNP—Converter—Mixer
2N444		2.25	NPN—Hi Freq. Switching
2N445		3.00	NPN—Hi Freq. Switching
2N1008		1.43	PNP—Driver Auto Radio
2N1009		1.43	PNP—Driver Auto Radio
2N1245		1.62	PNP—Power, 30V-20W
2N1246		1.82	PNP—Power, 30V-20W



ITT SEMI-CONDUCTORS

SILICON DEVICES Complete line of ITT's Gold Crown Silicon Power Rectifiers afford design engineers new levels of reliability – outstanding characteristics and unique design achieved through advanced diffusion techniques – provide highest electrical efficiency and maximum operating reliability – high surge current capabilities.

High reliability, low medium and high power types. Over 200 standard JEDEC types – printed circuit – insulated stud – high current and high voltage types.

ITT also has available a complete line of zener voltage regulator diodes, up to 100 volts, 4 power ratings, 750 milliwatts, 1 watt, 3.5 watts, and 10 watts; can be supplied in ±10% and ±5% tolerances.

Advanced diffused junction process – maximum thermal conductivity and heat dissipation – hermetically sealed – operating over entire temperature range (–65° C to +175° C) – maximum efficiency and operating reliability.

CURRENT RATINGS: 70 amps to 400 amps, up to 2000 volts

- Low Power To 1.5 amps
- Medium Power To 1200 volts
- High Power To 70 amps
- Insulated Stud To 2000 volts
- Zener Diodes To 10 watts
- Printed Circuit Assemblies To 4.5 amps
- Stack Assemblies-Single Phase and Polyphase

Consult your local authorized industrial ITT distributor.

SELENIUM DEVICES

Radio-TV Selenium Rectifiers. Hi-Density Selenium Rectifiers for the home entertainment market, the Golden 8 Series, meet 100% of all replacement requirements. ITT quality control assures long life, high current ratings and high output voltage. ITT Hi-Density Selenium Rectifiers are available with eyelet construction. Minimize your inventory with the new Miniaturized Golden 8.

Selenium Diodes

Catalog No.	Max. DC Ma	Max. RMS Volts	Mfg. ("H") Dimensions Max.
#K1615	1.000	20 DC	19/32"
#K1616	1.000	20 DC	19/32"

K1615 . . . Replaces 1 RC D4 • K1616 . . . Replaces 1 RC D5
#Dual diode

CONTACT PROTECTORS Low cost, compact devices that solve the problem of destructive arcing between relay or switch contacts in inductive circuits. Their use reduces contact erosion, increases contact life, eliminates radio frequency interference, prevents high voltage insulation punctures, and reduces service interruptions. Applicable to AC or DC circuits, and can be used with hermetically sealed relays. Meets military specifications. Available in wide range of types and ratings.

ITT
DISTRIBUTOR PRODUCTS DIVISION
INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION

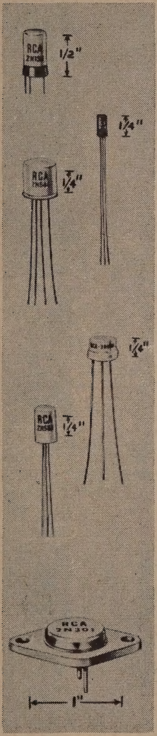
RCA TRANSISTORS AND SILICON RECTIFIERS

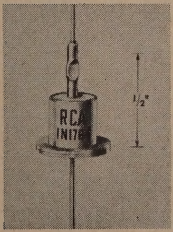
July 1, 1960

RCA TRANSISTORS

- Hermetically Sealed
- Excellent Uniformity of Characteristics
- Insulated Metal Envelopes
- Extreme Envelopes

TRANSISTORS, THYRISTORS (P-N-P types unless stated otherwise) & GERMANIUM DIODES





RCA TYPE	DESCRIPTION	OPTIONAL DISTRIBUTOR RESALE PRICE 1-99	100-999
1N2326	D, (Use with 2N217 or 2N270)	.50	.37
2N104	G, Same as 2N215 but has 3-pin base	1.82	1.25
2N105	G, AF Amplifier (Hearing Aids)	2.97	2.02
2N109	G, Same as 2N217 but has 3-pin base	1.24	.87
2N139	G, Same as 2N218 but has 3-pin base	1.49	1.03
2N140	G, Same as 2N219 but has 3-pin base	1.53	1.06
2N175	G, Same as 2N220 but has 3-pin base	1.63	1.13
2N176	G, AF Power Amplifier	3.05	2.08
2N215	G, AF Amplifier	1.73	1.20
2N217	G, AF Amplifier	1.16	.81
2N218	G, IF Amplifier (Broadcast)	1.40	.98
2N219	G, Converter (Broadcast)	1.45	1.01
2N220	G, AF Amplifier	1.55	1.07
MIL2N220	G, Like 2N220—Meets MIL-T-19500/1	4.54	3.07
2N247	G, Drift Field RF/IF Amplifiers (Communication)	3.14	2.13
2N269	G, Switching—Medium Speed	2.64	1.80
2N270	G, AF Amplifier—Lg. Signal	1.32	.92
2N274	G, Drift Field RF/IF Amplifier (Communication)	2.06	1.42
MIL2N274	G, Like 2N274—Meets MIL-T-19500/26 (Sig)	3.30	2.24
2N301	G, AF Power Amplifier	1.98	1.36
2N301A	G, AF Power Amplifier	4.95	3.34
2N307	G, AF Power Amplifier (Hobbyist)	1.49	1.03
2N331	G, AF Amplifier	2.06	1.42
2N351	G, AF Power Amplifier	3.30	2.24
2N356	G, NPN Switching—High Cur., Med. Speed	5.20	3.51
2N357	G, NPN Switching—High Cur., Med. Speed	6.53	4.40
2N358	G, NPN Switching—High Cur., Med. Speed	8.91	5.98
2N370	G, Drift Field RF Amplifier (Communication)	2.72	1.86
2N371	G, Drift Field Oscillator (Communication)	2.89	1.97
2N372	G, Drift Field Mixer (Communication)	2.64	1.80
2N373	G, Drift Field IF Amplifier (Broadcast)	1.49	1.03
2N374	G, Drift Field Converter (Broadcast)	1.57	1.09
2N376	G, AF Power Amplifier	3.47	2.35
2N384	G, Drift Field VHF Amplifier (Communication)	3.30	2.24
MIL2N384	G, Like 2N384—Meets MIL-T-19500/27	4.54	3.07
2N398	G, Switching—High Voltage	2.06	1.42
2N404	G, Switching—Med. Speed	1.32	.92
MIL2N404	G, Like 2N404—Meets MIL-T-19500/20 (USAF)	1.40	.98
2N405	G, Same as 2N406 but has 3-pin base	.86	.61
2N406	G, AF Driver	.86	.61
2N407	G, Same as 2N408 but has 3-pin base	.92	.66
2N408	G, AF Amplifier—Lg. Signal	.92	.66
2N409	G, Same as 2N410 but has 3-pin base	1.22	.85
2N410	G, IF Amplifier (Broadcast)	1.22	.85
2N411	G, Same as 2N412 but has 3-pin base	1.29	.90
2N412	G, Converter (Broadcast)	1.29	.99
2N456	G, Power Switch	3.63	2.46
2N457	G, Power Switch	5.78	3.89
2N544	G, Drift Field RF Amplifier (Broadcast)	1.63	1.13
2N561	G, Power Switch	6.60	4.44
2N578	G, Switching—Med. Speed, High Cur.	3.71	2.52
2N579	G, Switching—Med. Speed, High Cur.	4.95	3.34
2N580	G, Switching—High Speed, High Cur.	5.78	3.89
2N581	G, Switching—Med. Speed	1.49	1.03
2N582	G, Switching—High Speed	4.13	2.79

G=Germanium Transistor S=Silicon Transistor D=Germanium Diode T=Thyristor

Net

TRANSISTORS AND SILICON RECTIFIERS

RCA TRANSISTORS

- Hermetically Sealed
- Excellent Uniformity of Characteristics
- Insulated Metal Envelopes
- Extreme Envelopes

TRANSISTORS, THYRISTORS (P-N-P types unless stated otherwise) & GERMANIUM DIODES

RCA TYPE	DESCRIPTION	OPTIONAL DISTRIBUTOR RESALE PRICE 1-99	100-999
2N583	G, Switching—Med. Speed	1.98	1.36
2N584	G, Switching—High Speed	4.46	3.01
2N585	G, NPN, Switching—Med. Speed	2.64	1.80
2N586	G, Switching—Low Speed	1.90	1.31
2N591	G, AF Driver	1.12	.79
2N640	G, Drift Field RF Amplifier (Auto)	1.85	1.27
2N641	G, Drift Field IF Amplifier (Auto Radio)	1.68	1.16
2N642	G, Drift Field Converter (Auto Radio)	1.77	1.22
2N643	G, Drift Field Switching—High Speed	3.47	2.35
2N644	G, Drift Field Switching—High Speed	5.36	3.62
2N645	G, Drift Field Switching—High Speed	6.93	4.66
2N647	G, NPN Version of 2N217—AF Amplifier	1.82	1.25
2N649	G, NPN Version of 2N408—AF Amplifier	1.45	1.01
2N706		14.60	9.79
2N706A		15.70	10.49
2N1010	G, NPN, AF Amplifier Low Noise	2.89	1.97
2N1014	G, AF Power Amplifier	12.40	8.29
2N1023	G, Drift Field VHF Amplifier (Communication)	4.54	3.07
2N1066	G, Drift Field VHF Amplifier (Communication)	4.54	3.07
2N1067	S, NPN, Power Switch	31.50	21.04
2N1068	S, NPN, Power Switch	42.00	28.04
	(For New Equipment Design Use Type 2N1483)		
2N1069	S, NPN, Power Switch	82.50	55.04
2N1070	S, NPN, Power Switch	97.50	65.04
2N1090	G, NPN, Version of 2N579, Switching Medium	3.30	2.24
2N1091	G, NPN, Version of 2N582, Switching Medium	4.87	3.29
2N1092	S, NPN, Power Switch	24.00	16.04
	(For New Equipmeht Design Use Type 2N1483)		
2N1169	G, Bidirectional switch	6.60	4.44
2N1170	G, Bidirectional switch	9.08	6.09
2N1177	G, Drift Field RF Amplifier, FM & AM/FM	3.63	2.46
2N1178	G, Drift Field Oscillator for FM & AM/FM	3.30	2.24
2N1179	G, Drift Field Mixer for AM & AM/FM	2.97	2.02
2N1180	G, Drift Field IF Amplifier for FM & AM/FM	2.48	1.69
2N1183	G, Power Switching	2.48	1.69
2N1183A	G, Power Switching	3.30	2.24
2N1183B	G, Power Switching	4.13	2.79
2N1184	G, Power Switching	4.95	3.34
2N1184A	G, Power Switching	5.78	3.89
2N1184B	G, Power Switching	8.25	5.54
2N1213	T, Germanium Hi-Speed Switching, Mesa	9.08	6.09
2N1214	T, Germanium Hi-Speed Switching, Mesa	8.25	5.54
2N1215	T, Germanium Hi-Speed Switching, Mesa	7.84	5.27
2N1216	T, Germanium Hi-Speed Switching, Mesa	4.95	3.34
2N1224	G, Drift Field RF/IF Ampl. (Like 2N274 but JEDEC TO-33)	2.48	1.69
2N1225	G, Drift Field VHF Ampl. (Like 2N384 but JEDEC TO-33)	3.30	2.24
2N1226	G, Drift Field RF/IF Ampl. (60V with JEDEC TO-33)	3.30	2.24
2N1300	G, Switching—High Speed Mesa	2.64	1.80
2N1301	G, Switching—High Speed Mesa	5.78	3.89
2N1384	G, Drift Field, High Cur. High Dissipation Type	6.60	4.44
2N1395	G, Drift Field RF/IF Amplifier (Communication)	2.81	1.91
2N1396	G, Drift Field VHF Amplifier (Communication)	3.71	2.52
2N1397	G, Drift Field VHF Amplifier (Broadcast)	4.95	3.34
2N1425	G, Drift Field IF Amplifier (Broadcast)	1.25	.88
2N1426	G, Drift Field Converter (Broadcast)	1.35	.94
2N1479	S, NPN, Power Switching and Amplifier	12.80	8.59
2N1480	S, NPN, Power Switching and Amplifier	14.45	9.69
2N1481	S, NPN, Power Switching and Amplifier	16.90	11.34
2N1482	S, NPN, Power Switching and Amplifier	22.30	14.89
2N1483	S, NPN, Power Switching and Amplifier	19.40	12.99
2N1484	S, NPN, Power Switching and Amplifier	25.15	16.84
2N1485	S, NPN, Power Switching and Amplifier	30.10	20.14

G=Germanium Transistor S=Silicon Transistor D=Germanium Diode T=Thyristor

TRANSISTORS AND SILICON RECTIFIERS

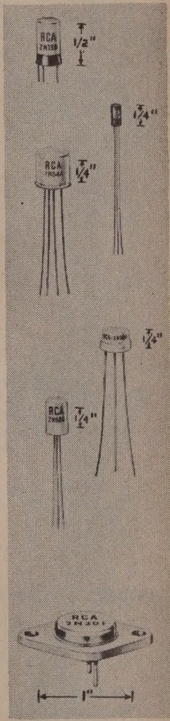
RCA TRANSISTORS

- Hermetically Sealed
- Excellent Uniformity of Characteristics
- Insulated Metal Envelopes
- Extreme Envelopes

TRANSISTORS, THYRISTORS (P-N-P types unless stated otherwise) & GERMANIUM DIODES

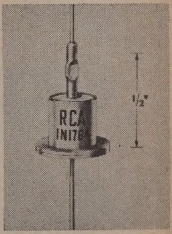
RCA TYPE	DESCRIPTION	OPTIONAL DISTRIBUTOR RESALE PRICE 1-99	100-999
2N1486	S, NPN, Power Switching and Amplifier	44.45	29.74
2N1487	S, NPN, Power Switching and Amplifier	38.35	25.64
2N1488	S, NPN, Power Switching and Amplifier	50.35	33.59
2N1489	S, NPN, Power Switching and Amplifier	67.50	45.04
2N1490	S, NPN, Power Switching and Amplifier	75.00	50.04
2N1491	S, Mesa Type for HF and VHF	33.75	22.54
2N1492	S, Mesa Type for HF and VHF	39.75	26.54
2N1493	S, Mesa Type for HF and VHF	48.75	32.54
2N1511	S, NPN, Power Switching and Amplifier (TO-36 Case)	38.35	25.64
2N1512	S, NPN, Power Switching and Amplifier (TO-36 Case)	50.35	33.59
2N1513	S, NPN, Power Switching and Amplifier (TO-36 Case)	67.50	45.04
2N1514	S, NPN, Power Switching and Amplifier (TO-36 Case)	75.00	50.04
2N1524	G, Drift Field IF Amplifier (JEDEC TO-1 Case)	1.25	.88
2N1525	G, Drift Field IF Amplifier (JEDEC TO-40 Case)	1.25	.88
2N1526	G, Drift Field Converter (JEDEC TO-1 Case)	1.35	.94
2N1527	G, Drift Field Converter (JEDEC TO-40 Case)	1.35	.94
2N1631	G, Drift Field RF Ampl. (JEDEC TO-40 Case)	1.63	1.13
2N1632	G, Drift Field RF Ampl. (JEDEC TO-1 Case)	1.63	1.13
2N1633	G, Drift Field IF Ampl. (JEDEC TO-40 Case)	1.49	1.03
2N1634	G, Drift Field IF Ampl. (JEDEC TO-1 Case)	1.49	1.03
2N1635	G, Drift Field Converter (JEDEC TO-40 Case)	1.57	1.09
2N1636	G, Drift Field Converter (JEDEC TO-1 Case)	1.57	1.09
2N1637	G, Drift Field RF Ampl. (JEDEC TO-1 Case)	1.85	1.27
2N1638	G, Drift Field IF Ampl. (JEDEC TO-1 Case)	1.68	1.16
2N1639	G, Drift Field Converter (JEDEC TO-1 Case)	1.77	1.22
2N1683	G, PNP, Mesa Type for Switching	7.01	4.72

G=Germanium Transistor S=Silicon Transistor D=Germanium Diode T=Thyristor



SILICON RECTIFIERS

RCA TYPE	DESCRIPTION	OPTIONAL DISTRIBUTOR RESALE PRICE 1-99	100-999
1N440B	Magnetic Amplifier-100 V	1.73	1.20
1N441B	Magnetic Amplifier-200 V	2.05	1.40
1N442B	Magnetic Amplifier-300 V	2.52	1.72
1N443B	Magnetic Amplifier-400 V	3.55	2.41
1N444B	Magnetic Amplifier-500 V	4.42	2.99
1N445B	Magnetic Amplifier-600 V	6.07	4.09
1N536	Industrial Rectifier-50 V	1.06	.74
1N537	Industrial Rectifier-100 V	1.12	.79
1N538	Industrial Rectifier-200 V	1.35	.94
MIL 1N538		1.98	1.36
1N539	Industrial Rectifier-300 V	1.80	1.24
1N540	Industrial Rectifier-400 V	2.71	1.84
MIL 1N540L		3.30	2.24
1N547	Industrial Rectifier-600 V	3.68	2.49
1N1095	Industrial Rectifier-500 V	2.71	1.84
1N1763	TV/Radio Receivers, PIV, 400 V DC-MA 500	1.06	.74
1N1764	TV/Radio Receivers, PIV, 500 V DC-MA 500	1.55	1.07
1N2858	General Purpose, PIV 50 V	.74	.54
1N2859	General Purpose, PIV 100 V	.83	.59
1N2860	General Purpose, PIV 200 V	.91	.65
1N2861	General Purpose, PIV 300 V	1.12	.79
1N2862	General Purpose, PIV 400 V	1.27	.89
1N2863	General Purpose, PIV 500 V	1.98	1.36
1N2864	General Purpose, PIV 600 V	2.64	1.80



Prices for types without the MILitary prefix are .05 per unit higher if inspection by a military representative is required at RCA.

Prices shown do not include any state or local taxes. All prices are subject to change or withdrawal without notice.

Terms and conditions of sale are set forth in our current applicable booklet covering the sale of these products.

Bulk packaging is available in multiples of 100 per type at .04 less per unit, except in those cases, indicated by the letter "C", where types are available only in carton quantities.

† This price applies on orders for 100-999 units,* but only to those types where the quantity is between 10-99.

†† This price applies on orders for 1000 or more units,* but only to those types where the quantity is at least 20. This price also applies to all types where the quantity is 100 or more regardless of order size.

* Units must be for shipment at one time to a single destination. Transistors, thyristors, and Germanium Diode types may be combined but Silicon Rectifiers must be considered separately.

U.S. TRANSISTOR CORP.

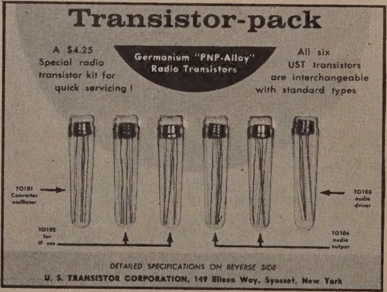
Syosset, L. I., N. Y.

GERMANIUM "PNP" ALLOY TYPE TRANSISTORS

GENERAL TYPE	PRICE PER UNIT 1 to 99
2N43	= UST-43*
2N44	= UST-44*
2N45	= UST-45*
2N123	= UST-2N1284*
2N315	3.00
2N315A	3.15
2N316	3.07
2N316A	3.22
2N317	7.88
2N317A	8.10
2N320	= UST-320*
2N321	= UST-321*
2N323	= UST-323*
2N331	1.87
2N359	1.86
2N360	1.71
2N361	1.63
2N362	1.32
2N363	1.23
2N381	1.27
2N382	1.58
2N383	2.00
2N394	= 2N1353*
2N395	= 2N1354*
2N396	= 2N1355*
2N396A	= 2N1356*
2N397	= 2N1357*
2N404	2.76
2N413	1.58
2N414	1.86
2N416	4.50
2N417	5.99
2N425	3.15
2N426	3.22
2N427	4.87
2N428	6.30
2N450	= 2N1347*
2N460	= UST-460*
2N461	= UST-461*
2N464	1.65
2N465	1.73
2N466	1.80
2N467	2.25
2N482	1.47
2N483	1.58
2N484	1.73
2N485	1.58
2N486	1.65
2N508	= UST-508*
2N519	1.50
2N519A	1.62
2N520	2.50
2N520A	2.63
2N521	3.99
2N521A	4.13
2N522	5.34
2N522A	5.48
2N523	7.95
2N523A	8.10
2N524	= UST-524*
2N525	= UST-525*
2N526	= UST-526*
2N527	= UST-527*
2N564	2.25
2N566	2.55
2N568	3.00
2N570	3.40
2N572	3.75
2N578	3.37
2N579	4.50
2N580	5.25
2N581	1.95
2N584	4.50
2N632	1.35
2N633	1.28
2N650	= UST-650*
2N651	2.03
2N652	2.33
2N653	= UST-653*
2N654	1.73
2N655	1.88
2N1017	6.90
2N1280	4.05
2N1281	4.50
2N1282	5.22
2N1284	3.70
2N1316	12.00
2N1317	8.26
2N1318	7.87
2N1343	2.77
2N1344	2.77
2N1345	5.52
2N1346	5.52
2N1347	2.37
2N1348	5.91
2N1349	6.70
2N1350	7.50
2N1351	8.28
2N1352	2.52
2N1353	1.87
2N1354	2.97
2N1355	4.60
2N1356	6.30
2N1357	7.05
UST-34	.90
UST-43	4.12
UST-44	2.80
UST-45	2.62
UST-320	1.65
UST-321	1.77
UST-323	1.68
UST-460	2.70
UST-461	2.92
UST-508	1.80
UST-524	2.70
UST-525	2.85
UST-526	3.15
UST-527	3.75
UST-650	1.80
UST-653	1.58
UST-721	1.43
UST-722	.99

*Replacement is electrically identical. Grounded base construction has been replaced by improved, insulated, shock-proof floating base.

Transistor-pack


Transistor-pack

A $4.25 Special radio transistor kit for quick servicing!

Germanium "PNP-Alloy" Radio Transistors

All six UST transistors are interchangeable with standard types

DETAILED SPECIFICATIONS ON REVERSE SIDE

U. S. TRANSISTOR CORPORATION, 149 Eileen Way, Syosset, New York

New and Exclusive

Six quality Germanium "PNP" Alloy replacement transistors in one kit—all spec data included.

Complete Kit $4.25

Kit includes one converter oscillator, two transistors for IF use, two for audio use and one audio driver.

RELAYS
ACRO
SWITCHES

"OUR 21st YEAR"

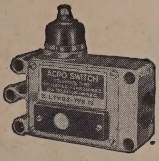
ACRO DIVISION Robertshaw

Biggest Line of Little Switches

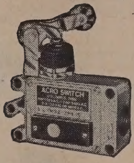
METAL CLAD • SUB MINIATURE • MINIATURE • GENERAL PURPOSE

Metal-Clad Switches

U.L. Inspected 15 Amp - 120 - 240 - 480 V.A.C.



ACRO-LITE
L-FHD2-7PN-1S
O.F. 2.5 LBS. MAX.



ACRO-LITE
L-FHD2-2PN2-1S
O.F. 2 LBS. MAX.

MACHINE TOOL
242-0003-03
O.F. 3 LBS. MAX.

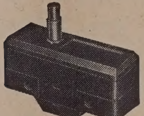
METAL CLAD
SF-BRD2-6PQ-1S
O.F. 13 OZ. MAX.

METAL CLAD
SF-BRD2-9PR-1S
O.F. 13 OZ. MAX.

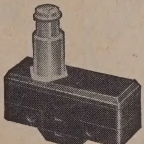
GENERAL PURPOSE

U.L. Inspected 21 Amp - 120 - 240 - 480 V.A.C.

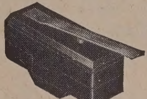
PIN ACTUATOR
FAD2-1A-1S
O.F. 10-18 OZ.



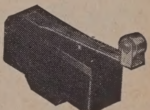
LONG OVERTRAVEL PLUNGER
FAD2-10-1S
O.F. 10-18 OZ.



LARGE OVERTRAVEL PLUNGER
FAD2-3P-1S
O.F. 10-18 OZ.

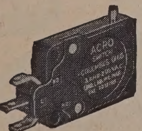


LEAF ACTUATOR
FAD2-5L-1S
O.F. 9 OZ. MAX.



ROLLER LEAF ACTUATOR
FAD2-2M-1S
O.F. 9 OZ. MAX.

MINIATURE & SUBMINIATURE

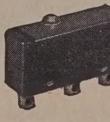


MODEL CM
1CMD1-2AXX
O.F. 27 Grams
3 AMPS—
250 V.A.C.

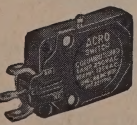
Acro has more than 21 years experience in the manufacture of precision snap switches. Put this experience to work for you. . . . always ask for Acro. Shown are just a few samples from our complete line. Contact your Acro distributor for all of your switch requirements.

MODEL D
Overtravel Plunger
3D05-8P-2T
O.F. 15 OZ. MAX.
12 AMPS—
125 V.A.C.

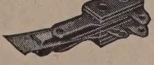
MODEL CM
Flat Leaf
Actuator
1CMD1-2AXX-A24
O.F. 2.5 Grams
3 AMPS—
250 V.A.C.



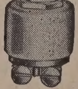
MODEL Z
Sub-miniature
Switch
ZD-0024
O.F. 145 Grams Max.
5 AMPS—
120-240 V.A.C.



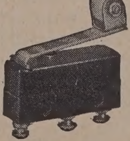
MODEL M
1MD1-1A
O.F. 6 OZ. MAX.
10 AMPS—
125 V.A.C.



OPEN BLADE
SWITCH
E-S1POBD-R
O.F. 6 OZ. MAX.
15 AMPS—
125-250 V.A.C.



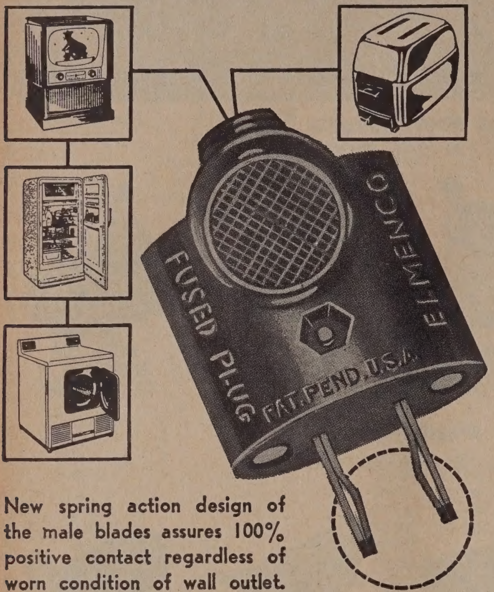
MODEL D
3D05-5P-2T
O.F. 15 OZ. MAX.
12 AMPS—
125 V.A.C.



MODEL Z
Roller Leaf
Actuator
ZLD-0033
O.F. 2 OZ. MAX.
5 AMPS—
120-240 V.A.C.

All Acro Switches are Underwriter Laboratory Inspected for Ratings as Indicated.

Announcing an important NEW Feature


FUSED PLUG
ELMENCO
PAT. PEND. U.S.A.

OF THE ELMENCO Fused Plug

Spring Action

For
POSITIVE CONTACT
plus
Impact Resistant Cover

New spring action design of the male blades assures 100% positive contact regardless of worn condition of wall outlet.

LIST PRICE **75¢** LESS FUSES

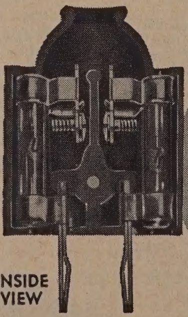
OFFERS COMPLETE PROTECTION AGAINST CURRENT SURGES & SHORT CIRCUITS

PROTECTS ELECTRICAL APPLIANCES!

ELMENCO
fused plug
with IMPACT RESISTANT COVER
and
"SPRING ACTION" for Perfect Contact
OFFERS COMPLETE PROTECTION AGAINST CURRENT SURGES
10 Elmenco Fused Plugs
ELMENCO FUSED PLUGS
REPLACE FUSE INSTANTLY!

Conveniently Packed
10 to a Box
In Colorful
Self-merchandising displays.
Easy to handle for resale

The Elmenco Fused Plug is like any standard plug, is light in weight, but easier to handle because of finger grips. However, it contains 2 small fuses which provide complete protection against damage to the appliance and to the main line. The blown fuse is easy to remove and simple to replace. Fits any standard wall outlet.


INSIDE VIEW

REPLACE FUSE Instantly!

Fuses are replaced instantly without need of opening plug. Can be used with standard 3AG and 3AB glass tubular fuses up to 20 amps.

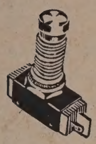
ARCO electronics inc. NEW YORK 13, N. Y.
BRANCHES: Dallas 7, Texas, Los Angeles 35, California

Birnbach ARROW H&H SWITCHES

TOGGLE • PUSH BUTTON • ROTARY • KNIFE • POWER • SLIDE

BIRNBACH

1



1 MOMENTARY CONTACT PUSH BUTTON

Solder lugs; laminated type. Has 9/16" slotted sleeve, 15/32-32 TPI Complete with hex and knurled nut; nickel plated; all accept snap on button. Supplied less insulating button.

QUICK MAKE AND BREAK

Cat. No.	Descrip.	Type	Current Rating 250 V	List Price
6184	SPST	Normally Closed (On)	3 amps	2.25 ea
6184A	SPST	Normally Open (Off)	3 amps	2.25 ea
6185A	SPDT	Normally Closed (On)	1 amp	2.60 ea
6185	SPDT	Normally Open (Off)	1 amp	2.60 ea
6186	2 Circ	Normally Closed (On)	1 amp	3.10 ea
6231A	DPST	Normally Closed (On)	1 amp	3.10 ea
6231	DPST	Normally Open (Off)	1 amp	3.10 ea
6231B	DPDT	Normally Closed (On)	1 amp	3.45 ea
6232	Button only, red or black			.40 ea

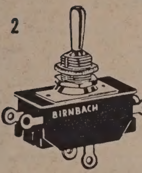
Std. Pkg. 25

SLOW MAKE AND BREAK

Cat. No.	Descrip.	Type	Current Rating 125 V	List Price
6180	SPST	Normally Closed (On)	1 amp	2.55 ea
6230	SPST	Normally Open (Off)	1 amp	2.55 ea
6224	2 Circ.	Normally Closed (On)	1 amp	1.60 ea

Std. Pkg. 25

2



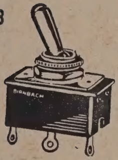
3 INTERMEDIATE SIZE TOGGLE-BAT

Molded phenolic base; back connected silver plated solder lug contacts; supplied with hex nut and knurled nut. SPDT rated at 1 amp.-250V, 6 amps.-125 volts AC-DC; others rated at 3 amps-250V, 6 amps.- 125V AC-DC.

Std. Pkg. 25

Cat. No.	Description	Type Action	List Price
6280	SPST	POSITIVE	1.55 ea
6280A	**SPST**	MOM.—NORM. OFF	2.20 ea
6281	SPDT	POSITIVE	1.85 ea
6281A	SPDT	MOMENTARY	2.50 ea
6284	2 CIRC	POSITIVE	1.90 ea
6282	DPST	POSITIVE	2.25 ea
6282A	**DPST**	MOM.—NORM. OFF	3.15 ea
6283	DPDT	POSITIVE	2.60 ea
6283A	DPDT	MOMENTARY	3.45 ea

3



2 THREE POSITION—CENTER OFF

Rated 3 amps-250 V, 6 amps-125 V AC-DC

Cat. No.		List Price
6261	SPDT	2.80 ea
6262	2 CIRC	3.15 ea
6263	DPDT	3.45 ea

Std. Pkg. 25

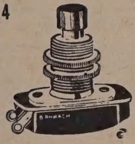
2 BAKELITE MOLDED MOMENTARY CONTACT SWITCHES

Same as above except momentary. SPST Normally Off. 3 A., 250 V. UL approved. Rated 6 A., 125 V.

Cat. No.	Description	Shank Length	List Price
6241	SPST	15/32"	2.20 ea
6240	SPDT	15/32"	2.50 ea
6242	DPDT	15/32"	3.45 ea

Std. Pkg. 25

4



4 MOMENTARY PUSH BUTTON

Molded momentary, solder lugs. Rated 1 A., 125 V. With 9/16" shank, normally OFF—push to make. Nickel plated. UL approved.

Cat. No.	Descrip.	Std. Pkg.	List Price
6233	SPST	25	1.28 ea
6234	SPDT	25	1.39 ea
6235	DPST	25	1.78 ea
6236	DPDT	25	2.39 ea

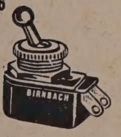
6 MIDGET SIZE TOGGLE POS. ACTION

SPST Rated 3 Amps—250 Volts, 6 amps—125 Volts. Others Rated 1 Amp—250 Volts, 6 amps—125 Volts. Molded Phenolic base. 15/32—32 x 15/32" long slotted sleeve, Nickel finish; solder lugs.

Cat. No.	Description	Type	List Price
6244	SPST	Ball Handle	1.30 ea
6244A	SPST	Bat Handle	1.30 ea
6244B	SPDT	Ball Handle	1.65 ea
6244C	SPDT	Bat Handle	1.65 ea
6244D	2 circ.	Ball Handle	1.70 ea
6244E	2 circ.	Bat Handle	1.70 ea

Std. Pkg. 25

6



16 ROTARY SWITCHES CANOPY TYPE—ROTO LOCK

Laminated phenolic sections—solder lugs; sleeve 11/32" diam. 32 threads per inch; nickel finish; Rotary switches supplied with two hex nuts; roto lock key types have 15/32" diam. 32 threads per inch; key removable in off position only on SPST and DPST—key removable in both positions on all others.

SPST rated at 3 amps-250 V AC-DC, others rated at 1 amp-250 V, 3 amps-125 volts AC-DC.

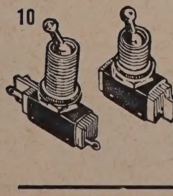
Roto Lock (Key Type)

Cat. No.	Description	Std. Pkg.	List Price
6110	SPST	12	2.20 ea
6111	SPDT	12	2.50 ea
6112	DPST	12	3.15 ea
6113	DPDT	12	3.45 ea
6114	Key—Rem. Off Pos.	100	.35 ea
6115	Key—Rem. Both Pos.	100	.35 ea

Canopy type rotary

6210	SPST	⅜"	1½"	1.45 ea
6211	SPST	1"	2½"	1.95 ea
6212	SPDT	⅜"	1½"	1.75 ea
6213	SPDT	1"	2½"	2.30 ea
6214	DPST	⅜"	1½"	2.40 ea
6215	DPST	1"	2½"	2.90 ea
6216	DPDT	⅜"	1½"	2.70 ea
6217	DPDT	1"	2½"	3.30 ea

10



BALL HANDLE TOGGLE SWITCHES 10 POSITIVE ACTION

UL approved. Ball lever switches nickel plated; laminated type; ring and mounting nuts.

Std. Pkg. 25

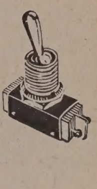
Cat. No.	Descrip.	Shank Length	Current Rating 125 V.		List Price
			125 V.	250 V	
6200	SPST	15/32"		3 amps	1.15 ea
6201	SPST	3/4"		3 amps	1.40 ea
6202	SPDT	15/32"	3 amps	1 amp	1.45 ea
6202A	2 Cir.	15/32"	3 amps	1 amp	1.55 ea
6203	SPDT	3/4"	3 amps	1 amp	1.80 ea
6204	DPST	15/32"	3 amps	1 amp	2.10 ea
6205	DPST	3/4"	3 amps	1 amp	2.40 ea
6206	DPDT	15/32"	3 amps	1 amp	2.40 ea
6207	DPDT	3/4"	3 amps	1 amp	2.65 ea

NAME PLATE ......Std. Pkg. 100

6208 —On-Off—Fits 15/32" Sleeves ....09 ea

6208A—Hi-Low—Fits 15/32" Sleeves ....09 ea

11



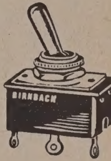
BAT HANDLE TOGGLE SWITCHES 11 POSITIVE ACTION

UL approved. Laminated type. Nickel plated finish; supplied with ring and mounting nuts. 15/32" shank.

Std. Pkg. 25

Cat. No.	Descrip.	Current Rating 125 V		List Price
		125 V	250 V	
6220	SPST		3 amps	1.15 ea
6221	SPDT	3 amps	1 amp	1.45 ea
6221A	2 Cir.	3 amps	1 amp	1.55 ea
6222	DPST	3 amps	1 amp	2.10 ea
6223	DPDT	3 amps	1 amp	2.40 ea

12

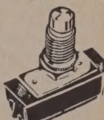


BAT HANDLE MOMENTARY ACTION 11

UL approved. Laminated type. Nickel plated finish; supplied with ring and mounting nuts; 15/32" shank; solder terminals; SPST rated at 3 amps 250V AC-DC, others rated at 1 amp 250V, 3 amps 125V AC-DC. Std. Pkg. 25.

Cat. No.	Descrip.	Type	List Price
6190	SPST	Normally Closed (On)	1.85 ea
6191	SPST	Normally Open(Off)	1.85 ea
6192	SPDT	Normally Closed (On)	2.15 ea
6193	DPST	Normally Closed (On)	2.80 ea
6194	DPST	Normally Open (Off)	2.80 ea
6195	DPDT	Normally Closed (On)	3.10 ea

13



ST TYPE PER SPEC. JAN-S-23 12

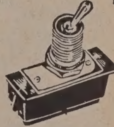
Std. Pkg. 25

Bat handle, back connected, silver plated solder lug contacts; slotted sleeve. Supplied with two hex nuts. Molded phenolic base; 15/32-32 x 15/32" long, nickel finish. They meet, where applicable. All Jan-S-23 and Mil-S-6745 Specs.

Cat. No.	Aws No.	Description	List Price
6250	ST-12A	SPST	2.05 ea
6251	ST-12D	SPDT	2.34 ea
6251C	ST-12C	SPST	2.70 ea
6251V	ST-12V	2 Circ.	2.40 ea
6252	ST-22K	DPST	2.95 ea
6252M	ST-22M	DPST	3.55 ea
6253	ST-22N	DPDT	3.20 ea

Cur. rate 125V 6A, 250V 3A, **Std. Pkg. 25.**

14



6270*	ST-42A	SPST	2.10 ea
6271*	ST-42D	SPDT	2.45 ea
6249*	ST-42E	SPDT	2.45 ea
6272**	ST-52K	DPST	2.50 ea
6273**	ST-52N	DPDT	2.80 ea
6274**	ST-52P	DPDT	2.80 ea

*Cur. rate 125V 15A, 250V 6A.

**Cur. rate 125V 25A, 250V 9A.

Std. Pkg. 25.

STANDARD DUTY MOM. PUSH BUTTON 13

Molded phenolic base; 15/32-32x7/16" long slotted sleeve; nickel finish; screw terminals; complete with two hex nuts. All accept snap on button; supplied less insulating button. Cur. rate 125V 12A, 250V 6A,

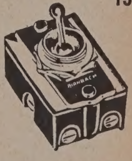
Std. Pkg. 100.

Cat. No.	Description	Type	List Price
6238	SPST	Normally Closed	3.30 ea
6238B	SPDT	Normally Closed (on)	3.50 ea
6238C	2 Circ.**	Normally Closed (on)	3.50 ea
6226	DPST*	Normally Open (off)	3.30 ea
6238D	DPST*	Normally Closed (on)	3.30 ea

* 1 H.P. 250 V.A.C.-D.C.

**Cur. rating ½.

15



STANDARD DUTY TOGGLE SWITCHES 14

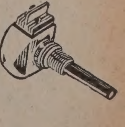
Molded phenolic base; 15/32-32 x 7/16" long slotted sleeve; nickel finish; screw terminals; complete with one hex nut, one knurled nut.

QUICK MAKE AND BREAK BAT

Cat. No.	Descrip.	Current Rating AC-DC		List Price
		125 V	250 V	
6225A	SPST	12 amps	6 amps	2.20 ea
6225B	SPDT	12 amps	6 amps	2.20 ea
6225C	2 Circ.	6 amps	3 amps	2.20 ea
6225	DPST*	12 amps	6 amps	2.20 ea

* 1 HP 250 V. **Std. Pkg. 10.**

16



EXTRA HEAVY DUTY POWER SWITCHES 15 3 POSITION—POSITIVE CENTER OFF

Molded phenolic base; screw terminals; slotted sleeve ¾-32; nickel finish; with two hex nuts. Rated at 5 Amps—250 V, 10 Amps—125 V.

Cat. No.	Description	Circuit	List Price
6227	DPDT	¾ H.P. 250 V.A.C.-D.C.	8.15 ea
6228	3PDT	½ H.P. 115/230 V.A.C. 3 phase	12.55 ea
6229	4PDT	½ H.P. 115/230 V.A.C. 2 phase	16.75 ea

Std. Pkg. 10.

Birnbach CUTLER-HAMMER SWITCHES

BIRNBACH

AIRCRAFT SWITCHES

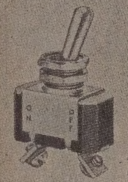
Made to joint Army and Navy specifications. Spec. Jan-S-23 Superseded by Mil-S-3950. Binding Screw Terminals (ST-40 Series and ST-50 series) Per Spec. AN-3021 and AN 3027. The ST-42 and ST-52 Series have solder lugs. These switches are heavy duty; rugged design; bakelite housing; rated 10 amps-250V AC, 15 amps-125V AC, ¾ HP 115-230VAC.

1

1 SINGLE POLE STYLE ST-42—WITH SOLDER LUGS

Cat. No.	C-H No.	Jan-S-23 No.	Type	Circuit			Current Rating		
				Up Position	Center Position	Down Position	125V	250V	
5370	8803K6	ST-42A	SPST	On	None	Off	15 amps	6 amps	2.10 ea
5371	8819K5	ST-42B	SPST	On	None	Mom. Off	15 amps	6 amps	2.30 ea
5372	8817K5	ST-42C	SPST	Off	None	Mom. On	15 amps	6 amps	2.30 ea
5373	8816K5	ST-42D	SPDT	On	None	On	15 amps	6 amps	2.45 ea
5374	8802K6	ST-42E	SPDT	On	Off	On	15 amps	6 amps	2.45 ea
5375	8805K5	ST-42F	SPDT	On	None	Mom. On	15 amps	6 amps	2.70 ea
5376	8818K5	ST-42G	SPDT	Mom. On	Off	Mom. On	15 amps	6 amps	2.70 ea
5377	8815K6	ST-42H	SPDT	On	Off	Mom. On	15 amps	6 amps	2.70 ea

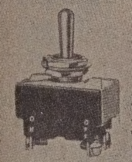
STANDARD PKG. 25


2

2 SINGLE POLE STYLE 40—WITH SCREW TERMINALS

Cat. No.	C-H No.	Jan-S-23 No.	MIL-S-6745 (AN-S-20A) No.	Type	Circuit			Current Rating		
					Up Position	Center Position	Down Position	125V	250V	
5360	8801K13	ST-40A	AN 3021-2	SPST	On	None	Off	15 amps	6 amps	2.80 ea
5361	8813K12	ST-40B	AN 3021-9	SPST	On	None	Mom. Off	15 amps	6 amps	3.10 ea
5362	8811K12	ST-40C	AN 3021-8	SPST	Off	None	Mom. On	15 amps	6 amps	3.10 ea
5363	8810K12	ST-40D	AN 3021-3	SPDT	On	None	On	15 amps	6 amps	3.40 ea
5364	8800K13	ST-40E	AN 3021-1	SPDT	On	Off	On	15 amps	6 amps	3.40 ea
5365	8804K12	ST-40F	AN 3021-6	SPDT	On	None	Mom. On	15 amps	6 amps	3.65 ea
5366	8812K13	ST-40G	AN 3021-7	SPDT	Mom. On	Off	Mom. On	15 amps	6 amps	3.65 ea
5367	8809K13	ST-40H	AN 3021-5	SPDT	On	Off	Mom. On	15 amps	6 amps	3.65 ea

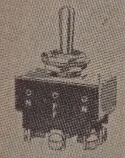
STANDARD PKG. 25


3

3 DOUBLE POLE STYLE ST-50—WITH SCREW TERMINALS

Cat. No.	C-H No.	Jan-S-23 No.	Mil-S-6745 (AN-S-20A) No.	Type	Circuit			Current Rating		
					Up Position	Center Position	Down Position	125V	250V	
5380	8822K8	ST-50K	AN-3027-2	DPST	On	None	Off	25 amps	9 amps	3.75 ea
5381	8828K5	ST-50L	AN-3027-4	DPST	On	None	Mom. Off	15 amps	6 amps	4.50 ea
5382	8826K5	ST-50M	AN-3027-5	DPST	Off	None	Mom. On	15 amps	6 amps	4.50 ea
5383	8824K8	ST-50N	AN-3027-3	DPDT	On	None	On	25 amps	9 amps	4.50 ea
5384	8820K10	ST-50P	AN-3027-1	DPDT	On	Off	On	25 amps	9 amps	4.50 ea
5385	8830K5	ST-50R	AN-3027-6	DPDT	On	None	Mom. On	15 amps	6 amps	4.90 ea
5386	8834K4	ST-50S	AN-3027-7	DPDT	Mom. On	Off	Mom. On	15 amps	6 amps	4.90 ea
5387	8832K4	ST-50T	AN-3027-8	DPDT	On	Off	Mom. On	15 amps	6 amps	4.90 ea

STANDARD PKG. 25


4

4 DOUBLE POLE STYLE ST-52—WITH SOLDER LUGS

Cat. No.	C-H No.	Jan-S-23 No.	Type	Circuit			Current Rating		
				Up Position	Center Position	Down Position	125 V	250 V	
5390	8823K5	ST-52K	DPST	On	None	Off	25 amps	9 amps	2.50 ea
5391	8829K5	ST-52L	DPST	On	None	Mom. Off	15 amps	6 amps	2.80 ea
5391A	8827K5	ST-52M	DPST	Off	None	Mom. On	15 amps	6 amps	2.80 ea
5392	8825K5	ST-52N	DPDT	On	None	On	25 amps	9 amps	2.80 ea
5393	8821K5	ST-52P	DPDT	On	Off	On	25 amps	9 amps	2.80 ea
5394	8831K5	ST-52R	DPDT	On	None	Mom. On	15 amps	6 amps	3.25 ea
5395	8835K3	ST-52S	DPDT	Mom. On	Off	Mom. On	15 amps	6 amps	3.25 ea
5396	8833K3	ST-52T	DPDT	On	Off	Mom. On	15 amps	6 amps	3.25 ea

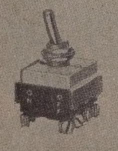
STANDARD PKG. 25

5

5 THREE POLE—WITH SCREW TERMINALS FLUSH MOUNTING

Cat. No.	C-H No.	Spec.	Type	Circuit			
				Up Position	Center Position	Down Position	
5400	8740K9	MIL-S-6745	3PST	On	None	Off	6.45 ea
5401	8744K9	MIL-S-6745	3PDT	On	None	On	7.70 ea
5402	8742K9	MIL-S-6745	3PDT	On	Off	On	7.70 ea

CURRENT RATING: 125 VAC 20 AMPS. 30 VDC 25 AMPS. STANDARD PKG. 12

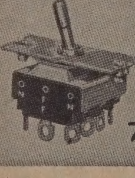

6

6 FOUR POLE—ONE HOLE MOUNTING

The four pole switches are designed to meet the rigid specifications and requirements of JAN-S-23 and MIL-S-6745 Specs.

Cat. No.	C-H. No.	Type	Circuit			Terminals	
			Up Position	Center Position	Down Position		
5420	7660K8	4PST	On	None	Off	Screw	8.25 ea
5421	7661K6	4PST	On	None	Off	Lug	7.60 ea
5422	7662K5	4PDT	On	Off	On	Screw	10.30 ea
5423	7663K5	4PDT	On	Off	On	Lug	9.35 ea
5424	7664K3	4PDT	On	None	On	Screw	10.30 ea
5425	7665K4	4PDT	On	None	On	Lug	9.35 ea
5426	7666K6	4PST	Off	None	Mom. on	Screw	11.15 ea
5427	7667K6	4PST	Off	None	Mom. on	Lug	10.55 ea
5428	7668K4	4PST	On	None	Mom. off	Screw	11.15 ea
5429	7669K4	4PST	On	None	Mom. off	Lug	10.55 ea
5430	7670K4	4PDT	On	Off	Mom. on	Screw	12.40 ea
5431	7671K4	4PDT	On	Off	Mom. on	Lug	11.50 ea
5432	7672K4	4PDT	Mom. on	Off	Mom. on	Screw	12.40 ea
5433	7673K4	4PDT	Mom. on	Off	Mom. on	Lug	11.50 ea
5434	7674K4	4PDT	On	None	Mom. on	Screw	12.40 ea
5435	7675K4	4PDT	On	None	Mom. on	Lug	11.50 ea

CURRENT RATING: 125 VAC 10 AMPS. 30 VDC 20 AMPS. STD. PKG. 12


7

7 FOUR POLE—FLUSH MOUNTING

Cat. No.	C-H No.	Spec.	Type	Circuit			Terminals	
				Up Position	Center Position	Down Position		
5410	8882K5	MIL-S-6745.	4PST	On	None	Off	Screw	8.30 ea
5411	8883K5	MIL-S-6745.	4PST	On	None	On	Lug	7.40 ea
5412	8886K5	MIL-S-6745.	4PST	On	Off	On	Screw	11.15 ea
5413	8884K5	MIL-S-6745.	4PDT	On	None	On	Screw	10.40 ea
5414	8885K5		4PDT	On	None	On	Lug	9.45 ea
5415	8880K5	MIL-S-6745.	4PDT	On	Off	On	Screw	10.40 ea
5416	8881K5		4PDT	On	Off	On	Lug	9.45 ea
5417	8888K5	MIL-S-6745.	4PDT	Mom. on	Off	Mom. on	Screw	12.45 ea
5418	8887K5	MIL-S-6745.	4PDT	On	Off	Mom. on	Screw	12.45 ea

CURRENT RATING: 125 VAC 10 AMPS. 30 VDC 20 AMPS. STD. PKG. 12

Birnbach CUTLER–HAMMER SWITCHES

BIRNBACH

Complete line of Cutler-Hammer quality switches available from our warehouse stocks. Includes commercial, industrial, aircraft and Gov't spec.

LIGHT DUTY TOGGLE SWITCHES

1 BACK CONNECTED LUG TERMINALS

Quick make-break; bakelite; small, compact size AC-DC UL approved

Cat. No.	C-H No.	Descrip.	Shank	Current Rating 125V	250V	List Price
5300	8280K16	SPST	15/32"		3 amps	1.15 ea
5301	8381K8	SPST	15/32"	6 amps	3 amps	1.35 ea
5302	8282K14	SPDT	15/32"	3 amps	1 amp	1.45 ea
5303	8284K14	2 circ	15/32"	3 amps	1 amp	1.55 ea
5304	8360K7	DPST	15/32"		3 amps	2.10 ea
5305	8370K7	DPST	15/32"	6 amps	3 amps	2.30 ea
5306	8363K7	DPDT	15/32"		3 amps	2.40 ea
5307	8373K7	DPDT	15/32"	6 amps	3 amps	2.60 ea

STD. PKG. 25

2 SIDE CONNECTED SCREW TERMINALS

Cat. No.	C-H No.	Descrip.	Shank	Current Rating 125V	250V	List Price
5308	8295K8	SPST	15/32"		3 amps	1.40 ea
5309	8396K8	SPST	15/32"	6 amps	3 amps	1.60 ea
5310	8297K8	SPDT	15/32"	3 amps	1 amp	1.85 ea
5311	8372K7	DPST	15/32"	6 amps	3 amps	2.75 ea
5312	8365K7	DPDT	15/32"		3 amps	3.15 ea
5313	8375K7	DPDT	15/32"	6 amps	3 amps	3.35 ea

STD. PKG. 25

3 SIX INCH LONG WIRE LEADS

Cat. No.	C-H No.	Descrip.	Shank	Current Rating 125V	250V	List Price
5335	8290K16	SPST	15/32"		3 amps	1.40 ea
5336	8391K8	SPST	15/32"	6 amps	3 amps	1.60 ea

STD. PKG. 25

4 PUSH BUTTON MOMENTARY SWITCHES

Door operated switches, used wherever it is desired to control current by opening or closing of refrigerated doors, telephone booths, closets, vaults, etc. AC-DC. UL approved; 15/32" shank; rated at .75 AMF., 125 volts—.75 AMPS, 250 volts.

Cat. No.	C-H No.	Description	Terminals	List Price
5337	8411K4	SP norm. open	lug	.80 ea
5338	8411K3	SP norm. open	screw	.90 ea
5339	8411K8	SP norm. closed	lug	.60 ea
5340	8411K7	SP norm. closed	screw	.65 ea

STD. PKG. 25

8, 9

HEAVY DUTY TOGGLE SWITCHES

Quick make—quick break; 15/32" shank (No. 8680 11/32" shank); AC-DC, UL approved; bakelite case; screw terminals.

Cat. No.	C-H No.	Descrip.	Current Rating 125V	250V	List Price
5341	@7321K3	SPST	12 amps	6 amps	2.20 ea
5342	@7320K3	DPST	12 amps	6 amps	2.20 ea
5343	*7361K5	SPST	15 amps	10 amps	3.85 ea
5344	*7360K8	DPST	15 amps	10 amps	3.85 ea
5345	**7402K4	DPST		20 amps	5.40 ea
5346	8680K1	DPDT	10 amps	5 amps	7.15 ea
5347	8690K2	DPDT	15 amps	10 amps	8.60 ea

@ 1 HP—125/250V * 1½ HP—125/250V
**1½ HP—125V, 2 HP—250V

STD. PKG. 12

A MULTI-POLE, MULTI-POSITION, ROTARY SWITCHES

Nos. 7260 thru 7266 and Nos. 7271 thru 7276

B PUSHBUTTON OPERATED AIRCRAFT SWITCHES

Nos. 8911K525, 8874, 8875

STANDARD DUTY TOGGLE SWITCHES

5 BACK CONNECTED LUG TERMINALS

Slow make and break; bakelite; AC rated for longer life, greater capacity. 15 amps. 125 volts—10 amps. 250 volts.

Cat. No.	C-H No.	Description	Shank	List Price
5314	7501K13	SPST	15/32"	1.15 ea
5315	7505K4	SPDT	15/32"	1.35 ea
5316	7561K4	DPST	15/32"	1.75 ea
5317	7565K5	DPDT	15/32"	2.05 ea
5318	7611K2	3PST	15/32"	3.65 ea
5319	7615K2	3PDT	15/32"	4.50 ea

STD. PKG. 25

6 BACK CONNECTED SCREW TERMINALS

Cat. No.	C-H No.	Description	Shank	List Price
5320	7500K14	SPST	15/32"	1.35 ea
5321	7504K4	SPDT	15/32"	1.60 ea
5322	7560K5	DPST	15/32"	2.10 ea
5323	7564K6	DPDT	15/32"	2.60 ea
5324	7610K2	3PST	15/32"	4.25 ea
5325	7614K2	3PDT	15/32"	5.40 ea

STD. PKG. 25

4

PUSH BUTTON SWITCHES PUSH TO MAKE—PUSH TO BREAK

Push-push switches; AC-DC. UL approved, bakelite case; rated 6 amps. 125V—3 amps. 250V. Pushing the button once closes the contacts; pushing it again opens the contacts. 11/16" shank.

Cat. No.	C-H No.	Description	Terminals	List Price
5326	7206K4	SPST	lug	1.60 ea
5327	7208K4	SPST	screw	1.80 ea
5328	7207K4	SPST	wire	1.80 ea

STD. PKG. 25

5

CENTER OFF STANDARD DUTY TOGGLE SWITCHES

BACK CONNECTED LUG TERMINALS

Cat. No.	C-H No.	Description	Shank	List Price
5329	7503K13	SPDT	15/32"	1.35 ea
5330	7563K4	DPDT	15/32"	2.10 ea
5331	7613K2	3PDT	15/32"	4.50 ea

STD. PKG. 25

7 BACK CONNECTED SCREW TERMINALS

Cat. No.	C-H No.	Description	Shank	List Price
5332	7502K13	SPDT	15/32"	1.60 ea
5333	7562K4	DPDT	15/32"	2.60 ea
5334	7612K2	3PDT	15/32"	5.40 ea

STD. PKG. 12

C MISCELLANEOUS AIRCRAFT SWITCHES

Pistol grip trigger movement switches Nos. 8895, 8896, 8897

D LEVER EXTENSIONS and ATTACHABLE TIPS

To meet requirements for luminous identification on switches and circuit breakers these tips snap over the standard levers and are held in place by a cup shaped spring member.
Nos. 24-1939, 24-1939-2, 24-1997, 24-1997-2, 24-1164, 24-1164-2, 24-1164-3.

E

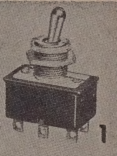
AIRCRAFT SWITCH GUARDS

IT IS USED TO PREVENT INADVERTENT OPERATION OF THE LEVER

BOOTS FOR WATER and DUST RESISTANT APPLICATIONS

Gray silastic flexible designed to obstruct water and dust from entering switch interior. Remains flexible at minus 67°F. withstand exposure to sunlight without deterioration. For all applications. Advise which Specific Switch guard is to be used.

F BUSHING SEAL No. 32-341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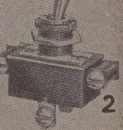
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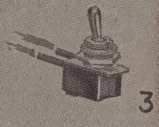
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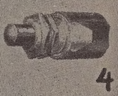
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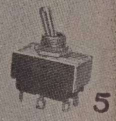
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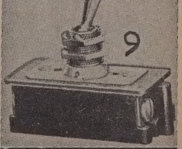
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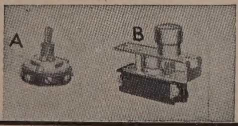
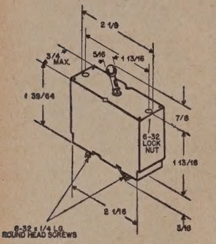
ADDITIONAL CUTLER-HAMMER EQUIPMENT AVAILABLE



Birnbach

CUTLER-HAMMER SWITCHES
MISCELLANEOUS SWITCHES

MANUAL TYPE CIRCUIT BREAKERS



OVERRIDE TYPE
NON-TRIP FREE

Both types combine, in one unit, a standard aircraft type SPST switch and a positive protection device. Molded case, metal strap with locking type mounting nuts.

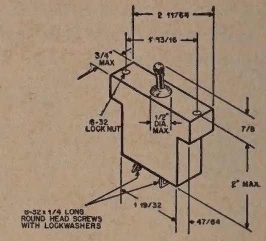
NON-TRIP FREE

CAT. NO.	C-H NO.	SPEC.	TYPE	RATING 24 VOLTS	LIST PRICE
5460	8750 K11	AN-3160- 5	SPST	5 AMPS	15.75 ea.
5461	8751 K 8	AN-3160-10	SPST	10 AMPS	15.75 ea.
5462	8752 K 8	AN-3160-15	SPST	15 AMPS	15.75 ea.
5463	8753 K 8	AN-3160-20	SPST	20 AMPS	15.75 ea.
5464	8754 K 8	AN-3160-25	SPST	25 AMPS	15.75 ea.
5465	8755 K 8	AN-3160-35	SPST	35 AMPS	15.75 ea.
5466	8756 K 8	AN-3160-50	SPST	50 AMPS	15.75 ea.

TRIP FREE

CAT. NO.	C-H NO.	SPEC.	TYPE	RATING 24 VOLTS	LIST PRICE
5470	8730 K3	E-1441- 5	SPST	5 AMPS	21.50 ea.
5471	8731 K3	E-1441-10	SPST	10 AMPS	21.50 ea.
5472	8732 K3	E-1441-15	SPST	15 AMPS	21.50 ea.
5473	8733 K3	E-1441-20	SPST	20 AMPS	21.50 ea.
5474	8734 K1	E-1441-25	SPST	25 AMPS	21.50 ea.
5475	8735 K3	E-1441-35	SPST	35 AMPS	21.50 ea.
5476	8736 K1	E-1441-50	SPST	50 AMPS	21.50 ea.

Std. Pkg. 5



NON-OVERRIDE TYPE
TRIP FREE

In addition to our large inventory listed above we have in stock the special switches manufactured specifically for aircraft—such as:

DOUGLAS DC-8
BOEING 707
CONVAIR 888
LOCKHEED ELECTRA

Also we have the regular aircraft relays which includes the hermetically sealed type.

POSITIVE ACTION MINIATURE MILITARY SWITCHES
"AS SMALL AS A DIME"

Especially designed for aircraft, missile and electronic applications.

EXTREMELY COMPACT — highly reliable power or dry circuit switch, usable as a pre-set switch in aircraft recognition systems, for walkie-talkies, electronic instruments and communication systems.

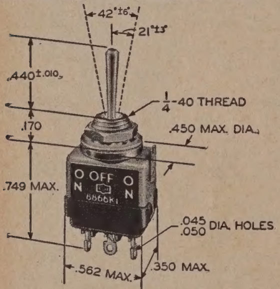
NEW DESIGN — Toggle is linked directly with movable contact member, insuring positive make and break.

NEW TOGGLE LEVER SEAL — Protects switch enclosure under adverse environmental conditions; includes panel bushing seal.

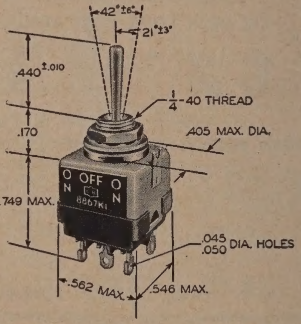
NEW GOLD PLATED CONTACTS — Open and close with wiping action, for good contact even on low energy circuits. Contact bounce is extremely low.

NEW SUPERIOR MATERIAL — In molded parts, provides higher arc-tracking resistance and excellent recovery voltage.

NEW POSITIVE DETENT ACTION — For improved operator "feel."



SINGLE POLE



DOUBLE POLE

CAT. NO.	C-H NO.	TYPE	CIRCUIT UP POSITION	CIRCUIT CENTER POSITION	CIRCUIT DOWN POSITION	CURRENT RATING 25 VOLTS DC	CURRENT RATING 50 VOLTS DC	CURRENT RATING 115 VOLTS AC	LIST
5480 K1	8866 K1	SPDT	ON	OFF	ON	2 AMPS	1 AMP	2 AMPS	10.10 ea.
5480 K2	8866 K2	SPDT	MOM-ON	OFF	MOM-ON	2 AMPS	1 AMP	2 AMPS	11.40 ea.
5480 K3	8866 K3	SPDT	ON	OFF	MOM-ON	2 AMPS	1 AMP	2 AMPS	11.40 ea.
5480 K4	8866 K4	SPDT	ON	NONE	ON	2 AMPS	1 AMP	2 AMPS	10.10 ea.
5480 K5	8866 K5	SPDT	ON	OFF	NONE	2 AMPS	1 AMP	2 AMPS	10.10 ea.
5480 K6	8866 K6	SPDT	NONE	OFF	MOM-ON	2 AMPS	1 AMP	2 AMPS	11.40 ea.
5480 K7	8866 K7	SPDT	ON	NONE	OFF	2 AMPS	1 AMP	2 AMPS	10.10 ea.
5481 K1	8867 K1	DPDT	ON	OFF	ON	2 AMPS	1 AMP	2 AMPS	12.60 ea.
5481 K2	8867 K2	DPDT	MOM-ON	OFF	MOM-ON	2 AMPS	1 AMP	2 AMPS	14.70 ea.
5481 K3	8867 K3	DPDT	ON	OFF	MOM-ON	2 AMPS	1 AMP	2 AMPS	14.70 ea.
5481 K4	8867 K4	DPDT	ON	NONE	ON	2 AMPS	1 AMP	2 AMPS	12.60 ea.
5481 K5	8867 K5	DPDT	ON	OFF	NONE	2 AMPS	1 AMP	2 AMPS	12.60 ea.
5481 K6	8867 K6	DPDT	NONE	OFF	MOM-ON	2 AMPS	1 AMP	2 AMPS	14.70 ea.
5481 K7	8867 K7	DPDT	ON	NONE	OFF	2 AMPS	1 AMP	2 AMPS	12.60 ea.

Std. Pkg. 5

SLIDE LEVER SWITCHES
UL APPROVED

Ideal for phonographs, test instruments, electrical equipment, appliances, etc.
1⅜″ x ½″ with 1⅛″ mounting centers; mounting holes .140″.

CAT. NO.	DESCRIPTION	CURRENT RATING	STD. PKGE.
6245	SPST	4 Amps-125 V AC	25
6246	SPDT	4 Amps-125 V AC	25
6247	DPST	.50 Amp-125 V AC-DC	25
6248	DPDT	.50 Amp-125 V AC-DC	25
SPRING RETURN			
6245S	SPST	.75 Amp-125 V AC-DC	25
6246S	SPDT	.75 Amp-125 V AC-DC	25
6239		Slide Switch Shield	25

BIRNBACH KNIFE SWITCHES

Made of special nickel plated spring brass on a rugged base. Screw terminals located conveniently for easy connections in circuit. Two mounting holes.

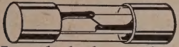
Cat. No.	Descrip.	Base	Std. Pkg.
6100	SPST	Por.	25
6102	SPDT	Bake.	20
6103	DPST	Por.	10
6104	DPDT	Bake.	10
6105	TPDT	Por.	10

BUSS Fuses

FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

for Protection of TV, Radios, Instruments and Electronic Equipment

FAST ACTING FUSES for PROTECTION OF INSTRUMENTS, Etc.



Formerly called 8AG.

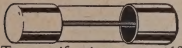
Dimension ¼ x 1 inch, Glass tube.

Provide high speed action necessary to protect sensitive instruments.

Listed by Underwriters' Laboratories Inc.

Test specification—carry 100%, open at 200% in 5 seconds.

Voltage	Symbol	Amperes	List Price
250 or less	**AGX**	1/500	$1.39
"	**AGX**	1/200	.58
"	**AGX**	1/100	.52
"	**AGX**	1/32	.45
250 or less	**AGX**	1/16	.28
"	**AGX**	1/10, ⅛, 3/16, 2/10	.21
"	**AGX**	¼, ⅜, 4/10, ½ or ¾	.14
"	**AGX**	1	.084
125 or less	**AGX**	1½ or 2	.084



Formerly called 8AG

Dimension ¼ x 1 inch, Glass tube.

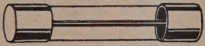
Test specification—carry 110%, open at 135% within 1 hour.

125 volt sizes are listed by Underwriters' Laboratories Inc.

Voltage	Symbol	Amperes	List Price
125 or less	**AGX**	3, or 4	$0.084
"	**AGX**	5	.053
32 or less	**AGX**	8, 10, 15 or 20	.053
"	**AGX**	25 or 30	.063

MJB & MJW FUSES NOW CALLED AGX

BUSS GLASS TUBE FUSES, ¼ x 1¼ inch

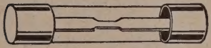


Formerly called 3AG

Test specification—carry 110%, open at 135% in 1 hour.

Listed by Underwriters' Laboratories Inc.

Voltage	Symbol	Amperes	List Price	Voltage	Symbol	Amperes	List Price
250 or less	**AGC**	1/500	$1.39	250 or less	**AGC**	175/1000	$0.21
"	**AGC**	1/200	.58	"	**AGC**	3/16, 2/10	.21
"	**AGC**	1/100	.52	"	**AGC**	¼, 3/10, ⅜	.14
"	**AGC**	1/32	.45	"	**AGC**	45/100, ½, ¾	.14
"	**AGC**	1/16	.21	"	**AGC**	1, 1½, or 2	.084
"	**AGC**	⅛	.21	"	**AGC**	3	.074
"	**AGC**	15/100	.21	"	**MTH**	4, 5 or 6	.105



Formerly called 3AG

Test specification—carry 110%, open at 135% in 1 hour.

Voltage	Symbol	Amperes	List Price
125 or less	**GLH**	8 or 10	$0.16
32 or less	**AGC**	4	.074
"	**AGC**	5, 6, 7½, 8, 10 or 15	.053
"	**AGC**	25 or 30	.063

20 ampere size is an SFE 20 fuse.

Sizes larger than 30 ampere are not recommended as clips or fuse holders would not permit fuse to carry such high currents. If surges or starting currents make heavier fuse necessary, use MDL Fusetron dual-element fuses.

MBW & MBB FUSES NOW CALLED AGC

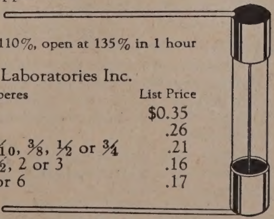
BUSS PIG-TAIL FUSES

¼ x 1¼ inch Glass tube fuse with 1½ inch leads of No. 20 tinned copper wire.

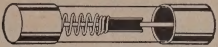
Test specifications—carry 110%, open at 135% in 1 hour or less.

Listed by Underwriters' Laboratories Inc.

Voltage	Symbol	Amperes	List Price
250 or less	**GJV**	1/16	$0.35
"	**GJV**	⅛	.26
"	**GJV**	¼, 3/10, ⅜, ½ or ¾	.21
"	**GJV**	1, 1½, 2 or 3	.16
"	**GJV**	4, 5 or 6	.17



FUSETRON FUSES, ¼ x 1¼ inch



DUAL-ELEMENT SLOW BLOWING TYPE

Stop needless blows from starting currents or surges. Fuse link operates only on very high overloads or short-circuits. Thermal cutout functions on low overloads — cannot operate quickly at any load, so long time-lag is obtained. Yet protection is afforded against short-circuits or continued overloads.

Test specification—carry 110%, open at 135% in 1 hour.

Approximate blowing time:				
at 200% load	**MDL**	25 sec.	**MDX**	12 sec.
at 300% "	"	8 "	"	3 "
at 500% "	"	3 "	"	½ "

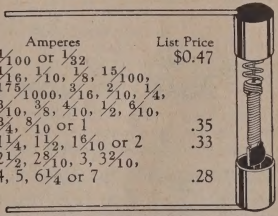
125 and 250 volt sizes listed by Underwriters' Laboratories Inc.

Voltage	Symbol	Amperes	List Price
250 or less	**MDL**	1/100 or 1/32	$0.39
250 or less	**MDL**	1/16, 1/10, ⅛, 15/100, 175/1000, 3/16, 2/10, ¼, 3/10, ⅜, 4/10, ½, 6/10, 7/10, ¾, 8/10 or 1	.28
"	**MDX**	1¼, 1½, 1 6/10 or 2	.32
125 or less	**MDL**	1 2/10, 1¼, 1½, 1 6/10 or 2	.26
"	**MDL**	2½ or 2 8/10	.21
"	**MDX**	3, 3 2/10, 4 or 5	.21
"	**MDX**	6¼ or 7	.24
32 or less	**MDL**	3, 3 2/10, 4, 5, 6¼, 8, 10, 15, 20, 25 or 30	.21

FUSETRON PIG-TAIL FUSES

Leads are No. 20 tinned wire 1½ inch long. Listed by Underwriters' Laboratories Inc. Test specifications and performance, MDV 1/100 to 2 8/10 amps. same as MDL fuses. 3 to 7 amps. same as MDX fuses.

Voltage	Symbol	Amperes	List Price
250 or less	**MDV**	1/100 or 1/32	$0.47
"	**MDV**	1/16, 1/10, ⅛, 15/100, 175/1000, 3/16, 2/10, ¼, 3/10, ⅜, 4/10, ½, 6/10, ¾, 8/10 or 1	.35
125 or less	**MDV**	1¼, 1½, 1 6/10 or 2	.33
"	**MDV**	2½, 2 8/10, 3, 3 2/10, 4, 5, 6¼ or 7	.28



BUSS INDICATING FUSES, ¼ x 1¼ inch

Fibre Tube. Silverplated indicating pin extends from end of fuse when fuse is blown. This pin can also be used to actuate a signal by using fuses in BUSS HKA Fuseholders or BUSS Signal Fuse Blocks. GLD fuses in sizes larger than 5 amperes have dual tube construction. They can be used in BUSS Signal Fuse Blocks but not in HKA Fuseholders.

125 volt sizes listed by Underwriters' Laboratories Inc.

Test specifications—carry 110%, open at 135% in one hour or less.

Voltage	Symbol	Amperes	List Price
125 or less	**GLD**	¾	$0.66
"	**GLD**	1, 2, 3, or 5	.50
32 or less	**GLD**	8, 10, 12 or 15	.70

$^{13}/_{32}$ x 1½ inch INDICATING FUSES

Voltage	Symbol	Amperes	List Price
250 or less	**MIC**	1, 2, 3, 5, 10 or 15	.58
32 or less	**MIC**	20, 25 or 30	.58

250 volt sizes listed by Underwriters' Laboratories Inc.

Fuses made in accordance with Military Specifications.

Voltage	Symbol	Amperes	List Price
250 or less	**MIN**	1, 2, 3, 5, 10 or 15	$0.51
125 or less	**MIN**	20, 25 or 30	.51

BUSSMANN MFG. DIVISION McGraw-Edison Co. **St. Louis 7, Mo.**

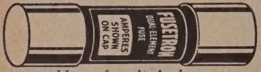
BUSS Fuses

FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

for Protection of TV, Radios, Instruments and Electronic Equipment

FUSETRON FIBRE TUBE FUSES

$^{13}/_{32}$ x 1 1/2 inch



Dual-Element — Slow Blowing Type. Avoid needless blows from starting currents or surges. Have fuse link that operates only on very high overloads or short-circuits, and thermal cutout on low overloads. Thermal cutout cannot operate quickly at any load, hence long time-lag is obtained. Yet protection is provided against short-circuits or continued overloads.

Test specification—carry 110%, open at 135% within 1 hour.
Approximate blowing time: at 200% load 25 seconds.
at 300% load 8 seconds.
at 500% load 5 seconds.

125 and 250 volt sizes listed by Underwriters' Labs., Inc.

Voltage	Symbol	Amperes	List Price
250 or less	**FNM**	1/10, 15/100, 2/10, 3/10, 4/10, 1/2, 6/10, 8/10, 1, 1 1/8, 1 1/4, 1 4/10, 1 6/10, 1 8/10, 2, 2 1/4, 2 1/2, 2 8/10, 3 2/10, 3 1/2, 4, 4 1/2, 5, 5 6/10, 6 1/4, 7, 8, 9 or 10	$0.35
125 or less	**FNM**	12 or 15	.35
32 or less	**FNM**	20, 25 or 30	.35

SIGNAL OR VISUAL INDICATING TYPE

FNA are FNM Fusetron fuses with silverplated indicating pin that extends from fuse when fuse blows. Pin can also be used to actuate a signal by using fuse in BUSS Signal Fuse Block. Fuses in sizes larger than 10 ampere have a dual tube construction. They can be used in BUSS Signal fuse blocks but not in the HPC-C fuseholder.

Voltage	Symbol	Amperes	List Price
250 or less	**FNA**	1/10, 15/100, 2/10, 3/10, 4/10, 1/2, 6/10, 8/10	$0.656
125 or less	**FNA**	1, 1 1/8, 1 1/4, 1 4/10, 1 6/10, 1 8/10, 2, 2 1/4, 2 1/2, 2 8/10, 3, 3 2/10, 3 1/2, 4, 4 1/2, 5, 5 6/10, 6, 6 1/4, 7, 8, 10	.656
"	**FNA**	12 or 15	.722
32 or less	**FNA**	20, 25 or 30	.722

BUSS LIMITRON FUSES

600 Volt. $1^{3}/_{32}$ x 1 3/8 inch. Fibre tube. For protection of control circuits or wherever a fuse with "quick-blowing" characteristics is desirable. Listed by Underwriters' Laboratories Inc.

Voltage	Symbol	Amperes	List Price
600 or less	**BBS**	4/10, 3/4 or 8/10	$0.23
600 or less	**BBS**	1, 2, 3, 4 or 5	0.21

Fuseholder for BBS fuses. Use HPC-L fuseholder or No. 3845 single pole, side barrier porcelain fuse block. Only BBS fuses (or others with exact same dimensions) will fit these holders. This assures replacement of proper size fuse.

Buss LIMITRON Fuses

For Protection of Semi-Conductor Rectifiers

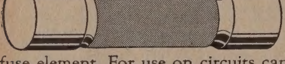
These fuses furnished with type of terminals needed to meet requirements for easy mounting.

Available in three voltage ranges. Type KAA and type KAH for 130 volts or less. Type KAB for 250 volts or less. Type KAC and type KAJ for 600 volts or less.

Tell us your requirements.

HIGH INTERRUPTING CAPACITY FUSES

$^{13}/_{32}$ x 1 1/2 inch



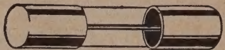
Glass fibre melamine tube with sand filler surrounding a silver fuse element. For use on circuits capable of delivering currents as high as 68,000 amperes at voltages of 500 or less AC or DC.

Test specification—carry 110%, open at 135% in 1 hour or less.

Voltage	Symbol	Amperes	List Price
500 or less	**KTK**	1/10, 1/8, 2/10, 1/4, 3/10, 1/2, 3/4, 1, 1 1/2, 2, 3, 4, 5, 6, 8, 10, 15, 20, 25 or 30	$1.33

BUSS GLASS TUBE FUSES

$^{9}/_{32}$ x 1 1/4 inch



Formerly called 4 AG.

Test specifications — carry 110%, open at 135% within 1 hour except 35 and 40 ampere which open at 300% in 2 to 4 seconds when tested in a standard 30 ampere test circuit.

Voltage	Symbol	Amperes	List Price
250 or less	**AGS**	1/16	$0.44
	AGS	1/8	.30
	AGS	1/4, or 1/2	.15
	AGS	1, 2, 2 1/2 or 3	.14
32 or less	**AGS**	5, 10, 15, 20, 25, 30	.12
	AGS	35, 40 or 50	.14

BUSS HIGH VOLTAGE FUSES

HVA and HVB

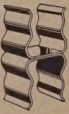
HVJ and HVL

Designed for protection of circuits up to 20 KW on DC and 30 KVA on AC.

Test specification—carry 110%, open at 135% in 1 hour.

Voltage	Symbol	Amperes	Diameter of caps	Length inches	List Price
1000 or less	**HVA**	3/8, 1/2, 3/4, 1, 1 1/2 or 2	$1^{3}/_{32}$	3	$0.29
2500 or less	**HVB**	1/2, 3/4, 1, 1 1/2 or 2	$1^{3}/_{32}$	4 1/2	0.38
5000 or less	**HVJ**	1/16, 1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/2 or 2	$1^{3}/_{16}$	5	0.70
10000 or less	**HVL**	1/16, 1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/2 or 2	$1^{3}/_{16}$	10	1.40

BUSS TWIN-CLIPS for 1/4" FUSES



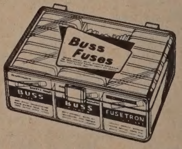
Make it easy to replace blown pigtail fuses without cutting or unsoldering pigtails.

Just snap Twin-Clips on blown fuse and insert ordinary or Fusetron fuse of same amperage as blown fuse.

Strong spring clip pressure assures good contact.

		List Price
No. 4121 BUSS Twin Clips	One pair	$0.20

BUSS FUSE TV Service Kit Assortment



Contains 101 of the most popular fuses — 20 slide-cover metal boxes — and five pair of BUSS No. 4121 Twin Clips for use in replacing blown pigtail fuses. All packed in a clear plastic box.

Symbol, **TV-STD** List Price $19.25

VIBRATION CHARACTERISTICS

To determine the vibration characteristics of BUSS and FUSETRON fuses, a costly Caladyne Vibration System has been installed.

This system permits the evaluation of the vibration characteristics of Small Dimension fuses at cycles of 5 to 2000 per second and acceleration levels up to 30g (vector) or with displacements up to 1/2 inch double amplitude.

Tests with this equipment have permitted great improvement in the designing of fuses to withstand vibration.

BUSSMANN MFG. DIVISION McGraw-Edison Co. **St. Louis 7, Mo.**

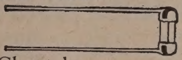
BUSS Fuses

FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

for Protection of TV, Radios, Instruments and Electronic Equipment

Sub-Miniature Fuses

TRON PIGTAIL FUSES for MINIATURIZED CIRCUITS



Body size .140 x .300 inches. Glass tube.
1 inch leads of No. 24 tinned copper wire.

Easily incorporated into miniaturized devices or components. May be potted or encapsulated. Hermetically sealed. Color coded to indicate ampere rating.

Test specifications —

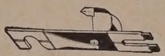
Type GLN carry 100% load, open within 10 seconds at 200% load.

Type GLX carry 100% load, open within 10 seconds at 150% load.

Voltage	Symbol	Amperes	
125 volts or less if available fault current is not over 50 amps.	**GLN**	1/20, 1/16, 1/10, 1/8, 3/10, 4/10,	(Prices on Request)
	GLX	2/10, 1/4, 1/2, 3/4, 1, 1½, 2, 3, 4, 5	

BUSS GRASSHOPPER FUSES

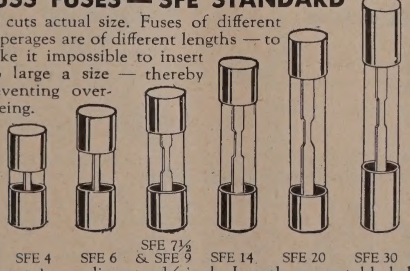
Give a visible signal or activate an alarm circuit when blown. Color coded to indicate type and amperage.



Symbol	Amps	Volts	Color Code	
35A	1⅓	90 or less	White	Prices on Request
35B	1⅓	90 or less	White	
35B	2	90 or less	Orange	
35C	2	90 or less	Orange	
35D	1⅓	90 or less	White	
35E	3	90 or less	White	
35F	½	90 or less	Red	
35G	3	90 or less	Blue	
35H	5	90 or less	Green	
35R	18/100	90 or less	Yellow	
35T	65/100	90 or less	Tan	
35J	½	160 or less	Red	
35K	1⅓	160 or less	White	
35L	2	160 or less	Orange	
35M	3	160 or less	Blue	
35N	5	160 or less	Green	
35P	¾	160 or less	Tan	
35S	¼	160 or less	Pink	

BUSS FUSES — SFE STANDARD

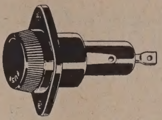
All cuts actual size. Fuses of different amperages are of different lengths — to make it impossible to insert too large a size — thereby preventing overfuseing.



Glass tube — diameter ¼ inch. Length as per table below:
Test specification—carry 100%, open at 125% in 1/2 hour.
Listed by Underwriters' Laboratories Inc.
Made according to specifications of Society of Automotive Engineers.

Voltage	Symbol & Amperes	Length Inches	Pounds per 100	List Price
32 or less	**SFE4**	⅝	.73	$0.058
"	**SFE6**	¾	.75	.058
"	**SFE7½**	⅞	.80	.053
"	**SFE9**	⅞	.80	.053
"	**SFE14**	1 1/16	.82	.047
"	**SFE20**	1¼	.87	.047
"	**SFE30**	1 7/16	1.60	.063

PANEL MOUNTED HOLDERS for 13/32 x 1½ inch Fuses



Screw type knob. Molded phenolic body. Holder attached to panel by screws or rivets. Strong coil spring provides contact pressure on ends of fuse. Normal current carrying capacity 30 amperes. Listed by Underwriters' Laboratories for 15 ampere rating for any voltage up to 250.

HPC (for FNM and KTK fuses)	List Price	$0.80
HPC-C (Same as above, but has transparent knob)	List Price	$1.00

HPC-L Holder for 13/32 x 1⅜ inch Fuses.

Like **HPC** Holder. Has Underwriters' Laboratories approved listing for 5 ampere rating and any voltage up to 600.

HPC-L (for BBS fuses)	List Price	$0.80

PANEL MOUNTED HOLDERS for ¼ inch Fuses

Can be used on panels up to 5/16 inch thick.

Bayonet type knob. No screw driver is needed.

Side terminal is held mechanically as well as by solder. Heat of soldering wire to it will not cause it to loosen.

Vibration will not cause failure of terminals as they are designed to stand severe service.

Neoprene washer and steel locking nut furnished with each holder.

Wire hole in terminals; .115 inch.

Normal current carrying capacity; 30 amperes.

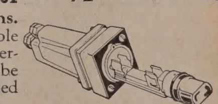
Listed by Underwriters' Laboratories Inc.

	List Price
HJM for ¼ x 1 inch fuses (AGX, SFE 14)	$0.52
HJM-CC (Same as HJM but projects shorter distance behind panel)	.52
HKP for ¼ x 1¼ inch fuses (ABC, AGC, SFE20, MDL, MDX, MTH)	.52
HKP-CC (Same as HKP but projects shorter distance behind panel)	.52

PANEL MOUNTED, LAMP INDICATING FUSEHOLDERS for ¼ x 1¼ and 13/32 x 1½ inch fuses

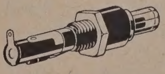
Made to Military Specifications.

Available as single or two pole units. Transparent knob permits neon indicating light to be readily seen. Body of molded alkyd.



Type	Pole	Fuse Size Inches	Circuit Voltage	Max. Amp. Rating	List Prices
HGB-C	Single	¼ x 1¼	100 to 250	30	Prices on Request
HGA-C	Two	¼ x 1¼	100 to 250	30	
HGC	Single	13/32 x 1½	200 to 500	30	

LAMP INDICATING FUSEHOLDERS



For panel mounting ¼ x 1 and ¼ x 1¼ inch fuses. Bayonet type knob. Molded phenolic body. Strong coil spring provides contact pressure at ends of fuse. Transparent knob permits indicating light to be readily seen.

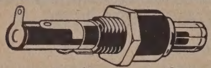
Type	Fuse Size Inches	Circuit Voltage	Max. Amp. Rating	Type Lamp	List Price
HKL	¼ x 1¼	100 to 250	20	Neon	$2.15
HKL-X	¼ x 1¼	100 to 250	20	Neon	2.15
HKR	¼ x 1¼	24 to 32	20	Incand.	3.50
HKX	¼ x 1¼	24 to 32	20	Incand.	3.50
HKT	¼ x 1¼	10 to 14	20	Incand.	3.50
HKU	¼ x 1¼	4 to 6	20	Incand.	3.50
HJL	¼ x 1	100 to 250	20	Neon	2.15

BUSSMANN MFG. DIVISION McGraw-Edison Co. **St. Louis 7, Mo.**

BUSS Fuses

FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

for Protection of TV, Radios, Instruments and Electronic Equipment



HKA SERIES

Lamp Indicating, Signal Activating holders for ¼ x 1¼ inch BUSS type GLD fuses

Used on circuits of 125 volts or less. Flashes a light, rings a bell, trips a relay or gives other signals to tell you when and where a fuse blows.

Symbol		List Price
HKA	for ¼ x 1¼ inch GLD fuses, ¾ to 5 amps.	$4.70

GLD fuses listed under Indicating fuses.

IN-THE-LINE HOLDERS for ¼ inch fuses

For mounting fuse in wire. Holders consist of body and bayonet type knob — two contacts ready to be staked on ends of wire — and a contact pressure spring.

Holders can also be mounted in panel up to 5/16 inch thick by means of a No. 9969 Spring nut (Nut not furnished). Flat area on holder permits locking against rotation.

Normal current carrying capacity: 15 amperes. Maximum Voltage: 250.

Contacts designed to take different size wire. For 18 to 22 wire add "-A" to symbol. For 14 to 16 wire add "-B" to symbol. (Example HHJ-A).

Symbol	Fuse Size Inches	List Price
HHJ	¼ x 1¼	$0.25
HHI	¼ x 1 or 1 1/16	.25
HHH	¼ x ⅞	.25
HIG	¼ x ¾	.25
HIF	¼ x ⅝	.25

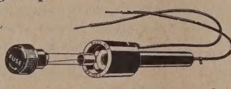
SERIES HD and HA

These holders are the same in all details and dimensions as the HH and HI series — EXCEPT that the holding ears in the bayonet knob are of molded phenolic instead of being of metal.

Symbol	Fuse Size Inches	List Price
HDJ	¼ x 1¼	$0.20
HDI	¼ x 1 or 1 1/16	.20
HDH	¼ x ⅞	.20
HAG	¼ x ¾	.20
HAF	¼ x ⅝	.20
No. 9969	Spring nut for panel mounting above holders	.033

BUSS FUSE & HOLDER COMBINATION

For voltages up to 300



Safeguard against use of wrong size and type of fuse. HLR holder takes only GLR and GMF fuses.

Fuse and knob of fuseholder are in one piece. When fuse blows, the entire fuse-knob assembly is replaced.

Small and compact, overall length of holder with fuse is approximately 2 7/16 inches.

Fuseholder

Symbol		List Price
HLR	takes all sizes GLR and GMF Fuses	$0.22
No. 6374	Snap-in steel clip for mounting HLR	$0.026

GLR FUSES — Fast-acting type

Symbol	Amperes	List Price
GLR	1, 1½, 1 6/10, 2, 2½, 3, 4, 5, 6	$0.12
GLR	7, 8, 9, 10	.13

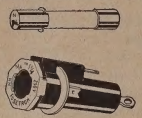
Carry 110%; open at 135% within one hour: Listed by Underwriters' Laboratories, Inc.

GMF FUSES — Dual-Element — slow-blowing type

Symbol	Amperes	List Price
GMF	½, 6/10, 8/10, 1, 1¼, 1 6/10, 2, 2½, 2 8/10	$0.36
GMF	3 2/10, 4, 5, 6¼	.36

Carry 110%; open at 135% within one hour. Listed by Underwriters' Laboratories, Inc.

FUSETRON and BUSS MATCHED FUSES and FUSEHOLDERS



Safeguard against use of wrong size and type of fuse. FUSETRON Type N are "slow-blowing" fuses for use where harmless surges or starting currents might cause ordinary fuses to open needlessly. Use in Type HN fuseholder.

BUSS Type C are "quick-blowing" fuses for fast interruption of fault current. Use in Type HC fuseholder.
Listed by Underwriters' Laboratories Inc.

FUSETRON FUSE		FUSEHOLDER	
Symbol & Amperes	List Price	Symbol & Range	List Price
N 1/100	$0.41	HN 0 to 3/10	$0.21
N 1/32	.41		
N 1/16	.295		
N 1/10	.295		
N 15/100	.295		
N 2/10	.295		
N ¼	.295		
N 3/10	.295		
N 4/10	.295	HN 3/10 to ½	.21
N ½	.295		
N 6/10	.295	HN ½ to ¾	.21
N 7/10	.295		
N ¾	.295		
N 8/10	.295	HN ¾ to 1¼	.21
N 1	.295		
N 1¼	.27		
N 1 6/10	.27	HN 1 3/10 to 1¾	.21
N 1¾	.27		
N 2	.27	HN 1¾ to 2½	.21
N 2½	.25		
N 2 8/10	.25	HN 2½ to 3½	.21
N 3 2/10	.25		
N 3½	.25		
N 4	.25	HN 3½ to 5	.21
N 5	.25		
N 6¼	.25	HN 5 to 7	.21
N 7	.25		

BUSS FUSE		FUSEHOLDER	
Symbol & Amperes	List Price	Symbol & Range	List Price
C 1/32	$0.44	HC 0 to 3/10	$0.21
C 1/16	.28		
C ⅛	.22		
C 3/16	.22		
C ¼	.17		
C 3/10	.17		
C ⅜	.17	HC 3/10 to ½	.21
C ½	.17		
C ¾	.17	HC ½ to ¾	.21
C 1	.095	HC ¾ to 1¼	.21
C 1¼	.095		
C 1½	.095	HC 1¼ to 1¾	.21
C 1¾	.095		
C 2	.095	HC 1¾ to 2½	.21
C 2½	.095		
C 3	.095	HC 2½ to 3½	.21
C 3½	.125		
C 4	.125	HC 3 6/10 to 5	.21
C 5	.125		
C 6	.125	HC 5 to 7	.21
C 7	.125		
C 8	.18	HC 7 to 10	.21
C 10	.19		

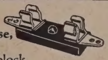
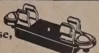
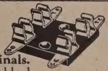
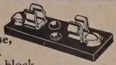
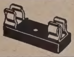
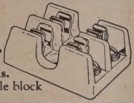
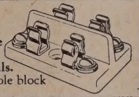
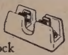
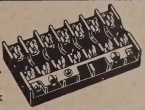
BUSSMANN MFG. DIVISION McGraw-Edison Co. **St. Louis 7, Mo.**

BUSS Fuses

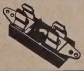
FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

for Protection of TV, Radios, Instruments and Electronic Equipment

BUSS FUSE and BUSS SILICON RECTIFIER BLOCKS

Type of Block	Poles	For ¼ x 1 inch Fuses		For ¼ x 1¼ inch Fuses		For ¼ x 1-7/16 inch Fuses		For 9/32 x 1¼ inch Fuses		For 13/32 x 1½ inch Fuses	
		No.	List Price	No.	List Price	No.	List Price	No.	List Price	No.	List Price
Small bakelite base, solder terminals. Cut shows 1 pole block 	1 Pole	4520	$0.22	4405	$0.22			4413	$0.36	4421	$0.54
	2 Pole	4485	.44	4408	.44			4416	.72	4424	1.08
	3 Pole	4403	.66	4411	.66			4419	1.08	4428	1.62
Small bakelite base, screw terminals. Cut shows 1 pole block 	1 Pole	4399	$0.36	4407	$0.36			4415	$0.59	4423	$0.59
	2 Pole	4402	.72	4410	.72			4418	1.18	4427	1.18
	3 Pole	4404	1.08	4412	1.08			4420	1.77	4429	1.77
Small bakelite base, solder side terminals. Cut shows 2 pole block 	1 Pole	4398	$0.22	4406	$0.22			4414	$0.36	4422	$0.54
	2 Pole	4401	.44	4409	.44			4417	.72	4426	1.08
Full bakelite base, screw terminals. Cut shows 1 pole block 	1 Pole	4514	$0.47	4512	$0.47	4513	$0.59	4481	$0.59	4515	$0.68
	2 Pole	4524	.94	4522	.94	4523	1.18	4482	1.18	4525	1.37
	3 Pole	4534	1.41	4532	1.41	4533	1.77	4483	1.77	4535	2.05
Spare fuse block. Bakelite base. 	1 Pole	4393	$0.22	4574	$0.22						
Porcelain base, side barrier, screw terminals. Cut shows 2 pole block 	1 Pole			4396	$0.53					3792	$0.79
	2 Pole			4161	1.05					4439	2.36
	3 Pole										
Porcelain base center barrier screw terminals. Cut shows 2 pole block 	2 Pole									4575	$1.47
Porcelain base, side barrier, screw terminals. Cut shows 1 pole block 	1 Pole	3845	For 13/32 x 1⅜ inch Fuses (BUSS BBS) — Price Each $0.79								
Signal Fuse block. Cut shows 7 pole block 	4 Pole	3839	For 13/32 x 1½ inch BUSS FNA fuses—Prices on request								
	7 Pole	4178	For ¼ x 1¼ BUSS GLD fuses—Prices on request								

BUSS SILICON RECTIFIER BLOCKS

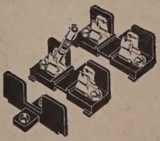
Type of Block	Poles	No.	List Price
Silicon rectifier block. Solder terminals. Cut shows 1 pole block 	1 Pole	3794	$0.22
	2 Pole	3795	.44

BUSS Add-On Fuse Blocks for $^{13}/_{32}$ x 1½ inch Fuses

Single-pole fuse blocks and separate end barrier assemble into a unit block of one or more poles. Units lock in position. Assembled block becomes a single unit.

Each fuse can be used as a disconnect. See illustration. Raised fuse identifies open circuit and prevents confusion in getting right fuse back in circuit.

Marking strips so each circuit can be identified available.



No.		
3949	Assembly consisting of one No. **3742** End Barrier —plus specified number of No. **3743** One-Pole Blocks	
3742	End-Barrier Only	$ .30
3743	One-Pole Block Only	1.50
	Marking Strip in 50 inch lengths	$0.55 per length

When ordering, be sure to specify number of End Barriers and number of One-Pole Blocks desired. Only ONE End Barrier is required for each assembled fuse block of any number of poles.

Other standard and special fuses, fuse blocks, fuse clips and fuse holders

If the fuses, fuse blocks, fuse clips and holders shown do not fit your requirements ask for information on other types.

Fuses and fuse mountings to meet JAN and Military specifications also are available.

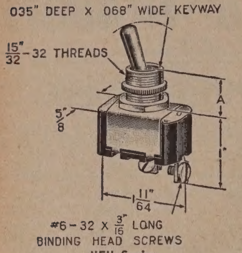
If you have a special problem in protection send description or sketch giving number of circuits, type of fuse, terminals, etc., desired. We welcome such inquiries.

BUSSMANN MFG. DIVISION McGraw-Edison Co. **St. Louis 7, Mo.**

SWITCHES - TOGGLE

*For COLORED PLASTIC Toggles—Inquire

Heavier Duty Types of these Switches Available — Inquire


035" DEEP X 068" WIDE KEYWAY
$\frac{15}{32}$"-32 THREADS
$\frac{5}{8}$"
A
1"
$1\frac{11}{64}$"
#6-32 X $\frac{3}{16}$" LONG
BINDING HEAD SCREWS

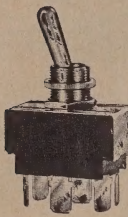
"F" Series

Single Pole ("F" Series)

CATALOG NUMBERS				ELECTRICAL CIRCUIT CHARACTERISTICS (NOTE—Keyway Indicates "Down" Position)		
NOMINAL RATINGS						
15 Amp—125 V. A.C. 10 Amp—250 V. A.C. ¾ H.P.—115-230 V. A.C.		6 Amp—125 V. A.C. 3 Amp—250 V. A.C. ¼ H.P.—115-230 V. A.C.				
SOLDER LUGS	SCREW TERMINALS	SOLDER LUGS	SCREW TERMINALS	UP POSITION	CENTER POSITION	DOWN POSITION
*2FA53	*2FA54	2FA63	2FA64	On	None	Off
6FA57	6FA58	6FA67	6FA68	On	None	Momentarily Off
6FA53	6FA54	6FA63	6FA64	Off	None	Momentarily On
2FB53	2FB54	2FB63	2FB64	On	None	On
2FC53	2FC64	2FC63	2FC64	On	Off	On
6FB53	6FB54	6FB63	6FB64	On	None	Momentarily On
6FC53	6FC54	6FC63	6FC64	Momentarily On	Off	Momentarily On
6FC57	6FC58	6FC67	6FC68	On	Off	Momentarily On

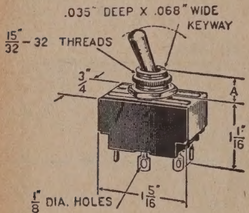
Note: For Cross Connected Reversing, Progressive Circuits, and other multiple circuit applications—Inquire.

Double Pole ("G" Series)



For TAB Terminals as above Add Suffix — "TABS"

CATALOG NUMBERS				ELECTRICAL CIRCUIT CHARACTERISTICS (NOTE—Keyway Indicates "Down" Position)		
NOMINAL RATINGS						
15 Amp—125 V. A.C. 10 Amp—250 V. A.C. ¾ H.P.—115-230 V. A.C.		6 Amp—125 V. A.C. 3 Amp—250 V. A.C. ¼ H.P.—115-230 V. A.C.				
SOLDER LUGS	SCREW TERMINALS	SOLDER LUGS	SCREW TERMINALS	UP POSITION	CENTER POSITION	DOWN POSITION
2GK53	2GK54	2GK63	2GK64	On	None	Off
6GK57	6GK58	6GK67	6GK68	On	None	Momentarily Off
6GK53	6GK54	6GK63	6GK64	Off	None	Momentarily On
2GL53	2GL54	2GL63	2GL64	On	None	On
2GM53	2GM54	2GM63	2GM64	On	Off	On
6GL53	6GL54	6GL63	6GL64	On	None	Momentarily On
6GM53	6GM54	6GM63	6GM64	Momentarily On	Off	Momentarily On
6GM57	6GM58	6GM67	6GM68	On	Off	Momentarily On


.035" DEEP X .068" WIDE KEYWAY
$\frac{15}{32}$"-32 THREADS
$\frac{3}{4}$"
A
$1\frac{1}{16}$"
$\frac{1}{8}$" DIA. HOLES
$1\frac{5}{16}$"

"G" Series (above)

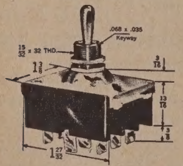
CATALOG NUMBER SUFFIX
FOR TOGGLE and STEM LENGTHS
(Bat Toggle Only)

TOGGLE LENGTH	STEM LENGTH	SUFFIX NO.	TOGGLE LENGTH	STEM	SUFFIX NO.
$\frac{13}{32}$"	$\frac{11}{32}$"	—52	1"	$\frac{11}{32}$"	—A2
$\frac{9}{16}$"	$\frac{11}{32}$"	—62	1"	$\frac{15}{32}$"	—A3
$\frac{9}{16}$"	$\frac{15}{32}$"	—63	1¼"	$\frac{15}{32}$"	—B3
$\frac{11}{16}$"	$\frac{11}{32}$"	—72	3"	$\frac{15}{32}$"	—I3
$\frac{11}{16}$"	$\frac{15}{32}$"	—73			

*Note: #2FA53 and #2FA54 have a higher rating of 1 H.P.

RATING:
13 Amp.—125 V. A.C.
10 Amp.—250 V. A.C.
1 H.P.—1, 2, 3 Phase
120-240 V. A.C.

Three Pole ("H" Series)

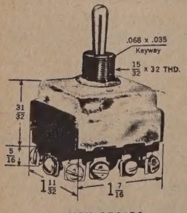


"H" SERIES
Illustration is with
Tab type terminals

CATALOG NUMBERS			CIRCUIT CHARACTERISTICS WITH POSITION OF TOGGLE		
TERMINALS					
LUG	SCREW	TAB	UP	CENTER	DOWN
HK233	HK234	HK23A	On	None	Off
HK633	HK634	HK63A	Off	None	Momentarily On
HK637	HK638	HK63B	On	None	Momentarily Off
HL233	HL234	HL23A	On	None	On
HL633	HL634	HL63A	On	None	Momentarily On
HM233	HM234	HM23A	On	Off	On
HM633	HM634	HM63A	Momentarily On	Off	Momentarily On
HM637	HM638	HM63B	On	Off	Momentarily On

RATING: 15 Amp.—125 V. A.C.
10 Amp.—250 V. A.C.

Four Pole ("I" Series)



"I" SERIES
Illustration above
shows Screw Terminals

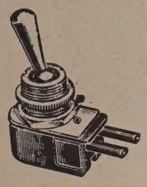
CATALOG NUMBERS			CIRCUIT CHARACTERISTICS WITH POSITION OF TOGGLE		
TERMINALS					
LUG	SCREW	TAB	UP	CENTER	DOWN
IK253	IK254	IK25A	On	None	Off
IK653	IK654	IK65A	Off	None	Momentarily On
IK657	IK658	IK65B	On	None	Momentarily Off
IL253	IL254	IL25A	On	None	On
IL653	IL654	IL65A	On	None	Momentarily On
IM253	IM254	IM25A	On	Off	On
IM653	IM654	IM65A	Momentarily On	Off	Momentarily On
IM657	IM658	IM65B	On	Off	Momentarily On

Note: Keyway is in down position on all switches shown.

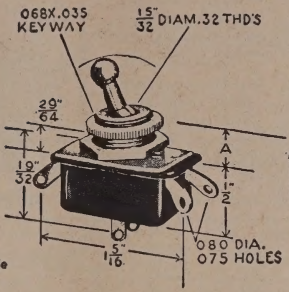
CARLING ELECTRIC, INC. — West Hartford 10, Conn.

SINGLE POLE DOUBLE POLE SWITCHES—TOGGLE

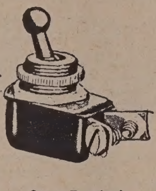
Maintained (Locking) and Momentary (Non-Locking) Types



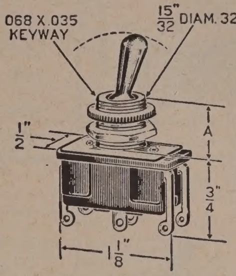
Wire Leads
Single Pole or Double Pole



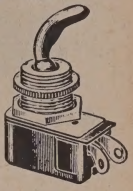
End Lugs—Double Poles
Bottom Lugs—Single Pole



Screw Terminals
Single Pole Only



Bottom Lugs—Double Poles



Trigger Bat
Momentary Only

End Lugs
Single Pole
Switches

IMPORTANT—ADD correct SUFFIX NUMBER to CATALOG NUMBER to receive type TOGGLE and STEM wanted.

MAINTAINED CONTACTS

CATALOG NUMBER	TYPES OF TERMINALS	POLES-CIRCUIT	NOMINAL RATING AC or DC
T-110 T-110-B T-110-S T-111-16	Lugs—End Lugs—Bottom Screw Wire	S.P.—S.T.	3 Amp—250 V. 6 Amp—125 V.T. (T Rated)
110 110-B 110-D 110-S 111-16 111-D	Lugs—End Lugs—Bottom Lugs—2 Ends Screw Wire Wire—2 Ends	S.P.—S.T.	3 Amp—250 V. 6 Amp—125 V.
112 112-A	Lugs—End Wire	S.P.—D.T.	1 Amp—250 V. 3 Amp—125 V.
216 216-A 216-B	Lugs—End Wire Lugs—Bottom	D.P.—S.T.	
316 316-A 316-B	Lugs Wire Lugs—Bottom	D.P.—D.T.	
516 516-A 516-B	Lugs—End Wire Lugs—Bottom	Two Circuit	
2BB62	Lugs—End	S.P.—D.T.	3 Amp—250 V. 6 Amp—125 V.
2BK62	Lugs—End	D.P.—S.T.	
2BL62 2BL63	Lugs—End Lugs—Bottom	D.P.—D.T.	
160 160-A 160-B 160-S	Lugs—End Wire Lugs—Bottom Screw	S.P.—S.T.	10 Amp—125 V. 5 Amp—250 V.

MOMENTARY TYPES — Stem Length 15/32″ ONLY

NOMINAL RATING AC or DC	POLES-CIRCUIT	TYPES OF TERMINALS	CATALOG NUMBER
6 Amp—125 V. 3 Amp—250 V.	S.P.—S.T. Normally Open (Off) (Momentarily On)	Lugs—End Lugs—Bottom Lugs—2 Ends Screw Wire Wire—2 Ends	110-M-NO 110-BM-NO 110-M-DNO 110-SM-NO 111-16M-NO 111-16M-DNO
	S.P.—S.T. Normally Closed (On) (Momentarily Off)	Lugs—End Lugs—Bottom Lugs—2 Ends Screw Wire Wire-2 Ends	110-M-NC 110-BM-NC 110-M-DNC 110-SM-NC 111-16M-NC 111-16M-DNC
3 Amp—125 V. 1 Amp—250 V.	S.P.—D.T.	Lugs—End Wire	112-M 112-M-A
	D.P.—S.T. Normally Open (Off) (Momentarily On)	Lugs—End Wire	216-M-NO 216-M-ANO
	D.P.—S.T. Normally Closed (On) (Momentarily Off)	Lugs—End Wire	216-M-NC 216-M-ANC
	D.P.—D.T.	Lugs Lugs—Bottom	316-M 316-BM
	Two Circuit (1 On—1 Off)	Lugs—End Wire Lugs—Bottom Screw	516-M 516-AM 516-BM 516-SM

TOGGLE TYPE & LENGTH	BALL 3/8″	BAT 1/2″	BAT 11/16″	TRIGGER BAT
SUFFIX NO.	—23	—63	—73	—93

TOGGLE TYPE & LENGTH	BALL 5/16	BALL—3/8″ LONG				BAT—1/2″		BAT—11/16″	SLOTTED
STEM LENGTH (A)	1/4″	1/4″	11/32″	15/32″	7/8″	11/32″	15/32″	15/32″	11/32″
Std. SUFFIX NOS.	—11	—21	—22	—23	—25	—62	—63	—73	
*With Neoprene Seal			—57			—67	—68		
& Toggle Type & Length			BAT 3/8			BAT 1/2	BAT 9/16		

***DUSTPROOF SEAL (Also RAIN RESISTANT)**

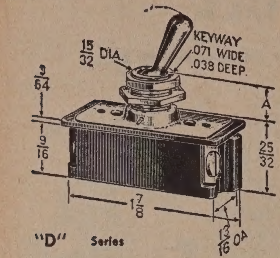
MARINE APPLICATIONS
USE PREFIX M-

Note: Solderless quick disconnect terminals are available on #110 switch above

(See Picture on Cover) Use Addt'l Suffix No. — "TABS"

CARLING ELECTRIC, INC. — West Hartford, 10, Conn.

SWITCHES - TOGGLE - PUSH - SLIDE



"D" Series

CATALOG NUMBER	TYPE OF TERMINALS	POLES OR CIRCUIT	NOMINAL RATING A.C. OR D.C.
2DA25	Screw	S.P.—S.T.	12 Amps—125 V. 6 Amps—250 V. 1 H.P. 125—250 V.
2DK25	Screw	D.P.—S.T.	
EA255	Screw	S.P.—S.T.	15 Amps—125 V. 10 Amps—250 V. 1½ H.P. 125—250 V.
EK255	Screw	D.P.—S.T.	

CATALOG NUMBER SUFFIX FOR TOGGLE & STEM LENGTHS

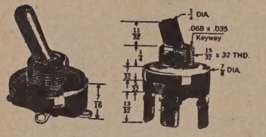
Toggle Length 11/16"

TOGGLE TYPE	STEM LENGTH	SUFFIX NO.
Bat	11/32"	—72
Ball	11/32"	—32
Bat	15/32"	—73
Ball	15/32"	—33

Note: Dimensions of "E" Series Switches are 2⅛" lg x 1" w x 23/32" high.

RATING: 15 Amp — 125 V. A-C
7½ Amp. — 250 V. A-C
½ H.P. 115-23 V. A-C

Single Pole



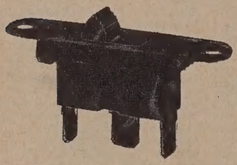
"A" Series Illustrated Above with Solder Lugs and Metal Toggle 11/16" Long

"A" Series Illustrated Above with Tab Terminals and Plastic Toggle

CATALOG NUMBERS			CIRCUIT CHARACTERISTICS WITH POSITION OF TOGGLE		
TERMINALS					
LUG	SCREW	TAB	UP	CENTER	DOWN
AA252	AA254	AA25A	On	None	Off
AB252	AB254	AB25A	On	None	On
AC252	AC254	AC25A	On	Off	On
RATING: 3 Amp. — 125 V. A-C (Below)					
AA232	AA234	AA23A	On	None	Off

Add: Following Suffixes to ABOVE CATALOG NOS.

Metal Toggle Type	Colored Plastic Toggle Types:			
	Black	Brown	—WH	—RD
—71	—BL	—BR	Red	White

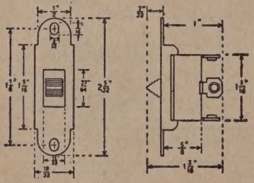


"L" Series

(**Also available with ON-OFF Stamped on Slide or Case on Special Order**)

CATALOG NUMBERS NOMINAL RATINGS						ELECTRICAL CIRCUIT CHARACTERISTICS		
15 Amp—125 V. A.C. 10 Amp—250 V. A.C. ½ H.P.—115-230 V. A.C.			3 Amp—250 V. A.C. 6 Amp—125 V. A.C. ¼ H.P.			UP POSITION	CENTER POSITION	DOWN POSITION
Solder Lugs	Screw Term.	Tab Term.	Solder Lugs	Screw Term.	Tab Term.	Single Pole—Single Throw & Single Pole—Double Throw		
LA453	LA454	LA45A	LA463	LA464	LA46A	On	None	Off
LB453	LB454	LB45A	LB463	LB464	LB46A	On	None	On
LC453	LC454	LC45A	LC463	LC464	LC46A	On	Off	On

For Slide COLOR Add SUFFIX	BLACK	RED	GRAY
	—BL	—RD	—GY

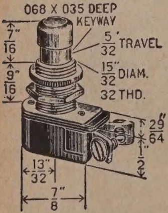


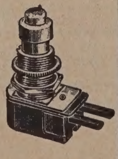
MAINTAINED CONTACTS OR MOMENTARY CONTACTS AC—DC

CATALOG NUMBERS			Type Terminals	Poles Or Circuit	Nominal Rating
Maintained Contacts	MOMENTARY CONTACTS				
	Normally Open	Normally Closed			
110—P 110—BP 110—SP 111—16P	110—PM—OFF 110—PBM—OFF 110—SPM—OFF 111—PM—OFF	110—PM—ON 110—PBM—ON 110—SPM—ON 111—PM—ON	Lug Lug (Bottom) Screw Wire	S.P.—S.T.	6 Amp—125 V. 3 Amp—250 V. A.C.—D.C.
160—P 160—BP 160—SP 160—AP	None	None	Lug Lug (Bottom) Screw Wire	S.P.—S.T.	10 Amp—125 V. 5 Amp—250 V. A.C.—D.C.
216—PP 216—PPA	216—PM—OFF 216—PAM—OFF	216—PM—ON 216—PAM—ON	Lug Wire	D.P.—S.T.	3 Amp—125 V. 1 Amp—250 V. A.C.—D.C.
112—P 112—PA	112—PM 112—PAM		Lug Wire	S.P.—**D.T.**	
316—PP 316—PPA	316—PM 316—PAM		Lug Wire	D.P.—D.T.	
516—PP 516—PPA	516—PM 516—PAM		Lug Wire	2 circuit	

Overtravel available for Momentary Switches only)—Add CATALOG SUFFIX NO. —OV

TAB (Quick Disconnect) Terminals available on above Switches





CARLING ELECTRIC, INC. — West Hartford 10, Conn.

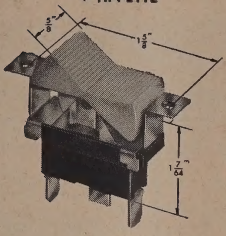
SWITCHES-TIPPETTE*-TRIGGER

TIL Series

*Tippette is a Carling Trademark

TIL SERIES

✻ TIPPETTE



1⅝" Distance Between Mounting Hole Centers. Mounting Holes Tapped 6-32 NC2. Width of "Tippette" Actuators .660. Length of "Tippette" Actuators 1.230.

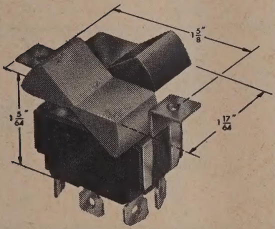
Note: For purposes of terminology "OFF" indicates open circuit, "ON" indicates closed circuit, MOM. ON indicates Momentary Normally OPEN circuit and MOM. OFF indicates Momentary Normally Closed Circuit.

CATALOG NUMBERS NOMINAL RATINGS RATING 6 AMP—125V A.C. 3 AMP—250V A.C.						OPERATION AND CIRCUIT CHARACTERISTICS		
SOLDER LUGS	.250 SPADE TERM.	.205 SPADE TERM.	.187 SPADE TERM.	SCREW TERM.	WIRE LEADS	Position #1	Position #2 (CENTER)	Position #3
						SINGLE POLE SINGLE THROW		
TILA60	TILA61	TILA62	TILA63	TILA64	TILA65	On	None	Off
TILA6A	TILA6B	TILA6C	TILA6D	TILA6E	TILA6F	Off	None	Mom. On
TILA6L	TILA6M	TILA6Q	TILA6R	TILA6S	TILA6T	On	None	Mom. Off
						SINGLE POLE DOUBLE THROW		
TILB60	TILB61	TILB62	TILB63	TILB64	TILB65	On	None	On
TILB6A	TILB6B	TILB6C	TILB6D	TILB6E	TILB6F	On	None	Mom. On
TILC60	TILC61	TILC62	TILC63	TILC64	TILC65	On	Off	On
TILC6A	TILC6B	TILC6C	TILC6D	TILC6E	TILC6F	On	Off	Mom. On
TILC6L	TILC6M	TILC6Q	TILC6R	TILC6S	TILC6T	Mom. On	Off	Mom. On

RATING 15 AMP—125V A.C. 10 AMP—250V A.C. ¾ H.P. 125-250V. A.C.						OPERATION AND CIRCUIT CHARACTERISTICS		
SOLDER LUGS	.250 SPADE TERM.	.205 SPADE TERM.	.187 SPADE TERM.	SCREW TERM.	WIRE LEADS	Position #1	Position #2 (CENTER)	Position #3
						SINGLE POLE SINGLE THROW		
TILA50	TILA51	TILA52	TILA53	TILA54	TILA55	On	None	Off
TILA5A	TILA5B	TILA5C	TILA5D	TILA5E	TILA5F	Off	None	Mom. On
TILA5L	TILA5M	TILA5Q	TILA5R	TILA5S	TILA5T	On	None	Mom. Off
						SINGLE POLE DOUBLE THROW		
TILB50	TILB51	TILB52	TILB53	TILB54	TILB55	On	None	On
TILB5A	TILB5B	TILB5C	TILB5D	TILB5E	TILB5F	On	None	Mom. On
TILC50	TILC51	TILC52	TILC53	TILC54	TILC55	On	Off	On
TILC5A	TILC5B	TILC5C	TILC5D	TILC5E	TILC5F	On	Off	Mom. On
TILC5L	TILC5M	TILC5Q	TILC5R	TILC5S	TILC5T	Mom. On	Off	Mom. On

TIG SERIES

✻ TIPPETTE



Also this switch can be provided with two "Tippette" levers (see illustration) to operate as two single pole switches in any circuit combination desired and rating shown under our "TIL" Series switches. Specify "TIG" switch and combination desired.

Note: For purposes of terminology "OFF" indicates open circuit, "ON" indicates closed circuit, MOM. ON indicates Momentary Normally OPEN circuit and MOM. OFF indicates Momentary Normally Closed Circuit.

TIG Series (With *ONE* Tippette Lever)

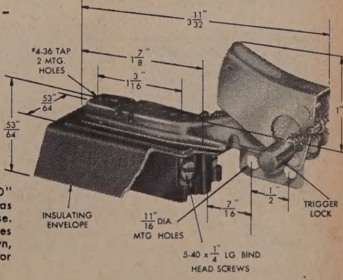
CATALOG NUMBERS NOMINAL RATINGS RATING 6 AMP—125V A.C. 3 AMP—250V A.C. ¼ H.P. 125-250V. A.C.						OPERATION AND CIRCUIT CHARACTERISTICS		
SOLDER LUGS	.250 SPADE TERM.	.205 SPADE TERM.	.187 SPADE TERM.	SCREW TERM.	WIRE LEADS	Position #1	Position #2 (CENTER)	Position #3
						DOUBLE POLE SINGLE THROW		
TIGK60	TIGK61	TIGK62	TIGK63	TIGK64	TIGK65	On	None	Off
TIGK6A	TIGK6B	TIGK6C	TIGK6D	TIGK6E	TIGK6F	Off	None	Mom. On
TIGK6L	TIGK6M	TIGK6Q	TIGK6R	TIGK6S	TIGK6T	On	None	Mom. Off
						DOUBLE POLE DOUBLE THROW		
TIGL60	TIGL61	TIGL62	TIGL63	TIGL64	TIGL65	On	None	On
TIGL6A	TIGL6B	TIGL6C	TIGL6D	TIGL6E	TIGL6F	On	None	Mom. On
TIGM60	TIGM61	TIGM62	TIGM63	TIGM64	TIGM65	On	Off	On
TIGM6A	TIGM6B	TIGM6C	TIGM6D	TIGM6E	TIGM6F	On	Off	Mom. On
TIGM6L	TIGM6M	TIGM6Q	TIGM6R	TIGM6S	TIGM6T	Mom. On	Off	Mom. On

RATING 15 AMP—125V A.C. 10 AMP—250 V.A.C. ¾ H.P. 125-250V. A.C.						OPERATION AND CIRCUIT CHARACTERISTICS		
SOLDER LUGS	.250 SPADE TERM.	.205 SPADE TERM.	.187 SPADE TERM.	SCREW TERM.	WIRE LEADS	Position #1	Position #2 (CENTER)	Position #3
						DOUBLE POLE SINGLE THROW		
TIGK50	TIGK51	TIGK52	TIGK53	TIGK54	TIGK55	On	None	Off
TIGK5A	TIGK5B	TIGK5C	TIGK5D	TIGK5E	TIGK5F	Off	None	Mom. On
TIGK5L	TIGK5M	TIGK5Q	TIGK5R	TIGK5S	TIGK5T	On	None	Mom. Off
						DOUBLE POLE DOUBLE THROW		
TIGL50	TIGL51	TIGL52	TIGL53	TIGL54	TIGL55	On	None	On
TIGL5A	TIGL5B	TIGL5C	TIGL5D	TIGL5E	TIGL5F	On	None	Mom. On
TIGM50	TIGM51	TIGM52	TIGM53	TIGM54	TIGM55	On	Off	On
TIGM5A	TIGM5B	TIGM5C	TIGM5D	TIGM5E	TIGM5F	On	Off	Mom. On
TIGM5L	TIGM5M	TIGM5Q	TIGM5R	TIGM5S	TIGM5T	Mom. On	Off	Mom. On

"TRD" Series Rated 12A @ 125V 6A @ 250V ½ H.P. 125-250V A.C. ¾ H.P. 125-250V D.C.			
CATALOG NO.	CIRCUIT	HAS LOCK	HAS ENVELOPE
TRDA-00	SPST	No	No
TRDA-01	SPST	No	Yes
TRDA-05	SPST	Yes	No
TRDA-06	SPST	Yes	Yes
TRDK-00	DPST	No	No
TRDK-01	DPST	No	Yes
TRDK-05	DPST	Yes	No
TRDK-06	DPST	Yes	Yes
"TRE" Series Rated 15A @ 125V 10A @ 250V 1 H.P. 125V A.C. 1½ H.P. 125V D.C.			
TREA-00	SPST	No	No
TREA-01	SPST	No	Yes
TREA-05	SPST	Yes	No
TREA-06	SPST	Yes	Yes
TREK-00	DPST	No	No
TREK-01	DPST	No	Yes
TREK-05	DPST	Yes	No
TREK-06	DPST	Yes	Yes

*TRD SERIES-TRE SERIES

TRIGGER



*Note: Illustration shows "TRD" Series dimensions. "TRE" Series has same dimensions except for base. For base dimensions of "TRE" Series substitute 15/16" for 53/64 height shown, 1" for 53/64 width shown, and 3/16 for 7/16" dimension shown.

CARLING ELECTRIC, INC. — West Hartford 10, Conn.

SWITCHING PROBLEMS?

get fast off-the-shelf answers from complete stocks of basic precision switches and actuators

always available for immediate delivery

CONTROL SWITCH DIVISION Folcroft, Pennsylvania

SUB-SUBMINIATURE T type

Exceptionally high current capacity in tiny case. Only ½″ x ¼″ x ⅜″ yet UL listed at 7.5 amps. 125/250 VAC. Also rated at 7.5 amps, 30 VDC resistive, 3 amps. 30 VDC inductive. Mounts side-by-side, four switches to the inch.

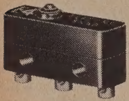
ACTUATORS

ROLLER LEAF

LEAF

DESCRIPTION	MODEL NUMBER	PRICES 1-9	10-19	20-49	50 & up
SPDT solder terminals	T3	2.00	1.80	1.60	1.40
SPDT solder terminals, U.L.	T12	2.00	1.80	1.60	1.40
leaf actuator	A5-71**	.20	.18	.16	.14
roller leaf actuator	A5-73**	.50	.45	.40	.35

SUBMINIATURE E4 type

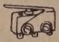


Ideal for compact electrical and electronic equipment. Low movement differential and operating force gives precision control in critical applications. Can be stacked and gang mounted. Meets MIL Specs. MS-25085 and is UL listed at 5 amps, 125/250 VAC. Also handles 4 amps, 30 VDC resistive, 2.5 amps, 30 VDC inductive. Size: 25/32″ x ¼″ x 23/64″.

ACTUATORS

TOGGLE

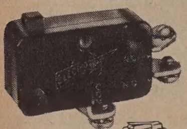
PUSHBUTTON


LEAF

ROLLER LEAF

DESCRIPTION	MODEL NUMBER	PRICES 1-9	10-19	20-49	50 & up
SPDT, solder terminals	E4-103	1.50	1.35	1.20	1.05
SPDT, turret terminals	E4-110	1.50	1.35	1.20	1.05
DPDT maintained toggle switch, 15/32″ bushing	A3-32-103*	5.70	5.13	4.56	3.99
TPDT maintained toggle switch, 15/32″ bushing	A3-33-103*	7.80	7.02	6.24	5.46
DPDT maintained toggle switch, ¼″ bushing	A3-41-103*	5.70	5.13	4.56	3.99
SPDT maintained toggle switch, ¼″ bushing	A3-42-103*	3.49	3.34	2.79	2.44
DPDT momentary push-button switch, 15/32″ bushing	A4-86-103*	6.10	5.49	4.88	4.27
DPDT push-on, push-off, push-button switch, 15/32″ bushing	A4-87-103*	7.40	6.66	5.92	5.18
leaf actuator	A5-9*	.20	.18	.16	.14
roller leaf actuator	A5-10*	.50	.45	.40	.35

MINIATURE F type



Low cost precision switch that meets military specs and is UL listed. Rugged design—positive over-travel stop protects mechanism from damaging over-actuation. Easy to mount. Size: 1 3/32″ x 13/32″ x ⅝″. Rating: 10 amps 125/250 VAC / 28 VDC resistive, 6 amps, 30 VDC inductive.

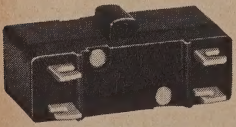
ACTUATORS

LEAF

ROLLER LEAF

DESCRIPTION	MODEL NUMBER	PRICES 1-9	10-19	20-49	50 & up
SPDT basic switch, screw terminals, U.L.	F2-13	1.00	.90	.80	.70
roller leaf actuator	A5-47**	.40	.36	.32	.28
leaf actuator	A5-49**	.20	.18	.16	.14

HIGH CURRENT CAPACITY G type



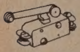
Recommended for precision control of power circuits. Handles 40 amps at 125/250 VAC. Case only 1¾″ x 43/64″ x 35/64″.

DESCRIPTION	MODEL NUMBER	PRICES 1-9	10-19	20-49	50 & up
SPDT basic switch, side solder terminals	G3-4	3.45	3.10	2.76	2.41

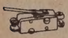
2-CIRCUIT S type

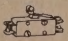
Combines high capacity, small size and long life with extreme precision. Rated at 10,000,000 operations at full load, tested to 30,000,000. Good for power circuits as well as precision control applications. Meets military specs. Several models UL listed. Reset model maintains circuit until reset button actuated; can be used as inexpensive two-way limit switch. Size: 1¼″ x ½″ x ½″. Rating: 10 amps, 125/250 VAC. 30 VDC inductive.

ACTUATORS


ROLLER LEVER

PUSHBUTTON


EXTENDED LEAF


ROLLER LEAF

DESCRIPTION	MODEL NUMBER	PRICES 1-9	10-19	20-49	50 & up
SPDT, end solder terminals	S1-4	1.40	1.26	1.12	.98
SPDT, (reset) end solder terminals	S1-304	1.65	1.48	1.32	1.15
SPDT, end screw terminals	S2-4	1.50	1.35	1.20	1.05
SPDT, (reset) end screw terminals	S2-304	1.75	1.57	1.50	1.32
SPDT, side solder terminals	S3-4	1.47	1.32	1.18	1.03
roller lever actuator	A2-2**	.80	.72	.64	.56
push-button switch, solder terminals 15/32″ bushing	A4-1/S1-4* N.P.	2.40	2.16	1.92	1.68
push-button switch, detachable plastic button	A4-25-1/S1-4*	3.32	2.99	2.65	2.32
red plastic button for A4-25-1	1109-SA11-1	.60	.60	.54	.48
black plastic button for A4-25-1	1109-SA11-2	.60	.60	.54	.48
1″ dia. push-button actuator	A4-102**	3.50	3.15	2.80	2.45
roller leaf actuator	A5-5**	.40	.36	.32	.28
extended leaf actuator	A5-7**	.50	.45	.40	.35

*Designates actuator assembled with switch. **Order these actuators separately. Assemble on switch when mounting.

NOTE: ALL SWITCHES MOMENTARY CONTACT UNLESS OTHERWISE NOTED

ELECTROSNAP
HETHERINGTON

CONTROL SWITCH DIVISION
CONTROLS COMPANY OF AMERICA

Folcroft, Pennsylvania

MANUFACTURERS OF ELECTROSNAP AND HETHERINGTON PRODUCTS

PRECISION SNAP-ACTION SWITCHES

BASIC SWITCH SERIES

DOUBLE POLE D type

Multi-Circuit

High capacity basic switches permit simultaneous switching of multiple circuits and precision control of three phase motors. Military and UL listed models available. Reset model maintains circuit until reset button is actuated. Can be used as inexpensive two-way limit switches. Sizes: D type, 1¼″ x ½″ x ⅞″—K type, 1¼″ x .491″ x 15/16″.

TRIPLE POLE K type

ACTUATORS

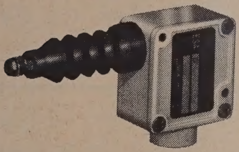
ROLLER LEVER

EXTENDED LEAF

PUSHBUTTON

DESCRIPTION	MODEL NUMBER	PRICES			
		1-9	10-19	20-49	50 & up
	4-Circuit				
DPDT, side solder terminals	D8-4	6.25	5.62	5.00	4.37
DPDT, (reset) side solder terminals	D8-304 N.P.	6.75	6.07	5.40	4.72
	6-Circuit				
TPDT, side solder terminals	K3-4	7.45	6.70	5.96	5.21
Actuators for Type D & K Basic Switches					
Roller lever	A2-5**	1.05	.94	.84	.74
Push-button, 15/32″ bushing	A4-2**	2.00	1.80	1.60	1.40
Push-button, w/o detachable plastic button, 15/32″ bushing	A4-24-1**	1.71	1.54	1.37	1.20
Red plastic button for A4-24-1	1109-SA11-1	.60	.60	.54	.48
Black plastic button for A4-24-1	1109-SA11-2	.60	.60	.54	.48
1″ dia. push-button	A4-102**	3.50	3.15	2.80	2.45
Extended leaf	A5-18**	.75	.67	.60	.52

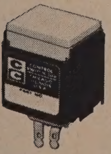
LIMIT SWITCHES ES4 type



Especially designed for machine control, automation circuitry and sequencing operation. Aluminum diecast housing protects switch from damage, dirt and corrosion, simplifies mounting on equipment. Some models available with neoprene boot on plunger for protection from dirt, oil and metal chips. Impulse models eliminate need for one-way dogs, complicated relays and timers. As plunger is depressed, switch completes electrical circuit during pre-set section of travel ("ON" period), but does not make circuit on return stroke. Case size: 2″ (plus plunger length) x 1 1/32″ x 2 3/16″. Rating: 10 amps, 125/250 VAC. Circuit: SPNO.

DESCRIPTION	MODEL NUMBER	OVER-TRAVEL	"ON" PERIOD	1-19	20-49	50 & up
STANDARD ACTION						
	ES4-N	5/16″		8.50	7.65	7.22
Red 1¾″ push-button	ES4-J	5/16″		9.80	8.82	8.33
Neoprene boot plunger	ES4-K	7/16″		9.50	8.55	8.07
IMPULSE ACTION						
	ES4-NM1	¼″	1/16″	9.50	8.55	8.07
	ES4-NM2	3/16″	⅛″	9.50	8.55	8.07
	ES4-NM3	⅛″	3/16″	9.50	8.55	8.07
	ES4-NM4	1/16″	¼″	9.50	8.55	8.07
Red 1¾″ push-button	ES4-JM3	⅛″	3/16″	10.80	9.72	9.18
Neoprene boot plunger	ES4-KM1	⅜″	1/16″	10.50	9.45	8.92
" " "	ES4-KM2	5/16″	⅛″	10.50	9.45	8.92
" " "	ES4-KM3	¼″	3/16″	10.50	9.45	8.92
" " "	ES4-KM4	3/16″	¼″	10.50	9.45	8.92
" " "	ES4-KM6	1/16″	⅜″	10.50	9.45	8.92
Replacement basic switch for ES4 Series	S1-25			1.75	1.40	1.23

LIGHTED PUSH-BUTTON PANEL SWITCHES C6 type



Combine lighting, legend, and electrical control in one compact unit. Save panel space, simplify operation. Units can be stacked or mounted individually on control panels or consoles. Plastic push-button is available in colors, can be hot-stamped with words or symbols, button size ¾″ x 1″. Light is provided by two separate 6- or 28-volt lamps wired in parallel. Switching component is DPDT, rated at 5 amps, 125 VAC or 4 amps, 30 VDC, resistive each pole. Either alternate action (push-on, push-off) or momentary action is available. Unit is also available without switch for use as pilot light. Two lamps included with each unit. Solid plastic or two-piece plastic button with clear slip-in insert for legend.

DESCRIPTION	MODEL NUMBER	1-24	25-99	100 & up
Momentary, w/2 clear 6V lamps	C6-52-22	9.60	8.19	7.46
Momentary, w/2 clear 28V lamps	C6-56-22	10.40	8.91	8.12
Push-push, w/2 clear 6V lamps	C6-53-22	11.70	10.08	9.18
Push-push, w/2 clear 28V lamps	C6-57-22	12.50	10.80	9.84
Pilot light, w/2 clear 6V lamps	C6-50-22	5.25	4.28	3.90
Pilot light, w/2 clear 28V lamps	C6-54-22	6.05	5.00	4.55
Solid blue button	1117-229-BB	.50	.45	.41
2/pc. blue button	1117-SA19-11-B	.50	.45	.41
Solid green button	1117-229-GG	.50	.45	.41
2/pc. green button	1117-SA19-11-G	.50	.45	.41
Solid red button	1117-229-RR	.50	.45	.41
2/pc. red button	1117-SA19-11-R	.50	.45	.41
Solid white button	1117-229-WW	.50	.45	.41
2/pc. white button	1117-SA19-11-W	.50	.45	.41
Solid yellow button	1117-229-YY	.50	.45	.41
2/pc. yellow button	1117-SA19-11-Y	.50	.45	.41
Mounting barrier (use one more barrier than number of units ganged)	1117-SA-19-4	.75	.68	.41

NOTE: Order buttons and mounting barriers separately

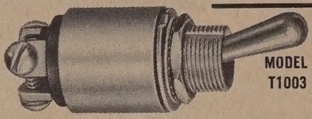
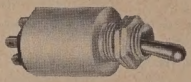
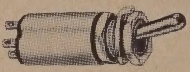
**Order these actuators separately. Assemble on switch when mounting.
NOTE: ALL SWITCHES MOMENTARY CONTACT UNLESS OTHERWISE NOTED

CONTROL SWITCH DIVISION Folcroft, Pennsylvania

Toggle Switches

Space-Saving Cylindrical Types

Exceptionally rugged, cam-roller Hetherington Toggle Switches positively cannot be teased off contact. Cylindrical anodized aluminum cases reduce size by 25% over conventional rectangular switches. Firmly anchored terminals separated by heavy insulation barrier. All are 2-position, snap-action.

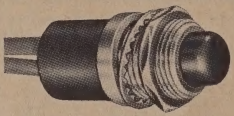
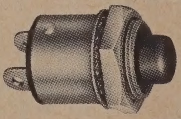
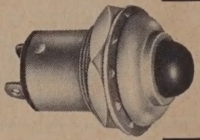
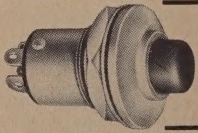
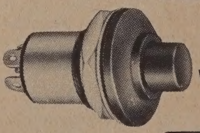
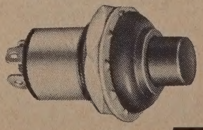
	CIRCUIT	RATINGS (Resistive Loads)		MTG. HOLE DIA.	SPECIAL FEATURES	PRICES
		28v. dc.	115v. ac.			
 **MODEL T1003**	SPDT	20 amps.	10 amps.	15/32"	Designed to MIL-S-6745 specs.	3.22
 **MODEL T2104**	2-circuit	10 amps.	5 amps.	¼"	Designed to JAN-S-23, Amend. 3.	3.94
MODEL T2150	DPDT	1 amp.	1 amp.	¼"	Miniaturized	5.32
 **MODEL T3103**	SPDT	5 amps.	2½ amps.	¼"	Anodized aluminum case	4.06

Pushbutton Switches

Snap-Action, Momentary Contact

The exclusive Hetherington snap-action mechanism reduces arcing and contact wear... provides far greater current capacity than the small sizes of these switches would indicate. Mechanism enclosed in dust and moisture-resistant anodized aluminum housings (phenolic in B2001 & B2002). 1-piece terminals and contacts firmly anchored to bases. Many types meet JAN and MIL Specs for aviation and military requirements.

Features and dimensions are subject to change based on engineering refinements. If dimensions or specifications are critical, obtain drawings from Control Switch engineering department.

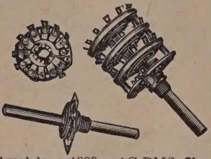
	CIRCUIT	RATINGS (Resistive Loads)		MTG. HOLE DIA.	SPECIAL FEATURES	PRICES
		28v. dc.	115v. ac.			
 **MODEL B2001**	SPST (N.O.)	— —	8 amps.*	½"	Phenolic body	2.09
MODEL B2002	SPST (N.C.)					
 **MODEL C1006**	SPST (N.O.)	17 amps.	15 amps.*	½"	Anodized aluminum cases	3.01
MODEL C2006	2-circuit	10 amps.				3.61
 **MODEL C100U4**	SPST (N.O.)	17 amps.	15 amps.*	⅝"	Anodized aluminum cases & mounting flanges	3.76
 **MODEL C200P3**	2-circuit	10 amps.	15 amps.*	⅝"	Anodized aluminum cases & mounting flanges	4.36
 **MODEL W103PB6**	2-circuit	10 amps.	— —	⅝"	Conforms to MS25089-3C (MIL-S-6743). Black flange.	5.43
 **MODEL W103UB6**	2-circuit	10 amps.	— —	⅝"	Conforms to MS25089-3D (MIL-S-6743). Black flange.	5.43

* Inspected by Underwriters' Laboratories, Inc.

Use Index Page 1 for Quick, Easy Location of ALL Products

Centralab Miniature Switches, Parts

PA-1000 SERIES MINIATURE PHENOLIC SWITCHES



Laminated phenolic insulated rotary switches that meet requirements for a miniature switch for rigorous commercial or military uses. Clip and contact arrangements assure low inter-circuit capacitance and contact resistance. Index assemblies and hardware identical to PA-2000 series, permitting interchangeability. **Insulation:** High quality laminated phenolic type PBE per MIL-P-3115B specs.; voltage breakdown 1000 v. AC-RMS. **Size:** ½″ spacing between sections; ⅜″ spacing between 1st section and front plate, phenolic section 1/16″ thick. **Hardware:** All metal parts (except clips and contacts) cadmium plated; withstand 25-hour salt-spray test. **Mounting:** Single hole with locating lug. Bushing ⅜″-32 thread ⅜″ long. Shaft ¼″ diam. full round, 2¼″ long. **Rating:** 2 amps at 15 v. DC; 150 milliamps at 110 v. AC. **Index:** Positive, adjustable stop or continuous rotation; 30° or 60° detents available.
Mounting nut, lockwasher and 1¼″ black pointer knob are included with switches.

MINIATURE PHENOLIC SWITCHES

CRL Number		Poles to Section	No. of Sections	No. Poles	Total Pos.	Net Each
Shorting	Non-Shtg.					
PA-1000	PA-1001	1	1	1	2-11	$1.80
PA-1002	PA-1003	2	1	2	2-5	1.80
PA-1004	PA-1005	1	2	2	2-11	2.58
PA-1006	PA-1007	3	1	3	2-3	1.80
PA-1008	PA-1009	1	3	3	2-11	3.24
PA-1010	PA-1011	4	1	4	2	1.80
PA-1012	PA-1013	2	2	4	2-5	2.58
PA-1014	PA-1015	1	4	4	2-11	3.81
PA-1016	PA-1017	1	5	5	2-11	4.47
PA-1018	PA-1019	3	2	6	2-3	2.58
PA-1020	PA-1021	2	3	6	2-5	3.24
PA-1022	PA-1023	1	6	6	2-11	5.04
PA-1024	PA-1025	4	2	8	2	2.58
PA-1026	PA-1027	2	4	8	2-5	3.81
PA-1028	PA-1029	4	3	12	2	3.24
PA-1030	PA-1031	2	5	10	2-5	4.47
PA-1032	PA-1033	2	6	12	2-5	5.04

SPECIAL CIRCUIT AND 60° INDEXING SWITCHES

PA-1034*	....	1	1	1	2-10	$1.80
PA-1040†	....	1	1	1	2-10	1.80
....	PA-1035‡	1	1	1	2-6	1.80
....	PA-1037‡	1	2	2	2-6	2.58

*All shorted to common contact in CCW, progressively opened and dropped with CW rotation. †All open in full CCW, progressively picked up and shorted to common with CW rotation. ‡60° indexing; 1½″ spacing between sections.

SEPARATE PHENOLIC SECTIONS

Use with index assemblies PA-300, PA-301 and PA-302 for all (except Model PA-45, which uses PA-304 or PA-305, 60° index) for assembly of special switches to meet your needs.

CRL Number		Index-ing	No. Poles	Total Positions	Net Each
Shorting	Non-Short.				
PA-30	PA-31	30°	1	2-11	87c
PA-32	PA-33	30°	2	2-5	87c
PA-34	PA-35	30°	3	2-3	87c
PA-36	PA-37	30°	4	2	87c
PA-38*	PA-39*	30°	1	2-5	87c
PA-40**	PA-41**	30°	1	2-11	87c
PA-43†	....	30°	1	2-10	87c
PA-49††	....	30°	1	2-10	87c
....	PA-45	60°	1	2-6	87c

*Unused contacts one side of common connected and shorted out. **All unused contacts connected and shorted out. †Active contacts shorted to common in full CCW, progressively opened and dropped with CW rotation. ††All active contacts open in full CCW, progressively picked up and shorted to common with CW rotation.

SEPARATE INDEX ASSEMBLIES

Index assemblies for series PA-1000 and PA-2000 interchangeable.

CRL No. PA-300 Assembly—Contains PA-300 (30°) index, P-120 pointer knob, adjustable stop plate, two ⅛″ spacers, two 9/32″ spacers, four 7/16″ spacers, 2½″ tie bolts, nuts, lockwashers and fiber spacer washers. Rear shaft length 2″. Use with 1 to 3 sections. Net Each.................................. $1.38

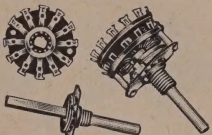
CRL No. PA-301 Assembly—Contains PA-301 index (30°), P-120 pointer knob, adjustable stop plate, two ⅛″ spacers, two 9/32″ spacers, ten 7/16″ spacers, four 15/16″ spacers, 5″ tie bolts and hardware. Rear shaft length 4″. Use with 4 to 6 sections. Net Each.. $1.80

CRL No. PA-302 Assembly—Contains PA-302 (30°) index, P-120 pointer knob, adjustable stop plate, four 5/16″ spacers, two 9/32″ spacers, sixteen 7/16″ spacers, eight 15/16″ spacers, 7″ tie bolts, and hardware. Rear Shaft length 6″. Use with 7 to 9 sections. Net Each.. $2.37

CRL No. PA-304 Assembly—Contains PA-304 (60°) index and hardware same as PA-300. Rear Shaft length 2″. Use with 1 to 3 sections. Net Each............................ $1.44

CRL No. PA-305 Assembly—Contains PA-305 (60°) index and hardware same as PA-301. Rear shaft length 4″. Use with 4 to 6 sections. Net Each.............................. $1.89

PA-2000 SERIES MINIATURE CERAMIC SWITCHES



Complete line of ceramic insulated miniature rotary switches with the following features: 1-piece shaft construction; adjustable stop allows selection of positions or continuous rotation; cadmium plated metal parts, except clips and contacts; available as complete switches or separate assemblies. Excellent RF characteristics. Shaft 1⅞″ from bushing, index available 30 and 60 degree with adjustable stop; mounting is single hole and optional locating lug, bushing ⅜-32 thread, ⅜″ long. Includes mounting nut, lockwasher and 1¼″ black bar knob. Index assemblies and hardware are identical and interchangeable with those of the PA-1000 series. Rating: 2 amps. at 15 v. DC; 150 milliamps. at 110 v. AC.

SERIES PA-2000 MINIATURE ROTARY SWITCHES

CRL Number		Poles to Section	No. of Sections	No. Poles	Total Pos.	Net Each
Shorting	Non-Shtg.					
PA-2000	PA-2001	1	1	1	2-12	$2.37
PA-2002	PA-2003	2	1	2	2-6	2.37
PA-2004	PA-2005	1	2	2	2-12	3.39
PA-2006	PA-2007	3	1	3	2-5	2.37
PA-2008	PA-2009	1	3	3	2-12	4.32
PA-2010	PA-2011	2	2	4	2-6	3.39
PA-2012	PA-2013	1	4	4	2-12	5.19
PA-2014	PA-2015	5	1	5	2-3	2.37
PA-2016	PA-2017	1	5	5	2-12	6.21
PA-2018	PA-2019	6	1	6	2	2.37
PA-2020	PA-2021	3	2	6	2-5	3.39
PA-2022	PA-2023	2	3	6	2-6	4.32
PA-2024	PA-2025	1	6	6	2-12	7.20
PA-2026	PA-2027	2	4	8	2-6	5.19
PA-2028	PA-2029	3	3	9	2-5	4.32
PA-2030	PA-2031	5	2	10	2-3	3.39
PA-2032	PA-2033	2	5	10	2-6	6.21
PA-2034	PA-2035	6	2	12	2	3.39
PA-2036	PA-2037	2	6	12	2-6	7.20
PA-2038	PA-2039	5	3	15	2-3	4.68
PA-2040	PA-2041	6	3	18	2	4.68

SPECIAL CIRCUIT AND 60° INDEXING SWITCHES

PA-2052*	....	1	1	1	2-10	$2.16
PA-2042†	....	1	1	1	2-10	2.16
PA-2048‡	PA-2049‡	1	2	2	2-12	4.68
PA-2050§	....	1	2	2	4	2.37
....	PA-2043††	1	1	1	2-6	2.16
....	PA-2045††	1	2	2	2-6	3.03

*All shorted to common in full CCW, progressively opened and dropped with CW rotation. †All open in full CCW, progressively picked up and shorted to common with CW rotation. ‡Silver clips and contacts. §For switching dual lines. ††60° Indexing; 1½″ spacing between stations.

SERIES PA-2000 STEATITE SECTIONS

For use with 30° index assemblies No. PA-300, PA-301 and PA-302, except Nos. PA-17 and PA-20, for use with 60° index assemblies PA-304 and PA-305.

CRL Number		Number of Poles	Number of Positions	Net Each
Shorting	Non-Shorting			
PA-0	PA-1	1	2-12	$1.20
PA-2	PA-3	2	2-6	1.20
PA-4	PA-5	3	2-5	1.20
PA-6	PA-7	5	2-3	1.20
PA-8	PA-9	6	2	1.20
PA-10††	PA-19††	1	2-5	1.20
PA-11*	PA-18*	1	2-11	1.20
PA-12†	....	1	2-10	1.20
PA-13‡	....	1	2-10	1.20
PA-20	PA-17	1	2-6	1.20

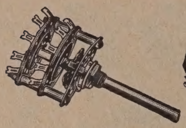
††Unused contacts one side of common connected and shorted out. *All unused contacts connected and shorted out. †9 contacts, open in full CCW position, progressively picked up and shorted to common with CW rotation. ‡9 contacts, shorted to common in full CCW position, progressively opened and dropped with CW rotation.

SILVER CLIPS AND CONTACTS

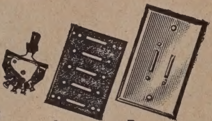
CRL Number		Index	No. of Poles	No. of Positions	Net Each
Shorting	Non-Shorting				
PA-16	PA-21	30°	1	2-12	$1.98
PA-14	PA-23	30°	2	2-5	1.98
PA-15	PA-24	30°	4	2	1.98

For switches to military specifications add "M" to part number (PA-2000M). State specifications which must be met. Where no specification number is stated, switches will meet finish requirements of MIL-S-3786. Prices and delivery on request.

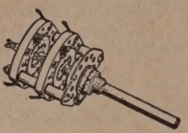
Centralab Rotary and Lever Switches



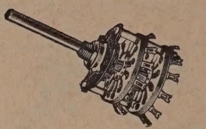
1400 Series



A B
Lever Action



Ham Switch



2500 Series

1400 SERIES—LAMINATED PHENOLIC INSULATION

Extremely compact design. Mounting bushings ⅜″-32 thread, ⅜″ long. Shafts 1⅞″ from end of bushing. Positive 30° index with adjustable stop. Revisions or corrections easily made due to availability of all parts separately. Packaged with mounting nut, lockwasher, 1¼″ black pointer knob. Index assemblies and hardware are identical and interchangeable with those of 2500 series. Rated: 2 amps @ 15 v. DC; 150 ma @ 110 v. AC.

CRL Number		Poles to Section	No. Sections	No. Poles	No. Positions	Net Each
Shorting	Non-Short.					
1400	1401	1	1	1	2–6	$2.10
1402	1403	1	1	1	2–11	2.10
1404	1405	2	1	2	2–5	2.10
1410	1411	1	2	2	2–6	2.58
1412	1413	1	2	2	2–11	2.58
1406	1407	3	1	3	2–3	2.10
1420	1421	1	3	3	2–6	3.24
1422	1423	1	3	3	2–11	3.24
1408	1409	4	1	4	2	2.10
1414	1415	2	2	4	2–5	2.58
1426	1427	1	4	4	2–6	3.81
1428	1429	1	4	4	2–11	3.81
1416	1417	3	2	6	2–3	2.58
1424	1425	2	3	6	2–5	3.24
1418	1419	4	2	8	2	2.58
1430	1431	2	4	8	2–5	3.81

SEPARATE PHENOLIC SECTIONS

Deluxe Types: .187″ rotor slot, use P-270, P-271, P-272 indexes.

CRL Number		No. of Poles	No. of Positions	Net Each
Shorting Type	Non-Shorting Type			
AD	HD	1	2–6	$0.87
BD	JD	1	2–11	.87
CD	KD	2	2–5	.87
DD	LD	3	2–3	.87
ED	MD	4	2	.87
EED	BBD	4	2–3	1.20
FD**	AAD**	1	2–5	.87
GD*	CCD*	1	2–10	.87
PID‡	....	1	2–10	.87
ND and PD	....	Resistance Decade†		1.74
QD	....	Capacitance Decade		.87

*All unused contacts connected and shorted out. ‡9 contacts, open in full CCW, progressively picked up and shorted to common with CW rotation. †Combination of two sections; price includes both. **Unused contacts one side of common connected and shorted out.

SEPARATE INDEX ASSEMBLIES

Deluxe Type: 1-piece shaft .187″ thick flat; use deluxe 1400 or 2500 Series sections. Units include index, pointer knob and hardware for complete assembly.

CRL No. Deluxe	No. of Sections	Rear Shaft	Net Each
P-270	1 to 3	2″	$1.38
P-271	3 to 5	4″	1.80
P-272	5 to 10	8″	2.37

LEVER ACTION SWITCHES

Coil spring and cam index design provide guaranteed minimum life 150,000 switching cycles. Smooth "clean" action. Coil type index spring. Furnished with black paddle-type knob. Rating: 2 amps. at 15 v. DC; 150 milliamps. at 110 v. AC.

CRL No.		No. Poles	Positions	Index	Net Each
Shorting	Non-Short.				
1452	1454	2	3	Positive	$1.26
1453	1455	2	3	Spring Return	1.26
1466	1467	2	3	Pos. and Spring Ret.	1.26
1456	1457	4	2	Spring Return	1.44
1459	1458	4	2	Positive	1.44
2815*	....	2	3	Positive	1.26
....	1475†	1	3	Positive	1.26

*Model railroad reversing switch. †Test equipment replacement.

Mounting Plates for Lever Switches—Type A made of .035″ die cut steel, black crackle finish. Provides ¾″ spacing between switches. Type B for use in electrical outlet boxes. Chrome plated steel with mounting holes 3 5/16″ between centers. Type A 2⅝″ h.

CRL Type A	No. Switches	Lgth. In.	Net Each
P-1755	1	¾	30c
P-1756	2	1⅓	30c
P-1757	3	2¼	30c
P-1758	4	3	30c
P-1759	5	3¾	30c

CRL Type B	No. Switches	Net Each
P-221	2	63c
P-222	1	63c

Size: 2¾″ x 4½″ overall.
¾″ spacing between switches.

ANTENNA SWITCH KIT

(Not Illustrated). Ceramic section rotary switch for UHF-VHF antenna switching. Rated at 2 amps. for 150 v. DC; 150 milliamps. at 110 v. AC. Contains: PA-2050 switch, P-218 bracket-dial plate, P-401 knob, two self-tapping wood screws.
CRL No. PK-400—Net Each........................ $1.65

2500 SERIES—STEATITE INSULATION

Made of highest quality (grade L-5A) Steatite insulation. Meet critical requirements of RF circuit applications. Bushing ⅜″-32 thread ⅜″ long. Shaft 1⅞″. Positive 30° index with adjustable stop. Index assemblies and hardware are identical and interchangeable with those of the 1400 Series. Ratings same as 1400 Series.

CRL Number		Poles to Section	No. Sections	No. Poles	No. Positions	Net Each
Shorting	Non-Short.					
2500	2501	1	1	1	2–6	$2.37
2502	2503	1	1	1	2–11	2.37
2504	2505	2	1	2	2–5	2.37
2510	2511	1	2	2	2–6	3.39
2512	2513	1	2	2	2–11	3.39
2506	2507	3	1	3	2–3	2.37
2520	2521	1	3	3	2–6	4.32
2522	2523	1	3	3	2–11	4.32
2514	2515	2	2	4	2–5	3.39
2516	2517	3	2	6	2–3	3.39
2524	2525	2	3	6	2–5	4.32

SEPARATE CERAMIC SECTIONS

Deluxe Types: .187″ rotor slot, use P-270, P-271, P-272 indexes.

CRL Number		No. of Poles	No. of Positions	Net Each
Shorting Type	Non-Shorting Type			
TD	XD	1	2–6	$1.20
UD	YD	1	2–11	1.20
RD	RRD	2	2–5	1.20
SD	SSD	3	2–3	1.20
VD	ZD	4	2	1.20
GGD*	FFD*	1	2–10	1.20
PISD‡	....	1	....	1.20
NSD and PSD	....	Resistance Decade†		2.40
QSD	....	Capacitance Decade		1.20

*All unused contacts connected and shorted out. ‡9 contacts, open in full CCW, progressively picked up and shorted to common with CW rotation. †Two sections combined; price includes both.

STEATITE HAM-TYPE SWITCHES

Heavy-duty deluxe ceramic construction for ham applications. Available in 60° and 90° index. All metal parts except clips and contacts are cadmium plated steel; all units have phenolic shaft through switch sections. Positive index with adjustable stop; 60° units have 2-6 active positions; 90° units, 2-4. Single hole mounting: ⅜″-32 thread bushing ⅜″ long. Shaft ¼″ diam. 2¼″ long, full round. Rated 150 milliamps. at 150 v. AC; 4 milliamps. at 1500 v. AC; 2 amps. at 15 v. DC; will handle 15 watts; for tubes operating at voltages up to 1 kv. and inputs to 150 watts. Unit complete includes mounting nut, lockwasher, pointer knob, and dial plate.

NON-SHORTING HAM SWITCHES

CRL No. 90°	CRL No. 60°	Poles to Section	No. Sections	No. Poles	Net Each
2542	2550	1	1	1	$2.16
2543	2551	1	2	2	3.06
2544	2552	1	3	3	3.96
2545	2553	1	4	4	4.86
2546	2554	1	5	5	5.76

SEPARATE SECTIONS

CRL No.	Index	No. Poles	Positions	Type	Net Each
XXD	90°	1	2-4	Non-shorting	$1.20
ZZD	60°	1	2-6	Non-shorting	1.20

SEPARATE INDEX ASSEMBLIES

Deluxe 90° and 60° Types: 2-piece shaft with phenolic rear, metal front; for high voltage operation; use XXD section for 90°; use ZZD section for 60°.

CRL No. 90°	CRL No. 60°	Rear Shaft	Suggested No. Sections	Net Each
P-278	P-273	2″	1 to 2	$1.38
P-279	P-274	4¼″	3 to 4	1.74
P-280	P-275	7″	5 to 8	2.16

DUAL SPEAKER SWITCH KIT

(Not Illustrated). Primarily designed for rear seat auto radio speaker applications. It is adaptable, however, to many commercial applications. Contains: 1484 switch, P-216 bracket-dial plate, P-401 knob, two self-tapping metal screws and instruction sheet.
CRL No. PK-300—
Net Each.. 90c

ALL-PURPOSE INTERCOM SWITCHES

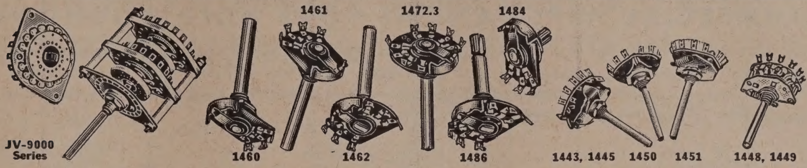
CRL Type 1448-1449—Six pole three position, will fit practically every intercom application in use. Both units have replaceable coil spring indexing assuring 50,000 cycles minimum.

CRL No. 1448—Spring return both sides. Net Each.....$1.98

CRL No. 1449—Spring return one side; positive index opposite side. Net Each.....................................$1.98

CRL No. PK-500—Lever action switch assembly for PA or intercom systems. Cord operated. Comes in kit form. Net Each.$1.62

Centralab Special Switches, Kits



SERIES JV-9000 HEAVY-DUTY POWER SWITCH

High accuracy and long life to meet engineering requirements for transmitters, industrial controls, laboratory equipment, etc. Ceramic grade L-5A steatite insulation; 1" spacing between sections. Metal parts are cadmium plated steel except clips, contacts and index spring. **Index:** Positive 20° adjustable stop; continuous stopless rotation through 18 positions. **Mounting:** 3/8"-32 thread bushing 3/8" long; shaft 1/4" diam. double flat 2 1/4" long. **Rating:** 7 1/2 amps at 115 v. AC; 25 amps at 6 v. DC; 0.75 amp at 500 v. AC; 0.4 amp at 1000 v. AC. Solid coin silver contacts. Includes 2" double set screw pointer knob, dial plate and instructions.

SERIES JV-9000 ROTARY SWITCHES

CRL Number		Poles to Section	No. Sections	No. Poles	No. Positions	Net Each
Shorting	Non-Short.					
JV-9000	JV-9001	1	1	1	2–17	$10.50
JV-9002	JV-9003	3	1	3	2–5	10.50
JV-9004	JV-9005	1	2	2	2–17	17.40
JV-9006	JV-9007	3	2	6	2–5	17.40
JV-9008	JV-9009	1	3	3	2–17	24.30
JV-9010	JV-9011	3	3	9	2–5	24.30
JV-9012	JV-9013	1	4	4	2–17	31.20
JV-9014	JV-9015	3	4	12	2–5	31.20
JV-9016	JV-9017	1	5	5	2–17	38.10
JV-9018	JV-9019	3	5	15	2–5	38.10
JV-9020	JV-9021	1	6	6	2–17	45.30
JV-9032	JV-9033	2	1	2	2–8	10.50
JV-9034	JV-9035	2	2	4	2–8	17.40
JV-9036	JV-9037	2	3	6	2–8	24.30
JV-9038	JV-9039	2	4	8	2–8	31.20

SERIES JV-9000 SECTIONS

CRL Number		Number Poles	Number Positions	Net Each
Shorting	Non-Shorting			
JV-8	JVN-8	1	2–17	$6.90
JV-9	JVN-9	3	2–5	6.90
JV-10	JVN-10	2	2–8	6.90
JV-18*	JVN-18*	1	2–18	7.50

*Rotor has 17 fingers making contact with 17 contacts on stator, leaving one contact open. By cutting off unwanted fingers this section can be adapted to special circuits, e.g., one off, nine progressively shorting positions.

SERIES JV-9000 DIAL PLATES, INDEX ASSEMBLY

CRL Nos. P-230, P-231 or P-232—2 3/4" diam., etched aluminum on black background; 20°; marked 1-5 for P-230, 1-8 for P-232, and 1-17 for P-231. Packaged 5 of a number. Net Pkg.... $1.08

CRL No. JV-7 Index Assembly—Includes shaft, tie rods, spacers, nuts and lockwashers, adjustable stop pin, 2" black bar knob and dial plate. Net Each........................ $4.50

GENERAL PURPOSE AND TONE SWITCHES

CRL No. 1460—SPDT. May be used as SPST or SPDT. Positive index. Shorting contacts. Net Each....................**$1.08**

CRL No. 1463—Same as above except has spring return index and non-shorting contacts. Net Each..................**$1.08**

CRL No. 1461—SP. Three-position selector switch. Positive index. Shorting contacts. Net Each........................**$1.08**

CRL No. 1462—DPDT. May also be used as SPDT, SPST, or DPST. Positive index. Shorting contacts. Net Each.....**$1.08**

CRL No. 1464—Two pole, two position, spring return index and non-shorting contacts. Net Each......................**$1.08**

CRL No. 1465—Single pole, 4-position (3 active), with DPST, AC line switch, shorting contacts, positive index. Net Each..**$1.80**

CRL No. 1473—Two pole, three position. Positive index. Shorting contacts. Net Each...................................**$1.08**

CRL No. 1472—Same as above except with non-shorting contacts. Net Each...**$1.08**

CRL No. 1483—Specially designed to be used with auxiliary rear seat auto radio speakers. Permits the operation of either speaker separately or both simultaneously. Single pole, three position. Positive index. Shorting contacts. Extra long shaft. Net Ea. **75c**

CRL No. 1484—Same as above except with 1/4" bushing and 3/8" knurl split shaft; 15/16" black pointer knob. Net Each........**75c**

CRL No. 1486—Stereo remote speaker switch; 2 pole, 3-position, shorting contacts. Switches one pair of speakers to a remote pair, or all four speakers. Shaft 1 1/2" l. with 1/2" split knurl end. With black and chrome push-on knob and instructions. Net Each....**$1.08**

ROTARY ACTION FLAT SWITCHES

CRL No. 1443—"23 CLIPPER" single pole, 23 positions, shorting type contacts. 15° positive index. Requires 1" behind panel. Silver plated contacts. Fixed stop. Net Each..................**$2.16**

CRL No. 1444—Same as 1443 except 2 sections, 2 poles. Net Each...**$2.88**

CRL No. 1445—Same as 1443 except continuous rotation; 23 positions include one "off". Net Each......................**$2.16**

CRL No. 1448—For PA and intercom uses; 6 pole, 3-position, non-shorting contacts; spring return index, both sides to center. Replaces any switch from 2 pole-2 position to 6 pole-3 position. Needs only 1" depth behind panel. Net Each...........**$1.98**

CRL No. 1449—Same as above, but spring return index, one side to center; positive index, opposite side to center. Net Each..**$1.98**

ROTARY ACTION FLAT SWITCHES (CONT'D)

CRL No. 1450—"ECONO-SWITCH." A 4 pole, 2 position economically designed switch. Requires only 7/8" depth behind panel. Can be used as SPST, SPDT, DPDT, 3PST, 4PST, or 4PDT. Positive non-shorting leaf type index. Laminated phenolic insulation. Net Each.......................................**$1.26**

CRL No. 1451—"PERMA-SWITCH". Long life coil spring switch similar in style to the type 1450 but with 4 pole 2 positions. Net Each...**$1.44**

SECTIONS ONLY

CRL No. WD—For replacement in 1443, 1444 and 1445 switches with deluxe shaft and .187" rotor slot (DD type). Net Ea. **$1.20**

CABINET SWITCH KITS

Convenient source of stock sections, indexes and hardware packed in heavy gauge steel, shelf-size cabinets, 23 1/4" x 9 1/2" h. x 12" d.

CRL Kit No. PA-410—Contains 106 pieces 1 1/2" dia. phenolic sections, 32 index assemblies (including dial plates, knobs and hardware) of PA 1000 series switches. Assembles 32 regular or special switches. Net Each.................... $160.20

CRL Kit No. PA-420—Contains 102 pieces of 1 1/2" dia. steatite sections, 32 index assemblies (with knobs, dial plates, etc.), of PA-2000 series. Makes 32 switches. Net Each. $190.20

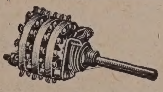
CRL Kit No. 414D—Series 1400 phenolic switch parts; 100 phenolic 1 7/8" dia. sections, 30 index assemblies to make 30 switches. Includes knobs, dials and hardware. Net. $155.40

CRL Kit No. 419D—Series 2500 ceramic parts; 100 sections and 29 index assemblies to make 29 switches; 30° and 60°. Net Each.................................. $184.80

CRL Kit No. 1000—68 miniature phenolic sections, 15 complete index assemblies of PA-1000 switches in 4-drawer 9 1/2" x 11 1/2" x 9 3/4" metal cabinet. Net Each............ $85.85

CRL Kit No. 2000—39 miniature steatite sections, 12 index assemblies of PA-2000; 4-drawer cabinet as above. Net Each.................................... $69.05

SUBMINIATURE ROTARY SWITCHES



Deluxe, ceramic insulated rotary switches that are ultra-small. Weigh less than 1 oz. each, yet have the same electrical ratings as switches much heavier and larger. Ideally suited for band switching, transistor circuits, aircraft instruments, etc. Insulation is Dow-Corning 200 Silicone treated L-5A steatite; resistance exceeds 10,000 megohms. **Size:** Ceramic sections 1/8" thick spaced 1/8" apart with ceramic spacing; spacing between front plate and first section, 5/32". All hardware except clips, contacts, and index spring are of cadmium plated steel. **Mounting:** Single hole with optional locating lug on 3/8" radius. Bushing 1/4"-32 thread, 1/4" long. Shaft 1/8" diam. x 1 1/4" long. **Rating:** Make and break, resistance load 0.5 amps. at 6 volts DC; 100 milliamps. at 110 v. AC. **Index:** Positive 30°; fixed stop.

CRL Number		Total Poles	No. of Positions	Poles Per Sec.	No. of Sec.	Net Each
Shorting	Non-Short.					
PS-100	PS-101	1	11	1	1	$4.80
PS-102	PS-103	2	11	1	2	6.00
PS-104	PS-105	2	5	2	1	4.80
PS-106	PS-107	3	11	1	3	7.20
PS-108	PS-109	3	3	3	1	4.80
PS-110	PS-111	4	5	2	2	6.00
PS-112	PS-113	4	2	4	1	4.80
PS-114	PS-115	6	5	2	3	7.20
PS-116	PS-117	6	3	3	2	6.00
PS-118	PS-119	8	2	4	2	6.00
PS-120	PS-121	9	3	3	3	7.20
PS-122	PS-123	12	2	4	3	7.20

SEPARATE STEATITE SECTIONS

CRL Number		No. Poles	No. of Positions	Fixed Stop Indexing	Net Each
Shorting	Non-Short.				
PS-20	PS-21	1	2-11	Use	$2.70
PS-22	PS-23	2	2-5	P-501	2.70
PS-24	PS-25	3	2-3	thru	2.70
PS-26	PS-27	4	2	P-511	2.70

SEPARATE INDEX ASSEMBLIES

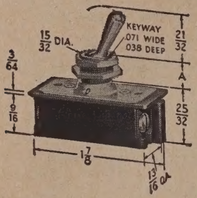
Designed for maximum of three sections. Includes: Index and shaft assembly; KC-6 knob; two 3/32" spacers; two 1/16" spacers; six 1/8" spacers; two 3/16" spacers; two 1 1/8" tie bolts; nuts, lockwashers, washers; and 16 plastic spacer washers.

CRL Number	No. of Positions	CRL Number	No. of Positions	Net Each
P-501	2	P-507	8	$2.70
P-502	3	P-508	9	2.70
P-503	4	P-509	10	2.70
P-504	5	P-510	11	2.70
P-505	6	P-511	Continuous Rotation	2.70
P-506	7	....	....	2.70

CUTLER-HAMMER SWITCHES ...

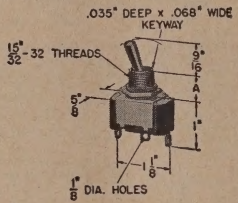
COMMERCIAL APPLICATIONS—ONE HOLE MOUNTING

These Cutler-Hammer switches are of the one-hole mounted type, designed for convenient installation on panels, housings and other flat surfaces of machines and appliances. Experienced Cutler-Hammer engineers working closely with the electronics and appliance manufacturers — have developed these devices to meet the requirements of every type of apparatus and every class of service.



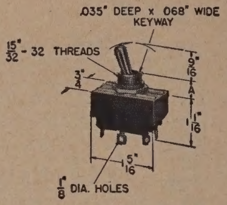
15/32 DIA.
KEYWAY .071 WIDE .038 DEEP
21/32
3/64
A
9/16
25/32
1 7/8
13/16

Cat. No. 7320 (D.P. S.T.)
Standard Duty



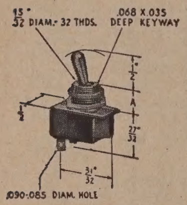
.035" DEEP x .068" WIDE KEYWAY
15/32-32 THREADS
9/16
A
5/8
1"
1 1/8
1/8 DIA. HOLES

Cat. No. 7503 (S.P. D.T.) Standard Duty
Cat. No. 7581 (S.P. D.T.) Light Duty



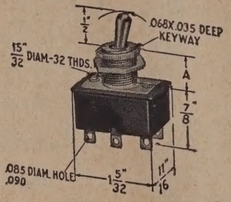
.035" DEEP x .068" WIDE KEYWAY
15/32-32 THREADS
3/4
9/16
A
11/16
5/16
1/8 DIA. HOLES

Cat. No. 7563 (D.P. D.T.)
Standard Duty



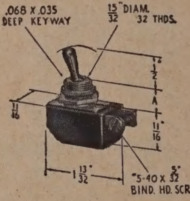
15/32 DIAM.-32 THDS.
.068 X.035 DEEP KEYWAY
1/2
A
1/2
27/32
31/32
.090-.085 DIAM. HOLE

Cat. No. 8280 (S.P. S.T.)
Light Duty



1/2
.068X.035 DEEP KEYWAY
15/32 DIAM-32 THDS.
A
7/8
.085 .090 DIAM. HOLE
1 5/32
11/16

Cat. No. 8363 (D.P. D.T.)
Light Duty



.068 X.035 DEEP KEYWAY
15/32 DIAM. 32 THDS.
1/2
A
11/16
11/16
1 13/32
5-40 X 5/32 BIND. HD. SCR.

Cat. No. 8396 (S.P. S.T.)
Light Duty

ONE HOLE MOUNTING — A. C. RATINGS
Standard bushing lengths 11/32″ and 15/32″.

RATING		1 POLE		2 POLE		3 POLE		4 POLE		Term. Type
250 V.	125 V.	S. T.	D. T. W/O Off	S. T.	D. T. W/O Off	S. T.	D. T. W/O Off	S. T.	D. T. W/O Off	
	3 Amp.	8098 8098	7140✱ 7141							L S S
3 Amp.	6 Amp.	7580 7583‡	7581✱ 7582 7585‡ 7586✱‡	7590 7593‡	7591✱ 7592 7595‡ 7596✱‡					S, L & Sp S. L & Sp S, L & Sp S, L & Sp
10 Amp.	15 Amp.	7500 7501	7502✱ 7503✱ 7504 7505	7560 7561	7562✱ 7563✱ 7564 7565	7610 7611 7616‡	7612✱ 7613✱ 7614 7615 7617✱‡ 7618‡			S L & Sp S L & Sp S & Sp S & Sp
10 Amp.		7506‡ 7507‡ 7533	7508✱‡ 7510‡	7566‡ 7522 7520 7521	7568✱‡ 7570‡			7690 7691 7696‡ 7697‡	7692✱ 7693✱ 7694 7695	S, L & Sp S, L & Sp S L S L W
20 Amp.				7543		8320				S

L=Solder Lug, W=Wire Leads, S=Screw terminals, Sp=Spade terminals.
✱Center Off
‡Momentary contact.

ONE HOLE MOUNTING — AC-DC RATINGS
Standard bushing lengths ¼″, 11/32″, and 15/32″.

RATING		1 Pole		2 Pole		
250 V.	125 V.	S.T.	D.T. W/O Off (3-Way)	S.T.	D.T. W/O Off	Term. Type
1 Amp.	3 Amp.		8292 8292 8297			L W S
3 Amp.		8280 8290 8295		8360 8361 8362	8363 8364 8365	L W S
3 Amp.	6 Amp.	8381 8384 8391 8396		8370 .. 8371 8372	8373 .. 8374 8375	L Sp W S
4 Amp.	8 Amp.	7740 7741 7742 7743				L W S Sp
5 Amp.	10 Amp.				8680	S
6 Amp.	12 Amp.	7321		7320		S
	12 Amp.	7732#				S
10 Amp.	15 Amp.	7361		7360	8690	S
20 Amp.		7403		7402		S

#Parallel Contacts.

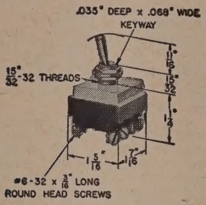
CUTLER-HAMMER Inc.

Cutler-Hammer, Inc., Milwaukee, Wis. . Division: **Airborne Instruments Laboratory** . Sub.: **Cutler-Hammer International, C. A.**
Associates: Canadian Cutler-Hammer, Ltd.; Cutler-Hammer Mexicana, S. A.; Intercontinental Electronics Corporation, Inc.

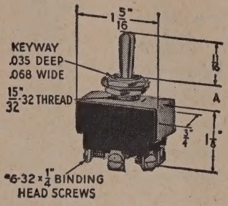
. . . *for* Electronics, Radio, Small Motors

MILITARY STANDARD — ONE HOLE MOUNTING

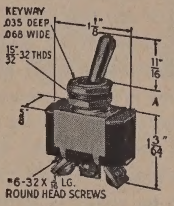
These switches are designed to meet the exacting requirements of communication and power apparatus for all branches of the government. All meet requirements of MIL-S-3950.



Cat. No. 8800
Single Pole — Double Throw



Cat. No. 8820
Double Pole — Double Throw



Cat. No. 7660
Four Pole — Double Throw

Single Pole		Double Pole		Four Pole		Lever Position		
MS Part No.	C-H Cat. No.	MS Part No.	C-H Cat. No.	MS Part No.	C-H Cat. No.			
MS35058-21	8800K16	MS35059-21	8820K16	MS25068-21	7662K7	On	Off	On
MS35058-22	8801K22	MS35059-22	8822K20	....	....	On	None	Off
MS35058-23	8810K15	MS35059-23	8824K14	MS25068-23	7664K5	On	None	On
MS35058-24	8801K23	MS35059-24	8822K21	MS25068-24	7660K13	On	Off	None
MS35058-25	8813K13	MS35059-25	8828K12	MS25068-25	7668K7	On	Off★	None
MS35058-26	8804K13	....	....	MS25068-26	7664K5	On	None	On★
MS35058-27	8812K14	MS35059-27	8834K5	MS25068-27	7672K5	On★	Off	On★
MS35058-28	8811K18	MS35059-28	8826K14	MS25068-28	7666K9	None	Off	On★
MS35058-29	8813K17	....	....	....	....	On	None	Off★
MS35058-30	8811K17	....	....	....	....	Off	None	On★
MS35058-31	8809K16	MS35059-31	8832K6	MS25068-31	7670K6	On	Off	On★

★Momentary contact.

NEW!—A Highly Reliable *Miniature* Toggle Switch

An extremely compact power or dry circuit switch . . . usable as a pre-set switch in aircraft recognition systems . . . for walkie-talkies . . . electronic instruments and communications.

RATINGS: 2 Amps. @ 28 volts D-c
1 Amp. @ 50 volts D-c
2 Amps @ 115 volts A-c
Minimum rating: 30 microamps @ 50 millivolts

TYPES: 2 and 3 position switches with maintained or momentary switch action.

DIMENSIONS: Single Pole —$\frac{9}{16}$" W. $\frac{3}{4}$" H. $\frac{3}{8}$" D.
Double Pole —$\frac{9}{16}$" W. $\frac{3}{4}$" H. $\frac{9}{16}$" D.

The switches shown on this page constitute only a partial listing of standard type Cutler-Hammer switches available. Additional data on other standard and special types may be obtained from your Cutler-Hammer electrical distributor or your nearest Cutler-Hammer sales office.

What you should know about Cutler-Hammer

Cutler-Hammer has long held the respect of the aircraft industry because this company has been part of the aircraft industry for over 35 years. Today, as for the decades past, Cutler-Hammer engineers are working closely with the aircraft industry's leaders . . . thinking ahead, planning, designing and building for the future. Here is the record:

1920 Cutler-Hammer designed and manufactured the first line of switches ever created specifically for use in aircraft.

1938 Cutler-Hammer designed and manufactured the first d-c power relays ever created specifically for use in aircraft.

1943 Cutler-Hammer designed and manufactured the first a-c power relays ever created specifically for use in air-craft.

1949 Cutler-Hammer started development of the first environment-free power relays for use in aircraft.

1953 Cutler-Hammer submitted samples and certified test reports on the first hermetically sealed power relay to WADC and Bu. Aer. Cutler-Hammer configuration was adopted as industry standard by ASG.

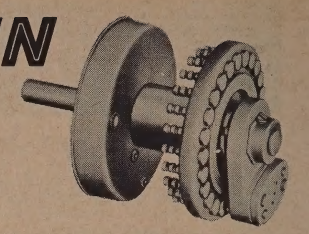
1955 Cutler-Hammer designed and manufactured the first one hole mounting Lever Lock aircraft switches.

CUTLER-HAMMER Inc.

Cutler-Hammer, Inc., Milwaukee, Wis. . Division: **Airborne Instruments Laboratory** . Sub.: **Cutler-Hammer International, C. A**
Associates: Canadian Cutler-Hammer, Ltd.; Cutler-Hammer Mexicana, S. A.; Intercontinental Electronics Corporation, Inc.

CONTROL

the versatile, new DAVEN Adjustable Stop Switch



For flexibility in all types of circuit experimentation, laboratory work, breadboard setups, and in circuitry where the exact number of switch positions can be changed at any time. Maximum of either 24 positions with 15° spacing or 32 positions with 11¼° spacing. One, two, three, and four pole units available.

Features • sturdy, dependable construction; large silver alloy contacts and slip rings; tamper-proof, KNEE ACTION silver alloy rotor blades; high grade, accurately machined dielectric and gold flashed turret-type terminals for ease of soldering.

Constructed to meet and exceed applicable military specifications on humidity, moisture, environment, temperature cycling, contact resistance, life, vibration and shock.

Available from stock through your local DAVEN distributor.

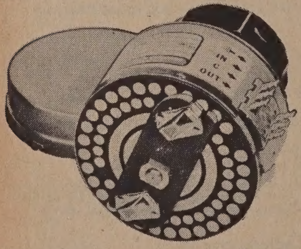
Adjustable in the Following Combinations:

Adjustable Stop with a Maximum of 24 Positions	**15° Between Positions**	**Shorting**
11 CM-24A . . .	1 pole . . .	24 pos. max per pole
21 CM-12A . . .	2 poles . . .	12 pos. max. per pole
31 CM-8A	3 poles . . .	8 pos. max. per pole
41 CM-5A	4 poles . . .	5 pos. max. per pole
Adjustable Stop with a Maximum of 12 Positions	**30° Between Positions**	**Non-Shorting**
11 CB-12A . . .	1 pole . . .	12 pos. max. per pole
21 CB-6A	2 poles . . .	6 pos. max. per pole
31 CB-4A	3 poles . . .	4 pos. max. per pole
41 CB-3A	4 poles . . .	3 pos. max. per pole
Adjustable Stop with a Maximum of 32 Positions	**11¼° Between Positions**	**Shorting**
12 CM-32A . . .	1 pole . . .	32 pos. max. per pole
22 CM-15A . . .	2 poles . . .	15 pos. max. per pole
32 CM-10A . . .	3 poles . . .	10 pos. max. per pole
42 CM-7A	4 poles . . .	7 pos. max. per pole
Adjustable Stop with a Maximum of 16 Positions	**22½° Between Positions**	**Non-Shorting**
12 CB-16A . . .	1 pole . . .	16 pos. max. per pole
22 CB-8A	2 poles . . .	8 pos. max. per pole
32 CB-5A	3 poles . . .	5 pos. max. per pole
42 CB-4A	4 poles . . .	4 pos. max. per pole

These units are exact equivalents of standard catalog switches.

DAVEN
Attenuators

For Broadcast, TV, Recording and Geophysical Applications



SP-4627
CP-354-T
SP-4633
LA-350-EF
LAQ-350-EF
LA-350-G
TA-1000-1
TA-1000-4
CP-354-X
T-330-G
T-330-K
T-321-G
T-255-G
LA-350-AH
CP-350-T
CP-350-Y

DAVOHM SERIES 850 RESISTOR
hermetically sealed, precision metal film type

To fill the gap between wire-wound and deposited carbon type resistors, Daven has developed the Series 850 with these characteristics: high stability, hermetically sealed, small size, lower cost, immediate availability.

	MIL-R-10509B Allowable Change	Series 850 Typical Change
Temperature Cycling	1%	0.02%
Low Temperature Exposure	3%	0.04%
Short Time Overload	0.5%	0.02%
Effect of Soldering	0.5%	0.02%
Moisture Resistance	5.0%	0.08%
Voltage Coefficient	0.002%	0.000%
Load-Life (per 1000 hours)	1%	0.2%
Temperature Coefficient (PPM° C.)	±500	+360±20

Available in popular values from your local DAVEN distributor.

SUPER DAVOHM ENCAPSULATED PRECISION WIRE WOUND RESISTORS

Wattage ratings shown are maximum military wattage ratings at 125°C. Maximum commercial wattages at 125°C are double these ratings.

MIL TYPES AND DAVEN EQUIVALENTS

MIL Spec	Mil Types	Daven Type No.	Dia. In.	Length In.	Mil Watts MIL-R-93B	Mil Watts MIL-R-9444	Mil Max. Volts	Daven Max. Ohms
MIL-R-93B	RB 54	1195	¼	¾	*.250			1 Meg
	RB 55	1250	¼	½	*.15			500K
MIL-R-9444 (USAF)	AFRT 10	1250	¼	½		*.125	150	500K
	AFRT 11	1195	¼	¾		*.250	300	1 Meg
	AFRT 18	1174	½	⅝		*.500	300	1 Meg

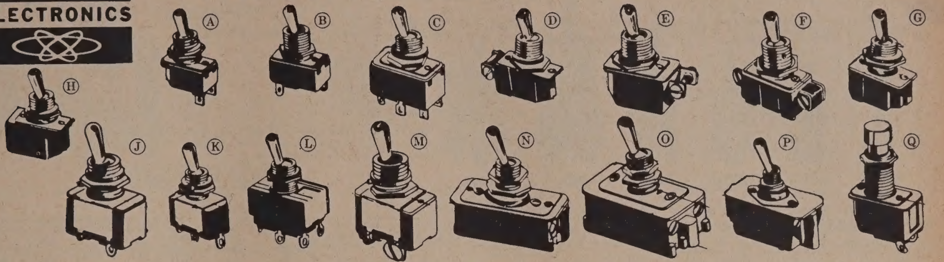
Standard Tolerance is 1% *MIL WATTS AT 125°C

THE DAVEN CO.
Livingston, New Jersey

Available in Popular Values
From Your Local
DAVEN Distributor

GC ELECTRONICS

ELECTROCRAFT COMPONENTS SWITCHES · CABLE CLAMPS



These switches, made by Cutler Hammer Inc., for GC-Electrocraft, are all single hole mounting, UL Approved and supplied with threaded shank 15/32″ long. Shanks are milled with keway to prevent any possible turning when used with a keyed hole in the panel.

(A) LIGHT DUTY, SMALL SIZE TOGGLE SWITCH—rating 3 amps, 250/V.

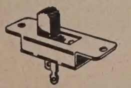
Cat. No. 34-180	SPST	List **$1:20**
Cat. No. 34-182	DPST	List **$2.15**
Cat. No. 34-184	DPDT	List **$2.45**

(B) "THREE WAY" AND "TWO CIRCUIT" SWITCH—Three way switch handles 2 circuits with common line; 3 terminals, with one terminal "common". Two circuit model 4 terminals, with no connections between circuits.

Cat. No. 34-186	SPDT (3-way)	List **$1.50**
Cat. No. 34-188	DPST (2-circuit)	List **$1.82**

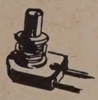
MISCELLANEOUS SMALL SWITCHES

The switches listed below are widely used on electronic equipment, automotive applications and small electrical appliances.



SLIDE SWITCHES—UL approved for ½ amp, 125/V. Mount with 2 screws #6 or rivets ⅛″ with 1⅛″ spacing.

Cat. No. 34-160	SPDT	List **$ .28**
Cat. No. 34-162	DPDT	List **$ .33**



ROTARY CANOPY SWITCH—With wire leads and 13/32″ shank length. Rating 3 amps, 125/V, 1 amp, 250/V. Mounts in ⅜″ hole.

Cat. No. 34-166	List **$ .50**

CUTLER HAMMER SWITCHES

(C) MEDIUM DUTY TOGGLE SWITCH—solder lug connections; 3 amp, 250/V; 6 amp, 125/V, AC-DC.

Cat. No. 34-190	DPST	List **$2.35**
Cat. No. 34-192	DPDT	List **$2.65**

(D) LIGHT DUTY TOGGLE SWITCH—screw terminals, rating 3 amp, 250/V AC-DC.

Cat. No. 34-194	SPST	List **$1.45**
Cat. No. 34-196	DPST (2 pos. no "off")	List **$2.80**
Cat. No. 34-198	DPDT (2 pos. w/ off)	List **$3.40**

(E) MEDIUM DUTY TOGGGLE SWITCH—rating 6 amp, 125/V; 3 amp, 250/V.

Cat. No. 34-200	SPST	List **$1.65**
Cat. No. 34-202	DPDT (2 pos. w/ "off")	List **$3.20**

(F) LIGHT DUTY, 3-WAY SWITCH—rating 1 amp, 250/V; 3 amps, 125/V.

Cat. No. 34-204	SPDT	List **$1.90**

(G) LIGHT DUTY, WIRE LEAD SWITCH—rating 3 amps, 250/V, AC-DC.

Cat. No. 34-206	SPST	List **$1.45**

(H) MEDIUM DUTY WIRE LEAD SWITCH—rating 6 amp, 125/V; 3 amp, 250/V.

Cat. No. 34-208	SPST	List **$1.65**

(J) MEDIUM-HEAVY DUTY TOGGLE SWITCH—rating 10 amp, 250/V, 15 amp, 125/V and ¾ HP.

Cat. No. 34-210	SPST	List **$1.20**
Cat. No. 34-212	DPST (2 pos. on-off)	List **$1.85**

(K) MEDIUM-HEAVY DUTY TOGGLE SWITCH—rating 10 amp, 250/V; 15 amp, 125/V and 1 HP.

Cat. No. 34-214	SPDT (2 pos. no "off")	List **$1.40**
Cat. No. 34-216	3 PST (2 pos. on-off)	List **$3.70**
Cat. No. 34-218	3 PDT (no "off" pos.)	List **$4.55**

(L) MEDIUM-STD DUTY TOGGLE SWITCH—Designed for applications where rugged bat handle switch is required.

Cat. No. 34-220	DPDT lug (2 pos. w/ "off")	List **$2.15**
Cat. No. 34-222	DPST screw (2 pos. on-off)	List **$2.15**
Cat. No. 34-224	DPDT screw (2 pos. w/ "off")	List **$2.65**
Cat. No. 34-226	DPDT lug (3 pos. center off)	List **$2.15**

(M) MEDIUM-HEAVY DUTY TOGGLE SWITCH—Designed for applications where rugged bat handle switch is required.

Cat. No. 34-228	SPST screw (on-off)	List **$1.40**
Cat. No. 34-230	SPDT screw (no "off pos.)	List **$1.65**
Cat. No. 34-232	3 PST screw (2 pos. on-off)	List **$4.30**
Cat. No. 34-234	3 PDT screw (2 pos. w/ "off")	List **$5.45**
Cat. No. 34-236	SPDT (3 pos. center off)	List **$1.40**
Cat. No. 34-238	3 PDT (3 pos. center off)	List **$4.55**
Cat. No. 34-240	3 PDT (3 pos. center. off)	List **$5.45**

(N) MEDIUM-HEAVY DUTY TOGGLE SWITCH—rating 6 amp, 250/V; 12 amp, 125/V, 1 HP.

Cat. No. 34-242	SPST	List **$2.25**
Cat. No. 34-244	DPST	List **$2.25**

(O) HEAVY DUTY TOGGLE SWITCH—rating 10 amp, 250/V; 15 amp, 125/V, 1½ HP.

Cat. No. 34-246	SPST	List **$3.90**
Cat. No. 34-248	DPST	List **$3.90**

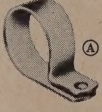
(P) EXTRA-HEAVY DUTY TOGGLE SWITCH—rating 20 amps, 250/V, 1½ HP, 125/250 V.

Cat. No. 34-250	DPST	List **$5.45**

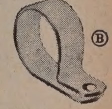
(Q) PUSH BUTTON, ON-PUSH-OFF SWITCHES—rating 3 amp, 250/V; 6 amp, 125/V; 11/16″ shank length, single pole, single throw type.

Cat. No. 34-252	SPST with lug terminal	List **$1.65**
Cat. No. 34-254	SPST with screw terminal	List **$1.85**
Cat. No. 34-256	SPST with wire leads	List **$1.85**

PLASTIC CABLE CLAMPS



Electrocraft Cable Clamps are excellent for fastening cables, harnesses, tubing, etc. The Ethyl Cellulose clamps are designed for normal industrial and commercial application. They are tough, have good electrical properties and may be used where temperatures do not exceed 185°F. They have a low temperature limit of —40°F. The Nylon (Zytel) clamps are specifically designed for application where extreme durability and high resistance to temperature (—60 to 300°F) is required. They are also resistant to most chemicals.



(A) ETHYL CELLULOSE CABLE CLAMPS—made of transparent (light yellowish cast) plastic.

Cat. No. 34-300C	⅛″ O.D.	List **$ 3.90**
Cat. No. 34-304C	3/16″ O.D.	List **$ 4.00**
Cat. No. 34-308C	¼″ O.D.	List **$ 4.30**
Cat. No. 34-312C	5/16″ O.D.	List **$ 4.75**
Cat. No. 34-316C	⅜″ O.D.	List **$ 5.00**
Cat. No. 34-320C	7/16″ O.D.	List **$ 5.50**
Cat. No. 34-324C	½″ O.D.	List **$ 6.00**
Cat. No. 34-328C	9/16″ O.D.	List **$ 7.00**

ETHYL CELLULOSE CABLE CLAMP:

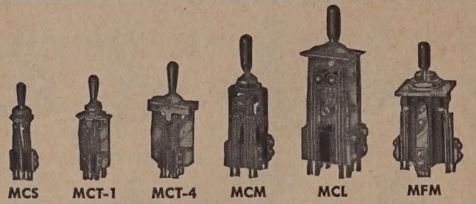
Cat. No. 34-332C	19/32″ O.D.	List **$ 7.50**
Cat. No. 34-336C	⅝″ O.D.	List **$ 8.00**
Cat. No. 34-340C	11/16″ O.D.	List **$ 8.50**
Cat. No. 34-344C	¾″ O.D.	List **$ 9.00**
Cat. No. 34-348C	⅞″ O.D.	List **$ 9.50**
Cat. No. 34-352C	1″ O.D.	List **$10.00**
Cat. No. 34-356C	1⅛″ O.D.	List **$10.50**

(B) NYLON (ZYTEL) CABLE CLAMPS—Made of natural color (translucent white) Nylon.

Cat. No. 34-370C	⅛″ O.D.	List **$ 6.00**
Cat. No. 34-374C	3/16″ O.D.	List **$ 6.55**
Cat. No. 34-378C	¼″ O.D.	List **$ 6.95**
Cat. No. 34-382C	5/16″ O.D.	List **$ 7.80**
Cat. No. 34-386C	⅜″ O.D.	List **$ 8.05**
Cat. No. 34-390C	7/16″ O.D.	List **$ 8.55**
Cat. No. 34-394C	½″ O.D.	List **$ 9.10**
Cat. No. 34-398C	9/16″ O.D.	List **$11.20**
Cat. No. 34-402C	⅝″ O.D.	List **$12.50**
Cat. No. 34-406C	11/16″ O.D.	List **$13.00**
Cat. No. 34-410C	¾″ O.D.	List **$14.00**
Cat. No. 34-414C	⅞″ O.D.	List **$15.00**
Cat. No. 34-418C	1″ O.D.	List **$17.50**

SEND FOR FREE CATALOG ON ALL GC ELECTRONICS PRODUCTS TODAY!

A complete line of LEVER SWITCHES by GENERAL CONTROL COMPANY



RATINGS

Type	*Amps.**	*High*	*Wide*	*Long***
MCS	1	⅞"	⅞"	2-1/16"
MCT-1	1	1¼"	¾"	2-5/16"
MCT-4	1	1½"	¾"	2-17/32"
MCM	5	1¼"	1¼"	2-25/32"
MCL	10	1¾"	1⅜"	3-15/16"
MFM	5	1¾"	1¾"	3"

**125 volts, 60 cycles, non-inductive.*
***From back panel to end of terminals.*

Write for data Sheet CLRM

MCS Light-weight, miniature switch. Two contact sections. Single-hole mounting. Especially suited for Instruments and communications systems.

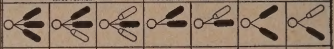
MCT Small switch for multiple-circuit control. Four contact sections. Frames available for either single-hole or four-hole screw type mounting.

MCM Widely used switch with multiple-position, ball-bearing detents. Four contact sections. Contact assemblies easily removed for wiring. Single-hole mounting.

MCL Heavy-duty switch for constant use in electrical control. Rugged cam. Four contact sections; easily removed contact assembly. Four-hole mounting.

MFM Versatile five-position switch with four contact sections—one neutral and four switch positions. Single-hole mounting.

LEVER OPERATION

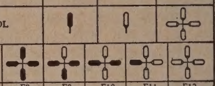


Symbol		Three-Position			Two-Position Half Throw		Two-Position Full Throw	
Lock (Stays put)	Non-lock Spring return							
Designation	MCS	S1	*S2	S3	*S4	*S5		
	MCT	T1	*T2	T3	*T4	*T5		
	MCM	M1	*M2	M3	*M4	*M5	M6	*M7
	MCL	L1	*L2	L3	*L4	*L5		

*Lock and non-lock positions may be reversed. To reverse designate as RS2, RM4, RL5, etc.

SPECIAL MCM LEVER
(A) waterproof lever $3.30 each, list

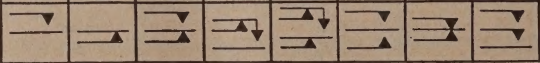
MFM



Description	Lock	Non-lock	Four-Position		
SYMBOL					
OPERATION					
Operation No.	F8	F9	F10	F11	F12

CONTACTS

To obtain list price:— add contact prices to frame price.

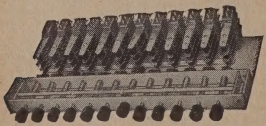


Frame Types and Prices	Contact Forms	A	B	C	D	E	F	G	H	O
	Circuit									No Contacts
MCS $1.35	MCS	0.40	0.40	0.50	0.60	0.70	0.50	—	0.50	—
MCT-4 $1.60	MCT-4	0.40	0.40	0.50	0.60	0.70	0.50	—	0.50	—
MCT-1 $2.00	MCT-1	0.40	0.40	0.50	0.60	0.70	0.50	—	0.50	—
MCM $3.00	MCM	.60	.60	.75	.95	1.20	.75	.75	.75	—
MCL $4.00	MCL	.95	.95	1.05	1.30	2.00	1.05	1.05	1.05	—
MFM $13.75	MFM	.60	.60	.75	.95	1.20	.75	.75	.75	—

Note: Add 20% to MCS and MCT contact prices for contacts of palladium-silver alloy.

PUSH-BUTTON SWITCHES by GENERAL CONTROL COMPANY

A complete heavy duty push button switch with either 1 amp. or 5 amp. ratings at 110/60 AC. Furnished in two or twelve positions. A right-angle MPB is also available where back-of-panel depth is limited, incorporating all of the operating features of the standard MPB. 1 amp. switches are available with palladium silver contacts. It is possible to obtain the standard MPB switch stacked and/or intercoupled, providing all of the features of a single switch. Other variations of the standard MPB switch are also obtainable. Contact the factory with your requirements.



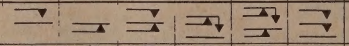
STANDARD MPB SWITCH

STANDARD and RIGHT-ANGLE FRAME PRICES

① FRAME TYPES		MPB-2	MPB-3	MPB-4	MPB-5	MPB-6	MPB-7	MPB-8	MPB-9	MPB-10	MPB-11	MPB-12
CONTACT POSITIONS		2	3	4	5	6	7	8	9	10	11	12
*Accumulative Lock	B-13	See note	6.70	8.65	10.60	12.55	14.50	16.45	18.40	20.35	22.30	24.85
No Two Interlock	B-14	5.50	5.95	7.40	8.85	10.30	11.75	13.20	14.65	16.10	17.55	19.60
Lock Release	B-15	5.00	5.20	6.40	7.60	8.80	10.00	11.20	12.40	13.60	14.80	16.60
Non-Lock	B-16	5.00	5.20	6.40	7.60	8.80	10.00	11.20	12.40	13.60	14.80	16.60

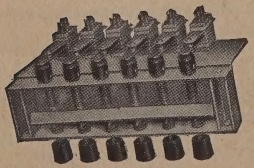
*Reset button requires one position in addition to standard contact positions. Reset button is on right-hand side unless otherwise specified.
*Reset button normally actuates no contacts but *can* be used to actuate ***momentary*** contacts if required.

CONTACTS



CONTACT FORMS		A	B	C	D	E	H	0
② Circuit								No Contacts
Price	*5 Amps.	.60	.60	.75	.95	1.20	.75	—
	*1 Amp.	.40	.40	.50	.60	.70	.50	—

*Ratings at 125 volts A-C, N.I.



RIGHT-ANGLE MPB SWITCH

PUSH BUTTON OPERATION

③ OPERATION	ACCUMULATIVE LOCK	NO TWO INTERLOCK	LOCK RELEASE	NON-LOCK
Description	Buttons pushed in remain locked in position until released by pushing reset button.	Only one button can be pushed in at one time, and releases any other button.	Any button pushed in releases any previously pushed in button.	Has no locking action; returns to normal position on release of finger pressure.
Designation	B-13	B-14	B-15	B-16

Write for data sheet PBRM

ORDERING INFORMATION

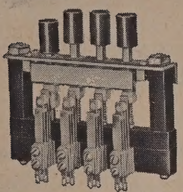
When ordering, specify:

① Frame Type	② Push Button Operation	③ Contacts C1, C2, C3, etc	④ Contact Rating	⑤ Panel Thickness	
Standard MPB-6	B-15	A-A-A-B-B-C	5-amperes	⅛" panel	
Price: $8.80	—	+.60 + 60 +.60 + .60+.60 +.75	—	—	=$12.55

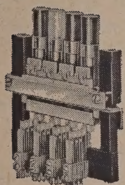
NOTICE: All prices and specifications subject to change without prior notice. **General Control Company, Boston 34, Mass.**

NEW Standard and Lighted Push Button Switches

STANDARD



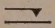
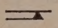
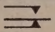
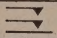
LIGHTED



FRAME PRICES

BUTTONS		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B13	SPS	7.65	8.20	10.50	12.95	15.15	17.55	19.75	22.20	24.40	26.80	29.75	32.90	35.85	39.00	41.95
	LPS	13.75	17.75	22.25	25.85	32.25	37.65	43.25	48.85	54.25	59.85	62.25	71.85	78.25	84.85	91.25
B14	SPS	6.90	7.45	9.25	11.10	12.90	14.70	16.50	18.35	20.15	21.95	24.50	27.05	29.60	32.15	34.70
	LPS	13.00	17.00	21.00	25.00	30.00	35.00	40.00	45.00	50.00	55.00	60.00	66.00	72.00	78.00	84.00
B15	SPS	6.25	6.50	8.00	9.50	11.00	12.50	14.00	15.50	17.00	18.50	20.75	23.00	25.25	27.50	29.75
	LPS	12.00	16.00	20.00	24.00	29.00	34.00	39.00	44.00	49.00	54.00	59.00	65.00	71.00	77.00	83.00
B16	SPS	5.75	6.00	7.50	9.00	10.50	12.00	13.50	15.00	16.50	18.00	20.25	22.50	24.75	27.00	29.25
	LPS	11.50	15.50	19.50	23.50	28.50	33.00	38.00	43.00	47.50	52.50	57.50	63.50	69.50	75.50	81.50

CONTACTS

CONTACT FORMS	A	B	C	H
1 amp silver	.50	.50	.65	.65
3 amps paladium alloy	.60	.60	.75	.75
↑ Direction of Throw				

Ratings at 125 volts A.C. n.i.

OPERATION

Operation	Accumulative Lock	No Two Interlock	Lock Release	Non-Lock
Description	Buttons pushed in remain locked in position until released by pushing reset button.	Only one button can be pushed in at one time, and releases any other button.	Any button pushed in releases any previously pushed in button.	Has no locking action; returns to normal position on release of finger pressure.
Designation	B-13	B-14	B-15	B-16

WRITE FOR DATA SHEET SLRM

ORDERING INFORMATION

1. Frame Type	2. Operation	3. Contacts	4. Rating	5. Panel Thickness	
SPS4	B14	A-C-2A-2C	3 amps	⅛"	
9.25	—	.60+.75+1.20+1.50	—	—	= $13.30

"Footrol" FOOT SWITCHES by GENERAL CONTROL COMPANY

FOOTROL® GENERAL CONTROL

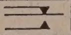
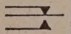
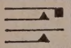
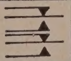
TYPE MA A new light weight foot switch with an actuating treadle built into its top to permit operation with unusually light foot pressure. A completely enclosed limit switch forms the internal switch action. Especially recommended for fast operation where minimum fatigue is important. Access to the internal limit switch terminals is greatly facilitated by simply removing the front end of the casting.

TYPE MI An ideal treadle-type foot switch, especially convenient for many applications. Inclined, non-slip tread has an adjustable throw and includes a heel rest. Two operating pressures: 5 lbs. and 10 lbs. Mounting ears are provided on each side. A BX connector is mounted in the base, and terminal access is by a removable base plate.

TYPE MC Especially adapted for unusual applications and hard use. Easily operated for foot, knee, hand, or elbow. Non-slip-tread top may be operated at any point of its surface.

Since 1934, General Control Company has been a foremost manufacturer of Foot Switches. These are products of the highest quality; built for rugged industrial and commercial applications such as: bowling alleys, packaging machinery, super-market conveyor belts, drill presses, indexing machines, etc.

Write for data sheet FSRM

TYPES			CONTACT TYPES	CONTACT OPERATION	RATING
MA-3 $4.60	MC-13 $6.50	MI-23 $9.80		Double throw, Spring return (ONE NORMALLY OPEN, ONE NORMALLY CLOSED)	20 amps
—	—	* MI-25 $11.25		First press transfers switch contacts Second press restores switch contacts (ONE NORMALLY OPEN, ONE NORMALLY CLOSED)	12 amps
—	—	MI-26 $13.65		1st half-throw closes 1st switch 2nd half-throw closes 2nd switch Spring Return	20 amps
—	—	MI-27 $15.00		Double pole, Double throw, Spring return (TWO NORMALLY OPEN, TWO NORMALLY CLOSED)	20 amps

*Available with heavy duty 20 amps rating at 250 V

Standard Foot Switches are available with mounting holes to accommodate special connectors used on shielded cable.

"Promatic" CONTROLS by GENERAL CONTROL COMPANY

SYNCHRONOUS-MOTOR TIMERS

The Series II, Type SY, Synchronous-motor Timers has time ranges from 1 second up to 24 hours, available to match the Type ET Timer. Redesigned to incorporate the latest production and quality improvements. A new patented O-Ring clutch eliminates gears and costly maintenance problems. Time period easily adjusted and continuously indicated on large dial. Prices from $55.00 each, list.

ELECTRONIC TIMERS

Type ET, Electronic Timers with ranges from .060 seconds to 60 seconds, are available in a variety of frame types, terminal arrangements, and mountings. The enclosed type or chassis model have back plates punched with universal mounting holes. Double pole, double throw auxiliary load contacts are rated at 10 amps., 125 volts a-c, n.i. Prices from $35.00 each, list.

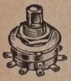
Write for data sheets SERM

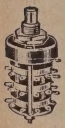
Grayhill INC. LA GRANGE, ILLINOIS

MINIATURE ROTARY TAP SWITCHES

SERIES 24

For Precision Requirements

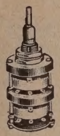




Fully enclosed tap switch designed for high reliability military and commercial applications. Accurate indexing and best detent action. One pole per deck, 1 to 10 decks, 2 to 9 positions with built-in stop, or 10 positions continuous rotation, shorting or non-shorting contacts, two poles per deck (non-shorting contacts only) also available on special order, 36° indexing. Rating: break 1 ampere, 115 VAC, resistive, or carry 5 amperes. ⅜-32 threaded and keyed bushing, 1 1/32" O.D. includes solder terminals, 5/16" long shaft flatted opposite contacting position. Illustration shows difference between single deck and multiple deck construction. Studs of multi-deck units of 5 decks and over extended ¼" at rear to facilitate double-ended mounting. Housing of molded melamine and phenolic materials; studs, shaft, end plates of 303 stainless steel; single deck cover, bushings, nuts, of brass, cadmium plated .0003" to .0005" thick; special heavy silver plate on contacts. Have passed military tests such as 125G shock, 10 - 500 cps vibration, 100 hours salt spray, explosion, sand and dust, 28 day fungus exposure, humidity; will operate —55°C to +85°C, and up to 50,000 feet at rated load. Supplied with mounting nut. Non-turn washer and lockwasher, special shafts and bushings, etc., available on special order.

SERIES 36

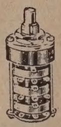
Miniature Concentric Shaft Switch



Fully enclosed tap switch permitting new flexibility, and allowing 2 switches to be mounted in space normally occupied by one. Construction, materials and detent action same as Series 24. Each shaft controls from one or two decks, with two to ten shorting, or non-shorting, positions per deck. Can be furnished in over 6500 combinations of decks and positions. Only 1" in diameter including solder lugs.

Rating: Break 1 amp. 115 VAC resistive, carries 5 amps. ⅜-32 threaded and keyed bushing, supplied with mounting nut.

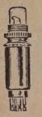
Spring Return Rotary Switch



Same as Series #24 except momentary contact, spring return to either side of center position. Available 1 to 3 decks (incl.), one pole per deck, shorting or non-shorting contacts. Also available with up to 4 detent positions plus spring return position to either right or left of detent position.

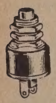
PUSH BUTTON SWITCHES

LIGHTED PUSH BUTTON SWITCH



Equipped with a NE2 neon bulb, with light circuit independent of switch circuit. Switch rated at 1 amp. 115 VAC with approximate life of 500,000 operations. Normally open. Momentary contact. ⅜-32 threaded bushing, 7/16" max dia., 1¼" behind panel length. Fine silver contacts. Solder type terminals.

SNAP ACTION SWITCH

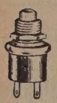


Snap action, momentary contact, SPST, push button switch. Normally Open or Normally Closed available. Rating: 10 amperes, 115 VAC, resistive. Life approximately 50,000 operations. 15/32-32 threaded bushing, ⅞" O.D., 1 59/64" overall length including solder type terminals.

No. 2201—Normally Open (Red Button).

No. 2202—Normally Closed (Black Button)

SILENT ACTION SWITCH

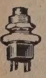


Silent action, momentary contact, SPST, push button switch. Normally Open or Normally Closed available. Rating: ½ ampere, 115 VAC, resistive, for approximately 800,000 operations, or 1 ampere for approximately 100,000 operations. 15/32-32 threaded bushing, 51/64" O.D., 1 17/32" overall length including solder type terminals.

No. 4001—Normally Open (Red Button).

No. 4002—Normally Closed (Black Button).

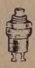
DOUBLE POLE SWITCH



Silent action, Normally Open, momentary contact, DPST, push button switch. Rating: ½ ampere, 115 VAC, resistive. Life over 100,000 operations. Button and housing molded phenolic. 51/64" O.D., 1 17/64" overall length including solder terminals.

No. 35-1 (Red Button)

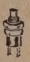
MINIATURE PUSH BUTTON SWITCH



Silent action, momentary contact, Normally Open, SPST, switch rated at ¼ ampere, 115 VAC, resistive. Life approximately ½ million operations. Button and housing molded phenolic. 5/16-32 threaded bushing, ½" O.D., 1 3/64" overall length including solder terminals.

No. 23-1 (Red Button)

SUB-MINIATURE SWITCH



Silent action, momentary contact, SPST, push button switch. Normally Open or Normally Closed available. Conservatively rated at 1/10 ampere, 115 VAC, resistive. Life approximately ½ million operations. Button and housing molded phenolic. ¼-32 threaded bushing, ⅜" O.D., 63/64" overall length including solder terminals.

No. 30-1—Normally Open (Red Button)

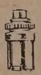
No. 30-2—Normally Closed (Black Button).

ULTRA-MINIATURE SWITCH

Silent action, momentary contact, Normally Open, SPST, push button switch. Conservatively rated at 1/10 ampere, 115 VAC, resistive. Life over 1 million operations. Button and base molded phenolic. ¼" O.D., 19/32" overall length including solder terminals.

No. 39-1 (Red Button)

SOLDERLESS WIRING SWITCH



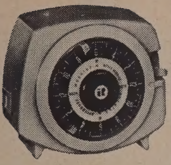
Silent action, Normally Open, momentary contact, SPST, push button switch. Built-in receptacles for A-MP #53 taper pins plus "in-and-out" wiring provision on one side. Rating: ½ ampere, 115 VAC, resistive. Life over 100,000 operations. Button and housing molded phenolic. ⅜-32 threaded mounting bushing and knurled nut black anodized aluminum. Lockwasher provided. ½" O.D., 31/32" overall length.

No. 34-1 (Red Button)

Intermatic
TIME CONTROLS

A COMPLETE LINE OF QUALITY TIME SWITCHES FOR ALL AUTOMATIC CONTROL REQUIREMENTS

PORTABLE PLUG-IN APPLIANCE TIMERS



Time-All — for all-around use in the home, office, or store. Converts any radio to a clock radio . . . provides automatic "on-off" operation of lamps, de-humidifiers, hi-fi, fans, tape recorders, etc. Has manual control with automatic reset. Plug-in receptacle.

TV Show Catcher—Catch favorite radio and TV programs with combination electric clock and signal timer. Positive reminder - pleasant buzzer sound. Plugs in anywhere. Timing periods from 1 minute to 4 hours.

Tape Recorder Timer—Combination clock and appliance timer. The favorite of tape recorder owners who want to hear their favorite show, even though they're away at the time.

Model No.	Description	Watts	Amps	Volts	List Price
A221	Standard Time-All	875	7	125	**$10.95**
A211	DeLuxe Time-All	1650	15	125	**$11.95**
A301	TV Show Catcher	....	..	125	**$ 8.95***
A401	Tape Recorder Timer	1650	15	125	**$11.95***

*Subject to Retail Federal Excise Tax

STANDARD ON-OFF TIME SWITCHES

Century Series T100

Tungsten-Rated to handle incandescent lighting loads. For ordinary automatic control requirements, with up to 11 on-off operations per day. Minimum on-off time, 1 hour; maximum 23 hours. Manual control with automatic reset.

Model No.	Switch	Amps	Voltage	List Price
T101	SPST	35	125	**$11.95**
T102	SPST	35	250	**$12.95**
T103	DPST	35	125	**$13.95**
T104	DPST	35	250	**$14.95**
T105	SPDT	35	125	**$13.95**
T106	SPDT	35	250	**$14.95**
T101B	SPST	35	125	**$11.95**
T102B	SPST	35	250	**$12.95**
P101*	SPST	10	125	**$13.95**

*Portable Plug-In: 125 volts, 60 cycle only.

Models also available for 125 volt 50 cycle, 125 volt 25 cycle or 250 volt 50 cycle.

PROGRAM TIME SWITCH

Supervisor Series T960

For recorded music, process timings, fans, and heaters. Permits 1 to 96 on-off operations every 24 hrs. in 15 min. increments. 96 permanently attached trippers easily slide in and out for fast setting. Portable plug-in model available.

Model No.	Type	Amps per pole	Voltage 60 cycle	List Price
T965	Can be used 3 ways 1. SPST—Normally open	20	125	**$37.50**
T966	2. SPST—Normally closed 3. SPDT—Alternate open & close	15	250	**$38.50**
P961*	Single Pole, Single Throw	10	125	**$39.50**

*Portable Plug-In

12 MINUTE REPEAT CYCLE TIMER

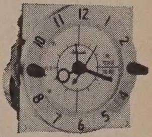
Cycler Series C8300

Dial makes a complete revolution every 12 min. ON operations from 10 sec. to 11 min., 10 sec. OFF operations from 50 sec. to 11 min., 50 sec. Up to 12 sets of on-off trippers can be placed on the dial at one time.

Model No.	Switch	Amps	Voltage	List Price
C8301-S	SPST	15	125	**$14.45**

RADIO CLOCK TIMER

Model RC 6021-2—unmounted

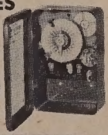


An unmounted radio clock timer with front control. For installation in any model radio or other electrical unit. Radio can be turned on automatically, turned on or off manually. Complete with round bezel and crystal. With front switch setting, front "time" and "automatic" set.

Model No.	Watts	Amps	Voltage/60 cycles	List Price
RC6021-2	**1875**	**15**	**125**	**$9.00**

Skipper SERIES TIME SWITCHES

T170—for 7-day Operation



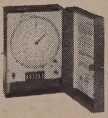
Tungsten-Rated to handle incandescent lighting loads. For use where it is desired to skip operation on selected days. SKIPPER has two dials—a 24 hour time dial and a day dial—day dial advances position one day every 24 hours.

Model No.	Switch	Amps	Voltage	List Price
T171	SPST	35	125	**$17.95**
T172	SPST	35	250	**$18.95**
T173	DPST	35	125	**$19.95**
T174	DPST	35	250	**$20.95**
T175	SPDT	35	125	**$19.95**
T176	SPDT	35	250	**$20.95**
T171B	SPST	35	125	**$17.95**
T172B	SPST	35	250	**$18.95**
P171*	SPST	35	125	**$19.95**

*Portable Plug-In: 125 volts, 60 cycle only.
Models also available for 125 volt-50 cycle, 125 volt-25 cycle, or 250 volt-50 cycle.

5 OR 15 MINUTE ON-OFF SWITCH

Supervisor DeLuxe Series V27000



For highly accurate on-off operations in 5 or 15 min. intervals, on a 24 hr. basis. Recommended for intermittent 24 hr. control of recorded music in stores, factories and offices, for process timings in food, chemical, and industrial plants, fans, ventilating systems, etc. Timings in multiples of 5 or 15 min.

Model No.	Case Size	Minimum Time Between Settings	Circuit Closure Range in multiples of	No. Circ.	List Price
V27101	LC	5 min.	5 min.	1	**$89.95**
V27201	SC	15 min.	15 min.	1	**$79.95**
V27107	LC	5 min.	5 min.	2	**$119.95**
V27207	SC	15 min.	15 min.	2	**$109.95**

Note: All models available for 250 volt operation and/or with Skipper feature. Request catalog No. TS-110 for complete model number listing.

for complete Time Switch information, request Catalog TS-89

INTERNATIONAL REGISTER COMPANY, CHICAGO, ILLINOIS

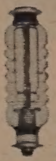
Jennings VACUUM SWITCHES

R5C

R1G

R6G

RH5G


RH7G

Types R and RH Vacuum Switches

VACUUM SWITCH RATINGS

For RF and DC Transfer Switching

Jennings Type	R5C	R1	R1K	R2	R8	RH7
Test Voltage (300 kc dry)—peak kv	25	50	40	60	85	100
Operating Voltage—peak kv	15	30	20	40	75	85
Continuous Current (rms amp)—dc①	50	50, 100	100, 200	50, 100	100, 200	50, 400
—300 kc	30	35	100	35	100	200
— 10 mc	25	25	50	25	50	60
— 30 mc		15	25	15	25	25
RF Interrupting Power—kilowatts	50	250	500	250	1000	1000

①DC continuous currents may be increased as shown by using special connectors.

For DC Switching Under Load or Capacitor Discharging

Jennings type	R4C	R5C	R1G	R6G③	R2G	R8G	R9G	RH1G	RH4G	RH2G	RH7G	RH5G
Test voltage (60 cycles dry)—pk kv	20	25	50	50	55	60	70	37	37	50	113	70
Max. operating voltage—pk kv	5	15	20	20	30	40	50	20	10	20	70	30
Continuous current①—DC amp	50 100	50	50 100	100 250	50 100	100 200	100 200	50 400	50 600	50 600	50 400	50 600
DC interruption②—power in kw	7.5	50	75	100	100	100	200	200	250	250	200	250
—Current in amp.	250@ 28 VDC	15	20	20	20	20	25	25	30	30	25	30
Capacitor discharge decaying to 30% in 1 millisec. or less—												
initial amp.			500	1000	500	1000	1500	5000	10,000	20,000	5000	20,000
10 micro sec pulse (amps)			1000	2000	1000	2000	3000	10,000	20,000	20,000	10,000	20,000
peak kv			30	25	40	50	60	30	20	30	70	40

①DC continuous currents may be increased as shown by using special connectors.
②For DC interruption in continuous operation, neither power nor current rating should be exceeded.
DC current interruption capabilities will be increased beyond current shown by addition of transient suppression capacitance across switch contacts. They can be multiplied considerably by special application of capacitors after the contacts have parted.

For 60 Cycle Power Switching

Jennings type	R6G③	R8G	R9G	RH1G	RH4G	RH2G	RH5G	RH7G	RL7G	RL10G
Recommended max. load voltage for max. operating recovery voltage @ 50 amps-rms kv	27	31	35	13.5	5	13.5	31	38	35	40
Load break 70% PF to 600 amps (grounded wye) rms kv	15.5	18	24.5	8.5	3.2	8.5	18	33	29.5	37
Grounded Y capacitor switching at 50 amps-rms kv	13.5	15.5	17.5	6.75	2.5	6.75	15.5	19	17.5	20
Grounded Y capacitor switching at rated thermal current—rms kv	12.5	12	14.75	4.75	1.6	4.25	9	15	12	17
Thermal current (for 30° C. rise) rms amps	100, 250	200	250	400	600	600	600	400	600	600
Max. recovery voltage at rated thermal current load—rms kv	25	24.5	29.5	9.5	3.2	8.5	18	30.5	24.5	34
Overload or fault interrupter circuit breaker 3 phase simultaneous break line to line (present recommended duty) rms kv			15.5	5	5	8.5	12	21.5	15.5	34.5
Max. interrupting current (10 times) rms amps.	1500 @9kv	1500 @14kv	2000 @17.5kv	2000 @6kv	4000 @2.5kv	4000 @5kv	4000 @12kv	2000 @21.5kv	4000 @15.5kv	4000 @18kv
Withstand voltage (60 cycle 1 min. dry) rms kv	36	36	50	26	26	36	50	80	50	80
Impulse voltage (1½ x 40 micro sec. NEMA) pk kv	95	95	110	60	60	75	95	125	110	150
Short time surge currents NEMA—4 sec. rms amps.	2500	2000	2500	2500	5000	5000	5000	2500	5000	5000
NEMA—½ cy + 10 cy. @ 70% rms amps	5000	4000	5000	5000	10000	20000	20000	5000	20000	20000

③Type R6A modification is available with longer life bellows and lower continuous current ratings of 50, 100 amps.

Relays using Vacuum Switches

Type R and RH Vacuum Switches are available from Jennings mounted as relays for indoor use. They may be mounted with contacts normally open or normally closed or two switches may be mounted in a single pole double throw arrangement. Either ac or dc solenoids may be used. Insulation between the switch and its actuating solenoid is provided by a 2 to 12 inch puller rod providing 40 to 140 kv insulation. CE grade phenolic laminate is recommended for dc or 60 cycle use. Grade G7 silicone glass laminate is recommended for radio frequency applications.

JENNINGS RADIO MANUFACTURING CORPORATION • SAN JOSE 8, CALIF.

Instrument Quality J-B-T **Components**

J-B-T INSTRUMENTS, INC.

LEVER ACTION SWITCHES AND UNIQUE MOLDED SWITCHES

3-, 4-, 5-, and 6-Position Lever Switches — Time-saving Ring-Contact Rotaries — 6-Pole DT per Deck

SS-14-IL4F-2
Two-Deck Lever-Action Switch

SINGLE DECK, POSITIVE INDEXING, 3- and 4-POSITION. These lever switches are derived from the J-B-T SS-14 instrument-type rotaries. Specified for tube checkers, inspection equipment, communications systems, control consoles, and other uses where quality is important. 4-position types are interchangeable with 3-position except in length of throw, and provide for an extra circuit. Individually-boxed switches come with mounting hardware and KN-17 knob as illustrated; bulk shipments, without knobs. Spacing between centers: recommended ¾"; minimum 9/16". For dimensions, see drawing below.

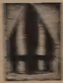
Spring Return Type. Single deck, 3-position switches may also be ordered with spring return. Lever returns to position 11, giving momentary action at positions 9 and 10.

Two Deck. Same basic construction and packaging as single deck. Spacing between centers: recommended, 15/16"; minimum, 13/16". ⅜" between decks matches TV twinlead wires.

Model	Pos. per Circuit	Ckts. per Deck	Decks	Short. or Non	Stand.* Contact Pos.	Boxed Incl. Knob
SS-14-IL3	3, no "off"	1	1	NS	A	$0.95
SS-14-IL3A	3, no "off"	2	1	NS	B	1.10
SS-14-IL3S	3, no "off"	1	1	S	A	1.00
SS-14-IL3-R Sp. Ret.	3, no "off"	1	1	NS	A	1.10
SS-14-IL3S-R Sp. Ret.	3, no "off"	1	1	S	A	1.15
SS-14-IL3-2	3, no "off"	1	2	NS	A	1.60
SS-14-IL4	3 & "off"	1	1	NS	C	1.05
SS-14-IL4F	4, no "off"	1	1	NS	D	1.05
SS-14-IL4F-2	4, no "off"	1	2	NS	D	1.80
SS-14-IL4S	3 & "off"	1	1	S	C	1.10

*A—common at 12, contacts at 9, 10, 11; B—common at 9, 10, contacts at 6, 7, 8, 12, 13, 14; C—common and off at 12, contacts at 9, 10, 11; D—common at 12, contacts at 8, 9, 10, 11.

KNOBS AND MOUNTING PLATES FOR LEVER SWITCHES

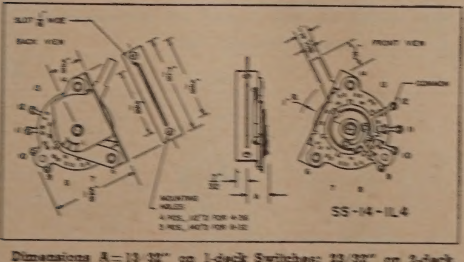


Spare Knobs. Push-on type are:

KN-17, black, pointed design, metal insert regularly supplied	$0.08
KN-18, walnut, same as KN-19	.06
KN-19, black, round, flat-type, no insert needed	.06

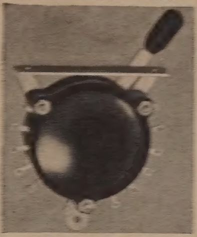
Mounting Plates. These .035" stamped steel plates in black crackle finish simplify alignment of standard 3-position IL3 single deck models. Spacing between slots, ¾"; all plates 2⅝" high.

PL-36, ¾" wide, for one switch	$0.30
PL-37, 1½" wide, for two switches	.40
PL-38, 3" wide, for four switches (illustrated)	.45



Dimensions A=13/32" on 1-deck Switches; 23/32" on 2-deck. Non-shorting type with standard level length is shown.

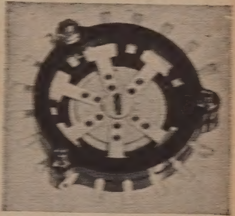
5-Position Lever Switch



MOLDED 5- and 6-POSITION, POSITIVE-INDEXING. Designers and servicemen now have available 5 or 6 live positions, two circuits per deck, in an enclosed lustrous black molded construction. Both switches are adapted from the MS-20 series on page 1233 and have similar electrical characteristics. Besides sound systems, these models can simplify circuitry for control, inspection, test, experimental, and hobby purposes. Individually-boxed switches come with mounting hardware and KN-20 threaded black molded knob; bulk shipments, without knobs. For mounting data see SK-64 on 5-position and SK-119 on 6-position.

MS-20-IL5A-1, 5-position, 2-circuit (1-deck)	$2.35
MS-20-IL6A-1, 6-position, 2-circuit (1-deck)	3.20

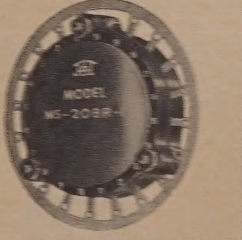
6-POLE DOUBLE-THROW PER DECK—1 OR 2 DECKS



6-Pole Switches. Double-throw switching of 6 circuits per deck through two 18° positions 36° throw) becomes easy with this unique rotary-type molded switch. It is fully enclosed and similar in appearance to the molded MS-20 switches on page 1209. The illustration at the right shows internal construction with back protective cover cut away. Circuit arrangement is designated on the metal front of the switch. Quality features include .007 ohm average contact resistance; heavy, fine-silver plating for 100-hour salt spray test; double-grip collector arms. Now available in non-shorting (break before make) and shorting (make before break). 2⅝" maximum diameter, one deck, 13/16" behind panel; two-deck, 1⅛" behind panel. DTS-Shorting Types are rated 1500 volts R.M.S. between contacts and ground, 1000 volts R.M.S. between contacts.

MS-20-1-6DT, 6-pole, double-throw (1 deck), non-shorting	$3.60
MS-20-1-6DTS, 6-pole, double-throw (1 deck), shorting	3.70
MS-20-2-6DT, 6-pole, double-throw (2 decks), non-shorting	5.15
MS-20-2-6DTS, 6-pole, double-throw (2 decks), shorting	5.40

NEW IDEA: RING-CONTACT SWITCHES



Perfect connections between adjacent switch contacts are assured because this distinctive design needs no soldered jumpers. An integral ring which holds together all the contacts on each deck can be snipped wherever wanted—to save valuable time in development and pilot runs. For production lots, J-B-T can supply various combinations of joined and unjoined contacts to slash the user's assembly costs and build-in quality. The ring-contact adds 7/32" o.d. to the MS-14 or MS-20 types listed on page 1233 (prints SK-88 and SK-89 respectively). The MS-20BR-1 shown here also has bonded (suffix B) construction. Switches listed below are normally available. Others such as 3-decks, 6-decks, shorting, etc., require substantial lead time.

RING-TYPE MOLDED SWITCH MS-14R

(14-position; angular indexing 25° 43'; o.d. 2-5/16")

Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Depth Behind Panel	Boxed Including Knob
MS-14R-1	14	1	1	N-S	13/16"	$2.75
MS-14R-2	14	1	2	N-S	1⅛"	3.35
MS-14R-4	14	1	4	N-S	1¾"	5.55

RING-TYPE MOLDED SWITCH MS-20R

(20 positions; angular indexing, 18°; o.d. 2-27/32")

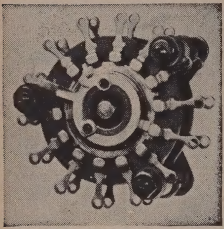
Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Depth Behind Panel	Boxed Including Knob
MS-20R-1	20	1	1	N-S	13/16"	$3.35
MS-20R-2	20	1	2	N-S	1⅛"	4.15
MS-20R-4	20	1	4	N-S	1¾"	7.00

Instrument Quality J-B-T Components

J-B-T INSTRUMENTS, INC.

INSTRUMENT AND TESTER SWITCHES (Laminated)

Rotary Selector — Single and Multi-Gang — Non-Shorting and Shorting

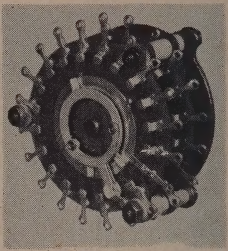

SS-14-2 Laminated

J-B-T Instrument-type Rotary Selector Switches are used widely in quality test equipment, portable instruments, inspection setups and avionics where trouble-free, dependable performance is of major importance. Available as a 14-position or a 20-position in laminated or molded types—the design gives extra contacts in minimum space. One to six decks.

FEATURES:

Reliability — Rigid, 3-post deck suspension, instead of the usual 2; all current carrying parts are brass or phosphor bronze, silver flashed and then heavily plated with fine silver to meet 100 hour salt spray test; ball bearing action, beryllium-copper balanced spring (SS-14); leaf type (SS-20), and sharp detent assure positive indexing. Springs of both types are replaceable without disturbing soldered connections. Laminated plastic decks and rotors are selected for maximum mechanical and dielectric strength. Insulation resistance above 50,000 megohms.

Exceptional Compactness—14-position switch takes 13 circuits and "off" in 2" circle; 20-position switch handles 19 circuits and "off" in 2-23/32" circle. Each deck above first adds only 5/16".


SS-20-2 Laminated

Low Contact Loss—Double-grip collector arms, and large-area contacts, silver to silver, result in an average contact resistance of .007 ohms or less during the useful life of the switch.

Ample Dielectric—AC or DC; carries 1 amp., 125 volts VAC, inductive load; maximum momentary capacity (not make-and-break), 5 amp.; maximum voltage between contacts 1500 volts R.M.S.; between decks and ground, 2000 volts R.M.S.

Military Variations—The following can be supplied on specia order at extra cost: (a) laminated plastic, Type PBE-P per Spec MIL-P-3115B; (b) vacuum impregnation of rotors, decks, spacers and ceramic spacers with approved fungicides; (c) hot tin dip o contact surfaces to be soldered; (d) 14 or 20 live positions, no off (add suffix F, as SS-14-2F or SS-20-1F); (e) common position i non-standard location.

BASIC 14-POSITION: 1¼" Bar knob (KN-14) supplied only on individually packed units—not on bulk orders unless specified. **Collector arm** placed directly opposite to flat of shaft, unless otherwise specified. **Contact lugs** and common lugs positioned as shown below, 13 contacts per deck. **One to six decks;** for each additional deck (or gang) adds 5/16" to depth. **Continuous rotation type** supplied unless otherwise specified. **Adjustable Stop** normally is supplied on standard cataloged switches. **Fixed Stops** can be supplied on quantity orders at moderate cost. **Panel locator** positioned as shown unless otherwise specified on bulk orders.

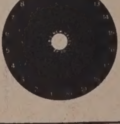
BASIC 20-POSITION: 2" Bar Knob (KN-16) supplied on individually packed units—not on bulk orders unless specified. **Collector Arm** placed directly opposite to flat of shaft unless otherwise ordered. **Contact Lugs** and common lugs positioned as shown below, 19 live positions per deck, standard. **One to six decks;** for each additional deck or gang add 5/16" to depth. **Continuous rotation** type supplied unless otherwise specified. **Panel locator** positioned as shown; can be modified on bulk orders.

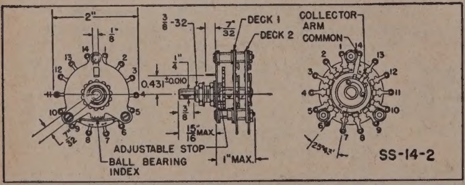
COMBINATIONS IN SS-14 and SS-20 SERIES: In addition to the military variations listed above, shorting and non-shorting decks can be assembled on the same switch shaft. Reference to the sketch below will be helpful in numbering decks and contacts when ordering non-standard assemblies. Specialized requirements for stainless steel shafts, no flats or double-flats on shaft, longer projections beyond bushing, and other variations can also be supplied, with necessarily longer delivery time and additional cost.

ETCHED DIAL PLATES FOR ROTARY SWITCHES

For SS-14 or MS-14 Series; and for SS-20 or MS-20 Series. Dull black finish—with raised bright metal numerals. 2¾" diameter.

EP-13	off thru 13	**$0.23**
EP-14	1 thru 14	**.23**
EP-19	off thru 19	**.23**
EP-20	1 thru 20	**.23**





Note: Threaded bushing on all SS-14 changing to 3/8-32 NEF-2A.

Non-Shorting—Break before make. Shorting—Make before break.

LAMINATED SWITCHES, SS-14 TYPE

.s; angular indexing 25° 43')

Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Boxed, Including Knob
SS-14-1	14	1	1	N-S	$2.10
SS-14-1A*	5†	2	1	N-S	2.25
SS-14-1S*	14	1	1	S	2.15
SS-14-1CS‡*	14	1	1	CS	2.60
SS-14-2	14	1	2	N-S	2.60
SS-14-2A*	5†	2	2	N-S	2.90
SS-14-2S*	14	1	2	S	2.70
SS-14-2CS‡*	14	1	2	CS	3.60
SS-14-3	14	1	3	N-S	3.10
SS-14-3S*	14	1	3	S	3.25
SS-14-4	14	1	4	N-S	4.00
SS-14-6	14	1	6	N-S	5.85

* Standard items, but not regularly stocked; check with your electronic parts distributors.

‡ Complete shorting — all contacts shorted except one in use.

† 5 positions include 4 "live" and 1 "off."

LAMINATED SWITCHES, SS-20 TYPE**

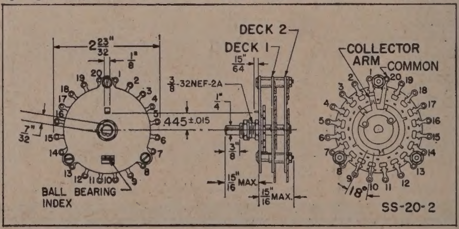
(20-positions; angular indexing, 18°)

SS-20-1	20	1	1	N-S	$4.00
SS-20-1A*	6§	2	1	N-S	4.15
SS-20-1S*	20	1	1	S	4.05
SS-20-2	20	1	2	N-S	4.75
SS-20-2S*	20	1	2	S	4.85
SS-20-3	20	1	3	N-S	5.85
SS-20-4	20	1	4	N-S	7.10
SS-20-6	20	1	6	N-S	9.40

* Standard items, but not regularly stocked; check with your electronic parts distributors.

** SS-20 Switches reinstated February 1960 with new prices as shown.

§ 6 positions include 5 "live" and 1 "off".



Use Index Page 1 for Quick, Easy Location of ALL Products

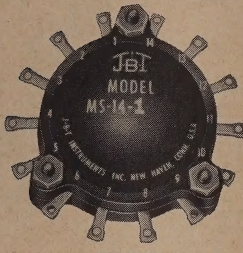
Net Effective Sept. 1, 1960

Instrument Quality **J-B-T** **Components**

J-B-T INSTRUMENTS, INC.

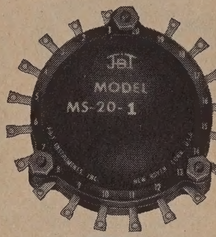
MOLDED ROTARY SELECTOR SWITCHES (Fully Enclosed)

14 and 20 Position — Single and Multi-Gang — Shorting and Non-Shorting



MS-14-2

- **All moving contacts enclosed—minimizes dirt and corrosion—also 3-post deck suspension, double grip collector arms, and rectangular drive shaft for precision indexing.**
- **Interchangeable, electrically and mechanically, with SS-14 and SS-20 laminated switches.**



MS-20-1

FEATURES: See adjoining page on SS types laminated switches for description of rigid 3-post construction; heavy fine silver plating to meet 100-hour salt-spray test; exceptional compactness; .007 ohm average contact resistance; insulation resistance above 50,000 megohms; current-carrying capacity and voltage breakdown. Besides fully enclosing all the moving contact parts, the molded switches differ from the laminated construction in the design of the detent mechanism, but both types provide the positive indexing which quickly identifes the superior quality of J-B-T switches. Test results are available on request covering certain procedures of MIL-E-5272A on insulation resistance; high and low temperature and temperature shock; humidity; altitude; salt spray; vibration; fungus resistance; rain, sand and dust; explosion; shock; and endurance values. (Ratings for MS-20-6DTS Types differ somewhat.)

BASIC 14-POSITION MOLDED (MS-14): 13 circuits and "off" per deck in 2 3/32" circle for compactness. **Molded end cover** regularly supplied. 1¼" **Bar knob (KN-14)** included with individually boxed units—not on bulk orders unless specified. **Collector arm** placed directly opposite to flat of shaft, so that knob pointer points to live contact. **Common or "off" contact lug** is bent down for ready identification. **Internal construction:** double-grip collector arms hold contact lug on upper and lower surfaces; collector ring is self-wiping. **Extra decks** add 5/16" per deck (or gang) to depth; for 7 decks and over add ½" to depth for shaft support; if adjustable stop type, also add 3/16" to depth. **Continuous rotation type** supplied unless adjustable stop (type MAS) is ordered or, on quantity orders, pre-set fixed stops are specified. **Panel locator** is available at extra cost on quantity orders when specified; on MS-14-4 and MS-14-6, extra hex nut and longer screw can be supplied for inverting supporting screw nearest common, thus converting into panel locator. For complete dimensions on MS-14 switches, 1 to 6 decks, request Print SK-111; for 7 decks and over, SK-112.

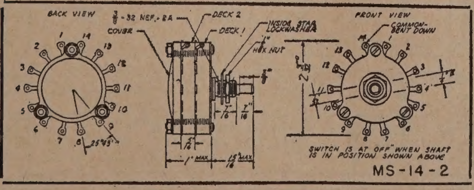
BASIC 20-POSITION MOLDED (MS-20): 19 circuits and "off" per deck in 2⅝" circle for compactness. **Molded end cover** regularly supplied. **2" Bar knob (KN-16)** included with individually boxed units—not on bulk orders unless specified. **Collector arm** placed directly opposite to flat of shaft, so that knob pointer points to live contact. **Common or "off" contact lug** is bent down for ready identification. **Internal construction:** double-grip collector arms and self-wiping collector ring are standard construction. **Extra decks** add to depth 5/16" per deck and, if 7 decks or more, ½" for shaft support. **Continuous rotation type** supplied; on quantity orders, pre-set fixed stops are available. **Panel locator** available at extra cost on quantity orders when specified; on MS-20-4 and MS-20-6, extra hex nut and longer screw can be supplied for inverting supporting screw nearest common, thus converting into panel locator. For complete dimensions on MS-20 switches, 1 to 6 decks, request Print SK-113; for 7 decks and over, SK-114.

MOLDED SWITCHES, MS-14 TYPE

(14 positions; angular indexing 25° 43')
Continuous rotation, no stops

Non-Shorting—Break before make. **Shorting**—Make before break.

Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Depth Behind Panel	Boxed Including Knob
MS-14-1	14	1	1	N-S	13/16"	**$2.20**
MS-14-1S*	14	1	1	S	13/16"	**2.25**
MS-14-2	14	1	2	N-S	1⅛"	**2.80**
MS-14-2S*	14	1	2	S	1⅛"	**2.90**
MS-14-3	14	1	3	N-S	1 7/16"	**3.40**
MS-14-4	14	1	4	N-S	1¾"	**4.45**
MS-14-6	14	1	6	N-S	2⅜"	**6.50**



MS-14-2

> **NEW BONDED RUGGEDIZED TYPES** — All molded rotary switches may be ordered with bonded construction as MS-14B or MS-20B types using cured laminations for ruggedization, shock-proofing and further enclosure. Add 35c per deck to catalog price. Thus, 2 deck switch is MS-14B-2 at $3.25. Bonding adds 1/64" max. per deck.

Non-Shorting—Break before make. **Shorting**—Make before break

MOLDED SWITCHES, MS-20 TYPE

(20 positions; angular indexing 18°)
Continuous rotation, no stops (except 6DT Types)

Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Depth Behind Panel	Boxed Including Knob
MS-20-1	20	1	1	N-S	13/16"	**$2.80**
MS-20-1-6DT	2	6	1	N-S	13/16"	**3.60**
MS-20-1-6DTS	2	6	1	S	13/16"	**3.70**
MS-20-1S*	20	1	1	S	13/16"	**2.85**
MS-20-2	20	1	2	N-S	1⅛"	**3.60**
MS-20-2-6DT	2	6	2	N-S	1⅛"	**5.15**
MS-20-2-6DTS	2	6	2	S	1⅛"	**5.40**
MS-20-2S*	20	1	2	S	1⅛"	**3.70**
MS-20-3	20	1	3	N-S	1 7/16"	**4.75**
MS-20-4	20	1	4	N-S	1¾"	**5.90**
MS-20-6	20	1	6	N-S	2⅜"	**8.30**

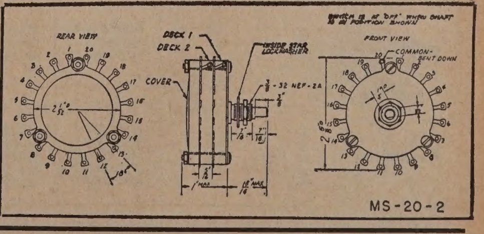
ADJUSTABLE STOP MOLDED SWITCHES, MAS-14 TYPE

(14 positions; angular indexing 25° 43')

IMPORTANT: Enclosed adjustable stop mechanism increases switch length by 5/32" behind panel; decrease effective bushing length by 3/32"; and shortens shaft extending from bushing by 1/16". Rings RI-23 and RI-24 are supplied.

Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Depth Behind Panel	Boxed Including Knob
MAS-14-1	14	1	1	N-S	31/32"	**$2.85**
MAS-14-1S*	14	1	1	S	31/32"	**2.95**
MAS-14-2	14	1	2	N-S	1 9/32"	**3.50**
MAS-14-2S*	14	1	2	S	1 9/32"	**3.65**
MAS-14-3	14	1	3	N-S	1 19/32"	**4.25**
MAS-14-4	14	1	4	N-S	1 29/32"	**5.30**
MAS-14-6	14	1	6	N-S	2 17/32"	**7.45**

For more than 6 decks, request prices
***Standard items, but not regularly stocked; check with your electronic parts distributor.**



MS-20-2

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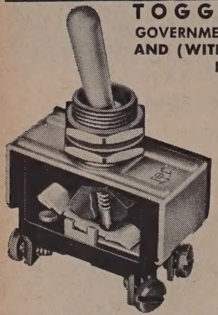
Net Effective Sept. 1, 1960

Instrument Quality J-B-T Components

J-B-T INSTRUMENTS, INC.

TOGGLE SWITCHES — HEAVY DUTY — SINGLE-HOLE

GOVERNMENT-QUALITY TYPES DESIGNED FOR JAN-S-23, DDAX SERIES, AND MIL-S-21195A (Ships) AND (WITH TOGGLE SEALS AND OTHER VARIATIONS) MIL-S-6745, AN-S-20a, AND MIL-S-3950A.



REGULARLY TESTED TO MEET ADVERSE OPERATING CONDITIONS

Overload . . . Tested to make and break at 50% overload for brief periods. To assure performance of these switches with their comparatively heavy current ratings, J-B-T features ample size **solid coin silver contacts and rocker arms** instead of clad or brazed construction. Contact resistance is under 0.005 ohms. High dielectric exceeds 1000 volts r.m.s. at 60 cycles at sea level.

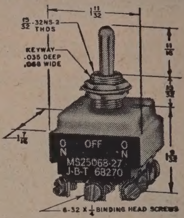
Cold and Heat . . . Specialized aircraft lubricant facilitates mechanical and electrical operation at —85°F to 185°F.

Vibration and Shock . . . No momentary make or break or mechanical damage during severe shake and 75 G's drop tests.

High Humidity . . . Materials, dull finish on outside metal parts (per Armed Services specifications) and lubricant enable switches to withstand tropical climates.

Salt . . . Meet 100 hour Salt-Spray Test QQ-M-151a which is twice the required minimum of JAN-S-23.

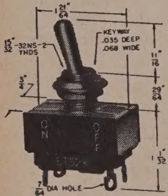
Rugged Service . . . Generously proportioned and substantially built for extra life. For instance, both screw-type terminals and solder lugs easily withstand a 30 pound pull test. Operating cycles far in excess of minimum specified as acceptable. Quality standards are maintained by in-plant production testing.


1 11/32
15/32-32NS-2 THDS
KEYWAY .035 DEEP .068 WIDE
11/16
15/32
1 7/16
ON OFF ON
MS25068-27
J-B-T 68270
1 9/32
6-32 x 1/4 BINDING HEAD SCREWS

NEW 4-POLE

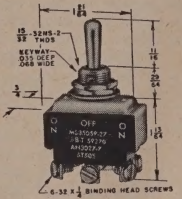
ST and DT 4-pole toggle switches with one-hole mounting and sealed toggle bushings (8 terminals, sc.) MS25068-24, -25, -28.
(12 terminals, sc.) MS25068-21,-23, -26, -27, and -31.

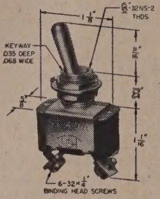
20 AMP. — HEAVY DUTY This page covers 130 models of toggle switches nominally rated at 20 amp. at 125 VAC, and 10 amp., 250 VAC, and other higher and lower ratings where specified in JAN-S-23 or other pertinent specifications.


1 21/64"
15/32"-32NS-2 THDS
KEYWAY .035 DEEP .068 WIDE
11/16"
29/64"
3/4"
1 1/32"
ON OFF
7/64 DIA HOLE

(6 terminals s.l.)
ST52S, T
(6 terminals sc.)
ST50S, T

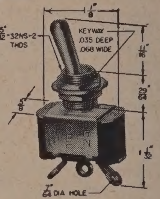
(4 terminals sc.)
ST50K, L, M
(6 terminals sc.)
ST50N, P, R
(4 terminals s.l.)
ST52K, L, M
(6 terminals s.l.)
ST52N, P, R


1 21/64
15/32-32NS-2 THDS
KEYWAY .035 DEEP .068 WIDE
11/16
29/64
3/4
1 13/64
ON OFF ON
MS35059-27
J-B-T 59270
AN3027-7
ST50S
6-32 x 1/4 BINDING HEAD SCREWS

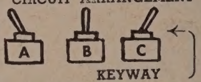
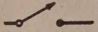
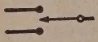
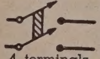
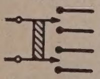
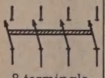
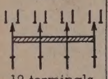

1 1/8"
15/32"-32NS-2 THDS
KEYWAY .035 DEEP .068 WIDE
11/16"
29/64"
5/8"
1 1/16"
6-32×1/4" BINDING HEAD SCREWS

(2 terminals sc.)
ST40A, B, C
(3 terminals sc.)
ST40D, E, F, G, H

(2 terminals s.l.)
ST42A, B, C
(3 terminals s.l.)
ST42D, E, F, G, H


1 1/8"
15/32"-32NS-2 THDS
KEYWAY .035 DEEP .068 WIDE
11/16"
29/64"
5/8
1 1/32"
7/64" DIA HOLE

For Electrical Characteristics, Current Values, and Full Information, Ask for Bulletin TS-6B

	MODEL NUMBER						CIRCUIT ARRANGEMENT 		
	SCREW TERMINAL				SOLDER LUG		KEYWAY		
CIRCUIT DIAGRAM AND TYPE	JAN-S-23 & MIL-S-21195A	MIL-S-6745 See Note A	MIL-S-3950 See Notes A & B	MIL-S-3950A See Notes A & B	JAN-S-23 & MIL-S-21195A (Ships)	MIL-S-3950 See Note A	A	B	C
SPST  2 terminals	ST40A	AN3021-2	#	MS35058-22	ST42A	MS35058-9	On	None	Off
	ST40B	AN3021-9	#	MS35058-29	ST42B	MS35058-10	On	None	Off*
	ST40C	AN3021-8	#	MS35058-30	ST42C	MS35058-11	Off	None	On*
	#	AN3021-10	MS35058-1	MS35058-24	#	MS35058-12	On	Off	None
	#	AN3021-11	MS35058-2	MS35058-28	#	MS35058-13	None	Off	On*
	#	AN3021-12	MS35058-3	MS35058-25	#	MS35058-14	On	Off*	None
SPDT  3 terminals	ST40D	AN3021-3	MS35058-4	MS35058-23	ST42D	MS35058-15	On	None	On
	ST40E	AN3021-1	MS35058-5	MS35058-21	ST42E	MS35058-16	On	Off	On
	ST40F	#	MS35058-6	MS35058-26	ST42F	MS35058-17	On	None	On*
	ST40G	AN3021-7	MS35058-7	MS35058-27	ST42G	MS35058-18	On*	Off	On*
	ST40H	AN3021-5	MS35058-8	MS35058-31	ST42H	MS35058-19	On	Off	On*
	#	AN3021-6†	#	#	#	#	On	Off	On*
DPST  4 terminals	ST50K	AN3027-2	#	MS35059-22	ST52K	MS35059-9	On	None	Off
	ST50L	AN3027-4§	#	MS35059-29§	ST52L	MS35059-10§	On	None	Off*
	ST50M	AN3027-5§	#	MS35059-30§	ST52M	MS35059-11§	Off	None	On*
	#	AN3027-9	MS35059-1	MS35059-24	#	MS35059-12	On	Off	None
	#	AN3027-11	MS35059-2	MS35059-28	#	MS35059-13	None	Off	On*
	#	AN3027-10§	MS35059-3§	MS35059-25§	#	MS35059-14§	On	Off*	None
DPDT  6 terminals	ST50N	AN3027-3	MS35059-4	MS35059-23	ST52N	MS35059-15	On	None	On
	ST50P	AN3027-1	MS35059-5	MS35059-21	ST52P	MS35059-16	On	Off	On
	ST50R	AN3027-6§	MS35059-6§	MS35059-26§	ST52R	MS35059-17§	On	None	On*
	ST50S	AN3027-7	MS35059-7	MS35059-27	ST52S	MS35059-18	On*	Off	On*
	ST50T	AN3027-8	MS35059-8	MS35059-31	ST52T	MS35059-19	On	Off	On*
4PST  8 terminals	#	#	MS25068-11	MS25068-24	#	#	On	Off	None
	#	#	MS25068-13	MS25068-25	#	#	On	Off*	None
	#	#	MS25068-12	MS25068-28	#	#	None	Off	On*
4PDT  12 terminals	#	#	MS25068-1	MS25068-21	#	#	On	Off	On
	#	#	MS25068-3	MS25068-23	#	#	On	None	On
	#	#	MS25068-10	MS35068-26	#	#	On	None	On*
	#	#	MS25068-7	MS25068-27	#	#	On*	Off	On*
	#	#	MS25068-5	MS25068-31	#	#	On	Off	On*

*Momentary Position

#Not included in this specification †AN3021-6 same as AN3021-5 with jumper §Same dimensions as ST50S as illustrated

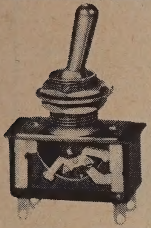
Instrument Quality J-B-T Components

J-B-T INSTRUMENTS, INC.

TOGGLE SWITCHES—MEDIUM DUTY—SINGLE-HOLE

GOVERNMENT-QUALITY TYPES DESIGNED FOR JAN-S-23, DDAX SERIES, AND MIL-S-21195A (Ships)

Variations in construction under development for MIL-S-3950A, Series MS25098 and MS25100



6 AMP. — MEDIUM DUTY

This page covers 40 models of toggle switches nominally rated at 6 amp. at 125 VAC, 3 amp. at 250 VAC. 32 models have threaded bushings 29/64" in length; eight ¼" in length.

Single Pole - Double Pole
Single Throw - Double Throw
Side Connected - Rear Connected

Like J-B-T Switches in the rotary, lever-action and heavy-duty toggle switch fields, this ST12-27 Series has quality as its first objective. J-B-T controls quality by doing its own designing, actual manufacturing and in-plant testing of production samples.

Sound Electrical Characteristics . . . Stationary contacts are brass, heavily silver plated; double wiping contacts are phospher bronze, heavily silver plated. Tested to meet 50% overload for brief periods. Contact resistance well under 0.01 ohm requirement of military specifications. High dielectric exceeds 1000 volts r.m.s., 60 cycles at sea level.

Cold and Heat . . . Specialized aircraft lubricant facilitates mechanical and electrical operation at both low and high temperatures (—85°F to 185°F).

High Humidity . . . Materials, plating, construction and lubricant enable switch to withstand tropical climates.

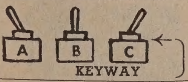
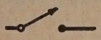
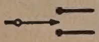
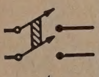
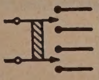
Salt . . . Meets 100 hour Salt-Spray Test QQ-M-151a which is twice the required minimum.

Vibration and Shock . . . No momentary make or break or mechanical damage during stringent shake tests and 75 G's drop test.

Specified Plating . . . Dull finish plating on outside metal parts follows requirements of applicable Government Specifications. For substantial orders, other plating will be quoted on request.

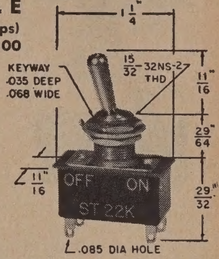
Exceptionally Rugged Construction . . . Enclosed molded body, with no unused holes for side terminals . . . terminals in this series are all solder-type, hot-tin dipped, and withstand 5 pound pull test . . . operating cycles far in excess of minimum specified as acceptable.

For Electrical Characteristics, Current Values, and Full Information, Ask for Bulletin TS-6B

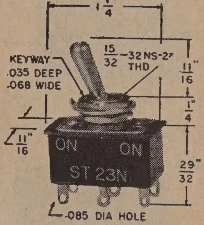
CIRCUIT DIAGRAM AND TYPE	MODEL NUMBER (Solder Lugs Only)				CIRCUIT ARRANGEMENT		
	JAN-S-23 and MIL-S-21195A (Ships)		MIL-S-3950	MIL-S-3950A			
	29/64" BUSHING	¼" BUSHING	29/64" BUSHING See Notes A & B	29/64" BUSHING See Notes A & B	A	B KEYWAY	C
SPST  2 terminals	ST12A ST12B ST12C ST16A ST16B ST16C	ST13A # # ST17A # #	MS25098-1 MS25098-2 MS25098-3 # # #	MS25098-22 MS25098-29 MS25098-30 # # #	On On Off On On Off	None None None None None None	Off Off* On* Off Off* On*
SPDT  3 terminals	ST12D ST16D	ST13D ST17D	MS25098-4 #	MS25098-23 #	On On	None None	On On
DPST  4 terminals	ST22K ST22L ST22M ST26K ST26L ST26M	ST23K # # ST27K # #	MS25100-1 MS25100-2 MS25100-3 # # #	MS25100-22 MS25100-29 MS25100-30 # # #	On On Off On On Off	None None None None None None	Off Off* On* Off Off* On*
DPDT  6 terminals	ST22N ST26N	ST23N ST27N	MS25100-4 #	MS25100-23 #	On On	None None	On On
	#Not included in this specification				*Momentary Position		

Note A: AN or MS types use internal sand and dust toggle seal and high performance features involving extra cost; some models not regularly stocked.

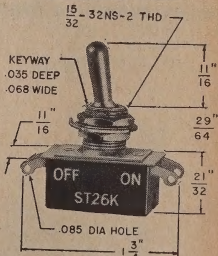
Note B: Specification MIL-S-3950 covering suffix numbers —19 and below, has been withdrawn by the Government, and is being superseded by MIL-S-3950A which has suffix numbers —21 and above. For heavy-duty switches, specification MIL-S-3950A provides for screw terminals only. However, terminals have been prepared for soldering, and may be soldered after removing screws.



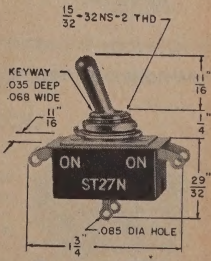
(2 terminals) ST12A, B, C
(3 terminals) ST12D
(4 terminals) ST22K, L, M
(6 terminals) ST22N



(2 terminals) ST13A
(3 terminals) ST13D
(4 terminals) ST23K
(6 terminals) ST23N



(2 terminals) ST16A, B, C
(3 terminals) ST16D
(4 terminals) ST26K, L, M
(6 terminals) ST26N



(2 terminals) ST17A
(3 terminals) ST17D
(4 terminals) ST27K
(6 terminals) ST27N

LICON® Precision Switches

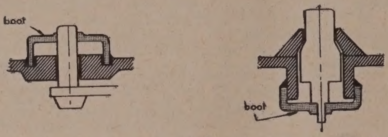
LICON TYPE 10 PRECISION BASIC SWITCHES

TYPE 10-122

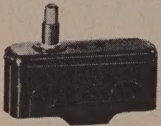
Features extremely sensitive operation plus long life and high electrical rating. Over 10,000,000 actuations by test. Movement differential of .001 on standard types. 15 amp; 125, 250, 460V A.C. Meets government specs. ½ amp; 125V D.C. U.L. Approved.

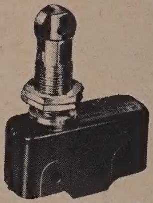
TYPE 10-72237

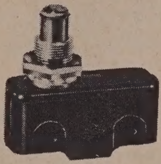
SPLASH PROOF SEAL



Sealing against moisture, dirt and other harmful elements can be provided by a neoprene boot for most type 10 models without altering switch characteristics. Specify by adding 301 to part number, i.e., 10-122301.


TYPE 10-222

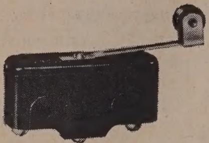

TYPE 10-922


TYPE 10-322

Type 10 switches shown are normally supplied with .020″ contact gaps with 15 amp rating. Gaps of .010″ to .070″ and ratings to 20 amps are also available.

TYPE 10-822

TYPE 10-422


TYPE 10-522

TYPE 10-622

TYPE 10-722

LICON TYPE 11 PRECISION BASIC SWITCHES

Type 11 combines small size, long life, high rating and double break in one reliable package. Government approved. Rated 10 amps, 30V D.C., 125 or 250V A.C. U.L. Approved. Tested over 20,000,000 life cycles.

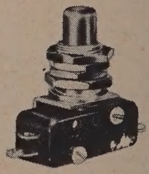
TYPE 11 ACTUATORS

70-104

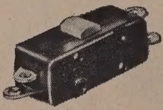
70-301

TYPE 11 ACTUATORS

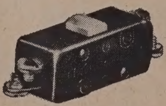
70-302


70-201

TYPE 11-104



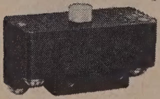
TYPE 11-204



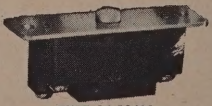
TYPE 11-304

RESET MODEL AVAILABLE WITH END OR SIDE TERMINALS

LICON TYPE 14 HEAVY DUTY SNAP-ACTION SWITCHES


TYPE 14-124

Rugged, dependable Type 14 switches feature 30,000,000 life cycles by test. Rated 20 amps, 250V A.C. Normally supplied with .020″ movement differential. Available with .010″ to over .040″ movement differential, in choice of mounting means and terminal designs. Operating force normally 12 oz. but can be from 100 grams to 2 lbs. Best suited to industrial and machine tool applications.


TYPE 14-12403

BOTH SWITCH TYPES AVAILABLE IN RESET MODELS

LICON® Precision Switches

LICON TYPE 16 SUBMINIATURE SWITCHES

Type 16 offers extremely long life (over 20,000,000 cycles) and big switch performance in a subminiature unit—rated 10 amps 30 VDC inductive (L/R = .026) yet measures only ¼″ thick and 25/32″ long. Offers exceptional shock and vibration resistance—meets MIL-S-6743. Wide variety of actuators and terminal types offer unusual flexibility in application.

TYPE 16-104

TYPE 16-304

TYPE 16-404

Type 104 and 304 also available in reset styles.
Type 404 also available with taper tab terminals.

Type 16 also offers wide engineered flexibility in specials — Licon engineers can adapt the type 16 to suit individual requirements. Especially adaptable to aircraft and guided missile applications where size, vibration resistance, and capacity are critical.

TYPE 16 ACTUATORS

70-2510 OIL TIGHT PUSHBUTTON
Available in round or hex head in aluminum, Red, Yellow, Black, Green, Orange, Blue or Olive Drab. Also available in DPDT as 70-2520.

70-223 PANEL MOUNT PUSHBUTTON
15/32″ Bushing—White nylon plunger or specify color—in 2, 3 or 4 pole.

70-222 MINIATURE PUSHBUTTON
¼″-20 threaded bushing, also with 5/32″ overtravel as type 70-226.

TYPE 16 ACTUATORS.

70-421 TOGGLE ACTUATOR
2 to 5 poles

70-120 PIVOTED ROLLER LEVER
Also available without roller as 70-121.

70-320 SPRING LEAF
Also available with roller actuator as 70-321.

LICON TYPE 30 INDUSTRIAL ENCLOSED LIMIT SWITCH

SEALED SWITCHES
- **30-200 PLUNGER SWITCH**
- **30-400 ROLLER ARM SWITCH**
- **30-600 PALM BUTTON SWITCH**
- **30-700 ROLLER PLUNGER SWITCH**

UNSEALED SWITCHES
- **30-100 OVERTRAVEL PLUNGER SWITCH**
- **30-300 ROLLER ARM SWITCH**
- **30-500 ROLLER PLUNGER SWITCH**

ACTUATORS

70-101 LEVER ACTUATOR

Used to convert 30-200, sealed plunger switch to 30-400 sealed roller arm; 30-100 plunger switch to 30-300 roller arm.

70-102 PALM BUTTON ACTUATOR

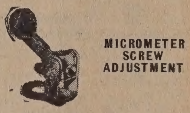
Used to convert 30-200 Sealed Plunger Switch to 30-600 Sealed Palm Button switch. Also attaches to 30-100.

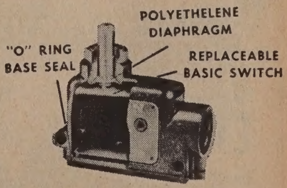
Type 30 is versatile—3 actuators and 3 housings provide 16 switch types — its effective oil tight sealing is accomplished without boots. Used for industrial control, limit and safety applications. Aluminum diecast housing — adequate wiring room. ½″-14 internal tap conduit hub. Excellent mounting means — wide variety of actuators. Actuation is sensitive. Rated 15 amp 125, 250, 460V A.C. ½ amp 115V D.C. Tested life 10,000,000 cycles. Types listed are interchangeable with all 16 competitive types.

Switchpak (TRADE MARK) **CONTROL COMPONENTS**

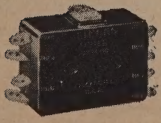
Handy plastic kit contains three complete switches, two accessory actuators and optional base mounting plates. Perfect for on-the-job maintenance. Have the right switch at the right time—get Switchpak containing . . .

Sealed Plunger Switch • Overtravel Plunger Switch • Roller Plunger Switch • Palm Button Actuator • Lever Actuator and three optional base mounting plates





LICON TYPE 22 DOUBLE POLE DOUBLE THROW SWITCHES



TYPE 22-104
Also reset model Type 22-114

Type 22 features DPDT high current interruption, outstanding vibration resistance (over 25 G's @ 2000 cps.), long dependable life (10,000,000 cycles) and a wide variety of circuit combinations offered by four separate circuits. Switch is rated 10 amp 125/250V A.C. and 30V D.C.

TYPE 22-304
Also reset model Type 22-314

LINEMASTER

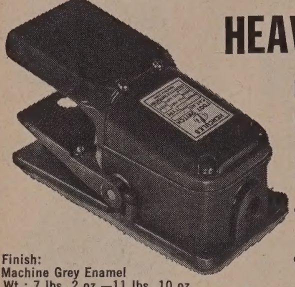
AMERICA'S FOOT SWITCH LEADER

LINEMASTER

HERCULES

HEAVY DUTY

FOOT SWITCH LINE



- **Rugged**
- **Cast Iron Enclosure**
- **Safety-Guarded**

- 2 Contact Types
- 4 Classes • 40 Models

Finish:
Machine Grey Enamel
Wt.: 7 lbs. 2 oz.—11 lbs. 10 oz.
Size: 8-7/16" x 4-5/16" x 4-1/2"

Interior steel parts are cadmium plated or otherwise treated to resist corrosion. All terminals face up for easy wiring upon unfastening cover guard. Casing has 1/2 inch threaded hole for conduit pipe. Pedal position trip point is minutely adjustable. Two and three stage switches have distinct "FEEL" between stages. Special circuit combinations can be supplied in addition to those listed below.

Class—Voltage Rating	Contact Type	Single Stage SP DT	Single Stage DP DT	Single Stage TP DT	2-Stage SP DT	3-Stage SP-DT
General Purpose 125-480 V. AC-20 amps	Maintained Momentary	561-D 521-S	562-D 522-S	563-D 523-S	564-D 524-S	565-D 525-S
Water Tight NEMA Type 4 125-480 V. AC 20 amps	Maintained Momentary	571-DW 531-SW	572-DW 532-SW	573-DW 533-SW	574-DW 534-SW	575-DW 535-SW
Explosion-Proof Class I Group D Class II Group E, F & G NEMA Type 7 125-480 V. AC-20 amps	Maintained Momentary	581-DX 541-SX	582-DX 542-SX	583-DX 543-SX	584-DX 544-SX	585-DX 545-SX
High DC Rated 125 V. DC 10 amps.	Maintained Momentary	591-DDC 551-SDC	592-DDC 552-SDC	593-DDC 553-SDC	594-DDC 554-SDC	595-DDC 555-SDC

Tip-Toe Control for Tip-Top Production!

LINEMASTER, Jr.

FOOT SWITCH

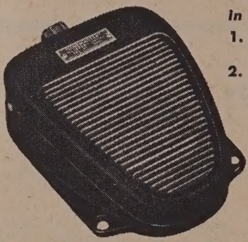
#121-S & #122-S

Lightweight, sensitive... ideal for women workers! Needs only a touch of the toe, while heel remains comfortably on the floor.

Aluminum housing, black crackle finish. Weight 1 lb. 5½" long, 3¼" wide, 1¼" high. Rated at 15 amps., 115 volts A.C.; 15 amps., 250 volts A.C. Can be wired to operate as single pole, normally open; single pole, normally closed; or single pole double throw. Momentary Contact only.
#122-S—Rated at 20 amps., 115-250 volts A.C.

The LINEMASTER

CLIPPER SWITCH



In two models:

1. **Momentary contact** (press to start—release to stop)
2. **Maintained contact** (press to start—press to release)

Rugged Momentary Contact Clipper has proved invaluable to product engineers and machine operators. Maintained Contact Clipper is now available for heavy duty applications. Molded nylon actuating cams; rugged cast iron housings, sponge rubber skid pads. Weight: 2½ lbs. Size: 4½" x 3½" x 1½".

#632-S—AC Rating: 20-A, 125-250V, Momentary Contact, Single Pole, Double Throw.

#634-S—AC Rating: 10-A, 125-250V, Momentary Contact, Double Pole, Double Throw.

#632-D—AC Rating: 20-A, 125-250V, Maintained Contact, Single Pole, Double Throw.

#634-D—AC Rating: 10-A, 125-250V, Maintained Contact, Double Pole, Double Throw.

The LINEMASTER

EXECUTIVE

Two Switches in One • "On-Center" Mechanical Interlock!

#B-2-S

This handsome switch is fool-proof and easy-to-operate! Selective circuits and guaranteed interlock eliminate possibility of accidentally tripping both circuits simultaneously, while low, wide casing saves excessive leg movement — foot pivots easily from one side to the other.
Easy to wire—remove only one screw and switch is ready. Either interior (or both) may be wired as normally open or normally closed—single pole—double throw.

Heavy steel housing, baked hammertone grey finish. Wt., 14 oz., 4⅝" long, 4" wide, 1¼" high. Each interior rated at 15 amps at 125-250 volts A.C.

The LINEMASTER

CADET

the "little giant" in foot switches that operates from *any angle*

#HB-2

Small only, 1⅛" high 3⅝" in diameter . . .
Lightweight, just 11 oz. including cordset . . .
Rugged, with heavy steel housing and unbreakable plastic actuating cap, the Cadet is an extremely compact foot switch that will give years of service in hundreds of different applications. It is well designed with an attractive grey hammertone effect casing, maroon cap and non-skid sponge rubber base for perfect positioning. The slightest pressure on the actuating cap from any angle puts the switch in operation. The operator has better control of work resulting in better production. Single pole, double throw, momentary contact only. Wired normally open. Rating 5A at 110V and 250V. Furnished with heavy duty 6 ft. 18-2SV black rubber cordset, series plug and molded strain relief grommet.

"When awkward jobs hold you up—a LINEMASTER FOOT SWITCH is your third hand!"

LINEMASTER

PRECISION-BUILT • DEPENDABLE • RUGGED • ECONOMICAL • OVER 1000 APPLICATIONS

LINEMASTER

"SENIOR" 4000 SERIES

10 Maintained and Momentary Contact Models

A sturdy industrial-type switch that operates with light pressure from foot or knee, leaving both hands free for work. Economical and built to give years of trouble-free service — fully enclosed and hooded for protection against dirt and chips, with additional heavy spring and cast stop under cover casting, to relieve pressure and strain on spring inside switch proper

Heavy-duty cast iron housing; black crackle enamel finish. 7" long, 4" wide, 3¼" high. Weight, 5¼ lbs.

MAINTAINED CONTACT MODELS: Press to start—press to stop.

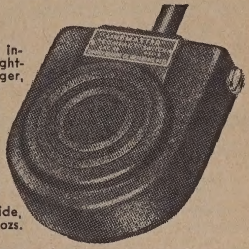
MOMENTARY CONTACT MODELS: Press to start—release to stop.

ELECTRICAL CHARACTERISTICS						MAINTAINED CONTACT	MOMENTARY CONTACT
Descrip.	Amperes AC	Amperes DC	Volts	Horse-power	Ph.	Cat. No.	Cat. No.
D-P S-T	20 20	20 20	125 250	1 1	1 1	4141-D	4141-S
D-P D-T	10 5	10 5	125 250	½ ½	1 1	4142-D	4142-S
S-P D-T	15 10	15 10	125 250	½ ½	1 1	4143-D	4143-S
D-P S-T	15 15 5		115 230 575	1 2 2	1 1 1	4151-D	4151-S
Three Pole	15 5		115-230 575	2 2	3 3	4351-D	4351-S

Safety guard available for all above models.

The LINEMASTER COMPACT

Amazingly versatile—amazingly low-priced!



Small, lightweight — and instantly responsive to the slightest pressure of foot, finger, knee or elbow! Substantially built to insure long life, with an actuating mechanism superior to any other on the market today.

Available in a wide variety of wiring plans. Strong steel housing, black crackle finish. 2¾" long, 2½" wide, ⅞" high. Weight, 6½ ozs. Momentary contact only.

Cat. No.	DESCRIPTION	RATING
491-S	Single Pole, Double Throw A.C. only	10A at 115V 10A at 230V
491-SC	SPDT. Wired N.O. with 6 ft. cord and 2 prong series plug. A.C. only.	10A at 125V ½HP at 115V
492-S	Single Pole, Double Throw A.C. only	20A at 115V 20A at 230V
493-S	Single Pole, Single Throw A.C. only, double break	10A at 115V 5A at 230V
494-S	2 interiors so arranged as to simulate D-P-D-T	10A at 115V 5A at 230V
495-S	Single Pole, Double Throw A.C.	15A at 125V 15A at 250V 15A at 460V
496-S	Foto with cord & light, Single Pole, Double Throw A.C.	20A at 115V 20A at 230V

Twin Compacts Available: Two 491-S Switches Mounted On A Twin Base. Cat. No. 491-S Twin

The LINEMASTER TREADLITE

Trim, small, lightweight, instantaneous!

MODEL T-51-S — Accurate control in a modern, minute, treadle switch! Single pole, double throw, momentary contact interior, that can be wired open or closed. Rubber base pad and rubber-ribbed treadle, formed steel casing with black crackle finish. Interior rated at 7 amps., 110 volts and 250 volts A.C. Weight 7 ozs.; 3½" long, 2⅝" wide, 1" high (Supplied on order, wired with 6' cord and series plugs.)

MODEL T-51-D — Rocker type maintained contact action.

MODEL T-52-S — ONE treadle activates TWO switching operations! A partial downward stroke opens or closes one circuit, added pressure actuates the second circuit. Both interiors, as well as exterior, meet specifications for single-switching Model T-51-S.

LINEMASTER "NAUTILUS" FOOT SWITCH

waterproof • dustproof
oilproof • rustproof

A truly great development by Linemaster. The Nautilus is waterproof, dustproof, oilproof, rustproof. Rugged Aluminum casting for long life. Piston type actuator sealed with "O" ring. Electrical interior "well" sealed with "O" ring.

Size: 8" x 4" x 2¼" Wt.: 2 lbs., 8½ ozs.

Cat. No. WP541-S 20 Amp. 125-250 VAC SPDT momentary
Cat. No. WP541-D 12 Amp. 125 VAC SPDT maintained

The LINEMASTER LEKTRO-LOK SWITCH

#L-2-S

Small, sensitive, automatically safe

Particularly ideal for transmission equipment!

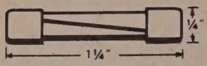
Mechanical Interlock allows only one circuit to function at a time—and you can depend on it! LEKTRO-LOK operates on the teeter-totter system, with selective circuits. Pressure on one side actuates one circuit, release of pressure automatically returns switch to normal "off" position. Pressure on the other side is required before second switch is actuated, independent of first. Yet LEKTRO-LOK requires only a single cord—eliminates costly harness assemblies! Rugged stamped metal housing, black crackle finish. Weight, 10 ozs. 5" long, 2¾" wide, 1¼" high. Single pole, double throw. Rating (A.C. only) 15 amps at 125 volts, 15 amps. at 250 volts.

LINEMASTER SWITCH CORPORATION

WOODSTOCK, CONNECTICUT

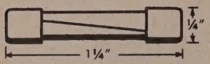
LITTELFUSE

DES PLAINES, ILLINOIS, U.S.A.



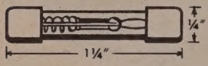
3AG Fuses (32 volts or less) 311(000) Series
Quick to medium blowing fuses. Designed with straight type element positioned to center of fuse. Available in following amperages: 4, 5, 7-1/2, 10, 15, 25 and 30 amperes.

Percentage of rating	Blow Time
110%	Life
135%	0-1 hour
200%	0-2 minutes



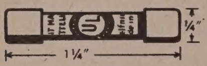
3AG Fuses (250 volts or less) 312(000) & 318(000) Series
Quick acting fuses for low time lag applications. Available in following amperages: 1/16, 1/8, 15/100, .175, 3/16, 1/4, 3/10, 3/8, 1/2, 3/4, 1, 1-1/2, 2, 3, 4, 5, 6; also 8 amperes at 125 volts. This fuse is also available with 1-1/2" No. 20 tinned copper leads in comparable amperages under Series #318(000). 312(000) Series approved by Underwriters' Laboratories. 318(000) Series approved by Underwriters' Laboratories through 3 amps.

110%	Life
135%	0-1 hour
200%	0-2 minutes



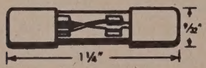
3AG Slo-Blo Fuses (125 volts or less) 313(000) & 315(000) Series
Slow blow fuses with high time lag to withstand heavy current surges. Blows quickly on shorts. Available in 1/100, 1/32, 1/16, 1/10, 1/8, 15/100, .175, 3/16, 2/10, 1/4, 3/10, 3/8, 4/10, 1/2, 6/10, 7/10, 3/4, 8/10, 1, 1-2/10, 1-1/4, 1-1/2, 1-6/10, 2, 2-1/2, 2.8, 3, 3-2/10, 4, 5; also 6-1/4, 8, 10, 15, 20, 25 and 30 amperes at 32 volts. This fuse is also available with 1-1/2" No. 20 tinned copper wire leads in comparable amperages under series #315(000)—313(000) series approved by Underwriters' Laboratories through 5 amperes. 315(000) series approved by Underwriters' Laboratories through 3.2 amperes.

110%	Life
135%	0-1 hour
200%	60 sec. max. 5 sec. min.



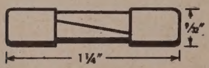
3AB Fuses (250 volts or less) (steatite) 314(000) Series
Medium time lag steatite enclosed arc quenching powder filled fuses. Available in following amperages: 1, 2, 3, 5, 6, 8, 10, 12, 15, 20 and 30 amperes. Approved by Underwriters' Laboratories through 15 amperes.

110%	Life
135%	0-1 hour
200%	0-2 minutes



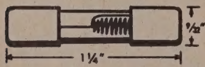
4AG Aircraft Fuses (32 volts or less) (anti-vibration) 411(000) Series
Medium to slow fuses especially developed for aircraft use. Designed to withstand vibration, shock, fatigue and repeated off and on circuit operating conditions encountered in aircraft operation. Available in following amperages: 5, 10, 15, 20, 25, 30 and 35 amperes

110%	Life
135%	0-1 hour
200%	0-2 minutes



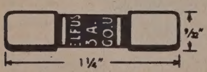
4AG Aircraft Fuses (250 volts or less) (anti-vibration) 412(000) Series
Quick acting fuses—for low time lag applications. Developed for aircraft use. Designed to withstand shock and fatigue and afford maximum protection. Available in following amperages: 1/4, 1/2, 1, 2, 2-1/2 and 3 amperes.

110%	Life
135%	0-1 hour
200%	0-2 minutes



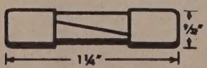
4AG Slo-Blo Fuses (250 volts or less) 413(000) Series
High time lag fuses for extra protection against sustained overloads. Designed to meet aircraft vibration test requirements. Spring-and-link element construction takes up thermal expansion and contraction and eliminates cyclic fatigue, crystallization and resulting fracture of link. Available in following amperages: 1/10, 1/8, 15/100, 2/10, 1/4, 3/10, 4/10, 1/2, 6/10, 3/4, 8/10, 1, 1-1/4, 1-6/10, 2, 2-1/2, 3, 3-2/10; also 4, 5, 6-1/4, 8, 10, 15, 20, 25, 30, 35, 40 amperes at 32 volts.

110%	Life
135%	0-1 hour
200%	60 sec. max. 5 sec. min.



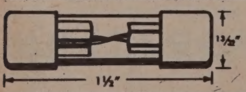
4AB Fuses (250 volts or less) (steatite) 414(000) Series
Medium lag, steatite-enclosed, shatterproof fuses. Spring and link construction under 5 amperes. Mechanical depolarization, non-crystallizing features incorporated into ratings over 5 amperes. Available in following amperages: 1, 2, 3; also 5, 8, 10, 15, 20 amperes at 125 volts; also 25, 30, 35 and 40 amperes at 32 volts.

110%	Life
135%	0-1 hour
200%	0-2 minutes



4AG Straight-element Fuses (250 volts or less) 417(000) Series
Medium lag fuses for applications where vibration is not an important factor. Designed with diagonally aligned element and Littelfuse exclusive locked cap construction. Available in following amperages: 1, 2, 3; also 5, 10, 15, 20, 25, 30, 35, 45 and 50 amperes at 32 volts.

110%	Life
135%	0-1 hour
200%	0-2 minutes

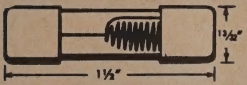


5AG Aircraft Fuses (32 volts or less) 511(000) Series
Medium to slow fuses for general aircraft applications. Design incorporates anti-vibration type element, twisted to 90 angle and mechanically depolarized construction. Available in following amperages: 5, 10, 15, 20, 25, 30, 35, 40, 50 and 60 amperes.

110%	Life
135%	0-1 hour
200%	0-2 minutes

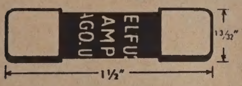
LITTELFUSE

DES PLAINES, ILLINOIS, U.S.A.



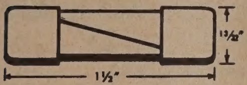
5AG Slo-Blo Fuses (250 volts or less) 513(000) Series.
High time lag fuses. Designed to withstand heavy current surges while affording maximum protection against shorts and damaging overloads. Available in following amperages: 1, 2, 3; also 5, 10, 15, 20, 25, 30, 40, 50 and 60 amperes at 32 volts.

Percentage of rating	Blow Time
110%	Life
135%	0-1 hour
200%	60 sec. max. 5 sec. min.



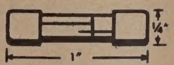
5AB Aircraft Fuses (250 volts or less) 514(000) Series
Medium time lag, bakelite enclosed, shatterproof fuses. Spring-link construction under 5 amperes. Mechanical depolarization, non-crystallizing features incorporated in ratings over 5 amperes. Recommended for applications where excessive shock and vibration are encountered. Available in following amperages: 1, 2, 3; also 5, 10, 15, 20, 25, 30, 35, 40, 50 and 60 amperes at 32 volts.

Percentage of rating	Blow Time
110%	Life
135%	0-1 hour
200%	0-2 minutes



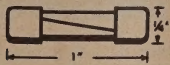
5AG Straight-element Fuses (250 volts or less) 517(000) Series
Medium time lag fuses for applications where a heavy duty fuse is desirable. Design incorporates diagonally aligned element and locked cap construction. Available in following amperages: 1, 2, 3; also 4, 5, 10, 15, 20, 25 and 30 amperes at 32 volts.

Percentage of rating	Blow Time
110%	Life
135%	0-1 hour
200%	0-2 minutes



8AG Instrument Fuses (250 volts or less) 361(000) Series
Designed for high speed action to insure maximum protection of delicate electrical equipment. Available in the following amperages: 1/500, 1/200, 1/100, 1/32, 1/16, 1/10, 1/8, 3/16, 2/10, 1/4, 3/8, 4/10, 1/2, 3/4, 1, 1-1/2, 2, 3, 4; also 5 and 20 amperes at 32 volts.

Percentage of rating	Blow Time
100%	Life
150%	0-10 sec.



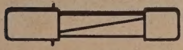
8AG Fuses (250 volts or less) 362(000) Series
Medium time lag fuses for applications where size is a factor because of space limitation or the need to differentiate physically between two fuses in close proximity. Designed to standard N. E. C. blowing specifications. Available in following amperages: 1/8, 1/4, 3/8, 1/2, 3/4, 1; also 1-1/2, 2, 3 and 5 amperes at 125 volts. Approved by Underwriters' Laboratories.

Percentage of rating	Blow Time
110%	Life
135%	0-1 hour
200%	0-2 minutes

LIMITED CURRENT FUSES & HOLDERS

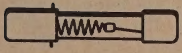
A new approach to circuit protection completely eliminating the possibility of overfusing circuits. This has been accomplished by a combination of three different fuse lengths and seven different widths of bayonet locking tabs on the fuse caps

The Limited Current Fuse Holder is designed to accept only the size, amperage, range and type (regular or slo blo) in its amperage range. The fuse locks into the holder by means of a bayonet lock which permits easy and quick insertion and removal of fuses.



Limited current LC fuses 250V type C 332(000) Series
Quick acting—low time lag fuses, incorporating design features which adapt easily to television and similar applications.
Available in following amperages: 1/32, 1/16, 1/8, 3/16, 1/4, 3/10, 3/8, 1/2, 3/4, 1, 1-1/4, 1-1/2, 1-3/4, 2, 2-1/2, 3, 3-1/2, 4, 5, 6; also 7, 8 and 10 amperes at 125V.

Percentage of rating	Blow Time
110%	Life
135%	0-1 hour
200%	0-2 minutes



Limited current LC Slo Blo fuses 125V type N 333(000) Series
Slo Blo fuses for high time lag applications. Construction incorporates design features similar to 332(000) series.
Available in following amperages: 1/100, 1/32, 1/16, 1/10, 15/100, 2/10, 1/4, 3/10, 4/10, 1/2, 6/10, 3/4, 8/10, 1, 1-1/4, 1-6/10, 1-3/4, 2, 2-1/2, 2-8/10, 3-2/10, 3-1/2, 4, 5; also 6-1/4 and 7 amperes at 32V.

Percentage of rating	Blow Time
110%	Life
135%	0-1 hour
200%	60 sec. max. 5 sec. min.

Limited Current Fuse Holders 346(000) Series

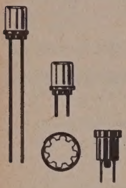
Catalog Number	Type	Amperage Range	Catalog Number	Type	Amperage Range	Catalog Number	Type	Amperage Range
346001	Regular	(C 1/32-3/10)	346007	Regular	(Over C 2-1/2-3-1/2)	346011	Slo-Blo	(Over N 3/4-1-1/4)
346002	Regular	(Over C 3/10-1/2)	346012	Regular	(Over C 3-1/2-5)	346016	Slo-Blo	(Over N 1-1/4-1-3/4)
346003	Regular	(Over C 1/2-3/4)	346013	Regular	(Over C 5-7)	346017	Slo-Blo	(Over N 1-3/4-2-1/2)
346004	Regular	(Over C 3/4-1-1/4)	346014	Regular	(Over C 7-10)	346018	Slo-Blo	(Over N 2-1/2-3-1/2)
346005	Regular	(Over C 1-1/4-1-3/4)	346008	Slo-Blo	(N 1/100-3/10)	346019	Slo-Blo	(Over N 3-1/2-5)
346006	Regular	(Over C 1-3/4-2-1/2)	346009	Slo-Blo	(Over N 3/10-1/2)	346020	Slo-Blo	(Over N 5-7)
			346010	Slo-Blo	(Over N 1/2-3/4)			

LITTELFUSE

DES PLAINES, ILLINOIS, U.S.A.

MICROFUSE

A completely different development in circuit protection for sub-miniature applications.



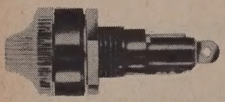
The PIGTAIL VARIETY (278000 series) is especially adaptable for soldered connections in minimum space.

The PLUG-IN VARIETY (272000 series) is designed for use with the No. 281001 sub-miniature fuse holder which is easily mounted to chassis or printed circuit board.

The SUB-MINIATURE FUSE HOLDER #281001 allows fast simple fuse replacement will handle continuous currents up to 5 amps at 125V or less.

Size: 13/64" Dia. x 9/32". Available from 1/500 amp. through 5 amps. Maximum voltages—125V. Blowing Specifications: Series 272000—278000. 100% Life; 150% 0-10 Seconds

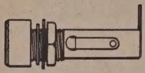
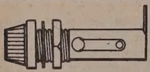
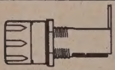
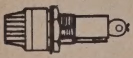
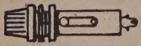
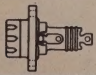
3AG INDICATING FUSE POST



Catalog Number	Voltage Range
344006	2½-7V
344012	7-16V
344024	16-32V
344125	90-125V
344250	200-250V

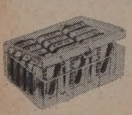
PHYSICAL CHARACTERISTICS

High temperature styrene knob (amber with incandescent bulbs —2½ thru 32 volts—and clear with high degree vacuum neon bulbs 90-250 volts). Maximum current rating 20 amperes. Size: Overall Length 2⅜"; front of Panel 13/16"; back of Panel 1½"; mounting hole ⅝" Dia.; flat at one side.

Style	Catalog Number	Fuse Size	Description	Physical Size fuse	Mounting Hole Dia.	Overall Length	Back of Panel
	341001 371001	3AG 8AG	Screwdriver Slot Knob Screwdriver Slot Knob	1¼x¼ Dia. 1x¼ Dia.	.505D .505D	2 7/32 2 7/32	1 23/32 1 23/32
	342001 372001	3AG 8AG	Finger Operated Knob Finger Operated Knob	1¼x¼ Dia. 1x¼ Dia.	.505D .505D	2 7/32 2 7/32	1 23/32 1 23/32
	342003	3AG	Miniature post with finger operated knob	1¼x¼ Dia.	.510D	1 45/64	1 3/64
	342012	3AG	Miniature post with finger operated knob	1¼x¼ Dia.	.510D	2 5/32	1 11/32
	442001	4AG	Fuse extractor post	1¼x9/32 Dia.	.635D	2 29/32	2¼
	570001	5AG	Finger operated knob —flange Mount	1½x13/32 Dia.	.865D	2 9/32	1 15/32

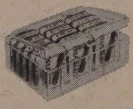
FUSE CADDY Part 094037

A handy fuse kit for instant accessibility—correct fuse at your fingertips every time. 18 individual compartments. Fuse caddy comes with 75 fuses, 15 different types, plus 3 spare compartments.



3AG ¼A
3AG ½A
3AG 1A
3AG 2A
3AG 3A
3AG 5A
3AG ¼A SB
3AG ½A SB
8AG ¼
8AG ½
N ¼ LC
N 1 LC
N 1¼ LC
C 2½ LC

LC FUSE CADDY Part 094041

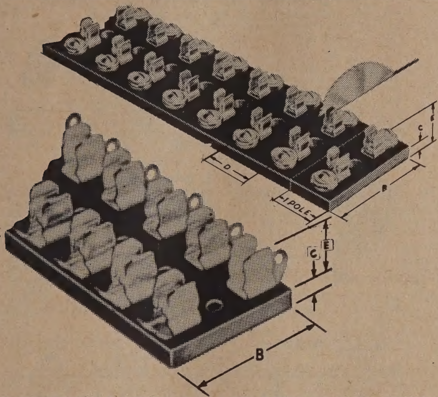


A handy all inclusive LC (Limited Current) Fuse Caddy for servicemen's tube caddy. One call is all. 18 individual compartments. LC Fuse Caddy comes with 75 fuses; 15 different types plus three spare compartments.

LITTELFUSE

DES PLAINES, ILLINOIS, U.S.A.

FUSE MOUNTING PANELS



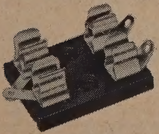
MOUNTINGS WITH SOLDER TERMINALS—TYPE "S" Phosphor-Bronze, bright-dipped finish "Lug-Clips" are firmly anchored to black Bakelite base—have non-turning anchors. For 8AG (387000 series) and 3AG (357000 series) fuses.

MOUNTINGS WITH SCREW TERMINALS—TYPE "T" Spaced to U/L requirements for equipment circuit protection. Nickel plated brass screw terminals, nickel plated fuse clips. For 3AG (356000 series), 4AG (456000 series) and 5AG (556000 series) fuses.

Open type fuse panels, stocked in 12-pole units as shown—we cut them to 2, 3, 4 or more poles as ordered, or you may cut them in your plant (⅛″ allowance for saw cut).

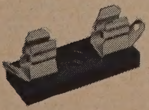
Fuse Type	Mtg. Type	Dim. "B"	Dim. "C"	Dim. "D"	Dim. "E"
8AG	S	1⅜	3/16	⅝	21/32
3AG	S	1⅝	3/16	⅝	21/32
3AG	T	2⅜	7/32	29/32	11/16
4AG	T	2⅜	7/32	29/32	13/16
5AG	T	2¾	9/32	31/32	1 1/32

RECTIFIER MOUNTINGS



Mountings custom designed for Sarkes Tarzian silicon rectifiers series M500 and L1250. Mountings designed to your specifications are available upon request. Let our engineers assist you.

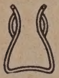
METER BACK MOUNTING Cat. No. 383002 (1059)—



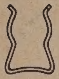
Mounts directly on meter binding post. Will not touch other posts on smallest standard meter. Linen bakelite base, 1″ x 1⅛″. Length over screw terminal, 1½″.

STANDARD FUSE CLIPS

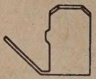
For the exacting performance often required in the electronics communications, radio, television, aircraft and marine equipment industries, we recommend our beryllium copper fuse clip. Beryllium copper clips have lower contact resistance and higher conductivity than ordinary fuse clips. They are silver plated, a finish well suited to fuse applications.



Ears



Earless



Lug

FUSE CLIPS
(Phosphor Bronze Bright Nickel Plated)

3AG Fuse Clip	101001
3AG Fuse Clip (Earless)	101002
3AG Solder Terminal Clip Bright dip	101003
4AG Fuse Clip	103001
4AG Fuse Clip (Earless)	104002
5AG Fuse Clip	105001
5AG Fuse Clip (Earless)	105002
9/16″ Dia. Fuse Clip	107001
9/16″ Dia. Fuse Clip (Earless)	107002
13/16″ Dia. Fuse Clip	109001
13/16″ Dia. Fuse Clip (Earless)	109002

FUSE CLIPS
(Beryllium Copper Silver Plated)

3AG Fuse Clip	121001
3AG Fuse Clip (Earless)	121002
3AG Solder Terminal Clip	121004
4AG Fuse Clip	123001
4AG Fuse Clip (Earless)	123002
5AG Fuse Clip	125001
5AG Fuse Clip (Earless)	125002
9/16″ Dia. Fuse Clip	127001
9/16″ Dia. Fuse Clip (Earless)	127002
13/16″ Dia. Fuse Clip	129001
13/16″ Dia. Fuse Clip (Earless)	129002

SNAP-ON MOUNTINGS

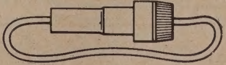
Time saver for pigtail replacement. Snap on blown pigtail, then use regular fuse in other side. No soldering. This Snap-On mounting has a cut out on both sides which makes the fuse accessible for replacement from both sides. They are available in bulk, on display cards of 24, or in handy merchandising plastic boxes of ten.

Card of 24	No. 094024
Box of 10	No. 094025
Bulk	No. 350130

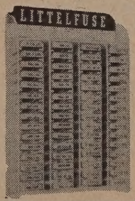
IN-LINE FUSE RETAINER Assortment 094020

EASY IN-LINE FUSE RETAINER
LITTELFUSE

comes complete with 8-inch loop of wire and fuse inserted under spring tension. Assortment consists of 6 SFE 14 units, 3 SFE 9 and 3 SFE 20.



FUSEMASTER 094047



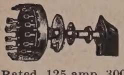
Versatile clear plastic fuse wall rack with 60 individual compartments for 60 different fuse types. Index inventory control card, pressure sensitive blank inventory labels for easy index adjustment; and an assortment of 100 popular fuses are furnished as a package under Fusemaster Assortment 094047.

P. R. MALLORY & CO. Inc.
MALLORY

SPECIAL PURPOSE SWITCHES

P.R. MALLORY & CO. INC.
INDIANAPOLIS 6, IND.

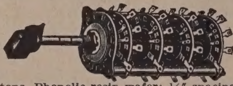
SINGLE SECTION ROTARY SWITCHES



For use in small receivers as tone controls, band selector and antennae switching; also for meter switching in test equipment and other devices where space is a factor. Two sizes available: 1¼" dia. 30° indexing and 1¹¹⁄₁₆" dia., 20° indexing. Phenolic resin wafer. Breakdown, 500 v. DC or AC. Rated .125 amp, 300 v. DC; 3 amp, 6 v. DC; .2 amp, 300 v. AC; 5 amps, 6 v. AC. Non-breaking current resistive load, 5 amps max. With knob, nut and lockwasher.

Shorting Mallory No.	Non-Shorting Mallory No.	No. of Circuits	No. of Positions	Dia. of Base	Adjustable Stop	Net Each
3115J	3215J	1	5	1¼"	No	$1.02
31112J	32112J	1	12	1¼"	No	1.02
3122J	3222J	2	2	1¼"	No	1.02
3123J	3223J	2	3	1¼"	No	1.02
3126J	3226J	2	6	1¼"	No	1.02
3134J	3234J	3	4	1¼"	No	1.05
3142J	3242J	4	2	1¼"	No	1.05
3143J	3243J	4	3	1¼"	No	1.05
31117J	32117J	1	2 to 17	1¹¹⁄₁₆"	Yes	1.56
3129J	3229J	2	2 to 9	1¹¹⁄₁₆"	Yes	1.56
3136J	3236J	3	2 to 6	1¹¹⁄₁₆"	Yes	1.65
3163J	3263J	6	2 to 3	1¹¹⁄₁₆"	Yes	1.65

MULTI-SECTION ROTARY SWITCHES

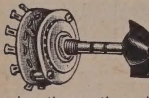


For test equipment, meter switching and low current industrial applications. All contacting members are silver plated, with self-cleaning contact wiping action. Durable alloy index spring. Adjustable stops. Phenolic resin wafer; ½" spacing except three and four-section models, 1" spacing. Indexing, 30°. Breakdown, 1000 v. AC or DC. Rated .6 amp, 300 v. DC; 8 amps, 60 v. DC; 1 amp, 300 v. AC; 10 amps, 6 v. AC. Non-breaking current, resistive load, 10 amps max. With knob, nut and lockwasher.

Shorting Type Mallory No.	Non-Shorting Type Mallory No.	No. of Circuits Per Section	No. of Circuits Per Switch	No. of Positions	No. of Sections or Gangs	Net Each
1211L	1311L	1	1	2 to 11	1	$2.10
1215L*	1315L*	2	2	2 to 5	1	2.10
1213L*	1313L*	3	3	2 to 3	1	2.10
1212L*	1312L*	4	4	2 to 2	1	2.10
1221L	1321L	1	2	2 to 11	2	2.58
1225L*	1325L*	2	4	2 to 5	2	2.58
1223L*	1323L*	3	6	2 to 3	2	2.58
1222L*	1322L*	4	8	2 to 2	2	2.58
1231L	1331L	1	3	2 to 11	3	3.24
1235L*	1335L*	2	6	2 to 5	3	3.24
1241L	1341L	1	4	2 to 11	4	3.81
1245L*	1345L*	2	8	2 to 5	4	3.81
1251L	1351L	1	5	2 to 11	5	4.11
1256L	1356L	2	10	2 to 6	5	4.53
1261L	1361L	1	6	2 to 11	6	4.83
1266L	1366L	2	12	2 to 6	6	5.52

*These switches are provided with an "off" position which is in addition to the number of positions listed in the fifth column.

CERAMIC SECTION SELECTOR SWITCHES



Ideal for highly efficient, critical r-f circuit applications in radio receivers and low-power transmitter circuits. Ceramic insulation minimizes r-f losses and retards moisture absorption. Adjustable stop is feature of index assembly permitting choice of 2 to 11 positions. All types are non-shorting. Two-section switch has ½" spacing; three-section units, 1" spacing between sections. Brass bushing ⅜" dia. x ⅜" l.; shaft ¼" dia. x 2" l. grooved for cutting. Breakdown, 500 v. AC or DC. Rated 5 amps, 300 v. AC-DC; 6 amps, 6 v. AC-DC. Non-breaking current, resistive load, 10 amps max. With knob, nut and lockwasher.

Mallory No.	Number of Gangs	Number of Circuits Per Gang	Number of Positions	Net Each
172C	1	1	2 to 11	$2.37
173C*	1	2	2 to 5	2.37
174C*	1	3	2 to 3	2.37
176C	2	1	2 to 11	3.39
177C*	2	2	2 to 5	3.39
178C*	2	3	2 to 3	3.39
180C	3	1	2 to 11	4.32
181C*	3	2	2 to 5	4.32

*Has additional "off" switch preceding numbered positions.

CIRCUIT OPENING SWITCH

For meter switching in test sets or where multiple circuits must be opened for insertion of resistors, capacitors, etc. Phenolic resin insulation; 2 to 11 position adjustable stop. Bushing, ⅜" dia. x ⅜" long; shaft ¼" dia. x 2" long, grooved for cutting. Indexing, 30°. Rated 6 amps, 300 v. DC; 8 amps, 6 v. DC; 1 amp, 300 v. AC; 10 amps, 6 v. AC. Max. resistive load 10 amps non-breaking current. With knob, nut and lockwasher.

Mallory No. 1400L Circuit Opening Switch—Net Each. . $4.68

24-POSITION TAP SWITCH NO. 13124L

For test applications which cannot be met with conventional 12-point switch. Accomplished through use of two sections similar in design to 1300L switches. Indexing mechanism has no stops, and is capable of continuous rotation with a 15° indexing action between positions. Furnished with ⅜" dia. x ⅜" long bushing and 2" long, notched shaft. Electrical characteristics similar to 1200L, 1300L series. Each switch is equipped with No. 366 knob, No. 232 nut, No. 227 lock washer and No. 394 dial plate.

Mallory No. 13124L Switch—Net Each $2.76

LEVER ACTION SWITCHES
TYPES 5000 AND 6000

Particularly adapted to centralized radio, sound distribution, public address equipment and intercommunicating systems. Housing and bracket are one integral part, prevents warping or mis-alignment of contacts. Terminals secured by "wrap-around" method to high grade phenolic resin. 5000 series has elongated mounting holes with 2⁹⁄₁₆" centers; 6000 series has round holes spaced 1⅝". May be mounted in multiples with ¾" between lever arm centers. Breakdown, 500 v. AC or DC. Rated .125 amp, 300 v. DC; 3 amps, 6 v. DC; .2 amp, 300 v. AC; 5 amps, 6 v. AC. With knob and two 6-32 bolts with nuts.

POSITIVE INDEXING

Shorting Type Mallory No.	Non-Shorting Type Mallory No.	No. of Poles or Circuits	No. of Positions or Contacts	Net Each
5124	5224	2	4	$1.38
6142	6242	4	2	1.20
6143	6243	4	3	1.20

MINIATURE PUSH BUTTON SWITCHES

1011

Especially suitable for use in such applications as test panels, meter circuits and labs. Eight different circuit combinations available in non-locking type only, where contact is made when button is depressed. Alloy contact springs, fine silver contacts, cadmium plated steel switch frame, aluminum mounting bushing. Mounts in single hole, ⁷⁄₁₆" min. (1011) and ⅞" max. (1018). Voltage breakdown, 500 v. DC. With mounting nut and washer.

Mallory No.	Circuit Arrangement	Net Each
1011	SPST—Make	$0.68
1012	SPST—Break	.68
1013	SPDT	.78
1014	DPST—Make 2	.87
1015	DPST—Break 2	.87
1016	DPDT	1.05
1017	DP—Make 2, Break 1	1.05
1018	DPDT—Make before break	1.44

CAPACITOR AND RESISTOR DECADE SWITCHES

Phenolic insulation. Positions adjustable for use as single decade or combined with other switches for multiple decade. Circuit requires only four resistors or capacitors for full decade. Mounting depth, 1" behind panel; lateral mounting space 2". Rated 500 v. DC or AC breakdown. Shaft, ¼" dia. x 2" long. With knob, nut and lockwasher.

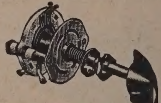
Mallory No. 153L Capacitor Decade Switch—Net Each. . $2.70
Mallory No. 154L Resistor Decade Switch—Net Each. . . .$2.94

ANTENNA SWITCH

For use where two separate antennas are used with a single TV set. Mounts on rear safety panel of cabinet with mounting bracket and two self-tapping screws, supplied. Solder terminals. Shaft ¹³⁄₁₆" long from mounting surface; switch 1¼" dia. With bar knob, bracket and screws.

Mallory No. 3122TV Antenna Switch—Net Each. $1.31

CERAMIC SECTION HAMBAND SWITCHES



A special ceramic switch designed for transmitter circuits up to 1000 V. D. C. with power up to 100 watts. Ceramic insulation is employed in both sections and spacers 90° indexing between positions, and capable of continuous rotation. Supplied with ⅜" dia., ⅜" long brass bushing and 2" long shaft grooved for cutting. Bar knob, locknut and washer included. All types non-shorting.

Mallory No.	No. of Sections	Circuits	Spacing Between Sections	Contacts Per Circuit	Net Each
161C	1	1	. . . .	4	$2.16
162C	2	2	1⅞"	4	3.06
163C	3	3	1"	4	3.96
164C	4	4	1"	4	4.86
165C	5	5	1"	4	5.76

FIVE-POSITION HAMSWITCH®

Provides a method of using a single meter to measure current or voltages up to five circuits of an amateur transmitter. Same basic design as Series 1200L. Has conservative rating of 1000 volts RMS AC or 1500 volts DC. Indexing 60°. Has adjustable stop feature for maximum of five positions. Bushing is ⅜" dia. x ⅜" long, shaft is ¼" dia x 2" long, grooved for easy cutting. Knob, nut and lock washer furnished.

Mallory No. 151L Hamswitch—Net Each. $2.70

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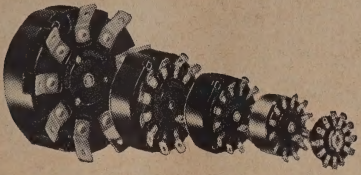
POWER TAP SWITCHES NON-SHORTING TYPE



Each switch is a non-shorting, single pole, rotary, multi-position unit, but switches can be ordered assembled 2 or 3 in tandem (2 maximum, for Model 111) to form multipole assemblies. All ceramic insulation, large, solid silver-to-silver contacts, and "slow-break" action especially designed for alternating current use establish new standards of dependability and performance. Switch shafts are electrically "dead"—insulated by strong ceramic hubs. Contacts and mechanism are entirely enclosed and protected (except for the Model 111).

MODEL 111 TAP SWITCH

Alternating Current Rating *10 Amps. 150 Volts* — Diameter 1¾" — Shaft Diameter ¼" — Standard Mounting: For ¼" panel maximum, by means of ⅜"-32 threaded bushing and hex. nut.

Depth Behind Panel		Single Unit		2 in Tandem	
		1⅛"		2¾"	
No. of Taps	Total Rotation	Stock Number	*Net 1-4	Stock Number	*Net 1-2
11	300°	111-11	$4.78	111-11-T2	$12.86
10	270°	111-10	4.66	111-10-T2	12.62
9	240°	111- 9	4.54	111- 9-T2	12.38
8	210°	111- 8	4.42	111- 8-T2	12.14
7	180°	111- 7	4.30	111- 7-T2	11.90
6	150°	111- 6	4.18	111- 6-T2	11.66
5	120°	111- 5	4.06	111- 5-T2	11.42
4	90°	111- 4	3.94	111- 4-T2	11.18
3	60°	111- 3	3.82	111- 3-T2	10.94
2	30°	111- 2	3.70	111- 2-T2	10.70
Recommended Knobs		Stock No. 5150 or 5116		Stock No. 5109 or 5110	

*Without Knob.

MODEL 212 TAP SWITCH

Alternating Current Rating *15 Amps. 150 Volts* — Diameter 2¼" — Shaft Diameter ¼" — Standard Mounting: For ¼" panel maximum, by means of ⅜"-32 threaded bushing and hex. nut. Tandem Mounting: For ¼" panel maximum, three No. 10-32 flat-head machine screws ⅜" long.

Depth Behind Panel		Single Unit		2 in Tandem		3 in Tandem	
		1¾"		4$\frac{3}{16}$"		6$\frac{3}{16}$"	
No. of Taps	Total Rotation	Stock No.	*Net 1-4	Stock No.	*Net 1-2	Stock No.	*Net Each
12	330°	212-12	$ 9.04	212-12-T2	$21.38	212-12-T3	$32.12
11	300°	212-11	8.86	212-11-T2	21.02	212-11-T3	31.58
10	270°	212-10	8.68	212-10-T2	20.66	212-10-T3	31.04
9	240°	212- 9	8.50	212- 9-T2	20.30	212- 9-T3	30.50
8	210°	212- 8	8.32	212- 8-T2	19.94	212- 8-T3	29.96
7	180°	212- 7	8.14	212- 7-T2	19.58	212- 7-T3	29.42
6	150°	212- 6	7.96	212- 6-T2	19.22	212- 6-T3	28.88
5	120°	212- 5	7.78	212- 5-T2	18.86	212- 5-T3	28.34
4	90°	212- 4	7.60	212- 4-T2	18.50	212- 4-T3	27.80
3	60°	212- 3	7.42	212- 3-T2	18.14	212- 3-T3	27.26
2	30°	212- 2	7.24	212- 2-T2	17.78	212- 2-T3	26.72
Recommended Knobs		Stock No. 5150 or 5116		Stock No. 5111 or 5112		Stock No. 5111 or 5112	

*Without Knob.

MODEL 312 TAP SWITCH

Alternating Current Rating *25 Amps. 300 Volts,* 150 V. A.C. between taps — Diameter 3$\frac{5}{16}$" — Shaft Diameter ¼" — Standard Mounting: For ¼" panel maximum, three No. 10-32 flat-head machine screws ⅜" long.

Depth Behind Panel		Single Unit		2 in Tandem		3 in Tandem	
		2¼"		4⅝"		7"	
No. of Taps	Total Rotation	Stock No.	*Net 1-4	Stock No.	*Net 1-2	Stock No.	*Net Each
12	330°	312-12	$11.62	312-12-T2	$27.24	312-12-T3	$41.46
11	300°	312-11	11.44	312-11-T2	27.28	312-11-T3	40.92
10	270°	312-10	11.26	312-10-T2	26.92	312-10-T3	40.38
9	240°	312- 9	11.08	312- 9-T2	26.56	312- 9-T3	39.84
8	210°	312- 8	10.90	312- 8-T2	26.20	312- 8-T3	39.30
7	180°	312- 7	10.72	312- 7-T2	25.84	312- 7-T3	38.76
6	150°	312- 6	10.54	312- 6-T2	25.48	312- 6-T3	38.22
5	120°	312- 5	10.36	312- 5-T2	25.12	312- 5-T3	37.68
4	90°	312- 4	10.18	312- 4-T2	24.76	312- 4-T3	37.14
3	60°	312- 3	10.00	312- 3-T2	24.40	312- 3-T3	36.60
2	30°	312- 2	9.82	312- 2-T2	24.04	312- 2-T3	36.06
Recommended Knobs		Stock No. 5109 or 5110		Stock No. 5111 or 5112		Stock No. 5111 or 5112	

*Without Knob.

MODEL 412 TAP SWITCH

Alternating Current Rating *50 Amps. 300 Volts,* 150 V. A.C. between taps — Diameter 4$\frac{3}{16}$" — Shaft Diameter ¼" — Standard Mounting: For ¼" panel maximum three No. 10-32 flat-head machine screws ⅜" long.

Depth Behind Panel		Single Unit		2 in Tandem		3 in Tandem	
		2$\frac{7}{16}$"		5$\frac{1}{32}$"		7⅝"	
No. of Taps	Total Rotation	Stock No.	*Net 1-4	Stock No.	*Net 1-2	Stock No.	*Net Each
12	330°	412-12	$15.46	412-12-T2	$35.32	412-12-T3	$52.98
11	300°	412-11	15.20	412-11-T2	34.80	412-11-T3	52.20
10	270°	412-10	14.94	412-10-T2	34.28	412-10-T3	51.42
9	240°	412- 9	14.68	412- 9-T2	33.76	412- 9-T3	50.64
8	210°	412- 8	14.42	412- 8-T2	33.24	412- 8-T3	49.86
7	180°	412- 7	14.16	412- 7-T2	32.72	412- 7-T3	49.08
6	150°	412- 6	13.90	412- 6-T2	32.20	412- 6-T3	48.30
5	120°	412- 5	13.64	412- 5-T2	31.68	412- 5-T3	47.52
4	90°	412- 4	13.38	412- 4-T2	31.16	412- 4-T3	46.74
3	60°	412- 3	13.12	412- 3-T2	30.64	412- 3-T3	45.96
2	30°	412- 2	12.86	412- 2-T2	30.12	412- 2-T3	45.18
Recommended Knobs		Stock No. 5111 or 5112		Stock No. 5111 or 5112		Stock No. 5111 or 5112	

*Without Knob.

MODEL 608 TAP SWITCH

Alternating Current Rating *100 Amps. 300 Volts* — Diameter 6" —Shaft Diameter ⅜"—Standard Mounting: For 1" panel maximum, three flat-head machine screws ¼"-20 x 1¼".

Depth Behind Panel		Single Unit		2 in Tandem		3 in Tandem	
		3$\frac{5}{16}$"		6$\frac{13}{16}$"		10$\frac{5}{16}$"	
No. of Taps	Total Rotation	Stock No.	*Net 1-4	Stock No.	*Net 1-2	Stock No.	*Net Each
8	280°	608-8	$25.54	608-8-T2	$57.68	608-8-T3	$85.42
7	240°	608-7	25.20	608-7-T2	57.00	608-7-T3	84.40
6	200°	608-6	24.86	608-6-T2	56.32	608-6-T3	83.38
5	160°	608-5	24.52	608-5-T2	55.64	608-5-T3	82.36
4	120°	608-4	24.18	608-4-T2	54.96	608-4-T3	81.34
3	80°	608-3	23.84	608-3-T2	54.28	608-3-T3	80.32
2	40°	608-2	23.50	608-2-T2	53.60	608-2-T3	79.30
Recommended Knobs		Stock No. 5104 or 5115 or 5105		Stock No. 5104 or 5115 or 5105		Stock No. 5115	

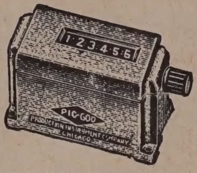
*Without Knob.

ELECTRIC COUNTERS & ACTUATORS

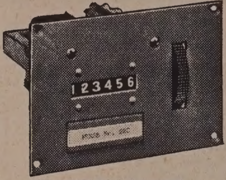
AUTOMATION CONTROLS DIVISION

GENERAL CONTROLS CO. SKOKIE, ILL

CE-600B Panelmount



CE-600A Basemount



CE-800B Panelmount

CE-800C Standard, CE-800A Dustproof

PIC Electric Counters are actuated by electric impulses which may come from any suitable switch, relay, photoelectric unit or other circuit breaking device. Counters rated for 1000 counts per minute (cpm) require .024 second minimum closed period and .036 second minimum open period for each count. Counters rated at 600 cpm require .040 second minimum closed period and .060 second minimum open period for each count. Models are available for 12 to 230 v. AC and DC. Send for literature or write us for prices and deliveries.

Also available in coin counting models.

CE-600 COUNTERS

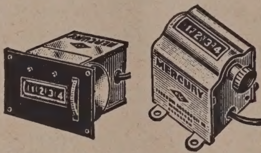
TO 999,999, WITH RESET

Count life of 50 million; 1000 cpm (1600 cpm with electronic actuation); seven watts power consumption. Built-in rectification provides reliable operation on all AC voltages to 115 v. Quiet operation; no AC hum when energized. Continuous duty coils and balanced armature. White figures on black wheels are easy to read; die cast, dust resistant enclosure. Size: No. 6115A, 1.668" w. x 3.5" d. x 2.5" h.; No. P6115A, 4.4375" x 1.875" panel x 2.6875" d.; No. P6115AK, 5.5" x 2.125" panel x 2.812" d. Models listed are for 115 v. AC, 60 cps.

CE-600AS602	Basemount with knob reset. Net........	**$19.50**
CE-600BS602	Panelmount with knob reset. Net.....	**20.85**
CE-600BK602	Panelmount with key reset. Net.......	**28.95**

MERCURY COUNTERS

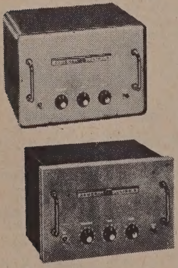
TO 9,999, WITH RESET



For laboratory use and industrial service where duty is moderate. Estimated life six million counts. Counting rate 600 cpm, higher with electronic actuation. Has white figures on black wheels. Coils consume three watts. Tamper-proof metal enclosure has plastic window. Size: Basemount model, 2 1/4" x 1 23/32" x 2 13/64" h.; panelmount model, 2 13/16" x 1 15/16" panel x 2 27/64" d. For 115 v. AC, 60 cps.

CE-40AS402	—Basemount. Net....................	**$14.00**
CE-40BS402	—Panelmount. Net...................	**14.75**

CE-901 PRE-DETERMINING COUNTER

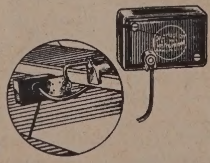


The CE901 Electromagnetic counter is a compact pre-determining counting device capable of maintaining an accurate count of 1000 counts per minute. This unit, designed for industrial applications employs the use of any remote actuator, switch, photo-electric cell, contactor or any other sensing device which operates within the actuator specifications. Available in models of 2, 3, 4 or 5 digits as standard.

CE901AA302 3 digit desk mount }
CE901BA302 3 digit rack mount } Consult Factory or your local PIC distributor for prices

Dimensions Overall:
2 & 3 digit 12" wide x 8" high x 8" deep
4 & 5 digit 19" wide x 8" high x 8" deep

SENSITIVE ACTUATOR ES-41



Widely used on folding machines. Requires only 3/4 in.-oz. torque. Arm motion: 24° min., 59° max. reciprocal; 10° to 45° overthrow. Arm position adjustable, easily shortened or bent. Rated speed, 300 cpm. SPST contacts rated 2 amps, 115 v. AC. Body size, 2 1/2" x 1 5/8" x 1 5/8" d. Furnished with straight spring steel arm 2 13/16" long.

ES-41—Actuator. Net....**$7.70**

CE-800 SUPER-WIZARD COUNTER

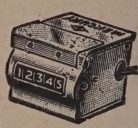
TO 999,999, WITH RESET

Has 200 million count life; 1000 cpm (1600 cpm with electronic actuation); only five watts power consumption. Built-in rectification provides top reliability from all AC voltages to 230 v. Continuous duty coils and balanced armatures for dependability. Large, white-on-black figures are easy to read. Standard enclosure has tamper-proof, die cast aluminum housing with staked window of unbreakable plastic; separate wiring compartment with independent cover is tapped for conduit. Dustproof enclosure has same housing with dustproof gasket seal and cement sealed window. Size: Standard and dustproof models, 3.12" w. x 5.94" l. x 4.69" h.; panelmount model, 5.19" x 3.50" panel x 4.39" d. Models listed are for 115 v. AC, 60 cps.

CE-800CS602—Standard enclosure, knob reset. Net....	**$43.00**
CE-800AS602—Dustproof enclosure, knob reset. Net...	**47.25**
CE-800BS602—Panelmount, knob reset. Net..........	**41.50**

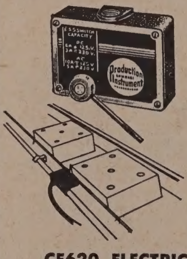
MERCURY COUNTERS

TO 99,999, NO RESET



Counts to 99,999 and then repeats. Widely used in vending machines and similar applications where duty is moderate. Estimated life, three million counts. Counting rate, 600 cpm. Coil consumes three watts. Has white figures on black wheels. Tamper-proof metal enclosure with plastic window. Size: Basemount model, 2 1/4" x 1 23/32" x 2 27/64" h.; panelmount model, 1 23/32" x 2 23/64" x 1 9/16" h. For 115 v. AC, 60 cps operation.

CE-40BN602	—Basemount. Net......................	**$4.75**
CE-40AN602	—Panelmount. Net.....................	**5.35**



HEAVY DUTY ACTUATOR ES-5

Arm has spring return. For operation by boxes, cans, packages, etc. Minimum torque of 3 oz.-in. Arm motion: 31° min., 65° max., reciprocal; 10° to 42° overthrow. Arm position adjustable. Rated speed 300 cpm. SPST contacts rated 10 amps, 115 v. AC. Size: 3 9/16" x 2 9/16" x 1 17/32". Furnished with lever as shown in upper illustration.

ES-5—Actuator. Net......**$9.35**

CE620 ELECTRIC RESET ELECTRIC COUNTER

Developed to provide remote reset through manually, mechanically, electrically or electronically operated contacts. The CE620 includes a 6 digit CE600 electric counter with electrically operated reset mechanism mounted on a subpanel. Available with push button reset built into panel or with terminals provided for connecting remote contactor furnished by user. Also available in 7 digit and coin counting models.

CE620BA602—Remote reset 120v 60 cy. Net.........................**$59.40**

CE602BB602—Pushbutton reset 120v 60 cy. Net..........................**66.40**

Dimensions, overall 6" wide, 4" high, by 1/2" deep.

SPEMCO H & H SWITCHES

BALL LEVER TOGGLE SWITCHES

Underwriters' approved, 3 amp. 125 volts. Laminated bakelite base. Nickel plated finish.

No.	Description	Sleeve	List Price
1120	SPST	15/32"	$1.05 ea.
1122	SPDT	15/32"	1.35 ea.
1124	DPST	15/32"	1.85 ea.
1126	DPDT	15/32"	2.15 ea.
1121	SPST	1"	1.35 ea.
1123	SPDT	1"	1.60 ea.
1125	DPST	1"	2.20 ea.
1127	DPDT	1"	2.40 ea.

BAT LEVER TOGGLE SWITCHES

Underwriters' approved. 3 amp. 125 volts, laminated bakelite base. Nickel plated finish.

No.	Description	Sleeve	List Price
1135	SPST	15/32"	$1.05 ea.
1136	SPDT	15/32"	1.35 ea.
1137	DPST	15/32"	1.85 ea.
1138	DPDT	15/32"	2.15 ea.
1121-B	SPST	1"	1.35 ea.
1123-B	SPDT	1"	1.60 ea.
1125-B	DPST	1"	2.20 ea.
1127-B	DPDT	1"	2.40 ea.

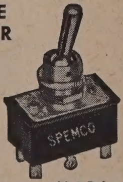
NEW COMPACT SWITCH

Ideal for aircraft, missile and electronic applications. Underwriters approved. 1 amp. 250 volts, 3 amp. 125 volts, AC-DC.

No.	Description	Sleeve	List Price
1205	SPST	15/32"	$1.40 ea.
1206	SPDT	15/32"	1.65 ea.
1207	DPST	15/32"	2.05 ea.
1208	DPDT	15/32"	2.35 ea.

MOLDED BAKELITE SWITCH, BAT LEVER

U.L. approved for 6 amp. 125 volts, 3 amp. 250 volts. *Except for 1143 which is rated at 1 amp. 250 volts, 6 amp. 125 volts. All back connected, slotted sleeve.



No.	Description	Sleeve	List Price
1142	SPST	15/32"	$1.40 ea.
*1143	SPDT	15/32"	1.65 ea.
1144	DPST	15/32"	2.05 ea.
1145	DPDT	15/32"	2.35 ea.

*1 amp. 250 volts, 6 amp. 125 volts

UTILITY SWITCHES—Toggle Type For AC Uses

1185
1186
SPEMCO

1188
1194
SPEMCO

Underwriters' approved, 10 amp. 250 volts AC, 15 amp. 125 volts AC, ¾ H.P. 115V-230V AC.

No.	Description	Sleeve	List Price
1185	SPST	15/32"	$1.20 ea.
1186	SPDT	15/32"	1.45 ea.
1188	DPST	15/32"	1.90 ea.
1194	DPDT	15/32"	2.30 ea.

MOMENTARY BAT LEVER TOGGLE SWITCHES

Underwriters' approved, 3 amp. 125 volts, laminated bakelite base. Nickel plated finished.

No.	Description	Sleeve	List Price
1166	SPST	15/32"	$1.75 ea.
1167	SPDT	15/32"	1.90 ea.
1155	DPST	15/32"	2.40 ea.
1150	DPDT	15/32"	2.75 ea.

1155 and 1166—Norm. Off

NORM. OFF

Underwriters' approved, 10 amp. 250 volts AC, 15 amp. 125 volts AC, ¾ H.P. 115V-230V AC.

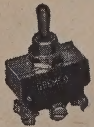
No.	Description	Sleeve	List Price
1196	SPST	15/32"	$1.55 ea.
1197	DPST	15/32"	2.50 ea.

NEUTRAL CENTER MOMENTARY BOTH ENDS

Underwriters' approved, 10 amp. 250 volts AC, 15 amp. 125 volts AC, ¾ H.P. 115V-230V AC.

No.	Description	Sleeve	List Price
1193	DPDT	15/32"	$3.00 ea.
1195	SPDT	15/32"	1.85 ea.

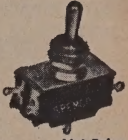
NEUTRAL CENTER



Underwriters' approved, 10 amp. 250 volts AC, 15 amp. 125 volts AC, ¾ H.P. 115V-230V AC.

No.	Description	Sleeve	List Price
1187	SPDT	15/32"	$1.45 ea.
1189	DPDT	15/32"	2.30 ea.

BAT LEVER TOGGLE SWITCH Neutral Center



Underwriters' approved, 6 amp. 125 volts, either AC or DC. A 3 position switch, on-off-on. Black bakelite case.

No.	Description	Sleeve	List Price
1175	SPDT	15/32"	$2.55 ea.
1176	DPDT	15/32"	3.05 ea.

PUSH BUTTON DOUBLE ACTION SWITCH

Underwriters' approved, 6 amp. 125 volts. Press button to make contact, press button to break contact. Nickel plated finish or snap-on plastic button, in red or black.

No.	Description	Sleeve	List Price
1156	SP	9/16"	$1.50 ea.
1156-A	Red	Dia.	1.85 ea.
1156-B	Black	15/32"	1.85 ea.

MIDGET MOMENTARY PUSH BUTTON SWITCHES

Underwriters' approved, 3 amp. 125 volts, AC. Molded bakelite base, nickel plated finish.

No.	Description	Sleeve	List Price
1141	SP Normally Closed	9/16"	$0.90 ea.
1141-A	SP Normally Open	9/16"	0.90 ea.

Underwriters' approved, 3 Amp. 125V, AC, Nickel plated finish, Molded bakelite base, Single Pole, slow make and slow break with bakelite snap-On button in red or black.

No.	Description Normally	Sleeve	List Price
1157-A	Open Red	9/16"	$1.55 ea.
1157-B	Open Black	9/16"	1.55 ea.
1157-C	Closed Red	9/16"	1.55 ea.
1157-D	Closed Black	9/16"	1.55 ea.

Two circuit slow make and slow break, momentary switch. One circuit normally on, the other off, with snap-on plastic button, in red or black. (Pushing the button reverses the contact.) 1 Amp. 125 Volts AC.

No.	Description	Sleeve	List Price
1158-A	Red	7/16"	$1.85 ea.
1158-B	Black	7/16"	1.85 ea.

Phenolic Snap-On Buttons for above—Red, White or Black (specify color)
No. 1212 .... $ .35 ea.

ROTARY CANOPY SWITCH With Fixed Plastic Handle

U.L. approved. 3 amp. 125 volts, 1 amp, 250 volts.

No.	Stem	Wire Lead	List Price
1179	7/16"	6"	$0.65 ea.

SPECIALTIES MANUFACTURING CO. • Detroit 38, Michigan

SPEMCO H & H SWITCHES

INTERMEDIATE MOMENTARY PUSH SWITCH NORMALLY OFF

U.L. approved for 6 amp. 125 volts, 3 amp. 250 vols. *Except for 1147 which is rated at 1 amp. 250 volts, 6 amp. 125 votls. All back connected, slotted sleeve.

No.	Description	Sleeve	List Price
1146	SPST	1/2"	2.35 ea.
*1147	SPDT	1/2"	2.65 ea.
1148	DPST	1/2"	3.05 ea.
1149	DPDT	1/2"	3.35 ea.

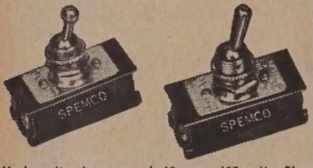
*1 amp. 250 volts, 6 amp. 125 volts

POWER SWITCHES

SPEMCO
SPEMCO

Underwriters' approved, 10 amp. 125 volts. Size of case 1 1/16", long 17/32" wide, 1 5/16" high.

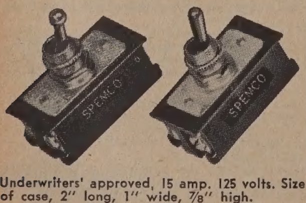
No.	Description	Sleeve	List Price
1133	SPST	11/32"	$1.80 ea.
1133-B	Bakelite lever		1.15 ea.



Underwriters' approved, 12 amp. 125 volts. Size of case, 1¾" long, ¾" wide, 13/16" high.

No.	Description	Sleeve	List Price
1159	DPST	15/32"	$2.05 ea.
1159-B	DPST	15/32"	$2.05 ea.

1159—Ball Lever 1159-B—Bat Lever



Underwriters' approved, 15 amp. 125 volts. Size of case, 2" long, 1" wide, ⅞" high.

No.	Description	Sleeve	List Price
1134	DPST	15/32"	$3.45 ea.
1134-B	DPST	15/32"	$3.45 ea.

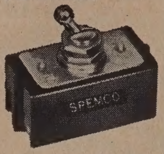
1134—Ball Lever 1134-B—Bat Lever

HARDWARE

No.	Description	List Price
1132	On and Off Plate	$0.06 ea.
1132-H	Hex Nut	0.04 ea.
1132-K	Knurled Nut	0.04 ea.
1210	Lockwasher	$1.80C
1211	Locking Ring	2.40C

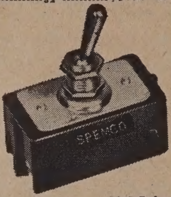
POWER SWITCHES

Fully enclosed tumbler switch, 20 amp. 250 volts, 1½ horsepower, 250 volts. Size of case, 2¼" long, 1⅛" wide, 1 5/32" high.



No.	Description	Sleeve	List Price
1170S	DPST	11/32"	$5.00 ea.

Fully enclosed tumbler switch, 20 amp. 250 volts, 1½ horsepower, 250 volts. Size of case, 2¼" long, 1⅛" wide, 1 5/32" high.



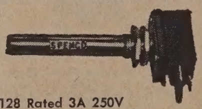
No.	Description	Sleeve	List Price
1170	DPST	15/32"	$5.00 ea.

MOMENTARY PUSH BUTTON SWITCH, NORMALLY OFF

Rated at 12 amp. 125 volts. 1 horsepower, 250 volt AC. Size of case, 1¾" long, ¾" wide, 13/16" high.

No.	Description	Sleeve	List Price
1160	DPST	15/32"	$3.00 ea.

ROTARY SWITCHES

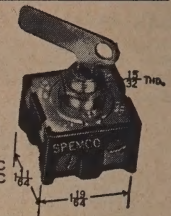


*1128 Rated 3A 250V

UL approved 1A 250V, 3A 125V. Nickel plated finish. Laminated bakelite base.

No.	Description	Shaft	Sleeve	List Price
1128	SPST	1⅛"	⅜"	$1.35 ea.
1129	SPDT	1⅛"	⅜"	1.65 ea.
1130	DPST	1⅛"	⅜"	2.20 ea.
1131	DPDT	1⅛"	⅜"	2.40 ea.

ROTO-LOCK SWITCH



Underwriters' approved.
20 amp. 120 volts,
240 volts AC.

1 H.P.....120 volts AC
2 H.P.....240 volts AC

(with key)
(above key removable in off position only)

No.	Description	Sleeve	List Price
1130-K	DPST	9/16"	$4.40 ea.
1130-KA	Key Only for Above		.45 ea.

ROTO-LOCK SWITCH

Underwriters' approved, 3 amp. 250 volts.
1129-K and 1131-K
Rated 1A 250V, 3A 125V

No.	Description	Sleeve	List Price
1128-K	SPST (with key) (above key removable in off position only)	15/32"	$2.05 ea.
1128-KA	Key only for above		.35 ea.
1128-KE	SPST (with key) (above key removable in either position)	15/32"	2.05 ea.
1128-KEA			.35 ea.

Key fits 1128KE, 1129K, 1130K

No.	Description	Sleeve	List Price
1129-K	SPDT	15/32"	$2.35 ea.
1131-K	DPDT	15/32"	$3.25 ea.

(above keys removable in either position)

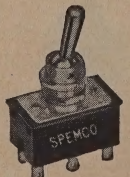
BALL LEVER TOGGLE SWITCH

Underwriters' approved 3A 250V, 6A 125V, molded bakelite base. Nickel plated finished. WITH 6" WIRE LEADS size of case, ⅞" long, ½" wide, 9/16" high.

No.	Description	Sleeve	List Price
1154	SPST	⅜"	$1.45 ea.

MILTARY TYPE TOGGLE SWITCHES

Manufactured of materials and in accordance with specification Mil-S-3950
MS-25098 and MS-35058—Single Pole MS-25100 and MS-35059—Double Pole



MS Part.No.	Up Position	Center Position	Down Position Keyway Side	Price
MS-25098-22	On	None	Off	$283.00C
MS-25098-23	On	None	On	311.00C
MS-25100-22	On	None	Off	355.00C
MS-25100-23	On	None	On	378.00C
MS-35058-21	On	Off	On	261.00C
MS-35058-22	On	None	Off	217.00C
MS-35058-23	On	None	On	261.00C
MS-35058-24	On	Off	None	217.00C
MS-35058-25	On	Mom. Off	None	239.00C
MS-35058-26	On	None	Mom. On	283.00C
MS-35058-27	Mom. On	Off	Mom. On	283.00C
MS-35058-28	None	Off	Mom. On	239.00C
MS-35058-29	On	None	Mom. Off	239.00C
MS-35058-30	Off	None	Mom. On	239.00C
MS-35058-31	On	Off	Mom. On	307.00C
MS-35059-21	On	Off	On	349.00C
MS-35059-22	On	None	Off	290.00C
MS-35059-23	On	None	On	349.00C
MS-35059-24	On	Off	None	290.00C
MS-35059-25	On	Mom. Off	None	349.00C
MS-35059-26	On	None	Mom. On	378.00C
MS-35059-27	Mom. On	Off	Mom. On	378.00C
MS-35059-28	None	Off	Mom. On	349.00C
MS-35059-29	On	None	Mom. Off	349 00C
MS-35059-30	Off	None	Mom. On	349.00C
MS-35059-31	On	Off	Mom. On	378.00C

SPECIALTIES MANUFACTURING CO. • Detroit 38, Michigan

SPEMCO H & H SWITCHES

EXTRA HEAVY DUTY SWITCH NEUTRAL CENTER

Used in heavy current circuits, such as transmitters, power amplifiers, motors, etc. Contacts have fast "break" which reduces the tendency to arc. Rated at 10 amp. 125 volts. Size of case 2″ long, 1⅚₁₆″ wide, 1″ high.

No.	Description	Sleeve	List Price
1161	DPDT	11/32″	$7.75 ea.
*1161-A	DPDT	11/32″	7.75 ea.

(*Straight thru, no off-center)

Size of Case: 2½" long, 1 19/32" wide, 1 21/32" high, 3 9/32″ mounting centers. 10 amp., 250 volts; 20 amp., 125 volts; 5 amp., 600 volts. 1½ H.P., 250 volts DC. 2 H.P., 230 volts DC.

No.	Description	List Price
1161-B	DPDT	$11.75 ea.

Size of Case: 2 5/16" long, 2" wide, 1⅛" high. Rated 10 amp. 125 volts, ½ horsepower, 115-230 volt AC.

No.	Description	Sleeve	List Price
1177	3PDT	13/32″	$11.75 ea.
1178	4PDT	13/32″	14.75 ea.

THREE & FOUR POLE AC UTILITY SWITCHES

15 amp. 125 volts, 10 amp. at 250 volts AC — 1 H.P. 120 volts AC. With Screw Terminals.

No.	Description	Sleeve	List Price
1198	3PST On-None-Off	15/32″	$4.00
1199	3PDT On-Off-On	15/32″	5.00
1200	4PST On-None-Off	15/32″	5.75
1201	4PDT On-Off-On	15/32″	7.00

Sleeve Diameter, 15/32″

FEED THROUGH CORD SWITCH

Underwriters' approved, black bakelite case sliding lever, 10 amp. 125 volts, 5 amp. 250 volts. 5/16" cord hole.

No.	Description	Sleeve	List Price
1163	SP		$1.90 ea.

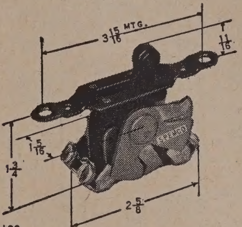
HEAVY DUTY SWITCHES

Toggle Type

Underwriters' approved, 30 amp., 250 volts, AC-DC; 2 H.P., 115V-230V AC only; 1 H.P., 460V AC only.

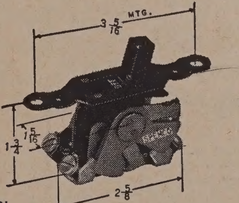
For use on Food Machines, Grinders, Sanders, Machine Tools, Gasoline Pumps, etc.

Roller Type Lever



1190

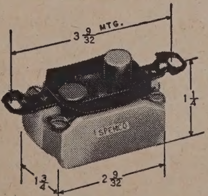
Square Bakelite Lever



1191

No.	Description	*Net Price
1190	DPST	$2.85 ea.
1191	DPST	2.85 ea.

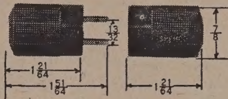
METAL PUSH BUTTON TYPE NORMALLY OPEN



Underwriters' approved, 20 amp. 250 volts, 2 H.P. 230V AC, 2 H.P. 250V DC.
For use on Floor Sander, as a foot switch, etc.

No.	Description	NET PRICE
1192	DPST	$2.85 ea.

CORD CONNECTORS



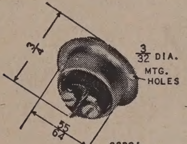
Brown Bakelite Cord Connector Complete, ⅞" O.D. x 2½" long, 10 amps. 250 volts. End opening for wire size up to ⅜″ O.D.

No.	Description	List Price
1162	Complete	$2.65 ea.
1162-F	Female Part	1.50 ea.
1162-M	Male Part	1.50 ea.

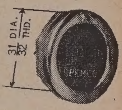
RECEPTACLES

Underwriters' approved, 10 amp. 250 volts AC.

Short Female Flush Receptacle



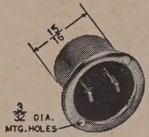
80326



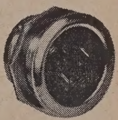
80327

No.	Description	List Price
80326	2 Screw Mounting	$1.80 ea.
80327	Lock Nut Mounting	2.65 ea.

Recessed Male Receptacle



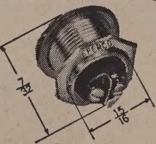
80328



80329

No.	Description	List Price
80328	2 Screw Mounting	$2.10 ea.
80329	Lock Nut Mounting	2.65 ea.

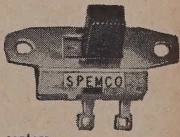
Recessed Female Receptacle



No.	Description	List Price
80331	Lock Nut Mounting	$2.65 ea.

All aforementioned switches and receptacles are manufactured by H. & H. for S.M.C.

SLIDE SWITCHES



Housings are made of steel and are cadmium plated. 1 13/32" long, 35/64" wide and 1⅛" mounting centers.

No.	Description	List Price
1180	SPST .75A-125V AC-DC	$0.31 ea.
1181	SPDT .75A-125V AC-DC	0.37 ea.
1182	DPST .50A-125V AC-DC	0.44 ea.
1183	DPDT .50A-125V AC-DC	0.55 ea.

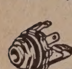
SPECIALTIES MANUFACTURING CO.
DETROIT 38, MICHIGAN

SWITCHCRAFT INC.

CHICAGO 30, ILLINOIS

"LITTEL-JAX AND "TINI-JAX"

A


B

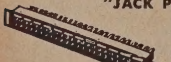
The **"Littel-Jax"** (A) features notched insulating washers mechanically interlocking springs and lugs; "V" bend in tip spring firmly "holds" mating plug; minimum space requirements, economical. Mount in single ⅜" hole, panels up to 5/32" thick, except L-11 and L-12A in panels up to ¼" thick.

No. C-11 (JJ-034) and C-12A (JJ-089) mate with No. 440 (PJ-055B) Plug; C-12B (JJ-033), S-12B and S-13B mate with No. 480 (JAN PJ-068 or W.E. No. 309) Plug. No. C-11 and C-12B have locating pins (non-turn devices). No. S-11 similar to No. 11 except .210" I.D. sleeve to mate with S-250 and S-280 Plugs. C-11 (JJ-034), C-12B (JJ-033) and C-12A (JJ-089) per JAN-J-641. All others mate with standard ¼" dia. plugs such as our No. 40, 250, etc.

The **"Tini-Jax"** (B) a miniature 2-conductor Jack, approximately ⅓ the size of the "Littel-Jax"; otherwise similar in construction. Mounts in ¼" dia. hole; panels up to ⅛" thick. Mate with **"Tini-Plugs"** No. 750, etc. 43A has a unique spring design that requires a pear shaped tip, such as our No. 750.

"LITTEL-JAX"		"TINI-JAX"		Schematic No.
Part No.	U.S.A. List Price	Part No.	U.S.A. List Price	
11	$0.40	41	$0.40	I
C-11	$0.60			
L-11	$0.50			
S-11	$0.45			
12A	$0.45	42A	$0.45	III
C-12A	$0.75			
L-12A	$0.55			
13	$0.90			V
13A	$0.85	43A	$0.70	VI
13E	$0.90			IX
Three Conductor Types				
12B	$0.55			IV
C-12B	$0.70			
S-12B	$0.65			
13B	$0.75			VII
S-13B	$0.95			

"JACK PANELS"



Black phenolic strip, reinforced with steel, supports Switchcraft "T-JAX" and "MT-JAX" (see separate listing). Slotted mounting brackets for standard 19" relay racks. Series 1200, single row for 24 Jacks; strip 1¾" wide. Series 2400, double row for 48 Jacks; 2⅛" wide. Series 2600, double row for 52 Jacks; 1¾" wide.

Series 2800 Aluminum Jack Panels now available. Write for catalog J-102.

Part No.	U.S.A. List	DESCRIPTION
1200	$18.00	Single Row Panel, less Jacks.
1232A	$45.00	Single Row, 12 pr. closed ckt. T-332A "T-Jax".
1332A	$55.00	Single Row, 12 pr. closed ckt. MT-332A "MT-Jax".
2400	$20.00	Double Row Panel, less Jacks. 2⅛" wide (holds 48 Jacks).
2432A	$75.00	Double Row, 24 pr. closed ckt. T-332A "T-Jax". 2⅛" wide.
2532A	$95.00	Double Row, 24 pr. closed ckt. MT-332A "MT-Jax". 2⅛" wide.
2600	$25.00	Double Row Panel, less Jacks. 1¾" wide (holds 52 Jacks).
2632A	$85.00	Double Row with 52 No. T-332A "T-Jax". 1¾" wide.
2732A	$110.00	Double Row with 52 No. MT-332A "MT-Jax". 1¾" wide.

"SF-JAX"

C

D

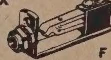
"SF-JAX", Series 20 (C) requires a minimum of panel depth, mounts in single ⅜" dia. hole, panels up to 3/16" thick. Series 50 (D) similar to Series 20, except solder lug location necessitates more depth but requires less panel space. Mounts in panels up to ¼" thick.

Series C-20 and C-50, MIL types with Military Insulation and finishes, otherwise similar to commercial Series 20 and 50; both will mount in panels up to ¼" thick.

Series 20 & C-20		Series 50 & C-50		MIL	Schematic No.
Part No.	U.S.A. List	Part No.	U.S.A. List	Type No.	
21	$0.65	51	$0.65		I
		C-51	$1.20	JJ-096	
22	$0.80	52	$0.80		II
22A	$0.80	52A	$0.80		III
		C-52A	$1.30	JJ-097	
22B	$0.80	52B	$0.80		IV
		C-52B	$1.30	JJ-103	
23	$0.95	53	$0.95		V
C-23	$1.35			JJ-099	
23A	$0.95	53A	$0.95		VI
C-23A	$1.35			JJ-098	
		C-53A	$1.55	JJ-092	
23B	$0.95	53B	$0.95		VII
23C	$0.95	53C	$0.95		VIII
23E	$0.95	53E	$0.95		IX
C-23E	$1.35			JJ-102	
24	$1.10	54	$1.10		X
24A	$1.10	54A	$1.10		XI
		C-54A	$1.60	JJ-093	
24B	$1.10	54B	$1.10		XII
		C-54B	$1.60	JJ-101	
25	$1.30	55	$1.30		XIII
		C-55B	$1.85	JJ-095	XV
26	$1.40	56	$1.40		XIV

"LF-JAX" AND "M-JAX"

E


F

Long Frame Jacks, the "LF-JAX", (E) Series 30, requires minimum panel space, 3" deep.

"M-JAX" (F) a heavy frame, often referred to as Navy Jack, 2 11/16" deep. Both types mount in single ⅜" hole, in panels up to ¼" thick.

"LF-JAX"		"M-JAX"		MIL	Schematic No.
Part No.	U.S.A. List	Part No.	U.S.A. List	Type No.	
31	$0.75	M-441	$1.50		I
32	$0.95				II
32A	$0.95	M-442A	$1.70	JJ-107	III
32B	$0.95				IV
33	$1.05				V
33A	$1.05	M-443A	$1.95	JJ-105	VI
33B	$1.05	M-443B	$2.10	JJ-106	VII
33C	$1.05				VIII
33E	$1.05				IX
34	$1.20				X
34A	$1.20				XI
34B	$1.20	*M-444	$2.30	JJ-083	XII
		M-444B	$2.20	JJ-082	XII
35	$1.45	M-445	$2.75	JJ-104	XIII
36	$1.70	M-446	$3.50	JJ-079	XIV
		M-446A	$3.90	JJ-081	XVI

*Bushing .2085", to mate with plugs PJ-068 and PJ-309.

"T-JAX" AND "MT-JAX"

G

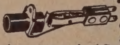
The **"T-JAX"** and **"MT-JAX"** are a long frame, switchboard type. The **"T-JAX"**, commercial quality, for low cost communication equipment where economy is all important.

The **"MT-JAX"** is recommended for high quality communication and Military equipment, featuring welded crossbar Palladium contacts. Frame design also available with mounting ear rotated 90° from position shown in figure "G"; add prefix "C" to part number. All types listed mate with ¼" dia. plug sleeves unless otherwise indicated.

"T-JAX"		"MT-JAX"		MIL	Schematic No.
Part No.	U.S.A. List	Part No.	U.S.A. List	Type No.	
T-331	$1.05	MT-331	$1.50	JJ-086	I
		MT-332	$1.70		II
T-332A	$1.20	MT-332A	$1.70	JJ-024	III
T-332B	$1.20	MT-332B	$1.70	JJ-022	IV
		MT-332C	$1.95	JJ-016	XVIII
		MT-333	$1.95	JJ-084	V
		MT-333B	$1.95		VII
		MT-333E	$1.95		IX
T-334A	$1.50	MT-334A	$2.00		XI
T-334B	$1.60	MT-334B	$2.00	JJ-042	XII
T-334C	$1.50	MT-334C	$2.00	JJ-072	XVII
		MT-334E	$2.00	JJ-085	XXV
		MT-334F	$2.00	JJ-035	XIX
		MT-335	$2.25		XIII
		MT-336	$2.25	JJ-074	XX
		MT-336A	$2.75	JJ-075	XIV
		MT-336B	$2.75	JJ-077	XXI
		MT-336C	$2.75	JJ-073	XXII
		MT-336E	$2.75		XXIII
		MT-337	$2.75	JJ-087	XXIV
		*MT-342B	$1.95		IV
		*MT-344B	$2.25		XII

*Bushing .2085" to mate with PJ-068 and PJ-309.

"LAMP JAX"



Switchboard Panel Type. Lamp completely insulated. Interchangeable with W.E. #47A & 47B. Accepts standard Switchboard Lamps. Ideal for mounting on Jack Panel. Two frame mountings—Vertical add prefix A. Horizontal prefix C.

Part No. LT-47 **U.S.A. List $2.00**

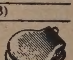
"SHIELDED JAX"

H

"Shielded Jax" (H) regular "Littel-Jax" (see separate listing) assembled into shield, ideal for high impedance circuits.

Part No.	U.S.A. List Price	DESCRIPTION
CN-11	$0.80	Open ckt. (see No. 11)
CN-12A	$0.85	Close ckt. (see No. 12A)
CN-12B	$0.95	(see No. 12B)
CN-13B	$1.15	(see No. 13B)

"JACK COVERS"

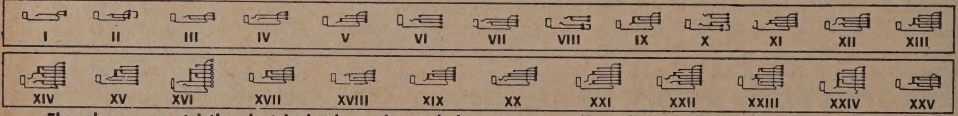


500 Series Cover used with conventional ⅜"-32 threaded bushing type Phone Jacks. Spring loaded cover immediately snaps over Jack opening when plug is removed, providing a moisture seal.

600 Series Cover, similar to above, is used with certain type Tip Jacks. Fit Tip Jacks with ¼" mounting; height of Tip Jack head ⅛" to 3/16".

Also can be used as covers for "Tini-Jax".

	U.S.A.			U.S.A.	
Part No.	List Price	Description	Part No.	List Price	Description
510	$1.05	Olive Drab	610	$0.75	Olive Drab
512	$1.05	Br. Nkl.	615	$0.75	Black
515	$1.05	Black	620	$0.75	Navy Grey
520	$1.05	Navy Grey			



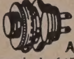
The above are strictly electrical schematics and do not necessarily indicate relative solder lug positions.

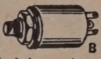
SWITCHCRAFT INC.

CHICAGO 30, ILLINOIS

SWITCHES

"BUTTON SWITCHES"


A

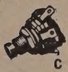

B

An unusually small, completely enclosed switch. Series 903 and 913 (A), behind panel mounting, requires single 15/32" dia. hole, panels up to 19/64". Series 923 and 933 (B) front of panel mounting, requires 1/4" dia. hole, panels up to 5/32" thick. Rated 250 mils, non-inductive load. A.C. 30 watts max.

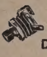
"CORD SWITCHES"—Button Switch assembled into nickel plated brass handle provides ideal switch for attachment to cable.

Part No. Red Button	Part No. Blk. Button	U.S.A. List Price	Schematic Circuit
903	913	$1.50	
903D	913D	$1.50	
923	933	$1.75	
923D	933D	$1.75	
"CORD SWITCHES"			
E-903	E-913	$2.50	
E-903D	E-913D	$2.50	

"LITTEL" AND "TINY" SWITCHES


C

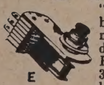
The "Littel Switch" (C) available in 3 circuits, red or black 1 pc. Plastic P.B., non-locking only. Integral contacts; recommended for low current circuits only; same switches with suffix letter "S" in part number rated at 3 amps, 300 watts A.C. non inductive load. Mounts 3/8" dia. hole in panels up to 1/4".


D

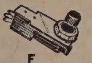
The "Tiny-Switch" (D) similar in construction but approx. 1/3 the size of "Littel-Switch". Available integral contacts only. Mounts 1/4" dia. hole in panels up to 1/8" thick. *Silver Cont.

Part No. Red Button	Part No. Blk. Button	U.S.A. List Price	Schematic Circuit
101	201	$0.90	I
*101-S	201-S	$1.05	
102	202	$0.90	II
*102-S	202-S	$1.05	
103	203	$1.00	III
*103-S	203-S	$1.20	
"TINY-SWITCHES"			
951	961	$0.90	I
952	962	$0.90	II
953	963	$1.00	III

"FF" AND "NF" SWITCHES


E

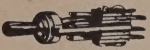
"FF-Switch" (E), Series 1000, 1-pc. black plastic push button; all common circuits. Mounts in single 3/8" dia. hole, panels up to 1/4" thick. Fine silver contacts rated at 3 amp. 300 Watts max. A.C. non-inductive load. Frame 3/4" wide; 1 61/64 lg. o/a.


F

"NF-Switch" (F) series 4000, same features and rating as "FF-Switch" but smaller. Frame 1/2" wide; 1 5/8" long o/a. mounts in panels up to 5/32" thick.

FF-Switch Part No.	NF-Switch Part No.	U.S.A. List Price	Schematic Circuit
1001	4001	$1.05	I
1002	4002	$1.05	II
1003	4003	$1.20	III
1004	4004	$1.30	IV
1005	4005	$1.30	V
1006	4006	$1.55	VI
1009	4009	$2.10	VII

"LEV-R-SWITCHES"



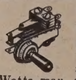
Unusually small lever action switch. Ideal for test equipment, intercom. systems, model r.r. switch panels, etc. Mount in 15/32" dia. hole, panels up to 5/64" thick for series 3000, and panels up to 1/4" for series 13000. Contacts fine silver, rated at 3 amps., 300 watts max. non-inductive A.C. load. Welded cross bar Palladium contacts special.

Add suffix "L" for locking type.

TWO POSITION TYPE

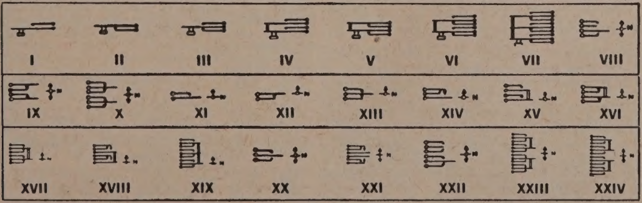
Series 3000		Series 13000		Schematic CKT.
Non-Locking	U.S.A. List	Non-Locking	U.S.A. List	
3001	$1.95	13001	$2.10	XI
3002	$1.95	13002	$2.10	XII
3003	$2.25	13003	$2.40	XIII
3003D	$2.40	13003D	$2.50	XIV
3004	$2.50	13004	$2.65	XV
3005	$2.50	13005	$2.65	XVI
3006	$2.75	13006	$2.75	XVII
3006D	$2.90	13006D	$2.90	XVIII
3009	$3.40	13009	$3.75	XIX
THREE POSITION TYPE				
3033	$2.50	13033	$2.65	XX
3034	$2.60	13034	$2.75	VIII
3035	$2.60	13035	$2.75	IX
3036	$2.90	13036	$3.10	X
3036D	$3.10	13036D	$3.25	XXI
3037	$2.95	13037	$3.10	XXII
30312	$3.75	130312	$4.00	XXIII
30313	$3.75	130313	$4.00	XXIV
INTER-COMM. SWITCHES				
3033T	$2.50	13033T	$2.65	XX
3037T	$2.95	13037T	$3.10	XXII

SERIES 12000

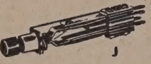


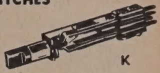
Requires minimum depth (7/8") behind panel. Single hole mounting. Springs insulated. Contacts fine silver rated at 3 amp. 120V A.C. non-inductive load, 300 Watts max. std. For detailed information regarding stack heights write for technical sheet. See basic contact forms.

Series 12000 Locking	Series 12000 Non-Locking	U.S.A. List	Schematic Circuit
TWO POSITION TYPE			
12001L	12001	$1.75	XI
12002L	12002	$1.75	XII
12003L	12003	$2.00	XIII
12003DL	12003D	$2.25	XIV
12004L	12004	$2.25	XV
12005L	12005	$2.25	XVI
12006L	12006	$2.50	XVII
12006DL	12006D	$2.75	XVIII
THREE POSITION TYPE			
12033L	12033	$2.25	XX
12034L	12034	$2.35	VIII
12035L	12035	$2.35	IX
12036L	12036	$2.65	X
12036DL	12036D	$2.85	XXI
12037L	12037	$2.75	XXII
3 POS. LOCKING ONE SIDE—NON-LOCKING OTHER SIDE			
12033T		$2.25	XX
12037T		$2.75	XXII



"T-SWITCHES"


J


K

Long frame switches, Series 11000 (J), locking and non-locking push button design commonly used on Jack Panels, same mounting as "MT-JAX". 5/32" dia. mounting hole 3/8" center distance to push button. Requires 2 7/8" depth behind panel. Welded cross bar Palladium contacts rated 3 amps. A.C. 300 Watts max. non-inductive load.

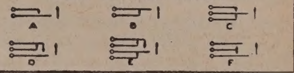
Series 11200 (K), similar to above but turn type operation, locking and non-locking.

Add suffix "L" to part number for locking type.

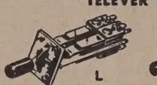
"PUSH BUTTONS" SERIES 11000	"TURN-BUTTONS" SERIES 11200		
Part No. Non-Locking	Part No. Non-Locking	U.S.A. List	Contact Assembly
11001	11201	$3.50	1-A
11002	11202	$3.50	1-B
11003	11203	$4.00	1-C
11003D	11203D	$4.00	1-D
11004	11204	$4.50	2-A
11005	11205	$4.50	2-B
11006	11206	$5.00	2-C
11006D	11206D	$5.00	2-D
11008	11208	$5.60	4-A
11009	11209	$6.00	3-C
11012	11212	$6.80	4-C

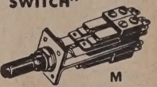
This table refers to Basic Contact Forms under the heading "Contact Assembly".

BASIC CONTACT FORMS



"TELEVER SWITCH"


L


M

Series 6000, "Telever Switch" (L), rugged telephone type; 3" depth behind panel. Welded cross bar Palladium contacts rated at 3 amps., 300 Watts max. non-inductive A.C. load. Insulated black knob; chrome plated brass actuator. Standard mounting centers 17/32" x 13/16"; usually mounted by four No. 3-48 screws (not furnished); can be assembled to escutcheon plate.

Series 16000, "Telever Switch" (M), same design as Series 6000, except features a single hole mounting; requires 15/32" hole in panels up to 1/4" thick. Unique feature, "non-locking" type can easily be converted to "locking" by removing "stop plate".

Add suffix "L" to part number for locking type.

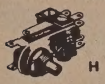
6000 SERIES		16000 SERIES		Contact Assembly	
Part No. Non-Locking	U.S.A. List	Part No. Non-Locking	U.S.A. List		
TWO POSITION TYPE					
6006	$ 5.00	16006	$ 5.00	2-C	
6006D	$ 5.60	16006D	$ 5.60	2-D	
6008	$ 5.60	16008	$ 5.60	4-A	
6009	$ 6.00	16009	$ 6.00	3-C	
60012	$ 6.80	160012	$ 6.80	4-C	
60012D	$ 7.50	160012D	$ 7.50	4-D	
60024	$10.00	160024	$10.00	8-C	
THREE POSITION TYPE					
				Pos.1	Pos. 2
6036	$ 5.00	16036	$ 5.00	1-C	1-C
6036D	$ 5.60	16036D	$ 5.60	1-D	1-D
6038	$ 5.60	16038	$ 5.60	2-A	2-A
60312	$ 6.80	160312	$ 6.80	2-C	2-C
60312D	$ 7.50	160312D	$ 7.50	2-D	2-D
60316	$ 8.80	160316	$ 8.80	4-A	4-A
60324	$10.00	160324	$ 10.00	4-C	4-C
530	$ 0.60	Escutcheon plate with 4 mounting screws. For series 6000 only.			

SWITCHCRAFT INC.

CHICAGO 30, ILLINOIS

"SWITCHES"
"MILITARY TYPE PLUGS"
"PHONE PLUGS"

"RS-SWITCH"

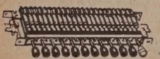


The "RS-SWITCH" (H), locking and non-locking, 2- or 3-position, all common circuits. Mounts in single ⅜" dia. hole, panels up to ¼" thick. Fine silver contacts rated 3 amperes, 120 volts A.C. (non-inductive).

Add suffix "L" to part number for locking type.

Part No. Non-Locking	U.S.A. List Price	Schematic CKT.
2001	$1.25	XI
2002	$1.25	XII
2003	$1.50	XIII
2004	$1.50	XV
2005	$1.50	XVI
2006	$1.95	XVII
THREE POSITION TYPES		
2034	$1.50	VIII
2035	$1.50	IX
2036	$1.95	X

"MULTI-SWITCHES"

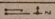
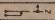
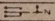
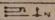
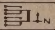


A multiple push button Switch (A), featuring choice of switching functions; 2 to 12 stations (for complete details write). Frame can be set up by user for interlock action, non-locking action, and accumulative or all-lock. Choose number of stations needed, order switching for each station as separate items, for mounting to frame by the user.

FRAME ASSEMBLY FOR "MULTI-SWITCHES"

Frame Part No.	7400	7600	7800	71000	71200
No. of Stations	4	6	8	10	12
U.S.A. List Price	$12.00	$16.00	$20.00	$24.00	$28.00

Switch Stacks, for "Multi-Switches", series 70 have fine silver contacts; series 70P have welded cross bar Palladium contacts; either type rated at 3 amps., A.C. non-inductive load, 300 Watts maximum.

SERIES 70		SERIES 70P		Schematic Circuit
Part No.	U.S.A. List Price	Part No.	U.S.A. List Price	
71	$0.50	71P	$0.60	
72	$0.50	72P	$0.60	
73	$0.60	73P	$0.80	
73D	$0.70	73PD	$0.90	
76	$0.95	76P	$1.15	

Lock-out Bars, for "Multi-Switches". For interlock function when it is desired that only one station can be depressed at one time. Assembly is added to back of frame assembly.

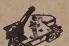
Part No.	No. of Stations	U.S.A. List Price
K04	4	$3.25
K06	6	$3.50
K08	8	$3.75
K10	10	$4.25
K12	12	$4.75

SOLENOIDS "J" SERIES

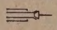
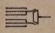
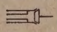
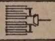
A simple solenoid assembly that can be added on the end of the standard frame assembly by 2 screws.

Part No.	U.S.A. List Price	Function Used On	Voltage
J-1	$8.50	Interlock	115V A.C.
J-3	$9.50	All-lock	115V A.C.

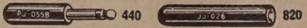
"HOOK SWITCH"



Hanging accessory on "hook" actuates switch. Requires minimum of depth behind panel. Soft, easy action. Fine silver contacts rated at 3 amps. 120V. A.C. Palladium contacts and special circuits available. (Refer to basic contact forms Page 2. Specify by lettering.)

Part No.	U.S.A. List	Schematic Circuit	Part No.	U.S.A. List	Schematic Circuit
14004	$2.75		14006	$3.00	
14005	$2.75		14012	$3.85	

"LITTEL-PLUG" AND "EXTENSION JAX" MILITARY TYPES

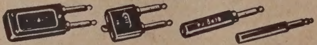


Designed to meet exacting requirements of Industry and the Armed Services. Molded construction provides complete continuity of insulation in plugs Jack per MIL-J-641A; Plugs per MIL-P-642A.

Part No.	U.S.A. List	DESCRIPTION
410	$0.60	2-cond.—Solder Cup—Type PJ-291 (Old S C. No. PL-291) Mates with No. 810 (JJ-048) Jack
*430	$1.40	2-cond.—Screw Term. Cable opening ¼"—Black handle—Type PJ-054B (Old S.C. No. PL-54).
*435	$1.40	Same as No. 430, except Red Handle—Type PJ-054R (Old S.C No. PL-354).
440	$1.40	2-cond.—Screw Term. Black Handle—Type PJ-055B. (Old S.C. No. PL-55).
445	$1.40	2-cond.—Screw Term Red Handle—Type PJ-055R.
*450	$1.40	Same as No. 430, except—Type PJ-540B—Cable Opening ⁹⁄₃₂" (¹³⁄₃₂" deep) (Old S.C. No. PL-540). Black Handle.
*455	$1.40	Same as No. 450, except—Type PJ-540R, Red Handle
470	$2.00	2-cond.—Screw Term. Shielded Handle—Type PJ-055M (Old S.C. No. PL-125).
475	$1.95	Shielded Handle. MIL Type PJ-636. Similar No. 70, except 2-pc handle, built-in Cable Clamp. Handle 1¾" long.
480	$3.60	3-cond.—Screw Term. Black Handle—Type PJ-068 (Old PL-68).
810	$0.80	2-cond.—Solder Lug—Type JJ-048 (Old S.C. No. JK-48), mates with No. 410 (PJ-291) Plug.
820	$2.00	2-cond.—Screw Term. Black Handle—Type JJ-026 (Old S.C. No. JK-26).
P-1074-1	$0.85 for Pkg. of 25	Strain Relief Clamp, Nickel Plate Brass.

*Mates with No. 820 (JJ-026) "Extension Jax".

"LITTEL-PLUGS"—"TWIN-PLUGS"



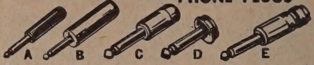
"Littel Plugs"—One piece tip rod and one piece sleeve and plug body, assembled together into a mold as inserts. Insulated. Internal interlock to prevent parts shifting in position.

"Twin-Plugs"—Two electrically independent 2-cond. plugs, ⅝" centers, placed into handles to provide a double or "Twin-Plug". Self aligning. Made in same exacting manner as "Littel Plugs" above.

Design and material to NME Spec. MIL-P-642(A).

Part No.	U.S.A. List	DESCRIPTION
		"LITTEL-PLUGS"—MILITARY TYPE
420	$1.50	2-cond. Screw term. Black Handle. Type PJ-047B (Sim. WE 347B).
425	$1.50	2-cond. Screw term. Red Handle. Type PJ-047R (Sim. WE 347A).
482	$4.00	3-cond. Screw term. Red handle. Type PJ-051 (Sim. WE 310)
		"TWIN-PLUGS"—MILITARY TYPE
411	$4.75	Two 2-cond. plugs. Black Handle. Type PJ-327. Provision for internal cord clamp (not included).
412	$4.50	Two 2-cond. plugs. Black Handle. (Old MIL Type PJ-289) Sim. WE 289B. External Cord Anchor.
S-2674	$0.50 for pkg. of 10	Strain Relief Clamp, Brass. Use only with No. 411.

"PHONE PLUGS"



The **"Littel-Plug"** (A), radically new, fitting standard Jacks; solder lug type features clamp terminal serving as a cable clamp and terminal—perfect for metal braid cable. Screw type terminals—no clamp. Tenite or Metal handles 1⅝" L., ½" dia. Ext. metal nickel Pl.

No.'s S-250 and S-280 have a .206 dia. sleeve; mates with S-11 and S-128 Jacks. No.'s 180 and 288 have wide insulator between sleeve and tip—makes it possible to use a 2-conductor Plug in a 3-conductor Jack.

The **Standard Plugs** (B), conventional design, available both black Bakelite or metal handles 2¹⁄₁₆" L. x ¹¹⁄₁₆" O.D., except No. 90 and No. 160 have metal handles 1" long. Exterior metal parts bright nickel Pl. No. 170 (E) is similar to No. 70, except 2 piece handle with built-in cable clamp: No. 190A similar to No. 90 except same handle as No. 170. No. 475 same as No. 170 but MIL construction for type PJ-636. No. 385 1" lg. .206" dia. sleeve and tip-mates with S-11 & S-128.

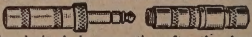
The **"Lug Plug"** (C), low-cost two conductor, solder lug term. Exterior metal parts bright Nickel Pl. Red or Black Tenite Handles are 1⅝" L., ½" O.D. No. 380 has metal handle 1" L., bright Nickel Pl.

Plug Adapter (D) used with 2501 F Connector for use with standard Jacks. See separate adapter listing.

Part No.	U.S.A. List	Plug Type	Type Handle	Description
40	$0.75	Standard	Black	2-cond.*
44	$0.50	Adapter		2-cond.
45	$0.75	Standard	Red	2-cond.*
60	$1.05	Standard	Black	3-cond.‡
70	$1.20	Standard	Metal	2-cond.*
90	$1.30	Standard	Metal	3-cond.‡
160	$0.90	Standard	Metal	2-cond.*
170	$1.65	Standard	Metal-2-pc	2-cond.*
180	$1.05	Standard	Metal	2-cond.*
190	$1.50	Standard	Metal	3-cond.‡
190-A	$1.95	Standard	Metal	3-cond.‡
240	$0.75	Littel-Plug	Black	2-cond.*
245	$0.75	Littel-Plug	Red	2-cond.*
250	$0.70	Littel-Plug	Black	2-cond.†
S-250	$0.75	Littel-Plug	Black	2-cond.†
255	$0.70	Littel-Plug	Red	2-cond.†
260	$1.20	Littel-Plug	Black	3-cond.*
267	$1.05	Littel-Plug	Black	3-cond.†
269	$1.05	Littel-Plug	Red	3-cond.†
270	$1.05	Littel-Plug	Metal	2-cond.*
280	$1.00	Littel-Plug	Metal	2-cond.†
S-280	$1.00	Littel-Plug	Metal	2-cond.†
R-280	$1.25	Littel-Plug	Metal	2-cond.†
(Short sleeve for Revere Recorders, mates with No. 126 "Extension Jax")				
288	$1.05	Littel-Plug	Metal	2-cond.†
290	$1.40	Littel-Plug	Metal	3-cond.*
297	$1.30	Littel-Plug	Metal	3-cond.†
350	$0.55	Lug-Plug	Black	2-cond.‡
355	$0.55	Lug-Plug	Red	2-cond.‡
380	$0.70	Lug-Plug	Metal	2-cond.‡
385	$1.00	Lug-Plug	Metal	2-cond.‡
475	$1.95	Standard	Metal	2-cond.*

*Screw Terminals. †Clamp-Lug Terminals.
‡Solder-Lug Terminals.

"LOCK PLUG" and "LOCK-EXTENSION JAX"



Locking device locks connection after the plug fully inserted into Littel-Jax or Lock-Ext. Jax. Sold. Lug Term. Sleeve terminal has cable clamp. Shielded. Lock Ext. Jax mates standard Phone Plugs where no "lock" requirement exists.

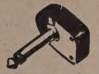
Part No.	U.S.A. List	DESCRIPTION
		"LOCK-PLUG"
282	$1.40	2-cond. Sim. No. 280 "Littel-Plug".
298	$1.75	3-cond. Sim. No. 297 "Littel-Plug".
		"LOCK-EXTENSION JAX"
123	$1.75	2-cond. Mates with No. 282.
133	$2.25	3-cond. Mates with No. 298.

SWITCHCRAFT INC.

CHICAGO 30, ILLINOIS

"FLAT PLUGS" "TINI PLUGS"
"MICROPHONE & PHONO CONNECTORS"
"EXTENSION JAX"
"MINI-MIX"
"MICROPHONE MIXERS"

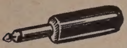
"FLAT PLUGS"



A unique design, removable cover for easy access to either screw or solder terminals; 2- and 3-cond. types. Ideal for equipment where conventional long handle may interfere.

PART NO.		U.S.A. List Price	DESCRIPTION
Black Handle	Red Handle		
220	225	$0.90	2-cond. Screw term.
227	229	$0.85	2-cond. Solder term.
230	235	$1.30	3-cond. Screw term.
237	239	$1.25	3-cond. Solder term.

"TINI-PLUGS"



"Tini-Plugs"—A miniature 2-conductor Phone Plug for the "Tini-Jax"; about $\frac{1}{3}$ the size of Switchcraft "Littel Plug"; similar construction. Accepts cable up to $\frac{3}{16}$" diameter. Cable clamp terminals for soldering also screw terminal with no clamp.

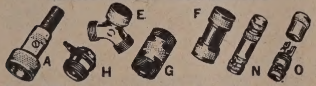
PART NO.		U.S.A. List	DESCRIPTION
Black Handle	Red Handle		
740	745	$0.75	Screw Term.
750	755	$0.70	Clamp Term.
Metal Handle			
770		$1.05	Screw Term.
780		$1.00	Clamp Term.

"RF-JAX" & "RF-PLUGS"

Nylon insulation. See illus. under "Phono Connectors."

Part No.	U.S.A. List	
3504M	$0.20	RF-Plug—Similar No. 3501M.
3505F	$0.60	RF-Phono Jax—Similar No. 3501FP.
3506	$2.00	Adapter-Connector—COAX Plug to Phono Jack.
3507	$0.80	RF-Plug—Similar to No. 3502.

"MICROPHONE CONNECTORS"



Series 2500, standard size Microphone Connector, designed for use with single conductor microphone cable; panel receptacle mounts in .385" hole, Series 3500, phono connector, used for phono connections.

Series 5500, "**Mini-Con,**" a miniature MIC connector, approx. $\frac{1}{2}$ the size of series 2500. Accepts cable up to $\frac{3}{16}$" dia; panel receptacle. 5501MP mounts in $\frac{3}{16}$" dia. hole, in panels up to $\frac{1}{4}$" thick; 5501MF mounts in $\frac{3}{8}$" dia. hole with locknut on front of panel.

"MICROPHONE CONNECTORS"—
Series 2501

Part No.	U.S.A. List	Fig.	DESCRIPTION
2501F	$0.60	A	1-contact, female, coupling ring.
2501M	$0.45		1-contact, male.
2501MP	$0.35	H	Panel Connector, male
2501MPC	$0.45		Panel Connector, closed ckt. male.
44	$0.50		Plug Adapter.
25Y	$1.65	E	Two male to one female.
2501FT	$0.80	F	Double female, for connecting 2 cables with male Connectors.
2501MT	$0.70	G	Double male, for connecting 2 cables with female Connectors.
2501FL	$2.25	N	Straight Conn., 2 screw term., female, 2-pc. handle/built in cable clamp.
2501FS	$1.65	O	Straight Conn.; same 2501FL, except no cable clamp.

"MINI-CON" CONNECTORS—Series 5501

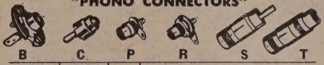
5501F	$0.60		1-contact, female, coupling ring.
5501M	$0.45		1-contact, male.
5501MF	$0.45		Panel Conn., male, mounts front side panel.
5501MP	$0.35		Panel Conn., male, mounts back side.

"EXTENSION JAX"

Features a clamp type terminal providing a cable anchor. Spring tempered nickel silver springs, designed to properly "hold" mating plug. Exterior metal parts N.P.: Terminals mechanically interlock. High grade insulation. Available in 2 and 3-conductor types, solder lug or screw type terminals. Bakelite or Brightly Nickel Plated Brass handles. Mates with any $\frac{7}{8}$ standard plug. S-128 mates with S-250 plug. S-830 and S-1230 .210 I.D. bushing to mate with PJ-068 plug. No. 125 is Ext. Jax for Tini Plug. $\frac{13}{32}$" O.D. Built-in cable clamp is cable support and sleeve terminal.

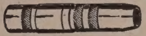
Part No.	U.S.A. List	Handle	Description
80	$1.15	Black	2-cond. Screw Term.
88	$1.00	Black	2-cond. Lug. Term.
120	$1.55	Shielded	2-cond. Screw Term.
125	$1.25	Shielded	2-cond. Lug. Term.
126	$1.80	Shielded	2-cond. for R-280 Plug
128	$1.40	Shielded	2-cond. Lug. Term.
830	$1.55	Black	3-cond. Screw Term.
S-830	$2.00	Black	3-cond. Screw Term.
838	$1.40	Black	3-cond. Lug. Term.
1230	$1.95	Shielded	3-cond. Screw Term.
S-1230	$2.50	Shielded	3-cond. Screw Term.
1238	$1.80	Shielded	3-cond. Lug. Term.
S-128	$1.50	Shielded	2-cond. Spec. Lug. Ter.

"PHONO CONNECTORS"



Part No.	U.S.A. List	Fig.	DESCRIPTION
3501F	$0.15	B	Phono Jack—2 conductor.
3501M	$0.10	C	Phono Plug—2 conductor.
3501MC	$0.15	C	Phono Plug—2 conductor (cable clamp type).
3501FP	$0.35	P	Phono Jax—$\frac{7}{16}$" O.D. for back panel mounting.
3501FR	$0.40	R	Phono Jax—$\frac{5}{8}$" O.D. for front of panel mounting.
3502	$0.50	S	Phono Plug. Removable handle. Cable clamp. Shielded. N.P.
3503	$0.60	T	Phono Ext. Jax. Removable Handle. Cable clamp. Shielded. N.P.

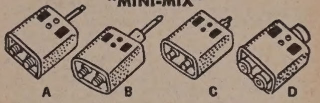
SHIELDED "EXTENSION JAX"



Streamlined—same O.D. $\frac{1}{2}$" as "Little Plugs". For attachment to cable. Built-in cable clamp is cable support and sleeve term. Solder term.

Part No.	U.S.A. List	DESCRIPTION
121	$1.60	2-cond. for $\frac{1}{4}$" dia. Phone Plugs.
131	$2.00	3-cond. for $\frac{1}{4}$" dia. Phone Plugs.

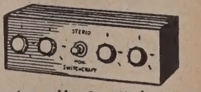
"MINI-MIX"



Resistance type mixer for tape recorders to mix 2 different sound sources or music with voice. Accommodates 2 high imp. inputs. Loss factor approx. 3 db. Separate volume controls recessed inside housing—in line with each input. Average size $2\frac{1}{4}$" x $1\frac{13}{16}$" x $\frac{11}{16}$".

Part No.	U.S.A. List	Fig. No.	DESCRIPTION
310	$7.95	A	2-cond. Phone Jack inputs with 2-cond. Plug output (For equipment where Jack is recessed, use 8266 Cable Assembly Adapter).
311	$8.95	B	2-cond. plug output. Long plug makes suitable for recorders with Jacks recessed such as latest Wilcox Gay, Webster Electric, V.M., etc.
312	$8.95	B	Spc. size plug and jacks, for use with Am. Geloso Model G-255-S Tape Recorder.
315	$7.95	D	2-cond. Phone Jack Inputs with female Mic. Conn. Output.
316	$7.95	C	2 Phono Jax Inputs to Phono Plug Output.
320	$7.95	D	Microphone Connector inputs and output mating with standard mic. connectors.
325	$9.95		For use with recorders using Jones type connectors. Fits Early Webcor Recorders.
326	$9.95	B	3-cond. Jack Inputs with long 2-cond. Plug Output. For Webcor Recorders Series 2020, 2110, and 2130.
8266	$3.75		Cable assembly for recessed Jack. Used with 310 Mini-Mix. No. 280 "Littel Plug" one end; No. 128 Ext. Jax other end.

MICROPHONE MIXERS



Tan finish. Brown knobs with gold metallic inserts. Rubber feet. Shielded. Input Jacks on back, with Phono Jax for output to recorder or amplifier. CAUTION: Do not use in output circuit to directly control the volume of individual speakers. Size: 2" x $3\frac{5}{8}$" x 6".

MIXER, MONAURAL—4-channel, high imp. For mixing up to 4 signals, such as Mics., Phonos, Tuners, etc., into a single output. Inputs 2-cond. Phone Jacks. Output Phono Jax.

PART NO. 301 **U.S.A. LIST $19.50**

MIXER, STEREO-MONAURAL—Same as No. 301, except has Lev-R-Switch for use as 4-channel audio mixer for monaural, or as 2 sep. inputs for each of 2 Stereo channels. Jacks accept 2-cond. Phone Plugs; high imp. circuits. Two Phono Jax for output to Amp. or Tape Rec. When used monaurally, output Jax are common.

PART NO. 306 **U.S.A. LIST $22.50**

TRANSISTORIZED MIXER—4-channel, high imp., same design features as No. 301, except has built-in transistor amplifier for feeding up to four mics., or combinations of sound sources, into a single "input" of Recorder or Amp. Individual gain adjustment for each channel. Transistor amplifier (powered by 9 volt battery included) overcomes usual loss of resistance type mixer and actually provides a 6 db. gain; permits use up to 30 feet from Recorder or Amp. Accepts input signals up to 1.5 volts. (Use a Switchcraft Molded Cable Assembly with proper connection to fit your equipment —not included.) Low noise level; low distortion. Response 20 to 20,000 cycles.

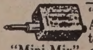
PART NO. 301TR **U.S.A. LIST $30.00**

TRANSISTORIZED STEREO-MONAURAL MIXER—Similar to the No. 306, except has built-in transistor amplifier in each of two Stereo channels. Accepts input signals up to 1.5 volts in either Stereo or Monaural position. (9 volt battery included.) ON-OFF Switch to shut-off amplifiers when not in use. Provides 6 db. gain; permits use up to 30 feet from Recorder or Amp. For Stereo, requires two cables for attachment to Recorder or Amp.

PART NO. 306TR **U.S.A. LIST $37.50**

CABLE ASSEMBLY—A 3-foot long chrome-grey shielded cable with molded Phone Plug on one end, molded Phono Plug other end. Ideal for use with above Mixers where Input of Recorder or Amplifier has a standard two-conductor Phone Jack. (For other terminations, see Cable Assemblies.)

PART NO. 05AF25 **U.S.A. LIST $1.50**



"MIX-AMP"—Miniature Transistorized Amplifier designed for use with resistance type MIXERS, such as the Switchcraft "Mini-Mix" and four-channel Microphone Mixers overcoming the usual "losses" in such mixers and actually providing a 3 db. gain. When used with a "Mini-Mix", will accept signals up to 2 volts. Has a "HI-LO" Impedance Switch; in "HI" position, when used as a straight amplifier (without mixer) has a 200,000 ohm input and provides a 6 db. gain and in "LO" position has a 25 db. gain with input impedance of 5,000 ohms. Compact, approximately size of package of cigarettes; completely portable, requires 9 volt battery (included). Has standard 2-cond. Phone Jack Input and 2-cond. Phone Plug Output. Can also be used at a microphone, using cables up to 30 feet long, without serious loss of high frequencies.

Frequency response 20 to 20,000 cycles. Also ideal for Phono Pickups (Magnetic and Crystal).

PART NO. 501 **U.S.A. LIST $20.00**

"MIX-AMP"—Same as above, but Input and Output have microphone connectors (Switchcraft Series 2500 or Amphenol Series 75).

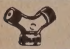
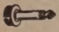
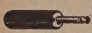
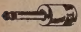
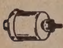
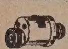
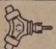
PART NO. 502 **U.S.A. LIST $20.00**

SWITCHCRAFT INC.

CHICAGO 30, ILLINOIS

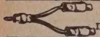
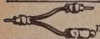
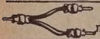
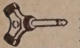
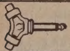
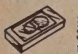
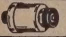
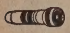
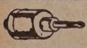
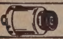
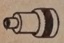
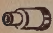
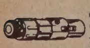
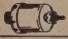
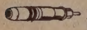
"ADAPTERS"
"CONNECTORS"
"STEREO LINE BALANCE CONTROLS"
"SPEAKER VOLUME CONTROLS"

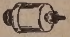
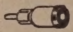
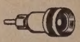
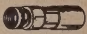
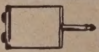
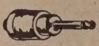
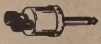
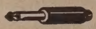
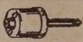
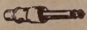
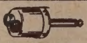
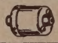
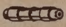
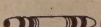
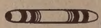
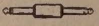
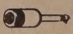
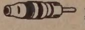
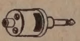
ADAPTERS — CONNECTORS

	Part No.	U.S.A. List	DESCRIPTION
	25Y	$1.65	"Y Adapter". Connects 2 cables (with std. mic. conn.) in parallel to 1 single conn.
	44	$0.50	Male Mic. Input to Phone Plug Output.
	49	$1.50	"Silent Plug". 2 cond. plug with circuit closing device. When removed from jack, shorts input of Amp., eliminating "squeals". Patented.
	169	$1.75	Same as No. 49, but 1" long shielded handle.
	328	$3.95	To connect Ceramic Phono Cartridge to audio amplifier designed for magnetic cartridge. Phono Jack Input, Phono Plug Output.
	329	$6.95	"Microphone Volume Control Adapter". For use in high imp. circuits to adjust volume. Mic. conn. input and output.
	330F	$1.75	"Y Adapter". 2 Phono Jax Connectors, in parallel to a std. Phono Plug.

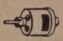
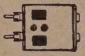
FLEXIBLE "Y" CONNECTORS
(Phono Jack and Plug Type)

For converting Stereo Player to Monaural. Can be used for tap-in meter monitor conn. Required on some Tape Rec. (4" long. Grey. Shielded cable.)

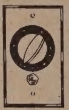
	Part No.	U.S.A. List	DESCRIPTION
	330F1	$2.00	Phono Plug connected to 2 Phono Jacks.
	330F2	$2.00	Phono Plug connected to 1 Phono Jax and 1 Phono plug.
	330F3	$2.00	Phono Plug connected to 2 Phono plugs.
	330M	$1.90	"Y Adapter". 2 male Mic. Conn. in parallel to a std. 2-cond. Phone Plug. Shielded.
	330PJ	$1.90	"Y-Adapter". 2 Phono Jax conn. in parallel to a std. Phone Plug.
	331	$14.70	"Adapter Kit". A Plastic case containing each of: 332, 334, 336, 338, 342, 344, 346, 348 and two 44.
	332	$1.75	Phone Jack Input to female Mic. Conn. Output.
	332A	$1.75	2-cond. Phone Jack Input to female Mic. Output. Body ½" O.D. N.P. Shielded.
	333	$2.35	Std. ¼" 2-cond. Jack Input to special plug that mates with jack in Am. Geloso Rec.
	334	$1.45	Phono Jack Conn. Input to female Mic. Conn. Output.
	334A	$1.25	Phono Jax Input to female Mic. Conn. Output. ½" O.D. N.P. Shielded.
	334B	$1.25	Same as 334A less ring. Phono Jax Input to male Mic. Conn. Output.
	335	$2.95	2-cond.—Input has our 2501MP (Amphenol 75PCL1M) Output is Cannon XL-3-11. Has internal wire unsoldered at one end for connecting terminal.
	336	$1.45	Phone Jack input to Phono Plug Conn. Output.
	336A	$1.45	2-cond. Phone Jack Input to Phono Plug Output. Body ½" O.D. N.P. Shielded.

	Part No.	U.S.A. List	DESCRIPTION
	338	$1.45	Male Mic. Conn. Input to Phono Plug Conn. Output,
	338A	$1.00	Phono Plug one end. male Mic. Conn. at other.
	338B	$1.00	Phono Plug one end, female Mic. Conn. at other. Body ½" O.D. N.P. Shielded.
	339	$2.95	Same as 335, but output our 2501F (Amphenol 75-MC1-F) to input. Cannon XL-3-12.
	340	$3.75	"Y Adapter" (in case). Two 2-cond. jack inputs conn. in parallel to 2-cond. plug output.
	341	$2.95	"Silent Plug Adapter". 2-cond. jack input to 2-cond. plug output, with circuit closing device, When removed Jack shorts input of Amp. eliminating "squeals". Patented.
	342	$2.60	Dual-purpose Binding Post/Banana Jack Input to Phone Plug Output.
	343	$1.95	"Phono Adapter". (Sim. No. 250 "Littel Plug" with female Phono Jack in end of handle.) Internal resistor circuit to adapt crystal Phono pickup or pickup from terminals of radio or TV set to input of Tape Rec. Use as adapter with magnetic Phono—open plug and twist together opposite leads of resistor.
	344	$1.45	Phono Jack Conn. Input to Phone Plug Output.
	345A	$1.25	Phone Plug Output to Phono Jack Input. Grey molded housing. Shielded,
	346	$2.15	Tip Jack Input to Phone Plug Output.
	348	$1.40	Phono Jack Input to Phono Jack Output.
	349A	$1.00	"Phono Plug Coupler". Phono Jack at each end. Grey plastic. Shielded.
	361	$2.25	"Phone Plug Coupler". 2-cond. Phone Jack in each end. Shielded. N.P.
	362	$2.75	"Phone Plug Coupler". 3-cond. Phone jacks in each end.
	363	$2.00	"Coupler". A 2-cond. Phone Plug at each end. Shielded.
	364	$1.45	2-cond. Tini-Jax Input to std. size (¼" O.D. sleeve) Phone Plug Output. Body 11/16" O.D. Shielded.
	365	$1.45	2-cond. Tini-Jax Input to a Phono Plug Output. Body 13/32" O.D. N.P. Shielded.
	368	$4.50	"Input Volume Control Adapter". Phono Jax Input to 2-cond. Phone Plug Output. Built-in volume control circuit. High volume signals, phonos, tuners, etc., can be connected into high gain Input Jax of Tape Rec., without overloading recorder. N.P. Shielded.

STEREO LINE BALANCE CONTROLS

	Part No.	U.S.A. List	DESCRIPTION
	366	$3.95	"Volume Control Adapter" Single channel, high imp. circuits only (Crystal Mic., Phono, etc.). Phono Jack Input to Phono Plug Output. Shielded. N.P. Use in unbalanced Stereo channels, or in pairs for dual Stereo channel control.
	367	$7.50	"Dual Volume Control Adapter". Twin-channel, high imp. circuits only. 2 Phono Jack Inputs and 2 Phono Plug Outputs. Separate volume controls. Shielded.

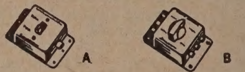
SPEAKER VOLUME CONTROLS



Brushed brass wall plate mounts on std. outlet box. Constant imp. T-pad volume controls. Control speaker volume of Stereo, Hi-Fi, or P.A. system from remote location. Rated at 4 Watts (15 Watt peak audio). Ivory knob, black-white lettered escutcheon. Screw term. Mounting screws and instructions furnished. Also available in Stainless Steel. Add "S" to Part No.

Part No.	U.S.A. List	DESCRIPTION
651	$9.95	8 ohm control for single 8 ohm speaker, or two 16 ohm speakers in parallel, or two 4 ohm speakers in series. Screw term.
652	$9.95	16 ohm T-pad control for single 16 ohm speaker, or two 8 ohm speakers connected in series.
656	$6.95	L-pad Volume Control to prevent mismatch to amplifier at different volume settings. When turned all the way counter-clockwise, completely shuts off the speaker. Solder lug terminals. 10 Watts Peak Audio—8 ohm.
655	$5.50	"Multi-Speaker Selector Switch". 7 position switch. Selects any of 3 speakers; all, or any 2 of 3. Also mounts on speaker cabinet. Constant imp., regardless of switch position.

STEREO-MONAURAL SELECTORS
PHONO-TUNER ADAPTER
SPEAKER PHASE CONTROL



Part No.	U.S.A. List	DESCRIPTION
661 (A)	$3.00	"Stereo-Monaural Selector". Switches from monaural to stereo. Two Phono Jax Inputs and two Phono Jax Outputs. Dual channel feed-through for Stereo (Outputs connected together in monaural position). Tan finish.
662 (B)	$3.50	"Stereo-Monaural Selector with Reverse". Same as No. 661 with channel reversing feature.
663 (A)	$2.50	"Phono-Tuner Adapter". To modernize old sound equipment. Two Phono Jax Inputs, switch selects either input. Phono Jax Output for connecting to amplifier.
664 (B)	$4.95	"Multiple Selector Control". Accepts up to 5 Input circuits. Selector switch connects any one circuit to one Phono Jax Output. Inputs labeled AM, FM, PHONO, TAPE, and AUX. 5 input and one output Phono Jack. Shielded.
665 (A)	$2.50	"Speaker Phase Control". For multiple or Stereo Speaker installations for proper phasing of speakers. Screw terminals. Shielded.

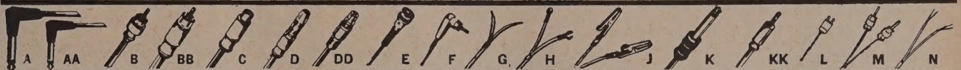
Use Index Page 1 for Quick, Easy Location of ALL Products

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

SWITCHCRAFT INC.
CHICAGO 30, ILLINOIS

MOLDED CABLE ASSEMBLIES
(Audio Jumpers)
(Interconnecting Cords)

Various Molded Cable Combinations.



Part No.	U.S.A. List	Conn. or Term.		Length	Cable
		One End	Other		
Straight 2 Cond. Phone Plug to Various Connections					
05AC05	$1.60	K	K	18"	Shield.
05AD05	$1.75	K	K	24"	Shield.
05AK05	$2.60	K	K	6'	Shield.
05AN05	$3.50	K	K	10'	Shield.
05AU05	$4.75	K	K	25'	Shield.
05AK15	$2.60	K	A	6'	Shield.
05AN15	$3.50	K	A	10'	Shield.
05AK25	$2.00	K	B	6'	Shield.
05AN25	$2.75	K	B	10'	Shield.
05AR25	$3.00	K	B	15'	Shield.
05AK30	$2.00	K	F	6'	Shield.
05AN30	$2.75	K	F	10'	Shield.
05AK80	$2.60	K	D	6'	Shield.
05AN80	$3.50	K	D	10'	Shield.
05AR80	$4.00	K	D	15'	Shield.
05AU80	$4.75	K	D	25'	Shield.
05AK82	$2.20	K	C	6'	Shield.
05AN82	$3.00	K	C	10'	Shield.
05AR82	$3.25	K	C	15'	Shield.
05AK87	$2.60	K	E	6'	Shield.
05AN87	$3.50	K	E	10'	Shield.
05AU87	$4.75	K	E	25'	Shield.
05AK84	$1.75	K	G	6'	Shield.
05AN84	$2.25	K	G	10'	Shield.
05AR84	$2.75	K	G	15'	Shield.
05CK84	$1.40	K	G	6'	Unshield.
05CN84	$1.90	K	G	10'	Unshield.
05CK85	$1.50	K	H	6'	Unshield.
05CN85	$2.00	K	H	10'	Unshield.
05CK86	$1.90	K	J	6'	Unshield.
05CN86	$2.40	K	J	10'	Unshield.
05CR86	$2.65	K	J	15'	Unshield.
05CT86	$3.00	K	J	20'	Unshield.
Straight 3 Cond. Phone Plug to Various Connections					
10BD10	$3.25	K	K	24'	Shield.
10BK10	$4.80	K	K	6'	Shield.
10BN10	$6.00	K	K	10'	Shield.
10BU10	$8.75	K	K	25'	Shield.
10BK81	$4.80	K	D	6'	Shield.
10BN81	$6.00	K	D	10'	Shield.
10BU81	$8.75	K	D	25'	Shield.
Right Angle 2 Cond. Phone Plug to Various Connections					
15AK15	$2.60	A	A	6'	Shield.
15AN15	$3.50	A	A	10'	Shield.
15AU15	$4.75	A	A	25'	Shield.
15AK25	$2.00	A	B	6'	Shield.
15AN25	$2.75	A	B	10'	Shield.
15AR25	$3.00	A	B	15'	Shield.
15AK30	$2.00	A	F	6'	Shield.
15AN30	$2.75	A	F	10'	Shield.
15AK80	$2.60	A	D	6'	Shield.
15AN80	$3.50	A	D	10'	Shield.
15AR80	$4.00	A	D	15'	Shield.
15AU80	$4.75	A	D	25'	Shield.
15AK82	$2.20	A	C	6'	Shield.
15AN82	$3.00	A	C	10'	Shield.
15AR82	$3.10	A	C	15'	Shield.
15AK87	$2.60	A	E	6'	Shield.
15AN87	$3.50	A	E	10'	Shield.
15AU87	$4.75	A	E	25'	Shield.
15AK84	$1.75	A	G	6'	Shield.
15AN84	$2.25	A	G	10'	Shield.
15AR84	$2.75	A	G	15'	Shield.
15CK84	$1.40	A	G	6'	Unshield.
15CN84	$1.90	A	G	10'	Unshield.
15CK85	$1.50	A	H	6'	Unshield.
15CN85	$2.00	A	H	10'	Unshield.
15CK86	$1.90	A	J	6'	Unshield.
15CN86	$2.40	A	J	10'	Unshield.
15CR86	$2.65	A	J	15'	Unshield.
15CT86	$3.00	A	J	20'	Unshield.
Straight Phono Plug to Various Connections					
25AC25	$1.05	B	B	18"	Shield.
25AF25	$1.20	B	B	36"	Shield.
25AH25	$1.35	B	B	4'	Shield.
25AK25	$1.50	B	B	6'	Shield.
25AN25	$2.00	B	B	10'	Shield.
25AR25	$2.50	B	B	15'	Shield.
25AT25	$3.00	B	B	20'	Shield.
25AU25	$3.50	B	B	25'	Shield.

Part No.	U.S.A. List	Conn. or Term.		Length	Cable
		One End	Other		
25AC30	$1.05	B	F	18"	Shield
25AF30	$1.20	B	F	36"	Shield.
25AK30	$1.50	B	F	6'	Shield.
25AN30	$2.00	B	F	10'	Shield.
25AR30	$2.50	B	F	15'	Shield.
25AT30	$3.00	B	F	20'	Shield.
25AU30	$3.50	B	F	25'	Shield.
25AK80	$2.00	B	D	6'	Shield.
25AN80	$2.75	B	D	10'	Shield.
25AR80	$3.25	B	D	15'	Shield
25AC82	$1.25	B	C	18"	Shield.
25AF82	$1.35	B	C	36"	Shield.
25AH82	$1.60	B	C	4'	Shield.
25AK82	$1.75	B	C	6'	Shield.
25AN82	$2.00	B	C	10'	Shield.
25AR82	$2.50	B	C	15'	Shield.
25AT82	$3.00	B	C	20'	Shield.
25AU82	$3.50	B	C	25'	Shield.
25AB87	$1.40	B	E	12"	Shield.
25AF87	$1.75	B	E	36"	Shield.
25AK87	$2.45	B	E	6'	Shield.
25AN87	$3.35	B	E	10'	Shield.
25AU87	$4.60	B	E	25'	Shield.
25AC84	$0.80	B	G	18"	Shield.
25AF84	$0.95	B	G	36"	Shield.
25AH84	$1.00	B	G	4'	Shield.
25AK84	$1.15	B	G	6'	Shield.
25AN84	$1.65	B	G	10'	Shield.
25AR84	$2.25	B	G	15'	Shield.
25AT84	$2.75	B	G	20'	Shield.
25AU84	$3.25	B	G	25'	Shield.
25CF84	$0.75	B	G	36"	Unshield.
25CK84	$0.90	B	G	6'	Unshield.
25CN84	$1.40	B	G	10'	Unshield
25CK85	$1.00	B	H	6'	Unshield.
25CN85	$1.50	B	H	10'	Unshield.
25CK86	$1.75	B	J	6'	Unshield
25CN86	$2.25	B	J	10'	Unshield.
25CR86	$2.35	B	J	15'	Unshield.
25CT86	$2.60	B	J	20'	Unshield.
2 Straight Phono Plugs on Same End to Various Conn.					
25FF25	$3.25	M	M	36"	Shield.
25FK25	$3.75	M	M	6'	Shield.
25FN25	$4.50	M	M	10'	Shield.
25FF84	$2.90	M	N	36"	Shield.
25FK84	$3.25	M	N	6'	Shield.
25FN84	$3.75	M	N	10'	Shield.
Straight Phono Plug (Long Handle) to Various Conn.					
26AF26	$1.30	BB	BB	36"	Shield.
26AK26	$1.60	BB	BB	6'	Shield.
26AN26	$2.10	BB	BB	10'	Shield.
26AR26	$2.60	BB	BB	15'	Shield.
26AK05	$2.20	BB	K	6'	Shield.
26AN05	$2.75	BB	K	10'	Shield.
26AR05	$3.20	BB	K	15'	Shield.
26AT05	$3.65	BB	K	20'	Shield.
26AF82	$1.50	BB	C	36"	Shield.
26AK82	$1.95	BB	C	6'	Shield.
26AN82	$2.25	BB	C	10'	Shield.
26AR82	$2.75	BB	C	15'	Shield.
26AF84	$1.10	BB	G	36"	Shield.
26AK84	$1.30	BB	G	6'	Shield.
26AN84	$1.80	BB	G	10'	Shield.
26AR84	$2.30	BB	G	15'	Shield.
Right Angle Phono Plug to Various Connections					
30AC30	$1.05	F	F	18"	Shield.
30AF30	$1.20	F	F	36"	Shield.
30AH30	$1.35	F	F	4'	Shield.
30AK30	$1.50	F	F	6'	Shield.
30AN30	$2.00	F	F	10'	Shield.
30AR30	$2.50	F	F	15'	Shield.
30AT30	$3.00	F	F	20'	Shield.
30AU30	$3.50	F	F	25'	Shield.
30AK80	$2.00	F	D	6'	Shield
30AN80	$2.75	F	D	10'	Shield.
30AC82	$1.25	F	C	18"	Shield.
30AF82	$1.35	F	C	36"	Shield.
30AK82	$1.75	F	C	6'	Shield.
30AN82	$2.00	F	C	10'	Shield.
30AR82	$2.50	F	C	15'	Shield.
30AT82	$3.00	F	C	20'	Shield.
30AU82	$3.50	F	C	25'	Shield.
30AK87	$2.45	F	E	6'	Shield.
30AN87	$3.35	F	E	10'	Shield.
30AU87	$4.60	F	E	25'	Shield.

Part No.	U.S.A. List	Conn. or Term.		Length	Cable
		One End	Other		
30AF84	$0.95	F	G	36"	Shield.
30AK84	$1.15	F	G	6'	Shield.
30AN84	$1.65	F	G	10'	Shield.
30CF84	$0.75	F	G	36"	Unshield.
30CK84	$0.90	F	G	6'	Unshield.
30CN84	$1.40	F	G	10'	Unshield.
30CK85	$1.00	F	H	6'	Unshield.
30CN85	$1.50	F	H	10'	Unshield.
30CK86	$1.75	F	J	6'	Unshield.
30CN86	$2.25	F	J	10'	Unshield.
Straight Tini Plug to Various Connections					
40DF05	$2.25	KK	K	36"	Shield.
40DK05	$2.75	KK	K	6'	Shield.
40DN05	$3.00	KK	K	10'	Shield.
40DF25	$2.10	KK	B	36"	Shield.
40DK25	$2.50	KK	B	6'	Shield.
40DN25	$2.75	KK	B	10'	Shield.
40DB80	$2.25	KK	D	12"	Shield.
40DF80	$2.50	KK	D	36"	Shield.
40DK80	$2.75	KK	D	6'	Shield.
40DF82	$2.20	KK	C	36"	Shield.
40DK82	$2.50	KK	C	6'	Shield.
40DN82	$2.85	KK	C	10'	Shield.
40DF83	$2.50	KK	DD	36"	Shield.
40DK83	$2.75	KK	DD	6'	Shield.
40DN83	$3.25	KK	DD	10'	Shield.
40DF84	$1.75	KK	G	36"	Shield.
40DK84	$2.00	KK	G	6'	Shield.
40DN84	$2.50	KK	G	10'	Shield
40DT84	$3.50	KK	G	20'	Shield.
40DN86	$2.50	KK	J	10'	Shield.
40DT86	$3.50	KK	J	20'	Shield.
41EF75	$2.00	KK	L	36"	2-cond. Hearing Aid
41EH75	$2.25	KK	L	4'	
45AN25	$2.75	KK	B	10'	Shield.
45AR25	$3.25	KK	B	15'	Shield.
45AU25	$4.25	KK	B	25'	Shield.
Right Angle Tini Plug to Various Connections					
50DF05	$2.50	AA	K	36"	Shield.
50DK05	$3.00	AA	K	6'	Shield.
50EF75	$2.25	AA	L	36"	2-cond. Hearing Aid
50EH75	$2.50	AA	L	4'	
50DB80	$2.50	AA	D	12"	Shield
50DF80	$2.75	AA	D	36"	Shield.
50DK80	$3.00	AA	D	6'	Shield.
Extension Jax Cords					
82AC82	$1.50	C	C	18"	Shield.
82AF82	$1.65	C	C	36"	Shield.
82AK82	$1.95	C	C	6'	Shield.
82AN82	$2.50	C	C	10'	Shield.
83DK05	$2.75	DD	K	6'	Shield.
83DN05	$3.25	DD	K	10'	Shield.
Cords with Spade Lugs and Alligator Clips					
85CN85	$0.90	H	H	10'	Unshield.
85CT85	$1.50	H	H	20'	Unshield.
85CU85	$1.75	H	H	25'	Unshield.
86CN86	$1.70	J	J	10'	Unshield.
86CU86	$2.55	J	J	25'	Unshield.
Microphone Connector to Various Connections					
87AF87	$2.00	E	E	36"	Shield.
87AK87	$2.50	E	E	6'	Shield.
87AP87	$3.50	E	E	12'	Shield.
87AU87	$5.00	E	E	25'	Shield.
87AK80	$2.75	E	D	6'	Shield.
87AN80	$3.50	E	D	10'	Shield.
87AU80	$5.25	E	D	25'	Shield.
87AK82	$2.00	E	C	6'	Shield.
87AN82	$2.75	E	C	10'	Shield.
87AU82	$4.75	E	C	25'	Shield.
87AF84	$1.50	E	G	36"	Shield.
87AK84	$1.75	E	G	6'	Shield.
87AN84	$2.25	E	G	10'	Shield.
87AU84	$4.25	E	G	25'	Shield.
87AF86	$1.95	E	J	36"	Shield.
87AK86	$2.50	E	J	6'	Shield.
87AP86	$3.25	E	J	12'	Shield.

Sightmaster® FUSES

"C" LIMITED CURRENT SERIES

CASE MATERIALS: GLASS **SIZE: ¼" DIAMETER**

For use when rapid interruption of fault current is required to avoid damage due to delay in opening. Length of fuse is determined by amperage and ear size. Manufactured in the following amperages:

250V OR LESS

1/16 Amp through 10 Amps

TEST SPECIFICATIONS:

Continuous duty at 110%, Blows within 1 hour at 135%

C SERIES

1/16	.27
1/8, 3/16	.21
1/4, 3/10, 3/8, 1/2, 3/4	.16
1, 1-1/4, 1-1/2, 1-3/4, 2, 2-1/2, 3	.09
3-1/2, 4, 5, 6, 7	.12
8	.17
10	.18

"N" LIMITED CURRENT SERIES

CASE MATERIALS: GLASS **SIZE: ¼" DIAMETER**

Designed with time-lag characteristics to avoid unnecessary opening due to harmless surges or starting currents. Length of fuse is determined by amperage and ear size. Manufactured in the following amperages:

125V OR LESS

1/100 Amp through 7 Amps

TEST SPECIFICATIONS:

Continuous duty at 110%, Blows within 1 hour at 135%
Blows in not less than 5 seconds at 200%

N SERIES

1/100, 1/32	.40
1/16, 1/10, 15/100, 2/10, 1/4, 3/10, 4/10, 1/2, 6/10, 7/10, 3/4, 8/10, 1	.28
1-1/4, 1-6/10, 1-3/4, 2	.26
2-1/2, 2-8/10, 3-2/10, 3-1/2, 4, 5, 6-1/4, 7	.24

"3AG" HIGH VOLTAGE SERIES

CASE MATERIALS: GLASS **SIZE: ¼" x 1¼"**

Designed for use in Radio, Television and numerous electronic devices. The 3AG High Voltage series blow quickly under overload conditions therefore providing the high speed action necessary to protect electronic apparatus. Manufactured in the following amperages:

250V OR LESS

1/16 Amp through 6 Amps

125V OR LESS: 8

TEST SPECIFICATIONS:

Continuous duty at 110%, Blows within 1 hour at 135%

3 AG HIGH VOLTAGE SERIES

1/16	.27
1/8, 15/100, 175/1000, 3/16	.20
1/4, 3/10, 3/8, 6/10, 3/4, 1/2,	.13
1, 1-1/2, 2	.C8
3	.C7
4, 5, 6	.10

"3AG" HIGH VOLTAGE *Time Lag* SERIES

CASE MATERIALS: GLASS **SIZE: ¼" x 1¼"**

Designed for circuits with equipment having High Inductive or Capacitative Surges and for circuits with heavy starting currents. Manufactured in the following amperages:

125V OR LESS

1/100 Amp through 6¼ Amps

32V OR LESS

6½ Amps through 25 Amps

TEST SPECIFICATIONS:

Continuous duty at 110%, Blows within 1 hour at 135%
Blows within 1 minute, but not less than 5 seconds at 200%

3 AG TIME LAG SERIES

1/100, 1/32	.36
1/16, 1/10, 1/8, 15/100, 175/1000, 3/16, 2/10, 1/4, 3/10, 3/8, 4/10, 1/2, 6/10, 7/10, 3/4, 8/10, 1	.27
1-1/4, 1-1/2, 1-6/10, 2	.25
2-1/2, 2-8/10, 3, 3-2/10, 4, 5, 6-1/4, 8, 10, 15, 20, 25, 30	.20

"3AG" HIGH VOLTAGE *Pig-tail* SERIES

CASE MATERIALS: GLASS **SIZE: ¼" x 1¼"**

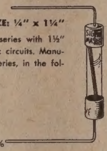
Quick blowing fuses of the same type as the 3AG high voltage series with 1½" tinned copper leads on either end for easy soldering into electronic circuits. Manufactured to the same test specifications as the 3AG high voltage series, in the following amperages:

250V OR LESS

1/16 Amp through 6 Amps

TEST SPECIFICATIONS:

Continuous duty at 110%, Blows within 1 hour at 135%



3 AG PIG TAIL SERIES

1/16	.33
1/8	.25
1/4, 3/8, 1/2, 3/4	.20
1, 1-1/2, 2, 3	.15
4, 5, 6	.16

This series is also available with Time—Lag characteristics.

"3AB" SERIES

CASE MATERIAL: CERAMIC **SIZE: ¼" x 1¼"**

Designed for use with Amplifiers, Rectifiers, Communication and Electronic Equipment, etc. Designed to withstand greater shock than the 3AG series. Manufactured in the following amperages:

250V OR LESS

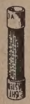
1/16 Amp through 15 Amps

125V OR LESS

above 15 Amps

TEST SPECIFICATIONS:

Continuous duty at 110%, Blows within 1 hour at 135%



3 AB SERIES

1/4	.18
1, 2, 3, 5, 6, 8, 10, 12, 15, 20	.17
25, 30	.20

This series is also available with Time—Lag characteristics.

"4AG" SERIES

CASE MATERIAL: GLASS **SIZE: 9/32" x 1¼"**

Fuses of the 4AG series may be considered a more rugged version of the corresponding 3AG series since these fuses offer greater protection against Shock, Vibration and Rough Handling, also due to their heavier design fuses of the 4AG series are available in amperage ratings up to 30 amps. Most of the applications of this series are found in Aircraft Installations. Manufactured in the following amperages:

250V OR LESS

1/16 Amp through 5 Amps

32V OR LESS

6 Amps through 30 Amps

TEST SPECIFICATIONS:

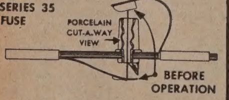
Continuous duty at 110%, Blows within 1 hour at 135%

4 AG SERIES

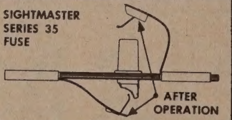
1/16	.38
1/8	.26
1/4, 1/2, 1, 2, 2-1/2, 3	.13
5, 10, 15, 20, 25, 30	.11
35, 40 or 50	.13

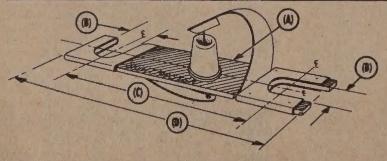
This series is also available with Time—Lag characteristics.

SIGHTMASTER SERIES 35 FUSE



SIGHTMASTER SERIES 35 FUSE

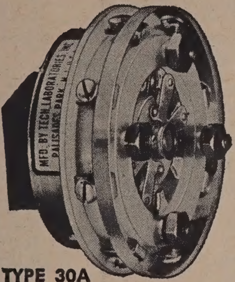




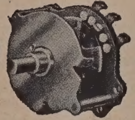
FUSE CAT. NO.	RATED CAPACITY (AMPERE)	OPERATES ON			COLOR OF INSULATING STRIP (A)	SIZE OF SCREWS SLOTTED FOR	DIMENSIONS		
		SUGGESTED PEAK VOLTAGE	AMPS.	IN LESS THAN			SLOT WIDTH (B)	MOUNTING CENTERS (C)	OVERALL LENGTH (D)
35A	1-1/3	90	2	1-1/2 Min.	White	10	13/64	1-1/4	1-43/64
35B	1-1/3	90	2	1-1/2 Min.	White	6	5/32	1-1/4	1-43/64
35B	2	90	3	3 Min.	Orange	6	5/32	1-1/4	1-43/64
35C	2	90	3	3 Min.	Orange	10	13/64	1-1/4	1-43/64
35D	1-1/3	90	2	1-1/2 Min.	White	6	5/32	1-3/16	1-5/8
35E	3	90	4	5 Min.	White	6	5/32	1-9/16	1-63/64
35F	1/2	90	3/4	1-1/2 Min.	Red	10	13/64	1-1/4	1-43/64
35G	3	90	4-1/2	5 Min.	Blue	6	5/32	1-1/4	1-43/64
35H	5	90	6-1/2	5 Min.	Green	6	5/32	1-1/4	1-43/64
**35J	1/2	160	3/4	1-1/2 Min.	Red	10	13/64	1-1/4	1-43/64
*35K	1-1/3	150	2	3 Min.	White	10	13/64	1-1/4	1-43/64
*35L	2	150	3	3 Min.	Orange	10	13/64	1-1/4	1-43/64
*35M	3	150	4-1/2	5 Min.	Blue	6	5/32	1-1/4	1-43/64
*35N	5	150	6-1/2	5 Min.	Green	6	5/32	1-1/4	1-43/64
**35P	3/4	160	1-1/8	1-1/2 Min.	Tan	10	13/64	1-1/4	1-43/64
35R	.180	90	.270	1-1/2 Min.	Yellow	10	13/64	1-1/4	1-43/64
**35S	1/4	160	3/8	1-1/2 Min.	Pink	10	13/64	1-1/4	1-43/64
35T	.65	90	1.1	3 Min.	Tan	10	13/64	1-1/4	1-43/64

* Made with ceramic insulator to protect against arcing
** Made with glass insulator to protect against arcing

SWITCH TO TECH LABS for Precision Electrical Resistance Instruments



TYPE 30A
A rugged multi-pole control switch, 15-25 amp.



TYPE 2A & 2M
Standard control switch with phenolic or Melamine insulation, 3-5 amp, rating.

TAP SWITCHES

The following listings are limited to a few standard units only. All switches shown meet government specifications. For further information write or teletype us direct.

Type 30A is a heavy duty control switch with Nylon insulation. Furnished with either one or two poles per deck and there may be as many as 25-30 decks in a stack with several stacks geared together to give as many as 150 poles. The max. number of positions is 8 when single pole. Has screw terminals and will carry 25 amp.

Type 2A switch is our standard control switch for electronic instruments and equipment of better quality. Made in innumerable combinations with as many as four poles per deck and 24 positions. Phenolic insulation. Type 2M is identical except for Melamine insulation. Code No. "S" stands for "shorting" and "N" for "non-shorting."

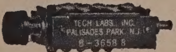
Type	Code #	Diam.	Rating	No. Pos.	No. Decks	Pol./Dk	Price
30A	30A1N7	2¾"	15A.	7	1	1	$15.00
30A	30A1N7-2	2¾"	15A.	7	2	1	$25.00
30A	30A2N3-6	2¾"	15A.	3	6	2	$70.00
2A	A1S24	1¾"	3A.	24	1	1	$ 4.50
2A	A4S5	1¾"	3A.	4	1	4	$ 5.25
2A	A1N10-2	1¾"	3A.	10	2	1	$ 7.00
2M	M1S24	1¾"	3A.	24	1	1	$ 5.00
2M	M4N3	1¾"	3A.	3	1	4	$ 5.75

Miniature Tap Switches

TYPE 2B MINIATURE TAP SWITCH

This switch is only 1" in dia., carries 3 amp. and is ruggedly built. Can be furnished with two or more decks, price similar to 2A.

CAM SWITCHES



TYPE 8A CAM SWITCH

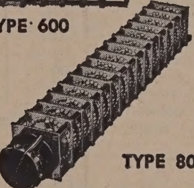
A new development of great interest. Small size, long life and great flexibility. Have been made with from one to 30 contact springs. Will carry 3 amp. Standard unit has four contact springs and 10 positions, price $12.50.

TYPE 10A TAP SWITCH

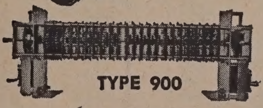
A multi-deck switch of small dimensions, 1⅝" sq. This is a precision switch designed to meet high requirements in smallest possible space. Up to 24 positions, shorting. Price approx. $10 per deck, plus frame $5.

SQUARE SWITCHES

TYPE 600



TYPE 800



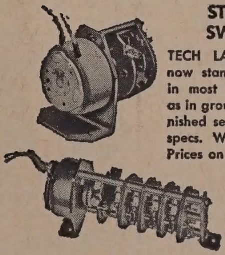
TYPE 900

These standard rugged control switches are the stand-by for equipment calling for dependable switches in a hurry. Will meet all standard government specs. All parts carried in stock. An infinite number of combinations possible. Teletype your specs.

The price of the basic frame is the same for all, viz. $4.00 each. The type 600 and 800 are priced at $8.00 per deck plus frame price, and the type 900 switches are $9.50 per deck plus frame $4.00.

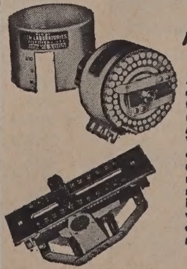
Type	Size	Rating	Max. Pos. Short.	Max. Pos. Non-Short.
600	1¾" sq.	5A.	24	12
800	2¼" sq.	5A.	32	16
900	2¾" sq.	10A.	48	24

OTHER TECH LAB SWITCHES



STEPPING SWITCHES

TECH LAB switches are now standard equipment in most missiles as well as in ground controls. Furnished sealed to meet all specs. Write for details. Prices on request.



ATTENUATORS

A complete line of audio and r.f. attenuators with both manual and REMOTE CONTROL. We will design components to meet your specific requirements, if standard units are inadequate. Please write for catalogue and send us your specs for estimate.

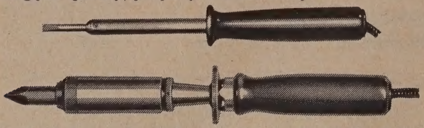
WRITE FOR NEW BULLETINS ON SWITCHES • DECADE RESISTORS • POTENTIOMETERS

TECH LABORATORIES INC. • Palisades Park, New Jersey

American Beauty ELECTRIC SOLDERING IRONS

A soldering iron for every soldering need!

American Beauty Electric Soldering Irons are made in *one* quality only—*the best*—and only *the best* gives you *the most!* No matter what the requirements—there's an American Beauty in the right model, correct tip size, proper watt input, to do any soldering job quickly, properly and efficiently.

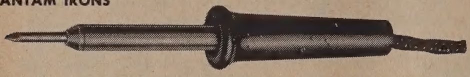


Hundreds of thousands of these devices are faithfully doing their jobs every day in the year—on production lines and work benches of industrial plants all over the world. Also widely used in telephone, telegraph, radio and television manufacturing and servicing everywhere.

Cat. No.	Tip Diameter	Watts	Net Weight	List
3128†	¼″	60	7½ oz.	$ 7.20
3125†	¼″	60	7½ oz.	8.20
3138	⅜″	100	16 oz.	11.00
3138-X	⅜″	175	16 oz.	12.70
3138-XY	¼″	175	16 oz.	12.70
3158	⅝″	200	28 oz.	13.20
3158-X	⅝″	250	28 oz.	14.30
3178	⅞″	300	42 oz.	17.60
3198	1⅛″	550	60 oz.	22.00
	(3138 is made also in 130- and 150-watt input.)			

Available in standard voltages and many special voltages.
†Made also in 75-watt input.

BANTAM IRONS

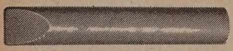


Small, compact, lightweight—designed especially for the electronic industry. They provide ample heat for fine and medium-fine soldering jobs of all kinds. Bantam "X" Series is intended for special applications on *production lines* of radio, television and electronic plants. They should be placed only on Production Lines—where high soldering rates are maintained—or where similar heat-dissipating conditions exist.

Cat. No.	Tip Diameter	Watts	Net Weight	List
3118-SC/3118-SCP	⅛″	*30	6 oz.	$6.60
3120-SC/3120-SCP	3/16″	*30	6 oz.	6.60
3118	⅛″	*30	6¼ oz.	6.60
3120	3/16″	*30	6½ oz.	6.60
3118-X/3118-XP	⅛″	50	6 oz.	7.30
3120-X/3120-XP	3/16″	50	6 oz.	7.30
(*Optional wattage (40 watts) available without extra cost. SPECIFY.)				

Available in standard voltages.

COPPER TIPS



All American Beauty copper tips are made from commercially pure drawn copper rod—heavily nickeled to resist corrosion and oxidation. All are obtainable with special American Beauty iron-plating—for even longer life than standard nickel-coating—at nominal extra cost. All are plug type and available in either diamond or chisel point.

Cat. No.	Diameter	Length
3718	⅛″	3″
3720	3/16″	3¼″
3728	¼″	3½″
3728-S	¼″	3½″
3738	⅜″	4⅜″
3738-S	⅜″	4½″
3758	⅝″	4 11/16″
3778	⅞″	5 5/32″
3798	1⅛″	5⅞″

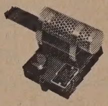
TRANSFORMER TYPE IRONS

The T-12 Series is intended primarily for fine precision soldering on miniature and subminiature electronic components and similar assemblies. The T-30 Series is designed especially for *production line* use; intended for heavy duty, fine, precision soldering requiring extremely high tip-temperatures constantly maintained.

Cat. No.	Tip Diameter	Watts	Net Weight	List
T-12	1/16″	*17	1 lb., 3 oz.	$20.00
T-12	⅛″	*17	1 lb., 3 oz.	20.00
T-12	¼″	*17	1 lb., 3 oz.	20.00
T-12	3/32″	12	1 lb., 2 oz.	20.50
T-30	1/16″	*30	1 lb., 12 oz.	22.00
T-30	⅛″	*30	1 lb., 12 oz.	22.00
T-30	¼″	*30	1 lb., 12 oz.	22.00

*T-12 also available in 20 watts—T-30 also available in 25 watts.

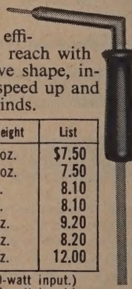
TEMPERATURE REGULATING STANDS



These automatic devices regulate and control the tip-temperature of an electric soldering iron while the iron is connected to current and at idle. The controlled soldering iron is maintained at all times at just the right heat to meet the requirements of the job or the needs of the user. Suffix "SG" after catalog number indicates stand is equipped with safety guard.

Cat. No.	Watts (Max.)	Net Weight	List
475	660	1¾ lbs.	$ 9.30
475-SG	660	2 lbs.	11.50
476	660	1¾ lbs.	9.30
476-SG	660	2 lbs.	11.50

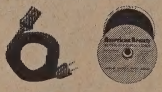
ANGLE TYPE IRONS



These models are equipped with angle type casings—providing more efficient operation in places difficult to reach with straight-casing irons. Their distinctive shape, ingenious design and perfect balance speed up and simplify tough soldering jobs of all kinds.

Cat. No.	Tip Diameter	Watts	Net Weight	List
3118-A	⅛″	30*	6¼ oz.	$7.50
3120-A	3/16″	30*	6¼ oz.	7.50
3118-XA	⅛″	50	6 oz.	8.10
3120-XA	3/16″	50	6 oz.	8.10
3125-A	¼″	60**	10 oz.	9.20
3128-A	¼″	60**	10 oz.	8.20
3138-A	⅜″	100***	16 oz.	12.00

(*Nos. 3118-A and 3120-A are made also in 40-watt input.)
(**Nos. 3125-A and 3128-A are made also in 75-watt input.)
(***No. 3138-A is made also in 150-watt input.)



CORDS—American Beauty super-flexible heater cord, cord sets and plugs are available as original equipment as well as for replacement or repair purposes. Ideal for use with many industrial tools where quality of the cord and plug are important considerations on the part of the user. Cord available in both conventional two-conductor and three-conductor types and cord sets and plugs in many types and sizes.

Write for illustrated catalog containing full information on our complete line of electric soldering irons—including their use and care.

AMERICAN ELECTRICAL HEATER COMPANY • • DETROIT 2, MICHIGAN

→Also a complete line of resistance soldering units (100 to 2500 Watts) and wire strippers—write for bulletin W-50.←

BOKER
U.S.A.
IN-DUS-TRONIC
TOOLS
QUALITY SINCE 1837 ®

DESIGN IN-DUS-TRONIC tools are more streamlined, with slender jaws and fine points, to reach into the tight spots and perform the specific work required of the electronics technician.

TEST AND INSPECTION Individually tested for hardness, each tool must maintain highest standards for handle strength and cutting ability. To assure perfect jaw alignment, pliers must cleanly cut single bond paper strips and snip cotton-covered lamp cord without fraying. Each tool is guaranteed against defects in workmanship and materials.

WORKMANSHIP IN-DUS-TRONIC tools are hot drop-forged from special analysis alloy steel, machined and finished with the same care and precision which have made world-famous BOKER TREE BRAND Fine Cutlery and surgical instruments for over a century. Individually fitted and adjusted, each is accurately heat-treated by HYDRIZING, which minimizes "carburization" and "decarb". Cutting blades are precision-hardened with electronic controls, and honed by hand for keen edges that retain their sharpness.

Individually Boxed

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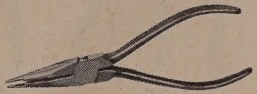
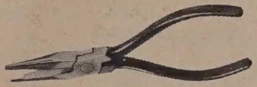
RADIO AND TV NOSE CUTTING PLIERS



Reaches into tight spots to cut small wires, and to grip at the tips.

NO.	LIST EA.	NO.	LIST EA.
539-6"	3.75	639-6"	4.05
939-6"	3.75	739-6"	4.25

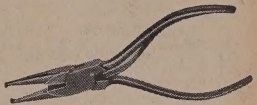
SIDE TIP NOSE CUTTING PLIERS



Cuts flush at left side of tips. Turn tool over to cut flush at right side.

NO.	LIST EA.	NO.	LIST EA.
S539-6"	4.00	S939-4½"	3.80
S939-6"	4.00	S639-6"	4.30
		S739-6"	4.50

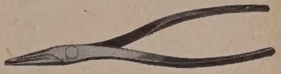
TRANSVERSE END CUTTING PLIERS



For clean, flush cutting of small wires where ordinary cutters are too bulky.

NO.	LIST EA.	NO.	LIST EA.
532-6"	3.65	632-6"	3.95
932-6"	3.65	732-6"	4.15

SHORT JAW, LONG HANDLE NOSE CUTTING PLIERS



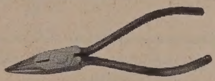
Extra long, narrow handles provide maximum reach of the slender jaws to cut and grip.

NO.	LIST EA.	NO.	LIST EA.
579-8"	4.15	679-8"	4.45
979-8"	4.15	779-8"	4.65

STOCK NUMBER CODE IDENTIFICATION ON PLIERS

First Digit in Pliers Stock No.	DESCRIPTION OF FINISH	
"5"	Polished Head, Standard Gunmetal Finish Handles — i.e.	51-6"
"9"	Polished Head, Factory molded Red Cushion Grip Plastisol Handles — i.e.	91-6"
"6"	Fully Nickel and Chrome Plated Head and Handles — i.e.	61-6"
"7"	Nickel and Chrome Plated Head, Factory molded Red Cushion Grip Plastisol Handles — i.e.	71-6"

SHORT CHAIN NEEDLE NOSE PLIERS



Sturdy, tapered jaws provide more positive grip. Checker-milled tips.

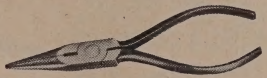
WITH SIDE CUTTERS

NO.	LIST EA.	NO.	LIST EA.
53-5"	3.15	63-5"	3.45
93-5"	3.15	73-5"	3.65

WITHOUT SIDE CUTTERS

NO.	LIST EA.	NO.	LIST EA.
530-5"	2.65	730-5"	3.15
930-5"	2.65		

LONG CHAIN NEEDLE NOSE PLIERS



Slender, checker-milled jaws taper to 1/32" at tips.

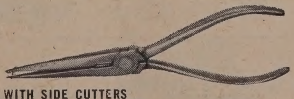
WITH SIDE CUTTERS

NO.	LIST EA.	NO.	LIST EA.
53-6"	3.40	63-6"	3.70
93-6"	3.40	73-6"	3.90

WITHOUT SIDE CUTTERS

NO.	LIST EA.	NO.	LIST EA.
530-6"	2.70	630-6"	3.00
930-6"	2.70	730-6"	3.20

EXTRA LONG CHAIN NOSE PLIERS



2¾" long jaws add extra reach to checker-milled tips.

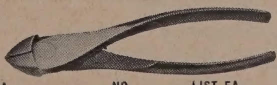
WITH SIDE CUTTERS

NO.	LIST EA.	NO.	LIST EA.
53-7"	4.20	63-7"	4.50
93-7"	4.20	73-7"	4.70

WITHOUT SIDE CUTTERS

NO.	LIST EA.	NO.	LIST EA.
530-7"	3.10	630-7"	3.40
930-7"	3.10	730-7"	3.60

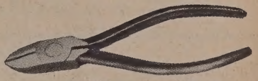
HEAVY DUTY DIAGONAL CUTTING PLIERS



Added leverage for heavy cutting.

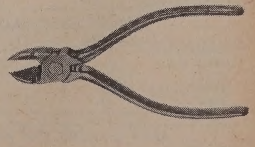
NO.	LIST EA.	NO.	LIST EA.
591-7"	3.50	691-7"	3.80
991-7"	3.50	791-7"	4.00

DIAGONAL CUTTING PLIERS



NO.	LIST EA.	NO.	LIST EA.
51-4½"	2.80	61-4½"	3.10
91-4½"	2.80	71-4½"	3.30
51-5"	3.05	61-5"	3.35
91-5"	3.05	71-5"	3.55
51-5½"	3.30	61-5½"	3.60
91-5½"	3.30	71-5½"	3.80
51-6"	3.45	61-6"	3.75
91-6"	3.45	71-6"	3.95
51-7½"	3.80	61-7½"	4.10
91-7½"	3.80	71-7½"	4.30

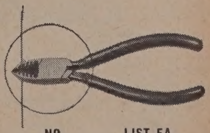
WIRE STRIPPING CUTTERS WITH INSULATION CRUSHER



"W" notches slit acetate cellulose and other thin insulations. Notch in blades strips heavier insulation. Grooves in handles crush insulation.

NO.	LIST EA.
517-5½"	4.00
917-5½"	4.00
617-5½"	4.30
717-5½"	4.50

"THROAT-HOLD" DIAGONAL PLIERS



Plastisol inserts back of the blades tightly grip the cut-off end of wire after cut is made, preventing shorts, machine failures, and eye injuries.

NO.	LIST EA.	NO.	LIST EA.
TH51-4½"	4.40	TH91-5"	4.65
TH91-4½"	4.40	TH91-5½"	4.90
TH51-5"	4.65	TH51-7½"	5.40

SPECIAL THROAT-HOLD TYPE PLIERS

NO.	LIST EA.	
THB981-4½"	5.20	Bent (offset) Handles
THC981-4½"	5.00	Flush cutting edges

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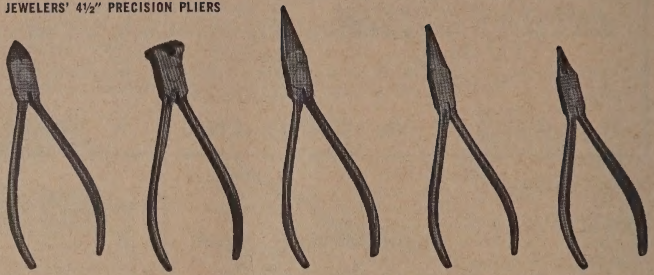
®

JEWELERS' PLIERS SETS

Crystal Case, 5″ x 7″, lined to nest 4½″ Pliers.

NO.	CONTENTS	LIST
C63	One ea. 681, 683, 684	10.95
C64	One ea. 681, 683, 684, 6517	13.25
C65	One ea. 681, 682, 683, 684, 685	18.05
C73	One ea. 781, 783, 784	11.30
C93	One ea. 981, 983, 984	10.65
C95	One ea. 981, 982, 983, 984, 985	17.55

JEWELERS' 4½″ PRECISION PLIERS

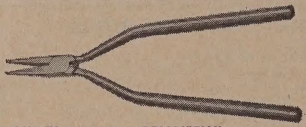


	POLISHED HEAD, GUN METAL HANDLES		POLISHED HEAD, CUSHION-GRIP HANDLES		FULL NICKEL AND CHROME PLATED		NICKEL, CHROME-PLATED, CUSHION-GRIP HANDLES	
	Tool No.	List Ea.	Tool No.	List Ea.	Tool No.	List Ea.	Tool No.	List Ea.
Diagonal Cutting Pliers	581	3.10	981	3.20	681	3.30	781	3.35
End Cutting Nippers	582	3.60	982	3.80	682	3.90	782	3.95
*Needle Nose Pliers	583	2.90	983	3.10	683	3.20	783	3.35
*Flat Nose Pliers	584	2.90	984	3.10	684	3.20	784	3.35
*Round Nose Pliers	585	2.90	985	3.10	685	3.20	785	3.35

*Note: Inside jaws are smooth. Supplied with milled jaws at no extra cost.

PRECISION PLIERS WITH SPRING IN EXTENDED HANDLES

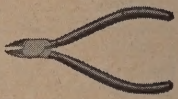
Midget jaws, extra long handles, to reach into deep areas normally inaccessible.



NO.	LIST EA.	DESCRIPTION
L981S-8″	6.05	Diagonal Cutters
L983S-8″	5.95	Needle Nose Pliers

TAPERED JAWS, FLUSH CUTTING DIAGONALS

Midget pliers with sharply tapered jaws and very fine flush cutting edges.



NO.	LIST EA.
A981-4½″	3.70

STANDARD SHAPE JAWS, FLUSH CUTTING DIAGONALS

NO.	LIST EA.
C981-4½″	3.40

SHORT NOSE, FLUSH CUTTING DIAGONALS

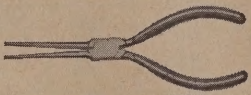
NO.	LIST EA.
E981-4½″	3.60

STOCK NUMBER CODE IDENTIFICATION ON PLIERS

First Digit in Pliers Stock No.	DESCRIPTION OF FINISH	
"5"	Polished Head, Standard Gunmetal Finish Handles — i.e.	51-6″
"9"	Polished Head, Factory molded Red Cushion Grip Plastisol Handles — i.e.	91-6″
"6"	Fully Nickel and Chrome Plated Head and Handles — i.e.	61-6″
"7"	Nickel and Chrome Plated Head, Factory molded Red Cushion Grip Plastisol Handles — i.e.	71-6″

EXTRA FINE NEEDLE NOSE PLIERS WITH STABILIZED TIPS

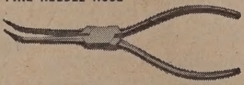
Dowel pin in jaw engages hole in other jaw when closed, stabilizing tips and maintaining perfect alignment.



NO.	LIST EA.	NO.	LIST EA.
ST903-6″	3.50	ST703-6″	4.00

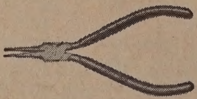
CURVED EXTRA FINE NEEDLE NOSE

NO.	LIST EA.
508-6″	3.90
908-6″	3.90
608-6″	4.20
708-6″	4.40



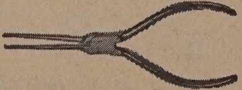
SHORT JAW, EXTRA FINE NEEDLE NOSE PLIERS

NO.	LIST EA.
903-4½″	3.10
703-4½″	3.35



EXTRA FINE NEEDLE NOSE PLIERS

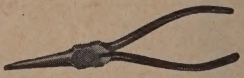
Long, very slim, spring tempered jaws for assembling miniature parts.



NO.	LIST EA.	NO.	LIST EA.
503-6″	3.10	603-6″	3.40
903-6″	3.10	703-6″	3.60

LONG NEEDLE NOSE PLIERS

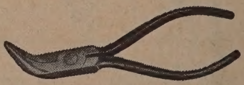
Unusual gripping ability without distortion for such long, slender jaws. Checker-milled at tips.



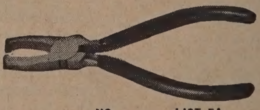
No.	LIST EA.	No.	LIST EA.
533-6″	3.15	633-6″	3.45
933-6″	3.15	733-6″	3.65

CURVED NEEDLE NOSE PLIERS

NO.	LIST EA.
538-6″	3.50
938-6″	3.50
638-6″	3.80
738-6″	4.00



END CUTTERS AND LEAD-IN STRIPPERS

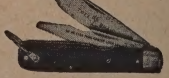


Quickly strips TV transmission cable. Full throat for general purpose cutting.

NO.	LIST EA.	NO.	LIST EA.
902-6″	3.95	702-6″	4.50

ELECTRICIANS' UTILITY KNIFE

One blade and one self-locking Screwdriver and Insulation Scraper.



NO.	LIST EA.	
9229	2.75	3¾″ long

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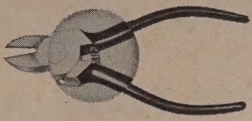
PLIERS WITH SPRING IN HANDLES

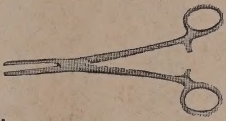
Bauer type coil spring keeps pliers in open position, ready-to-work.



Specify "S" as a Suffix to tool number (i.e., **91S-5"**)
Additional List Ea. .30

HOLDING FORCEPS

Slender, long-reaching, with ratchet type lock. Acts as third hand, and as heat sink. Box joint, polished stainless spring steel.



NO.	LIST EA.	
HF-6¼"	4.35	Straight pattern
HFC-6¼"	5.00	Curved pattern

ELECTRONIC SNIPS

Pointed, serrated blades cut wire, filament, sheet metal, insulating materials, plastics, fabrics. spring keeps blades open, ready-to-work.

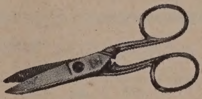
NO.	LIST EA.	
P4-7⅛"	3.60	Long Blades
P4E-6½""	4.25	Short Blades
C4E-7⅛""	4.25	Curved Blades

ELECTRICIANS' SNIPS

Scraper, file on back of blade.

NO.	LIST EA.
709-5"	2.75

Nickel Plated



SHORT JAW, LONG HANDLE, NEEDLE NOSE PLIERS

NO.	LIST EA.	NO.	LIST EA.
573-8"	3.20	**673-8"**	3.50
973-8"	3.20	**773-8"**	3.70

SHORT JAW, LONG HANDLE DUCKBILL PLIERS

No.	LIST EA.	No.	LIST EA.
574-8"	3.15	**947-8"**	3.15

ELECTRICIANS' SIDE CUTTING PLIERS

NO.	LIST EA.	NO.	LIST EA.
92-6"	3.25	**62-7"**	3.90
92-7"	3.65	**62-8"**	4.25
92-8"	4.00	**72-7"**	4.10

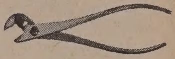
LEATHER TOOL HOLSTER

Five pockets of pliable form-fitting Russet leather. Stitched with 7-cord linen hot waxed thread, locked to solid leather back with steel rivets. Handy tape holder is of leather, not chain, an extra safety insulation feature.

NO.	LIST EA.
89	4.95

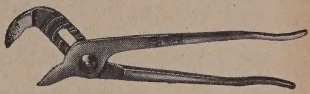
MIDGET "GROOVE-GRIP" PLIERS

Slender and wiry, indispensable for gripping small nuts and other objects in tight spots.



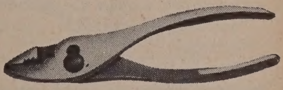
NO.	LIST EA.	
6517-5"	2.25	Nickel, Chrome Plated
P6517-5"	2.35	Plated, Cushion Grips

"GROOVE-GRIP" 5-ADJUSTMENT PLIERS



NO.	LIST EA.	
6507-6½"	2.65	Nickel and Chrome Plated
6507-8"	2.90	
6507-10"	3.25	

COMBINATION SLIP-JOINT PLIERS



NO.	LIST EA.	
6041-6½"	1.40	Nickel and Chrome Plated
6041-8"	1.80	
6041-10"	2.60	

THIN NOSE COMBINATION PLIERS

NO.	LIST EA.	
6042-6½"	1.60	Nickel, Chromed

BENT THIN NOSE COMBINATION PLIERS

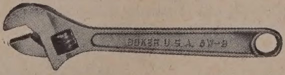
NO.	LIST EA.	
6043-6½"	1.85	Nickel, Chromed

PROFESSIONAL SLIP-JOINT SIDE CUTTERS

Flat, serrated nose for gripping. Curved inner section to grip round shapes. Keen-cutting knives.

NO.	LIST EA.	
6395-7½"	3.75	Nickel, Chromed

THIN, ALLOY STEEL ADJUSTABLE WRENCHES



Nickel and Chrome Plated		Polished Head, Gunmetal Handles	
NO.	LIST EA.	NO.	LIST EA.
6W-4"	2.64	**5W-4"**	2.10
6W-6""	2.64	**5W-6"**	2.10
6W-8"	3.10	**5W-8"**	2.52
6W-10"	3.95	**5W-10"**	3.12
6W-12"	5.75	**5W-12"**	4.70
6W-15"	8.75	**5W-15"**	7.36
6W-18"	14.50	**5W-18"**	10.95

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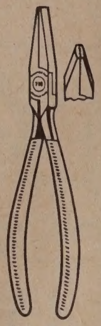
Pliers by CHANNELLOCK®

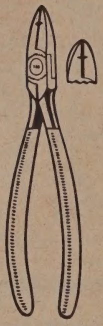
Specially Designed ELECTRONICS PLIERS

You'll do hundreds of jobs easier, faster with these Channellock Pliers because they are **specially designed** for all types of electronics work. You'll like the long reach . . . the precision-matched jaws . . . the hand-honed, specially hardened cutting edges . . . the easy-to-handle "feel" of the blue plastic grips. And you'll appreciate the top quality of Channellock Pliers . . . they're forged from high grade steel, properly heat treated. Best of all, because they are specially designed for fine electronics work, these four pliers will satisfy more than 90% of your Service and Repair needs. Ask your Electronics Equipment Supplier for Channellock Electronics Pliers by name.



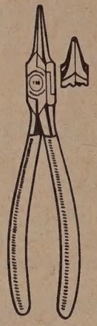
No. 718
FLAT-NOSE PLIER

Watchmaker's precision PLUS a bull-dog grip in hard-to-reach places. LIST $3.10



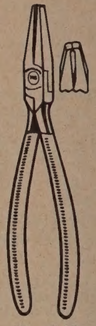
No. 728
DIAGONAL CUTTER

A wire-stripping notch (Patent Pending) that **really works!** LIST $3.40.



No. 738
ROUND-NOSE PLIER

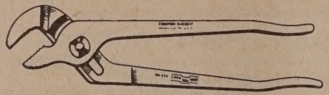
You can **pick up a human hair** with these precision-machined points. LIST $3.10



No. 748
END CUTTER

Fine enough to cut a human hair—sturdy enough to cut 12 gauge copper wire. LIST $3.40.

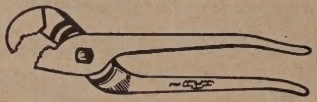
MULTI-PURPOSE PLIER



The handiest and most popular multi-purpose plier ever designed. Five patented, non-slip undercut channels. Terrific gripping power. Particularly useful on aerial construction jobs. Polished steel finish.

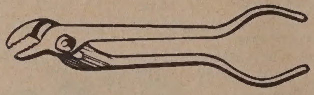
No.	Size	Capacity	List
420	9½"	1½"	$3.20
426	6½"	⅞"	2.30

HEAVY DUTY PLIER



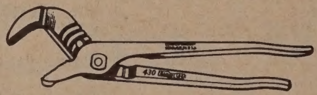
A heavy duty, self-gripping plier . . . actually a combination plier and wrench. Terrific gripping power in tight places you can't reach with a pipe wrench. Length 9½". Four adjustments. Capacity 1⅛". Polished steel finish. No. 410. . .LIST $3.40.

"MIGHTY MIDGET" PLIER



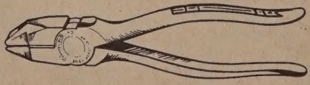
A midget plier that gives you popular Channellock gripping power for a wide number of small, hard-to-get at electronics jobs. Length 4½". Four adjustments. Capacity ½". Polished steel finish. No. 424. . .LIST $2.20.

BIG CHAMP PLIER



Full 2" jaw opening. Big grip for big jobs . . . compact design for easy handling. Length 10". Five adjustments. Undercut, non-slip channels. Capacity 2". Polished steel finish. No. 430. . .LIST $3.30.

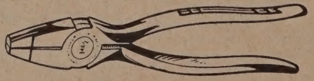
LINEMEN'S PLIER—Bevel Nose



Polished steel finish. Knurled grips. Side cutter.

No.	Size	List
3046	6"	$3.50
3047	7"	$4.00
3048½	8½"	$4.80

LINEMEN'S PLIER—Rounded Nose



Polished steel finish. Knurled grips. Side cutter.

No.	Size	List
346	6"	$3.50
347	7"	$4.00
348½	8½"	$4.80

CHANNELLOCK PLIERS Are Made Only By Champion DeArment Tool Co., Meadville, Pa.

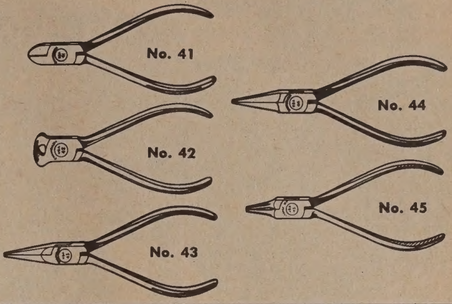
Pliers by CHANNELLOCK®

Little Champ PRECISION PLIERS

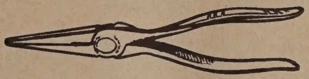
Highest quality precision pliers for fine bench work in electronics, model making, jewelry and watch repair. Polished steel finish. Also available at no extra cost with blue, dipped plastic, cushion-grip handles.

No.	Style	Size	List
41	Diagonal Cutter	4½″	$3.14
42	End Cutter	4½″	$3.60
43	Needle Nose	4½″	$2.90
44	Flat Nose	4½″	$3.00
45	Round Nose	4½″	$3.00

Attractive, velvet-lined case for Little Champ Pliers. $1.00



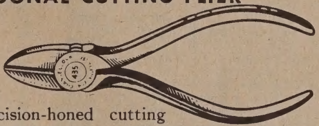
LONG-NOSE PLIER



Point ³⁄₃₂″ round. Polished steel finish. Knurled grips.

No.	Size	Side-Cutter	List
317½	7½″	With	$4.10
3017½	7½″	Without	$3.00

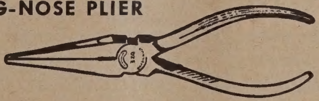
DIAGONAL CUTTING PLIER



Precision-honed cutting edges. Polished steel finish. Knurled grips.

No.	Size	List
435	5″	$3.00
436	6″	$3.40
437	7″	$3.80

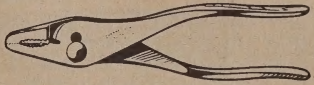
LONG-NOSE PLIER



Point ³⁄₃₂″ round. Polished steel finish. Knurled grips.

No.	Size	Side-Cutter	List
326	6″	With	$3.40
3026	6″	Without	$2.70

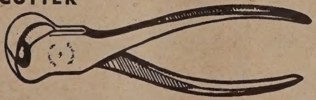
SLIP-JOINT PLIER—With Cutter



Heavy-duty. Polished steel finish. Knurled grips.

No.	Size	List
546	6″	$2.30
548	8″	$2.84
5410	10″	$3.46

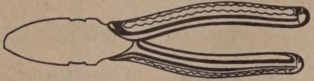
END CUTTER



Precision-honed cutting edges. Polished steel finish.

No.	Size	List
356	6″	$3.40
357	7″	$3.90

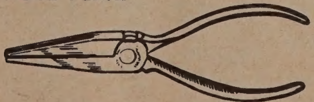
"SUPERIOR" PLASTIC GRIPS



For maximum hand comfort, durable plastic grips. Light blue color for good visibility, reduces plier loss. Easy to install. Order by desired grip size

Plier Size	Grip Size	List	Plier Size	Grip Size	List
6″	Small	65c pr	8″, 9½″	Large	70c pr
7″	Medium	70c pr	10″	Large	70c pr

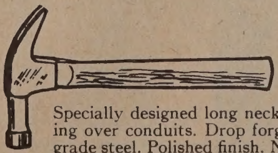
FLAT-NOSE PLIER



Precision-matched jaws. Polished steel finish.

No.	Size	Side-Cutter	List
366	6″	With	$3.50
3066	6″	Without	$2.70

ELECTRICIANS' HAMMER



Specially designed long neck for hammering over conduits. Drop forged from high grade steel. Polished finish. NuRed enamel neck and under claw for good visibility. Best quality hickory handle. No. 88, 18 oz. LIST $3.76

CHANNELLOCK PLIERS Are Made Only By Champion DeArment Tool Co., Meadville, Pa.

Multicore
FIVE-CORE SOLDER
World's finest!
ERSIN
Multicore
5-CORE SOLDER
ERSIN Multicore SOLDER
SERVICE PAK
Multicore
SAVBIT
Multicore
5 CORE SOLDER

MULTICORE SOLDER

Five separate cores of flux eliminate possibility of no flux in a portion of the wire, which may occur in single cored solder. Guaranteed continuity of the flux stream prevents "dry" joints, i.e., those having high electrical resistance.

Although there are five cores of flux in Multicore, the total percentage of flux to solder is less than many single cored solders. Very rapid melting results from the multiple core construction which provides thinner walls of solder than are found in the same gauge single cored solder. Multicore's unique properties make perfect joints possible on difficult metals and alloys, even if oxidized.

Ability to thin rapidly produces perfect joints with less solder. Greater coverage per pound.

ERSIN FLUX

Ersin Flux is exclusive to Multicore and will not be found in any other solder. It is a high grade, water white rosin, homogeneously activated.

Ersin Flux has a vigorous fluxing action and possesses the non-corrosive and protective features of the original rosin. Soldered joints made with Ersin Flux do not corrode even after prolonged exposure to any degree of humidity. Ersin Flux reduces the surface tension of molten solder, causing it to wet metals rapidly, increasing speed of operation with resultant production economies. Free from objectionable odor. Nontoxic in use. Leaves nothing but pure rosin on the work after soldering, and may be used wherever plain rosin is specified.

COPPER-LOADED SAVBIT ALLOY

Copper-loaded SAVBIT is one of a number of solder alloys developed for the industry by Multicore, it is entirely different—and, it is patented. SAVBIT alloy contains its own copper, and therefore will not take the copper of the soldering iron tip into the molten solution during soldering. This absorption of copper when any standard alloy is used is a basic reason for the wearing out of the expensive copper tips, and the need for constant refinishing of the tip.

Comparative tests with solders having pure tin/lead alloys and the new Ersin Multicore copper-loaded SAVBIT alloy have been made on assembly lines of electronic plants. Results of these tests have proven that startling production efficiencies and economies may be realized when the wear and corrosion of copper soldering iron tips is curbed, using SAVBIT alloy. Equally as important . . . a higher standard of soldering quality is assured for a much longer period of time.

SAVBIT alloy is available in Ersin Multicore 5-Core Solder containing non-corrosive extra fast Ersin flux in 14, 16, and 18 gauge. Its melting point is virtually the same as standard tin/lead alloys.

Alloys and Melting Points

Alloy	B. S. Grade	Multicore Color Code	Melting Temp. °C	Melting Temp. °F	Recommended Bit Temp. °C	Recommended Bit Temp. °F
60/40	K	Red	188	370	228	442
50/50	F	Yellow	212	414	252	476
45/55	(M)	Crimson/ Buff	215	419	255	491
40/60	G	Green	234	453	274	525

Approximate lengths per pound in feet

S.W.G.	Diameter	Dia. M/Ms	60/40	50/50	45/55	40/60
14	.080	2.032	65.7	62.6	61	60
16	.064	1.626	102	98	97	94.5
18	.048	1.219	182	174	172	167
20	0.36	.914	324			
22	0.28	.711	536			

New! HAND-CRAFTED *Gold Lion* Custom Tubes

Produced by General Electric Co. Ltd. of England

Gold Lion
CUSTOM TUBE
Genalex
KT77
GOLD LION
CUSTOM TUBE
Gold Lion
Genalex

A completely new series of plug-in replacement tubes, *hand-crafted* to give *higher power, lower distortion* and longer life.

In contrast to mass-produced tubes, which often vary widely in their characteristics, new Gold Lion tubes are made to extremely close tolerances, and individually 100% tested for major characteristics, including operation tests, noise and microphony. For the first time . . . an individual test report is packed with each tube, certifying measured production characteristics.

CROSS REFERENCE REPLACEMENT CHART

Replace these types	With these Gold Lion Tubes	Replace these types	With these Gold Lion Tubes	Replace these types	With these Gold Lion Tubes	Replace these types	With these Gold Lion Tubes
B309	B739	EZ90	U707	6L6G	KT66	6060	B739
D77	D717	E81CC	B739	6L6GB	KT77	6063	U707
EAA91	D717	U78	U707	6L6GC	KT88	6097	D717
EB91	D717	5U4G	U52	6X4	U707	6201	B739
ECC81	B739	5T4	U52	12AT7	B739	6202	U707
EF86	Z729	6AL5	D717	1614	KT66	6203	U707
EL34	KT77	6BQ5	N709	1622	KT66	6267	Z729
EL35	KT66	6BX4	U707	5726	D717	6550	KT88
EL36	KT66	6CA4	U709	5931	U52	6663	D717
EL37	KT66	6CA7	KT77	5932	KT66	6679	B739
EL39	KT66	6CF8	Z729	5881	KT66	7027	KT66
EL84	N709	6CN5	KT66	5993	U707	7027A	KT88
EZ81	U709	616	KT66	6058	D717	7581	KT77

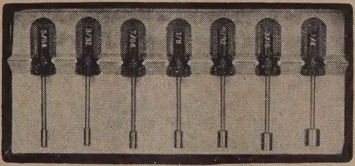
BRITISH INDUSTRIES CORPORATION - PORT WASHINGTON, N. Y.

DESCO *

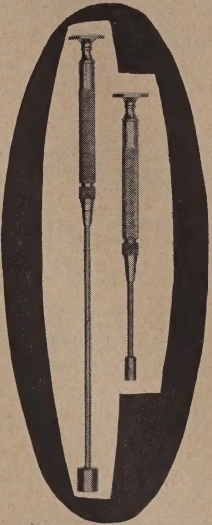
PROPERLY PROPORTIONED MINIATURE TOOLS

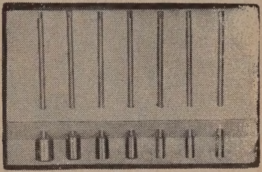
For precision instrument and model work use Desco "7" Miniature Nut Drivers. Available with Tenite handles, or for use with jewelers' screw driver handles. Also made with 5½″ long shanks for those hard-to-get-to places.

DESCO "7" Sizes across flats
5/64 3/32 7/64 1/8 5/32 3/16 1/4

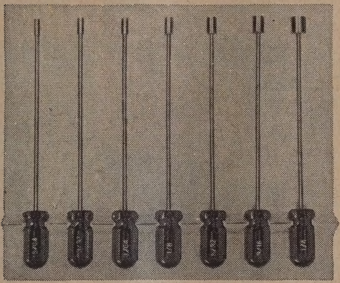


Set HS 7 List $5.95

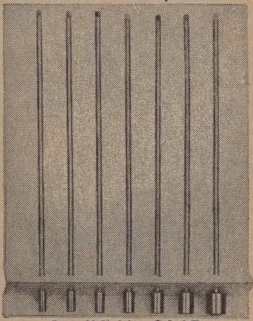




Set JS 7 List $4.95



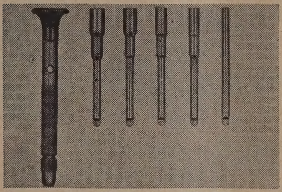
Set HL 7 List $5.95



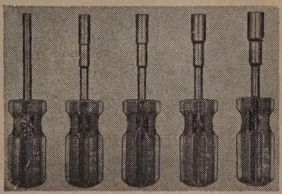
Set JL7 List $4.95

NON-MAGNETIC NUT DRIVERS available in HL7 and HS 7 series only. Specify "No-Mag" with the code number — same prices.

INTRODUCING THE DESCO "5" Series of Miniature Tools

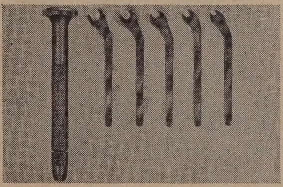


Set JD 5 List $3.50



Set HD 5 List $4.50

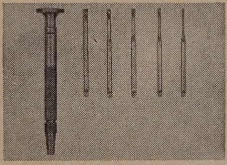
Deeper and more rugged than the "7" Series. Made only in 5/64, 3/32, 7/64, 1/8 and 5/32.



Set EW 5 Steel List $2.50

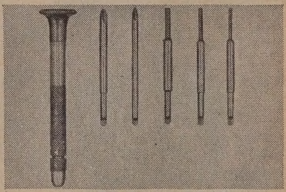
Set EWN 5 Non-Magnetic List $2.50

A practical miniature end wrench to fit the smallest nuts made 5/64 3/32 7/64 1/8 5/32.

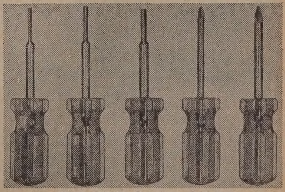


Set SS 5 List $1.98

Contains four screw driver blades and a fine scriber.



Set PA 5 List $2.50



Set PAH 5 List $3.50

Includes the two smallest Phillips drivers and the three smallest Allen wrenches.

* T. M.

All of the DESCO "5" and "7" Series are complete as shown.

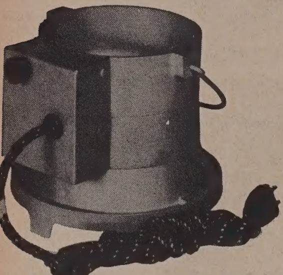
DESCO MFG. CO., DESCO GLENDALE, CALIF.

ESICO

Electric Solder Pots

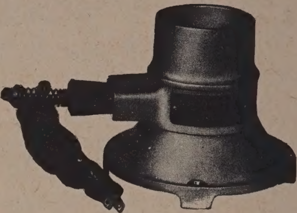
No. 12 & 12T →

This small pot is used largely for individual dipping of small parts and reaches a temperature of approximately 750°. The #12T, which has a thermostat, is adjusted normally to 400/600°. It can be adjusted to a higher temperature by the user. For higher temperatures use #36 or #60 elements.



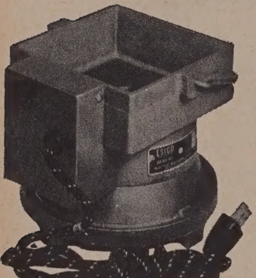
No. 70T ←

This is a thermostatically controlled pot, maintaining a temperature of 400/600°. Adjustable control permits the pot to be used anywhere between these two temperatures. See table below for details.



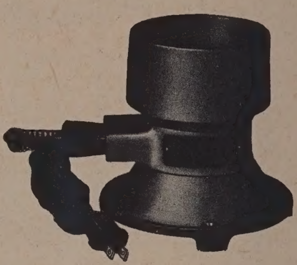
No. 36 & 36T →

This pot is used for dip soldering of bundles of lead wires. It operates at approximately 750°. The #36T has a thermostat set to 400/600°. The user; however, can adjust it for higher temperatures. The #60 element, for a hotter pot, is usable in the #36.



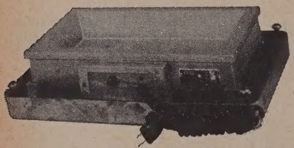
No. 75T ←

This pot is similar in operation to the #70T, but is intended for the dipping of small panels, which cannot be accommodated in a round pot. Temperature range is 400/600°. The pot is also available without a thermostat but is then catalogued as #75. Without a thermostat, the pot reaches a temperature of 850°. See table below for details.



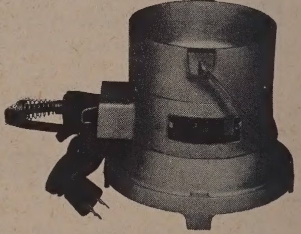
No. 60 & 60T →

This pot is used for volume tinning and operates at a temperature of 800°. On occasion where production requires greater heat drain capacity, elements of a higher wattage than the standard 325 watt have been supplied. However, we recommend the use of the #70 600W Pot for this greater heat requirement and higher temperature. The #60T has a thermostat set for 400/600°. The user can adjust the thermostat to a higher temperature. See table below for details.



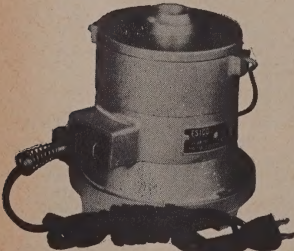
No. 80 ←

This pot is intended for printed circuit panels and is thermostatically controlled. Temperature range is 400/-600°. The pot stands on 4 corner posts in a sand tray, which has screws for leveling. See table below for details.



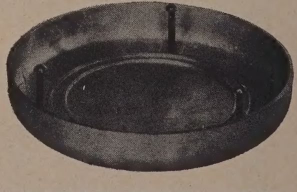
No. 70 →

This is a high heat pot reaching a temperature of approximately 900°, and has considerable heat drain capacity. Where pots are required for 220V operation, longer element life will be secured than in the case of the #60. See table below for details.



No. 90 ←

This is a high temperature pot intended for silver soldering, and will maintain a temperature of 1300/-1500°. See table below for details.



No. 1270 →

This sand tray will accommodate all of the round base solder pots shown on this sheet. The tray is fitted with leveling screws. See table below for details.

CAT. NO.	WATTS	DIA.	DEPTH	WIDTH	LENGTH	HEIGHT	THERMO-STAT	SOLDER CAP. LBS.	SHIPPING WEIGHT LBS.
12	200	1½″	1½″	——	——	4½″	No	¾	3¾
12T	200	1½″	1½″	——	——	4½″	Yes	¾	4½
36	250	2½″	1¾″	——	——	4¾″	No	2¼	4
36T	250	2½″	1¾″	——	——	4¾″	Yes	2¼	4¾
60	325	3½″	1⅛″	——	——	4¾″	No	3¾	5¼
60T	325	3½″	1⅛″	——	——	4¾″	Yes	3¾	6
70	600	4¾″	1⅝″	——	——	5½″	No	9	6¾
70T	600	4¾″	1⅝″	——	——	5½″	Yes	9	8
75	600	——	1¾″	4¾″	4¾″	5½″	No	11¾	8
75T	600	——	1¾″	4¾″	4¾″	5½″	Yes	11¾	9¾
80	1200	——	2″	6″	12″	3¾″	Yes	15	28
90	550	1⅛″	2⅞″	——	——	5½″	No	¾	8
1270	——	9¼″	1½″	——	——	——	——	——	2

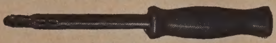
ESICO

REG. U. S. PAT. OFF.

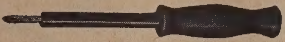
ELECTRIC SOLDERING IRONS FOR HOME, PROFESSIONAL MECHANIC AND FACTORY

● GREEN LABEL LINE

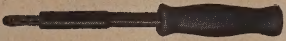
For intermittent duty. Meets all requirements of the home craftsman.



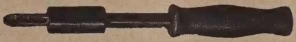
No. 415—List $2.48—3/8″ Tip—55 Watts



No. 416—List $3.75—1/4″ Tip—60 Watts



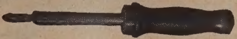
No. 417—List $5.00—3/8″ Tip—100 Watts



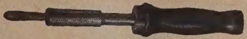
No. 418—List $6.28—1/2″ Tip—130 Watts

● ORANGE LABEL LINE

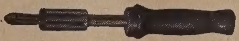
For Professional Mechanics — light or heavy soldering where iron must withstand operation for eight hour periods or more on frequent occasions.



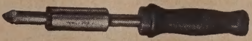
No. 62—List $6.26—1/4″ Tip—60 Watts



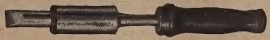
No. 63—List $7.53—3/8″ Tip—100 Watts



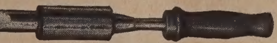
No. 64—List $8.81—1/2″ Tip—130 Watts



No. 65—List $10.08—5/8″ Tip—200 Watts



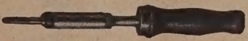
No. 67—List $11.30—7/8″ Tip—300 Watts



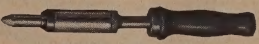
No. 69—List $13.83—1 1/8″ Tip—500 Watts

● RED LABEL LINE

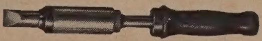
For Production Line Continuous Operations. These Irons are of most rugged construction.



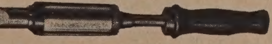
No. 38—List $8.81—3/8″ Tip—100 Watts



No. 58—List $11.30—5/8″ Tip—200 Watts



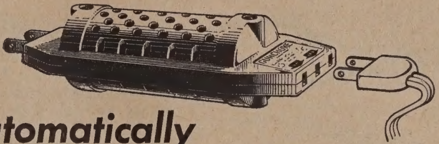
No. 78—List $13 83—7/8″ Tip—300 Watts



No. 98—List $16.36—1 1/8″ Tip—550 Watts

TAKE THE GUESSWORK OUT OF SOLDERING PRINTED CIRCUITS!

ESICO GUNCHOKE ®



Automatically

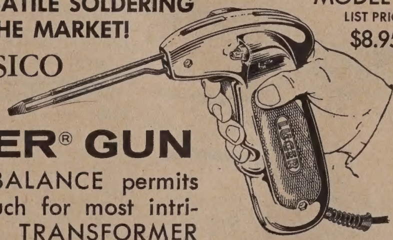
CONTROLS TEMPERATURE OF ALL WIDELY USED GUNS

Esico GUNCHOKE has been developed to permit normally high temperature guns to be automatically reduced to 500 and 600 degrees for low temperature soldering requirements such as printed circuits and transistors. GUNCHOKE is available in models adaptable for all widely used guns.

MOST VERSATILE SOLDERING GUN ON THE MARKET!

ESICO

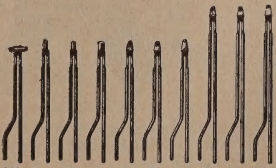
MODEL "C"
LIST PRICE
$8.95



LUGER® GUN

PERFECT BALANCE permits delicate touch for most intricate work. TRANSFORMER built in handle eliminates possibility of tip heaviness. TIP DESIGNS simplify soldering connections inaccessible with other guns. FULLY EQUIVALENT in solder melting capacity to any 150-watt gun.

TIPS ARE LONG AND THIN FOR GETTING INTO DEEP PLACES



For all soldering jobs. Will not anneal, bend or develop residue, even if left on circuit beyond operating cycle. In plastic vials.

Tips C4, C5 and C6 (not shown) are identical in shape to C1, C2 and C3, but are the same length (6″) as AB4, AB5 and AB6. Diameters: C1 & C4 — 1/8″; C2 & C5 — 3/16″; C3 & C6 — 1/4″; PC1 — 3/4″.

KITS OF TIPS

KIT AB: 1 ea. of AB1 through AB6
KIT C: 1 ea. of C1 through C6

LUGER
SOLDERING GUN TIPS

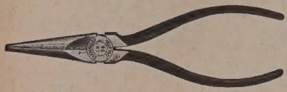
LIST PRICES KIT AB — $5.75
KIT C — $5.75

ELECTRIC SOLDERING IRON CO., INC. • Deep River, Conn.

DIAMOND® DIAMOND® DIAMALLOY®

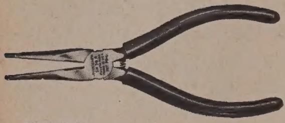
Insist on the Finest -- They Last Longer

"There is Nothing Finer Than a DIAMOND"

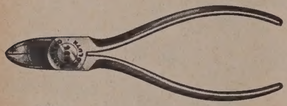


LN56

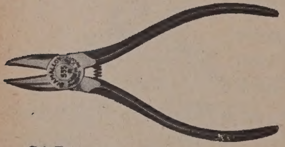
NN56



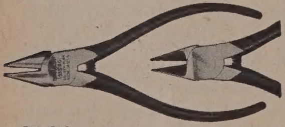
SN56RP



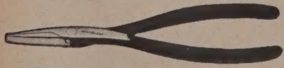
S54



S54R



S54RG



DB58

Diamalloy Electronic Pliers

LN56—LONG NOSE without cutter. End of jaws diamond scored. Size, 6 in. LN57—7 in.

NN56—NEEDLE NOSE with long slender jaws and strong gripping ability. End of jaws diamond scored. Size, 6 in. NN57—7 in.

SN56RP—LONG NOSE with side cutter, coil spring and plastic handles. Electronically hardened cutting edges. Size, 6 in. SN57RP—7 in.

S54—DIAGONAL CUTTING Electronically hardened cutting edges. Size, 4 in. S55—5 in.

S54R—DIAGONAL CUTTING with coil spring. Electronically hardened cutting edges. Size, 4 in. S55R—5 in.

S54RG—DIAGONAL CUTTER with coil spring. Flush ground jaw and tapered nose for use in tight spots. Size, 4 in. S55RG—5 in.

DB58—LONG REACH DUCK BILL PLIERS— Jaws diamond scored. Size, 8 in.

EC54—TRANSVERSE END CUTTER for cutting close to printed circuit boards. Easily resharpened. Size, 4 in.

LN54—ROUND NOSE with finely serrated jaws 1⅛" long. Tips 1/16". Size, 4 in.

CN54—CURVED NEEDLE NOSE. Same as LN54 except nose is bent 90°. Ideal for confined places.

SN54—LONG NOSE with side cutter. Same as LN54 except has side cutter in jaw.

DN54—FLAT NOSED with smooth jaws. Size, 4 in.

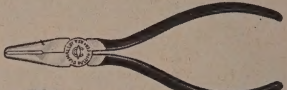
MS54—DIAGONAL CUTTER with extremely sharp cutting edges, ½" long for cutting fine wires. Size, 4 in.

ST55—WIRE STRIPPER with 4 holes accurately drilled and counterbored for 18, 20, 22, 26 gauge wire. Size, 5 in.

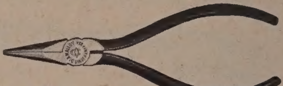
LC56—LONG NOSE SPECIAL with very fine cutter on end of nose for cutting very fine wire in confined places. Size, 6 in.

DIAMALLOY
S55 RG
DULUTH MINN
MADE IN USA

The strong coil spring is fastened to only one side of the pliers by a method covered by U. S. Patent. Will not fall out.

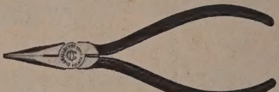


EC54



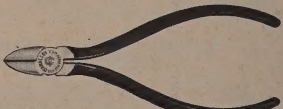
LN54

CN54

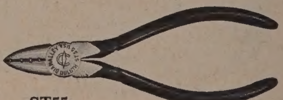


SN54

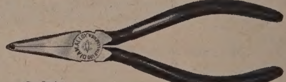
DN54



MS54



ST55



LC56

SOLD THROUGH LEADING ELECTRICAL SUPPLY WHOLESALERS
AND INDUSTRIAL DISTRIBUTORS

DIAMOND TOOL and Horseshoe Co.

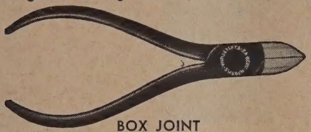
DULUTH · MINNESOTA Established 1908 TORONTO · ONTARIO

Berg
SWEDISH STEEL PLIERS

**ALL ITEMS CARRIED IN STOCK
FOR IMMEDIATE SHIPMENT**

All pliers packed ½ dozen per box

Diagonal Cutting Pliers



BOX JOINT

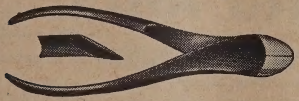
No. 526 .... 5" 3.25 6" 4.05

SINGLE JOINT

	4½"	5"	5½"	6"
No. 1525	2.90	3.00	3.15	3.75

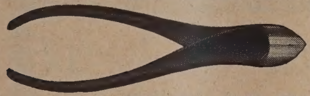
With wire stripping hole
1525-STR .... 4½" 3.15 5" 3.25

ANGLE NOSE Diagonal Cutting Pliers



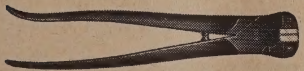
No. 2528 ...... 6½" 3.70 7½" 4.20

PIANO WIRE Diagonal Cutting Pliers



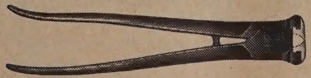
	4½"	5½"	6½"	7½"
No. 1528	2.50	3.20	3.70	4.20

PIANO WIRE Side Cutting Nippers with replaceable blades



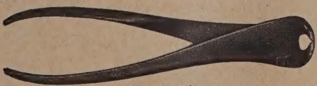
No. 1518 ...... 9" 5.50 10" 6.50
Extra Blades .. 9" .2.30 10" 2.55

PIANO WIRE End Cutting Nippers with replaceable blades



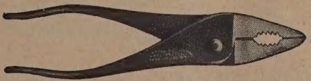
No. 1519 - 9" 7.50
Extra Blades 2.60

PIANO WIRE End Cutting Nippers



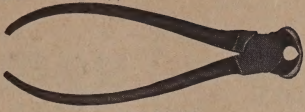
No. 527 .... 6" 3.10 7" 3.65

Slip Joint Pliers with wire cutters



No. 616 .... 5½" 2.80 7½" 3.25

End Cutting Nippers



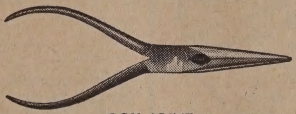
BOX JOINT

No. 522 - 6" 4.00

SINGLE JOINT

No. 523 - 6" 3.50

Long Nose Pliers with cutters



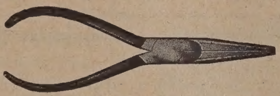
BOX JOINT

No. 590 .... 6" 4.00 7" 4.50

SINGLE JOINT

No. 1590 5" 3.40 6" 3.70 7" 4.25

Long Nose Pliers



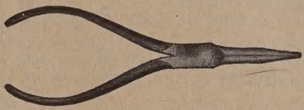
BOX JOINT

No. 533 5" 3.00 6" 3.25 7" 3.75

SINGLE JOINT

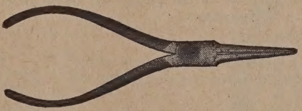
No. 2533 6" 2.80 7" 3.25 8" 3.90

Snipe Nose Pliers



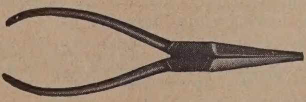
No. 1533 - 6" 3.10

Slender Duck Bill Pliers



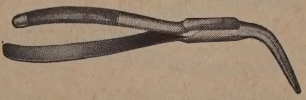
No. 1532 - 6" 3.10

Special Slender Electronic Duck Bill Pliers with BOX JOINT



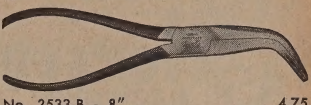
No. 530 .... 5" 2.80 6" 3.30

Curved Nose Pliers



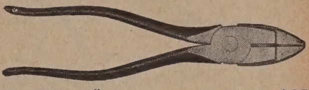
No. 1631 - 5½" 3.75

Special Bent Nose Pliers



No. 2533-B - 8" 4.75

Lineman's Pliers

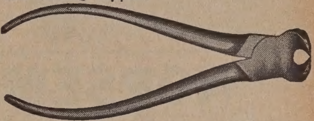


No. 697 - 8" 4.95

INSTRUMENT MAKERS and JEWELERS PLIERS

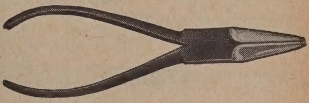
Full Polished

End Cutting Nippers



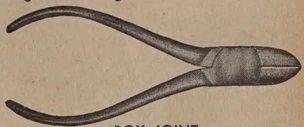
No. 523-P .... 4" 3.05 4½" 3.15

BOX JOINT Duck Bill Pliers



No. 531-4½P 3.05

Diagonal Cutting Pliers



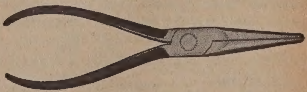
BOX JOINT

No. 526 - 4½P 3.75

SINGLE JOINT

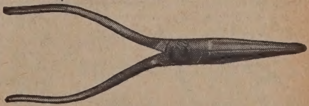
No. 1526-4P 3.45
No. 1525-4½P 3.45

BOX JOINT Snipe Nose Pliers



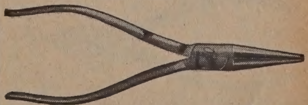
No. 533-P .... 4" 3.30 4½" 3.60

Slim Snipe Nose Pliers



No. 1520-P ...... 4" 3.00 4½" 3.25

Slim Round Nose Pliers



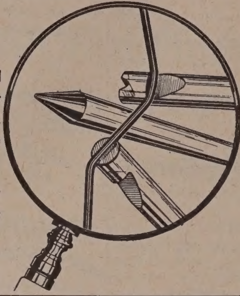
No. 5020-P ...... 4" 3.00 4½" 3.25

Norseman
ELECTRONIC TOOLS

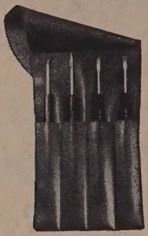
JIGGLE STICKS

Probes of Lucite, 1 end forked for pushing other end pointed for probing, notched on side for pulling wires.

PR 532-6 5/32" dia.	.30 net
PR 316-8 3/16" dia.	.35 net



NORSEMAN SOLDERING AID KIT



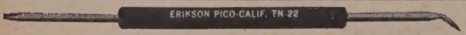
Red Vinyl plastic kit, packed with 4 Norseman Soldering Aids (TN-22, TN-33, TN-44, TN-55) as illustrated.

TNSA-4 complete kit	$4.35 net

Kit with 4 Norseman Soldering Aids with unbreakable aluminum handles (AL-22, AL-33, AL-44 & AL-55).

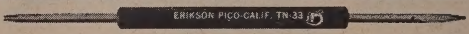
ALSA-4 complete kit	$4.35 net

NORSEMAN SOLDERING AIDS



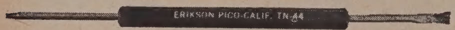
Red Handle

TN-22 Tenite II Handle	$ .75 net
AL-22 Aluminum Handle	$ .75 net



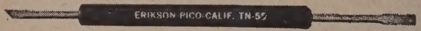
Green Handle

TN-33 Tenite II Handle	$ .75 net
AL-33 Aluminum Handle	$ .75 net



Black Handle

TN-44 Tenite II Handle	$ .90 net
AL-44 Aluminum Handle	$ .90 net



Blue Handle

TN-55 Tenite II Handle	$ .90 net
AL-55 Aluminum Handle	$ .90 net

PLASTIC HANDLES-(TN-22, TN-33, TN-44, TN-55) are of Tenite II, 4" x ⅜" hex and will not roll off the work bench. Shock-proof, practically unbreakable and will stand rough use on industrial production lines.

METAL HANDLES—(AL-22, AL-33, AL-44, AL-55) are aluminum alloy 4" x ⅜" hex and won't roll off the work bench. Being metal, are NOT SHOCK-PROOF and hence not recommended for ordinary radio-TV service work, especially on a 'live' unit. However, these handles are practically unbreakable and were designed to take rough use on industrial assembly lines and can be used as PRY BARS in lining up components.

METAL ENDS—(separated from each other) non-magnetic stainless steel, to which solder won't adhere. Are firmly seated in handles and are twist-proof.

FORKED END—straddles the wire and with a slight twist, grips it for easy unwinding and removal, or guides it into another lug for soldering. Since plastic handles act as insulation, there is no danger of shock when working on sets in operation. ⅛" forks are made especially for use on printed circuits and transistors.

SPADE END—is a reamer to clean lug holes of solder.

CURVED END—can be used as a scriber for marking chassis. As a circuit tracer when looking for loose connections. As a dial cord stringer. Hook can be bent to a 90 degree angle if desired.

KNIFE & SCRAPER—for cutting and repairing printed circuits.

WIRE BRUSH—has approx. 200 bristles of stainless wire .0035 in dia. For use in cleaning connections before soldering, brushing out splattered solder and in repairing printed circuits.

STAINLESS STEEL WIRE BRUSHES on steel shaft approximately 2" long over all. Can be used in a regular pin vise. **.33 net**

Packed 25 or 50 per box

Berg
SWEDISH STEEL PLIERS

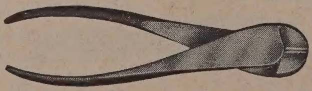
MADE IN ESKILSTUNA, SWEDEN, BY E. A. BERG MFG. CO. LTD. • EST. 1880

Only the best Swedish Charcoal Steel is used in the manufacture of Berg Pliers. Produced under exacting standards of control, they embody the most modern techniques of heat treatment and manufacture. Each plier is carefully engineered and designed to afford the greatest practical utility; lightness and ease of operation; and strength coupled with durability.

Special Electronic Diagonal Cutting Pliers with extra thin cutting edges, pointed nose and BOX JOINT

No. 525 - 5"	4.40

High Leverage Diagonal Cutting Pliers.



1508 - 7"	3.30

Straight Cutting Pliers with extended jaws

No. 1529 - 6½"	3.75

ERIKSON SPECIALIZED TOOL COMPANY, PICO, CALIF.

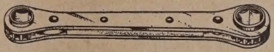
Norseman
ELECTRONIC TOOLS

STICKLE-BACK DRILSAWS

Made in Germany, this tool will drill holes in wood, plaster board, etc. and saw in any direction.

#0—5 x 5/32" dia.	$ .98 net
#1—7 x 3/16" dia.	1.85 net
#2—10 x ¼" dia.	2.45 net
#3—13 x 5/16" dia.	2.95 net
#4—15 x ⅜" dia.	3.25 net
#5—13 x ½" dia. (saw rasp)	2.25 net

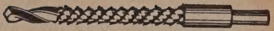
REVERSIBLE RATCHETS



A rugged ratcheting box wrench. No buttons, no levers — just turn it over to reverse the ratchet.

¼" x 5/16"	$2.35 net	⅝" x 11/16"	$3.90 net
⅜" x 7/16"	2.65 net	⅝" x ¾"	3.90 net
½" x 9/16"	3.60 net	¾" x ⅞"	4.50 net

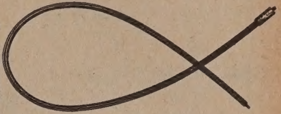
DRILL ROUTERS



Another "Stickle-back" tool, similar to the Drilsaw, but for use in electric drills.

#318-1 2⅜" x ¼" dia.	$1.40 net
#318-2 4½" x ¼" dia.	1.60 net

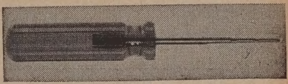
TIPPY STICKS



Flexible alignment tools of tenite II with a non-magnetic stainless steel tip. Permits snaking around obstructions and still turn screws and slugs.

ST-186 6" long	.40 net
ST-1810 10" long	.45 net
ST-1814 14" long	.50 net

TRI-TAPS

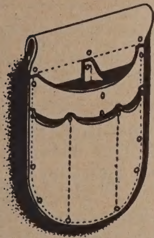


The original 3-in-1 **tool with 6/32", 8/32"** and 10/32" taps to clean or cut three of the most common threads used in electronic work.

T-3 .... $2.25 net T-4 tap only for HT-24 1.65 net

HT-24 with replaceable tap .... $2.85 net

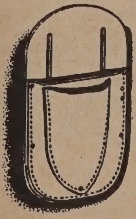
TOOL POUCHES



#14 Telephone lineman's pouch of chrome-tanned cowhide. One large separated pocket with three smaller ones in front. Riveted and stitched with linen thread. 6" x 9¼" .... $4.95 net

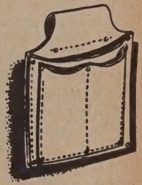
Electrician's Pouch. Bark-tanned top grain cowhide, riveted and stitched with linen thread. 7 pockets, loop for hammer, T-chain for roll of tape.

#17 10" x 9" .... $4.95 net



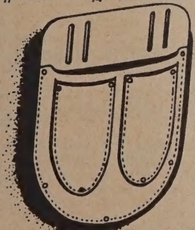
Bark-tanned top grain cowhide, riveted and stitched with linen thread. One large pocket, 1 smaller one in front.

#16 5" x 8¾" .... $2.15 net



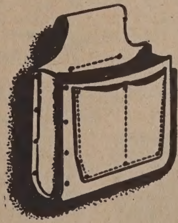
Bark-tanned top grain cowhide, riveted and stitched with linen thread. One large pocket, 2 smaller ones in front.

#15 5½" x 7¾" .... $2.85 net



Radio-TV Pouch. Bark-tanned top grain cowhide, riveted and stitched with linen thread. One large pocket, 2 smaller ones in front.

#19 8" x 10¼" .... $3.75 net



#18 Box type pouch of chrome-tanned cowhide. Large 2" wide pocket with two smaller ones in front. Riveted and stitched with linen thread.

6¼" x 9" .... $4.25 net

DIDDLE STICKS

Alignment tools of Lucite

10" long.

LU-1810 ⅛" dia.	.25 net
LU-53210 5/32" dia.	.25 net
LU-31610 3/16" dia.	25 net

14" long

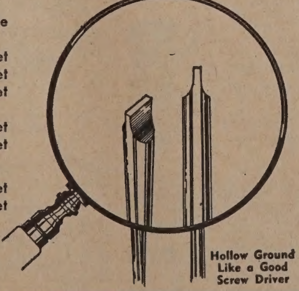
LU-53214 5/32" dia.	.35 net
LU-31614 3/16" dia.	.35 net

Rigid Vinyl 3/16" dia.

RV-31610 10" long	.25 net
RV-31614 14" long	.35 net

Fibre Glass ⅛" dia.

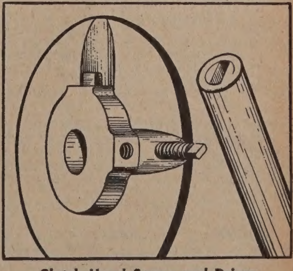
FG-1810 10" long	.35 net
FG-1814 14" long	.50 net
FG-1818 18" long	.65 net


Hollow Ground Like a Good Screw Driver

SLAB-HEAD DRIVERS

Drivers for SLAB-HEAD screws as used in Delco auto radios, Zenith & Arvin TV and 1956 models of Webcor recorders.

246-P ..... $1.80 net

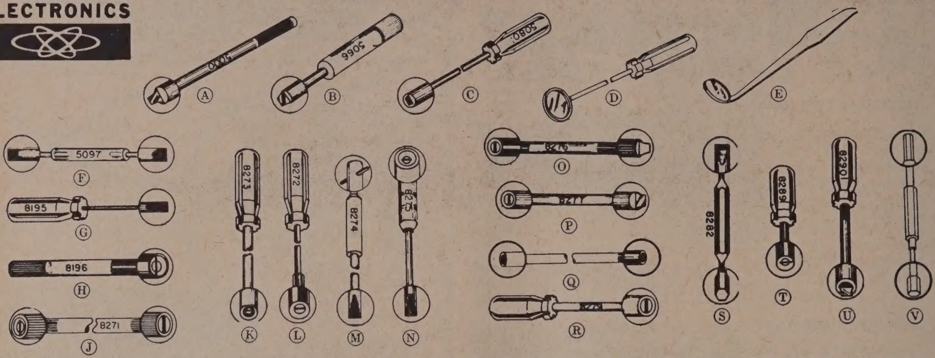


Clutch Head Screw and Driver

ERIKSON SPECIALIZED TOOL COMPANY, PICO, CALIF.

GC ELECTRONICS

ALIGNMENT TOOLS . . .



(A) G-C ALIGNMENT SCREWDRIVER—Low inductance metal tip screwdriver made of Butyrate material.
Cat. No. 5000 ¼″ Diameter x 6″ Tool List $ .55

(B) G-C TV ALIGNMENT TOOL—Very short, sturdy tool with a fine metal screwdriver blade.
Cat. No. 5066 2½″ long, 3/16″ Shaft Dia. List $ .60

(C) G-C TV ALIGNING WRENCH—New tool with ⅛″ square socket wrench, 7/32″ shaft with insulated handle.
Cat. No. 5080 List $ .90

(D) G-C INSPECTION MIRROR—Handy inspection mirror to inspect parts, coils, wiring, etc. Made of metal shaft with glass mirror and a plastic handle.
Cat. No. 5090 7⅞″ Inspection Mirror List $ .65

(E) G-C NEW ALL-PLASTIC INSPECTION MIRROR—Use to inspect coils, resistors, sockets, etc. while the chassis is hot. No danger of shorting.
Cat. No. 5090-P 7⅞″ Plastic Mirror List $ .65

(F) G-C K-TRAN TOOL—Specially designed for K-tran and I.F. transformers. Butyrate material, screwdriver on both ends.
Cat. No. 5097 6″ long, 5/32″ Fibre Tip, ⅛″ metal Tip List $1.30

(G) G-C TV CHANNEL TUNING TOOL—Completely insulated, non-metallic tool with long ⅛″ narrow blade. Made of bone fibre.
Cat. No. 8195 7¼″ long, ⅛″ shaft dia. List $1.20

(H) G-C TV AND FM TUNING TOOL—Special short tool with fine recessed screwdriver top for Television and FM adjustments. Made of Butyrate.
Cat. No. 8196 2½″ long, 7/32″ shaft dia. List $ .65

(J) G-C TV CORE ALIGNER—For Motorola and other sets using Stackpole or other stud type cores that are not slotted. Milled steel insert on one end, thin screwdriver blade on other end.
Cat. No. 8271 6″ long, 7/32″ shaft dia. List $ .95

(K) G-C TV I.F. OSCILLATOR ALIGNER—Specially made for I.F. and oscillator adjustments. Will fit all makes of sets—R.C.A., G.E., Philco, Admiral and others.
Cat. No. 8272 6½″ long, ¼″ tip dia. List $1.85

(L) G-C TV ALL-PURPOSE ALIGNER — Specially made for TV I.F. adjustments. Very thin spring steel tip is recessed so the tool will guide itself over the screws.
Cat. No. 8273 8″ long, 7/32″ shaft dia. List $1.15

(M) G-C TV LONG REACH ALIGNER—Specially made for Admiral, Zenith, R.C.A. and other sets for adjustments of nested iron cores that are hard to reach.
Cat. No. 8274 9″ long, ⅛″ shaft dia. List $1.25

(N) G-C TV ZENITH UNIVERSAL ALIGNER—Specially designed for Zenith and other sets. Made of bone fibre and plastic handle.
Cat. No. 8275 5″ long, ⅛″ shaft dia., ¼″ handle List $ .85

(O) G-C TV DUPLEX ALIGNER—An all-purpose TV aligner for trimmers and I.F. transformers. Made of Butyrate material with extra thin spring steel tips.
Cat. No. 8276 6″ long, 7/32″ shaft dia. List $ .85

(P) G-C TV "SHORTY" DUPLEX ALIGNER—Specially made for trimmer and I.F. transformers where space does not permit the use of a longer tool.
Cat. No. 8277 2½″ long, 7/32″ shaft dia. List $ .85

(Q) G-C TV TUNING WAND—Brass insert on end reduces inductance and iron core on other end increases the inductance.
Cat. No. 8278 6″ long, 7/32″ shaft dia. List $ .60

(R) G-C TV CORE ALIGNER—Tool has a recessed steel milled slot to fit over the Stackpole and other type stud cores that are not slotted.
Cat. No. 8279 7½″ long, 7/32″ shaft dia. List $1.15

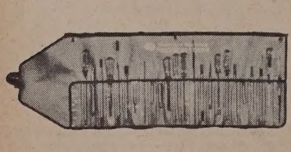
(S) G-C NEW ZENITH TV WRENCH & ALIGNER—New nylon plastic molded special tool made specially for Zenith TV sets.
Cat. No. 8282 5 7/16″ long, .100 Dia. Hex Wrench, .109 Screw Driver Dia. List $ .60

(T) G-C "SHORTY" TV ALIGNMENT SCREW DRIVER—Only 2″ long overall to adjust hard-to-get-at places under TV tubes, etc.
Cat. No. 8289 2″ long, 7/32″ shaft dia. List $ .75

(U) G-C UNIVERSAL SCREW DRIVER ALIGNER—Made of unbreakable flexible clear plastic shaft and an amber plastic handle.
Cat. No. 8290 7″ long, 7/32″ shaft dia. List $1.05

(V) G-C ZENITH-ADMIRAL NYLON HEX WRENCH—New nylon hex wrench alignment tool for Zenith, Admiral and other sets.
Cat. No. 8606 5″ wrench, 11″ long List $ .80
8606-L 11″ wrench, 11″ long List $1.05

GC ALIGNMENT TOOL KITS



MASTER DELUXE TOOL KIT—A super-deluxe kit in a superior leatherette roll type case. Contains 25 tools and includes all TV alignment tools except the extra long ones (over 9″) which would not fit in the case.
Cat. No. 8283 List $22.50

DELUXE ALIGNMENT TOOL KIT—Case is made of durable leatherette that will give long service. The steel tips are all extra thin and are of the best grade hardened spring steel that will give you service. Kit contains one each of 16 tools you need.
Cat. No. 8280 List $13.50

G-C ALL-PURPOSE TV ALIGNMENT KIT—A handy, all-purpose TV kit put up in a convenient plastic container. Kit contains four basic essential tools that will service the majority of TV sets.
Cat. No. 8457 List $3.25

STANDARD ALIGNMENT TOOL KIT—Made to last and wear—a quality kit. Kit contains 9 essential tools in roll type case.
Cat. No. 8455 List $7.95

G-C No. 5040 TOP 12 TOOL KIT—12 most popular TV alignment tools. Plastic roll-up case.
Cat. No. 5040 List $12.50

G-C CONTACT BURNISHING TOOL KIT—A complete kit for the servicing of relays, switches, etc. where critical contact points must be kept clean for ideal operation conditions.
Cat. No. 9339 List $1.25

NEW TINNERMAN NUT REMOVER—The new G-C Tinnerman Nut Remover is a handy dual purpose tool for removing large or small tinnerman nuts with just a twist. Eliminates fumbling with hard-to-remove nuts.
Cat. No. 9355 List $1.55

G-C ILLUMINATED INSPECTION AND SERVICE MIRROR—A hinge-mounted mirror fastens to a 6″ transparent lucite rod which transmits light from a small anodized aluminum flashlight.
Cat. No. 8725 ⅞″ Mirror, frame O.D. 1 1/16″ List $3.35

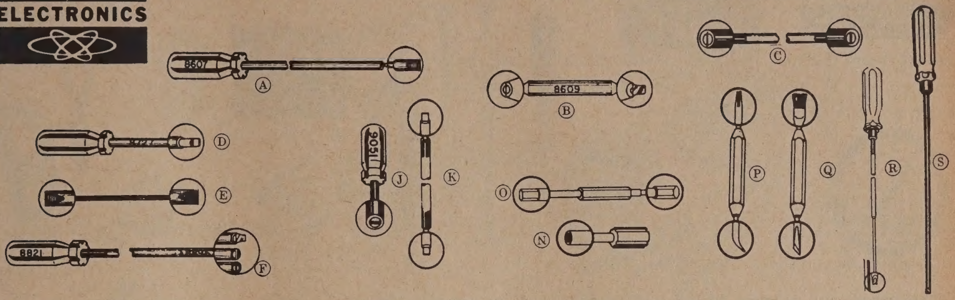
G-C SPEEDEX SLIM-TYPE SOLDER IRON TIPS—A new high-heat, turned-down tip made of one-piece copper. Will fit ⅜″ irons. Tips 4½″ long.
Cat. No. 8741 List $1.00

G-C SOLDER IRON TIPS—Bright plated to resist corrosion. These tips are made of best grade hard-drawn copper.

Cat. No.	Dia. Long	List
724	¼″x3″	$ .60
725	5/16″x4½″	.75
726	⅜″x4½″	.95
727	7/16″x4″	1.00

GC ALIGNMENT TOOLS . . .

GC ELECTRONICS



(A) G-C NEW NYLON TV LONG-REACH ALIGNER—Handy new long-reach TV aligner with insulated metal shaft and nylon tip. 12¼" long overall, .195 Shaft Dia.
Cat. No. 8607 TV Tool List **1.90**

(B) G-C ALIGNMENT TOOL—Handy to align and adjust TV sets, radio sets, etc. Made of clear plastic 5" long x ⅜" dia.
Cat. No. 8609 List **1.05**

(C) G-C TV 2-IN-1 LONG-REACH DUPLEX ALIGNER—Made of clear, unbreakable plastic material. Ends colored red and blue for size identification. Tips are made of spring steel recessed for easy location of stud.
Cat. No. 8721 9" long, 7/32" Shaft Dia. List **1.30**
8722 7" long, 7/32" Shaft Dia. List **1.10**

(D) NEW G-C K-TRAN TELEVISION ALIGNER—Specially made for K-Tran I.F. Transformer tuner slugs. Precision made of bone fibre.
Cat. No. 8727 6¼" long, 5/32" Tip Dia. List **.90**

(E) TV LONG REACH ALIGNMENT SCREW DRIVERS—Made of bone fibre, extra thin ⅛" diameter screw drivers for adjustment of TV receivers. Screw drivers tip on both ends—can be re-ground and used over.
Cat. No. 8728A ⅛"x7" long List **.65**
8728 ⅛"x12" long **.75**
8729 ⅛"x16" long **.95**

(F) G-C LONG ARM TV TOOL PLASTIC SHAFT—New, extra-long-reach alignment tool for Zenith sets and others where adjustments are had to get at. Tool is 18" long overall. 18" long, 7/32" Shaft Dia.
Cat. No. 8821 TV Tool (Type A) List **1.55**
8896 TV Tool (Type B) **1.55**
8897 TV Tool (Type C) **1.55**

(J) NEW ZENITH-RCA ALIGNING TOOL WITH HANDLE—Handle affords a better grip and easier adjustments. Length is 2½" with a 1½" shaft length. 7/32" diameter blade with recessed slot in blade end.
Cat. No. 9051 List **.80**

(K) NEW G-C STANDARD COIL SLUG TUNER ADJUSTING TOOL—A new special slug tuning tool especially made for adjusting Standard Tuners, etc. Completely insulated. 7½" long, ¼" shaft diameter, shaft ends .170 diameter.
Cat. No. 9087 List **1.10**

(N) G-C ADJUSTABLE SHORTY—Recessed tip TV alignment tool. Adjustable from 1¼" to 2" in length, for those hard-to-get-at places.
Cat. No. 9090 List **.80**

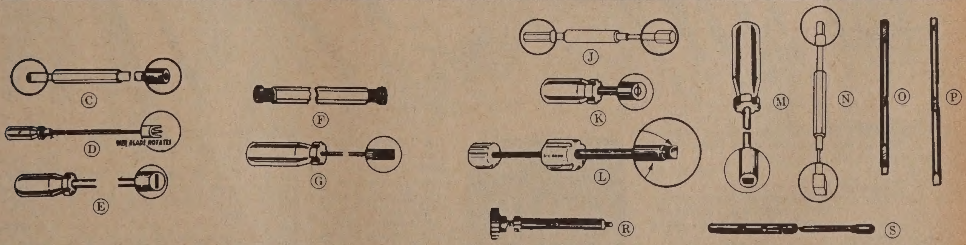
(O) G-C DOUBLE END IRON CORE TOOL—All nylon hex tool made to fit cores with .125 hex opening. One end of tool undercut so it can reach the bottom slug in coils without turning the top slug.
Cat. No. 9091 5" long List **.80**
9091-L 11" long **1.05**

(P) G-C PRINT-KOTE SOLDER AID PROBE—Handy, fine point probe specially designed to aid in probing and soldering printed circuits.
Cat. No. 9093 8" Length List **1.65**

(Q) G-C PRINT-KOTE BRUSH AND SCRAPER—Fine Stainless Steel brush and hardened steel scraper are required to scrape and clean the Silicone Resin from printed circuits.
Cat. No. 9094 8" Length List **1.65**

(R) G-C SLUG RETRIEVER TOOL—A precision made tool with hardened steel tips made for removing lost TV tuner slugs in Standard Coil tuners. Ends ground to fit standard coils.
Cat. No. 9096 12" Retriever List **3.70**
9097 15" Retriever **4.95**

(S) G-C MINI-HOLD SCREWDRIVERS—Speeds replacing of phono cartridges. Designed with exclusive "Wedge Action" enabling secure gripping of tiny screws. (Nos. 0, 1, 2, 3 and No. 8 set screws and smaller) Special short length (2⅞" when in use).
Cat. No. 9346 3¼" long, 2⅞" in use List **2.86**
9347 7" long, 6¾" in use **3.75**



(C) G-C RCA TV ALIGNMENT TOOL—Double end nylon tool with a recessed metal tip on one end and a plastic slot on the other end.
Cat. No. 9150 6" Length List **1.55**

(D) G-C SCREW STARTER SCREW DRIVER—A handy screw holding screwdriver that will start screws in hard-to-get-at places. Holds the screw securely while it starts it.
Cat. No. 9148 12" List **3.50**

(E) G-C TV AND AUTO RADIO WRENCH—Special female slotted wrench to remove screws and stud screws from auto radios and backs of TV sets, etc.
Cat. No. 9211 List **1.80**

(F) G-C DUAL NUT STARTER—New tool that holds and starts hex nuts or hex head screws in hard-to-get-at places. Fits ¼" and 5/16" hex nuts.
Cat. No. 9147 List **2.55**

(G) G-C FIBREGLASS SCREWDRIVER—Gives full protection on hot chassis when adjusting high potentials. For close-up hard-to-reach places. Cat. No. 9291 7" List **1.25**

(J) G-C NYLON HEX TOOLS—For the adjustment of iron cores inside mounted chassis, and the tuner adjustment of iron and brass slugs with hex heads. Has .100" hex and 5/32" handle.
Cat. No. 9295 11"x.100" Hex List **1.05**
9296 11"x.075" Hex **1.05**
9297 11"x.075" Hex **1.05**

(K) G-C SHORTY ALIGNMENT TOOL—A convenient tool for hard-to-get-at places. Has 3/16" shaft, 2" length. Overall length of tool 4".
Cat. No. 9298 List **.70**

(L) G-C COLOR TV TOOL—Used on convergence controls and others in color sets. The outer sleeve fits into the O.D. adjusting slot and the inner drive penetrates to the inside slot. Cat. No. 9299 List **2.10**

(M) G-C RCA WRENCH FOR VHF CHANNEL SELECTOR—Tool is made to fit square headed set screws in RCA VHF Channel Selector gear assembly without removing chassis.
Cat. No. 6035 List **1.80**

(N) G-C NEW TRANSISTOR I.F. CORE ALIGNMENT TOOL—One end square .055, opposite end rectangle nib. .047 x .078 to reach bottom slugs in iron cores.
Cat. No. 9440 11¾" long List **1.05**

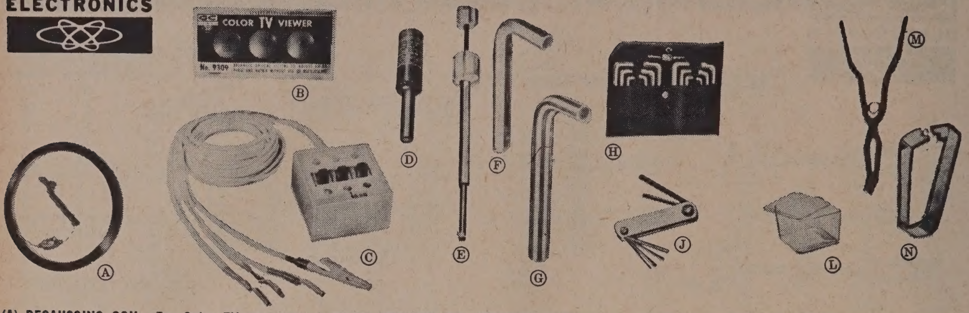
(O) G-C RCA ALIGNING TOOL—Made of 7/32" Butyrate rod, narrow screwdriver on one end and screw nib inserted on other end.
Cat. No. 5003 List **.90**

(P) G-C NO-METAL INSULATING ADJUSTMENT SCREW DRIVER—Made of black bone fibre. Indispensable for aligning all-wave sets.
Cat. No. 5004 7" long List **.80**
LOW-LOSS POLYSTYRENE TYPE—Ideal for U.H.F. Sets.

(R) G-C NEUTRALIZING TOOL—Combination screw driver and 5/16" hex wrench. Approved by U. S. Army Signal Corps.
Cat. No. 5027 List **3.20**

(S) G-C 4-in-1 ALIGNMENT TOOL—Consists of screw driver with metal nib, ¼" hex wrench slotted and 5/16" hex wrench on other end.
Cat. No. 5014 List **1.20**
G-C 5-in-1 ALIGNMENT TOOL—Consists of screw driver with metal nib, 5/16" hex wrench, ¼" hex wrench slotted, with metal screw driver on one end.
Cat. No. 5015 List **1.95**
G-C 6-in-1 ALIGNMENT TOOL—Consists of screw driver with metal nib, 5/16" hex wrench, ¼" hex side wrench and ¼" hex end wrench slotted.
Cat. No. 5016 List **1.85**

SERVICE AIDS



(A) DEGAUSSING COIL—For Color TV receivers. The G-C Degaussing Coil serves to demagnetize the magnetic fields set up in the color CRT due to the sensitivity of the tube.
Cat. No. 9317 List $29.95

(B) NEW G-C COLOR TV VIEWER—Has three transparent optical filters sealed in permanent plastic. Simplifies phase and matrix adjustments on color TV sets using a saturated color for signal. Makes adjustments possible in the home.
Cat. No. 9309 List $2.50

(C) G-C COLOR TV TEST BOX—Test color tubes with black-and-white test equipment. Extra long leads allow test box to be placed in front or rear of set.
Cat. No. 9318 List $8.50

(D) G-C COLOR TV CHEATER—A safety device for color TV receiver work. Used when applying Hi-voltage Probe through cheater.
Cat. No. 5650 List $ .99

(E) COLOR TV TOOL—Used on convergence controls and others in color sets. The outer sleeve fits into the O.D. adjusting slot and the inner-drive penetrates to the inside slot.
Cat. No. 9299 List $2.10

(F) G-C HEXAGON KEY WRENCHES KITS and ASSORTMENTS

Cat. No. H1600-F Plastic Box of 4 List $ .60
5029 Kit 5 Assorted Wrenches in Leatherette Case. $1.05

(G) SPLINE KEY WRENCHES KITS and ASSORTMENTS

Cat. No. H1602-F Plastic Box of 4 List $ .60
5070 Kit of 6 Assorted Wrenches in Leatherette Case 1.05

INDIVIDUAL WRENCHES

Cat. No.		List
5071	No. 4 Set Screw	$ .17
5071-A	No. 5 Set Screw	.17
5072	No. 6 Set Screw	.17
5073	No. 8 Set Screw, No. 4 Cap Screw	.17
5074	No. 10 Set Screw, No. 5-6 Cap Screw	.18

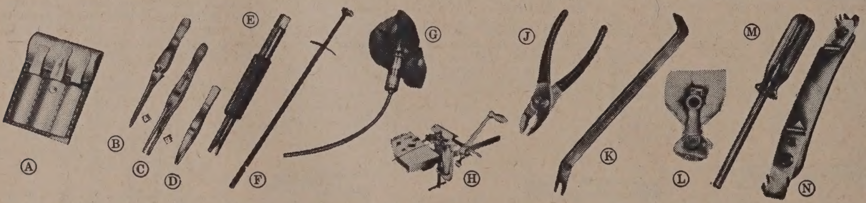
(H) G-C HEX-KEY AND SPLINE WRENCH KIT—A complete wrench kit for both hex and spline type screws. Twelve wrenches in an attractive leatherette case.
Cat. No. 5028 List $2.25

(J) G-C POCKET HEX KEY WRENCH SET— Seven popular size wrenches. .050 to ³⁄₁₆″ fitted in a steel case-like pocket knife blades.
Cat. No. 9124 List $2.75

(L) G-C PLASTIC BOXES—Clear plastic boxes for stocking small parts, screws, nuts, bolts, condensers, resistors, etc.
Cat. No. 8022 4″x4″x2½″ deep List $ .50
8023 4″x4″x8″ deep 1.00

(M) G-C LONG NOSE CLAMP PLIERS—Like an extra hand. Spring tension keeps the jaws closed unless handles are squeezed.
Cat. No. 5192 Straight Nose Pliers List $1.10
5193 Curved Nose Pliers 1.30

(N) G-C TV-RADIO KNOB PULLER—Simply slip the G-C Puller behind the knob and pull it off. Saves time, the cabinet and the knob.
Cat. No. 1063 List $ .55



(A) G-C TWEEZER KIT—For the shop or laboratory to pick up and examine small parts, start screws and nuts, etc.
Cat. No. 7950 List $3.80

(B) G-C TWEEZERS
Cat. No. 7946 6½″ Self-closing tweezer opens when squeezed; serrated, blunt points. List $1.30

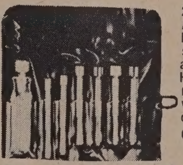
(C) G-C TWEEZERS
Cat. No. 7947 6½″ Heavy-duty type, with slide lock feature; holds wires or parts tight like an extra finger; serrated, blunt points. List $1.50

(D) G-C TWEEZERS
Cat. No. 7948 4½″ Precision tweezer, narrow pointed ends for delicate work. List $ .85

(E) G-C AUTO RADIO TUNER—A tuner tool to adjust auto radios and turn the controls when the radio is removed.
Cat. No. 8285 List $ .50

(F) G-C HANDY PICK-UP TOOL—One of the handiest tools you can have in your home, shop, office or farm. Tool is 15 inches long.
Cat. No. 5089 List $1.65

1. G-C TV 3-WAY ANTENNA KLIP—Buy them by the bag and have clips ready to sell and ready to install on TV sets.
Cat. No. 9015-X Bag of 10 List $2.40



2. G-C INTERCHANGEABLE HEX NUT DRIVER KIT—6 assorted nut drivers in a handy plastic case. Handle is non-inflammable amber plastic with a quick change chuck.
Cat. No. 9206 List $4.95

(G) G-C LONG-REACH TV AND RADIO LUBRICATOR—For radio and TV controls, bearings, phono motors, etc. Buy them by the pair—one for grease and one for light oil.
Cat. No. 8690 List $ .90

(H) G-C SPEEDEX SPRING WINDER—Simple to operate and springs can be made very fast. Any diameter spring and any size wire can be used.
Cat. No. 5209 List $24.95

(J) G-C NO-JOLT TOOL GRIPS—Modernizes old tools with new safety grip handles. Grease and oil resistant.
Cat. No. 5647 Small No-Jolt Plastic Tool Grips (1 pair) List $ .34
5648 Medium No-Jolt Plastic Tool Grips (1 pair) .42
5649 Large No-Jolt Plastic Tool Grips (1 pair) .50

(K) G-C PRY-UP TUBE LIFTER—Handy tool for removing tight tubes. Saves the fingers and the tubes.
Cat. No. 9213 List $ .35

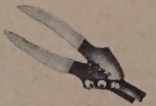
(L) G-C 4-in-1 TUBE GADGET—Four tools in one. Pure rubber, will not break.
Cat. No. 9130 List $1.25

(M) G-C NEW TV AND AUTO RADIO WRENCH—Special female slotted wrench to remove screws and stud screws from auto radios and backs of TV sets, etc.
Cat. No. 9211 List $1.80

(N) G-C NEW LOW LOSS TV LINE KLIP—A new all plastic clip with metal ends only. The best for UHF or fringe areas. Made of genuine polyethylene.
Cat. No. 9055 List $ .25
9055-X Bag of 10 2.45

6. G-C DUAL SHEET METAL PUNCH—Punches holes for Tube Sockets and Condensers for hand or power operation. Two punches ⅞″ and 1³⁄₃₂″ for one price.
Cat. No. 9260 List $5.95

7. G-C DUAL SHEET METAL PUNCH JR.—Punch neat, clean holes in chassis for tube sockets, condensers and for mounting other components. For ½″ and ¾″ holes.
Cat. No. 9261 List $5.95



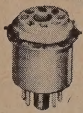
8. NEW G-C PRECISION 300-OHM TOOL—This specially designed tool cuts, slots, strips and crimps. Has shockproof, oil resistant plastic grips.
Cat. No. 9220 List $6.75

GC SERVICE AIDS

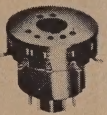
ELECTRONICS

G-C 7-PIN MINIATURE TEST SOCKET ADAPTER
Cat. No. 9247
List **$2.75**

G-C 7-PIN MINIATURE TEST SOCKET ADAPTER
Cat. No. 9249 List **$3.10**



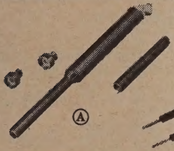
G-C 8-PIN OCTAL TEST SOCKET ADAPTER
Cat. No. 9248 List **$2.60**

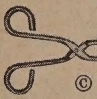


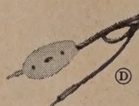
G-C DUO-DECAL TV TUBE TEST SOCKET ADAPTER — Designed for making measurements of voltage, resistance and video from the base of the picture tube. It is inserted between C.R. tube base and its socket.
Cat. No. 9251 List **$3.25**

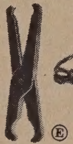
G-C TEST SOCKET ADAPTER KIT—This handy kit contains all 4 of G-C's Test Socket Adapters.
Cat. No. 9250 List **$11.70**

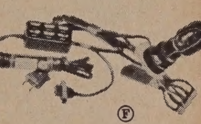
G-C ANGLE ANODE LEAD—A better anode lead with special "Ozone Proof" rubber. Cat. No. 8637 List **$.70**











(A) G-C CONTROL GUN KIT—Cleans and lubricates noisy volume controls. Constructed of solid aluminum—will not rust. Complete kit includes Gun, Adapter for extra long shanks, Adapter for ½-28 thread, and Auto Adapter for 7⁄16-28 thread.
Cat. No. 9285 List **$7.50**
Uses G-Control Kleener.
Cat. No. 65-16 16 oz. Bottle List $ **3.25**
65-G 1 Gallon **15.00**

G-C CONTROL GUN—Designed to clean and lubricate noisy volume controls in one sure, fast and easy operation. Gun nozzle fits over the control shaft and screws securely over the control base threads.
Cat. No. 9280 List **$6.25**

G-C CONTROL GUN ADAPTERS—Aluminum—won't rust when used with normal electronic chemicals.
Cat. No. 9281 To fit control shafts with ½-28 thread. List **$ .75**
9283 To fit control shafts with 7⁄16-28 thread. List **$ .75**
9282 For use on controls with extra long shanks List **$ .75**

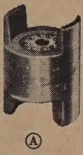
(B) G-C NE-O-LITE—A simple, safe, dependable electrical circuit tester—easy to use with a Neon Glow Lamp which varies in light intensity according to voltages. Traces all types of trouble, such as grounded lines, open circuits, short circuits, etc.
Cat. No. 5100 List **$ .75**

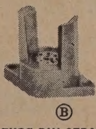
(C) G-C TUBE & PARTS EXTRACTOR—Originally designed by the U. S. Signal Corps. as standard equipment. Skillfully constructed of spring steel, cadmium plated. Has rubber cushion on the prongs.
Cat. No. 5092 List **$1.65**

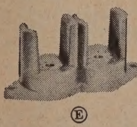
(D) G-C DANDY LITE TESTER—Your hand touches the lead to only one side of the line for extra safety. A simple, dependable tester for tracing electrical circuits, grounded lines, shorts, etc.
Cat. No. 8585 List **$1.35**

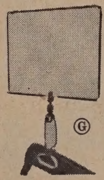
(E) G-C SPEEDEX FUSE PULLERS—Inexpensive—non-slip, fuse puller. Safe and handy for cartridge fuses.
Cat. No. 5525 Midget Size—for fuses ¼" to ½" dia. List **$ .85**
5526 Pocket Size—for fuses ½" to 1½" dia. Voltages to 200 amps at 250 volts and 100 amps at 600 volts List **$1.65**

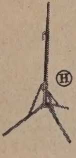
(F) G-C INSPECTION LIGHT—Built-in cheater cord. 3-way outlet and handy inspection light.
Cat. No. 707 List **$5.00**

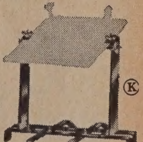












(A) G-C DUAL TUBE PIN STRAIGHTENER—A handy, miniature pin straightener for 7-pin and 9-pin miniature tubes. Accurately machined metal inserts on either end of the tool body, each made of hardened metal to assure accuracy and long life.
Cat. No. 9092 List **$1.85**

(B) G-C MINIATURE TUBE PIN STRAIGHTENER—Precision-constructed steel die, designed for straightening pins on fragile miniature tubes of the 1S5, 6AK5, 9002 variety.
Cat. No. 5191 For 7-pin Min. Tubes (red base) List **$1.25**
8105 For 9-pin Jumbo Tubes (blue base) List **$1.25**

(C) G-C TV "HIGH-VOLT" SAFETY PROBE & TESTER—A new handy tester for quickly checking TV high voltage circuits. Tester will glow when high voltage is okay.
Cat. No. 8836 List **$3.15**

(D) G-C AMO MINIATURE TUBE PULLER—AMO makes it possible to easily remove or insert miniature tubes such as 6AG5, 50B5, etc. It works on the suction and vacuum principle.
Cat. No. 5093 For 7-Pin Tubes List **$1.90**
8106 For 9-Pin Tubes **1.90**

(E) G-C DUPLEX TUBE PIN STRAIGHTENER—The handiest tube pin straightener for both miniature and jumbo miniature tubes of the 7- and 9-pin types.
Cat. No. 8655 List **$2.50**

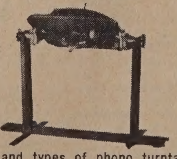
(F) G-C THIRD EYE DELUXE GLASS TV MIRROR—Here's a deluxe TV service mirror for adjusting and servicing TV sets. It is made with an adjustable and collapsible telescoping stand and 12" x 10" glass mirror that avoids distortion of the image.
Cat. No. 8390 Third Eye Mirror, Stand List **$8.00**
8391 Glass Mirror Only **4.00**
8199 Soft Bag for Mirror **1.75**

(G) G-C TV PORTO MIRROR—TV service mirror for adjusting rear controls and settings of TV sets. Supplied with a rubber lined spring clamp.
Cat. No. 8198 TV Metal Mirror, Spring Clamp List **$4.50**
8199 Soft Bag for Mirror List **$1.75**

(H) G-C TELEVISION MIRROR & EXTENSION LAMP COLLAPSIBLE STAND—Handy metal collapsible and adjustable stand for No. 8391 mirror or for clamping on metal mirrors or extension lamps.
Cat. No. 8392 List **$5.00**

(J) G-C KLEER LENS—A superior lens cleaning fluid packaged in a handy plastic spray type container. This cleaner will make the transparent protection shield in front of the picture tube crystal clear.
Cat. No. 9081 6-oz. List **$1.25**

(K) G-C "QUICK-RIG" RADIO-PHONO CHASSIS REPAIR CRADLE—Complete 360° rotation to lock chassis at best working angle. Clamps securely, makeshift setups, all metal.
Cat. No. 5205 List **$8.25**



G-C PHONO TURNTABLE STAND—Stand raises the turntable about 15 inches above the bench so you can easily look under the mechanism to check it while in operation. Easily adjusted to all sizes and types of phono turntables. Sturdily made of steel.
Cat. No. 5212 List **$12.50**

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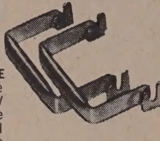
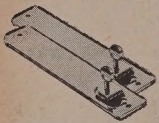
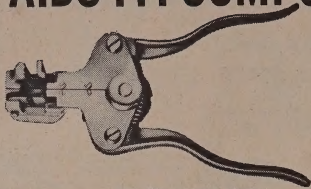
GC ELECTRONICS SERVICE AIDS . . . COMPONENTS



G-C TV CHASSIS SERVICE HANDLES. Here's a safe way of carrying TV Chassis. Handles made of smooth tubular steel simply lock on to chassis as chassis is lifted. Handles will not slip off until released.
Cat. No. 9023 Per Pair List $3.25



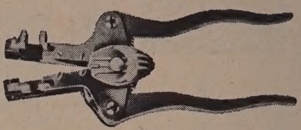
G-C TV CHASSIS SUPPORT. Prop chassis to easy working position on your bench or in the home. Simply slip it on the flange of chassis, tighten thumb screws and tilt chassis to position desired.
Cat. No. 9176 Per Pair List $3.00



SPEEDEX STANDARD WIRE STRIPPER. This is the popular inexpensive Speedex model that will work on 90% fo all stripping jobs. Blades are inter-changeable, hardened and precision ground to razor sharp edges.

No.	For Sizes Listed Below
733	12 to 20 Wire
733-A	14 to 30 Wire
733-B	10 to 18 Wire
733-C	8 to 10 Wire
733-D	16, 18, 20, 22 Wires
733-E	14, 16, 18 Wires
733-F	10, 12, 14 Wires
733-G	For No. 18 POSJ or Parallel Wire
733-H	For 300 ohm TV and FM twin transmission line
733-I	10, 12, 14, 16, 18, 20, 22 Wire
733-M	10 to 20 Wire
733-N	Straight Cutter Blades

Cat. No. 733 List $7.95



SPEEDEX AUTOMATIC WIRE STRIPPER. Equipped with "Trig-O-Matic" Stay-Open feature. Stay-Open features keeps wires from being crushed.

No.	For Sizes Listed Below
744	12 to 20 Wire
744-A	14 to 30 Wire
744-B	10 to 18 Wire
744-C	8 to 10 Wire
744D	16, 18, 20, 22 Wire
744-E	14, 16, 18 Wire
744-F	10, 12, 14 Wire
744-G	For No. 18 POSJ or Parallel Wire
744-H	For 300 ohm TV and FM twin transmission line
744-1	10, 12, 14, 16, 18, 20, 22 Wire
744-M	10 to 20 Wire
744-N	Straight Cutter Blades

Cat. No. 744 List $9.90

SPEEDEX SPEED-O-MATIC WIRE STRIPPER. Fully automatic delayed return action to prevent crushing fine wires. The Speed-O-Matic combines the features of all Speedex Wire Strippers.

No.	For Sizes Listed Below
766	12 to 20 Wire
766-A	14 to 30 Wire
766-B	10 to 18 Wire
766-C	8 to 10 Wire
766-D	16, 18, 20, 22 Wire
766-E	14, 16, 18 Wire
766-F	10, 12, 14 Wire
766-G	For No. 18 POSJ or Parallel Wire
766-H	For 300 ohm TV and FM twin transmission line
766-I	10, 12, 14, 16, 18, 20, 22 Wire
766-M	10 to 20 Wire
766-N	Straight Cutter Blades

Cat. No. 766 List $9.90

SPEEDEX WHIZ WIRE STRIPPER. All new economy model—a perfect all round general use wire stripper. Precision milled, hardened steel cutters.

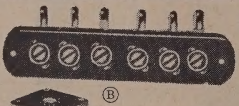
Cat. No.	
788	3 Hole Blade, Gauges 12 thru 22
788-B	3 Hole Blade, Gauges 10 thru 16
788-D	4 Hole Blade, Gauges 14 thru 24
788-H	300 ohm Blade forT win Lead-In

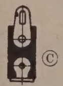
Cat. No. 788 List $6.60

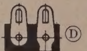
WIRE STRIPPER KIT
Speedex

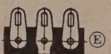
SPEEDEX WIRE STRIPPER KITS. Kits complete with Wire Strippers and seven different size blades neatly put up in a special permanent plasitc box. Very handy kit for the tool box, home workshop, maintenance and production.
Cat. No. 733-K Standard Stripper Kit List $15.95
744-K Auotmatic Stripper Kit $19.95
766-K Speed-O-Matic Stripper Kit $19.95

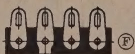
ELECTRONIC COMPONENTS

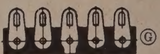


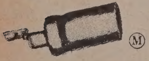


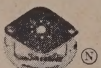


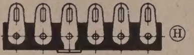


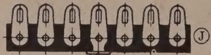


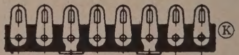












(A) G-C TERMINAL STRIP ASSORTMENT. A variety of most commonly used terminal strips. One to eight lug strips, 1/16" insulation, 3/8" spacing.
Cat. No. 9232 List $1.80

(B) G-C SCREW TYPE TERMINAL STRIPS. Mounted on laminated bakelite strips, rigidly constructed, terminals will not turn and short.

Cat. No.	Contacts	List
1772	2	$ .15
1772-C	(100-1772)	13.50
1773	3	.19
1773-C	(100-1773)	16.75
1774	4	.25
1774-C	(100-1774)	22.00
1775	5	.28
1775-C	(100-1775)	26.75
1776	6	.35
1776-C	(100-1776)	31.75
1777	7	.42
1777-C	(100-1777)	39.75
1778	8	.50
1778-C	(100-1778)	45.00
1779	9	.55
1779-C	(100-1779)	50.00
1780	10	.60
1780-C	(100-1780)	55.75

G-C STANDARD TERMINAL STRIPS. Insulation 1/16" Thick, 3/8" Spacing.

	Cat. No.		List
(C)	1781	1 Lug	$ .06
	1781-C	100 No. 1781	4.50
(D)	1782	2 lugs	$ .06
	1782-C	100 No. 1782	4.50
(E)	1783	3 lugs	$ .08
	1783-C	100 No. 1783	4.70
(F)	1784	4 lugs	$ .09
	1784-C	100 No. 1784	6.50
(G)	1785	5 lugs	$ .12
	1785-C	100 No. 1785	7.50
(H)	1786	6 lugs	$ .14
	1786-C	100 No. 1786	8.00
(J)	1787	7 lugs	$ .23
	1787-C	100 No. 1787	14.50
(K)	1788	8 lugs	$ .26
	1788-C	100 No. 1788	16.00

SPECIAL TERMINALS AVAILABLE IN QUANTITIES. SEND PRINTS FOR QUOTATIONS

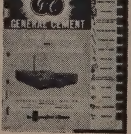
(M) G-C EXTENSION JACK & CONNECTOR. Special jack used in extending radio antenna cables and phonograph attachments.
Cat. No. 1744 List $ .16
1744-C 100 14.90

(N) G-C HIGH VOLTAGE ANTI-CORONA TV SOCKETS. Eight-prong octal and nine-pin miniature sockets for use in high voltage circuits using the 1B3, 1AX2, 1AX2A, etc.
Cat. No. 9070 8-prong octal List $ .60
9071 9-pin miniature .60

(O) G-C 9-PIN MINIATURE WAFER SOCKET. High quality plastic wafer socket, 9-pin type with phosphor bronze contacts. Standard 1⅛" mounting centers.
Cat. No. 1543 9-pin Wafer Sockets List $ .16
1544 9-pin Wafer Socket with Grounding Strap .18

FREE

GC Catalog . . ask your jobber

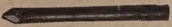


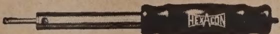
HEXACON ELECTRIC SOLDERING IRONS

VOLTAGE RANGE: 6 to 250 OPERATES IDENTICALLY ON A.C. OR D.C., ANY CYCLE
STANDARD VOLTAGES 110/120, 121/130, 220/250 SPECIFY VOLTAGE ON ORDER

Equipped with flexible 6-ft. approved Neoprene rubber heater cord, which is water-proof, kink-free, and resistant to oil, abrasion and heat. Nickel-chromium replaceable heating elements, insulated with finest mica, protected by rugged outer housing. Replaceable tips.

PLUG-TIP IRONS



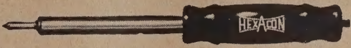


No. P-25 25 WATTS TIP DIA. 1/8" SHIP WT. 1/2 LB.........................**$6.50**

SMALLEST FULL-FLEDGED INDUSTRIAL IRON. Weight (less cord) only 3 oz. Length only 8". For extremely light soldering on finest wires, delicate instruments, jewelry, etc. Can also be furnished in higher wattages.

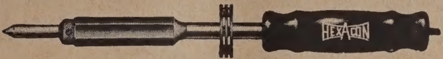
No. P-26 30 WATTS TIP DIA. 3/16" SHIP WT. 1/2 LB.........................**$6.50**

Same size and for same work as P-25, but where larger tip is required. Can be furnished in higher wattages.

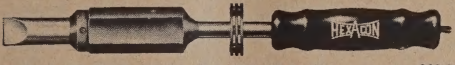


No. P-30 40 WATTS TIP DIA. 1/4" SHIP WT. 7/8 LB.........................**$7.25**

Very light soldering on fine wire and delicate instruments. Extra 1/8" dia. tip furnished with each iron. Also available in **50** or **60 watts.** Specify watts when ordering.

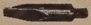


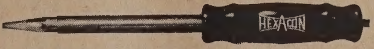
No. P-70	**80 WATTS**	TIP DIA. 3/8"	SHIP WT. 1 1/8 LB.	**$ 9.75**
No. P-100	**100 WATTS**	TIP DIA. 3/8"	SHIP WT. 1 3/8 LB.	**$10.75**
No. P-125	**130 WATTS**	TIP DIA. 5/8"	SHIP WT. 1 5/8 LB.	**$12.75**
No. P-150	**150 WATTS**	TIP DIA. 3/8"	SHIP WT. 1 1/2 LB.	**$11.75**
No. P-151	**175 WATTS**	TIP DIA. 1/2"	SHIP WT. 1 5/8 LB.	**$12.75**
No. P-200	**200 WATTS**	TIP DIA. 5/8"	SHIP WT. 2 3/8 LB.	**$13.25**
No. P-250	**250 WATTS**	TIP DIA. 5/8"	SHIP WT. 2 3/8 LB.	**$15.25**



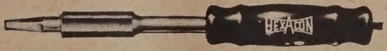
No. P-300	**300 WATTS**	TIP DIA. 7/8"	SHIP WT. 3 LB.	**$18.00**
No. P-550	**550 WATTS**	TIP DIA. 1 1/8"	SHIP WT. 4 3/8 LB.	**$23.25**

SCREW TIP IRONS

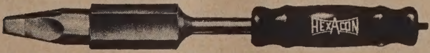




No. 50	**50 WATTS**	TIP DIA. 7/16"	SHIP WT. 1 LB.	**$ 7.25**

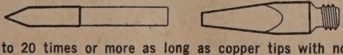


No. 60	**60 WATTS**	TIP DIA. 1/2"	SHIP WT. 1 1/8 LB.	**$10.00**
No. 85	**90 WATTS**	TIP DIA. 1/2"	SHIP WT. 1 1/8 LB.	**$10.75**
No. 120	**120 WATTS**	TIP DIA. 5/8"	SHIP WT. 1 3/8 LB.	**$11.75**
No. 130	**130 WATTS**	TIP DIA. 7/8"	SHIP WT. 1 1/2 LB.	**$13.50**
No. 170	**175 WATTS**	TIP DIA. 1"	SHIP WT. 2 1/4 LB.	**$15.00**



No. 225	**250 WATTS**	TIP DIA. 1 1/8"	SHIP WT. 2 3/4 LB.	**$17.75**
No. 350	**350 WATTS**	TIP DIA. 1 3/8"	SHIP WT. 3 1/2 LB.	**$20.75**
No. 500	**500 WATTS**	TIP DIA. 1 5/8"	SHIP WT. 4 3/8 LB.	**$23.75**
No. 700	**700 WATTS**	TIP DIA. 1 3/4"	SHIP WT. 5 5/8 LB.	**$43.00**

GREATLY EXPANDED LINE OF LONG-LIFE HEXCLAD AND XTRADUR TIPS



Last 10 to 20 times or more as long as copper tips with normal use and save maintenance cost. Have a durable coating of Iron Alloy over copper base on all surfaces for long wear. Do not erode or pit and thus deliver uniform heat. XTRADUR tips are multicoated for extra long wear by a new exclusive process. Solder adheres only to the working surface at point of tip—prevents solder dropping on components or creeping into tip hole. Eliminates costly tip maintenance. Available in all plug and screw tip sizes and shapes. 124 standard sizes and shapes, plus over 500 specials. Over 100,000 carried in stock. Can also furnish special HEXCLAD or XTRADUR tips made to your order. **Ask for Long-Life Tip Catalog For Prices And Full Details.**

SUPER-PENCIL IRONS

HOT TIP **(Weighs only 2 oz.)** **COOL HANDLE**

Length 7 3/4" **Ship Wt. 1/2 lb.**

No. 25S	**25 Watts**	(higher wattages	1/8" Tip	**$6.50**
No. 26S	**30 Watts**	are available)	3/16" Tip	**$6.50**

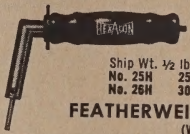
All the advantages of a Soldering Pencil, but a full-fledged industrial soldering iron with nickel-chromium mica-wound element. Tiny tips outperform irons with larger tips and higher wattages.

No. 24S	**50 Watts**	1/4" Tip	**$9.55**

Fastest and most durable Pencil Iron. Weighs but 2 oz. Price includes XTRADUR Extra-Long-Life HEXCLAD Tip.

BANTAMWEIGHT HATCHET IRONS

(Weighs only 3 oz.)



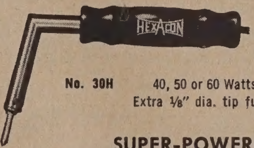
Smallest Hatchet Soldering Iron. Perfect balance gives effortless soldering at its best. Tiny tips outperform irons with larger tips and higher wattages.

Ship Wt. 1/2 lb. **See Bulletin 25H for Further Details.**

No. 25H	**25 Watts**	(higher wattages	1/8" Tip	**$7.00**
No. 26H	**30 Watts**	are available)	3/16" Tip	**$7.00**

FEATHERWEIGHT HATCHET IRON

(Weighs only 5 oz.)



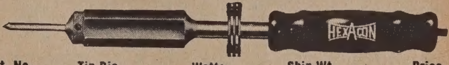
More powerful than wattage rating indicates. Hatchet design makes iron effortless to use. Ship Wt. 7/8 lb. **See Bulletin 30H for Further Details.**

No. 30H	40, 50 or 60 Watts	1/4" Tip	**$7.75**

Extra 1/8" dia. tip furnished with each iron.

SUPER-POWERED IRONS

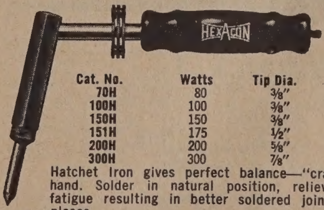
HIGHER SPEED **SMALLER TIPS**



Cat. No.	**Tip Dia.**	**Watts**	**Ship Wt.**	**Price**
P-114	1/4"	100	1 3/8 lbs.	**$10.75**
P-154	1/4"	150	1 1/2 lbs.	**$11.75**
P-214 (shown)	1/4"	200	2 1/8 lbs.	**$13.25**
P-238	3/8"	200	2 1/4 lbs.	**$13.25**
P-212	1/2"	200	2 1/4 lbs.	**$13.25**
P-338	3/8"	300	2 3/4 lbs.	**$18.00**

SOLDER FASTER WITH LOWER TIP COST! For example, Cat. No. P-214 has more speed than conventional 200 watt iron, but takes 1/4" tip instead of 5/8" (saves 84% of tip copper). Widely used on production line soldering of TV sets, etc.

HATCHET TYPE IRONS



Perfect Balance
Less Fatigue
See What You Solder

Cat. No.	**Watts**	**Tip Dia.**	**Ship Wt.**	
70H	80	3/8"	1 3/8 lbs.	**$12.00**
100H	100	3/8"	1 1/2 lbs.	**$13.00**
150H	150	3/8"	1 5/8 lbs.	**$14.00**
151H	175	1/2"	1 5/8 lbs.	**$14.75**
200H	200	5/8"	2 1/4 lbs.	**$15.25**
300H	300	7/8"	3 lbs.	**$19.75**

Hatchet Iron gives perfect balance—"cradles" in operator's hand. Solder in natural position, relieving arm and back fatigue resulting in better soldered joints. For inaccessible places.

FEATHERWEIGHT INSTANT SOLDER GUNS

120 Volts, A.C. or D.C.—150 Watts
Listed by Underwriters' Laboratories

For intermittent soldering, electrical maintenance, laboratory use, repairing electronic equipment, etc. For shop or home.

Solders in seconds. Conventional lifetime tip cannot bend or wear. No tip maintenance required.

Cat. No.	**Tip Dia.**	**Ship Wt.**	**Price**
G14	1/4"	1 1/4 lbs.	**$7.95**
G148	1/8"	1 1/4 lbs.	**$7.95**

Heater-Tip Assembly ....**each $4.00**

HEXACON ELECTRIC COMPANY • ROSELLE PARK, N. J.
In Canada: Adlam Tool & Supply Co., 1015 St. Alexander St., Montreal. Export Division: 36 Pearl St., New York 4, N. Y.

SOLDERING IRONS

Equipped with Quick, Long-Life Calrod® Heaters

FOR MANUFACTURING AND SERVICE OF RADIO AND ELECTRONIC EQUIPMENT

ASK YOUR GENERAL ELECTRIC DISTRIBUTOR FOR A COPY OF BULLETIN GED-3553.

HEAVY-PRODUCTION SOLDERING IRONS

(Listed by Underwriters' Laboratories)

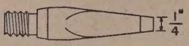
High efficiency and reserve-heat capacity make these General Electric soldering irons well-suited for continuous-production soldering as well as intermittent duty.

Quick, dependable heating provided by General Electric Calrod cartridge heating elements.

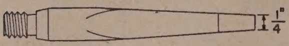
Ironclad tips for high-speed repetitive soldering last up to ten times as long as plain copper tips. Ironclad construction combines the fast heat transfer of copper and long wearing qualities of iron.

Calorized copper tips—For **ordinary** soldering requirements, these tips will last much longer than plain copper tips.

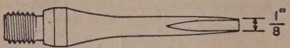
All copper parts are Calorized—Calorized surfaces retard the harmful effects of high temperature on copper.



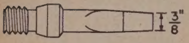
A. ¼-inch short chisel tip



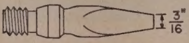
B. ¼-inch long chisel tip



C. ⅛-inch chisel tip

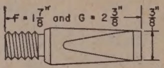


D. ⅜-inch chisel tip

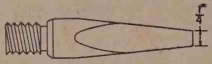


E. $\frac{3}{16}$-inch chisel tip

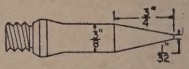
Fig. I. Tips



F. and G. ⅜-inch short-taper chisel tips



H. ¼-inch blunt chisel tip



J. Long-taper cone tip

Soldering Iron, Less Tip					Renewal Heater†		Tips				
Cat. No.	Rating* Volts	Rating* Watts	List Price Each‡	Standard Package	Cat. No.	List Price Each‡	Cat. No.	Tip Width (Fig. 1)	Type	List Price Each‡	Standard Pkg. Qty.
6A161	115	75	$14.95	6	6A31	$4.50	6808345AAP2	A	Calorized	$1.05	12
							6851775P21	A	Ironclad	1.85	12
6A162	115	100	14.95	6	6A32	4.50	6808345AAP3	B	Calorized	1.75	12
							6851775P22	B	Ironclad	3.55	12
							111A4195P1	C	Calorized	1.35	12
6A162G6	115	110	14.95	6	7C342	4.50	111A4195P2	C	Ironclad	1.75	12
							6851732P21	D	Calorized	1.05	12
							6851732P22	D	Ironclad	1.85	12
6A162G3	115	125	14.95	6	8A88	4.50	9817171P22	E	Ironclad	1.85	12
							111A4196P1	F	Ironclad	2.30	12
6A162G12	115	140	14.95	6	7C474	4.50	111A4196P2	G	Ironclad	2.75	12
							40A100466P2	H	Ironclad	2.20	12
							125A8448P1	J	Ironclad	1.80	12

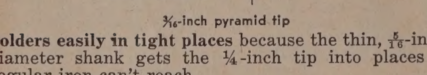
* Also available for 230-volt operation.

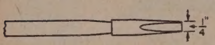
† Renewal heaters standard package is 6.

Note: All of the interchangeable tips listed above will fit any iron in the 6A161 and 6A162 series.

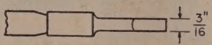
MEDIUM-PRODUCTION SOLDERING IRONS

(Listed by Underwriters' Laboratories)

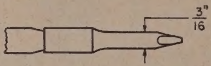




¼-inch chisel tip



$\frac{3}{16}$-inch chisel tip



$\frac{3}{16}$-inch pyramid tip

Solders easily in tight places because the thin, $\frac{5}{16}$-inch diameter shank gets the ¼-inch tip into places a regular iron can't reach.

Reduces operator fatigue—Iron weighs only 8½ ounces, is well balanced and has comfortable handle.

Produces uniformly strong soldered joints because iron's quick heat recovery produces enough heat for hard, continual use.

Saves on maintenance—Fewer interruptions in production result because iron's sturdy construction and long-life ironclad tip eliminates need for frequent repairs.

Tip renewal is easy and inexpensive—Unscrew shank from handle and replace with new, low-cost assembly in seconds. New tips can be brazed to heater assembly if desired.

SOLDERING IRON (Complete)* 120 V, 60 W

Cat. No.	Tip Dia. in Inches (All Ironclad Copper)	List Price Each‡	Standard Package Quantity
6A273	¼ Chisel	$14.20	6
6A283	$\frac{3}{16}$ Pyramid	14.20	6
6A283G23	$\frac{3}{16}$ Chisel	14.20	6

* Lightweight industrial irons have Ironclad tips only. Price includes 6-foot Type SJ cord.

RENEWAL TIP AND HEATER

Cat. No.	Tip Dia. in Inches (All Ironclad Copper)	List Price Each‡	Standard Package Quantity
6A300	¼ Chisel	$6.95	6
6A301	$\frac{3}{16}$ Pyramid	6.95	6
6A301G4	$\frac{3}{16}$ Chisel	6.95	6

TIP ONLY

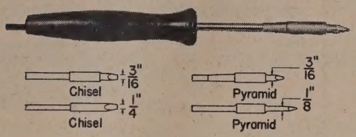
Cat. No.	Size in Inches (All Ironclad Copper)	List Price Each‡	Standard Package Quantity
326A964P21	¼ Chisel	$1.80	12
326A964P22	$\frac{3}{16}$ Pyramid	1.80	12
166V707P21	$\frac{3}{16}$ Chisel	1.80	12

‡ Manufacturer's suggested resale price.

SOLDERING IRONS

LIGHT TO MEDIUM-PRODUCTION SOLDERING IRONS

(Listed by Underwriters' Laboratories)



Improves operator efficiency — Handles like a pencil, weighs only 1¾ oz.
Cuts maintenance costs—Ironclad tips last up to ten times longer than conventional tips.
Increases production — Heater is built into tip for quick heat recovery, fast heat transfer.
Provides greater versatility with four tip sizes.
Tip renewal is easy, fast—Complete tip and heater assembly can be changed in five seconds.

TRANSFORMERS

Specially designed transformers are available as optional equipment in three types. Single-tap transformer is for use where only one soldering heat is required. Four-tap transformer gives wide range of heats (from 26 to 35 watts) for close temperature control of tips. Where lower heat is required for printed-circuit-board application, the Cat. No. 6A434 transformer can be used. The low-heat tap controls the tip temperature to 575 to 600F. The medium-heat tap supplies 28 watts and high-heat tap 35 watts. Through the use of this transformer the iron is completely isolated, thus preventing injury to low-voltage components such as transistors and diodes.

SOLDERING IRON (Complete) 6 V, 25 W

Complete Iron Cat. No.	Tip Dia. (Inches)	List Price Each‡	Renewal-Tip and Heater Cat. No.	List Price Each‡	Std. Pkg. Qty.
6A210	¼ Chisel	$7.60	6A211	$3.95	6
6A212	⅛ Pyramid	7.60	6A213	3.95	6
6A214	3/16 Pyramid	7.60	6A215	3.95	6
6A216	3/16 Chisel	7.60	6A217	3.95	6

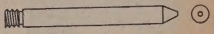
SOLDERING IRON (with Heater Assembly for Interchangeable Tips)

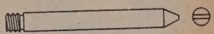
Complete Iron Cat. No.	Tip Dia. (Inches)	List-Price Each‡	Renewal Heaters Cat. No.	List Price Each‡	Std. Pkg. Qty.
6A218	3 Pencil	$7.60	6A219	$3.95	6
6A218G2	4¼ Pencil	7.60	6A219G2	3.95	6

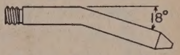
THREADED TIPS FOR 6A218 SERIES

Cat. No.	Tip Size (Inches)	List Price Each‡
40A100139P1	5/32 Cone	$0.60
40A100139P2	5/32 Chisel	.60
50A100139P3	5/32 Offset Cone	.60

Material is nickel-plated copper 5/32-inch diameter.


5/32 inch cone tip


5/32-inch chisel tip



5/32-inch offset cone tip

45-WATT TIP AND HEATER ■

Cat. No.	Tip Size (Inches)	List Price Each‡
6A211G3	⅜ Chisel	$4.50

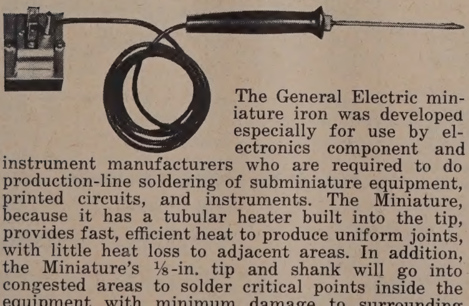
■ Designed especially for users of Midget Irons who have some applications which require greater heat reserve or a higher repetitive soldering rate than can be supported by the standard tip and heater assemblies. Fits standard Midget handle.

TRANSFORMERS

Description	115-volt Primary Cat. No.	List Price Each‡	Description	115-Volt Primary Cat. No.○	List Price Each‡
Single-tap	6A362G2	$6.90	3-heat with switch	6A434△	$17.00
Four-tap	6A364G2	9.20	Handle and cord set	9218864G8	4.15

● Transformers available with 230-volt primary in quantities of 24 or more. Specify Cat. No. of 115-volt transformers but indicate "with 230-volt primary."
△ Use of this transformer requires special cord set with plug. Order Cat. No. 9218864G8 handle and cord set with tip and easy assy. desired. Transformer furnished with 3-conductor cord set and crowfoot plug.

MINIATURE-PRODUCTION SOLDERING IRONS



The General Electric miniature iron was developed especially for use by electronics component and instrument manufacturers who are required to do production-line soldering of subminiature equipment, printed circuits, and instruments. The Miniature, because it has a tubular heater built into the tip, provides fast, efficient heat to produce uniform joints, with little heat loss to adjacent areas. In addition, the Miniature's ⅛-in. tip and shank will go into congested areas to solder critical points inside the equipment with minimum damage to surrounding insulation, joints, and wiring.

Improves operator efficiency — Weighs less than 1½ oz, reduces operator fatigue, increases production.

Portable — Transformer integral part of cord set, plugs into any standard 115-v outlet.

ACCESSORIES (Minimum Order Quantity is 6)

Pistol-grip handle (6A160 series only)—Specify Cat. No. of standard iron desired, note on order "Except pistol-grip handle." Add $1.30 List per iron.

Three-conductor Cord Set—6-foot length with NEMA standard plug. Specify Cat. No. of standard iron desired, note on order "Except three-conductor cord set with NEMA standard plug. Add $1.20 List per iron.

Coiled Cord Set—6-foot extended length, two-conductor with standard plug. Specify Cat. No. of standard iron desired, note on order "Except with coiled cord set, two-conductor, standard plug." Add $1.75 List per iron.

SOLDERING IRON 6 V, 12 W

Cat. No.	Description	Tip & Heater Dia. (In.)	Shank Length (In.)	List Price Each‡	Std. Pkg. Qty.
6A428G3	Complete iron including tip and heater assembly, 6-ft cord and transformer.	⅛ Chisel	3	$15	6
6A428G4		⅛ Chisel	6	15	6
6A428G7		⅛ Pyramid	3	15	6
6A428G8		⅛ Pyramid	6	15	6
6A428G5	Complete iron, less transformer (includes tip, heater assembly, and 6-ft cord set with terminals).	⅛ Chisel	3	9	6
6A428G6		⅛ Chisel	6	9	6

RENEWAL TIP AND HEATER ASSEMBLY

Cat. No.	Tip Diameter (Inches)	Shank Length (Inches)	List Price Each‡	Std. Package Quantity
6A429G3	⅛ Chisel	3	$5.50	6
6A429G4	⅛ Chisel	6	5.50	6
6A429G5	⅛ Pyramid	3	5.50	6
6A429G6	⅛ Pyramid	6	5.50	6

RENEWAL TRANSFORMERS*

Cat. No.	List Price Each‡	Std. Pkg. Qty.
6A430	$7.80	6

* Includes 6-foot integral cord set.

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‡ Manufacturer's suggested resale price.

TOOLS FOR CRAFTSMEN
GREENLEE

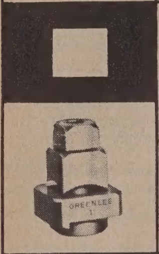
CHASSIS PUNCHES

ROUND, SQUARE, "KEY," AND "D" TYPES

Greenlee Tool Co., Rockford, Illinois

NO. 730 ROUND PUNCH

Swiftly cuts clean, accurate holes in radio chassis for sockets, switches, controls and other equipment. Operates simply with an ordinary wrench for drive power . . . just insert in a small drilled hole and turn drive screw. No reaming or filing . . . hole is smooth, perfect. 27 sizes from ½" to 3" diameter. New Ball-Bearing Drive available for even easier, speedier operation.

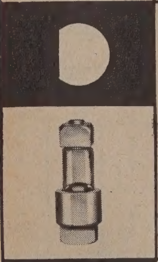


NO. 731 SQUARE PUNCH

Cuts square or oblong openings as desired. Available in five sizes for making ½", ⅝", ¾", ⅞", and 1" square holes. Drive screw fits into ½" hole, which can be drilled or made with ½" No. 730 GREENLEE Round Punch. Operates with an ordinary wrench for drive power. Individually packed.

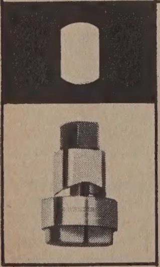
NO. 732 "KEY" PUNCH

Quickly, easily cuts holes for keyed radio sockets. Operates on same principle as other GREENLEE Radio Chassis Punches . . . an ordinary wrench supplies the drive power. In five sizes to make openings of 15/32", 15/16", 1 11/64", 1 17/64", 1 21/64". Drive screw fits into ½" hole. Individually packed.



NO. 733 "D" PUNCH

Simplifies and speeds the work of making "D"-shaped openings for high-frequency, miniature tube sockets and other equipment using this type opening. Available in ½" and ⅝" sizes. Operates on same principle as other GREENLEE Radio Chassis Punches with an ordinary wrench supplying the drive power. Drive screw fits into ⅜" drilled hole. Individually packed.



NO. 734 DOUBLE "D" PUNCH

Quickly makes standard electrical receptacle openings. Cuts standard hole 1⅛" dia. across parallel sides, 1⅜" dia. across rounded ends. Simply insert into a ½" hole and turn with an ordinary wrench. Does the work in less than five minutes . . . eliminates all tedious hand filing . . . gives a smooth, perfect opening.

PRICES . . . Nos. 730, 731, 732, 733, 734

No. 730 ROUND PUNCH

Size	Price	Size	Price
½"	$2.60	1¾"	$5.50
9/16"	2.60	1⅞"	6.85
⅝"	2.60	2"	7.40
11/16"	2.60	2⅛"	11.00
¾"	2.60	2¼"	7.95
13/16"	2.60	2½"	13.00
⅞"	2.60	2¾"	18.00
15/16"	2.85	2 25/32"	12.50
1"	2.85	3"	26.00
1 1/16"	3.00		
1⅛"	3.00		
1 5/32"	3.00		
1 3/16"	3.00		
1 7/32"	5.50		
1¼"	3.00		
1⅜"	3.60		
1½"	4.10		
1⅝"	4.85		

Following sizes also available with larger drive screw for cutting thicker metals (No. 730X)

Size	Price
1⅛"	$5.50
1 3/16"	5.50
1¼"	5.50
1⅜"	6.25
1½"	7.25

NO. 731 SQUARE PUNCH

Size	Price	Size	Price
½"	4.65	⅞"	$6.25
⅝"	4.75	1"	6.40
¾"	5.40		

No. 732 "KEY" PUNCH

Size	Price	Size	Price
15/32"	5.00	1 17/64"	$6.15
15/16"	5.00	1 21/64"	6.65
1 11/64"	5.65		

No. 733 "D" PUNCH

Size	Price	Size	Price
½"	4.50	⅝"	$4.75

No. 734 DOUBLE "D" PUNCH

Size	Price
1⅛" x 1⅜"	$35.00

TOOLS FOR CRAFTSMEN
GREENLEE

KNOCKOUT PUNCHES AND DRIVERS

Greenlee Tool Co., Rockford, Illinois

No. 735 KNOCKOUT PUNCH SET..... $11.60

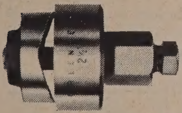
Designed primarily for the electrical trade to permit fast, easy enlarging of knockouts and cutting of holes for conduit in metal boxes and cabinets. Also excellent for automobile work where holes are needed for heater pipes and other accessories. Simply insert the tool in a knockout or small drilled hole and give the screw a few turns with an ordinary wrench. No. 735 set has four punches for cutting ⅞, 1³⁄₃₂, 1¹¹⁄₃₂, 1¹¹⁄₁₆-inch holes for ½, ¾, 1, 1¼-inch conduit. Set is neatly packed in leather case illustrated. Weight, 2½ lb.

Heavy-Duty Drive for ½″ punch............ $1.40

To increase length of service of the ½-inch Knockout Punch in cutting ⅞-inch holes in heavier gauge sheet metals, the No. KR5 Drive Screw with No. KR4 Drive Nut illustrated is recommended. Weight, ¼ lb.

No. 737 KNOCKOUT PUNCH SET........ $12.50

Similar to the No. 735 set, but consists of only two punches for cutting holes to accommodate 1½″ and 2″ conduit. Packed in leather case. Weight, 3½ lb.



KNOCKOUT PUNCHES

No. 738 for 2½″ conduit $16.25

No. 739 for 3″ conduit . . $22.00

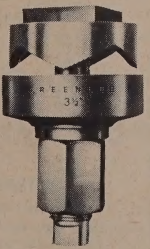
For cutting holes to accommodate 2½″ and 3″ conduit. Design is similar to that of smaller GREENLEE Knockout Punches: insert in a knockout or drilled hole and turn drive nut with an ordinary wrench. Packed and sold individually. Weight, No. 738, 4½ lb. No. 739 6½ lb.

KNOCKOUT PUNCHES

No. 741 for 3½″ conduit.. $43.00

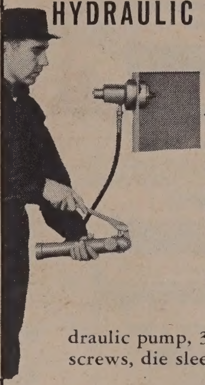
No. 742 for 4″ conduit.... $53.00

No. 743 for 5″ conduit.... $80.00

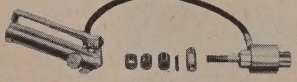


For quickly making smooth openings for 3½″, 4″ and 5″ conduit. Hole is clean, no filing of burrs necessary. Operation is similar to that of other GREENLEE Knockout Punches. Simply insert in hole for 1″ conduit and turn drive nut with an ordinary wrench. Weights, No. 741, 10⅜ lb; No. 742, 12⅛ lb; No. 743, 17⅞ lb.

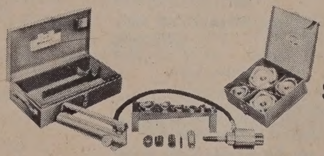
HYDRAULIC PUNCH DRIVER AND SETS



Just a few easy strokes on the handle of the GREENLEE No. 7646A Hydraulic Knockout Punch Driver and the punch slices cleanly through 10-gauge metal. Handy driver develops 11 tons of ram force. Use it with all GREENLEE Knockout Punches for conduit ½″ to 5″. Comes complete with hydraulic pump, 3-foot hose, one ram, adapter screws, die sleeves, and metal carrying box.

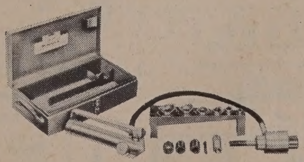


No. 7646 A HYDRAULIC KNOCKOUT PUNCH DRIVER.... $100.00



SET No. 7310 $233.50

Hydraulic hand pump, hose, complete drive, and ten punches and dies for ½″ through 4″ conduit, plus two metal carrying cases.



SET No. 7306 $123.50

Hydraulic pump, six punches and dies for ½″ to 2″ conduit, plus metal carrying case.

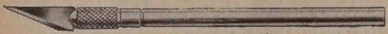
SET No. 7304.... $110.00

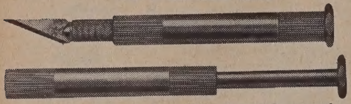
Four knockout punches and dies for 2½″, 3″, 3½″, and 4″ conduit in metal carrying case.

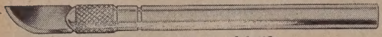
Handicraft Tools INC.

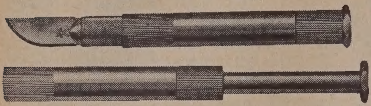
A division of **X-acto®, INC.**

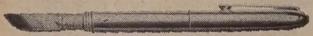
KNIVES • with surgically-sharp interchangeable BLADES, ROUTERS, GOUGES AND PUNCHES for cutting, carving, etching, piercing, scribing, scraping, sawing, trimming, slicing, hollowing, stripping, slitting, scoring, etc.

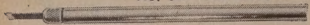

No. 1—All-metal knife

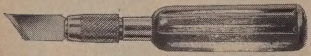

No. 1-G—Knife with adjustable guard

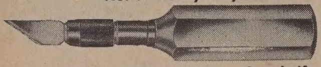

No. 2—All-metal knife

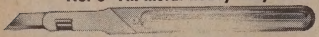

No. 2-G—Knife with adjustable guard

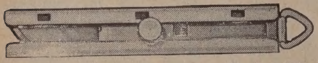

No. 3M—Pen-knife


No. 4—Stencil knife


No. 5—Heavy duty knife


No. 6—All-metal heavy duty knife


No. 8—Utility knife


No. 66—Retractable-blade knife

NO. 1 KNIFE—For light to medium work. Aluminum handle (5" long — 5/16" handle diameter) complete with No. 11 blade. **Net 60¢**

NO. 1-G SAFETY KNIFE—Same as No. 1 knife with adjustable metal guard for safety and for depth cutting (Pat. Pending). **Net $1.20**

NO. 2 KNIFE—For medium to heavy work. Aluminum handle (5" long — 7/16" handle diameter) complete with No. 22 blade. **Net 75¢**

NO. 2-G SAFETY KNIFE—Same as No. 2 knife with adjustable metal guard for safety and for depth cutting. (Pat. Pending). **Net $1.50**

NO. 3M PEN KNIFE—Handy utility knife (5" long) clips to pocket. Metal barrel, metal blade lock. Complete with #10 Blade. Also accommodates #11 and #16 refill blades. **Net $1.00**

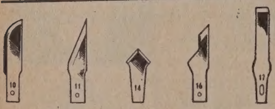
NO. 4 STENCIL KNIFE—All-metal handle with detachable blade (5" long with blade—¼" handle diameter). **Net 30¢**
(Refill blades: No. 4B — pkg. of 5 — Net 25¢)

NO. 5 KNIFE—For heavy work. Plastic handle and metal blade lock (4¾" long), complete with No. 19 blade. **Net $1.20**

NO. 6 KNIFE—For heavy work. Solid aluminum handle (4¾" long) complete with No. 24 blade. **Net $1.80**

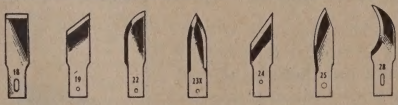
NO. 8 UTILITY KNIFE—Steel handle (5⅜" long), patented lock, reversible blade. **Net 29¢**
(Refill blades: No. 8 — pkg. of 5 — Net 30¢)

NO. 66 POCKET KNIFE—Stainless steel shell, surgical blade, push button operation. **Net 59¢**
(Refill blades: No. 122 — pkg. of 2 — Net 25¢)



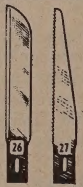
Package of 5 alike Net 60¢
(For 5 assorted, specify Asstmt. No. 1 — Net 60¢)

Fit Nos. 1, 1-G, and 3M handles.



Package of 5 alike Net 60¢
(For 5 assorted, specify Asstmt. No. 2 — Net 60¢)

Fit Nos. 2, 2-G, 5, and 6 handles.

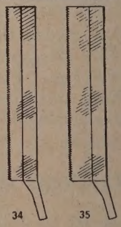


BLADES

Pkg. of 2 alike

Net 30¢

Fit Nos. 2, 5 and 6 handles.

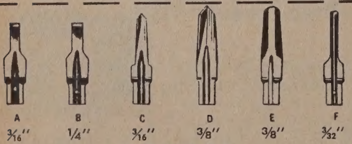


RAZOR SAWS

No. 34—¾" wide by 5½" long. Net 40¢

No. 35—1" wide by 5½" long Net 45¢

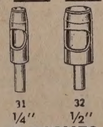
Fit Nos. 5 and 6 handles.



GOUGES

Each Net 25¢
(For 5 assorted, specify Asstmt. No. 4 — Net $1.25)

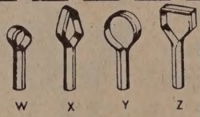
Fit Nos. 5 and 6 handles.



PUNCHES

Each Net 30¢
(Pkg. of 2 different Net 60¢

Fit Nos. 5 and 6 handles.



ROUTERS

Each Net 25¢
(For 4 assorted, specify Asstmt. No. 5 — Net $1.00)

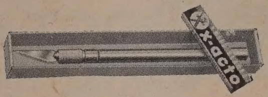
Fit Nos. 5 and 6 handles.

HANDICRAFT TOOLS, INC. *A division of* X-ACTO, INC. **LONG ISLAND CITY 1, N. Y.**

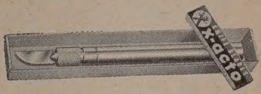
Handicraft Tools INC.
A division of **X-acto®, INC.**

PRECISION-MADE ELECTRONIC TOOLS

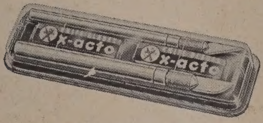
KNIFE SETS



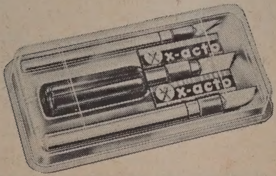
No. 51 KNIFE SET — No. 1 Knife with 5 extra assorted blades. **Net $1.20**



No. 52 KNIFE SET — No. 2 Knife with 5 extra assorted blades. **Net $1.35**



No. 62 DOUBLE KRYSTAL-PAK KNIFE SET — Nos. 1 and 2 Knives with 10 extra assorted refill blades. **Net $2.75**

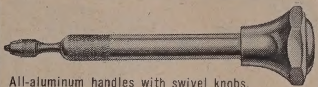


No. 81 TRIPLE KRYSTAL-PAK KNIFE SET — Nos. 1, 2, and 5 knives plus 10 assorted extra blades in handy clear plastic case. **Net $3.75**

No. 82 KNIFE CHEST — Nos. 1, 2 and 5 Knives plus 9 asstd. extra blades Handy, natural-finish wood chest **Net $4.50**

No. 83 DELUXE KNIFE CHEST — Nos. 1, 2 and 6 knives plus 18 asstd. extra blades. Handy, natural-finish wood chest. **Net $6.00**

HAND DRILLS—PIN VISES



All-aluminum handles with swivel knobs. Precision-tooled English model chucks. (4" long).

No. 1D Handle dia. 5/16". For No. 80 to No. 60 drill bits. **Net $1.25**

No. 2D Handle dia. ⅜". For No. 63 to No. 50 drill bits. **Net $1.25**

No. 3D Handle dia. 7/16". For No. 53 to No. 44 drill bits. **Net $1.50**

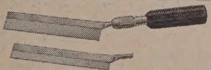
DRILL CHUCK ADAPTERS

Precision-tooled English models (1⅜" long). Fit standard hand drills, power drills and lathes.

No. 22A For No. 80 to No. 60 drill bits **Net 75¢**

No. 22B For No. 63 to No. 50 drill bits **Net 75¢**

No. 22C For No. 53 to No. 44 drill bits **Net 75¢**



No. 53

RAZOR SAW BLADE SET

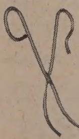
No. 5 Handle and 1 each of No. 34 and No. 35 Saw Blades. **Net $1.75**

No. 60S SWISS NEEDLE FILE SET

Complete set of 12 assorted styles. **Net $3.95**

No. 70 SCREW DRIVER SET

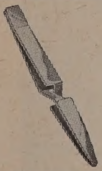
Aluminum handle with sure-locking chuck and 5 assorted steel blades. **Net $1.75**



No. 39 FORCEPS

Steel construction. Scissor-action. 5" long.

Net 75¢



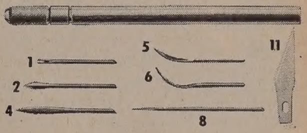
No. 256-ST CROSS-ACTION CLAMP

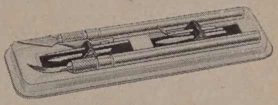
Ideal for use as heat sink.

Net 3 for 30¢

SCRAPERS AND PROBES

- All-metal X-acto handle with specially designed chuck takes 6 styles of precision-made English scraper points and 4 shapes of X-acto knife blades.





No. 63 DOUBLE SCRAPER SET — 2 metal handles; 6 assorted scraper points; 2 pointed, straight-edged knife blades; packaged in plastic container. **Net $2.75**

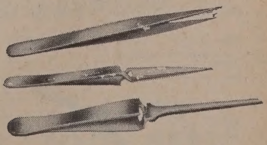
No. 68 METAL HANDLE ONLY **Net 60¢**

No. 64 METAL HANDLE and 1 scraper point. **Net 75¢**

No. 65 METAL HANDLE, 6 assorted scraper points, 1 No. 11 knife blade. **Net $1.50**

No. 67 SCRAPER POINTS — 6 asstd. (Nos. 1, 2, 4, 5, 6, 8) **Net 90¢**
(Individual points — 15¢ ea.)

TWEEZERS



No. 36E — Plain pointed (4¾" long) **Net 50¢**

No. 37E — Cross-action, self-locking, Pointed (4¾" long) **Net 65¢**

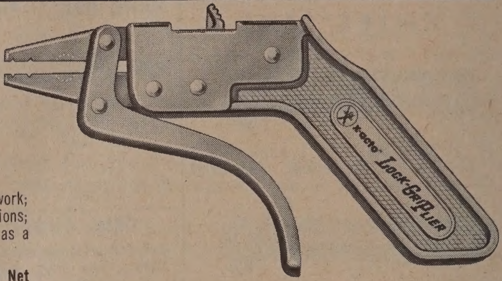
No. 38E — Cross-action, self-locking, Blunt (6½" long) **Net 70¢**

HANDICRAFT TOOLS, INC. A division of X-ACTO, INC. **LONG ISLAND CITY 1, N. Y.**

Handicraft Tools INC.
A division of x-acto®, INC.

PRECISION TOOLS for SMALL ASSEMBLIES

Lock-GriPlier©



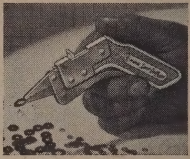
THE "THIRD HAND" FOR SMALL ASSEMBLIES. Patent No. 2,766,646

Specifically designed as a multiple-service tool for small assembly work; to pick up and firmly grasp small parts for soldering or other operations; as a vise to free both hands; to secure rivets; to strip insulation; as a brad or staple setter.

No. 800 .... **$4.50 Net**

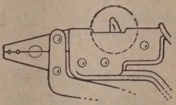
- **RUGGED CONSTRUCTION:** All-metal with case-hardened steels jaws, 5⅛" overall length. Well balanced and comfortable to hold; can be used for hours without hand fatigue.
- **ONE-HAND ACTION:** The tapered jaw tips permit the picking up and holding of the smallest parts without repositioning. Small washers or other parts can be placed into position quickly and accurately. Quick one-hand adjustment for size and lock-up leaves the other hand entirely free.
- **LOCKING KEY FREES BOTH HANDS:** Pushing the locking key forward automatically locks the jaws. Jaws released instantly by pulling back on the locking key.

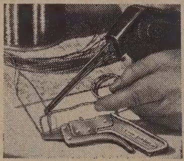
Power-crimping of Fahnstock clip.

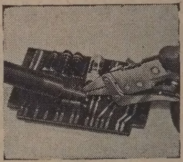

Pick up and grip tiny washers, minute parts.

LOCK-GRIP PLIER SERVES AS:

(1) Heat Sink
(2) Plier
(3) Vise
(4) Stripper
(5) Crimper
(6) Tweezer
(7) Wrench

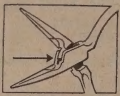



X-Acto Lock-GriPlier used as a vise.

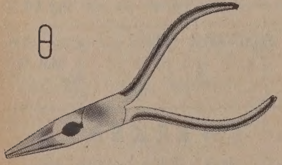

As a heat-sink, protects sensitive parts from soldering heat.

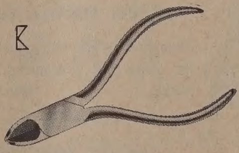
SWEDISH PLIERS

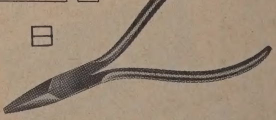
Finest professional quality. Made of tempered Swedish steel, chrome-plated, highly polished.

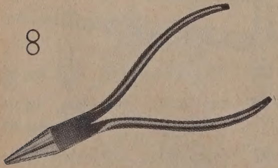


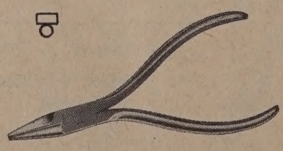
All models feature box-joint—jaws never go out of alignment.

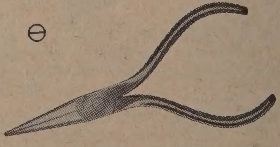

No. 54E PLIER—Long-nose, side cutting. Length 4¾".
No. 54E .... $4.00 Net
With insulated handles:
No. 54EP .... $4.25 Net


No. 55E PLIER—Diagonal cutting. Length 4¼".
No. 55E .... $3.50 Net
With insulated handles:
No. 55EP .... $3.75 Net


No. 56E PLIER—Flat-nose. Length 4¾".
No. 56E .... $3.25 Net
With insulated handles:
No. 56EP .... $3.50 Net


No. 57E PLIER—Snipe-nose. Length 4¾".
No. 57E .... $3.25 Net
With insulated handles:
No. 57EP .... $3.50 Net


No. 58E PLIER—Combination-nose. Length 4¾".
No. 58E .... $3.25 Net
With insulated handles:
No. 58EP .... $3.50 Net

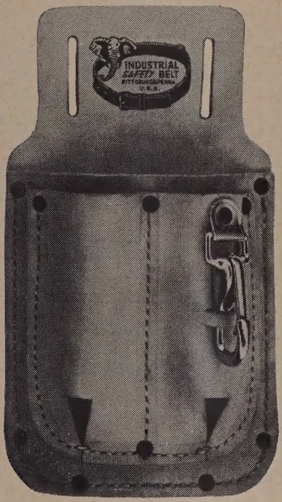

No. 59E PLIER—Long-nose. Length 4¾".
No. 59E .... $3.50 Net
With insulated handles:
No. 59EP .... $3.75 Net

HANDICRAFT TOOLS, INC. *A division of X-ACTO, INC.* **LONG ISLAND CITY 1, N. Y.**

First in Safety

INDUSTRIAL SAFETY BELT

• TOOL HOLSTERS • TOOL BELTS

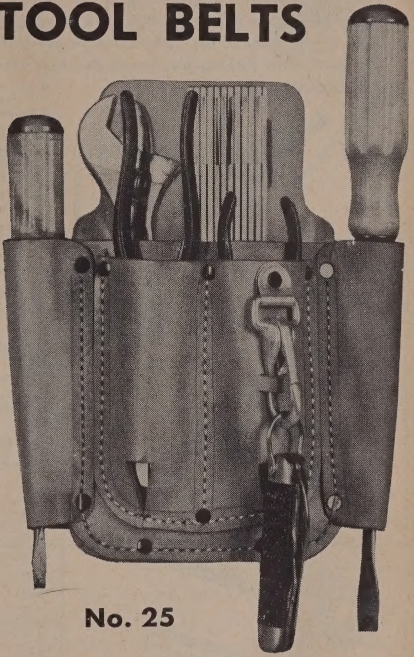


No. 24

No. 24
TOOL HOLSTER

Similar to electrician holster except side pockets not attached, making the overall dimensions 5 x 9 inches.

No. 24 List
$4.00 each



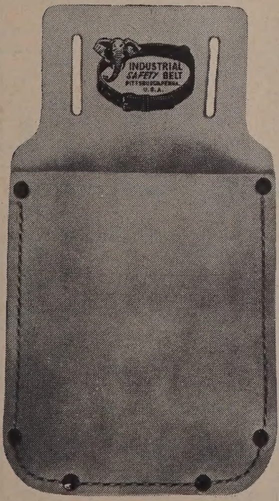
No. 25

ELECTRICIAN HOLSTER
5 POCKETS

Stitched with seven cord top quality linen hot wax thread, locked to solid leather back with steel rivets. Pockets made of pliable form fitting Russet Leather.

Special designed snap allows knife to be removed by use of a one hand upward motion. Overall dimensions are: 8 x 9 inches.

No. 25 List Price $5.00 each (Without Tools)

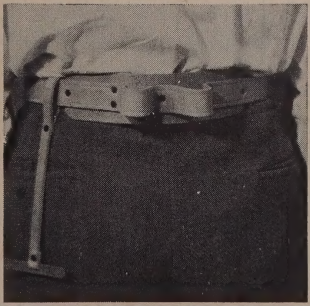


No. 23

No. 23

Similar to overall dimensions of tool holster No. 24. One pocket. Dimensions are small enough to insert in pocket of trousers.

No. 23 List
$2.50 each



No. 175
TOOL BELT

Extra heavy quality leather. Two *strong loops* formed for heavy tools. *Latigo* thong *tape carrier* attached. *Steel rivets* anchor *tested buckle* to belt Three sizes, No. 1, 30 to 38; No. 2, 40, to 46; No. 3, 46 to 52.

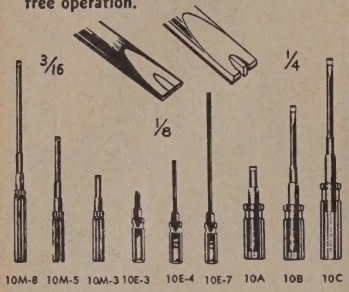
List Price $3.50

ELECTRONIC TOOLS

HUNTER TOOLS ...the name to watch

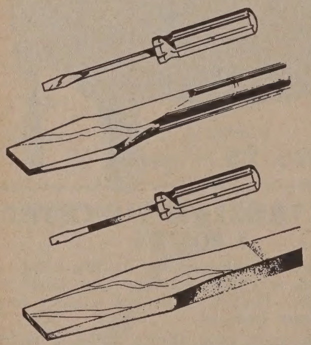
MAGIC-TIPS

One tool starts the screw and drives it. To operate one merely places the tip of the Magic-Tip in the slot of the screw and pushes gently . . . the screw becomes firmly fastened to the blade—easy to start even in places inaccessible to the fingers. No bulky claws to get in the way because the mechanism is internal and fully automatic. Hardened steel locking pin, tough chromoly steel tip, plus sturdy OVER ALL construction assures long trouble-free operation.



Stock #	Overall Length	Width of Point	Thickness of Point	Slot Fits Screw	Diam. Handle	Blade Length	List
10 E-3	2½″	⅛″	.017	#00 to #2	9/16″	1″	$2.05
10 E-4	4″	⅛″	.017	#00 to #2	9/16″	2¼″	2.05
10 E-7	7″	⅛″	.017	#00 to #2	9/16″	5¼″	2.30
10 M-3	3½″	3/16″	.030	#3 to #6	9/16″	½″	1.80
10 M-5	5¼″	3/16″	.030	#3 to #6	9/16″	2¾″	2.00
10 M-8	8¼″	3/16″	.030	#3 to #6	9/16″	4¾″	2.30
10 M-12	11¼″	3/16″	.030	#3 to #6	9/16″	7½″	2.65
10 A	4″	¼″	.038	#6 to #10	⅞″	¾″	1.95
10 B	6¼″	¼″	.040	#7 to #10	⅞″	3¼″	2.30
10 C	7½″	¼″	.040	#7 to #10	⅞″	3¾″	2.50
10 D	11¼″	¼″	.040	#7 to #10	⅞″	7″	2.90

SCREWDRIVERS



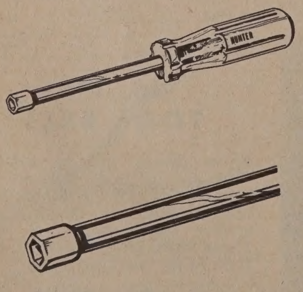
Round Blades

Stock #	Blade Size	List
14	1/8″ x 2″	$ .36
14A	1/8″ x 3″	.42
14B	3/16″ x 4″	.70
14C	3/16″ x 6″	.80
14D	3/16″ x 8″	.88
14E	3/16″ x 10″	.95
14F	1/4″ x 1¼″	.70
14G	1/4″ x 4″	.92
14H	1/4″ x 6″	1.00
14I	1/4″ x 8″	1.10
14J	#1 Recess	.86
14K	#2 Recess	.96
14L	#3 Recess	1.24
14M	#0 Phillips	.98
14N	#1 Phillips	1.10
14P	#2 Phillips	1.20

Square Blades

Stock #	Blade Size	List
15	1/8″ x 2″	$ .68
15A	1/8″ x 3½″	.76
15B	1/8″ x 5½″	.80
15C	3/16″ x 2″	.96
15D	3/16″ x 4″	1.00
15E	3/16″ x 6″	1.08
15F	3/16″ x 8″	1.20
15G	1/4″ x 1½″	1.08
15H	1/4″ x 4″	1.20
15I	1/4″ x 6″	1.30
15J	1/4″ x 8″	1.44
15K	1/4″ x 10″	1.48
15L	5/16″ x 4½″	1.52
15N	5/16″ x 8½″	1.64
15P	3/8″ x 6½″	1.90
15Q	3/8″ x 10″	2.26
15M	5/16″ x 6½″	1.55

NUTDRIVERS



Regular Shaft

Stock #	Hexagon Size	Color	List
20	3/16″	Black	$ .98
20A	7/32″	Red	.98
20B	1/4″	Yellow	.98
20C	9/32″	Green	.98
20D	5/16″	Blue	.98
20E	11/32″	Brown	.98
20F	3/8″	Orange	.98

Economy Champ Nut Drivers

Stock #	Hex Size	Overall	List
23	3/16″	6″	$ .78
23A	7/32″	6″	.78
23B	1/4″	6″	.78
23C	9/32″	6″	.78
23D	5/16″	6″	.78
23E	11/32″	6″	.78
23F	3/8″	6″	.78

Hollow Shaft

Stock #	Hexagon Size	Color	List
21	3/16″	Black	1.20
21A	7/32″	Red	1.20
21B	1/4″	Yellow	1.20
21C	9/32″	Green	1.20
21D	5/16″	Blue	1.20
21E	11/32″	Brown	1.20
21F	3/8″	Orange	1.20

Pocket Nut Driver

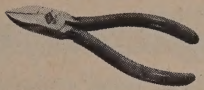
Only 3½″ overall in size — fits your shirt pocket. Has handy clip.

Stock #	Size	List
22	1/4″	$ .66
22A	3/16″	.66
22B	5/32″	.66

PART OF AMERICA'S MOST COMPLETE LINE

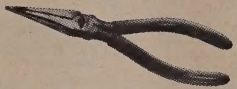
PLIERS

DIAGONAL CUTTING
4½", 5", 6"



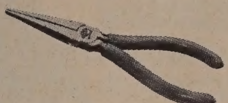
A96-4½ FULL POLISH—List $3.85
A96-5 FULL POLISH—List 4.05
A96-6 FULL POLISH—List 4.50

RADIO AND IGNITION
6½"



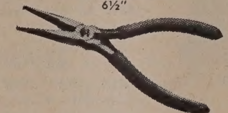
A2 FULL POLISH—List $5.15

LONG REACH FLAT NOSE
6½"



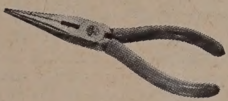
A9 FULL POLISH—List $3.62

TRANSVERSE FLUSH END-CUTTING WITH LEAF SPRING
6½"



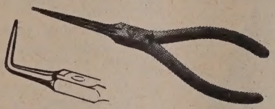
A7L FULL POLISH—List $4.95

LONG CHAIN NOSE W/CUTTER
6" 7"



A61-6 FULL POLISH—List $4.25
A61-7 FULL POLISH—List 4.90

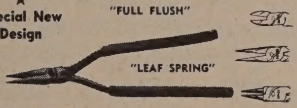
LONG NARROW NEEDLE NOSE
6"



A13 FULL POLISH (Curved Nose) —List $4.35
A14 FULL POLISH (Straight Nose) —List 3.90

HARD TO REACH PROBLEMS — "HERE ARE THE ANSWERS"

★
Special New Design

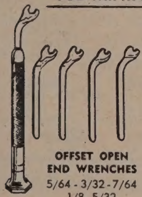


A98 Full Polish List $7.15 Very Long Midget Diagonal Cutter
A1 Full Polish List $6.15 Very Long Narrow Chain Nose Plier
A6 Full Polish List $6.15 Very Long Round Nose Plier

FEATURES 6" HANDLE, 7" OVERALL "LIGHTWEIGHT"

COMPLETE TWEEZER CATALOG ON REQUEST

SUB-MINIATURE TOOLS

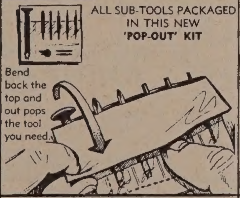


OFFSET OPEN END WRENCHES
5/64 - 3/32 - 7/64
1/8 - 5/32

In New 'Pop-Out' Kit

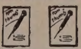
Stock #	List
K24	$2.50

ALL SUB-TOOLS PACKAGED IN THIS NEW **'POP-OUT' KIT**

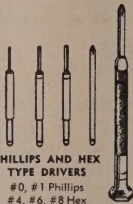


Bend back the top and out pops the tool you need.

Individual Carded Screwdrivers



	Stock #	List
SMALL	**24N**	$ .68
FINE	**24P**	.68

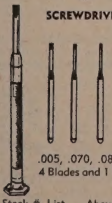


PHILLIPS AND HEX TYPE DRIVERS
#0, #1 Phillips
#4, #6, #8 Hex

In New 'Pop Out' Kit

Stock #	List
K24A	$2.50

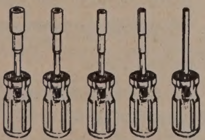
SCREWDRIVERS



.005, .070, .080, .100
4 Blades and 1 Handle

Stock #	List	
K24B	$1.98	Above in Pop-up Kits

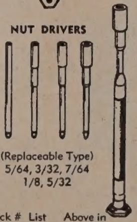
NUT DRIVERS WITH HANDLES



Stock #	Size	Stock #	Size
24C	5/64	**24F**	1/8
24D	3/32	**24G**	5/32
24E	7/64	**24H**	Set

Card of one complete set—**24H**—List $4.50

NUT DRIVERS

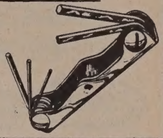


(Replaceable Type)
5/64, 3/32, 7/64
1/8, 5/32

Stock #	List	
K24I	$3.50	Above in Pop-up Kits

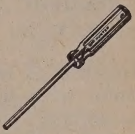
SPECIALTY NUMBERS!!!

"SMITTY" FOLDING SOCKETHEAD WRENCH SETS



IP6—Small set .050-5/32" 6 Blades, List **$1.55**
IP5—Medium Set 3/32"-7/32" 5 Blades, List **$1.55**

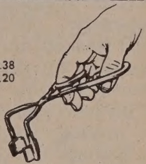
HEX DRIVERS



Stock #	Size	List
5	.050	$ .65
5A	1/16	.65
5B	5/64	.65
5C	3/32	.75
5D	1/8	.75

K5N—All of the above kit—**$3.95**

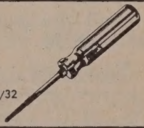
HOT TUBE PULLERS



Stock #		List
57A	90° Angle	List $2.38
57	Straight	List 2.20

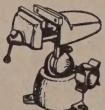
"TRI-TAP"

Three Popular Size Taps in One Tool



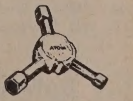
47A — List $2.50
6/32, 8/32, 10/32

PANAVISE



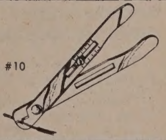
Height 6½", Width 5½", Jaw Width 2½", Opening 2"
62 —List $14.95

ATOM
3-IN-1 NUT DRIVER



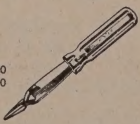
#8 (¼) - #10 (5/16) - #12 (3/8)
55 List $1.69

"WIRE-STRIPPER"



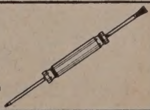
Strip-It for any size wire from #10 to #20.
55A List $ .98

TENSION-TWEEZIE



Permanent tension.
56 —Tweezie Only List $ .50
56A—Tweezie with Handle List .70

SOLDER-AID TOOLS FORK and BRUSH



51A—List $1.20—Shown.
51 —List $1.20—Same as above only small curved hook in place of brush.

IDEAL WIRE STRIPPERS

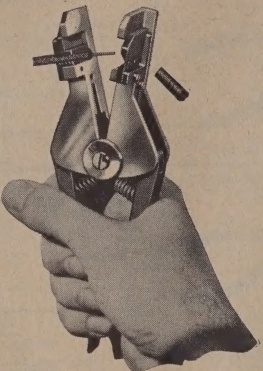
FOR ALL PRODUCTION JOBS ON ALL KINDS OF INSULATION

Formex - Formvar - Nylon - Enamel - Fibre Glass - Teflon*

IDEAL Wire Strippers, both hand and production models are engineered with unique design features that speed up and simplify the stripping of ALL kinds of insulation.

IDEAL Stripmaster®

2 SECOND "ONE SQUEEZE" OPERATION



Unexcelled for fast assembly work, this 10 oz. stripper can be used all day without fatigue. Exclusive "automatic" feature holds jaws open after stripping to permit removal of wire and to prevent crushing. No nicking, fraying, or cutting of wire ends possible. 7 models for all wire gauges from 8 to 30.

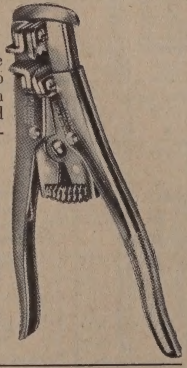
MODELS FOR ALL WIRE GAUGES — FROM 8 TO 30

Catalog No.	Wire Gauge	No. of Holes	List Price◆	Suggested Resale
45-090	8 to 12	3	$9.60	$5.75
45-091	10 to 18	4	9.60	5.75
45-092	10 to 22	6	9.60	5.75
45-093	14 to 22	4	9.60	5.75
*45-095	16 or 18, and POSJ	-	9.60	5.75
45-097	16 to 26	6	9.60	5.75
45-098	20 to 30	6	9.60	5.75

*Also strips 2 and 3-conductor low-voltage wire used in G.E. and Touchplate remote control wiring systems.

"E-Z Automatic" • FOR HEAVY DUTY WORK

Especially designed to make difficult jobs easy and fast



The "E-Z Automatic" provides the extra-powerful leverage needed to cut through the toughest insulation and then strip the wire bare. Rugged strength insures long life in heavy-duty service.

Cat. No.	Wire Gauge	List Price	Sugg. Resale
45-200	16 to 26	$9.60	$5.75
45-201	10 to 18	9.60	5.75
45-202	10 to 22	9.60	5.75
45-203	8 to 14	9.60	5.75
45-204	for 2-cond. 300-ohm TV down-lead	9.60	5.75
45-205	for 2 and 3 cond. No. 12 and No. 14 UF plastic sheathed cable	9.60	5.75

IDEAL CUSTOM Stripmaster®

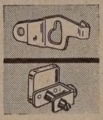
Patented, No. 2,523,936

FOR PRECISION WIRE STRIPPING

Shown with optional Stop Latch (1) and Wire Stop (2)

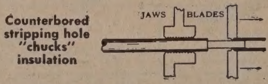
Removes Teflon* and other hard-to-strip insulation. New "concentric hole" stripping blades and special design of jaws prevent damage to insulation and wires. Matched sets of blades are precision drilled on watchmaker's equipment to exact wire sizes. Chucking action on insulation guides conductor through stripping hole, preventing nicks and scrapes. 3 models, wire sizes from 10 to 30.

EXTRA FEATURES (optional)



"SHORT-STOP" LATCH protects wire by limiting stroke to 5/32" — disengages without removal for full 7/8" strip.

"SEE-THRU" WIRE STOP assures uniform lengths by adjusting to strip length desired.

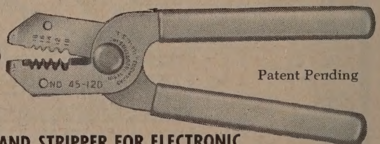


FOR GENERAL PURPOSE STRIPPING OF PLASTIC, FIBRE GLASS AND OTHER HARD-TO-STRIP INSULATIONS

WIRE GAUGE	NO. OF HOLES	CATALOG NO: (without stop latch and wire-stop)	CATALOG NO. (with stop latch and wire-stop)
		List $28.25 Suggested Resale $16.95	List $34.60 Suggested Resale $20.75
10 to 14	3	45-170	45-180
16 to 26	6	45-171	45-181
26 to 30	3	45-172	45-182
FOR TYPE EE — 1000 VOLT TEFLON* WIRE			
10 to 14	3	45-173	45-183
16 to 26	6	45-174	45-184
26 to 30	3	45-175	45-185
FOR TYPE E — 600 VOLT TEFLON* WIRE			
10 to 14	3	45-176	45-186
16 to 26	6	45-177	45-187
26 to 30	3	45-178	45-188

*Reg. Trademark of DuPont

IDEAL



Patent Pending

LOW COST HAND STRIPPER FOR ELECTRONIC AND APPLIANCE PRODUCTION STRIPPING

For quick, easy, clean stripping of wires used in electronic instruments and appliances. Sturdy, compact, constructed of hardened steel for rugged duty and long service. Comfortable plastic grips for sure handling and safety.

	Cat. No.	List	Sugg. Resale
T-5 MODEL, strips 10, 12, 14, 16 and 18 gauge wires	45-120	$3.25	$1.95
T-6 MODEL, strips 16, 18, 20, 22, 24 and 26 gauge wires	45-121	$3.75	$2.25

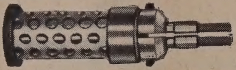
IDEAL INDUSTRIES Inc., Sycamore, Illinois

RESISTANCE SOLDERING TOOLS IDEAL

COMPLETE THERMO-TIP ATTACHMENTS AND POWER UNITS

"Pencil" Type attachment with double metal electrodes. "Feed-thru" electrodes, adjustable for length.

Cat. No. 12-167 with double metal electrodes. List Price $17.50 ◆ Suggested Resale $10.50.



DOUBLE CARBON ATTACHMENTS

Carbons provide more heat than metal tips. Available in two sizes — 1/8″ for small work, 3/16″ for larger work.

Cat. No. 12-166 Pencil Grip with 1/8″ carbons. List Price $17.50 ◆ Suggested Resale $10.50

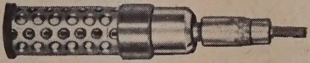
Cat. No. 12-165, Pencil Grip with 3/16″ carbons. List Price $17.50 ◆ Suggested Resale $10.50.

Cat. No. 12-176 Pistol Grip with 1/8″ carbons. List Price $17.50 ◆ Suggested Resale $10.50.

Cat. No. 12-175 Pistol Grip with 3/16″ carbons. List Price $17.50 ◆ Suggested Resale $10.50.

Cat. No. L-4866 3/16″ dia. replacement carbons for **12-165** and **12-175**, six per pkg. Shipping wt., 2 oz. List Price $2.00 ◆ Suggested Resale $1.20.

Cat. No. L-4848 1/8″ dia. replacement carbons for **12-166** and **12-176**, six per pkg. Shipping wt., 2 oz. List Price $1.10 ◆ Suggested Resale $.65.



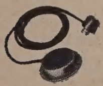
SINGLE CARBON ATTACHMENTS

Collet chuck holds feed-thru carbon. Permits adjustment. Complete with ground-clamp and lead assembly for jig-soldering.

Cat. No. 12-168 Pencil grip. List Price $17.50 ◆ Suggested Resale $10.50.

Cat. No. 12-178 Pistol grip. List Price $17.50 ◆ Suggested Resale $10.50.

Cat. No. L-5202 Replacement Carbons 1/8″x3″ for **12-168** and **12-178**, packaged 6 per tube. Shipping wt., 2 oz. List Price $3.75 ◆ Suggested Resale $2.25.



FOOT SWITCH **Cat. No. 12-146**

List Price $11.35 ◆ Sugested Resale $6.80
Used to eliminate arcing at point of electrode contact. Also permits the use of electrodes to position or hold work after heat has been applied. Small and convenient to use (3⅝″ dia. x 1⅛″ high). Wired normally open (with series plug). Rated 5 amps., 115V. Shipping Wt., 12 oz.

CHISEL TIP IRONS

Cat. No. 12-151 Handle and Lead Assembly. List Price $7.40 ◆ Suggested Resale $4.45.

Cat. No. 12-144 1/4″ Chisel-Tip. List Price $12.15 ◆ Suggested Resale $7.30.

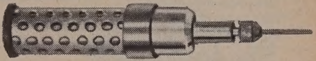
Cat. No. 12-143 — 1/8″ Chisel-Tip. List Price $12.15 ◆ Suggested Resale $7.30.

Rapid heating characteristics and corrosion-resistant special plating provide long life. Irons are locked into handle with set screws. Resistance element in the iron provides continuous, controlled heat.
NOTE: Handle assembly and Irons are sold separately.

Lightweight, Resistance Soldering Tools especially designed for faster, positive production soldering of miniature and subminiature parts. All attachments available with either "Pencil" or "Pistol-Grip" type handles. Complete with 5′ cord. Soldering Irons with "Pencil" type handle only.

"Pistol-Grip" attachment. Double metal electrodes are feed-thru type, adjustable for length.

Cat. No. 12-177 with double metal electrodes. List price $22.60 ◆ Suggested Resale $13.50.



SINGLE METAL ATTACHMENT

Collet chuck holds feed-thru electrode. For smallest work. Complete with ground clamp and lead assembly for jig-soldering.

Cat. No.12-169 Pencil grip. List Price $17.50 ◆ Suggested Resale $10.50.

Cat. No. 12-179 Pistol grip. List Price $17.50 ◆ Suggested Resale $10.50.

Cat. No. L-5241 Replacement Electrodes for **12-169** and **12-179**, packaged 6 per tube. Shipping wt., 2 oz. List Price $.85 ◆ Suggested Resale $.50.

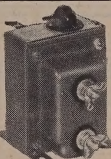
REPLACEMENT CARBON HOLDERS

Cat. No. L-5246 — 3/16″ Dia. List Price $1.10 ◆ Suggested Resale $.65.

Cat. No. L-5247 — 1/8″ Dia. List Price $.60 ◆ Suggested Resale $.35.

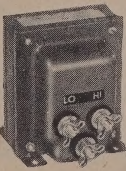
Provides easy replacement of only part attacked by corrosive fluxes. Holders can be used interchangeably with either the 12-165, 12-166, 12-175 or 12-176, depending on diameter of carbons desired.

POWER UNITS



125-Watt Power Unit. **Cat. No. 12-124**
List Price $30.35 ◆ Sug. Resale $18.20

For light production and intermittent work. Selector switch for choice of three heats. Complete with power cord and clip for holding pencil style attachments. 115V — 60 cy.



250-Watt Power Unit. **Cat. No. 12-123**
List Price $40.85 ◆ Sug. Resale $24.50

For heavier production work. Faster. Handles larger components than 12-124. Choice of two heats through "high" and "low" secondary connections. Complete wih power cord. 115V — 60 cy.

IDEAL
THERMO-TIP POWER UNIT

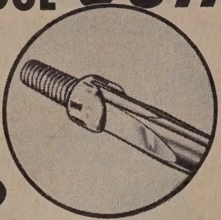
500-Watt Power Unit
Cat. No. 12-163
List Price $72.35
Suggested Resale $43.40

For continuous production work. Widest selection of heats — nine choices through 3-position selector switch plus "high", "medium" and "low" secondary terminals. Complete with power cord and pilot light. 115V — 60 cy.

IDEAL INDUSTRIES, Inc. Sycamore, Illinois

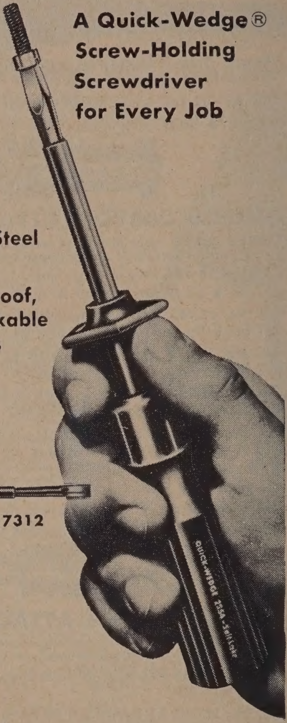
QUICK-WEDGE SCREW-HOLDING SCREWDRIVER

Holds the screw
Starts the screw
Drives the screw



America's Handiest!

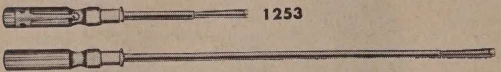
A Quick-Wedge® Screw-Holding Screwdriver for Every Job


QUICK-WEDGE 2354 - Salt Lake

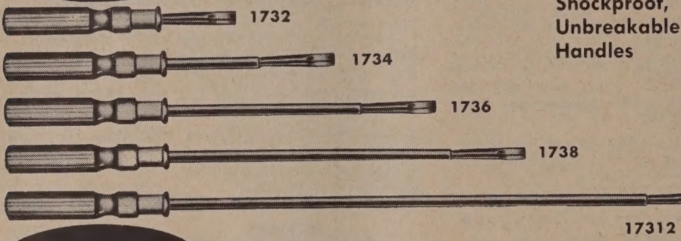
Spring Steel Blades

Shockproof, Unbreakable Handles

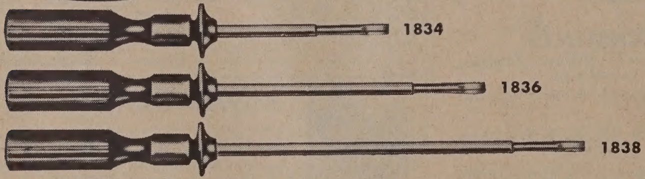
MIDGET SIZES



SMALL SIZES

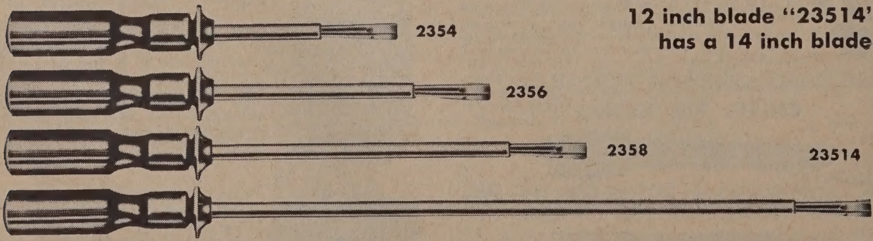

1732
1734
1736
1738
17312

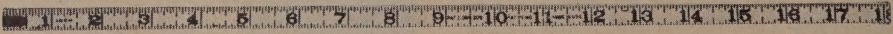
MEDIUM SIZES


1834
1836
1838

Blade length is indicated by last digit of model number. "17312" has a 12 inch blade "23514" has a 14 inch blade.

HEAVY DUTY SIZES


2354
2356
2358
23514


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

ELECTRICAL SIZES

Any of the 14 sizes (except No. 1732) available with shockproof, plastic covered tubing at a cost of 15c additional per screwdriver.

KEDMAN COMPANY • Salt Lake City, Utah

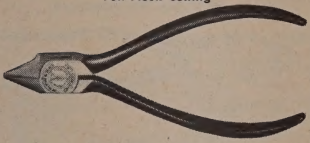
Other Kedman Products--The Famous Huntsman Welding Shields and Face Shields

Mathias KLEIN & Sons
Established 1857
Chicago, Ill., U.S.A.
INCORPORATED

OBLIQUE CUTTING PLIER
Lightweight, Pointed Nose
Semi-Flush Cutting

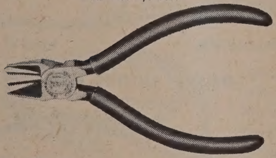
No. 209-4 Size 4 3/16 in.
209-5 5 in.
Available with spring

OBLIQUE CUTTING PLIER
Full-Flush Cutting



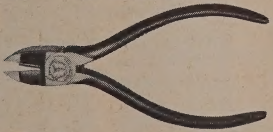
No. 219-4 Size 4 3/16 in.
219-5 5 in.
Available with spring

WIRE GRIPPING OBLIQUE CUTTER
Full-Flush Cutting
Pat. No. 2,938 [illegible]



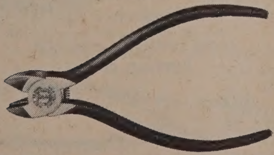
No. 229-4C Size 4 3/16 in.
229-5C 5 in.
Supplied with coil spring and plastic handles

OBLIQUE SHEAR CUTTING PLIER
Pat. No. 2,848,810



No. 207-5C Size 5 1/2 in.
077-K Replacement Blade
Supplied with coil spring

PRINTED CIRCUIT PLIER



No. 052-C Size 5 1/8 in.
Supplied with coil spring

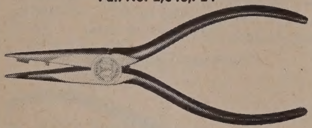
OBLIQUE CUTTING PLIER

No. 245-5 Size 5 in.

TRANSVERSE END CUTTING PLIER

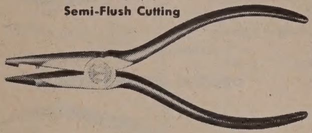
No. 204-6 Size 6 1/4 in.
Available with spring

LONG NOSE SHEAR CUTTING PLIER
Pat. No. 2,848,724



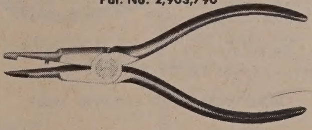
No. 208-6PC Size 6 5/8 in.
Supplied with coil spring

ALL-PURPOSE ELECTRONIC PLIER
Pat. No. 2,903,790
Semi-Flush Cutting



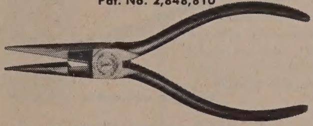
No. 260-6 Size 6 3/8 in.
Available with spring

NEEDLE NOSE ELECTRONIC PLIER
Pat. No. 2,903,790



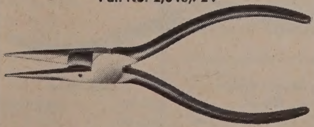
No. 261-6 Size 6 3/8 in.
Available with spring

LONG NOSE SHEAR CUTTING PLIER
Pat. No. 2,848,810



No. 208-6C Size 6 5/8 in.
078-K Replacement Blade
Supplied with coil spring

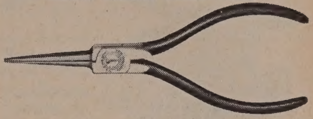
LONG NOSE SHEAR CUTTING PLIER
Pat. No. 2,848,724



Same as 208-6C shown above but designed to put a positive 3/16 in. hook in the end of resistor wire.

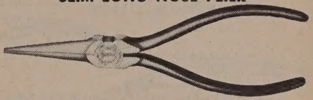
No. 208-6NC Size 6 5/8 in.
078-K Replacement Blade
Supplied with coil spring

LONG NEEDLE NOSE PLIER



No. 318-5 1/2 Size 5 25/32 in.
Available with spring

SLIM LONG NOSE PLIER



No. 310-6 Size 6 5/8 in.
Available with spring

LONG NOSE PLIER

No. 301-5 Size 5 9/16 in.
301-6 6 5/8 in.
301-7 7 1/8 in.
Available with spring

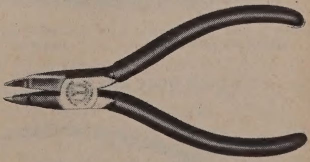
LONG NOSE SIDE CUTTING PLIER

No. 203-5 Size 5 9/16 in.
203-6 6 5/8 in.
203-7 7 1/8 in.
Available with spring

LONG NOSE PLIER, KNIFE AT POINT

No. 301-6P Size 6 5/8 in.
317-6P 6 in.
Available with spring

SPECIAL SKINNING PLIER



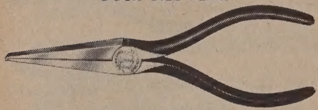
No. 317-5P Size 5 1/4 in.
Supplied standard with red plastic handles

Mathias KLEIN & Sons
Established 1857 Chicago, Ill., U.S.A.
INCORPORATED

SLIM LONG NOSE PLIER

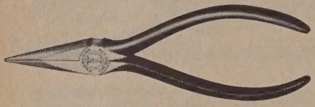
No. 307-5½ Size $5\frac{13}{16}$ in.
221-5½ with side cutting knives $5\frac{13}{16}$ in.
Available with spring

DUCK BILL PLIER



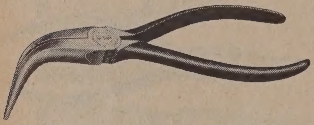
No. 205-6 with knives Size 6½ in.
304-6 6½ in.

CHAIN NOSE PLIER



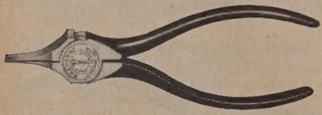
No. 317-6 Size $5\frac{15}{16}$ in.
217-6 with knives $5\frac{15}{16}$ in.

CURVED NOSE PLIER



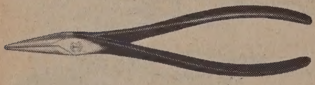
No. 302-6 Size 6¼ in.

RELAY SPRING ADJUSTABLE PLIER



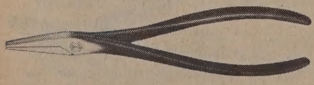
No. 325-5 Size $5\frac{1}{16}$ in.

8-INCH LONG NOSE PLIER



No. 314-8 with knurl Size 8 in.

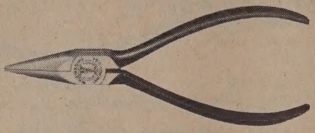
8-INCH DUCK BILL PLIER



No. 315-8 with knurl Size 8 in.
312-8 without knurl 8 in.

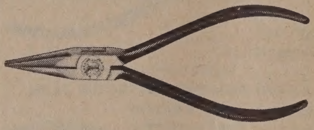
MIDGET ELECTRONIC PLIERS

LONG NOSE PLIER



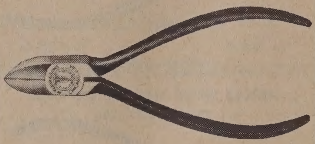
No. 321-4½ Size 4¾ in.
No. 322-4½ without knurl Size 4½ in.
Available with spring

FLAT NOSE PLIER



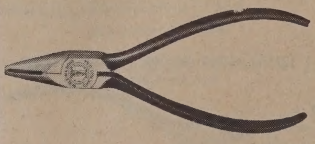
No. 323-4½ Size 4¾ in.
Available with spring

OBLIQUE CUTTING PLIER



No. 257-4 Size $4\frac{3}{16}$ in.
Available with spring

TRANSVERSE END CUTTING PLIER



No. 224-4½ Size ⅝ in.
Available with spring

COIL SPRING PLIERS

Pliers listed below are supplied with coil springs

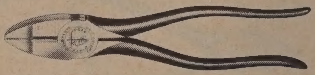
Oblique Cutters	Long Nose	
209-4C	204-6C	322-4½C
209-5C	260-6C	323-4½C
219-4C	261-6C	310-6C
219-5C	318-5½C	301-5C
202-5C	203-5C	301-6C
202-6C	203-6C	301-7C
210-5C	203-7C	301-6PC
210-6C	221-5½C	317-6PC
224-4½C	$\frac{1}{32}$" Point	317-5C
245-5C	307-5½C	
257-4C	321-4½C	

CHAIN NOSE PLIER

No. 317-5 Size 5¼ in.
Available with spring

SIDE CUTTING PLIER

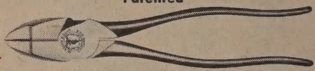
NE Type (Streamlined)



No. 201-5NE Size 5 in.
201-6NE 6 in.
201-7NE 7 in.
201-8NE 8 in.
201-9NE 9 in.

KLEIN-KUT HIGH LEVERAGE PLIER

Patented



No. 213-9NE Size 9 in.

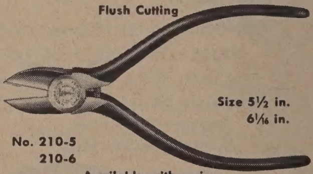
OBLIQUE CUTTING PLIER

Narrow Nose

No. 202-5 Size 5½ in.
202-6 $6\frac{1}{16}$ in.
Available with spring

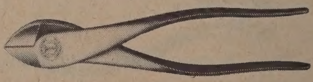
OBLIQUE CUTTING PLIER

Flush Cutting



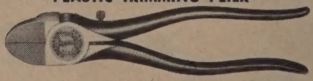
Size 5½ in.
$6\frac{1}{16}$ in.
No. 210-5
210-6
Available with spring

HIGH LEVERAGE OBLIQUE CUTTING PLIER



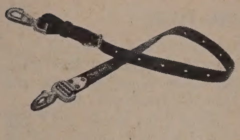
No. 228-8 Size 8 in.

PLASTIC TRIMMING PLIER



No. 227-7C
"Handform" handles Size $7\frac{11}{16}$ in.
227-6C bowed handles 6 in.

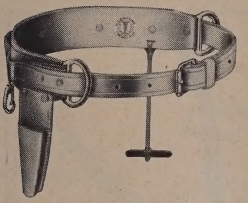
"KLEIN-KORD" NYLON SAFETY STRAP



A strong high-quality safety strap made of nylon possessing excellent dielectric characteristics. Klein Red Center for safety.

Cat. No.	Size	Av. Wgt. Per Doz.
Standard Snaps		
5294	1¾" x 5'8"	34 lb.
5294-7	1¾" x 7'	38 lb.
"Klein-Lok" Snaps		
KL-5294	1¾" x 5'8"	34 lb.
KL-5294-7	1¾" x 7'	38 lb.

LEATHER TOOL BELTS



Made of first quality harness leather. "D" rings are solid drop steel forgings tested to 1,500 lb. All rivets are solid copper and sewing is with hot waxed linen thread, lock stitched.

Cat. No.	Width	Av. Wgt. Per Doz.
5204-DE	3½"	34 lb.

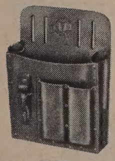
One of a complete line of Klein tool belts.

KLEIN ELECTRICIANS' WAIST BELTS

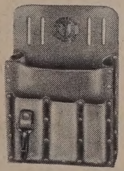
Lightweight belt of heavy web belting. Leather tool loops. Friction buckle.

No.	Size
5227-M	32 to 40 in.
5227-L	40 to 48 in.

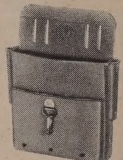
KLEIN COMBINATION TOOL POCKETS



5126



5127



5141

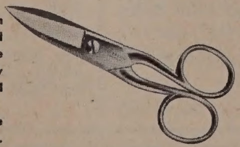
Above are three of the many tool pockets available in the Klein line.

Nos. 5126-5127 are made from highest grade leather.

No. 5141 is made of polyvinyl chloride.

No.	Size
5126 Leather	8½ in. high, 6½ in. wide
5127 Leather	10 in. high, 7 in. wide
5141 Plastic	10 in. high, 8 in. wide

KLEIN "XELA" ELECTRICIANS' SCISSORS

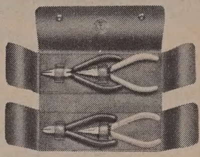


A scissor designed for the electrician and mechanic. Will stand continued hard service. Made of high-grade steel carefully tempered. Has screw hinge to allow for adjustment. Nickel plated.

Cat. No.	Size
2100-5	5 in.

5100 Pocket for scissors, not illustrated

KLEIN POCKET TOOL KIT

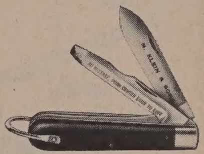


A handy kit that fits the pocket and holds your midget Klein pliers, long nose, end cutting, oblique cutting and duck bill. Case is of top leatherette with two snaps. Contains following tools:

- 1 No. D257-4 Oblique Cutting Plier
- 1 No. D224-4½ End Cutting Plier
- 1 No. D321-4½ Long Nose Plier
- 1 No. D323-4½ Duck Bill Plier

No. 1305-4 Size 7 x 2¾ x 1

KLEIN "XELA" ELECTRICIANS' KNIFE



Especially designed for electricians. Has sharp utility blade and screw driver blade which locks automatically in open position. Made of finest cutlery steel, carefully tempered. Fitted with wrought shackle riveted in handle.

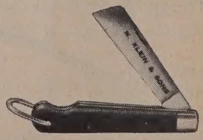
No. 1550-2 Length Closed 4 in.

KLEIN "XELA" LINEMAN'S KNIFE

Sturdily constructed. Single 3-in. blade of finest cutlery steel. Blade locks automatically in open position. Handle of plastic. Won't crack or chip. Fitted with wrought shackle riveted in handle.

No. 1550-4 Length Closed 4 in.

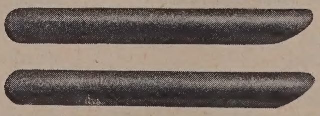
KLEIN "XELA" SKINNING KNIFE



A high-quality knife designed for skinning. Particularly used in the telephone field. Hardwood handle with ring for attaching to snap.

No. 1550-5 Length Closed 3½ in.

DIPPED SLIP-ON HANDLES



Plastic handles available in the following colors—Red, Yellow, Green and Blue.

Easy to slip on to plier handles providing a comfortable grip.

No.	
34	To fit 4 in. - 4½ in. pliers
35	To fit 5 in. - 5½ in. pliers
36	To fit 6 in. - 6½ in. pliers
46	36 pr. assorted sizes and colors

DIPPED HANDLES

Klein Pliers may be had with dipped-on plastic coating. This provides a heavy comfortable plastic coating that can't come off and yet may be removed if desired. See Klein Cat. 103 for Standard Colors and prices.

kraeuter
TOOLS FOR TECHNICIANS

FOR 100 YEARS THE FINEST IN HAND TOOLS—1860-1960

KRAEUTER PRECISION AND PROFESSIONAL PLIERS FULL POLISHED FINISH

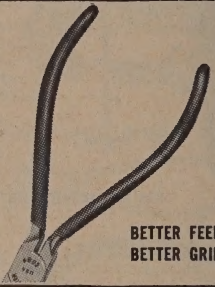
Extra fine pliers designed for exacting work. Drop forged from selected tool steel, accurately machined and carefully heat treated. In the hands of skilled radio and electronics technicians, these tools may be depended upon for exceptional service.

Precision and Professional Pliers illustrated show vinyl cushion grips (prefix "CG" with stock number) which are furnished at NO extra cost (factory bonded). Color: B—Blue; G—Green; O—Orange; R—Red; Y—Yellow.

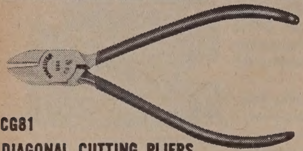
When Precision and Professional Pliers are required without Cushion Grips, OMIT the prefix "CG" when ordering.

KRAEUTER VINYL CUSHION GRIP "CG" HANDLES AT NO EXTRA COST

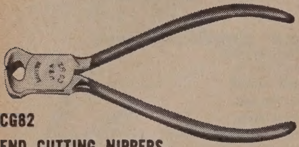
All the "CG" Kraeuter tools listed on these pages have the Cushion Grips bonded on at the factory... actually become part of the tool. Won't crack, peel or chip. They're brightly colored to help you find them when you need them... easier to hold, easier to use... cushion your hand so you do the job with less effort. Cushion Grips give pliers the "feel" of comfortable, more accurate control. And they come to you at no extra cost.



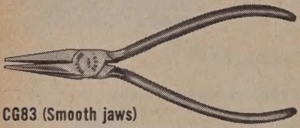
BETTER FEEL! BETTER GRIP!



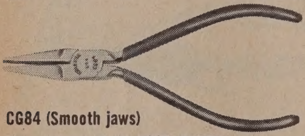
CG81
DIAGONAL CUTTING PLIERS
4½" R List ea. 3.40



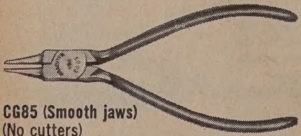
CG82
END CUTTING NIPPERS
4½" G List ea. 3.96



CG83 (Smooth jaws)
(No cutters) **CHAIN NOSE PLIERS**
4½" R List ea. 3.20

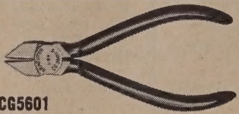


CG84 (Smooth jaws)
(No cutters) **FLAT NOSE PLIERS**
4½" B List ea. 3.20

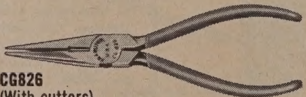


CG85 (Smooth jaws)
(No cutters)
ROUND NOSE ROUND JAW PLIERS
4½" G List ea. 3.20
No. 83-84-85 supplied with milled jaws when specified.

CG825
(With cutters)
MEDIUM NOSE NEEDLE POINT PLIERS
Needle points 1/32" x 1/32"
5" B List ea. 4.42
CG835
(No cutters)
5" G List ea. 4.20



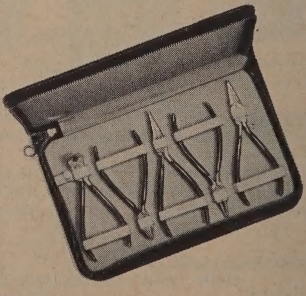
CG5601
NEEDLE POINT DIAGONAL CUTTING PLIERS
4½" R List ea. 4.00
5" B List ea. 4.25
6" G List ea. 5.10



CG826
(With cutters)
LONG NOSE NEEDLE POINT PLIERS
Needle points 1/32" x 1/32"
6" G List ea. 4.60
CG836
(No cutters)
6" O List ea. 3.60

CG827
(With cutters)
EXTRA LONG NOSE NEEDLE POINT PLIERS
Needle points 1/32" x 1/32"
7" O List ea. 5.30
CG837
(No cutters)
7" Y List ea. 4.20

CG5612
NEEDLE POINT DIAGONAL CUTTING PLIERS
Wire stripping notch, spring return handles.
6½" O List ea. 5.00



CG90
PLIER SET
Five pliers in black zipper case. Size 5-3/4" x 9-1/4" when closed. One each Nos. CG81, CG82, CG83, CG84 and CG85.
List ea. 19.50

THIS IS ONLY A PARTIAL LISTING OF KRAEUTER TOOLS... SEND FOR CATALOG

kraeuter
TOOLS FOR TECHNICIANS

**FOR 100 YEARS
THE FINEST IN
HAND TOOLS—
1860-1960**

KRAEUTER INDUSTRIAL PLIERS FULL POLISHED HEADS— VINYL CUSHION GRIP HANDLES

Designed for use in the Radio and Electronics fields. Hammer forged from high grade tool steel, individually fitted, tempered, adjusted and tested. Furnished with Cushion Grips (factory bonded) at no extra cost. Colors: B — Blue; G — Green; O—Orange; R—Red; Y—Yellow.

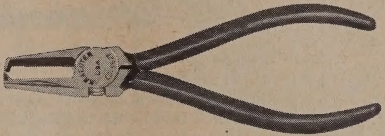
CG71

(With cutters)

SHORT JAW NOSE-CUTTING PLIERS

Extra long, narrow handles, cutters at tip of jaws.

8″ B List ea. 4.98

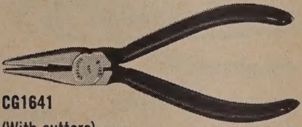


CG5627

END CUTTING RESISTOR PLIERS

Resistor terminal cutters for cutting the terminal ends of packaged assembly type resistors. Pliers sever terminal wires which are inaccessible except from over the resistor.

5½″ R List ea. 4.95



CG1641

(With cutters)

SHORT CHAIN NEEDLE NOSE PLIERS

Short nose, extra leverage, for open wiring.

5″ R List ea. 3.36

CG1643

(No cutters)

5″ B List ea. 3.25

CG1661

(With cutters)

LONG CHAIN NEEDLE NOSE PLIERS

Radio and TV's most extensively used pliers.

6″ B List ea. 3.65

C-CG1661

(Cross Coil Spring)

6″ B List ea. 3.95

CG1671

(No cutters)

6″ G List ea. 2.85

CG1781

(With cutters)

EXTRA LONG CHAIN NOSE PLIERS

Jaw length reaches 2-3/4″, narrow pointed nose.

7″ O List ea. 4.40

C-CG1781

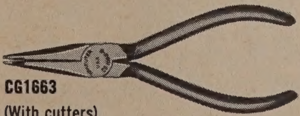
(Cross Coil Spring)

7″ O List ea. 4.70

CG1771

(No cutters)

7″ Y List ea. 3.25



CG1663

(With cutters)

RADIO AND IGNITION NOSE-CUTTING PLIERS

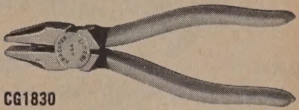
Grips at tip of nose, cutters 1/4″ back.

6″ O List ea. 4.85

C-CG1663

(Cross Coil Spring)

6″ O List ea. 5.15

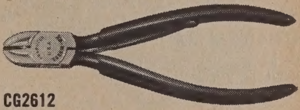


CG1830

ELECTRICIANS' SIDE CUTTING PLIERS

For electric wiring and repair work.

		List ea.
4″	R	3.54
5″	B	3.65
6½″	O	3.30
7″	Y	3.78
8″	B	4.16



CG2612

WIRE STRIPPING DIAGONAL CUTTING PLIERS

Strips fine wire. Spring return handles.

6½″ Y List ea. 4.62

CG4501

DIAGONAL "OBLIQUE" CUTTING PLIERS

For close cutting in radio, TV, telephone work.

		List ea.
4½″	B	2.94
5″	O	3.20
6″	R	3.70

C-CG4501

(Cross coil spring)

4½″	B	3.24
5″	O	3.50
6″	R	4.00

CG4502

7-IN. DIAGONAL CUTTING PLIERS WITH FULL-FASHIONED HANDLES

High leverage and comfort for continuous cutting.

7″ B List ea. 4.29

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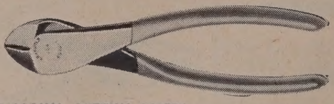
TOOLS FOR TECHNICIANS

FOR 100 YEARS THE FINEST IN HAND TOOLS—1860-1960

INDUSTRIAL PLIERS

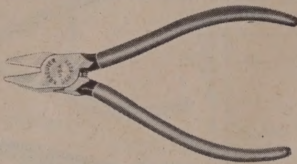


CG4610

HEAVY DUTY DIAGONAL CUTTING PLIERS

Added leverage for easier cutting.

5″ Y .... List ea. 3.57
7″ G .... List ea. 3.57



C-CG4625

NEEDLE POINT DIAGONAL CUTTING PLIERS

Narrow tapered nose for close cutting. Cross Coil Spring in handle.

5″ R .... List ea. 4.70

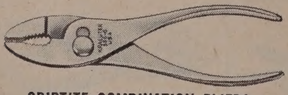
COMBINATION PLIERS

Drop forged from special analysis steel, KRAEUTER slip joint pliers have sharp, milled teeth and notches for better gripping and wire cutting. Knurled handles are shaped to fit the hand comfortably and provide maximum leverage. Studs and nuts are machined from solid bar steel and carefully hardened for longer wear.

KRAEUTER "BRITE" LINE

Fine quality slip joint pliers in 3 different finishes.

		List ea.
056—6″	Satin Chrome Plated Finish	.85
8″	Satin Chrome Plated Finish	1.12
156—6″	Chrome Plated Finish	1.25
8″	Chrome Plated Finish	1.60
10″	Chrome Plated Finish	1.96
256—6″	Full Polished Chrome Plated Mirror Finish	1.56
8″	Full Polished Chrome Plated Mirror Finish	2.02
10″	Full Polished Chrome Plated Mirror Finish	2.82

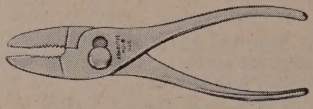


GRIPTITE COMBINATION PLIERS

Designed for heavy duty service.

5½″ & 6″ sizes, 2 position slip joint adjustments.
8 ″ & 10″ sizes, 3 position slip joint adjustments.

		List ea.
356—5½″	Nickel Plated	2.65
356—6″	Nickel Plated	2.65
356—8″	Nickel Plated	3.35
356—10″	Nickel Plated	4.25



THIN NOSE COMBINATION PLIERS

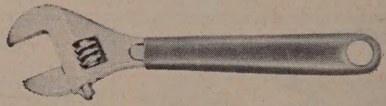
Tapered thin jaws for confined areas.

40—6″ Nickel Plated .... List ea. 2.06

TONGUE-N-GROOVE JOINT PLIERS
POLISHED FACES—"CG" VINYL CUSHION GRIP HANDLES

Five parallel adjustments from closed to 1-5/8″. Furnished with "CG" VINYL Cushion Grips only.

CG710-10″ R .... List ea. 3.50



ALLOY STEEL ADJUSTABLE WRENCH

THIN PATTERN—SMOOTH ACTION—CHROME PLATED

With "CG" VINYL Cushion Grip.

		List ea.
CG31—4″	R	2.70
CG31—6″	B	2.70
CG31—8″	O	3.45
CG31—10″	G	4.35
CG31—12″	Y	6.25
CG31—15″	R	9.00

COMBINATION PATTERN SNIP

Cuts straight, curved shapes in metal, etc. Polished Blades, Hard Black Enameled Handles.

K13—7″ Pocket Size, Cut 1-5/8″ .... List ea. 2.39

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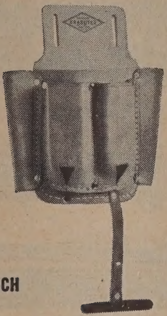
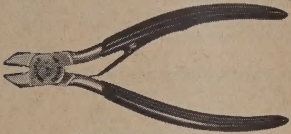


711
LEATHER TOOL POUCH

Five pockets, with tape holder. Stitched with 7-cord top quality linen hot wax thread, locked to solid leather back with steel rivets. Pockets made of pliable form-fitting Russet Leather. Designed for the radio and TV serviceman to carry pliers, screw drivers, tape, and other small tools.

711	Tool Holster	List ea. 5.00



SPRING IN HANDLE

Available for most pliers, replaceable leaf spring keeps pliers in open position, ready to work. Can be provided separately or in combination with cushion grips. Effectively used to increase efficiency and reduce wrist fatigue on the production line.

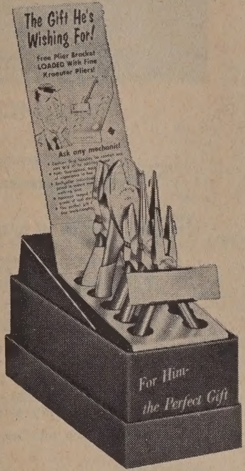
Leaf	List ea. .30 additional

CROSS COIL SPRING

The following pliers are available with cross coil spring. When ordering, specify prefix "C" with tool number.

C-CG1661-6", C-CG1663-6", C-CG1781-7", C-CG4501-4½", C-CG4501-5", C-CG4501-6".

Cross Coil Spring	List ea. .30 additional



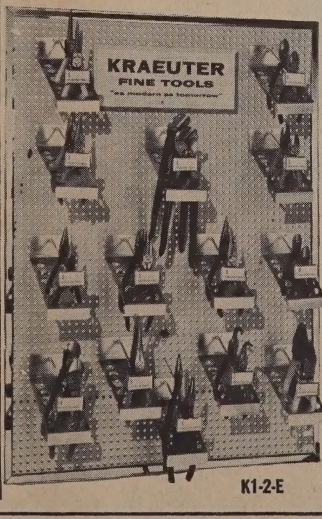
K-5
5-PLIER ASSORTMENT WITH FREE DISPLAY BRACKET AND GIFT BOX

Set includes:

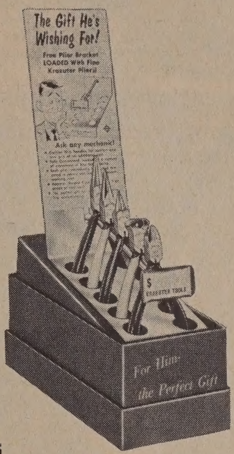
1—CG1830-6½"	Electrician's Side Cutter
1—CG4610-7"	Heavy Duty Diagonal
1—CG4501-6"	All Around Diagonal
1—CG1661-6"	Chain Nose with Cutter
1—CG83-4½"	Chain Hose "Hobby"

1 to 5-plier bracket (no charge)

Shipping weight—2 lbs. 5 oz. List ea. 17.42



K1-2-E



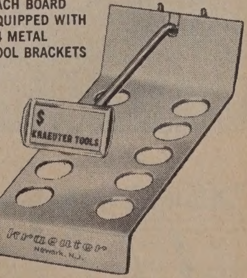
P-35
5-PLIER ASSORTMENT WITH FREE DISPLAY BRACKET AND REVERSIBLE POINT-OF-SALE DISPLAY CARD

Set includes:

1—CG81	Diagonal Cutting Pliers
1—CG82	End Cutting Nipper
1—CG83	Chain Nose Pliers
1—CG84	Flat Nose Pliers
1—CG85	Round Nose, Round Jaw Pliers

Shipping weight 1 lb. List ea. 16.96

EACH BOARD EQUIPPED WITH 14 METAL TOOL BRACKETS



RADIO AND ELECTRONIC BRACKET ASSORTMENT

Includes 2 each of 14 popular pliers, permanent peg-board display and 14 Kraeuter metal tool brackets. Shipping weight—25 lbs.

List ea. 106.96

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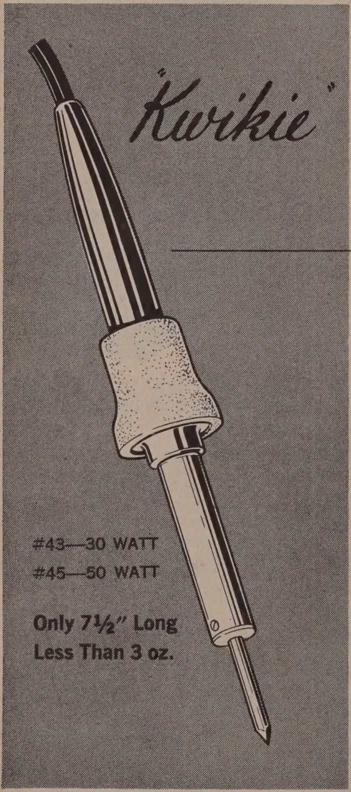
NEW *Kwikie*

PENCIL SOLDERING IRON

KWIKHEAT'S Smaller, Lighter Pencil Iron for Densely Packed Printed Circuit Production.
Only 7½ inches long . . . less than 3 oz. weight! This really small iron is ideal for general precision use in large or small shops. Heat insulated handle. Combination of wattage and tip size gives proper temperature for job.

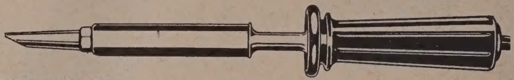

Kwikie
#43—30 WATT
#45—50 WATT
Only 7½" Long
Less Than 3 oz.

KWIKHEAT

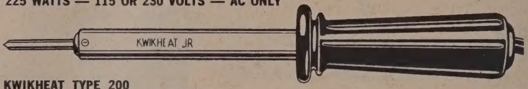
SOLDERING IRONS

Built-in Vanatta Automatic Thermostat

THERMOSTATIC MODELS



KWIKHEAT TYPE 300
225 WATTS — 115 OR 230 VOLTS — AC ONLY


KWIKHEAT JR

KWIKHEAT TYPE 200
150 WATTS — 115 VOLTS AC ONLY

REAL PRODUCTION IRONS
No. 200 lightweight and No. 300 heavy duty irons are both real production tools for high speed soldering. Tips are easily replaced with a screwdriver, or wrench.

HOT IN 90 SECONDS
Very high watt density with less heat radiation, under complete control of built-in thermostat.

TEMPERATURE
No. 200 is factory preset to 700°F for intermittent standby work or 800°F for constant high speed soldering. No. 300 can be preset to any temperature between 275° and 875°F, at additional charge of $1.00 each for 1 to 49 irons or 50c each for 50 to 99 irons. No extra charge for 100 or more. Alloys used reduce temperature creep.

CORROSION RESISTANT
Tips, core assemblies, and outer shells are made of stainless steel or plated forged tellurium copper alloy.

KWIKHEAT TYPE 200
150 WATTS — 115 VOLTS AC ONLY

Weight with Tip	7½ oz.
Shipping Weight with ⅜" x ¼" dia. Tip and Resting Stand	1 lb. 2 oz.
Length with ⅜" x ¼" dia. Tip	12¾"
Length of Heater Cord	6 ft.

LIST PRICE

Iron complete with Tip	**$9.95**
Replacement Element	**6.95**

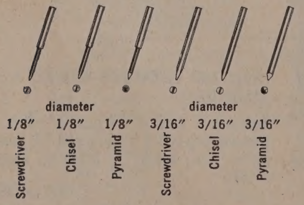
KWIKHEAT TYPE 300
225 WATTS — 115 OR 230 VOLTS — AC ONLY

Weight with Standard No. 1 Tip	14 oz.
Shipping Weight with No. 1 Tip and Resting Stand	1½ lb.
Length with No. 1 Tip	13"
Length of Heater Cord	6 ft.

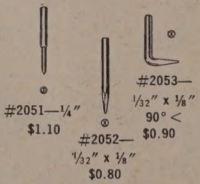
LIST PRICE

Iron complete with Tip	$14.95
For other AC voltages or with 3-Conductor Cord, add	$2.75
Replacement Element	$10.85
Tips, according to style	$1.80 to $2.70

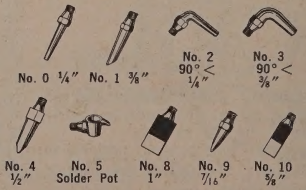
Kwikie 6 INTERCHANGEABLE TIPS


diameter
diameter
1/8"
1/8"
1/8"
3/16"
3/16"
3/16"
Screwdriver
Chisel
Pyramid
Screwdriver
Chisel
Pyramid

TYPE 200 TIPS


#2051—¼"
$1.10
#2052—
⅟₃₂" x ⅛"
$0.80
#2053—
⅟₃₂" x ⅛"
90° <
$0.90

9 INTERCHANGEABLE TIPS FOR NO. 300


No. 0 ¼"
No. 1 ⅜"
No. 2
90° <
¼"
No. 3
90° <
⅜"
No. 4
½"
No. 5
Solder Pot
No. 8
1"
No. 9
7/16"
No. 10
⅝"

#20 ANTIFREEZE COMPOUND
A lubricant for all soldering iron tips. Prevents sticking, increases conductivity between tip and core.

PLEASE CONTACT YOUR JOBBER FOR TRADE DISCOUNTS

KWIKHEAT MANUFACTURING CO. GLENDALE 4, CALIFORNIA

ORYX

Shown Model 6-A

PRECISION AC AND DC MINIATURE SOLDERING IRONS

World's finest instruments for close-quarter precision soldering . . . the only complete line of low voltage, low maintenance irons for every production, service, or laboratory application! Ideally suited for transistors, printed circuits, and fine sub-assemblies. From the world-famous Oryx Electrical Laboratories of England.

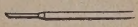
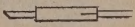
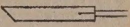
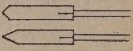
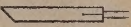
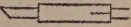
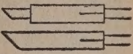
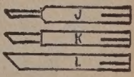
NO HAND FATIGUE
Weight as low as ¼ oz. permits fast, efficient production soldering

AC AND DC MODELS
Choice of low voltage AC/DC elements with step-down transformers, or new 115 v AC irons ready to plug in!

HIGH TEMPERATURES
Operating temperatures from 540 to 1000°F available for every application

REPLACEABLE TIPS
Low maintenance costs with inexpensive push-on tips. Variety of bits available.

COMPLETE LINE OF SOLDERING INSTRUMENTS FOR EVERY APPLICATION

MODEL	DESCRIPTION	Volts AC-DC	Watts	Max. Temp. (in °F)	Length	TIP No.	ALSO TAKES No.	NET PRICE
6	The world's smallest soldering instrument. With fixed tip, it is ideal for hair spring movements, r.f. coils, and fine sub-assemblies. Specially recommended for connections to transistors and diodes.	6	6	542	6″	1/16″ Fxd.	—	**$4.95 ea.** (12 or more $4.45 ea.) 
6A	Combines the lightweight advantages of Model 6 with the added convenience of renewable bits (or tips). Widely used for hearing aids, f.m. tuners, printed circuits, transistorized amplifiers.	6	6	602	6″	B	A	**$4.95 ea.** (12 or more $4.45 ea.) 
9-6 9-12 9-24	Ideal for use on complex circuitry, radar, missile sub-assemblies, electromedical devices, television and all applications calling for a precision tool with high heat capacity.	6 12 24	8.3 8.3 8.3	614 614 614	6″ 6″ 6″	A A A	B B B	**$4.95 ea.** (12 or more $4.45 ea.) 
11	Special featherweight high temperature model specifically designed for all soldering alloys requiring a hotter than normal iron. Uses a pure nickel bit to reduce oxidization.	6	10	813	6″	D	E	**$6.95 ea.** (12 or more $6.45 ea.) 
12-6 12-12 12-24	Standard model for factory use on radio, television, radar assembly, switchboard and instrument work. Its generous heat capacity also renders it extremely suitable for repair work in aircraft and automotive industries.	6 12 24	12 12 12	652 652 652	6¼″ 6¼″ 6¼″	C C C	— — —	**$4.95 ea.** (12 or more $4.45 ea.) 
18	Specially developed for the production line. The equivalent in performance of a standard 80-watt soldering iron at the fantastic weight of only ¾ oz. By the elimination of hand fatigue, output can be greatly increased.	6	18	674	7¼″	F	G	**$7.50 ea.** (12 or more $7.05 ea.) 
25-12	The latest addition to the ORYX line. A high performance iron for continuous operation at 1000°F. The world's most powerful miniature iron Fitted with heavy duty copper alloy bit with solid nickel tip to resist oxidization and greatly speed production.	12	25	1000	7¼″	G	H	**$8.00 ea.** (12 or more $7.55 ea.) 
115-10W AC 115-15W AC	Longlife suspension AC element heats to rated temperature in 70 seconds. Complete with 4½-foot UL approved ultra-flexible cord. Approved by Dept. of Bldg. and Safety, City of Los Angeles. Total weight 1 oz., plus cord.	115 v AC 115 v AC	10 15	672 717	7″ 7″	J K	K L	**$6.95 ea.** (12 or more $6.45 ea.) 

TRANSFORMERS:

MODEL 54203-6V

For 6-volt irons. Output 18 watts, 3 amps. Operates on 110v AC. 4½-ft. cord and clip-holder for iron.

NET **5.50**

MODEL 5420-12V

For 12-volt irons. Output 25 watts, 2 amps. Operates on 110v AC. 4½-ft. cord and clip-holder for iron.

NET **6.45**

REPLACEMENT TIPS:

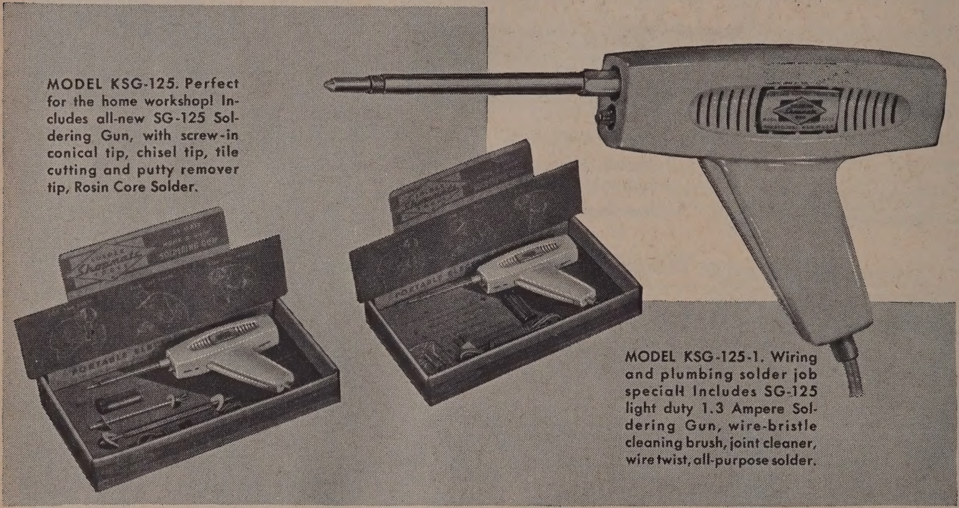
Tip	Material	Tip Diam.	Net Price
A	Nickel plated	5/32″	$ .50
B	Nickel plated	3/32″	.50
C	Nickel plated	3/16″	.50
D	Solid Nickel	5/32″	1.80
E	Solid Nickel	3/32″	1.80
F	Nickel plated	3/16″	1.25
G	Solid Nickel end	3/16″	1.85
H	Copper Alloy and plated	1/4″	2.35
J	Copper alloy, nickel plated	3/32″	1.55
K	Copper alloy, nickel plated	5/32″	1.70
L	Copper alloy, nickel plated	7/32″	2.25

Protected by
U. S. Patents

THE ORYX COMPANY **National Sales Agency** **SHERMAN OAKS, CALIF.**

SHOPMATE®

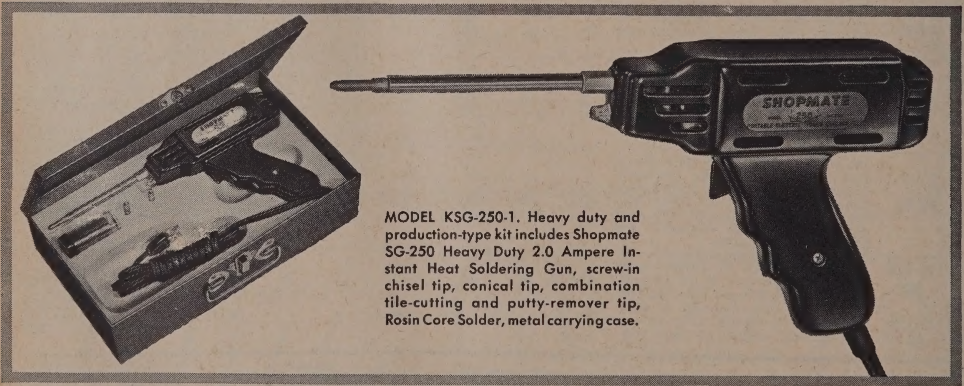
Portable Electric Tools, Inc., Chicago 20, Illinois



MODEL KSG-125. Perfect for the home workshop! Includes all-new SG-125 Soldering Gun, with screw-in conical tip, chisel tip, tile cutting and putty remover tip, Rosin Core Solder.

MODEL KSG-125-1. Wiring and plumbing solder job special! Includes SG-125 light duty 1.3 Ampere Soldering Gun, wire-bristle cleaning brush, joint cleaner, wire twist, all-purpose solder.

ALL-NEW SHOPMATE SG-125 1.3 AMPERE SOLDERING GUN with high-impact, Shatterproof, Flame-resistant Nylon housing for longer life, extra protection against damage. Easy-to-locate sparkling white streamlined housing, brilliant turquoise cord. New rigid single pole transformer type gun has 5 inch reach—gets at work no other can touch. Extensions available—up to 12 inches. No tools needed for replacement of screw-in tips in a wide variety of tip styles for all specialized work. New hand-grip, soft-action trigger for a positive hold in any position—ends finger fatigue. Prefocused light directs beam where you need it. Fast heat transformer type gun heats in only 2½ seconds—ends warm-up delays. Full 1.3 Amperes—115 Volt, AC. Light, beautifully balanced functional design.



MODEL KSG-250-1. Heavy duty and production-type kit includes Shopmate SG-250 Heavy Duty 2.0 Ampere Instant Heat Soldering Gun, screw-in chisel tip, conical tip, combination tile-cutting and putty-remover tip, Rosin Core Solder, metal carrying case.

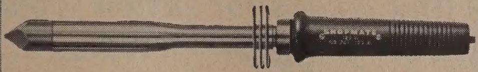
SHOPMATE HEAVY DUTY 2.0 AMPERE SG-250 SOLDERING GUN features sturdy, rigid pole on lightweight transformer type gun. 5 inch reach—extensions, up to 12 inches, also available. 2½ second heat for faster work, no warm-up delays. Balanced transformer delivers full 2.0 Amperes—115 volt, AC. Screw-in tips need no tools but the fingers for replacement. Complete selection of tips for all special jobs available. Soft-action trigger for easy operation. Directed light throws powerful beam—keeps work in focus. Balanced design for easier handling and accurate direction on the job—permits feather-light touch for delicate work. UL and CSA Approved and Job-Tested by Shopmate to assure precision workmanship and top quality materials in a rugged, production type Soldering Gun for all Heavy-Duty purposes.

(Use Index Page 1 for Quick, Easy Location of ALL Products)

SHOPMATE®

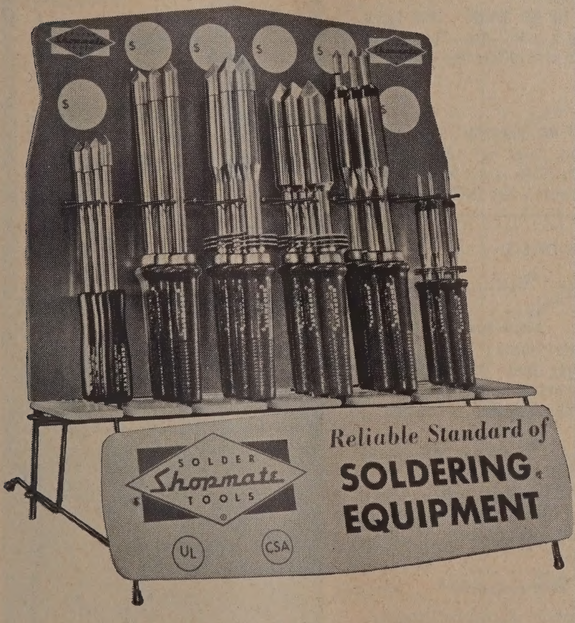
Portable Electric Tools, Ltd., Scarborough, Ontario, Canada

"Vapor-Proof" Irons with Sealed Elements



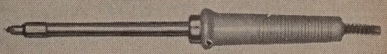
No. 625. ⅜" Tip, 125 Watts. Popular for light soldering—only 10" long. Complete with stand.

No. 825. ⅝" Tip, 225 Watts, for heavier duty. Comes complete with stand. Shipping wt. 3 lbs.



MODEL UP-36 SOLDERING IRON DISPLAY ASSORTMENT. All-purpose selection of Shopmete Soldering Irons. Includes 32 irons in 6 models—12 of Model 5, 40W ½" tip; 6 of Model 75, 80W, 9⁄16" tip; 4 of Model 325, 100W, ⅜" tip; 3 each of Models 360 and 703, 35W and 150W, 3⁄16" and 1⅛" tips, and 4 of Model 701, 80W, ⅝" tip in handsome metal display stand.

Newly designed handle on these Shopmate Soldering Irons adds new safety and comfort — protects hand from contact with casing of hot iron. Easy-to-grasp coppertone finished handle with flared design.

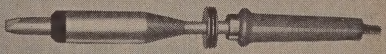


No. 315. ⅜'' tip, 60 Watts, for occasional light soldering. Nichrome-porcelain element.

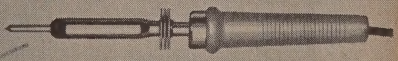
No. 225. ⅜'' adjustable plug tip, 80 Watts. Element Nichrome wound on amber mica.

No. 400. ¼'' tip, 60 Watts. Small, continuous duty model with baffle plates, 6 ft. cord.

No. 325. ⅜'' adjustable plug tip, 100 Watts. Standard radio iron. Nichrome wound on mica.

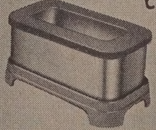


No. 425. ⅝'' adjustable plug tip, 200 Watts. For medium heavy work. Nichrome-Mica element.

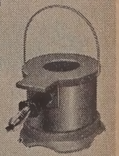


No. 360. 3⁄16'' tip, 35 Watts. For delicate work. 7½'' long. Rugged, featherweight.

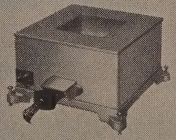
Complete line of Solder Pots



Model 202. 6''x2½''x1½'' oblong well holds 6 lbs. of solder, with cord.



Model 200. 2½'' diameter round well holds 2 lbs. of solder. Heavy duty.



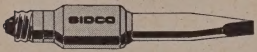
Model PC 44. 4''x4''x2'' deep well, 600 W. 10 lb. capacity, Thermostat.

Model 100. Perfect for printed circuit service. Holds 1 lb. of solder.

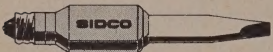
Other Models Available

SIDCO

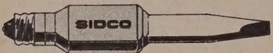
industrial soldering tips and tiplets for pencil irons
manufactured by SID UNGAR, *the pioneer*
with 28 years experience in making electric pencils

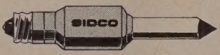


CHISEL TIP NO. 25W33 25 W. 115 V.
1⅝″ long, point ¼″ – Tellurium Copper Ideal for Labs. – List **$1.25** each.

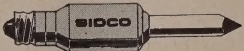


CHISEL TIP NO. 50W33 50 W. 115 V.
1⅝″ long, point ¼″ "IRON-PLATED" Tellurium Copper pre-tinned – heavy duty for production lines. LONGER LIFE – List **$3.00** each.





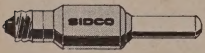
PYRAMID TIP NO. 25W36 25 W. 115 V.
1⅛″ long x 5/16″ dia. – Tellurium Copper. Ideal for Labs, Servicemen and light soldering – List **$1.25** each.



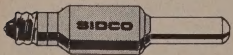
PYRAMID TIP NO. 40W36 40W. 115 V.
1⅛″ long x 5/16″ dia. – Pure ARMCO Iron plated with 100% silver – List **$1.50** each.

CHISEL TIP NO. 50W33AR 50 W. 115 V.
1⅝″ long, point ¼″ – ARMCO Iron plated with 100% silver. Ideal for Labs and Servicemen – List **$2.00** each.

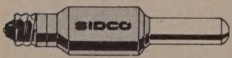
THREADED UNITS FOR USE WITH TIPLETS



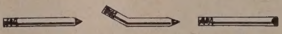
NO. 25W35 25W. 115 V.
1⅛″ x 5/16″ dia. – Threaded unit, plated with 100% silver. For use with pre-tinned iron-plated or pre-tinned standard tiplets. Refer to illustration at right – List **$1.25** each.



NO. 40W35 40W 115 V.
1¼″ x ⅜″ dia. – Threaded unit plated with 100% silver. For use with Tiplets – List **$1.50** each.

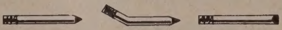


NO. 50W35 50 W. 115 V.
1¼″ x ⅜″ dia. – Threaded unit plated with 100% silver. For use with Tiplets – Save $1.00! – List **$2.00** each.



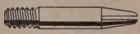
PL 1 Conical | PL 2 Bent Conical | PL 3 Chisel

Iron Plated Tiplets 1″ x ⅛″ dia. available in three types – Threads chemically treated – prevents binding and freezing. PRE-TINNED – Save 10¢. – List **50¢**.

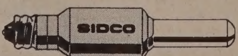


T 1 | T 2 | T 3

PRE-TINNED Standard Tiplets. Threads chemically treated to prevent binding and freezing. List **20¢** each

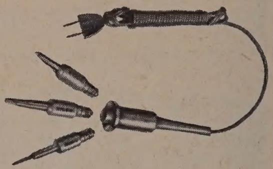


NO. T57 Special all-purpose Desoldering Tiplet—pre-tinned threads—chemically treated for use with #50W45. Save 25¢!—List **50¢**.



NO. 50W45 50 W. 115 V.
1 5/16″ x ⅜″ diameter—threaded unit—plated with 100% silver. For use with #T57 Desoldering Tiplet, and 3/16″ diameter Tiplets.
Save $1.00!—List **$2.00** each.

KISS 'N COOL SOLDERING HANDLE



New design with vertical vents reduces temperature. Molded from nylon—no cork necessary—tips stay tight.

Part No. KC1200. List price **$2.50** each. Length 5½″, weight with cord 3 oz., **50 watts-115 volts.** Packed in individual boxes, 1 doz. to container.

QUANTITY DISCOUNTS

$1.00 to $9.00 . . . . 33⅓%
$10.00 to $99.00 . . . . 40%
$100 to $299.00 . . . . 40% and 5%
$300.00 to $750.00 . . . . 40% and 10%

ALL TIPS AND TIPLETS
PACKED 1 DOZEN TO BOX

SOLDERING IS OUR ONLY BUSINESS!

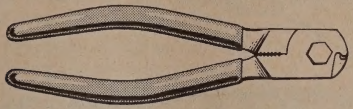
SIDCO®
box 192 | venice | california

UL **Handles And Tips Listed**

WEST COAST ELECTRONICS MANUFACTURERS ASSOCIATION

Saxton Velvet Grip Tools

- Induction hardened steel for maximum service life.
- Red Insulated Grips individually tested for 5,000 volt breakdown
- Unconditionally guaranteed by SAXTON against defects in workmanship or materials.

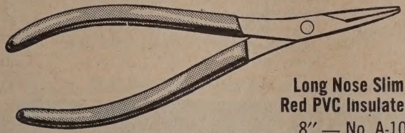


SAXTON Cable Cutter Red PVC Insulated Grips

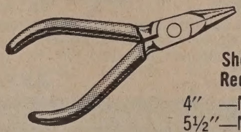
Hi leverage and replaceable cutting edges give this cable snapper long life.

6½"—No. 1958-6½

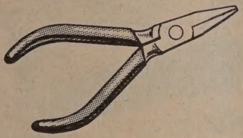
$6.75 ea.



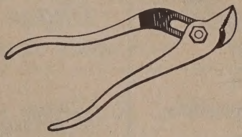
Long Nose Slim Line
Red PVC Insulated Grips
8" — No. A-1082-8
$4.25 ea.



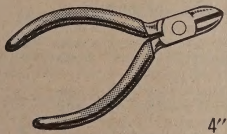
Short Chain Nose Pliers
Red PVC Insulated Grips
4" —No. A-1512-4 **$2.90 ea.**
5½"—No. A-1512-5½ **2.85 ea.**
6½"—No. A-1542-6½ **3.20 ea.**



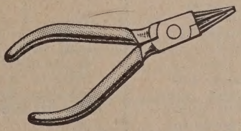
Flat Nose Pliers
Red PVC Insulated Grips
4" — No. A-1612-4
$2.90 ea.



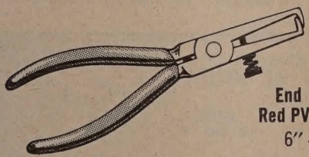
Slip Joint Magneto Pliers
4½" — No. E-168-4½
$2.75 ea.



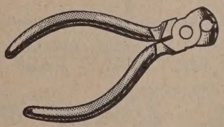
Diagonal Cutters
Red PVC Insulated Grips
4" — No. PW-772-4 **$3.10 ea.**
6" — No. PW-772-6 **3.50 ea.**



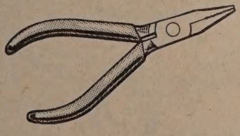
Round Nose Pliers
Red PVC Insulated Grips
4" — No. A-1472-4
$2.90 ea.



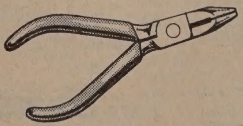
End Wire Strippers
Red PVC Insulated Grips
6" — No. 1951-6
$3.85 ea.



End Cutting Nippers
Red PVC Insulated Grips
4" — No. PW-622-4
$3.60 ea.



Tapered Flat Nose Pliers
Red PVC Insulated Grips
4" — No. A-1422-4
$2.90 ea.



Short Chain Nose Pliers
with Sidecutters
Red PVC Insulated Grips
4" — No. PW-752-4
$3.40 ea.

saxton NEW YORK, N. Y.
wire and cable division

(See Pages 1584 to 1598 for Complete Listing of Saxton Products)

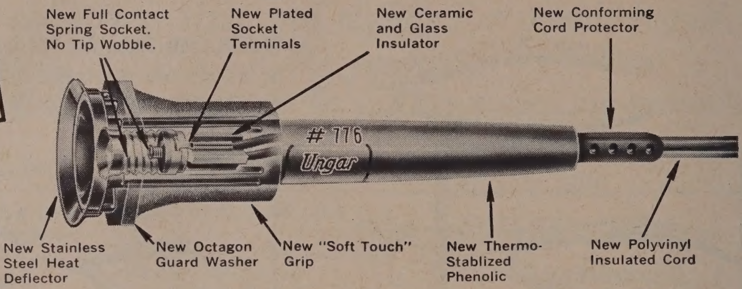
Ungar® SOLDERING TOOLS

Proven and Preferred where Reliability Counts

NEW IMPROVED Ungar® #776 HANDLE

Quality proven in millions of hours of production line use . . .

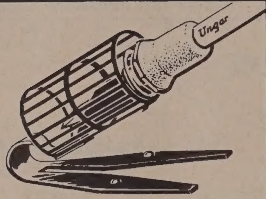
NOW EVEN BETTER WITH 9 GREAT IMPROVEMENTS!


New Full Contact Spring Socket. No Tip Wobble.
New Plated Socket Terminals
New Ceramic and Glass Insulator
New Conforming Cord Protector
# 776
Ungar
New Stainless Steel Heat Deflector
New Octagon Guard Washer
New "Soft Touch" Grip
New Thermo-Stablized Phenolic
New Polyvinyl Insulated Cord

(#880 Handle discontinued)

All these plus features . . . still only $1.50 list

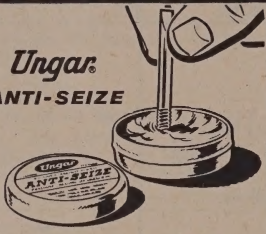
NEW Ungar Accessories



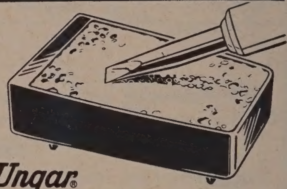
Ungar® SOLDERING IRONHOLDER

For safer, more efficient production soldering. Provides a double safety guard design that protects the operator against accidental "hot tip" burns, and protects the iron against breakage. Keeps the iron ready for easy, instant use. #8000 Individually boxed. List $2.00 each.

Ungar® ANTI-SEIZE


Ungar
ANTI-SEIZE

Guards against tip freezing. Protects against corrosion. Repeated use of ANTI-SEIZE on threads helps to reduce tip seizure and resultant breakage. Improves heat transfer, too! #8001 2 oz. can. List 69¢ each.



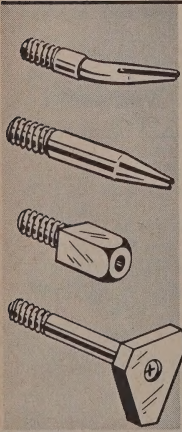
Ungar® KLEEN-TIP

Specially Processed SPONGE
Reduces oxidation, prevents contamination and insures reliability of soldered connections. Clean tips last twice as long.

#400 Phenolic Tray with 2 specially processed sponges and bracket for attaching to work bench. List $1.25 each.

#455 Refill Sponges. Package of 2 sponges. List 50¢ each.

FOR FAST, SAFE, EASY PRINTED CIRCUIT RE-WORK

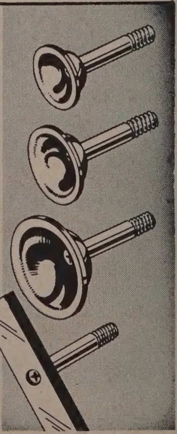

NEW #862 Offset Slotted Tip
#857 Slotted Tip
NEW #863 Cube Tip
NEW #861 Triangle Tip

Ungar DE-SOLDERING TIPS

Specially shaped to help you remove components 70% faster. Melts solder on all terminals simultaneously. All De-Soldering Tips designed for use with #4045 Heating Unit. List 75c each

#270 Ungar DE-SOLDERING KIT.

Complete, 7 pieces including lightweight #776 Handle, Super Hi-Heat Unit #4045., 5 De-Soldering Tiplets. Packed in metal case. List $7.95


#856 ⅝" Cup Tip
#855 ¾" Cup Tip
#854 1" Cup Tip
#858 Bar Tip

NEW *Ungar*®

THREAD-ON

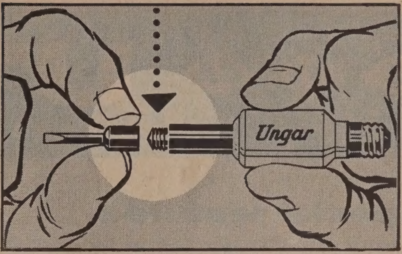
HEATING UNITS AND MINI-TIPS®

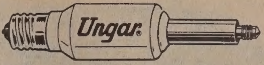
THREAD-ON SOLDERING TIPS

Ungar's exclusive new development provides these important advantages . . .

- 100% increase in heat recovery rate
- 4 times greater heat transfer
- No tip seizure from oxidation or solder
- Positive seal between Heating Unit and **MINI-TIP***
- New passivated plating prevents barrel oxidation and surface flaking
- New UC_{47} copper **MINI-TIPS***, iron clad nickel plated or unplated, chisel or pencil

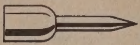
All electrical components are for use on 110 v. AC-DC.



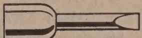


#4037 — Hi-Speed Heating Unit — 850° to 900° F. 47½ Watts. List $3.00

#1237 — Hi-Speed Heating Unit — 750° to 800° F. 37½ Watts. List $1.50

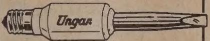
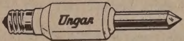
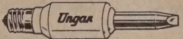
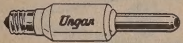


PENCIL MINI-TIP. ¾" long, ⅛" O.D. New UC_{47} copper body. #PL 111 Iron clad, silver plated. List 75c
#111 Unplated List 25c

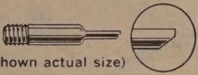


CHISEL MINI-TIP. ¾" long, ⅛" O.D. New UC_{47} copper body. #PL 113 Iron clad, silver plated. List 75c
#113 Unplated. List 25c

Ungar Interchangeable Tips . . . the right tip at the right temperature.

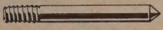
TIP TEMPERATURES	 CHISEL TIP LONG TAPER	 PYRAMID TIP	 CHISEL TIP SHORT TAPER	 THREAD-IN HEATING UNITS For use with **TIPLETS*** shown below.
850° to 1000° F. #4000 Super Hi-Heat Series 47½ watt	#4033 Tip 1⅝" long, ¼" wide. UC_{47} copper, iron clad, silver plated. List $3.00	#4036 Tip 1⅛" long, ⅜" diameter. UC_{47} copper, iron clad, silver plated. List $3.00	#4039 Tip 1⅛" long, ⅜" diameter. UC_{47} copper, iron clad, silver plated. List $3.00	#4035 Steel body, nickel plated. ⅛" tap for use with 300 Series **TIPLETS*** #4045 Steel body, nickel plated. 3/16" tap for use with 800 Series **TIPLETS*** List $3.00 ea
750° to 800° F. #1200 Hi-Heat Series 37½ watt	NEW #1333 Tip 1⅝" long, ¼" wide. Pure solid Armco iron, silver plated. List $1.50 #1233 Same as above except with UC_{47} copper, unplated. List $1.50	#1236 Tip 1⅛" long, 5/16" diameter. Pure solid Armco Iron, silver plated. List $1.50	#1239 Tip 1⅛" long, ⅜" diameter. Pure solid Armco iron, silver plated. List $1.50	#1235 Steel body, nickel plated. ⅛" tap. List $1.50
650° to 750° F. #500 Standard Series 23½ watt	NEW #533 Tip 1⅝" long, 3/16" wide. UC_{47} copper, unplated. List $1.25	#536 Tip 1⅛" long, 5/16" diameter. UC_{47} copper, unplated. List $1.25	#539 Tip 1⅛" long, 5/16" diameter. UC_{47} copper, unplated. List $1.25	#535 Steel body, nickel plated. ⅛" tap. List $1.25

TIPLETS® THREAD-IN SOLDERING TIPS . . . combine with Ungar Heating Units above.

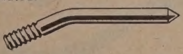


(Shown actual size)

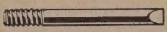
#PL 340 MICRO-NEEDLE. 3/64" Tip, ¾" long, for micro-scopic soldering. UC_{47} copper, iron clad, silver plated. List 60c



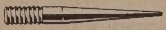
#PL 331 PENCIL. 1" long. UC_{47} copper, iron clad, silver plated. List 60c
#331 unplated. List 20c



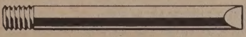
#PL 332 PENCIL OFFSET. 1" long. UC_{47} copper, iron clad, silver plated. List 60c
#332 unplated. List 20c



#PL 333 CHISEL, LONG TAPER. 1" long. UC_{47} copper, iron clad, silver plated. List 60c
#333 unplated. List 20c

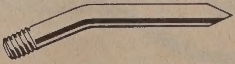


#PL 338 TAPERED NEEDLE, 1/16" POINT. 1" long. UC_{47} copper, iron clad, silver plated. List 60c

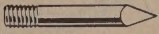


#PL 833 CHISEL, LONG TAPER. 1¾" long. UC_{47} copper, iron clad, silver plated. List $1.00

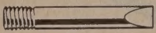
800 SERIES
for use with #4045 Heating Unit



#PL 834 CHISEL, LONG TAPER, OFFSET. 1¾" long. UC_{47} copper, iron clad, silver plated. List $1.00



#PL 823 3/16" O.D. PYRAMID. 1" long. UC_{47} copper, iron clad, silver plated. List 60c
#823 unplated. List 20c



#PL 824 3/16" O.D. CHISEL, LONG TAPER. 1" UC_{47} copper, iron clad, silver plated. List 60c
#824 unplated. List 20c

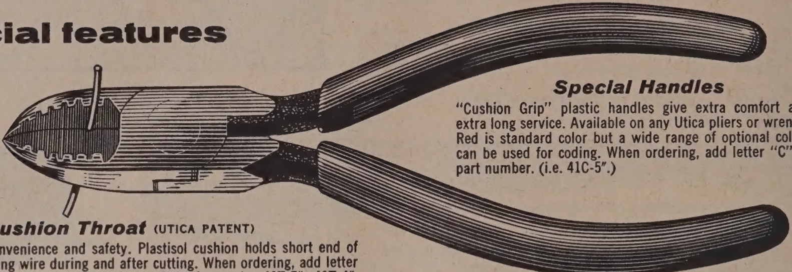
UNGAR ELECTRIC TOOLS

***TIPLETS** and **MINI-TIPS** are registered trade marks of Ungar Electric Tools, Electronic Division of Eldon Industries, Inc., 4101 Redwood Ave., Los Angeles 66, Calif.

U TI CA® UTICA

DROP-FORGED • INDUCTION-HARDENED • BACKED BY FULL GUARANTEE

special features

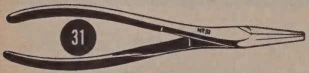


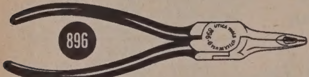
Special Handles

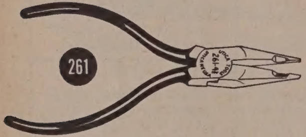
"Cushion Grip" plastic handles give extra comfort and extra long service. Available on any Utica pliers or wrench. Red is standard color but a wide range of optional colors can be used for coding. When ordering, add letter "C" to part number. (i.e. 41C-5".)

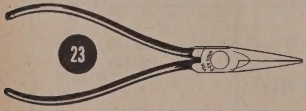
Ribbed Cushion Throat (UTICA PATENT)

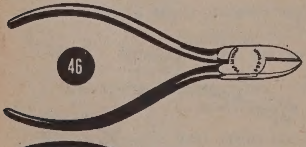
Designed for convenience and safety. Plastisol cushion holds short end of electrical or spring wire during and after cutting. When ordering, add letter "T" to part number. Available only on following tools: 40T-7", 41T-4", 41T-5", 41T-6", 44T-5", 46T-4".

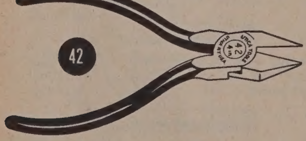












No. 31 DUCK BILL WIRING PLIERS
Long reach duck bill pliers. Serrated jaws. Size: 8".

No. 896 RADIO AND IGNITION CUTTING PLIERS
For cutting and forming wire. Center cutter near tip of jaws. Size: 6".

No. 261 SPECIAL SHORT CHAIN NOSE CUTTING PLIERS
Flush cutter near tip of jaws for close cuts. Size: 4½" (formerly custom tool No. B801).

No. 23 NEW MIDGET SHORT CHAIN NOSE PLIERS
Very thin nose for delicate electronic subminiature assembly. Sizes: 4", 4½", 5".

No. 46 MIDGET DIAGONAL PLIERS
Small, light, sturdy diagonal for work on small electronic assemblies. Size: 4".

No. 42 DIAGONAL PLIERS
Heavy pattern diagonal. Flush cutting edges, tapered jaws for cutting in confined areas. Size: 4".

No. 1033 LONG CHAIN NOSE PLIERS
For general wiring. 3/32" nose and deep serrated jaws. Sizes: 6", 7".

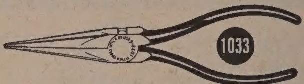
No. 654 LONG CHAIN NOSE SIDE CUTTING PLIERS
Same as 1033 but with side cutter. Sizes: 6" 7".

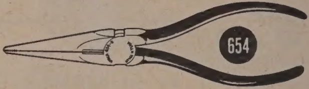
No. 777 LONG NEEDLE NOSE PLIERS
Long, spring tempered jaws for very fine work in assembling small electronic apparatus. Size: 6".

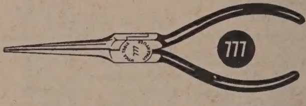
No. 776 CURVED LONG NEEDLE NOSE PLIERS
Fine, spring tempered pliers with bent nose for offset work. Size: 6".

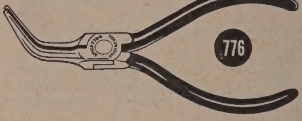
No. 38 SPECIAL DIAGONAL PLIERS
Exceptionally fine construction of nose for precision work. Semi-flush edges. Size: 4" (formerly custom tool No. B644).

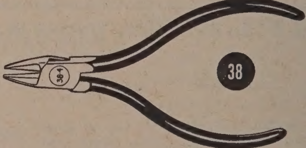
No. 47 MIDGET DIAGONAL PLIERS
Fine tapered nose for delicate work in confined areas. Flush jaws for close cutting. Size: 4".

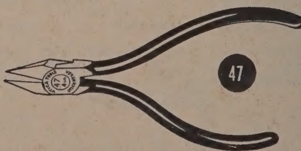












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The
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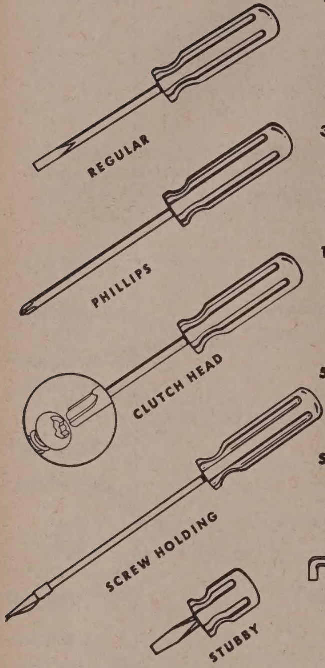
VACO®

Screw Drivers
Nut Drivers

The Industry's Finest and Most Complete Line



1/8″ Cabinet Style—Round Blades

Stock Number	Blade Diameter and Length
A 216-4	1/8″x4″
A 216-6	1/8″x6″
A 216-8	1/8″x8″
A 216-10	1/8″x10″

3/16″ Cabinet Style—Round Blades

A 316-4	3/16″x4″
A 316-5	3/16″x5″
A 316-6	3/16″x6″
A 316-8	3/16″x8″
A 316-10	3/16″x10″

1/4″ General Service—Round Blades

A 416-4	1/4″x4″
A 416-5	1/4″x5″
A 416-6	1/4″x6″
A 416-8	1/4″x8″
A 416-10	1/4″x10″

5/16″ Heavy Duty—Round Blades

A 516-6	5/16″x6″
A 516-8	5/16″x8″
A 516-10	5/16″x10″

Stubbys

A 132	1/4″x1-1/4″
A 135	5/16″x1-3/4″

Phillips Drivers

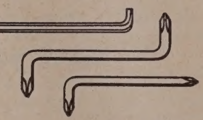
Stock Number	Point No.	Blade Diam. and Length
P 01	0	1/8″x2-1/2″
P 1	1	3/16″x3″
P 2	2	1/4″x4″
P 3	3	5/16″x6″
P 5 (Stub)	2	1/4″x1-3/4″
P 6 (Stub)	1	3/16″x1-1/4″
P 12 (Pocket Clip)	1	1/8″x2-1/2″

Clutch Head Drivers

Stock Number	Bit Point Diameter and Blade Length
CH 43	1/8″x3″
CH 54	5/32″x4-1/4″
CH 64	3/16″x4-1/4″
CH 86	1/4″x6″
CH 106	5/16″x6″
Stub Styles	
CH 51	5/32″x1-1/2″
CH 61	3/16″x1-1/2″

Screw Holding Drivers

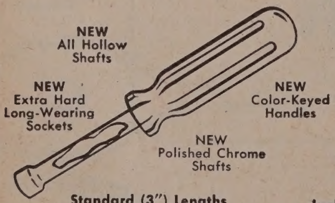
Stock Number	Blade Diam. & Length
OK 23	1/8″x3″
OK 24	1/8″x4″
OK 26	1/8″x6″
OK 28	1/8″x8″
OK 34	3/16″x4″
OK 36	3/16″x6″
OK 38	3/16″x8″



Offset Screw Drivers

Stock No.	Type	Blade
VO 1	Regular	5/32″x3″
VO 2	Regular	1/4″x4″
P 120	Phillips	#1 point one end, #2 point other end
P 111	Phillips	#1 point both ends
P 222	Phillips	#2 point both ends

VACO® NEW DESIGN NUT DRIVERS—With All Hollow Shafts

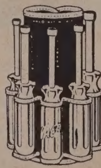


Standard (3″) Lengths

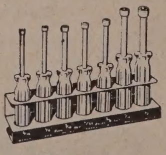
Stock No.	Hex Size	Overall Length	Color Key
S 6	3/16″	6 5/8″	Black
S 8	1/4″	6 5/8″	Red
S 10	5/16″	6 5/8″	Yellow
S 11	11/32″	6 5/8″	Green
S 12	3/8″	6 5/8″	Blue
S 14	7/16″	7″	Brown
S 16	1/2″	7″	Orange

ALSO AVAILABLE

Stubby sizes 1/4″, 5/16″, 3/8″
Odd sizes 7/32″, 9/32″
Extra Large sizes 9/16″, 5/8″



K-7 Self-Standing Kit
Includes 7 nut drivers (3″ lengths) each in own holder marked for size and color.



S 700 Bench Stand.
All metal for permanent attachment to bench or wall. 7 drivers.

VACO
Nut Drivers
Feature

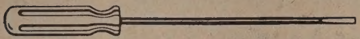
4-STAR DESIGN

- ★ **Extra Large Colored-for-Size Handles**
- ★ **Beautiful Polished Chrome Finish**
- ★ **All Hollow Shafts**
- ★ **Extra Hard Tempered Sockets**

with COLORED HANDLES

Available in 24 types and sizes

Beryllium Copper Drivers



Round Blade, Non-Spark, Non-Magnetic

Stock Number	Blade Diameter and Length
VB 26	1/8"x6"
VB 210	1/8"x10"
VB 38	3/16"x8"
VB 46	1/4"x6"
VB 48	1/4"x8"

Insulated Blade Screw Drivers

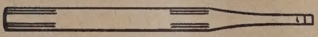
VR 241	1/8"x4"
VR 261	1/8"x6"
VR 281	1/8"x8"
VR 361	3/16"x6"
VR 381	3/16"x8"

Non-Metallic Radio and TV Aligners

Bone Fiber Blade

AT 55	5/32"x5"
AT 510	5/32"x10"

Non-Magnetic *Metal Tip* Radio and TV Aligner

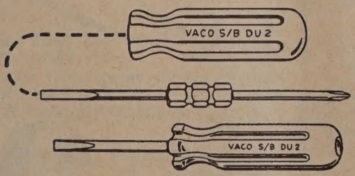


Stock Number	Body Size	Bit Diameter	Capacitance
AT 45	3/8"x5-1/2"	3/16"	Slight

Neon Light Screw Drivers

Stock Number	Blade Diameter and Length
AN 44	1/4"x4"
AN 2 (Pocket Clip)	1/8"x3"

Duplex "*Reversible*" Drivers



Stock Number	Blade Size and Type
DU 2	No 1 Phillips, One End 3/16" Regular, Other End
DUH 4	No. 2 Phillips, One End 1/4" Regular, Other End
DUP 12	No. 1 Phillips, One End No. 2 Phillips, Other End

VACO RADIO and TV KITS

ZBX 51

ZBX 51 Screw Driver Kit

A fine, all-purpose kit of interchangeable regular and Phillips blades that fit same handle. 6" extension makes 10 combinations possible. In durable leatherette bag.

ZSX 61

ZSX 61 Nut Driver Kit

A most versatile and complete hexagon wrench kit for radio, television or any other work requiring speedy nut setting. All sockets are super hard for maximum utility and long life. 6" extension makes 10 blade lengths possible. In handy leatherette tool roll.

ZA 70

ZA 70 Allen Driver Kit

This useful kit consists of 6 hexagon drivers, handle and bag. Will service hexagon recessed opening screws Nos. 4, 5, 6, 8, 10, 1/4", 5/16" and 3/8". Each bit is extra long and may ground back as wear occurs.

ZU 75

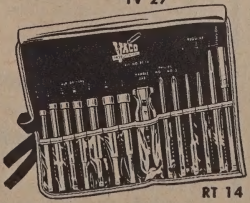
ZU 75 Universal Driver Kit

Here is a kit that is universal in its applications since it will serve all three types of the most popular screws in use today—regular slotted, Phillips, and clutch head. All popular size blades are included—3/16" and 1/4" for regular slotted screws; No. 1 and No. 2 Phillips; 5/32" x 3/16" clutch head.

27-Piece TV and Radio Kit

NO. TV 27 KIT—Contains practically every hand tool necessary for television and radio work, *plus* extra pockets for pliers and other personal tools according to individual preferences. Contains one each of the following: ZH 1 medium duty handle; ZH 2 heavy duty handle; ZX 56 extension; A 132 1/4" stub; 1/4", 3/16", 1/8" regular bits; No. 1 Phillips and No. 2 Phillips bits; 3/16", 1/4", 5/16", 11/32", 3/8", 7/16" and 1/2" hex. wrenches; AT 45 metal tip aligner; A 116-2 3/32" pocket clip; P 01 #0 Phillips thin blade; OK 24 1/8" screw holding; VR 261 1/8" insulated blade; OK 38 3/16" screw holding; VR 381 3/16" insulated blade; VB 210 1/8" x 10" non-magnetic adjuster; AT 510 5/32" fiber aligner; VO 2 medium offset; VO 1 small offset.

TV 27



RT 14

14-Piece TV and Radio Kit

NO. RT 14 KIT—Here's a handy, convenient kit for radio and TV service men. Contains nut drivers, Phillips and regular drivers, plus ZH 2 heavy duty handle and famous Vaco 6" extension which doubles the usefulness of each driver. In durable leatherette tool roll.

VACO PRODUCTS CO., Chicago 11, Illinois

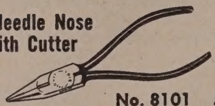
In Canada: Vaco-Lynn Products (of Canada) Ltd.

NEW VACO Individually Tested PLIERS

- Milled jaws for sure grip
- Hand honed side cutters
- Fitted grip handles
- Unconditional factory guarantee

24 Popular Styles from Which to Choose

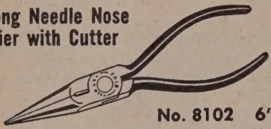
Short Needle Nose Plier with Cutter



No. 8101 5"

This plier is intended for general use where a short nose is desired for getting into difficult places.

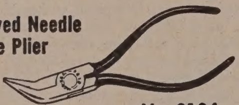
Long Needle Nose Plier with Cutter



No. 8102 6"
No. 8103 7"

An exceptional handy and useful plier, well proportioned with long thin nose, designed for reaching into tight places.

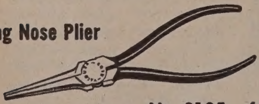
Curved Needle Nose Plier



No. 8104 6"

A long, bent, thin nose plier. The angle is arranged to give full clearance and prevent skinning of knuckles.

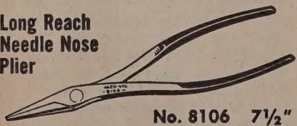
Long Nose Plier



No. 8105 6"

Newly designed long nose plier suitable for working in confined places.

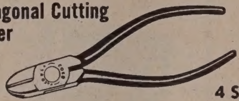
Long Reach Needle Nose Plier



No. 8106 7½"

Has long, thin, sure-grip jaws to reach into places where fingers and ordinary pliers will not go.

Diagonal Cutting Plier

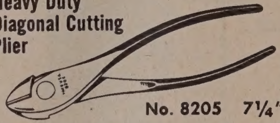


4 Sizes

No. 8201 4½" **No. 8203 6"**
No. 8202 5" **No. 8204 7½"**

Specially designed for electricians, radio and TV service men and automotive mechanics Powerful jaws cut close and quickly.

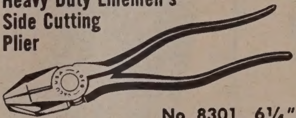
Heavy Duty Diagonal Cutting Plier



No. 8205 7¼"

One of the most powerful diagonal pliers made. Long handles give a 20 to 1 ratio of leverage to cut with minimum effort.

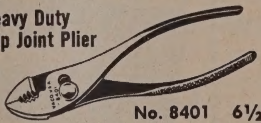
Heavy Duty Linemen's Side Cutting Plier



No. 8301 6¼"
No. 8302 7½" **No. 8303 8¾"**

One of the most popular pliers in use today. Has extra powerful leverage and reinforced cutting knives.

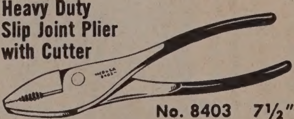
Heavy Duty Slip Joint Plier



No. 8401 6½"
No. 8402 8"

A top quality slip joint combination plier Has all the quality features of higher priced cutting pliers at modest cost.

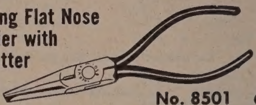
Heavy Duty Slip Joint Plier with Cutter



No. 8403 7½"

This plier incorporates the best features of a regular side cutter with the versatility of a slip joint combination plier.

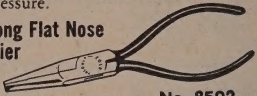
Long Flat Nose Plier with Cutter



No. 8501 6"

Extra long, wide, flat nose makes this an especially useful tool. Plier is tempered so jaw will not spring under pressure.

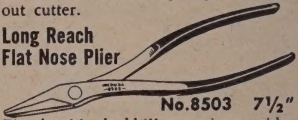
Long Flat Nose Plier



No. 8502 6"

Same as No. 8501 except supplied without cutter.

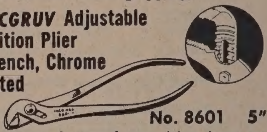
Long Reach Flat Nose Plier



No.8503 7½"

Fitted with duckbill type jaws wider and heavier than those of the ordinary flat nose for firmer gripping service.

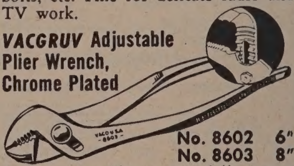
VACGRUV Adjustable Ignition Plier Wrench, Chrome Plated



No. 8601 5"

Especially designed 3-position jaws accommodate small to medium large nuts, bolts, etc. Fine for delicate radio and TV work.

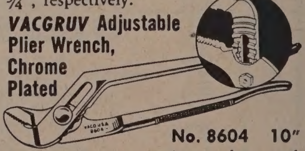
VACGRUV Adjustable Plier Wrench, Chrome Plated



No. 8602 6"
No. 8603 8"

Built to provide an especially secure grip on medium to large bolts, nuts, pipes, etc. 3-position jaws open to—⅝", ¾", respectively.

VACGRUV Adjustable Plier Wrench, Chrome Plated



No. 8604 10"

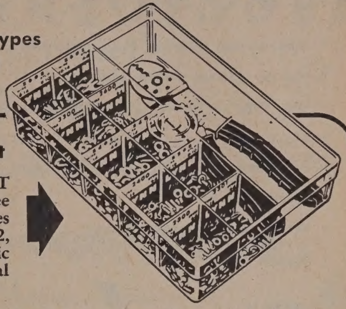
A general purpose, heavy duty tool with 5-position jaws that open to 1⅛". Doubles as pipe wrench, gripping plier and hand vise.

VACO PRODUCTS CO., Chicago 11, Illinois
In Canada: Vaco-Lynn Products (of Canada) Ltd.

LYNN *Lightning* Solderless Terminals by VACO

Now Available in 2 Lines— Insulated and Non-Insulated

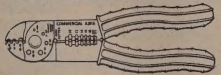
71 different types and sizes



No. 2195 Service Kit

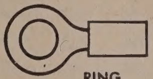
A GENERAL PURPOSE ELECTRICAL, RADIO AND TV KIT containing everything needed for making clean, fast, trouble-free electrical connections. No soldering! No fuss or muss! Kit includes ...No. 1902 Crimping Tool and Terminals Nos. 2300, 2301, 2302, 2400, 2401, 2402, 2600, 2601, 2602, and 3300... all in a clear plastic box with tight-fitting lid. Individual bins marked with terminal stock number cards.

No. 1902 BOLT CUTTING and CRIMPING TOOL

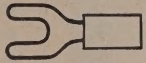


New type VACO Crimcut Tool has threaded holes for screwing in and shearing 4-40, 6-32, 8-32, 10-24 and 10-32 bolts or machine screws . . . plus crimping die, wire cutters and wire-stripping die. Shock-proof, slip-proof plastic handle grips. For No. 22 to No. 10 gauge wire.

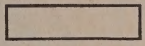
NEW! Insulated Solderless Terminals!



RING



SPADE

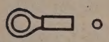


CONNECTOR

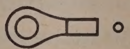
In addition to the non-insulated terminals illustrated below, VACO now brings you a complete line of insulated solderless terminals color-coded for size. Available in 21 different types. Special No. 1930 Crimping Tool available. Write for Bulletin T 73.

Quick Reference Chart for Easy Terminal Identification

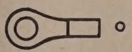
RING TONGUE TERMINALS



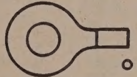
*No. 2300
Hole Dia. — 5/32″
Stud Size — 4 - 6
Wire Size — 22 - 16



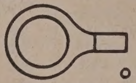
*No. 2301
Hole Dia. — 5/32″
Stud Size — 4 - 6
Wire Size — 22 - 16



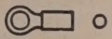
*No. 2302
Hole Dia. — 13/64″
Stud Size — 8 - 10
Wire Size — 22 - 16



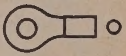
*No. 2303
Hole Dia. — 17/64″
Stud Size — 12 - 1/4
Wire Size — 22 - 16



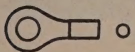
*No. 2304
Hole Dia. — 13/32″
Stud Size — 3/8
Wire Size — 22 - 16



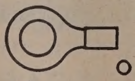
*No. 2400
Hole Dia. — 5/32″
Stud Size — 4 - 6
Wire Size — 16 - 14



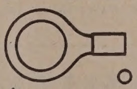
*No. 2401
Hole Dia. — 5/32″
Stud Size — 4 - 6
Wire Size — 16 - 14



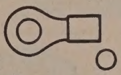
*No. 2402
Hole Dia. — 13/64″
Stud Size — 8 - 10
Wire Size — 16 - 14



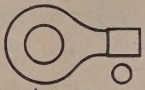
*No. 2403
Hole Dia. — 17/64″
Stud Size — 12 - 1/4
Wire Size — 16 - 14



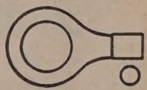
*No. 2404
Hole Dia. — 13/32″
Stud Size — 3/8
Wire Size — 16 - 14



*No. 2502
Hole Dia. — 13/64″
Stud Size — 8 - 10
Wire Size — 12 - 10

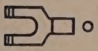


*No. 2503
Hole Dia. — 17/64″
Stud Size — 12 - 1/4
Wire Size — 12 - 10

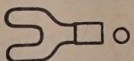


*No. 2504
Hole Dia. — 13/32″
Stud Size — 3/8
Wire Size — 12 - 10

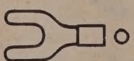
SPADE TONGUE TERMINALS



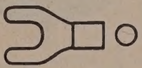
*No. 2600
Slot Dia. — 5/32″
Stud Size — 4 - 6
Wire Size — 22 - 16



*No. 2601
Slot Dia. — 5/32″
Stud Size — 4 - 6
Wire Size — 16 - 14

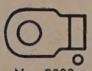


*No. 2602
Slot Dia. — 13/64″
Stud Size — 8 - 10
Wire Size — 16 - 14

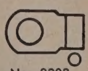


*No. 2702
Slot Dia. — 13/64″
Stud Size — 8 - 10
Wire Size — 12 - 10

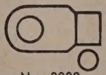
FLAG TYPE TERMINALS



No. 2802
Hole Dia. — 13/64″
Stud Size — 8 - 10
Wire Size — 22 - 16

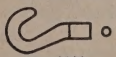


No. 2902
Hole Dia. — 13/64″
Stud Size — 8 - 10
Wire Size — 16 - 14



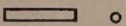
No. 3002
Hole Dia. — 13/64″
Stud Size — 8 - 10
Wire Size — 12 - 10

HOOK TYPE TERMINAL

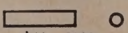


No. 3300
Slot Dia. — 5/32″
Stud Size — 4 - 6
Wire Size — 22 - 16

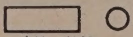
BUTT CONNECTORS



*No. 3101
Wire Size — 22 - 16



*No. 3102
Wire Size — 16 - 14



*No. 3103
Wire Size — 12 - 10

*These types available in insulated style . . . use prefix 6 instead of 2. Thus 2300 becomes 6300.

CONVENIENT $ PAK

All Lynn Lightning Terminals are available in convenient $ Paks. When any of the "bins" of the service kit are empty, user merely purchases a refill just right for replacing stock. Refill Paks are well marked for trouble-free handling, and designed with "window" for easy identification.

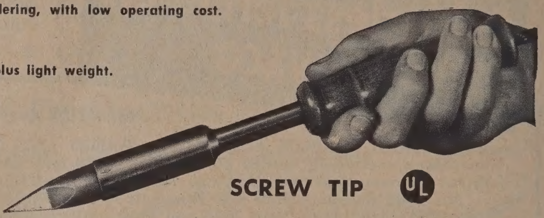
BULK PAK

Also available in bulk—packed 100 pieces to a package or in new "Bulko" Paks of 1000 each.

VACO PRODUCTS CO. **Chicago 11, Illinois, U.S.A.**

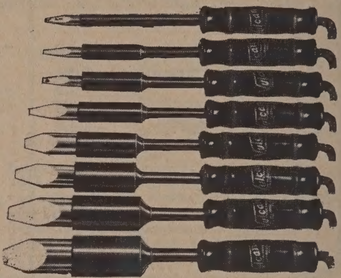
VULCAN
ELECTRIC SOLDERING TOOLS

- High-powered Soldering Tools, designed for fast soldering, with low operating cost.
- Tips are of finest forged copper.
- The "Hang" or balance good mechanics appreciate, plus light weight.
- Cool handles of selected birch, shaped to fit the hand.
- 6 ft. heater cord, with unbreakable rubber plug.
- Fireproof terminals.
- Heating elements easily replaced.
- Operate equally well on AC or DC.



SCREW TIP

CAT. No.	WATTS	TIP	LIST
20	50	7/16"	$6.55
30	60	1/2"	8.95
40	90	1/2"	9.80
50	130	7/8"	11.65
60	175	1"	13.35
70	220	1 1/8"	15.50
80	310	1 3/8"	17.70
90	430	1 5/8"	20.15
900	700	1 3/4"	37.30



Pygmy
PENCIL TYPE

A very efficient tool for fine soldering of instruments, meters, gauges, small radios, etc. or any spots where space is cramped or there is little clearance. The cool, tapering wood handle permits "writing grip." Flexible coil also assures coolness. Equipped with approved cord and unbreakable rubber plug. Standard tip is 1/4" but 3/16" or 1/8" tips are available, as well as special tips, bent to any angle or in various shapes.

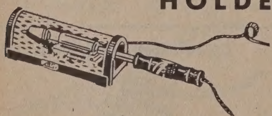
Cat. No.	Watts	Tip	Weight	Length	List
Pygmy	25	1/4"	7 oz.	8 1/4"	$5.10

PLUG TIP — All parts replaceable

CAT No.	WATTS	TIP	LIST
* 25	50	1/4"	$6.25
35	100	3/8"	9.80
453	150	3/8"	10.65
45	150	1/2"	11.15
55	200	5/8"	11.55
* 75	300	7/8"	15.10

*Heating element replaceable at Factory only.

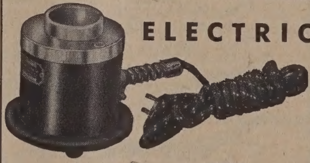
SOLDERING TOOL HOLDER



Holds and guards the Soldering Tool and keeps the tip at soldering temperature as long as it remains in the holder. Has a cord and attached plug cap for connection to current and a receptacle for plugging in the Tool. A convenient adjusting screw sets the Holder thermostat to maintain proper temperature. AC only

No. 2100 without thermostat ....$4.50 list
No. 2100T with thermostat ....$7.30 list

ELECTRIC SOLDER POTS



Both single and three-temperature Pots in a variety of sizes and wattages, all with cord and plug approved at Underwriters' Laboratories.

CAT. No.	WATTS HIGH	WATTS MEDIUM	WATTS LOW	CAPACITY SOLDER APPROXIMATE	LIST
1700	200	120	80	1 1/4 lbs.	$28.60
1702	250	150	100	5 lbs.	32.85
1704	500	250	125	10 lbs.	41.25
1600	150	Single Heat		14 oz.	9.90
1606	350	Single Heat		3 lbs.	11.55
1701	250	Single Heat		4 lbs.	21.10
1703	200	Single Heat		1 1/2 lbs.	16.10

Other sizes up to 6000 watts, single heat.

"DUREVER" Soldering Tips are pure forged copper, shaped to your favorite style, with a special metal coating that will preserve the original shape of the tip by protecting the copper from corrosion and oxidation. Will outlast copper tips, cannot amalgamate with solder, do away with the necessity for dressing or filing. Can be readily tinned without filing and hold their original shape. Circular on request.

VULCAN ELECTRIC COMPANY

DANVERS 30, MASS.

ELECTRIC SOLDERING TOOLS • SOLDER POTS • GLUE POTS • BRANDING IRONS • HEATING UNITS

VULCAN

ELECTRIC SOLDERING TOOLS

LOW PRICE, LONG DISCOUNT

JACKSON

Jackson "Standard" Electric Soldering Irons are scientifically designed for that "balanced feel" which reduces fatigue. All elements used in Jackson Standard Irons are made of the finest quality nichrome wire, wound on heat conductive cores and insulated with selected high grade amber mica. Equipped with 6 ft. approved heater cords and plugs. Stand included with every iron.

STANDARD — SCREW TIP UL

CAT. No.	WATTS	TIP	LIST
141	85	7/16"	$5.65
142	100	5/8"	6.55
0142	125	5/8"	7.75
144	150	3/4"	9.30
143	225	7/8"	10.70
210	350	1 1/8"	12.55

STANDARD — PLUG TIP UL

CAT. No.	WATTS	TIP	LIST
149	85	5/16"	$5.65
145	100	3/8"	6.55
0145	125	3/8"	7.75
146	150	1/2"	9.30
147	225	5/8"	10.70
148	350	7/8"	12.55

DE-LUXE ELECTRIC SOLDERING PENCIL

A soldering pencil for all light work such as Radio, Television, Jewelry, Instruments and Electronics. Handle is cork-filled composition, 100% air cooled: 1/2" steel tubing, perforated for air cooling. Element is wound on a heat conductive core, for efficient heating. High grade mica and nichrome wire. Underwriters approved 6 ft. rubber cord and plug.

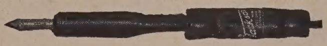
CAT. No.	WATTS	VOLTS	TIP	LENGTH	WEIGHT	LIST
230D	25	115	1/4"	7"	3 oz.	$3.45

STANDARD ELECTRIC SOLDERING PENCIL

Wood handle, rich black finish with cork sleeve. 1/2" steel tubing gun metal finish. Element is wound on heat conductive core. High grade mica and nichrome wire. 6 ft. rubber cord and plug.

CAT. No.	WATTS	VOLTS	TIP	LENGTH	WEIGHT	LIST
230	25	115	1/4"	7"	3 oz.	$2.90
231	40	115	3/8"	8"	4 oz.	5.10

COMET — SCREW TIP*



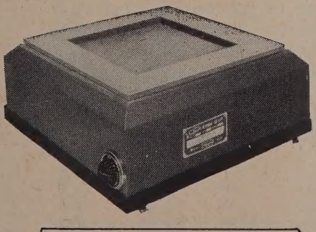
COMET — PLUG TIP

Comet Irons are equipped with a 6 ft. approved Heater Cord and Plug. Heating element is made of high quality Nichrome Wire, wound with mica on a core. Handles are black finish. All irons are packed one in a box, stand included. 50 to a standard shipping container. All irons are made for 115 volts. If higher voltage is desired, there will be a slight extra charge.

CAT. No.	WATTS	TIP	LIST
65 S	65	1/2"	$3.10
85 S	85	5/8"	3.60
100 S	100	3/4"	4.10
125 S	125	7/8"	4.90

CAT. No.	WATTS	TIP	LIST
65 P	65	1/4"	$2.75
85 P	85	5/16"	3.25
100 P	100	3/8"	4.00
125 P	125	7/16"	4.90

***Discontinued manufacture of screw-on type comet line. Limited number of irons still available.**



VULCAN "EVEN-DIP" SOLDER POTS

DESIGNED AND DEVELOPED BY SPECIALISTS FOR PRINTED CIRCUIT SOLDER OPERATIONS

- **16 Crucible Sizes.**
- **High Fidelity thermostat control—Adjustable 150-600° F.**
- **Surface Temperature does not vary beyond ± 2° F.**
- **Localized "hot spots" completely eliminated.**
- **Replaceable heavy-duty heating elements.**

Send for free, detailed specifications.

VULCAN

ELECTRIC COMPANY

DANVERS 30, MASS.

ELECTRIC SOLDERING TOOLS • SOLDER POTS • GLUE POTS • BRANDING IRONS • HEATING UNITS

SOLDERING PRODUCTS
WALL
The Safety Line
SINCE 1864

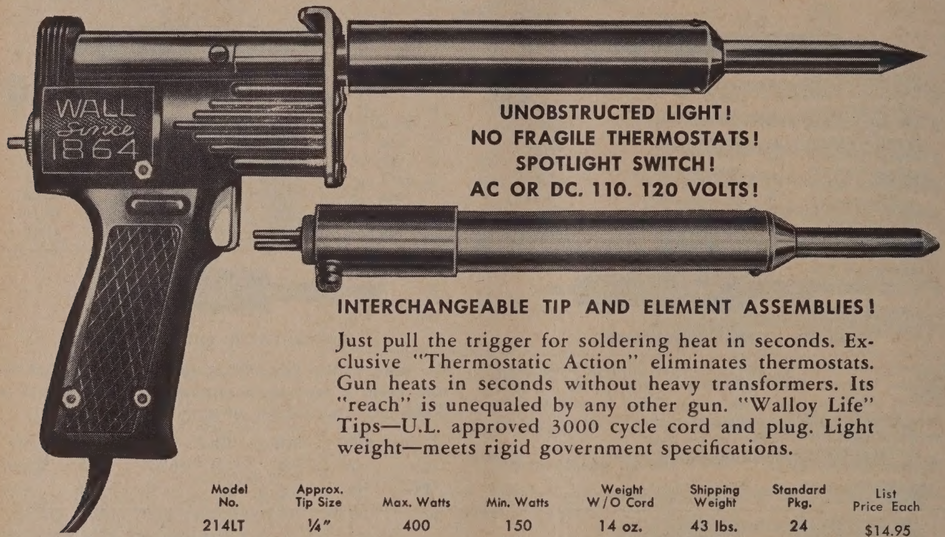
GROVE CITY
Pennsylvania

"TRIG-R-HEAT"

Instant Electric

SOLDERING GUNS

with "Thermostatic Action"



UNOBSTRUCTED LIGHT!
NO FRAGILE THERMOSTATS!
SPOTLIGHT SWITCH!
AC OR DC. 110. 120 VOLTS!

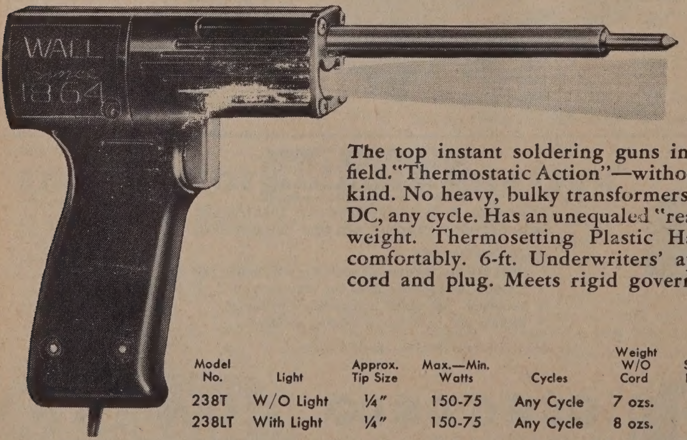
INTERCHANGEABLE TIP AND ELEMENT ASSEMBLIES!

Just pull the trigger for soldering heat in seconds. Exclusive "Thermostatic Action" eliminates thermostats. Gun heats in seconds without heavy transformers. Its "reach" is unequaled by any other gun. "Walloy Life" Tips—U.L. approved 3000 cycle cord and plug. Light weight—meets rigid government specifications.

MODEL NO. 212LT

Model No.	Approx. Tip Size	Max. Watts	Min. Watts	Weight W/O Cord	Shipping Weight	Standard Pkg.	List Price Each
214LT	¼"	400	150	14 oz.	43 lbs.	24	$14.95
212LT	½"	650	300	24 oz.	57 lbs.	24	16.95

Attractively packed 1 to a display carton.



POPULAR PRICED MODEL

The top instant soldering guns in the popular priced field. "Thermostatic Action"—without thermostats of any kind. No heavy, bulky transformers. Operates on AC or DC, any cycle. Has an unequaled "reach." Extremely light weight. Thermosetting Plastic Handle fits the hand comfortably. 6-ft. Underwriters' approved 3000 cycle cord and plug. Meets rigid government specifications.

MODEL NO. 238LT

Model No.	Light	Approx. Tip Size	Max.—Min. Watts	Cycles	Weight W/O Cord	Standard Package	Shipping Weight	List Price Each
238T	W/O Light	¼"	150-75	Any Cycle	7 ozs.	50	50 lbs.	$7.50
238LT	With Light	¼"	150-75	Any Cycle	8 ozs.	50	50 lbs.	7.98

Packed 1 to an attractive display carton.

SOLDERING PRODUCTS
WALL
The Safety Line
SINCE 1864

GROVE CITY
Pennsylvania

Industrial
SOLDERING IRONS
with "Thermostatic Brain"

BUILT WITH TRIPLE LIFE, PRECISION-WOUND ELEMENTS

UL

Precision-built to withstand "production-line punishment!" "Thermostatic Action" provides controlled heat without fragile or moving parts to wear out. "Thermostatic Action" is guaranteed for the life of the iron.

CSA APP. NO. 9186

1. Built to withstand "Production-Line Punishment"!
2. "Thermostatic Action" prevents tip burning!
3. Heats 4 times faster than most other industrial irons!
4. No radionic interference while iron is in use!
5. Underwriters' Laboratories and Canadian Standards approved!
6. Successfully passed the 65° below zero test!
7. Precision wound on pure mica sheet!
8. More economical in use than others of like wattage!
9. Operates on 110-120 volts, AC or DC!
10. Meets all rigid government specifications!

No. 18 Series—1 ounce*

No. 14 Series—2 ounces*

PENCIL TYPES
Ideal for Printed Circuits

For delicate, precision work on radio, TV, electronics, small metals, jewelry, light or intricate electrical connections. Recovers faster and reduces fatigue on the production line.

Cat. No.	Max.—Min. Watt Input	Type	Tip Metal	Volts AC-DC	Tip Size	Overall Length	Shipping Case Quantity	Shipping Case Weight	List Price
18HD	25	Heavy Duty	Copper	110-120	⅛"	7½"	50	17 lbs.	8.00
18HDW	25	Heavy Duty	Walloy	110-120	⅛"	7½"	50	17 lbs.	9.50
14T	125-40	Regular	Copper	110-120	¼"	8"	50	19 lbs.	8.00
14TW	125-40	Regular	Walloy	110-120	¼"	8"	50	19 lbs.	9.50
14HD	40	Heavy Duty	Copper	110-120	¼"	8"	50	19 lbs.	8.75
14HDW	40	Heavy Duty	Walloy	110-120	¼"	8"	50	19 lbs.	10.25

*Wt. without cord

Packed 1 to a box

58T

78T

EXTRA HEAVY DUTY PRODUCTION IRONS

Made to withstand uninterrupted soldering service of medium and medium heavy metals. Heavy metal electrical connections. Heavy duty . . . but light in weight.

Cat. No.	Max.—Min. Watt Input	Type	Tip Metal	Volts AC-DC	Tip Size	Overall Length	Shipping Quantity	Case Wt.	List Price
38T	225-80	Regular	Copper	110-120	⅜"	12½"	50	61 lbs.	10.00
38TW	225-80	Regular	Walloy	110-120	⅜"	12½"	50	61 lbs.	11.75
38HD	80	Heavy Duty	Copper	110-120	⅜"	12½"	50	61 lbs.	11.50
38HDW	80	Heavy Duty	Walloy	110-120	⅜"	12½"	50	61 lbs.	13.25
12T	300-125	Regular	Copper	110-120	½"	13"	50	73 lbs.	13.00
12TW	300-125	Regular	Walloy	110-120	½"	13"	50	73 lbs.	15.00
12HD	125	Heavy Duty	Copper	110-120	½"	13"	50	73 lbs.	14 00
12HDW	125	Heavy Duty	Walloy	110-120	½"	13"	50	73 lbs.	16 00
58T	500-200	Regular	Copper	110-120	⅝"	13½"	25	50 lbs.	15.00
58TW	500-200	Regular	Walloy	110-120	⅝"	13½"	25	50 lbs.	17.50
58HD	200	Heavy Duty	Copper	110-120	⅝"	13½"	25	50 lbs.	16.00
58HDW	200	Heavy Duty	Walloy	110-120	⅝"	13½"	25	50 lbs.	18.50
78T	750-300	Regular	Copper	110-120	⅞"	14"	25	70 lbs.	18.00
78TW	750-300	Regular	Walloy	110-120	⅞"	14"	25	70 lbs.	21.60
78HD	300	Heavy Duty	Copper	110-120	⅞"	14"	25	70 lbs.	20.00
78HDW	300	Heavy Duty	Walloy	110-120	⅞"	14"	25	70 lbs.	23.60

Packed 1 to a box

Weller®

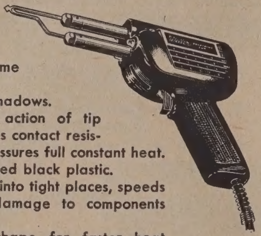
INSTANT HEAT TYPE SOLDERING GUNS AND KITS

Easton, Penna.

DUAL HEAT MODELS

IMPORTANT WELLER GUN FEATURE

DUAL HEAT—saves time and money; tip life greatly increased by using high heat only when necessary. Switch instantly to high or low heat as job requires.



Model D-550

200/275 watts

Instant heat—no wasted time or current.

Twin spotlights—eliminate shadows.

Exclusive tip-grip—wiping action of tip fastening unit eliminates contact resistance and oxidation; assures full constant heat.

Shatterproof housing—rugged black plastic.

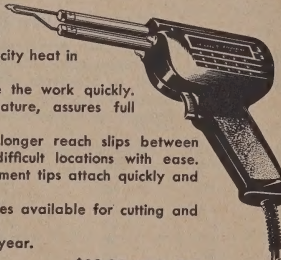
Longer reach—slides easily into tight places, speeds work and prevents damage to components and insulation.

Replaceable tips—chisel shape for faster heat transfer.

Accessory tips—available for cutting and smoothing.

Guaranteed—one year.

PRICE.......................$16.25 each, list



Model D-440

100/150 watts

Instant heat—full capacity heat in 5 seconds.

Twin spotlights—locate the work quickly.

Tip-grip—exclusive feature, assures full constant heat.

High-impact housing—longer reach slips between wiring; handles difficult locations with ease.

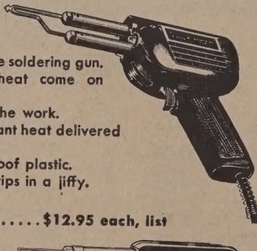
Low-cost tips—replacement tips attach quickly and securely.

Special tips—accessories available for cutting and smoothing jobs.

Guaranteed—for one year.

PRICE.......................$12.95 each, list

SINGLE HEAT MODELS



Model 8250A

250 watts

Heavy-duty general purpose soldering gun.

Instant heat—lights and heat come on together.

Twin spotlights—illuminate the work.

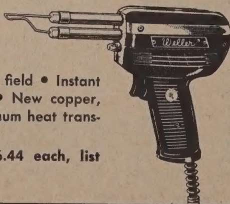
Tip-grip—assures full, constant heat delivered to the tip.

Rugged housing—shatterproof plastic.

Replaceable tips—change tips in a jiffy.

Guaranteed—one year.

PRICE.......................$12.95 each, list



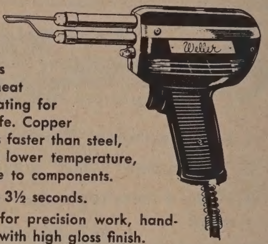
Model 8100 B

100 watts

Value leader in the soldering field • Instant heat • Prefocused spotlight • New copper, iron-plated tip provides maximum heat transfer • Guaranteed—one year.

PRICE..................$6.44 each, list

"EXPERT" SOLDERING KIT with new DUAL HEAT GUN



Model 8200K

90/125 watts

Prefocused spotlight

Newest tip design—utilizes copper for superior heat transfer, plus iron plating for rigidity and longer life. Copper conducts heat 5 times faster than steel, permits operation at lower temperature, and prevents damage to components.

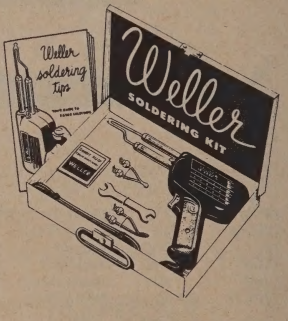
Instant heat—gun heats in 3½ seconds.

New design—streamlined for precision work, handsome modern styling with high gloss finish.

Guaranteed—for one year.

PRICE .... $7.95 each, list

HEAVY DUTY SOLDERING KIT



Model 8250AK

250 watts

Kit includes:

250 watt, instant heat **soldering gun.**

Supply of first-quality **solder.**

Long-life **soldering tip.**

Cutting tip for cutting **thermoplastics,** etc.

Smoothing tip for **heat sealing, etc.**

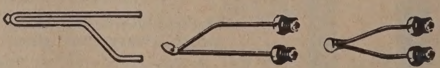
Tip interchange **wrench.**

Instruction booklet

All-metal storage and **carrying case a** $17.00 value.

PRICE.................................$14.95 each, list

WELLERTIPS FOR ALL MODELS



GUN	SOLDERING TIP
8100B	No. 8125, pkg of 2—35c list
8250A	No. 7250, pkg. of 2—50c list
8200	No. 8125, pkg. of 2—35c list
D440	No. 7135, pkg. of 2—35c list
D550	No. 7250, pkg. of 2—50c list

GUN	SMOOTHING TIP
8100B	No. 6120, with nuts—50c list
8250A	No. 6140, with nuts—50s list
8200	No. 6120, with nuts—50c list
D440	No. 6120, with nuts—50c list
D550	No. 6140, with nuts—50c list

GUN	CUTTING TIP
8100B	No. 6110, with nuts—50c list
8250A	No. 6130, with nuts—50c list
8200	No. 6110, with nuts—50c list
D440	No. 6110, with nuts—50c list
D550	No. 6130, with nuts—50c list

WELLER SOLDERING AID

Special soldering aid widely used for opening old joints, holding down wires, twisting and looping, etc.—always handy.

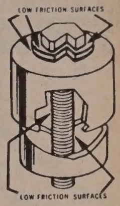
PRICE .... 50c each

Walsco ELECTRONICS CHASSIS PUNCHES

NEW *"LT" (LOW TORQUE) CHASSIS PUNCHES

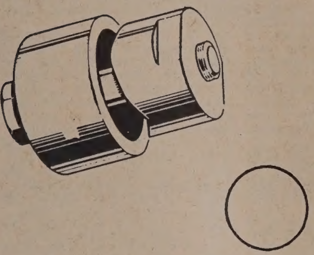
A brand-new electro-coating process (which can't wear off) reduces friction, thus lowers torque. You get a much cleaner hole with much less effort. The Walsco "L.T." Chassis Punch requires no lubrication of any kind and will give perfect service almost indefinitely.

50% LESS
EFFORT REQUIRED
THAN
COMPETITIVE
PUNCHES



ROUND CHASSIS PUNCHES

Made of hardened, precision-ground, tool steel. Quick and easy to operate. Saves hours of hard work.

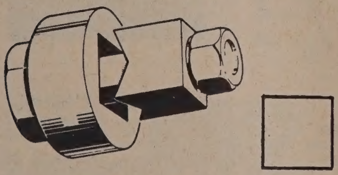


Cat. No.	Punch Size	Pilot Bolt Size	Pilot Hole Drill Size	Dealer Net
3050-R	½"	¼	5/16"	$2.60
3062-R	⅝"	5/16	⅜"	2.60
3069-R	11/16"	⅜	7/16"	2.60
3075-R	¾"	⅜	7/16"	2.60
3087-R	⅞"	⅜	7/16"	2.60
3100-R	1"	⅜	7/16"	2.85
3106-R	1 1/16"	⅜	7/16"	3.00
3112-R	1⅛"	⅜	7/16"	3.00
3116-R	1 5/32"	⅜	7/16"	3.00
3117-R	1 11/64"	⅜	7/16"	3.00
3119-R	1 3/16"	⅜	7/16"	3.00
3125-R	1¼"	⅜	7/16"	3.00
3137-R	1⅜"	½	9/16"	4.15
3150-R	1½"	½	9/16"	4.75
3225-R	2¼"	¾	⅞"	9.90

* LOW TORQUE

SQUARE CHASSIS PUNCHES

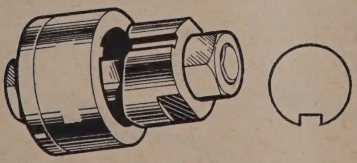
Very handy for mounting I.F. transformers, ~~or~~ for "nibbling" larger square holes such as may be required for power transformers, tuning condensers, etc. Finest quality steel.



Cat. No.	Punch Size	Pilot Bolt Size	Pilot Hole Drill Size	Dealer Net
3062-S	⅝"	⅜	½"	$5.45
3069-S	11/16"	⅜	½"	5.85
3075-S	¾"	⅜	½"	5.95
3087-S	⅞"	⅜	½"	6.55
3100-S	1"	⅜	½"	7.50

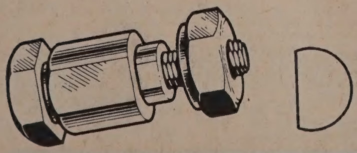
* LOW TORQUE

KEY AND "D" CHASSIS PUNCHES



KEY 3117-K 1-11/64" ½" 9/16" 6.10

Cuts a special keyed hole for key-type sockets and other components where turning or twisting is not desired. The "D" shape punch is especially helpful in the mounting of power and output transformers. Provides ample space to pass wire and insulation through the chassis.

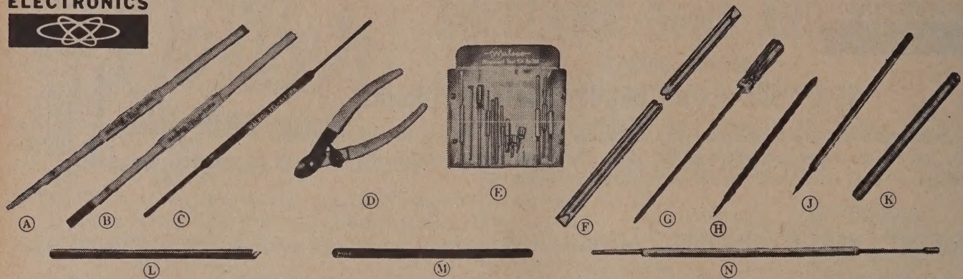


"D" 3050-D ½" 5/16" ⅜" 4.35

* LOW TORQUE

Walsco ELECTRONICS

ALIGNMENT AND SPECIAL TOOLS



(A) I.F. Aligner and also double-ended. One end fits a #4 stud, the other end fits a #6 stud.
Cat. No. 2586 Tel-A-Turn Tool List **$1.65**

(B) An alignment screwdriver with a standard metal tip at one end. The other end has a very thin 7/64" wide metal blade for small can openings.
Cat. No. 2587 Tel-A-Turn Tool List **$1.65**

(C) A double ended Hex Aligner that turns both top and bottom slugs. One end has .100" hex, the other end is .125" hex.
Cat. No. 2588 Tel-A-Turn Tool List **$1.65**

(D) WALSCO STRIP-ER-CLIP. A brand new precision tool with an exclusive safeguard that prevents accidental nicking or cutting while wires are being stripped. Strips and clips all wires ranging from 14 to 26 gauge.
Cat. No. 595 List **$2.30**

(E) "LUCKY 13" ALIGNMENT TOOL KIT. Carefully selected as the most needed tools, for the Service-Technician in Electronics, TV, Hi-Fi and Printed Circuit Work.
Cat. No. 582 List **$14.55**

(F) NEW "SLIM-FIBREGLASS STICKS." New precision made Walsco Slim-Sticks are made of durable fibreglass. Completely non-metallic.
Cat. No. 2531-X 1/8" Dia. x 12" Long List **$ .70**
2532-X 1/8" Dia x 16" Long **.95**
2534-X 5/32" Dia. x 12" Long **.80**
2535-X 5/32" Dia. x 16" Long **1.20**

(G) WALSCO "GLAS-STICKS." Precision made machined fiberglas reinforced polyester alignment screwdriver.
Cat. No. 2537 5/32" Dia., 7" blade List **$1.20**
2538 5/32" Dia., 14" blade **1.75**

(H) DUPLEX ALIGNMENT SCREWDRIVER. Large end is 7/32" wide; small end, 5/32" wide. Tip thickness conforms to standard slot dimensions, 7" long.
Cat. No. 2520 List **$ .85**

(J) ALIGNMENT TOOL FOR WESTINGHOUSE, ETC. Especially designed to fit Westinghouse and other sets. Very thin tip for small can openings.
Cat. No. 2541 5¾" long List **$ .95**

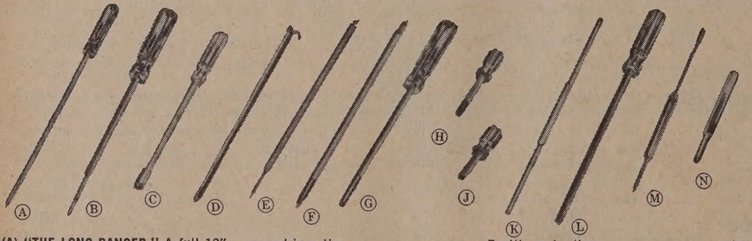
¼" HEX I.D. NEUTRALIZING WRENCH. Made of tough, flexible, Lo-loss plastic. If corners wear round, just trim back, 7½" long, ⅜" round O.D.
Cat. No. 2503 List **$ .55**

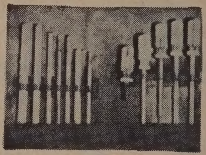
(K) 5/16" HEX I.D. NEUTRALIZING WRENCH. Durable Lo-loss plastic gives long service life. 7½" long, 7/16" O.D.
Cat. No. 2508 List **$ .55**

(L) METAL TIP ALIGNMENT SCREWDRIVER. Combines low capacitance desirable in alignment tool with mechanical strength of metal screwdriver. Butyrate handle, 7/32" diameter, 6" long over all.
Cat. No. 2525 List **$ .55**

(M) WALSCO TUNING WAND. Butyrate rod with one end made of brass, the other loaded with powdered iron—for checking coils.
Cat. No. 2540 List **$ .75**

(N) DOUBLE END NYLON HEX IRON CORE TOOLS—For .075", .100" and .125" Cores. Turn both top and bottom coil slugs with this one handy tool. One end under cut for turning bottom slug separately.
Cat. No. 2542 .125" Hex, 5" long, Hex Handle List **$ .80**
2543 .100" Hex, 5" long, Hex Handle **.80**
2544 .100" Hex, 11" long, knurled ¼" Handle **1.05**
2545 .100" Hex, 11" long, thin, 5/32" Handle **1.05**
2546 .075" Hex, 11" long, knurled ¼" Handle **1.05**
2547 .075" Hex, 11" long, thin, 5/32" Handle **1.05**





(A) "THE LONG RANGER." A full 12", slim, completely insulated tuner alignment tool. Features tough, replaceable, molded nylon tip.
Cat. No. 2523 List **$1.90**

(B) TURRET TUNER TOOL. A tool for adjusting all sets using "Standard Coil" and similar turret-type tuners.
Cat. No. 2522 List **$1.20**

(C) PHILCO TUNER TOOL. A special tool for 1946-48 front-end tuners.
Cat. No. 2518 List **$1.85**

(D) WIRE DRESSING & ALIGNMENT TOOL. A handy dual-purpose tool with a thin 7/32" Butyrate handle. One end is a special tool for dressing wires in hard-to-reach places. Other end with a low capacitance metal screwdriver tip.
Cat. No. 2512 List **$ .75**

(E) K-TRAN ALIGNMENT TOOL. This tough, double-use tool is machined at one end to fit the slots on all K-Tran miniature I.F. transformers.
Cat. No. 2515 List **$ .95**

(F) "SLUG SAVER" TUNER TOOL. New patented tool for aligning "Standard Coil" front ends. Prevents "loosing" slugs, thru ingenious "step" design.
Cat. No. 2528 7½" long List **$1.10**

(G) SLOTTED STUD DRIVER. An 8¼" long precision screwdriver with blade to fit No. 6 studs.
Cat. No. 2516 List **$1.15**

(H) I.F. ALIGNER. 2½" long molded high-impact styrene . . . for RCA, Zenith and others.
Cat. No. 2527 List **$ .80**

(J) STUBBY STUD DRIVER. The only screwdriver only 2" long overall. Fits No. 6 studs.
Cat. No. 2517 List **$ .75**

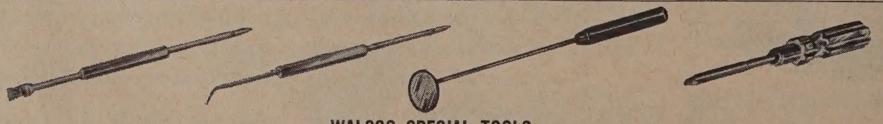
(K) STANDARD ALIGNMENT TOOL. Screwdriver blades are made with extra-thin tempered Swedish steel and are recessed so that they will slide easily over a stud and will not slip off.
Cat. No. 2519 List **$1.10**

(L) SLOTTED SCREWDRIVER. Instead of a blade, this tool has a slot to fit No. 6 studs. For many of the older TV sets.
Cat. No. 2524 List **$1.15**

(M) DOUBLE ENDER. A 5½" long, molded-nylon tool, with one end to fit hex studs, the other end being a very small screwdriver.
Cat. No. 2526 List **$ .60**

(N) I.F. ALIGNER TOOL. Designed for I.F. Alignment of Zenith, RCA and other similar types. Made of molded nylon. 5½" long.
Cat. No. 2521 List **$ .80**

(O) WALSCO TV-FM ALIGNMENT TOOL KIT. Kit contains 12 tools. These are all standard Walsco tools and come in a handy leatherette case or wall rack for mounting above work bench.
Cat. No. 580 Leatherette case. List **$12.00**
581 in wall rack **12.00**



WALSCO SPECIAL TOOLS

SOLDER-AID TOOL. Wire brush makes removing of solder a cinch. Forked tool end and brush made of special stainless steel to which solder will not stick.
Cat. No. 2529 8"long plastic handle List **$1.70**

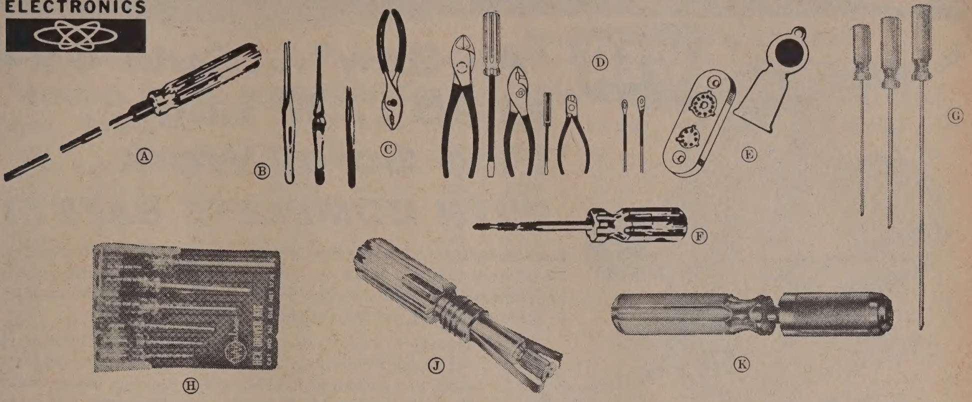
SOLDER-AID TOOL. Similar to #2529 but has very thin curved hook in place of brush. Designed for use in delicate printed circuit work.
Cat. No. 2530 8" long plastic handle list **$1.65**

INSPECTION MIRROR. High-visibility polished glass reflection mirror is protected against breakage by a heavy gauge plated metal backing. Has plastic, insulated grip.
Cat. No. 554 List **$ .65**

MINI-HOLD SCREWDRIVERS. Designed primarily to speed replacing phono cartridges. Exclusive "wedge-action" securely grips extremely small screws (#1 to #4) "Mini-hold" measures just 2⅞" when in use.
Cat. No. 2568 2⅞" long, "Open" length 3¼" List **$2.86**
2569 7" long **3.75**

Walsco ELECTRONICS

ALIGNMENT AND SPECIAL TOOLS



(A) WALSCO SLUG RETRIEVING & SCREW HOLDING TOOL — Especially designed for removing "lost" TV Tuner slugs in Standard Coil Tuners. Excellent screw holding tool. End is precision-ground of hardened steel.
Cat. No. 2565 11" Lgh. List **$3.72** ea.
Cat. No. 2566 15" Lgh. List **4.95** ea.
Cat. No. 2567 19" Lgh. List **6.25** ea.

(B) WALSCO SERVICE TWEEZERS — For handling small parts in crowded spaces. Walsco Tweezers are indispensable. They are made of forged steel, polished nickel-plated.

Cat. No. 570 Self-Closing Tweezer with cross-over action, 6½" long, serrated, blunt points. List **$1.30**

Cat. No. 571 Heavy-Duty Tweezer with slide-lock feature. 6½" length, serrated, blunt points. List **$1.50**

Cat. No. 572 Precision Tweezer with narrow, pointed ends especially suitable for delicate work. Over-all length 4½". List **$ .85**

Cat. No. 575 Tweezer Kit, made of durable leatherette, containing one each of the above listed tweezers. List **$3.80**

(C) EASY-ON TOOL GRIP — Designed for pliers, cutters, diagonals, wire, snippers, etc. Made of flexible, elastic plastic. Gives superior insulation and protection against electrical shock.
Cat. No. 521 Small **List $ .35** per pr.
Cat. No. 522 Med. **List .45** per pr.
Cat. No. 523 Large **List .50** per pr.

(D) WALSCO PROTECTO TUBE — Insulate the handles of your pliers, wire cutters, screwdriver shanks neatly and effectively with Walsco Protecto Tube.
Cat. No. 18K List **$1.80**

(E) WALSCO STRAIGHT'N PULL TUBE PIN STRAIGHTENER AND PULLER — Compact tube pin straightener for seven and nine pin miniature tubes combined with an ingenious tube puller.
Cat. No. 565 List **$1.65**

(F) 3-STEP TAP — Eliminates the need for carrying 3 separate taps and handle. Designed for reaming holes, tapping new holes, etc. Sizes are 6/32, 8/32 and 10/32.
Cat. No. 2574 List **$4.67**

(G) NON-MAGNETIC BERYLLIUM SCREWDRIVERS — Ideal for making adjustments near magnetic fields such as in focalizers of TV sets. Does not affect TV picture as a steel tool would.
Cat. No. 2560 ⅛" Dia., 9" Overall Length List **$1.25**
Cat. No. 2561 ⅛" Dia., 13" Overall Length List **$1.35**
Cat. No. 2562 3/16" Dia., 9" Overall Length List **$2.25**
Cat. No. 2564 3/16" Dia., 13" Overall Length List **$2.75**

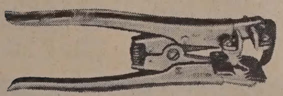
(H) HEX DRIVERS — Blades are made of high torque, heat treated, alloy steel and are permanently embedded in shock and chip-proof plastic handles.

Cat. No.	Size of Hex across flat	Overall Length	List
562-01	.050"	3⅜"	**$ .49**
562-02	1/16"	3⅝"	**.49**
562-03	5/64"	4⅜"	**.49**
562-04	3/32"	5⅛"	**.59**
562-05	⅛"	5⅜"	**.59**
562-06	5/32"	6½"	**.75**

COMPLETE KIT containing all six above drivers in attractive plastic case.
Cat. No. 563 List **$4.50**

(J) TWISTO WIRE STRIPPER — A low-cost, pocket-size, precision stripper. Operating on an entirely new principle, the Walsco Twisto Wire Stripper permits stripping insulation right up next to a soldered connection, plug or socket.
Cat. No. 592-00 List **$4.50**
Cat. No. 592-03 Replacement Blades **$1.00** per set

(K) WALSCO KNURL-TITE WRENCH — Tighten or loosen knurled finish nuts quickly and easily. The knurled nut is slipped into the collet-type pressure jaws. A quarter turn of the handle results in a positive vise-like grip.
Cat. No. 2581 ⅜" Dia. nut List **$7.50**
Cat. No. 2582 ½" Dia. nut List **7.50**
Ca. No. 2583 ⅝" Dia. nut List **7.50**



ALL-PURPOSE WIRE STRIPPER — Has "Stay-open" feature to prevent crushing fine wires. An improved tool for automatically stripping insulation from wires neatly and quickly. Strips ends or at any point along a wire. Very sturdy. Especially hardened steel, precision ground blades.

Cat. No. 590-000 Electronic type for wire sizes 12 through 20, plus 300 ohm twin lead. Also cuts wire. List **$9.90**

Cat. No. 590-01 Replacement Blade set for No. 590. List **$2.75**

Cat. No. 591-00 "Wide-Range" Model. Strips wire from #10 through #22. Will not strip twin lead and has no cutter. List **$9.90**

Cat. No. 591-01 Replacement Blade Set for No. 591. List **$2.75**

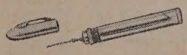
SPEED-O-MATIC WIRE STRIPPERS—With fully automatic—delayed-action return that prevents the crushing of fine stranded wires. Completes the stripping operation with one simple squeeze of the handles. Strips all types of wire insulation from #10 to #30 wires by easy exchange of cutter blades.

Cat. No. 594-01 For #10 to #22	List **$9.90**
Cat. No. 594-02 For #10 to #18	List **9.90**
Cat. No. 594-03 For #14 to #30	List **9.90**
Cat. No. 594-04 For #16 to #22	List **9.90**
Extra Blades for Above	set **1.90**

TRIG-O-MATIC WIRE STRIPPERS — Similar to 594 but has a Trig-O-Matic action that holds jaws open until released. Especially desirable for stripping of fine stranded wire.

Cat. No. 593-01 For #10 to #22	List **$9.90**
Cat. No. 593-02 For #10 to #18	List **9.90**
Cat. No. 593-03 For #14 to #30	List **9.90**
Cat. No. 593-04 For #16 to #22	List **9.90**
Extra Blades for Above	set **1.80**

NEW WALSCO VIBRA-PULL — The quickest, easiest safest way to pull auto radio vibrators. Exclusive design offers absolute protection against damage to vibrator prongs, sockets and adjacent electronic components.
Cat. No. 566 List **$2.49**



WALSCO OILETTE — Filled with high grade Walsco oil. Dispenses accurately one drop at a time. For use on electronic and electrical devices, clocks, office machines, sporting goods, etc.
Cat. No. 986 List **$1.25**
Cat. No. 986-22 Refill for Oilette List **.45**

NEW WALSCO CHEM-O-JECTOR — A new type applicator for lubricants, greases, certain adhesives and many cleaning fluids used in electronics. Uses the "hypodermic" plunger principal, which makes it possible to reach "hard-to-get-at" places.
Cat. No. 987 List **$ .50**

WEN

. . . Tools you will sell the most

PROMOTED THE YEAR 'ROUND

Reader's Digest—Life, Saturday Evening Post—Esquire,
Popular Mechanics, Popular Science, Mechanix Illustrated

WEN

"All-Saw". . .Cuts 4 x 4 at 45°. . .6" Log. . . Fine Scroll Work. . . *WITH COMPLETE SAFETY!*

½ h.p.

Complete with 7 blades, rip guide, circle cutter, 45 tilting base plate. Universal Motor: AC-DC, 3400 1" strokes per minute. Length 8", Width 7" Height 7½", Wt. 6½ lbs.

ONLY
$44.95
LIST

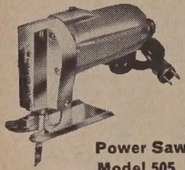
UL listed under Industrial Classification

Does Everything a Pattern Saw Will Do; More Than A Circular Saw Does! Does many things a band saw or nibbler will do—and many things that, until now, only a chain saw could. No other portable electric-saw can cut a 6" board or a 6" log, yet cut any pattern, too!

Cuts 2 x 4, 4 x 4, 6 x 6—all metals, including steel thin gauge to ½"—pipe and thin wall up to 2" in diam. Cuts curves, circles, straight cuts, fine pattern work in Masonite, Bakelite, wood, metals, tiles, Formica, wallboard, Plexiglas, plaster board, asbestos. Knife blade cuts all materials cut with knife.

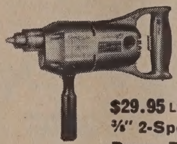
Curved foot plate enables inside cut anywhere; cutting blade in line of sight; air stream clears dust from line of cut; powerful ½ H.P. motor; 3 wire 8 cord with adaptor; heavy duty hardened gears; heavy duty roller and oilite bearings.

Sand-Polishers and Kits



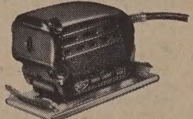
Power Saw
Model 505
$26.95 LIST

Does work of rip, jig, crosscut, band, hack, coping, scroll, keyhole saws. Cuts 2 x 4 in seconds; cuts plastics, etc.; cuts ½" steel plate. 1.8 amp. motor. 2650 ⅝" strokes per minute under load. Motor fan keeps guideline free from sawdust. Handy, beautifully balanced. 3 blades included. Also available in kit form (505K) with metal carrying case.



$29.95 LIST
⅜" 2-Speed
Power Drill
Model 808

A 2-speed ⅜" Power Drill by Wen—and only Wen. Here in one tool is everything needed in an electric drill. Easy to change speeds. 1000 RPM to 3000 RPM. Husky, powerful, but streamlined design. Genuine ⅜" Geared Chuck. Universal 2 amp. Motor. Size 12¼" x 4¾" x 2½". Weight 4½ lbs.



$13.95
Model 202

Small, light, handy and quiet. Powerful motor delivers 14,400 straight line action strokes per minute. Ideal for fine finishing and polishing. Strong black plastic case. Comes in attractive Display Carton with 6 assorted abrasives, 2 polishing pads.

$16.95
Model 303

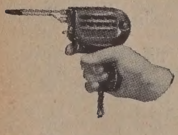
General utility sander 14,400 straight strokes per minute. Case strong red plastic. Comes in "gold" metal Kit Box with 12 abrasives, 2 polishing pads.

$19.95 LIST
Model 404

Has special motor, amazing power. Heavy duty model Drives 3¼" x 6⅛" sanding pad. 14,400 straight strokes per minute. Ebony black plastic shatter and heat resistant case. Comes in metal Kit Box with 15 assorted abrasives. 2 polishing pads, instruction book.

"Quick Hot" Soldering Guns . . . 8 standard and special tips

Promotionally Priced



$7.95 LIST
Model 199

$9.95 LIST
Model 199K

General purpose gun. Heats 2½ seconds. Weighs 1½ lbs. Has long, durable tips, spotlight, sturdy red plastic case. Kit includes gun, extra tips for hot-cutting, smoothing, rosin core solder, all in strong metal box.

$9.95 LIST
Model 288

Heats in 5 seconds, far beyond 200 watt rating. Light (2¼ lbs.) Has long reach, long life tips, spotlight, strong shatterproof handle and case.

$12.95 LIST
Model 250

Famous WEN 250 Watt Heavy Duty Model. 567 hours continuous operation. Heats in 5 seconds. Spotlights work. With special rip cuts plastic tile. Strong black plastic case. Comes in attractive Self-Display Carton. Also available in kit form (250K) with metal carrying case.

$5.95 LIST
Model 100

Feather-light (19 oz.) Slim-line (1$\frac{11}{16}$" cross section) 100 Watts power. Heats 2½ seconds. Built-in spotlight focused on work. Long reach, long life tips, replaceable and interchangeable with special purpose tips. Lustrous black plastic housing.

WEN PRODUCTS, INC. • Chicago 31, Ill.
(CABLE ADDRESS: WENPRODUCT)

XCELITE QUALITY TOOLS

Preferred by the EXPERTS

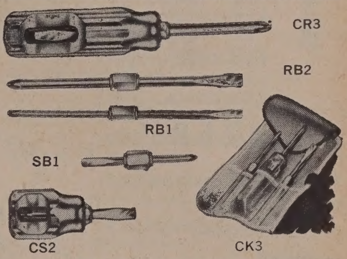
ROUND BLADE SCREWDRIVERS

Number	Size Blade	List	Number	Size Blade	List
R-3322	3/32″ x 2″	$0.30	R-5328	5/32″ x 8″	$1.00
R-3323	3/32″ x 3″	.45	R-3163	3/16″ x 3″	.95
R-3324	3/32″ x 4″	.45	R-3164	3/16″ x 4″	1.00
R-181	⅛″ x 2″	.30	R-3166	3/16″ x 6″	1.15
R-183	⅛″ x 3″	.45	R-3168	3/16″ x 8″	1.30
R-184½	⅛″ x 4″	.45	R-31610	3/16″ x 10″	1.45
R-182	⅛″ x 2″	.55	R-142	¼″ x 2″	1.10
R-184	⅛″ x 4″	.65	R-144	¼″ x 4″	1.25
R-186	⅛″ x 6″	.70	R-146	¼″ x 6″	1.30
R-188	⅛″ x 8″	.90	R-148	¼″ x 8″	1.40
R-1810	⅛″ x 10″	1.00	R-1410	¼″ x 10″	1.50
R-5323	5/32″ x 3″	.75	R-5164	5/16″ x 4″	1.45
R-5324	5/32″ x 4″	.75	R-5166	5/16″ x 6″	1.65
R-5325	5/32″ x 5″	.75	R-5168	5/16″ x 8″	1.75

SQUARE BLADE SCREWDRIVERS

Number	Size Blade	List	Number	Size Blade	List
S-183	⅛″ x 3″	$0.65	S-5168	5/16″ x 8″	$1.85
S-184	⅛″ x 4″	.65	S-51610	5/16″ x 10″	2.10
S-185	⅛″ x 5″	.65	S-51612	5/16″ x 12″	3.30
S-3163	3/16″ x 3″	1.05	S-388	⅜″ x 8″	2.30
S-3164	3/16″ x 4″	1.10	S-3812	⅜″ x 12″	3.30
S-3166	3/16″ x 6″	1.30	S-3818	⅜″ x 18″	3.55
S-3168	3/16″ x 8″	1.40	S-7166	7/16″ x 6″	2.70
S-31610	3/16″ x 10″	1.65	S-71612	7/16″ x 12″	3.30
S-142	¼″ x 2″	1.25	S-71618	7/16″ x 18″	3.55
S-144	¼″ x 4″	1.35	S-1424	¼″ x 24″	3.00
S-146	¼″ x 6″	1.45	**Stubbies**		
S-148	¼″ x 8″	1.60	S-3161	3/16″ x 1″	$0.75
S-5162	5/16″ x 2″	1.35	S-141	¼″ x 1″	.85
S-5164	5/16″ x 4″	1.60	S-5161	5/16″ x 1″	.85
S-5166	5/16″ x 6″	1.70			

COMBINATION-DETACHABLE SCREWDRIVERS



COMPLETE UNITS

(Regular Type)	List
No. CR1 No. 25 handle and RB1 blade	$2.30
No. CR2 No. 25 handle and RB2 blade	2.30
No. CR3 No. 25 handle and RB3 blade	2.30
(Stubby Type)	
No. CS1 No. 26 handle and SB1 blade	2.05
No. CS2 No. 26 handle and SB2 blade	2.05

BLADES ONLY

No. RB1 No. 1 Phillips & 3/16″ Slotted	1.30
No. RB2 No. 2 Phillips & ¼″ Slotted	1.30
No. RB3 No. 3 Phillips & 5/16″ Slotted	1.30
No. SB1 No. 1 Phillips & 3/16″ Slotted	1.15
No. SB2 No. 2 Phillips & ¼″ Slotted	1.15

HANDLES ONLY

No. 25 Regular	1.00
No. 26 Stubby	.90

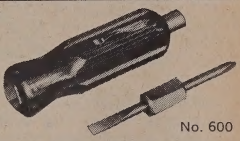
ROLL KIT COMBINATIONS

No. CK3 with No. 25 combination handle and RB1, RB2 and RB3 detachable, reversible blades .... **List $5.80**

No. CK2 with No. 25 combination handle and RB1 and RB2 detachable, reversible blades **List $4.50**

COMBINATION DETACHABLE SCREW AND NUTDRIVER

No. 600—Pocket clip combination handle with ¼″ and 7/16″ hex openings and detachable, reversible SB1 blade (see above)........ **List $2.30**



PHILLIPS SCREWDRIVERS

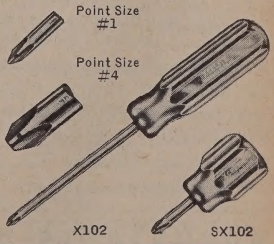
No.	Point Size	Length Blade	Diameter Blade	List Price
X-100	0	2″	⅛″	$ .75
X-108	1	6″	3/16″	1.25
X-101	1	3″	3/16″	1.15
X-102	2	4″	¼″	1.45
X-103	3	6″	5/16″	1.95
X-104	4	8″	⅜″	2.45
X-1010	1	10″	3/16″	1.75
X-1020	2	10″	¼″	1.95

SHORT STUBBY TYPE

No.	Point Size	Blade	List Price
SX-101	1	3/16″x1⅜″	$1.05
SX-102	2	¼″x1⅜″	1.15

POCKET CLIP STYLE

No.	Point Size	Blade	List Price
P12S	0	⅛″x2″	$ .65

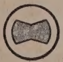


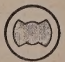
BERYLLIUM-COPPER SCREWDRIVERS

- Non-sparking
- Non-magnetic
- Better fatigue resistance than steel

Number	Size Blade	List
BR-186	⅛″ x 6″	$1.25
BR-1810	⅛″ x 10″	1.35
BR-3168	3/16″ x 8″	2.20
BR-146	¼″ x 6″	2.75
BR-148	¼″ x 8″	2.95
BR-1410	¼″ x 10″	3.25

CLUTCH HEAD SCREWDRIVERS


Type G


Friction-Hold Type A

Note: Both types are the same size and price. Order by number.

Type G No.	Type A No.	Size	Diameter Blade	Length Blade	List Price Each
G-3324	—	3/32″	⅛″	4″	$1.20
G-183	A-183	⅛″	3/16″	3″	1.20
G-5324	A-5324	5/32″	¼″	4″	1.35
G-3164	A-3164	3/16″	¼″	4″	1.35
G-146	A-146	¼″	5/16″	6″	1.75
G-5166	A-5166	5/16″	⅜″	6″	2.15

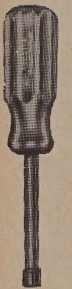
YOUR DISTRIBUTOR CARRIES A COMPLETE LINE OF XCELITE TOOLS!

XCELITE QUALITY TOOLS

Preferred by the EXPERTS

NUTDRIVERS (With Color-Coded Handles)

REGULAR



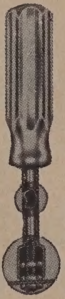
6" Overall Length

No.	Handle Color	Hex Opening	List
6	Black	3/16"	$1.20
7	Brown	7/32"	1.20
8	Red	1/4"	1.20
9	Orange	9/32"	1.20
10	Amber	5/16"	1.20
11	Green	11/32"	1.20
12	Blue	3/8"	1.20
14	Brown	7/16"	1.50
16	Red	1/2"	1.50

9" Overall Length

No.	Handle Color	Hex Opening	List
A-6	Black	3/16"	$1.35
A-7	Brown	7/32"	1.35
A-8	Red	1/4"	1.35
A-9	Orange	9/32"	1.35
A-10	Amber	5/16"	1.35
A-11	Green	11/32"	1.35
A-12	Blue	3/8"	1.35

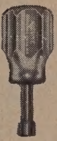
HOLLOW SHAFT



No.	Handle Color	Hex Opening	List
HS-8	Red	1/4"	$1.45
HS-10	Amber	5/16"	1.45
HS-11	Green	11/32"	1.50
HS-12	Blue	3/8"	1.50
HS-13	Amber	13/32"	1.70
HS-14	Brown	7/16"	1.70
HS-15	Amber	15/32"	1.75
HS-16	Red	1/2"	1.75
HS-17	Amber	17/32"	1.80
HS-18	Orange	9/16"	1.80
HS-19	Amber	19/32"	2.05
HS-20	Amber	5/8"	2.05
HS-24	Amber	3/4"	2.65

EXTRA LONG HOLLOW SHAFT

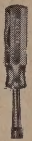
No.	Handle Color	Hex Opening	List
AHS-14	Brown	7/16"	$1.90
AHS-16	Red	1/2"	1.95
AHS-18	Orange	9/16"	2.00
AHS-20	Amber	5/8"	2.30



STUBBY NUTDRIVERS

3 1/4" Overall Length

No.	Handle Color	Hex Opening	List
S-8	Red	1/4"	$ .95
S-10	Amber	5/16"	.95
S-11	Green	11/32"	.95
S-12	Blue	3/8"	.95



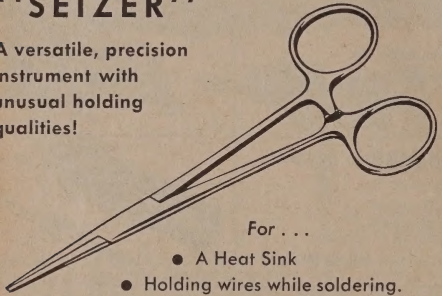
"You Wear 'Em!" Handy, Pocket-Clip NUTDRIVERS

No.	Handle Color	Hex Opening	List
P-3	Amber	3/32"	$ .80
P-4	Red	1/8"	.80
P-5	Amber	5/32"	.80
P-8	Red	1/4"	.80
P-10	Amber	5/16"	.80
P-12	Blue	3/8"	.80

ALSO—ask about Xcelite Regular and Phillips Pocket Screwdrivers!

"SEIZER"

A versatile, precision instrument with unusual holding qualities!



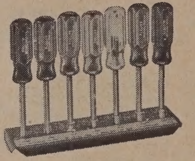
For . . .

- A Heat Sink
- Holding wires while soldering.
- Out-reach and out-hold needle nose pliers. . . . Hold dial cords when stringing.
- Retrieves small items from "far-a-way" places.

ALL STAINLESS STEEL with precise box joints, these tools provide the necessary "third hand" in so many tricky servicing situations.

No. 42H	Straight nose	**$5.70** list
No. 43H	Curved nose	**$5.90** list

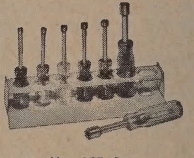
NUT DRIVER SETS



No. 17 SET

NON-TIPPING BENCH RACK OF STURDY STEEL. Contains Nos. 6, 7, 8, 9, 10, 11 and 12 XCELITE Nutdrivers with convenient color-coded handles (size-color table above, left).

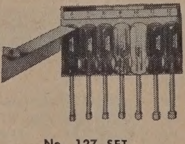
	List
17 —Polished Finish	$9.05
17C—Chrome-Plated Blades	$9.90



No. 137 Set

THEY'RE ALL HANDY—Your most-used Xcelite Nutdrivers! Sturdy metal bench set contains Nos. 6, 8, 10, 11, 12, HS-16 and HS-18.

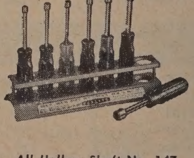
	List
137 —Polished Finish	$10.70
137C—Chrome-Plated Blades	$11.70



No. 127 SET

YOU CAN LOCK 'EM UP! This steel wall set comes with Nos. 6, 7, 8, 9, 10, 11 and 12 XCELITE Nutdrivers with color-coded handles.

	List
127 —Polished Finish	$ 9.60
127C—Chrome-Plated Blades	$10.35

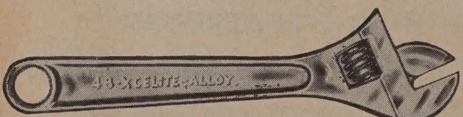


All Hollow Shaft No. 147

Set contains: Nos. HS8, HS9, HS10, HS11, HS12, HS14, and HS16 Hollow Shaft Nutdrivers with bench stand. Blades are Nickel plated. Also available in Chrome.

147 (Nickel)—Wt. 2 lb.	$11.95
147C (Chrome)—Wt. 2 lb.	12.95

ADJUSTABLE WRENCHES



Everything about these XCELITE wrenches is designed from the mechanic's point of view! Extra-wide bearing surface of movable jaws gives better grip. The thin pattern helps you get into close quarters. The adjustment knurl turns EASILY. And it's STRONG, because it's drop forged from chrome alloy steel. Ideal for securing antenna mounts and 1001 other jobs. Order your sizes by number. All in gleaming chrome plated finish.

No.	Size	List
44C	4"	$2.60
46C	6"	2.60
48C	8"	3.04
40-10C	10"	3.86
40-12C	12"	5.60

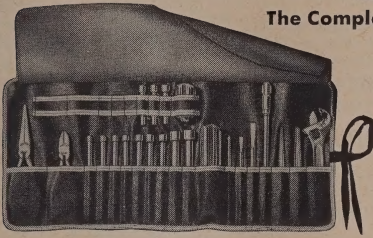
YOUR DISTRIBUTOR CARRIES A COMPLETE LINE OF XCELITE TOOLS!

XCELITE QUALITY TOOLS

Preferred by the EXPERTS

KITS and "99" PARTS

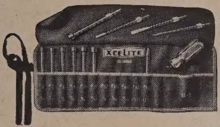
NEW SERVICE MASTER
The Complete Serviceman's Kit!



Contains: No. 52CG Long Nose Pliers, No. 55CG Side Cutter, Stubby 99-3 Handle with three Nutdrivers (¼", 5⁄16" and ⅜"), No. 46C Chrome-Plated Adjustable Wrench, Regular 99-1 Handle with nine Nutdrivers, one Phillips and two Regular Screwdrivers, 99-X10 Extension Shaft and two Chrome-Plated SUPEREAMERS.

No. 99 SM .... $37.25 list

Kit only
(No. 99 SMK) .. $ 3.20 list

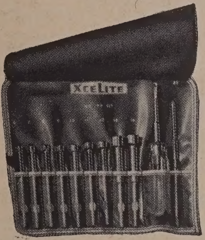


No. 99 JR ROLL KIT

Contains: No. 99-6, -7, -8, -9, -10, -11, -12 Nutdrivers; No. 99-811, -812 (Slotted) and No. 99-821, -822 (Phillips) Screwdriver Blades; No. 99-2 Handle.

No. 99 JR ....$12.50 list

Kit only
(No. 99 KJR) ....$ 1.60 list

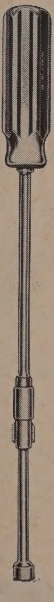


No. 99 PR ROLL KIT

Contains: No. 99-6, -7, -8, -9, -10, -11, -12, -14, -16 Nutdrivers; No. 99-81 (Slotted) and -82 (Phillips) Reversible Screwdriver Blades; No. 99-1 Handle (Regular).

No. 99 PR ....$14.45 list

Kit only
(No. 99 K) ....$ 1.60 list



XCELITE Now Offers You the Most Complete selection of quality, quick-change tools available to make the serviceman's job easier. They're yours in any combination you want: the three roll kits shown — or in "custom" kits your distributor can makeup immediately from his replacement stock.

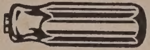
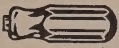
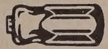
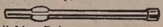
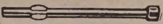
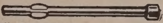
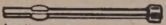
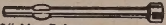
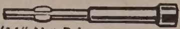
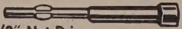
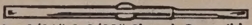
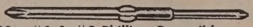
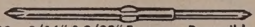
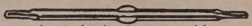
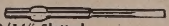
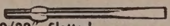
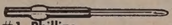
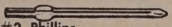
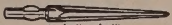
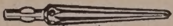
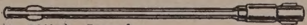
ALL BLADES Fit the No. 99-1 Regular Handle, while all single-end blades fit the No. 99-2 Junior and 99-3 Stubby Handles.

THE NEW No. 99-X10 EXTENSION SHAFT snaps into all "99" Handles — adds a 6" reach to all single-end blades for those "hard-to-reach" jobs. It's one of the most popular additions to the "99" family!

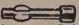
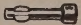
NEW CHROME-PLATED REAMERS . . . Added to the rustproof, clean-cutting No. 99-38 Detachable Reamer, is the No. 99-39. This ¼"—½" "Reamer with the New Twist" has a .190 shank hole for T-Handle Leverage when you insert a 3⁄16" round screwdriver blade — either with the Stubby Handle for extra convenience, or the Regular Handle for extra torque on the tough jobs.

ASK YOUR DISTRIBUTOR for Your Choice of the "99" Kits, Handles or Interchangeable Tools Shown on This Page.

SERIES "99" TOOLS

			LIST
	No. 99-1	Handle (Regular)	$1.15
	No. 99-2	Handle (Junior)	1.00
	No. 99-3	Handle (Stubby)	.90
	No. 99-6	3/16" Nut Driver	.90
	No. 99-7	7/32" Nut Driver	.90
	No. 99-8	1/4" Nut Driver	.90
	No. 99-9	9/32" Nut Driver	.90
	No. 99-10	5/16" Nut Driver	.90
	No. 99-11	11/32" Nut Driver	.90
	No. 99-12	3/8" Nut Driver	.90
	No. 99-14	7/16" Nut Driver	1.20
	No. 99-16	1/2" Nut Driver	1.20
	No. 99-81	3/16" & 9/32" Slotted, Reversible	1.50
	No. 99-82	#1 & #2 Phillips, Reversible	1.50
	No. 99-83	3/16" & 9/32" Frearson, Reversible	1.50
	No. 99-84	3/16" Clutch "G," Reversible	1.50
	No. 99-811	3/16" Slotted	.90
	No. 99-812	9/32" Slotted	.90
	No. 99-821	#1 Phillips	.90
	No. 99-822	#2 Phillips	.90
	No. 99-38	Reamer (1/8"-3/8")	2.20
	No. 99-39	Reamer (1/4"-1/2")	2.75
	No. 99X10	Extension	1.45

Stubby Nut Drivers

		
No. 99-S8	No. 99-S10	No. 99-S12
List $.80	List $.80	List $.80

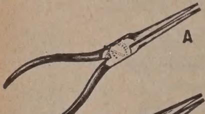
YOUR DISTRIBUTOR CARRIES A COMPLETE LINE OF XCELITE TOOLS!

XCELITE QUALITY TOOLS

***Preferred by the* EXPERTS**

PLIERS FOR EVERY JOB

DROP FORGED OF HIGH GRADE TOOL STEEL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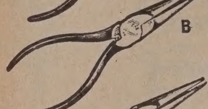
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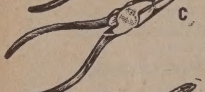
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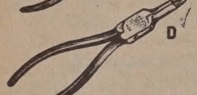
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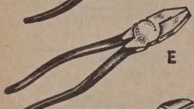
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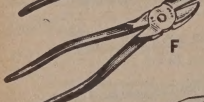
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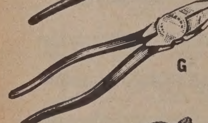
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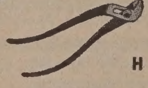
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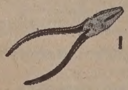
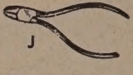

I

(Fig. A)—No. 56 6-in. Needle Nose Plier—Long slim jaws permit entry of this plier where a regular long nose plier won't work. List Price	$3.18
No. 56C—Chrome plated	$3.78
No. 56CG—Cushion grip	$3.64
(Fig. B)—No. 52 Long Nose Plier (Without Side Cutters)—Long perfectly matching tips are ideal for gripping and twisting in awkward places. List Price	$2.78
No. 52C—Chrome plated	$3.52
No. 52CG—Cushion grip	$3.22
(Fig. C)—No. 51 Long Nose Plier (With Side Cutters)—The same rugged strength and long reach as No. 52 Long Nose Plier above plus side cutters. List Price	$3.56
No. 51C—Chrome plated	$4.34
No. 51CG—Cushion grip	$4.04
(Fig. D)—No. 58 Radio and TV Plier—Designed for radio and TV Servicemen. Extreme tip for gripping with sharp cutting edges ¼ in. back from tip. Invaluable in many applications. List Price	$4.20
No. 58C—Chrome plated	$4.96
No. 58CG—Cushion grip	$4.62
(Fig. E)—No. 60 6-in. Side Cutting Plier—This plier has the "just right" size required for most side cutting operations. Serrated upper and lower jaws for gripping and hand honed cutting edges. List Price	$3.26
No. 60C—Chrome plated	$3.82
No. 60CG—Cushion grip	$3.72
(Fig. F)—No. 67 7-in. Diagonal Plier—A rugged plier with all the leverage required for even the heaviest applications. Hand honed cutting edges stand up under tough cutting conditions. List Price	$3.96
No. 67C—Chrome plated	$4.66
No. 67CG—Cushion grip	$4.66
(Fig. G)—No. 68 8-in. Side Cutting Plier—The big brother to No. 60 above. Designed for the man-sized big job where heavy grip and leverage is needed. Ideal for cutting heavy wire. List Price	$4.06
No. 68C—Chrome plated	$4.80
No. 68CG—Cushion grip	$4.86
(Fig. H)—No. 50 5-in. Ignition Plier—Narrow head. Three slip joint adjustments. List Price	$1.96
No. 50C—Chrome plated	$2.22
No. 50CG—Cushion grip	$2.30
(Fig. I)—No. 40 Midget 4" Side Cutting Plier—with serrated jaws and hand-honed blades. List Price	$2.96
No. 40C—Chrome plated	$3.66
No. 40CG—Cushion grip	$3.30
(Fig. J)—No. 54 Midget 4-in. Diagonal Plier—the ideal plier for close quarter work. For servicemen, electricians and hobbyists. List Price	$3.24
No. 54C—Chrome plated	$3.78
No. 54CG—Cushion grip	$3.60
(Fig. K)—No. 62 Transverse Cutting Plier—for flush cut-off—Radio and TV Printed Circuits and Miniature Sets. List Price	$4.18
No. 62C—Chrome plated	$4.90
No. 62CG—Cushion grip	$4.64
(Fig. L)—No. 55 5-in. Diagonal Plier—Ideal for most cutting needs. Hand honed cutting edges cut through medium wire with ease. List Price	$3.14
No. 55C—Chrome plated	$3.78
No. 55CG—Cushion grip	$3.54
(Fig. M)—No. 66 6-in. Diagonal Plier—An all purpose plier heavier than No. 55 above. Small enough for most jobs, but it has a grip for the tough ones. List Price	$3.60
No. 66C—Chrome plated	$4.16
No. 66CG—Cushion grip	$4.08
(Fig. N)—No. 59 Chain Nose Electricians Plier—Long reach and high leverage are combined. Slim enough to go into a small space, rugged enough to stand the pressure for tough electrical jobs. List Price	$3.34
No. 59C—Chrome plated	$4.04
No. 59CG—Cushion grip	$4.10
(Fig. O)—No. 63 10-in. Utility Plier—Forged ribbed lock design for strength plus high leverage. Serrated jaws. List Price	$3.26
No. 63C—Chrome plated	$3.96
No. 63CG—Cushion grip	$4.22
(Fig. P)—No. 53 6-in. Utility Plier—A husky, all-purpose plier with forged rib-lock design and serrated jaws. List Price	$2.44
No. 53C—Chrome plated	$2.62
No. 53CG—Cushion grip	$2.86
(Fig. Q)—No. 41—Midget 4" Long-Nose Plier—without side cutter. Perfectly matched tips for gripping and twisting where space is short. List Price	$2.54
No. 41C—Chrome plated	$3.26
No. 41CG—Cushion grip	$2.86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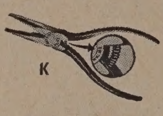
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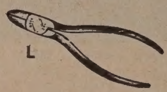
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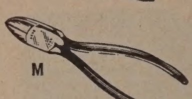
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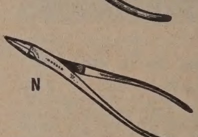
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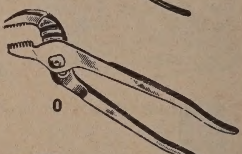
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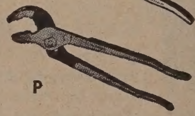
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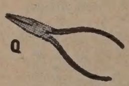
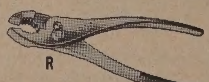

Q

NEW COMBINATION PLIERS . . . . . .

(Fig. R)—No. 78C. 8-in. Combination Plier—A high quality slip joint combination plier. Sturdy construction—ideal for general use. Polished Chrome Plate. List Price	$2.16
(Fig. S)—No. 76S. 6-in. Combination Plier—Satin Finish Plated. List Price	$ .94
No. 76C—Polished Chrome Plate. List Price	$1.62
(Fig. T)—No. 75S. 5-in. Combination Plier—Satin Finish Plated. List Price	$ .94
No. 75C—Polished Chrome Plate. List Price	$1.62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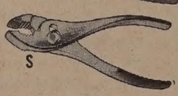
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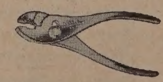
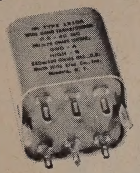

T

YOUR DISTRIBUTOR CARRIES A COMPLETE LINE OF XCELITE TOOLS!

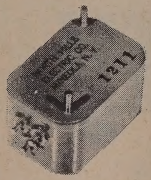
XCELITE, INC. • ORCHARD PARK, N. Y., U. S. A.

NORTH HILLS WIDE BAND TRANSFORMERS

- Antenna Matching
- Interstage Coupling
- Impedance Matching
- Computer Drive Circuits
- Pulse Applications
- Voltage Step-Up
- DC Isolation

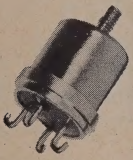

1210
Epoxy
Encapsulated
1½x1½x1½

Available Case Type	Part Number Suffix	Freq. Range	Impedance	Power
1210, 1211	A	0.2-40 mc	75 unb/600 bal	1 watt
1210, 1211	B	3-100 mc	75 unb/600 bal	1 watt
1210, 1211	C	20 kc-10 mc	75 unb/600 bal	1 watt
1210, 1211	D	20 kc-8 mc	75 unb/1850 bal	1 watt
1210, 1211	E	1-50 mc	50 unb/800 bal	1 watt
1210, 1211	F	1-30 mc	50 unb/1250 bal	1 watt
1214	G	1.5-130 mc	75 unb/600 bal	1 watt
1210	PB	3-30 mc	600 bal/50 unb	100 watts


1211
Hermetically
Sealed
1 15/16x1 5/16x1⅛

North Hills wide band transformers have been designed for low insertion loss and good matching characteristics over wide frequency ranges. Balanced windings feature extremely low unbalanced voltage. Band width ratings are conservative.

Three case styles are offered. Series 1210 models are potted in open metal cases with a terminal board on the bottom and 6-32 spade mounting bolts. Series 1211 units are hermetically sealed with glass terminals at the case ends, and 4-40 studs on the bottom for mounting. Series 1214 units are hermetically sealed and have a single 4-40 stud mounting. A great variety of different requirements are being met by special designs. Your specifications for custom wide band transformers may be submitted for quotation.


1214
Hermetically
Sealed
⅝ O.D.x⅝

NORTH HILLS HI-Q RF TOROIDS

1218
Hermetically
Sealed
21/32 O.D.x¾

Type	L(μH)	Q	F(mc)
1218-1	1.5	180	12
1218-2	2.8	180	8
1218-3	5.4	170	7
1218-4	10.2	170	5
1218-5	15.0	150	3.5
1218-6	18.7	150	3

These high Q toroids are hermetically sealed and shielded in a metal case which is nickel plated. There are two teflon terminals ¼" high and one mounting stud 6-32x⅜.

NORTH HILLS
ELECTRONICS, INCORPORATED
GLEN COVE, LONG ISLAND, N. Y.

NOW...from ARCO!

24 Hour Delivery of HST*

*HERMETIC SEAL TRANSFORMER CO.
A DIVISION OF DRESSER INDUSTRIES, INC.

MINIATURIZED TRANSISTOR TRANSFORMERS

at low cost factory prices!

Complete stocks are available from ALL Arco branches or from any Arco Master Industrial Distributor for instant shipment upon receipt of order. Required material is prepared minutes after your request is received. Arco's branches in Dallas and Los Angeles, eliminate any delay in shipping time from the East to West coast.

For complete information write for Bulletin H-100

ARCO electronics inc.

Los Angeles	BRANCHES	Dallas
ARCO CAPACITORS INC.		ARCO ELECTRONICS INC.

NEW Type TT

aTTom®

Actual Size

Built and tested to meet MIL-T-27A, Class R, Grade 5 Specifications, the type TT miniaturized transformers are ideally suited for transistor circuits. In addition, frequency response ratings are based on military specifications.

The exceptional reliability, low distortion and high efficiency of these units combine for excellent performance.

In addition to the ATTOM series, Arco will supply the complete quality-assured HST magnetic component line featuring: Hermetic Seal or Molded—Miniaturized or Subminiaturized — High Temperature — High Stability.

TRANSFORMERS

POWER • INVERTER • PLATE MODULATION • PULSE MIXING • REFERENCE MATCHING • AUDIO ISOLATION • HYBRID TRANSISTOR

FILTERS

LOW PASS • TELEMETERING BAND PASS • HIGH PASS TELEGRAPH TONE AIRCRAFT

REACTORS

AUDIO • CHARGING TOROIDAL

MAGNETIC AMPLIFIERS

SERVO • HIGH GAIN SATURABLE REACTORS

HST* UNITS AND QUALITY ARE SYNONYMOUS!

Arco Electronics Inc. is proud to announce its appointment as exclusive supplier to the industry of standard type H S T transformers, manufactured by Hermetic Seal Transformer Co., a division of Dresser Industries, Inc.

aTTom•

MINIATURIZED TRANSISTOR TRANSFORMERS

The new line of miniaturized aTTom Transistor Transformers (Type TT) is the most complete series available. Consists of 47 standard values. These transformers are molded for conformance with MIL-T-27A, Grade 5, Class R for altitudes up to 50,000 feet. aTTom units have excellent response, low distortion and highest power capabilities available for its volume. Valuable chassis space is not taken up with bulky clamps. One inch long hard drawn copper-tinned leads allow for direct printed circuit mounting. Designs cover practically all applications: Interstage, output, input, single or push-pull output, reactors, line to base, collector to base or line, collector to speaker, and reversible-input to secondary.

Actual Size

HST*

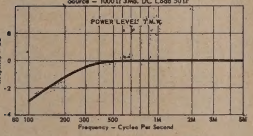
TRANSFORMERS AND QUALITY ARE SYNONYMOUS

***Hermetic Seal Transformer Co.**

MINIMUM PERFORMANCE CURVES

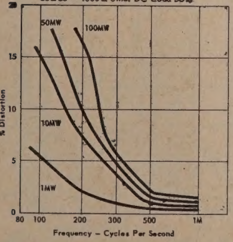
TT – 003

Source – 1000Ω 3Ma. DC Load 50Ω



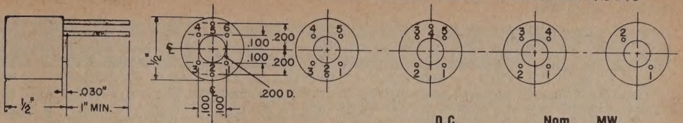
TT – 003

Source – 1000Ω 3Ma. DC Load 50Ω



Above curves based on setting output power at 1KC and maintaining same input level over frequency range.

STANDARD LEAD TERMINATIONS

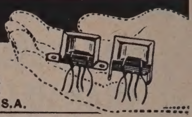


TT No.	Mil Type	Application	Pri. Imp.	D.C. Ma. * in Pri.	Sec. Imp.	Nom. Pri. Res.	MW Level @ 1 KC	Net Price
001	TF5RX13ZZ	Interstage	20,000 30,000	.5 .5	800 1200	850	50	$6.00
002	TF5RX17ZZ	Output	500 600	3 3	50 60	60	100	5.40
003	TF5RX13ZZ	Output	1,000 1,200	3 3	50 60	115	100	5.40
004	TF5RX17ZZ	Output	600	3	3.2	60	100	5.40
005	TF5RX13ZZ	Output	1,200	2	3.2	115	100	5.40
006	TF5RX13ZZ		10,000	1	3.2	790	100	6.00
007	TF5RX16ZZ	Input	200,000	0	1000	8500	25	6.60
008	TF5RX20ZZ	Reactor 3.5 HYs. @ 2 Ma. DC, 1 Hy. @ 5 Ma. DC						4.80
009	TF5RX13ZZ	Output or driver	10,000 12,000	1 1	500CT 600CT	800	100	6.60
010	TF5RX13ZZ	Driver	10,000 12,000	1 1	1200CT 1500CT	800	100	6.60
011	TF5RX13ZZ	Driver	10,000 12,000	1 1	2000CT 2500CT	800	100	6.60
012	TF5RX17ZZ	Single or PP Output	150CT 200CT	10 10	12 16	11	500	5.70
013	TF5RX17ZZ	Single or PP Output	300CT 400CT	7 7	12 16	20	500	5.70
014	TF5RX17ZZ	Single or PP Output	600CT 800CT	5 5	12 16	43	500	6.00
015	TF5RX17ZZ	Single or PP Output	800CT 1,070CT	4 4	12 16	51	500	6.00
016	TF5RX13ZZ	Single or PP Output	1,000CT 1,330CT	3.5 3.5	12 16	71	500	6.00
017	TF5RX13ZZ	Single or PP Output	1,500CT 2,000CT	3 3	12 16	108	500	6.00
018	TF5RX13ZZ	Single or PP Output	7,500CT 10,000CT	1 1	12 16	505	500	6.30
019	TF5RX17ZZ	Output to Line	300CT	7	600	19	500	6.00
020	TF5RX17ZZ	Output or Line to Line	500CT	5.5	600	31	500	6.00
021	TF5RX17ZZ	Output to Line	900CT	4	600	53	500	6.00
022	TF5RX13ZZ	Output to Line	1,500CT	3	600	86	500	6.00
023	TF5RX13ZZ	Interstage	20,000CT 30,000CT	.5 .5	800CT 1200CT	850	100	6.90
024	TF5RX16ZZ	Input	200,000CT	0	1000CT	8500	25	7.50
025	TF5RX13ZZ	Interstage	10,000CT 12,000CT	1 1	1500CT 1800CT	800	100	7.20
026	TF5RX20ZZ	Reactor 6 Hys. @ 2 Ma. DC, 1.5 Hys. @ 5 Ma. DC				2100		5.70
027	TF5RX20ZZ	Reactor 1.25 Hys. @ 2 Ma. DC, .5 Hy. @ 11 Ma. DC				100		4.80
028	TF5RX20ZZ	Reactor .3 Hy. @ 4 Ma. DC, .15 Hy. @ 20 Ma. DC				25		4.80
029	TF5RX17ZZ	Single or PP Output	120CT 150CT	10 10	3.2 4	10	500	5.70
030	TF5RX17ZZ	Single or PP Output	320CT 400CT	7 7	3.2 4	20	500	5.70
031	TF5RX17ZZ	Single or PP Output	640CT 800CT	5 5	3.2 4	43	500	6.00
032	TF5RX17ZZ	Single or PP Output	800CT 1,000CT	4 4	3.2 4	51	500	6.00
033	TF5RX13ZZ	Single or PP Output	1,060CT 1,330CT	3.5 3.5	3.2 4	71	500	6.00
034	TF5RX13ZZ	Single or PP Output	1,600CT 2,000CT	3 3	3.2 4	109	500	6.00
035	TF5RX13ZZ	Single or PP Output	2,000CT 10,000CT	1 1	3.2 4	505	500	6.30
036	TF5RX13ZZ	Isolation or Interstage	10,000CT	1	10,000CT	950	500	7.50
037	TF5RX13ZZ	Driver	10,000CT 12,000CT	1 1	1200CT 1500CT	800	100	6.60
038	TF5RX13ZZ	Driver	10,000CT 12,000CT	1 1	2000CT 2500CT	800	100	6.60
039	TF5RX13ZZ	Driver	10,000CT 12,000CT	1 1	500CT 600CT	800	100	6.60
040	TF5RX16ZZ	Input	100,000	0	1000	1700	8	6.60
041	TF5RX13ZZ	Driver	20,000	.5	1000	1000	2.5	5.40
042	TF5RX13ZZ	Driver	20,000	.5	1200CT	1000	2.5	5.70
043	TF5RX17ZZ	Output	1,000	3	50	60	3	4.95
044	TF5RX17ZZ	Output	400	3	50	30	4	4.95
045	TF5RX17ZZ	Output	400	3	11	30	4	4.95
046	TF5RX17ZZ	Output	400CT	6	11	30	4	5.25
047	TF5RX20ZZ	Reactor 10 Hy. @ 0 Ma. DC 8 Hy. @ .5 Ma. DC				650		5.25

*DCMA shown is for single ended useage (under 5% distortion — 100MW — 1KC) . . . for push pull, DCMA can be any balanced value taken by .5W transistors (under 5% distortion — 500MW — 1KC)

ARCO ELECTRONICS, INC., Transformer Division, New York 13, N. Y.

Argonne TRANSISTOR TRANSFORMERS LIST PRICE 5.00 ANY TYPE



CHOOSE FROM 77 TYPES — THE ONLY COMPLETE LINE OF QUALITY TRANSISTOR TRANSFORMERS

• NICKEL-STEEL LAMINATIONS • WOUND ON NYLON BOBBINS • MYLAR OUTER WRAP • COLOR CODED LEADS

Efficiently designed to meet the needs of miniaturization and engineered to provide more power handling capacity and improved frequency response with minimum distortion. All are nickel-steel laminations. Applications under "TYPE" column shows typical use. Many units may be used for other applications as well. Average net weight 1¼ oz.; average shp. wt., 4 oz. **MADE IN U.S.A.**

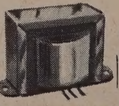
ARGONNE NUMBER	TYPE	IMPEDANCE PRIMARY OHMS	IMPEDANCE SECONDARY OHMS	UNBALANCED CURRENT PRI. D.C. MA	POWER MILLI-WATTS	D.C. RESISTANCE PRI. OHMS	D.C. RESISTANCE SEC. OHMS	OVERALL SIZE
AR-141	Input	500,000	1,500 CT	.3	350	3500	60	1"x¾"x¾"
AR-142	Input	500,000	200 CT	.3	350	3500	20	1"x¾"x¾"
AR-143	Input	250,000	200 CT	.5	350	3500	20	1"x¾"x¾"
AR-144	Input	200,000	1,500 CT	.5	350	3000	65	1"x¾"x¾"
AR-100	Input	200,000	1,000	.5	100	3600	90	1"x¾"x¾"
AR-126	Input	150,000	1,500 CT	2.	100	3700	55	1"x¾"x¾"
AR-101	Input	100,000	3,000 CT	.5	100	3600	60	1"x¾"x¾"
AR-145	Input	100,000	2,000 CT	.5	350	3000	50	1"x¾"x¾"
AR-102	Input	100,000	1,500 CT	.5	100	3600	40	1"x¾"x¾"
AR-146	Input	100,000	50	.5	350	3000	1.6	1"x¾"x¾"
AR-127	Input	50,000	3,000 CT	1.	100	2000	50	1"x¾"x¾"
AR-128	Input	50,000	1,500 CT	2.	100	3000	50	1"x¾"x¾"
AR-129	Input	50,000	1,000	2.	100	2500	20	1"x¾"x¾"
AR-148	Input	50,000	500 CT	1.	175	1300	20	¾"x⅝"x⅝"
AR-149	Input	50,000	200 CT	1.	175	1300	10	¾"x⅝"x⅝"
AR-147	Input	50,000	30 CT	1.	175	1300	1.5	¾"x⅝"x⅝"
AR-150	Input	40,000	100	1.	175	850	6	¾"x⅝"x⅝"
AR-103	Driver	20,000	2,000 CT	1.	100	400	50	1"x¾"x¾"
AR-104	Driver	20,000	1,000	1.	100	400	50	¾"x⅝"x⅝"
AR-151	Driver	20,000	800 CT	1.5	175	600	60	¾"x⅝"x⅝"
AR-105	Driver	20,000	400	1.	100	600	30	1"x¾"x¾"
AR-130	Output	20,000	8	.5	100	400	0.6	¾"x⅝"x⅝"
AR-131	Output	20,000	3.2	.5	100	400	0.3	¾"x⅝"x⅝"
AR-106	Driver	16,000	4,000	1.	100	620	350	¾"x⅝"x⅝"
AR-152	Driver	15,000	200 CT	1.5	175	550	10	¾"x⅝"x⅝"
AR-107	Driver	15,000	200	1.5	250	1000	20	1"x¾"x¾"
AR-108	Driver	10,000	3,000 CT	1.5	100	200	100	¾"x⅝"x⅝"
AR-109	Driver	10,000	2,000 CT	1.5	100	500	50	¾"x⅝"x⅝"
AR-153	Driver	10,000	200 CT	2.	175	400	10	¾"x⅝"x⅝"
AR-110	Output	10,000	16	2.	150	600	2.5	¾"x⅝"x⅝"
AR-132	Output	10,000	8	1.	100	600	.6	¾"x⅝"x⅝"
AR-133	Output	10,000	3.2	1.	100	600	.3	¾"x⅝"x⅝"
AR-158	Input	5,000 CT	80,000	2.	175	350	1800	¾"x⅝"x⅝"
AR-157	Input	5,000	45,000	2.	175	250	1600	¾"x⅝"x⅝"
AR-156	Input	5,000	30,000	2.	175	150	1300	¾"x⅝"x⅝"
AR-155	Input	5,000	10,000	2.	175	150	450	¾"x⅝"x⅝"
AR-154	Input	5,000 CT	7,500 CT	2.	175	150	400	¾"x⅝"x⅝"
AR-173	Driver	5,000	3,000 CT	2.	350	200	90	1"x¾"x¾"
AR-111	Output	5,000	100	1.	100	600	10	¾"x⅝"x⅝"
AR-134	Output	4,000 CT	8	4.	250	150	.8	1"x¾"x¾"
AR-135	Output	4,000 CT	3.2	4.	250	150	.3	1"x¾"x¾"
AR-112	Output	3,500	200	1.	150	120	25	1"x¾"x¾"
AR-113	Driver	3,000 CT	1,000	9.	150	100	60	¾"x⅝"x⅝"
AR-114	Output	2,500	11	10.	150	50	1.1	¾"x⅝"x⅝"
AR-115	Input	2,000 CT	8,000 CT	2.	150	150	660	1"x¾"x¾"
AR-116	Output	2,000	200	4.	250	120	20	1"x¾"x¾"
AR-175	Driver	2,000	1,500 CT	2.	350	150	60	1"x¾"x¾"
AR-159	Driver	1,500	500 CT	4.	175	100	20	¾"x⅝"x⅝"
AR-136	Output	1,000 CT	100	4.	250	120	10	1"x¾"x¾"
AR-137	Output	1,000 CT	8	4.	250	120	.9	1"x¾"x¾"
AR-138	Output	1,000 CT	3.2	4.	250	120	.3	1"x¾"x¾"
AR-160	Output	800 CT	3.2	5.	175	40	.3	¾"x⅝"x⅝"
AR-161	Output	650 CT	16	5.	175	27	1.3	¾"x⅝"x⅝"
AR-162	Output	500 CT	500 CT	5.	350	18	18	1"x¾"x¾"
AR-163	Output	500 CT	150 CT	5.	175	18	8	¾"x⅝"x⅝"
AR-165	Output	500 CT	50	5.	175	18	4	¾"x⅝"x⅝"
AR-117	Output	500 CT	30	5.	100	20	1.5	¾"x⅝"x⅝"
AR-118	Output	500 CT	16	5.	100	20	1.5	¾"x⅝"x⅝"
AR-164	Output	500 CT	8	5.	175	18	.8	¾"x⅝"x⅝"
AR-119	Output	500 CT	3.2	5.	100	20	.3	¾"x⅝"x⅝"
AR-166	Output	400 CT	16	5.	175	16	1.3	¾"x⅝"x⅝"
AR-120	Output	400 CT	11	1.	150	20	.9	¾"x⅝"x⅝"
AR-167	Output	400 CT	8 or 3.2	5.	175	16	.6/.3	¾"x⅝"x⅝"
AR-168	Output	300 CT	16	6.	175	12	1.4	¾"x⅝"x⅝"
AR-121	Output	300 CT	3.2	6	150	20	.25	¾"x⅝"x⅝"
AR-139	Output	250 CT	8	2.	250	15	.7	1"x¾"x¾"
AR-122	Output	250 CT	3.2	2	150	11	.3	1"x¾"x¾"
AR-123	Input	200	2,000 CT	2.	150	11	50	1"x¾"x¾"
AR-124	Output	200 CT	16	2.	250	20	1.3	¾"x⅝"x⅝"
AR-169	Output	200 CT	8 or 3.2	7.	175	9	.6/.3	¾"x⅝"x⅝"
AR-140	Output	200 CT	3.2	2.	100	10	.3	¾"x⅝"x⅝"
AR-170	Output	160 CT	8 or 3.2	8.	350	10	.6/.3	1"x¾"x¾"
AR-176	Output	125 CT	8	8.	350	4	.7	1"x¾"x¾"
AR-174	Output	125 CT	3.2	8.	350	6	.3	1"x¾"x¾"
AR-171	Output	100 CT	10 CT	10.	175	4	.8	¾"x⅝"x⅝"
AR-172	Output	48 CT	8 or 3.2	15.	350	2.3	.6/.3	1"x¾"x¾"
AR-125	Input	3	4,000	15.	250	14	50	¾"x⅝"x⅝"

HIGH FIDELITY TRANSISTOR TRANSFORMERS

Driver and output transformers, completely encased. Response 20-20,000 cps ± 0.25 db. Output transformer 1.5 watts out 20-20,000 cps ± 2 db. Size 1-5/16" x 1-5/16" x 1¾". Shpg. wt., 9 oz.

MODEL AR-500 DRIVER TRANSFORMER: 5000 ohm primary, 3000 ohm CT secondary; dc resistance of primary 50 ohms, secondary 75 ohms; unbalanced primary dc current 20 ma List Price 9.60

MODEL AR-501 OUTPUT TRANSFORMER: Primary 125 ohms CT, secondary 8 ohms; primary dc resistance 4 ohms, secondary 0 8; unbalanced primary current 50 ma. dc..........................List Price 9.60



HIGH POWER TRANSISTOR AUDIOS

For the new high-output transistors

MODEL AR-503 OUTPUT TRANSFORMER: 6 watts. 70-20,000 cps ± 2 db. Primary 48 ohms CT, secondary 3.2 ohms; primary dc resistance 1.1 ohms, secondary 0.3; unbalanced primary current 200 ma. dc. Size 1-9/16" x 1⅞" x 1-9/16". Shpg. wt., 1 lb. List Price 2.95

MODEL AR-504 INPUT TRANSFORMER: 2 watts. 70-20,000 cps ± 2 db. Primary 100 ohms, secondary 200 ohms CT. Primary dc resistance 1.8 ohms, secondary 2.7; unbalanced primary current 200 ma. dc ....List Price 2.50

Write to Factory For Complete Catalog Of Audio & Miniaturization Products

Argonne ELECTRONICS MFG. CORP. 165-11 SOUTH ROAD - JAMAICA 33, N. Y.

MANUFACTURERS & IMPORTERS

OLympia 7-7528

CHICAGO STANDARD TRANSFORMER CORPORATION

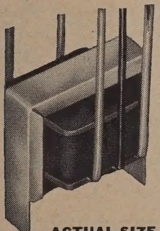
STANCOR TRANSFORMERS

AND RELATED COMPONENTS - INDEX on Pg. 1330

TRANSISTOR AUDIO TRANSFORMERS

Part No.	Application	Imp. in Ohms		Max. Pri. DC Ma.	DC Res. in Ohms		Power in Watts	Ht.	Base Area	Mtg. Ctrs.	Mtg. Type	Shpg. Wt.	List Price
		Pri.	Sec.		Pri.	Sec.							
TA-1	Input	600 C.T.	10	20	42	.8	.05	13/16	1 9/16x15/16	1 5/16	A	1 oz.	**$3.22**
TA-2	Interstage	100 C.T.	10 C.T.	100	4.3	.8	.25	1 1/16	2 1/8x1 3/8	1 13/16	A	3 oz.	**3.22**
TA-3	Interstage	100	1000 C.T.	100	5.8	45	.25	1 3/8	2 7/16x1 3/8	2	A	3 oz.	**3.22**
TA-4	Interstage	500 C.T.	5000 C.T.	12	37	250	.03	1 3/8	2 7/16x1 3/8	2	A	3 oz.	**4.22**
TA-5	Driver	1000	200 C.T.	10	400	115	.05	5/8	1 1/4x1/2	1 1/16	A	2 oz.	**7.99**
TA-6	Driver	2000	200 C.T.	5	720	115	.05	5/8	1 1/4x1/2	1 1/16	A	2 oz.	**9.05**
TA-7	Driver	100	100 C.T.	100	12	12	.5	1 5/8	1 13/16x1 3/8	2 3/8	A	5 oz.	**3.22**
TA-8	Output	9800	15	2	640	2	.05	1 3/8	2 7/16x1 3/8	2	A	2 oz.	**7.22**
TA-9	Output	1000	4/8/16	10	180	3.5	.2	3/4	1 9/16x3/4	1 3/8	A	1 oz.	**8.27**
TA-10	Output	2000 C.T.	4/8/16	—	250	4	.2	3/4	1 9/16x3/4	1 3/8	A	1 oz.	**9.05**
TA-11	Output	48 C.T.	8/16	275	5	1.5	5	2	3 5/16x1 3/4	2 7/8	A	1 lb.	**6.20**
TA-12	Output	20 C.T.	8	500	.55	.35	10	1 3/8	1 7/16x1 1/2	2	A	4 oz.	**3.22**
TA-13	Driver	200 C.T.	400 C.T.	10	—	—	.6	3	2 11/16x2 5/32	2 3/8x1 1/2	TD	1 1/2 lb.	**6.83**
TA-14	Output	24 C.T.	16/4 C.T.†	200	—	—	10	4 1/4	4 3/8x3 9/16	3 7/8x2 3/4	TD	6 1/4 lb.	**17.12**
TA-15	Input	50 to 100	10	50			5MW	13/16	1 9/16x15/16	1 3/16	A	5 1/2 oz.	**2.50**
TA-16	Driver	20	36 C.T.	400			1W	1 3/16	2 1/16x1 1/8	1 3/4	A	2 oz.	**2.89**
TA-17	Modulation	8 C.T.	7500/5000	120			35	3 1/8	3x2 1/2	1 15/16x2	C	3 lbs.	**10.81**

.150 WATT GROUP



ACTUAL SIZE

Dimensions:

H x W x D: 21/32″x13/16″x5/8″

Mounting Tabs Centers: 25/16″—3/16″ W

Weight..............65 oz.

List Price......$6.20

For other transistor transformers see:

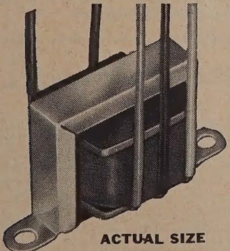
Page 1330—Power transistor units

Page 1346—Hermetically sealed units

Page 1348—Ultra-miniature units

—Transverter power supply transistor transformers

.300 WATT GROUP



ACTUAL SIZE

Dimensions:

H x W x D: 13/16″x 1 5/8″x3/4″

Mounting Centers: 1 3/8″

Weight.....1.2 oz.

List Price $6.20

Part No.	Application	Turns Ratio Pri. to Sec.	Impedance in Ohms		D.C. Res. in Ohms	
			Pri.	Sec.	Pri.	Sec.
TA-18	Input	1.00:45.5	30 C.T.	50,000	14.7	4060
TA-19	Interstage	3.08:1	100 C.T.	10 C.T.	19	1.27
TA-20	Output	5.22:1	350 C.T.	4, 12	38	1.45
TA-21	Output	5.53:1	500 C.T.	4, 8, 16	75.3	3.55
TA-22	Interstage	3.16:1	500 C.T.	50	59.7	7.9
TA-23	Output	5.65:1	600 C.T.	4, 8, 16	73.2	3.2
TA-24	Interstage	10.0:1	500 C.T.	50,000	76.8	5135
TA-25	Output	6.75:1	825 C.T.	4, 8, 16	74	2.7
TA-26	Output	9.80:1	1,250	4, 12	132.5	1.4
TA-27	Interstage	4.08:1	1,200	20,000 C.T.	142	1860
TA-28	Interstage	1.65:1	1,500	500 C.T.	104	46.5
TA-29	Output	11.8:1	2,500	4, 16	370	2.3
TA-30	Interstage	1.00:1.22	5,000 C.T.	7,500 C.T.	650	790
TA-31	Interstage	1.00:1.41	5,000 C.T.	10,000 C.T.	635	1100
TA-32	Interstage	1.00:4	5,000 C.T.	80,000 C.T.	573	5740
TA-33	Output	24.6:1	10,000 C.T.	4, 8, 16	1174	2.6
TA-34	Interstage	14.0:1	10,000	200 C.T.	1200	33.4
TA-35	Interstage	2.24:1	10,000	2,000 C.T.	1200	257
TA-36	Interstage	1.83:1	10,000	3,000 C.T.	1200	385
TA-37	Output	5.55:1	400 C.T.	11	71.5	1.5
TA-38	Interstage	3.44:1	500 C.T.	150 C.T.	62	21.2
TA-53	Input‡	3:1	5000 C.T.	45,000	310	1400
TA-54	Input#	5:1	20,000	800 C.T.	1350	95
TA-39	Output	3.08:1	100 C.T.	4, 8, 16	10.9	1.45
TA-40	Output	3.27:1	160	4, 8, 16	18.7	1.4
TA-41	Output	5.00:1	400 C.T.	4, 8, 16	34	1.5
TA-42	Output	5.60:1	500 C.T.	4, 8, 16	47	.85
TA-43	Output	6.63:1	700 C.T.	4, 8, 16	77	1.15
TA-44	Output	12.5:1	2,500	4, 8, 16	172	1.15
TA-45	Output	13.7:1	3,000	4, 8, 16	192	1.2
TA-46	Interstage	8.17:1	100,000	1,500 C.T.	3250	143
TA-47	Input	1.00:14.1	1,000 C.T.	200,000 C.T.	123	1815
TA-52	Driver‡	100:1	500 C.T.	500 C.T.	40	55
TA-55	Input	50:1	500,000	200 C.T.	7,000	8.5

TRANSISTOR POWER TRANSFORMERS—Primary 117 volts, 60 cycle operation

Part No.	Plate Supply No. 1		Plate Supply No. 2		Height	Base Area	Mtg. Type	Shpg. Wt.	List Price
	AC Volts	DC Ma	AC Volts	DC Ma					
***TP-1**	13 or 18	900	13 or 18	900	3″	3x2 1/2	C	2 3/4	**$8.27**

* For bridge rectifier systems. † 2 secondaries 16 ohm series, 4 ohms parallel. ‡Also Interstage. #Also driver and interstage.

HI-FI & TV TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

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POWER TRANSISTOR TRANSFORMERS

Part No.	Application	Impedance in Ohms Pri.	Impedance in Ohms Sec.	D.C. Ma. Pri.	Power Watts	Mtg.	Height Overall	Mtg. Ctrs.	Base Area	Shpg. Wt. in Lbs.	List Price
TA-56	Output	48 C.T.	3.2/8/16	550	10	J	2⁵⁄₁₆"	2⅜"	2⅞ x 2"	1	**$7.75**
TA-57	Output	100 C.T.	3.2/8/16	500	10	S	2⁵⁄₁₆"	2⅜"	2⅞ x 2"	1	**7.00**
TA-58	Driver	100	200 C.T.	200	.5	A	1¼"	1¾"	2⅛" x 1"	½	**3.85**
TA-59	Driver	500 C.T.	200 C.T.	50	.5	A	1¼"	1¾"	2⅛" x 1"	½	**4.00**
TA-60	Hi-Fi Output‡	125 C.T.	8	50#	1.5	TS	1¾"	1¼"	1¼" x 1¼"	¾	**10.00**

‡Freq. Resp. ±½ db, 20-20,000 cps. #Unbalanced Primary Current.

TELEVISION COMPONENTS

Almost 500 TV replacement transformers and related components, the most complete line in the industry, are available from Chicago Standard. These include over 175 exact replacement flybacks and almost 70 power transformers, as well as yokes, vertical outputs, width and linearity coils and many other popular TV replacement units.

Ask your distributor for a free copy of the latest edition of the Stancor TV Transformer Catalog and Replacement Guide listing these units and replacement data on thousands of television sets.

STANCOR ULTRA-LINEAR HIGH-FIDELITY AMPLIFIER

Now you can build an Ultra-Linear version of the famous Stancor-Williamson high fidelity amplifier, using Stancor Ultra-Linear Output Transformer A-8072. For complete construction details see Stancor Bulletin 479.

The original Stancor-Williamson amplifier can be converted to Ultra-Linear operation by a few simple circuit changes and the installation of the A-8072. Conversion instructions are included in Bulletin 479.

Stancor supplies a set of two completely punched and finished chassis for the Ultra-Linear Amplifier; Chassis Set WM-8. $5.75 net. In addition to Ultra-Linear Output Transformer A-8072, $16.60 net, this amplifier uses power transformer PC8412, $12.55 net and filter choke C-1411, $5.67 net. The other components used cost about $30.00. They are all stock parts and can be readily obtained from your Stancor distributor.

Write for your FREE copy of Bulletin 479.

HIGH FIDELITY OUTPUT TRANSFORMERS

Better than ±1 db from 20 to 20,000 cps.

These Stancor output transformers combine the most advanced design and manufacturing practices to provide outstanding audio response at low cost. Maximum power level is conservatively rated at 50 watts. They are designed to match the most popular types of output tubes to speaker or line impedances.

Extensively interleaved "trifilar" windings, extremely tight coupling and careful electrical balance result in audio fidelity to please the most critical specialist. Inasmuch as elaborate shielding is not required at the audio output level, an inexpensive, but thoroughly practical, Type C mounting, is used. Shipping weight is 6.5 lbs., except A-8098, shipping weight 3.2 lbs.

Part No.	Pri. Imp. (P-P) in Ohms	Sec. Imp.* in Ohms	Max. Pri. D.C. Per Side	Audio Watts	Height Overall	Base Area	List Price
A-8050	1500	8, 16	200	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**$22.74**
A-8098	2000 C.T.	8, 16, 32	140	15	3¾"	2⅝" x 3¼"	**13.57**
A-8051	2500	8, 16	150	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**22.74**
A-8052	3000	8, 16	175	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**22.74**
A-8053	5000	8, 16	150	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**22.74**
A-8054	9000	8, 16	100	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**22.74**
A-8056	6600	8, 16	125	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**22.74**
A-8060	1500	500	200	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**22.74**
A-8061	2500	500	150	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**22.74**
A-8062	3000	500	175	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**22.74**
A-8063	5000	500	150	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**22.74**
A-8064	9000	500	100	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**22.74**
A-8072†	7600	4, 8, 16	100	25	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**27.80**
A-8066	6600	500	125	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**22.74**

*Where more than one secondary impedance is shown, only one value is to be used at any time.
†Primary provided with seven taps for Ultra-Linear application.

DRIVER TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

STANCOR

SINGLE PLATE TO PUSH-PULL GRIDS

Part No.	Pri. Impedance in Ohms	Pri /½ Sec. Ratio	Core	Max. Pri. D.C.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4713	10,000	2:1	⅝″ x ⅝″	30 ma.	A	1⅝″	2⅞″ x 1⅛″	0.7	**$3.53**
A-4752	10,000	2/1.5/1:1	¾″ x ¾″	40 ma.	A	2″	3¼″ x 1¾″	1.2	**4.88**
A-4722	10,000	2:1	¾″ x 1″	30 ma.	TD	2¹¹⁄₁₆″	2¾″ x 2³⁄₁₆″	1.7	**7.22**
A-4292	10,000	2.5:1	⅝″ x ⅝″	20 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**3.78**
A-4723	10,000	3:1	⅝″ x ⅝″	30 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**3.59**
A-4210	1,500 to 5,000	3:1	1″ x 1″	40 ma.	C	3³⁄₁₆″	2⅝″ x 2⅝″	2.4	**8.27**
A-4702	1,500 to 5,000	5:1	1″ x 1″	80 ma.	C	3³⁄₁₆″	2⅝″ x 2⅝″	2.5	**8.16**

PUSH-PULL PLATES TO PUSH-PULL GRIDS

Part No.	Pri. Imp. (P.P.) in Ohms	Pri./½ Sec. Ratio	Core	Max. Pri. D.C.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4208#	20,000 to 30,000	2.8:1	1″ x 1″	15 ma.	C	3³⁄₁₆″	2⅝″ x 2⅝″	2.5	**$ 9.45**
A-4701#	20,000	3:1	1″ x 1″	25 ma.	C	3³⁄₁₆″	2⅝″ x 2⅝″	2.7	**10.66**
A-4212	1,500 to 5,000	3.2:1	1″ x 1″	50 ma.	C	3³⁄₁₆″	2⅝″ x 2⅝″	2.5	**8.66**
A-4703#	3,000 to 10,000	5:1	1⅛″ x 1⅛″	95 ma.	C	3⅝″	3″ x 3⅛″	3.7	**10.73**

POLY-PEDANCE DRIVER MULTI-TAPPED UNITS FOR USE IN CIRCUITS WHERE THE OPTIMUM RATIO CANNOT BE PREDETERMINED.

Driver circuit changes often require new transformers. Many times it is impossible to match correctly tubes involved with a specific transformer, with high distortion resulting. *Poly-Pedance* units solve that problem; three transformers with the maximum number of usable ratios will match the driver tubes to any Class B modulator grid circuit without exceeding the power capabilities of the driver tubes.

Part No.	Application and Ratio Pri./½ Sec.	Max. D.C.	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4761	Driver to Class "B" Grids 1.25:1/ 1.4:1/ 1.6:1/ 1.8:1/ 2:1/ 2.2:1/ 2.4:1	Pri—150 ma. Sec—100 ma.	15	CD	3³⁄₁₆″	2⅝″ x 3⅝″	3.4	**$18.57**
A-4762	Driver to Class "B" Grids 2.6:1/ 3:1/ 3.2:1/ 3.4:1/ 4:1/ 4.5:1/ 5:1	Pri—150 ma. Sec—180 ma.	15	CD	3³⁄₁₆″	2⅝″ x 3⅛″	2.7	**17.46**
A-4763	Driver to Class "B" Grids 1.25:1/ 1.5:1/ 1.75:1/ 2:1/ 2.25:1/ 3.2:1	Pri—225 ma. Sec—280 ma.	30	CD	3⅝″	3″ x 4″	4.3	**21.63**

POLY-PEDANCE LINE DRIVER MULTI-TAPPED UNIT TO MATCH ALL COMMON LINE IMPEDANCES TO GRID CIRCUIT OF MODULATOR OR CLASS "B" AMPLIFIER.

Designed with pie wound coils to assure low leakage inductance, low resistance and low capacity, these two units will easily match all common line impedances to any modulator grid circuit. Individually boxed with complete instructions.

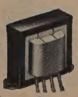
Part No.	Application and Ratio Pri./ ½ Sec.	Max. D.C.	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4765	Line to Grid 1:0.75/ 1:0.85/ 1:1/ 1:1.25/ 1:1.45/ 1:1.75/ 1:2/ 1:2.25/ 1:2.5/ 1:2.75/ 1:3.15	Pri—180 ma. Sec—100 ma.	15	CD	3³⁄₁₆″	2⅝″ x 3⅜″	3.2	**$19.18**

AUDIO CHOKES

Audio reactors are rated at 2 volts, 200 cycles, with maximum D.C. in windings. Tolerance of plus 15% is maintained on all ratings.

Part No.	Rated Inductance	Max. D.C.	D.C. Res. in Ohms	Test Volts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-1003	16 hy at 50 ma.	50 ma.	580	1500	A	2″	3¼″ x 1¾″	1.1	**$3.61**
C-2346	35 hy at 15 ma.	—	1850	2500	A	1⅜″	2⅜″ x 1¼″	½	**3.59**
C-2301	135 hy at 5 ma.	10 ma.	6500	1500	TD	2¹¹⁄₁₆″	2¾″ x 1¹³⁄₁₆″	1.7	**7.14**
C-2345	350 hy at 5 ma.	—	5500	2500	A	2″	3¼″ x 2″	1½	**6.60**

#These units have split secondaries for individual bias adjustment and/or use of inverse feedback.
‡To be removed from next catalog.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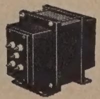
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STANCOR

INPUT-INTERSTAGE

CHICAGO STANDARD TRANSFORMER CORPORATION

MICROPHONE OR LINE TO LINE

Part No.	Impedance In Ohms	Mtg.	Height Overall	Base Area	Shpt. Wt. In Lbs.	List Price
A-4350#	Pri—500/333/200/125/50 Sec—500/333/200/125/50	Q	2″	3¼″ x 1¾″	1.0	**$ 7.22**
A-4407#†	Pri—500/333/200/125/50 Sec—500/333/200/125/50	D	3 3/16″	2⅝″ x 3¼″	2.4	**14.98**

MICROPHONE PICKUP OR LINE TO GRID

Part No.	Application	Impedance in Ohms	Turns Ratio	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4705	S. B. Mic. to S. Grid	Pri—200/70 Sec—80,000	1:20	A	1⅜″	2⅜″ x 1⅜″	0.4	**$4.95**
A-4706	S. B. Mic. to S. Grid	Pri—100 Sec—60,000	1:24.5	A	1⅜″	2⅜″ x 1½″	0.5	**3.61**
A-4708	D. B. Mic. to S. Grid	Pri—200 CT Sec—57,000	1:17	J	2″	2⅜″ x 1⅝″	0.7	**4.88**
A-4742	S. B. Mic. to P.P. Grids	Pri—100 Sec—400,000 CT	1:64	S	2 5/16″	2⅞″ x 1¾″	1.2	**5.22**
A-4747	S. B. Mic. or Low Imp. Line to S. Grid	Pri—70 Sec—1,300,000	1:137	VE	1 7/16″	1 5/16″ x 1¼″ 1½″	0.5	**5.25**
A-4351#	Mic. or Line to S. Grid	Pri—500/333/200/125/50 Sec—89,000	1:13.3	TD	2 11/16″	2¾″ x 2 3/16″	1.4	**7.71**
A-4352#	Mic. or Line to S. Grid	Pri—500/333/200/125/50 Sec—89,000	1:13.3	Q	2″	3¼″ x 1¾″	1.0	**8.00**
A-4709	Dynamic Mic. or Pickup to S. Grid	Pri—30/15/8/4 Sec—106,000	1:60	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**8.66**
A-4778	Line to Grid	Pri.—500/600 C.T. Sec.—240,000	1:20	C	2⅜″	2⅞″ x 1⅞″	—	**7.80**
A-4779	Line to S. or P. P. Grids	Pri.—500/600 C. T. Sec.—60,000 C.T.	1:10	A	2″	2⅜″ x 1¼″	—	**6.00**
A-4780	Line to P. P. Grids	Pri.—500/600 C.T. Sec.—240,000 C.T.	1:20	A	2 13/16″	3⅛″ x 1¾″	—	**6.00**

INTERCOMMUNICATOR AND TRANSCEIVER

Part No.	Application	Impedance in Ohms Primary	Impedance in Ohms Secondary	Max. Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4744	Intercom. input	4	25,000		VE	1⅜″	2⅜″ x 1½″	0.5	**$3.36**
A-4748	Intercom. input	45 or 50	50,000		A	1 3/16″	2 3/16″ x 1¼″ 1¾	0.4	**5.00**
A-4749	Telephone Patch Circuit	10,000	2–500 each		TD	1 15/16″	1 17/32″ x 2¼″	1.0	**8.09**
A-8090	Line to Voice Coil	45 or 50	3–4, 6–8	3	QL	1⅜″	2⅜″ x 1½″	0.5	**2.95**
A-8091	Line to Voice Coil	45 or 50	3–4, 6–8	8	QL	1⅝″	2⅞″ x 1⅝″	0.7	**3.50**
A-3833	Transceiver Input Mic. and Plate to Grid	200 and 5,000	60,000	5	A	1⅝″	2⅞″ x 1½″	0.7	**4.77**
A-3836	Transceiver Output. Plate to Low or High impedance phones	10,000	50 at 2,000	5	A	1⅝″	2⅞″ x 1½″	0.7	**4.66**
A-3817	Transceiver modulation and output (Autoformer)	5,000 at 50 madc	6750 at 40 madc	10	A	1 15/16″	1½″ x 2⅜″	0.7	**5.00**

SINGLE PLATE TO SINGLE GRID—FOR 7,000-20,000 OHM PLATE IMPEDANCES

Part No.	Turns Ratio	Core	Max. Pri. D.C.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-53	1:3	½″ x ½″	10 ma.	A	1⅜″	2⅜″ x 1½″	0.5	**$3.36**

SINGLE PLATE TO PUSH-PULL GRIDS—FOR 7,000-15,000 OHM PLATE IMPEDANCES

A-52-C	1:2	½″ x ½″	10 ma.	A	1⅜″	2⅜″ x 1⅜″	0.4	**$3.75**
A-62-C	1:2	⅝″ x ⅝″	10 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**3.89**
A-4745	1:2	¾″ x 1″	10 ma.	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**9.44**

Recommended for use in super-regenerative circuits. Has a static shield between pri. and sec. windings.

A-53-C	1:3	½″ x ½″	10 ma.	A	1⅜″	2⅜″ x 1⅜″	0.5	**4.00**
A-63-C	1:3	⅝″ x ⅝″	10 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**4.50**
A-73-C	1:3	¾″ x ¾″	10 ma.	A	2″	3¼″ x 1¾″	1.0	**5.25**
A-4719	1:3	¾″ x 1″	10 ma.	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**8.27**
A-64-C	1:4	⅝″ x ⅝″	10 ma.	A	2″	2⅜″ x 1¾″	0.7	**4.05**
A-4420	Exact Repl. United Motors (Delco) 6061 18,000 Ω Plate to P-P Grids, Autoformer			S2	1⅝″	1 7/16″ x 1¼″	0.5	**3.35**

MULTI-PURPOSE INTERSTAGE—SPLIT SECONDARIES

May be used as a single plate to single grid, single plate to push-pull grid, or push-pull plate to push-pull grid interstate transformers. Overall ratios are 3:1, however, primaries are center-tapped and secondaries have split windings, thus providing ratios of 1:1, 3:1 and 6:1 in either step-up or step-down applications. § Has split secondary.

A-4774	1:3	¾″ x ¾″	10 ma.	S	2 5/16″	2⅞″ x 1¾″	1.2	**$5.42**
A-4773	1:3	¾″ x 1″	10 ma.	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**8.66**

PUSH-PULL PLATES TO PUSH-PULL GRIDS—FOR 7,000-15,000 OHM PLATE IMPEDANCES

A-4711	1:1	⅝″ x ⅝″	10 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**$5.25**

PUSH-PULL PLATES TO PARALLEL OR PUSH-PULL GRIDS—FOR 7,000-20,000 OHM PLATE IMPEDANCES

A-4208	1:1.4	1″ x 1″	15 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.5	**$9.45**

#Has a dual primary—when properly connected the 500 and 200 ohm sections are center tapped. §Has split secondary.
†Has a static shield between primary and secondary windings. ‡Designates part numbers to be removed from next catalog.

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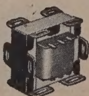
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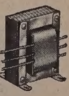
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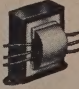
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OUTPUT TRANSFORMERS

STANCOR

CHICAGO STANDARD TRANSFORMER CORPORATION

SINGLE PLATE TO VOICE COIL

Part No.	Application	Max. Pri. D.C.	Typical Output Tubes	Class	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3332	2,000 ohms to 3.2 ohms	50 ma.	25B5, 25B6, 25L6, 35A5, 35L6, 50L6	A	3	A	1³⁄₁₆″	2⅛″ x 1″	0.4	**$2.31**
A-3876	2,000 ohms to 4 ohms	60 ma.	2A3, 6A3, 6B4, 6W6, 6Y6, 25AC5, 25B5, 25B6, 25L6, 35A5, 35L6, 50L6	A	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**2.47**
A-3328	4,000 ohms to 3.5 ohms	10 ma.	1S4, 3S4	A	3	A	1³⁄₁₆″	2⅛″ x 1″	0.4	**2.28**
A-2203	4,000 ohms to 8 ohms	40 ma.	43, 45, 48, 12A5, 25A6	A	5	A	1⅝″	2⅛″ x 1⅝″	0.7	**4.11**
A-3877	5,000 ohms to 4 ohms	40 ma.	43, 59, 6V6, 7C5, 25A5	A	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**2.47**
A-3310	5,000 ohms to 500/15/8/4 ohms	55 ma.	45, 6L6, 6V6, 25A6, 25A7	A	20	C	3³⁄₁₆″	2⅝″ x 2⅝″	2.5	**9.50**
A-3878	7,000 ohms to 4 ohms	30 ma.	20, 31, 33, 42, 2A5, 6AC5, 6B5, 6F6, 6K6, 6N6, 7B5	A	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**2.53**
A-2313	7,000 ohms to 8 ohms	40 ma.	33, 41, 42, 47, 59, 89, 2A5, 6AC5, 6F6, 6K6, 6N6, 7B5	A	10	A	2″	3¼″ x 1¾″	1.0	**4.25**
A-8114	7,600 ohms to 3.2 ohms	32 ma.	33, 41, 42, 47, 59, 89, 2A5, 6AC5, 6F6, 6K6, 6N6, 7B5	A	5	A	1⅜″	2⅜″ x 1⅝″	0.4	**2.94**
A-3329	8,000 ohms to 3.5 ohms	10 ma.	1C5-GT, 1G5-G, 1Q5-GT/G, 1S4, 3S4	A	3	A	1³⁄₁₆″	2⅛″ x 1″	0.4	**2.28**
A-3879	10,000 ohms to 4 ohms	30 ma.	1J6, 3C5, 6A4, 6G6, 6N7	A	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**2.47**
A-3881	15,000 ohms to 4 ohms	10 ma.	1D8, 1E7, 1F4, 1F5, 1J5, 1T5, 6V7, 6Y7, 12A7	A	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**2.72**
A-3327	25,000 ohms to 4 ohms	5 ma.	1A5, 1D8-GT, 1F4, 1F5-G, 1LA4, 1LB4, 1N6-G	A	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**3.06**
A-4431	Exact Repl. United Motors (Delco) 6062, 6,000 ohms to 3-4 ohms			—	5	A2	1⅝″	1¹⁵⁄₁₆″ x 1⅜″	0.8	**3.10**

PUSH-PULL PLATES TO VOICE COIL

A-3802	3,800/3,300 to 500/250/8/4 ohms	250 ma.	45, 6L6, Par. 6L6	AB2, AB1	75	C	4¾″	4″ x 3⅞″	7.9	**$20.02**
A-3851§	4,400 ohms to 500/250/15/8/4 ohms	70 ma.	6L6	AB1	30	C	3⅝″	3″ x 3⅛″	3.6	**12.34**
A-3872	5,000 ohms to 15/8/4 ohms	75 ma.	45, 2A3, 6A3, 6L6	AB	18	TD	2¹¹⁄₁₆″	2¾″ x 2³⁄₁₆″	1.7	**7.77**
A-3800	5,000 ohms to 500/250/15/8/4 ohms	80 ma.	45, 2A3, 6A3, 6L6	AB	30	C	3⅝″	3″ x 3⅜″	3.7	**11.45**
A-3307	6,000 ohms to 500/15/8/4 ohms	100 ma.	46, 59, 42, 2A5, 6F6, Par. 53, 6A6, 6N7	B, AB2	30	C	3⅝″	3″ x 3⅛″	3.5	**13.20**
A-3801	6,600 ohms to 500/250/15/8/4 ohms	150 ma.	6L6	AB1	35	C	4″	3¼″ x 3⅜″	5.8	**14.60**
A-3885	9,000 ohms to 500/250/15/8/4 ohms	150 ma.	6L6	AB1	35	C	4″	3¼″ x 3⅜″	4.5	**14.46**
A-3304	10,000/7,000 ohms to 500/15/8/4 ohms	60 ma.	45, 6V6, 6AC5	~~AB~~	25	C	3³⁄₁₆″	2⅝″ x 2⅝″	2.7	**10.71**
A-3311	10,000 ohms to 500/15/8/4 ohms	70 ma.	6F6, 6V6, 6AC5	AB	25	C	3⅝″	3″ x 3⅛″	3.5	**11.51**
A-3831	10,000 ohms to 8/4/2 ohms	40 ma.	30, 49	AB	5	A	1⅝″	2″ x 1½″	0.7	**4.50**
A-3335	10,000 ohms to 6-8/3.2-4 ohms	40 ma.	10	S	2⁵⁄₁₆″	2¹⁵⁄₁₆″ x 1¾″	2⅜″		1.0	**5.25**
A-2312	14,000 ohms to 4 ohms	40 ma.	33, 41, 42, 47, 49, 2A5, 6F6, 6K6, 7B5	AB	10	A	2″	3¼″ x 1¾″	1.0	**4.75**
A-3496	14,000 ohms to 4 ohms	25 ma.	33, 41, 42, 47, 49, 2A5, 6F6, 6K6, 7B5	AB	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**4.50**
A-3303	14,000 ohms to 500/15/8/4 ohms	55 ma.	41, 42, 47, 59, 89, 2A5, 6F6, 6K6, 7B5	AB	20	C	3³⁄₁₆″	2⅝″ x 2⅝″	2.7	**10.88**
A-3857	25,000 ohms to 4 ohms	10 ma.	1F4, 1F5, 1J5, 1T5, 6G6 12A7, 950	A	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**4.00**
A-4430	Exact Repl. United Motors (Delco) 7269231, 7269116, 7266997 9,000 ohms CT to 3.2 ohms			—	5	A2	1¹⁵⁄₁₆″	2⅜″ x 1⅝″	1.0	**3.80**
A-4432	Exact Repl. United Motors (Delco) 6063 10,000 ohms CT to 4 ohms			—	10	S2	2⅜″	2″ x 1⅝″	1.0	**4.10**

HUM-REDUCING TRANSFORMERS, Single Plate to Voice Coil

A-3330	†2,000 ohms to 3.5 ohms	60 ma.	5	A	1⅜″	2⅜″ x 1⅜″ 2	0.4	**$3.30**
A-3336	#2,500 ohms to 3.5 ohms	50 ma.	5	A	1⅜″	2⁷⁄₁₆″ x 1⅜″ 2	0.4	**3.31**

CRYSTAL RECORDER OUTPUT

Part No	Application	Max. Pri. D.C.	Audio Watts	Core Size	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3859	Push-pull 10,000 ohm plates to 70,000 ohm crystal cutter OR 4 ohm voice coil	30 ma. ea. ½	5	¾″ x ¾″	A	2″	3¼″ x 1¾″	1.0	**$7.10**

#Has tapped primary for use in hum-reducing circuit. §This unit has a tertiary winding to provide 10% inverse feedback.
‡Designates part number to be removed from next catalog. †Has a 4.5% primary tap.

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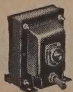
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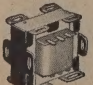
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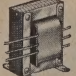
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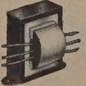
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STANCOR

OUTPUT TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

UNIVERSAL OUTPUT

Part No.	Application	Max. Pri. D.C.	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3856	Single or Push-pull plates (4,000 to 14,000 ohms) to voice coil	35 ma.	4	Q	1⅜″	2⅜″ x 1⅜″	0.4	**$4.84**
A-3822¶	Single plate (7,000 to 10,000 ohms) to voice coil	35 ma.	4	Q	1⅜″	2⅜″ x 1⅜″	0.4	**3.25**
A-3848§	Single plate (7,000 to 16,000 ohms) to voice coil	10 ma.	5	Q	1⅜″	2⅜″ x 1⅜″	0.4	**4.33**
A-3823	Single or Push-pull plates (4,000 to 14,000 ohms) to voice coil	40 ma.	8	Q	1⅝″	2⅜″ x 1½″	0.7	**5.62**
A-3850	Single or Push-pull plates (4,000 to 14,000 ohms) to voice coil	40 ma.	8	J	2″	2⅜″ x 1½″	0.7	**5.53**
A-3825§	Single plate (1,500 to 4,500 ohms) to voice coil	75 ma.	8	Q	2″	3¼″ x 1⅝″	0.9	**4.38**
A-3824§	Single or Push-pull plates (6,000 to 10,000 ohms) to voice coil	75 ma.	8	Q	2″	3¼″ x 2″	1.4	**5.49**
A-3849	Single plate (1,500 to 10,000 ohms) to voice coil	55 ma.	10	Q	1⅝″	2⅞″ x 1½″	0.7	**5.62**
A-3880	Push-pull plates (4,000 to 14,000 ohms) to voice coil	40 ma. ea. ½	15	Q	2¼″	3¾″ x 2¼″	1.7	**7.31**
A-2855	Push-pull plates (4,000 to 14,000 ohms) to voice coil	50 ma. ea. ½	15	L	2 1/16″	2 5/16″ x 1¾″	1.0	**6.26**
A-3890	Push-pull plates (4,000 to 14,000 ohms) to voice coil	50 ma. ea. ½	15	TD	2 11/16″	2¾″ x 2 3/16″	1.5	**9.05**
A-3852	Push-pull plates (4,000 to 14,000 ohms) to voice coil	40 ma. ea. ½	18	J	2 5/16″	2⅞″ x 2″	1.3	**6.78**
A-3870	Push-pull plates (4,000 to 14,000 ohms) to voice coil	50 ma. ea. ½	18	Q	2″	3¼″ x 2″	1.3	**6.92**
A-3830	Push-pull plates (3,000 to 10,000 ohms) to voice coil	60 ma. ea. ½	20	J	2 11/16″	3 5/16″ x 2¼″	1.8	**7.50**

¶Secondary impedance 0.7, 1, 1.4, 2, 2.8, 4 ohms. §Secondary impedance, 1, 2, 4 ohms.

SINGLE AND/OR PUSH-PULL PLATES TO LINE

Part No.	Application	Impedance in Ohms	Max. Pri. D.C.	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3841	Single plate to line	Pri—7,000/6,000/5,000/4,000/2,500; Sec—500	60 ma.	10	J	2 11/16″	3 5/16″ x 2¼″	1.5	**$8.33**
A-3842	Push-pull plates to line	Pri—14,000/12,000/10,000/8,000 CT; Sec—500	55 ma.	10	J	2 11/16″	3 5/16″ x 2¼″	1.7	**9.50**
A-4770	Single plate to line	Pri—7,000/6,000/5,000/4,000/2,500; Sec—500	60 ma.	20	J	3⅛″	3⅝″ x 2¼″	2.4	**8.77**
A-3250	Single plate or Push-pull plates to line	Pri—20,000/10,000/5,000 Pri—20,000 CT Sec—500/333/200/125/50	15 ma.	—	Q	2″	3¼″ x 1¾″	1.0	**6.98**
A-3315	Single plate or Push-pull plates to line	Pri—20,000/10,000/5,000 Pri—20,000 CT; Sec—500/333/200/125/50	35 ma.	—	D	3 3/16″	2⅝″ x 2⅝″	2.7	**14.04**

LINE TO VOICE COIL

Part No.	Impedance in Ohms	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-8101	Pri—500 Sec—3.2/6-8	5	Q	1⅜″	2⅜″ x 1⅜″	0.4	**$2.95**
A-3883	Pri—500 Sec—15/8/6/4	25	J	2 5/16″	2⅞″ x 1¾″	1.1	**5.75**
A-3882	Pri—500/333/250 Sec—15/8/4	25	D	3 3/16″	2⅝″ x 3½″	2.4	**14.18**
A-3838	500/250/175/150/140/125/100/85/45/14/4/0.7 This Unit is designed to operate one or more speakers in series across a 500 ohm line or to match unequal lines.	30	B	3⅛″	2½″ x 2¼″	2.3	**8.84**
A-3818	Pri—1,500/1,000/500 Sec—15/8/4	25	J	3⅛″	3⅝″ x 2¼″	2.2	**8.20**
A-7947	Pri—2,000/1,500/1,000/500 Sec—6 ohms	8	Q	1⅝″	2 13/16″ x 1 9/16″	0.7	**4.89**
A-7949	Pri—2,000/1,500/1,000/500 Sec—6-8 ohms	12	J	2 5/16″	2⅞″ x 1 13/16″	1.1	**5.73**
A-3820	Pri—2,000/1,500/1,000/500 Sec—15/8/4	40	D	4 5/16″	3⅝″ x 4½″	5.0	**17.87**
A-8104	Pri—3,000/2,000/1,500/1,000/500 Sec—16/8/4	10	J	2 5/16″	2 15/16″ x 1¾″ 2⅜″	1.5	**6.77**
A-3837	Line to Line or V. C. (Autoformer) Pri—500 Sec—8/4/2.65/2.35/2/1.5/0.7/0.5/0.3/0.2/0.1/0.05 This Unit is designed to operate one or more speakers in parallel across a 500 ohm line.	15	J	2 5/16″	2⅞″ x 2″	1.4	**6.69**

70.7 VOLT LINE TO VOICE COIL

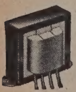
Part No.	Power Steps in Watts	Impedance in Ohms	Mtg. Type	Height Overall	Base Area	Mtg. Ctrs.	Shpg. Wt. in Lbs.	List Price
A-8080	5/4/3/2/1	Pri.—1000/1250/1667/2500/500 Sec.—8/16	Q	1⅜″	2⅜″ x 1⅜″	2″	0.4	**$5.00**
A-8081	10/9/8/7/6	Pri—500/555/625/715/833 Sec—8/16	J	2″	2 7/16″ x 1⅝″	2″	0.7	**5.50**
A-8082	15/14/13/12/11	Pri—333/357/384/417 455 Sec—8/16	J	2 5/16″	2⅞″ x 1¾″	2⅜″	1.2	**5.85**
A-8102	8/4/2/1/0.5	Pri—625/1,250/2,500/5,000/10,000 Sec—4/8/16	J	2″	1⅝″ x 2⅞″	2″	0.7	**5.84**
A-8103	16/8/4/2/1/0.5	Pri—312.5/625/1,250/2,500/5,000/10,000 Sec—4/8/16	J	2⅛″	2¼″ x 3¼″	2 13/16″	1.5	**8.25**
A-8105	5/2.5/1.25/.62/.31	Pri—1,000/2,000/4,000/8,000/16,000 Sec—4/8	J	1⅜″	2⅜″ x 1⅜″	2″	0.4	**4.73**

140 VOLT LINE TO VOICE COIL

A-8106	1/2/4/8	Pri—2,500/5,000/10,000/20,000 Sec—4/8/16	J	2	1⅝″ x 2 7/16″	2	0.7	**$5.00**
A-8107	1/2/4/8/16	Pri—1,250/2,500/5,000/10,000/20,000 Sec—4/8/16	J	2	3 3/16″ x 2″	2 13/16″	1.8	**7.90**
A-8108	0.625/1.25/2.5/5.0	Pri—4,000/8,000/16,000/32,000 Sec—4/8	Q	1⅜″	2⅜″ x 1⅜″	2	0.4	**4.53**

25 VOLT LINE TO VOICE COIL

A-8095	5/2.5/1.25/.62/.31	Pri—125/250/500/1,000/2,000 Sec—4/8	Q	1⅜″	2⅜″ x 1⅜″	2″	0.4	**$4.48**
A-8096	8/4/2/1/0.5	Pri—78/156/312.5/625/1,250 Sec—4/8/16	J	2″	1⅝″ x 2 7/16″	2″	0.65	**6.00**
A-8097	16/8/4/2/1/0.5	Pri—39/78/156/312.5/625/1,250 Sec—4/8/16	J	2 13/16″	2¼″ x 3¼″	2 13/16″	1.6	**7.20**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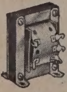
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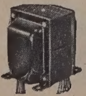
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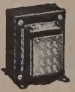
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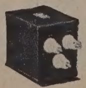
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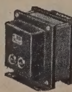
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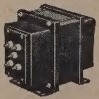
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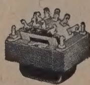
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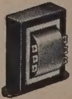
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POWER TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

STANCOR

COMBINATION PLATE AND FILAMENT SUPPLY

Type and Part No.	Plate Supply A.C. Volts	Plate Supply D.C. Ma.	Rectifier Fil. Volts	Rectifier Fil. Amps.	Other Windings Volts	Other Windings Amps.	Base Area	Overall Height	Mtg. Centers	Shpg. Wt. in Lbs.	List Price
POWER TRANSFORMERS TO PROVIDE APPROXIMATELY 260 VOLTS D.C. TO CONDENSER INPUT FILTER											
PC8401	235-0-235	40	5.0	2.0	6.3 CT	2.0	2⅝″ x 2⅝″	3 3/16″	2″ x 1 9/16″	2.2	**$ 9.21**
PM8401							2½″ x 3″	2⅝″	2″ x 2½″		
PC8402	240-0-240	55	5.0	2.0	6.3 CT	2.0	2⅝″ x 2¾″	3 3/16″	2″ x 1 11/16″	2.4	**9.15**
PM8402							2½″ x 3″	2¾″	2″ x 2½″		
PC8403	250-0-250	70	5.0	2.0	6.3 CT	2.5	2⅝″ x 3⅛″	3 3/16″	2″ x 2 1/16″	3.2	**10.60**
PM8403							2½″ x 3″	3⅛″	2″ x 2½″		
PC8404	260-0-260	90	5.0	2.0	6.3 CT	3.0	3″ x 3½″	3⅝″	2¼″ x 2¼″	4.0	**11.75**
PM8404							2⅞″ x 3⅜″	3⅝″	2¼″ x 2 13/16″		
PC8405	270-0-270	120	5.0	3.0	6.3 CT	3.5	3¼″ x 3½″	4″	2½″ x 2 3/16″	4.9	**15.32**
PM8405							3⅛″ x 3¾″	3½″	2½″ x 3⅛″		
FOR USE WITH CHOKE INPUT FILTER, OR HIGHER VOLTAGE WITH CONDENSER INPUT FILTER											
PM8423	300-0-300	90	5.0	2.0	6.3 CT	3.5	2 13/16″ x 3⅜″	3¼″	2¼″ x 2⅞″	3.0	**$13.60**
PC8406	325-0-325	40	5.0	2.0	6.3 CT	2.0	2⅝″ x 2¾″	3 3/16″	2″ x 1 11/16″	2.4	**9.60**
PM8406							2½″ x 3″	2¾″	2″ x 2½″		
PC8407	325-0-325	55	5.0	2.0	6.3 CT	2.0	2⅝″ x 3⅛″	3 3/16″	2″ x 2 1/16″	3.2	**10.00**
PM8407							2½″ x 3″	3⅛″	2″ x 2½″		
PC8422	325-0-325	50	5.0	3.0	6.3 CT	5.0	3¼″ x 3⅞″	4″	2½″ x 2 9/16″	5.8	**15.99**
PM8422							3⅛″ x 3¾″	3¾″	2½ x 3⅛″		
PC8408	340-0-340	70	5.0	2.0	6.3 CT	2.5	3″ x 3⅜″	3⅝″	2¼″ x 2⅛″	3.8	**12.50**
PM8408							2⅞″ x 3⅜″	3½″	2¼″ x 2 13/16″		
PC8409	350-0-350	90	5.0	2.0	6.3 CT	3.0	3″ x 3⅝″	3⅝″	2¼″ x 2⅜″	4.5	**13.20**
PM8409							2⅞″ x 3⅜″	3¾″	2¼″ x 2 13/16″		
PC8410	360-0-360	120	5.0	3.0	6.3 CT	3.5	3¼″ x 3¾″	4″	2½″ x 2 7/16″	5.5	**14.98**
PM8410							3⅛″ x 3¾″	3¾″	2½″ x 3⅛″		
PC8411	375-0-375	150	5.0	3.0	6.3 CT	4.5	3⅝″ x 4″	4 5/16″	2¾″ x 2 13/16″	5.8	**20.05**
PM8411							3½″ x 4⅛″	3⅞″	2¾″ x 3 7/16″		
PC8412	400-0-400	200	5.0	3.0	6.3 CT	5.0	4″ x 4″	4¾″	3″ x 2 13/16″	8.2	**20.91**
PM8412							3¾″ x 4½″	3⅞″	3″ x 3¾″		
PC8413	400-0-400	250	5.0	4.0	6.3 CT	5.0	4″ x 4½″	4¾″	3″ x 3 5/16″	10.0	**23.91**
PC8414	600-0-600	200	5.0	3.0	6.3 6.3	3.0 3.0	4″ x 4″	4¾″	3″ x 2 13/16″	8.3	**24.60**
POWER TRANSFORMERS FOR USE WITH 6AX5, 6X4, 6X5, OR SELENIUM RECTIFIERS											
PS8415	125 ½-wave	15	...	...	6.3	0.6	2⅜″ x 1⅜″	2″	2″	0.7	**$ 3.95**
PS8416	125-0-125	25	...	...	6.3	1.0	2⅞″ x 1¾″	2 5/16″	2⅜″	1.0	**4.75**
***PA8421**	125 ½-wave	50	---	---	6.3	2.0	3¾″ x 2⅛″	2¼″	3⅛″	1.5	**6.40**
PC8417	220-0-220	50	6.3	0.6	25.2	0.5	2⅝″ x 2⅝″	3 3/16″	2″ x 1 9/16″	2.2	**10.68**
PC8418	230-0-230	50	...	...	6.3	2.5	2⅝″ x 2⅝″	3 3/16″	2″ x 1 9/16″	2.2	**8.00**
PM8418							2½″ x 3″	2⅝″	2″ x 2½″		
PC8419	240-0-240	70	...	...	6.3	3.0	2⅝″ x 2⅞″	3 3/16″	2″ x 1 13/16″	2.6	**9.20**
PM8419							2½″ x 3″	2⅞″	2″ x 2½″		
PC8420	260-0-260	90	...	...	6.3	4.0	3″ x 3½″	3½″	2″ x 2¼″	3.5	**10.70**
PM8420							2⅞″ x 3⅜″	3½″	2¼″ x 2 13/16″		

REPLACEMENT POWER TRANSFORMERS (Misc.)

Part No.	Plate Supply A.C. Volts	Plate Supply D.C Ma.	Rectifier Filament Volts—Amperes	Other Windings Volts—Amperes	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-8173	250-0-250	10	———	6.3-0.6 6.3-1.2	C	2¼″	2⅞″ x 2⅛″	1.0	**$ 7.77**
P-8174	250-0-250	20	———	6.3-0.6 6.3-1.2	C	2⅝″	3 5/16″ x 2¼″	1.5	**8.05**
P-6001	325-0-325	40	5.0 CT-2.0	2.5 CT-4.0	M	2¾″	2½″ x 3″	2.5	**11.34**
P-6348	240-0-240	60	———	6.3 CT-2.75	M	2¾″	2 3/16″ x 2 11/16″	2.3	**9.30**
P-6358	300-0-300	65	———	6.3 CT-2.7	C	3⅛″	2⅝″ x 2⅝″	2.8	**10.00**
P-4047	350-0-350	70	5.0-3.0	2.5 CT-9.0 6.3-3.0	C	4″	3¼″ x 3″	3.8	**14.10**
P-8175	300-0-300	70	5.0-3.0	6.3 CT-3.0	C	3½″	2⅞″ x 3⅛″	4.0	**13.09**
P-6007	400-0-400	110	5.0 CT-3.0	2.5 CT-15.0 2.5 CT-3.5	M	3⅜″	3⅛″ x 3¾″	5.4	**18.96**
P-8176	350-0-350	110	5.0-2.0	6.3 CT-3.0 6.3 CT-3.0	C	3⅞″	3 3/16″ x 3⅞″	5.5	**17.60**
P-8177	300-0-300	120	5.0-3.0	6.3 CT-5.0	C	3⅞″	3 3/16″ x 3¾″	5.8	**15.99**

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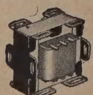
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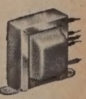
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TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

POWER TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

REPLACEMENT POWER TRANSFORMERS (Misc.)

Part No.	Plate Supply A.C. Volts	Plate Supply D.C. Ma.	Rectifier Filament Volts—Amperes	Other Windings Volts—Amperes	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6143	440-0-440	130	5.0–3.0	6.3 CT–3.5	C	4 5/16"	3⅝" x 3⅞"	7.0	**$18.82**
P-4004#	400-0-400 80 v. Bias	175	5.0 CT–3.0	2.5–1.75 6.3 CT–2.5 6.3 CT–2.5	C	4¾"	4" x 3⅞"	8.3	**24.21**
P-5059#	337.5-0-337.5	200	5.0 CT–3.0	6.3 CT–5.0	C	4¾"	4" x 4¼"	9.6	**22.21**
P-6315	370-0-370	275	5.0 CT–3.0	6.3 CT–7.0	M	4¼"	3¾" x 4½"	9.3	**23.27**

#Primary for 117/107 Volts.

SELENIUM RECTIFIER TRANSFORMERS—See Page 1338

VIBRATOR TRANSFORMERS WITH 6 VOLT D.C. PRIMARY

Part No.	Secondary A.C. Volts	Secondary Volts	D.C. to Filter Milliamperes	Recommended Buffer Cap.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6301	210-0-210	150	40	0 008 mfd.	S	2 5/16"	2⅞" x 1¾"	1.2	**$6.25**
P-6491	188-0-188	200	40	0.003 mfd.	S	2¼"	3⅛" x 2 13/16"	1.5	**6.65**
P-4060	240-0-240	225	40	0.008 mfd.	N	3⅛"	2½" x 2⅝"	2.5	**8.78**
P-4061	290-0-290	250	50	0.006 mfd.	N	3⅛"	2½" x 2⅝"	2.5	**8.56**
P-4062	300-0-300	260	65	0.006 mfd	N	3⅛"	2½" x 2⅝"	2.3	**9.09**
P-4063	320-0-320	285	75	0.006 mfd.	N	3⅛"	2½" x 2¾"	2.8	**11.10**
P-6131	370-0-370	330	100	0.007 mfd.	N	3½"	2⅞" x 2"⅞	3.5	**12.25**

VIBRATOR TRANSFORMER WITH 6 VOLT D.C. AND 117 VOLT A.C. PRIMARY

P-6166	350-0-350	—	135		C	4¾"	4" x 3⅝"	6.9	**$20.18**

Filament—6.3 volts at 2.25 Amps.

AUTO RADIO VIBRATOR TRANSFORMERS—EXACT DUPLICATE

Write for FREE Stancor Auto Radio Transformer Replacement Guide listing detailed replacement information of 540 car radios.

Part No.	Original Part No.	Original Manufacture	D.C. Volts at Filter Input	D.C. Ma.	Recommended Buffer Cap.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-4064	7240519	United Motors (Delco)	280	65	0.015–0.015 mfd.	3 9/16"	2 9/16" x 2 9/16"	2.5	**$13.93**
P-4065	7255881	United Motors (Delco)	265	56	0.006 mfd.	4 1/16"	2⅜" x 2 7/32"	2.6	**13.51**
P-6470	140-111	Regal (5-tube univ. series)	145	50	0.009 mfd.	2 11/16"	2 11/16" x 2 3/16"	1.4	**9.00**
P-6471	25B472533	Motorola (408, 508, etc.)	235	70	0.006 mfd.	3"	3⅜" x 2 3/16"	2.0	**9.00**
P-6472	D 71014 C 217020 C 71014 25B70950	Colonial-Detrola No. 8072 Colonial-Bendix M1 Colonial-Motorola Motorola (405, 505, etc.)	270	56	0.007 mfd.	2⅝"	2 27/32" x 2 5/32"	2.0	**9.00**
P-6473	95-1073	Zenith	272	73	0.008 mfd.	3 1/32"	2⅜" x 2½"	2.4	**9.60**
P-6474	95-1066	Zenith	240	52.5	0.008 mfd.	3 1/32"	2⅜" x 2½"	2.2	**9.00**
P-6476	D 70267 C 70267	Colonial-Detrola No. 7070 Col.-Mot.-Det No. 8030	220	53.5	0.008 mfd.	2⅝"	2 27/32" x 2 5/32"	2.0	**9.60**
P-6477	25C500189	Motorola	150	50	.03 mfd.	2"	1⅞" x 2¼"	1.0	**5.16**
P-6478	25C501644	Motorola	225	70	.02 mfd.	2¼"	2 3/16" x 2⅝"	1.5	**5.89**
P-6479	65-0358	Philco	260	60	.005 mfd.	2½"	2⅜" x 3"	2.3	**7.92**
P-6480	65-0347	Philco	225	70	.0033 mfd.	2 3/16"	2¼" x 2⅝"	1.5	**6.51**
P-6481	32-8313-1	Philco	250	60	.0068 mfd.	2¼"	2 3/16" x 2⅝"	1.5	**7.50**
P-6483	VE-169	Farnsworth	240	50	.006	3 1/16"	2½" x 2⅜"	2½	**9.67**
P-6484	25B70950-E	Motorola	265	70	.007	3 1/16"	2½" x 2⅜"	2½	**9.60**
P-6485	95-1071	Zenith	240	70	.008	3 1/16"	2½" x 2⅜"	2½	**9.66**
P-6486	25C472586-C	Motorola	240	80	.007	3¼"	2⅞" x 2¾"	3½	**10.93**
P-6487	25B-231303	Motorola	170	60	.007	2 11/16"	2 3/16" x 2 3/32"	1¾	**9.20**
P-6488	25C-521454	Motorola	225	50	.007	2⅞"	2 3/16" x 2⅜"	2	**7.45**
P-6490	C291787-1	Bendix (Ford Model 5B8F)	265	52	.006	2⅛"	2 3/16" x 2⅝"	1.5	**5.55**
P-6499	1220167, 7261386, 7262956	United Motors (Delco)	250	60	0.006	3 7/32"	2⅝" x 2½"	2.3	**12.93**

FOR 12 VOLT D.C. PRIMARY

P-6482	6064	United Motors (Delco)	250	60	.004 mfd.	3¼"	2 11/16" x 2 11/16"	2.5	**$14.18**
P-6489	6067	United Motors (Delco)	250	60	.004 mfg.	2 3/16"	2 3/16" x 2⅝"	2.0	**6.92**
P-6493	★25C535794	Motorola	275	75	(See Footnote)	2¾"	2⅜" x 2"	1.7	**6.89**
P-6494	32-8592-1	Philco	245	70	0.0047 mfd.	2 3/16"	2⅝" x 2⅛"	1 5	**6.20**
P-6495	★25K535795	Motorola	275	75	(See Footnote)	2¾"	2⅜" x 2⅛"	1.7	**7.14**
P-6497	7265604, 7269118, 7271233	United Motors (Delco)	250	55	0.007*	2 9/16"	2¼" x 2"	1.8	**6.10**

★2 Buffer capacitors used 0.5 mfd. and 0.04 mfd. as in original circuit. *in series with 15K-1W resistor.

FILTER CHOKES

CHICAGO STANDARD TRANSFORMER CORPORATION

SMOOTHING CHOKES FOR D.C. POWER SUPPLIES.

Inductance varies with the amount of D C. flowing through the coil, therefore these units have been tested under uniform conditions. They are rated at 10 volts, 60 cycles, with maximum D.C. in winding. Tolerance of plus 15% is maintained on all ratings.

Part No.	Rating Induc.	at	Ma. D.C.	D.C. Res. in Ohms	R.M.S. V. Insul.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-2344	1.5 hy.	at	10 ma.	95	2500	A	1¼″	2⅛″ x 1⅛″	0.5	**$2.60**
C-1515	20.0 hy.	at	15 ma.	900	1500	A	1⅝″	2⅞″ x 1½″	0.7	**3.59**
C-2318	12.0 hy.	at	30 ma.	400	2000	A	1⅜″	2⅜″ x 1⅜″	0.5	**3.05**
C-1706	4.5 hy.	at	50 ma.	300	1500	A	1⅜″	2⅜″ x 1⅜″	0.4	**2.14**
C-1707	7.0 hy.	at	50 ma.	550	1500	A	1⅜″	2⅜″ x 1⅜″	0.4	**2.36**
C-1003	16.0 hy.	at	50 ma.	580	1500	A	2″	3¼″ x 1¾″	1.1	**3.61**
C-1708	13.0 hy.	at	65 ma.	500	1500	A	2″	3¼″ x 1¾″	1.0	**4.00**
C-1355	8.0 hy.	at	75 ma.	290	1500	L	2 1/16″	2 5/16″ x 1¾″	1.0	**4.42**
C-1002	15.0 hy.	at	75 ma.	400	1500	A	2¼″	3¾″ x 2¼″	1.7	**4.80**
C-1420	16.0 hy.	at	80 ma.	360	1500	C	3 3/16″	2⅝″ x 2⅝″	2.5	**7.73**
C-1709	8.0 hy.	at	85 ma.	250	1500	A	2″	3¼″ x 2″	1.4	**4.00**
C-2305	5.0 hy.	at	100 ma.	300	1500	TD	2 11/16″	2¾″ x 2 3/16″	1.5	**5.75**
C-1001	10.5 hy.	at	110 ma.	225	3000	A	2⅝″	4″ x 2¼″	2.3	**5.98**
C-2704	9 hy.	at	125 ma.	250	1500	Q	2¼″	3 3/16″ x 2⅛″	1.5	**5.10**
C-2303	2.5 hy.	at	130 ma.	100	2000	A	2″	3¼″ x 1¾″	1.0	**3.75**
C-1421	7.0 hy.	at	140 ma.	165	3000	C	3 3/16″	2⅝″ x 2⅝″	2.5	**7.73**
C-2304	2.3 hy.	at	150 ma.	60	1500	A	2″	3¼″ x 1¾″	1.0	**3.75**
C-2309	3.0 hy.	at	150 ma.	90	2000	A	2¼″	3¾″ x 2¼″	1.7	**4.27**
C-1710	7.0 hy.	at	150 ma.	200	1500	A	2⅝″	4″ x 2¼″	2.2	**6.00**
C-1410	4.0 hy.	at	175 ma.	100	3000	C	3 3/16″	2⅝″ x 2⅝″	2.4	**7.56**
C-2327	1.5 hy.	at	200 ma.	85	1500	A	1⅝″	2⅞″ x 1½″	0.8	**3.00**
C-1646	5.0 hy.	at	200 ma.	90	5000	C	4″	3¼″ x 3⅜″	4.5	**11.34**
C-1411	4.5 hy.	at	200 ma.	80	3000	C	3⅝″	3″ x 3⅛″	3.5	**9.45**
C-1721	8.5 hy.	at	200 ma.	120	3000	N	3⅞″	3⅛″ x 3″	4.4	**12.51**
C-2705	10 hy.	at	200 ma.	150	2500	C	3 9/16″	3″ x 3⅝″	4.25	**11.10**
C-1703	4.0 hy.	at	250 ma.	60	3000	B	3½″	2⅞″ x 3⅛″	4.2	**10.34**
C-1412	4.0 hy.	at	250 ma.	60	3000	C	3⅝″	3″ x 3½″	4.3	**11.60**
C-1722	8.0 hy.	at	300 ma.	80	3000	N	4⅝″	3¾″ x 3½″	7.3	**18.40**
C-2308	8.0 hy.	at	300 ma.	80	3000	C	4¾″	4″ x 3⅞″	7.8	**18.40**
C-1413	8.0 hy	at	300 ma.	80	5000	D	4¾″	4″ x 4⅛″	7.8	**19.13**
C-2706	2.6 hy.	at	310 ma.	60	1500	C	3 3/16″	2⅝″ x 3⅛″	3.4	**10.00**
C-2328	0.8 hy.	at	375 ma.	25	1500	A	2½″	3¾″ x 2″	1.5	**6.00**
C-1414	7.5 hy.	at	400 ma.	60	5000	D	4¾″	4″ x 5⅛″	11.8	**26.16**
C-1415	6.0 hy.	at	500 ma.	75	7500	FS	8⅛″	5⅝″ x 5½″	23.7	**80.68**

SWINGING CHOKES FOR INPUT SECTION OF D.C. POWER SUPPLIES.

Part No.	Min. Swg. Induc.	D.C. Res. in Ohms	Approx. Range of Induc.	at	D.C. Ma.	R.M.S. V. Insul.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-1718	10 hy.	130	13.5-3.5 hy.	at	15-150	2000	C	3 3/16″	2⅝″ x 2½″	2.3	**$7.39**
C-1400	10 hy.	100	12-2	at	17.5-175	3000	C	3 3/16″	2⅝″ x 2⅝″	2.4	**7.90**
C-1401	10 hy.	80	12-2	at	20-200	3000	C	3⅝″	3″ x 3⅛″	3.5	**9.92**
C-1645	10 hy.	90	12-2	at	20-200	5000	C	4″	3¼″ x 3⅜″	4.5	**10.98**
C-1702	10 hy.	60	12-2	at	25-250	3000	B	3½″	2⅞″ x 3⅛″	4.3	**11.29**
C-1402	10 hy.	60	12-2	at	25-250	3000	C	3⅝″	3″ x 3½″	4.3	**11.62**
C-1720	16 hy.	80	20-4	at	30-300	3000	N	4⅝″	3¾″ x 3½″	7.2	**18.35**
C-2307	16 hy.	80	20-4	at	30-300	3000	C	4¾″	4″ x 3⅞″	7.9	**19.07**
C-1403	16 hy.	80	20-4	at	30-300	5000	D	4¾″	4″ x 4⅛″	7.7	**19.49**
C-1404	14 hy.	60	17-3	at	40-400	5000	D	4¾″	4″ x 5⅛″	11.7	**25.38**
C-1405	12 hy.	75	16-4	at	50-500	7500	FS	7⅝″	6⅛″ x 7″	24.3	**67.97**

SMOOTHING CHOKES FOR USE IN A.C.-D.C. POWER SUPPLIES.

Part No.	Rating Induc.	at	Ma. D.C.	D.C. Res. in Ohms	R.M.S. V. Insul.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-1080	3.5 hy.	at	50 ma.	200	1500	A	1⅝″	2⅞″ x 1½″	0.7	**$2.75**
C-1325	5.0 hy.	at	50 ma.	250	1500	A	1⅝″	2⅞″ x 1½″	0.7	**2.75**
C-1277	7.0 hy.	at	50 ma.	300	1500	A	1⅝″	2⅞″ x 1½″	0.7	**3.00**
C-1723	4.5 hy.	at	50 ma.	325	1500	A	1⅜″	2⅜″ x 1⅜″	0.4	**2.36**
C-1227	7.0 hy.	at	50 ma.	350	1500	A	1⅝″	2⅞″ x 1½″	0.7	**3.00**
C-1279	8.5 hy.	at	50 ma.	400	1500	A	1⅝″	2⅞″ x 1½″	0.7	**2.75**
C-1333	8.0 hy.	at	50 ma.	450	1500	A	1⅝″	2⅞″ x 1½″	0.7	**2.75**
C-1215	9.0 hy.	at	50 ma.	500	1500	A	1⅝″	2⅞″ x 1½″	0.7	**2.67**

HIGH CURRENT FILTER CHOKES (Indcutances rated at 1 volt RMS, 60 cycle)

Part No.	Inductance Henrys	at	D.C.	D.C. Res. Ohms	R.M.S. V. Insul.	Height Overall	Mtg. Ctrs.	Base Area	Mtg. Type	Shpg. Wt. in Lbs.	List Price
C-2685	.035	at	2.0 amp.	.72	1500	2⅜″	2 3/16″ x 2″	2⅝″ x 2¾″	BH	1.9	**$9.52**
C-2686	.025	at	4.0 amp.	.425	1500	3″	2 13/16″ x 2⅛″	3⅜″ x 2⅞″	BH	3.4	**10.09**
C-2687	.01	at	8.0 amp.	.15	1500	3¼″	3⅛″ x 2½″	3¾″ x 3 3/16″	BH	5.3	**13.28**
C-2688	.01	at	12.5 amp.	.11	1500	3½″	3 7/16″ x 2⅜″	4⅛″ x 3 1/16″	BH	5.9	**15.29**
C-2689	.005	at	22.5 amp.	.03	1500	3⅞″	3¾″ x 3½″	4½″ x 4½″	BH	11.9	**22.43**
C-2690	.3-.075		1A-2A	3.0-.75	1500	3 7/16″	2¼″ x 2¼″	2 13/16″ x 3¼″	BV	5.0	**13.55**
C-2691	.08-.02		2.5A-5A	.57-.143	1500	3¾″	2½″ x 3″	3⅛″ x 4″	BV	6.5	**15.80**

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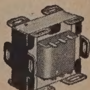
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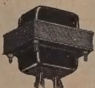
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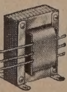
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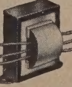
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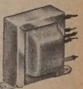
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STANCOR

MODULATION TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

PLATE MODULATION

Part No.	Impedance in Ohms	Max. Ma. D.C./Tube Pri.	Max. Ma. D.C./Tube Sec.	Typical Output Tubes	Class	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs	List Price
A-3812	Pri—10,000 CT	32	50	Sgl.—37, 38, 41, 1G5, 6K6	A	5	A	1⅝″	2⅞″ x 1½″	0.7	**$4.06**
	Sec—4,000			Sgl.—19, 1G6, 1J6, 6E6, 6G6, 6Z7	B						
				P.P.—30, 49, 1H4	B						
A-3871	Pri—4,500	60	50	Sgl.—6L6, HY69	A	10	TD	2 11/16″	2¾″ x 2 3/16″	1.4	**7.40**
	Sec—8,500			#Sgl.—6B5, 6F6, 6N6	A						
	#Secondary used as primary.										
A-3845	Pri—10,000 CT	100	100	Sgl. 53, 79, 6A6, 6N7, 6Y7	B	25	C	3 3/16″	2⅝″ x 2¾″	2.8	**9.73**
	Sec—8,000/6.500/5,000/3,000			P.P.—42, 2A5, 6F6, 6V6	AB2						
A-3808	Pri—3,800/3,300 CT	260	170	P.P.—6L6, 807, HY61, RK41	AB2	60	D	4¾″	4″ x 2⅞″	7.7	**25.21**
	Sec—10,000/7,500/5,000/4,000			P.P. Par—6L6	AB1						
A-3829	Pri—9,000/6,900 CT	250	300	P.P.—RK12, HY25, 35T, HY40Z, T40, TZ40, 100TL, HK354, 756, 809. 830B	B	175	D	4¾″	4″ x 6⅛″	11.4	**28.08**
	Sec—6,250/5,000/4,000/3,300										

POLY-PEDANCE MODULATION MULTI-TAPPED UNITS TO PROPERLY MATCH THE OUTPUT OF THE MODULATOR STAGE TO THE MODULATED LOAD. WILL MATCH ALL COMMON IMPEDANCES OF CLASS "B" MODULATOR (2,000 to 20,000 OHMS) TO CLASS "C" LOAD IMPEDANCES OF 2,000 TO 20,000 OHMS.

Part No.	Max. Watts	Max D.C	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3891	15	Pri—100 ma. Sec—100 ma.	D	3 3/16″	2⅝″ x 2⅞″	2.5	**$16.01**
A-3892	30	Pri—150 ma Sec—150 ma.	D	4″	3¼″ x 3⅝″	4.3	**20.29**
A-3893	60	Pri—180 ma. Sec—180 ma.	D	4″	3¼″ x 4⅛″	6.2	**21.96**
A-3894	125	Pri—225 ma. Sec—225 ma.	D	4¾″	4″ x 4⅝″	9.4	**27.63**
A-3898	300	Pri—260 ma. Sec—260 ma.	FS	8⅛″	5¾″ x 7⅝″	37.9	**163.55**
A-3899	600	Pri—500 ma. Sec—500 ma.	FS	9⅛″	7¼″ x 10¼″	70.0	**199.63**

SELENIUM RECTIFIER TRANSFORMERS (117 volt, 50-60 cycle input)

Part No.	Rectifier Circuit	Range of Applied A.C. Volts Under Load (Approx.)	Output Resistive or Inductive Load Max. D.C. Volts	Output Resistive or Inductive Load Max. D.C. Amps.	Output Capacitive Load* Max. D.C. Volts	Output Capacitive Load* Max. D.C. Amps.	Mtg. Type	Overall Dimensions H W D	Shpg. Wt. (lbs.)	List Price
RT-201	C. T.	11.7 to 29.4	11.2	2.0	13.8[1]	2.0	B	3⅛″ x 2½″ x 3⅜″	2.5	**$ 8.45**
	Bridge	11.1 to 28.5	23.0	1.25	30.0[2]	1.25	B	3½″ x 2½″ x 3⅜″	2.5	
RT-202	C. T.	12.0 to 29.8	11.1	4.0	14.7[3]	4.0	B	3⅝″ x 2⅞″ x 3½″	3.8	**11.48**
	Bridge	12.0 to 29.8	24.3	2.0	33.0[1]	2.0	B	3⅝″ x 2⅞″ x 3½″	3.8	
RT-204	C. T.	11.7 to 29.2	12.0	8.0	14.5[4]	8.0	B	4″ x 3¼″ x 4⅛″	6.1	**14.85**
	Bridge	11.6 to 29.2	24.0	4.0	32.4[3]	4.0	B	4″ x 3¼″ x 4⅛″	6.1	
RT-206	C. T.	12.0 to 29.7	11.5	12.0	14.4[5]	12.0	B	4¼″ x 3 7/16″ x 5⅛″	9.1	**20.18**
	Bridge	12.0 to 29.7	24.0	6.0	32.0[6]	6.0	B	4¼″ x 3 7/16″ x 5⅛″	9.1	
RT-208	C. T.	12.1 to 29.2	11.4	15.0	14.8[7]	15.0	B	4¾″ x 3¾″ x 5¼″	12.6	**25.44**
	Bridge	12.1 to 29.2	23.7	8.0	32.5[4]	15.0	B	4¾″ x 3¾″ x 5¼″	12.6	
RT-2012	C. T.	12.1 to 29.0	11.4	22.5	14.3[8]	22.5	B	5⅜″ x 4⅜″ x 6⅜″	20.5	**37.50**
	Bridge	12.0 to 29.0	23.5	12.0	33.0[5]	12.0	B	5⅜″ x 4⅜″ x 6⅜″	20.5	
RT-408	Bridge	25.0 to 53.5	44.0	8.0	63.0[4]	8.0	B	5⅜″ x 4⅜″ x 7½″	26.5	**55.46**
RT-4012	Bridge	25.0 to 53.0	43.5	12.0	60.0[5]	12.0	B	7⅛″ x 5⅝″ x 6¼″	33.5	**73.03**

RECTIFIER TRANSFORMERS (Primary 117 volt, 60 cycle)

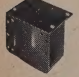
Part No.	Secondary	Rectified Circuit ½ Wave	Rectified Circuit Full-wave Brdg.	Mtg. Type	Mtg. Ctrs.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-8193	17-18 V. A.C. at 3A. R.M.S.	6-7 V. D.C.	13-14 V. D.C.	BV	2½″ x 2⅝″	3¾″	3⅛″ x 3⅝″	5¼	**$15.15**
P-8194	36 V. A.C. at 3A. R.M.S.	13 V. D.C.	26 V. D.C.	BV	3″ x 3″	4½″	3¾″ x 4″	9½	**23.30**

AUTOMATION CONTROL TRANSFORMERS (Primary 115-230 volts, 50-60 cycle)

Part No.	Secondary Parallel	Secondary Series	V. A. Rating	Mtg. Type	Mtg. Ctrs.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6375	6 V. at 2 A.	12 V. at 1 A.	12	J	2⅜″	2⅜″	2⅞″ x 2″	¾	**$ 7.80**
P-6376	6 V. at 4 A.	12 V. at 2 A.	24	J	2⅞″	3⅝″	3⅜″ x 2¼″	1½	**10.60**
P-6377	12 V. at 4 A.	24 V. at 2 A.	48	J	3⅛″	3⅛″	3⅝″ x 2⅜″	2	**13.40**
P-6378	12 V. at 8 A.	24 V. at 4 A.	96	BV	2⅜″ x 2¼″	3⅜″	3⅞″ x 3″	3½″	**18.00**
P-6379	12 V. at 16 A.	24 V. at 8 A.	192	BV	2⅞″ x 2¾″	4⅛″	3½″ x 3½″	8	**25.00**

*Transformers and Rectifiers will have a higher temperature rise when operating with a capacitive load as compared to a resistive or inductive load for a given load current. If this is undesirable extra ventilation should be provided or else the output current from the rectifier should be derated by approximately 20% from the values shown.

RT Footnotes: MFD. Filter Capacitor: 1. 1,000 2. 500 3. 2,000 4. 4,000 5. 6,000 6. 3,000 7. 7,500 8. 12,000.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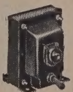
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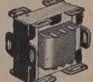
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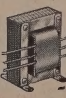
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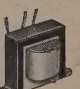
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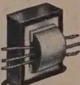
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FILAMENT TRANSFORMERS

STANCOR

CHICAGO STANDARD TRANSFORMER CORPORATION

FILAMENT TRANSFORMERS WITH SINGLE SECONDARY

Part No.	Secondary Volts	Secondary Amperes	R.M.S. V. Insul.	Primary Volts#	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-4026	2.5	1.5	2,500	117	A	1⅝″	2⅞″ x 1½″	0.7	**$4.60**
P-4082	2.5 CT	2.5	2,500	117/107	TD	2 11/16″	2¾″ x 2 3/16″	1.5	**8.05**
P-6133	2.5 CT	5.0	7,500	117	S	2 11/16″	3 5/16″ x 2¼″	1.5	**6.33**
P-4083	2.5 CT	6.0	2,500	117/107	C	3 3/16″	2⅝″ x 2⅜″	2.2	**8.44**
P-3024	2.5 CT	10.0	2,500	117/107	C	3 3/16″	2⅝″ x 2⅝″	2.5	**8.33**
P-6454	2.5 CT	10.0	7,500	107/117	S	3⅛″	3⅝″ x 2½″	2.5	**6.67**
P-3060	2.5 CT	10.0	10,000	117	B	3½″	2⅞″ x 2½″	2.5	**11.20**
P-3026	5.0 CT	3.0	2,500	117/107	C	3 3/16″	2⅝″ x 2⅝″	2.4	**8.33**
P-4088	5.0 CT	3.0	2,500	117	B	3⅛″	2½″ x 2½″	1.8	**7.09**
P-6467	5.0 CT	3.0	2,500	117	A	2	3 5/16″ x 2″	1.4	**5.33**
P-6455	5.0 CT	6.0	2,000	107/117	S	2⅝″	3 5/16″ x 2¼″	2.0	**7.22**
P-3062	5.0 CT	6.0	2,500	117	B	3⅛″	2½″ x 2½″	2.3	**8.56**
P-5000	5.0 CT	6.0	2,500	117/107	C	3 3/16″	2⅝″ x 2⅞″	3.1	**9.66**
P-6135	5.0 CT	10.0	2,500	117	N	3⅛″	2½″ x 2⅞″	3.0	**9.34**
P-4086	5.0 CT	14.0	10,000	117/107	FA	5⅛″	4¼″ x 8½″	12.3	**38.14**
P-6432	5.0 CT	21.0	2500	117*	BV	3⅝″	2⅜″ x 2⅝″	5.0	**17.80**
P-6433	5.0 CT	15.0	2500	117*	BV	3⅛″	2½″ x 2⅞″	3½	**13.80**
P-6302	5.0 CT	22.0	10,000	117/107	FA	5⅛″	4¼″ x 8½″	13.5	**53.54**
P-6492	5.0 CT	30.0	2,500	117	C	4¾″	3¾″ x 3⅞″	7.5	**18.24**
P-6468	5.0 CT	30.0	2,500	117/107	D	4 5/16″	3 9/16″ x 3⅞″	4.3	**21.32**
P-6305	5.0 CT	30.0	10,000	117/107	FB	5⅛″	4¼″ x 10″	18.3	**51.60**
P-6137	5.25 CT	13.0	2,500	117	N	3⅞″	3⅛″ x 3¼″	5.2	**13.65**
P-6463	†6.0 CT, 6.5 CT, or 7.0 CT	13.0	2,000	117	B	3⅜″	2 13/16″ x 3⅜″	4.5	**13.09**
P-6465	6.3 CT	0.6	1,500	117	A	1⅜	2⅜″ x 1⅜″	0.5	**3.30**
P-6134	6.3 CT	1.2	3,000	117	A	1⅝″	2⅞″ x 1⅝″	0.8	**3.50**
P-8190	6.3	1.2	5,000	117	A	2	3¼″ x 1¾″	1.0	**4.60**
P-8191	6.3	1.2	5,000	6.3	A	2	3¼″ x 1¾″	1.0	**4.95**
P-5014	6.3 CT	3.0	2,500	117	B	3⅛″	2½″ x 2½″	2.0	**7.78**
P-6466	6.3 CT	3.0	2,500	117	A	2	3 5/16″ x 2″	1.4	**5.65**
P-6462	6.3	3.0	7,000	107/117	A	2⅝″	4″ x 2⅝″	2.0	**9.32**
P-4019	6.3 CT	4.0	2,500	117/107	C	3 3/16″	2⅝″ x 2⅝″	2.7	**8.40**
P-6456	6.3 CT	6.0	2,000	107/117	A	2¼″	3⅝″ x 2½″	2.0	**6.37**
P-3064	6.3 CT	6.0	2,500	117	B	3⅛″	2½″ x 2⅞″	2.4	**9.04**
P-4089	6.3 CT	6.0	2,500	117/107	C	3⅝″	3″ x 3⅛″	3.5	**11.04**
P-6308	6.3 CT	10.0	2,500	117/107	N	3½″	2⅞″ x 2¾″	3.4	**10.98**
P-6464	6.3 CT	10.0	1.500	117	C	3 9/16″	3″ x 3¼″	3.5	**11.60**
P-6309	6.3 CT	20.0	2,500	117/107	N	4⅝″	3¾″ x 3″	6.7	**17.01**
P-5015	7.5 CT	4.0	2,500	117	B	3⅛″	2½″ x 2⅞″	2.7	**7.92**
P-6457	7.5 CT	5.0	2,000	107/117	C	4½″	3¾″ x 4″	6.0	**21.15**
P-4091	7.5 CT	5.0	2,500	117/107	C	3⅝″	3″ x 3″	3.4	**11.16**
P-6138	7.5 CT	8.0	2,500	117	N	3⅞″	3⅛″ x 2⅞″	4.7	**12.15**
P-5016	10.0 CT	4.0	2,500	117	B	3½″	2⅞″ x 2⅝″	3.3	**10.09**
P-6458	10.0 CT	5.0	2,000	107/117	N	3 1/16″	2½″ x 2⅞″	3.0	**7.84**
P-4096	10.0 CT	5.0	2,500	117/107	C	4″	3¼″ x 3⅛″	4.0	**12.04**
P-6139	10.0 CT	8.0	2,500	117	N	3⅞″	3⅛″ x 3⅛″	4.9	**12.50**
P-4097	10.0 CT	8.0	2,500	117/107	C	4″	3¼″ x 3⅝″	5.2	**13.04**
P-6461	10.0 CT	10.0	2,000	117*	C	3⅞″	3¼″ x 3⅝″	5.0	**14.65**
P-5002	10.0 CT	12.0	7,500	117/107	FA	5⅛″	4¼″ x 8½″	14.7	**41.42**
P-3020	11.0 CT	10.0	2,500	117/107	C	4¾″	4″ x 3½″	7.7	**16.59**
P-8130	12.6 CT	2.0	1,500	117	A	2″	3¼″ x 2″	1.4	**5.72**
P-6469	25.2		1.0	1,500	117	A	2″	3¼″ x 2″	1.4	**5.44**

FILAMENT TRANSFORMERS WITH MULTIPLE SECONDARY

P-6144	2.5 VCT at 3.5 A; 5.0 VCT at 3.0 A; 6.3 VCT at 3.0 A	2,500	117	C	3⅝″	3″ x 3⅛″	3.7	**$12.99**
P-6338	2.5 V at 3.0 A; 5.0 V at 3.0 A; 5.0 VCT at 2.0 A; 6.3 VCT at 3.0 A	2,500	117	N	3½″	2⅞″ x 2¾″	3.4	**12.65**
P-5009	5.0 VCT at 3.0 A; 6.3 VCT at 6.0 A	2,500	117/107	C	4″	3¼″ x 3¼″	4.5	**14.82**
P-5008	5.0 VCT at 4.0 A; 6.3 VCT at 3.6 A	2,500	117/107	C	3⅝″	3″ x 3¼″	3.8	**13.04**
P-4022	5.0 VCT at 6.0 A; 6.3 VCT at 6.0 A	2,500	117/107	C	4″	3¼″ x 3⅜″	4.8	**13.93**
P-6333	5.0 V at 3.0 A; 5.0 V at 3.0 A; 6.3 VCT at 4.0 A; 7.5 V/6.3 VCT at 3.0A	2,500	117	B	3½″	2⅞″ x 3⅞″	4.7	**15.71**
P-6428	6.3 V at 1.75 A; 6.3 V at 1.75 A; 6.3 V at 1.75 A; 6.3 VCT at 1.75 A	2,500	117	C	3⅛″	2½″ x 3″	3.0	**10.35**
P-6429	6.3 V at 3.5 A; 6.3 V at 3.5 A; 6.3 V at 3.5 A; 6.3 VCT at 3.5 A	2,500	117	C	3⅞″	3⅛″ x 3½″	4.8	**14.05**
P-6430	6.3 VCT at 3.0 A; 6.3 VCT at 3.0 A	2,500	117	C	3⅛″	2½″ x 3⅞″	2.8	**9.17**
P-6431	6.3 VCT at 6.0 A; 6.3 VCT at 6.0 A	2,500	117	C	3⅞″	3⅛″ x 3½″	4.8	**13.90**

#All primary windings for 60 cycle operation. *Primary 50/60 cycles. †By means of primary tap: For Eimac 4CX1000A tube.

PLATE TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

PLATE TRANSFORMERS

Part No.	D.C. Volts	Sec. A.C. Volts at Plate	D.C. Ma. CCS	D.C. Ma. ICAS	Pri. Volts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-8040	400 40	500/40–0–500	300	375	115	C	4¾″	4″ x 4½″	9.8	**$22.52**
P-8041	500 400 40	615/520/40–0–520/615	250	310	115	C	4¾″	4″ x 5⅛″	13.6	**26.63**
P-8042	600 400 40	770/510/40–0–510/770	300	375	115	C	4¾″	4″ x 6⅜″	18.0	**35.86**
P-8043	750 600 40	950/750/40–0–750/950	300	375	115	FS	7⅝″	6⅛″ x 8½″	29.0	**132.61**
P-8025	1000 750	1230/940–0–940/1230	400	500	115	FS	7⅝″	6⅛″ x 9½″	35.0	**149.49**
P-8026	1250 1000	1475/1175–0–1175/1475	300	375	115	FS	7¾″	7⅜″ x 8¼″	36.5	**123.15**
P-8027	1250 1000	1510/1210–0–1210/1510	500	625	115	FS	8″	5⅝″ x 8¼″	45.2	**126.49**
P-8028	1500 1250	1740/1460–0–1460/1740	300	375	115	FS	8⅛″	5⅝″ x 7⅞″	38.7	**119.12**
P-8029	1500 1250	1775/1500–0–1500/1775	500	625	115–230	FS	9⅞″	7¼″ x 8⅜″	65.0	**179.87**
P-8030	1750 1500	2100/1800–0–1800/2100	300	375	115	FS	7¾″	7⅜″ x 9″	45.8	**141.39**
P-8031	1750 1500	2075/1775–0–1775/2075	500	625	115–230	FS	10½″	7¼″ x 8⅛″	65.5	**172.03**
P-8032	2000 1750	2400/2100–0–2100/2400	300	375	115	FS	7¾″	7⅜″ x 9¼″	46.0	**158.04**
P-8033	2000 1750	2375/2065–0–2065/2375	500	625	115–230	FS	11¼″	7⅜″ x 9½″	77.0	**206.22**
P-8034	2500 2000	2900/2385–0–2385/2900	300	375	115–230	FS	11¼″	7⅜″ x 8¾″	62.8	**202.88**
P-8035	2500 2000	2950/2375–0–2375/2950	500	575	115–230	FS	11¼″	7⅜″ x 10¼″	80.0	**238.47**

PLATE TRANSFORMERS—NEW FUNCTIONAL UNITS

No exposed terminals. Insulated leads provide protected routing to circuits. Simplified design offers ease of mounting and neat, convenient circuit wiring. No difficult cutouts needed. Each of these units is "all transformer," taking a minimum of chassis space. No bulky casing or protruding, "hot" terminals to increase mounting area.

D.C. output rated CCS at load terminals of single-section reactor-input filter, ICAS with single-section capacitor-input filter. Primaries for 117 volts, 60 cycles.

Type Part No.	Secondary A.C. Volts	D.C. Output Volts	D.C. Output Ma.	Type Filter	Rectifier	List Price
PC8301	415-0-415	300 425	200 160	Reactor Input Capacitor Input	5U4G 5U4G	**$13.40**
PC8302	515-0-515	385 500	235 200	Reactor Input Capacitor Input	5U4G 5R4GY	**17.54**
PC8303	665-0-665	500 750	250 200	Reactor Input Capacitor Input	5R4GY 5R4GY	**22.27**
PC8304	750-0-750	600 850	265 200	Reactor Input Capacitor Input	2-5R4GY 5R4GY	**25.08**
PC8305	920-0-920	750 1000	250 200	Reactor Input Capacitor Input	2-5R4GY 5R4GY	**26.10**
PC8306*	920-0-920	750 1100	150 125	Reactor Input Capacitor Input	5R4GY 5R4GY	**25.80**
	500-0-500	380 550	150 125	Reactor Input Capacitor Input	5U4G 5U4G	

D.C. output rated at load terminals of single-section, reactor-input filter with full-wave mercury-vapor rectification. Primaries for 117 volts, 60 cycles

Type and Part No.	Secondary A.C. Volts	D.C. Volts	D.C. Ma. CCS	D.C. Ma. ICAS	List Price
PT8311	1200-0-1200	1000	225	280	**$28.41**
PT8312	1200-0-1200	1000	325	405	**49.71**
PT8313	1475-0-1475	1250	250	310	**44.34**
PT8314	1790-0-1790	1500	225	280	**51.17**
PT8315	2065-0-2065	1750	200	250	**51.62**

*Tapped for use with dual rectifier-filter systems to deliver two rated outputs simultaneously.

BIAS SUPPLY TRANSFORMERS

Part No.	High Voltage Supply A.C. Volts at D.C. Milliamps.	Rectifier Fil. Volts	Rectifier Fil. Amperes	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6317	200/170/130/90/0/90/130/170/200 @ 200 ma.	5.0	3.0	CD	4″	3¼″ x 3⅝″	4.9	**$19.09**
P-6318	450/400/350/250/0/250/350/400/450 @ 200 ma.	5.0	3.0	CD	4$\frac{5}{16}$″	3⅝″ x 4⅛″	7.0	**22.74**

TUBE CHECKER MULTI-TAPPED FILAMENT TRANSFORMER

Part No.	Secondary Volts	Primary Volts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-1834-3	1.1/ 1.4/ 1.5/ 2.0/ 2.5/ 3.0/ 3.3/ 5.0/ 6.3/ 7.0/ 7.5/ 12/ 25/ 30/ 35/ 50/ 70/ 85/ 110/ 117	125/115/105	A	2⅝″	4″ x 2″	2.4	**$16.87**

All Primary Windings for 60 cycle operation. ‡Designates part number to be removed from next catalog.
§Output changed by means of tap on primary winding. Rating is for a single section choke input filter using a 6 mfd. condenser.

ISOLATION AND AUTOFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

STRAIGHT ISOLATION—125/115/105 VOLTS TO 115 VOLTS.†

Part No.	Wattage	Primary#	Secondary	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6160	100	125/115/105	115	KA	4¾″	4″ x 3⅝″	7.0	**$27.52**
P-6371	175	117	117	TE	5 5/16″	4 9/16″ x 5¼″	9.0	**32.24**
P-6161	250	125/115/105	115	KA	4¾″	4″ x 5⅜″	14.2	**50.04**
P-6298	500	125/115/105	115	FK	7⅝″	6⅛″ x 7⅛″	28.0	**71.89**
P-6125	1000	125/115/105	115	FK	7¾″	5⅝″ x 7¾″	34.8	**113.03**
P-6123	1500	125/115/105	115	FK	7¾″	5⅝″ x 9″	49.8	**157.38**

STEP-DOWN ISOLATION—250/230/210 VOLTS TO 115 VOLTS.†

Part No.	Wattage	Primary#	Secondary	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6383	100	250/230/210	115	KA	4¾″	4″ x 3⅝″	7.3	**$24.36**
P-6385	250	250/230/210	115	KA	4¾″	4″ x 5⅜″	14.2	**39.68**
P-6387	500	250/230/210	115	FK	7⅝″	6⅛″ x 7⅛″	29.5	**90.13**
P-6389	1000	250/230/210	115	FK	7¾″	5⅝″ x 8″	33.8	**106.81**
P-6390	1500	250/230/210	115	FK	7¾″	5⅝″ x 9⅜″	50.3	**130.55**

†Built-in electrostatic shields are grounded to core internally.

ISOLATION TESTING TRANSFORMER

Part No.	Wattage	Primary#	Secondary	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6415	350	117	105/115/125	KC	5⅜″	4½″ x 5¾″	17.0	**$39.20**

Large enough to handle almost any television or radio receiver on test. Has three standard receptacles, providing output voltages of 105, 115 and 125, with 117 volts, A.C., from the line for testing purposes or for correction of high or low line voltage. Has electrostatic shield.

AUTOFORMERS

Part No.	Wattage	Primary#	Secondary	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6287	40	230	115	—	4½″	3″ Diam. can	2.7	**$10.81**
P-5062	80	230	115	K	3⅝″	3″ x 3¼″	3.8	**13.23**
P-5063	100	230	115	K	4″	3¼″ x 3¼″	4.5	**14.04**
P-5064	150	230	115	K	4 5/16″	3⅝″ x 3⅝″	5.2	**16.60**
P-5065	300	230	115	K	4¾″	4″ x 4⅛″	8.8	**22.96**
P-6141	500	230	115	K	4¾″	4″ x 5⅛″	13.7	**30.05**
P-6124	1000	230	115	FK	7⅛″	5⅝″ x 6¾″	24.5	**70.20**
P-6299	150	115	150/140/130/120/110/100/90	KA	4″	3¼″ x 4¾″	6.0	**21.15**

Testing Autoformer—Incorporates a convenient tap switch to permit variable voltages from 90 to 150 volts. Primary equipped with 6 ft. approved cord and plug. Secondary connected to female receptacle.

LINE ADJUSTING AUTOFORMERS

Type and Part No.	Va.*	Input Voltage 50-60 Cycle	Output Voltage	Height	Base Area	Shpg. Wt. in Lbs.	List Price
PV-6441	150	65/75/90/100/115/130/145	115	5½″	3⅞″ x 5⅜″	6.4	**$33.00**
PV-6442	350	65/75/90/100/115/130/145	115	5½″	3⅞″ x 6⅛″	10.5	**38.00**
PV-6443	500	65/75/90/100/115/130/145	115	5½″	3⅞″ x 6⅞″	15.0	**42.00**
PV-6444	750	65/75/90/100/115/130/145	115	6 5/16″	4½″ x 8⅛″	19.0	**64.41**

*Watts to pure resistive load. To other types of loads, multiply rating of line adjuster by power factor of load for actual wattage.

AIR CONDITIONER AUTO-TRANSFORMERS—230 VOLTS TO 208 VOLTS

Part No.	Rating KVA	Motor Size	Input Voltage	Output Voltage	Mtg.	Height	Base Area	Shpg. Wt. in Lbs.	List Price
PSU-2000	2.3	½-1 hp.	208/230	230/208	PSU	3½″	3¾″ x 6½″	9	**$27.86**
PSU-3000	3.0	1-2 hp.	208/230	230/208	PSU	4″	4½″ x 6″	10	**33.47**

CATHODE RAY TUBE POWER TRANSFORMERS

For use with type 2X2 rectifier tubes in a conventional half-wave voltage supply.

Part No.	Plate Supply A.C. Volts	Plate Supply D. C. Milliamperes	Rectifier Filament Volts	Rectifier Filament Amperes	Other Windings Volts	Other Windings Amperes	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-8150	1,550 half-wave	1.5	2.5	1.75	. . .	. . .	TD	3 1/16″	3″ x 2½″	1.8	**$15.00**
P-8151	2,400 half-wave	5.0	2.5	2.0	2.5	2.0	C	4 5/16″	3 9/16″ x 3⅞″	6.4	**19.77**

PHOTOFLASH POWER TRANSFORMER

Part No.	Application	Pri.	Sec.	Mtg. Type	Height Overall	Base Area	Mtg. Ctrs.	Shpg. Wt. in Lbs.	List Price
P-6425	For use in Sprague electronic flash circuits. See Sprague Electronic Flash Handbook C-703	105/115/125V. 60 cy.	Charges up to 1050 mfd. to 450 Volts D.C.	S	2 5/16″	2 15/16″ x 2″	2⅜″	1.4	**$5.83**
P-6426	Trigger coil for use with 450V. flashtube. Replaces G.E. 86G41				¾″	9/16″ diam.		0.2	**$2.78**

SPEAKER FIELD SUPPLY TRANSFORMER

Part No.	Plate Supply A.C. Volts	Plate Supply D.C. Milliamperes	Rectifier Filament Volts	Rectifier Filament Amperes	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6146	120-0-120	250	5.0	3.0	C	4″	3¼″ x 3⅛″	4.2	**$13.04**

CONDENSER TESTER POWER TRANSFORMER

Part No.	Plate Supply A.C. Volts	Plate Supply D.C.-M.A.	Fil. Wdgs. Volts	Fil. Wdgs. Amps.	Overall Dimensions L	Overall Dimensions W	Overall Dimensions D	Mtg.§ Type	Shpg. Wt. in Lbs.	List Price
P-6459	550 55	30 60	6.3 6.3	0.9 0.6	2⅝″	2 3/16″	2¼″	Coil and Iron	1.4	**$9.10**

#All Primary Windings for 117 V-60 cycle operation unless otherwise indicated.

K

KA

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M

N

PSU

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PV

CHICAGO

MILITARY and NEW EQUIPMENT

TRANSISTOR TRANSFORMERS
PULSE TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

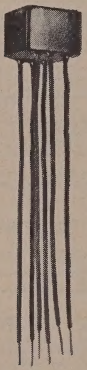
RIQAP

Reduced Inspection Quality Assurance Plan

Since 1955, Chicago Standard Transformer Corporation has been operating continuously under RIQAP, the U. S. Army Signal Corps' Reduced Inspection Quality Assurance Plan. When you specify Chicago Standard transformers, delivery time is reduced and incoming inspection is at a minimum. You are assured of the highest quality units for military applications.

ULTRA MINIATURE ENCAPSULATED TRANSISTOR TRANSFORMERS

The 27 transformers in the UME series are characterized by high power ratings, low distortion, high efficiency and excellent frequency response. Designed and built in accordance with MIL-T-27A specifications, their ratings match those of most popular transistors. They are ideally suited for printed circuit applications. Dimensions: .312" x .400" x .426". Weight is approximately ⅛ ounce.

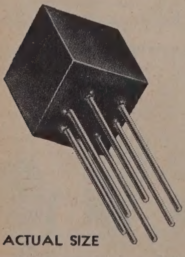


ACTUAL SIZE

CHICAGO Part No.	Application	Pri. Res.	Pri. Impedance in Ohms	D.C. M.A. in Pri.	Sec. Impedance in Ohms	Sec. Res.	Net Price
UME-12	output	120	500 600	3	50 60	13	**$5.40**
UME-13	output	250	1000 1200	3	50 60	17	**5.40**
UME-14	output	70	600	3	3.2	.7	**5.40**
UME-15	output	170	1200	2	3.2	.75	**5.40**
UME-16	output	1200	10,000	1	3.2	.7	**5.50**
UME-18	reactor	1000	3 hy at 2 Madc	2	—	—	**4.80**
UME-19	output or driver	1100	10,000 CT 12,500 CT	1	500 CT 600 CT	45	**5.50**
UME-20	driver	1000	10,000 12,500	1	1200 CT 1500 CT	100	**6.10**
UME-21	driver	1100	10,000 12,500	1	2000 CT 2500 CT	160	**6.10**
UME-22	single or PP output	25	150 CT 200 CT	10	12 16	3	**5.45**
UME-23	single or PP output	35	300 CT 400 CT	7	12 16	2.5	**5.45**
UME-24	single or PP output	75	600 CT 800 CT	5	12 16	2	**5.50**
UME-25	single or PP output	85	800 CT 1070 CT	4	12 16	2	**5.50**
UME-26	single or PP output	120	1000 CT 1330 CT	3.5	12 16	2	**5.50**
UME-27	single or PP output	225	1500 CT 2000 CT	3	12 16	2.5	**5.50**
UME-28	single or PP output	750	7500 CT 10,000 CT	1	12 16	2.5	**6.00**
UME-29	output	35	300 CT	7	600	110	**5.50**
UME-30	output	60	500 CT	5.5	600	110	**5.50**
UME-31	output	105	900 CT	4	600	110	**5.50**
UME-32	output	200	1500 CT	3	600	120	**5.50**
UME-33	interstage	1500	20,000 CT 30,000 CT	.5	800 CT 1200 CT	175	**6.50**
UME-34	input	6500	200,000 CT	0	1000 CT	250	**7.00**
UME-35	interstage	1000	10,000 CT 12,000 CT	1	1500 CT 1800 CT	115	**6.50**
UME-36	reactor	2600	6 hy at 2 Madc	2	—	—	**5.45**
UME-37	reactor	190	1 hy at 2 Madc	2	—	—	**4.80**
UME-38	reactor	1800	12 hy at 0 dc	0	—	—	**4.80**
UME-39	reactor	2700	20 hy at 0 dc	0	—	—	**5.50**

PULSE TRANSFORMERS

These ultra-miniature wound core pulse transformers are hermetically encapsulated 3-winding units designed and built in accordance with MIL-T-27A. They feature extremely fast rise time, minimum droop and high temperature stability. The leads are arranged so that they can be soldered directly into the circuit or clipped and plugged into a standard 7-pin miniature tube socket. Oscillograph pictures of pulses for all units and other technical data obtained through use of N.B.S. Preferred circuit No. 46, as found in Navy Aeronautical Preferred Circuits Handbook are listed in Chicago Bulletin CT-45.



ACTUAL SIZE

CHICAGO Part No.	Nominal Pulse Width Microseconds	Rise Time Microseconds	Height	Width	Depth	Weight oz.	Net Price
PE-50	0.5	.07	9/16"	9/16"	9/16"	.16	**$5.86**
PE-75	0.75	.07	9/16"	9/16"	9/16"	.16	**5.90**
PE-100	1	.06	9/16"	9/16"	9/16"	.16	**6.03**
PE-200	2	.05	11/16"	11/16"	3/4"	.16	**6.57**
PE-500	2	.07	11/16"	11/16"	3/4"	.16	**6.45**
PE-700	7	.1	11/16"	11/16"	3/4"	.16	**7.05**

CHICAGO

MILITARY and NEW EQUIPMENT
POWER TRANSFORMERS
FILTER REACTORS

CHICAGO STANDARD TRANSFORMER CORPORATION

POWER TRANSFORMERS—PLATE AND FILAMENT SUPPLY—TF4RX03YY

For CAPACITOR INPUT SYSTEMS—Primary 117 Volts, 50-60 Cycles

High Voltage Secondary			Filaments					YY Case Mounting			S-Type Mounting			C-Type Mounting		
			Rectifier		Others											
Volts A-C-	Ma. D-C	Output V.D-C	Volts	Amps.	Volts	Amps.	Wt. Lbs.	Cat. No.	Case No.	Net Price	Cat. No.	Case No.	Net Price	Cat. No.	Case No.	Net Price
250-0-250	10	320	6.3	1.2	6.3	0.6	1¼	PHC-10	14	$11.25	......			......		
250-0-250	20	300	6.3	1.2	6.3	0.6	1¾	PHC-20	15	11.40	......			......		
225-0-225	40	210	5	2	6.3CT	2	3¼	PHC-40	17	12.90	PSC-40	17	$8.85	PCC-40	16	$5.10
270-0-270	55	260	5	2	6.3CT	2	3½	PHC-55	17	13.14	PSC-55	17	9.30	PCC-55	16	5.49
300-0-300	60	285	5	2	6.3CT	3	4½	PHC-60	19	14.28	PSC-60	19	9.90	PCC-60	18	6.30
335-0-335	70	320	5	2	6.3CT	3	4½	PHC-70	19	14.55	PSC-70	19	10.50	PCC-70	18	6.75
330-0-330	85	320	5	2	6.3CT	3	6	PHC-85	20	15.60	PSC-85	20	11.19	PCC-85	20	7.80
345-0-345	105	320	5	2	6.3CT	3.5	6½	PHC-105	21	16.62	PSC-105	21	11.85	PCC-105	20	8.46
375-0-375	120	380	5	3	6.3CT	4	9½	PHC-120	21	17.58	PSC-120	22	12.48	PCC-120	22	9.51
370-0-370	150	390	5	3	6.3CT	4										
					6.3CT	1	11½	PHC-150	22	23.34	PSC-150	22	16.50	PCC-150	22	10.89
385-0-385	200	390	5	3	6.3CT	4.5										
					6.3CT	1	12¼	PHC-200	22	24.99	PSC-200	22	17.55	PCC-200	22	12.69
400-80-0-80-400	250	410	5	6	6.3CT	7										
					5	2	15	PHC-250	24	27.36	PSC-250	24	21.90	PCC-250	24	15.63
625-0-625	300	685	5	4	6.3	8										
					6.3	3										
					6.3	3	21				PSC-300	24	31.08	PCC-300	24	18.90

For REACTOR INPUT SYSTEMS—Primary 117 Volts, 50-60 Cycles

350-0-350	55	260	5	2	6.3CT	2	3¼	PHR-55	17	$12.99	PSR-55	17	$ 9.45	PCR-55	16	$5.70
425-0-425	70	320	5	2	6.3CT	3	4½	PHR-70	19	14.07	PSR-70	19	10.35	PCR-70	18	6.45
440-0-440	85	325	5	2	6.3CT	3	6	PHR-85	20	15.09	PSR-85	20	11.40	PCR-85	20	7.50
450-0-450	105	320	5	2	6.3CT	3.5	6½	PHR-105	21	16.62	PSR-105	21	12.00	PCR-105	20	8.01
500-0-500	120	390	5	3	6.3CT	4	9½	PHR-120	21	17.58	PSR-120	22	12,75	PCR-120	22	8.97
510-0-510	150	395	5	3	6.3CT	4										
					6.3CT	1	11½	PHR-150	22	21.78	PSR-150	22	17.70	PCR-150	22	10.50
520-0-520	200	390	5	3	6.3CT	4.5										
					6.3CT	1	12¼	PHR-200	22	22.92	PSR-200	22	18.90	PCR-200	22	11.70
550-370-75-0-75-370-550	300	420	5	6	6.3CT	1										
					6.3CT	5	17½	PHR-300	24	31.29	PSR-300	24	26.70	PCR-300	24	18.30

For REGULATED POWER SUPPLIES, CAPACITOR INPUT—Primary 117 Volts, 50-60 Cycles

High Voltage Secondary			Filaments							H-Type Mounting			S-Type Mounting		
			Rectifier		Others										
Volts A-C	Ma. D-C	Output V.D-C-	Volts	Amps.	Volts	Amps.	Volts	Amps	Wt. Lbs.	Cat. No.	Case No.	Net Price	Cat. No.	Case No.	Net Price
440-0-440	165	430	5	3	6.3 6.3	7.5 0.6	6.3 6.3	3 3	12	PHC-165	22	$28.59	PSC-165	22	$23.85
450-0-450	200	442	5	2	6.3 6.3	4 4	6.3	0.6	12	PHC-200A	22	25.77	PSC-205	22	22.50

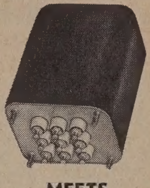
FILTER REACTORS—TF4RX01YY

Inductance in Henries	Max. Current Ma. D-C	D-C Resistance in Ohms	Insulation Test Volts	Wt. Lbs.	YY Case Mounting Cat. No.	Case No.	Net Price	S-Type Mounting Cat. No.	Case No.	Net Price	C-Type Mounting Cat. No.	Case No.	Net Price
15	10	680	1,000	1	RH-1510	8	$ 5.85	......			......		
15	20	680	1,000	1	RH-1520	8	6.18	......			......		
15	40	475	2,500	1½	RH-1540	12	6.24	RS-1540	12	$ 3.60	RC-1540	12	$ 2.55
15	55	420	2,500	2	RH-1555	13	6.45	RS-1555	13	4.20	RC-1555	12	3.12
15	85	285	2,500	2¾	RH-1585	14	6.84	RS-1585	15	5.07	RC-1585	14	3.78
12	105	170	2,500	4	RH-12105	17	8.01	RS-12105	17	5.70	RC-12105	16	4.41
12	150	150	2,500	5½	RH-12150	19	9.18	RS-12150	19	6.81	RC-12150	18	5.85
12	200	140	2,500	7	RH-12200	20	10.80	RS-12200	21	8.25	RC-12200	20	6.90
10	55	230	2,500	1¾	RH-1055	13	6.45	RS-1055	13	3.99	RC-1055	12	2.97
10	85	175	2,500	2½	RH-1085	14	6.84	RS-1085	15	4.20	RC-1085	14	3.51
8	105	100	2,500	3¾	RH-8105	17	8.01	RS-8105	17	5.70	RC-8105	16	4.20
8	150	100	2,500	5¼	RH-8150	18	9.18	RS-8150	19	6.60	RC-8150	18	5.79
8	200	85	2,500	7	RH-8200	20	10.80	RS-8200	21	7.80	RC-8200	20	6.81
8	250	90	2,500	10½	RH-8250	22	14.10	RS-8250	22	9.45	RC-8250	22	7.74
8	300	55	3,500	12½	RH-8300	22	16.50	RS-8300	22	11.85	RC-8300	22	9.54

FILAMENT TRANSFORMERS—Primary 115-230 Volts, 50-60 Cycles—TF4RX01YY

Secondary Volts	Secondary Amps.	Insulation Test Volts	Wt. Lbs.	YY Case Mounting Cat. No.	Case No.	Net Price	S-Type Mounting Cat. No.	Case No.	Net Price
2.5CT	5.25	3,500	2	FH-25	15	$ 9.27	F-25	14	$ 9.72
2.5CT	10.0	5,000	3	FH-210	15	13.29	F-210	17	9.75
2.5CT	10.0	9,000	4	FH-210H	19	15.45	F-210H	19	11.85
2.5CT	15.0	9,000	6	FH-215H	21	18.57	F-215H	20	12.75
5CT	4.0	2,500	2¼	FH-54	15	9.66	F-54	15	6.51
5CT	10.0	2,500	3½	FH-58	17	13.29	F-58	17	11.10
5CT	10	8,000	6	FH-510H	21	19.80	F-510H	21	24.00
5CT	20.0	2,500	6½	......			F-516	21	14.70
5CT	20	10,000	13	FH-520HB	22	24.75	F-520HB	22	16.95
5CT	30	2,500	10½	......			F-530	22	16.95
5CT	30	2,500	10½	......			F-530BX*	22	37.44
6.3CT	1.5	2,500	1	FH-615	12	8.10	F-615	12	5.25
6.3CT	3	2,500	2	FH-63	14	9.57	F-63	14	6.30
6.3CT	5.5	2,500	3	FH-65	16	11.13	F-65	17	7.65
6.3CT	10.0	2,500	5	FH-610	19	15.75	F-610	19	10.50
7.5CT	12	2,500	6½	......			F-712	21	14.70
7.5CT	25.0	2,500	12	......			F-725	22	16.95
7.5CT	51	2,500	29	......			F-751	26	35.70
10CT	4.0	2,500	3¼	FH-104	17	11.43	F-104	17	8.40
10CT	6.5	2,500	5	......			F-106	19	11.70
10CT	10.0	2,500	6½	......			F-1010	21	14.70

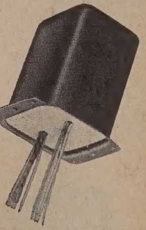
*BX mounting, see page 1350 for illustration and dimensions.



MEETS MIL-T-27A SPECS

YY Case. Steel base cover deep-seal soldered into case. Terminals hermetically sealed. Ceramic bushings. Stud-mounted unit.

S-Type. Steel base cover fitted with phenolic terminal board. Convenient numbered solder lug terminals. Flange-mounted unit.



C-Type. With 10" color-coded stripped and tinned leads brought out through fibre board base cover. Flange-mounted unit.

S-TYPE & C-TYPE CASE DIMENSIONS

(YY Case Dimensions on Page 1345

Case No.	Depth	Width	Height
12	2¼	2⅛	2 11/16
13	2¼	2⅛	2 15/16
14	2½	2⅜	3 1/16
15	2½	2⅜	3 5/16
16	2⅞	2 11/16	3½
17	2⅞	2 11/16	3¾
18	3¼	3	3⅞
19	3¼	3	4¼
20	3 11/16	3 5/16	4 5/16
21	3 11/16	3 5/16	4 11/16
22	4 9/16	4⅛	5 5/16
24	5 5/16	4 13/16	6 1/16

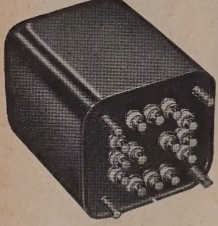
CHICAGO

MILITARY STANDARD

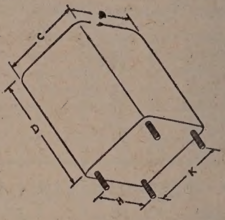
POWER AND FILAMENT TRANSFORMERS MOLDED TOROIDAL INDUCTORS

CHICAGO STANDARD TRANSFORMER CORPORATION

MS (MILITARY STANDARD) POWER AND FILAMENT TRANSFORMERS



Case Type	Dimensions in Inches A	C	D	H	K	Stud Size
EB	1 15/16	1 13/16	2 7/16	1⅜	1¼	6-32
FB	2 5/16	2 1/16	2½	1 11/16	1 7/16	6-32
GA	2¾	2⅜	3 13/16	2⅛	1¾	6-32
GB	2¾	2⅜	2 13/16	2⅛	1¾	6-32
HB	3 1/16	2⅝	3 3/16	2 19/64	1 55/64	8-32
HA	3 1/16	2⅝	4¼	2 19/64	1 55/64	8-32
JB	3 9/16	3 1/16	3⅞	2⅝	2⅛	8-32
KA	3 15/16	3⅜	5¼	3	2 7/16	10-32
KB	3 15/16	3⅜	4 5/16	3	2 7/16	10-32
LB	4 5/16	3 11/16	4½	3 5/16	2 11/16	10-32
MB	4 11/16	4	4 15/16	3 11/16	3	¼-20
NB	5 1/16	4 5/16	5½	4 1/16	3 5/16	¼-20



POWER TRANSFORMERS—Primary, 105/115/125 V.—Frequency, 54-66 Cycles

MIL-T-27 Classification	MIL-T-27 Part No.	High Voltage Secondary A-C Volts	D-C Ma.	D-C V Output	Rect. Fil. Volts	Amps	Fil. No. 2 Volts	Amps	Wt. Lbs.	Case Size	Catalog Number	Net Price
TF4RX03HA001	MS-90026	200-100-0-100-200	70	385	6.3/5	2	6.3	3	4	HA	PMS-70	$20.70
TF4RX03JB002	MS-90027	325-0-325	70	260	6.3/5	2	6.3	4	5	JB	PMS-70A	17.70
TF4RX03KB006	MS-90028	325-0-325	150	245	6.3	5	5	3	7¼	KB	PMS-150	21.90
TF4RX03LB003	MS-90029	400-0-400	175	318	5	3	6.3	8	10	LB	PMS-175	25.50
TF4RX03MB004	MS-90030	450-0-450	250	345	5	3	6.3	8	13	MB	PMS-250	28.50
TF4RX02KB001	MS-90031	350-0-350	250	255					7½	KB	PMS-350	18.90
TF4RX02LB002	MS-90032	550-0-550	250	419					11	LB	PMS-550	21.90
TF4RX02NB003	MS-90036	800-0-800	250	640					16½	NB	PMS-800	29.70

FILAMENT TRANSFORMERS—Primary, 105/115/125 V.—Frequency, 54-66 Cycles

MIL-T-27 Classification No.	MIL-T-27 Part No.	Secondary Volts	Amps	Insulation Volts RMS	Wt. Lbs.	Case Size	Catalog Number	Net Price
TF4RX01EB002	MS-90016	2.5	3.0	2500	1½	EB	FMS-23	$10.17
TF4RX01GB003	MS-90017	2.5	10	2500	2½	GB	FMS-210	14.10
TF4RX01FB004	MS-90018	5.0	3.0	2500	1¾	FB	FMS-53	11.10
TF4RX01HB005	MS-90019	5.0	10	2500	4	HB	FMS-510	15.30
TF4RX01FB006	MS-90020	6.3	2.0	2500	1¾	FB	FMS-62	11.10
TF4RX01GB007	MS-90021	6.3	5.0	2500	2¾	HB	FMS-65	12.90
TF4RX01JB008	MS-90022	6.3	10	2500	5	JB	FMS-610	17.70
TF4RX01KB009	MS-90023	6.3	20	2500	8	KB	FMS-620	21.90
TF4RX01JB012	MS-90024	2.5	10	10000	4¾	JB	FMS-210H	16.50
TF4RX01KB013	MS-90025	5.0	10	10000	7	KB	FMS-510H	21.00

MULTIPLE FILAMENT TRANSFORMERS (TR4RX01— —†)Primary,105/115/125 V., Frequency, 50/60 cycles

Designed and built in accordance with MIL-T-27A, Grade 4, Class R operating temperature; life expectancy X (10,000 hours minimum). Maximum operating altitude 10,000 feet. Also available in type S, **Sealed-in-Steel** cases (catalog Numbers F-1 through F-8, listed below). Dimensions on page 1342.

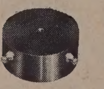
Sec. No. 1	Sec. No. 2	Sec. No. 3	Insul. Test	Case Size†	Wt. Lbs.	Catalog No.	Net Price	Catalog No.	Case Size	Net Price
5 V. 2A	6.3 V. CT 2.5 A	—	2500 V.	GA	2½	FMS-1	$15.90	F-1	15	$ 9.90
5 V. 2A	16.6 V. CT 1.25A	—	2500 V.	GA	3½	FMS-2	15.90	F-2	15	9.90
5 V. 3A	6.3 V. CT 5A	—	2500 V.	HA	4	FMS-3	17.55	F-3	17	10.35
5 V. 3A	6.3 V. CT 3A 12.6 V. CT 3A	6.3 V. CT 3A	2500 V.	JB	4¾	FMS-4	20.70	F-4	18	11.85
5 V. 3A	6.3 V. CT 1A	6.3 V. CT 5A	2500 V.	JB	4¾	FMS-5	20.70	F-5	18	12.00
6.3 V. CT 3A 12.6 V. CT 3A	6.3 V. CT 3A	—	2500 V.	HA	4	FMS-6	17.25	F-6	17	10.35
6.3 V. CT 6A 12.6 V. CT 6A	6.3 V. CT. 6A	—	2500 V.	KA	6½	FMS-7	20.10	F-7	21	12.30
5 V. CT 3A	5 V. CT 3A	5 V. CT 6A	5000 V.	KA	7	FMS-8	26.25	F-8	21	12.90

†Refer to case size. All secondary A.C. voltages ± 3%.

MOLDED TOROIDAL INDUCTORS

CHICAGO toroids, plastic encapsulated in molded cases, are stocked for immediate delivery. Units may be stacked and mounted with a single screw. CHICAGO toroids are wound on high density, high permeability cores of powdered molybdenum permalloy, with utmost attention given to stability, low temperature co-efficients, insulation and ruggedness. All units are 1 1/16″ diameter, ½″ high, with 90° spacing of terminals and mounting hole for 4-40 screw.

Features:
- High Q over wide frequency ranges
- Minimum pickup from external magnetic fields
- Close tolerance of plus, minus 1%
- High stability over temperature range of —55° to plus 85° centigrade
- Not affected by high humidity
- Resist shock and vibration
- Small sized, uniform, easily stacked



Catalog No.	Inductance (m.h.)	D.C. Res. (ohms)	Net Price
TM-1A	1	.32	$4.50
TM-2 A	2	.72	4.50
TM-5 A	5	1.85	4.50
TM-8 A	8	2.25	4.50
TM-10 A	10	3.25	4.50
TM-20 A	20	7.0	4.50
TM-50 A	50	18.5	4.50

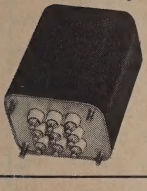
Catalog No.	Inductance (m h.)	D.C. Res. (ohms)	Net Price
TM-80 A	80	29.5	$4.50
TM-100 A	100	32.5	4.50
TM-200 A	200	71.5	5.10
TM-500 A	500	185	5.70
TN-800 A	800	300	5.70
TM-1000 A	1000	340	5.70

CHICAGO

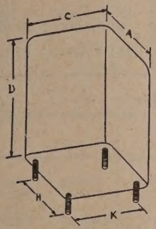
MILITARY and NEW EQUIPMENT
AUDIO TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

B-TYPE MOUNTING



YY CASE



YY Case & H Type Mtg. Dimensions

Case Size	Dimensions in Inches				
	A	C	D	H	K
8	1½	1½	1 15/16	1	1
9	1½	1½	2⅛	1	1
12	2¼	2⅛	2 11/16	1 9/16	1⅜
13	2¼	2⅛	2 15/16	1 9/16	1⅜
14	2½	2⅜	3 1/16	1 13/16	1 11/16
15	2½	2⅜	3 5/16	1 13/16	1 11/16
16	2⅞	2 11/16	3½	2	1⅞
17	2⅞	2 11/16	3¾	2	1⅞
18	3¼	3	3⅞	2⅜	2⅛
19	3¼	3	4¼	2⅜	2⅛
20	3 11/16	3 5/16	4 5/16	2⅝	2⅜
21	3 11/16	3 5/16	4 11/16	2⅝	2⅜
22	4 9/16	4⅛	5 5/16	3⅜	3
24	5 5/16	4 13/16	6 1/16	3⅜	3

HIGH Q CHOKES

For Dynamic Noise Suppression Circuits (S-Type Mounting)

Two efficient reactors, inductance values .8 and 2.4 henrys respectively, are designed for noise suppression circuits, but can be used in any tuned circuit requiring the given inductances. Inductance values accurate within −5% with up to 15 ma. d-c. Minimum Q of 20. Mounted in drawn steel cases, 1 21/32″ x 1 13/32″ x 1 21/32″ high.

Cat. No.	Inductance	Net Price
NSI-1	.8 hy.	$7.50
NSI-2	2.4 hy.	7.50

(S-Type and C-Type Case Dimenisons on Page 1343.

FULL FREQUENCY RANGE AUDIO TRANSFORMERS
Frequency Response within ±½ db, 30 to 15,000 Cycles

INPUT TRANSFORMERS—TF4RX— —YY††
YY Case (Cat. No. BIH) and B-Type (Cat. No. BI) Mountings

Application	Impedance Primary—Secondary	Max. Power Level	Hum Shielding, dbm	Case Size	Family	Wt. Lbs.	Cat. No.	Net Price
Line to Single or P-P Grids	*Pri: 600/150 ohms CT *Sec: 50,000 ohms CT	+15 dbm.	−70	13	10	1½	BIH-1 BI-1	$23.70 21.52
Line to Single or P-P Grids	*Pri: 600/150 ohms CT *Sec: 50,000 ohms CT	+15 dbm.	−90	13		1½	BI-2	22.05
Line bridging to P-P Grids	*Pri: 8,000/6,000 ohms CT *Sec: 50,000 ohms CT	+15 dbm.	−70	13		1½	BI-3	23.74
Line to Line	Pri: 600/150 ohms CT Sec: 600/150 ohms CT	+15 dbm.	−70	13	16	1½	BIH-4 BI-4	23.70 17.70
Line to Line	*Pri: 600/150 ohms CT *Sec: 600/150 ohms CT	+30 dbm.	−90	18	16	3¼	BIH-5 BI-5	37.17 48.28
Interstage: P-P Plates to Sgl. or P-P Grids	*Pri: 20,000 ohms CT *Sec: 50,000 ohms CT	+15 dbm.	−70	13	15	1½	BIH-6 BI-6	24.30 17.25
Low Imped. Mike, Pickup, or Multiple Line to Grid	Pri: 50/150/250/600 *Sec: 50,000 ohms CT	+15 dbm.	−70	13	10	1½	BIH-7 BI-7	23.70 22.51
Single Plate to Push-Pull Grids	Pri: 10,000 ohms *Sec: 50,000 ohms CT	+15 dbm.	−70	13	10	1½	BIH-8	22.50

††Refer to family.

OUTPUT TRANSFORMERS—TR4RX13YY
YY Case (Cat. No. BOH) and B-Type (Cat. No. BO) Mountings

Application	Impedance Primary—Secondary	Max. Power Level	Case Size	Wt. Lbs.	Cat. No.	Net Price
Single Plate to Line	†Pri: 15,000 ohms *Sec: 600/150 ohms CT	+15 dbm. (22 mw)	14	2¼	BOH-1 BO-1	$16.08 10.17
P-P Plates to Line	*Pri: 20,000 ohms CT *Sec: 600/150 ohms CT	+30 dbm. (1 watt)	16	3	BOH-2 BO-2	23.52 13.50
P-P Plates to Line	Pri: 5,000 ohms CT *Sec: 600/150 ohms CT	+40 dbm. (10 watts)	20	5¾	BO-3	13.29
P-P Plates to Line	Pri: 7,500 ohms CT *Sec: 600/150 ohms CT‡	+43 dbm. (20 watts)	20	6	BOH-4	22.26
P-P Plates to Line or Voice Coil	*Pri: 10,000 ohms CT *Sec: 600/16/8 ohms CT and 150/4 ohms	+37 dbm. (5 watts)	18	4	BOH-5 BO-5	29.70 16.32
P-P Plates to Voice Coil	Pri: 7,500 ohms CT Sec: 8/20 ohms‡	+43 dbm. (20 watts)	20	6	BO-6	17.55
P-P Parallel Pl. to Line or Voice Coil	Pri: 1500 ohms CT *Sec: 600/16/8 ohms CT and 150/4 ohms	+45 dbm. (30 watts)	21	6½	BO-8	18.48
P-P Plates to Line or Voice Coil	*Pri: 5000/3000 ohms CT *Sec: 600/16/8 ohms CT and 150/4 ohms	+42 dbm. (15 watts)	20	6	BOH-9 BO-9	27.24 17.25
P-P Low Level Plates to Line	Pri: 20,000 ohms CT *Sec: 600/150 ohms CT	+15 dbm. (22 mw)	13	1½	BO-10	16.50
P-P Plates to Line or Voice Coil	*Pri: 3000/2500 ohms CT *Sec: 600/16/8 ohms CT and 150/4 ohms	+46 dbm. (40 watts)	22	9½	BO-11	24.87
P-P Plates to Line or Voice Coil	Pri: 10,000 ohms CT Sec: 600/16/8 ohms	+40 dbm. (10 watts)	22	9	BO-12	17.85
P-P Plates to Voice Coil	Pri: 10,000 ohms Sec: 16/8/4 ohms	+43 dbm. (20 watts)	21	7	BO-13	17.85
P-P Plates to VC, pentode, triode or Ult.-Lin. Circuits	Pri: 5000 phms CT Sec: 16/8 ohms: 70.7 volts	+50 dbm. (100 watts)	24	24	BO-14	39.75

*Split and balanced windings. †0 to 10 ma. D.C. ‡Has tertiary winding to provide 15% inverse feedback. **Has D.C. in primary; frequency response ±2 db, 30–15,000 cycles.

LOW PASS FILTER LPF-2—Hermetically sealed unit for attentuating frequencies above 3,000 cycles in low level speech amplifiers, 10,000 ohm plate to 50,000 ohm grid. Insertion loss 0.8 db. Height 2⅛″, width 1 7/16″, depth 1 7/16″, mtg. ctrs. 1 15/16″. Shpg. wt. ½ lb. Net Price $21.65.

DETAILS OF NEW EQUIPMENT LINE MOUNTINGS

YY CASE MOUNTING—Hermetic sealing meets all MIL-T-27A specifications. Steel base cover is bonded into the case by deep-seal soldering. Terminals are hermetically sealed by unique rubber gasket—ceramic bushing construction. Units are stud mounted.

C-TYPE MOUNTING—Moisture-resistant compound surrounds coil and core. Ten-inch E.I.A. color-coded leads, ends stripped and tinned for easy soldering. Flange-mounted drawn steel cases.

S-TYPE MOUNTING—Precision-fitted steel base-covers and terminal boards, plus compound filling, keep moisture out. Solder-lug terminals are clearly identified, easy to use. Drawn steel cases are flange-mounted.

B-TYPE MOUNTING—Steel bases are bonded into the drawn steel cases by deep-seal soldering to make units completely moisture proof. Stud-mounted cases take minimum chassis space. Convenient, compact, pin-type terminals.

BIAS TRANSFORMERS—Combination Plate and Filament—Primary 50-60 Cycles

Primary Volts	High Voltage Secondary				YY Case Mounting*			S-Type Mounting			C-Type Mounting		
	AC Volts CT	DC Ma.	Rect. Volts	Fila. Amps.	Cat. No.	Case No.	Net Price	Cat. No.	Case No.	List Price	Cat. No.	Case No.	Net Price
115	180-160-140-120	150	5.0	3.0				1BS-150	19	$14.70	1BC-150	18	$6.45
230	180-160-140-120	150	5.0	3.0	1BH-150	19	$18.90	2BS-150	19	15.30	2BC-150	18	6.30

*TF4RX03YY.

Net

CHICAGO

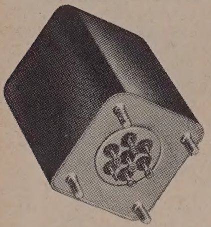
MILITARY STANDARD AUDIOS
MS TRANSISTOR AUDIOS
MIL-T-27A SATURABLE TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

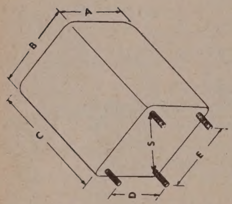
MILITARY STANDARD AUDIO TRANSFORMERS

Designed and built in accordance with MIL–T–27A, Grade A, Class R operating temperature; Life Expectancy X (10,000 hrs. min.).

Maximum Operating Altitude 50,000 ft.
Frequency Response ± 2 db 300—10,000 cps, AJ Case Size—Max. Wt., 6 lbs.



MIL-T-27A Classification	MIL-T-27A Part No.	Application	Impedance	Operating Level	Pri. DCMA	Catalog No.	Net Price
TF 1RX 15AJ001	MS-90000	P-P Plates to P-P Grids	Pri: 10,000 ohms CT Sec: 90,000 ohms CT 22,500 ohms CT	15 dbm.	10	**AMS-1**	**$15.90**
TF 1RX 16AJ002	MS-90001	Line to Voice Coil	Pri: 600 ohms CT 150 ohms Sec: 4/8/16 ohms	2W	—	**AMS-2**	**14.70**
TF 1RX 10AJ001	MS-90002	Line to P-P Grids	Pri: 600 ohms CT 150 ohms Sec: 135,000 ohms CT	15 dbm.	—	**AMS-3**	**14.10**
TF 1RX 16AJ001	MS-90003	Line to Line	Pri: 600 ohms CT 150 ohms Sec: 600 ohms CT 150 ohms	15 dbm.	—	**AMS-4**	**14.10**
TF 1RX 13AJ001	MS-90004	Single Plate to Line	Pri: 7600/4800 ohms Sec: 600 ohms CT/150 ohms	2W	40	**AMS-5**	**12.75**
TF 1RX 13AJ002	MS-90005	Single Plate to Voice Coil	Pri: 7600/4800 ohms Sec: 4/8/16 ohms	2W	40	**AMS-6**	**12.90**
TF 1RX 13AJ003	MS-90006	P-P Plates to Line	Pri: 15,000 ohms CT Sec: 600 ohms CT/150 ohms	2W	10	**AMS-7**	**12.48**
TF 1RX 13AJ004	MS-90007	P-P Plates to Line	Pri: 24,000 ohms CT Sec: 600 ohms CT/150 ohms	1W	20	**AMS-8**	**12.90**
TF 1RX 13AJ005	MS-90008	P-P Plates to Line	Pri: 60,000 ohms CT Sec: 600 ohms CT/150 ohms	5W	20	**AMS-9**	**12.48**



CASE DIMENSIONS

Case Size	Dimensions in inches					
	A	B	C	D	E	S
AG	1	1	1⅜	—	—	¾
AH	1 5/16	1 5/16	1¾	—	—	1¼
AJ	1⅝	1⅝	2⅜	1 3/16	1 3/16	—
EA	1 15/16	1 13/16	2¾	1⅜	1¼	—
EB	1 15/16	1 13/16	2 7/16	1⅜	1¼	—
FA	2 5/16	2 1/16	3⅛	1 11/16	1 7/16	—

TRANSISTOR AUDIO TRANSFORMERS—TF4RX— — — — †

Designed and built in accordance with MIL–T–27A, Grade 4, Class R operating temperature; Life Expectancy X (10,000 hrs. min.).

Maximum Operating Altitude 50,000 ft.

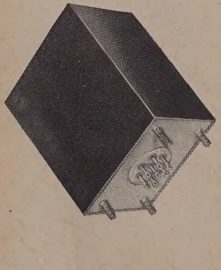
Application	Impedance in Ohms		Max. Pri. D.C. Ma.	DC Res. in Ohms		Power in Watts	Case† Size	Family†	Wt. Lbs.	Catalog No.	Net Price
	Pri.	Sec.		Pri.	Sec.						
Input	600 CT	10	20	42	.8	.05	AG	17	2½ oz.	**TAMS-1**	**$10.20**
Interstage	100 CT	10 CT	100	4.3	.8	.25	AH	17	5 oz.	**TAMS-2**	**10.20**
Interstage	100	1000 CT	100	5.8	45	.25	AJ	17	11 oz.	**TAMS-3**	**10.20**
Interstage	500 CT	5000 CT	12	37	250	.03	AJ	17	11 oz.	**TAMS-4**	**10.80**
Driver	1000	200 CT	10	400	115	.05	AG	17	2 oz.	**TAMS-5**	**13.29**
Driver	2000	200 CT	5	720	115	.05	AG	12	2 oz.	**TAMS-6**	**13.29**
Driver	100	100 CT	100	12	12	.5	EB	17	1 lb.	**TAMS-7**	**10.20**
Output	9800	15	2	640	2	.05	AG	12	2 oz.	**TAMS-8**	**12.90**
Output	1000	4/8/16	10	180	3.5	.2	AG	17	2½ oz.	**TAMS-9**	**13.50**
Output	2000 CT	4/8/16	—	250	4	.2	AG	12	2½ oz.	**TAMS-10**	**13.98**
Output	48 CT	8/16	275	5	1.5	5	FA	17	1½ lb.	**TAMS-11**	**12.48**
Output	20 CT	8	500	.55	.35	10	AJ	17	12 oz.	**TAMS-12**	**10.20**

†Refer to Family and Case Size.

MIL-T-27A SATURABLE TRANSFORMERS (Magnetic Amplifiers)

Application: For use with 2 phase 115v. 400 cycle Servo-Motors.

Saturable Transformer Ratings Maximum Altitude 50,000 ft.
All Primaries 115v., 400 cycles: TF4RX40YY



Catalog No.	STH-3		STH-5	STH-10	STH-18
Power Output in watts	2.7	3.5	5	10	18
Voltage Output, volts	26	115	115	115	115
Load Resistance in ohms	250	3800	2640	1320	775
Tuning Capacitor, MFD	.28	.19	.4	.6	1.0
Primary Current in amps	.085	.1	.13	.24	.35
Control Current, MA	8	8	8	8	8
Control Coil Res. (Per Coil) in ohms	2900	2900	3100	4200	5600
Control Coil By pass Capacitors, MFD	.1	.1	.1	.1	.1
Base Area, Dimensions, in.	1 5/16 x 1 13/16		1½ x 2⅛	1¾ x 2½	2⅛ x 3⅛
Height, in.	2 7/16		2¾	2 31/32	3⅜
Mtg. Ctrs., in.	¾ x 1 15/16		1 x 1⅝	1⅛ x 1⅞	1½ x 2½
Actual Wt., Lbs.	¾		1	1½	2½
Typical Servo-Motor Load: Kearfott	R-118	R-119-2	R-110-2	R-111-2	R-112-2
G. M. Labs.	—	665-54-19	665-54-47 665-52-48	665-53-40 665-53-41	665-53-44 665-53-45
Net Price	**$27.00**		**$28.50**	**$32.25**	**$37.50**

SATURABLE TRANSFORMERS

are designed and built in accordance with MIL–T–27A, Grade 4, Class R operating temperature and life expectancy X (10,000 hrs. min.).

400 CYCLE STEP-DOWN TRANSFORMER—TF1RX01YY

Y-Y connected, HP3–140 is identical to CHICAGO Specification No. 9926A in size and construction, but is rated at 140 va. instead of 88 va. Primary is 115 volts per phase, 3-phase, 400 cycles. Designed primarily for aircraft applications.

Catalog No.	Secondary		Case Size	Terminal Type	Weight Lbs.	Net Price
	Volts	Va. Cap.				
HP3-140	28.5	140	17	R	3	**$26.10**

All secondary A.C. voltages ± 3%

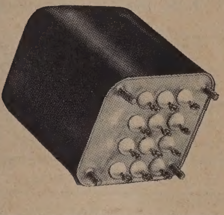
CHICAGO

MILITARY STANDARD AND MIL-T-27A
400 CYCLE
TRANSFORMERS AND REACTORS

CHICAGO STANDARD TRANSFORMER CORPORATION

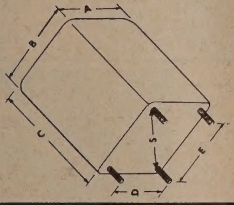
MILITARY STANDARD CASES

Designed and built in accordance with MIL-T-27A, Grade 4, Class S* operating temperature and life expectancy X (10,000 hours minimum). Maximum operating altitude 70,000 feet. The complete line is housed in Chicago's one piece drawn-steel cases. Outside case dimensions and mounting dimensions are within the tolerance of the Military Standard Specifications. *High Temperature Operation 85° C. ambient, 45° C. rise.



MS CASE DIMENSIONS

Case Size	Dimensions in Inches					
	A	B	C	D	E	S
AH	1 5/16	1 5/16	1¾	—	—	1¼
AJ	1⅝	1⅝	2⅜	1 1/16	1 3/16	—
EA	1 15/16	1 13/16	2¾	1⅜	1¼	—
EB	1 15/16	1 13/16	2 7/16	1⅜	1¼	—
FA	2 5/16	2 1/16	3⅛	1 11/16	1 7/16	—
GA	2¾	2⅜	3 13/16	2⅛	1¾	—
GB	2¾	2⅜	2 13/16	2⅛	1¾	—
HA	3 1/16	2⅝	4¼	2 19/64	1 55/64	—
JB	3 9/16	3 1/16	3⅞	2⅝	2⅛	—
KA	3 15/16	3⅜	5¼	3	2 7/16	—
KB	3 15/16	3⅜	4 5/16	3	2 7/16	—



POWER TRANSFORMERS—TF4SX03— —† (Cap. Input. All pri. 105/115/125 V., 380-1000 c.

High Voltage Secondary		Rectifier Filament		Other Filaments		Case† Size	Wt. Lbs.	Catalog Number	Net Price
A.C. Volts	D.C. Ma.	Volts	Amps.	Volts	Amps.				
255-0-255	40	5.0	2.0	6.3 CT	2.0	GB	1½	4PMS-40	$22.92
270-0-270	55	5.0	2	6.3 CT	2	GB	1¾	4PMS-55	23.34
335-0-335	70	5.0	2	6.3 CT	3	GB	1¾	4PMS-70	25.50
330-0-330	85	5.0	2.0	6.3 CT	3.0	GA	2½	4PMS-85	25.77
345-0-345	105	5.0	2.0	6.3 CT	3.5	GA	2¼	4PMS-105	28.59
375-0-375	120	5.0	3	6.3 CT	4	GA	3	4PMS-120	29.70
370-0-370	150	5.0	3.0	6.3 CT	4.0	JB	4¼	4PMS-150	38.70
				6.3 CT	1.0				
440-0-440	165	5.0	3	6.3	7.5	KB	6½	4PMS-165	49.05
				6.3	3				
				6.3	3				
				6.3	0.6				
450-0-450	200	5.0	2	6.3	4	KB	6¼	4PMS-200A	44.70
				6.3	4				
				6.3	0.6				
550-370-75-0	300	5.0	6	6.3 CT	5				
75-370-550				6.3 CT	1	KA	7½	4PMS-300‡§	49.05

FILTER REACTORS—TF4SX04— —†

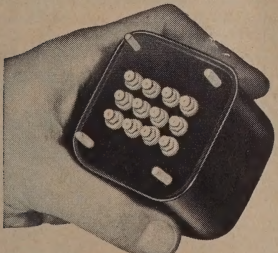
Inductance (henries)	Maximum D.C. Ma.	D.C. Resistance (ohms)	Insulation Volts RMS	Case† Size	Wt. Lbs.	Catalog Number	Net Price
2.0	40	190	2,500	AH	¼	4RMS-240	$ 8.82
2.0	55	160	2,500	AH	¼	4RMS-255	8.10
2.0	70	165	2,500	AJ	¾	4RMS-270	7.80
2.0	85	125	2,500	AH	¼	4RMS-285	8.70
2.0	105	110	2,500	EB	½	4RMS-2105	8.10
2.0	120	100	2,500	EB	1	4RMS-2120	8.70
2.0	150	95	2,500	EB	1	4RMS-2150	8.40
2.0	165	90	2,500	EB	1	4RMS-2165	8.70
2.0	200	73	2,500	FA	2	4RMS-2200	9.75
2.0	300	47	2,500	HA	4	4RMS-2300§	12.75

FILAMENT TRANSFORMERS— TF4SX01 — —†(All Prim. 105 . 115 . 125 V., 380-1000 cys.

Sec. Volts	Sec. Amps.	Insulation Volts RMS	Case Size	Wt. Lbs.	Catalog No.	Net Price
6.3 CT	3	2,500	EB	1	4FMS-63	$16.65
6.3 CT	5.5	2,500	EA	1¼	4FMS-65	17.25
6.3 CT	10	2,500	FA	2	4FMS-610	19.80
6.3 CT	20	2,500	GA	2½	4FMS-620	24.30

‡Reactor Input. †Refer to Case Size. All secondary A.C. voltages ±3% §Max. operating Alt. 50,000 ft.

400 CYCLE TRANSFORMERS AND REACTORS (YY ALTERNATE CASES) (Max. Alt. 10,000 ft.)



CASE DIMENSIONS

Case Size	Dimensions in Inches				
	A	C	D	H	K
3	1 3/16	1 3/16	2	1 5/32-2 Studs	
7	1⅜	1⅜	2	1 5/16-2 Studs	
10	1⅞	1¾	2 3/16	1 5/16	1 1/16
11	1⅞	1¾	2 7/16	1 5/16	1 1/16
12	2¼	2⅛	2 11/16	1 9/16	1⅜
13	2¼	2⅛	2 15/16	1 9/16	1⅜
15	2½	2⅜	3 5/16	1 13/16	1 11/16
16	2⅞	2 11/16	3½	2	1⅞
17	2⅞	2 11/16	3¾	2	1⅞
20	3 11/16	3 5/16	4 5/16	2⅝	2⅜
21	3 11/16	3 5/16	4 11/16	2⅝	2⅜

POWER TRANSFORMERS (All Primaries 105/115/125 V., 380-1000 Cycles)—TF4SX03YY

High Voltage Secondary		Rect. Fil.		Other Fil.		Case Size	Wt. Lbs.	Catalog Number	Net Price
A. C. Volts	D.C. Ma.	Volts	Amps.	Volts	Amps.				
270-0-270	55	5.0	2	6.3 CT	2	13	1½	4PHC-55	$20.10
335-0-335	70	5.0	2	6.3 CT	3	13	1¾	4PHC-70	20.40
375-0-375	120	5.0	3	6.3 CT	4	17	2½	4PHC-120	23.70
440-0-440	165	5.0	3	6.3	7.5				
				6.3	3				
				6.3	3				
				6.3	0.6	20	6	4PHC-165	38.70
450-0-450	200	5.0	2	6.3	4				
				6.3	4				
				6.3	0.6	20	5¾	4PHC-200A	35.70
550-370-75-0	300	5.0	6	6.3 CT	5				
75-370-550				6.3 CT	1	21	6½	4-PHR-300	40.50

FILTER REACTORS—TF4SX04YY

Inductance (henries)	Maximum D.C. Ma.	D.C. Resistance (Ohms)	Insulation Volts RMS	Case Size	Wt. Lbs.	Catalog Number	Net Price
2.0	55	160	2,500	3	¼	4RH-255	$6.60
2.0	70	165	2,500	7	½	4RH-270	6.90
2.0	120	100	2,500	11	1	4RH-2120	8.10
2.0	165	90	2,500	11	1½	4RH-2165	7.80
2.0	200	73	2,500	13	1¾	4RH-2200	8.70
2.0	300	47	2,500	16	3¼	4RH-2300	10.50

FILAMENT TRANSFORMERS (All Prim. 105/115/125 V., 380-1000 cycles—TF4SX04YY)

Sec. Volts	Sec. Amps.	Insulation Volts RMS	Case Size	Wt. Lbs.	Catalog Number	Net Price
6.3 CT	3	2,500	10	¾	4FH-63	$14.70
6.3 CT	5.5	2,500	11	1	4FH-65	15.90
6.3 CT	10	2,500	13	1¾	4FH-610	17.70
6.3 CT	20	2,500	15	2½	4FH-620	19.50

400 CYCLE STEP-DOWN TRANSFORMER (See Page 1346)

CHICAGO

NEW EQUIPMENT

AUDIO TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

TRANSISTOR AUDIO TRANSFORMERS

Here are the smallest iron core audio transformers ever built. They weigh less than 1/10 ounce and are no larger than the transistors they power. Write for Bulletin 462 showing typical circuit application.

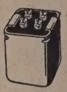
Part No.	Application	Pri. Imp.	Sec. Imp.	Pri. DC Res.	Sec. DC Res.	Dimensions (±.015")	Weight in ounces	Net Price
UM-110	Interstage	20,000	1,000	1675	285	¼" x ⅜" x ⅜"	0.07	**$5.70**
UM-111	Output or matching	1,000	50/60	120	9.0	⅜" x ⅜" x ⅜"	0.10	**3.90**
UM-112	High imp. mic. input	200,000	1,000	4000	195	⅜" x ⅜" x ⅜"	0.10	**6.30**
UM-113	Interstage	20,000	1,000	1350	205	⅜" x ⅜" x ⅜"	0.10	**4.35**
UM-114	Output or matching	500	50/60	70	9.0	⅜" x ⅜" x ⅜"	0.10	**3.90**

TRANSISTOR TRANSVERTER TRANSFORMERS

For converting 12 V. battery voltage to plate supply voltage. See Chicago Bulletin CT-43 for schematics and parts lists.

Part No.	Application	Mtg. Type	Dimensions	Weight	Net Price
DCT-1	Converts 12 VDC to 275 VDC at 125 DCMA	C	1⅞" x 2⁷⁄₁₆" x 2³⁄₁₆"	14 oz.	**$13.21**
DCT-2	Converts 12 VDC to 250 VDC at 275 DCMA or 500 VDC at 165 DCMA	C	2¼" x 2¹¹⁄₁₆" x 2¹¹⁄₁₆"	1.5 lbs.	**14.95**

MINIATURE HIGH FIDELITY AUDIO TRANSFORMERS



Chicago-Stancor Tinytrans are miniature transformers made with nickel steel laminations. They have an exceptional frequency response for units of this size; ±1 db. 30-15,000 cps, Maximum level 0 db. Write for Bulletin 463 showing frequency response curves on these transformers.

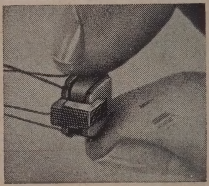
These units are sealed and potted in ⅞" square, anodized aluminum cases with phenolic terminal boards. Total height, including terminals, is 1¼". The case has two 2-56 threaded inserts, ¹¹⁄₁₆" centers, for easy chassis mounting. The entire transformer weighs only 1.3 ounces.

Part No.	Application	Primary Impedance	Secondary Impedance	Net Price
TT-11	Mic., pickup or line to single grid	50, 200/250, 500/600	50,000	**$8.49**
TT-12	Mic., pickup or line to push-pull grids	50, 200/250, 500/600	50,000	**8.85**
TT-13	Dynamic mic. to single grid	7.5/30	50,000	**8.07**
TT-14	Single plate to single grid	15,000* (No DC in primary	60,000	**6.96**

PUBLIC ADDRESS RANGE TRANSFORMERS

Frequency Response within ±1 db, 50 to 10,000 Cycles

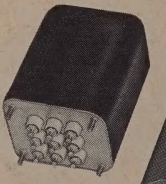
Driver and output transformers in this CHICAGO series are designed for three general power levels to fit a wide range of application. Up-to-date secondary impedances match 600 or 150-ohm lines, 16, 8, and 4-ohm speakers. (16/8/4-ohm taps also suitable for 20/6/3.2-ohm speakers.) Output transformers have tertiary windings for 10% inverse feedback that minimizes distortion and provides extra audio watts without loss of fidelity.



TYPE UM

DRIVERS H-Type—TF4RX12YY (Cat. No. PHD), S-Type (Cat. No. PSD) and C-Type (Cat. No. PCD) Mountings

Application	Primary Impedance	Max. D.C. Pri.	Ratio, Pri. to ½ Sec.	Case Size	Wt. Lbs.	Cat. No.	Net Price
P-P Plates to P-P Grids	20,000 ohms (Pri. CT)	10 ma.	3:1	14	2¼	**PHD-10** **PSD-10** **PCD-10**	$ 9.00 6.90 5.01
P-P Plates to P-P Grids	20,000 ohms (Pri. CT)	25 ma.	3:1	15	2¼	**PHD-25** **PSD-25** **PCD-25**	10.90 7.50 10.90
P-P Plates to P-P Grids	5,000/10,000 ohms (Pri. CT)	100 ma.	5:1	18	4½	**PHD-100**	14.85



YY CASE MOUNTING

S-TYPE MOUNTING

OUTPUTS H-Type—TF4RX13YY (Cat. No. PHO), S-Type (Cat. No. PSO) and (Cat. No. PCO) Mountings

Application	Impedances	Typical Output Tubes	Class	Max. Audio Watts	Max. D.C. Pri. CT	Case Size Wt.	Cat. No.	Net Price
P-P Plates to Line or Voice Coil	Primary: 5,000 ohms, CT Secondary: * 600/150/16/8/4 ohms	6B4G, 6L6, 6V6, etc.	A_1 AB	20	120 ma.	20: 6½ lbs.	**PHO-80** **PSO-80** **PCO-80**	$18.57 20.78 8.10
P-P Plates to Line or Voice Coil	Primary: 10,000 ohms, CT Secondary: * 600/150/16/8/4 ohms	6V6, 6F6, 6K6, etc.	AB, AB_1	15	200 ma.	19: 5 lbs.	**PSO-150** **PCO-150**	11.40 7.50
P-P Plates to Line or Voice Coil	Primary: 6,000 ohms, CT Secondary: * 600/150/16/8/4 ohms	Two 6L6's, Four 6V6's, or similar	B, AB_2†	30	250 ma.	22: 9 lbs.	**PSO-200** **PCO-200**	13.95 8.70

*Has tertiary winding to provide 10% inverse feedback.
†For low distortion, use fixed bias.

See Pages 1345 & 1360 For Mounting Dimensions

C-TYPE MOUNTING

CHICAGO

NEW EQUIPMENT

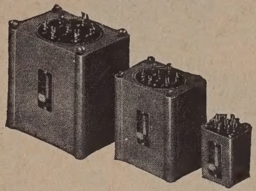
AUDIO TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

HF AND WF SERIES HIGH FIDELITY AUDIO TRANSFORMERS

HF Series

These units have a wide frequency response of 20 to 20,000 cps with ±1 db. Correct design reduces harmonic and intermodulation distortion to a negligible amount. Balanced construction minimizes hum pickup. Chicago-Stancor impregnation insures long life. Cases are finished in gray enamel and have four threaded holes at each end for flush mounting. Stud-type terminals are plainly marked for easy identification.



LOW IMPEDANCE TO GRID

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	Max. Level	Hum-Pickup Reduction¶	Mtg. §	Net Price
HF-20	Low Imp. Mic., Pickup, or Line to Grid	50, 125/150, 200, 250, 333, 500/600	60,000 overall, in two sections	15 db	−74 db	HF-1	**$35.03**
HF-20X	Low Imp., Mic., Pickup, or Line to Grid	50, 125/150, 200, 250, 333, 500/600	50,000	14 db	−92 db‡	HF-1	**42.43**
HF-22	Low Imp. Mic., Pickup, or Line to P.P. Grids	50, 125/150, 200, 250, 333, 500/600	120,000 overall, in two sections	15 db	−74 db	HF-1	**23.70**
HF-22X	Low Imp. Mic., Pickup, or Line to P.P. Grids	50, 125/150, 200, 250, 333, 500/600	80,000 overall, in two sections	14 db	−92 db‡	HF-1	**43.27**
INTERSTAGE							
HF-29	Sgl. Pl. to P.P. Grids—Split secondary	15,000	95,000 (Turn ratio 2.5:1 overall)	17 db	−50 db	HF-1	**$18.72**
HF-31	Single Plate to P.P. Grids. Split pri. and sec.	15,000	135,000 (Turn ratio 3:1 overall)	14 db	−74 db	HF-1	**23.70**
HF-32	P.P. Plates to P.P. Grids Split pri. and sec.	30,000 Plate to Plate	80,000 (Turn ratio 1.6:1 overall)	26 db	−50 db	HF-2	**34.50**
MIXING							
HF-40	Low Imp. Mixer, Mic., Pickup, or Line to Line	50, 125/150, 200, 250, 333, 500/600	50, 125/150, 200, 250, 333, 500/600	17 db	−74 db	HF-1	**$39.48**
OUTPUT							
HF-65†	P.P. 2A3's, 6L6's, etc. to Line or Voice Coil	3,000 or 5,000 Plate to Plate	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125, 200, 250, 333 or 500	20 watts	......	HF-2	**$25.50**
HF-67†	P.P. 2A3's, 6L6's, etc. to Voice Coil	3,000 or 5,000 Plate to Plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	20 watts	......	HF-2	**20.70**
HF-68†	P P. Par. 2A3's, 6A5G's, 300A's, 6A3's to Line or Voice Coil	1,500 or 2,500 Plate to Plate	500, 333, 250, 200, 125, 50, 30, 20, 15 ,10, 7.5, 5, 2.5, 1.2	40 watts	......	HF-3	**39.00**

§HF-1 Case: *Shpg. wt., 3.0 lbs. Height overall,* $3\frac{1}{4}''$*. Base area,* $2\frac{9}{16}\text{x}3\frac{1}{16}''$*. Mtg. ctrs.,* $1\frac{15}{16}\text{x}2\frac{7}{16}''$*.* HF-2 Case: *Shpg. wt., 7.5 lbs. Height overall,* $4\frac{1}{8}''$*. Base area,* $3\frac{3}{16}''\text{x}4\frac{3}{16}''$*. Mtg. ctrs.,* $2\frac{11}{16}''\text{x}3\frac{11}{16}''$*.* HF-3 Case: *Shpg. wt., 15.0 lbs. Height overall,* $4\frac{11}{16}''$*. Base area,* $4\frac{11}{16}''\text{x}5\frac{9}{16}''$*. Mtg. ctrs.,* $4\frac{3}{16}''\text{x}5\frac{1}{32}''$.

†Response ±1 db from 25 to 20,000 cps.

¶As compared to standard uncased units.

‡Quadruple alloy magnetic shied.

WF Series

These units are of the same outstanding quality as the HF Series above, and, with the exception of two units, have a frequency response of 30–20,000 cps within ±2 db. The WF-21 and WF-35 have a response within ±2 db from 50–20,000 cps and have multiple alloy shields for extremely low hum pickup. All WF units are cased in the WF-6 type cast case with phenolic terminal board and four tapped holes for flush mounting. Overall dimensions are 2″ high with $1\frac{1}{2}''$ x $1\frac{1}{2}''$ base area. Mounting centers are $1\frac{5}{32}''$ x $1\frac{5}{32}''$. Shipping weight is 0.6 lbs.

INPUT

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	Ne Price
WF-20	Low Imp. Mic., Pickup, or Line to Grid	50, 125/150, 200, 250, 333, 500/600	50,000	**$11.70**
WF-21	Low Imp. Mic., Pickup, or L. to Sgl. or P.P. Grids	50, 200, 500	50,000	**12.48**
WF-22	Low Imp. Mic., Pickup, or Line to P.P. Grids	50, 125/150, 200, 250, 333, 500/600	80,000 overall, in two sections	**11.70**
WF-24	Dynamic Microphone to 1 or 2 Grids	30	50,000 overall, in two sections	**10.62**
INTERSTAGE				
WF-26	Single Plate to Single Grid	15,000	60,000 (Turn ratio 2:1)	**$ 9.87**
WF-28	Sgl. Pl. to 2 Grids. Can use split pri. for P.P. Pl.	15,000	80,000 overall (Turn ratio 2.3:1 overall)	**10.92**
LOW LEVEL OUTPUT				
WF-34	Single Plate to Line	15,000	50, 125/150, 200, 250, 333, 500/600	**$11.70**
WF-36	P.P. Low Level Plates to Line	30,000 Plate to Plate	50, 125/150, 200, 250, 333, 500/600	**11.70**
WF-35	Single Plate to Multiple Line Primary D.C. 8.0 ma. Response from 50–20,000 cps within ±2 db	15,000	50, 125/150, 200, 250, 333, 500/600	**10.92**
MIXING				
WF-30	Low Imp. Mixer, Mic., Pickup, or Line to Line	50, 125/150, 200, 250, 333, 500/600	50, 125/150, 200, 250, 333, 500/600	**11.70**

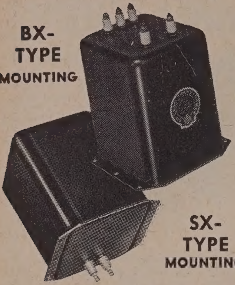
CHICAGO

NEW EQUIPMENT

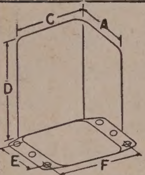
TRANSFORMERS and REACTORS

for Broadcast, Amateur and Industrial Application

CHICAGO STANDARD TRANSFORMER CORPORATION

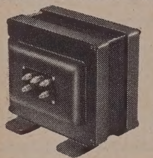

BX- TYPE MOUNTING

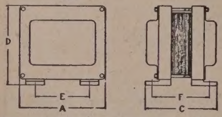
SX- TYPE MOUNTING



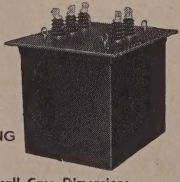
CASE DIMENSIONS FOR BX-, S- & SX-TYPE MOUNTINGS

Case Size	A	C	D	E	F
	Dimensions in Inches				
22	$4\frac{9}{16}$	4⅛	$5\frac{5}{16}$	2½	4¾
24	$5\frac{5}{16}$	$4\frac{13}{16}$	$6\frac{1}{16}$	3½	5⅜
26	6⅛	5¼	$7\frac{1}{16}$	4¼	6
28	$7\frac{1}{16}$	6⅛	$8\frac{1}{16}$	5	7


FS TYPE MOUNTING



Size	A	D	E	F	C
	Dimensions in Inches				
60	7½	7	4¾	5½	$6\frac{5}{16}$
61	7½	7	4¾	$5\frac{5}{16}$	6⅞
62	7½	7	4¾	6¼	7⅛
63	7½	7	4¾	$6\frac{11}{16}$	7½
64	$7\frac{13}{16}$	10	8⅝	6	7¾
65	7½	7	4¾	6⅞	$7\frac{13}{16}$
71	8⅞	8½	5½	6½	8⅛
81	11½	10½	7½	8¼	10¼
84	11½	10½	7½	$11\frac{13}{16}$	$13\frac{13}{16}$
90	$13\frac{13}{16}$	12¾	9	8⅞	10⅜


WC- TYPE MOUNTING

Overall Case Dimensions:
H—31½" W—26½" D—23½"

LARGE CAPACITY TRANSFORMERS AND REACTORS

For Broadcast, Communications and Industrial Use

DRIVER TRANSFORMERS

Recommended Application: In:	Tubes:	Ratio Pri./½ Sec.	Mtg. Type	Case Size	Wt. Lbs.	Cat. No.	Net Price
250-Watt Transmitter	From two 2A3's, 6B4's, or similar P-P Plates to Class B 838's, 805's, 203-A's, etc.	3.5:1	B*	20	6½	**BD-1**	$20.70
1-KW Transmitter	From four 2A3's, 6B4's, or similar P-P Plates to two 833-A's or similar P-P Grids	3:1	†	24	12¼	**BD-2**	25.50
5-KW Transmitter	From four 845's, two 152-TL's or similar P-P Plates to 891-R's or similar P-P Grids	3.5:1	BX	26	24	**BD-3**	58.50

†Similar to SX-Type mounting, but with screw terminals on a terminal board.
*B-Type mounting, but with screw terminals.

MODULATION TRANSFORMERS

Recommended Application In:	With:	Impedances (Pri. Plate to Plate)	Modulator Tubes	Mtg. Type	Size	Wt. Lbs.	Cat. No.	Net Price
250-Watt Transmitter	Driver Transformer #BD-1	Pri: 7500 ohms CT Sec: 5000 ohms	203-A, 838 805, etc.	BX	26	25	**BM-1**	$37.50
1-KW Transmitter	Driver Transformer #BD-2	Pri: 9000 ohms CT Sec: 7500 ohms	833-A, etc.	FS	84	175	**BM-2**	325.47
500-Watt Transmitter	Driver Transformer #BD-2 Class C Amplifier	Pri: 11000 ohms CT Sec: 5500 ohms	833-A, etc.	FS-1		105	**BM-4**	114.00

MODULATION REACTORS

Recommended Application: In:	With:	Inductance	D.C. Ma.	Mtg. Type	Size	Wt. Lbs.	Cat. No.	Net Price
250-Watt Transmitter	Mod. Transformer #BM-1	65 hy.	250	BX	28	41	**BR-1**	$ 57.30
1-KW Transmitter	Mod. Transformer #BM-2	100 hy.	500	FS	81	165	**BR-2**	300.00
5-KW Transmitter	Mod. Transformer #BM-3	120 hy.	900	WC		1100	**BR-4**	

PLATE TRANSFORMERS

Primary: Volts	Max. VA.	Secondary: A.C. Load Volts	D.C. Volts after Filter	D.C. Ma.	Mtg. Size	Mtg. Type	Wt. Lbs.	Cat. No.	Net Price
115-230	185	675-0-675 575-0-575	500 400	250	22	S	12	**P-45**	$15.30
115-230	250	900-0-900 735-0-735	750 600	250	22	S	13½	**P-67**	16.80
115-230	310	1150-0-1150 870-0-870	1000 750	250	60	FS	37	**P-107**	53.70
115-230	360	1425-0-1425* 600-0-600	1250 400	150 200	24	S	26	**P-1240**	25.50
115-230	550	1710-0-1710 1430-0-1430	1500 1250	300	63	FS	43	**P-1512**	57.30
115-230	915	2820-0-2820 2260-0-2260	2500 2000	300	71	FS	71	**P-2520**	76.50
115-230	1600	2900-0-2900 2320-0-2320	2600 2100	500	64	FS	95	**P-2126**	135.60
115-230	1850	3450-0-3450 2850-0-2850	3000 2500	500	81	FS	137	**P-3025**	236.66
115-230	3050	4600-0-4600 4050-0-4050 3400-0-3400	4000 3500 3000	600	90	FS	150	**P-4353**	225.00

*Both secondaries may be rectified simultaneously.

FILTER REACTORS

Inductance in Henrys	Max. D.C. Ma.	D.C. Resistance, Ohms	Insulation Test Volts	Mtg. Type	Mtg. Size	Wt. Lbs.	Cat. No.	Net Price
10	500	40	9,000	FS	62	35	**R-105**	$39.90
10	300	40	7,500	SX	26	22	**R-103**	19.50
6	700	35	10,000	FS	61	35	**R-67**	51.74
6	500	35	9,000	FS	60	35	**R-65**	44.65
6	300	35	7,500	SX	24	16½	**R-63**	23.31

Splatter Chokes for High Level "Clipper" Filters

Can withstand high peak voltages. Has tapped windings to cover an inductance from .02 to 1.5 henries at relatively constant Q. Eliminates splatter, caused by heavy modulation; limits band width to 3,000 cycles, effectively increases "get through" ability of phone signals, and prevents negative peak clipping.

Type	D.C. Ma.	Insulation Volts	Inductance In Henries	Mounting Type	Mounting Size	Net Price
SR-300	300	7,500	.02 to 1.5 Hy	BX	22	$26.59
SR-500	500	10,000	.02 to 1.5 Hy	BX	24	30.26

Low Pass Filter No. LPF-1

For attenuating frequencies above 3,000 cycles in low level speech amplifiers. Operates out of a 15,000 ohm source, *e.g.*, the plate of 6C5, 6J5, etc. when its 60,000 ohm secondary is connected to an equal impedance output. Operates at signal levels up to —8 db. Complete with operating instructions. S type mtg. Case size 13. (See pg. 1343).

Net Price......................$22.72

CHICAGO

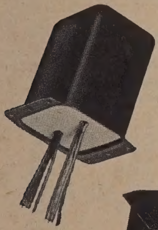
NEW EQUIPMENT

AUDIO TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

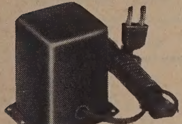
YY CASE

S-TYPE MOUNTING

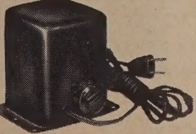


C-TYPE MOUNTING

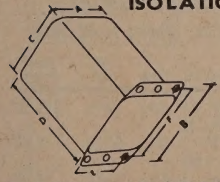
BX MOUNTING



STEP-DOWN



ISOLATION



DIMENSIONS for S, SX, STEP-DOWN and ISOLATION TRANSFORMERS

Case Size	Dimensions in Inches A	B	C	D	E	F
16	2⅞	3½	2 11/16	3½	2	3⅛
20	3 11/16	4 7/16	3 5/16	4 5/16	2¾	3⅞
21	3 11/16	4 7/16	3 5/16	4 11/16	2¾	3⅞
22	4 9/16	5¼	4 ⅛	5 5/16	2½	4¾
24	5 5/16	5⅞	4 13/16	6 1/16	3½	5⅜
26	6 ⅛	6½	5¼	7 1/16	4¼	6

COMMUNICATIONS RANGE AUDIO TRANSFORMERS

Frequency Response within ±1 db, 200 to 3,500 Cycles

These transformers are specifically designed for use in receiving and transmitting equipment such as amateur, police, railroad, and aircraft types, where clear voice reproduction is desired.

INPUTS H-Type-TF4RX--YY† (Cat. No. CIH), S-Type (Cat. No. CIS) and C-Type (Cat. No. CIC) Mountings*

Application	Impedances: Primary—Secondary	Case Size	Wt. Lbs.	Cat. No.	Family	Net Price
Low Level Line to Single or Push-Pull Grids	Pri: 600/150 ohms CT *Sec: 100,000 ohms CT	9	¾	**CIH-1** **CIS-1** **CIC-1**	10 — —	$14.70 15.01 7.50
Low Level S. B. or D. B. Mike to Sgl. or P-P Grids	Pri: 125/50 ohms @ 80 ma. Sec. 125,000 ohms CT	9	¾	**CIH-2** **CIS-2** **CIC-2**	11 — —	10.50 6.30 3.90

**Split and balanced windings: may be used singly or push-pull. †Refer to family.

OUTPUTS H-Type-TF4RX13YY (Cat. No. COH), S-Type (Cat. No. COS) and C-Type (Cat. No. COC) Mountings*

Application	Impedances: Pri.—Sec.	Typical Audio Tubes	Pri. Class	Max. Case Watts	Max. Pri. D.C.	Case Size	Wt. Lbs.	Cat. No	Net Price
Sgl. P. to Line or Speaker	Pri.: 5000 ohms Sec. ohms: 600/150/16/8/4	6L6, 6V6, 25A6	A	5	55 ma.	14	2¼	**COH-1** **COS-1** **COC-1**	$10.50 7.50 4.20
Sgl. Pl. to Line or Speaker	Pri: 8000 ohms Sec. ohms: 600/150/16/8/4	6F6, 6V6, 6K6	A	5	55 ma.	14	2¼	**COH-2** **COS-2** **COC-2**	11.58 7.50 4.20

DRIVER H-Type (Cat. No. CDH), S-Type (Cat. No. CDS) and C-Type (Cat. No. CDC) Mountings*

Application	Primary Impedance	Max. D.C. Pri. CT	Ratio, Pri. to ½ Sec.	Case Size	Wt. Lbs.	Cat. No.	Net Price
P-P Plates (2A3's, etc.) to P-P Grids	5,000 ohms (Pri. CT)	100 ma.	3:1	17	3½	**CDS-1** **CDC-1**	$9.30 5.01

*Mounting Dimensions on Page 1350.

MODULATION TRANSFORMERS—Class B Plates to Class C Load

Catalog No.	Typical Mod. Tubes	Impedances Primary-Secondary	D.C. Ma. Pri.	D.C. Ma. Sec.	Power Level	Mounting Type	Mounting Size	Wt., Lbs.	Net Price
CMS-1	203A's, 805's, 75TL's, 203Z's	Pri: 9000/6700 ohms CT Sec: 8000/6000/4000 ohms	350	350	250-350 watts	SX	26	22	$ 39.00
CMS-3	810's, 822's, 4-250A's, etc.	Pri: 18,000/12,000 ohms CT Sec: 6250 ohms	500	500	500.750 watts	FS†	64†	43	105.00

†Mounting Dimensions and Illustration on Page 1316.

STEP-DOWN TRANSFORMERS—Primary, 50/60 cycles

CHICAGO step-down autotransformers solve the problem of operating standard 117-volt radios, amplifiers, and various electrical apliances from 220-volt power sources. They are particularly well adapted to use in Central and South American countries, where 220-volt lines are frequently found, and where the **Sealed-in-Steel** construction protects them against corrosion caused by excessive humidity. Input side is equipped with 8-foot, rubber-covered cord and plug. Output side has standard female receptacle.

Catalog No.	Input Voltage	Output Voltage	Rating, Continuous Duty	Case Size	Wt., Lbs.	Net Price
SD-50	220-250	110-125	50 watts	16	2¾	$ 5.34
SD-100	220-250	110-125	100 watts	20	4¼	6.66
SD-150	220-250	110-125	150 watts	22	7	7.80
SD-250	220-250	110-125	250 watts	22	8¾	9.45
SD-500	220-250	110-125	500 watts	24	14½	12.00
SD-1000	220-250	110-125	1000 watts	26	22½	19.50

ISOLATION TRANSFORMERS—Primary, 50/60 cycles

A rotary switch on each CHICAGO isolation transformer adjusts to either of three primary voltages, 125/115/105 volts. With the unit operating on a 115-volt line, the three switch positions also provide varying secondary voltages, 105/115/125 volts isolated from line.

Eight-foot, rubber-covered cord and plug on primary, standard female receptacle on secondary.

Catalog No.	Input Voltage	Output Voltage	Rating, Continuous Duty	Case Size	Wt., Lbs.	Net Price
IS-50	105/115/125	125/115/105*	50 watts	21	5	$ 8.25
IS-100	105/115/125	125/115/105*	100 watts	22	8½	11.85
IS-150	105/115/125	125/115/105*	150 watts	24	12½	14.10
IS-250	105/115/125	125/115/105*	250 watts	24	18¼	16.65

*With 115-volt primary.

FERRANTI

TRANSFORMERS

FERRANTI

This group of transformers and filter reactors are designed to meet the full requirements of MIL-T-27A specifications, and are hermetically sealed in standard MIL-T-27A case sizes. They provide the highest standard of quality necessary for military and professional requirements.

The range includes the specific types standardized by the Armed Services Standards Agency as well as a group of standard types for 400 cycle power supplies.

Transformers and reactors meeting MIL-T-27A specifications Grade 1 through 6, Class Q, S, T, or U can be supplied on special order.

A wide range of transformers and reactors of all varieties are regularly manufactured, including the more economical types for commercial use.

If the ratings you require are not listed, we can offer prompt competitive quotations on designs to your specifications.

All manufacturing, testing and inspection in accordance with applicable requirements of Military Specifications.

MILITARY STANDARD FILAMENT TRANSFORMERS Input 105/115/125 Volts 60 Cycles ± 10%

Cat. No.	MIL Types	Military Standards No.	Sec. Volts	Sec. Amps	Test Volts	Case	Wt. Lbs.	List Price
FMF 20	TF1RX01EB002 or TF4RX01EB002	MS90016-1 or 2	2.5	3	2500	EB	1	$16.80
FMF 21	TF1RX01GB003 or TF4RX01GB003	MS90017-1 or 2	2.5	10	2500	GB	2.125	22.60
FMF 22	TF1RX01FB004 or TF4RX01FB004	MS90018-1 or 2	5.0	3	2500	FB	1.5	18.50
FMF 23	TF1RX01HB005 or TF4RX01HB005	MS90019-1 or 2	5.0	10	2500	HB	3.125	24.60
FMF 24	TF1RX01FB006 or TF4RX01FB006	MS90020-1 or 2	6.3	2	2500	FB	1.25	18.50
FMF 25	TF1RX01GB007 or TF4RX01GB007	MS90021-1 or 2	6.3	5	2500	GB	2.125	21.00
FMF 26	TF1RX01JB008 or TF4RX01JB008	MS90022-1 or 2	6.3	10	2500	JB	5	29.00
FMF 27	TF1RX01KB009 or TF4RX01KB009	MS90023-1 or 2	6.3	20	2500	KB	7.75	35.00
FMF 28	TF1RX01JB012 or TF4RX01JB012	MS90024-1 or 2	2.5	10	10,000	JB	4.25	27.00
FMF 29	TF1RX01KB013 or TF4RX01KB013	MS90025-1 or 2	5.0	10	10,000	KB	6	34.00

MILITARY STANDARD PLATE AND FILAMENT TRANSFORMERS

Input 105/115/125 Volts 60 Cycles ± 10%. Choke Input Filter

Cat. No.	MIL Types	Military Standards No.	FIL 1	FIL 2	Plate (RMS)	Current	Case	Wt. Lbs.	List Price
FMP 30	TF1RX03HA001 or TF4RX03HA001	MS90026-1 or 2	6.3/5v 2a	6.3v 3a	200-100-0-100-200	.07A.DC	HA	3.75	$33.00
FMP 31	TF1RX03JB002 or TF4RX03JB002	MS90027-1 or 2	6.3/5v 2a	6.3v 4a	325-0-325	.07A.DC	JB	5.125	29.00
FMP 32	TF1RX03KB006 or TF4RX03KB006	MS90028-1 or 2	5v 3a	6.3v 5a	325-0-325	.150A.DC	KB	7.25	34.00
FMP 33	TF1RX03LB003 or TF4RX03LB003	MS90029-1 or 2	5v 3a	6.3v 8a	400-0-400	.175A.DC	LB	9.5	40.00
FMP 34	TF1RX03MB004 or TF4RX03MB004	MS90030-1 or 2	5v 3a	6.3v 8a	450-0-450	.250A.DC	MB	12.125	46.00
FMP 35	TF1RX02KB001 or TF4RX02KB001	MS90031-1 or 2			350-0-350	.250A.DC	KB	7.125	31.00
FMP 36	TF1RX02LB002 or TF4RX02LB002	MS90032-1 or 2			550-0-550	.250A.DC	LB	9.5	36.00
FMP 37	TF1RX02NB003 or TF4RX02NB003	MS90036-1 or 2			800-0-800	.250A.DC	NB	14.75	48.00

400 Cycle Transformers

FILAMENT TRANSFORMERS

Input 115 Volts 380-1200 Cycles

Cat. No.	Sec. Volts	Sec. Amps	Test Volts	Case	Wt. Lbs.	List Price
FF 440	6.3 ct	2	1500	AJ	.625	$16.20
FF 41	6.3 ct	5	1500	EA	1	19.60
FF 42	6.3 ct	5	2500	FA	2	22.00
FF 43	6.3 5/6.3	5 3	2500 2500	EB	.95	19.00
FF 44	5 ct	6	2500	EA	1	19.60
FF 45	2.5 ct	10	5000	HB	2.75	25.60

PLATE AND FILAMENT TRANSFORMERS

Input 115 Volts 380-1200 Cycles. Choke Input Filter

Cat. No.	Plate RMS	DC Amps	Filaments	Case	Wt. Lbs.	List Price
FP 40	250-0-250	.070	5/6.3V 2A 6.3Vct 3A	GB	1.875	$27.50
FP 41	325-0-325	.120	5V 3A 6.3 ct 5A	JB	4.625	33.00
FP 42	400-0-400	.200	5V 3A 6.3Vct 6A	KB	6.625	37.50
FP 43	350-0-350	.250	——	JB	4.625	27.50
FP 44	500-0-500	.250	——	KB	6.25	30.00

FERRANTI ELECTRIC, INC.

TRANSFORMER DIVISION
BROOKLYN, N. Y.

FERRANTI

TRANSFORMERS

FERRANTI

MILITARY STANDARD AUDIO TRANSFORMERS

Frequency Response 300-10,000 c.p.s. ± 2DB

Weight — 0.72 Lbs. Max. Altitude — 50,000 Ft. Max.

All units are hermetically sealed in MIL-T-27A case size AJ and are designed to meet the full requirements of the MIL-T-27A specification. All manufacturing, testing and inspection in accordance with applicable requirements of Military Specifications.

Cat. No.	Function	Type Designation	Military Standards No.	IMPEDANCE LEVEL (in ohms)		Max. Power Level	Pri. D.C. Per Side in MA	Max. D.C. Unbal-ance	List Price
				Primary	Secondary				
FMA 550	Interstage, Single or P.P. plates to single or P.P. grids	TF1RX15AJ001	MS 90000	10,000 CT	90,000 split and CT	+15 DBM	10	10	$20.80
FMA 551	Matching, 600 ohm line to voice coil	TF1RX16AJ002	MS 90001	600 split	4, 8, 16	2 watt	0	0	20.30
FMA 552	Input, 600 ohm line to single or P.P. grids	TF1RX10AJ001	MS 90002	600 split	135,000 CT	+15 DBM	0	0	20.80
FMA 553	Matching, 600 ohm line to 600 ohm line	TF1RX16AJ001	MS 90003	600 split	600 split	+15 DBM	0	0	20.30
FMA 554	Output, single plate 7600 ohm or 4800 ohm to 600 ohm line	TF1RX13AJ001	MS 90004	7600 tap @ 4800	600 split	2 watt	40	40	19.80
FMA 555	Output, single plate 7600 ohm or 4800 ohm to voice coil	TF1RX13AJ002	MS 90005	7600 tap @ 4800	4, 8, 16	2 watt	40	40	19.80
FMA 556	Output, single or P.P. plates to 600 ohm line	TF1RX13AJ003	MS 90006	15,000 CT	600 split	2 watt	10	10	19.80
FMA 557	Output, P.P. plates to 600 ohm line	TF1RX13AJ004	MS 90007	24,000 CT	600 split	1 watt	10	1	20.30
FMA 558	Output, P.P. plates to 600 ohm line	TF1RX13AJ005	MS 90008	60,000 CT	600 split	0.5 watt	10	1	20.30

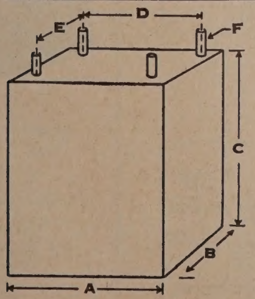
FILTER REACTORS

FOR 60 CYCLE POWER SUPPLIES

Cat. No.	DC Amps	Induct. Henries	Resist. Ohms	Test Volts	Case	Wt. Lbs.	List Price
FC 410	.020	30	930	1500	AJ	.625	$14.50
FC 11	.070	15	260	2500	GB	2.25	14.00
FC 12	.150	10	110	2500	JB	4.75	20.00
FC 13	.200	8	90	2500	KB	6.25	21.00
FC 14	.300	10	95	2500	LB	9.625	28.50

FOR 400 CYCLE POWER SUPPLIES

Cat. No.	DC Amps	Induct. Henries	Resist. Ohms	Test Volts	Case	Wt. Lbs.	List Price
FC 440	.070	3	225	1500	AJ	.625	$14.00
FC 41	.120	3	145	2000	EB	1	15.00
FC 42	.200	3	115	2000	FB	1.5	15.50
FC 43	.250	3	65	2000	GB	2.25	17.50



MIL-T-27A CASE AND MOUNTING DIMENSIONS

Case	A	B	C	D	E	F
AJ	1 5/8	1 5/8	2 3/8	1 3/16	1 3/16	6-32
EA	1 15/16	1 13/16	2 3/4	1 3/8	1 1/4	6-32
EB	1 15/16	1 13/16	2 7/16	1 3/8	1 1/4	6-32
FA	2 5/16	2 1/16	3 1/8	1 11/16	1 7/16	6-32
FB	2 5/16	2 1/16	2 1/2	1 11/16	1 7/16	6-32
GB	2 3/4	2 3/8	2 13/16	2 1/8	1 3/4	6-32
HA	3 1/16	2 5/8	4 1/4	2 19/64	1 55/64	8-32
HB	3 1/16	2 5/8	3 3/16	2 19/64	1 55/64	8-32
JB	3 9/16	3 1/16	3 7/8	2 5/8	2 1/8	8-32
KB	3 15/16	3 3/8	4 5/16	3	2 7/16	10-32
LB	4 5/16	3 11/16	4 1/2	3 5/16	2 11/16	10-32
MB	4 11/16	4	4 15/16	3 11/16	3	1/4-20
NB	5 1/16	4 5/16	5 1/2	4 1/16	3 5/16	1/4-20

FERRANTI ELECTRIC, INC.

TRANSFORMER DIVISION
BROOKLYN, N. Y.

BROADCAST QUALITY COMPONENTS

Modern high fidelity broadcasting and transcription equipment requires the use of "Audio" — transformers of utmost quality and reliability in performance. Freed broadcast quality components have been designed to meet these requirements. They are wide band, high fidelity components with low distortion throughout the audio range and beyond. Frequency response for most units is in the order of ± 1DB from 20 to 20,000 cps and for high level output transformers in the order of ± 0.5 DB from 20 to 30,000 cps.

These units feature astatic construction, longitudinal balance, high efficiency, uniform response, and constant impedance match throughout the audio frequency spectrum. Maximum neutralization of stray fields is accomplished through the use of hum balanced coil structures and multiple alloy shielding. Equal high fidelity response is assured on every tap of any universal impedance winding without line reflection of transverse coupling.

All broadcast quality components are thoroughly impregnated in a special non-hygroscopic varnish and fully encapsulated with a moisture proof, high melting compound.

All broadcast quality components are **hermetically sealed**.

All units are tested in accordance with and meet "EIA" standards.

Almost all units are designed with universal impedance windings to insure greatest versatility.

A full line of high Q reactors complements this series of audio transformers.

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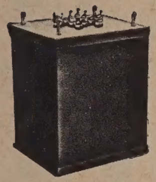
BROADCAST QUALITY COMPONENTS

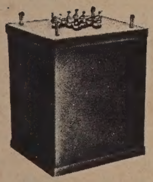
CASE DIMENSIONS

DC-2B CASE



Height: 3½"
Width: 2⅝"
Depth: 2¼"
Mtg. Cen.: 2"x1¾"
Studs: 4 8-32
Knockout: 1½" dia

DC-4A CASE



Height: 3¾"
Width: 3⅜"
Depth: 3"
Mtg. Cen.: 2½"x2½"
Studs: 4 8-32
Knockout: 2" dia.

INPUT TRANSFORMERS

Frequency Response 20-20,000 C.P.S. ±1.0 DB

Catalog No.	Application	Impedance Level Ohms Primary	Secondary	Maximum Power Level DBM	Ratio	Equivalent Shielding D.B.	Maximum Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Case Number
QGA 1	Universal 500 ohm line to push-pull grids	U-500	100,000 split	+10	1:14.1	70	0	0	DC-2B
QGA 2	Universal 500 ohm line to push-pull grids	U-500	100,000 split	+10	1:14.1	90	0	0	DC-2B
QGA 3	Universal 500 ohm line to single or push-pull grids	U-500	60,000 split	+10	1:11	70	0	0	DC-2B
QGA 4	Universal 500 ohm line to single or push-pull grids	U-500	60,000 split	+10	1:11	90	0	0	DC-2B
QGA 5	Universal low impedance microphone, pickup or line to single or push-pull grids	U-60	60,000 split	+10	1:31.6	70	0	0	DC-2B
QGA 6	Universal low impedance microphone, pickup or line to single or push-pull grids	U-60	60,000 split	+10	1:31.6	90	0	0	DC-2B

U-60 IMPEDANCES IN OHMS:
2.5, 5, 10, 15, 20, 30, 40, 60

U-500 IMPEDANCES IN OHMS:
50, 125, 200 CT, 250, 330, 500 CT.
125 and 500 ohms can be used for 150 and 600 ohms.

HYBRID AND REPEAT COILS

Frequency Response 20-20,000 C.P.S. ±1.0 DB

Catalog No.	Application	Impedance Level Ohms Primary	Secondary	Maximum Power Level D.B.M.	Ratio	Equivalent Shielding D.B.	Maximum Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Case Number
QGA 7	Hybrid. Unbalanced 500/600 ohm lines to 600 ohms.	Total Pri 1200/1000 split 300/250 300/250	600/150 or 500/125 split	+10	1.41:1	70	0	0	DC-2B
QGA 8	Hybrid. Balanced 500/600 ohm lines to 600 ohms. Longitudinal balance 70 DB	Total Pri 1200/1000 split 300/250 C.T. 300/250 C.T.	600/150 or 500/125 split	+10	1.41·1	70	0	0	DC-2B
QGA 9	Hybrid. Unbalanced 500/600 ohm lines to triode plate. No. D.C. in secondary.	Total Pri 1200/1000 split 300/250 300/250	15,000 or 12,500	+10	1:3.54	70	0	0	DC-2B
QGA 10	Hybrid. Balanced 500/600 ohm lines to triode plate. No. D.C. in secondary. Longitudinal balance 70 DB.	Total Pri 1200/1000 split 300/250 C.T. 300/250 C.T.	15,000 or 12,500	+10	1:3.54	70	0	0	DC-2B
QGA 11	Repeat coil for low frequency ringing. Longitudinal balance 70 DB.	600/500 split	600/500 split Balanced		1·1	90	0	0	DC-A4

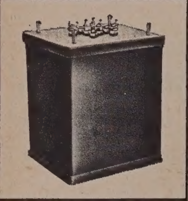
INTERSTAGE TRANSFORMERS

Frequency Response 20-20,000 C.P.S ±1 0 D.B.
*50-20,000 C P.S. ±1.0 D.B.

Catalog No.	Application	Impedance Level Ohms Primary	Secondary	Maximum Power Level D.B.M.	Ratio	Equivalent Shielding D.B.	Maximum Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Case Number
QGA 12	Bridging line to single or push-pull grids.	10,000	60,000 split	+10	1:2.45	70	0	0	DC-2B
QGA 13	Single 6C4, 6J5 ½ 6SN7 triode to push-pull grids. Shunt feed.	15,000	60,000 split	+18	1:2	45	0	0	DC-2B
QGA 14*	Single 6C4, 6J5, ½ 6SN7 triode to push-pull grids.	15,000	60,000 split	+18	1:2	45	8	8	DC-2B
QGA 15	Push-pull triode plates to push-pull class A grids.	20,000 split	45,000 split	+25	1:1.5	30	8	0.5	DC-4A

BROADCAST QUALITY COMPONENTS

CASE DIMENSIONS



DC-2B CASE

Height: 3½″
Width: 2⅝″
Depth: 2¼″
Mtg. Cen.: 2″x1¾″
Studs: 4 8-32
Knockout: 1½″ dia.

DC-4 CASE

Height: 4″
Width: 3⅛″
Depth: 3″
Mtg. Cen.: 2½″x2½″
Studs: 4 8-32
Knockout: 2″ dia.

DC-4A CASE

Height: 3¾″
Width: 3⅛″
Depth: 3″
Mtg. Cen.: 2½″x2½″
Studs: 4 8-32
Knockout: 2″ dia.

DC-5B CASE

Height: 4½″
Width: 4⅛″
Depth: 3½″
Mtg. Cen.: 3⅛″x2⅝″
Studs: 4 10-32
Knockout: 2½″ dia.

DC-6A CASE

Height: 4⅞″
Width: 5″
Depth: 4⅛″
Mtg. Cen.: 3¾″x3″
Studs: 4 10-32
Knockout: 3″ dia.

DC-6B CASE

Height: 6″
Width: 5″
Depth: 4⅛″
Mtg. Cen.: 3¾″x3″
Studs: 4 10-32
Knockout: 3″ dia.

DC-7A CASE

Height: 5⅜″
Width: 5½″
Depth: 5″
Mtg. Cen.: 4⅜″x3¾″
Studs: 4 ¼″-20
Knockout: 3″ dia.

LOW LEVEL OUTPUT, MIXING, MATCHING TRANSFORMERS

Frequency Response 20-20,000 C.P.S. ±1.0 DB
*50-20,000 C.P.S. ±1.0 DB

Catalog No.	Application	Impedance Level Ohms		Maximum Power Level D.B.M.	Ratio	Equivalent Shielding D.B.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Case Number
		Primary	Secondary						
QGA 16	Single plate or bridging line to Universal 500 ohm line. Shunt feed.	15,000	U-500	+18	5.5:1	70	0	0	DC-2B
QGA 17*	Single plate to Universal 500 ohm line.	15,000	U-500	+18	5.5:1	70	8	8	DC-2B
QGA 18	Push-pull triode plates to Universal 500 ohm line.	20,000 C.T.	U-500	+25	6.3:1	70	8	0.5	DC-2B
QGA 19	Mixing, low impedance microphone or line to Universal 500 ohm line.	U-500	U-500	+12	1:1*	70	0	0	DC-2B
QGA 20	Line level mixing and matching.	U-500	U-500	+30	1:1	70	0	0	DC-2B
QGA 21	High mu triode photo-cell to Universal 500 ohm line.	100,000	U-500	+12	14.1:1	70	0	0	DC-2B

DRIVER TRANSFORMERS

Frequency Response 20-20,000 C.P.S. ±1.0 DB

Catalog No.	Application	Primary Impedance Ohms	Maximum Power Level D.B.M.	Turn Ratio Pri.: ½ Sec.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Case Number
QGA 22	Universal 500 ohm line to Class B grids.	U-500	+40	1:1	0	0	DC-4A
QGA 23	Push-pull 6J5, etc. to push-pull 2A3's, 6L6's, etc.	20,000 C.T.	+30	3.2:1	8	0.5	DC-2B
QGA 24	Push-pull 2A3, 6B4 to push-pull 809, T2-40, 4/125A.	5,000 C.T.	+40	3.1:1	50	5	DC-4A

HIGH LEVEL OUTPUT TRANSFORMERS

Frequency Response 20-30,000 C.P.S. ±0.5 DB

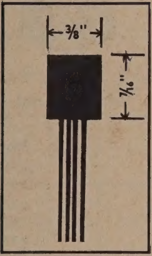
Catalog No.	Application	Impedance Level Ohms		Maximum Power Level		Ratio	Max. D.C. per Side Ma.	D.C. Unbalance Ma.	Case Number
		Primary	Secondary	DBM	Watts				
QGA 25	PP 5881, 6B4, 6L6, 300A, 275A to Universal 500 ohm line.	5,000 split	U-500	+42	15	3.16:1	70	7	DC-5B
QGA 26	As above to Universal voice coil.	5,000 split	U-16	+42	15	17.7:1	70	7	DC-5B
QGA 27	Push-pull 6V6, 6AQ5, 7C5, 6N7 to Universal 500 ohm line.	8,000 split	U-500	+42	15	4:1	50	5	DC-5B
QGA 28	As above to Universal voice coil.	8,000 split	U-16	+42	15	22.4:1	50	5	DC-5B
QGA 29	P.P. 6F6, 6V6, 6AQ5, 7C5, 7B5, 6AR5, 6K6, 6L6 to Universal 500 ohm line.	10,000 split	U-500	+42	15	4.47:1	40	4	DC-5B
QGA 30	As above to Universal voice coil.	10,000 split	U-16	+42	15	25:1	40	4	DC-5B
QGA 31*	PP. 807, 1614, KT-66, (Williamson Amplifier) to Universal 500 ohm line.	10,000 split	U-500	+45.5	36	4.47:1	60	6	DC-6A
QGA 32*	As above to Universal voice coil.	10,000 split	U-16	+45.5	36	25:1	60	6	DC-6A
QGA 33	P.P. Parallel, 6A5G, 300A to Universal 500 ohm line.	2,500 split	U-500	+45.5	36	2.24:1	100	10	DC-6A
QGA 34	As above to Universal voice coil.	2,500 split	U-16	+45.5	36	12.5:1	100	10	DC-6A
QGA 35	P.P. 6L6 or P.P. Parallel 6L6 to Universal 500 ohm line.	3,800 split	U-500	+47	50	2.75:1	140	14	DC-6B
QGA 36	As above to Universal voice coil.	3,800 split	U-16	+47	50	15.4:1	140	14	DC-6B
QGA 37	High level multiple line to Universal voice coil.	U-500	U-16	+42	15	5.6:1	0	0	DC-5B
QGA 38	High level multiple line to Universal voice coil.	U-500	U-16	+47	50	5.6:1	0	0	DC-6B
QGA 39*	5881 or 6146 Class AB1 to Universal 500 ohm line.	6,600 split	U-500	+45.5	36	3.64:1	70	7	DC-6A
QGA 40*	5881 or 6146 Class AB1 to Universal voice coil.	6,600 split	U-16	+45.5	36	20:1	70	7	DC-6A
QGA 41	6550 AB1 or 6146 AB2. to Universal 500 ohm line.	5,000 split	U-500	+50	100	3.16:1	140	14	DC-7A
QGA 42	6550AB1 or 6146AB2 to Universal voice coil.	5,000 split	U-16	+50	100	17.7:1	140	14	DC-7A

***These units supplied with taps for applying screen feedback.** **U-500 IMPEDANCES IN OHMS. 50, 125, 200 C.T., 250, 330, 500 C.T.**
U-16 IMPEDANCES IN OHMS: 2, 4, 8, 12, 16. **125 and 500 ohms can be used for 150 and 600 ohms.**

SUBMINIATURE TRANSISTOR TRANSFORMERS

Frequency Response: ± 2 DB, 300 ~ to 10 KC
Power Level: 500 MW

These high quality, subminiature transistor transformers are designed for maximum efficiency and minimum size. These units are constructed to meet MIL-T-27A specifications. Encapsulation and potting compounds provide maximum protection and reliability.



Catalog No.	MIL Type	IMPEDANCE (OHMS)		Unbalanced DC in Primary (Ma.)
		Primary	Secondary	
TSA-1	TF4RX17YY	150-600 *	3.2	6-3 *
TSA-2	TF4RX17YY	150-600 *	12	6-3 *
TSA-3	TF4RX17YY	150-600 *	150-600 *	6-3 *
TSA-4	TF4RX17YY	300-1200 *	3.2	4-2 *
TSA-5	TF4RX17YY	300-1200 *	12	4-2 *
TSA-6	TF4RX17YY	300-1200 *	150-600 *	4-2 *
TSA-7	TF4RX17YY	500-2000 *	3.2	3-1.5 *
TSA-8	TF4RX17YY	500-2000 *	12	3-1.5 *
TSA-9	TF4RX17YY	500-2000 *	150-600 *	3-1.5 *
TSA-10	TF4RX13YY	1K-4K *	3.2	2-1 *
TSA-11	TF4RX13YY	1K-4K *	12	2-1 *
TSA-12	TF4RX13YY	1K-4K *	150-600 *	2-1 *
TSA-13	TF4RX13YY	2.5K-10K *	3.2	1-.5 *
TSA-14	TF4RX13YY	2.5K-10K *	12	1-.5 *
TSA-15	TF4RX13YY	2.5K-10K *	150-600 *	1-.5 *
TSA-16	TF4RX13YY	10K	10K (Ct.)	.5
TSA-17	TF4RX13YY	50K	500	.3
TSA-18	TF4RX13YY	50K	6	.3
TSA-19	TF4RX13YY	100K	1.2K	.2
TSA-20	TF4RX13YY	50K	1.2K	.3
TSA-21	TF4RX13YY	25K	1.2K	.4
TSA-22	TF4RX17YY	150-600 *	1.2K	6-3 *
TSA-23	TF4RX13YY	25K	600	.4
TSA-24	TF4RX13YY	4K	150-600 *	1
TSA-25	TF4RX17YY	20K	50	.4
TSA-26	TF4RX17YY	1K	50	2
TSA-27	TF4RX16YY	100K	1K	0

***Indicates a split winding; can be used either in parallel (First values) or in series connection with a Ct. (Second values).**

FREED TRANSFORMER COMPANY, INC.

MINIATURE AUDIO TRANSFORMERS

These high quality, miniature transformers feature hermetically sealing for maximum protection from moisture penetration with subsequent electrolysis and corrosion of fine wires. While primarily intended for non-military equipment, these units are constructed in accordance with MIL-T-27A Specifications.

Frequency response: ± 2DB 30-20,000 CPS.
***± 2DB 200-10,000 CPS.**

Catalog No.	Application	MIL Type	Impedance Level Ohms		Max. Power Level DBM	Ratio	Equivalent Shielding D.B.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Case Number
			Primary	Secondary						
PMA 1	Line or microphone to single or push-pull grids.	TF4RX10YY	50/200/500	60,000 C.T.	+8	1:11		0	0	DM-20
PMA 2	Dynamic microphone or speaker voice coil to single or P.P. grid.	TF4RX10YY	4/8	60,000 C.T.	+8	1:86.6		0	0	DM-20
PMA 3	Line or microphone to single or push-pull grids. Magnetically shielded.	TF4RX10YY	50/200/500	60,000 C.T.	+8	1:11	30	0	0	DM-20
PMA 4	Single triode plate to single or push-pull grids.	TF4RX10YY	15,000	60,000 C.T.	+8	1:2		0	0	DM-20
PMA 5*	Single triode plate to push-pull grids.	TF4RX12YY	15,000	60,000 C.T.	+8	1:2		2	2	DM-20
PMA 6	Single triode plate to multiple line.	TF4RX16YY	15,000	50/200/500	+8	5.48:1		0	0	DM-20
PMA 7*	Single triode plate to multiple line.	TF4RX12YY	15,000	50/200/500	+8	5.48:1		2	2	DM-20
PMA 8	Push-pull triode plates to multiple line.	TF4RX12YY	30,000 C.T.	50/200/500	+8	7.75:1		2	0.25	DM-20
PMA 9	Crystal mike or pickup to multiple line.	TF4RX16YY	60,000 C.T.	50/200/500	+8	11:1		0	0	DM-20
PMA 10	Mixing or matching.	TF4RX16YY	50/200	50/200/500	+8	1:1.50		0	0	DM-20
PMA 11	Parallel Feed Reactor.	TF4RX20YY	40 hy, 3 ma dc, 3500 ohms d. c. resistance.							DM-20

MINIATURE TRANSISTOR TRANSFORMERS

These high quality miniature transformers are high efficiency audio components featuring hermetically sealing for maximum protection against electrolysis and subsequent corrosion of fine wires caused by moisture penetration. The units are constructed in accordance with MIL-T-27A Specifications.

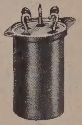
Transistor Transformers can also be supplied in an open or encapsulated type of construction.

Catalog No.	MIL Type	Impedance Ohms				Frequency Response		Unbalanced Primary Current	D.C. Resistance Ohms		Max. Power Output	Case No.
		Pri.	Ct.	Sec.	Ct.	±D.B.	C.P.S.	M.A./D.C.	Pri.	Sec.	M.W.	
TMA 1*	TF4RX16YY	500		500		1	200 to 15,000	0	18	24	250	DM-20
TMA 2*	TF4RX12YY	50K		500		2	300 to 15,000	3	2,200	49	250	DM-20
TMA 3*	TF4RX13YY	50K		6		2	300 to 15,000	3	2,200	.55	250	DM-20
TMA 4*	TF4RX12YY	100K		1.2K	√	3	300 to 15,000	1	2,790	95	100	DM-20
TMA 5*	TF4RX12YY	25K		1.2K	√	2	200 to 15,000	3	1,740	110	250	DM-20
TMA 6*	TF4RX12YY	50K		1.2K	√	2	300 to 15,000	3	2,200	106	250	DM-20
TMA 7*	TF4RX17YY	600/150		1.2K	√	1	200 to 15,000	4	30	95	250	DM-20
TMA 8*	TF4RX12YY	25K		600		2	200 to 15,000	3	1,740	61	250	DM-20
TMA 9*	TF4RX12YY	4K	√	600/150	√	1	200 to 15,000	1	274	43	250	DM-20
TMA 10*	TF4RX13YY	2K		3.2		2	200 to 15,000	10	160	.28	250	DM-20
TMA 11*	TF4RX13YY	4K	√	3.2		1	200 to 15,000	1	274	.26	250	DM-20
TMA 12*	TF4RX13YY	20K		50		2	300 to 15,000	4	1,340	2.9	250	DM-20
TMA 13*	TF4RX17YY	1K		50		2	300 to 15,000	8	42.6	2.5	250	DM-20
TMA 14*	TF4RX16YY	100K		1K		2	300 to 15,000	0	1,550	16.8	100	DM-20
TMO 15		20K		50		2	300 to 15,000	1	2,215	7.25	40	open
TMO 16		20K		600		2	300 to 15,000	1	2,215	102	40	open
TMO 17		1K		50		2	300 to 15,000	3	93	5.6	60	open
TMO 18		100K		1K		2	300 to 15,000	0	3,000	57.5	100	open
TMA 19*	TF4RX13YY	1K		3.2		2	200 to 15,000	20	38	.19	1000	DM-01

***When ordering open units specify TMO — when ordering encapsulated units specify TMC.**

CASE DIMENSIONS

DM-20 CASE



Height: 1 9/16"
Dia.: 15/16"
Mtg. Cen.: 1 1/8" to 1 7/32"
Mtg. 2 holes: .166 x .120
Flange Lgth.: 1 13/32"
Flange D.: .975"

CASE DIMENSIONS

DM-O1 CASE

Height: 2"
Width: 1 1/2"
Depth: 1 1/2"
Mtg. Cen.: 1 1/16"x1 1/16"
Studs: 4 6-32
Knockout: 1 3/8" dia.

UNCASED DIMENSIONS

TMO 1 TO 14

Height: 13/16"
Width: 1 1/16"
Depth: 21/32"
Mtg. Cen.: 1 3/8"
2 Mtg. Holes: .120 dia.
Flange Lght.: 1 5/8"

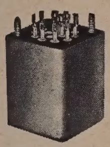
TMO 15 TO 18

Height: 21/32"
Width: 9/16"
Depth: 13/16"

TMO-19

Height: 13/16"
Width: 1 15/32"
Depth: 1 1/4"
Mtg. Cen.: 1 3/4"
2 Mtg. Holes: 3/16" dia.
Flange Lgth.: 2 1/16"

CASE DIMENSIONS



DM-01B CASE

Height: 2¼″
Width: 1½″
Depth: 1½″
Mtg. Cen.: 1 1/16″x1 1/16″
Studs: 2 6-32
Knockout: 1⅜″ dia.

PROFESSIONAL GRADE COMPONENTS

This group of components has been designed for use in high fidelity and professional equipment and for public address service. Freed has developed this series of units employing the latest design techniques and the best commercially available materials. Except for units carrying unbalanced direct current the frequency response is ± 1 DB from 30 to 15,000 cps. All units feature excellent performance characteristics combined with minimum size and weight.

All units are vacuum varnished and then potted in compound to insure long life and trouble free performance.

Professional Grade components are supplied cased. Upon request these units can be supplied open or in shell type construction.

All cased Professional Grade Components supplied with terminals meet "EIA" standards

Transformers PGA 1 through PGA 10 are supplied in hermetically sealed cases.

INPUT TRANSFORMERS

Frequency Response 30-15,000 C.P.S. ±1.0 DB

Catalog No.	Application	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Maximum Power Level DBM	Ratio	Equivalent Shielding D.B.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Case Number
PGA 1	Universal 500 ohm line to single grid.	U-500	50,000	+12	1:10	50	0	0	DM-01B
PGA 2	Universal 500 ohm line to push-pull grids.	U-500	60,000 split	+12	1:11	50	0	0	DM-01B
PGA 3	Universal 500 ohm line to push-pull grids.	U-500	100,000 split	+12	1:14.1	50	0	0	DM-01B
PGA 4	Bridging line to single grid.	10,000	60,000	+12	1:2.45	50	0	0	DM-01B
PGA 5	Bridging line to push-pull grids.	10,000	60,000 center tap	+12	1:2.45	50	0	0	DM-01B
PGA 6	Low level line matching.	U-500	U-500	+18	1:1	50	0	0	DM-01B

LOW LEVEL OUTPUT AND MIXING TRANSFORMERS

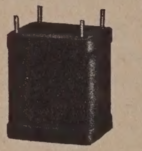
Frequency Response 30-15,000 C.P.S. ±1.0 DB

Catalog No.	Application	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Maximum Power Level DBM	Ratio	Max. Pri. D.C. Per Side Ma.	D.C. Unbalance Ma.	Case Number
PGA 7	Single triode plate to Universal 500 ohm line. Shunt feed.	15,000	U500	+18	5.48:1	0	0	DM-01B
PGA 8	Single triode plate to Universal 500 ohm line.	15,000	U500	+18	5.48:1	8	8	DM-01B
PGA 9	Push-pull triode plates to Universal 500 ohm	20,000 CT	U500	+30	6.32:1	8	0.5	DM-01B
PGA 10	Low level line matching.	U500	U500	+18	1.1	0	0	DM-01B

U-500 IMPEDANCES IN OHMS: 50, 125, 200 CT, 250, 330, 500 CT. 125 and 500 ohms can be used for 150 and 600 ohms.

PROFESSIONAL GRADE COMPONENTS

CASE DIMENSIONS



DC-1A CASE

Height: 2½″
Width: 2 1/16″
Depth: 1 13/16″
Mtg. Cen. 1½″x1¼″
Studs: 4 8-32
Knockout: 1¼″ dia.

DC-2A CASE

Height: 3″
Width: 2⅝″
Depth. 2¼″
Mtg. Cen. 2″x1¾″
Studs: 4 8-32
Knockout: 1½″x1⅜″

DC-2B CASE

Height: 3½″
Width: 2⅝″
Depth: 2¼″
Mtg. Cen. 2″x1¾″
Studs. 4 8-32
Knockout: 1½″x1⅜″

DC-4A CASE

Height: 3¾″
Width. 3⅛″
Depth: 3″
Mtg. Cen 2½″x2½″
Studs: 4 8-32
Knockout: 2″x1¾″

DC-5A CASE

Height· 3⅞″
Width: 4⅛″
Depth: 3½″
Mtg. Cen.. 3⅛″x2⅝″
Studs: 4 10-32
Knockout: 2½″x2″

DC-6A CASE

Height· 4⅞″
Width: 5″
Depth: 4⅛″
Mtg. Cen.: 3¾″x3″
Studs: 4 10-32
Knockout: 3″x2½″

DRIVER TRANSFORMERS

Frequency Response 30-15,000 C.P.S. ±1.0 DB

Catalog No.	Application	Primary Impedance Ohms	Turn Ratio Pri: ½ Sec.	Max. Level DBM	Max. Pri. D.C. Per Side Ma.	Max. D.C. Unbalance Ma.	Case Number
PGA 11	Universal 500 ohm line to push-pull grids.	U500	1:1	+40	0	0	DC-2A
PGA 12	Push-pull 6C4, 6SN7 triodes to push-pull 2A3, 6L6 grids.	20,000 C.T.	3.0:1	+30	10	1	DC-1A
PGA 13	Push-pull 2A3, 6B4, 6A5G to push-pull 809, TZ-40, 4/125A	5,000 C.T.	3.2:1	+40	50	5	DC-2A

All units supplied with leads.

HIGH LEVEL OUTPUT TRANSFORMERS

Frequency Response 30-15,000 C.P.S. ±1.0 DB

Catalog No.	Application	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Maximum Power Level DBM	Maximum Power Level Watts	Ratio	Max. Pri. D.C. Per Side Ma	DC Unbalance Ma	Case Number
PGA 14	P.P. 6K6, 6AR5, 7B5 Class A to Universal voice coil.	12,000 C.T.	U16	+40	10	27.4:1	40	4	DC-2B
PGA 15	P.P. 6F6 Cl. AB$_2$, P.P. 6V6, 6AQ5, 7C5, Cl. AB$_1$, 6L6 or 5881 Triode to Universal voice coil.	10,000 C.T.	U16	+43	20	25:1	50	5	DC-4A
PGA 16	P.P. 6L6 Cl. AB$_2$, self bias to Universal 500 ohm line.	9,000	U500	+44.8	30	4.23:1	50	5	DC-4A
PGA 17	As above to Universal voice coil.	9,000	U16	+44.8	30	23.7:1	50	5	DC-4A
PGA 18	P.P. 6N7 Cl. B, P.P. 6V6, 6AQ5, 7C5, Cl. AB$_1$ to Universal voice coil.	8,000 C.T.	U16	+41.8	15	22.3:1	45	5	DC-4A
PGA 19†	P.P. 6L6, fixed bias, Cl. AB$_1$, to Universal 500 ohm line.	6,600 C.T.	U500	+44.8	30	3.63:1	70	7	DC-4A
PGA 20	As above to Universal voice coil.	6,600 C.T.	U16	+44.8	30	20.3:1	70	7	DC-4A
PGA 21	P.P. 6L6 Cl. A, P.P. 2A3, 6A5G, 6B4 self bias P.P. Par. 6V6 Cl. AB$_1$ to Universal voice coil.	5,000 C.T.	U16	+43	20	17.7:1	80	8	DC-4A
PGA 22	P.P. Par 6L6 Cl. AB$_1$, self bias P. P. 6L6 Cl. AB$_2$ fixed bias PP807 Cl. AB$_2$ to Universal 500 ohm line.	4000 C.T.	U500	+47	50	2.83:1	100	10	DC-5A
PGA 23	As above to Universal voice coil.	4000 C.T.	U16	+47	50	15.8:1	100	10	DC-5A
PGA 24	P.P. 6A5G, 6B4, 2A3, fixed bias Universal voice coil.	3000 C.T.	U16	+41.8	15	13.7:1	75	7.5	DC-4A
PGA 25	P.P. Par. 807 Cl. AB$_2$ to Universal 500 ohm line.	2100 C.T.	U500	+51.8	150	2.05:1	240	12	DC-6A
PGA 26	P.P. Par 2A3, 6A5G, fixed bias 6B4, 300A Cl. AB$_1$, P.P. Par 6L6 Cl. A to Universal 500 ohm line.	1500 C.T.	U500	+44.8	30	1.73:1	160	15	DC-4A
PGA 27	As above to Universal voice coil.	1500 C.T.	U16	+44.8	30	9.7:1	150	15	DC-4A
PGA 28	Matching line to Universal voice coil.	U500	U16	+44.8	30	5.6:1	0	0	DC-4A
PGA 29	Matching line to Universal voice coil.	U500	U16	+47	50	5.6:1	0	0	DC-5A
PGA 30	Matching line to Universal voice coil.	U500	U16	+50	100	5.6:1	0	0	DC-6A

†Available with taps to apply screen feedback.

U-16 IMPEDANCES IN OHMS:
2, 4, 8, 12, 16

U-500 IMPEDANCES IN OHMS:
50, 125, 200 C.T., 250, 330, 500 C.T., 125 and 500 ohms can be used for 150 and 600 ohms.

*PGA 28, 29 & 30 supplied with terminals, all other units with leads.

A 70 volts level can be obtained for the following impedances:

500 ohms — 10 watts + 40 DBM
330 ohms — 15 watts + 42 DBM
250 ohms — 20 watts + 43 DBM
200 ohms — 25 watts + 44 DBM
125 ohms — 40 watts + 46 DBM
50 ohms — 100 watts + 50 DBM

FREED TRANSFORMER COMPANY, INC.

CASE DIMENSIONS

DM-01 CASE
Height: 2"
Width: 1½"
Depth: 1½"
Mtg. Cen.. 1 1/16"x1 1/16"
Studs: 4 6-32
Knockout: 1⅜" dia.

DC-1A
Height: 2½"
Width: 2 1/16"
Depth: 1 13/16"
Mtg. Cen.: 1½"x1¼"
Studs: 4 8-32
Knockout: 1¼" dia.

DC-2A
Height: 3"
Width: 2⅝"
Depth: 2¼"
Mtg. Cen.: 2"x1¾"
Studs: 4 8-32
Knockout: 1½"x1⅜"

DC-2B
Height: 3½"
Width: 2⅝"
Depth: 2¼"
Mtg. Cen.: 2"x1¾"
Studs: 4 8-32
Knockout: 1½"x1⅜"

DC-4A
Height: 3¾"
Width: 3⅛"
Depth: 3"
Mtg. Cen. 2½"x2½"
Studs: 4 8-32
Knockout: 2"x1⅜"

DC-5A CASE
Height: 3⅞"
Width: 4⅛"
Depth: 3½"
Mtg. Cen.: 3⅛"x2⅝"
Studs: 4 10-32
Knockout: 2½" x 2"

DC-5B
Height: 4½"
Width: 4⅛"
Depth: 3½"
Mtg. Cen. 3⅛"x2⅝"
Studs: 4 10-32
Knockout: 2½" dia.

DC-6A CASE
Height: 4⅞"
Width: 5"
Depth: 4⅛"
Mtg. Cen. 3¾"x3"
Studs: 4 10-32
Knockout: 3" dia

7B CASE
Height: 6¾"
Width: 5½"
Depth: 5"
Mtg. Cen. 4⅜"x3¾"
Studs: 4¼-20
Knockout: 3"x2½"

PROFESSIONAL GRADE COMPONENTS

FILTER REACTORS

Inductance measured at 50V, 60 cycles with rated direct current in the winding.

Catalog No.	Inductance in Henries	Rated Current D.C. Ma.	D.C. Resistance Ohms	Dielectric Test Voltage VRMS	Case Number
PGC 1	40	15	2000	1000	DM-01
PGC 2	12	40	400	1000	DC-1A
PGC 3	8	50	300	1000	DC-1A
PGC 4	20	50	425	2500	DC-2A
PGC 5	10	70	250	2500	DC-2A
PGC 6	6	100	160	2500	DC-2A
PGC 7	6	150	115	2500	DC-2B
PGC 8	10	150	160	2500	DC-4A
PGC 9	5.5	200	95	2500	DC-4A
PGC 10	10	200	150	2500	DC-4A
PGC 11	10	250	135	2500	DC-5B
PGC 12	8	300	95	2500	DC-5B
PGC 13	7	400	60	2500	DC-5B
		PARALLEL FEED	AUDIO CHOKES		
PGC 14	100	10	3500	1000	DM-01
PGC 15	30	50	650	1500	DC-2A
PGC 16	400	1	6000	1000	DM-01

SWINGING INPUT REACTORS

Catalog No.	Inductance in Henries*	Rated Current D.C. Ma.	D.C. Resistance Ohms	Dielectric Test Voltage VRMS	Case Number
PGC 17	5-20	150	160	1500	DC-4A
PGC 18	5-20	250	135	1500	DC-5B
PGC 19	3-15	300	95	1500	DC-5B
PGC 20	3-15	400	60	1500	DC-5B

***Inductance values for 100% and 10% of rated Direct Current**

POWER TRANSFORMERS

ALL PRIMARIES ARE FOR 115V., 50/60 c.p.s.

Temperature rises range from45° to 50°C.

Catalog No.	Py Va	Hi Volt	Choke Input D.C.V	Choke Input D.C. Ma	Cond. Input D.C.V.	Cond. Input D.C. Ma.	Bias Tap.	Rectifier	Fil. No. 1	Fil. No. 2	Fil. No. 3	Case No.
PGP 1	15	440V C.T.	Low flux densisity, hum-bucking. For Preamplifier service.		270	15		6X4	6.3VCT@0.6A	6.3V @ 0.3A		DC-2B
PGP 2	30	550V C.T.	Low flux density, hum-bucking. For Preamplifier service.		310	35		6X4	6.3VCT@0.6A	6.3VCT@0.9A		DC-4A
PGP 3	45	500V C.T.			270	40		6X4, 5Y3	5/6.3V @ 2A	6.3V @ 2A		DC-4A
PGP 4	57	600V C.T.			330	50		6X4, 5Y3	5/6.3V @ 2A	6.3V @ 2.5A		DC-4A
PGP 5	64	650V C.T.			370	50		6X4, 5Y3	5/6.3V @ 2A	6.3V @ 3A		DC-4A
PGP 6	73	600V C.T.			320	70		6X4, 5Y3	5/6.3V @ 2A	6.3V @ 3A		DC-4A
PGP 7	110	650V C.T.	225	140	330	100		5Y3, 5U4	5V @ 3A	6.3V @ 5A		DC-5B
PGP 8	76	700V C.T.	260	100	385	70		5Y3	5V @ 2A	6.3V @ 2.5A		DC-5A
PGP 9	108	700V C.T.	250	125	370	90		5Y3, 5U4	5V @ 3A	6.3V @ 5A		DC-5B
PGP 10	127	700V C.T.	260	170	350	120		5U4	5V @ 3A	6.3V @ 5A		DC-5B
PGP 11	146	700V C.T.	260	210	350	150		5U4	5V @ 3A	6.3V @ 5A	6.3V @ 1A	DC-6A
PGP 12	207	800V C.T.	295	280	400	200		5U4, 2-5Y3	5V @ 4A	6.3V @ 6A		DC-6A
PGP 13	225	800V C.T.	295	280	400	200	80	5U4, 2-5Y3	5V @ 4A	6.3V @ 6A	5/6.3V @ 2A	DC-6A
PGP 14	268	840V C.T.	330	350	450	250	80	2-5U4	5V @ 6A	6.3V @ 6A	5/6.3V @ 2A	DC-6A
PGP 15	320	900V C.T.	340	420	490	300	80	2-5U4	5V @ 6A	6.3V @ 6A	5/6.3V @ 2A	DC-7B
PGP 16	127	900V C.T.	360	150				5U4	5V @ 3A	6.3V @ 5A		DC-6A
PGP 17	150	900V C.T.	350	200				5U4	5V @ 3A	6.3V @ 5A		DC-6A
PGP 18	203	1100V C.T.	400	250				5R4GY	5V @ 3A	6.3V @ 5A		DC-6A
PGP 19	248	1100V C.T.	420	300				2-5R4GY	5V @ 4A	6.3V @ 7A		DC-6A
PGP 20	310	1280V C.T.	480	350				2-5R4GY	5V @ 4A	6.3V @ 7A		DC-7B

All units supplied with leads.

PQC HIGH Q REACTORS

PQC-Reactors are low-priced High Q components designed for use in selective circuits such as wave filters, wave traps, and noise suppressors.

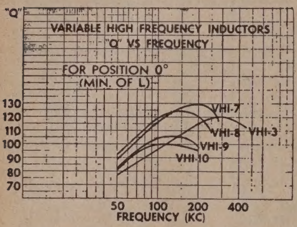
CASE DIMENSIONS

DM-02 CASE

Height: $1\frac{21}{32}''$
Width: $1\frac{21}{32}''$
Depth: $1\frac{13}{32}''$
Flange L: $2\frac{3}{8}''$
Mtg. Cen.: 2"

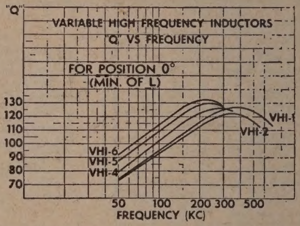
Catalog No.	Application	Rated Ind. in Henries	Q	Tuning Capacitor (Mf)	Case Size
PQC 1	60 cps resonant trap	14.00	10	.5	DM-02
PQC 2	400 cps resonant trap	1.58	15	.1	DM-02
PQC 3	1000 cps resonant trap	1.00	20	.025	DM-02
PQC 4	Dynamic noise suppression inductor	2.40	20 @ 4 KC		DM-02
PQC 5	Dynamic noise suppression inductor	2.00	15 @ 4 KC		DM-02
PQC 6	Dynamic noise suppression inductor	1.30	15 @ 4 KC		DM-02
PQC 7	Dynamic noise suppression inductor	.80	15 @ 4 KC		DM-02
PQC 8	Dynamic noise suppression inductor	.60	15 @ 4 KC		DM-02
PQC 9	Dynamic noise suppression inductor	.40	15 @ 4 KC		DM-02

MINIATURE VARIABLE HIGH FREQUENCY INDUCTORS



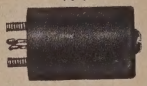
- VARIABLE for ± 20% of its nominal inductance.
- FREQUENCY RANGE: 20 to 500 Kilocyles.
- Q practically constant over whole range of inductance variation.
- Miniature size.
- Hermetically sealed.

Variable high frequency inductors with any inductance from 1 to 50 mhy with a variation of appr. ± 20% can be made on special order.



CASE DIMENSIONS

VI-1



Height: 1"
Diameter: ¾"
2 Studs: 4-40
Mtg. Cen.: ⅜"

Catalog No.	Nominal Inductance* MHY @ 100 KC		Variation of Q @ 100 KC		RDC ohms ±15%	Max. Non-destructive Current MA	Self-resonant Freq. MC	Case Des.
	Min.	Max.	Min.	Max.				
VHI-1	1.1	1.75	93.5	100.5	.75	250	2.2	VI-1
VHI-2	1.7	2.5	94.5	96.2	1.1	200	1.9	VI-1
VHI-3	2.3	3.7	94.5	97.2	1.4	200	1.6	VI-1
VHI-4	3.	4.5	100.75	101.75	1.9	160	1.4	VI-1
VHI-5	4.	5.7	107.	108.	2.2	160	1.3	VI-1
VHI-6	5.5	7.5	112.	119.	3.1	130	1.	VI-1
VHI-7	7.	10.5	116.	120.5	4.5	100	.9	VI-1
VHI-8	10.	15.	106.	109.	6.6	80	.85	VI-1
VHI-9	14.5	20.5	101.	101.5	9.2	60	.6	VI-1
VHI-10	20.	30.	105.	115.	13.7	50	.55	VI-1

QGC HIGH Q REACTORS

QGC-Reactors are designed for low audio frequency application requiring very high Q and inductance stability. These units are impregnated with a special compound and mounted in **hermetically sealed** cases. A hum reducing lamination structure used in these reactors results in an extremely low pickup of extraneous stray fields. A very low temperature coefficient is achieved by a specially developed impregnation and assembly process. All QGC High Q Reactors have an extremely low voltage coefficient.

All Resistance values are nominal and can vary by ±20%.

Inductance values are given within ±2%.

Closer Tolerances and Inductances other than the standard Catalog items can be supplied on special orders.

Inductance Values up to 400 Henries can be supplied.

The graphs showing the coil characteristics make use of the following formulas:

1. "Q" versus frequency was measured with voltages given by the expression:

   $$V = K \frac{\sqrt{LH}}{1H} \times \frac{FKC}{1KC}$$

   K—a constant listed in every chart
   LH—inductance in Henries
   FKC—frequency in kilocycles at which the measurements were made.

2. Variation of inductance versus normalized Direct Current.
   The normalized DC is given by

   $$I_n = I_{dc} \sqrt{LH}$$

   where Idc is the dc current in MA and LH the inductance in Henries.

3. Variation of Inductance versus normalized AC voltage.
   The normalized AC voltage is given by

   $$V_n = \frac{V}{\sqrt{LH}} \times \frac{60\ cps}{F_{cps}}$$

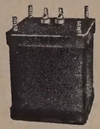
   Vn—normalized AC voltage
   V—voltage across the coil
   LH—inductance in Henries
   F—frequency of measurement in cps

* ± 5%

FREED TRANSFORMER COMPANY, INC.

CASE DIMENSIONS

DC-2A CASE



Height: 3"
Width: 2⅝"
Depth: 2¼"
Mtg. Cen.: 2"x1¾"
Studs: 4 8-32
Knockout: 1"

AJ CASE

Height: 2⅜"
Width: 1⅝"
Depth: 1⅝"
Mtg. Cen.: 1$\frac{1}{16}$"x1$\frac{1}{16}$"
Studs: 4 6-32

AH CASE

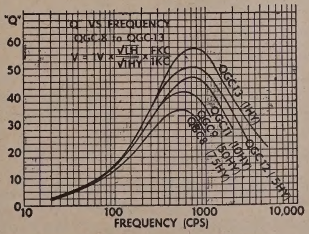
Height: 1¾"
Width: 1$\frac{5}{16}$"
Depth: 1$\frac{5}{16}$"
Mtg. Cen.: 1¼" dia.
Studs: 2 6-32

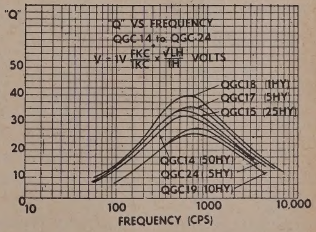
DM-20 CASE

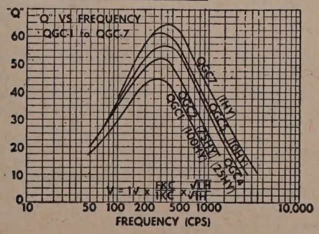
Height: 1$\frac{9}{16}$"
Dia.: $\frac{15}{16}$"
Flange L.: 1$\frac{13}{32}$"
Flange D.: 0.975"
Mtg. Cen.: 1⅛" to 1$\frac{7}{32}$"
2 Holes: .147 wide
Knockout: .875

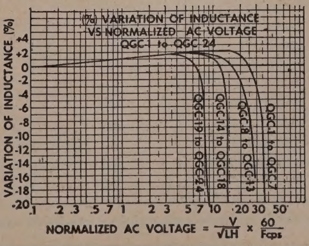
QUALITY GRADE HIGH Q REACTORS

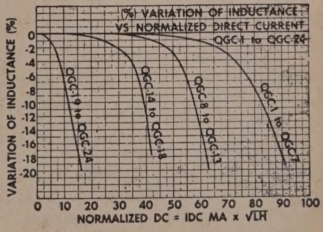
Catalog No.	Inductance Hy.	RDC Ohms Tolerance ± 20%	Self-resonant Frequency KC	Current Capacity MA	Case No.
QGC-1	100	1,611	2.2	40	DC-2A
QGC-2	75	1,054	2.6	50	DC-2A
QGC-3	50	878	3.2	50	DC-2A
QGC-4	25	378	4.5	80	DC-2A
QGC-5	10	117	7.2	160	DC-2A
QGC-6	5	78	10.2	160	DC-2A
QGC-7	1	15	22.6	400	DC-2A
QGC-8	75	3,400	.82	16	AJ
QGC-9	50	2,050	1.00	20	AJ
QGC-10	25	1,250	1.41	25	AJ
QGC-11	10	460	2.25	40	AJ
QGC-12	5	210	3.20	65	AJ
QGC-13	1	40	7.20	160	AJ
QGC-14	50	2,900	4.60	13	AH
QGC-15	25	1,300	6.60	20	AH
QGC-16	10	570	10.70	25	AH
QGC-17	5	280	15.20	40	AH
QGC-18	1	50	35.00	100	AH
QGC-19	10	760	10.70	20	DM-20
QGC-20	7.5	700	12.20	20	DM-20
QGC-21	5	450	15.20	25	DM-20
QGC-22	2.5	235	22.00	32	DM-20
QGC-23	1	90	35.00	63	DM-20
QGC-24	0.5	45	51.00	80	DM-20











CASE DIMENSIONS

AJ CASE
Height: 2 3/8"
Width: 1 5/8"
Depth: 1 5/8"
Mtg. Cen.: 1 3/16"x1 3/16"
Studs: 4 6-32
Cut Out: 1 1/8" D

EB CASE
Height: 2 7/16"
Width: 1 15/16"
Depth: 1 13/16"
Mtg. Cen.: 1 3/8"x1 1/4"
Studs: 4 6-32

FB CASE
Height: 2 1/2"
Width: 2 5/16"
Depth: 2 1/16"
Mtg. Cen.: 1 11/16"x1 7/16"
Studs: 4 6-32

GB CASE
Height: 2 13/16"
Width: 2 3/4"
Depth: 2 3/8"
Mtg. Cen.: 2 1/8"x1 3/4"
Studs: 4 6-32

HA CASE
Height: 4 1/4"
Width: 3 1/16"
Depth: 2 5/8"
Mtg. Cen.: 2 19/64"x1 55/64"
Studs: 4 8-32

HB CASE
Height: 3 3/16"
Width: 3 1/16"
Depth: 2 5/8"
Mtg. Cen.: 2 19/64"x1 55/64"
Studs: 4 8-32

JB CASE
Height: 3 7/8"
Width: 3 9/16"
Depth: 3 1/16"
Mtg. Cen.: 2 5/8"x2 1/8"
Studs: 4 8-32

KB CASE
Height: 4 5/16"
Width: 3 15/16"
Depth: 3 3/8"
Mtg. Cen.: 3"x2 7/16"
Studs: 4 10-32

LB CASE
Height: 4 1/2"
Width: 4 5/16"
Depth: 3 11/16"
Mtg. Cen.: 3 5/16"x2 11/16"
Studs: 4 10-32

MB CASE
Height: 4 15/16"
Width: 4 11/16"
Depth: 4"
Mtg. Cen.: 3 11/16"x3"
Studs: 4 1/4-20

NB CASE
Height: 5 1/2"
Width: 5 1/16"
Depth: 4 5/16"
Mtg. Cen.: 4 1/16"x3 5/16"
Studs: 4 1/4-20

STANDARD MILITARY TRANSFORMERS

This group comprises audio and power units designed to meet MIL-T-27 A specifications.

The functional characteristics of these transformers were established by the Armed Service Standardization Program. These units are supplied in standard MIL cases.

Transformers meeting MIL-T-27A specifications Grade 1 through 6 with temperature characteristics of Class S, T, or U can be supplied on special order.

Encapsulated units using either Epoxy-Resins or Fosterite can be supplied for Grade 2 and 5.

Class U components can be supplied molded in special high temperature Freed resin.

STANDARD MILITARY AUDIO TRANSFORMERS

Frequency Response 300-10,000 C.P.S. ±2 DB

Catalog No.	Application	Type Designation	Impedance Level in Ohms Primary	Impedance Level in Ohms Secondary	Ratio	Max. Power Level DBM	Pri. D.C. Per Side in Ma	Max. D.C. unbalance	Case
MGA 1	Transformer, interstage, single or P.P. plates to single or P.P. grids.	TF4RX15AJ	10,000 C.T.	90,000 split and C.T.	1:3 overall	+15	10	10	AJ
MGA 2	Transformer, matching 600 ohm line to voice coil.	TF4RX16AJ	600 split	4, 8, 16	6.12:1 overall	+33	0	0	AJ
MGA 3	Transformer, input, 600 ohm line to single or P.P. grids.	TF4RX10AJ	600 split	135,000 C.T.	1:15	+15	0	0	AJ
MGA 4	Transformer, matching, 600 ohm line to 600 ohm line.	TF4RX16AJ	600 split	600 split	1:1	+15	0	0	AJ
MGA 5	Transformer, output, single plate 7,600 ohm, 4,800 ohm to 600 ohm line.	TF4RX13AJ	7,600 tap @ 4,800	600 split	3.56:1	+33	40	40	AJ
MGA 6	Transformer, output, single plate 7,600 ohm, 4,800 ohm to voice coil.	TF4RX13AJ	7,600 tap @ 4,800	4, 8, 16	21.8:1	+33	40	40	AJ
MGA 7	Transformer, output, single or P.P. plates to 600 ohm line.	TF4RX13AJ	15,000 C.T.	600 split	5:1	+33	10	10	AJ
MGA 8	Transformer, output, P.P. plates to 600 ohm line.	TF4RX13AJ	24,000 C.T.	600 split	6.32:1	+30	10	1	AJ
MGA 9	Transformer, output, P.P. plates to 600 ohm line.	TF4RX13AJ	60,000 C.T.	600 split	10:1	+27	10	1	AJ

STANDARD MILITARY POWER TRANSFORMERS

Primary 105/115/125V 60~

SINGLE PHASE 400 CPS, AND THREE PHASE 60 AND 400 CPS TRANSFORMERS CAN BE SUPPLIED ON SPECIAL ORDER.

Catalog No.	MIL-T-27 Type Designation	HI Volt.	D.C. Volts	D.C. Amps.	Fil. No. 1	Fil. No. 2	Case
MGP 1	TF4RX03HA001	200/100/0/100/200	185	.070	5/6. 3V @ 2A	6. 3V @ 3A	HA
MGP 2	TF4RX03JB002	650 C.T.	260	.070	5/6. 3V @ 2A	6. 3V @ 4A	JB
MGP 3	TF4RX03KB006	650 C.T.	245	.150	6. 3V @ 5A	5V @ 3A	KB
MGP 4	TF4RX03LB003	800 C.T.	318	.175	5V @ 3A	6. 3V @ 8A	LB
MGP 5	TF4RX03MB004	900 C.T.	345	.250	5V @ 3A	6. 3V @ 8A	MB
MGP 6	TF4RX02KB001	700 C.T.	255	.250			KB
MGP 7	TF4RX02LB002	1100 C.T.	419	.250			LB
MGP 8	TF4RX02NB003	1600 C.T.	640	.250			NB

STANDARD MILITARY FILAMENT TRANSFORMERS

Primary 105/115/125V 60~

SINGLE PHASE 400 CPS, AND THREE PHASE 60 AND 400 CPS TRANSFORMERS CAN BE SUPPLIED ON SPECIAL ORDER

Catalog No.	MIL-T-27 Type Designation	Secondary Volts	Secondary Current Amps	Secondary Test Volts RMS	Case
MGF 1	TF4RX01EB002	2.5	3.0	2,500	EB
MGF 2	TF4RX01GB003	2.5	10.0	2,500	GB
MGF 3	TF4RX01FB004	5.0	3.0	2,500	FB
MGF 4	TF4RX01HB005	5.0	10.0	2,500	HB
MGF 5	TF4RX01FB006	6.3	2.0	2,500	FB
MGF 6	TF4RX01GB007	6.3	5.0	2,500	GB
MGF 7	TF4RX01JB008	6.3	10.0	2,500	JB
MGF 8	TF4RX01KB009	6.3	20.0	2,500	KB
MGF 9	TF4RX01JB012	2.5	10.0	10,000	JB
MGF 10	TF4RX01KB013	5.0	10.0	10,000	KB

*Standard Military Filament and Power Transformers are also available in Grade 4.

CASE DIMENSIONS

DM-8 CASE

Height:	1½"
Width:	1 3/32"
Flange D.:	1¼"

DM-01 CASE

Height:	2"
Width:	1½"
Depth:	1½"
Mtg. Cen.:	1 1/16"x1 1/16"
Studs:	4 6-32
Knockout:	1⅜" dia.

DM-20 CASE

Height:	1 9/16"
Diameter:	15/16"
Flange L.:	1 13/32"
Flange D.:	0.975"
Mtg. Cen.:	1⅛" to 1 7/
2 Holes:	.147 wide
Knockout:	.875

DM-18 CASE

Height:	1"
Width:	2¼"
Depth:	1⅛"
Mtg. Cen.:	9/16"
Studs:	2 6-32

MM-1

Length:	¾"
Diameter:	½"

MM-2

Length:	23/32"
Width:	23/32"
Height:	½"

MM-3

Length:	1¼"
Width:	1¼"
Height:	½"
Mtg. Cen.:	1½"
Mtg. Flange:	1¾"

MM-4

Length:	1 13/16"
Depth:	1¼"
Height:	½"
Mtg. Cen.:	2⅛"
Mtg. Flange:	2½"

MOLDED DIMENSIONS

MMO-1

Diameter:	11/16"
Thickness:	29/64"

MMO-2

Diameter:	13/16"
Thickness:	19/32"

HERMETICALLY SEALED PULSE TRANSFORMERS

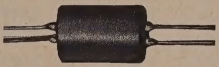
Hermetically sealed Pulse Transformers for use in blocking oscillator, low level interstage coupling, and modulator output circuits. These components meet MIL-T-27 A specifications. The pulse transformers are designed for maximum power, efficiency, and optimum pulse performance. Balanced coil structures permit series or parallel connection of windings for turn ratios other than unity. Pulse characteristics, voltages and impedance levels will depend upon the interconnections made.

PULSE TRANSFORMERS

Catalog No.	MIL Type	Blocking Osc.	Inter-stage Coupling	Low Power Output	Pulse Voltage Kilovolts	Pulse Duration Micro-seconds	Duty Rate	No. of Windings	Test Voltage KV., RMS	Character-istic Impedance Ohms	Case No.
MPT-1	TF4RX35YY	✓	✓		0.25/0.25/0.25	0.2-1.0	.004	3	0.7	250	DM-20
MPT-2	TFR4X35YY	✓	✓		0.25/0.25	0.2-1.0	.004	2	0.7	250	DM-20
MPT-3	TF4RX35YY	✓	✓		0.5/0.5/0.5	0.2-1.5	.002	3	1.0	250	DM-18
MPT-4	TF4RX35YY	✓	✓		0.5/0.5	0.2-1.5	.002	2	1.0	250	DM-18
MPT-5	TF4RX35YY	✓	✓		0.5/0.5/0.5	0.5-2.0	.002	3	1.0	500	DM-20
MPT-6	TF4RX35YY	✓	✓		0.5/0.5	0.5-2.0	.002	2	1.0	500	DM-20
MPT-7	TF4RX35YY	✓	✓	✓	0.7/0.7/0.7	0.5-1.5	.002	3	1.5	200	DM-18
MPT-8	TF4RX35YY	✓	✓	✓	0.7/0.7	0.5-1.5	.002	2	1.5	200	DM-18
MPT-9	TF4RX35YY	✓	✓	✓	1.0/1.0/1.0	0.7-3.5	.002	3	2.0	200	DM-18
MPT-10	TF4RX35YY	✓	✓	✓	1.0/1.0	0.7-3.5	.002	2	2.0	200	DM-18
MPT-11	TF4RX35YY	✓	✓	✓	1.0/1.0/1.0	1.0-5.0	.002	3	2.0	500	DM-01
MPT-12	TF4RX35YY	✓	✓	✓	0.15/0.15/0.3/0.3	0.2-1.0	.004	4	0.7	700	DM-8

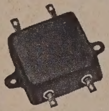
ULTRA MINIATURE PULSE TRANSFORMERS

- Meet all requirements of MIL-T-27 A.
- Negligible weight.
- Exceedingly small size.
- Encapsulated or hermetically sealed.

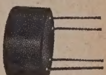


MM-1

MM-2



MM-3
MM-4



MMO-1
MMO-2

Catalog No.	MIL Type	Application	Pulse Volts	Pulse Width usec	Rise time usec	Inductance Prin. uhy	Inductance Leakage uhy	PPS. Mcs	Turns Ratio	Zo ohms	Case Des.
EPT-1	TF4RX31YY	Impedance matching & Interstage coupling	20	.07	.03	125	12	2	1:1	200	MM-1
EPT-2	TF4RX31YY		20	.07	.03	150	15	2	2.1	200	MM-1
EPT-3	TF4RX31YY		20	.07	.03	160	15	2	3.1	100	MM-1
EPT-4	TF4RX31YY		20	.07	.03	200	20	2	4.1	100	MM-1
EPT-5	TF4RX31YY		17	.10	.04	200	6	2	4.1	100	MM-1
EPT-6	TF4RX31YY		15	.10	.04	200	5	2	5:1	100	MM-1
EPT-7	TF4RX31YY		25	.50	.05	1,200	20	1	7:1:1		MM-1
EPT-8	TF4RX31YY		10	10	.04	12,000	70	.01	5:1		MM-2
EPT-9	TF4RX31YY		10	5	.04	7,500	22	.01	3:1	100	MM-2
EPT-11	TF4RX35YY	Blocking oscillator	100	.25	.02	200	2	.012	1:1		MM-1
EPT-12	TF4RX35YY		50	.33	.07	240	2	.002	1:1		MM-1
EPT-13	TF4RX35YY		40	.5	.07	6,000	15		2:1		MM-2
EPT-14	TF4RX35YY		15	6	.1	16,000	15	.0004	1:1.4		MM-2
EPT-15	TF4RX36YY	Memory core &	5	1.5	.25	4,000	300		5:5:1PP	10	MM-4
EPT-16	TF4RX36YY	Current driver	2.5	2.4	.2	2,800	200		3.3:3.3:1PP	6	MM-4
EPT-17	TF4RX36YY	Current driver	21	1-4	.22	18,000	800	.250	6:1	200	MM-3
EPT-18	TF4RX36YY	Current transformer	10	6	.2	90,000	200	.05	11:1	75	MM-3
EPT-19	TF4RX36YY	Pulse inversion	22	1-7	.25	55,000	300	.05	6:1:1	400	MM-3

When ordering encapsulated units add "M" to the catalog number.

PULSE TRANSFORMERS

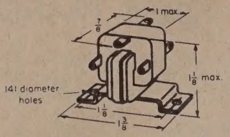
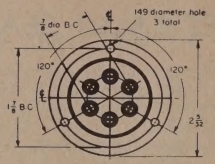
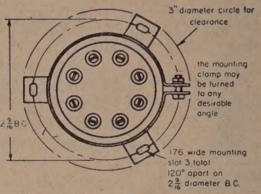

1 max.
7/8
1 1/8 max.
141 diameter holes
1 1/8
1 3/8

figure 2


7/8 dia B C
149 diameter hole
3 total
120°
120°
1 7/8 B C
2 5/32


3" diameter circle for clearance
the mounting clamp may be turned to any desirable angle
2 3/16 B C
.176 wide mounting slot 3 total 120° apart on 2 3/16 diameter B.C.

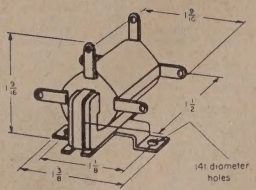

1 9/16
1 9/16
1 1/2
141 diameter holes
1 1/8
1 3/8

figure 1

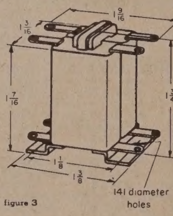

1 9/16
1 3/16
1 7/16
1 3/4
1 1/8
1 3/8
141 diameter holes

figure 3

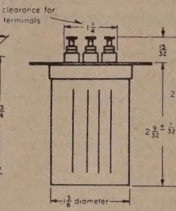

clearance for terminals
1 1/4
15/32
2 3/4 ± 1/16
2 9/32 ± 1/32
1 3/8 diameter

figure 4

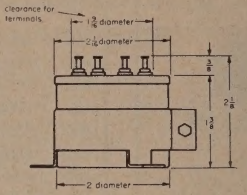

clearance for terminals
1 9/16 diameter
2 1/16 diameter
3/8
2 1/8
1 3/8
2 diameter

figure 5

Freed No.	Radiation Laboratory No.	Westinghouse No.	Dimension Figure	Guidance Values				Test Voltage (60 Cycle RMS)
				Pulse Voltage (KV)	Pulse Duration (Microseconds)	Maximum Duty Ratio	Load Impedance (Ohms)	
BLOCKING OSCILLATOR, REGENERATIVE DRIVER OR COUPLING TRANSFORMERS								
MPT-13C MPT-13M MPT-13H	132AW2 132AW2F 132AW2P	1P1 7P1 4P101	1 1 4	1.0/1.0/1.0	0.3 to 1.5	0.002	250	1000
MPT-14C MPT-14M MPT-14H	132BW2 132BW2F 132BW2P	1P2 7P2 4P102	1 1 5	0.5/0.5/0.5/0.15	0.3 to 1.5	0.002	200	1000
MPT-15C MPT-15M MPT-15H	132DW2 132DW2F 132DW2P	1P3 7P3 4P103	1 1 4	0.5/0.5/0.5	0.1 to 0.5	0.002	300	1000
MPT-16C MPT-16M MPT-16H	134BW2 134BW2F 134BW2P	1P4 7P4 4P104	3 3 5	2.5/2.5; 2.5/1.25 1.5/1.5; 1.5/0.75	1 to 2.5 1 to 5	0.002 0.002	1500 1500	1500
MPT-17C MPT-17M MPT-17H	134CW2 134CW2F 134CW2P	1P5 7P5 4P105	1 1 4	2.0/2.0/1.0 1.5/1.5/0.75	1 to 2.5 1 to 5	0.002 0.002	1200 1200	1000
MPT-18C MPT-18M	134EW2 134EW2F	1P6 7P6	2 2	2.0/2.0/1.0 1.5/1.4/0.75	0.3 to 1 0.3 to 1.5	0.002 0.002	800 800	750
MPT-19C MPT-19M MPT-19H	145CW2 145CW2F 145CW2P	1P7 7P7 4P107	1 1 4	0.5/0.5/0.5	1.0 to 5	0.002	500	1000
MPT-20C MPT-20M MPT-20H	145EW2 145EW2F 145EW2P	1P8 7P8 4P108	1 1 4	1.0/1.0/1.0	1.0 to 5	0.002	800	1000
MPT-21C MPT-21M MPT-21H	166AW2 166AW2F 166AW2P	1P9 7P9 4P109	1 1 4	1.0/0.67/0.67	1.0 to 5	0.002	800	1000
MPT-22C MPT-22M MPT-22H	176AW2 176AW2F 176AW2P	1P10 7P10 4P110	1 1 4	2.0/1.0/1.0 1.5/0.75/0.75	1 to 2.5	0.002 0.002	1000 1000	1000
MPT-23C MPT-23M MPT-23H	187AW2 187AW2F 187AW2P	1P11 7P11 4P111	1 1 4	1.0/0.5/0.5	0.5 to 2	0.002	400	1000
MPT-24C MPT-24M	224AW2 224AW2F	1P12 7P12	2 2	1.0/1.0/1.0/0.3	0.1 to 0.5	0.002	1000	750
PULSE TRIGGERING OR CURRENT TRANSFORMERS								
MPT-25C MPT-25M MPT-25H	139DW2 139DW2F 139DW2P	1P13 7P13 4P113	1 1 4		0.25 to 5	0.002		1000
PULSE OUTPUT TRANSFORMERS								
MPT-26C MPT-26M MPT-26H	148CW2 148CW2F 148CW2P	1P14 7P14 4P114	3 3 5	0.2/2.0 0.4/2.0 0.4/2.0	0.6 to 3 0.25 to 1.25 0.5 to 2.5	0.002 0.002 0.002	1600 1000 2000	1500
MPT-27C MPT-27M MPT-27H	148DW2 148DW2F 148DW2P	1P15 7P15 4P115	3 3 5	0.29/2.0 0.57/2.0 0.57/2.0	0.5 to 2.5 0.2 to 1.0 0.4 to 2.0	0.002 0.002 0.002	1200 800 1500	1500

C Indicates — varnish impregnated commercial construction.
M Indicates — encapsulated or molded construction to MIL-T-27A Grade 5 Class R.
H Indicates — hermetically sealed to MIL-T-27A Grade 4 Class R.

HERMETICALLY SEALED FILTER REACTORS

Case	Height	Depth	Width	Mtg. Centers	Studs
AJ	2 3/8	1 5/8	1 5/8	1 3/16x1 3/16	4 6-32
EB	2 7/16	1 13/16	1 15/16	1 3/8x1 1/4	4 6-32
FA	3 1/8	2 1/16	2 5/16	1 11/16x1 7/16	4 6-32
GA	3 13/16	2 3/8	2 3/4	2 1/8x1 3/4	4 6-32
HB	3 3/16	3 1/16	2 5/8	2 19/64x1 55/64	4 8-32
JA	3 9/16	3 1/16	4 7/8	2 5/8x2 1/8	4 8-32
JB	3 7/8	3 1/16	3 9/16	2 5/8x2 1/8	4 8-32
KB	4 5/16	3 3/8	3 15/16	3 x2 7/16	4 10-32
LA	5 9/16	3 11/16	4 5/16	3 5/16x2 11/16	4 10-32
LB	4 1/2	3 11/16	4 5/16	3 5/16x2 11/16	4 10-32
MB	4 15/16	4	4 11/16	3 11/16x3	4 1/4-20

MEET MIL-T-27A SPECIFICATIONS

Catalog No.	MIL Type	Inductance Henry	Rat. Current DC Ma.	DC Res. Ohms	Test Volt Kilovoltas	Case No.
MGC 1	TF4RX04AJ	100	10	3,500	1.	AJ
MGC 2	TF4RX04AJ	4	50	230	1.	AJ
MGC 3	TF4RX04EB	10	50	325	1.	EB
MGC 4	TF4RX04FA	20	50	475	1.5	FA
MGC 5	TF4RX04FA	30	50	650	1.5	FA
MGC 6	TF4RX04AJ	3	75	175	1.	AJ
MGC 7	TF4RX04EB	6	75	235	1.5	EB
MGC 8	TF4RX04FA	12	75	265	1.5	FA
MGC 9	TF4RX04EB	3.5	100	145	1.	EB
MGC 10	TF4RX04FA	8	100	180	1.5	FA
MGC 11	TF4RX04GA	12	100	190	2.	GA
MGC 12	TF4RX04EB	2	150	92	1.5	EB
MGC 13	TF4RX04FA	4	150	115	1.5	FA
MGC 14	TF4RX04GA	8	150	125	2.	GA
MGC 15	TF4RX04JB	11	150	120	2.5	JB
MGC 16	TF4RX04FA	2.5	200	70	1.5	FA
MGC 17	TF4RX04GA	4	200	80	2.	GA
MGC 18	TF4RX04HB	7	200	135	2.	HB
MGC 19	TF4RX04JA	10	200	125	2.5	JA
MGC 20	TF4RX04GA	2.5	300	50	2.	GA
MGC 21*	TF4RX04HB	4	300	62	2.5	HB
MGC 22	TF4RX04JB	6	300	85	2.5	JB
MGC 23*	TF4RX04KB	8	300	65	2.5	KB
MGC 24	TF4RX04LA	10	300	100	2.5	LA
MGC 25*	TF4RX04HB	2	400	37	2.5	HB
MGC 26	TF4RX04KB	6	400	60	2.5	KB
MGC 27*	TF4RX04JA	2	500	35	2.5	JA
MGC 28	TF4RX04KB	4	500	45	2.5	KB
MGC 29*	TF4RX04MB	7	500	50	2.5	MB
MGC 30*	TF4RX04LB	2	700	20	2.5	LB
MGC 31*	TF4RX04MB	1.75	1,000	12.5	2.5	MB

***Not stocked, available on short delivery.**
Above units available in Grade 4.

SERIES 1950 NULL "T" FILTERS

The Freed Series 1950 Null T networks consist of two resistance capacitance networks, whose outputs completely cancel each other at the balance frequency. They may be used as rejection networks particularly at low frequencies where LC filters become excessively large and unstable.

Standard models are available for 30, 60 and 120 cycles in a wide range of impedances. Each network will give a minimum of 50 db attenuation at the null frequency.

The null frequency is adjusted to a tolerance of ±2%.

All Null T Filters are hermetically sealed.

Prices on request.

Catalog No.	Frequency
NTF- 30	30 cps
NTF- 60	60 cps
NTF-120	120 cps

TOROIDAL INDUCTORS

Using the latest developments in the field of magnetic materials and new impregnation and molding techniques the Freed Transformer Co. makes available to the industry the most extensive line of toroidal inductors.

Freed toroids are available in three types of constructions. Open units coated with a special high temperature extremely low loss compound, hermetically sealed in metal cases or molded in special **Freed Epoxy Resin.** Both hermetically sealed and molded units meet the latest military specification MIL-T-27A (graded 1 or 4 and 2 or 5 respectively). Freed toroidal inductors are supplied with either molypermalloy or carbonyl iron powder cores.

1. Temperature Stabilization:

The molypermalloy and carbonyl iron powder cores have a temperature coefficient of inductance. Depending upon the degree of temperature stabilization the cores have different temperature coefficients. The degree of stabilization is denoted by a two-letter code.

SN	Non-stabilized cores, maximum inductance variations ± 2% from −55°C to + 85°C
SE	Temperature-stabilized cores, maximum inductance variations + .1% to −.4% from −1.5°C to +54°C
SB	Temperature-stabilized cores, maximum inductance variations ± .1% from +13°C to +35°C
SD	Temperature-stabilized cores, maximum inductance variations ± .1% from −1.5°C to +54°C
SW	Temperature-stabilized cores, maximum inductance variations ± .25% from −54°C to +85°C
SP	Temperature stable carbonyl iron cores, maximum inductance variations ± .3% from −55°C to +85°C

The temperature (stabilization) coefficient of an inductor will depend upon the nominal inductance value, operating frequency and A.C. voltage across the coil. Therefore some coils may have a lower temperature coefficient than the one corresponding to the core stability characteristic. Under some unfavorable working conditions the temperature coefficient of inductance corresponding to a given stability characteristic may be exceeded.

2. Self Resonant Frequency F_o:

This frequency is defined as the resonant frequency of L — Inductance and C_d — distributed capacity of the winding. Self resonant frequency may have a variation of ±10% from unit to unit.

3. Adjustment Accuracy ± 1% or 1 Turn Whichever Is Greater:

All toroidal inductors are adjusted at a frequency well below the self resonant frequency "F_o." Since all toroids have a voltage coefficient of inductance they are adjusted with a low A.C. voltage in the region of the initial permeability of the core material.

The apparent inductance at any frequency F is given by the expression

$$L\text{ app} = \frac{L}{1 - \left(\frac{f}{f_0}\right)^2}$$

Where L is the nominal inductance. For frequencies "F" well below the self resonant frequency "F_o" the fractional increase of inductance due to the self resonant frequency is

$$\frac{\triangle L}{L} = \left(\frac{f}{f_0}\right)^2 = w^2 L C_d$$

4. "Q":

The "Q" or quality factor of the coil is shown for every toroid type. Since the "Q" depends both upon the frequency and the A.C. voltage across the coil, the "Q" vs. frequency graphs show the "Q" variations for a given voltage applied across the coil. This voltage is defined by the expression,

$$V = K_q \sqrt{L_H} \times \frac{F_{KC}}{1\,KC}$$

5. Variations of Inductance vs Normalized A.C. Voltage:

All toroidal inductors have an A.C. voltage coefficient. The variations of inductance vs applied A.C voltage can be computed from the expression of normalized voltage.

$$V_{norm.} = \frac{V}{\sqrt{L_H}} \times \frac{60\ \text{cps.}}{F\ \text{cps.}} \times K_V$$

V — A.C. voltage across the coil
L_h — Inductance in henries.
F — Measurement frequency in cycles.
K_v — is the voltage coefficient (a variable parameter for different coils) listed in the graph. For high frequency toroids the expression for normalized voltage is changed to,

$$V_{norm.} = \frac{V}{\sqrt{L_H}} \times \frac{1 K_C}{F_{KC}} \times K_V$$

6. Variations of Inductance vs Normalized D.C. Current:

The incremental permeability of the coil and consequently the inductance depends upon the magnetizing D.C ampere turns The variations of inductance vs D.C. current can be computed from the expression for the normalized D.C current

$$I_{norm.} = I_{dc} \sqrt{L_H} \times K_i$$

Where I_{dc} — current in M.A. thru the coil
L_h — inductance in henries.
K_i — current coefficient (a variable parameter for different coils) listed in the graph.

7. Maximum Current:

This is the maximum non-destructive current that a coil can tolerate without overheating and consequent failure It is defined as

$$I_{mas} = \sqrt{I^2_{RMS} + I^2_{dc}}$$

The maximum current is listed for each type of toroidal inductors and is computed by dividing the parameter of the numerator by the square root of the inductance in millihenries. This current will affect the inductance value and may partially or completely saturate the inductor. The inductances variations due to I_{dc} and V_{ac} must be computed from the expressions of paragraphs 5 and 6.

Toroids with special requirements such as tapped toroids, toroidal transformers, molded and cased units with dimensions other than standard sizes and high temperature toroids can be supplied upon request. Our engineering and laboratory facilities are available for consultation, research and development.

CASE DIMENSIONS

DT-I CASE

Height:	1 7/32"
Width:	1/2"
Length:	1 1/16"
Mounting:	2 4-40 inserts
Mtg. Centers:	3/4"
Cutout:	5/16" x 1/2"

DT-2 CASE

Height:	1 3/4"
Width:	13/16"
Length:	1 7/16"
Mounting:	2 6-32 studs
Mtg. Centers:	7/8"x9/32"
Cutout:	3/8"x11/16"

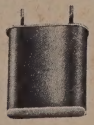
DT-3 CASE

Height:	2"
Width:	7/8"
Length:	1 25/32"
Mounting:	2 6-32 studs
Mtg. Centers:	1 1/4"x3/8"
Cutout:	3/8"x3/4"

DT-4 CASE

Height:	3 1/8"
Width:	1 5/16"
Length:	2 3/4"
Mounting:	4 8-32 studs
Mtg. Centers:	2 1/16"x11/16"
Cutout:	3/4"x3/8"

DST-I CASE



Height:	25/32"
Width:	11/32"
Length:	3/4"
Pins:	1/4" long
To fit:	1/2" crystal socket

DT-5 CASE

Height:	1 3/16"
Diameter:	1 13/16"
Mounting:	2 6-32 inserts
Mtg. Centers:	1 1/8"
Cutout:	3/8"x1"

DM-2 CASE

Height:	1"
Diameter:	1 1/8"
Mounting:	2 4-40 inserts
Mtg. Centers:	5/8"
Cutout:	3/8"x7/8"

DM-11 CASE

Height:	1 1/2"
Diameter:	1 3/8"
Mounting:	2 6-32 inserts
Mtg. Centers:	7/8"
Cutout:	3/8"x7/8"

TOROIDAL INDUCTORS
FREQUENCY RANGE: UP TO 15 Kc

TYPE	TI-16		TI-5		TI-4		TI-1		TI-1A		TI-12		TI-11	
Temperature Stabilization	SN		SN, SE, SD		SN, SD, SW		SN		SN, SD, SW		SN, SD, SW		SN, SD, SW	
Ω/1H Max.	650		260		110		70		68		45		29	
I Max. (Amp.)	$\frac{.32}{\sqrt{LMH}}$		$\frac{.85}{\sqrt{LMH}}$		$\frac{2}{\sqrt{LMH}}$		$\frac{4.5}{\sqrt{LMH}}$		$\frac{4}{\sqrt{LMH}}$		$\frac{8}{\sqrt{LMH}}$		$\frac{13}{\sqrt{LMH}}$	
Nominal Inductance	Catalog No.	Fo Kc	Catalog No.	Fo Kc	Catalog No.	Fo Kc	Catalog No.	Fo Kc	Catalog No.	Fo Kc	Catalog No.	Fo Kc	Catalog No.	Fo Kc
1 MH	F2050	650							F1500	350	F1655	500	F1747	1100
2 MH									F1501	250	F1656	380	F1748	740
3 MH	F2051	410							F1502	200	F1657	300	F1749	560
4 MH									F1503	180	F1658	250	F1750	470
5 MH	F2052	330	F1700	420	F850	170	F800	270	F1504	150	F1659	220	F1751	410
7.5MH									F1505	120	F1660	180		
10 MH	F2053	240	F1701	270	F851	130	F801	192	F1506	100	F1661	150	F1752	260
15 MH	F2054	200	F1702	215	F852	110	F802	155	F1507	90	F1662	120	F1753	200
30 MH	F2055	150	F1703	140	F853	83	F803	109	F1508	60	F1663	80	F1754	130
50 MH	F2056	122	F1704	105	F854	67	F804	82	F1509	50	F1664	60	F1755	95
75 MH	F2057	105	F1705	81	F855	57	F805	66	F1510	40	F1665	47	F1756	75
100 MH	F2058	90	F1706	68	F856	51	F806	56	F1511	33	F1666	40	F1757	64
150 MH	F2059	80	F1707	54	F857	43	F807	45	F1512	29	F1667	31	F1758	48
200 MH	F2060	70	F1708	40	F858	38	F808	39	F1513	23	F1668	27	F1759	40
300 MH	F2061	60	F1709	35	F859	32			F1514	20	F1669	21	F1760	31
400 MH	F2062	52	F1710	29	F860	28			F1515	18	F1670	18	F1761	26
500 MH	F2063	48	F1711	26	F861	26.5	F809	24	F1516	15	F1671	16	F1762	22
600 MH			F1712	22	F862	24			F1517	14	F1672	14		
700 MH			F1713	21	F863	23								
750 MH	F2064	40					F810	19	F1518	12	F1673	12.5	F1763	17.5
800 MH			F1714	19	F864	22								
900 MH			F1715	17.5	F865	21								
1 Hy	F2065	36	F1716	16.5	F866	20	F811	16.5	F1519	10	F1674	10.6	F1764	14.5
1.25 Hy	F2066	33	F1717	15	F867	18.5	F812	15						
1.5 Hy	F2067	30	F1718	13.5	F868	17	F813	13	F1520	9	F1675	8.5	F1765	11.5
1.75 Hy	F2068	28	F1719	12.2	F869	16	F814	12.2						
2 Hy	F2069	27	F1720	11	F870	15.5	F815	11	F1521	8	F1676	8.2	F1766	9.6
2.25 Hy					F871	14.5	F816	10.5						
2.5 Hy					F872	14	F817	10.3	F1522	7	F1677	6.3	F1767	8.2
2.75 Hy					F873	13.5	F818	9.8						
3 Hy					F874	12.5	F819	9.2	F1523	6.2	F1678	5.7	F1768	7.4
3.5 Hy					F875	12	F820	8.5	F1524	5.8	F1679	5.2	F1769	6.6
4 Hy					F876	11.5	F821	8	F1525	5.5	F1680	4.8	F1770	6.1
4.5 Hy					F877	11	F822	7.5	F1526	5.1	F1681	4.5	F1771	5.7
5 Hy					F878	10.5	F823	7	F1527	4.9	F1682	4.2	F1772	5.3
6 Hy							F824	6.4	F1528	4.5	F1683	3.8		
7 Hy							F825	5.9	F1529	4.1	F1684	3.5		
7.5 Hy													F1773	4.1
8 Hy							F826	5.5	F1530	3.9	F1685	3.25		
9 Hy							F827	5	F1531	3.7	F1686	3		
10 Hy							F828	4.8	F1532	3.4	F1687	2.9	F1774	3.4
12 Hy									F1533	3.1	F1688	2.6		
15 Hy							F829	3.9	F1534	2.8	F1689	2.3	F1775	2.6
17 Hy									F1535	2.6	F1690	2.1		
20 Hy							F830	3.9	F1536	2.4	F1691	1.95	F1776	2.2
25 Hy									F1537	2.2	F1692	1.75	F1777	1.9
30 Hy									F1538	2	F1693	1.5	F1778	1.7
40 Hy													F1779	1.4
50 Hy													F1780	1.25

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

FREQUENCY RANGE: 10 Kc TO 50 Kc ‖ 10 Kc TO 100 Kc

TYPE	TI-17		TI-7		TI-6		TI-2		TI-13		TI-15		TI-14	
Temperature Stabilization	SN		SN		SN, SD, SW		SD		SN		SN		SN	
Ω/1 MH Max.	1.2		.48		.23		.16		.055		1.0		.3	
I Max. (Amp.)	$\frac{.25}{\sqrt{LMH}}$		$\frac{.7}{\sqrt{LMH}}$		$\frac{2}{\sqrt{LMH}}$		$\frac{2.5}{\sqrt{LMH}}$		$\frac{5.8}{\sqrt{LMH}}$		$\frac{.5}{\sqrt{LMH}}$		$\frac{1.3}{\sqrt{LMH}}$	
Nominal Inductance (MH)	Catalog No.	Fo Kc	Catalog No.	Fo Kc	Catalog No.	Fo Kc	Catalog No.	Fo Kc	Catalog No.	Fo Kc	Catalog No.	Fo Kc	Catalog No.	Fo Kc
.100	F2100	4300									F1870	1800		
.200	F2101	2800									F1871	1300		
.300	F2102	2200									F1872	1100		
.400	F2103	1800									F1873	940		
.500	F2104	1600	F1781	1300							F1874	850		
1	F2105	1000	F1782	880	F1726	820	F1800	550	F1629	400	F1875	620	F1920	560
2	F2106	670	F1783	600	F1727	550	F1801	400	F1630	280	F1876	450	F1921	390
3	F2107	520	F1784	470	F1728	450	F1802	320	F1631	230	F1877	370	F1922	310
4	F2108	440			F1729	380	F1803	280	F1632	200	F1878	320	F1923	270
5	F2109	380	F1785	350	F1730	330	F1804	250	F1633	180	F1879	290	F1924	240
7.5	F2110	290	F1786	280	F1731	260			F1634	145	F1880	240	F1925	200
10	F2111	250	F1787	240	F1732	220	F1805	170	F1635	130	F1881	210	F1926	170
15	F2112	190	F1788	190	F1733	180	F1806	140	F1636	105	F1882	175	F1927	140
20	F2113	160	F1789	165	F1734	150					F1883	150	F1928	120
25			F1790	145							F1884	140		
30	F2114	120	F1791	135	F1735	115	F1807	100	F1637	73	F1885	125	F1929	96
40			F1792	110							F1886	110		
50	F2115	90	F1793	100	F1736	86	F1808	76	F1638	57	F1887	100	F1930	74
75	F2116	70	F1794	80	F1737	68	F1809	62	F1639	47	F1888	.082	F1931	60
100	F2117	58	F1795	68	F1738	58	F1810	53	F1640	40	F1889	.072	F1932	52
150			F1796	55	F1739	46	F1811	43	F1641	33			F1933	42
200			F1797	47	F1740	40	F1812	37	F1642	28			F1934	36
250					F1741	35							F1935	32
300					F1742	31	F1813	30	F1643	23			F1936	30
400					F1743	23.5	F1814	26	F1644	20				
500							F1815	23	F1645	18				

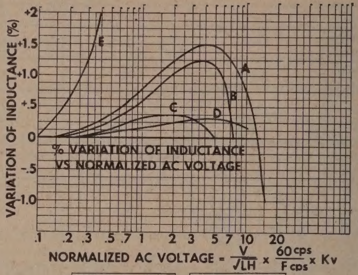
30 Kc TO 75 Kc ‖ 50 Kc TO 200 Kc

TYPE	TI-18		TI-8		TI-10		TI-9		TI-19		TI-3		TI-3A	
Temperature Stabilization	SN		SN, SD		SB		SB		SN		SD		SB	
Ω/1 MH Max.	2.6		1.5		.43		.15		4.5		.6		.31	
I Max. (Amp.)	$\frac{.15}{\sqrt{LMH}}$		$\frac{.4}{\sqrt{LMH}}$		$\frac{2}{\sqrt{LMH}}$		$\frac{5}{\sqrt{LMH}}$		$\frac{.12}{\sqrt{LMH}}$		$\frac{1.3}{\sqrt{LMH}}$		$\frac{2.5}{\sqrt{LMH}}$	
Nominal Inductance (MH)	Catalog No.	Fo Kc	Catalog No.	Fo Kc	Catalog No.	Fo Kc	Catalog No.	Fo Kc	Catalog No.	Fo Kc	Catalog No.	Fo Kc	Catalog No.	Fo Kc
.1	F2140	2500	F1821	5600					F2180	4000	F1846	2150		
.2	F2141	1700	F1822	3600					F2181	2500	F1847	1500		
.3	F2142	1400	F1823	2800					F2182	1900	F1848	1250		
.4	F2143	1200	F1824	2300					F2183	1550	F1849	1070		
.5	F2144	1050	F1825	2000					F2184	1350	F1850	960		
.6									F2185	1200				
.7									F2186	1070				
.8									F2187	1000				
.9									F2188	900				
1	F2145	700	F1826	1250	F1579	500	F1554	500	F2189	850	F1851	680		
2	F2146	500	F1827	800	F1580	350	F1555	350	F2190	540	F1852	480		
3	F2147	400	F1828	600	F1581	300	F1556	290	F2191	400	F1853	390		
4	F2148	340	F1829	500	F1582	260	F1557	250	F2192	340	F1854	330		
5	F2149	300	F1830	440	F1583	240	F1558	220	F2193	290	F1855	300		
7.5	F2150	240	F1831	330	F1584	200	F1559	175			F1845	210		
10	F2151	200	F1832	280	F1585	170	F1560	150			F1844	250	F1856	190
15	F2152	160	F1833	210	F1586	140	F1561	120					F1857	150
20	F2153	140	F1834	175									F1858	125
25			F1835	150										
30	F2154	110	F1836	135	F1587	105	F1562	82					F1859	96
40			F1837	110									F1860	80
50	F2155	85	F1838	95	F1588	82	F1563	62					F1861	70
75	F2156	65	F1839	75	F1589	68	F1564	50					F1862	54
100	F2157	58	F1840	60	F1590	60	F1565	42					F1863	45
150					F1591	50	F1566	34						
200					F1592	43	F1567	29						
250														
300							F1568	23.5						
400							F1569	20						
500							F1570	18						

TOROIDAL INDUCTORS

FREQUENCY RANGE:

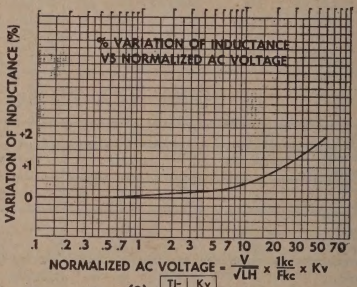
FREQUENCY RANGE:	20 Kc to 2 Mc		50 Kc to 5 Mc		50 Kc to 5 Mc		100 Kc to 10 Mc	
TYPE	**TI-20**		**TI-22**		**TI-23**		**TI-21**	
Temp. Stab.	SP		SP		SP		SP	
Ω/1 MH (±20%)	2.75		5.6		7		12	
I Max. (Amp.)	$0.2/\sqrt{LMH}$		$0.11/\sqrt{LMH}$		$0.11/\sqrt{LMH}$		$0.05/\sqrt{LMH}$	
Nominal Inductance	Catalog No.	Fo Mc	Catalog No.	Fo Mc	Catalog No.	Fo Mc	Catalog No.	Fo Mc
(MH)								
.010			F2270	13.5	F2301	11.5	F2240	17.0
.015			F2271	10.5	F2302	9.2	F2241	13.5
.020			F2272	9.0	F2303	8.0	F2242	11.5
.030			F2273	7.0	F2304	6.3	F2243	8.8
.040			F2274	6.0	F2305	5.4	F2244	7.4
.050	F2201	4.3	F2275	5.3	F2306	4.8	F2245	6.5
.075			F2276	4.1	F2307	3.8	F2246	5.0
.100	F2202	3.0	F2277	3.5	F2308	3.2	F2247	4.2
.125							F2248	3.6
.150			F2278	2.8	F2309	2.7	F2249	3.2
.200	F2203	2.1	F2279	2.4	F2310	2.3		
.300	F2204	1.7	F2280	1.9	F2311	1.8		
.400			F2281	1.6	F2312	1.5		
.500	F2205	1.3	F2282	1.4	F2313	1.4		
.600			F2283	1.25				
.700			F2284	1.1				
.750	F2206	1.1						
1	F2207	.9						
1.5	F2208	.75						
2	F2209	.65						
2.5	F2210	.55						
3	F2211	.52						
3.5	F2212	.48						
4	F2213	.45						
4.5	F2214	.42						
5	F2215	.4						



(1)

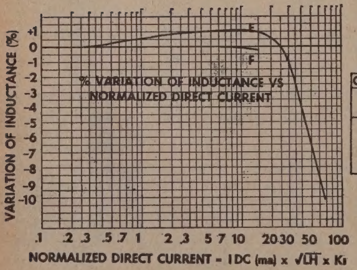
CURVE	TI	Kv
A	1	1
	1A	.65
	4	1
	5	2.7
	11	.43
	12	.8
	16	4.02
B	2	1.25
	6	1.25
	7	.8
	13	6.7
	17	2.5

CURVE	TI	Kv
C	8	1.1
	9	1
	10	.38
	18	2.2
D	3	2.2
	3A	1
	19	4.4
E	14	1
	15	2



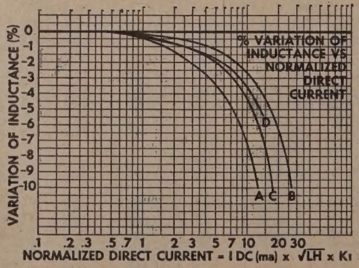
(2)

TI-	Kv
20	1
21	1
22	1
23	.55



CURVE	TI	Ki
E	14	1
	15	2.7
F	20	1
	21	5
	22	3.2
	23	3.6

(3)

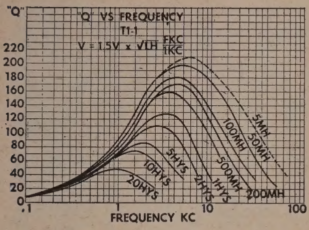


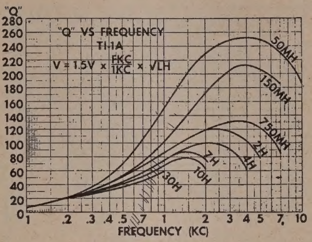
CURVE	TI	Ki
A	1	.5
	1A	.2
	4	.4
	5	.66
	11	.25
	12	.18
	16	1
B	2	.42
	6	.66
	7	1
	13	.23
	17	2.2

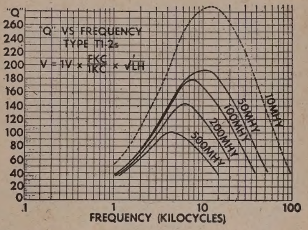
CURVE	TI	Ki
C	8	.37
	9	.105
	10	.155
	18	1
D	3	.14
	3A	.077
	19	1

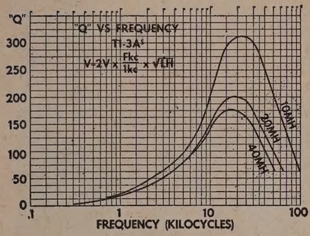
(4)

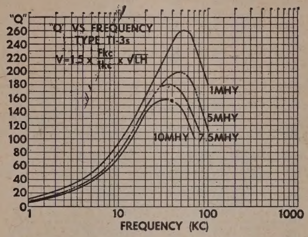
TOROIDAL INDUCTORS

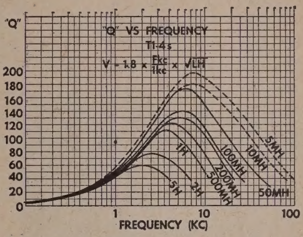


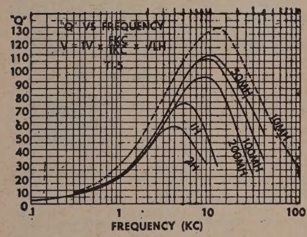


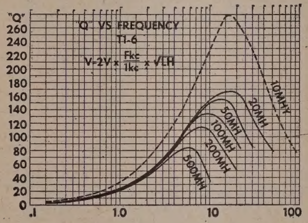


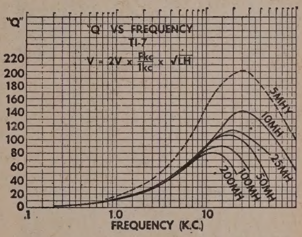


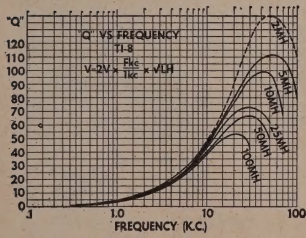


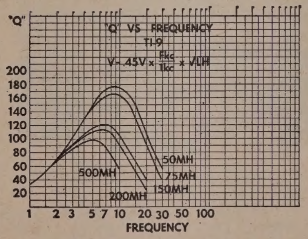


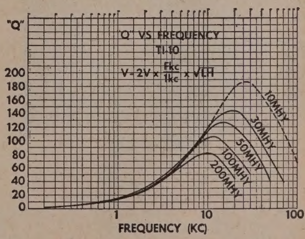


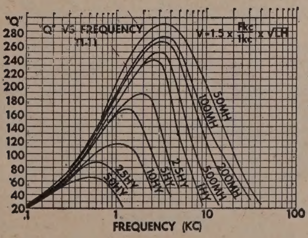


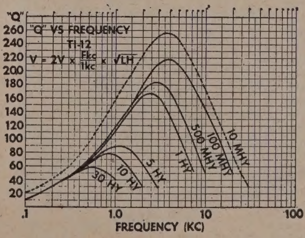






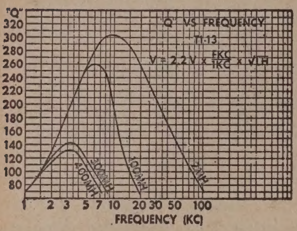


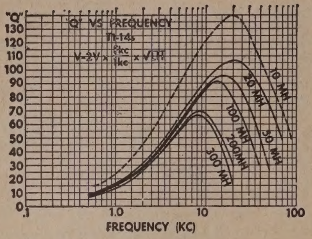


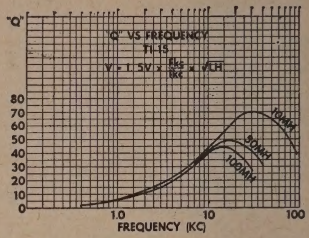


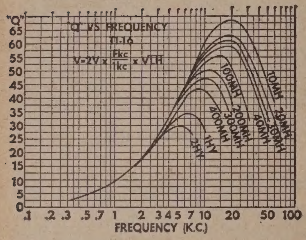
FREED TRANSFORMER COMPANY, INC.

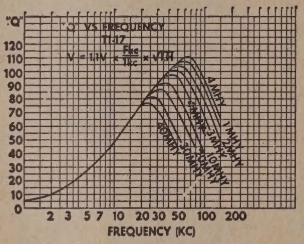
TOROIDAL INDUCTORS

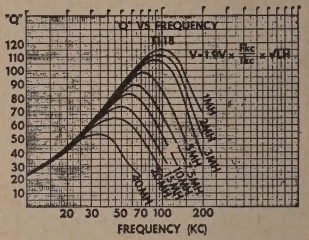


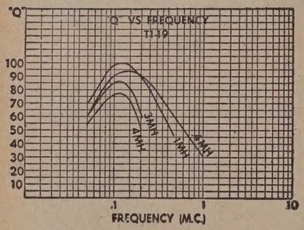


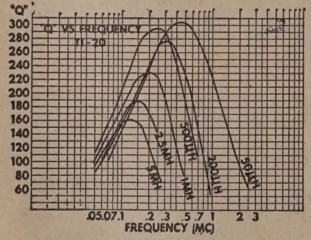


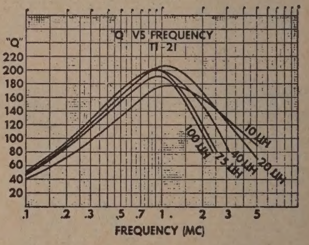


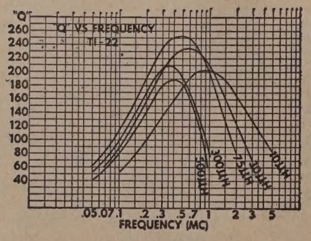


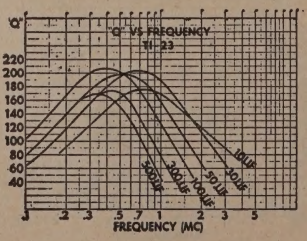










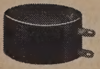


FREED TRANSFORMER COMPANY, INC.

CROSS REFERENCE GUIDE TO CASED, UNCASED AND MOLDED UNITS, SEE CHARTS A, B AND C.

Toroid Type	Case	Mold	Uncased Dimensions
TI-1	DT-3, DT-5	MR-6	OS-8
TI-1A	DT-4	MR-7	OS-9
TI-2	DT-3, DT-5	MR-5	OS-6
TI-3	DT-3, DT-5	MR-5	OS-6
TI-3A	DT-4	MR-8	OS-10
TI-4	DT-2, DM-11	MR-4	OS-5
TI-5	DT-1, DM-2	MR-3	OS-3
TI-6	DT-2, DM-11	MR-4	OS-5
TI-7	DT-1, DM-2	MR-3	OS-3
TI-8	DT-1, DM-2	MR-3	OS-3
TI-9	DT-4	MR-9	OS-10
TI-10	DT-3, DT-5	MR-5	OS-7
TI-11	DT-4	MR-10	OS-11
TI-12	DT-4	MR-8	OS-9
TI-13	DT-4	MR-8	OS-9
TI-14	DT-2, DM-11	MR-4	OS-5
TI-15	DT-1, DM-2	MR-3	OS-3
TI-16	DST-1	MR-1, MS-1	OS-1
TI-17	DST-1	MR-1, MS-1	OS-1
TI-18	DST-1	MR-1, MS-1	OS-1
TI-19	DST-1	MR-1, MS-1	OS-1
TI-20	DT-2	MR-3A	OS-4
TI-21	DT-1	MR-1, MS-1	OS-1
TI-22	DT-1	MR-2	OS-2
TI-23	DT-1	MR-2	OS-2

MR-1


MR-2 to MR-10

[A] DIMENSIONS OF MOLDED UNITS

Molded Coil Code No.	OD"	H"	Clearance Hole H-Mounting
MR-1	⅞	13/32	Pig tails
MR-2	1 1/16	½	4-40
MR-3	1 3/16	½	6-32
MR-3A	1 3/16	11/16	6-32
MR-4	1½	¾	8-32
MR-5	1⅞	1	8-32
MR-6	2⅛	⅞	8-32
MR-7	2⅜	1 5/16	10-32
MR-8	2½	1⅜	10-32
MR-9	2⅝	1 7/16	10-32
MR-10	2⅞	1⅜	10-32
MS-1	25/32 x 25/32	13/32	Pig tails

MS-1

OS-1 to OS-11

[B] DIMENSIONS OF UNCASED UNITS

Open Coil Code No.	OD"	H"	
OS-1	⅝	5/16	All OS Units supplied with 4" long leads
OS-2	⅞	⅜	
OS-3	1	⅜	
OS-4	1	9/16	
OS-5	1 5/16	⅝	
OS-6	1⅝	⅞	
OS-7	1 11/16	⅝	
OS-8	1⅞	11/16	
OS-9	2¼	1⅛	
OS-10	2⅜	1¼	
OS-11	2⅝	1⅛	

[C] CASE DIMENSIONS

DT-I CASE

Height: 1 7/32"
Width: ½"
Length: 1 1/16"
Mounting: 2 4-40 inserts
Mtg. Centers: ¾"
Cutout: 5/16" x ½"

DT-2 CASE

Height: 1¾"
Width: 13/16"
Length: 1 7/16"
Mounting: 2 6-32 studs
Mtg. Centers: ⅞"x9/32"
Cutout: ⅜"x11/16"

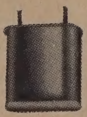
DT-3 CASE

Height: 2"
Width: ⅞"
Length: 1 25/32"
Mounting: 2 6-32 studs
Mtg. Centers: 1¼"x⅜"
Cutout: ⅜"x¾"

DT-4 CASE

Height: 3⅛"
Width: 1 5/16"
Length: 2¾"
Mounting: 4 8-32 studs
Mtg. Centers: 2 1/16"x11/16"
Cutout: ¾"x⅜"

DST-I CASE



Height: 23/32"
Width: 11/32"
Length: ¾"
Pins: ¼" long
To fit: ½" crystal socket

DT-5 CASE

Height: 1 3/16"
Diameter: 1 13/16"
Mounting: 2 6-32 inserts
Mtg. Centers: 1⅛"
Cutout: ⅜"x1"

DM-2 CASE

Height: 1"
Diameter: 1⅛"
Mounting: 2 4-40 inserts
Mtg. Centers: ⅝"
Cutout: ⅝"x⅞"

DM-11 CASE

Height: 1½"
Diameter: 1⅜"
Mounting: 2 6-32 inserts
Mtg. Centers: ⅞"
Cutout: ⅜"x⅞"

FREED MAGNETIC AMPLIFIERS & SATURABLE TRANSFORMERS

The ever increasing demand for reliability, ruggedness, miniaturization and high performance has made the magnetic amplifier an indispensable component of many military and industrial automatic control and servo systems. Recent advances in materials and techniques permit an even greater utilization of the well-known inherent advantages of magnetic amplifiers such as direct operation from line voltage, no warm-up time, long-life components, ease of signal mixing, and hermetic sealing.

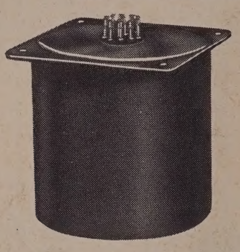
Freed Transformer Co. manufactures an extensive line of magnetic amplifiers, ranging from saturable transformers to half-wave type, fast-response servo amplifiers. Choice of catalog amplifiers assures standardization, lowest possible cost and rapid delivery.

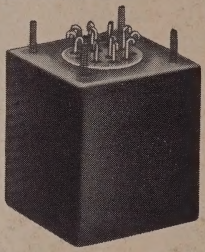
All standard units are designed for continuous operation and will operate in an ambient temperature range of −55°C to +75°C.

Vacuum tube and transistor preamplifiers can be supplied if very high impedance inputs are required.

In addition to standard items, Freed Transformer Co. has extensive facilities for the design and production of special amplifiers, saturable reactors and magnetic components.

ALL ITEMS LISTED ARE AVAILABLE FROM STOCK.





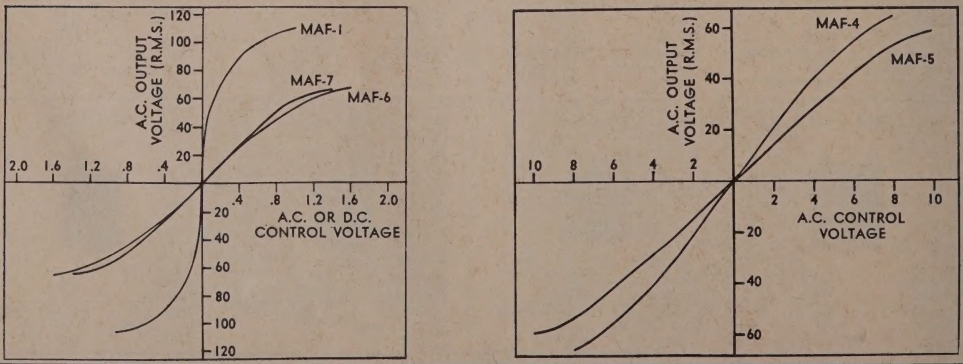
FAST RESPONSE FREED MAGNETIC AMPLIFIERS

THE MAF TYPE OF FAST RESPONSE MAGNETIC AMPLIFIERS COMBINES HIGH POWER GAIN, RUGGEDNESS, AND RELIABILITY WITH A MAXIMUM 2 CYCLE RESPONSE. ALL MAF UNITS ARE PHASE-REVERSIBLE.

FREED NO.	MAF-1	MAF-4*	MAF-5*	MAF-6	MAF-7
POWER SUPPLY	115V 60~	115V 400~	115V 400~	115V 400~	115V 400~
MAXIMUM OUTPUT WATTAGE	15	10	15	10	15
OUTPUT VOLTAGE	110V RMS	57.5V RMS	57.5V RMS	57.5V RMS	57.5V RMS
TYPICAL LOAD	Diehl FPE 25-11	Kearfott R110-2 Kearfott R111-2	Kearfott R112-2	Kearfott R110-2 Kearfott R111-2	Kearfott R111-2 Kearfott R112-2
INPUT SIGNAL REQUIRED FOR FULL OUTPUT	1V AC or DC	8V AC	8V AC	R110-2 10K 1K 1.2V .4V R111-2 10K 1K 1.6V .6V	R111-2 10K 1K 2.0V .6V R112-2 10K 1K 2.5V 1.0V
CONTROL WINDING RESISTANCE	10,000 OHMS	60 OHMS CT 150 OHMS CT	60 OHMS CT 150 OHMS CT	AC or DC 10,000 OHMS Min. 1,000 OHMS Min.	AC or DC 10,000 OHMS Min. 1,000 OHMS Min.
PHYSICAL DIMENSIONS	Mag. Amp. 5¼" x 7" x 7½" H X Former 3½" x 4⅛" x 3½" H	2 9/16" O.D. x 2⅜" H	2½" O.D. x 2½" H	4⅜" x 4¼" x 2⅞" H	4⅜" x 4¼" x 2⅞" H
WEIGHT	Mag. Amp. 21 lbs. X Former 6¼ lbs.	13 oz.	18 oz.	4½ lbs.	4½ lbs.

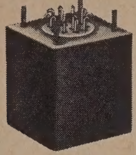
*When used with MAT-1 Transistor Preamplifier

Transfer characteristic curves



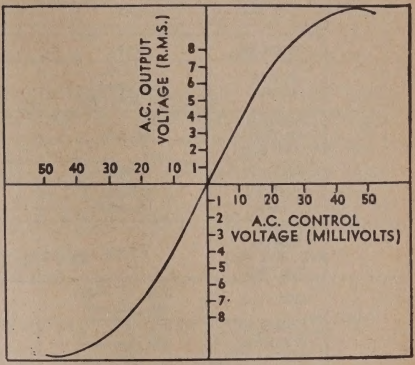
FREED MINIATURIZED SILICON TRANSISTOR PREAMPLIFIER

THE MAT TYPE OF TRANSISTOR PREAMPLIFIER COMBINES LOW POWER CONSUMPTION, HIGH POWER GAIN AND SMALL SIZE AND WEIGHT.



FREED NO.	MAT-1
POWER SUPPLY	115V 400~
VOLTAGE GAIN	400
MAXIMUM OUTPUT VOLTAGE	10V (RL = 1.5K)
TYPICAL LOAD	Freed MAF-4 and MAF-5 Magnetic Amplifiers
INPUT SIGNAL REQUIRED FOR FULL OUTPUT	30MV
INPUT IMPEDANCE	>10,000 OHMS
PHYSICAL DIMENSIONS	1¾" x 1⅞" x 2⅝"H
WEIGHT	10 oz.

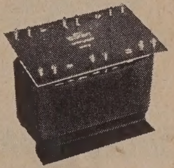
Transfer characteristic curves

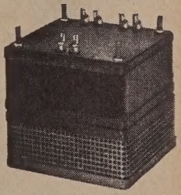


SINGLE ENDED MAGNETIC AMPLIFIERS

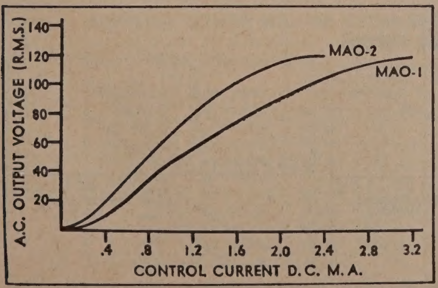
THE MAO LINE OF SINGLE-ENDED MAGNETIC AMPLIFIERS PROVIDES A SINGLE STAGE OF DC CONTROLLED AMPLIFICATION, UTILIZING POSITIVE FEEDBACK TO OBTAIN MUCH HIGHER GAIN THAN THAT OF A SATURABLE REACTOR.

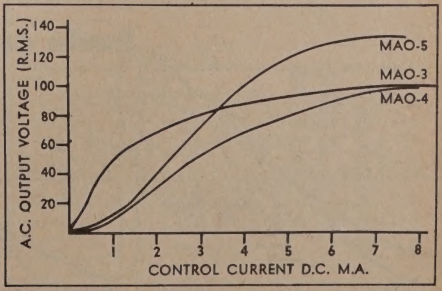
FREED NO.	MAO-1	MAO-2	MAO-3	MAO-4	MAO-5
POWER SUPPLY	115 V.A.C. 60 Cycles	115 V.A.C. 60 Cycles	115 V.A.C. 60 Cycles	115 V.A.C. 60 Cycles	115 V.A.C. to the MAO-T-5 Transformer 60 Cycles
MAXIMUM OUTPUT WATTAGE	4 watts	20 watts	100 watts	400 watts	575 watts
VOLTAGE	120V	120V	100V	100V	135V
TYPICAL LOAD	4000 ohms	700 ohms	100 ohms	25 ohms	25 ohms
INPUT SIGNAL REQ. FOR FULL OUTPUT	3 ma.	1.8 ma.	9 ma.	9 ma.	6 ma.
CONTROL WINDING RESISTANCE	300 ohms each	700 ohms each	5600 ohms each	4,500 ohms each	4,500 ohms
PHYSICAL DIMENSIONS	3¾" x 4" x 3½"H	4¼" x 3⅝" x 6⅜"H	3¼" x 5½" x 4 13/16"H	5" x 7½" x 6"H	5" x 7½" x 6"H Transf. 3⅞" x 3⅞" x 3¾"H
WEIGHT	4 lbs.	7 lbs.	8½ lbs.	21 lbs.	21 lbs. Transf. 7¼ lbs.





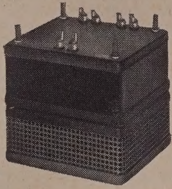
Transfer characteristic curves





FREED PUSH-PULL MAGNETIC AMPLIFIERS

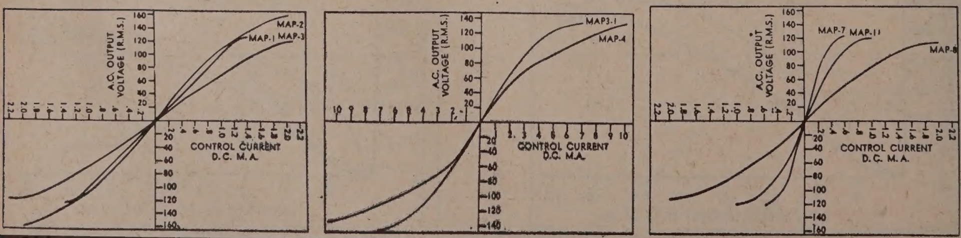
THE MAP LINE OF PUSH-PULL MAGNETIC AMPLIFIERS FEATURES HIGH GAIN, POLARITY-SENSITIVE AMPLIFICATION, AND A PHASE-REVERSIBLE OUTPUT.



FREED NO.	MAP-1	MAP-2	MAP-3	MAP-3-1
POWER SUPPLY	115 V.A.C. 60 Cycles (To MAPT-1)	115 V.A.C. 60 Cycles (To MAPT-2)	115 V.A.C. 60 Cycles (To MAPT-3)	115 V.A.C. 60 Cycles (To MAPT-3-1)
MAXIMUM OUTPUT WATTAGE	2.8 watts	15 watts	50 watts	50 watts
VOLTAGE	140V	150V	120V	140V
TYPICAL LOAD	Kollsman 951-0160	Diehl FPE 25-11	Diehl FPF 49-9	Diehl FPF 49-9
INPUT SIGNAL REQ. FOR FULL OUTPUT	1.2 ma.	1 ma.	2 ma.	4.5 ma.
RESP. TIME	ON OFF 15 cycles 60	ON OFF 5 cycles 38	ON OFF 3 cycles 15	ON OFF 5 cycles 20
CONTROL WINDING RESISTANCE	620 ohms each	1230 ohms each	250 ohms each	1700 ohms each
PHYSICAL DIMENSIONS	3⅜" x 3¼" x 5⅞"H M.A. 2⅝" x 2¼" x 3"H T.	3⅞" x 4⅝" x 7"H M.A. 2 5/16" x 2¾" x 3¾"H T.	5⅛" x 6⅞" x 8"H M.A. 3 5/16" x 3⅞" x 4¼"H T.	5½" x 5" x 8"H M.A. 3⅝" x 4¼" x 3⅜"H T.
WEIGHT	6 lbs. M.A. 3 lbs. T.	11 lbs. M.A. 3½ lbs. T.	26½ lbs. M.A. 8 lbs. T.	20 lbs. M.A. 8 lbs. T.

FREED NO.	MAP-4	MAP-7	MAP-8	MAP-11
POWER SUPPLY	115 V.A.C. 60 Cycles (To MAPT-4)	115 V.A.C. 400 Cycles	115 V.A.C. 400 Cycles (To MAPT-8)	115 V.A.C. 400 Cycles
MAXIMUM OUTPUT WATTAGE	175 watts	15 watts	50 watts	10 watts
VOLTAGE	130V	125V	115V	115V
TYPICAL LOAD	Diehl FPF 85-18-1	Kearfott R112-2A	Bendix CK-3000-1-A	Kearfott R111-2A
INPUT SIGNAL REQ. FOR FULL OUTPUT	8 ma.	.5 ma.	1.8 ma.	.9 ma.
RESP. TIME	ON OFF 17 cycles 66	ON OFF 5 cycles 15	ON OFF 45 cycles 60	ON OFF 4 cycles 75
CONTROL WINDING RESISTANCE	3000 ohms each	4,400 ohms each	320 ohms each	3300 ohms each
PHYSICAL DIMENSIONS	7¼" x 5" x 7⅞"H M.A. 4" x 4¾" x 5⅝"H T.	3¼" x 3⅝" x 7"H	3⅞" x 3⅞" x 7⅞"H M.A. 2 5/16" x 2¾" x 3¾"H T.	4⅛" x 3½" x 5¼"H
WEIGHT	35 lbs. M.A. 12 lbs. T.	7 lbs.	7½ lbs. M.A. 4 lbs. T.	5 lbs.

Transfer characteristic curves

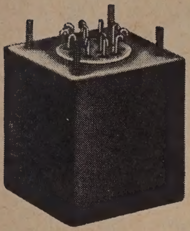


Use Index Page 1 for Quick, Easy Location of ALL Products

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

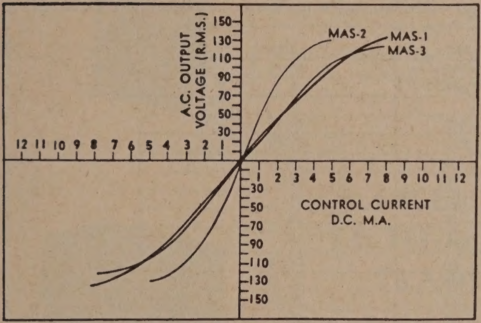
FREED SATURABLE TRANSFORMERS

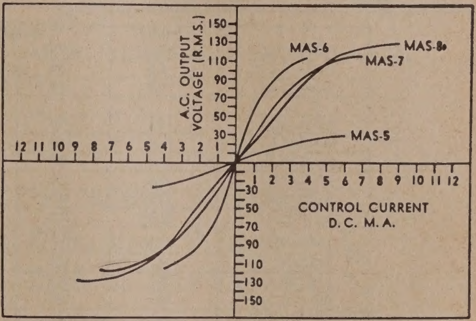
THE MAS LINE OF SATURABLE TRANSFORMERS, COMMONLY CONTROLLED BY DUAL-TRIODES OR TRANSISTORS, EMPHASIZES LOW COST, SMALL SIZE, EXTREME RELIABILITY (NO RECTIFIERS), AND PHASE-REVERSIBLE OUTPUT.



FREED NO.	MAS-1	MAS-2	MAS-3	MAS-5	MAS-6	MAS-7	MAS-8
POWER SUPPLY	115 V.A.C. 60 Cycles	115 V.A.C. 400 Cycles	115 V.A.C. 60 Cycles	115 V.A.C. 400 Cycles	115 V.A.C. 400 Cycles	115 V.A.C. 400 Cycles	115 V.A.C. 400 Cycles
MAXIMUM OUTPUT WATTAGE	15 watts	6 watts	30 watts	2.7 watts	30 watts	40 watts	10 watts
VOLTAGE	130V	120V	120V	26V	120V	115V	125V
TYPICAL LOAD	Diehl FPE 25-11	Kearfott R-110	Diehl FPE 49-7	Kearfott R-118	Diehl FPE 49-13-1	Bendix CK-3000-1A	Kearfott R-110 R-111
INPUT SIGNAL REQ. FOR FULL OUTPUT	6 ma.	3 ma.	8 ma.	4 ma.	4 ma.	6 ma.	11 ma.
RESP. TIME	ON 2 cycles OFF 5	ON 3 cycles OFF 6	ON 3 cycles OFF 30	ON 10 cycles OFF 35	ON 12 cycles OFF 9	ON 12 cycles OFF 9	ON 6 cycles OFF 3
CONTROL WINDING RESISTANCE	14 K ohms each	2000 ohms each	6800 ohms each	1500 ohms each	4000 ohms each	4000 ohms each	7000 ohms
PHYSICAL DIMENSIONS	3½" x 4⅛" x 5½"H	1¾" x 2 9/16" x 2 13/16"H	4¾" x 5⅞" x 5½"H	2¼" x 2⅛" 2¼"H	3¾" x 3¼" x 4"H	3 13/16" x 3¼" x 4"H	1⅝" x 2⅜" x 3⅛"H
WEIGHT	9 lbs.	2 lbs.	18.5 lbs.	1.25 lbs.	6 lbs.	6 lbs.	21 oz.

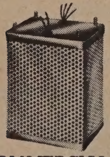
Transfer characteristic curves





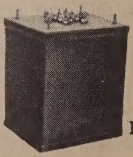
HERMETICALLY SEALED CONSTANT VOLTAGE TRANSFORMER

THE MCV LINE OF HERMETICALLY SEALED CONSTANT VOLTAGE TRANSFORMERS PROVIDES ACCURATE REGULATION AGAINST LINE AND/OR LOAD VARIATIONS, WITHOUT THE USE OF TUBES OR MOVING PARTS.



COMMERCIAL

- MEETS MILITARY SPECIFICATIONS
- NO TUBES
- NO MOVING PARTS
- ACCURATE REGULATIONS
- FAST RESPONSE
- FULLY AUTOMATIC



MILITARY

Here at last is a hermetically sealed magnetic voltage regulator that will provide constant output voltage regardless of line and/or load changes.

SUPPLIED EITHER MIL. OR COMMERCIAL

FREED NO.						DIMENSIONS			
COMMERCIAL	MILITARY	INPUT VOLT.	LINE FREQ.	OUTPUT VOLT.	OUTPUT VA	COMMERCIAL	MILITARY	COM.	MIL.
MCV620LC	MCV620LM	95-130V	60 cps.	115	20	2¾" x 3¾" x 5"H	2¾" x 3¾" x 5"H	15	25
MCV670LC*	MCV670LM	95-130V	60 cps.	115	70	4⅛" x 5" x 6"H	4⅛" x 5" x 3½"H	24	35
MCV6130LC*	MCV6130LM	95-130V	60 cps.	115	130	5⅝" x 4¾" x 6½"H	4¾" x 5⅞" x 4½"H	30	45
MCV620FC	MCV620FM	95-130V	60 cps.	6.4	20	2¾" x 3¾" x 5"H	2¾" x 3¾" x 5"H	15	25
MCV670FC*	MCV670FM	95-130V	60 cps.	6.4	70	4⅛" x 5" x 6"H	4⅛" x 5" x 3½"H	20	30
MCV6130FC*	MCV6130FM	95-130V	60 cps.	6.4	130	5¼" x 7" x 7"H	5¼" x 7" x 7"H	31	45
	MCV420LM	95-130V	400 cps.	115	20		1 13/16" x 3 9/16" x 3 1/16"H		25
	MCV4130LM	95-130V	400 cps.	115	130		5" x 4⅛" x 4¾"H		65
	MCV420FM	95-130V	400 cps.	6.4	20		1 13/16" x 3 9/16" x 3 1/16"H		25

*These units come supplied with a condenser.

When ordering commercial type construction add C to part #.

FREED TRANSISTOR CONVERTERS

THE MAC LINE OF HERMETICALLY SEALED DC TO AC AND DC TO DC TRANSISTOR CONVERTERS PROVIDE A HIGH EFFICIENCY VOLTAGE CONVERSION FROM BATTERY SOURCES TO AN AC LINE VOLTAGE OR HIGH DC VOLTAGE WITHOUT THE USE OF MOVING PARTS.

Freed Transformer Co. maintains a stock line of reliable, highly efficient static DC to DC and DC to AC converters.

DC to DC converters in hermetically sealed cans. RF filters included inside case.

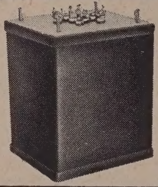
The MAC Line of Static DC to DC and DC to AC Converters provide a highly efficient voltage conversion from battery sources to AC or DC voltage without the use of moving parts.

The output voltage and/or frequency is directly proportional to source voltage variation.

Special regulators can be supplied to compensate for this variation.

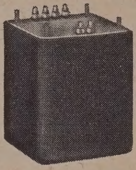
- **RUGGED, QUIET, MAINTENANCE FREE, LONG LIFE OPERATION.**
- **HIGH POWER TO WEIGHT RATIO, ARC-FREE OPERATION.**

DC TO DC CONVERTERS



DC-2B CASE

Height: 3½"
Width: 2⅝"
Depth: 2¼"
Mtg. Cen.: 2" x 1¾"
Studs: 4 8-32
Knockout: 1½" dia.



JB CASE

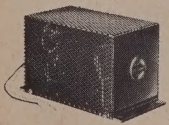
Height: 3⅞"
Width: 3 9/16"
Depth: 3 1/16"
Mtg. Cen.: 2⅝" x 2⅛"
Studs: 4 8-32

FREED NO.	INPUT VDC	OUTPUT VDC	OUTPUT IDC	SIZE
MAC- 6.2.1	6.3	150	.049	DC2B
MAC- 6.3.1	6.3	195	.080	JB
MAC-12.2.1	12.6	300	.043	DC2B
MAC-12.2.2	12.6	180	.072	DC2B
MAC-12.4.1	12.6	390	.100	JB
MAC-12.4.2	12.6	245	.170	JB
MAC-12.4.3	12.6	350	.120	JB
MAC-12.4.4	12.6	225	.218	JB
MAC-12.4.5	12.6	500 250	.170 .080	JB
MAC-26.2.1	26	250	.100	DC2B
MAC-26.2.2	26	600	.043	DC2B
MAC-26-2.3	26	360	.072	DC2B
MAC-26.4.1	26	600	.140	JB
MAC-26.4.2	26	450	.190	JB
MAC-26.4.3	26	450‡	.190	JB

‡Tap at 225 Volts.

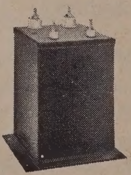
ALSO AVAILABLE FOR AC SQUARE WAVE OUTPUT AT SLIGHTLY HIGHER RATINGS.

DC TO AC CONVERTERS



MAC-12-3-60 CASE

Height: 4½"
Width: 7⅜"
Depth: 3¼"



MAC-6-30-1 CASE

Height: 5½"
Width: 7"
Depth: 5¼"

MAC-12-20-1 CASE

Height: 6"
Width: 4⅛"
Depth: 6"

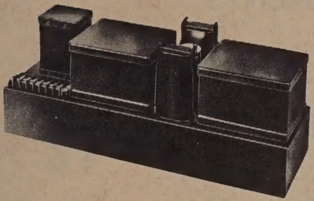
MAC-12-30-2 CASE

Height: 7"
Width: 4¾"
Depth: 5⅞"

FREED NO.	INPUT VOLTAGE	OUTPUT VA	OUTPUT VOLTAGE AND FREQUENCY	OUTPUT REGULATION	WEIGHT
MAC-6-30-1**	6 VOLT BATTERY	120 WATTS MAXIMUM	115 VOLTS* 60 CYCLES	±10%	15 LBS.
MAC-12-3-60	12 VOLT BATTERY	30 WATTS MAXIMUM	115 VOLTS* 60 CYCLES	±10%	4½ LBS.
MAC-12-20-1**	12 VOLT BATTERY	170 WATTS MAXIMUM	115 VOLTS* 60 CYCLES	±10%	12 LBS.
MAC-12-30-2**	12 VOLT BATTERY	250 WATTS MAXIMUM	115 VOLTS* 60 CYCLES	±5%	16 LBS.

***Output voltage varies directly with input voltage. **Hermetically sealed**

FREED TUBELESS REGULATED POWER SUPPLY #33125

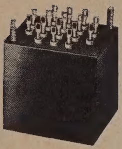


Input Voltage	Frequency	Output		Size
		1	2	
95–130 volts	60 cycles	155 volts DC @ 150 Ma	6.3 volts 60∼ 3a	17x5x7″H

Output No. 1 is regulated so that a change in load from one-third to full, with full line voltage variation (95–130 volts) will hold the output voltage fixed at 155 volts ± 2%. The ripple content is less than 10 Mv.

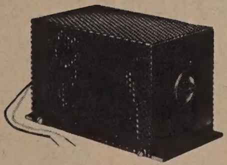
Featured in Output No. 1 is a Time Delay Relay, adjustable from 30 seconds to 3 minutes to allow for warm up.

FREED MAGNETIC MODULATOR—MAM—1



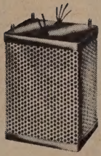
Input Voltage	Frequency	Output		Load	D.C. Signal Required for Full Output	Size	Wt.
		1	2				
115 volts	400 cycles	3 volts phase reversible	2.5 volts phase reversible	12KΩ	100 Microamps.	1¼x1½x1⁹⁄₁₆″H	5 oz.

FREED SINE WAVE OUTPUT (5% Maximum Distortion) D. C. to A. C. TRANSISTOR CONVERTERS



Our complete line of D.C. to A.C. Transistor Converters can be supplied as sine wave output units at a slight increase in price.

FREED SINE WAVE OUTPUT (5% Maximum Distortion) CONSTANT VOLTAGE TRANSFORMERS



Our complete line of constant voltage transformers can be supplied as sine wave output units at a slight increase in price.

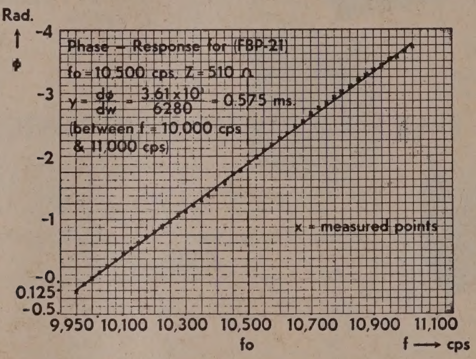
FREED TRANSISTOR REGULATORS

These devices are designed to be used in conjunction with our transistor converters for applications where the input voltage is unstable.

Prices for these units on application.

TELEMETERING COMPONENTS

A complete line of Band Pass Filters, Low Pass Filters and Discriminators is available for multi-channel telemetering applications. These components cover the frequency range from 400 cps to 70,000 cps. The filters feature linear phase response, excellent selectivity characteristics and plug-in construction. The Discriminators, either fixed or slug tuned, have exceptional linearity, high amplification, and utmost stability.



TELEMETERING BAND PASS FILTERS

These filters cover the frequencies from 400 c.p.s. to 70KC. Narrow frequency B.P.F. have a band width of ±9¾% of center frequency and 45 DB (minimum) points at ±7½% of center frequency of higher or lower adjacent channels. Wide frequency B.P.F. have a band width of ±19½% of center frequency and 50 D.B. points at ±15% of center frequencies of higher or lower second adjacent channels.

Characteristic Impedance 500 Ω

Catalog No.	Center Frequency c.p.s.	3 DB Band Width % of C.F.	Case No.
FBP-10	400	± 9¾	FA-10
FBP-11	560	± 9¾	FA-10
FBP-12	730	± 9¾	FA-10
FBP-13	960	± 9¾	FA-10
FBP-14	1,300	± 9¾	FA-10
FBP-15	1,700	± 9¾	FA-10
FBP-16	2,300	± 9¾	FA-10
FBP-17	3,000	± 9¾	FA-15
FBP-18	3,900	± 9¾	FA-15
FBP-19	5,400	± 9¾	FA-15
FBP-20	7,350	± 9¾	FA-15
FBP-21	10,500	± 9¾	FA-15
FBP-22	12,300	± 9¾	FA-15
FBP-23	14,500	± 9¾	FA-15
FBP-24	22,000	± 9¾	FA-15
FBP-25	22,000	±19½	FA-15
FBP-26	30,000	± 9¾	FA-15
FBP-27	30,000	±19½	FA-15
FBP-28	40,000	± 9¾	FA-15
FBP-29	40,000	±19½	FA-15
FBP-30	52,500	± 9¾	FA-15
FBP-31	52,500	±19½	FA-15
FBP-32	70,000	± 9¾	FA-15
FBP-33	70,000	±19½	FA-15

Characteristic Impedance 2,500 Ω

Catalog No.	Center Frequency c.p.s.	3 DB Band Width % of C.F.	Case No.
FBP-34	400	± 9¾	FA-5
FBP-35	560	± 9¾	FA-5
FBP-36	730	± 9¾	FA-5
FBP-37	960	± 9¾	FA-5
FBP-38	1,300	± 9¾	FA-5
FBP-39	1,700	± 9¾	FA-5
FBP-40	2,300	± 9¾	FA-5
FBP-41	3,000	± 9¾	FA-5
FBP-42	3,900	± 9¾	FA-5
FBP-43	5,400	± 9¾	FA-5
FBP-44	7,350	± 9¾	FA-5
FBP-45	10,500	± 9¾	FA-5
FBP-46	12,300	± 9¾	FA-5
FBP-47	14,500	± 9¾	FA-5
FBP-48	22,000	± 9¾	FA-5
FBP-49	22,000	±19½	FA-5
FBP-50	30,000	± 9¾	FA-5
FBP-51	30,000	±19½	FA-5
FBP-52	40,000	± 9¾	FA-5
FBP-53	40,000	±19½	FA-5
FBP-54	52,500	± 9¾	FA-5
FBP-55	52,500	±19½	FA-5
FBP-56	70,000	± 9¾	FA-5
FBP-57	70,000	±19½	FA-5

CASE DIMENSIONS

FA-5 CASE

Height: 4½"
Width: 3½"
Depth: 2⅛"
Mtg. Cen.: 2 7/16"x1 9/16"
Studs: 5—8-32x½"
Octal Header

FA-10 CASE

Height: 4½"
Width: 3½"
Depth: 2⅛"
Mtg. Cen.: 1 11/16"x1 9/16"
Studs: 4—8-32x½"
Knockout: 1½" dia.

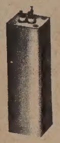
FA-15 CASE

Height: 4½"
Width: 2⅞"
Depth: 2⅛"
Mtg. Cen.: 1 11/16"x1 9/16"
Studs: 4—8-32x ½"
Knockout: 1½" dia.

FREED TRANSFORMER COMPANY, INC.

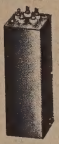
CASE DIMENSIONS

FA-1 CASE



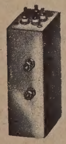
Height: 4½″
Width: 1½″
Depth: 1½″
Mtg. Cen.: 31/32″ sq.
4 Inserts 6-32
Knockout: 1″

FA-185 CASE



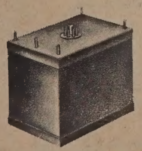
Height: 4½″
Width: 1⅞″
Depth: 1⅝″
Mtg. Cen.: 1 15/64″x1 1/16″
4 Inserts: 6-32
Knockout: 1½″

FA-190 CASE



Height: 4½″
Width: 2¼″
Depth: 1⅝″
Mtg. Cen.: 1 7/32″x1 1/16″
4 Inserts: 6-32
Knockout: 1½″

FA-410 CASE



Height: 4½″
Width: 6″
Depth: 4″
Mtg. Cen.: 5¼″x3¼″
5 Studs: 10-32
Octal Header

DISCRIMINATOR INPUT LOW PASS FILTER

Catalog No.	Fo Center Freq. in c.p.s.	Characteristic Impedance Ohms	Case No.
LPI-10	400	30,000	FA-1
LPI-11	560	30,000	FA-1
LPI-12	730	30,000	FA-1
LPI-13	960	30,000	FA-1
LPI-14	1,300	30,000	FA-1
LPI-15	1,700	30,000	FA-1
LPI-16	2,300	30,000	FA-1
LPI-17	3,000	30,000	FA-1
LPI-18	3,900	30,000	FA-1
LPI-19	5,400	30,000	FA-1
LPI-20	7,350	30,000	FA-1
LPI-21	10,500	30,000	FA-1
LPI-22	12,300	30,000	FA-1
LPI-23	14,500	30,000	FA-1
LPI-24	22,000	5,100	FA-1
LPI-25	30,000	5,100	FA-1
LPI-26	40,000	5,100	FA-1
LPI-27	52,500	5,100	FA-1
LPI-28	70,000	5,100	FA-1

Band Pass Attenuation: 0.05 DB ± 9¾% of Center Frequency
30 DB at second harmonic of Pass Band Frequencies
50 DB at third harmonic of Pass Band Frequencies
40 DB above third harmonic of Pass Band Frequencies

Band Pass Attenuation: 0.05 DB ± 15% of Center Frequency
30 DB at second harmonic of Pass Band Frequencies
50 DB at third harmonic of Pass Band Frequencies
40 DB above third harmonic of Pass Band Frequencies

DISCRIMINATOR OUTPUT LOW PASS FILTER

Catalog No.	Fo c. p. s.	Characteristic Impedance Ohms	Case No.
LPO-10	6	330	FA-410
LPO-11	8	330	FA-410
LPO-12	11	330	FA-410
LPO-13	14	330	FA-410
LPO-14	20	330	FA-410
LPO-15	25	330	FA-410
LPO-16	35	330	FA-410
LPO-17	45	330	FA-410
LPO-18	60	330	FA-410
LPO-19	81	330	FA-410
LPO-20	110	330	FA-410
LPO-21	160	330	FA-410
LPO-22	185	330	FA-410
LPO-23	220	330	FA-410
LPO-24	330	330	FA-410
LPO-25	450	330	FA-410
LPO-26	600	330	FA-410
LPO-27	660	330	FA-410
LPO-28	790	330	FA-410
LPO-29	900	330	FA-410
LPO-30	1,050	330	FA-410
LPO-31	1,200	330	FA-410
LPO-32	1,600	330	FA-410
LPO-33	2,100	330	FA-410
LPO-34	7,200	330	FA-410
LPO-35	10,000	330	FA-410

Attenuation: < 0.2 DB up to 0.5 times Fo
< 0.7 DB from 0.5 to 1. times Fo
> 20 DB at 2 Fo to 2.5 Fo
> 30 DB from 2.5 times Fo to 100 Kc.

SLUG TUNED DISCRIMINATORS

Catalog No.	Center Frequency (Kc.)	% Deviation of Fo	Linearity	D.C. Output Volts	Case No.
DST-17	3.0	±8½	±0.5%	32.5	FA-190
DST-18	3.9	±8½	±0.5%	32.5	FA-190
DST-19	5.4	±8½	±0.5%	32.5	FA-190
DST-20	7.35	±8½	±0.5%	32.5	FA-190
DST-21	10.5	±8½	±0.5%	32.5	FA-190
DST-22	12.3	±8½	±0.5%	32.5	FA-190
DST-23	14.5	±8½	±0.5%	32.5	FA-190
DST-24	22.0	±8½	±0.5%	32.5	FA-190
DST-25	30.0	±8½	±0.5%	32.5	FA-190
DST-26	40.0	± 8½	±0.5%	32.5	FA-190
DST-27	52.5	± 8½	±0.5%	32.5	FA-190
DST-28	70.0	± 8½	±0.5%	32.5	FA-190
DST-29	22.0	±15	±1.0%	26.0	FA-190
DST-30	30.0	±15	±1.0%	26.0	FA-190
DST-31	40.0	±15	±1.0%	26.0	FA-190
DST-32	52.5	±15	±1.0%	26.0	FA-190
DST-33	70.0	±15	±1.0%	26.0	FA-190

FIXED DISCRIMINATORS

Catalog No.	Center Frequency (cps)	% Deviation of Fo	Linearity	D.C. Output Volts	Case No.
DST-10	400	±8½	±0.5%	32.5	FA-185
DST-11	560	±8½	±0.5%	32.5	FA-185
DST-12	730	±8½	±0.5%	32.5	FA-185
DST-13	960	±8½	±0.5%	32.5	FA-185
DST-14	1,300	±8½	±0.5%	32.5	FA-185
DST-15	1,700	±8½	±0.5%	32.5	FA-185
DST-16	2,300	±8½	±0.5%	32.5	FA-185

FREED TRANSFORMER COMPANY, INC.

FREED FILTERS

Freed Standard Filters are **Hermetically Sealed Miniature** high performance components designed for both production and laboratory applications in the Communications and Electronic industry. In order to achieve attenuation requirements not obtainable with one single filter, one can combine several standard filters of different transmission characteristics. Wide Band Pass characteristics are obtainable by combining low and high Pass Units. The astatic construction of inductive components together with special shielding reduces the hum pick-up of the standard filters.

The standard filters are available in Low Pass, High Pass and Band Pass Filters.

Low Pass Filters: The attenuation characteristics of Low Pass Filters are 6db or less at cut-off frequency, 35db or more at 1.5 cut-off frequency and 40 db or more at 2 cut-off frequency.

ILP Interstage Low Pass Filter. Characteristic impedance 10,000 ohms, in and out.

LLP Line Low Pass Filter. Characteristic Impedance 500 to 600 Ω, in and out.

High Pass Filters: The attenuation characteristics of High Pass Filters are 6db or less at cut-off frequency, 35db and 40db or more at 0.67 and 0.5 cut-off frequency.

IHP Interstage High Pass Filter. Characteristic Impedance 10,000 ohms, in and out.

LHP Line High Pass Filter. Characteristic Impedance 500 to 600 Ω, in and out.

Band Pass Filters: The attenuation characteristics of Band Pass Filters are 2db or less at plus or minus 3% of center frequency 40db or more at 0.5 and 2 center frequency.

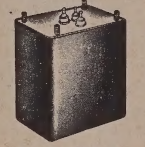
IBP Interstage Band Pass Filter. Nominal input impedance — 10,000 ohms. Nominal output impedance 5 megohms or grid of vacuum tube. Effective voltage step-up 2:1. (Output voltage to source voltage.)

LBP Line Band Pass Filter. Nominal input impedance 500 to 600 ohms. Nominal output impedance 5 megohms or grid of vacuum tube. Effective voltage step-up 9:1. (Output voltage to source voltage).

Special filters in all six types are available for any frequency from 200 to 20,000 cycles.

CASE DIMENSIONS

DF-1 CASE

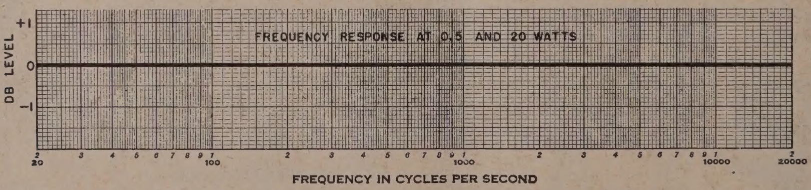


Height: 2½"
Width: 1$\frac{11}{16}$"
Depth: 1$\frac{3}{16}$"
Mtg. Cen.: 1¾"x¾"
Studs: 4—6-32x⅜"
Knockout: ⅞" dia.

Catalog No.	Cut-off Frequency c.p.s.
ILP- 500	500
ILP- 750	750
ILP- 1,500	1,500
ILP- 1,600	1,600
ILP- 2,000	2,000
ILP- 2,500	2,500
ILP- 3,000	3,000
ILP- 7,000	7,000
ILP- 15,000	15,000
ILP- 20,000	20,000
LLP- 1,500	1,500
LLP- 1,600	1,600
LLP- 2,000	2,000
LLP- 2,500	2,500
LLP- 3,000	3,000
IHP- 300	300
IHP- 400	400
IHP- 1,000	1,000
IHP- 2,000	2,000
LHP- 300	300
LHP- 400	400
LHP- 1,000	1,000

Catalog No.	Center Frequency
IBP - 200	200
IBP - 250	250
IBP - 400	400
IBP - 800	800
IBP - 1,000	1,000
IBP - 1,500	1,500
IBP - 2,000	2,000
IBP - 3,000	3,000
IBP - 5,600	5,600
IBP -10,000	10,000
IBP -15,000	15,000
LBP- 300	300
LBP- 400	400
LBP- 600	600
LBP- 1,000	1,000
LBP- 1,500	1,500
LBP- 2,000	2,000
LBP- 3,000	3,000
LBP-10,000	10,000
LBP-20,000	20,000

NEW CIRCUIT REVISES WILLIAMSON HI-FIDELITY AMPLIFIER FOR IMPROVED PERFORMANCE.



- Frequency response: .1DB from 20 to 30,000 cps. at 20W.
- Harmonic distortion: 0.4% from 20 to 30,000 cps. at 20W.
- Two section L-C filter for improved stable performance.
- 20 Watt output connected as Williamson amplifier.
- 10 Watt output connected as ultra linear amplifier.

FREED supplies the following parts from stock.

Catalog No.	Application	Rating	Case No.
KA-10	output transf.	Prim: 10,000 Ω ct. Sec. 16/8 Ω	VS-506
KC-10	filter reactor	12Hy at 165MA, RDC 180 Ω	VS-304
KC-11	filter reactor	20Hy at 30MA, RDC 1,250 Ω	CH-40
KP-10	power transf.	Pri: 115V 60cps; Sec. 1: 1100 Vct at 150MA; Sec. 2:6.3Vct at 4A; Sec. 3: 5V at 3A.	VS-606

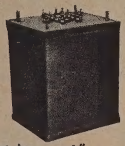
FREED TRANSFORMER COMPANY, INC.

CASE DIMENSIONS

DC-4B CASE

Height: 4¾"
Width: 3⅛"
Length: 3"
Mounting: 4 8-32 Studs
Mtg. Cen.: 2½" x 2½"
Cutout: (2)1⅜" x ⅝"

DC-6B CASE



Height: 6"
Width: 5"
Length: 4⅛"
Mounting: 4 10-32 Sds.
Mtg. Cen.: 3¾" x 3"
Cutout: 3" Dia.

OL-MA-2 CASE

Height: 4"
Width: 4⅝"
Length: 3 15/16"
Mounting: 4 10-32 Sds
Mtg. Cen.: 2½" x 3¾"
Cutout: (2)2¾" x ¾"

OL-112-1 CASE

Height: 6"
Width: 5⅞"
Length: 4¾"
Mounting: 4 ¼-20 Sds
Mtg. Cen.: 4¾"x3⅝"
Cutout: 3" dia.

FH-EA CASE

Height: 2 11/16"
Width: 1⅞
Length: 1¾"
Mounting: 4 6-32 Studs
Mtg. Cen.: 1⅜" x 1¼"
Cutout: 1 3/16"

DM-03 CASE

Height: 2½"
Width: 1½"
Length: 1½"
Mounting: 4 6-32 Studs
Mtg. Cen.: 1 1/16" x 1 1/16"
Cutout: 1¼" Dia.

ULTRASONICS

New developments and applications of ultrasonics for industrial cleaning, soldering, welding, and mixing have created a demand for generators and components specifically designed for ultrasonic applications.

Using the latest developments in the field of special magnetic materials the FREED ultrasonic transformers are designed for greatest efficiency and maximum reliability. They feature small size, excellent performance and long life under continuous duty operation.

Transformers with an extended frequency range (frequencies up to 2 MC) can be supplied upon request.

ULTRASONIC DRIVER AND INPUT TRANSFORMERS

Frequency response: ± 1 DB 10 KC to 60 KC.

Catalog No.	Application	Primary Impedance Ohms	Ratio	Maximum Power Watts	Maximum Primary D.C. per Side Ma.	Case Size
ULI-20	Transducer to PP 811A	1, 2, 4	1:17.3	5		DM-03
ULD-20	PP 6CM6 to PP 811A	10,000	4.4:1	5	50	DM-03
ULD-50	PP 5881 to PP 8000	7,200	1.7:1	25	90	FH-EA

ULTRASONIC OUTPUT TRANSFORMERS

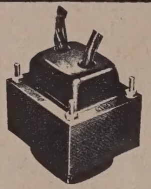
Frequency response: ± 1 DB 20 KC to 60 KC.

Catalog No.	Application	Impedance in Ohms Primary	Secondary	Maximum Power Watts	Maximum Primary D.C. per Side Ma.	Case Size
ULO-10	PP 6083 to transducer	7,600	1/4	100	120	DC-4B
ULO-11	Same	7,600	2/8	100	120	DC-4B
ULO-12	Same	7,600	4/16	100	120	DC-4B
ULO-13	Same	7,600	7.5/30	100	120	DC-4B
ULO-30	PP 811A to transducer	12,400	1/4	300	170	DC-4B
ULO-31	Same	12,400	2/8	300	170	DC-4B
ULO-32	Same	12,400	4/16	300	170	DC-4B
ULO-33	Same	12,400	7.5/30	300	170	DC-4B
ULO-34	Same	12,400	25	300	170	DC-4B
ULO-35	Same	12,400	125/500	300	170	DC-4B
ULO-36	Same	12,400	250/1000	300	170	DC-4B
ULO-37	Same	12,400	75/300	300	170	DC-4B
ULO-52	PP 8000 to transducer	10,800	4/16	500	230	OL-MA-2
ULO-53	Same	10,800	7.5/30	500	230	OL-MA-2
ULO-54	Same	10,800	25/100	500	230	OL-MA-2
ULO-55	Same	10,800	125/500	500	320	OL-MA-2
ULO-56	Same	10,800	250/1000	500	230	OL-MA-2
ULO-101	PP. Par. 8000 to transducer	5,400	25/100	1000	430	DC-6B
ULO-104	Same	5,400	75/300	1000	430	DC-6B
ULO-110	Same	5,400	18.8/75/300	1000	430	OL-112-1

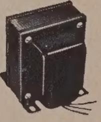
FREED TRANSFORMER COMPANY, INC.

COMMERCIAL GRADE COMPONENTS

CASE DIMENSIONS



Case No.	Height	Width	Depth	Mtg. Centers	Mtg. Studs
HS300	2⅝	3	2½	2½x2	(4) 3/16x⅜
HS303	2⅞	3	2½	2½x2	(4) "
HS306	3¼	3	2½	2½x2	(4) "
HS307	3⅜	3	2½	2½x2	(4) "
HS503	3½	3¾	3⅛	3⅛x2½	(4) "
HS505	3¾	3¾	3⅛	3⅛x2½	(4) "
HS603	3¾	4½	3¾	3¾x3	(4) "
HS605	4	4½	3¾	3¾x3	(4) "
HS606	4 5/16	4½	3¾	3¾x3	(4) "
HS610	4⅝	4½	3¾	3¾x3	(4) "
HS612	4⅞	4½	3¾	3¾x3	(4) "
HS708	5¾	5¼	4⅜	4⅜x3½	(4) 9/32x21/32
HS709	6	5¼	4⅜	4⅜x3½	(4) "



Case No.	Height	Width	Depth	Mtg. Centers	Mtg. Holes
VS300	3 5/32	2⅝	2¾	2x1 11/16	(4) 3/16x⅜
VS303	3 5/32	2⅝	3	2x1 15/16	(4) "
VS304	3 29/32	4¼	3¼	2½x3	(4) "
VS306	3 5/32	2⅝	3⅜	2x2⅜	(4) "
VS307	3 5/32	2⅝	3½	2x2 7/16	(4) "
VS503	3 29/32	3¼	3⅝	2½x2 5/16	(4) "
VS505	3 29/32	3¼	3⅞	2½x2⅝	(4) "
VS506	3 29/32	3¼	4¼	2¼x3	3/16x⅜
VS508	3⅝	2⅝	3⅛	2x2⅛	(4) "
VS603	4 21/32	3⅞	3⅞	3x2 11/16	(4) "
VS605	4 21/32	3⅞	4⅛	3x2 15/16	(4) "
VS606	4 21/32	3⅞	4¼	3x3⅛	(4) "
VS610	4 21/32	3⅞	4¾	3x3 9/16	(4) "
VS612	4 21/32	3⅞	5	3x3 15/16	(4) "
VS708	5 7/16	4 9/16	5¾	3½x4	(4) 9/32x21/32
VS709	5 7/16	4 9/16	5⅞	3½x4⅛	(4) "

These components are designed to meet the demand for low-cost replacement parts for commercial electronic equipment.

The best commercially available materials have been utilized in the design of these units, to insure reliability and excellent performance characteristics Vacuum impregnation with a non-hygroscopic varnish to prevent penetration of humidity are employed to give these units long life and trouble-free performance.

230-115 V, 50-60 C. P. S. Stepdown Transformers rated from 25 V A up to 5,000 V A Rating and line booster transformers are included in this series.

All units, with only a few exceptions, are uncased or of shell-type construction.

Isolation transformers and Stepdown transformers are equipped with line cord and receptacle.

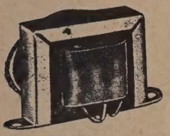
POWER TRANSFORMERS

All primaries designed for 115-volt, 50-60 cycle operation.

Catalog No.	Py Va	Hi Volt	Choke Input		Cond. Input		Bias Tap	Rectifier	Fil. No. 1	Fil. No. 2	Fil. No. 3	Case No.
			D.C.V.	D.C.Ma.	D.C.V.	D.C.Ma.						
RGP 1 RGP 2	45 "	500V CT "			270 "	40 "		6X4, 5Y3 "	5/6.3V @ 2A "	6.3V @ 2A "		VS300 HS300
RGP 3 RGP 4	57 "	600V CT "			330 "	50 "		6X4, 5Y3 "	5/6.3V @ 2A "	6.3V @ 2.5A "		VS303 HS303
RGP 5 RGP 6	64 "	650V CT "			370 "	50 "		6X4, 5Y3 "	5/6.3V @ 2A "	6.3V @ 3A "		VS303 HS303
RGP 7 RGP 8	73 "	600V CT "			320 "	70 "		6X4, 5Y3 "	5/6.3V @ 2A "	6.3V @ 3A "		VS306 HS306
RGP 9 RGP 10	110 "	650V CT "	225 "	140 "	330 "	100 "		5Y3, 5U4 "	5V @ 3A "	6.3V @ 5A "		VS503 HS503
RGP 11 RGP 12	76 "	700V CT "	260 "	100 "	385 "	70 "		5Y3 "	5V @ 2A "	6.3V @ 2.5A "		VS307 HS307
RGP 13 RGP 14	108 "	700V CT "	250 "	125 "	370 "	90 "		5Y3, 5U4 "	5V @ 3A "	6.3V @ 5A "		VS503 HS503
RGP 15 RGP 16	127 "	700V CT "	260 "	170 "	350 "	120 "		5U4 "	5V @ 3A "	6.3V @ 5A "		VS505 HS505
RGP 17 RGP 18	146 "	700V CT "	260 "	210 "	350 "	150 "		5U4 "	5V @ 3A "	6.3V @ 5A "	6.3V @ 1A "	VS603 HS603
RGP 19 RGP 20	207 "	800V CT "	295 "	280 "	400 "	200 "		5U4, 2-5Y3 "	5V @ 4A "	6.3V @ 6A "		VS606 HS606
RGP 21 RGP 22	225 "	800V CT "	295 "	280 "	400 "	200 "	80 "	5U4, 2-5Y3 "	5V @ 4A "	6.3V @ 6A "	5/6.3V @ 2A "	VS606 HS606
RGP 23 RGP 24	268 "	840V CT "	330 "	350 "	450 "	250 "	80 "	2-5U4 "	5V @ 6A "	6.3V @ 6A "	5/6.3V @ 2A "	VS612 HS612
RGP 25 RGP 26	320 "	900V CT "	340 "	420 "	490 "	300 "	80 "	2-5U4 "	5V @ 6A "	6.3V @ 6A "	5/6.3V @ 2A "	VS708 HS708
RGP 27 RGP 28	127 "	900V CT "	360 "	150 "				5U4 "	5V @ 3A "	6.3V @ 5A "		VS603 HS603
RGP 29 RGP 30	150 "	900V CT "	350 "	200 "				5U4 "	5V @ 3A "	6.3V @ 5A "		VS605 HS605
RGP 31 RGP 32	203 "	1100V CT "	400 "	250 "				5R4GY "	5V @ 3A "	6.3V @ 5A "		VS610 HS610
RGP 33 RGP 34	248 "	1100V CT "	420 "	300 "				2-5R4GY "	5V @ 4A "	6.3V @ 7A "		VS612 HS612
RGP 35 RGP 36	310	1280V CT "	480 "	350 "				2-5R4GY "	5V @ 4A "	6.3V @ 7A "		VS709 HS709

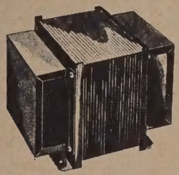
FREED TRANSFORMER COMPANY, INC.

CASE DIMENSIONS

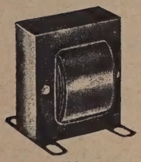


CH

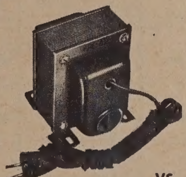
DC



HB



FV



VS

Case No.	Height	Width	Depth	Mtg. Centers	Mtg. Studs
DC2B	3½	2⅝	2¼	2x1¾	(4)8-32
DC4A	3¾	3⅛	3	2½x2½	(4)8-32
DC5C	4⅞	4⅛	3½	3⅛x2⅝	(4)10-32
DC6A	4⅞	5	4⅛	3¾x3	(4)10-32
CH50	1 11/16	2 15/16	1¾	2⅜	(2) 3/16
CH60	2	3¼	1¾	2 15/16	(2) 3/16
CH62	2	3¼	2⅛	2 15/16	(2) 3/16
CH70	2 5/16	3 11/16	2¼	3⅛	(2) 3/16
CH80	2⅝	4	2⅝	3 9/16	(2) 3/16
FV10	3 1/16	2½	2 9/16	2x2	(4) 13/64x21/64
FV12	3 1/16	2½	2 11/16	2x2⅛	(4) 13/64x21/64
FV22	3 7/16	2 13/16	2⅞	2¼x2¼	(4) 3/16x⅜
FV30	3 25/32	3⅛	3	2½x2¼	(4) 13/64x21/64
HB718	6¼	6⅜	8½	4¾x4¾	(4) 9/32x21/32
HB728	6¼	6½	9¾	4¾x5¾	(4) 9/32x21/32
HB828	6⅝	7 5/16	9⅞	5⅝x5¾	(4) 9/32x21/32
HB920	6⅝	7⅞	10¼	6½x7 5/16	(4) 9/32x21/32
VS300	3 5/32	2⅝	3	2x2	(4) 3/16x⅜
VS401	3 9/16	2 15/16	3¼	2¼x1 15/16	(4) 3/16x⅜
VS501	3 29/32	3¼	3⅜	2½x2 1/16	(4) 3/16x⅜
VS503	3 29/32	3¼	3⅝	2½x2 5/16	(4) 3/16x⅜
VS601	4 21/32	3⅞	3⅝	3x2 7/16	(4) 3/16x⅜
VS604	4 21/32	3⅞	4	3x2⅞	(4) 3/16x⅜
VS611	4 21/32	3⅞	4⅞	3x3 11/16	(4) 3/16x⅜
VS612	4 21/32	3⅞	5	3x3 13/16	(4) 3/16x⅜
VS700	5 7/16	3⅞	5	3½x3¼	(4) 3/16x⅜
VS706	5 7/16	4 9/16	5½	3½x3¾	(4) 3/16x⅜
VS714	5 7/16	4 9/16	6½	3½x4¾	(4) 3/16x⅜
VS718	5 7/16	4 9/16	7	3½x5¼	(4) 9/32x21/32
VS728	5 7/16	4 9/16	8¼	3½x6½	(4) 3/16x⅜

COMMERCIAL GRADE COMPONENTS

FILAMENT TRANSFORMERS

All primaries are for 115V, 50/60 c.p.s.

Catalog No.	Secondary Voltage	Secondary Current Amps.	Secondary Test Voltage RMS	Case Size
TF 1	2.5 (C.T.)	7.5	1500	CH60
TF 2	2.5 (C.T.)	10	1500	CH70
TF 3	2.5 (C.T.)	5	7500	DC2B
TF 4	2.5 (C.T.)	10	7500	DC4A
TF 5	5.0 (C.T.)	4	1500	CH60
TF 6	5.0 (C.T.)	6	1500	CH70
TF 7	5.0 (C.T.)	10	1500	CH80
TF 8	5.0 (C.T.)	10	1500	FV10
TF 9	5.0 (C.T.)	20	2500	FV30
TF 10	5.0 (C.T.)	20	10,000	DC6A
TF 11	6.3 (C.T.)	1.35	1500	CH50
TF 12	6.3 (C.T.)	3	1500	CH60
TF 13	6.3 (C.T.)	5	1500	CH70
TF 14	6.3 (C.T.)	7	1500	FV12
TF 15	6.3 (C.T.)	10	1500	FV22
TF 16	10 (C.T.)	5	2500	CH80
TF 17	10 (C.T.)	5	2500	FV10
TF 18	10 (C.T.) or 11 (C.T.) (tapped primary)	12 or 11	7500	DC-5C
TF 19	12.6 (C.T.)	2	1500	CH62

TF 3, 4 & 10 supplied with terminals. All others with leads.

AUTO TRANSFORMERS

To be used as step-down transformer. Equipped with standard receptacle and line cord.

Catalog No.	Transformation	VA Rating	Weight (lbs.)	Case Size
SDT 1*	230/115 V. 50/60 c.p.s.	25	1	CH-60
SDT 2*	230/115 V. 50/60 c.p.s.	50	1¼	CH-62
SDT 3	230/115 V. 50/60 c.p.s.	50	2½	VS-300
SDT 4	230/115 V. 50/60 c.p.s.	100	3	VS-401
SDT 5	230/115 V. 50/60 c.p.s.	200	5	VS-501
SDT 6	230/115 V. 50/60 c.p.s.	300	6½	VS-601
SDT 7	230/115 V. 50/60 c.p.s.	400	8	VS-604
SDT 8	230/115 V. 50/60 c.s.p.	500	11	VS-611
SDT 9	230/115 V. 50/60 c.p.s.	750	15	VS-706
SDT 10	230/115 V .50/60 c.p.s.	1000	23	VS-718
SDT 11	230/115 V. 50/60 c.p.s.	1500	29½	VS-728
SDT 12*	230/115 V. 50/60 c.p.s.	2000	37	HB-718
SDT 13*	230/115 V. 50/60 c.p.s.	2500	47	HB-728
SDT 14*	230/115 V. 50/60 c.p.s.	3000	58	HB-828
SDT 15*	230/115 V. 50/60 c.p.s.	5000	72	HB-920

***Supplied with leads without line cord and receptacle.**

ISOLATION TRANSFORMERS

Electrostatic shield between primary and secondary. Equipped with standard receptacle and line cord.

Catalog Number	Primary Voltage 50/60 c.p.s	Secondary Voltage	VA Rating	Case Size
IT 1	115	115	50	VS-401
IT 2	115	115	100	VS-503
IT 3	115	115	300	VS-700
IT 4	115	115	500	VS-714
IT 5*	220/440	110/220	250	VS-612
IT 6*	220/440	110/220	500	VS-714

***Supplied with leads without line cords and receptacle.**

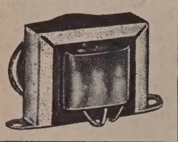
LINE BOOSTER TRANSFORMERS

Operates from 90 to 110 volts input to provide 10% step-up.

Catalog Number	Primary Voltage	Secondary Voltage	VA Rating	Case Size
LB-1	90-110	1.1 x Input	350	VS-300
LB-2	90-110	1.1 x Input	2000	VS-611

COMMERCIAL GRADE COMPONENTS

CASE DIMENSIONS

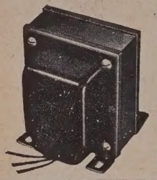


CH-40 CASE
Height: 1 7/16″
Width: 2 3/8″
Depth: 1 3/16″
Mtg. Cen.: 2″

CH-50 CASE
Height: 1 11/16″
Width: 2 13/16″
Depth: 1 3/4″
Mtg. Cen.: 2 3/8″

CH-60 CASE
Height: 2″
Width: 3 1/4″
Depth: 1 3/4″
Mtg. Cen.: 2 13/16″

CH-80 CASE
Height: 2 5/8″
Width: 4″
Depth: 2 5/8″
Mtg. Cen.: 3 9/16″



VS-100 CASE
Height: 2 11/32″
Width: 1 7/8″
Depth: 2 1/4″
Mtg. Cen.: 1 1/2″x1 7/16″

VS-300 CASE
Height: 3 3/32″
Width: 2 5/8″
Depth: 2 3/4″
Mtg. Cen.: 2″x1 11/16″

VS-303 CASE
Height: 3 5/32″
Width: 2 5/8″
Depth: 3″
Mtg. Cen.: 2x1 15/16
Mtg. Hole: (4) 3/16x3/8

VS-306 CASE
Height: 3 5/32″
Width: 2 5/8″
Depth: 3 3/8″
Mtg. Cen.: 2x2 5/16
Mtg. Hole: (4) 3/16x3/8

VS-308 CASE
Height: 3 33/64″
Width: 2 27/32″
Depth: 3 3/8″
Mtg. Cen.: 2″x2 9/16″

AUDIO TRANSFORMERS

Catalog No.	Application	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Max. Power Level DBM or Power in Watts	Ratio	Max. Pri. D.C. per Side Ma.	D.C. Un-balance Ma.	Freq. Response C.P.S.	Case No.
RGA 1	Input; multiple line or double button mike to single or push-pull grids.	500 CT 200 CT	100.000 CT	+20	1:14.1	50	5	±2DB 200-5000	CH-40
RGA 2	Input; single button mike to single or push-pull grids.	100	100.000 CT	+20	1:31.6	50		±2DB 200-5000	CH-40
RGA 3	Input; voice coil to grid. Intercom	3.2	100,000	+20	1:179			±2DB 200-5000	CH-40
RGA 4	Mixing and matching line to line.	600 CT 500 CT 200 CT 150/125/50	600 CT 500 CT 200 CT 150/125/50	+20	1:1			±2DB 100-5000	CH-40
RGA 5	Interstage; single triode plate to single or P.P. grids.	10.000	90.000 CT	+30	1:3	10		±2DB 200-5000	CH-40
RGA 6	Output; single plate to line or mixer.	10.000	600 CT 500 CT 200 CT 150/125/50	+30	4.8:1	10		±2DB 200-5000	CH-40
RGA 7	Output; Push-pull plate to line or mixer.	20.000 CT	600 CT 500 CT 200 CT 150/125/50	+30	6.32:1	10	1	±2DB 200-5000	CH-40
RGA 8	Output; plate to V.C. 6AL6, 6L6, 6Y6, 25B6, 25C6, 35A5, 35B5, 35C5, 50B5, 50C5, 50C6, 50L6, 117N7.	2500	3.2	5W		70		±3DB 200-10000	CH-40
RGA 9	Output; plate to V.C. 6V6, 6AQ5, 6AS5, 7C5.	5000	3.2	5W		50		±3DB 200-10000	CH-40
RGA 10	Output; plate to V.C. 6AR5, 6K6, 6V6, 7B5, 14A5, 3S4, 3U4, 3Q4, 3Q5, 3C5, 3A4.	10.000 or 7500	3.2	5W		30		±3DB 200-10000	CH-40
RGA 11	Output; P.P. plates to V.C. P.P. 6V6, PP6K6.	12.000 CT or 8000 CT	3.2	15W		50	5	±2DB 200-8000	CH-60
RGA 12	Output: TP to V.C. 6V6, 6AQ5, 7C5, C1AB.	10,000 CT	3.2	10W	5.6:1	40	4	±3DB 200-10000	CH-60

REPLACEMENT GRADE CHOKES

Catalog No.	Inductance in Henries	Rated Current D.C. Ma.	D.C. Resistance	Dielectric Test Voltage	Case Number
RGC 17	40	15	2000	1000	CH-40
RGC 1	4	40	200	1000	CH-40
RGC 2	9	40	400	1000	CH-40
RGC 3	6	50	400	1000	CH-40
RGC 18	20	50	425	1500	CH-60
RGC 4	10	55	400	1500	CH-50
RGC 19	3	75	200	1500	CH-40
RGC 5	10	75	250	1500	CH-60
RGC 6	10	75	250	1500	VS-100
RGC 7	6	100	150	1500	CH-60
RGC 8	6	100	150	1500	VS-100
RGC 9	3.5	150	100	1500	CH-60
RGC 10	3.5	150	100	1500	VS-100
RGC 20	12	160	180	2500	VS-306
RGC 11	2	200	60	1500	CH-60
RGC 12	2	200	60	1500	VS-100
RGC 13	3.7	200	65	1500	CH-80
RGC 21	7	200	100	2500	VS-303
RGC 14	3.7	200	65	1500	VS-300
RGC 15	2.8	300	65	1500	CH-80
RGC 16	2.8	300	65	1500	VS-300
RGC 22	5	300	65	2500	VS-308

FREED TRANSFORMER COMPANY, INC. — PRICE LIST

Catalog No.	Net Price
EPT-1	7.50
EPT-2	7.50
EPT-3	7.50
EPT-4	7.50
EPT-5	7.50
EPT-6	7.50
EPT-7	7.50
EPT-8	9.50
EPT-9	9.50
EPT-11	7.50
EPT-12	7.50
EPT-13	9.50
EPT-14	9.50
EPT-15	12.50
EPT-16	12.50
EPT-17	11.50
EPT-18	11.50
EPT-19	11.50

Note—Molded Units $1.00 additional.

Catalog No.	List Price
IT-1	12.10
IT-2	17.60
IT-3	44.00
IT-4	53.25
IT-5	44.00
IT-6	58.25

Catalog No.	List Price
KA-10	27.50
KP-11	15.10
KC-10	7.15
KC-11	2.40

Printed Circuit Board for Hi-Fi Kit, Pg. 42 in Cat., $4.95 Net.

Catalog No.	List Price
LB-1	11.00
LB-2	32.00

Catalog No.	Net Price
MAC-6-2-1	58.00
MAC-6-3-1	73.50
MAC-6-30-1	75.00
MAC-12-3-60	35.00
MAC-12-2-1	58.00
MAC-12-2-2	58.00
MAC-12-4-1	84.00
MAC-12-4-2	73.00
MAC-12-4-3	73.00
MAC-12-4-4	73.00
MAC-12-20-1	70.00
MAC-12-30-2	130.00
MAC-26-2-1	71.00
MAC-26-2-2	59.00
MAC-26-2-3	59.00
MAC-26-4-1	103.00
MAC-26-4-2	103.00
MAC-26-4-3	103.00

Catalog No.	Net Price
MAF-1	209.00
MAF-4	78.00
MAF-5	80.00
MAF-6	180.00
MAF-7	180.00
MAO-1	70.00
MAO-2	102.00
MAO-3	110.00
MAO-4	155.00
MAO-5	175.00
MAP-1	90.00
MAP-2	150.00
MAP-3	225.00
MAP-3A	175.00
MAP-4	280.00
MAP-7	105.00
MAP-8	133.00
MAP-11	95.00
MAS-1	55.00
MAS-2	37.00
MAS-5	33.00
MAS-6	50.00
MAS-7	60.00
MAS-8	24.00
MAT-1	167.00

Catalog No.	Net Price
MGA-1	12.50
MGA-2	12.50
MGA-3	16.50
MGA-4	15.00
MGA-5	12.50
MGA-6	12.50
MGA-7	12.50
MGA-8	12.50
MGA-9	12.50

Catalog No.	Net Price
MGC-1	7.50
MGC-2	6.15
MGC-3	6.50
MGC-4	7.25
MGC-5	7.50

Catalog No.	Net Price
MGC-6	6.15
MGC-7	6.50
MGC-8	7.00
MGC-9	6.50
MGC-10	7.00
MGC-11	8.75
MGC-12	6.50
MGC-13	7.00
MGC-14	8.75
MGC-15	9.50
MGC-16	7.00
MGC-17	8.75
MGC-18	10.00
MGC-19	12.50
MGC-20	8.75
MGC-21	*
MGC-22	9.50
MGC-23	*
MGC-24	18.00
MGC-25	*
MGC-26	16.00
MGC-27	*
MGC-28	16.00
MGC-29	*
MGC-30	*
MGC-31	*

*Not stocked, available on short delivery. Prices on request.

Catalog No.	List Price
MGF-1	10.85
MGF-2	23.50
MGF-3	11.70
MGF-4	25.50
MFG-5	11.70
MGF-6	21.50
MGF-7	29.50
MGF-8	36.50
MGF-9	27.50
MGF-10	35.00

Catalog No.	List Price
MGP-1	20.85
MGP-2	28.00
MGP-3	23.35
MGP-4	27.50
MGP-5	49.00
MGP-6	32.50
MGP-7	39.00
MGP-8	54.50

Catalog No.	Net Price
MPT-1	17.50
MPT-2	15.00
MPT-3	22.50
MPT-4	20.00
MPT-5	17.50
MPT-6	15.00
MPT-7	17.50
MPT-8	15.00
MPT-9	22.50
MPT-10	20.00
MPT-11	17.50
MPT-12	27.50
MPT-13C	11.60
MPT-13M	15.40
MPT-13H	19.20
MPT-14C	16.90
MPT-14M	20.90
MPT-14H	26.30
MPT-15C	15.60
MPT-15M	19.50
MPT-15H	26.50
MPT-16C	18.90
MPT-16M	22.90
MPT-16H	28.10
MPT-17C	19.50
MPT-17M	22.60
MPT-17H	26.60
MPT-18C	12.80
MPT-18M	16.60
MPT-19C	19.50
MPT-19M	22.60
MPT-19H	22.60
MPT-20C	14.80
MPT-20M	18.60
MPT-20H	24.00
MPT-21C	20.80
MPT-21M	23.50
MPT-21H	24.00
MPT-22C	19.50
MPT-22M	22.60
MPT-22H	26.60
MPT-23C	20.80
MPT-23M	23.50
MPT-23H	26.60
MPT-24C	13.70
MPT-24M	16.80

Catalog No.	List Price
PGA-1	22.50
PGA-2	25.00
PGA-3	25.00
PGA-4	21.25
PGA-5	21.25
PGA-6	21.25

Catalog No.	List Price
PGA-7	18.75
PGA-8	18.75
PGA-9	18.75
PGA-10	20.00
PGA-11	21.25
PGA-12	21.25
PGA-13	25.00
PGA-14	25.00
PGA-15	31.25
PGA-16	31.25
PGA-17	31.25
PGA-18	28.75
PGA-19	31.25
PGA-20	31.25
PGA-21	31.25
PGA-22	34.25
PGA-23	34.25
PGA-24	31.25
PGA-25	55.00
PGA-26	31.25
PGA-27	31.25
PGA-28	31.25
PGA-29	31.25
PGA-30	55.00

Catalog No.	List Price
PGC-1	7.70
PGC-2	8.25
PGC-3	8.25
PGC-4	9.10
PGC-5	9.10
PGC-6	9.10
PGC-7	9.90
PGC-8	11.00
PGC-9	11.00
PGC-10	11.50
PGC-11	16.00
PGC-12	16.00
PGC-13	19.25
PGC-14	12.10
PGC-15	13.10
PGC-16	12.65
PGC-17	11.00
PGC-18	16.00
PGC-19	16.00
PGC-20	19.25

Catalog No.	List Price
PGP-1	15.40
PGP-2	22.50
PGP-3	11.00
PGP-4	11.50
PGP-5	12.10
PGP-6	13.20
PGP-7	15.40
PGP-8	14.30
PGP-9	15.40
PGP-10	17.00
PGP-11	23.10
PGP-12	27.50
PGP-13	30.25
PGP-14	36.30
PGP-15	42.25
PGP-16	19.25
PGP-17	22.50
PGP-18	30.25
PGP-19	36.30
PGP-20	45.00

Catalog No.	List Price
PMA-1	16.50
PMA-2	13.50
PMA-3	19.00
PMA-4	13.50
PMA-5	13.50
PMA-6	16.50
PMA-7	16.50
PMA-8	16.50
PMA-9	16.50
PMA-10	15.50
PMA-11	12.00

Catalog No.	List Price
PQC-1	10.00
PQC-2	10.00
PQC-3	10.00
PQC-4	10.00
PQC-5	10.00
PQC-6	10.00
PQC-7	10.00
PQC-8	10.00
PQC-9	10.00

Catalog No.	List Price
QGA-1	31.00
QGA-2	38.50
QGA-3	27.50
QGA-4	38.50
QGA-5	35.00
QGA-6	40.50
QGA-7	27.50
QGA-8	38.50
QGA-9	38.50
QGA-10	44.00
QGA-11	33.00
QGA-12	33.00

Catalog No.	List Price
QGA-13	27.50
QGA-14	28.50
QGA-15	35.00
QGA-16	28.50
QGA-17	28.50
QGA-18	30.50
QGA-19	28.50
QGA-20	36.50
QGA-21	33.00
QGA-22	55.00
QGA-23	38.50
QGA-24	38.50
QGA-25	38.50
QGA-26	38.50
QGA-27	38.50
QGA-28	38.50
QGA-29	38.50
QGA-30	38.50
QGA-31	49.50
QGA-32	49.50
QGA-33	49.50
QGA-34	49.50
QGA-35	54.50
QGA-36	54.50
QGA-37	33.00
QGA-38	54.50
QGA-39	38.50
QGA-40	38.50
QGA-41	54.50
QGA-42	54.50

Catalog No.	Net Price
QGC-1	22.50
QGC-2	22.50
QGC-3	22.50
QGC-4	22.50
QGC-5	22.50
QGC-6	22.50
QGC-7	22.50
QGC-8	15.00
QGC-9	15.00
QGC-10	15.00
QGC-11	15.00
QGC-12	15.00
QGC-13	15.00
QGC-14	13.50
QGC-15	13.50
QGC-16	13.50
QGC-17	13.50
QGC-18	13.50
QGC-19	11.50
QGC-20	11.50
QGC-21	11.50
QGC-22	11.50
QGC-23	11.50
QGC-24	11.50

Catalog No.	List Price
RGA-1	6.00
RGA-2	4.85
RGA-3	4.85
RGA-4	8.50
RGA-5	4.85
RGA-6	5.75
RGA-7	6.00
RGA-8	2.75
RGA-9	2.75
RGA-10	3.30
RGA-11	6.00
RGA-12	4.85

Catalog No.	List Price
RGC-1	2.45
RGC-2	2.45
RGC-3	2.45
RGC-4	2.75
RGC-5	3.30
RGC-6	4.95
RGC-7	3.30
RGC-8	4.95
RGC-9	3.30
RGC-10	4.95
RGC-11	3.30
RGC-12	4.95
RGC-13	5.25
RGC-14	6.60
RGC-15	5.25
RGC-16	6.60
RGC-17	3.00
RGC-18	3.30
RGC-19	2.45
RGC-20	8.50
RGC-21	8.50
RGC-22	12.10

Catalog No.	List Price
RGP-1	9.60
RGP-2	9.60
RGP-3	9.60
RGP-4	9.60
RGP-5	10.20
RGP-6	10.20
RGP-7	11.25
RGP-8	11.25
RGP-9	12.65
RGP-10	12.65
RGP-11	11.25
RGP-12	11.25

Catalog No.	List Price
RGP-13	12.65
RGP-14	12.65
RGP-15	14.00
RGP-16	14.00
RGP-17	17.00
RGP-18	17.00
RGP-19	17.25
RGP-20	17.25
RGP-21	23.40
RGP-22	23.40
RGP-23	31.60
RGP-24	31.60
RGP-25	38.00
RGP-26	38.00
RGP-27	14.00
RGP-28	14.00
RGP-29	17.00
RGP-30	17.00
RGP-31	25.25
RGP-32	25.25
RGP-33	31.60
RGP-34	31.60
RGP-35	41.25
RGP-36	41.25

Catalog No.	List Price
SDT-1	3.75
SDT-2	4.40
SDT-3	7.50
SDT-4	10.20
SDT-5	11.55
SDT-6	14.70
SDT-7	18.40
SDT-8	20.05
SDT-9	26.75
SDT-10	37.60
SDT-11	55.00
SDT-12	66.00
SDT-13	89.35
SDT-14	140.00
SDT-15	187.50

Catalog No.	List Price
TF-1	4.85
TF-2	5.50
TF-3	16.50
TF-4	20.25
TF-5	4.95
TF-6	6.60
TF-7	7.25
TF-8	7.70
TF-9	12.65
TF-10	26.40
TF-11	3.30
TF-12	4.85
TF-13	6.60
TF-14	8.00
TF-15	8.50
TF-16	7.25
TF-17	7.70
TF-18	26.40
TF-19	5.50

Catalog No.	List Price
TMA-1	12.50
TMA-2	16.00
TMA-3	13.00
TMA-4	16.50
TMA-5	16.50
TMA-6	16.50
TMA-7	13.50
TMA-8	16.00
TMA-9	13.00
TMA-10	12.50
TMA-11	13.00
TMA-12	16.50
TMA-13	12.50
TMA-14	16.50
TMO-15	6.50
TMO-16	6.50
TMO-17	5.50
TMO-18	6.50
TMA-19	12.50

Catalog No.	Net Price
ULD-20	10.00
ULD-50	15.65
ULI-20	10.00
ULO-10	25.00
ULO-11	25.00
ULO-12	25.00
ULO-13	25.00
ULO-30	32.50
ULO-31	32.50
ULO-32	32.50
ULO-33	32.50
ULO-34	32.50
ULO-35	32.50
ULO-36	32.50
ULO-37	32.50
ULO-52	75.00
ULO-53	75.00
ULO-54	75.00
ULO-55	75.00
ULO-56	75.00
ULO-101	145.00
ULO-104	145.00
ULO-110	145.00

Catalog No.	Net Price
VHI-1	9.50
VHI-2	9.50
VHI-3	9.50
VHI-4	9.50
VHI-5	9.50
VHI-6	9.50
VHI-7	9.50
VHI-8	9.50
VHI-9	9.50
VHI-10	9.50

Filters and Discriminators

Catalog No.	Net Price
IBP*	25.00 35.00
IHP*	25.00 35.00
ILP*	25.00 35.00
LBP*	25.00 35.00
LHP*	25.00 35.00
LLP*	25.00 35.00

*Stock Frequencies are $25.00 Net.

Special Frequencies are $35.00 Net.

Catalog No.	Net Price
NTF-30	25.00
NTF-60	25.00
NTF-120	25.00

Catalog No.	Net Price
DST-10	50.00
DST-11	50.00
DST-12	50.00
DST-13	50.00
DST-14	50.00
DST-15	50.00
DST-16	60.00
DST-17	50.00
DST-18	50.00
DST-19	50.00
DST-20	50.00
DST-21	50.00
DST-22	50.00
DST-23	50.00
DST-24	60.00
DST-25	60.00
DST-26	60.00
DST-27	50.00
DST-28	60.00
DST-29	60.00
DST-30	60.00
DST-31	60.00
DST-32	60.00
DST-33	60.00
FBP-10	86.00
FBP-11	86.00
FBP-12	86.00
FBP-13	86.00
FBP-14	70.80
FBP-15	70.80
FBP-16	70.80
FBP-17	70.80
FBP-18	70.80
FBP-19	70.80
FBP-20	70.80
FBP-21	70.80
FBP-22	70.80
FBP-23	70.80
FBP-24	86.00
FBP-25	70.80
FBP-26	86.00
FBP-27	86.00
FBP-28	86.00
FBP-29	86.00
FBP-30	86.00
FBP-31	86.00
FBP-32	86.00
FBP-33	86.00
FBP-34	73.00
FBP-35	73.00
FBP-36	73.00
FBP-37	73.00
FBP-38	73.00
FBP-39	80.00
FBP-40	88.00
FBP-41	88.00
FBP-42	88.00
FBP-43	88.00
FBP-44	88.00
FBP-45	88.00
FBP-46	88.00
FBP-47	88.00
FBP-48	88.00
FBP-49	88.00
FBP-50	88.00
FBP-51	88.00
FBP-52	88.00
FBP-53	88.00
FBP-54	88.00
FBP-55	88.00
FBP-56	88.00
FBP-57	88.00
LPI-10	43.25
LPI-11	43.25

Catalog No.	Net Price
LPI-12	43.25
LPI-13	43.25
LPI-14	43.25
LPI-15	43.25
LPI-16	43.25
LPI-17	43.25
LPI-18	43.25
LPI-19	43.25
LPI-20	43.25
LPI-21	43.25
LPI-22	43.25
LPI-23	43.25
LPI-24	43.25
LPI-25	43.25
LPI-26	43.25
LPI-27	43.25
LPI-28	43.25
LPO-10	93.30
LPO-11	85.50
LPO-12	81.30
LPO-13	85.00
LPO-14	72.00
LPO-15	68.85
LPO-16	64.50
LPO-17	62.50
LPO-18	61.60
LPO-19	62.80
LPO-20	61.15
LPO-21	55.60
LPO-22	55.60
LPO-23	48.20
LPO-24	47.10
LPO-25	47.10
LPO-26	47.10
LPO-27	48.20
LPO-28	47.10
LPO-29	47.10
LPO-30	47.10
LPO-31	48.20
LPO-32	47.10
LPO-33	47.10
LPO-34	47.10
LPO-35	47.10

Toroidal Inductors

Prices shown are Net for Hermetically Sealed. Deduct $1.50 from Net for Uncased units. Add $1.00 to Net for Encapsulated units.

Type TI - 1

Catalog No.	Net Price
F-800	6.65
F-801	6.65
F-802	6.65
F-803	7.10
F-804	6.60
F-805	6.60
F-806	8.50
F-807	8.50
F-808	8.50
F-809	9.50
F-810	9.50
F-811	10.50
F-812	10.50
F-813	10.50
F-814	10.50
F-815	10.50
F-816	11.00
F-817	11.50
F-818	12.00
F-819	12.35
F-820	12.65
F-821	12.75
F-822	13.00
F-823	13.30
F-824	13.75
F-825	14.25
F-826	14.50
F-827	14.80
F-828	15.20
F-829	16.15
F-830	17.10

Type TI - 4 and 4s

Catalog No.	Net Price
F-850	7.90
F-851	7.90
F-852	7.90
F-853	7.90
F-854	7.90
F-855	7.90
F-856	8.25
F-857	8.60
F-858	8.80
F-859	8.95
F-860	9.05
F-861	9.20
F-862	9.35
F-863	9.50
F-864	9.80
F-865	10.35
F-866	10.65
F-867	10.65
F-868	10.65
F-869	11.15
F-870	11.15
F-871	11.15
F-872	11.50
F-873	11.50
F-874	12.00
F-875	12.45
F-876	12.90
F-877	13.40
F-878	13.90

Type TI - IA and As

Catalog No.	Net Price
F-1500	7.50
F-1501	7.50
F-1502	7.50
F-1503	7.50
F-1504	7.50
F-1505	7.50
F-1506	7.50
F-1507	7.75
F-1508	7.75
F-1509	7.75
F-1510	7.75
F-1511	7.75
F-1512	7.75
F-1513	7.90
F-1514	7.90
F-1515	7.90
F-1516	8.10
F-1517	8.10
F-1518	8.10
F-1519	8.35
F-1520	8.35
F-1521	8.55
F-1522	8.55
F-1523	8.75
F-1524	8.75
F-1525	9.05
F-1526	9.05
F-1527	9.25
F-1528	9.75
F-1529	10.10
F-1530	10.10
F-1531	10.35
F-1532	10.75
F-1533	11.25
F-1534	11.75
F-1535	11.75
F-1536	12.75
F-1537	13.10
F-1538	13.60

Type TI - 9s

Catalog No.	Net Price
F-1554	16.60
F-1555	16.80
F-1556	17.00
F-1557	17.30
F-1558	17.40
F-1559	17.50
F-1560	17.60
F-1561	17.80
F-1562	18.05
F-1563	18.30
F-1564	18.50
F-1565	18.50
F-1566	19.00
F-1567	19.50
F-1568	19.95
F-1569	20.40
F-1570	21.40

Type TI - 10s

Catalog No.	Net Price
F-1579	14.15
F-1580	14.15
F-1581	14.35
F-1582	14.45
F-1583	14.50
F-1584	14.60
F-1585	14.70
F-1586	14.80
F-1587	14.90
F-1588	15.00
F-1589	15.10
F-1590	15.30
F-1591	15.40
F-1592	15.60

Type TI - 13

Catalog No.	Net Price
F-1629	16.60
F-1630	16.80
F-1631	17.00
F-1632	17.30
F-1633	17.40
F-1634	17.50
F-1635	17.60
F-1636	17.80
F-1637	18.05
F-1638	18.30
F-1639	18.50
F-1640	18.50
F-1641	19.00
F-1642	19.50
F-1643	19.95
F-1644	20.40
F-1645	21.40

Type TI - 12 and 12s

Catalog No.	Net Price
F-1655	13.60
F-1656	13.60
F-1657	13.60
F-1658	14.05
F-1659	14.05
F-1660	14.05
F-1661	14.65
F-1662	14.65
F-1663	15.10
F-1664	15.10
F-1665	13.75
F-1666	13.75
F-1667	14.15
F-1668	14.15
F-1669	14.65
F-1670	14.65
F-1671	14.65
F-1672	15.10
F-1673	15.60
F-1674	16.05
F-1675	16.05
F-1676	16.50
F-1677	16.50
F-1678	17.00
F-1679	17.00
F-1680	17.50
F-1681	17.50
F-1682	17.50
F-1683	17.95
F-1684	17.95
F-1685	17.95
F-1686	18.45
F-1687	18.90
F-1688	19.50
F-1689	19.95
F-1690	20.40
F-1691	20.90
F-1692	21.40
F-1693	21.85

Type TI - 5

Catalog No.	Net Price
F-1700	5.70
F-1701	5.70
F-1702	5.70
F-1703	6.20
F-1704	6.65
F-1705	6.90
F-1706	7.10
F-1707	7.35
F-1708	7.60
F-1709	7.85
F-1710	8.05
F-1711	8.30
F-1712	9.00
F-1713	9.60
F-1714	9.80
F-1715	10.25
F-1716	10.60
F-1717	10.95
F-1718	11.20
F-1719	11.50
F-1720	11.90

Type TI - 5s

Catalog No.	Net Price
F-1700s	7.90
F-1701s	7.90
F-1702s	7.90
F-1703s	7.90
F-1704s	7.90
F-1705s	8.15
F-1706s	8.25
F-1707s	8.50
F-1708s	8.80
F-1709s	8.95
F-1710s	9.05
F-1711s	9.20
F-1712s	9.30
F-1713s	9.60
F-1714s	9.80
F-1715s	10.25
F-1716s	10.65
F-1717s	10.85
F-1718s	11.20
F-1719s	11.50
F-1720s	11.90

Type TI - 6 and 6s

Catalog No.	Net Price
F-1726	8.15
F-1727	8.15
F-1728	8.15
F-1729	8.15
F-1730	8.15
F-1731	8.15
F-1732	8.45
F-1733	8.45
F-1734	8.55
F-1735	8.55
F-1736	8.55
F-1737	9.00
F-1738	10.00
F-1739	10.00
F-1740	10.00
F-1741	10.00
F-1742	10.45
F-1743	11.90

Type TI - 11s

Catalog No.	Net Price
F-1747	14.20
F-1748	14.20
F-1749	14.20
F-1750	14.20
F-1751	14.20
F-1752	15.20
F-1753	15.20
F-1754	15.20
F-1755	15.20
F-1756	15.20
F-1757	14.20
F-1758	14.20
F-1759	14.65
F-1760	14.65
F-1761	15.20
F-1762	15.85
F-1763	16.15
F-1764	16.65
F-1765	17.10
F-1766	17.60
F-1767	17.80
F-1768	18.05
F-1769	18.45
F-1770	18.45
F-1771	18.45
F-1772	19.00
F-1773	19.50
F-1774	19.95
F-1775	20.40
F-1776	20.90
F-1777	21.85
F-1778	22.80
F-1779	23.75
F-1780	24.70

Type TI - 7

Catalog No.	Net Price
F-1781	7.90
F-1782	7.90
F-1783	7.90
F-1784	7.90
F-1785	7.90
F-1786	7.90
F-1787	8.05
F-1788	8.05
F-1789	8.25
F-1790	8.25
F-1791	8.45
F-1792	8.65
F-1793	8.65
F-1794	8.65
F-1795	9.00
F-1796	9.45
F-1797	10.00

Type TI - 2s

Catalog No.	Net Price
F-1800	14.20
F-1801	14.20
F-1802	14.20
F-1803	14.20
F-1804	14.20
F-1805	14.65
F-1806	14.65
F-1807	14.65
F-1808	14.65
F-1809	14.65
F-1810	14.65
F-1811	14.90
F-1812	14.90
F-1813	14.90
F-1814	14.90
F-1815	14.90

Type TI - 8 and 8s

Catalog No	Net Price
F-1821	8.65
F-1822	8.65
F-1823	8.65
F-1824	8.65
F-1825	8.65
F-1826	8.65
F-1827	8.65
F-1828	8.65
F-1829	8.65
F-1830	8.65
F-1831	8.65
F-1832	8.75
F-1833	8.85
F-1834	9.00
F-1835	9.00
F-1836	9.00
F-1837	9.10
F-1838	9.40
F-1839	9.50
F-1840	9.90

Type TI - 3s

Catalog No.	Net Price
F-1844	14.25
F-1845	14.25
F-1846	14.25
F-1847	14.25
F-1848	14.25
F-1849	14.25
F-1850	14.25
F-1851	14.25
F-1852	14.25
F-1853	14.25
F-1854	14.25
F-1855	14.25

Type TI - 3As

Catalog No.	Net Price
F-1856	20.00
F-1857	20.50
F-1858	20.50
F-1859	22.30
F-1860	22.80
F-1861	22.80
F-1862	23.30
F-1863	23.30

Type TI - 15

Catalog No.	Net Price
F-1870	7.25
F-1871	7.25
F-1872	7.25
F-1873	7.25
F-1874	7.25
F-1875	7.25
F-1876	7.25
F-1877	7.25
F-1878	7.25
F-1879	7.25
F-1880	7.25
F-1881	7.45
F-1882	7.45
F-1883	7.65
F-1884	7.65
F-1885	7.85
F-1886	8.05
F-1887	8.05
F-1888	8.05
F-1889	8.45

Type TI - 14

Catalog No.	Net Price
F-1920	7.40
F-1921	7.40
F-1922	7.40
F-1923	7.40
F-1924	7.40
F-1925	7.40
F-1926	7.85
F-1927	7.85
F-1928	7.95
F-1929	7.95
F-1930	7.95
F-1931	8.40
F-1932	8.75
F-1933	8.75
F-1934	9.00
F-1935	9.25
F-1936	9.75

Type TI - 16

Catalog No.	Net Price
F-2050	6.05
F-2051	6.05
F-2052	6.05
F-2053	5.85
F-2054	5.85
F-2055	6.30
F-2056	6.80
F-2057	7.05
F-2058	7.25
F-2059	7.35
F-2060	7.70
F-2061	8.00
F-2062	8.20
F-2063	8.45
F-2064	9.75
F-2065	10.80
F-2066	11.00
F-2067	11.40
F-2068	11.65
F-2069	12.00

Type TI - 17

Catalog No.	Net Price
F-2100	7.90
F-2101	7.90
F-2102	7.90
F-2103	7.90
F-2104	7.90
F-2105	7.90
F-2106	7.90
F-2107	7.90
F-2108	7.90
F-2109	7.90
F-2110	7.90
F-2111	8.05
F-2112	8.05
F-2113	8.25
F-2114	8.25
F-2115	8.65
F-2116	8.65
F-2117	9.05

Type TI - 18

Catalog No.	Net Price
F-2140	8.65
F-2141	8.65
F-2142	8.65
F-2143	8.65
F-2144	8.65
F-2145	8.65
F-2146	8.65
F-2147	8.65
F-2148	8.65
F-2149	8.65
F-2150	8.65
F-2151	8.75
F-2152	8.85
F-2153	9.00
F-2154	9.00
F-2155	9.20
F-2156	9.50
F-2157	9.70

Type TI - 19

Catalog No	Net Price
F-2180	7.90
F-2181	7.90
F-2182	7.90
F-2183	7.90
F-2184	7.90
F-2185	7.90
F-2186	7.90
F-2187	7.90
F-2188	7.90
F-2189	7.90
F-2190	7.90
F-2191	7.90
F-2192	7.90
F-2193	7.90

Type TI - 20s

Catalog No.	Net Price
F-2201	6.40
F-2202	6.40
F-2203	6.95
F-2204	6.95
F-2205	6.95
F-2206	7.15
F-2207	7.45
F-2208	8.10
F-2209	8.10
F-2210	8.10
F-2211	8.10
F-2212	8.10
F-2213	8.10
F-2214	8.10
F-2215	8.10

Type TI - 21s

Catalog No.	Net Price
F-2240	6.00
F-2241	6.00
F-2242	6.00
F-2243	6.00
F-2244	6.00
F-2245	6.00
F-2246	6.40
F-2247	6.40
F-2248	6.40
F-2249	6.40

Type TI - 22s

Catalog No.	Net Price
F-2270	6.00
F-2271	6.00
F-2272	6.00
F-2273	6.00
F-2274	6.00
F-2275	6.00
F-2276	6.40
F-2277	6.40
F-2278	6.40
F-2279	6.40
F-2280	7.15
F-2281	7.15
F-2282	7.15
F-2283	7.15
F-2284	7.15

Type TI - 23s

Catalog No.	Net Price
F-2301	6.25
F-2302	6.25
F-2303	6.25
F-2304	6.25
F-2305	6.25
F-2306	6.25
F-2307	6.75
F-2308	6.75
F-2309	6.75
F-2310	6.75
F-2311	7.50
F-2312	7.50
F-2313	7.50

TRANSFORMERS CHOKES

HIGH CURRENT SMALL SIZE SELENIUM RECTIFIERS

MAX. AMPS	0-26 VAC 0-20 VDC	0-52 VAC 20-40 VDC	0-78 VAC 40-60 VDC	0-130 VAC 60-100 VDC	0-156 VAC 100-120 VDC
0.6	1.50	2.50	3.25	4.50	6.25
1.5	2.30	3.25	4.75	8.25	10.00
2.2	3.20	5.00	5.75	11.25	13.25
3.4	4.15	6.00	8.25	14.00	16.50
4	7.00	11.00	15.00	24.00	27.00
6.6	8.00	12.00	18.00	32.00	35.00
10	12.00	19.00	25.00	41.00	48.00
12	15.00	21.00	29.00	44.00	51.00
15	18.00	28.00	38.00	53.00	63.00
20	22.00	35.00	46.00	75.00	88.00
24	30.00	42.00	53.00	83.00	93.00
30	34.00	53.00	70.00	115.00	133.00
36	45.00	65.00	84.00	140.00	185.00

RECTIFIER TRANSFORMERS

TYPE NO.	VOLTS	AMPS	PRICE
GT 36-2	36	2	$6.00
GT 36-5	36	5	7.60
GT 36-8	36	8	13.00
GT 36-10	36	10	14.75
GT 36-12	36	12	15.75
GT 36-15	36	15	21.50
GT 36-20	36	20	28.50
GT 36-30	36	30	42.00
GT 36-50	36	50	57.00

RECTIFIER TRANSFORMERS — ALL PRIMARIES 115 VAC 60 CYC. ALL GT TYPES ARE TAPPED TO DELIVER 32, 34, 36 VOLTS.

SILICON RECTIFIERS

STOCK No.	A.C. INPUT UP TO	D.C. OUTPUT UP TO	MAX. AMPS SELF COOLED	MAX. AMPS FAN COOLED	NET PRICE
G6S6	420	390	1.5	—	$ 4.66
G1-32-3	36	32	10	—	19.00
G2-125-3	140	125	10	—	28.00
G3-250-3	280	250	10	—	40.00
G1-32-5	36	32	40	80	30.00
G2-64-5	72	64	40	80	45.00
G3-95-5	105	95	40	80	85.00
G4-125-5	140	125	40	80	100.00
G1-32-5	36	32	50	100	32.00
G2-250-5	280	250	50	100	85.00
G1-32-6	36	32	75	100	58.00
G2-64-7	72	64	150	150	133.00
G3-95-6	105	95	75	150	155.00

CHOKES

CHOKES	HY	D.C. RES.	PRICE
GH 2A	.04	.9	$ 5.50
GH 5A	.03	0.2	6.60
GH 8A	.012	0.05	11.00
GH 10A	.015	0.06	12.50
GH 12A	.005	0.01	13.95
GH 15A	.006	0.02	14.25
GH 20A	.007	0.03	15.00
GH 30A	.006	0.09	34.00
GH 50A	.004	0.015	43.00

ALL PRICES ARE NET

HIGH CAPACITY LOW VOLTAGE DURALYTIC CAPACITORS

M.F.D. CAPACITY	W.D.C.	SIZE	NET PRICE	BRACKETS	TYPE	PRICE
2,000	50	1⅜ x 4⅛	$3.38	2,000	FHL	$.15
4,000	50	2 x 4⅛	3.68	4,000	FJ	.20
10,000	50	3 x 4⅛	4.62	10,000	FD	.40

GATES ELECTRONIC CO.

NEW YORK 60, N. Y.

GRAMER Halldorson TRANSFORMER CORPORATION

MT. CARMEL, ILLINOIS

MIL-T-27A Steel Jacket Line

MILITARY STANDARD TRANSFORMERS

The U. S. Army Signal Corps, U. S. Bureau of Ships, and the U. S. Air Force, working jointly through the Armed Services Electronic Standards Agency, and in cooperation with leading producers of military transformers, have established certain military standard transformers.

These transformers bear government classification and part numbers, as shown below. Dimensions, mounting centers, terminal arrangements, and markings are all in accordance with government specifications.

All these units will meet the requirements of Grade 1 and Grade 4 MIL-T-27A specifications for Class R operation. The components listed in this series have application in military communication and control equipment, whether air-borne, ship-borne, mobile or ground installed.

Input

300 TO 10,000 CPS
MAXIMUM ALTITUDE 50,000 FT.

Part No.	MIL-T-27A Classification	MIL-T-27A Part No.	Primary Impedances (Ohms)	Max. D.C. Amps. In Primary	Secondary Impedance (Ohms)	Max. Power Level	Case Size	Wt. Lbs.
27A02	TF1RX10AJ001	MS-90002	*600 ohms CT		135,000 ohms CT	15 dbm.	AJ	.75

Interstage

300 TO 10,000 CPS
MAXIMUM ALTITUDE 50,000 FT.

Part No	MIL-T-27A Classification	MIL-T-27A Part No.	Primary Impedances (Ohms)	Max. D.C. Amps. in Primary	Secondary Impedance (Ohms)	Max. Power Level	Case Size	Wt. Lbs.
27A03	TF1RX16AJ001	MS-90003	*600 ohms CT		*600 ohms CT	15 dbm.	AJ	.75
27A01	TF1RX15AJ001	MS-90000	10000 ohms CT	.010 amp.	22,500 ohms CT 22,500 ohms CT	15 dbm.	AJ	.75

Output

300 TO 10,000 CPS
MAXIMUM ALTITUDE 50,000 FT.

Part No.	MIL-T-27A Classification	MIL-T-27A Part No.	Primary Impedances (Ohms)	Max.D.C. Amps. in Primary	Secondary Impedance (Ohms)	Max. Power Level	Case Size	Wt. Lbs.
27S01	TF1RX16AJ002	MS-90001	*600 ohms CT		4/8/16 ohms	2 watts	AJ	1
27S02	TF1RX13AJ001	MS-90004	4800/7600	.040 amp.	*600 ohms CT	2 watts	AJ	1
27S03	TF1RX13AJ002	MS-90005	4800/7600	.040 amp.	4/8/16 ohms	2 watts	AJ	1
27S04	TF1RX13AJ003	MS-90006	15000 ohms CT	.010 amp.	*600 ohms CT	2 watts	AJ	1
27S05	TF1RX13AJ004	MS-90007	24000 ohms CT	.020 amp.	*600 ohms CT	1 watt	AJ	1
27S06	TF1RX13AJ005	MS-90008	60000 ohms CT	.020 amp.	*600 ohms CT	.5 watt	AJ	1

Chokes

Part No.	MIL-T-27A Classification	MIL-T-27A Part No.	Inductance (Henrys)		Current (MADC)		Case Size
			Series	Parallel	Series	Parallel	
27C01	TF1RX04FA001	MS-90009	16	4	80	160	FA
27C02	TF1RX04GA002	MS-90010	25	6.25	80	160	GA
27C03	TF1RX04HA003	MS-90011	40	10	80	160	HA
27C04	TF1RX04HA005	MS-90013	16	4	125	250	HA
27C05	TF1RX04JB006	MS-90014	25	6.25	125	250	JB
27C06	TF1RX0KA007	MS-90037	40	10	125	250	KA
27C07	TF1RX04LA009	MS-75000	16	4	200	400	LA
27C08	TF1RX04MA010	MS-75001	25	6.25	200	400	MA
27C09	TF1RX04NA012	MS-75002	16	4	315	630	NA
27C10	TF1RX04YY013	MS-75003	25	6.25	315	630	YY

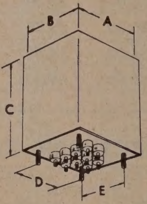
Filament Transformers

PRIMARY—105/115/125V—FREQUENCY—54-66 CYCLES

Part No.	MIL-T-27A Classification	MIL-T-27A Part No.	Secondary		Insulation Volts RMS	Case Size	Wt. Lbs.
			Volts	Amps			
27F36	TF1RX01EB002	MS-90016	2.5	3.0	2500	EB	1 1/2
27F37	TF1RX01GB003	MS-90017	2.5	10	2500	GB	2 1/2
27F38	TF1RX01FB004	MS-90018	5.0	3.0	2500	FB	1 3/4
27F39	TF1RX01HB005	MS-90019	5.0	10	2500	HB	4
27F40	TF1RX01FB006	MS-90020	6.3	2.0	2500	FB	1 3/4
27F41	TF1RX01GB007	MS-90021	6.3	5.0	2500	GB	2 3/4
27F42	TF1RX01JB008	MS-90022	6.3	10	2500	JB	5
27F43	TF1RX01KB009	MS-90023	6.3	20	2500	KB	8
27F44	TF1RX01JB012	MS-90024	2.5	10	10000	JB	4 3/4
27F45	TF1RX01KB013	MS-90025	5.0	10	10000	KB	7

FREE REGISTERED CATALOG

Your free "personalized" registered loose-leaf catalog containing information on more than 2500 highest quality transformers and coils may be obtained by sending your name and address to Gramer-Halldorson, Dept M, 700 W. 7th St., Mt. Carmel, Illinois.



MIL-T-27A
CASE TYPE

CASE DIMENSIONS

	AJ	EB	FA	FB	GA
A	1 5/8	1 15/16	2 5/16	2 5/16	2 3/4
B	1 5/8	1 13/16	2 1/16	2 1/16	2 3/8
C	2 3/8	2 7/16	3 1/8	2 1/2	3 13/16
D	1 3/16	1 3/8	1 11/16	1 11/16	2 1/8
E	1 3/16	1 1/4	1 7/16	1 7/16	1 3/4

	GB	HA	HB	JB
A	2 3/4	3 1/16	3 1/16	3 9/16
B	2 3/8	2 5/8	2 5/8	3 1/16
C	2 13/16	4 1/4	3 3/16	3 7/8
D	2 1/8	2 19/64	2 19/64	2 5/8
E	1 3/4	1 55/64	1 55/64	2 1/8

	KA	KB	LA	LB
A	3 15/16	3 15/16	4 5/16	4 5/16
B	3 3/8	3 3/8	3 11/16	3 11/16
C	5 1/4	4 5/16	5 9/16	4 1/2
D	3	3	3 5/16	3 5/16
E	2 7/16	2 7/16	2 11/16	2 11/16

	MA	MB	NA	NB
A	4 11/16	4 11/16	5 1/16	5 1/16
B	4	4	4 5/16	4 5/16
C	6	4 15/16	6 13/16	5 1/2
D	3 11/16	3 11/16	4 1/16	4 1/16
E	3	3	3 5/16	3 5/16

GRAMER Halldorson TRANSFORMER CORPORATION

MT. CARMEL, ILLINOIS

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MIL-T-27A Steel Jacket Line

Power Transformers — Reactor Input Systems

PRIMARY—105/115/125 V.
FREQUENCY—54-66 CYCLES

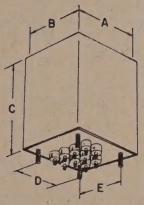
Part No.	MIL-T-27A Classification	MIL-T-27A Part No.	Secondary A-C Volts	Secondary D-C MA.	D-C V Output	Rectifier Filament Volts	Rectifier Filament Amps	Filament No. 2 Volts	Filament No. 2 Amps	Case Size	Wt. Lbs.
27R86	TF1RX03HA001	MS-90026	200-100-0-100-200	70	385	6.3/5	2	6.3	3	HA	4
27R87	TF1RX03JB002	MS-90027	325-0-325	70	260	6.3/5	2	6.3	4	JB	5
27R88	TF1RX03KB006	MS-90028	325-0-325	150	245	6.3	5	5	3	KB	7 1/4
27R89	TF1RX03LB003	MS-90029	400-0-400	175	318	5	3	6.3	8	LB	10
27R90	TF1RX03MB004	MS-90030	450-0-450	250	345	5	3	6.3	8	MB	13
27R91	TF1RX02KB001	MS-90031	350-0-350	250	255					KB	7 1/2
27R92	TF1RX02LB002	MS-90032	550-0-550	250	419					LB	11
27R93	TF1RX02NB003	MS-90036	800-0-800	250	640					NB	16 1/2

* Split center tap— balanced windings.

FOR 400 CYCLE OPERATION

These transformers are designed to meet all of the specifications of MIL-T-27A Class S. They are "steel jacketed," in case sizes and dimensions, exactly as specified by MIL-T-27A standards.

These units have been developed for aircraft and mobile communication control equipment, for use in the guided missile program, and should have application in future developments in the fields of aeronautics and rocketry.



MIL-T-27A CASE TYPE

Power

PRIMARY 105/115/125 V. 380-1000 CYCLES

Part No.	Plate Supply Volts	Plate Supply M.A.D.C.	Rectifier Filament Volts	Rectifier Filament Amps.	Other Filaments Volts	Other Filaments Amps.	Case Type	Terminal Type	Wt. Lbs.
27R62*	250-0-250	40	6.3 CT	1	6.3	1	EB	B	1 1/2
27R94	270-0-270	55	5.0	2	6.3 CT	2	FA	A	1½
27R95	335-0-335	70	5.0	2	6.3 CT	3	FA	A	1¾
27R96	375-0-375	120	5.0	3	6.3 CT	4	HA	B	2½
27R97	440-0-440	165	5.0	3	6.3 6.3 6.3 6.3	7.5 3 3 0.6	JA	B	6
27R98	450-0-450	200	5.0	2	6.3 6.3 6.3	4 4 0.6	JA	B	5¾
27R99	550-370-75-0 75-370-550	300	5.0	6	6.3 CT 6.3 CT	5 1	KA	B	6½

* Primary 115 Volts 380-1000 CPS.

Filament Transformers

PRIMARY 105/115/125 V. 380-1000 CYCLES

Part No.	Secondary Volts	Secondary Amps.	Insulation Volts Rms.	Case Type	Terminal Type	Wt. Lbs.
27F35	6.3 CT	2	2000	AJ-1	7 Pin	3/4
27F59	6.3 CT	3	2500	AJ	B	¾
27F60	6.3 CT	5.5	2500	EA	B	1
27F61	6.3 CT	10	2500	FA	B	1¾
27F62	6.3 CT	20	2500	GA	B & C	2½

Chokes

Part No.	Inductance Ratings Henrys	Inductance Ratings M.A.D.C.	D.C. Resistance (Ohms)	Insulation Volts Rms.	Case Type	Terminal Type	Wt. Lbs.
27C26	2.0	55	160	2500	AH	B	¼
27C27	2.0	70	165	2500	AH	B	½
27C28	2.0	120	100	2500	EB	B	1
27C29	2.0	165	90	2500	EB	B	1½
27C30	2.0	200	73	2500	FB	B	1¾
27C31	2.0	300	47	2500	HB	B	3¼

Step-Down Transformer

THREE-PHASE 400 CYCLES

400 cycle 3 phase. 27V17 is a Y-Y connected 400 cycle 3 phase Step-Down Transformer—Primary is 115 volts per phase. Designed for use primarily in airborne communication and control equipment. This transformer is rated at 140 VA.

Part No.	Secondary Volts	Secondary VA. Cap.	Case Type	Terminal Type	Wt. Lbs.
27V17	28.5	140	HA	B	3

CASE DIMENSIONS

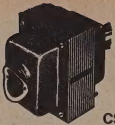
	AH	AJ	AJ-1	EA
A	1 5/16	1 5/8	1 5/8	1 15/16
B	1 5/16	1 5/8	1 5/8	1 13/16
C	1 3/4	2 3/8	2 3/8	2 3/4
D	Diag. 1 1/4	1 3/16	1 5/8	1 3/8
E		1 3/16		1 1/4

	EB	FA	FB	GA
A	1 15/16	2 5/16	2 5/16	2 3/4
B	1 13/16	2 1/16	2 1/16	2 3/8
C	2 7/16	3 1/8	2 1/2	3 13/16
D	1 3/8	1 11/16	1 11/16	2 1/8
E	1 1/4	1 7/16	1 7/16	1 3/4

	HA	HB	JA	KA
A	3 1/16	3 1/16	3 9/16	3 15/16
B	2 5/8	2 5/8	3 1/16	3 3/8
C	4 1/4	3 3/16	4 7/8	5 1/4
D	2 19/64	2 19/64	2 5/8	3
E	1 55/64	1 55/64	2 1/8	2 7/16

Merit power TRANSFORMERS

C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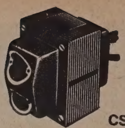
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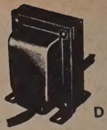
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Merit No.	Plate Supply		Rectifier		Filament Wdgs.		Mtg. Type	Dimensions—Inches				Shpg. Wt. Lbs.-Oz
	Volts	DCMA	Volts	Amps	Volts	Amps		Mtg. Centers	H	W	D	
P-3044	96	145			6.3	6.45	C	2 3/16	2½	3	3	3- 0
★P-2880	117	230			6.3 6.3	8.5 1.2	C	3 3/16 x 4 1/16	3¾	4⅝	4	8- 0
★P-2871	119.5	380			6.3 6.3	6.5 6.35	D	2¼ x 2½	3½	2 15/16	3⅝	4- 8
★P-3045	120	50			6.3	2.0	A	3⅛	2 3/16	3 11/16	2⅛	1- 7
★P-3144	123★★	200			6.3	10.3	D	2 x 2 11/16	3⅛	2½	3½	4- 0
P-3079	140 117 tap	300			6.3 6.3 6.3	9 2 1	C	3 x 3¾	3¾	4½	3¾	8- 0
P-3046	150	25			6.3 c.t.	.5	B	2	2	2½	1¾	0-12
P-2892	210-210	240	5	3.0	6.3	8.0	C	3 5/16 x 4 1/16	3¾	4½	3⅞	8- 6
P-3062	230-230	240	5	6.0	6.3	8.8	C	2¾ x 3 7/16	3 7/16	4⅛	4¾	8- 6
P-2949	240-240	40	5	2.0	6.3 c.t.	2.0	C	2 x 2½	2½	3	2½	2- 6
P-3149	240-240	40	5	2.0	6.3 c.t.	2.0	D	2 x 1 11/16	3⅛	2⅝	2⅝	2- 7
P-3047	240-240	50			6.3	2.5	C	2 x 2½	2½	3	2½	2- 0
P-3147	240-240	50			6.3	2.5	D	2 x 1 9/16	3⅛	2⅝	2½	2- 4
P-2958	240-240	50	5	2.0	6.3	2.6	C	2 x 2½	2½	3	3	2-10
P-2830	253-253	300	5	6.0	6.3• 6.3• 6.3	6.0 6.0 1.25	C	3 x 3¾	3¾	4½	4⅞	11- 0
P-3051	260-260	70	5	2.0	6.3	3.0	C	2 x 2½	2½	3	3⅛	3- 0
P-3048	260-260	90			6.3	4.7	C	2 x 2½	2½	3	3 3/16	3- 2
P-3148	260-260	90			6.3	4.7	D	2 x 2 3/16	3⅛	2⅝	3¼	3- 6
P-2870	276-276	250	5	3.0	6.3	8.5	C	2 11/16 x 3 5/16	3⅛	3¾	3½	5- 8
P-3060	265-265	260	5	3.0			C	2 11/16 x 3 5/16	3⅛	3¾	4	6- 2
P-2873	265-265	265	5	3.0	12.6 c.t.	5.1	C	2½ x 3⅛	3⅛	3¾	4	6- 8
* P-3135	265-265	300	5	6.0	12.6 c.t.	5.5			5½	3⅞	4¾	11- 6
P-3083	265-265	300	5	6.0	12.6 c.t.	4.7	C	3 x 3¾	3¾	4½	5¼	11-14
* P-2841	265-265	320	5	6.0	12.6 c.t.	4.9			3¾	4½	4¾	10- 0
* P-2883	265-265	380	5	6.0	12.6	6.4		3 x 4¼	5¾	3¾	4⅝	12- 6
P-2872	268-268	260	5	3.0	6.3	10.6	C	2½ x 3⅛	3⅛	3¾	3⅝	6- 6
P-2885	268-268	260	5	3.0	6.3	8.0	D	2¾ x 2 15/16	4 3/16	3 7/16	4	7- 6
P-2869	270-270	200	5	3.0	6.4	8.4	C	2 11/16 x 3 5/16	3⅛	3¾	4	7- 0
P-3076	270-270 180-180	†300 200	5	3.0	6.3• 6.3•	6.5 6.5	C	3 x 3¾	3¾	4½	5	13- 8
* P-3136	270-270	270	5	3.0	12.6 c.t.	4.4			4⅝	3¾	4½	8- 8
P-3154	275-275	50	5	2.0	6.3	2.6	D	2 x 2 3/16	3⅛	2⅝	3⅛	3- 5
* P-2832	275-275	220	5	3.0	7.0 6.3▲	.475 8.5		3 x 3⅝	3¾	4⅛	3½	7- 0
★P-2879	275-275	280	5	4.8	6.3 6.3 6.3	9.6 1.2 0.6	C	3 3/16 x 4 1/16	3¾	4⅝	5	9- 0
P-3049	275-275	270	5	3.0	6.3	12.6	CS	3 5/16 x 4	3¾	4½	5	13- 8
P-2839	276-276	290	5	6.0	6.3 6.3	11.5 3.6	CSS	3 x 3¾	3¾	4½	5½	13- 8
P-2874	277-277	210	5	3.0	13.3 c.t.	4.0	C	2½ x 3⅛	3⅛	3¾	3¼	6- 8
P-2876	277-277	305	5	5.0	6.3 6.3	8.5 1.2	C	3 x 3¾	3¾	4½	4 15/16	12- 0
* P-3084	285-285	220	5	3.0	6.3	8.0		2¾ x 3 7/16	3 7/16	4⅛	4 5/16	9- 0
P-2878	279-279	265	5	5.0	6.3 6.3 6.3	7.1 1.2 0.9	C	3 3/16 x 4 1/16	3¾	4⅝	5¼	12- 0
P-3052	280-280	90	5	2.0	6.3	5.0	C	2¼ x 2 13/16	2 13/16	3⅜	3½	4- 2
P-2849	280-280	205	5	3	6.3	9	C	3 x 3 11/16	3 7/16	4⅛	3¾	8- 0
P-3058	280-280	315	5	6.0	6.3	11.5	C	3 3/16 x 4 1/16	3¾	4½	5½	11- 8
* P-2882	281-281	250	5	3.0	6.3	9.5		2½ x 2½	3 7/16	4⅛	4 1/16	8- 0
P-3056	282-282	240	5	3.0	6.3	8.7	C	3 3/16 x 4 1/16	3¾	4½	4½	10- 0
P-2837	282-282	250	5	3.0	6.3 6.3	9.3 1.25	CS	3 x 3¾	3¾	4½	5 1/16	10- 8
P-2881	280-280	250	5.0	3.0	6.3	9.5	D	1 3/16 x 2½	3¾	3⅛	3 7/16	8- 0
P-2842	286-286	210	5	3.0	6.3	8.0	C	2¾ x 3½	3½	4⅛	2	7- 0
P-2867	290-290	230	5	3	6.3	12	C	3 7/16 x 2¾	4⅛	3 7/16	4¾	11- 0
P-3134	290-290	270	5	3.0	12.6 c.t.	4.8	D	3 x 3⅞	4⅝	3¾	4⅛	8- 4
P-3064	290-290 275-275	340 310	5	6.0	12.6 c.t.	6.1	C	3 x 3¾	3¾	4½	5¼	13- 0
P-2844	292-292	285	5	3.0	6.3	8.5	C	2¾ x 3½	4¼	3½	4¾	8-14
P-2836	300-300	250	5	4.0	6.3 6.3	11.7 1.2	C	2¾ x 3 7/16	3 7/16	4⅛	4⅞	11- 0
P-3077	300-300	250	5	3.0	6.3	9.0	C	3 x 3¾	3¾	4½	4¼	10- 2
P-3055	300-300	400	5	6.0	6.3 6.3	10.0 4.5	C	3 x 3¾	3¾	4½	5⅝	14- 4
P-2833	305-305	300	5	6.0	6.3 6.3 6.3• 6.3•	.9 1.95 6.4 6.4	C	3 x 3¾	3¾	4½	5⅜	13- 5
P-2847	306-306	460	5	6.0	6.3 46.0	11.4 .15	C	3½ x 4⅜	4⅜	5¼	4 15/16	14- 0
P-2840	312-312	340	5	6.0	6.3• 6.3• 6.3• 6.3•	5.1 5.1 1.5 1.5	CSS	3 x 3¾	3¾	4½	6¼	14- 0
P-2884	320-320	270	5	3.0	12.6 c.t.	5.2	D	3 x 3½	4 9/16	3¾	4	9- 0
P-3073	322-322 205-205	†180 70	5	3.0	6.3 6.3	10.0 2.7	CS	3 x 3¾	3¾	4½	5	12- 5
P-2950	325-325	40	5	2.0	6.3	2.0	C	2 x 2½	2½	3	2⅞	2-14

★Can be used as Isolation Transformer by ignoring filament windings

* Special Mounting

Quality in Production—Speed in Delivery

Merit power TRANSFORMERS

Plate and Filament

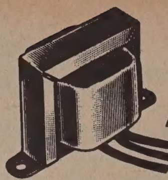
Merit No.	Plate Supply		Rectifier		Filament Wdgs.		Mtg. Type	Dimensions—Inches					Shpg. Wt. Lbs.-Oz.
	Volts	DCMA	Volts	Amps	Volts	Amps		Mtg. Centers		H	W	D	
P-3150	325-325	40	5	2.0	6.3 c.t.	2.0	D	2	x 1⅞	3⅛	2⅝	2 13/16	2-13
P-2951	325-325	70	5	3.0	6.3 c.t.	3.5	C	2	x 2½	2½	3	3⅜	3- 6
P-3151	325-325	70	5	3.0	6.3 c.t.	3.5	D	2½	x 1 15/16	3⅞	3 3/16	3 3/16	4- 2
P-2831	331-331 211-211	†250 90	5 5	3.0 2.0	6.3	13.0	C	3	x 3¾	3¾	4½	5⅜	13- 0
P-2838	333-333	250	5	3.0	6.3• 6.3• 6.3 6.3	5.8 5.8 3.3 .85	CS	3	x 3¾	3¾	4½	5½	15- 0
P-2877	338-338	300	5	6.0	6.3 6.3	10.1 2.4	C	3 3/16	x 4 1/16	3¾	4⅝	5¾	13- 0
P-2887♦	356-356 268-268	180 148	5 5	3.0 3.0	12.6 c.t.	6.0	D	4	x 3	4¾	3⅞	5	13- 0
P-2957	350-350	50	5	2.0	6.3 c.t.	2.6	C	2¼	x 2 13/16	3 5/16	2 13/16	2¾	3- 0
P-3160	350-350	50	5	2.0	6.3 c.t.	2.6	D	2¼	x 2	3½	2 15/16	3 1/16	3- 2
P-2966	350-350	70	5	3.0	2.5 c.t. 2.5 c.t.	9.0 3.5	C	2¼	x 2 13/16	2 13/16	3⅜	3⅝	4-10
P-2967	350-350	90	5	3.0	2.5 c.t.	12.5	C	2½	x 3⅛	3⅛	3¾	4 1/16	6-12
P-2952	350-350	90	5	3.0	6.3 c.t.	3.5	C	2¼	x 2 13/16	2 13/16	3⅜	4	4-10
P-3152	350-350	90	5	3.0	6.3 c.t.	3.5	D	2¾	x 2 5/16	4¼	3 9/16	3⅜	5- 0
P-3153	350-350	110	5	3.0	6.3 c.t.	4.5	D	3	x 2¼	4⅝	3 13/16	3 7/16	5-12
P-2953	350-350	120	5	3.0	6.3 c.t.	4.7	C	2½	x 3⅛	3⅛	3¾	3 13/16	6- 0
P-3173	350-350	150	5	3.0	6.3	6.5	D	2½	x 2⅞	3⅞	3¼	4⅛	6-12
P-3054	350-350 220-220	†180 70	5	6.0	6.3 6.3	10.2 2.7	C	3	x 3¾	3¾	4½	5⅜	13- 4
P-3165	350-350	200	5 5	2.0 3.0	6.3 6.3	0.6 7.0	D	3	x 3⅞	4⅝	3¾	5	11-10
P-3069	350-350	225	5	3.0	6.3 6.3	10.0 2.7	CS	3	x 3¾	3¾	4½	4¾	9- 8
P-3070	350-350	225	5	3.0	6.3 6.3	10.0 2.7	C	3	x 3¾	3¾	4½	4	9- 0
P-3057	350-350	290	5	6.0	6.3 6.3 6.3	9.5 2.4 1.5	C	3 3/16	x 4 1/16	3¾	4½	6¼	15- 0
P-3071	360-360	180	5	3.0	6.3	9.0	CS	2¾	x 3 7/16	3 7/16	4⅛	4 9/16	9-10
P-3072	360-360	180	5	3.0	6.3	9.0	C	2¾	x 3 7/16	3 7/16	4⅛	4 5/16	9- 6
P-2834	360-360	225	5	6.0	6.3 6.3 6.3	1.2 3.0 9.0	C	3	x 3¾	3¾	4½	4⅞	11-14
P-3059	360-360	250	5 5	2.0 3.0	6.3 6.3	2.7 9.0	C	3	x 3¾	3¾	4½	5⅛	12- 5
P-3063	360-360	250	5 5	3.0 2.0	6.3 6.3	9.0 1.2	C	3 3/16	x 4 1/16	3 13/16	4⅝	5½	11-10
P-3078	360-360	275	5	3.0	6.3 6.3 6.3 or 5	9.0 1.5 2.7	C	3	x 3¾	3¾	4½	5¼	11- 8
P-3179	362-362 210-210	210 120	5 5	3.0 2.0	12.6 c.t.	6.0	D	3	x 4¼	4⅝	3 13/16	5⅛	12-12
P-3061	362-362	295	5 5	6.0 2.0	12.6 c.t.	5.0	C	3 3/16	x 4 1/16	3 13/16	4⅝	6⅝	15- 8
P-2875	373-373	190	5	3.0	6.3 6.3	7.8 1.2	C	3	x 3¾	3¾	4½	4 11/16	10- 6
P-2954	375-375	150	5	3.0	6.3 c.t.	5.0	C	2½	x 3⅛	3⅛	3¾	4 5/16	7- 6
P-2886	375-375 220-220	190 100	5 5	3.0 2.0	12.6 c.t.	6.0	D	3	x 3 9/16	4 9/16	3¾	4⅝	11- 6
P-3053	375-375 325-325	†170 130	5 5	3.0 3.0	6.3• 6.3• 6.3 or 5	7.0 7.0 2.7	C	3	x 3¾	3¾	4½	5⅝	14- 8
P-3066	375-375 325-325	†170 130	5 5 5	3.0 3.0 2.0	12.6 c.t. 6.3	5.0 2.6	C	3	x 3¾	3¾	4½	5⅜	13- 2
P-3169	390-390 325-325	160 130	5 5 5	3.0 3.0 2.0	6.3 6.3	8.4 4.0	D	3	x 3⅝	4⅝	3 13/16	4 13/16	11-10
P-2968	400-400	110	5	3.0	2.5 c.t. 2.5 c.t.	15.0 3.5	C	3	x 3¾	3¾	4½	3 13/16	7-12
P-2955	400-400	200	5	3.0	6.3 c.t.	5.0	C	3	x 3¾	3¾	4½	4⅛	9- 0
P-3155	400-400	200	5	3.0	6.3 c.t.	5.0	D	3	x 3 3/16	4⅝	3 15/16	4¼	9- 6
P-3067	400-400 212-212	†220 90	5 5 5	3.0 3.0 2.0	6.3 6.3	10.0 2.6	C	3	x 3¾	3¾	4½	5⅜	13- 9
P-3166	400-400	300	5 5	3.0 6.0	12.6 c.t.	10.	D	3½	x 4¼	5⅜	4½	5¾	18- 3
P-3174	†405-405 325-325	240 200	5 5 5	3.0 3.0 3.0	6.3 6.3 6.3	6.0 6.0 2.6	D	3⅝	x 3⅞	5 15/16	4 7/16	5⅝	16- 8
P-2835	420-420	250	5	3.0	6.3 6.3 6.3	8.0 3.0 1.2	C	3	x 3¾	3¾	4½	5⅛	12- 0
P-2956	435-435 80 volt Bias Tap	250	5 2.5	3.0 10.0	6.3 c.t. 6.3 or 5	3.0 3.0	C	3	x 3¾	3¾	4½	4¾	11- 8
P-3156	435-435 80 volt Bias Tap	250	5 2.5	3.0 10.0	6.3 c.t. 6.3 or 5	3.0 3.0	D	3	x 3 13/16	4⅝	3 13/16	4⅞	11-14
P-3170	1750	2	2.5	2.0	6.3 or 2.5	.9 2.0	D	2	x 2 1/16	3⅛	2⅝	2⅞	2-12
P-3171	2500	5	2.5	2.0	6.3 or 2.5	3.0 3.0	D	2½	x 2 5/16	3⅞	3 3/16	3⅜	4- 4

▲ Tapped
● Can be used in Series for 12.6 v c.t.
★ For use with half wave rectifier.

★★ Tapped primary
♦ Primary taps

	P-3053 P-3066	P-2831 P-3067	P-3054 P-3073	P-3076
†Max. MA High Tap Only.	320	300	220	435
Max. MA Low Tap Only.	340	340	325	500

MERIT
Since 1924
BETTER ELECTRONIC COMPONENTS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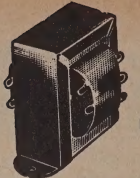
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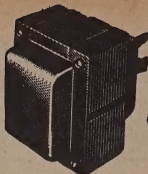
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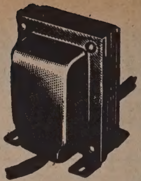
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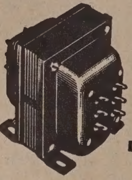
FILAMENT power TRANSFORMERS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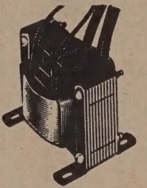
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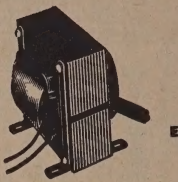
EV

Merit No.	Sec. Volts	Sec. Amp.	Insulation Volts RMS	Mtg. Centers	Dimensions—Inches			Mtg. Type	Shpg. Wt. Lbs.-Oz.
					H	W	D		
P-2939	2.5 c.t.	5	2500	2¹³⁄₁₆	2	3¼	1⅝	A	1- 4
P-2940	2.5 c.t.	10	7500	3⅛	3	3⅝	2¼	B	2- 2
P-3042	2.5 c.t.	10	10000	2¹³⁄₁₆ x 2	2⅞	3⅜	2¾	EH	2- 8
P-3040	5.0 c.t.	3	2500	2¹³⁄₁₆	2	3¼	2⅛	A	1- 4
P-2941	5.0 c.t.	6	2500	3⅛	2¼	3¹¹⁄₁₆	2⅛	A	1-12
P-2942	5.0 c.t.	15	10000	3 x 2½	4½	3¾	3½	EV	6-12
P-2943	5.0 c.t.	30	2500	2½ x 2⅞	3⅞	3³⁄₁₆	4⅞	DL	6- 4
P-2964	6.3	0.5	1500	2	1⅜	2⅜	1¼	A	0- 6
P-2888	6.3	.85	1500	2⅜	1⅝	2¹³⁄₁₆	1⁷⁄₁₆	A	1- 0
P-2944	6.3 c.t.	1	2500	2⅜	1⅝	2¹³⁄₁₆	1½	A	0-12
P-3074	6.3	1.2	5000	2¹³⁄₁₆	2	3¼	2	A	1- 4
P-2945	6.3 c.t.	2	2500	2¹³⁄₁₆	2	3¼	1⅝	A	1- 0
P-2946	6.3 c.t.	3	2500	2¹³⁄₁₆	2	3¼	1⅞	A	1- 6
P-3050	6.3	8.8	1500	2 x 2¹⁄₁₆	3⅛	2½	3	D	3- 0
P-2947	6.3 c.t.	6	1500	3⅛	3	3⅝	2¼	B	2- 4
P-2846	6.3	.7	1500	2	1⅜	2⅜	1⅝	A	1- 0
P-2948	6.3 c.t.	10	2500	2¼ x 2⅜	3⁷⁄₁₆	2¹³⁄₁₆	2⅞	EV	3-10
P-3141	6.3	10.3	1500	2 x 2³⁄₁₆	3⅛	2½	3⅛	D	3- 5
P-2845	6.3	13	1500	2¼ x 2⅜	3½	2¹⁵⁄₁₆	3½	D	5- 0
P-2890*	6.3* 6.3 6.3	7.2 1.2 .6	2500	2 x 2¼	3	2½	3⅛	D	4- 0
P-3041	5.0 c.t. 6.3 c.t.	3 3.6	2500	3⁹⁄₁₆	2½	4	2⅛	A	2- 2
P-3043	5.0 6.3 6.3	3 3.5 10	3000	2½ x 3⅛	3⅛	3¾	4¹⁄₁₆	C	5- 6
P-2961	6.3 c.t. 6.3 c.t.	3 3	2500	3⅛	3	3⅝	2¼	B	2- 6
P-3082	6.3 6.3	8 .3	5000 2500	3⅛	3¹⁄₁₆	3⁹⁄₁₆	2½	A	2- 8
P-2868	6.7 6.7	5.1 3.6	1500	2¼ x 1⅞	3⅛	2⅝	2⅞	D	3- 6
P-2864	6.7	9.6	2500	2¼ x 2⅛	3¹⁄₁₆	2½	3³⁄₁₆	D	3-10
P-2863	6.7 6.7	4.1 6.6	1500	2¼ x 2⅜	3	2½	3⅛	D	3-14
P-2866	6.7 6.7 25.2	6.4 6 .003	2500	2½ x 2⁵⁄₁₆	3⅞	3¼	3⁹⁄₁₆	D	4- 8
P-2960	7.5 c.t.	4	2500	2¹³⁄₁₆	2⅝	3⅛	1⅞	B	1-12
P-3143	7.5 c.t.	8	2500	2¼ x 2	3½	2¹⁵⁄₁₆	3⅛	D	3- 8
P-3145	10.0 c.t.	5	2500	2¼ x 2	3½	2¹⁵⁄₁₆	3	D	3- 1
P-3146	10.0 c.t.	10	3000	2½ x 2⁷⁄₁₆	3⅞	3³⁄₁₆	3⅝	D	5- 6
P-2959	12.6 c.t.	2	2500	2¹³⁄₁₆	2	3¼	1⅞	A	1- 4
P-2889	13.2 c.t.	5.7	1500	2¼ x 2⅝	3½	2¹⁵⁄₁₆	3⅝	D	5- 0
P-3142	12.6 6.3 6.3	.6 7.8 1.2	2500	2 x 2¾	3	2½	3⅝	D	4- 0
P-2865	25V 6.3	.005 11.9	1500	2½ x 2³⁄₁₆	3⅞	3¼	3½	D	4- 4
P-2848	25.8 6.3 6.3	.3 6.5 .9	1500	2 x 1¹⁵⁄₁₆	3⅛	2½	3	D	2-15
P-2962	25.2	1	2500	2¹³⁄₁₆	2	3¼	1⅞	A	1- 6
P-2963	#12.6	7	2000	2¼ x 2½	3½	2¹⁵⁄₁₆	3⅝	D	4-10

#Or 12.6V @ 3.5A, 12.6V @ 3.5A or 25.2V C.T. @ 3.5A.

Primary 117V, 60 cycles

* Primary taps.

Merit power

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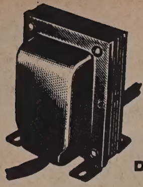
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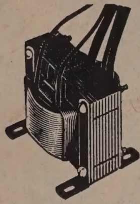
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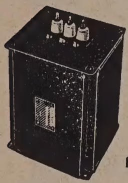
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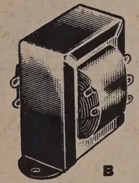
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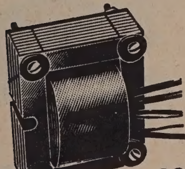
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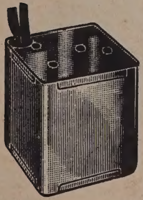
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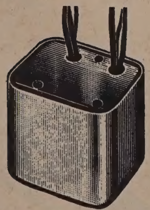
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Plate Transformers

Merit No.	Sec. Rms. Volts	Sec. DC Volts	Sec. DC MA	Dimensions—Inches				Mtg. Type	Shpg. Wt. Lbs.-Oz.
				Mtg. Centers	H	W	D		
P-3178	415-415	300	200	2½x2¼	3⅞	$3\frac{3}{16}$	3⅝	D	4–15
P-3175	550-550	400	150	2¼x2¾	$3\frac{9}{16}$	3	3⅞	D	5– 4
P-3157	660-660† 550-550	500 400	250	3 x$3\frac{5}{16}$	4⅝	$3\frac{13}{16}$	4⅜	D	10– 0
P-3158	1080-1080 500-500	1000‡ 400	125 150	3 x$3\frac{15}{16}$	4⅝	$3\frac{13}{16}$	5	D	11–12
P-3159	900-900 800-800	750 600	225	3 x$4\frac{1}{16}$	4⅝	$3\frac{13}{16}$	5⅛	D	12– 6
P-3167	1450-1450 1175-1175	1200 1000	300	5¼x3	5¾	6⅛	5	EH	20– 8
P-3168	2100-2100 1800-1800	1750 1500	300	5¼x3¾	5¾	6⅛	6	EH	29– 0
P-4062	2900-2900 2385-2385	2500 2000	300	5¼x5¾	8¼	$6\frac{9}{16}$	$6\frac{1}{16}$	H	43–13

†Has 40V. Bias Tap. ‡For dual operation with simultaneous use of both sec. ratings. Max. one winding only 275 M.A.

Rectifier Transformers

Merit No.	Secondary Volts	Secondary Amps.	Insulation Volts RMS	Mtg. Centers	Dimensions—Inches			Mtg. Type	Shpg. Wt. Lbs.-Oz.
					H	W	D		
P-3088	13	12	1500	3½x2⅝	$3\frac{7}{16}$	4⅛	3¼	EH	6– 3
***P-3085**	26	3	1500	$2\frac{13}{16}$x2⅛	$2\frac{13}{16}$	3⅜	2¾	EH	3– 4
P-3093	36 c.t.	10	1500	4⅜x3½	4⅜	5¼	4¾	EH	15– 8
***P-3094**	72 ct.	10	1500	$5\frac{13}{16}$x3¾	$6\frac{1}{32}$	$7\frac{1}{16}$	5¾	EH	30– 2
P-3087	78 tapped @26 and 52	6	1500	5¼x3¾	$5\frac{11}{16}$	6⅛	5⅞	EH	26– 6
P-3086	104 c.t.	3	1500	4¼x3	4⅜	5¼	4¼	EH	15– 0
P-3089	104 c.t.	6	1500	5¼x4	$5\frac{11}{16}$	6⅛	6⅝	EH	32– 5
P-3091	130 tapped @104	12	1500	$8\frac{5}{16}$x4¼	$7\frac{1}{16}$	$9\frac{17}{32}$	7½	EH	71– 8
P-3092	156	6	1500	$5\frac{13}{16}$x4¼	$6\frac{1}{32}$	$7\frac{1}{16}$	7	EH	40–11
P-3090	156 tapped @ 130	3	1500	5¼x3¼	$5\frac{11}{16}$	6⅛	5⅞	EH	25– 6

*Matches Selenium Rectifiers in Federal's " All Purpose Assembly Kit "

Vibrator Transformers

Merit No.	Sec. Rms. Volts	Sec. DC Volts to Filter	Sec DC MA	Dimensions—Inches				Mtg. Type	Shpg. Wt. Lbs.-Oz.
				Mtg. Centers	H	W	D		
For operation from 6V battery & vibrator									
P-2969	160-160	150	40	2⅜	2¼	2⅞	1¾	B	1- 1
P-2970	235-235	225	40	$2\frac{13}{16}$	2⅝	$3\frac{5}{16}$	2⅛	B	1- 7
P-2971	260-260	250	50	$2\frac{13}{16}$	2⅝	3⅛	2¼	B	1-12
P-4071	260-260	250	50		3	2⅜	$2\frac{3}{16}$	JT	2- 0
P-2972	265-265	260	60	3⅛	3	3⅝	2⅛	B	2- 4
P-3068	275-275	260	60	1¾ x $2\frac{3}{16}$	$2\frac{3}{16}$	2⅝	1⅞	CO	1- 6
P-4076*	280-280	265	65		3¼	2⅝	2⅝	JG	2- 8
P-4078	285-285	270	60		2⅝	$2\frac{3}{16}$	2¾	JT	1-15
P-4079	275-275	270	75		$3\frac{1}{32}$	2⅜	2½	JT	2- 4
P-4077*	290-290	280	65		3⅞	2¼	2⅜	JT	2- 7
For operation from 12V battery & vibrator.									
P-2860	235-235	225	50	$2\frac{13}{16}$	$2\frac{11}{16}$	3⅛	$1\frac{15}{16}$	B	2- 0
P-2861	260-260	250	60	1¾ x $2\frac{3}{16}$	$2\frac{3}{16}$	2⅝	2⅛	CO	2- 0
P-2978	275-275	260	60	1¾ x $2\frac{3}{16}$	$2\frac{3}{16}$	2⅝	1⅞	CO	1- 8
P-4051*	280-280	265	65		3¼	2⅝	2⅝	JG	2- 9
P-4052*	290-290	280	65		4	2¼	2⅜	JG	2- 6

* Built-in hash filter.

Quality in Production—Speed in Delivery

Merit power

STEP-UP, STEP-DOWN TRANSFORMERS

Merit No.	Input Voltage	Output Voltage*	Watts	Dimensions—Inches Mtg. Centers	H	W	D	Mtg. Type	Shpg. Wt. Lbs.-Oz.
P-3138	Dependent on Line Voltage	Dependent on Line Voltage and Position of Switch	350	3 x 5⁷⁄₁₆	4⅞	3¹³⁄₁₆	7½	DEM	10-10
P-3139			750	3½ x 6⅞	5⅞	4½	9½	DEM	19- 8

Equipped with voltmeter, line cord, and plug, variable primary switch, indicator light and output receptacle.
*See detailed instruction sheet packed with unit.

Step-Down Auto- Transformers

Merit No.	Primary Volts	Secondary Volts	Output Watts	Dimensions—Inches Mtg. Centers	H	W	D	Mtg. Type	Shpg. Wt. Lbs.-Oz.
P-3161	220-250	110-125	80	2¼ x 1⅞	3½	2¹⁵⁄₁₆	3	DE	3- 6
P-3162	220-250	110-125	150	2½ x 2⁷⁄₁₆	3⅞	3³⁄₁₆	3⅝	DE	5- 3
P-3163	220-250	110-125	250	3 x 2¹⁵⁄₁₆	4⅝	3¹³⁄₁₆	4	DE	8- 7
P-3164	220-250	110-125	500	3 x 3⁵⁄₁₆	4⅝	3¹³⁄₁₆	4⅜	DE	10- 2
P-4065	220-250	110-125	1000	4⅞ x 5¾	7¼	6⅝	5⅝	H	35- 8

Statically shielded, conservatively rated, equipped with cord plug and receptacle.

Photo-Flash Transformer

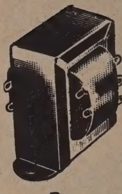
Merit No.	Secondary AC Volts	Secondary DCMA	Dimensions—Inches Mtg. Centers	H	W	D	Mtg. Type	Shpg. Wt. Lbs.-Oz.
P-3065	1100	1.5	2¹¹⁄₁₆	2⅝	3⅛	2	B	1-12

ISOLATION TRANSFORMERS

Merit No.	Shpg. Wt. Lbs.-Oz.	Primary Volts	Secondary Volts	Output Watts	Mtg. Centers Inches	Mtg. Type	Dimensions—Inches H	W	D
P-3096	2- 4	117	117	40	3⅛	B	3⅛	2⅝	2⅝
P-3197	5- 0	117	117	80	2½x2⁵⁄₁₆	D	3⅞	3³⁄₁₆	3½
P-3177	15-10	117	105-115-125	350	3½x3¾	DE	5⁵⁄₁₆	4½	5¼
P-3198	6- 6	117	117	100	3¾x2¹¹⁄₁₆	DE	4¼	3⁹⁄₁₆	3¾
P-3202	7- 0	117	117	175	2¾x3⅞	J	4¼	4⁷⁄₁₆	3⅝
P-3199	12- 2	117	117	250	3 x3¹³⁄₁₆	DE	4⅝	3¹³⁄₁₆	4⅞
P-3172	21- 4	117	117	500	3½x4⅞	DE	5⅜	4⅝	6½

Step Down Type

P-3116	5- 0	230	115	100	2¾x2⁵⁄₁₆	DE	4¼	3⁹⁄₁₆	3⅜
P-3117	9-10	230	115	250	3 x3⁵⁄₁₆	DE	4⅝	3¹³⁄₁₆	4⅜
P-3118	21- 7	230	115	500	3½x4⅞	DE	5⁷⁄₁₆	4⁹⁄₁₆	6⅜



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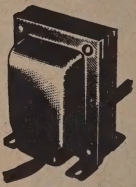

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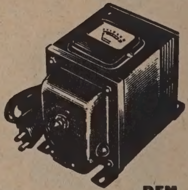
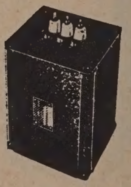
DE



DEM



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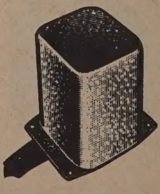

"COMPARE IT WITH MERIT!"

Quality in Production—Speed in Delivery

Merit COIL AND TRANSFORMER CORPORATION
HOLLYWOOD, FLORIDA

MERIT
Since 1924
BETTER
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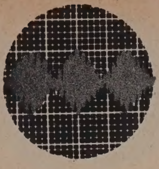
COMPONENTS

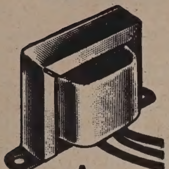


AUDIO

DRIVER AND MODULATION TRANSFORMERS

"COMPARE IT WITH MERIT!"

Driver Transtormers



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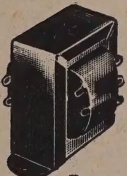
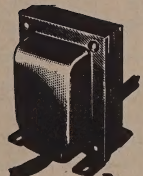


B

Merit No.	Driver	Typical Outputs	Turn Ratio Pri. to ½ Sec.	Pri. MA	Dimensions—Inches Mtg. Centers	H	W	D	Mtg. Type	Shpg. Wt. Lbs.-Oz.
A-3009	30, 1H4, etc.	PP19, 30's, 1J6, etc.	2.5:1	15	1¾	1 3/16	2 1/16	1⅛	A	0- 4
A-2920	6C5, 1H4. 30, 49, etc.	1J6, 19, PP30, 49, etc.	2.5:1	10	2⅜	1⅝	2 13/16	1½	A	0-10
A-2921	6F6, 2A5, 42. etc.	PP6F6, 2A5, 6L6, etc.	1.7:1, 1.5:1, 1.3:1	35	2 13/16	2	3¼	1⅝	A	1- 0
A-2922	6A6, 6C5, 6N7, 46, etc.	6A6, 6N7, PP46, etc.	5:1, 4:1, 3:1, 2.5:1	20	2 13/16	2	3¼	1⅝	A	1- 0
A-3120	500 ohm line	Class B Grids 15 Watt Capacity	1:.75, 1:.85, 1:1, 1:1.25, 1:1.45.		2 3/16 x 2	3 3/16	2⅝	3⅜	DL	3- 1
A-3121	500 ohm line	Class B Grids 30 Watt Capacity	1:1.75, 1:2, 1:2.25, 1:2.5, 1:2.75, 1:3		2¼ x 2¼	3 9/16	3	3¾	DL	4- 2
A-3123	PP6A6, 6C5, 53. etc.	PP6A6, 6N7, 6L6, T21	5:1†	15	2 x 1 11/16	3⅛	2⅝	2⅝	D	2- 7
A-3124	6F6, 46, 59, 42, etc.	PP46, 59, 6L6, 807	2.2:1	30	2 x 1 11/16	3⅛	2⅝	2⅝	D	2- 7
A-3125	6F6, 2A5, 47, 42, etc.	PP6L, 800, 812, 203A	1.4:1†	40	2¼ x 2	3½	2 15/16	3⅛	D	3- 4
A-3126	PP6L6, 6F6, 6V6, etc.	RK18, RK58, T20, 807	2:1	40	2 x 1 11/16	3⅛	2⅝	2⅝	D	2- 7

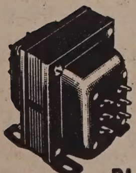
Modulation Transformers



D

Merit No.	Class B Outputs	Ohms Impedance Pri.	Ohms Impedance Sec.	Max. MA Pri.	Max. MA Sec.	Watts	Dimensions—Inches Mtg. Centers	H	W	D	Mtg. Type	Shpg. Wt. Lbs.-Oz.
A-3007	19,1J6,6A6, 6N7,PP1H4	10000 c.t.	5000 8000 10000	60	50	5	1¾	1 3/16	2 1/16	1⅛	A	0– 4
A-3008	PP6AV5,6V6, 6F6 Sgl. 6A6, 6N7,53	10000 c.t.	4000-5000 7500-10000 12000	50	60	10	2⅜	2¼	2⅞	2⅛	B	1– 5
A-3109	PP2A3,6A3, 6B4,6L6,45, 46, 59	6000 c.t. 3800 c.t. 3000 c.t.	5000 8000 10000	80	100	25	2x1 13/16	3⅛	2⅝	2¾	D	2– 8
A-3110	PP6L6,807 PPRK41, HY56 PP HY61, HK24	6600-3800 c.t.	4000-5000 7500-10000 12000	175	150	60	2¾x2 11/16	4¼	3½	3¾	D	6– 3
A-3113	PP800.809, TZ40,T55, HK54,RK31, HY40,811A, 807,812A	15000-6900 c.t.	3000-4000 5000-6000	250	300	175	3x4 7/16	4⅝	3 13/16	5⅝	D	14–10

Universal Modulation

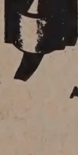


DL

Type No.	Pri. Impedance	Pri. MA Per Side	Sec. Impedance	Max. Sec. MA‡	Watts	Dimensions—Inches Mtg. Centers	H	W	D	Mtg. Type	Shpg. Wt. Lbs.-Oz.
A-3104	2000-20000	50	2000-20000	50/100	15	2 x1 11/16	3 3/16	2⅝	2⅝	DL	2–4
A-3105	2000-20000	150	2000-20000	150/300	60	2½x2 15/16	3⅞	3⅛	4⅛	DL	6–12
A-3106	2000-20000	220	2000-20000	220/440	125	3 x3¾	4⅝	3¾	4⅝	DL	10–10

‡Series/Parallel.

Transistor Transformers



Actual size

Merit No.	Function	Impedance in Ohms Pri.	Impedance in Ohms Sec.	DC Resistance Pri.	DC Resistance Sec.	DC Pri. MA	Power MW
A-2705	Output	250 c.t.	11	20	.80	0	175
***A-2702**	Output	450 c.t.	3.2	40	.40	2	100
***A-2706**	Output	500	12	50	2.7	15	175
***A-2701**	Output	725 c.t.	3.2	57	.34	0	175
A-2760	Output	1000	50/60	116	7	3	50
A-2704	Driver or Interstage	5000	2500c.t.	230	39	1.5	350
***A-2700**	Driver or Output	10,000	16	640	2.7	2	150
A-2703	Driver or Interstage	10,000	2000	370	198	2	100
A-2740	Input or Interstage	20,000	1000	1400	210	.5	150
A-2741	Input or Interstage	20,000	1000	1100	109	.5	150
A-2720	Input	200,000	1000	2800	145	0	150

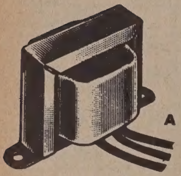
*Printed Ckt.

AUDIO

OUTPUT TRANSFORMERS

MERIT
Since 1924
BETTER ELECTRONIC COMPONENTS

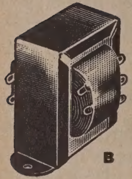
"COMPARE IT WITH MERIT!"


A

Standard Type

Mounting Type "A" except *Type "B" mounting.

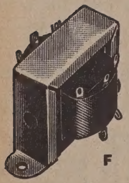
Merit No.	Tube	Ohms Impedance		Pri. Ma.	Max. Watts	Dimensions—Inches				Shpg. Wt. Lbs.-Oz.
		Primary	Sec.			Mtg. Centers	H	W	D	
A-2928	Single	2000	3-4	60	5	2	1⅜	2½	1¼	0- 6
A-3025	Single	2500	3-4	50	3	1¾	1 3/16	2 1/16	1	0- 4
A-3018	Single	3500	3-4	60	8	2⅜	1⅝	2 13/16	1½	0-10
A-3026	Single	5000	3-4	40	3	1¾	1 3/16	2 1/16	1	0- 4
A-2930	Single	5000	3-4	40	5	2	1⅜	2⅜	1¼	0- 6
A-3019	Single	5000	3-4	50	8	2⅜	1⅝	2 13/16	1½	0-10
A-2935	Single or Push-Pull	5000 c.t.	3-4	75	18	2 13/16	2	3¼	1⅝	1- 0
A-2931	Single	7000	3-4	30	5	2	1⅜	2⅜	1¼	0- 6
A-3020	Single	7000	3-4	40	8	2⅜	1⅝	2 13/16	1½	0-10
A-2927*	Single	8000	3-4	20	3	1½	1 7/16	1⅞	1	0- 4
A-2932	Single	10000	3-4	30	5	2	1⅜	2⅜	1¼	0- 6
A-2938	Single or Push-Pull	10000 c.t.	3-4	40	5	2	1⅜	2⅜	1¼	0- 6
A-2936	Single or Push-Pull	10000 c.t.	3-4	40	10	2⅜	1⅝	2 13/16	1½	0-10
A-2933	Single	12000	3-4	10	5	2	1⅜	2⅜	1¼	0- 6
A-3021	Single or Push-Pull	14000 c.t.	3-4	35	12	2 13/16	2	3¼	1⅝	1- 0
A-2934	Single	15000	3-4	10	5	2	1⅜	2⅜	1¼	0- 6
A-2937	Single or Push-Pull	25000 c.t.	3-4	10	5	2	1⅜	2⅜	1¼	0- 6
* **A-3012**	Single or Push-Pull	10000 c.t.	3-4	25	10	1 23/32	1 11/16	2	1½	0-10
A-3017	Single or Push-Pull	50000 c.t.	3-4	10	5	2	1⅜	2⅜	1¼	0- 6


B

Universal Type

Mounting Type "F" except *Type "G" mounting.

A-2900	Single or Push-Pull	4000- 7000- 8000-10000- 14000 c.t.	.17 to 32	35	4	2	1⅜	2⅜	1½	0- 6
A-2901	Single or Push-Pull	4000- 7000- 8000-10000- 14000 c.t.	.17 to 32	40	8	2⅜	1⅝	2 13/16	1½	0-10
A-2902	Single	1500- 2000- 4000- 5000- 7000-10000	.1 to 30	55	10	2⅜	1⅝	2 13/16	1½	0-10
A-2903	Single	2000- 4500- 7000-10000	3.2	30	4	2	1⅜	2⅜	1¼	0- 6
A-2904*	Single or Push-Pull	4000- 7000- 8000-10000- 14000 c.t.	.17 to 32	40	18	2⅜	2¼	2⅞	1⅞	1- 1
A-2905	Single or Push-Pull	3000- 5000- 7000- 8000- 10000 c.t.	.17 to 32	70	24	3⅛	2¼	3 11/16	2⅛	1-10
A-2998	Single	3500- 5000- 7000-10000	3.2	35	3	1¾	1⅛	2⅛	1⅛	0- 4
A-2999	Single	12000-15000- 18000-25000	3.2	10	3	1¾	1⅛	2⅛	1⅛	0- 4


F

Filter Tapped

Mounting Type "A"

A-3031	Single	3000	3-4	50	5	2	1⅜	2⅜	1¼	0- 6
A-3032	Single	6000	3-4	40	5	2	1⅜	2⅜	1¼	0- 6

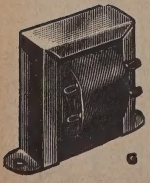
*Primary has 30% and 6% humbucking taps. Secondary to match 3-4 ohm speaker.

Special Type

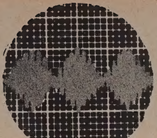
Mounting Type "F"

A-3022	PP 6V6	10000 c.t.	3.2	50▼	10	S P E C I A L				0-10
A-3027	PP6F6, 6V6, etc.	10000 c.t.	‡	45▼	15	2 13/16	2	3¼	1⅞	1- 0
A-3028	PP6L6, etc.	5000 c.t.	‡	70▼	20	3⅛	2 3/16	3 11/16	2	1- 8

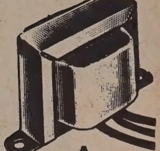
‡ Sec. Impedance 2-4-8-15-250-500 Ohms. ▼ Pri. M.A. Per Side.


G

MERIT
Since 1924
BETTER
ELECTRONIC
COMPONENTS



AUDIO
LINE TRANSFORMERS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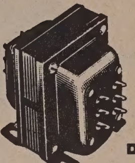
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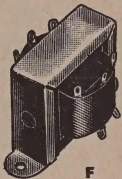
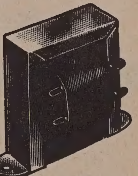
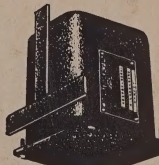

F


G


JO

Constant Voltage Line Transformers

Merit No.	Ohms Impedance		Watts	Dimensions—Inches				Mtg. Type	Shpg. Wt. Lbs.-Oz.
	Pri.	Sec.		Mtg. Ctrs.	H	W	D		
A-2800	1000-1250-1667-2500-5000	3.2, 8	1– 5	2	1⅜	2⅜	1½	F	0– 7
A-2801	500-555-625-715-833	3.2, 8	6–10	2⅜	1⅝	2¹³⁄₁₆	1½	F	0–10
A-2802	333-357-384-417-455	8, 16	11–15	2¹³⁄₁₆	2	3¼	1⅝	F	1– 0
A-2803	250-263-278-294-312	8, 16	16–20	2⅜	2¼	2¹³⁄₁₆	2	G	1– 4
A-2804	200-208-217-227-238	8, 16	21–25	2¹³⁄₁₆	2⅝	3⅛	1⅞	G	1– 6
A-3013	1000-2000-4000-8000-16000	3.5, 7	5	2	1⁵⁄₁₆	2⅜	1½	F	0– 7
A-3014	500-1000-2000-4000-8000	4-8-16	10	2⅜	1⅝	2¹³⁄₁₆	1½	F	0– 7
A-3015	275-550-1100-2200-4400-8800	4-8-16	18	2⅜	2¼	2⅞	1⅞	G	1– 0
A-3016	210-420-840-1680-3360-6720	4-8-16	24	3⅛	2¼	3¹¹⁄₁₆	2⅛	F	1–10
*A-2805	125-250-500-1000-2000	3.5,-7	5	2	1⁵⁄₁₆	2⅜	1½	F	0– 7
*A-2806	62.5-125-250-500-1000	4-8-16	10	2⅜	1⅝	2¹³⁄₁₆	1½	F	0– 7
*A-2807	34.5-68.75-137.5-275-, 550-1100	4-8-16	18	2⅜	2¼	2⅞	1⅞	G	1– 0
*A-2808	26-52-104-208-416-832	4-8-16	24	2⅜	2¼	2⅞	1⅞	F	1–10

*Used to match speaker to 25V constant voltage line.

Universal Line Transformers

A-2810	500-1000-1500-2000	3.2,4.8,6,8	10	2⅜	1⅝	2¹³⁄₁₆	1½	F	0–10
A-2811	500-1000-1500-2000	3.2,4.8,6,8	18	2⅜	2¼	2¹³⁄₁₆	1⅝	G	1– 0
A-2812	500-1000-1500-2000	3.2,4.8,6,8	25	2¹³⁄₁₆	2⅝	3⅛	1⅞	G	1– 6
A-2813	2500-5000-7000-10000	4.8, 6, 8	5	2	1⅜	2⅜	1⅝	F	0– 8
A-2814	31-62-125-250	4.8, 6, 8	20	2⅜	2¼	2¹³⁄₁₆	1⅞	G	1– 4
A-2906	500-1000-1500-2000	3.2, 6–8	10	2⅜	1⅝	2¹³⁄₁₆	1½	F	0–10
A-2907	500-1000-1500-2000	3.2, 6–8	18	2⅜	2¼	2⅞	1½	G	1– 0
A-2908	500-1000-1500-2000	6–8, 16	24	3⅛	2¼	3¹¹⁄₁₆	2⅛	F	1– 8
A-2909	45-50	3.2, 6–8	8	2	1¹⁵⁄₁₆	2⅜	1½	G	0–10
A-3005	500	3.2, 6–8	5	2	1⅜	2⅜	1¼	A	0– 6
A-4040	250-500-1000-1500-2000	4–8–16	8	2¾x3⅞	4¼	4⁷⁄₁₆	3⁹⁄₁₆	JO	4– 0
A-4041	250-500-1000-1500-2000	4–8–16	12	2¾x3⅞	4¼	4⁷⁄₁₆	3⁹⁄₁₆	JO	4– 4
A-4042	250-500-1000-1500-2000	4–8–16	25	2¾x3⅞	4¼	4⁷⁄₁₆	3⁹⁄₁₆	JO	5– 6

Tube to Line Transformers

A-2925	20000 c.t.	500-125	10	2¹³⁄₁₆	2	3¼	1⅝	A	1– 0
†A-3023	5000-10000-20000 c.t.	500-333-200-125-50	15	2¹³⁄₁₆	2	3¼	1¾	F	1– 0
†A-3024	5000-10000-20000 c.t.	500-333-200-125-50	50	2x1¹¹⁄₁₆	3³⁄₁₆	2⅝	2¾	DL	2– 8

†20000 Ohm Center Tapped.

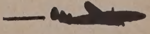
ATTENTION!

THE MERIT LINE INCLUDES FLYBACKS, YOKES, WIDTH AND LINEARITY COILS, VERTICAL OUTPUTS, VERTICAL BLOCKING OSCILLATORS, PEAKING COILS AND MANY OTHER TV AND RADIO COMPONENTS NOT LISTED IN THIS EDITION OF THE RADIO-ELECTRONIC MASTER.

THE MERIT LINE IS AVAILABLE AT LEADING DISTRIBUTORS. CONTACT YOUR FAVORITE DISTRIBUTOR FOR ANY INFORMATION ABOUT MERIT PRODUCTS NOT LISTED HEREIN.

Quality In Production—

-Speed in Delivery



"COMPARE IT WITH MERIT!"

Merit ***COIL AND TRANSFORMER CORPORATION***

HOLLYWOOD, FLORIDA

MICROTRAN company, inc., VALLEY STREAM, N. Y.

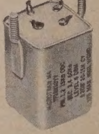
MINIATURE AUDIO TRANSFORMERS

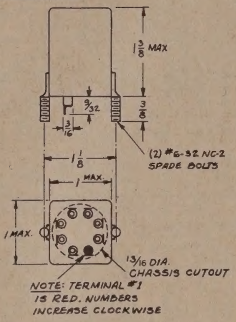
The ruggedized military type units shown on this and the accompanying page were developed to meet the demands of a growing miniaturization program. The various types shown are available from stock for immediate delivery. For use in miniaturized vacuum tube and Transistor circuitry.

MIL CASE M-AG

Grey enamel Finish. Weight 2⅜ oz. Supplied with compression sealed ceramic terminals in MIL-T-27.AG case.

To order add -AG to Part Number. i.e. M2-AG, MT3-AG.




1 3/8 MAX
9/32
3/8
3/16
1 1/8
1 MAX.
(2) #6-32 NC-2 SPADE BOLTS
1 MAX.
13/16 DIA. CHASSIS CUTOUT
NOTE: TERMINAL #1 IS RED. NUMBERS INCREASE CLOCKWISE

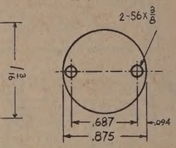
MIL DESIGNATION TF4RX—YY

See Family Designation in Chart

ALUMINUM CASED M-A

Supplied with 2-56 Screws. Weight 1.25 oz.

To order add -A to Part Number. i.e. MT3-A, M1-A.



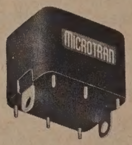
MIL DESIGNATION TF6RX—ZZ

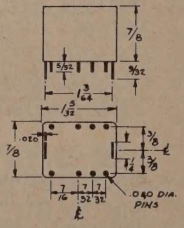
See Family Designation in Chart

MOLDED M-M

Designed for plug-in printed circuit applications. Cast Epoxy resin provides highest resistance to extremes of ambient. Weight 1¾ oz.

To order add -M to Part Number. i.e. M2-M, MT3-M





MIL DESIGNATION TF5RX—ZZ

See Family Designation in Chart

MINIATURE AUDIO TRANSFORMERS ("M" SERIES)

Part No.*	Application	Primary Impedance	Secondary Impedance	Pri. D.C. Unbalance Ma.	Operating Level DBM	Frequency Response ±2 db.	Family
M1-(*)	Mike or line to 1 grid	50/250/600 C.T.	50,000	0	5	20,20,000	10
M2-(*)	Mike or line to 2 grids	50/250/600 C.T.	50,000 C.T.	0	5	20,20,000	10
M3-(*)	Dynamic mike to 1 grid	7.5/30	50,000	0	5	20,20,000	10
M4-(*)	Single plate to 1 grid	15,000	60,000	0	6	20-15,000	10
M5-(*)	Single plate to 1 grid	15,000	60,000	4	14	200-20,000	15
M6-(*)	Single plate to 2 grids	15,000	95,000 C.T.	0	5	20-15,000	10
M7-(*)	Single plate to 2 grids	15,000	95,000 C.T.	4	11	200-20,000	15
M8-(*)	Single plate to line	15,000	50/250/600 C.T.	0	8	20-20,000	16
M9-(*)	Single plate to line	15,000	50/250/600 C.T.	4	21	150-20,000	13
M10-(*)	Push pull plates to line	30,000 P.-P.	50/250/600 C.T.	0	8	30-50,000	16
M11-(*)	Crystal mike to line	50,000	50/250/600 C.T.	0	5	20-20,000	16
M12-(*)	Mixing and matching	50/250 C.T.	50/250/600 C.T.	0	8	20-20,000	16
M13-(*)	Reactor	300 hy. 0 d.c.	50 hy. @ 3 ma.			6000 Ω D.C.R.	20
M14-(*)	50: 1 mike to grid	200	½ Megohm	0	9	80-3,000	10
M15-(*)	10: 1 plate to grid	10,000	1 Megohm	0	11	100-2,500	10

*Add either -AG, -H, -M, -P, -A, or -FB to part No. to designate construction. See photos.

MICROTRAN company, inc., VALLEY STREAM, N. Y.

The ruggedized military type units shown on this and the accompanying page were developed to meet the demands of a growing miniaturization program. The various types shown are available from stock for immediate delivery. For use in miniaturized vacuum tube and Transistor circuitry.

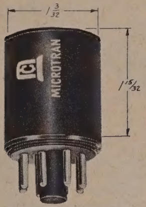
MINIATURE TRANSISTOR TRANSFORMERS

OCTAL PLUG-IN
M-P

Sealed Plastic Housing

Weight 2 oz.

To order add -P to Part No. i.e. MT3-P, M1-P



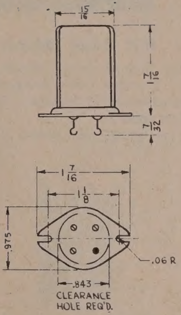
MIL DESIGNATION TF6RX—YY

See Family Designation in Chart

HERMETIC M-H

Grey Enamel Finish. Weight 1¼ oz. High Compression Glass Terminals. .120 holes instead of slots, available on special order.

To order add -H at Part Number. i.e. M2-H, MT3-H.



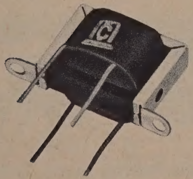
MIL DESIGNATION TF4RX—YY

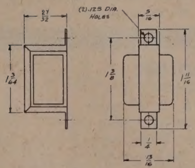
See Family Designation in Chart

OPEN FRAME WITH CHANNEL
M-FB

Weight 1.13 oz.

To order add -FB to Part No. i.e. MT3-FB, M1-FB





Available with plug-in tab channel, 1 1/32 mounting centers as Type M-FPB. On special order only.

Available without channel as type M-F 3/4 x 13/16. Wt. 1 oz. On special order only.

MIL DESIGNATION TF6RX—ZZ

See Family Designation in Chart

MINIATURE TRANSISTOR TRANSFORMERS ("MT" SERIES)

Part No.*	Application	Primary Impedance	Secondary Impedance	Pri. D.C. Unbalance Ma.	Operating Level DBM	Frequency Response ±2 db.	Family
MT1-(*)	Line to Base	600	600	10	23	200-15,000	17
MT2-(*)	Coll. to P.P. Base 2N57	100	10 C.T./40 C.T.	100	27	200-20,000	17
MT3-(*)	Collector to Base or line	50,000	600	3	20	300-15,000	13
MT5-(*)	Collector to speaker	50,000	6	3	20	300-15,000	13
MT6-(*)	Collector to P.P. Base	100,000	1200 C.T.	1.4	17	200-15,000	13
MT7-(*)	Collector to P.P. Base	25,000	1200 C.T.	3	22	200-15,000	13
MT8-(*)	P.P. Coll. to P.P. Base	50,000 C.T.	1200 C.T.	3	20	300-15,000	13
MT9-(*)	Line to P.P. Base	600 C.T.	1200 C.T.	4	23	200-15,000	17
MT10-(*)	Collector to Base	25,000	600	3	22	200-15,000	13
MT11-(*)	P.P. Coll. to P.P. Base	4,000 C.T.	600 C.T.	3	32	200-15,000	13
MT12-(*)	Output Coll. to speaker	2,000	3.4	10	32	200-15,000	13
MT13-(*)	P.P. Coll. to speaker	4,000 C.T.	3.4	3	32	200-15,000	13
MT14-(*)	Coll. to Spkr. 2N179	400	10	50	25	200-20,000	13
MT15-(*)	P.P. Servo Output 2N57	500 C.T.	210	30	27	300-20,000	17
MT18-(*)	P.P. Coll. to P.P. Base	25,000 C.T.	1,200 C.T.	6	22	200-15,000	13
MT20-(*)	P.P. Coll. to P.P. Base	50,000 C.T.	1200/300 Split	3	20	300-15,000	13
MT21-(*)	P.P. Coll. to P.P. Base	4,000 C.T.	600/150 Split	3	32	200-15,000	13
MT22-(*)	Line to P.P. Base	600/150 Split	1,200 C.T.	4	23	200-15,000	17
MT23-(*)	P.P. Coll. to Servo	250 C.T.	1000	10	30	300-15,000	17
MT24-(*)	Coll. to P.P. Base	2,500	600 C.T.	10	32	200-15,000	17
MT25-(*)	P.P. Coll. to P.P. Base	7,500 C.T.	600 C.T.	8	32	200-15,000	12
MT26-(*)	Line to P.P. Base	600 C.T.	600 C.T.	20	23	200-15,000	17

*Add either -AG, -H, -M, -P, -A, or -FB to part No. to designate construction. See photos.

MICROTRAN company, inc., VALLEY STREAM, N. Y.

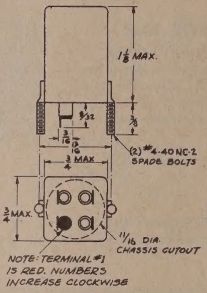
SUB MINIATURE TRANSFORMERS

The units shown on this page are suitable for rigid sub-miniaturization applications where the highest resistance to extremes of ambients must still be maintained. Available from stock for immediate delivery.

MIL CASE SM-AF

Grey Enamel Finish. Weight 1⅛ oz. Supplied with compression sealed ceramic terminals in MIL-T-27 AF case.

To order add -AF to Part Number. i.e. SM2-AF, SMT3-AF.


1 1/8 MAX.
9/32
3/8
3/16
13/16
3/4 MAX
(2) #4-40 NC-2 SPADE BOLTS
3/4 MAX.
11/16 DIA. CHASSIS CUTOUT
NOTE: TERMINAL #1 IS RED. NUMBERS INCREASE CLOCKWISE

MIL DESIGNATION TF4RX—YY

See Family Designation in Chart

SUB-MINIATURE AUDIO TRANSFORMERS ("SM" SERIES)

Part No.	Application	Primary Impedance	Secondary Impedance	Pri. D.C. Unbalance Ma.	Operating Level DBM	Freq. Response ±2 db.	Family
SM1-(*)	Input	200/50	250,000/62,500	0	6	80-10,000	10
SM2-(*)	Interstage 3:1	10,000	90,000	0	8	100-10,000	10
SM3-(*)	Plate to line	10,000	200	3	21	150-10,000	13
SM4-(*)	Output	30,000	50	1	21	150-10,000	13
SM5-(*)	Reactor 50 HY at 1 MIL. D.C.	3,000 ohms D.C. Res.					20
SM6-(*)	Output	100,000	60	0.5	21	150-10,000	13

SUB-MINIATURE TRANSISTOR TRANSFORMERS ("SMT" SERIES)

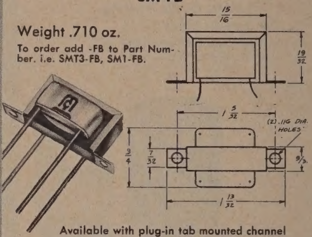
Part No.	Application	Primary Impedance	Secondary Impedance	Pri. D.C. Unbalance Ma.	Operating Level DBM	Freq. Response ±2 db.	Family
SMT1-(*)	Line to Base	600	600	9	23	200-15,000	17
SMT3-(*)	Collector to Base or line	50,000	600	1	20	300-15,000	13
•SMT4-(*)	P.P. Coll. to P.P. Base	50,000 C.T.	600 C.T.	2	20	200-15,000	13
SMT5-(*)	Coll. to speaker	50,000	6	1	20	300-15,000	13
SMT7-(*)	Coll. to P.P. Base	25,000	1,200 C.T.	1.5	20	200-15,000	13
•SMT8-(*)	P.P. Coll. to P.P. Base	50,000 C.T.	1,200 C.T.	2	20	200-15,000	13
•SMT9-(*)	Line to P.P. Base	600 C.T.	1,200 C.T.	18	23	200-15,000	17
SMT10-(*)	Collector to Base	25,000	600	2	20	200-15,000	13
SMT12-(*)	Output coll. to spkr.	2,000	3.4	5	30	200-15,000	13
SMT13-(*)	Output P.P. collector to spkr.	4,000 C.T.	3.4	5	30	200-15,000	13
SMT16-(*)	Coll. to P.P. Base	10,000	1,500 C.T.	1	23	200-15,000	13
•SMT17-(*)	P.P. Coll. to P.P. Base	10,000 C.T.	200 C.T.	6	20	200-15,000	13
•SMT18-(*)	P.P. Coll. to P.P. Base	25,000 C.T.	1,200 C.T.	3	20	200-15,000	13
SMT19-(*)	Coll. to P.P. Base	2,500	2,500 C.T.	2.5	26	200-15,000	13
•SMT26-(*)	Line to Base	600 C.T.	600 C.T.	18	23	200-15,000	17

*Add either -AF, -H, -M, or -FB to Part No. to designate construction. See photos. •These items not available in -AF case.

OPEN FRAME WITH CHANNEL
SM-FB

Weight .710 oz.

To order add -FB to Part Number. i.e. SMT3-FB, SM1-FB.



Available with plug-in tab mounted channel as type SM-FPB 29/32 mtg. centers on special order only.

Available without channel as type SM-F 9/16 x 7/8 x 3/4. Wt. .67 oz. on special order only.

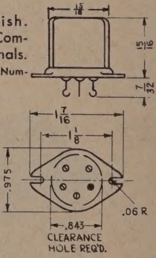
MIL DESIGNATION TF6RX—ZZ

See Family Designation in Chart

HERMETIC
SM-H

Grey Enamel Finish. Weight 1 oz. High Compression Glass Terminals.

To order add -H to Part Number. i.e. SM2-H, SMT3-H



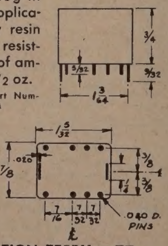
MIL DESIGNATION TF4RX—YY

See Family Designation in Chart

MOLDED
SM-M

Designed for plug-in printed circuit applications. Cast Epoxy resin provides highest resistance to extremes of ambient. Weight 1 1/2 oz.

To order add -M to Part Number. i.e. SM5-M, SMT5-M



MIL DESIGNATION TF5RX—ZZ

See Family Designation in Chart

See Pages 1412-1413 for Prices. Also see EEM pages 1414-1416.

MICROTRAN company, inc., VALLEY STREAM, N. Y.

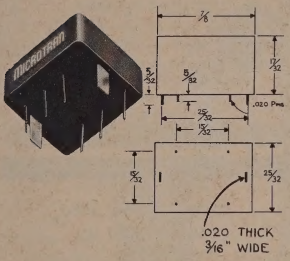
MICRO MINIATURE TRANSFORMERS

The units shown on this page are suitable for rigid sub-miniaturization applications where the highest resistance to extremes of ambients must still be maintained. Available from stock for immediate delivery.

MOLDED MM-M

Designed for plug-in printed circuit applications. Cast Epoxy resin provides highest resistance to extremes of ambient. Weight ½ oz.

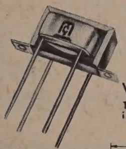
To order add -M to Part Number. i.e. MM2-M, MMT2-M.



MIL DESIGNATION TF5RX—ZZ

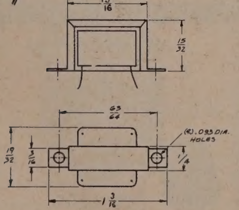
See Family Designation in Chart

OPEN FRAME WITH CHANNEL
MM-FB



Weight .415 oz.

To order add -FB to Part No. i.e. MMT3-FB, MM1-FB



Available with plug-in tab mounted channel as type MM-FPB, 25/32 mounting centers. On special order only. Available without channel as type MM-F ¾ x 7/16 x 19/32. Wt. .38 oz. On special order only.

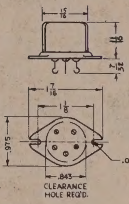
MIL DESIGNATION TF6RX—ZZ

See Family Designation in Chart

HERMETIC MM-H

Grey Enamel Finish. High Compression Glass Terminals. Weight ¾ oz.

To order add -H to Part Number. i.e. MM2-H, MMT3-H.



MIL DESIGNATION TF4RX—YY

See Family Designation in Chart

MICRO-MINIATURE AUDIO TRANSFORMERS ("MM" SERIES)

Part No.	Application	Primary Impedance	Secondary Impedance	Pri. DC. Unbalance Ma.	Operating Level DBM	Freq. Response ±2 db.	Family
MM1-(*)	Input	200/50	250,000/62,500	0	4	200-10,000	10
MM2-(*)	Interstage 3:1	10,000	90,000	0	4	150-10,000	10
MM3-(*)	Plate to line	10,000	200	3	20	150-10,000	13
MM4-(*)	Output	30,000	50	1	20	150-10,000	13
MM5-(*)	Reactor 50 HY at 1 MIL. D.C.	4,700 ohms D.C. Res.					20
MM6-(*)	Output	100,000	60	0.5	20	250-10,000	13
MM7-(*)	Output	30,000	1,200	0.5	20	200-10,000	13

MICRO-MINIATURE TRANSISTOR SERIES ("MMT" SERIES)

Part No.	Application	Primary Impedance	Secondary Impedance	Pri. D.C. Unbalance Ma.	Operating Level DBM	Freq. Response ±2 db.	Family
MMT1-(*)	Line to Base	600	600	8	22	200-15,000	17
MMT3-(*)	Coll.to Base or line	50,000	600	0.7	20	200-15,000	13
MMT4-(*)	P.P. coll. to P.P. Base	50,000 C.T.	600 C.T.	1.4	20	200-15,000	13
MMT5-(*)	Collector to speaker	50,000	6	1	20	200-15,000	13
MMT7-(*)	Coll. to P.P. Base	25,000	1,200 C.T.	1	20	200-15,000	13
MMT8-(*)	P.P. coll. to P.P. Base	50,000 C.T.	1,200 C.T.	1.4	20	200-15,000	13
MMT9-(*)	Line to P.P. Base	600 C.T.	1,200 C.T.	16	22	200-15,000	17
MMT10-(*)	Collector to Base	25,000	600	1	20	200-15,000	13
MMT11-(*)	P.P. col. to P.P. Base or line	4,000 C.T.	600 C.T.	5	28	200-15,000	12
MMT12-(*)	Coll. to Spkr.	2,000	3.4	5	28	200-15,000	13
MMT13-(*)	Output P.P. coll. to spkr.	4,000 C.T.	3.4	5	28	200-15,000	13
MMT16-(*)	Coll. to P.P. Base	10,000	1,500 C.T.	1	20	200-15,000	13
MMT17-(*)	P.P. Coll. to P.P. Base	10,000 C.T.	200 C.T.	6	20	200-15,000	13
MMT18-(*)	P.P. Coll. to P.P. Base	25,000 C.T.	1,200 C.T.	2	20	200-15,000	13
MMT19-(*)	Coll. to P.P. Base	2,500	2,500 C.T.	2	23	200-15,000	13
MMT21-(*)	P.P. Coll. to P.P. Base	4,000 C.T.	600/150 split	5	28	200-15,000	13
MMT25-(*)	P.P. Coll. to P.P. Base	7,500 C.T.	600 C.T.	4	22	200-15,000	13
MMT26-(*)	Line to Base	600 C.T.	600 C.T.	16	22	200-15,000	17
MMT27-(*)	P.P. Coll. to P.P. Base	25,000 C.T.	600 C.T.	2	20	200-15,000	13
MMT28-(*)	P.P. Coll. to P.P. Base	10,000 C.T.	1,500 C.T.	2	20	200-15,000	13

*Add either -H, -M, or -FB to Part No. to designate construction. See Photos.

MICROTRAN company, inc., VALLEY STREAM, N. Y.

VERI & ULTRA MINIATURE TRANSFORMERS

On this page are listed units designed for the extremes in miniaturization. The 4 inch #27 color coded leads supplied are suitable for dip soldering in printed circuits. Thorough baking and resin impregnation assure reliable life. Insulating materials used are compatible for later epoxy potting of complete assemblies. Highest efficiency—space factor obtained by use of high permeability Nickel-Alloy Cores; Nylon Bobbins, Formvar Wire. Available from stock.

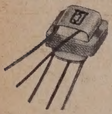
OPEN FRAME VM-F

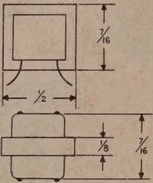
VERI-MINIATURE SIZE

Weight .16 oz.

To order add -F to Part Number. i.e. VM2-F

Available on special order only.





MIL DESIGNATION TF6RX—ZZ

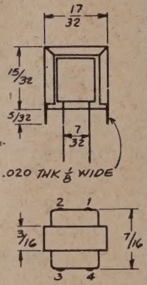
See Family Designation in Chart

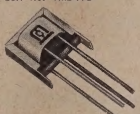
PLUG-IN TAB MOUNTED CHANNEL VM-FPB

VERI-MINIATURE SIZE

Weight .2 oz.

To order add -FPB to Part Number. i.e. VM2-FPB





MIL DESIGNATION TF6RX—ZZ

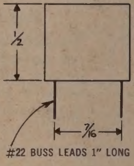
See Family Designation in Chart

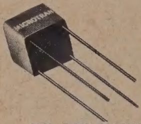
MOLDED VM-M

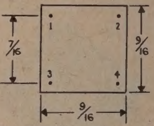
VERI-MINIATURE SIZE

Designed for plug-in printed circuit applications. Cast Epoxy resin provides highest resistance to extremes of ambient. Weight 1/4 oz.

To order add -M to Part Number. i.e. VM2-M, VM9-M.







MIL DESIGNATION TF5RX—ZZ

See Family Designation in Chart

VERI-MINIATURE TRANSISTOR TRANSFORMERS

("VM" SERIES) Frequency Response ±2 db. 200 to 10,000 Cycles

Part No.	Application	Primary Impedance	Secondary Impedance	Pri. D.C.R.	Sec. D.C.R.	Level MW.	Family
VM1-(*)	Input	50	600 (1.5ma)	6	70	15	21
VM2-(*)	Input or Interstage	200,000	600 (1.0ma)	2650	80	5	21
VM3-(*)	Interstage	25,000	600 (1ma)	675	45	5	21
VM4-(*)	Input or Interstage	200,000	1200 (.72ma)	2650	160	5	21
VM-5(*)	Interstage	50,000	600 (1.0ma)	1500	60	5	21
VM6-(*)	Interstage	100,000	1,200 C.T. (.72ma)	2K	140	5	21
VM7-(*)	Output	500 (3.5ma)	3.4	60	.5	15	21
VM8-(*)	Output	1250 (2.0ma)	3.4	115	.5	15	21
VM9-(*)	Output	1250 (2.0ma)	50	115	6.5	15	21
VM10-(*)	Interstage	2,500 (1.5ma)	2,500 C.T.	225	225	3	21
VM11-(*)	Choke	20 hy. (0ma)	12 hy. (.5ma)	1000	—	—	21
VM12-(*)	Interstage	20,000	1,000 (.75ma)	650	100	5	21
VM13-(*)	Interstage	20,000	1,000 C.T. (.75ma)	650	100	5	21
VM14-(*)	Interstage	600 C.T.	600 C.T.	7ma	5	65	10

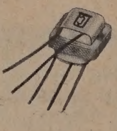
*Add either -F, or -M, or -FPB to Part No. to designate construction. See Photos.

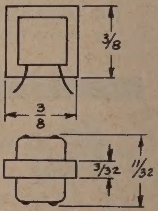
OPEN FRAME UM-F

ULTRA MINIATURE SIZE

Weight .08 oz.

To order add -F to Part Number i.e. UM-22-F





MIL DESIGNATION TF6RX—ZZ

See Family Designation in Chart

ULTRA-MINIATURE TRANSISTOR TRANSFORMERS

Frequency Response ± 2db 300 to 10,000 Cycles, Measured at level stated for 300 Cy.

Part No.	Application	Primary Impedance	Secondary Impedance	Unbal. Pri. DC Ma	Pri. D.C.R.	Sec. D.C.R.	Level @ 300 cy.	Level @ 1 kc	Family
UM21-(*)	Input	100,000	1,000	0	1900	135	5mw	70mw	16
UM22-(*)	Driver	20,000	1,000	0.5	1100	100	5mw	300mw	13
UM23-(*)	Driver	20,000	1,200 C.T.	0.5	1100	110	5mw	300mw	13
UM24-(*)	Output	1,000	50	3	65	10	5mw	500mw	17
UM25-(*)	Output	400	50	3	35	5	15mw	500mw	17
UM26-(*)	Output	400	11	3	35	1.5	15mw	500mw	17
UM27-(*)	Output	400 C.T.	11	6	35	1.5	15mw	500mw	17
UM28-(*)	Choke	10 hy (0 dc)	8hy (0.5ma)		650				20
UM29-(*)	Interstage	600 C.T.	600 C.T.	7	45	60	5mw	400mw	21
UM30-(*)	Choke	1.5 hy (0 dc)		0.7 (2ma)	100				20
UM31-(*)	Interstage	10,000 C.T.	1,200 C.T.	2	850	120	5mw	500mw	21
UM32-(*)	Output	1,500 C.T.	600	5	135	65	5mw	500mw	17
UM33-(*)	Output	1,000 C.T.	600	6	80	65	5mw	500mw	17
UM34-(*)	Driver	10,000 C.T.	600 C.T.	2	850	40	5mw	500mw	13

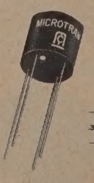
Power levels shown are for 7½% max. distortion. *Add either -F or -M to Part No. See Photos.

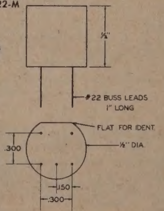
MOLDED UM-M

ULTRA MINIATURE SIZE

Weight .14 oz.

To order add -M to Part Number i.e. UM-22-M





MIL DESIGNATION TF5RX—ZZ

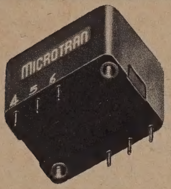
See Family Designation in Chart

See Pages 1412-1413 for Prices. Also see EEM pages 1414-1416.

MICROTRAN company, inc., VALLEY STREAM, N. Y.

Designed specifically for Transistor, Servo and Audio applications. All units shown are of MIL-T-27A construction and are available from stock. On special order may be obtained in alternate constructions such as Epoxy molded, or open frame. Also available with modified electrical specifications.

HERMETICALLY SEALED TRANSISTOR DRIVER OUTPUT AND POWER SUPPLY TRANSFORMERS

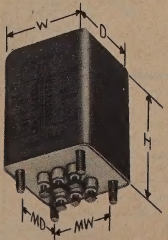


EPOXY MOLDED
(On Special Order Only)
Mil Designation: TF5RX†† ZZ
Inserts or studs or tabs for mounting, leads terminated with .040 pins for printed circuit applications.

Mil Designation: TF4RX†† YY

HERMETIC
M-H
Grey Enamel Finish. Weight 1¼ oz. High Compression Glass Terminals. .120 holes instead of slots, available on special order.

SEE PAGE 1403 FOR DIMENSIONS



HERMETICALLY SEALED
PER MIL-T-27A Fig. A

Mil Designation: TF4RX†† xx

SEE PAGE 1410 FOR MIL CASE DIMENSIONS

TRANSISTOR DRIVER TRANSFORMERS

Mil Designation: TF4RX†† xx

Part Number	Application	Pri. Imp.	Sec. Imp.	Pri. D.C. Unbal. Ma.	Level Watts	Frequency Response ±2 Db.	Fig. A Mil Case xx	†† Family
M8002*	Collector to P.P. Base	560	400 C.T.	18	.15	200-20,000	AJ	17
M8003*	Collector to P.P. Base	625 C.T.	100 C.T.	20	1.5	200-20,000	AJ	17
M8004	Collector to P.P. Base	5,400	600 C.T.	15	.075	200-15,000	AH	13
M8005	Collector to P.P. Base	7,000	320 C.T.	7	.040	70-15,000	AH	13
M8006	Collector to P.P. Base	10,000	6,500 C.T.	.75	.005	200-15,000	AF Mod.	13
M8008	P.P. Output to Spkr.	25	3-4	600	3	200-20,000	AJ	17
M8007*	P.P. Auto Transformer	30 C.T.	3-4	200	2	100-20,000	AJ	17
M8009	P.P. Output to Spkr.	48 C.T.	3.2/8	50	.5	200-20,000	AJ	17
M8010	P.P. Col. to Servo	120 C.T.	1,000	40	6	300-15,000	AJ	17
M8011	P.P. Output to Spkr.	125 C.T.	3-4	20	1.5	200-15,000	AH	17
M8012*	P.P. Col. to Servo	140 C.T.	500	50	6	300-15,000	AJ	17
M8013*	P.P. Output to Spkr.	250 C.T.	3-4	20	.4	70-15,000	AH	17
M8014	P.P. Output to Spkr.	400 C.T.	11	2	.25	300-15,000	AF Mod.	17
M8015	P.P. Col. to Servo	1,600 C.T.	800	5	2.5	150-20,000	AJ	17
M8016	P.P. Output to Spkr.	2,550 C.T.	12	4	.10	300-15,000	AF Mod.	17

*Bi-Filar wound to minimize switching transients.

POWER SUPPLY TRANSFORMERS

Designed for Silicon Rectifier Circuitry Primary 105/115/125 Volts **Mil Designation: TF4RX01 xx**

Part Number	Frequency Cycles	Secondary AC Volts	Secondary RMS Amperes	Rectifier Circuit C.T. Full Wave D.C. Volts**	Rectifier Circuit F.W. Bridge D.C. Volts**	Fig A Mil Case xx
M8018	380-1600	18.5 C.T.	1	7	14	EA
M8019	380-1600	18.5 C.T.	3	7	14	FA
M8020	380-1600	35 C.T.	3	14.5	29	GA
M8021	380-1600	70 C.T.	1	30	60	FA
M8022	50/60	18.5 C.T.	3	7	14	JB
M8023	50/60	35 C.T.	3	14.5	29	KA
M8024	50/60	70 C.T.	1	30	60	JA
M8039	380-1600	12.6 C.T. 12.6	.8 .8	10.5	21	AJ
M8041†	380-1600	50v. C.T.	.25	21.5	43	AH
M8042	50/60	6.3 C.T.	.6	1.9	3.8	AJ
M8043	50/60	6.3 C.T.	2	1.9	3.8	FB
M8044	50/60	12.6 C.T. 12.6	2 2	10.5	21	JB
M8045	50/60	28 C.T.	.6	11.7	23.4	FA
M8046	50/60	49 C.T.	2.5	21	42	LA

†Primary 115 volts only
Output voltages based on approximately 1 volt drop per rectifier.
**DC Output voltages stated for resistive or inductive rectifier loads.

400 CYCLE ISOLATION TRANSFORMERS

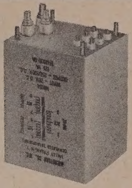
Mil Designation TF4RX01 xx — Electrostatic Shielding

Part No.	Input Voltage	Output Voltage	Current RMS Amps	V.A. Rating	Case Designation xx
M8047	115	115	.017	2	YY (Fig. M-H)
M8048	115	115	.35	40	EB (Fig. A)
M8049	115	115	1.3	150	GA (Fig. A)

MICROTRAN company, inc., VALLEY STREAM, N. Y.

D. C. TO D. C. CONVERTER TRANSFORMERS

Permits conversion of low voltage direct current to high voltage for operating mobile and military electronic equipment. These miniaturized high efficiency transformers used in transistor switching circuits provide greatly improved reliability, efficiency, ruggedness, over vibrator and rotary power converters.



All transformers shown are hermetically sealed and constructed in accordance with MIL-T-27A Grade 4, Class R, 10,000 hour minimum life. Unique construction eliminates the difficulties usually experienced with high voltage random wound torroidal transformers and mechanical fragility of ferrite cores. On special order obtainable with modified electrical or mechanical specifications. Available from franchised stocking distributors.

MIL DESIGNATION TF4RX09xx

See Case Designation in Chart

D. C. TO D. C. CONVERTER TRANSFORMERS

Part Number	Nominal D.C. Input Volts	Total V.A. Output*	Typical** Transistors	D.C. Output F.W. Bridge Volts	D.C. Output F.W. Bridge Ma.	D.C. Output C.T. Full Wave Volts	D.C. Output C.T. Full Wave Ma.	Size D	Size W	Size H	Mounting Centers MD	Mounting Centers MW	MIL Case xx
M8034	28	125	Delco 2N174	500	250	250	420	2¾	2⅜	3¹³⁄₁₆	2⅛	1¾	GA
M8035	13.6	125	Delco 2N442	500	250	250	420	2¾	2⅜	3¹³⁄₁₆	2⅛	1¾	GA
M8036	13.6	40	Delco 2N442	450	90	225	155	2⁵⁄₁₆	2¹⁄₁₆	3⅛	1¹¹⁄₁₆	1⁷⁄₁₆	FA

*Full wave and C.T. loads may be simultaneously drawn. However, for continuous duty operation, Total V.A. output shown should not be exceeded.

**Typical transistors suggested are for reference only, as user must verify that maximum transistor ratings will not be exceeded for the particular application.

Overall DC to DC full load efficiencies up to 80% when used in circuit similar to Fig. 1: AC output voltage to input of rectifier is a nominal 800 cycle square wave permitting ease of filtering.

TYPICAL DC-DC CONVERTER CIRCUIT

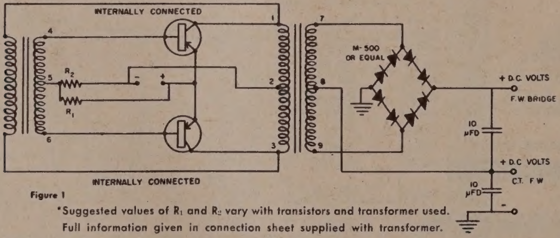


Figure 1

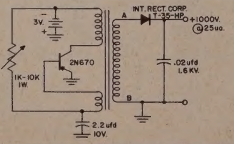
*Suggested values of R₁ and R₂ vary with transistors and transformer used. Full information given in connection sheet supplied with transformer.

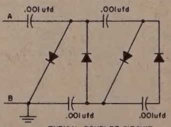
D. C. TO D. C. CONVERTER TRANSFORMERS

Transistor Blocking Oscillator Type 400 cycles approximate repetition rate

Part No.	Turns Ratio H.V.	Turns Ratio Collector	Turns Ratio Feedback	Typical Input Volts D.C.	Typical Input Ma. D.C.	Typical Output* Volts D.C.	Typical Output* μa D.C.	Dimensions L	Dimensions W	Dimensions H	Mounting Center	Fig.
M8050	600:	12:	1	3	20	1000	25	1¹¹⁄₁₆	¹³⁄₁₆	²⁷⁄₃₂	1⅜	M-FB†
M8051	600:	12:	1	3	20	1000	25	1	1	1⅜	1⅛	M-AG†

*(Output when transformer is used in blocking oscillator circuit with single capacitor input rectifier.) MIL Family 09.





TYPICAL DOUBLER CIRCUIT

MICROTRAN company, inc., VALLEY STREAM, N. Y.

Professional quality cased input Transformers for connection to low level chopper, microphone, pick up, tape heads, or lines. All units are magnetically shielded to improve signal to noise ratio.

CHOPPER AND INPUT TRANSFORMERS

CHOPPER TRANSFORMERS

Efficiently transfers 30 to 500 cps. Transducer or Thermocouple signals to instrument amplifiers. Signal level range from .5μV. to .5 volts. Resin impregnated to minimize mechanical vibration noise signal. Low hum pick up assured by 3 mu-metal and 2 copper shields. Accurate center taps and external electrostatic shield connection improve low-level operation.

Part Number	Turn Ratio Full Pri. To Full Sec.	Turn Ratio ½ Pri. To Full Sec.	Ind. of Full Pri. @ .5V. 60 cy.	Imped. of Full Pri. @ .5V. 60 cy.	D.C. Resistance Full Pri.	D.C. Resistance Sec.	Magnetic Shielding	Hght.	Dia.	Wght. Oz.	Fig.	Family
M8025	1:7.7	1:15.4	17.5	6,600	365	4140	90 DB.	$1\frac{25}{32}$	1⅜ D.	4.5	A	09
M8026	1:3.2	1:6.4	60 HY.	22,500	455	3500	90 DB.	$1\frac{25}{32}$	1⅜ D.	4.5	A	09

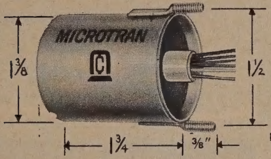


FIGURE A

LOW LEVEL CHOPPER INPUT

6-32 x ⅜" Mounting studs on 1½" centers. Available on special order with Plug-in header and hermetically sealed.

PLUG-IN INPUT TRANSFORMERS

These Broadcast fidelity input transformers are double mu-metal shielded. Plug-in feature permits simple installation.

Part Number	Pri. Imp.	Sec. Imp.	Magnetic Shielding	Level DBM	Frequency Resp. ±2 db.	Height	Width or Diameter	Weight Oz.	Figure	Family
M8027**	250/50 C.T.	50,000	65 DB.	+5	20-20,000	2⅜	1⅛ D.	11	B	10
M8028	170	50,000	65	+5	20-20,000	1¾	1 D.	4	C	10
M8029**	600	50,000	65	+5	20-20,000	$2\frac{11}{16}$	2	16	D	10
M8030*	200/50 C.T.	50,000	65	+5	20-20,000	2⅛	1⅛ D.	6	E	10
M8031	600 C.T./150	50,000	65	+5	30-20,000	2⅛	1⅛ D.	6	E	10
M8032†	250 C.T.	50,000	65	+5	20-20,000	2⅛	1⅛ D.	6	E	10
M8033†	50 C.T.	50,000	65	+5	20-20,000	2⅛	1⅛ D.	6	E	10

*M8030 is designed as a replacement for Ampex No. 1733-1.

†M8032 and M8033 mates with sockets on many RCA amplifiers.

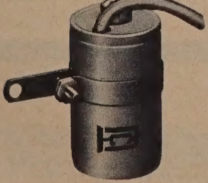


FIGURE C

PHONO INPUT
Auto Transformer

Designed to step up voltage of low level high fidelity phono pickups. Case may be rotated for minimum hum pickup. Supplied with 28" shielded cable terminated with standard phono plug. Standard phono receptacle mounted on can.

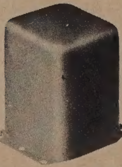


FIGURE D

PHONO INPUT AUTO
Transformer
Drawn Steel Case

Designed to step-up voltage of low level high fidelity phono pickups. Supplied with phono receptacle on case and with 28" shielded cable terminated with standard phono plug.

**ON SPECIAL ORDER ONLY.

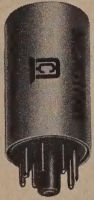


FIGURE E

MIKE INPUT
Plug-in Base

M8030 and M8031 has an 8 pin Octal plug. M8032 and M8033 has a 9 pin Octal Type plug.
Matches the sockets on many commercial Public Address and Tape Recorder amplifiers.
Available on special order with alternate plug-in headers or hermetically sealed.

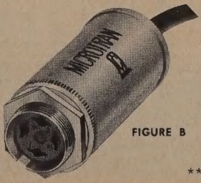


FIGURE B

MIKE INPUT
In-line

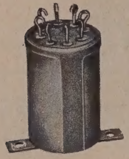
Designed for insertion in mike cable circuit. Supplied with 6" microphone cable. Input receptacle mates with Amphenol 91-PC4F Plug, (not supplied.)

**ON SPECIAL ORDER ONLY.

MICROTRAN company, inc., VALLEY STREAM, N. Y.

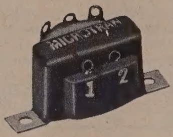
SPECIAL PACKAGING OF STOCK ITEMS

The following types are available on special order, with the same electrical ratings as catalog items on pages 1402 through 1409, but packaged specially to suit customer requirements. These are just some of the various mechanical constructions that may be had on special order.



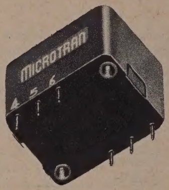
MINIATURE HERMETIC WITH FLAT BRACKET

Round can with flat mounting brackets opposite terminals. Available for the M, SM & MM series.



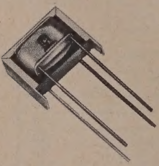
ENCAPSULATED

Epoxy encapsulated or fosterite process, with solder lugs, terminals. Available for the M, SM & MM series.



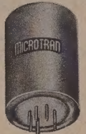
MOLDED WITH SPECIAL MOUNTING

Molded construction with inserts, studs, pins, or mounting bracket. Obtainable with turret terminals and mounting surface opposite terminals. Available for M, SM, & MM series.



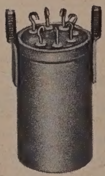
OPEN FRAME WITH TAB MOUNTED CHANNEL

Plug in tab mounted channel for printed circuit application with solid buss tinned leads. Available in M, SM, MM, & VM series.



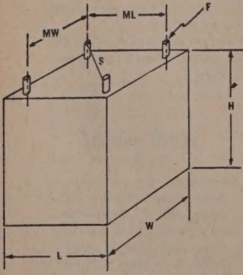
PLUG-IN HERMETIC

Hermetically sealed case with plug-in high compression header. Available only in M & SM series.



MU METAL CASE

Mu can shielding with spade bolt mounting. Obtainable hermetically sealed or potted with leads.



STANDARD MIL-T-27 CASES

Case Symbol	—Case Dimensions— L	W	H	—Mounting Dimensions— ML	MW	F
AF	3/4	3/4	1 1/8	*13/16	—	6—32x3/8
AG	1	1	1 3/8	*1 1/8	—	6—32x3/8
AH	1 5/16	1 5/16	1 3/4	S:1 1/4	—	6—32x3/8
AJ	1 5/8	1 5/8	2 3/8	1 3/16	1 3/16	6—32x3/8
EA	1 15/16	1 13/16	2 3/4	1 3/8	1 1/4	6—32x3/8
EB	1 15/16	1 13/16	2 7/16	1 3/8	1 1/4	6—32x3/8
FA	2 5/16	2 1/16	3 1/8	1 11/16	1 7/16	6—32x3/8
FB	2 5/16	2 1/16	2 1/2	1 11/16	1 7/16	6—32x3/8
GA	2 3/4	2 3/8	2 13/16	2 1/8	1 3/4	6—32x3/8
GB	2 3/4	2 3/8	2 13/16	2 1/8	1 3/4	6—32x3/8
HA	3 1/16	2 5/8	4 1/4	2 19/64	1 55/64	8—32x3/8
HB	3 1/16	2 5/8	3 3/16	2 19/64	1 55/64	8—32x3/8
JA	3 9/16	3 1/16	4 7/8	2 5/8	2 1/8	8—32x3/8
JB	3 9/16	3 1/16	3 7/8	2 5/8	2 1/8	8—32x3/8
KA	3 15/16	3 3/8	5 1/4	3	2 7/16	10—32x1/2
KB	3 15/16	3 3/8	4 5/16	3	2 7/16	10—32x1/2
LA	4 5/16	3 11/16	5 9/16	3 5/16	2 11/16	10—32x1/2
LB	4 5/16	3 11/16	4 1/2	3 5/16	2 11/16	10—32x1/2
MA	4 11/16	4	6	3 11/16	3	1/4—20x5/8
MB	4 11/16	4	4 15/16	3 11/16	3	1/4—20x5/8
NA	5 1/16	4 5/16	6 13/16	4 1/16	3 5/16	1/4—20x5/8
NB	5 1/16	4 5/16	5 1/2	4 1/16	3 5/16	1/4—20x5/8

S: Two studs in a diagonal.

*Not in conformance with MIL-T-27A.

YY—All metal cases not included above or with non-standard mounting centers. ZZ—Open type & encapsulated units.

1. Tolerances on dimensions L and W are +0 to —1/16 for cases AF, AG, AH and AJ; +0 to —1/8 for all other cases.
2. Tolerances on dimension H are +0 to —1/8 for cases AF, AG, AH, and AJ; +0 to —3/16 for all other cases.
3. Tolerances on dimensions ML and MW are ±1/64 for cases AJ to JB inclusive; ±1/32 for cases KA to LB, inclusive; and ±3/64 for cases MA to OA, inclusive. When mounting studs or holes for inserts are used, they shall be symmetrically located. For template dimensions D, E, and G, tolerance is ± .002.
4. Screw-stud lengths are measured from the mounting surface and have a length tolerance of ±1/16 on studs 1/2″ long or less and ±1/8 on studs over 1/2″ long.
of studs.

See Pages 1412-1413 for Prices. Also see EEM pages 1414-1416.

MICROTRAN

designs to meet your needs

PROTOTYPES ● SHORT RUNS ● PRODUCTION RUNS SOLICITED

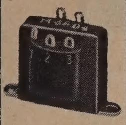


Figure E
Encapsulated
Channel Mtd.

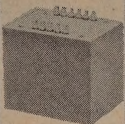


Figure Q
Hermetic
with Inserts

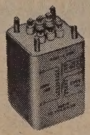


Figure MIL
Hermetic
MIL-T-27A Case

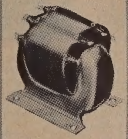


Figure R
Encapsulated
Hipersil

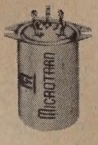


Figure H
Miniature
Hermetic

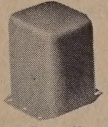


Figure V
Cylindrical with
rectangular
flange

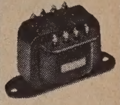


Figure X
Hipersil with
terminal board

RAPID DELIVERY OF CUSTOM TRANSFORMERS

Separate sampling Department for quick delivery. Immediate service assured by large stocks of high temperature insulation and other specialized materials.

IN-PLANT TESTING assures full compliance with military requirements and often saves weeks on contract completion. Units can be supplied to meet MIL-T-27A, MIL-T-9219, AN-E-19, CAA-R-9786, MIL-E-5400, MIL-E-16400, MIL-E-4158, MIL-E-8189A, MCREE-553, MIL-T-9454.

NOT STOCK, CUSTOM BUILT TO ORDER ONLY

400 CYCLE POWER SUPPLY TRANSFORMER

PRIMARY 115 VOLTS

Part No.	Secondary A.C. Volts	Secondary R.M.S. Ma.	Test Volts R.M.S.	Figure
M2954	24.2	10 A	1,500	MIL-KA
M2821	30	500	500	MIL-FB
M2880	32	5.5 A	500	MIL-KA
M2845	60 C.T.	166	500	MIL-AH
M2835	112 C.T.	500	500	MIL

400 CYCLE FILAMENT TRANSFORMER

PRIMARY 115 VOLTS

Part No.	Filament Volts	Filament Amps	Test Volts R.M.S.	Figure
M2655	6.3	1.5	1,500	MIL
	6.3	1.5		
M2810	6.3 C.T.	2.0	1,000	MIL-EA
	6.3 C.T.	2.0		
M2611	6.3 C.T.	2.0	1,000	Q
	6.3 C.T.	10.0	1,000	
M2724	12.6 C.T.	3.0	1,000	MIL
	6.3	1.2		
M2829	12.6	0.3	500	MIL-AJ
	12.6	0.3		
	12.6	0.3		
M2830	12.6 C.T.	5.0	500	MIL-JA
	12.6 C.T.	5.0		
M2812	26.0	1.0	1,000	MIL-EA

60 CYCLE POWER TRANSFORMERS

PRIMARY 115 VOLTS

Part No.	Plate Supply A.C. Volts	D.C. Ma.	Rectifier Filament Volts	Rectifier Filament Amps	Filament No. 2 Volts	Filament No. 2 Amps	Figure
M2571	550 C.T.	55	5.0	2.0	6.3 C.T.	3.0	MIL-JB
M2558	386 C.T.	70	6.3	2.5			MIL-HA
M2192	800 C.T.	250	6.3	5.0	5.0	3.0	MIL
M2442	330	300 FWB	6.3 C.T.	10.0	6.3	3.0	MIL-MB

60 CYCLE POWER SUPPLY TRANSFORMERS

PRIMARY 115 VOLTS

Part No.	Secondary A.C. Volts	Secondary R.M.S. Ma.	Test Volts R.M.S.	Figure
M1606	2.5	10	500	H
M2530	25.0	230	1,000	MIL-GB
M2552	26.5 C.T.	600	3,000	MIL-GA
M2808	34.0	15A	500	MIL
M2531	40.0	400	1,000	MIL-HB
	40.0	400		
M2244	600	300	1,500	MIL-MA
M2242	600	500	1,500	MIL-NB
M2170	980 C.T.	225	2,500	MIL-MA

60 CYCLE FILAMENT TRANSFORMER

PRIMARY 117 VOLTS

Part No.	Filament Volts	Filament Amps	Test Insulation Volts R.M.S.	Figure
M1070	5.0 C.T.	4.0	1,500	MIL-FA
M2245	5.0 C.T.	6.0	6,600	MIL-JA
	6.3 C.T.	0.6		
M2166	6.3 C.T.	0.6	3,500	MIL-JB
	6.3	4.0		
	5.0 C.T.	4.0		
M1631	6.3 C.T.	1.0	3,500	MIL-JA
	6.3 C.T.	1.5		
	6.3 C.T.	4.5		
M1191	7.5	3.0	1,500	MIL-GA
M2228	12.6	65.0	1,500	Q
M1395	24.0	1.0	1,500	MIL-GA

400 CYCLE SERVO DRIVER AND OUTPUT TRANSFORMERS

Part No.	Primary Impedance	Pri. Unbal. D.C. Ma.	Secondary Impedance	Power Level	Figure
M1828	4,750	15.	250	1 Watt	E
M1378	6,000	38.	180	1.3 Watts	H
M2472	2,500 C.T.	2.	300	1.5 Watts	H
M2848	200 C T.	20.	1,640 C.T.	5.6 Watts	MIL-AJ
M2769	10,000 C.T.	9.	500	7 Watts	E
M2849	62 C.T.	75.	510 C.T.	16 Watts	MIL-FB

MICROTRAN company, inc.

VALLEY STREAM, N. Y.

MICROTRAN company, inc., VALLEY STREAM, N. Y.

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NET PRICE LIST

Prices, Mechanical Construction, or Electrical Characteristics Subject to Modification without notice.

Effective 9/1/60

● NEW ITEMS

MINIATURE TRANSFORMERS
*Page 1402

Part	1 -9	10 -49	50 -99	100 -200
M1-A	$ 7.05	$ 6.34	$ 5.88	$ 4.70
M1-AG	9.90	8.91	8.25	6.60
M1-FB	3.75	3.37	3.13	2.50
M1-H	9.00	8.10	7.50	6.00
M1-M	10.20	9.18	8.50	6.80
M1-P	8.55	7.69	7.13	5.70
M2-A	7.05	6.34	5.88	4.70
M2-AG	10.05	9.04	8.38	6.70
M2-FB	3.90	3.51	3.25	2.60
M2-H	9.15	8.23	7.63	6.10
M2-M	10.35	9.31	8.63	6.90
M2-P	8.55	7.69	7.13	5.70
M3-A	6.45	5.80	5.38	4.30
M3-AG	9.45	8.50	7.88	6.30
M3-FB	3.60	3.24	3.00	2.40
M3-H	8.55	7.69	7.13	5.70
M3-M	9.75	8.77	8.13	6.50
M3-P	7.95	7.15	6.63	5.30
M4-A	6.00	5.40	5.00	4.00
M4-AG	7.95	7.15	6.63	5.30
M4-FB	3.45	3.10	2.88	2.30
M4-H	7.05	6.34	5.88	4.70
M4-M	8.25	7.42	6.88	5.50
M4-P	7.50	6.75	6.25	5.00
M5-A	6.00	5.40	5.00	4.00
M5-AG	7.95	7.15	6.63	5.30
M5-FB	3.45	3.10	2.88	2.30
M5-H	7.05	6.34	5.88	4.70
M5-M	8.25	7.42	6.88	5.50
M5-P	7.50	6.75	6.25	5.00
M6-A	6.45	5.80	5.38	4.30
M6-AG	9.45	8.50	7.88	6.30
M6-FB	3.60	3.24	3.00	2.40
M6-H	8.55	7.69	7.13	5.70
M6-M	9.75	8.77	8.13	6.50
M6-P	7.95	7.15	6.63	5.30
M7-A	6.45	5.80	5.38	4.30
M7-AG	10.35	9.31	8.63	6.90
M7-FB	3.75	3.37	3.13	2.50
M7-H	9.45	8.50	7.88	6.30
M7-M	10.65	9.58	8.88	7.10
M7-P	7.95	7.15	6.63	5.30
M8-A	7.05	6.34	5.88	4.70
M8-AG	9.90	8.91	8.25	6.60
M8-FB	3.75	3.37	3.13	2.50
M8-H	9.00	8.10	7.50	6.00
M8-M	10.20	9.18	8.50	6.80
M8-P	8.55	7.69	7.13	5.70
M9-A	7.05	6.34	5.88	4.70
M9-AG	9.90	8.91	8.25	6.60
M9-FB	3.75	3.37	3.13	2.50
M9-H	9.00	8.10	7.50	6.00
M9-M	10.20	9.18	8.50	6.80
M9-P	8.55	7.69	7.13	5.70
M10-A	7.50	6.75	6.25	5.00
M10-AG	10.20	9.18	8.50	6.80
M10-FB	3.90	3.51	3.25	2.60
M10-H	9.30	8.37	7.75	6.20
M10-M	10.50	9.45	8.75	7.00
M10-P	9.00	8.10	7.50	6.00
M11-A	7.05	6.34	5.88	4.70
M11-AG	9.90	8.91	8.25	6.60
M11-FB	3.75	3.37	3.13	2.50
M11-H	9.00	8.10	7.50	6.00
M11-M	10.20	9.18	8.50	6.80
M11-P	8.55	7.69	7.13	5.70
M12-A	7.50	6.75	6.25	5.00
M12-AG	10.20	9.18	8.50	6.80
M12-FB	3.75	3.37	3.13	2.50
M12-H	9.30	8.37	7.75	6.20
M12-M	10.50	9.45	8.75	7.00
M12-P	9.00	8.10	7.50	6.00
M13-A	5.55	4.99	4.63	3.70
M13-AG	7.35	6.61	6.13	4.90
M13-FB	3.30	2.97	2.75	2.20
M13-H	6.45	5.80	5.38	4.30
M13-M	7.65	6.88	6.38	5.10
M13-P	7.05	6.34	5.88	4.70
M14-A	7.05	6.34	5.88	4.70
M14-AG	9.90	8.91	8.25	6.60
M14-FB	$ 3.90	$ 3.51	$ 3.25	$ 2.60
M14-H	9.00	8.10	7.50	6.00
M14-M	10.20	9.18	8.50	6.80
M14-P	8.55	7.69	7.13	5.70
M15-A	7.05	6.34	5.88	4.70
M15-AG	8.40	7.56	7.00	5.60
M15-FB	3.60	3.24	3.00	2.40
M15-H	7.50	6.75	6.25	5.00
M15-M	8.70	7.83	7.25	5.80
M15-P	8.55	7.69	7.13	5.70

TRANSISTOR DRIVER—Page 1407

Part	1 -9	10 -49	50 -99	100 -200
M8002	10.50	9.45	8.75	7.00
M8003	11.10	9.99	9.25	7.40
M8004	10.20	9.18	8.50	6.80
M8005	10.20	9.18	8.50	6.80
M8006	9.45	8.50	7.88	6.30

TRANSISTOR OUTPUT—Page 1407

Part	1 -9	10 -49	50 -99	100 -200
M8007	10.20	9.18	8.50	6.80
M8008	9.90	8.91	8.25	6.60
M8009	10.80	9.72	9.00	7.20
M8010	10.50	9.45	8.75	7.00
M8011	10.20	9.18	8.50	6.80
M8012	10.50	9.45	8.75	7.00
M8013	10.20	9.18	8.50	6.80
M8014	8.40	7.56	7.00	5.60
M8015	10.50	9.45	8.75	7.00
M8016	8.55	7.69	7.13	5.70

TRANSISTOR POWER—Page 1407

Part	1 -9	10 -49	50 -99	100 -200
M8018	15.00	13.50	12.50	10.00
M8019	15.90	14.31	13.25	10.60
M8020	18.00	16.20	15.00	12.00
M8021	15.90	14.31	13.25	10.60
M8022	16.20	14.58	13.50	10.80
M8023	18.90	17.01	15.75	12.60
M8024	18.30	16.47	15.25	12.20
● M8039	13.20	11.88	11.00	8.80
● M8041	9.75	8.77	8.13	6.50
● M8042	10.05	9.04	8.38	6.70
● M8043	10.35	9.31	8.63	6.90
● M8044	19.35	17.41	16.13	12.90
● M8045	14.10	12.69	11.75	9.40
● M8046	28.20	25.33	23.50	18.80

CHOPPER TRANSFORMERS
Page 1409

Part	1 -9	10 -49	50 -99	100 -200
M8025	13.80	12.42	11.50	9.20
M8026	13.80	12.42	11.50	9.20

INPUT TRANSFORMERS—Page 1409

Part	1 -9	10 -49	50 -99	100 -200
M8028	11.85	10.66	9.88	7.90
M8030	13.50	12.15	11.25	9.00
M8031	13.35	12.01	11.13	8.90
M8032	13.05	11.74	10.88	8.70
M8033	13.05	11.74	10.88	8.70

DC TO DC CONVERTER—Page 1408

Part	1 -9	10 -49	50 -99	100 -200
M8034	26.70	24.03	22.25	17.80
M8035	26.70	24.03	22.25	17.80
M8036	24.90	22.41	20.75	16.60
● M8050	5.55	4.99	4.63	3.70
● M8051	11.85	10.66	9.88	7.90

400 CYCLE ISOLATION—Page 1407

Part	1 -9	10 -49	50 -99	100 -200
● M8047	8.55	7.69	7.13	5.70
● M8048	14.25	12.82	11.88	9.50
● M8049	17.70	15.93	14.75	11.80

MICRO-MINIATURE TRANSFORMERS
Page 1405

Part	1 -9	10 -49	50 -99	100 -200
MM1-FB	4.50	4.05	3.75	3.00
MM1-H	7.35	6.61	6.13	4.90
MM1-M	8.55	7.69	7.13	5.70
MM2-FB	4.80	4.32	4.00	3.20
MM2-H	7.50	6.75	6.25	5.00
MM2-M	8.70	7.83	7.25	5.80
MM3-FB	4.05	3.64	3.38	2.70
MM3-H	7.05	6.34	5.88	4.70
MM3-M	8.25	7.42	6.88	5.50
MM4-FB	4.05	3.64	3.38	2.70
MM4-H	$ 7.05	$ 6.34	$ 5.88	$ 4.70
MM4-M	8.25	7.42	6.88	5.50
MM5-FB	4.05	3.64	3.38	2.70
MM5-H	6.90	6.21	5.75	4.60
MM5-M	8.10	7.29	6.75	5.40
MM6-FB	4.05	3.64	3.38	2.70
MM6-H	7.05	6.34	5.88	4.70
MM6-M	8.25	7.42	6.88	5.50
MM7-FB	3.30	2.97	2.75	2.20
MM7-H	6.45	5.80	5.38	4.30
MM7-M	7.65	6.88	6.38	5.10

MICRO-MINIATURE TRANSISTOR TRANSFORMERS—Page 1405

Part	1 -9	10 -49	50 -99	100 -200
MMT1-FB	3.90	3.51	3.25	2.60
MMT1-H	7.35	6.61	6.13	4.90
MMT1-M	8.55	7.69	7.13	5.70
MMT3-FB	4.05	3.64	3.38	2.70
MMT3-H	7.50	6.75	6.25	5.00
MMT3-M	8.70	7.83	7.25	5.80
MMT4-FB	4.80	4.32	4.00	3.20
MMT4-H	8.55	7.69	7.13	5.70
MMT4-M	9.75	8.77	8.13	6.50
MMT5-FB	4.35	3.91	3.63	2.90
MMT5-H	7.95	7.15	6.63	5.30
MMT5-M	9.15	8.23	7.63	6.10
MMT7-FB	4.50	4.05	3.75	3.00
MMT7-H	8.40	7.56	7.00	5.60
MMT7-M	9.60	8.64	8.00	6.40
MMT8-FB	4.65	4.18	3.88	3.10
MMT8-H	8.55	7.69	7.13	5.70
MMT8-M	9.75	8.77	8.13	6.50
MMT9-FB	4.20	3.78	3.50	2.80
MMT9-H	7.65	6.88	6.38	5.10
MMT9-M	8.85	7.96	7.38	5.90
MMT10-FB	3.45	3.10	2.88	2.30
MMT10-H	7.20	6.48	6.00	4.80
MMT10-M	8.40	7.56	7.00	5.60
MMT11-FB	4.35	3.91	3.63	2.90
MMT11-H	7.80	7.02	6.50	5.20
MMT11-M	9.00	8.10	7.50	6.00
MMT12-FB	3.90	3.51	3.25	2.60
MMT12-H	7.35	6.61	6.13	4.90
MMT12-M	8.55	7.69	7.13	5.70
MMT13-FB	4.05	3.64	3.38	2.70
MMT13-H	7.50	6.75	6.25	5.00
MMT13-M	8.70	7.83	7.25	5.80
MMT16-FB	4.50	4.05	3.75	3.00
MMT16-H	8.40	7.56	7.00	5.60
MMT16-M	9.60	8.64	8.00	6.40
MMT17-FB	4.50	4.05	3.75	3.00
MMT17-H	8.10	7.29	6.75	5.40
MMT17-M	9.30	8.37	7.75	6.20
MMT18-FB	4.65	4.18	3.88	3.10
MMT18-H	8.55	7.69	7.13	5.70
MMT18-M	9.75	8.77	8.13	6.50
MMT19-FB	4.05	3.64	3.38	2.70
MMT19-H	7.50	6.75	6.25	5.00
MMT19-M	8.70	7.83	7.25	5.80
● MMT21-FB	4.65	4.19	3.88	3.10
● MMT21-H	8.55	7.70	7.13	5.70
● MMT21-M	9.75	8.78	8.13	6.50
● MMT25-FB	4.35	3.92	3.63	2.90
● MMT25-H	7.80	7.02	6.50	5.20
● MMT25-M	9.00	8.10	7.50	6.00
● MMT26-FB	4.20	3.78	3.50	2.80
● MMT26-H	7.65	6.89	6.38	5.10
● MMT26-M	8.85	7.97	7.38	5.90
● MMT27-FB	4.50	4.05	3.75	3.00
● MMT27-H	8.40	7.56	7.00	5.60
● MMT27-M	9.60	8.64	8.00	6.40
● MMT28-F	4.65	4.18	3.88	3.10
● MMT28-H	8.55	7.69	7.13	5.70
● MMT28-M	9.75	8.77	8.13	6.50

MINIATURE TRANSISTOR TRANSFORMERS—Page 1403

Part	1 -9	10 -49	50 -99	100 -200
MT1-A	7.20	6.48	6.00	4.80
MT1-AG	8.70	7.83	7.25	5.80
MT1-FB	3.60	3.24	3.00	2.40
MT1-H	7.80	7.02	6.50	5.20
MT1-M	9.00	8.10	7.50	6.00
MT1-P	7.35	6.61	6.13	4.90
MT2-A	8.10	7.29	6.75	5.40
MT2-AG	9.60	8.64	8.00	6.40
MT2-FB	4.20	3.78	3.50	2.80
MT2-H	8.70	7.83	7.25	5.80

MICROTRAN company, inc., VALLEY STREAM, N. Y.

INDUSTRIAL - O. E. M. NET PRICE LIST

Prices, Mechanical Construction, or Electrical Characteristics Subject to Modification without notice.

● NEW ITEMS

Effective 9/1/60

Part	1 -9	10 -49	50 -99	100 -200
MT2-M	$ 9.90	$ 8.91	$ 8.25	$ 6.60
MT2-P	8.25	7.42	6.88	5.50
MT3-A	7.80	7.02	6.50	5.20
MT3-AG	9.30	8.37	7.75	6.20
MT3-FB	3.90	3.51	3.25	2.60
MT3-H	8.40	7.50	7.00	5.60
MT3-M	9.60	8.64	8.00	6.40
MT3-P	7.95	7.15	6.63	5.30
MT5-A	7.80	7.02	6.50	5.20
MT5-AG	9.30	8.37	7.75	6.20
MT5-FB	3.90	3.51	3.25	2.60
MT5-H	8.40	7.56	7.00	5.60
MT5-M	9.60	8.64	8.00	6.40
MT5-P	7.95	7.15	6.63	5.30
MT6-A	7.95	7.15	6.63	5.30
MT6-AG	9.45	8.50	7.88	6.30
MT6-FB	4.05	3.64	3.38	2.70
MT6-H	8.55	7.69	7.13	5.70
MT6-M	9.75	8.77	8.13	6.50
MT6-P	8.10	7.29	6.75	5.40
MT7-A	7.95	7.15	6.63	5.30
MT7-AG	9.45	8.50	7.88	6.30
MT7-FB	4.05	3.64	3.38	2.70
MT7-H	8.55	7.69	7.13	5.70
MT7-M	9.75	8.77	8.13	6.50
MT7-P	8.10	7.29	6.75	5.40
MT8-A	8.10	7.29	6.75	5.40
MT8-AG	9.60	8.64	8.00	6.40
MT8-FB	4.20	3.78	3.50	2.80
MT8-H	8.70	7.83	7.25	5.80
MT8-M	9.90	8.91	8.25	6.60
MT8-P	8.25	7.42	6.88	5.50
MT9-A	8.10	7.29	6.75	5.40
MT9-AG	9.60	8.64	8.00	6.40
MT9-FB	4.20	3.78	3.50	2.80
MT9-H	8.70	7.83	7.25	5.80
MT9-M	9.90	8.91	8.25	6.60
MT9-P	7.80	7.02	6.50	5.20
MT10-A	7.80	7.02	6.50	5.20
MT10-AG	9.30	8.37	7.75	6.20
MT10-FB	3.90	3.51	3.25	2.60
MT10-H	8.40	7.56	7.00	5.60
MT10-M	9.60	8.64	8.00	6.40
MT10-P	7.95	7.15	6.63	5.30
MT11-A	8.10	7.29	6.75	5.40
MT11-AG	9.60	8.64	8.00	6.40
MT11-FB	4.20	3.78	3.50	2.80
MT11-H	8.70	7.83	7.25	5.80
MT11-M	9.90	8.91	8.25	6.60
MT11-P	8.25	7.42	6.88	5.50
MT12-A	7.80	7.02	6.50	5.20
MT12-AG	9.30	8.37	7.75	6.20
MT12-FB	3.90	3.51	3.25	2.60
MT12-H	8.40	7.56	7.00	5.60
MT12-M	9.60	8.64	8.00	6.40
MT12-P	7.95	7.15	6.63	5.30
MT13-A	7.95	7.15	6.63	5.30
MT13-AG	9.45	8.50	7.88	6.30
MT13-FB	4.05	3.64	3.38	2.70
MT13-H	8.55	7.69	7.13	5.70
MT13-M	9.75	8.77	8.13	6.50
MT13-P	8.10	7.29	6.75	5.40
MT14-A	7.20	6.48	6.00	4.80
MT14-AG	8.70	7.83	7.25	5.80
MT14-FB	3.60	3.24	3.00	2.40
MT14-H	7.80	7.02	6.50	5.20
MT14-M	9.00	8.10	7.50	6.00
MT14-P	7.35	6.61	6.13	4.90
MT15-A	7.80	7.02	6.50	5.20
MT15-AG	9.30	8.37	7.75	6.20
MT15-FB	3.90	3.51	3.25	2.60
MT15-H	8.40	7.56	7.00	5.60
MT15-M	9.60	8.64	8.00	6.40
MT15-P	7.95	7.15	6.63	5.30
MT18-A	8.10	7.29	6.75	5.40
MT18-AG	9.60	8.64	8.00	6.40
MT18-FB	4.20	3.78	3.50	2.80
MT18-H	8.70	7.83	7.25	5.80
MT18-M	9.90	8.91	8.25	6.60
MT18-P	8.25	7.42	6.88	5.50
MT20-A	8.40	7.56	7.00	5.60
MT20-AG	9.90	8.91	8.25	6.60
MT20-FB	4.50	4.05	3.75	3.00
MT20-H	9.00	8.10	7.50	6.00
MT20-M	10.20	9.18	8.50	6.80
MT20-P	8.55	7.69	7.13	5.70
MT21-A	8.25	7.42	6.88	5.50
MT21-AG	9.75	8.77	8.13	6.50
MT21-FB	4.35	3.91	3.63	2.90
MT21-H	8.85	7.96	7.38	5.90

Part	1 -9	10 -49	50 -99	100 -200
MT21-M	$10.05	$9.04	$8.38	$6.70
MT21-P	8.40	7.56	7.00	5.60
MT22-A	8.25	7.42	6.88	5.50
MT22-AG	9.75	8.77	8.13	6.50
MT22-FB	4.35	3.91	3.63	2.90
MT22-H	8.85	7.96	7.38	5.90
MT22-M	10.05	9.04	8.38	6.70
MT22-P	8.40	7.56	7.00	5.60
MT23-A	7.80	7.02	6.50	5.20
MT23-AG	9.30	8.37	7.75	6.20
MT23-FB	3.90	3.51	3.25	2.60
MT23-H	8.40	7.56	7.00	5.60
MT23-M	9.60	8.64	8.00	6.40
MT23-P	7.95	7.15	6.63	5.30
● MT24-A	7.80	7.02	6.50	5.20
● MT24-AG	9.30	8.37	7.75	6.20
● MT24-FB	3.90	3.51	3.25	2.60
● MT24-H	8.40	7.56	7.00	5.60
● MT24-M	9.60	8.64	8.00	6.40
● MT24-P	7.95	7.16	6.63	5.30
● MT25-A	8.10	7.29	6.75	5.40
● MT25-AG	9.60	8.64	8.00	6.40
● MT25-FB	4.20	3.78	3.50	2.80
● MT25-H	8.70	7.83	7.25	5.80
● MT25-M	9.90	8.91	8.25	6.60
● MT25-P	8.25	7.43	6.88	5.50
● MT26-A	7.95	7.16	6.63	5.30
● MT26-AG	9.45	8.51	7.88	6.30
● MT26-FB	4.05	3.65	3.38	2.70
● MT26-H	8.55	7.70	7.13	5.70
● MT26-M	9.75	8.78	8.13	6.50
● MT26-P	8.10	7.29	6.75	5.40

SUB-MINIATURE TRANSFORMERS
Page 1404

SM1-AF	9.00	8.10	7.50	6.00
SM1-FB	4.35	3.91	3.63	2.90
SM1-H	7.20	6.48	6.00	4.80
SM2-AF	8.70	7.83	7.25	5.80
SM2-FB	3.90	3.51	3.25	2.60
SM2-H	6.90	6.21	5.75	4.60
SM2-M	9.00	8.10	7.50	6.00
SM3-AF	8.70	7.83	7.25	5.80
SM3-FB	3.90	3.51	3.25	2.60
SM3-H	6.90	6.21	5.75	4.60
SM3-M	9.00	8.10	7.50	6.00
SM4-AF	8.70	7.83	7.25	5.80
SM4-FB	3.90	3.51	3.25	2.60
SM4-H	6.90	6.21	5.75	4.60
SM4-M	9.00	8.10	7.50	6.00
SM5-AF	8.10	7.29	6.75	5.40
SM5-FB	3.00	2.70	2.50	2.00
SM5-H	6.30	5.67	5.25	4.20
SM5-M	8.40	7.56	7.00	5.60
SM6-AF	8.70	7.83	7.25	5.80
SM6-FB	4.35	3.91	3.63	2.90
SM6-H	7.05	6.34	5.88	4.70
SM6-M	9.00	8.10	7.50	6.00

SUB-MINIATURE TRANSISTOR TRANSFORMERS—Page 1404

SMT1-AF	6.75	6.07	5.63	4.50
SMT1-FB	3.90	3.51	3.25	2.60
SMT1-H	6.00	5.40	5.00	4.00
SMT1-M	7.20	6.48	6.00	4.80
SMT3-AF	7.35	6.61	6.13	4.90
SMT3-FB	4.50	4.05	3.75	3.00
SMT3-H	6.60	5.94	5.50	4.40
SMT3-M	7.80	7.02	6.50	5.20
SMT4-FB	4.95	4.45	4.13	3.30
SMT4-H	7.05	6.34	5.88	4.70
SMT4-M	8.25	7.42	6.88	5.50
SMT5-AF	7.20	6.48	6.00	4.80
SMT5-FB	4.35	3.91	3.63	2.90
SMT5-H	6.45	5.80	5.38	4.30
SMT5-M	7.65	6.88	6.38	5.10
SMT7-AF	7.50	6.75	6.25	5.00
SMT7-FB	4.65	4.18	3.88	3.10
SMT7-H	6.75	6.07	5.63	4.50
SMT7-M	7.95	7.15	6.63	5.30
SMT8-FB	4.95	4.45	4.13	3.30
SMT8-H	7.05	6.34	5.88	4.70
SMT8-M	8.25	7.42	6.88	5.50
SMT9-FB	4.20	3.78	3.50	2.80
SMT9-H	6.30	5.67	5.25	4.20
SMT9-M	7.50	6.75	6.25	5.00

Part	1 -9	10 -49	50 -99	100 -200
SMT10-AF	$7.05	$6.34	$5.88	$4.70
SMT10-FB	4.20	3.78	3.50	2.80
SMT10-H	6.30	5.67	5.25	4.20
SMT10-M	7.50	6.75	6.25	5.00
SMT12-AF	6.75	6.07	5.63	4.50
SMT12-FB	3.90	3.51	3.25	2.60
SMT12-H	6.00	5.40	5.00	4.00
SMT12-M	7.20	6.48	6.00	4.80
SMT13-AF	6.90	6.21	5.75	4.60
SMT13-FB	4.05	3.64	3.38	2.70
SMT13-H	6.15	5.53	5.13	4.10
SMT13-M	7.35	6.61	6.13	4.90
SMT16-AF	7.50	6.75	6.25	5.00
SMT16-FB	4.65	4.18	3.88	3.10
SMT16-H	6.75	6.07	5.63	4.50
SMT16-M	7.95	7.15	6.63	5.30
SMT17-FB	4.80	4.32	4.00	3.20
SMT17-H	6.90	6.21	5.75	4.60
SMT17-M	8.10	7.29	6.75	5.40
SMT18-FB	4.95	4.45	4.13	3.30
SM18-H	7.05	6.34	5.88	4.70
SMT18-M	8.25	7.42	6.88	5.50
SMT19-AF	7.50	6.75	6.25	5.00
SMT19-FB	4.65	4.18	3.88	3.10
SMT19-H	6.75	6.07	5.63	4.50
SMT19-M	7.95	7.15	6.63	5.30
● SMT26-FB	4.50	4.05	3.75	3.00
● SMT26-H	6.60	5.94	5.50	4.40
● SMT26-M	7.80	7.02	6.50	5.20

ULTRA-MINIATURE TRANSFORMERS
Page 1406

UM21-F	6.00	5.40	5.00	4.00
UM21-M	6.60	5.94	5.50	4.40
UM22-F	4.35	3.91	3.63	2.90
UM22-M	5.40	4.86	4.50	3.60
UM23-F	4.65	4.18	3.88	3.10
UM23-M	5.70	5.13	4.75	3.80
UM24-F	3.90	3.51	3.25	2.60
UM24-M	4.95	4.45	4.13	3.30
UM25-F	3.90	3.51	3.25	2.60
UM25-M	4.95	4.45	4.13	3.30
UM26-F	3.90	3.51	3.25	2.60
UM26-M	4.95	4.45	4.13	3.30
UM27-F	4.20	3.78	3.50	2.80
UM27-M	5.25	4.72	4.38	3.50
UM28-F	3.75	3.37	3.13	2.50
UM28-M	5.25	4.72	4.38	3.50
● UM29-F	4.65	4.19	3.88	3.10
● UM29-M	5.70	5.13	4.75	3.80
● UM30-F	3.60	3.24	3.00	2.40
● UM30-M	4.50	4.05	3.75	3.00
● UM31-F	4.80	4.32	4.00	3.20
● UM31-M	5.85	5.27	4.88	3.90
● UM32-F	4.35	3.92	3.63	2.90
● UM32-M	5.40	4.86	4.50	3.60
● UM33-F	4.35	3.92	3.63	2.90
● UM33-M	5.40	4.86	4.50	3.60
● UM34-F	4.50	4.05	3.75	3.00
● UM34-M	5.55	5.00	4.63	3.70

VERI-MINIATURE TRANSFORMERS
Page 1406

VM1-FPB	4.20	3.78	3.50	2.80
VM1-M	5.25	4.72	4.38	3.50
VM2-FPB	5.70	5.13	4.75	3.80
VM2-M	6.75	6.07	5.63	4.50
VM3-FPB	4.50	4.05	3.75	3.00
VM3-M	5.55	4.99	4.63	3.70
VM4-FPB	5.70	5.13	4.75	3.80
VM4-M	6.75	6.07	5.63	4.50
VM5-FPB	4.65	4.18	3.88	3.10
VM5-M	5.70	5.13	4.75	3.80
VM6-FPB	5.85	5.26	4.88	3.90
VM6-M	6.90	6.21	5.75	4.60
VM7-FPB	4.20	3.78	3.50	2.80
VM7-M	5.25	4.72	4.38	3.50
VM8-FPB	4.35	3.91	3.63	2.90
VM8-M	5.40	4.86	4.50	3.60
VM9-FPB	4.35	3.91	3.63	2.90
VM9-M	5.40	4.85	4.50	3.60
VM10-FPB	4.65	4.18	3.88	3.10
VM10-M	6.90	6.21	5.75	4.60
VM11-FPB	4.05	3.64	3.38	2.70
VM11-M	5.10	4.59	4.25	3.40
VM12-FPB	4.50	4.05	3.75	3.00
VM12-M	5.55	4.99	4.63	3.70
VM13-FPB	4.65	4.18	3.88	3.10
VM13-M	6.90	6.21	5.75	4.60
● VM14-FPB	4.50	4.05	3.75	3.00
● VM14-M	5.55	5.00	4.63	3.70

Items may not be combined to obtain quantity discounts

MINIMUM BILLING: $10.00

TERMS: 1% 10th and 25th, Net 30. F.o.b. Valley Stream

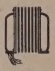
NOTE:* Price of part numbers with —FTB Suffix (i.e. MT1-FB) is the same as equivalent —FB item. To determine price of part number with —F suffix (i.e. MT-F) deduct the following from price of equivalent —FB item. Qty. 1-9 **$.30**; 10-49 **$.27**; 50-99 **$.25**; 100-200 **$.20**.

*These items not stocked, available on short delivery.

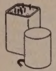
PEERLESS · ELECTRICAL PRODUCTS

DIVISION ALTEC LANSING CORPORATION

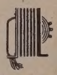
CASE A



CASE D



CASE E



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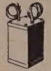

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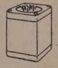
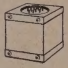
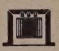


CASE S



CASE X



** All primaries are 117 V, 60 cycle.
† All transformers in this group are supplied with electro-static shield.

▼ Maximum operating level, 1 mw reference.
• Impedance is total of two separate windings.

° These units may also be used as bridging transformers. Complete application data in each packing box.

COMBINATION PLATE AND FILAMENT TRANSFORMERS ** †

Type Number	High Voltage Secondary AC Volts	High Voltage Secondary DC MA.	Filament Current, Amperes 5 V.	Filament Current, Amperes 6.3 V.C.T.	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	Consumer Net Price
R-340-F	325-0-325	100	3.	5.	4⅜	3 1/16	2¾	4	$20.25
R-490-F	350-0-350	200	3.	6.	5 5/16	3 15/16	3⅜	8	24.00
R-562-F	400-0-400	220	3.	6.	5 5/16	3 15/16	3⅜	9	27.00
R-631-F	500-435-0-435-500 (Has 100 V tap for C bias) (Replaces the R-630-F in a larger case)	225	3.	6.	6	4¾	4 1/16	11½	37.50
R-800-A	400-0-400	300	4.	4.-5.	4¾	5⅛	3 15/16	12	24.00
R-815-S	550-275-0-275-550	280 from 550-0-550 40 from 275-0-275	6.	4.-4.2-.9	6⅜	5⅛	5⅛	18	60.00

FILAMENT TRANSFORMERS

Type Number	Secondary Current, Amperes 6.3V. C.T.	Test Volts R.M.S.	Primary Volts 60 Cycle	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	Consumer Net Price
F-012-X	1.	2000	117	1⅝	2⅞	1⅝	½	$ 4.50
F-139-E	8	2000	117	3½	3⅛	2⅞	3¼	12.30

SMOOTHING CHOKES

Type Number	Current D.C. MA.	Inductance Henrys	Resistance Ohms	Test Volts R.M.S.	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	Consumer Net Price
C-325-F	120	10	240	1500	3⅞	2 13/16	2 7/16	3	$11.25
C-390-F	200	10	150	1500	4 15/16	3 9/16	3 3/16	6	15.00

STANDARD INPUT TRANSFORMERS

Type Number	Descriptive Data	Impedance, Ohms Primary	Impedance, Ohms Secondary	Freq. Range ±1 db	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	Consumer Net Price
K-308-D	Line, Mixer or Microphone to Sgle. Grid. Max. Level: 0 dbm▼. 60 db magnetic shielding.	250 C.T.	50,000	30-20,000 when terminated	1½	1 1/16 round		¼	$12.30

STANDARD IMPEDANCE MATCHING TRANSFORMERS

Type Number	Descriptive Data	Audio Watts Max.	Audio Watts 70 V Line	Impedance, Ohms Primary	Impedance, Ohms Secondary	Freq. Range ±1 db	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	Consumer Net Price
E-372-Q Repeat Coil	Electro-static Shield. 60 db Magnetic Shield.	+18 dbm▼	—	500 C.T.-333 250-200 C.T. 125-50	500 C.T.-333 250-200 C.T. 125-50	20 20,000	3½	2⅜	2½	1½	$22.50

STANDARD OUTPUT TRANSFORMERS

Type Number	Descriptive Data	Freq. Range ±1 db	Impedance, Ohms Primary	Impedance, Ohms Secondary	Prl. DC MA. Max.	Prl. DC MA. Unbal.	Audio Watts	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	Consumer Net Price
S-448-Q	Single or P-P plates to line. 30 db hum bucking.	20-20,000	20,000 C.T. 12,500 C.T. 5000-3125	500 C.T. 200 C.T.-333 250-125-50	15	2	+18 dbm▼	3½	2⅜	2½	1¾	$19.20
S-510-F	P-P plates to speaker.	20-30,000	10,000 C.T. 8000 C.T.	16-8	40	4	10	2⅞	2¾	2½	2	16.50
S-526-F	P-P plates to speaker.	20-30,000	6600 C.T. 5000 C.T.	16-8-4	60	6	20	4⅜	3 1/16	2¾	3¾	21.00
S-542-F	P-P plates to speaker.	20-30,000	5000 C.T. 4000 C.T.	16-8-4	140	14	40	5 5/16	3 9/16	3 1/16	6	26.25

Use Index Page 1 for Quick, Easy Location of ALL Products

PEERLESS ELECTRICAL PRODUCTS

DIVISION ALTEC LANSING CORPORATION

Frequency response is guaranteed on all 20-20 plus transformers

INPUT TRANSFORMERS (20-20 PLUS)

Type Number	Descriptive Data	Max. Level ▼	Impedance, Ohms Primary	Impedance, Ohms Secondary	Primary Max.	DC MA. Unbal.	Dimensions, Inches Height	Depth	Width	Weight Lbs.	Consumer Net Price
K-241-D°	Frequency response, ±1 db: 10-25,000 cps. Primary balanced to attenuate longitudinal currents in excess of 50 db. Sec. may be used single ended or in P-P. Has 2 sec. windings with bal. cap. to grnd. Electrostatic shield is provided between pri. and sec. Has 90 db electromagnetic shielding. Insertion loss 1¼ db. Transformer will operate into open circuit or resistive load. Frequency resp. down less than 1 db at 15 KC, when operated into resistive load shunted with 120 MMFD, cap. High power rating makes transf. suitable for use as output transf.	+8 dbm	500-280-125-31 or 600-340-150-37.5	70,000 • or 84,000 •	0	—	2¾	1½	2	1	$30.00

OUTPUT TRANSFORMERS (20-20 PLUS)

Type Number	Descriptive Data	Max. Level ▼	Impedance, Ohms Primary	Impedance, Ohms Secondary	Primary Max.	DC MA. Unbal.	Dimensions, Inches Height	Depth	Width	Weight Lbs.	Consumer Net Price
S-217-D° Line Level	Frequency response: ±1 db: 5-65,000 cps. Pri. may be used single ended or P-P. Sec. windings have bal. cap. to grnd. Has C.T. tertiary of 24.5 ohms which may be used for feedback or grnded. for electrostatic shield. Parallel feed is required. Astatic balance and electromagnetic shield provide approx. 50 db of shielding. Insertion loss 0.5 db. Transf. may be used as excellent input. transf. to either single or P-P grids. When used this way balanced low impedance winding provides excellent line termination.	+20 dbm	12,500 3125	600-300 150-75 Tert—See Data	25	0	3¼	1½	2	1¼	$38.40

MATCHING TRANSFORMERS (20-20 PLUS)

Type Number	Descriptive Data	Max. Level ▼	Impedance, Ohms Primary	Impedance, Ohms Secondary	Primary Max.	DC MA. Unbal.	Dimensions, Inches Height	Depth	Width	Weight Lbs.	Consumer Net Price
E-204-D Repeat Coil	Frequency response: ±1 db: 5-80,000 cps. Electrostatic shield. Astatic balance and electromagnetic shield provide approx. 50 db magnetic shielding. Attenuates longitudinal currents 80 db in bal. circuit in freq. range up to 70,000 cps. Insertion loss 0.4 db.	+23 dbm	500 C.T 125 C.T. or 600 C.T. 150 C.T.	500 C.T. 125 C.T. or 600 C.T. 150 C.T.	100	0	3¼	1½	2	1¼	$40.20

		Total Pri.	Impedances, Ohms Pri. 1	Pri. 2	Sec.	Max. Level ▼
As a Hybrid Transformer	This precise matching transf. is an excellent hybrid unit for operation from two 250/300 ohm sources. Balancing resistor of approx. 125/150 ohms required in pri. circuit. For max. attenuation between sources the exact value of resistor should be determined from measurements made in circuit where transf. is used. Correct value will yield average attenuation of 27 to 30 db with a max. attenuation of approx. 50 db at some point between 500 cps and 1,000 cps.	500 or 600	250 or 300	250 or 300	500-125 or 600-150	+23 dbm

HIGH LEVEL OUTPUT TRANSFORMERS (20-20 PLUS)

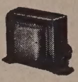
Type Number	Descriptive Data	Impedance, Ohms Primary	Impedance, Ohms Secondary	Pri. DC MA Per Winding Max.	Unbal.	Max. Level ▼	Dimensions, Inches Height	Depth	Width	Weight Lbs.	Consumer Net Price
S-232-Q	Frequency response, ±1 db: 10-100,000 cps. Insertion loss 0.6 db. (See descriptive data below)	6600 C.T. 1650 C.T.	16, 8, 4, 1.	70 140	7 14	+43 dbm (20 watts) See Data	4⅛	3 3/16	3 1/16	3¼	$31.50
S-238-Q	Frequency response, ±1 db: 10-75,000 cps. Insertion loss 0.6 db. (See descriptive data below)	10,000 C.T. 2500 C.T.	16, 8, 4, 1.	50 100	5 10	+43 dbm (20 watts) See Data	4⅛	3 3/16	3 1/16	3¼	$31.50
S-258-Q	Frequency response, ±1 db: 10-100,000 cps. Insertion loss 0.4 db. (See descriptive data below)	5000 C.T. 1250 C.T.	16, 8, 4, 1.	120 240	12 24	+46 dbm (40 watts) See Data	4⅝	3⅝	3½	6½	$42.00
S-271-S	Frequency response, ±1 db: 10-100,000 cps. Insertion loss 0.3 db. (See descriptive data below)	5000 C.T. 1250 C.T.	16, 8, 4, 1.	200 400	20 40	+49 dbm (80 watts) See Data	6⅜	5⅛	5⅛	18	$54.00
S-273-S	Frequency response, ±1 db: 10-80,000 cps. Insertion loss 0.3 db. (See descriptive data below)	8000 C.T. 2000 C.T.	16, 8, 4, 1.	125 250	12 25	+49 dbm (80 watts) See Data	6⅜	5⅛	5⅛	18	$54.00

DESCRIPTIVE DATA, GENERAL Maximum rated operating level ▼ applies to frequency range 20-20,000 cps. Power rating is ½ at 15 cps, ¼ at 10 cps. Full power (60 cps) primary open circuit inductance is approximately 100 Henrys for each 1000 ohms of primary impedance. Leakage inductance, secondary referred to total primary, is approximately 1 mh per 1000 ohms of primary impedance. Leakage inductance, half primary to half primary is approximately 1 mh per 1000 ohms of primary impedance. Can be used between half and double of rated impedances. For halved impedances, power ratings are doubled. For doubled impedances, power ratings are halved. Secondary may be operated with either end, or C.T. grounded.

IMPEDANCE MATCHING AUTO TRANSFORMER (20-20 PLUS)

Type Number	Descriptive Data	Impedance, Ohms	Insertion Loss	Max. Level ▼	Dimensions, Inches Height	Depth	Width	Weight Lbs.	Consumer Net Price
A-262-E	Frequency response, ± 1 db: 10-100,000 cps. May be used in any combination of rated impedances, step-up or step-down.	16, 8, 4 or 8, 4, 2	.5 db. or 1.0 db.	48.7 dbm (75 watts) or 44.7 dbm (30 watts)	4 3/16	3 1/16	3 7/16	5¾	$18.60

QUALITY TRANSFORMERS Give OUTSTANDING PERFORMANCE!

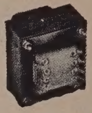


Style AL Mtg.

Style CL Mtg.

Style BL Mtg.

Style DL Mtg.



Style ET Mtg.

Style FL Mtg.

Skillful Engineering, latest production techniques and highest quality materials . . . backed by careful workmanship, exacting step-by-step inspection and rigorous final testing . . . are combined in every SNC transformer to provide a quality product that gives MORE in dollar value.

AUDIO TRANSFORMERS — THE "ONE" SERIES

AUDIO INPUT

Type Number	Application	Impedance		Pri. Mils (D.C.)	Max. Turns Ratio	Frequency Characteristics—c. p. s.					Mtg. Style	Dimensions				Net. Wt.	List Price
		Primary	Secondary			50	200	1M	5M	10M		A	B	C	C		
1P121	P.M. Speaker to Grid	4	100,000	0	1:58	−4.0	−1.0	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.85
1P124	S.B. Mic. to Sgl. or P.P. Grids	100	400,000 C.T.	50	1:63		−6.0	0	−2.0	−6.0	BL	1-7/8	1 9/16	1-1/2	2	.5	4.05
1P125	Low Z to Sgl. or P.P. Grids	50	100,000 C.T.	0	1:45		−3.0	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.75
1P128	Sgl. or D.B. Mic. or Line to Sgl. or P.P. Grids	200*/50	100,000 C.T.	50	1:45	−2.0	−0.3	0	−0.7	−2.0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.3	5.95
1P136	Line to Sgl. or P.P. Grids	500*/125	100,000 C.T.	0	1:28	−3.0	−0.4	0	−0.4	−1.5	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.4	5.95
1P145	Sgl. or P.P. Plates to Line	20,000 C.T.	500*/125	8	12.6:1	−3.5	−1.0	0	0	0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	4.90
1P152	Sgl. or P.P. Plates to Line	20,000 C.T.	200*/50	8	20:1	−4.0	−1.0	0	0	0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	4.90
1P161	Line to Line	500	500*/125	0	2:1	−0.4	−0.1	0	−0.4	−1.0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	5.30

*Indicates Balanced Center Tap

AUDIO INTERSTAGE

1P323	Sgl. Plate to Sgl. Grid	10,000	90,000	8	1:3	−5.0	−1.5	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.60
1P331	Sgl. Plate to P.P.Grids	10,000	90,000 C.T.	8	1:3	−6.0	−2.0	0	0	−1.0	BL	1-7/8	1-1/16	1-1/2	2	.5	3.85
1P339	Sgl. Plate to P.P. Grids	10,000	90,000 C.T.	8	1:3	−3.0	−0.5	0	±0.1	+0.5	BL	2-1/4	1-7/8	1-13/16	2-3/8	.9	4.30
1P342	Sgl. Plate to P.P. Grids	10,000	90,000 C.T.	8	1:3	−2.5	−0.5	0	0	0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.55
1P346	P.P. Plates to P.P. Grids	20,000 C.T.	45,000 C.T.	10	1:1.5	−1.0	−0.2	0	0	0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.70
1P351	Universal	Universal		8	1:3	−2.0	−0.4	0	0	0	BL	2-1/4	1-7/8	1-13/16	2-3/8	.9	4.55
3P363	Sgl. Type 30 to 19, 1J5 or P.P 30 Class B	10,000	7,000 C.T.	8	2.4:1	−0.5	0	0	−0.2	−1.0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.10

TELEVISION REPLACEMENT (VERTICAL BLOCKING OSCILLATOR)

Type Number	Primary Inductance	Leakage Inductance	Turns Ratio	Mounting Style	Mounting	Dimensions				Net Wt.	List Price
						H	W	D	Ctrs.		
1P412	1.15 Hy.±20%	.008 Hy.±25–15%	1:42	Comp. Filled Case	Flange	1-7/8	2-5/16	1-1/2	1-15/16	.5	4.00
1P416	1.15 Hy.±20%	.008 Hy.±25–15%	1:42	Comp. Filled Case	Studs	1-5/8	1-3/16	1-3/16	1-13/64	.4	3.70

CHOKES AND REACTORS — THE "TWO" SERIES

AUDIO REACTORS

Type Number	D.C. Mils		Inductance				Insul. Test Voltage	D.C. Res.	Mtg. Style	Dimensions					Net Weight	List Price
	Nom.	Max.	0-D.C.	50% Nom. D.C.	Nom. D.C.	Max. D.C.				A	B	C	D	E		
2P123	5-0.5	15	550	—	300-500	80	2000	5500	AL	1-7/8	2-1/4	1-5/8	2-13/16		.9	3.85
2P124	5-0.5	15	550	—	300-500	80	2000	5500	CL	1-7/8	2-1/4	1-3/4	2-13/16		.9	4.30
2P126	35-15	45	65	—	25-35	20	2000	800	AL	1-7/8	2-1/4	1-5/8	2-13/16		.9	3.05
2P127	35-15	45	65	—	25-35	20	2000	800	CL	1-7/8	2-1/4	1-3/4	2-13/16		.9	3.60

FILTER AND SWINGING CHOKES

2P132	40	50	22	13	8	6	2000	450	AL	1-5/16	1-5/8	1-1/8	2		.3	2.00
2P135	65	80	18	11	8	7	2000	300	AL	1-9/16	1-7/8	1-3/8	2-3/8		.5	2.35
2P138	85	100	30	16	8	7	2000	350	AL	1-7/8	2-1/4	1-7/8	2-13/16		1.2	3.00
2P141	110	135	20	10.5	8	7	2000	200	BL	2-5/8	2-3/16	1-7/8	2-13/16		1.5	4.05
2P142	110	135	20	10.5	8	7	2000	200	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	4.30
2P144	150	180	26	13	8	5.5	2000	190	BL	3	2-1/2	2-1/8	3-1/8		2.1	4.05
2P145	150	180	26	13	8	5.5	2000	190	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.2	5.55
2P147	200	250	16	10	8	6.5	3500	110	GL	3-1/2	2-7/8	3-1/8	2-1/4	2	3.2	7.15
2P148	200-20	—	—	—	3-15	—	3500	110	GL	3-1/2	2-7/8	3-1/8	2-1/4	2	3.2	7.15
2P151	300	350	18	11	8	7	5000	75	GL	4-5/8	3-3/4	3-7/8	3	2-13/16	7.5	12.20
2P152	300-30	—	—	—	3-15	—	5000	75	GL	4-5/8	3-3/4	3-7/8	3	2-13/16	7.5	12.20
2P155	500	600	16	10	8	5.5	5000	55	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22.8	34.30
2P156	500-50	—	—	—	3-15	—	5000	55	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22.8	34.30

DRIVER TRANSFORMERS — THE "THREE" SERIES

Type Number	Primary Impedance	Watts	Ratio, Pri. to 1/2 Sec. or Sec. Z	Pri. D.C. Mils	Frequency Characteristics—c. p. s.					Mtg. Style	Dimensions					Net Wt.	List Price
					50	200	1M	5M	10M		A	B	C	D	E		
3P323	6,000 C.T. to 10,000 C.T.	25	6, 5.5, 5:1	60	−0.5	0	0	0	−0.3	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	12.45
3P328	3,000 C.T. to 5,000 C.T.	25	6, 5.5, 5:1	60	−0.4	0	0	0	−0.1	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	12.45
3P334	6,000 C.T. to 10,000 C.T.	25	4.5, 4, 3.5:1	60	−1.0	−0.3	0	+0.1	+0.6	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	12.25
3P338	3,000 C.T. to 5,000 C.T.	25	4.5, 4, 3.5:1	60	−1.7	−0.5	0	0	0	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	12.50
3P342	6,000 C.T. to 10,000 C.T.	25	3, 2, 1:1	60	−0.7	−0.1	0	+0.1	+0.4	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	12.95
3P347	3,000 C.T. to 5,000 C.T.	25	3, 2, 1:1	60	−0.8	0	0	0	−0.8	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	12.75
3P353	6,000 C.T. to 10,000 C.T.	25	500 Ohms	60	−1.1	−0.3	0	0	+0.3	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	12.55
3P358	3,000 C.T. to 5,000 C.T.	25	500 Ohms	60	−0.9	−0.1	0	−0.4	−1.0	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	12.55
3P363	10,000	5	2.4:1	10	−0.5	0	0	−0.2	−1.0	BL	1-7/8	1-9/16	1-1/2	2		.5	3.10

SNC

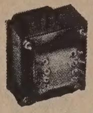
QUALITY TRANSFORMERS Give OUTSTANDING PERFORMANCE!

Style AL Mtg.

Style CL Mtg.

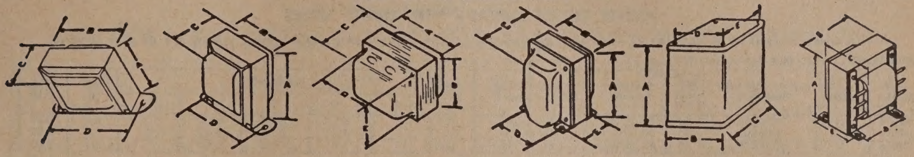
Style BL Mtg.

Style DL Mtg.


Style ET Mtg.

Style FL Mtg.

DIMENSIONAL ILLUSTRATIONS



OUTPUT TRANSFORMERS — THE "SIX" SERIES

SPECIFIC DUTY REPLACEMENT TYPES—TUBE TO VOICE COIL

Type Number	Primary Imp.—Ohms		Pri. D.C. Mils	Sec. Z—Ohms	Watts	Mtg. Style	Dimensions				Net Wt.	List Price
							A	B	C	D		
6P300	Single	2,000 Plate	50	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.00
6P306	Single	4,000 Plate	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.00
6P312	Single or P.P.	7,500 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.65
6P316	Single or P.P.	10,000 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.65
6P319	Push-Pull	15,000 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.70
6P321	Push-Pull	20,000 Plates	30	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.70
6P325	Push-Pull	25,000 Plates	20	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.70

UNIVERSAL REPLACEMENT TYPES—TUBE TO VOICE COIL—TUBE TO LINE—LINE TO VOICE COIL

Type Number	Primary Imp.—Ohms	Pri. D.C. Mils	Sec. Z—Ohms	Watts	Mtg. Style	Dimensions				Net Wt.	List Price
						A	B	C	D		
6P165	Sgl. or P.P. 4M to 14M Plates	40	1.1 to 14	4	ATL	1-5/16	1-5/8	1-3/8	2	.3	3.10
6P166	Sgl. or P.P. 4M to 14M Plates	50	1.1 to 14	8	ATL	1-9/16	1-7/8	1-5/8	2-3/8	.5	3.10
6P167	Sgl. or P.P. 3M to 10M Plates	50	1.2 to 13	15	BTL	1-7/8	1-9/16	1-3/4	2	.5	3.85
6P169	Sgl. 1500 to 7M Plate	55	.8 to 19	10	ATL	1-9/16	1-7/8	1-5/8	2-3/8	.5	3.10
6P172	P.P. 3500 to 12M Plates	60	1.3 to 14	20	BTL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.60
6P701	Single 2500 to 7500 Plate	45	165 to 1500	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	4.90
6P710	P.P. 7500 to 15M Plates	45	250 to 1000	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	5.55
6P714	Sgl. or P.P. 2500 to 12M Plates	45	150 to 2400	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	5.85
6P717	125 to 500 Line	0	1 to 32	35	BTL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.95
6P722	500 to 3M Line in 500-Ohm Steps	0	1.3 to 48	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	5.60

AMPLIFIER AND EQUIPMENT TYPES—TUBE TO LINE AND VOICE COIL

Type Number	Primary Imp.—Ohms		Pri. D.C. Mils	Secondary Imp.—Ohms	Watts	Frequency Characteristics—c. p. s.					Mtg. Style	Dimensions					Net Wt.	List Price
						50	200	1M	5M	10M		A	B	C	D	E		
6P726	P.P. 3300 or 3800	Plates	90	4-8-16-250-500	60	−0.3	0	0	+0.1	+0.5	GL	3-3/4	3-1/16	3-3/8	2-1/2	2-3/16	4.4	11.75
6P731	P.P. 4500 or 6800	Plates	90	4-8-16-250-500	60	−0.3	0	0	+0.2	0	GL	3-3/4	3-1/16	3-3/8	2-1/2	2-3/16	4.4	11.75
6P736	P.P. 5000	Plates	70	4-8-16-250-500	25	−0.9	−0.2	0	+0.2	+0.5	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.90
6P740	P.P. 4300	Plates	70	4-8-16-250-500	25	−0.9	−0.3	0	+0.3	+0.5	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.90
6P743	P.P. 6600	Plates	70	4-8-16-250-500	25	−0.7	−0.1	0	+0.2	+0.5	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.90
6P746	P.P. 8000	Plates	70	4-8-16-250-500	25	−0.7	−0.1	0	+0.1	+0.3	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.90
6P749	P.P. 10,000	Plates	60	4-8-16-250-500	25	−0.4	−0.1	0	+0.2	+0.3	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	8.30
6P752	Sgl. 2500	Plate	60	4-8-16-250-500	10	−3.0	−0.4	0	+0.3	+0.5	DL	2-1/4	1-7/8	2-1/8	2-3/8		1.0	6.25

TELEVISION REPLACEMENT (VERTICAL DEFLECTION)

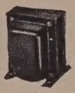
Type Number	Ratio Pri. to Sec.	Primary Imp.—Ohms	Leakage Inductance	Mounting Style	Dimensions					Net Wt.	List Price
					A	B	C	D	E		
6P860	10:1	19,000 Min.	0.33 Hy. Max.	B x L	3-3/16	2-3/4	2-9/16	1-19/32	2	2.2	7.35

MODULATION TRANSFORMERS — THE "FIVE" SERIES

SNC universal modulation transformers are specifically designed to provide maximum application possibilities per type. All units are provided with two identical secondary windings, permitting series or parrallel operation. Changes in the ratio can be readily accomplished, when desired, without removing the unit from the chassis. Most units available in either air cooled or compound filled cases.

UNIVERSAL TYPES

Type Number	Watts	Primary Current Mils	Secondary Characteristics				Primary Impedance Ohms	Mtg. Style	Dimensions					Net Weight	List Price
			Series Sec.		Parallel Sec.										
			Impedance	Mils.	Impedance	Mils			A	B	C	D	E		
5P341	15	60	3M to 8M	50	1000 to 5000	100	3M to 8M	DL	2-5/8	2-3/16	2-3/8	2-13/16		1.5	9.90
5P346	50	80	2M to 18M	75	500 to 4500	150	3M to 15M	GTL	3-7/8	3-1/8	3-3/8	2-1/2	2-3/16	4	15.50
5P352	100	120	2M to 18M	100	500 to 4500	200	3M to 15M	GTL	4-5/8	3-3/4	3-7/8	3	2-13/16	9.7	24.75
5P354								HT						24	56.75
5P355	200	200	2M to 18M	150	500 to 4500	300	3M to 15M	JT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	32	62.05
5P357								HT						33	68.65
5P358	300	250	2M to 18M	250	500 to 4500	500	3M to 15M	JT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	41	73.90
5P363								HT						51	138.60
5P364	500	300	2M to 18M	300	500 to 4500	600	3M to 15M	JT	10-3/4	6-1/2	7-1/4	5-3/8	6-1/8	64	151.80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Style HP Mtg.

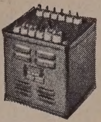
Style ATL Mtg.

Style BTL Mtg.

Style BxL Mtg.

Style HSP Mtg.

Style GTL Mtg.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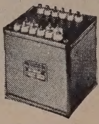
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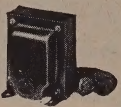

Style GP Mtg.

NOTE

Basic mounting types are classified as "A," "B," "C," "D," "E," "F," "G," "H," "J," and Bx.

Explanation of Suffix Symbols
L = Leads
T = Lugs
P = Cord and Plug
SP = Switch, Cord and Plug

POWER TRANSFORMERS — THE "EIGHT" SERIES

All units conservatively rated for operation on either 50 or 60 cycles and contain an electrostatic shield between primary and all other windings.

REPLACEMENT TYPES (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R.M.S.—High Volt. Secondary	Sec. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions					Net Wt.	List Price
							A	B	C	D	E		
8P040	117	265-0-265	40	5V. @ 2A.	6.3V. @ 2A.	FL	3	2-1/2	2-3/4	2-1/2	2	2.3	5.95
8P055	117	300-0-300	55	5V. @ 2A.	6.3A. @ 2.5A.	FL	3	2-1/2	3-1/8	2-1/2	2	2.8	6.00
8P070	117	325-0-325	70	5V. @ 2A.	6.3V. @ 3A.	FL	3	2-1/2	3-1/2	2-1/2	2	3.2	7.60

HEAVY DUTY REPLACEMENT AND NEW EQUIPMENT TYPES (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R.M.S.—High Volt. Secondary	Sec. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions					Net Wt.	List Price
							A	B	C	D	E		
8P180	117	265-0-265	40	5V. @ 2A.	6.3V. @ 2A.	FL	3	2-1/2	3-1/4	2-1/2	2	3.2	8.15
8P180G						GL	3-1/16	2-7/32	3-1/8	2	2-3/16		
8P183	117	300-0-300	50	5V. @ 2A.	6.3V. @ 2A.	FL	3-3/8	2-13/16	3-7/16	2-13/16	2-1/4	3.5	8.60
8P183G						GL	3-7/16	2-27/32	3-1/4	2-1/4	2-1/8		
8P186	117	325-0-325	60	5V. @ 2A.	6.3V. @ 3A.	FL	3-3/8	2-13/16	3-11/16	2-13/16	2-1/4	4.0	9.00
8P186G						GL	3-7/16	2-27/32	3-1/2	2-1/4	2-3/8		
8P189	117	350-0-350	70	5V. @ 3A.	6.3V. @ 3.5A.	FL	3-3/4	3-1/8	3-3/4	3-1/8	2-1/2	5.0	9.90
8P186G						GL	3-13/16	3-5/32	3-5/8	2-1/2	2-7/16		
8P192	117	350-0-350	90	5V. @ 3A.	6.3A. @ 4A.	FL	3-3/4	3-1/8	4	3-1/8	2-1/2	5.7	10.90
8P192G						GL	3-13/16	3-5/32	3-7/8	2-1/2	2-11/16		
8P194	117	375-0-375	110	5V. @ 3A.	6.3A. @ 4A.	FL	3-3/4	3-1/8	4-1/8	3-1/8	2-1/2	6.0	12.20
8P194G						GL	3-13/16	3-5/32	4	2-1/2	2-13/16		
8P196	117	350-0-350	150	5V. @ 3A.	6.3V. @ 4.8A.	FL	4-1/8	3-7/16	4-3/8	3-7/16	2-3/4	7.7	12.85
8P196G						GL	4-3/16	3-15/32	4-3/8	2-3/4	3-5/16		
8P199	117	400-0-400	70	5V. @ 3A.	6.3V. @ 3.5A.	FL	3-3/4	3-1/8	4	3-1/8	2-1/2	5.8	11.55
8P199G						GL	3-13/16	3-5/32	3-7/8	2-1/2	2-11/16		
8P202	117	450-0-450	200	5V. @ 3A.	6.3V. @ 5A.	FL	4-1/2	3-3/4	4-3/4	3-3/4	3	10.7	16.50
8P202G						GL	4-9/16	3-25/32	4-3/8	3	3-11/16		
8P205	117	450-0-450	325	5V. @ 6A.	6.3V. @ 8A.	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22.3	44.90
8P208	117	550-0-550	275	5V. @ 6A.	6.3V. @ 6A.	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	44.90

REPLACEMENT TYPES (2.5 Volt Heater Winding)

8P287	117	350-0-350	70	5V. @ 3A.	2.5V. @ 6A.	FL	3-3/4	3-1/8	3-3/4	3-1/8	2-1/2	5.0	9.90
8P293	117	350-0-350	90	5V. @ 3A.	2.5V..@ 8A.	FL	3-3/4	3-1/8	4	3-1/8	2-1/2	5.6	10.80
8P295	117	350-0-350	150	5V. @ 3A.	2.5V. @ 12A.	FL	4-1/8	3-7/16	4-3/8	3-7/16	2-3/4	7.3	12.85

REPLACEMENT TYPES (Two 2.5 Volt Heater Windings)

8P487	117	350-0-350	70	5V. @ 3A.	No. 1=2.5V.@3.5A.	FL	3-3/4	3-1/8	4	3-1/8	2-1/2	5.8	11.90
8P487G					No. 2=2.5V.@8A.	GL	3-13/16	3-5/32	3-7/8	2-1/2	2-11/16		
8P494	117	375-0-375	110	5V. @ 3A.	No. 1=2.5V.@3.5A.	FL	3-3/4	3-1/8	4-1/4	3-1/8	2-1/2	6.2	13.00
8P494G					No. 2=2.5V.@10A.	GL	3-13/16	3-5/32	4-1/8	2-1/2	2-15/16		

GENERAL PURPOSE TYPES WITH CONVENIENT LUG TERMINALS (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R.M.S.—High Volt. Secondary	Sec. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions					Net Wt.	List Price
							A	B	C	D	E		
8P382	117	300-0-300	50	5V. @ 2A.	6.3V. @ 2A.	ET	3-3/8	2-13/16	3-7/16	2-13/16	2-1/4	3.2	7.80
8P385	117	325-0-325	60	5V. @ 2A.	6.3V. @ 3A.	ET	3-3/8	2-13/16	3-11/16	2-13/16	2-1/4	4.0	8.35
8P388	117	350-0-350	70	5V. @ 3A.	6.3V. @ 3.5A.	ET	3-3/4	3-1/8	3-3/4	3-1/8	2-1/2	4.7	9.15

BIAS TYPES

8P510	117	40-0-40	25	5V. @ 2A.		CL	1-7/8	2-1/4	1-3/4	2-13/16		1.0	4.95
8P511	117	0-90-150-200-250	50	5V. @ 2A.		GL	3-1/16	2-7/32	2-5/8	2	1-11/16	2.0	7.20

VIBRATOR TYPES

8P610	6	225-0-225	40			AL	2-3/16	2-5/8	2	3-1/8		1.3	5.60
8P611	6	320-0-320	40			GL	3-1/16	2-7/32	2-1/2	2	1-9/16	2.1	6.70
8P612	6	390-0-390	60			GL	3-7/16	2-27/32	3-5/16	2-1/4	2-3/16	3.7	7.60

TELEVISION REPLACEMENT TYPES

8P803	117	375-0-375	210	5V. @ 3A.	No. 1=5V.@2A. No. 2=6.3V.@5.6A.	FL	4-1/2	3-3/4	4-3/4	3-3/4	3	10.7	19.55
8P805	117	235-0-235	90	5V. @ 2A.	6.3V. @ 5.5A.	FL	3-3/8	2-13/16	4	2-13/16	2-1/4	5.1	11.20
8P807	117	365-0-365	300	5V. @ 6A.	No. 1=12.6V.@5A No. 2=5V.@2A	FL	4-23/32	3-27/32	6-3/4	4-1/16	3-3/16	16.0	33.65

Style GL Mtg.

Style HP Mtg.

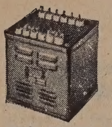
Style ATL Mtg.

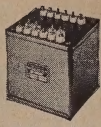
Style BTL Mtg.

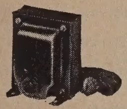
Style BxL Mtg.

Style HSP Mtg.

Style GTL Mtg.


Style HT Mtg.


Style JT Mtg.


Style GP Mtg.

NOTE

Basic mounting types are classified as "A," "B," "C," "D," "E," "F," "G," "H," "J," and Bx.

Explanation of Suffix Symbols

L = Leads
T = Lugs
P = Cord and Plug
SP = Switch, Cord and Plug

PLATE TRANSFORMERS — THE "SEVEN" SERIES

All SNC plate transformers have dual secondary ratings. Most units available in either air cooled or compound filled cases. All units electrostatic shields between primary and high voltage windings. 50/60 Cycle Operation

Type Number	Primary Voltage	Pri. V.A.	Secondary R.M.S. Voltage	D.C. Voltage From Filter*	D.C. Current	Mtg. Style	Dimensions					Net Wt.	List Price
							A	B	C	D	E		
7P530	115-230	220	920-0-920	750	200MA	GL	4-3/4	3-3/4	5-1/8	3	4-1/16	12	19.80
			or 740-0-740	or 600									
7P535	115-230	320	930-0-930	750	300MA	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22	46.20
7P536			or 750-0-750	or 600		JT						30	52.80
7P542	115-230	530	1470-0-1470	1250	300MA	HT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	33	55.45
7P543			or 1220-0-1220	or 1000		JT						41	60.70
7P551	115-230	750	2050-0-2050	1750	300MA	HT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	43	59.40
7P552			or 1740-0-1740	or 1500		JT						51	72.60
7P557	115-230	1060	2880-0-2880	2500	300MA	HT	10-3/4	6-1/2	7-1/4	5-3/8	6-1/8	53	81.85
7P558			or 2350-0-2350	or 2000		JT						69	88.45
7P563	115-230	1760	2900-0-2900	2500	500MA	HT	10-3/4	9	7-1/4	7	5-13/16	96	118.80
7P564			or 2370-0-2370	or 2000		JT						126	165.00

*All units may be operated with simultaneous loads—provided the total D.C. Current of the two loads does not exceed the rating listed.

FILAMENT TRANSFORMERS — THE "FOUR" SERIES

Most SNC Filament Transformers are constructed to provide two identical center tapped secondary windings and offer a minimum of three applications. They provide three-fold the number of possible applications of ordinary filament types. A few are single secondary units and are so designed. All have 117 V. 50/60 cycle primary.

Type Number	Applications			Test Voltages	Mtg. Style	Dimensions					Net Wt.	List Price
	Parallel Secondaries	Series Secondaries	Independent Identical Secondaries			A	B	C	D	E		
4P222	2.5V. C.T. @ 5 A.	5 V. C.T. @ 2.5 A.	Two of 2.5V. C.T.@ 2.5 A.	2000	BL	2-1/4	1-7/8	1-3/4	2-3/8		1.0	3.90
4P226*	2.5V. C.T. @ 10 A.*			7500	BL	3	2-1/2	2-3/8	3-1/8		2.0	6.05
4P227	2.5V. C.T. @ 10 A.	5 V. C.T. @ 5 A.	Two of 2.5V. C.T.@ 5 A.	2000	BL	2-5/8	2-3/16	2	2-13/16		1.5	5.30
4P234	2.5V. C.T. @ 15 A.	5 V. C.T. @ 7.5 A.	Two of 2.5V. C.T.@ 7.5 A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.2	6.25
4P239	5 V. C.T. @ 6.5A.	10 V. C.T. @ 3.25A.	Two of 5 V. C.T.@ 3.25A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.2	5.60
4P242*	5 V. C.T. @ 20 A.*			10000	BxL	4-1/8	3-7/16	2-3/4	2-3/4	2-1/8	4.6	11.20
4P243	5 V. C.T. @ 20 A.	10 V. C.T. @ 10 A.	Two of 5 V. C.T.@ 10 A.	2000	BxL	3-3/4	3-1/8	2-3/4	2-1/2	2-1/4	4.3	9.90
4P244*	6.3V. C.T. @ 0.6A.*			2000	BL	1-7/8	1-9/16	1-1/2	2		.6	3.85
4P245*	6.3V. C.T. @ 1.2A.*			2000	BL	1-7/8	1-9/16	1-5/8	2		.7	4.20
4P246	6.3A. C.T. @ 2 A.	12.6V. C.T. @ 1 A.	Two of 6.3V. C.T.@ 1 A.	2000	BL	2-1/4	1-7/8	1-3/4	2-3/8		1.0	4.60
4P251	6.3V. C.T. @ 6 A.	12.6V. C.T. @ 1 A.	Two of 6.3V. C.T.@ 3 A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.0	5.35
4P256	6.3V. C.T. @ 10 A.	12.6V. C.T. @ 5 A.	Two of 6.3V. C.T.@ 5 A.	2000	BxL	3-3/8	2-13/16	2-1/2	2-1/4	2-1/8	2.9	6.95
4P260	7.5V. C.T. @ 3 A.	15 V. C.T. @ 1.5 A.	Two of 7.5V. C.T.@ 1.5 A.	2000	BL	2-5/8	2-3/16	2	2-13/16		1.5	5.60
4P267	7.5V. C.T. @ 4.5A.	15 V. C.T. @ 2.3 A.	Two of 7.5V. C.T.@ 2.3 A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.0	6.95
4P272	11 V. C.T. @ 10 A.	22 V. C.T. @ 5 A.	Two of 11 V. C.T.@ 5 A.	2000	BxL	3-3/4	3-1/8	2-3/4	2-1/2	2-1/4	4.1	9.90

*Single Secondary Units.

VOLTAGE CHANGER AND ISOLATION — THE "NINE" SERIES

All Units Have Primary Cord and Secondary Plug and Are For 50/60 Cycle Operation.

VOLTAGE CHANGER (ISOLATION)

Type Number	Primary Voltage	Secondary Voltage	Capacity in V. A.	Mtg. Style	Dimensions					Net Wt.	List Price
					A	B	C	D	E		
9P707	220-250	110-125	75	GP	3-13/16	3-5/32	3-1/8	2-1/2	1-15/16	3.9	10.25
9P713	220-250	110-125	150	GP	4-9/16	3-25/32	3-7/8	3	2-13/16	8.0	15.20
9P718	220-250	110-125	360	HP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	39.60

ISOLATION TYPES

9P721	110-250	110-250	150	GP	4-9/16	3-25/32	4-5/8	3	3-9/16	12.1	19.80
9P725	110-250	110-250	250	HP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	32.35
9P728	110-250	110-250	500	HP	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	34.8	45.55

VOLTAGE ADJUSTMENT TYPES WITH TAP CHANGE SWITCH

9P732	95-130 in 5V. Steps	115	150	HSP	4-7/8	3-7/8	3-7/8	3-1/8	3-1/8	4.7	28.40
9P737	95-130 in 5V. Steps	115	250	HSP	5-3/8	4-3/8	4-1/4	3-5/8	3-1/2	8.0	36.30
9P739	80-130 in 5V. Steps	115	500	HSP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	54.10

All list prices given are subject to regular trade discounts and may be changed without notice.

S N C MANUFACTURING CO., INC., OSHKOSH, WISCONSIN

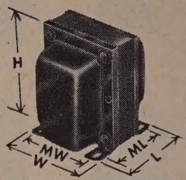
STERLING—THE MARK OF QUALITY

STERLING TRANSFORMER CORPORATION

Brooklyn 11, N. Y.

TRANSFORMERS

FOR ELECTRONICALLY REGULATED POWER SUPPLIES



- ONE UNIT PROVIDES PLATE AND FILAMENT POWER FOR ENTIRE SUPPLY.
- RATINGS BASED ON D.C. OUTPUT OF SUPPLY.
- APPLICATION BULLETIN WITH EACH UNIT.

2K SERIES

PLATE AND FILAMENT TRANSFORMERS

Cat. No.	Supply Rating	High Voltage Secondary AC Volts	DC MA	Rectifier Fil.		Pass Tube Fil.		Regulator Fil.		Auxiliary Fil.		Overall			Mtg. Dim.		Rec. Mtg. Screw	Weight Lbs.	List Price
				V	A	V	A	V	A	V	A	L	W	H	ML	MW			
2K6	300/250VDC 400MADC	550-480-0 480-550V	440		Use with 2K20				Use with 2K20			6	4 5/8	5 1/2	4 1/2	3 1/2	#10	19	$30.80
2K8	300/250VDC 300MADC	540-475-0 475-540V	340	5	6	6.3	6	6.3	1.2	6.3CT	6	6 1/4	4 5/8	5 1/2	4 3/4	3 1/2	#10	20	36.03
2K10	300/250VDC 200MADC	500-440-0 440-500V	240	5	3	6.3	3	6.3	1.2	6.3CT	6	5	4 5/8	5 1/2	3 1/2	3 1/2	#10	14	29.43
2K12	300/250VDC 100MADC	540-465-0 465-540V	140	5	3	6.3	3	6.3	1.2	6.3CT	3	4 3/4	4 5/8	5 1/2	3 1/4	3 1/2	#10	12	25.30
2K13	150/100VDC 400MADC	370-310-0 310-370V	440		Use with 2K20				Use with 2K20			4 3/4	4 5/8	5 1/2	3 1/4	3 1/2	#10	12	25.30
2K14	150/100VDC 300MADC	375-320-0 320-375V	340	5	6	6.3	6	6.3	1.2	6.3CT	6	5 1/2	4 5/8	5 1/2	4	3 1/2	#10	16	29.70
2K15	150/100VDC 200MADC	355-300-0 300-355V	240	5	3	6.3	3	6.3	1.2	6.3CT	6	4 3/4	4 5/8	5 1/2	3 1/4	3 1/2	#10	12	25.30
2K16	150/100VDC 100MADC	350-310-0 310-350V	140	5	3	6.3	3	6.3	1.2	6.3CT	3	4 3/8	3 7/8	4 5/8	3 5/16	3	#8	10	22.00
2K17	300/250VDC 600MDC	565-500-0 500-565V	640		Use with 2K20				Use with 2K20			6 1/4	4 1/2	6	4 1/2	3 7/16	#10	22	45.32
2K18	300/250VDC 800MADC	580-520-0 520-580V	840		Use with 2K21				Use with 2K21			6	6 1/8	7 1/4	4	4 25/32	1/4	33	59.40
2K19	300/250VDC 1.0 Amp.	590-525-0 525-590V	1040		Use with 2K21				Use with 2K21			7 1/2	6 1/8	7 1/4	5 1/2	4 25/32	1/4	48	83.60
2K20	(Filament Transformer for 400MA and 600MA Supplies)			5	6	6.3	6	6.3	1.2	6.3CT	6	3 7/8	3 7/8	4 5/8	2 13/16	3	#8	7.5	18.70
2K21	(Filament Transformer for 800MA and 1 Amp. Supplies)			5	10	6.3	10	6.3	2	6.3CT	10	4 7/8	3 7/8	4 5/8	3 13/16	3	#8	12	25.85

Standard Color Code

Primary: Black	Rectifier Filaments: Yellow
High Voltage: Center Tap: Red-Yellow	Pass Tube Filaments: Brown
High Voltage: High Tap: Red	Regulator Filaments: Green
High Voltage: Low Tap: Blue	Auxiliary Filaments: Slate

NOTES

1. All Primaries 115 Volts 50/60 Cps.
2. Ratings Based On Capacitor Input Filters
3. Dielectric Test Voltages:
   Primaries: 1500 V. RMS
   All Secondaries: 2500 V. RMS

CHOKES

Cat. No.	Inductance	Rated Current MADC	DC Resist.	Dielectric Test Volt.	Overall			Mtg. Dim.		Rec. Mtg. Screw	Weight Lbs.	List Price
					L	W	H	ML	MW			
2K5	4 hys. min.	440	50	2500V RMS	3 3/4	3 9/16	4 1/4	2 5/8	2 3/4	#8	6	$12.76
2K7	4 hys. min.	340	60	2500V RMS	3 1/8	2 15/16	3 1/2	2	2 1/4	#8	3.3	8.58
2K9	4 hys. min.	240	90	2500V RMS	2 5/8	2 5/8	3 1/8	1 11/16	2	#8	2.3	6.49
2K11	4 hys. min.	140	185	2500V RMS	3 11/16	2 3/16	2 5/16	3 1/8	Chan.	#8	1.5	4.40
2K22	4 hys. min.	.64A	52	2500V RMS	4 3/4	4 5/8	5 1/2	3 1/4	3 1/2	#10	12	22.00
2K23	4 hys. min.	.84A	25	2500V RMS	5 1/2	4 5/8	5 1/2	4	3 1/2	#10	17	28.27
2K24	4 hys. min.	1.04A	20	2500V RMS	7	4 5/8	5 1/2	5 1/2	3 1/2	#10	25	39.27

SPECIALS

Cat. No.	Secondary Volts	Secondary Amperes	RMS Volts Insulation	Primary Volts	Overall Dim.			Mtg. Dim.		Rec. Mtg. Screw	Weight Lbs.	List Price
					L	W	H	ML	MW			
6K1	6.3	4	1000	115/230	3 11/16	2 1/2	2 5/16	3 1/8	Chan.	8	1 3/4	$ 9.35
6K2	6.3	12	1500	115/230	3 3/4	3 1/4	4	2 7/16	2 1/2	8	6	17.16
6K3	6.3 CT	16	3000	115	3 7/8	3 1/4	4	2 9/16	2 1/2	8	6 1/2	18.26
6K4	5 6.3 CT 6.3 CT	3 4 4	2000 2000 2000	115/230	3 1/2	3 1/4	4	1 3/16	2 1/2	8	5	18.15
6K5	6.3 6.3	1.5 1.5	1000 1000	115/230	4	2 1/2	2 5/8	3 9/16	Chan.	8	2 1/4	10.23
6K6	800 CT	.036 DC	4000	115/230	3 1/2	2 5/8	3 3/16	2 7/16	2	8	4	11.55
6K7	28 CT	7 DC	1000	115	4 1/4	3 1/4	4	2 15/16	2 1/2	8	8	17.38
6K8	660 CT 5	.25 DC 4.5	1500 1500	115/230	3 7/8	3 7/8	4 5/8	2 13/16	3	8	8	21.12
6K9	1130 CT 5	.062 DC 2	3300 3300	115/230	3 7/8	3 7/8	4 5/8	2 13/16	3	8	8	21.12

Prices subject to change without notice

STERLING—THE MARK OF QUALITY

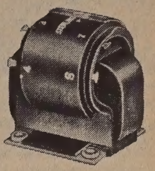
STERLING TRANSFORMER CORPORATION

Brooklyn 11, N. Y.

- Contour Molded
- Hipersil Cores

ENCAPSULATED
400 CPS TRANSFORMERS CLIPPER SERIES

FOR MINIMUM SIZE AND MINIMUM WEIGHT



	Cat. No.	Secondary Volts	Secondary Amps.	Rms. V Insulation	Primary Volts	Mold Size	Maximum Operating Ambient	List Price
FILAMENT	4C1	6.3 CT	.8	1500	115	SM3	100°C	18.15
	4C2	6.3 CT	1.2	1500	115	SM2	100°C	18.15
	4C3	6.3 CT	6.75	1500	110/115/120	2	100°C	29.15
	4C4	6.3 6.3	4.9 2.7	1500 1500	115	3	90°C	26.07
	4C5	6.3 CT	7.2	1500	115	35	120°C	30.25
	4C6	6.3 6.3 6.3	7 7 1.5	1500 1500 1500	120	35	80°C	29.48
	4C7	6.3 CT 6.3 CT	7 7	1500 1500	120	4	100°C	35.09
	4C8	6.3 6.3 6.3	13.7 2.93 0.3	1500 1500 1500	115	4	90°C	35.09
	4C9	6.3 CT	12.3	1500	115	5	100°C	32.45
	4C10	20 CT	0.6	1500	115	SM1	100°C	23.10
	4C11	6.3 6.3 6.3	2.4 2.5 2.7	1500 1500 1500	115	3	100°C	32.45
	4C26	6.3 CT	2	1500	115	SM1	100°C	23.10
	4C27	6.3 CT	3	1500	115	1A	100°C	23.98
	4C28	6.3 CT	5	1500	115	2	100°C	24.86
	4C29	5.0 CT	3	2500	115	SM1	100°C	23.10
	4C30	5.0 CT	6	2500	115	2	100°C	24.86
POWER	4C12	14.1	3	1500	115	3	100°C	24.75
	4C13	21	9	1500	115	4	65°C	27.50
	4C14	26	0.5	1500	115	SM1	55°C	22.55
	4C15	26 CT	1.5	1500	115	3	65°C	23.32
	4C16	28 CT 6.3 CT	0.75 7A	1500 1500	115	2	65°C	34.98
	4C17	52 CT	.192	1500	115	SM1	100°C	25.03
	4C18	90 CT	4.5	1500	115	9	100°C	47.30
	4C19	115	.05	1500	115	SM2	100°C	18.48
	4C20	105/115/125	0.4	1500	105/115/125	2	90°C	26.73
	4C21	115	2.83	1500	115	8	100°C	38.50
	4C22	334	.025	1500	115	SM1	120°C	21.23
	4C23	26 CT	3	1500	115	4	100°C	28.05
	4C24	26 CT	5	1500	115	6	100°C	32.34
	4C25	52 CT	2	1500	115	5	100°C	30.91

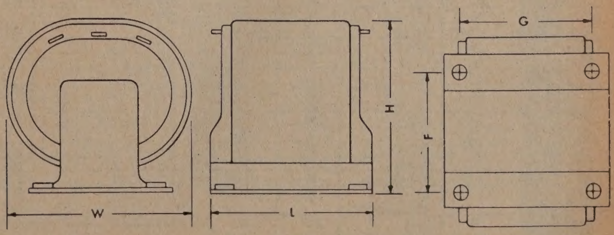
MOLD NO.	OVERALL DIMENSIONS			MTG. DIMENSIONS		APP. WT. (LBS.)	MTG. METH.
	L	W	H	F	G		
SM3	1	1-1/4	1-3/16	1	Note 1	0.06	Note 1
SM2	1-1/2	1-1/4	1-11/16	1	Note 1	0.10	Note 1
SM1	1-1/2	1-1/2	1-11/16	1-1/8	Note 1	0.16	Note 1
1	1-13/16	1-7/8	1-13/16	1-1/4	1-7/16	0.25	Note 2
1A	1-11/16	1-17/32	1-13/16	1-5/32	1-1/8	0.25	Note 2
2	2	1-15/16	2-1/8	1-9/32	1-1/4	0.40	Note 2
3	2-5/16	1-13/16	2-1/8	1-9/32	1-7/16	0.45	Note 2
35	2-1/16	2-3/8	2-3/16	1-17/32	1-11/16	0.70	Note 2
4	2-5/16	2-3/8	2-9/16	1-17/32	1-11/16	0.90	Note 2
5	2-3/4	2-3/8	2-7/8	1-17/32	2-3/16	1.20	Note 2
6	2-3/4	2-5/8	3-1/8	1-17/32	2-3/16	1.50	Note 2
7	3	2-7/8	3-3/8	1-25/32	2-1/2	2.00	Note 2
8	3-3/8	2-7/8	3-3/8	1-25/32	2-1/2	2.50	Note 2
83	3-3/4	3-1/4	3-3/8	2-1/4	3	3.25	Note 3
86	3-3/4	3-3/4	3-3/8	2-3/4	3-1/8	4.25	Note 3
9	4-1/16	3-3/8	3-7/8	2-3/16	3-1/2	5.00	Note 3
10	4-1/2	3-15/16	3-15/16	2-3/4	3-1/8	6.00	Note 3

Note 1—SM series are two hole mounting with holes on center line. #4-40 Pem nuts are fastened to the bracket.

Note 2—#6-32 Pem nuts on bracket are standard.

Note 3—#8-32 Pem nuts on bracket are standard.

- All primaries 380-1000 cps
- Dielectric test voltages: PRIMARIES 1000 Volts RMS
  SECONDARIES 1500 Volts RMS
- Epoxy resin used as encapsulant
- Prices subject to change without notice



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THORDARSON-MEISSNER MT. CARMEL, ILLINOIS

Transistor Transformers

Free "Personalized" Catalog
See Note On Next Page.

Power Transistor Outputs

These transistor output transformers have been designed to cover almost all of the power transistor applications, such as used in automobile radios, audio power amplifiers and many circuits.
The TR-57 and TR-59 has been designed to cover parallel 3.2 and 8 ohm voice coil applications. These transformers may be used with such transistors as Sylvania's 2N68, 2N95, 2N141 and CBS's 2N255 and 2N256.

Part No.	Impedance		Primary MADC	Power In Watts	Mtg. Type	Mtg. Centers	Dimensions		Wt. Lbs.
	Primary	Secondary					H.	W. x D.	
TR-57	32CT	1.6/4	575	10	BAH	2 13/16	2	3 5/16 x 1 7/8	1.0
TR-58	32CT	3.2/8/16	575	10	BAH	2 13/16	2	3 5/16 x 1 7/8	1.0
TR-59	48CT	1.6/4	550	10	BAV	2 3/8	2 5/16	2 7/8 x 2	1.0
TR-60	48CT	3.2/8/16	550	10	BHV	2 3/8	2 5/16	2 7/8 x 2	1.0
TR-61	48CT	3.2/8/16	550	5	BHV	1 3/4	1 3/4	2 x 1 1/4	0.5
TR-62	100	3.2/8/16	150	3	BAV	1 1/2	1 1/2	1 7/8 x 1 1/4	0.4
TR-63	100CT	3.2/8/16	500	10	BAV	2 3/8	2 5/16	2 7/8 x 2	1.0

Hi-Fi Transistor Transformers

Completely encased for use in wide range transistor high fidelity audio amplifiers. Each has a frequency response of ± 1/2 db from 20-20,000 CPS in properly designed circuits.

TR-67	125CT	8	50*	1.5	XAV	1 1/4	1 3/4	1 1/4 x 1 1/4	.75
TR-68	5000	3000CT	20*	.20	XAV	1 1/4	1 3/4	1 1/4 x 1 1/4	.75

* Unbalanced primary current

Drivers

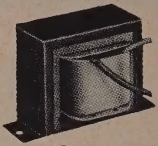
When used in conjunction with the output transformers listed above these driver transformers give the best in performance and at a very low cost.
Designed especially for driving power transistors such as Sylvania's 2N68, 2N95, 2N141 and CBS's 2N255 and 2N256.

TR-64	100	100CT	200	.5	BAH	1 3/4	1 1/4	2 1/8 x 1	.4
TR-65	100	200CT	200	.5	BAH	1 3/4	1 1/4	2 1/8 x 1	.4
TR-66	500CT	200CT	50	.5	BAH	1 3/4	1 1/4	2 1/8 x 1	.4

Transistor Power Supply Transformers

Recent developments in the power transistor field have made possible the design of circuits which are efficient and rugged converters of low voltage DC to high voltage AC or DC power. These transistorized power supplies are ideally suited for powering all kinds of battery operated equipment such as mobile commûnication systems, aircraft and marine navigational systems, photoflash, ultrasonic applications and even 117 Volts 60 CPS from an automobile battery so as to operate 117V radio, television, electric shavers, etc.
These transistor power supply transformers give a wide range of voltage and power to choose from. Complete instructions supplied with each transformer. * 60 CPS

Part No.	DC Supply Voltage	Output # Voltage	Power Output	Mtg. Type	Mtg. Centers	Dimensions	
						H.	W. x D.
TR-69	6	*117VAC	50	GGV	1 5/8 x 2	3 1/8	2 5/8 x 2 5/8
TR-70	12	*117VAC	50	GGV	1 5/8 x 2	3 1/8	2 5/8 x 2 5/8
TR-71	12	*117VAC	110	GGV	2 3/16 x 2 1/2	3 7/8	3 3/16 x 3 1/2
TR-72	12	*117VAC	250	GGV	3 1/16 x 3	4 5/8	3 13/16 x 4 9/16
TR-73	24	*117VAC	400	GGV	3 5/8 x 3 7/8	5 7/8	4 3/8 x 6
TR-74	12	150VDC	15	TAV	1 1/4 x 2 1/8	2 1/4	1 7/8 x 2 7/16
TR-75	12	200VDC	20	TAV	1 1/4 x 2 1/8	2 1/4	1 7/8 x 2 7/16
TR-76	6	225VDC	15	TAV	1 1/4 x 2 1/8	2 1/4	1 7/8 x 2 7/16
TR-77	12	225VDC	20	TAV	1 1/4 x 2 1/8	2 1/4	1 7/8 x 2 7/16
TR-78	12	250VDC	16.5	DAH	1 1/2	1 3/4	1 3/4 x 1 3/8
TR-79	6	250VDC	50	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4 x 2 11/16
TR-80	12	250VDC	50	TAV	1 1/2 x 2 3/8	2 7/8.	2 1/4 x 2 11/16
TR-81	12	250VDC	100	TAV	1 3/4 x 2 11/16	3 5/16	2 1/2 x 3
TR-82	12	275VDC	48	TAV	1 1/4 x 2 1/8	2 1/4	1 7/8 x 2 7/16
TR-83	12	300VDC	30	DAH	1 1/2	1 7/8	2 3/8 x 1 7/8
TR-84	12	300 & 150VDC	120	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4 x 2 11/16
TR-85	12	325VDC	50	DAH	1 1/2	2	2 3/8 x 2 7/16
TR-86	12	350VDC	30	TAV	1 1/4 x 2 1/8	2 1/4	1 7/8 x 2 7/16
TR-87	12	375VDC	70	DAH	1 1/2	2	2 3/8 x 2 7/16
TR-88	4.5	390VDC	12	DAH	1 1/2	1 3/4	1 3/4 x 1 11/32
TR-89	12	400VDC	50	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4 x 2 11/16
TR-90	12	450 & 225VDC	40	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4 x 2 11/16
TR-91	12	450VDC	120	TAV	1 3/4 x 2 11/16	3 5/16	2 1/2 x 3
TR-92	12	500 & 250VDC	50	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4 x 2 11/16
TR-93	12	500 & 250VDC	100	TAV	1 3/4 x 2 11/16	3 5/16	2 1/2 x 3
TR-94	12	500VDC	150	TAV	1 3/4 x 2 11/16	3 5/16	2 1/2 x 3
TR-95	12	600VDC	120	DAH	3 11/16	2	4 1/8 x 3
TR-96	12	800VDC	120	TAV	1 3/4 x 2 11/16	3 5/16	2 1/2 x 3
TR-97	12	1000VDC	100	TAV	1 3/4 x 2 11/16	3 5/16	2 1/2 x 3
TR-98	12	1500VDC	20	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4 x 2 11/16
TR-99	6 & 12	200-225- 250 or 275VDC	20	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4 x 2 11/16
TR-100	25	20KC 9 ohms output	200	TAV	1 1/4 x 2 1/8	2 1/4	1 7/8 x 2 7/16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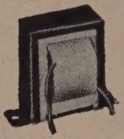
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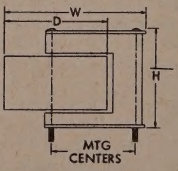
BHV

XAV

GGV

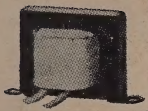
TAV



DAH

THORDARSON-MEISSNER MT. CARMEL, ILLINOIS

Transistor Transformers



BAH

300 Milliwatt Transistor Transformer

MTG. TYPE: BAH H. W. x D.
MTG. CENTERS 1 3/8 DIMENSIONS: 3/4 1 5/8 x 13/16

Listed In Order Of The Turns Ratio

Part No.	Turns Ratio	Impedance Wdg. #1	Impedance Wdg. #2	Resistance Wdg. #1	Resistance Wdg. #2	Applications
TR-1	1.00:1	500CT	500CT	40	55	D - J
TR-110	1.70:1	48CT	4/8/16	4.1	.78	S
TR-8	2.45:1	48CT	4/8	4	1.2	S
TR-111	2.50:1	100CT	4/8/16	11	1.5	S
TR-112	3.27:1	160	4/8/16	19	1.5	S
TR-21	4.47:1	160CT	4/8	12	1	S
TR-113	5.00:1	400CT	4/8/16	34	1.5	S
TR-114	5.60:1	500CT	4/8/16	47	.85	S
TR-115	6.63:1	700CT	4/8/16	77	1.15	S
TR-22	7.07:1	400CT	4/8	26	1.1	S
TR-116	7.9:1	1,000	4/8/16	120	1.6	S
TR-24	8.17:1	100,000	1,500CT	3,000	45	A - J
TR-117	12.5:1	2,500	4/8/16	172	1.15	S
TR-118	13.7:1	3,000	4/8/16	192	1.2	S
TR-28	14.1:1	200,000	1,000	3,000	30	A
TR-119	14.1:1	200,000CT	1,000CT	1,815	123	A
TR-33	35.4:1	250,000	200CT	4,400	8.5	A
TR-35	44.7:1	100,000	50	3,100	5	A
TR-36	50.0:1	500,000	200CT	7,000	8.5	A

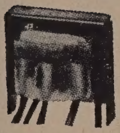
MAH

50 Milliwatt-Transistor Transformers

MOUNTING—MAH DIMENSIONS: H. 7/16 W. x D. 1/2 x 7/16

Listed In Order Of The Turns Ratio

Part No.	Turns Ratio	Impedance Wdg. #1	Impedance Wdg. #2	Resistance Wdg. #1	Resistance Wdg. #2	Application
TR-37	1:1	500CT	500CT	34	42	D - J
TR-38	1.09:1	6,000	5,000CT	330	250	D - J
TR-39	1.24:1	4,000	2,600CT	330	220	D - J
TR-40	2.24:1	10,000	2,000CT	295	147	D - J
TR-41	3.16:1	500	50	35	4.6	D - S
TR-42	3.16:1	20,000	2,000CT	560	140	A - J
TR-43	3.53:1	125CT	10	11	1	S
TR-44	4.08:1	20,000	1,200	560	72	A - J
TR-45	4.46:1	1,000	1,000	73	4.6	D - S
TR-46	4.47:1	200CT	10	18	1	S
TR-47	5.46:1	300CT	10	27	1	S
TR-48	5.75:1	20,000	600	560	43	A - J
TR-49	7.06:1	500CT	10	40	1	S
TR-50	7.9:1	200CT	3.2	18	.36	S
TR-51	9.65:1	300CT	3.2	27	.36	S
TR-52	11.8:1	7,000	50	440	4.6	S
TR-53	12.5:1	500CT	3.2	40	.36	S
TR-54	14.1:1	200,000	1,000	1,300	20	A - J
TR-55	44.7:1	100,000	50	1,170	1.7	A
TR-56	30 HY @ 1 MADC 4,000 Ohms					



BCH

150 Milliwatt Transistor Transformers

MOUNTING TYPE— BCH H. W. x D.
MOUNTING CENTERS 13/16 DIMENSIONS: 11/16 13/16 x 5/8

Listed In Order Of The Turns Ratio

Part No.	Turns Ratio	Impedance Wdg. #1	Impedance Wdg. #2	Resistance Wdg. #1	Resistance Wdg. #2	Application.
TR-2	1.23:1	5,000CT	7,500CT	550	980	D - J
TR-3	1.41:1	5,000CT	10,000CT	550	1,100	D - J
TR-4	1.73:1	1,500	500CT	100	45	D-J-S
TR-5	1.81:1	490CT	150CT	30	16	D - S
TR-6	1.83:1	10,000	3,000CT	820	6660	D - J
TR-7	2.24:1	10,000	2,000CT	740	300	D - J
TR-9	2.45:1	5,000	20,000CT	370	1,300	A - J
TR-10	3.00:1	5,000CT	45,000	310	1,400	A - J
TR-11	3.16:1	500CT	50	30	5	D - S
TR-12	3.16:1	100CT	10CT	13	1.5	S
TR-13	4.00:1	5,000CT	80,000	260	1,520	A - J
TR-108	4.00:1	5,000CT	80,000CT	573	5,740	A - J
TR-14	4.08:1	20,000	1,200	1,250	94	A - J
TR-106	4.08:1	20,000CT	1,200	1,860	142	A - J
TR-15	4.47:1	300CT	15	21	2.5	S
TR-16	5.00:1	400CT	16	28	2	S
TR-17	5.00:1	20,000	800CT	1,350	95	A-D-J
TR-101	5.22:1	350CT	4/12	38	1.45	S
TR-18	5.52:1	500CT	16.4	30	1.7	S
TR-102	5.53:1	500CT	4/8/16	75	3.5	S
TR-103	5.65:1	600CT	4/8/16	73	3.2	S
TR-19	6.04:1	400CT	11	27	1.3	S
TR-20	6.22:1	650CT	16.8	38	1.4	S
TR-104	6.75:1	825CT	4/8/16	14	2.7	S
TR-23	7.07:1	10,000	200CT	900	11	D - S
TR-25	8.66:1	15,000	200CT	1,100	11	J - S
TR-105	9.80:1	1,250	4/12	132	1.4	S
TR-26	10:1	50,000	500CT	1,300	30	A-D-S
TR-107	11.8:1	2,500	4/16	370	2.3	S
TR-27	12.5:1	500CT	3.2	30	.3	S
TR-29	15.6:1	825CT	3.4	40	.25	S
TR-30	15.8:1	50,000	200CT	1,400	9	A - S
TR-31	20:1	40,000	100	1,150	5	A - S
TR-109	24.6:1	10,000CT	4/8/16	1,174	2.6	S
TR-32	25.5:1	9,800	15	1,070	2.5	A - S
TR-34	40.8:1	50,000	30CT	1,400	2.5	A

Applications (A) Input, (D) Driver, (J) Interstage, (S) Output.

FREE "PERSONALIZED" CATALOG

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20 Milliwatt Transistor Transformers

MOUNTING TYPE MAH DIMENSIONS: H. 1/4 W. x D. 3/8 x 5/16

Listed In Order Of The Turns Ratio

Part No.	Turns Ratio	Impedance Wdg. #1	Impedance Wdg. #2	Resistance Wdg. #1	Resistance Wdg. #2	Applications
TR-121	1:1.1	500CT*	600	58	105	D - S
TR-122	1:1.41	300CT*	600	35	110	D - S
TR-123	1.25:1	900CT*	600	105	110	D - S
TR-124	1.58:1	1,500CT*	600	210	120	D - S
TR-125	2.24:1	10,000	2,000CT*	1,160	160	D
TR-130	2.58:1	10,000CT*	1,500CT*	1,150	105	J
TR-126	2.83:1	400	50	70	10	S
TR-127	2.89:1	10,000	1,200CT*	1,160	105	D
TR-128	3.16:1	500	50	105	10	S
TR-129	3.54:1	200CT	16	25	2.9	S
TR-131	4.46:1	1,000	50	240	15	S
TR-132	4.47:1	20,000	1,000	1,700	275	J
TR-133	4.47:1	10,000CT*	500CT*	1,160	44	D
TR-134	5:1	30,000	1,200	1,600	170	J
TR-135	5:1	30,000CT*	1,200CT*	1,500	160	J
TR-136	5:1	400CT*	16	35	2.4	S
TR-137	7.07:1	800CT*	16	86	2.4	S
TR-138	8.15:1	1,070CT*	16	100	2.4	S
TR-139	9.14:1	1,330CT*	16	150	2.4	S
TR-140	11.2:1	2,000CT*	16	240	2.3	S
TR-141	13.7:1	600	3.2	90	.8	S
TR-142	14.1:1	200,000	1,000	6,500	250	A
TR-143	14.1:1	200,000CT	1,000CT	6,500	250	A
TR-144	19.3:1	1,200	3.2	190	.8	S
TR-145	25:1	10,000CT*	16	750	2.3	S
TR-146	56:1	10,000	3.2	1,500	.8	S
TR-147	1 HY @ 2 MADC 130 Ohms DC Resistance					
TR-148	3 HY @ 2 MADC 330 Ohms DC Resistance					
TR-149	6 HY @ 2 MADC 1180 Ohms DC Resistance					
TR-150	12 HY @ 0 MADC 1880 Ohms DC Resistance					
TR-151	20 HY @ 0 MADC 2850 Ohms DC Resistance					

* Balanced windings.

Applications (A) Input, (D) Driver, (J) Interstage, (S) Output

TRIAD TRANSFORMER CORP.

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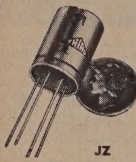
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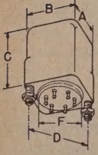

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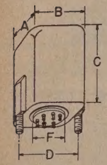

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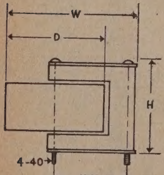

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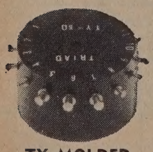
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MINIATURES

†† JAF SERIES — Hermetically Sealed

Type No.	Primary Impedance	Secondary Impedance	Max. Level-DBM	Freq. Resp.	** MTG.
JAF-1	600/250/50	50000	0	60-15000	AF
JAF-2	600/250/50	25,000	0	150-7000	AF
JAF-3	600/250/50	60000 CT.	0	60-15000	AF
JAF-5	30/12/4	50000	0	60-12000	AF
JAF-11	15000	50000	10	60-15000	AF
JAF-12	15000	60000 CT.	10	60-15000	AF
JAF-13	15000	95000 CT.	10	350-7000	AF
JAF-14	200	½ megohm	0	350-5000	AF
JAF-15	15000	1 megohm	10	350-5000	AF
JAF-21	15000	600/250/50	10	60-15,000	AF
JAF-22	15000	600/250/50	10	350-7000	AF
JAF-23	20000 CT.	600/250/50	10	60-15000	AF
JAF-31	600/250/50	600/250/50	10	60-15000	AF
JAF-33	5000 CT.	5000 CT.	10	60-15000	AF
JAF-101	50 h.-.75 Ma.				AF

SUB-MINIATURE AUDIO — Hermetically Sealed

Type No.	Primary Impedance	Secondary Impedance	DC Res. Ohms (Approx.) Pri.	DC Res. Ohms (Approx.) Sec.	** Case
JZ-1	30/12/4	50000	11.5	3800	JZ
JZ-5	600/250/50	60000	350	4100	JZ
JZ-7	30/12/4	1000	5	480	JZ
JZ-13	15000 (1 Ma.)	135000 CT.	985	4400	JZ
JZ-15	20000 (.5 Ma.)	1200/600/100	2700	350	JZ
JZ-25	10000 (1 Ma.)	200	1500	120	JZ
JZ-26	1000 (5 Ma.)	50	355	20	JZ

SUB-MINIATURE AUDIO — Open Frame

Type No.	Primary Impedance	Secondary Impedance	DC Res. Ohms (Approx.) Pri.	DC Res. Ohms (Approx.) Sec.
TZ-1	600/250/50	60000	350	4100
TZ-5	30/12/14	50000	11.5	3800
TZ-7	30/12/4	1000	5	480
TZ-13	15000 (1 Ma.)	135000 CT.	985	4400
TZ-15	20000 (.5 Ma.)	1200/600/100	2700	350
TZ-25	10000 (1 Ma.)	200	1500	120
TZ-26	1000 (5 Ma.)	50	355	20
TZ-28	600	50	95	11
T-41X	1000 (10 Ma.)	200 CT.	430	130
T-42X	9800 (2 Ma.)	16	855	1.7
TY-44X	1000 (10 Ma.)	16/8/4	180	3.8
TY-47X	2000 CT.	16/8/4	260	4

TRANSFORMERS FOR TRANSISTOR POWER SUPPLIES

Type No.	D.C. Volts Out of Rect.	D.C. Ma. Max.	Dimensions—Inches H	W	D	MW
TY-68S	250	65	1-3/4	1-3/4	1-11/32	1-1/2
TY-69S	300	100	1-7/8	2-3/8	1-7/8	1-1/2
TY-70S	325	150	2	2-3/8	2-7/16	1-1/2
TY-71S	375	200	2	2-3/8	2-7/16	1-1/2
TY-74S	600	200	2	4-1/8	3	3-3/4

EPOXY MOLDED TOROIDAL TYPE

Type No.	D.C. Source Volts	D.C. Volts Out Of Rectifier	D.C. Ma. Max.	Dimension—Inches Dia.	Ht.	Wt. Lbs.
TY-78	12.6	250/125	100	1¾	11/16	.35
TY-79	12.6	300/150	200	1¾	1	.35
TY-80	12.6	325/162.5	150	1¾	1	.35
TY-81	12.6	375/187.5	200	2	1	.50
TY-82	12.6	450/225	150	2	1	.50
● TY-83	12.6	500/250	250	2¾	1⅜	.85
TY-84	12.6	600/300	200	2¾	1⅜	1.00
TY-88	28	250/125	80	1 5/16	9/16	.25
TY-89	28	300/150	100	1¾	11/16	.35
TY-90	28	325/162.5	200	1¾	1	.35
TY-91	28	375/187.5	200	2	1	.50
TY-92	28	450/225	200	2	1	.50
● TY-93	28	500/250	250	2¾	1⅜	.85
TY-94	28	600/300	200	2¾	1⅜	1.00
TY-99	6	300/150	100	1¾	1	.35
TY-100	6	325/162.5	150	2	1	.50
TY-101	6	375/187.5	200	2¾	1⅜	1.00
TY-102	6	450/225	150	2¾	1⅜	1.00

MINIATURES

TRANSISTOR TRANSFORMERS

Type No.	Primary Matching Impedance	Primary Current MA	Secondary Matching Impedance	Maximum Level
● TY-23X	50000	.5	500 CT.	100 MW
● TY-24X	50000	.5	3000 CT.	200 MW
● TY-25X	100000	.5	200 CT.	200 MW
● TY-26X	100000	.5	3000 CT.	200 MW
TY-27XT	500 CT.	2	500 CT.	10 MW
TY-28XT	500 CT.	2	200 CT.	10 MW
● TY-29X	24 CT.	500	8/4	10W
● TY-30X	100 CT.	100	8/4	24
● TY-31X	200 CT.	60	8/4	2W
● TY-32X	200 CT.	2	2000 CT.	200 MW
● TY-33X	400 CT.	5	16/8/4	200 MW
● TY-34X	400 CT.	5	2000 CT.	200 MW
● TY-35X	500 CT.	2	150 CT.	100 MW
● TY-36X	2000	2	1500 CT.	200 MW
● TY-37X	2000 CT.	4	8000 CT.	200 MW
● TY-38X	3000 CT.	4	1000 CT.	200 MW
● TY-39X	4000 CT.	4	16/8/4	200 MW
● TY-40X	5000	1	200 CT.	100 MW
● TY-41X	16000	1	4000	100 MW
● TY-42X	20000	.5	8/4	100 MW
● TY-43X	20000	.5	800 CT.	100 MW
TY-44X	1000	10	16/8/4	200 MW
TY-45X	500 CT.	5	16/8/4	200 MW
TY-46X	100	100	1000 CT.	250 MW
TY-47X	2000 CT.	10	16/8/4	200 MW
TY-48X	100 CT.	40	16/8/4	.5W
TY-49X	500 CT.	12	5000 CT.	300 MW
TY-50X	125000		2000 CT.	40 MW
TY-51X	2000 CT.	10	200 CT.	50 MW
TY-52X	20000 CT.	1	2000 CT.	100 MW
TY-53X	200 CT.	100	400 CT.	.6W
TY-54X	15000	1.5	200 CT.	100 MW
TY-55X	2000 CT.	2	500 CT.	200 MW
TY-56X	10000	1	2000 CT.	50 MW
TY-57X	250 CT.	10	16/8/4	200 MW
TY-58X	125 CT.	15	8/4	200 MW
TY-59X	5000 CT.	1	50000 CT.	200 MW
TY-60X	200000		1000	—10 DBM
TY-61X	100	100	100 CT.	.5W
TY-62X	10000	2	4	100 MW
TY-63X	48 CT.	550	16/8	5W
TY-64X	32 CT.	575	16/8/4	10W
TY-65Z	32 CT.	575	6K/4K/3K	10W
TY-66A	6 CT.	5A	6K/4K/3K	40W
TY-67A	6 CT.	5A	16/8/4	40W

†† MINIATURE AUDIO — "Trijets"

Type No.	Primary Impedance	Secondary Impedance	Max. Level-DBM	Freq. Resp.
T-1X	600/250/50	50000	0	60-15000
T-2X	600/250/50	250000	0	100-5000
T-3X	600/250/50	60000 CT.	0	60-15000
T-5X	30/12/4	50000	0	60-15000
T-11X	15000	50000	10	60-15000
T-12X	15000	60000 CT.	10	60-15000
T-13X	15000	95000 CT.	10	350-7000
T-20X	15000	600/250/50	10	60-15000
T-21X	30000	50	10	60-15000
T-22X	15000	600/250/50	10	350-7000
T-23X	20000 CT.	600/250/50	10	60-15000
T-31X	600/250/50	600/250/50	10	60-15000
T-33X	5000 CT.	5000 CT.	10	60-15000
T-101X	50 henries @ .75 Ma.			

See Case Chart Page 1425.

††Low frequency loss will result from DC in windings other than where specified.

SEE TRIAD PRICE LIST ON PAGES 1437, 1438

TRIAD TRANSFORMER CORP.

DIVISION OF LITTON INDUSTRIES

†† JO SERIES — Hermetically Sealed

Type No.	Primary Impedance	Secondary Impedance	Max. Level-DBM	Freq. Resp.	Case
JO-1	600/250/50	50000	0	50-15000	JOA
JO-2	600/250/50	250000	0	150-7000	JOA
JO-3	600/250/50	60000 CT.	0	50-15000	JOA
JO-5	30/12/4	50000	0	50-12000	JOA
JO-11	15000	60000	10	50-15000	JOB
JO-12	15000	60000 Ct.	10	50-15000	JOB
JO-13	15000	95000 CT.	10	300-7000	JOB
JO-21	15000	600/250/50	10	50-15000	JOB
JO-22	15000	600/250/50	10	300-7000	JOB
JO-23	20000 CT.	600/250/50	10	50-15000	JOB
JO-31	600/250/50	600/250/50	10	50-15000	JOB
JO-101	50 h.-2 Ma.				JOB

††Low frequency loss will result from DC in windings other than where specified.

DC TO AC TRANSISTOR TRANSFORMERS

Type	Primary	Secondary		
TY-75A	12v	115v	60cps	120 watts
TY-76A	12v	115v	60cps	60 watts
TY-468	28v	115v	400cps	60 watts

POWER COMPONENTS

HERMETICALLY SEALED

Combined PLATE and FILAMENT Transformers Primary 115V — 50/60 cycle

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filaments	F Dim. (Min.) Inches	Case
● **HSM-200**	120	100	6.3 CT.-1.6A.	1⅜	FA
†**HSM-201**	500 CT.	20	6.3 CT.-2A.	1⅜	GA
HSM-203	600 CT.	50	6.3 CT.-2.5A. 5 -2A.	1⅜	JB
HSM-205	700 CT.	70	6.3 CT.-3A. 5 -3A.	1⅜	JA
HSM-207	700 CT.	120	6.3 CT.-5A. 5 -3A.	1⅜	KA
HSM-241	700 CT.-70V. bias tap.	150	6.3 CT.-6A. 6.3-V. -2A. 5 -3A.	1⅜	LA
HSM-212	1000/800 CT.	150 (ch. in.) 117 (cd. in.)	6.3/5.4A. 6.3 CT.-4A. 6.3-V-4A.	1⅜	LA
HSM-245	800/700 CT. 70 V. bias tap.	200	6.3 CT.-6A. 6.3-V. -4A. 5 -6A.	1⅜	MA
HSM-216	1000/800 CT.	200 (ch. in.) 157 (cd. in.)	6.3/5-4A. 6.3 CT.-5A. 6.3-5A.	1⅜	MA
HS-247	800/700 CT. 70 V. bias tap.	300	6.3 CT.-8A. 6.3-V. -4A. 5 -6A.	1⅜	GP-15
HSM-218	1000/800 CT.	300 (ch. in.) 235 (cd. in.)	6.3/5-6A. 6.3 CT.-6A. 6.3-6A	1⅜	GP-15
HSM-219	(115/230 pri.) 760/1600 CT.	40/230 (ch. input)		Spcl.	GP-15

† Low flux density—for pre-amplifier service. All types electrostatically shielded.
GP-15 dimens. 4¾″ x 5⅞″ x 6⅝″ high. Wt. approx. 22 lbs. Mtg. centers 3¾″ x 4⅞″.

● **New Item**

Combined PLATE and FILAMENT Transformers Primary 115V—400 cycle to operate 380 to 1500 cycles

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filaments	Insul. Test Volt.	F Dim. (Min.) Inches	Case
HS-402	475 CT.	20	6.3 CT.-1.5A.	1500	²³⁄₃₂	AJ
HS-401	500 CT.	40	6.3 CT.-1A. 6.3-1A	1500	⅞	EB
HS-405	600 CT.	70	6.3 CT.-2A. 6.3-2A. *6.3-2A.	1500	1⅜	GA
HS-407	600 CT.	120	6.3 CT.-3.5A. 6.3-3.5A. *6.3-3A.	1500	1⅜	JB
HS-409	700 CT.	150	6.3 CT.-4A. *6.3-3A.	1500	1⅜	HA
HS-413	450 CT.	200	6.3 CT.-6A. 6.3 -6A. *6.3-4A.	1500	1⅜	JA
HS-415	800/600 CT.	200	6.3 CT.-6A. 6.3-6A. *6.3-6A.	2500	1⅜	KB
HS-417	800/600 CT.	300	6.3 CT.-6A. 6.3-6A. *6.3-6A.	2500	1⅜	LA

* Tapped for 5 volt rectifier use. All types electrostatically shielded.

AUDIO INTERSTAGE Transformers

Type No.	Primary Imped.	Turn Ratio	Freq. Resp.	Max. Level Pri. Volts	Shld'g	Case
HS-23	15000	1:2.7	20-20000	15	P-3	GP-4
HS-25	15000	1:2.72 overall	20-20000	25	P-1	GP-4
HS-35	15000	1:2.72 overall	20-20000	20	P-1	GP-2
HS-27	20000/5000	1:1.72 overall	20-20000	50	P-1	GP-4
HS-29	20000/5000	1:2 overall	20-20000	20	P-5	GP-4
HSM-31	20000/5000	1:1 or 2:1	20-20000	240		FA
HS-32	15000 (6 Ma.)	1:2 overall	20-15000	20	P-1	GP-5

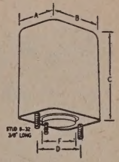
Low frequency loss will result from use of unbalanced DC in windings other than where specified.

See table below for shielding data.

SHIELDING

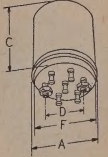
P-1—One nickel alloy high permeability shield — 45db. reduction in pickup.
P-3—Two nickel alloy shields interleaved with one heavy copper shading ring — 70db. reduction in pickup.
P-5—Three nickel alloy shields interleaved with two heavy copper shading rings—95 db. reduction in pickup.

HS Series



JO Series

	AF	AG	AH	AJ	JZ*
A	3/4	1	1-5/16	1-5/8	9/16 dia.
B	3/4	1	1-5/16	1-5/8	Round
***†Bw**	1-3/64	1-3/32	1-11/32		
C	1-1/8	1-3/8	1-3/4	2-3/8	25/32
D	*27/32	*1-1/32	*1-11/32	*1-5/8	
F	5/8	3/4	7/8	7/8	
I	4/40	6/32	6/32	6/32	
Unit Wt.	1-1/4 oz.	2-1/2 oz.	5-1/4 oz.	11 oz.	.5 oz.



	GP-1	GP-2	GP-3	GP-4	GP-5
A	⅞	1¹⁄₁₆	1¼	1⁷⁄₁₆	1⅝
B	1¹⁄₁₆	1¼	1½	1¾	2
Bw	1⅓	1¹¹⁄₃₂	1⁹⁄₁₆		
C	1¹¹⁄₁₆	2¼	2⅜	2½	2¾
D	1³⁄₃₂	1³⁄₁₆	1¹⁵⁄₃₂	1½	1½
F	¾	¾	¹⁵⁄₁₆	¹⁵⁄₁₆	¹⁵⁄₁₆
Wt.	3 oz.	5½ oz.	8 oz.	12 oz.	17 oz.

	JOA	JOB
A	¹⁵⁄₁₆ dia.	¹⁵⁄₁₆ dia.
B	Round	Round
C	1¹³⁄₃₂	1²⁵⁄₃₂
D	⁹⁄₁₆	⁹⁄₁₆
F	⅞	⅞
Unit Wt.	2 oz.	2½ oz.

	AH	AJ	EA	EB	FA	FB	GA
A	1⁵⁄₁₆	1⅝	1¹³⁄₁₆	1¹³⁄₁₆	2¹⁄₁₆	2¹⁄₁₆	2⅜
B	1⁵⁄₁₆	1⅝	1¹⁵⁄₁₆	1¹⁵⁄₁₆	2⁵⁄₁₆	2⁵⁄₁₆	2¾
C	1¾	2⅜	2¾	2⁷⁄₁₆	3⅛	2½	3¹³⁄₁₆
D	1¼	1³⁄₁₆	1⅜	1⅜	1¹¹⁄₁₆	1¹¹⁄₁₆	2⅛
E		1³⁄₁₆	1¼	1¼	1⁷⁄₁₆	1⁷⁄₁₆	1¾
G	⅜	⅜	⅜	⅜	⅜	⅜	⅜
I	6-32	6-32	6-32	6-32	6-32	6-32	6-32
Wt. lbs.	4 oz.	9 oz.	1	15 oz.	1¾	1½	2

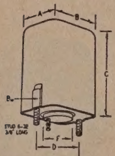
	GB	HA	HB	JA	JB	KA	KB
A	2⅜	2⅝	2⅝	3¹⁄₁₆	3¹⁄₁₆	3⅜	3⅜
B	2¾	3¹⁄₁₆	3¹⁄₁₆	3⁹⁄₁₆	3⁹⁄₁₆	3¹⁵⁄₁₆	3¹⁵⁄₁₆
C	2¹³⁄₁₆	4¼	3³⁄₁₆	4⅞	3⅞	5¼	4⁵⁄₁₆
D	2⅛	2¹⁹⁄₆₄	2¹⁹⁄₆₄	2⅝	2⅝	3	3
E	1¾	1⁵⁵⁄₆₄	1⁵⁵⁄₆₄	2⅛	2⅛	2⁷⁄₁₆	2⁷⁄₁₆
G	⅜	⅜	⅜	⅜	⅜	½	½
I	6-32	8-32	8-32	8-32	8-32	10-32	10-32
Wt. lbs.	1¾	2½	2¼	4½	4	7¾	7

	LA	LB	MA	MB	NA	NB
A	3¹¹⁄₁₆	3¹¹⁄₁₆	4	4	4⁵⁄₁₆	4⁵⁄₁₆
B	4⁵⁄₁₆	4⁵⁄₁₆	4¹¹⁄₁₆	4¹¹⁄₁₆	5¹⁄₁₆	5¹⁄₁₆
C	5⁹⁄₁₆	4½	6	4¹⁵⁄₁₆	6¹³⁄₁₆	5½
D	3⁵⁄₁₆	3⁵⁄₁₆	3¹¹⁄₁₆	3¹¹⁄₁₆	4¹⁄₁₆	4¹⁄₁₆
E	2¹¹⁄₁₆	2¹¹⁄₁₆	3	3	3⁵⁄₁₆	3⁵⁄₁₆
G	½	½	⅝	⅝	⅝	⅝
I	10-32	10-32	¼-20	¼-20	¼-20	¼-20
Wt. lbs.	9¼	8½	13½	12½	18	16

* Not in conformance with MIL-T-27A.

TRIAD TRANSFORMER CORP.

DIVISION OF LITTON INDUSTRIES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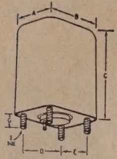
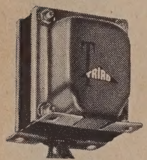

MIL-T-27A CASE



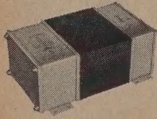
Case A

PL-4

PL-5

PL-6
TRIAD
LOS ANGELES, CALIF.
PL-6

Case X


Case SC

POWER OUTPUT to Line and VC.

Hermetically Sealed

Type No.	Primary Impedance	Secondary Impedance	Max. Level-Watts	Freq. Resp.	** Case
HS-71	10000 (10 Ma.)	600/150	2	150-15000	AH
HS-73	5000 (40 Ma.)	500/250/ 16/8/4	5	150-15000	AJ
HS-75	10000 CT. (50 Ma. bal.)	500/250/ 16/8/4	10	150-15000	EB
HS-77	9000 CT. (120 Ma. bal.)	500/250/ 16/8/4	25	150-15000	GA

LOW LEVEL AUDIO

AUDIO INPUT TRANSFORMERS

Hermetically Sealed

Type No.	Primary Imped.	Turn Ratio	Freq. Resp.	Max. Level DBM	Shld'g	** Case
HS-1	600*/250*/ 150/62.5	1:11.3	20- 20000	10	P-5	GP-4
HS-11	Same as above				P-1	GP-2
HS-3	600*/250*/ 150/62.5	1:14 overall	20- 20000	10	P-5	GP-5
HS-4	Same as above				P-3	GP-4
HS-14	Same as above				P-1	GP-3
HS-15	600*/250*/ 150/62.5 (10 Ma.)	1:8 overall	30- 20000	20	P-3	GP-5
HS-5	30-50	1:65.7	50- 10000	0	P-5	GP-4
HS-8	600*/250*/ 150/62.5	1:14 overall	20- 20000	20	P-1	GP-4

*Balanced center tap.

Low frequency loss will result from use of unbalanced DC in windings other than where specified.
(See table on preceding page for shielding data.)

AUDIO LOW LEVEL OUTPUT, MIXING, MATCHING, BRIDGING

Type No.	Primary Imped.	Secondary Impedance	Freq. Resp.	Max. Level DBM	Shld'g	** Case
HS-50	15000	600*/250*/ 150/62.5	20- 20000	26	P-3	GP-4
HS-60	15000	600*/250*/ 150/62.5	20- 20000	10	P-1	GP-2
HS-61	15000 (5 Ma.)	600*/250*/ 150/6.25	50- 15000	20	P-1	GP-5
HS-52	20000/ 5000	600*/250*/ 150/62.5	20- 20000	26	P-1	GP-4
HS-54	20000/ 5000	600*/250*/ 150/62.5	20- 20000	10	P-5	GP-4
HS-56	600*/250*/ 150/62.5	600*/250*/ 150/6.25	10- 30000	20	P-3	GP-4
HS-66	600*/250*/ 150/62.5	600*/250*/ 150/6.25	10- 30000	20	P-1	GP-3
HS-58	600*/250*/ 150/62.5	600*/250*/ 150/6.25	20- 30000	15	P-3H	GP-5

* Balanced center tap.

Low frequency loss will result from use of unbalanced DC in windings other than where specified.

See table on Page 1425 for shielding data.

POWER COMPONENTS

Type No.	Primary Volts	Secondary Volts	Secondary Amperes	Insulation Test Voltage	** Case
HSM-223	115	6.3	0.6	1500	AJ
HSM-225	105-115-125	6.3 CT.	2	1500	EA
HSM-226	105-115-125	6.3 CT.	3.6	1500	FA
HSM-234	105-115-125	6.3 CT. 6.3	10 10	2500	KA
HSM-227	105-115-125	†6.3 CT. 6.3	3 3	2500	GA
HSM-229	105-115-125	6.3 CT.	8	2500	JB
HSM-230	105-115-125	24 CT.	0.8	1500	FA
HSM-236	105-115-125	†12.6 CT. 12.6	2 2	2500	JB
HSM-228	105-115-125	†6.3 CT. 6.3	6 6	2500	JA
HSM-231	105-115-125	6.3 CT. 5 CT.	5 3	2500	JB
HSM-232	105-115-125	2.5 CT.	10	7500	HA
HSM-235	105-115-125	2.5 CT. 10 CT.	10 10	7500 2500	MA

† Series or parallel connections.
** See case chart page N-771.

FILAMENT Transformers, 380/1500 cycle

Type No.	Primary Volts	Secondary Volts	Secondary Amperes	Insulation Test Voltage	** Case
HS-436	115	6.3 CT.	1	1500	AH
HS-425	105-115-125	6.3 CT.	2	1500	AJ
HS-427	105-115-125	6.3 CT.	5	1500	EA
HS-438	105-115-125	24 CT.	1.5	1500	EA
HS-433	105-115-125	*6.3 CT. 6.3	5 5	2500	FA
HS-435	105-115-125	*6.3 CT. 6.3 †6.3/5	3.5 3.5 3	2000	FA
HS-441	105-115-125	*5 CT. 5 2.5 CT.	10 10 10	2000 7500	HA
HS-443	105-115-125	*12.6 CT. 12.6	0.8 0.8	1500	AJ
HS-442	57.5-99.7-115-120 Single phase.	12.6 CT. 12.6	2 2	1500	EA

Two HS-442's can be used, 115 volt 3 phase to 26 volt 2 phase, Scott-connected.

* Series or parallel connection.
† 5 volt tap for filament type rectifiers.
**See case chart page 1425.

HIGH FIDELITY OUTPUT

HIGH LEVEL OUTPUT — Hermetically Sealed

Type No.	Primary Impedance	Secondary Impedance	Freq. Resp.	Max. Level Watts	F Di. Min. In.	** Case
HSM-79	20000 CT. (20 Ma.) or 5000 (40 Ma.)	16/8/4	50-25000	5	1⅜	FA
HSM-80	20000 CT. (20 Ma.) or 5000 (40 Ma.)	500/ 250 CT. or 125/62.5	50-25000	5	1⅜	FA
HSM-81	8000 CT. Split primary.	16/8/4	7-50000	15	1⅜	JB
HSM-82	8000 CT.	500/ 250/125	7-50000	15	1⅜	JB
†HSM-181	8000/ 2000 CT. Split primary.	16/8/4	7-50000	15	1⅜	JB
†HSM-182	8000/ 2000 CT. Split primary.	500/ 250/125	7-50000	15	1⅜	JB
HSM-84	5000 CT.	16/8/4	7-50000	20	1⅜	JB
HSM-85	5000 CT.	500/ 250/125	7-50000	20	1⅜	JB
● HSM-184	8000/ 2000 Split primary	16/8/4	7-5000	25	1⅜	KG
†HSM-189	10000/ 2500 CT. Split primary.	16/8/4	7-50000	25	1⅜	KB
†HSM-190	10000/ 2500 CT. Split primary.	500/ 250/125	7-50000	25	1⅜	KB
†HSM-186	6600 CT. Split primary.	16/8/4	7-50000	25	1⅜	KB
†HSM-187	6600 CT. Split primary.	500/ 250/125	7-50000	25	1⅜	KB

● **New Item**

(Continued on next page.)

SEE TRIAD PRICE LIST ON PAGES 1437, 1438

TRIAD TRANSFORMER CORP.

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HSM-91	2500 CT.	16/8/4	7-50000	50	1⅜	LA
HSM-94	4500 CT.	16/8/4	7-50000	55	1⅜	LA
HSM-95	4500 CT.	500/250/125	7-50000	55	1⅜	LA
†HSM-192	4000 CT. Split primary.	16/8/4	7-50000	65	1⅜	LA
†HSM-193	4000 CT. Split primary.	500/250/125	7-50000	65	1⅜	LA
HS-97	6600 CT.	500/250/125	10-30000	125	Spcl.	Spcl.

† Williamson type circuit.
Proper taps on primary for screen operation.

HIGH LEVEL OUTPUT

Type No.	Primary Impedance	Secondary Impedance	Output Watts
S-34X	4000 CT.	32/16/8	7.5
S-31A	8000 CT.	16/8/4	15
S-32A	8000 CT.	500/250/125	15
†S-142A	8000 CT.	16/8/4	15
S-35A	5000 CT.	16/8/4	20
S-36A	5000 CT.	500/250/125	20
● †S-144A	[illegible]000 CT.	6/8/4	25
†S-146A	6600 CT.	16/8/4	25
†S-148A	10000 CT.	16/8/4	25
S-42A	4500 CT.	16/8/4	50
†S-152A	4000 CT.	16/8/4	65
SR-45Z*	4000/2000/1000/500	16/8/4	10
S-46A	2000/1000/500/250	16/8/4	20

† Williamson type circuit. Proper taps on primary for screen operation, leads out both end bells.
* Replaces S-45Z. **● New Item**

LINE POWER

ISOLATION Transformers, 50/60 cycles

(See page N-776 for 380/1500 cycle isolation transformers)

Type No.	V. A. Output	Input Volts	Output Volts
N-51X	35	115	115
N-68X	50	230/115	115
N-53M	85	115	115
N-54M	150	115	115
N-67A	150	230/115	115
N-55M	250	115	115
N-66A	250	230/115	115
N-57M	500	115	115
N-59M	1000	115	115
†N-52M	350	95 to 130 (in 5V steps)	115
†N-56M	150	95 to 130 (in 5V. steps)	115

†With switch and meter for primary voltage control. Detachable cord.

N-469A	50	230/115	115
N-470A	150	230/115	115
N-471A	300	230/115	115

STEPDOWN Autoformers, 50/60 cycles

Type No.	V. A. Output	Input Volts	Output Volts
N-1X	50	230	115
N-3M	85	230	115
N-4M	150	230	115
N-5M	250	230	115
N-7M	600	230	115
N-9M	1250	230	115
N-11M	2000	230	115
N-34X	150	95/105/115/125/135	115
†N-35M	350	95 to 130 (in 5V. steps)	115
†N-50M	500	95 to 130 (in 5V. steps)	115

With switch and meter.

† M case with switch for primary voltage control and detachable cord.

Note: Last letter of Type No. denotes case style

FILTER REACTORS

Type No.	Current DC Ma.	Inductance *Henries	Resistance Ohms	Insulation Test Voltage
HSM-301	20	30	1000	1500
HSM-302	20	14	550	1500
HS-331	40	4	375	1500
HS-303	50	12	385	1500
HS-333	70	3	225	1500
HSM-305	70	15	300	2500
HS-335	120	3	150	1500
HSM-307	120	15	185	2500
HSM-309	150	9	115	2500
HS-339	200	3	105	2000
HSM-315	200	10	100	2500
HS-341	300	2	48	2000
HSM-319	300	10	85	2500

* Minimum Inductance—20%

BLOCKING OSCILLATOR TYPE

Type No.	Pulse Voltage per Winding	Pulse Duration—us	Load Impedance —Ohms
PL-4	100-100	.54 to .66	500*
PL-5	100-100-100	.36 to .54	2000*
PL-6	100-100-100	.36 to .54	2000*

* As blocking oscillator in Triad circuit. Can be used with lower impedances and higher peak power at lower duty cycle.

HIGH SPEED FERRITE TOROIDAL CORE LOW POWER

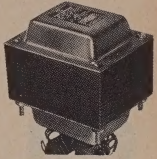
Type No.	Turns Ratio	Pulse Width μ Sec.	Rise Time μ Sec.	Repitition Rate	Suggested Load Ohms	Volts
●PL-80E **●PL-80H** **●PL-80P**	1-1	.07	.03	1-2 Mc	200	15
●PL-81E **●PL-81H** **●PL-81P**	2-1	.07	.03	1-2 Mc	200	20
●PL-82E **●PL-82H** **●PL-82P**	3-1	.08	.03	1-2 Mc	100	15
●PL-83E **●PL-83H** **●PL-83P**	4-1	.08	.03	1-2 Mc	100	15
●PL-84E **●PL-84H** **●PL-84P**	5-1	.08	.03	1-2 Mc	100	15

The letter "H" indicates Hermetically Sealed, the letter "P" indicates Miniature Plug-in and the letter "E" indicates Epoxy Molded. **●New Item.**

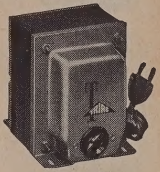
SLOW SPEED SILICON CORE LOW POWER

Type No.	Pulse Voltage per Winding	Pulse Duration—μ Sec.	Load Impedance —Ohms
PL-124E **PL-124H**	300-300-300	.6 to 5	150
PL-140E **PL-140H** **PL-140M**	100-400-100	.6 to 5	175
PL-139E **PL-139H** **PL-139M**	100-100	.3 to 1.5	250
PL-146E **PL-146H** **PL-146M**	300-300	.6 to 5	250

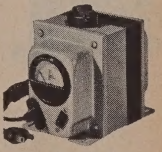
Letter "M" indicates MIL type case.



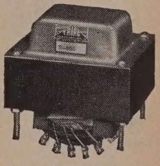
Case B



Case M



Case M with Meter



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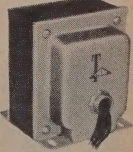


Case AC

SEE TRIAD PRICE LIST ON PAGES 1437, 1438

TRIAD TRANSFORMER CORP.

DIVISION OF LITTON INDUSTRIES

INSTRUMENT POWER

Instrument POWER SUPPLY Transformers

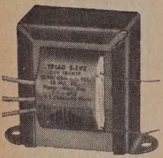
Intelligent design and construction of measuring instruments involves consideration of many factors normally neglected in electronic circuits. Regulation of power supply voltages, limitation of external magnetic fields by minimum flux density, multiple static shields to limit capacitive coupling, multiple filaments where tubes must operate at different potentials, all become necessary to obtain peak performance. The transformers on this page are a series of special designs which have been developed for instrument design.

Case U

For PREAMPLIFIERS, VTVM, etc.

Primary 115 volts — 60 cycles

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filament Windings Volts and Amperes
R-68A	800 CT.	30	5V.-2A, 6.3V-1.2A, 6.3V-1.2A.
R-2C	135	15	6.3V-.9A.
R-23B	250 CT.	22	6.3-.8A. 15.5/12.6V-.6A.
R-3A	500 CT.	20	6.3V CT.-2A.
R-29A	230 CT.	40	6.3V.-1.5A.
R-30X	135	50	6.3V.-1.5A.
R-54X	115	15	6.3V.-.6A.
R-56A	130	20	0/15/22.5/30V-6A.
R-73B	135	200	6.3V CT.-5.5A.



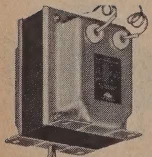
Case Z

CATHODE RAY Tubes

Primary 115 volts — 60 cycles

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filament Windings Volts and Amperes	
R-41C	440-0- 440-1250.	125/5	*6.3V.-.6A. †2.5V.-1.75A.	†2.5V.-1.75A. 5V.-3A.
R-45C	400-0- 400-800.	30/5	*6.3V.-.6A. 6.3 CT.-3A. †5V.-2A	6.3V.-1A. 5V.-2A.
R-43C	1600	3	*6.3/5/2.5V.-1A. †6.3/5/2.5V.-3A.	

* Statically shielded and insulated for full plate voltage.
† Insulated for full plate voltage.



Case AL

For REGULATED POWER SUPPLIES

Primary 115 volts — 60 cycles

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filament Windings Volts and Amperes	
R-70A	880 CT.	75	6.3V.-.6A. 6.3V.-.3A.	6.3V.-.9A. 6.3V.-3A.
R-26A	880-720 CT.	200	6.3 CT.-8A. 6.3V.-1A.	6.3V.-3A. 5V.-3A.
R-28A	1250 CT.	300	6.3 CT.-8A. 6.3V.-3A.	6.3V.-3A 5V.-6A.
R-46A	1250 CT. 130 (Bias winding)	350 50	5V.-4A.	6.3V.-4A. 6.3V.-1A. 6.3V.-1A.

R-46A will supply 550 V. D.C. using 2 5R4G rectifier tubes, choke input. Will also supply 130 V. for bias using Selenuim rectifier. Sufficient filament windings to regulate screen voltages.

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filament Windings Volts and Amperes	
R-27A	1500 CT.	400	5V.-6A.	6.3V.-3A. 6.3V.-8A.

Case X

UNIVERSAL

Isolation, Autoformer, Voltage Control 50/60CPS

Type No.	V.A. (Isolation)	V.A. (Autoformer)
N-64AC	500	1000
N-62AC	1000	2000
N-60SC	2000	4000

SELENIUM RECTIFIER Transformers

Primary 60 cycles

These transformers are for use with Selenium rectifiers. Rectifiers *not* included.

Type No.	Primary Volts	Secondary AC Volts	Secondary Amperes RMS	Half Wave Volts DC	Full Wave Volts DC
F-47U	115	17-18	3	6-7	13-14
F-48U	115	17-18	6	6-7	13-14
F-49U	115	36 36	3 3	13	26
F-60U	115	6.5-13- 19.5-26	3 (int.)	9	18
F-61U	115	24-27-30 33-36	3	13	26
F-67U	110-120	24-27-30- 33-36	8	13	26
F-63U	115	8-9 8-9	2 2		6-7
F-64U	115	7-8-9	7		6-7
F-62U	105-115- 125	9-9-9-9	10 ea. wdg.		6-7 ea. wdg.
F-68U	115	9 CT. 9 9 9	3.5 3.5 3.5 3.5		6-7 ea. wdg.
F-65U	110-120	140-150-160	.75	60	115
F-66U	110-120	140-150-160	2.5	60	115
*F-79U	115	24-26-28-30	15	—	22.8
F-80U	tapped for mult. sec.	12 to 18 or 24 to 36CT	40 20		
F-84AC	230-115	24CT or 12CT	10 20		
F-90X	115 tapped	40CT-20CT-10	100ma		
F-91X	115 tapped	40CT-20CT-10	300ma		
F-92A	115 tapped	40CT-20CT-10	1 amp		
R-93A	115 (voltage doubler circuit)	6.3CT	6 150-160-170		(500ma)

* Replaces F-69U
† Voltage doubler circuit

FILAMENT Transformers, Single Secondary

Primary 115 volts — 60 cycles

Type No.	Secondary Volts	Secondary Amperes	Test Volts
F-1X	2.5 CT.	3	1500
F-72Z	2.5 CT.	5	7500
F-6X	2.5 CT.	6	2500
F-3X	2.5 CT.	10	3000
F-5U	2.5 CT.	10	7500
F-71U	2.5 CT.	10	10000
F-7X	5 CT.	3	1500
F-8X	5 CT.	6	1500
•F-12X	5 CT.	8	2500
F-9A	5.2 CT.	13	1500
F-10U	5 CT.	14	10000
F-9U	5.2 CT.	13	1500
•F-15U	5 CT.	15	3000
F-11U	5.2 CT.	24	1500
F-13X	6.3	.6	1500
F-14X	6.3 CT.	1.2	1500
†F-52X	6.3	1.2	5000
†F-51X	6.3/5	2	5000
†F-53X	6.3	4	5000
F-16X	6.3 CT.	3	1500
F-18X	6.3 CT.	6	1500
F-18A	6.3 CT.	6	1500
•F-19X	6.3/6 CT.	6	2500
F-21A	6.3 CT.	10	1500
•F-20U	6.3/6 CT.	11	2500
F-22A	6.3 CT.	20	2000
•F-24U	7.5/6.3 CT.	8	2500
•F-28U	7.5/6.3 CT.	25	3000
F-23U	10 CT.	7	1500
•F-29U	12/11/10 CT.	11	3000
F-25X	12.6 CT.	1.5	1500

● New Item (Continued on next page.)

SEE TRIAD PRICE LIST ON PAGES 1437, 1438

TRIAD TRANSFORMER CORP.

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F-44X	12.6 CT.	2	1500
F-26X	12.6 CT.	2.5	1500
F-45X	24 CT	1	1500
F-41X	25.2 CT.	2.2	1500
F-40X	26.8 CT	1	1500
F-50X	Filament line transformer Pri. 6.3V/5V Sec. 6.3/5V 2A		5000
F-83A	12.6 CT. 12.6 CT.	5 5	1500

† Low capacity—High voltage for damper tube operation.

CHOKES SWINGING Filter REACTORS

Type No.	Inductance Henries	Current Ma.	Resistance Ohms	Test Volts RMS
C-31A	25/5	20/200	150	2500
C-33A	25/5	30/300	105	3000
C-32AL	20/4	35/350	105	5000
C-35A	20/4	40/400	60	3000
C-39A	25/5	50/500	65	3000
C-38AL	25/5	50/500	65	5000

SMOOTHING Filter REACTORS

Type No.	Inductance Henries	Current Ma.	Resistance Ohms	Test Volts RMS
C-30X	50	15	3500	1500
C-2X	2	15	70	1500
C-1X	15	20	1000	1500
C-3X	10	50	500	1500
C-4X	4	50	360	1500
C-6X	5	65	330	1500
C-5X	12	75	390	1500
C-8X	7	75	240	1500
C-7X	10	90	270	1500
C-9X	4	90	100	1500
C-11X	6	110	160	1500
C-10X	9	125	250	1500
C-12X	6	160	165	1500
C-12A	6	160	165	1500
C-13X	3	160	75	1500
C-14X	6	200	150	1500
C-14A	6	200	150	1500
C-16A	10	200	150	2500
C-21X	1.5	225	65	1500
C-15X	4	250	100	1500
C-15A	4	250	100	1500
C-23X	1.2	260	45	1500
C-24X	1	200	50	1500
C-27X	.7	290	25	1500
•C-36X	.5	300	30	1500
C-17X	1.5	300	40	1500
C-18A	8	300	90	2500
C-19A	10	300	105	3000
C-25A	2.6	310	60	1500
C-42AL	8	350	105	5000
C-20A	6	400	60	3000
C-22A	10	500	65	3000
C-45AL	10	500	65	5000
C-40X	.32	600	10	1500
C-47U	.3-.075	1A-2A	3-.75	1500
C-48U	.08-.02	2.5A-5A	.57-.143	1500
C-49U	5A-10A	.19.05	.032-.008	1500
C-80U	.024-006	20A-40A	.096-.024	1500

● New Item

FILAMENT Transformers, Multiple Secondary

Primary 115 volts — 60 cycles

Type No.	Secondary Volts and Amperes		Test Volts RMS
F-27U	10 CT.-10A.	2.5 CT.-10A.	1500 7500
F-30A	5 CT.-3A.	6.3 CT.-8A.	1500
F-32A	6.3 CT.-3A.	6.3 CT.-3A.	1500
F-34A	6.3 CT.-1.75A. 6.3V.-1.75A.	6.3V.-1.75A. 6.3V.-1.75A.	1500
F-36A	6.3 CT.-3.5A. 6.3V.-3.5A.	6.3V.-3.5A. 6.3V.-3.5A.	1500
F-38A	6.3 CT.-5A. 6.3V.-1A. 5V.-4A.	6.3V.-5A. 5 CT.-2A.	1500
F-42A	12.6 CT.-2.5A.	12.6-2.5A.	1500

ISOLATION Transformers

Primary 115V—400 cycle to operate 380 to 1500 cycles

Type No.	Secondary Volts	Amp.	V. A.	F Dim. (Min.) inches	Case
HS-470	115	.35	40	⅞	EA
•HS-471	115	.7	80	⅞	FA
HS-472	115	1.4	160	⅞	GA
HS-474	115	2.6	300	⅞	JA
•HS-475	115	4.4	500	⅞	KA

60 cycle — hermetically sealed

Type No.	secondary volts	amp.	V.A.	F dim. (Min.) inches	Case
HSM-270	105-115-125	.4	50	⅞	JB
HSM-271	105-115-125	1	125	⅞	KA
HSM-272	105-115-125	2	250	1⅜	NB

All isolation transformers electrostatically shielded.

- New Item

AUDIO

Low Level Input

Type No.	Application	Frequency Response	Primary Impedance	Turn Ratio
A-9J	line or mike to grid	30-15000	600/250/50	12
A-10J	line to grid	30-15000	600/150 split wdgs.	10.1
A-11J	line or mike to grid 60-80DB shielding	30-15000	600/250/50	10
A-12J	same as A-11J	30-15000	600/150 split windings	10
A-13J	line to transistor or line to line (70 db Shldg)	30-15000	600-200CT 50	
A-40J	par. fed 6J5 or 6SN7 plate to P.P. grids	30-15000	15000	2.76
A-41J	same as A-40J 8ma DC in primary			
A-55J	par. fed 6J5 or 6SN7 to line	30-15000	15000	2.5
A-57J	line to line	30-15000	600/250/50	1
A-65J	par. fed 6J5 or 6SN7 to line	30-15000	15000	5
A-66J	same as A-65J— 8 ma DC in primary	30-15000	15000	5
A-67J	line to line	30-15000	600/150 split windings	1
A-68J	pp plate to line 8ma DC in primary	30-15000	30000CT	5
A-75J	Audio choke — 15 Henries			
A-77J	Audio choke — 200 henries - 5 ma DC dual winding 100 henries - 10 ma DC			
A-78J	output pp transistors to line	30-15000	2000CT	
A-79J	Transistor interstage 10ma in primary	40-15000	1000	

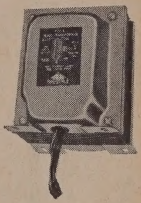
• new item

Triad "J" series transformers closely approach the electrical performance of the "HS" series while eliminating or modifying mechanical features which increase the cost. Careful design, taking advantage of the flexibility of the "J" series units, will result in low level amplifiers which will in every way meet broadcast quality specifications.

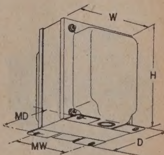
AUDIO INPUT Transformers

Line or Microphone to Grid

Type No.	Application	Frequency Response	Primary Impedance	Turn Ratio
A-1X	Line or single button mike to grid.	300-3000	100	31.4
A-3X	Line or D.B. mike to grid.	300-3000	400 CT.	15.8
A-4X	Line to grid.	300-3000	500/200/67.5 CT.	12
A-5X	Single button mike to p.p. grids—Hi-gain.	300-3000	100	84
A-6X	Speaker V.C. to grid.	300-3000	8/3.2	79
A-7J	voice coil to grid	300-3000	3.2	124



Case A



Case A

SEE TRIAD PRICE LIST ON PAGES 1437, 1438

TRIAD TRANSFORMER CORP.

DIVISION OF LITTON INDUSTRIES

AUDIO

OUTPUT Transformers
Line to Voice Coil

Type No.	Primary Impedance	Output Imped.	Output Watts	Freq. Resp.
S-23X	50 (autoformer).	3.2	3	300-3000
S-26X	500/50 (autoformer).	3.2	3	300-3000
S-65X	500	8/4	5	300-7000
S-66X	500 (autoformer).	16/8/4	3	100-5000
S-76Z	250/125/62.5/31	16/8/4	10	40-15000
S-77U	500 CT./125	32/16/8/ 4/2	30	40-15000

POWER

Combined PLATE and FILAMENT Transformers
Primary 115 volts — 60 cycles

Case A

Type No.	Plate Supply		Rect. Fil.		Other Fil.	
	AC Volts	DC Ma.	Volts	Amp.	Volts	Amp.
R-22A	380/320 CT.	70	6.3	.6	6.3 CT.	3
R-22B	380/320 CT.	70	6.3	.6	6.3 CT.	3
R-4A	500 CT.	40			6.3 CT.	2
R-4B	500 CT.	40			6.3 CT.	2
R-5A	600 CT.	65			6.3 CT.	2.7
R-5B	600 CT.	65			6.3 CT.	2.7
R-6A	480 CT.	50	5	2	6.3 CT.	2
R-6B	480 CT.	50	5	2	6.3 CT.	2
R-7A	600 CT.	50	5	2	6.3 CT.	2
R-7B	600 CT.	50	5	2	6.3 CT.	2
R-8A	500 CT.	75	5	2	6.3 CT.	2.5
R-8B	500 CT.	75	5	2	6.3 CT.	2.5
R-9A	600 CT.	75	5	2	6.3 CT.	3
R-9B	600 CT.	75	5	2	6.3 CT.	3
R-10A	525 CT.	90	5	2	6.3 CT.	5
R-10B	525 CT.	90	5	2	6.3 CT.	5
R-11A	700 CT.	90	5	3	6.3 CT.	3.5
R-11B	700 CT.	90	5	3	6.3 CT.	3.5
R-12A	550 CT.	110	5	2	6.3 CT.	5
R-12B	550 CT.	110	5	2	6.3 CT.	5
R-14A	700 CT.	125	5	3	6.3 CT.	4.5
R-14B	700 CT.	125	5	3	6.3 CT.	4.5
R-16A	700 CT.	160	5	3	6.3 CT.	5
R-16B	700 CT.	160	5	3	6.3 CT.	5
R-17A	750 CT. 80 Tap	160	5	3	6.3 CT. 2.5 CT.	5 5
R-18A	750 CT.	175	5	3	6.3 CT.	8
R-18B	750 CT.	175	5	3	6.3 CT.	8
R-19A	750 CT. 80 Tap	200	5	3	6.3 CT. 2.5 CT.	6 10
R-20A	700 CT.	200	5	3	6.3 CT.	8
R-20B	700 CT.	200	5	3	6.3 CT.	8
R-72A	800 CT.	140	5	3	6.3	4
R-21A	800 CT.	200	5	3	6.3 CT.	6
R-21B	800 CT.	200	5	3	6.3 CT.	6
R-24A	800 CT.	300	5	6	6.3 CT.	6
R-24B	800 CT.	300	5	6	6.3 CT.	6
R-25A	800 CT.	500	5	6	6.3 CT. 6.3	3 7
R-58A	875 CT.	185	5	3	6.3 6.3	4 3
R-71A	900 CT.	250	5 CT.	4	6.3 CT. 6.3	2 4
R-93A	150-160-170	500	Silicon Rectifier Voltage doubler		6.3 CT.	6

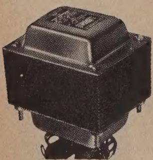
Combined PLATE and FILAMENT Transformers

New "100" Series

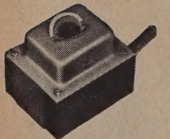
Primary 115 volts 60 cycles

Triad power components are liberally designed to best meet average design specifications and to ensure maximum utility for each design. All units are beautifully finished in baked grey enamel and have all connection data permanently marked on the case.

All types are "Climatite" treated, both coil and core, for protection against moisture and for elimination of lamination chatter. Although they are small in size, the high quality materials used keep losses to a minimum. The temperature rise design is 55°C. Only copper foil static shields, grounded to the case and core, are used. Leads are of a type approved by UL for high temperature operation.



Case B



Case BS

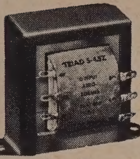
PRIMARY 115 VOLTS 60 CYCLES

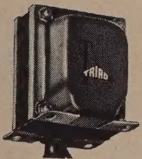
Type No.	Plate Supply		Rect. Filaments		Other Filaments		Case Dim.			Mtg. Dim.		Wt. Lbs.
	AC Volts	DC Ma.	Volts	Amp.	Volts	Amp.	H	W	D	MW	MD	
R-104A	500 C.T.	40			6.3 V.C.T.	2	2¾	2⅜	2¼	1¾	1½	1.55
● R-104B	500 C.T.	40			6.3 V.C.T.	2	1⅝	2¾	2¼	2 3/16	1¾	1.55
R-105A	600 C.T.	65			6.3 V.C.T.	2.7	3⅛	2⅝	2½	2	1¾	2
● R-105B	600 C.T.	65			6.3 V.C.T.	2.7	1¾	3 1/16	2⅝	2½	2	2
R-106A	480 C.T.	50	5	2	6.3 V.C.T.	2	3⅛	2⅝	2⅜	2	1⅝	2.05
● R-106B	480 C.T.	50	5	2	6.3 V.C.T.	2	1⅝	3 1/16	2⅝	2½	2	2.05
R-107A	600 C.T.	50	5	2	6.3 V.C.T.	2	3⅛	2⅝	2½	2	1¾	2.35
● R-107B	600 C.T.	50	5	2	6.3 V.C.T.	2	1¾	3 1/16	2⅝	2½	2	2.35
R-108A	500 C.T.	75	5	2	6.3 V.C.T.	2.5	3⅛	2⅝	2⅝	2	1⅞	2.4
● R-108B	500 C.T.	75	5	2	6.3 V.C.T.	2.5	1⅞	3 1/16	2⅝	2½	2	2.4
R-109A	600 C.T.	75	5	2	6.3 V.C.T.	3	3½	3	2⅞	2¼	1¾	2.9
● R-109B	600 C.T.	75	5	2	6.3 V.C.T.	3	1¾	3 7/16	2⅞	2 13/16	2¼	2.9
R-110A	525 C.T.	90	5	2	6.3 V.C.T.	5	3½	3	3¼	2¼	2	3.25
● R-110B	525 C.T.	90	5	2	6.3 V.C.T.	5	2	3 7/16	2⅞	2 13/16	2¼	3.25
R-111A	700 C.T.	90	5	2	6.3 V.C.T.	3.5	3½	3	3¼	2¼	2	3.55
● R-111B	700 C.T.	90	5	2	6.3 V.C.T.	3.5	2	3 7/16	2⅞	2 13/16	2¼	3.55
R-112A	550 C.T.	110	5	2	6.3 V.C.T.	5	3½	3	3⅜	2¼	2⅛	3.7
● R-112B	550 C.T.	110	5	2	6.3 V.C.T.	5	2⅛	3 7/16	2⅞	2 13/16	2¼	3.7
● R-113A	650 C.T.	40	5	2	6.3 V.C.T.	2	3⅛	2⅝	2¾	2	1¾	2.3
● R-113B	650 C.T.	40	5	2	6.3 V.C.T.	2	2	3	2½	2½	2	2.3
R-114A	700 C.T.	125	5	3	6.3 V.C.T.	4.5	3⅞	3¼	3¼	2½	2⅜	4.7
● R-114B	700 C.T.	125	5	3	6.3 V.C.T.	4.5	2½	3¾	3⅛	3⅛	2½	4.7
● R-115A	680 C.T.	70	5	2	6.3 V.C.T.	2.5	3⅝	3	3⅜	2¼	2⅛	3.5
● R-115B	680 C.T.	70	5	2	6.3 V.C.T.	2.5	2	3 7/16	2⅞	2 13/16	2¼	3.5
R-116A	700 C.T.	160	5	3	6.3 V.C.T.	5	3⅞	3¼	3⅝	2½	2⅝	5.65
● R-116B	700 C.T.	160	5	3	6.3 V.C.T.	5	2⅝	3¾	3⅛	3⅛	2½	5.65
R-118A	750 C.T.	175	5	3	6.3 V.C.T.	8	4¼	3⅝	4	2¾	2⅞	7.45
● R-118B	750 C.T.	175	5	3	6.3 V.C.T.	8	2⅞	4⅛	3½	3 7/16	2¾	7.45
● R-120A	700 C.T.	200	5	3	6.3 V.C.T.	8	4¼	3⅝	4⅛	2¾	2⅞	8.25
● R-120B	700 C.T.	200	5	3	6.3 V.C.T.	8	3	4⅛	3½	3 7/16	2¾	8.25
R-121A	800 C.T.	200	5	3	6.3 V.C.T.	6	4¼	3⅝	4⅜	2¾	3¼	8.25
● R-121B	800 C.T.	200	5	3	6.3 V.C.T.	6	3¼	4⅛	3½	3 7/16	2¾	8.25

SEE TRIAD PRICE LIST ON PAGES 1437, 1438

TRIAD TRANSFORMER CORP.

DIVISION OF LITTON INDUSTRIES


Case Z


Case A

Case X

PLATE POWER Transformers
Primary 115 volts — 60 cycles

Type No.	Secondary Volts AC	Secondary Volts DC	Sec. D.C. Ma. CCS	Sec. D.C. Ma. ICAS	Rect. Fil.
P-1A	440/220 CT.	180/90	160	190	5V-3A
P-3A	600/300 CT.	250/125	300	360	5V-4A
P-5A	1100 CT.	400	250	310	5V-4A
P-7A	1235 CT.	500	250	310	5V-4A
P-9A	1235 CT.	500	500	600	5V-6A
P-11A	1455 CT.	600	250	310	
§P-14A	1780 CT.	750/600	250	310	
†P-15AL	2340 CT.	1000	250	310	
†P-16AL	2430 CT.	1000	500	600	
†P-17AL	2880 CT.	1250	250	310	
†P-18AL	2880 CT.	1250	500	600	
†P-20AL	3300 CT.	1500	350	425	
*PR-21AL	3300 CT.	1500	500	700	

† Plate leads out side of case for 866 rectifiers.
§ Tapped Pri. to produce the lower D.C. voltage.
•New Item
*Pri. Is 230/115V.

TELEVISION COMPONENTS

Replacement POWER Transformers, Combined Plate and Filament
Electrostatically shielded. Primary 115 volts 60 cycles.

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filaments — Volts and Amperes	
R-31A R-31BC	760 V.C.T.	320	5V.—6A. 5V.—2A.	12.6 C.T.—5A.
R-32A	760 V.C.T.	320	5V.—6A.	12.6 V.C.T.—5A 6.3V.—1.2A.
R-33A R-33BC	775 V.C.T.	230	5V.—3A.	6.3V.—9A. 6.3V./5V.—2A.*
R-34A	750 V.C.T.	230	5V.—3A.	6.3V.—8.5A. 6.3V.—1.2A.
R-35A R-35BC	725/340 V.C.T.	250	5V.—3A. 5V.—2A.	6.3V.—8A. 6.3V.—2.5A.
R-36A R-36BC	775 V.C.T.	275	5V.—6A.	6.3V.—8.5A. 6.3V.—1.2A.*
R-37BC	735 V.C.T.	275	5V.—6A.	6.3V.—8.5A. 6.3V./5V.—2A.*
R-38A R-38BC	750 V.C.T.	225	5V.—3A.	6.3V.—10A. 6.3V.—1.2A.* 6.3V.—2.5A.
R-39A R-39BC	640 V.C.T.	225	5V.—3A.	6.3V.—10A. 6.3V.—1.2A.*
R-40A R-40BC	780/440 V.C.T.	300	5V.—3A. 5V.—3A. 5V.—2A.	6.3V.—8.5A. 6.3V.—3.5A.
R-42A R-42BC	675 V.C.T.	185	5V.—3A.	6.3V.—7A. 6.3V.—2A.*
R-44BS	525 V.C.T.	240	5V.—3A.	6.3V.—8A. 6.3V.—1.2A*
R-47BS	725 V.C.T.	225	5V.—3A.	6.3V.—10A. 6.3V.—2.7A.*
R-48BS	750 V.C.T.	180	5V.—3A.	6.3V.—9A. 6.3V.—2.7A.*
R-49BS R-49BC	650 V.C.T.	240	5V.—3A.	6.3V.—9A. 6.3V.—9A. 6.3V.—1.2A.*
R-50A R-50BC	790/650 V.C.T.	310	5V.—3A. 5V.—3A. 5V.—2A.	6.3V.—5A. 6.3V.—5A. 6.3V.—2.6A.
R-51BC	505 V.C.T.	320	5V.—6A.	6.3V.—5A. 6.3V.—5A. 6.3V.—1.2A.*
R-52BC	600 V.C.T.	270	5V.—3A.	6.3V.—5A. 6.3V.—5A. 6.3V.—1.2A.*
R-60BC	460 V.C.T.	300	5V.—6A.	6.3V.—10A. 6.3V.—1.2A.* 6.3V.—2.5A.
R-61BC	560 V.C.T.	275	5V.—6A.	6.3V.—6A. 6.3V.—6A. 6.3V.—1.2A.*
R-62BC	680 V.C.T.	290	5V.—6A.	6.3V.—10A. 6.3V.—1.5A. 6.3V.—1.2A.*
R-63BC	131 V.	980		6.3V.—9A. 6.3V.—6A. 6.3V.—1.2A.*
R-64BC	520 V.C.T.	270	5V.—3A.	6.3V.—10A.
R-65BC	550 V.C.T.	270	5V. —3A.	6.3V. —10A.
R-66BC	580 V.C.T.	270	5V. —3A.	6.3V. —10A.
R-67BC	600 V.C.T.	250	5V. —3A.	6.3V. —9A.
R-69BC	550 V.C.T.	270	5V. —3A.	6.3V. —10A.
R-74BC	655 V.C.T.	190	6.3V.—7.8A. 6.3V.—1.2A. (damper wdg)	5V.—3A.
R-75BA	560 V.C.T.	250	5V.—3A.	6.3V.—9.5A.
R-79BA	127V.	500	6.3V.-2A	12.6V.-2A
R-80BA	500V.CT.	300	5V.-6A 6.3V.-3A	6.3V.-8A 6.3V.-5A
R-86BA	117/129/141 multi-purpose	550	6.3V.-6A 6.3V.-6A	12.6V.CT.-2A

* Less than 100 m.m.f.d. capacity to ground and insulated for high voltage damper tube.
Height of transformers in BC cases is measured from chassis line to top of case. Copper shading ring on all BC cases to reduce external magnetic field.

Note: Last letter of Type No. denotes case style.

AUDIO

REPLACEMENT OUTPUT TRANSFORMERS
Single Tube To Standard Voice Coil 3-4 Ohms

Type No.	Primary Impedance	D.C. Ma	Audio Watt
●S-20X	2000	50	2-3
●S-20Z	2000	50	2-3
S-2X	2000	55	3-5
S-12X	2500	50	2-3
●S-12Z	2500	50	2-3
S-1X	2500	55	3-5
●S-50X	2500	60	4-6
S-16X	3000	60	2-3
●S-30X	3000	60	3-5
●S-67X	3000	55	4-6
S-4X	3000	70	5-8
●S-14Z	4000	50	2-3
●S-41X	4000	50	3-5
●S-41Z	4000	50	3-5
S-6X	5000	35	2-3
●S-6Z	5000	35	2-3
S-3X	5000	40	3-5
S-5X	5000	50	5-8
S-5Z	5000	50	5-8
●S-48X	6500	35	2-3
●S-48Z	6500	35	2-3
●S-49X	6500	40	3-5
S-7X	7500	40	3-5
S-9X	7500	50	5-8
S-9Z	7500	50	5-8
S-8X	8000	30	2-3
●S-8Z	8000	30	2-3
●S18X	8000	45	4-6
●S-18Z	8000	45	4-6
S-11X	10000	30	2-3
S-11Z	10000	30	2-3
S-17X	10000	40	3-5
●S-10X	10000	45	4-6
●S-40X	14000	5.5	¼
●S-38X	16000	15	2-3
●S-38Z	16000	15	2-3
●S-37X	25000	4.0	¼
S-13X	25000	10	2-3
●S-13Z	25000	10	2-3

REPLACEMENT PUSH-PULL OUTPUT TRANSFORMERS
Push-Pull Tubes To Voice Coil 3-4 Ohms

Type No.	Impedance	DC MA	Audio Watts
●S-39X	12000 CT.	30 ea	3-4
●S-64X	6000 CT.	45 ea	4-6
S-15X	10000 CT.	40 ea	7-10
S-19Z	10000 CT.	50 ea	10-14
●S-68Z	3000/3800 CT.	70 ea	15-18
●S-69Z	5000 CT.	55	15-18
●S-21A	8000 CT.	50	15-18
●S-21Z	8000 CT.	50	15-18

●New Item.

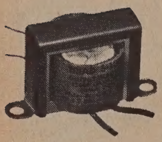
TRIAD TRANSFORMER CORP.

DIVISION OF LITTON INDUSTRIES

AUDIO

LOW LEVEL OUTPUT Transformers

Type No.	Application	Freq. Resp.	Pri. Imped.	Second. Imped.
A-51X	Tube to line.	300-3000	7000	50
A-53X	Single or p.p. tubes to line.	70-7000	18000 CT.	600/250/50
A-54X	P.P. Tubes to V.C.	300-15000	7700 CT.	8/4
A-55J	Parallel-fed 6J5 or 6SN7 to line. 45 db. shielding	30-15000	15000	600/250/50
A-65J	Parallel-fed 6J5 or 6SN7 to line. 45 db. shielding.	30-15000	15000	600/150 Split winding
S-58X	Line to line.	300-3000	600/ 150	600/ 150 —Split windings—
A-57J	Line to line. 45 db. shielding.	30-15000	600/ 250/50	600/ 250/50
A-67J	Line to line. 45 db. shielding.	30-15000	600/ 150	600/ 150 —Split windings—



Case X

"SPLATTER" Chokes

Type No.	Inductance Henries	Current Ma.	Res. Ohms	Wt. Lbs.
C-26X	Tapped .2 to 1.5	100	95	1¼
C-43X	Tapped .05 to 1	300	40	2

A-75J
TONE CONTROL
REACTOR
TRIAD

Case J

UNIVERSAL OUTPUT TRANSFORMERS

Single Or Push-Pull Tubes To Voice Coil

Type No.	Application	Impedance	DC MA	Audio Watts
●S-62X	Single or P.p. plates	2000-10000	30	2
●S-52X	Single or p.p. plates	4000-24000	30	4
S-51X	Single or p.p. plates	4000-14000	35	5
●S-63X	Single or p.p. plates	1500- 7000	50	6
●S-54X	Single	1500- 5000	70	8
S-53X	Single or p.p. plates	4000-14000	40	8
S-55X	P.p. plates	4000-14000	40 ea	10
S-55Z	P.p. plates	4000-14000	40 ea	10
●S-56Z	Single	1500- 6000	85	12
●S-59Z	P.p. plates	1500- 4000	65	15
S-57Z	P.p. plates	4000-14000	55	15
S-61Z	P.p. plates	4000-10000	60	20

●New Item.

Case P

PLUG-IN INPUT Transformers

Type No.	Application	Pri. Imped.	Second Imped.	Freq. Resp.	Shld'g
A-200P	Line or mike to grid.	200/50 CT.	36,000	30-20000	70 db.
A-202P	Same as above.	200/50 CT.	36,000	20-20000	90 db.
HS-273P	Same as above.	200/50 CT.	80,000	30-30000	70 db.
A-210P	Stereo Isolation	1:1 ratio	ODBM	20-20000	45 db.

INTERSTAGE Transformers

Plate to Grid

Type No.	Application	Freq. Resp.	Pri. Imped.	Second Imped.	Ratio
A-31X	Plate to single or p.p. grids	300-3000	10000	90000CT	1 : 3
A-33X	Plate to single or p.p. grids	70-7000	10000	90000CT	1 : 3
A-42Z	Multi-ratio single or p.p plates to single or p.p. grids.	70-7000	15000 CT.	135000C.T. or 33750	1 : 1.5 1 : 3 1 : 6
A-35A	Plate to single or p.p. grids	50-10000	10000	90000CT	1 : 3
A-39A	P.p. plates to p.p. grids	50-10000	20000 CT.	45000CT	1 : 1.5
A-40J	Parallel-fed 6J5 or 6SN7. Plate to p.p. grid 45 db. shielding.	30-15000	15000	86000CT	1 : 2.76

MODULATION Transformers — Tube to RF Load

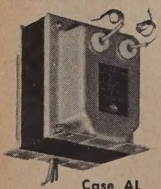
Type No.	Primary	Freq. Resp.	Secondary Impedance	Secondary Ma.	Aud. Wtts.
TY-65Z	32 CT. (575 Ma.) (Transistor use)	70-15000	3000-4000-6000	100	10
M-4Z	5000 (Auto-former).	300-3000	6750 4	100 (total)	10
M-5Z	5000 (Auto-former).	300-3000	6750 4	165 (total)	20
M-1X	10000 CT. for 19, 1J6, 6N7, 6A6, etc.	300-3000	5000-8000-10000	50	5
M-3X	10000 CT. for 6N7, 6A6, 6F6's, etc.	300-3000	3000-5000-8000	100	20
TY-66A	6 CT. (5A) (Transistor use)	300-3000	3000-4000-6000	200	40
†M-7AL	4250 CT. for 807's	300-3000	3000-5000-8000	200	60
M-15A	Multi-match	300-3000	4000 to 20000	150	30
M-16AL	Multi-match	300-3000	4000 to 20000	180	60
†M-8AL	Multi-match	300-3000	4000 to 20000	200	80
†M-12AL	Multi-match	300-3000	4000 to 20000	300	125

DRIVER Transformers

Type No.	Driver Tubes	Output Tubes	Frequency Response	Ratio Primary ½ Sec.	Primary D.C. Ma.
A-81X	30, 1H4, etc.	19, 30's, 1J6, etc.	300-3000	2.66:1	15
A-83X	6F6, 42, 45, etc.	6L6, 6F6, 6V6, 807, etc.	70-7000	1.33:1	40
A-85X	6F6, 42, 45, etc.	6L6, 6F6, 6V6, 807, etc.	50-10000	2.66:1	40
A-89A	P.p. plates to class B or AB grids—Universal 15 watt	Any class B or AB tubes. 100-500 watts output	50-10000	3.1 or 1.8:1	100 per side
A-91A	P.p. plates to Class B or AB grids—Universal 30 watt.	Any class B or AB tubes. 400-1500 watts output	50-10000	3.1 or 1.88:1	160 per side
TY-61X	Transistor use		70-10000	1:0.5	100

•New Item

†Plate leads out side



Case AL

Use Index Page 1 for Quick, Easy Location of ALL Products

SEE TRIAD PRICE LIST ON PAGES 1437, 1438

TRIAD TRANSFORMER CORP.

DIVISION OF LITTON INDUSTRIES

TELEVISION COMPONENTS

VERTICAL OUTPUT Transformers

Type No.	Application	Turns Ratio
A-99X	Transformer type, 4 leads.	10:1
A-101U	Same as above, except upright universal mtg.	10:1
A-102X	Autoformer type, 3 leads.	11.4:1
A-103X	Transformer type, 4 leads. For low inductance yokes.	49:1
A-104X	Autoformer type, 3 leads.	18:1
A-105X	Transformer type, 4 leads.	25:1
A-107X	Transformer type, 4 leads. Heavy duty.	10:1
A-108X	Transformer type, 4 leads.	8:1
A-109X	Transformer type, 4 leads.	15:1
A-110X	Autoformer type, 3 leads.	44:1
A-111X	Transformer type, 4 leads. Small size.	10:1
†A-112X	Autoformer and Blank Winding	15:1
A-113X	Transformer type, 4 leads.	12:1
A-113Z	Transformer type, 4 leads.	12:1
A-114X	Transformer type, 4 leads.	25:1
A-115X	Autoformer type, 3 leads.	15:1
A-115Z	Autoformer type, 3 leads.	15:1
A-116X	Autoformer type, 3 leads	6:1
A-117X	Transformer type, 7 leads (Muntz replacement)	25:1 and 2.5:1
A-118X	Autoformer type, 4 leads.	8:1/5.5:1
A-119X	Autoformer type, 3 leads.	15:1

†Crosley 728256-2 and others.

HORIZONTAL BLOCKING OSCILLATOR

Type No.	Application
A-98X	Generates 15750 pulse.
A-98K	Generates 15750 pulse.

VERTICAL BLOCKING OSCILLATOR

Type No.	Application	Ratio
A-96X	Dumont type. 3 windings.	1:0.5 1:1
A-97X	Std. Mtg.	1:4.14
A-97Z	Same—Small Mtg. Dim.	1:4.14
A-122X	Std. Mtg.	1:3.5
A-122Z	Same—Small Mtg. Dim.	1:3.5
A-97K	Same—Case K.	1:4.14
A-97Y	Same—Case Y.	1:4.14
A-95X	Blocking oscillator transformer for vertical sweep.	1:4.14
A-120Z	Philco replacement	1:1.5

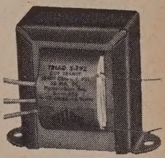
Width and Linearity COILS

All WLC units feature dual mounting, for 5/16″ and 7/16″ mounting holes. Units are assembled with the 5/16″ mounting clip in place. To use the 7/16″ mounting remove the 5/16″ clip, cut off the tubing, thread the 7/16″ clip to the core and install.

Type No.	Inductance MH Min.	Max.	Resist.	Application
WLC-3	4.00	28.00	17.	wid or lin
WLC-4	.05	.5	.5	width D11 211T3 Color conv cont
WLC-5	1.00	8.00	8.00	wid or lin
WLC-6	2.00	18.00	14.00	wid or lin
WLC-7	40% Tap .60	4.30	3.90	Tapped wid or lin
WLC-8	.30 4.00	2.80 28.00	5.00 26.00	Series Coil Par. Coil
WLC-8A	.20 4.00	1.90 26.00	4.00 23.00	Series Coil Par. Coil
WLC-9	.10 4.00	.90 16.00	.90 25.00	pri width Sec AFC AGC
WLC-11	4.00 .60	28.00 8.30	27.00 24.00	pri or sec Tapped pri or sec
WLC-12	.9	16.00	9.00	wid or lin tapped
WLC-21	.10	1.00	1.00	wid or lin
WLC-23	.40	3.00	3.00	wid or lin

OUTPUT Transformers
Tube to Voice Coil and Line

Type No.	Tubes	Pri. Imped.	Sec. Imped.	DC Pri.	Audio Watts
S-27A	2A3, 6A3, 6B4, 6L6, 6U6, 6Y6, 12A5, 25B6, 35B5, 50A5.	2500	500/16/8/4	80	8
S-28X	2A5, 6AC5, 6B5, 6F6, 6K6, 7B5, 14A5, 25AC5.	7500	500/16/8/4	40	5
S-29X	6AQ5, 6AS5, 6V6, 7C5, 25A6, 25B5, 25L6, 25N6, 35A5, 35L6.	5000	500/16/8/4	45	5
S-22A	P.p. 2A3, 6B4, 6A5, 6L6, etc.	5000 CT.	500/16/8/4	100 (bal.)	15
S-24A	P.p. 6V6, 7C5, 6K6, 6F6, etc.	8000 CT.	500/16/8/4	80 (bal.)	15
S-60A	P.p. 6L6, 5881, 807, etc.	6600 CT.	500/250/16/8/4	120 (bal.)	30


Case Z

OUTPUT Transformers
70.7 volt Line to Voice Coil

Type No.	Primary Impedance	Sec. Imped.	Output Watts	Freq. Resp.
S-70Z	Autoformer 16000/8000/4000/2000/1000.	8/4	5	100-5000
S-71Z	Autoformer 4000/2000/1000/500.	16/8/4	10	100-5000
S-25Z	Autoformer 4000/2000/1000/500.	8/4	10	70-7000
*SR-45Z	Autoformer 4000/2000/1000/500.	16/8/4	10	20-20000
*SR-74K	Weatherproof autoformer 4000/2000/1000/500.	16/8/4	10	20-20000
S-72Z	Autoformer 2000/1000/500/250.	16/8/4	20	100-5000
S-46A	Autoformer 2000/1000/500/250.	16/8/4	20	20-20000
S-75K	Weatherproof autoformer 2000/1000/500/250.	16/8/4	20	20-20000
S-78Z	Isolation 4000/2000/1000/500.	16/8/4	10	100-5000
S-79Z	Isolation 2000/1000/500/250.	16/8/4	20	100-5000
● S-47Z	10K/5K/2.5K/1250/625	16/8/4	8	20-20000
S-73X	Isolation 16K/8K/4K/2K/1K	16/8/4	5	100-10000

*Replaces S-45Z and S-74K

WLC

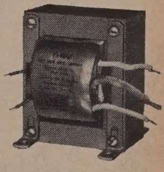
25 VOLT LINE TRANSFORMERS

Type No.	Primary Matching Impedance	Secondary Load Impedance	Output Watts
● S-131X	1250/625/312	8/4	2
● S-132X	1000/500/250/125	16/8/4	5
● S-133Z	500/250/125/62.5	16/8/4	10

MATCHING TRANSFORMERS FOR 25 OR 70.7 VOLT LINE

● S-129Z	70.7V line to 25V line or, 25V line to 70.7V line	30	20-15000
● S-130Z	70.7V line to 25V line or, 25V line to 70.7V line	10	20-15000

Ask for the Triad publication "Sound distribution using the 70 volt line." Free from your distributor.


Case U

Special TRANSCEIVER Transformers
(Voice Frequencies)

Type No.	Application	Primary Impedance	Secondary Impedance
A-21X	S.B. mike or plate to grid (2 primaries)	100 10000	100000
A-23X	Tube to line and hi-impedance phones.	10000	50 and 2000

● New Item

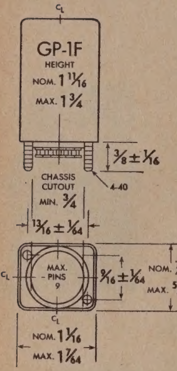
SEE TRIAD PRICE LIST ON PAGES 1437, 1438

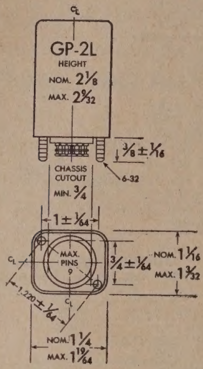
TRIAD TRANSFORMER CORP.

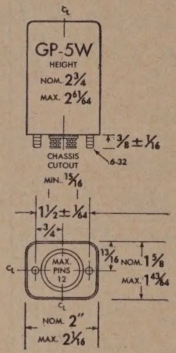
DIVISION OF LITTON INDUSTRIES

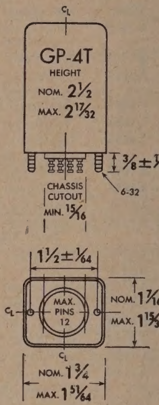
GEOFORMERS

For Geophysical and Low Frequency Instrumentation.


GP-1F
HEIGHT
NOM. 1 11/16
MAX. 1 3/4
3/8 ± 1/16
CHASSIS CUTOUT
MIN. 3/4
4-40
13/16 ± 1/64
MAX. PINS 9
9/16 ± 1/64
NOM. 7/8
MAX. 59/64
NOM. 1 1/16
MAX. 1 7/64


GP-2L
HEIGHT
NOM. 2 1/8
MAX. 2 5/32
3/8 ± 1/16
CHASSIS CUTOUT
MIN. 3/4
6-32
1 ± 1/64
MAX. PINS 9
3/4 ± 1/64
NOM. 1 1/16
MAX. 1 3/32
1.220 ± 1/64
NOM. 1 1/4
MAX. 1 19/64


GP-5W
HEIGHT
NOM. 2 3/4
MAX. 2 61/64
3/8 ± 1/16
CHASSIS CUTOUT
MIN. 15/16
6-32
1 1/2 ± 1/64
3/4
13/16
MAX. PINS 12
NOM. 1 5/8
MAX. 1 43/64
NOM. 2"
MAX. 2 1/16


GP-4T
HEIGHT
NOM. 2 1/2
MAX. 2 17/32
3/8 ± 1/16
CHASSIS CUTOUT
MIN. 15/16
6-32
1 1/2 ± 1/64
MAX. PINS 12
NOM. 1 7/16
MAX. 1 15/32
NOM. 1 3/4
MAX. 1 51/64

LOW FREQUENCY TRANSISTOR TRANSFORMERS

Type No.	Impedance Ohms Pri.	Impedance Ohms Sec.	Turns Ratio	Min. pri. Ind. @ 100MV—60 cy. With No Unbalanced D.C. Current	D. C. Resistance (Ohms) Pri.	D. C. Resistance (Ohms) Sec	1 Ma. −3DB	1 Ma. −1DB	2 Ma. −3DB	2 Ma. −1DB	3 Ma. −3DB	3 Ma. −1DB	5 Ma. −3DB	5 Ma. −1DB	Shielding	Case Mtg.	Wt.
G-18	1000 or 250	125 or 31	2:83:1	60.	500	44	5 to 20000	8 to 7000	5 to 20000	8 to 7000	6 to 20000	9 to 7000	7 to 20000	10 to 7000	P1-H	GP-1F	3.2 oz.
G-19	1000 or 250	1000 or 250	1:1	65.	540	230	12 to 7000	15 to 3800	12 to 7000	15 to 3800	12 to 7000	15 to 3800	20 to 7000	40 to 3800	P1-H	GP-2L	5¼ oz.
G-30	1000 CT.	2500 CT.	1:1.58	20.	350	1800	20 to 8000	40 to 4200	22 to 8000	45 to 4200	40 to 8000	75 to 4200	70 to 8000	160 to 4200	P1	GP-1F	3.2 oz.

(Frequency Response in Cycles, Primary Signal of 1 Volt, Unbalanced D.C. Secondary Current of 1 Ma., 2 Ma., 3 Ma., 5 Ma.)

CHOPPER INPUT TRANSFORMERS - 30 to 500 cycle

Triad's new Chopper Input Transformers are manufactured under the same rigid high quality control standards as the Triad Input Transformers, plus the addition of an extremely close balance between the two halves of the primary winding. One half of the primary is balanced to the other half in both inductance and "Q". Cores are specially treated to eliminate noise in the microvolt range of input signals. Adjustment is at 60 cycles and, since input impedances are kept extremely high and the windings are not tuned, the chopper frequency may be 30 to 500 cycles. Magnetic and electrostatic shielding can be varied to meet customer's requirements.

Types for tube or transistor input are available. In addition to the standard types listed below, many types are currently being supplied to customer's specifications. We invite your inquiry on your special requirements.

Type No.	Primary Impedance in Ohms	Secondary Impedance in Ohms	Turns Ratio Full Pri. to Full Sec.	Turns Ratio ½ Pri. to Full Sec.	Minimum Pri. Ind. (of Full Pri.) @ 1.V-60〜	Maximum Pri. Volts (Full Pri.) @ 60〜	D.C. Resistance Full Primary	D.C. Resistance Secondary	Magnetic Shielding	Case	Weight
G-20	10000 CT. or 2500	640000 CT.	1:8	1:16	120	25.	370	21000	P5-H	GP-4T	11½ oz.
G-21	200000 CT.	12500 CT.	4:1	2:1	1200	84.	4000	1300	P1-H	GP-2L	5¼ oz.
G 22	50000 CT.	800000 CT.	1:4	1:8	1000	90.	2200	19000	P5-H	GP-5W	1 lb.
G-23	40000 CT.	1000 CT.	6.32:1	3.16:1	1000	75.	4400	160	P1-H	GP-2L	5¼ oz.
G-24	40000 CT. or 10000 CT.	40000 CT.	1:1	.5:1	400	1.95	1625	1625	P5	GP-5W	1 lb.
G-25	40000 CT. or 10000 CT.	10000 CT.	2:1	1:1	800	70.	3200	2200	P1-H	GP-2L	5¼ oz.

SEE TRIAD PRICE LIST ON PAGES 1437, 1438

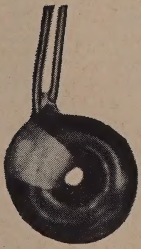
TRIAD TRANSFORMER CORP.

DIVISION OF LITTON INDUSTRIES

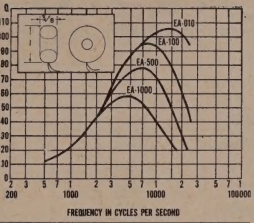
TOROIDS

A

TOROIDS

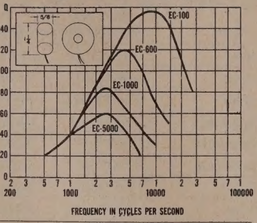


EA SERIES TOROIDS



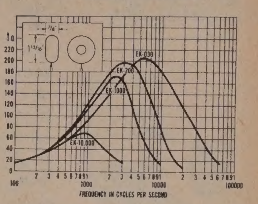
Type No.	Ind.	Res-Ohms Average	D.C.-Ma. for 5% Ind. drop
EA-001	1 mh	.40	270
EA-002	2 mh	.58	192
EA-003	3 mh	.73	157
EA-004	4 mh	.85	135
EA-005	5 mh	1.20	121
EA-007	7 mh	1.42	102
EA-010	10 mh	2.20	86
EA-015	15 mh	3.40	70
EA-020	20 mh	5.05	60
EA-025	25 mh	5.80	54
EA-030	30 mh	7.90	50
EA-040	40 mh	11.40	43
EA-050	50 mh	12.80	38
EA-070	70 mh	19.00	32
EA-100	100 mh	30.00	27
EA-150	150 mh	46.00	22
EA-200	200 mh	52.00	19
EA-250	250 mh	73.00	17
EA-300	300 mh	80.00	16
EA-400	400 mh	115.00	14
EA-500	500 mh	126.00	12
EA-600	600 mh	178.00	11
EA-700	700 mh	193.00	10
EA-1000	1000 mh	297.00	8.6

EC SERIES TOROIDS



Type No.	Ind.	Res-Ohms Average	D.C.-Ma. for 5% Ind. drop
EC-001	1 mh	.40	520
EC-002	2 mh	.56	368
EC-003	3 mh	.70	300
EC-004	4 mh	.82	260
EC-005	5 mh	.92	233
EC-007	7 mh	1.05	195
EC-010	10 mh	1.30	165
EC-015	15 mh	1.60	134
EC-020	20 mh	1.85	116
EC-030	30 mh	2.85	95
EC-040	40 mh	4.20	82
EC-050	50 mh	4.60	74
EC-070	70 mh	7.00	62
EC-100	100 mh	8.00	52
EC-200	200 mh	25.00	37
EC-250	250 mh	28.00	33
EC-300	300 mh	38.20	30
EC-400	400 mh	44.00	26
EC-500	500 mh	63.50	23
EC-600	600 mh	71.00	21
EC-700	700 mh	80.00	19.5
EC-1000	1000 mh	113.00	16.5
EC-1500	1500 mh	175.00	13.5
EC-2000	2000 mh	243.00	11.6
EC-3000	3000 mh	370.00	9.5
EC-4000	4000 mh	435.00	8.2
EC-5000	5000 mh	645.00	7.4
EC-7000	7000 mh	780.00	6.2
EC-10000	10000 mh	1190.00	5.2

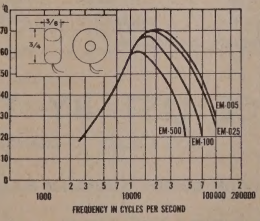
EK SERIES TOROIDS



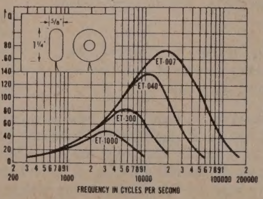
Type No.	Ind.	Res-Ohms Average	D.C -Ma. for 5% Ind. drop
EK-010	10 mh	.92	262
EK-020	20 mh	1.30	184
EK-030	30 mh	1.65	150
EK-040	40 mh	1.90	130
EK-050	50 mh	3.50	116
EK-060	60 mh	4.00	106
EK-080	80 mh	4.60	92
EK-100	100 mh	5.20	82
EK-120	120 mh	5.50	75
EK-150	150 mh	6.20	67
EK-200	200 mh	7.50	58
EK-250	250 mh	10.30	52
EK-300	300 mh	12.00	47
EK-400	400 mh	16.50	41
EK-500	500 mh	23.60	37
EK-700	700 mh	30.00	31
EK-1000	1000 mh	45.00	26
EK-2000	2000 mh	100.00	18.4
EK-3000	3000 mh	151	15
EK-4000	4000 mh	175	13
EK-5000	5000 mh	250	11.6
EK-7000	7000 mh	380	9.8
EK-10000	10000 mh	500	8.2
EK-20000	20000 mh	1000	5.8
EK-30000	30000 mh	1500	4.7
EK-40000	40000 mh	1850	4.1

Type No.	Ind.	Res-Ohms Average	D.C.-Ma. for 5% Ind. drop
EM-001	1 mh	2.8	150
EM-002	2 mh	4.1	108
EM-003	3 mh	5.1	87
EM-004	4 mh	6.0	76
EM-005	5 mh	6.8	68
EM-007	7 mh	8.2	57
EM-010	10 mh	10	48
EM-015	15 mh	12.5	39
EM-020	20 mh	14.5	34
EM-025	25 mh	16.5	30
EM-030	30 mh	18	27.6
EM-040	40 mh	27	24
EM-050	50 mh	30	22
EM-060	60 mh	40	19.5
EM-070	70 mh	43	18
EM-100	100 mh	66	15
EM-150	150 mh	100	12.5
EM-200	200 mh	115	11
EM-250	250 mh	167	9.6
EM-300	300 mh	180	8.8
EM-400	400 mh	265	7.6
EM-500	500 mh	295	7
EM-700	700 mh	440	5.8
EM-1000	1000 mh	650	4.8

EM SERIES TOROIDS



ET SERIES TOROIDS



Type No.	Ind.	D.C.-Ma. Max.	D.C.-Ma. for 5% Ind. drop
ET-001	1 mh	.57	680
ET-002	2 mh	.82	480
ET-003	3 mh	.98	396
ET-004	4 mh	1.10	342
ET-005	5 mh	1.35	306
ET-007	7 mh	1.50	260
ET-010	10 mh	2	217
ET-015	15 mh	3	177
ET-020	20 mh	4.3	153
ET-025	25 mh	4.8	137
ET-030	30 mh	6.9	125
ET-040	40 mh	7.2	108
ET-050	50 mh	8	97
ET-060	60 mh	15.5	88
ET-070	70 mh	16.8	82
ET-100	100 mh	26.0	68
ET-150	150 mh	38.5	56
ET-200	200 mh	44.5	48
ET-250	250 mh	64	43
ET-300	300 mh	72	40
ET-400	400 mh	103	34
ET-500	500 mh	118	31
ET-700	700 mh	173	26
ET-1000	1000 mh	245	22

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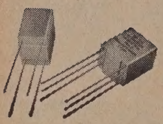
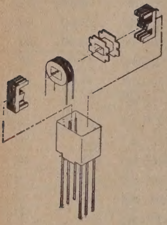
TRIAD TRANSFORMER CORP.

DIVISION OF LITTON INDUSTRIES

"RED SPEC" TRANSISTOR TRANSFORMERS



Type No.	Type	MIL-T-27A Designation	Primary Impedance	D.C. Res. Pri. Ohms	Max. Unbal. Pri. D.C. Ma.	Secondary Impedance	Max. Power MW
SP-4	Input	TF5RX16ZZ	200000 c.t.	5300	0	1000 c.t.	10
SP-5	Input	TF5RX16ZZ	50000 c.t.	3800	.2	1000 c.t.	25
SP-7	Input	TF5RX16ZZ	200000	5300	0	1000	10
SP-11	Interstage	TF5RX13ZZ	20000/30000	1700	.5	800/1200	40
SP-13	Interstage	TF5RX13ZZ	20000/30000 c.t.	1700	.5	800/1200 c.t.	40
SP-15	Interstage	TF5RX13ZZ	10000/12000 c.t.	1050	1	1500/1800 c.t.	50
SP-20	Driver	TF5RX13ZZ	10000/12000 c.t.	1050	1	1200/1500 c.t.	50
SP-21	Driver	TF5RX13ZZ	10000/12000 c.t.	1050	1	2000/2500 c.t.	50
SP-29	Driver	TF5RX13ZZ	10000/12000 c.t.	1050	1	500/600 c.t.	50
SP-32	Output	TF5RX17ZZ	500/600	60	3	50/60	50
SP-33	Output	TF5RX17ZZ	1000/1200	145	3	50/60	50
SP-34	Output	TF5RX17ZZ	600	70	3	3.2	50
SP-35	Output	TF5RX13ZZ	1200	120	2	3.2	50
SP-36	Output	TF5RX13ZZ	10000	1160	1	3.2	50
SP-42	Output	TF5RX17ZZ	150/200 c.t.	18	10	12/16	50
SP-43	Output	TF5RX17ZZ	300/400 c.t.	38	7	12/16	50
SP-44	Output	TF5RX17ZZ	600/800 c.t.	75	4.5	12/16	50
SP-46	Output	TF5RX17ZZ	1000/1330 c.t.	120	3.5	12/16	50
SP-47	Output	TF5RX13ZZ	1500/2000 c.t.	180	3	12/16	50
SP-48	Output	TF5RX13ZZ	7500/10000 c.t.	820	1	12/16	50
SP-49	Output	TF5RX13ZZ	300 c.t.	37	7	600	50
SP-50	Output	TF5RX17ZZ	500 c.t.	60	3	600	50
SP-51	Output	TF5RX17ZZ	900 c.t.	100	4	600	50
SP-52	Output	TF5RX17ZZ	1500 c.t.	170	3	600	50
SP-59	Output	TF5RX17ZZ	120/150 c.t.	15	10	3.2/4	50
SP-60	Output	TF5RX17ZZ	320/400 c.t.	40	6	3.2/4	50
SP-61	Output	TF5RX17ZZ	600/750 c.t.	70	4.5	3.2/4	50
SP-62	Output	TF5RX17ZZ	800/1000 c.t.	100	4	3.2/4	50
SP-63	Output	TF5RX13ZZ	1200/1500 c.t.	125	3	3.2/4	50
SP-64	Output	TF5RX13ZZ	1600/2000 c.t.	190	2.5	3.2/4	50
SP-65	Output	TF5RX13ZZ	8000/10000 c.t.	820	1	3.2/4	50
SP-66	Output Isolation	TF5RX13ZZ	10000 c.t.	1000	1	10000 c.t.	50
SP-106	Choke	TF5RX20ZZ	6 hy. @ 2 ma.	1700			
SP-107	Choke	TF5RX20ZZ	1.25 hy. @ 2 ma.	180			
SP-108	Choke	TF5RX20ZZ	3.5 hy. @ 2 ma.	1100			
SP-118	Choke	TF5RX20ZZ	.3 hy. @ 4 ma.	42			
SP-310	Magnetic shielding case						



PRICE LIST BY TYPE NUMBER

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

RIQAP (REDUCED INSPECTION QUALITY ASSURANCE PLAN)

ALL TRIAD transformers are manufactured under a Signal Corps approved plan intended to assure quality in the product. The system includes approved procedures for incoming inspection of material, process controls in the plant, and final inspection. Transformers passed are approved for shipment for military use.

RIQAP applies to all Triad transformers, military or otherwise. Why not take advantage of the exhaustive quality control at Triad and eliminate or reduce the costs of your incoming inspection.

All of the transformers listed on the preceding pages are currently available from stock at the four plants of Triad and from better distributors in all the purchasing centers of the United States.

Triad transformers are continually being revised and improved to use the best available materials. For this reason, the Triad Transformer Corporation reserves the right to modify existing mechanical construction or electrical characteristics of any catalog item without notice.

TRIAD transformer numbers are so arranged as to indicate the type of transformer and type of mounting. The prefix letter indicates the type of transformer as follows: **A**—Audio **C**—Choke **D**—High voltage horizontal output transformer **E**—High "O" Toroidal coils **F**—Filament **G**—Geoformer **M**—Modulation **N**—Isolation or Stepdown autoformer **NW**—Yoke Networks **P**—Plate power transformer **PL**—Pulse transformer **R**—Power transformer, combined plate and filament **S**—Speaker coupling or output transformer **T, TZ**—Miniatures **TY**—Transistor transformer **V**—Vibrator power **WC, WLC**—Width and Linearity coils **Y**—Yokes. Hermetically sealed units bear the prefix **HS** and **HSM**; hermetically sealed "Trijets" **JZ, JO** and **AF**. **Type of mounting is indicated by the suffix letter which refers to the illustrations in the catalog.**

SEE TRIAD PRICE LIST ON PAGES 1437, 1438

TRIAD TRANSFORMER CORP.

DIVISION OF LITTON INDUSTRIES

PRICE LIST BY TYPE NUMBER

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

Type No.	List Price
A-1X	3.30
A-3X	3.60
A-4X	3.80
A-5X	4.95
A-6X	3.70
A-7J	8.80
A-9J	16.20
A-10J	16.40
A-11J	19.20
A-12J	19.40
A-13J	19.20
A-21X	3.85
A-23X	4.35
A-31X	3.75
A-33X	5.10
A-35A	9.50
A-39A	9.90
A-40J	16.40
A-41J	16.40
A-42Z	5.75
A-51X	3.20
A-53X	4.60
A-54X	4.15
A-55J	16.10
A-57J	16.35
A-65J	16.80
A-66J	16.25
A-67J	17.20
A-68J	16.50
A-75J	17.20
A-77J	15.00
A-78J	16.10
A-79J	16.25
A-81X	3.55
A-83X	4.30
A-85X	5.00
A-89A	11.35
A-91A	15.50
A-95X	3.80
A-96X	5.00
A-97K	5.15
A-97X	3.60
A-97Y	5.30
A-97Z	3.60
A-98K	5.55
A-98X	3.60
A-99X	5.75
A-101U	8.60
A-102X	5.15
A-103X	5.75
A-104X	6.35
A-105X	6.55
A-107X	7.90
A-108X	6.10
A-109X	6.65
A-110X	6.10
A-111X	5.25
A-112X	6.40
A-113X	6.15
A-113Z	6.15
A-114X	6.25
A-115X	6.15
A-115Z	6.15
A-116X	6.65
A-117X	4.90
A-118X	6.25
A-119X	6.15
A-120X	4.00
A-120Z	4.00
A-122X	3.60
A-122Z	3.60
A-200P	24.40
A-202P	33.80
A-210P	16.50
C-1X	2.50
C-2X	2.40
C-3X	3.35
C-4X	2.90
C-5X	3.75
C-6X	3.30
C-7X	4.30
C-8X	3.90
C-9X	3.90
C-10X	5.10
C-11X	5.10
C-12A	7.65
C-12X	5.65
C-13X	5.40
C-14A	8.65
C-14X	6.25
C-15A	8.65
C-15X	6.25
C-16A	11.10
C-17X	5.15
C-18A	15.40
C-19A	17.35
C-20A	20.10
C-21X	4.45
C-22A	34.00
C-23X	4.45
C-24X	3.55
C-25A	10.00
C-26X	6.95
C-27X	3.40
C-28X	4.55
C-29X	5.00
C-30X	3.35
C-31A	11.20
C-32AL	20.50
C-33A	17.25
C-34X	3.75
C-35A	21.40
C-36X	3.40
C-38AL	35.00
C-39A	34.50
C-40X	4.20
C-42AL	20.40
C-43X	10.00
C-45AL	35.00
C-47U	13.55
C-48U	15.80
C-49U	18.55
C-80U	65.00
EA-001	6.82
EA-002	6.82
EA-003	6.82
EA-004	6.67
EA-005	6.67
EA-007	6.67
EA-010	6.67
EA-015	6.82
EA-020	6.82
EA-025	6.82
EA-030	6.95
EA-040	6.95
EA-050	6.95
EA-070	7.08
EA-100	7.08
EA-150	7.08
EA-200	7.28
EA-250	7.37
EA-300	7.37
EA-400	7.52
EA-500	7.92
EA-600	8.07
EA-700	8.34
EA-1000	8.62

For Molded Cup
add 3.20
(EA-001A etc.

Type No.	List Price
EC-001	7.37
EC-002	7.37
EC-003	7.37
EC-004	7.37
EC-005	7.37
EC-007	7.52
EC-010	7.65
EC-015	7.65
EC-020	7.78
EC-030	7.78
EC-040	7.92
EC-050	7.92
EC-070	8.07
EC-100	8.07
EC-200	8.20
EC-250	8.20
EC-300	8.30
EC-400	8.34
EC-500	8.49
EC-600	8.49
EC-700	8.62
EC-1000	8.77
EC-1500	9.04
EC-2000	9.17
EC-3000	9.30
EC-4000	9.45
EC-5000	9.74
EC-7000	10.70
EC-10000	11.90

For Molded Cup
add 3.33
(EC-005A etc.

Type No.	List Price
EK-010	10.82
EK-020	11.00
EK-030	11.10
EK-040	11.10
EK-050	11.32
EK-060	11.42
EK-080	11.65
EK-100	11.80
EK-120	11.80
EK-150	11.80
EK-200	11.89
EK-250	12.05
EK-300	12.20
EK-400	12.50
EK-500	12.79
EK-700	13.05
EK-1000	13.32
EK-2000	13.75
EK-3000	14.15
EK-4000	14.55
EK-5000	14.70
EK-7000	15.40
EK-10000	16.10
EK-20000	16.65
EK-30000	17.90
EK-40000	18.85

For Molded Cup
add 3.47
(EK-010A etc.)

Type No.	List Price
EM-001	7.23
EM-002	7.23
EM-003	7.23
EM-004	7.23
EM-005	7.23
EM-007	7.37
EM-010	7.50
EM-015	7.70
EM-020	7.78
EM-025	7.78
EM-030	7.85
EM-040	7.92
EM-050	7.92
EM-060	8.07
EM-070	8.07
EM-100	8.20
EM-150	8.20
EM-200	8.34
EM-250	8.34
EM-300	8.62
EM-400	8.77
EM-500	9.04
EM-700	9.59
EM-1000	10.70

For Molded Cup
add 3.05
(EM-001A etc.)

Type No.	List Price
ET-001	7.38
ET-002	7.38
ET-003	7.38
ET-004	7.38
ET-005	7.50
ET-007	7.65
ET-010	7.65
ET-015	7.65
ET-020	7.78
ET-025	7.78
ET-030	7.92
ET-040	7.92
ET-050	7.92
ET-060	8.07
ET-070	8.07
ET-100	8.07
ET-150	8.20
ET-200	8.20
ET-250	8.35
ET-300	8.35
ET-400	8.35
ET-500	8.49
ET-700	8.62
ET-1000	8.77

For Molded Cup
add 3.33
(ET-001A etc.)

Type No.	List Price
F-1X	3.90
F-3X	6.40
F-5U	9.40
F-6X	5.30
F-7X	5.80
F-8X	6.70
F-9U	11.95
F-9A	13,45
F-10U	15.00
F-11U	15.00
F-12X	8.00
F-13X	3.50
F-14X	3.70
F-15U	11.65
F-16X	5.55
F-18A	10.00
F-18X	7.80
F-19X	8.75
F-20U	11.40
F-21A	11.60
F-22A	17.00
F-23U	11.75
F-24U	11.85
F-25X	5.95
F-26X	6.95
F-27U	15.55
F-28U	23.00
F-29U	15.00
F-30A	13.60
F-32A	10.75
F-34A	14.45
F-36A	17.25
F-38A	18.00
F-40X	5.65
F-41X	8.40
F-42A	12.50
F-43X	6.25
F-44X	5.90
F-45X	5.65
F-47U	10.25
F-48U	15.15
F-49U	23.30
F-50X	5.25
F-51X	5.70
F-52X	5.00
F-53X	7.00
F-60U	11.65
F-61U	16.90
F-62U	32.00
F-63U	10.00
F-64U	12.00
F-65U	18.65
F-66U	45.00
F-67U	25.50
F-68U	16.50
F-71U	10.40
F-72Z	6.75
F-79U	37.50
F-80U	74.50
F-83A	18.60
F-84AC	31.50
F-90X	6.25
F-91X	8.10
F-92A	12.70
G-1	19.58
G-2	40.85
G-4	40.85
G-5	35.30
G-7	35.30
G-8	46.75
G-9	35.30
G-10	46.75
G-12	33.30
G-14	32.65
G-15	53.55
G-16	34.45
G-17	36.25
G-18	33.30
G-19	33.30
G-20	48.15
G-21	39.40
G-22	52.00
G-23	39.40
G-24	63.00
G-25	39.40
G-30	29.95
G-31	32.65
G-32	40.85
G-33	35.30
G-34	46.75
G-36	28.00
G-40	35.30
G-48	27.30
G-51	32.65
G-51A	32.65
G-52	34.65
G-53	34.65
G-53A	34.65
G-54	34.65
G-57	28.00
G-58	43.05
G-64	27.30
G-65	27.30
G-72	35.30
G-80	40.95
G-84	35.30
G-85	35.30
G-92	36.75
G-101	32.65
G-135	32.65
G-150	32.65
G-155	32.65
G-183	41.50
G-201	32.65
G-202	33.30
G-235	32.65
G-250	32.65
G-255	32.65
G-266	34.15
G-274	34.00
G-275	34.15
G-276	34.15
G-283	41.50
G-284	33.30
G-285	33.30
G-301	32.15
G-306	32.15
G-313	32.15
G-315	32.15
G-335	31.50
G-336	31.50
G-350	31.50
G-355	18.90
G-388	32.15
G-389	32.15
G-391	31.50
G-394	31.50
G-401	32.65
G-435	32.65
G-437	32.65
G-455	32.65
G-475	33.82
G-493	29.40
HS-1	47.60
HS-3	51.80
HS-4	47.30
HS-5	45.90
HS-8	47.60
HS-11	36.10
HS-14	37.50
HS-15	44.40
HS-23	36.20
HS-25	36-20
HS-27	32.80
HS-29	45.80
HSM-31	35.10
HS-35	32.50
HS-32	45.80
HS-50	38.70
HS-52	40.00
HS-54	47.60
HS-56	43.00
HS-58	50.50
HS-60	32.50
HS-61	34.40
HS-66	38.60
HS-71	24.00
HS-73	25.70
HS-75	30.30
HS-77	35.30
HSM-79	32.50
HSM-80	35.50
HSM-81	39.30
HSM-82	39.30
HSM-85R	39.30
HSM-85	39.30
HSM-91	65.50
HSM-94	72.70
HSM-95	72.70
HS-97	137.00
HSM-181	39.30
HSM-182	39.30
HSM-184	50.00
HSM-186	50.00
HSM-187	50.00
HSM-189	50.00
HSM-190	50.00
HSM-192	75.00
HSM-193	75.00
HSM-200	33.33
HSM-201	36.10
HSM-203	35.70
HSM-205	40.25
HSM-207	44.00
HSM-212	54.00
HSM-216	63.25
HSM-218	87.25
HSM-219	83.25
HSM-223	18.75
HSM-225	23.80
HSM-226	25.85
HSM-227	31.70
HSM-228	38.50
HSM-229	30.30
HSM-230	26.15
HSM-231	34.10
HSM-232	39.30
HSM-234	40.50
HSM-235	53.75
HSM-236	35.90
HSM-241	54.50
HSM-245	62.75
HS-247	76.40
HSM-270	29.40
HSM-271	40.00
HSM-272	55.50
HS-273P	28.00
HSM-301	19.70
HSM-302	18.05
HS-303	19.65
HSM-305	25.53

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TRIAD TRANSFORMER CORP.

DIVISION OF LITTON INDUSTRIES

PRICE LIST BY TYPE NUMBER

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price
HSM-307	28.35	N-9M	58.36	R-10B	13.75	R-79BA	19.75	S-32A	15.00	SP-36	9.42	TY-52X	7.15
HSM-309	26.60	N-11M	86.50	R-11A	14.15	R-80BA	28.00	S-33A	14.30	SP-42	9.25	TY-53X	5.55
HSM-315	30.60	N-34X	9.70	R-11B	14.15	R-83A	20.00	S-34X	8.25	SP-43	9.25	TY-54X	6.80
HSM-319	42.75	N-35M	22.00	R-12A	14.55	R-84K	9.65	S-35A	15.50	SP-44	9.25	TY-55X	6.95
HS-331	15.90	N-50M	37.50	R-12B	14.55	R-85A	31.50	S-36A	16.10	SP-46	9.25	TY-56X	6.95
HS-333	16.75	N-51X	7.65	R-14A	16.35	R-86BA	19.15	S-37X	3.65	SP-47	9.25	TY-57X	5.85
HS-335	21.15	N-52M	50.00	R-14B	16.35	R-93A	23.50	S-38X	2.90	SP-48	10.00	TY-58X	5.85
HS-339	21.00	N-53M	16.40	R-16A	18.60	R-104A	8.00	S-38Z	2.90	SP-49	9.25	TY-59X	7.65
HS-341	22.00	N-54M	19.45	R-16B	18.60	R-104B	8.00	S-39X	3.15	SP-50	9.25	TY-60X	7.20
HS-401	27.15	N-55M	31.90	R-17A	20.00	R-105A	9.15	S-40X	3.65	SP-51	9.25	TY-61X	4.85
HS-402	25.55	N-56M	38.90	R-18A	20.50	R-105B	9.15	S-41X	2.90	SP-52	9.25	TY-62X	5.80
HS-405	34.20	N-57M	58.50	R-18B	20.50	R-106A	9.15	S-41Z	2.90	SP-59	9.00	TY-63X	6.65
HS-407	40.45	N-59M	86.50	R-19A	24.40	R-106B	9.15	S-42A	27.00	SP-60	9.00	TY-64X	6.10
HS-409	36.00	N-60SC	185.00	R-20A	22.00	R-107A	10.00	S-45Z	8.90	SP-61	9.58	TY-65Z	6.10
HS-413	50.00	N-62AC	86.00	R-20B	22.00	R-107B	10.00	S-46A	15.25	SP-62	9.58	TY-66A	15.15
HS-415	52.80	N-64AC	48.40	R-21A	22.80	R-108A	10.55	S-47Z	6.25	SP-63	9.58	TY-67A	15.55
HS-417	59.70	N-66A	28.35	R-21B	22.80	R-108B	10.55	S-48X	2.60	SP-64	9.58	TY-68S	10.30
HS-425	20.00	N-67A	19.15	R-22A	11.85	R-109A	11.50	S-48Z	2.60	SP-65	10.00	TY-69S	13.35
HS-427	26.10	N-68X	9:30	R-22B	11.85	R-109B	11.50	SR-45Z	8.90	SP-66	11.67	TY-70S	13.45
HS-433	28.90	N469A	12.50	R-23B	10.00	R-110A	11.95	S-49X	2.90	SP-106	9.08	TY-71S	15.30
HS-435	31.30	N-470A	16.65	R-24A	26.80	R-110B	11.95	S-50X	3.45	SP-107	8.00	TY-74S	16.65
HS-436	16.65	N-471-A	23.45	R-24B	26.80	R-111A	12.50	S-51X	4.25	SP-108	8.00	TY-75A	19.40
HS-438	26.40	P-1A	13.60	R-25A	42.40	R-111B	12.50	S-52X	4.20	SP-118	7.72	TY-76A	12.75
HS-441	45.15	P-3A	16.50	R-26A	29.50	R-112A	12.90	S-53X	4.85	SP-310	1.50	TY-78	17.35
HS-442	31.80	P-5A	22.20	R-27A	54.20	R-112B	12.90	S-54X	4.60	T-1X	7.20	TY-79	18.50
HS-443	21.90	P-7A	23.00	R-28A	41.20	R-113A	9.45	S-55X	6.10	T-2X	7.20	TY-80	19.35
HS-470	25.00	P-9A	40.20	R-29A	8.90	R-113B	9.45	S-55Z	6.10	T-3X	7.20	TY-81	20.85
HS-471	27.50	P-11A	25.60	R-30X	7.25	R-114A	14.45	S-56Z	6.20	T-5X	7.20	TY-82	21.50
HS-472	31.00	P-14A	32.50	R-31A	34.70	R-114B	14.45	S-57Z	7.35	T-11X	6.70	TY-83	23.40
HS-474	38.10	P-15AL	37.50	R-31BC	36.10	R-115A	12.00	S-58X	4.75	T-12X	7.20	TY-84	25.00
HS-475	40.83	P-16AL	74.50	R-32A	32.80	R-115B	12.00	S-59Z	7.25	T-13X	6.60	TY-88	17.35
JAF-1	22.00	P-17AL	46.70	R-33A	29.80	R-116A	14.60	S-60A	14.15	T-20X	6.75	TY-89	18.00
JAF-2	22.90	P-18AL	85.00	R-33BC	31.00	R-116B	14.60	S-61Z	7.75	T-21X	6.45	TY-90	19.40
JAF-3	22.90	P-20AL	82.80	R-34A	28.60	R-118A	17.05	S-62X	4.10	T-22X	6.45	TY-91	20.85
JAF-5	22.90	PR-21AL	101.00	R-35A	28.00	R-118B	17.05	S-63X	4.30	T-23X	6.70	TY-92	21.85
JAF-11	21.40	PL-4	17.20	R-35BC	30.55	R-120A	20.10	S-64X	3.85	T-31X	6.70	TY-93	24.00
JAF-12	22.00	PL-5	20.80	R-36A	29.80	R-120B	20.10	S-65X	3.28	T-33X	6.70	TY-94	25.50
JAF-13	22.90	PL-6	20.80	R-36BC	31.40	R-121A	19.05	S-66X	3.40	T-41X	6.50	TY-99	18.50
JAF-14	22.90	PL-10	1.95	R-37BC	30.55	R-121B	19.05	S-67X	3.45	T-42X	6.50	TY-100	19.35
JAF-15	22.90	PL-80E	20.20	R-38A	28.00	S-1X	2.75	S-68Z	7.35	T-101X	5.55	TY-101	20.85
JAF-21	22.00	PL-80H	22.40	R-38BC	30.40	S-2X	2.90	S-69Z	7.25	TY-23X	6.20	TY-468	14.50
JAF-22	22.00	PL-80P	21.25	R-39A	28.90	S-3X	2.90	S-70Z	5.15	TY-24X	7.25	TZ-1	6.15
JAF-23	22.90	PL-81E	21.20	R-39BC	30.40	S-4X	3.90	S-71Z	5.55	TY-25X	7.45	TZ-5	6.15
JAF-31	23.60	PL-81H	22.60	R-40A	33.70	S-5X	3.95	S-72Z	7.00	TY-26X	7.60	TZ-7	5.45
JAF-33	23.60	PL-81P	21.50	R-40BC	36.65	S-5Z	3.95	S-73X	5.10	TY-27XT	6.25	TZ-13	6.40
JAF-101	21.00	PL-82E	21.05	R-41C	27.70	S-6X	2.60	SR-74K	15.55	TY-28XT	6.25	TZ-15	6.40
JO-1	21.90	PL-82H	23.45	R-42A	25.40	S-6Z	2.60	S-75K	22.00	TY-29X	6.10	TZ-25	5.20
JO-2	23.20	PL-82P	22.20	R-42BC	27.10	S-7X	2.75	S-76Z	8.40	TY-30X	5.40	TZ-26	5.20
JO-3	23.20	PL-83E	22.50	R-43C	16.45	S-8X	2.65	S-77U	14.70	TY-31X	5.40	TZ-28	5.20
JO-5	23.20	PL-83H	23.90	R-44BC	26.40	S-8Z	2.65	S-78Z	6.10	TY-32X	6.25	V-1K	10.95
JO-11	22.20	PL-83P	22.70	R-45C	22.20	S-9X	4.05	S-79Z	6.90	TY-33X	6.25	V-3K	11.50
JO-12	22.90	PL-84E	21.80	R-46A	44.50	S-9Z	4.05	S-128Z	9.50	TY-34X	6.25	V-5A	11.50
JO-13	22.90	PL-84H	24.20	R-47BS	32.00	S-10X	3.45	S-129Z	8.80	TY-35X	6.00	V-7A	13.95
JO-21	22.90	PL-84P	23.00	R-48BS	29.40	S-11X	2.75	S-130Z	6.00	TY-36X	6.25	V-21	7.00
JO-22	22.90	PL-124E	21.00	R-49BC	30.50	S-11Z	2.75	S-131X	4.60	TY-37X	6.40	V-21B	8.00
JO-23	23.20	PL-124H	23.60	R-49BS	32.20	S-12X	2.65	S-132X	5.65	TY-38X	6.40	V-21K	10.55
JO-31	22.90	PL-139E	18.00	R-50A	34.50	S-12Z	2.65	S-133Z	7.25	TY-39X	6.50	V-21Z	7.15
JO-101	21.00	PL-139H	20.00	R-50BC	36.00	S-13X	2.90	S-142A	21.40	TY-40X	6.00	V-23	8.20
JZ-1	19.65	PL-139M	22.00	R-51BC	28.60	S-13Z	2.90	S-144A	30.83	TY-41X	6.20	V-23B	10.00
JZ-5	20.20	PL-140E	21.00	R-52BC	27.85	S-14Z	2.65	S-146A	30.60	TY-42X	6.00	V-23K	12.10
JZ-7	19.65	PL-140H	23.60	R-54X	5.95	S-15X	4.30	S-148A	30.60	TY-43X	6.20	V-23Z	8.30
JZ-13	19.65	PL-140M	25.60	R-56A	10.65	S-16X	3.05	S-152A	44.60	TY-44X	6.25	VR-30Z	7.85
JZ-15	19.65	PL-146E	21.00	R-58A	25.00	S-17X	3.20	SP-4	11.67	TY-45X	6.25	V-31	7.45
JZ-25	19.10	PL-146H	23.50	R-60BC	29.70	S-18X	3.45	SP-5	11.25	TY-46X	4.25	WLC-3	2.10
JZ-26	19.10	PL-146M	25.50	R-61BC	32.50	S-18Z	3.45	SP-7	10.83	TY-47X	6.60	WLC-4	1.95
M-1X	4.70	R-2C	6.65	R-62BC	34.60	S-19Z	5.80	SP-11	10.00	TY-48X	6.60	WLC-5	1.95
M-3X	7.65	R-3A	9:30	R-63BC	27.50	S-20X	2.65	SP-13	10.83	TY-49X	4.65	WLC-6	1.95
M-4Z	5.00	R-4A	9.05	R-64BC	22.50	S-20Z	2.65	SP-15	10.83	TY-50X	7.60	WLC-7	2.45
M-5Z	6.65	R-5A	10.00	R-65BC	24.00	S-21A	8.80	SP-20	10.17	TY-51X	6.60	WLC-8	3.00
M-7AL	21.60	R-5B	10.00	R-66BC	25.00	S-21Z	7.20	SP-21	10.17			WLC-8A	3.00
M-8AL	27.00	R-6A	10.25	R-67BC	22.80	S-22A	11.35	SP-29	9.58			WLC-9	3.00
M-12AL	32.20	R-6B	10.25	R-68A	14.70	S-23X	3.20	SP-32	9.00			WLC-11	2.65
M-15A	18.80	R-7A	10.80	R-69BC	23.30	S-24A	11.35	SP-33	9.00			WLC-12	2.35
M-16AL	20.90	R-7B	10.80	R-70A	18.90	S-25Z	6.65	SP-34	9.00			WLC-21	1.75
N-1X	6.45	R-8A	11.45	R-71A	27.90	S-26X	3.35	SP-35	9.00			WLC-23	1.75
N-3M	13.10	R-8B	11.45	R-72A	19.05	S-27A	10.00						
N-4M	16.10	R-9A	12.50	R-73B	12.90	S-28X	5.90						
N-5M	19.15	R-9B	12.50	R-74BC	35.00	S-29X	5.60						
N-7M	27.10	R-10A	13.75	R-75BA	20.50	S-30X	2.85						
						S-31A	14.30						

UNITED TRANSFORMER CORP.

NET PRICE LIST

INTERSTAGE and LINE FILTERS

Special Frequencies $48.00

BMI—60, 100, 120, 400, 500, 750, •800, 1000, 1500, 2000, 3000, 4000, 5000, 10000 $30.00

BTI—60, 100, 120, $36.00

HMI—200, 400, 500, 800, 1000, 2000, 3000 $31.50

LMI—200, 400, 500, 800, 1000, 1500, 2000, 2500, 3000, 4000, 5000, 10000 $31.50

BML—400, 1000 $30.00

HML — 200, 300, 500, 1000 $39.00

LML — 1000, 1500, 2000, 2500, 4000, 8000, 10000, 12000 $31.50

MINIATURE FILTERS

Special Frequencies $48.00

BPM — 400, •440, •500, •600, 750, 1000, 1500, 2000, •3000, •4000, •5000, 10000 $27.00

HPM—500, 1000 $30.00

LPM — 200, 500, 1000, 2000, 3000, 5000 $30.00

TELEGRAPH RECEIVING FILTERS

Special Frequencies $90.00

TGR—425, 595, 765, 935 $72.00

TGR — 1105, 1275, 1445, 1615 $63.00

TGR — 1785, 1955, 2125, 2295 $60.00

TGR — 2465, 2635, 2805, 2975 $57.00

TELEGRAPH TRANSMITTING FILTERS

Special Frequencies $54.00

TGT—425, 595, 765, 935 $42.00

TGT — 1105, 1275, 1445, 1615 $36.00

TGT — 1785, 1955, 2125, 2295 $33.00

TGT — 2465, 2635, 2805, 2975 $30.00

TELEMETERING FILTERS

Special Frequencies $60.00

TMN—.4, .56, .73, .96, 1.3, 1.7, 2.3, 3.0, 3.9, 5.4, 7.35 $39.00

TMN — 10.5, 14.5, 22, 30, 40, 52.5, 70 $42.00

TMW—22, 30, 40, 52.5, 70 $42.00

TELEMETERING MINIFILTERS

Special Frequencies $60.00

•MNF — .4, .56, .73, .96, 1.3, 1.7, 2.3, 3.0, 3.9, 5.4, 7.35 $39.00

•MNF — 10.5, 14.5, 22, 30, 40, 52.5, 70 $42.00

•MWF — 22, 30, 40, 52.5, 70 $42.00

ULTRA COMPACT

Type	Net
A-10	$13.20
A-11	12.00
A-12	12.00
A-15	9.90
A-16	9.90
A-17	12.00
A-18	12.00
A-19	12.00
A-20	14.40
A-21	12.00
A-22	9.90
A-23	9.90
A-24	12.90
A-25	12.00
A-26	13.20
A-27	12.00
A-28	10.20
A-30	10.20
A-32	6.60
A-33	2.70
•A-34	10.20
•A-35	9.90
•A-36	9.60
•A-37	9.60
•A-38	9.30
•A-39	11.10
•A-40	9.90
•A-41	6.30

COMMERCIAL GRADE

Type	Net
CG-1C	54.00
CG-1S	54.00
CG-2L6	13.80
CG-15	12.00
CG-16	12.00
CG-19	12.00
CG-20	15.00
CG-21	24.00
•CG-30	18.90
•CG-31	42.00
•CG-32	10.50
CG-33	9.00
CG-34	10.20
CG-40	8.10
CG-44	6.90
CG-45	6.00
CG-48C	7.50
CG-51AX	9.00
CG-53AX	10.50
CG-59AX	10.80
CG-100	9.00
CG-101	9.00
CG-102	13.20
CG-103	13.20
CG-104	15.00
CG-105	15.00
CG-108	27.00
CG-109	27.00
•CG-111	11.40
CG-120	15.00
CG-121	18.00
CG-122	15.00
CG-124	15.00
CG-125	18.00
CG-126	24.00
CG-131	9.90
CG-132	9.90
CG-133	10.50
CG-134	9.00
CG-135	9.90
CG-136	13.20
CG-137	8.40
CG-140	7.80
CG-141	9.00
CG-233	9.00
CG-235	12.00
CG-300	16.20
CG-301	24.00
CG-302	30.00
CG-303	36.00
CG-304	141.00
CG-305	63.00
CG-306	150.00
CG-307	138.00
CG-308	162.00
CG-309	360.00
CG-310	309.00
CG-311	66.00
CG-312	66.00
CG-315	14.40
CG-316	21.00
CG-333	9.00
CG-422	21.00
CG-428	24.90
CG-429	24.90
CG-431	36.00
CG-433	9.90
CG-710	$12.00
CGU-1	15.00
CGU-2	17.40
CGU-3	22.50
CGU-4	25.50
CGU-5	26.10
CGU-6	39.00
CGU-7	39.90
CGU-8	72.00
CGU-9	135.00
CVA-1	12.00
CVA-2	14.10
CVA-3	18.00
CVA-4	21.00
CVA-5	36.00
CVL-1	9.00
CVL-2	10.50
CVL-3	15.00
CVM-0	10.50
CVM-1	13.80
CVM-2	18.00
CVM-3	21.00
CVM-4	39.00
CVM-5	105.00
CVP-1	13.20
CVP-2	14.40
CVP-3	21.00
CVP-4	24.00
CVP-5	39.00

• NEW ITEM

DECADE INDUCTORS

Type	Net
DI-1	42.00
DI-2	54.00
DI-3	57.00
DI-4	72.00

DI-T'S

Type	Net
DI-T1	6.00
DI-T2	5.40
DI-T3	5.40
DI-T5	5.40
DI-T8	4.80
DI-T9	6.60
DI-T10	6.60
DI-T11	6.60
DI-T19	6.00
DI-T20	6.00
DI-T21	6.00
DI-T22	6.00
DI-T23	6.90
DI-T25	7.20
DI-T26	5.70
DI-T27	4.80
DI-T28	4.80
DI-T36	7.50
DI-TSH	.90

DO-T'S

Type	Net
DO-T1	6.00
DO-T2	5.40
DO-T3	5.40
DO-T4	5.40
DO-T5	5.40
DO-T6	6.00
DO-T7	6.60
DO-T8	4.80
DO-T9	6.60
DO-T10	6.60
DO-T11	6.60
DO-T12	5.70
DO-T13	5.70
DO-T14	6.00
DO-T15	6.00
DO-T16	6.00
DO-T17	6.00
DO-T18	6.30
DO-T19	6.00
DO-T20	6.00
DO-T21	6.00
DO-T22	6.00
DO-T23	6.90
DO-T24	7.50
DO-T25	7.20
DO-T26	5.70
DO-T27	4.80
DO-T28	4.80
DO-T29	5.70
DO-T30	5.70
DO-T31	6.00
DO-T32	6.00
DO-T33	6.00
DO-T34	6.00
DO-T35	6.30
DO-T36	7.50
•DO-T37	7.80
•DO-T38	7.80
•DO-T39	7.80
•DO-T40	8.40
•DO-T41	7.50
•DO-T42	7.50
•DO-T43	$7.50
•DO-T44	7.50
DO-TSH	.90

FT FILAMENT

Type	Net
FT-1	2.85
FT-2	3.15
FT-3	3.45
FT-4	3.45
FT-5	3.90
FT-6	4.05
FT-7	4.05
FT-8	4.80
FT-10	5.10
•FT-11	4.50
•FT-12	5.10

HERMETIC

Type	Net
H-1	9.00
H-2	9.90
H-3	7.80
H-4	7.80
H-5	8.40
H-6	10.20
H-7	9.60
H-8	9.00
H-9	9.00
H-10	8.40
H-11	7.50
H-12	9.60
H-13	9.00
H-14	9.00
H-15	9.00
H-16	9.00
•H-17	8.70
•H-18	8.70
H-19A	16.50
H-20	15.00
H-21	18.00
H-22	15.90
H-23	16.20
H-24	10.80
H-25	15.00
H-26	15.00
H-27	15.00
H-30	8.40
H-31	8.40
H-32	8.40
H-33	8.40
H-35	6.90
H-36	7.50
H-37A	7.50
H-38	7.50
H-39	7.50
H-40A	7.50
H-41A	7.50
•H-42A	8.40
H-45	9.30
H-46	9.30
H-47	6.90
H-48	6.90
H-49	6.90
H-50	6.90
H-51	7.20
H-52	7.20
H-53	7.20
H-54	7.50
H-55	8.10
H-56	8.70
H-57	9.00
H-58	93.00
H-60	8.10
H-61	8.10
H-62	8.10
H-63	8.10
H-64	8.10
H-65	9.00
H-66	9.00
H-67	9.00
H-68	9.00
H-69	75.00
H-70	7.20
H-71	8.40
H-72	9.00
H-73	11.40
H-74	12.90
H-75	17.40
H-76	24.00
H-77	27.00
H-78	34.50
H-79	90.00
H-80	12.90
H-81	18.00
H-82	20.40
H-83	21.00
H-84	26.40
H-85	30.00
H-86	30.90
H-87	36.00
H-89	49.50
H-91	27.00
H-92	$33.00
H-93	49.50
H-94	19.80
H-95	28.80
H-96	48.00
H-97	14.70
H-98	15.90
H-99	20.40
H-100	21.00
H-101	14.10
H-102	15.00
H-103	17.40
H-104	21.90
H-105	5.70
H-106	6.00
H-107	7.50
H-108	9.60
H-109	10.80
H-110	27.00
H-111	33.00
H-112	36.00
H-113	54.00
H-114	81.00
H-115	81.00
H-117	291.00
H-120	13.80
H-121	18.00
H-122	21.00
H-123	36.00
H-124	12.00
H-125	21.00
H-126	27.00
H-127	45.00
H-128	81.00
H-129	90.00
H-130	9.00
H-131	12.00
H-132	19.20
H-133	15.00
H-134	16.80
H-135	21.00
H-136	27.00
•H-137	12.00
•H-138	19.50
•H-139	18.00
•H-140	7.80
•H-141	10.20
•H-142	12.90
•H-143	18.60
•H-144	30.00
•H-145	45.90
•H-146	45.90
•H-147	27.00
•H-170	10.20
•H-171	15.00
H-194	21.00
H-195	24.00
H-196	30.00
H-197	42.00
•H-198	27.00
•H-219	9.00
•H-220	8.70
•H-221	8.70
H-280	12.00
H-281	12.00
H-282	12.60
•H-290	19.80
•H-291	28.80
•HIT-1	33.00
•HIT-2	48.00
•HIT-3	69.00

HIPERMALLOY

Type	Net
HA-100	17.40
HA-100X	17.40
HA-101	22.20
HA-101X	18.00
HA-103A	15.00
HA-104	15.00
HA-105	21.00
HA-106	18.90
HA-107	27.00
HA-108	19.80
HA-108X	19.80
HA-113	18.00
HA-114	21.00
HA-130X	21.00
HA-133	21.00
HA-134	16.80
HA-135	16.80
HA-136	18.00
HA-137	16.80
HP-122	12.00
HP-123	12.00

HQ TOROIDS

Type	Net
HQA-1	7.50
HQA-2	7.80
HQA-3	8.10
HQA-4	8.40
HQA-5	8.70
HQA-6	$9.00
HQA-7	9,00
HQA-8	9.60
HQA-9	9.60
HQA-10	9.90
HQA-11	9.90
HQA-12	10.80
HQA-13	11.40
HQA-14	12.90
HQA-15	13.80
HQA-16	15.00
HQA-17	15.90
HQA-18	16.80
HQB-1	15.00
HQB-2	15.30
HQB-3	15.90
HQB-4	16.80
HQB-5	17.40
HQB-6	18.00
HQB-7	18.90
HQB-8	19.80
HQB-9	21.00
HQB-10	21.90
HQB-11	22.80
HQB-12	24.00
HQC-1	15.60
HQC-2	16.80
HQC-3	18.00
HQC-4	19.80
HQC-5	24.00
HQE-1	7.80
HQE-2	7.80
HQE-3	8.10
HQE-4	8.40
HQE-5	8.70

HVC VARIDUCTORS

Type	Net
HVC-1	9.00
HVC-2	9.00
HVC-3	9.00
HVC-4	9.00
HVC-5	9.00
HVC-6	9.00
HVC-7	9.60
HVC-8	9.60
HVC-9	9.60
HVC-10	9.90
HVC-11	10.80
HVC-12	12.00

LINEAR STANDARD

Type	Net
LS-6L1	36.00
LS-6L4	66.00
LS-10	24.00
LS-10X	24.00
LS-12	27.00
LS-12X	24.00
LS-14X	24.00
LS-19	19.50
LS-21	24.00
LS-25	27.00
LS-26	27.00
LS-27	24.00
LS-30	24.00
LS-30X	27.00
LS-31	24.00
LS-32	33.00
LS-33	24.00
LS-34	33.00
LS-35	24.00
LS-40	33.00
LS-47	24.00
LS-48	60.00
LS-50	24.00
LS-51	27.00
LS-52	24.00
LS-54	21.00
LS-55	24.00
LS-56	27.00
LS-57	21.00
LS-58	57.00
LS-61	24.00
LS-63	21.00
LS-65	42.00
LS-140	27.00
LS-141	21.00
LS-150	21.00
LS-151	21.00
•LS-666	21.00
•LS-667	21.00
LS-691	600.00
LS-692	930.00

MAGAMPS

Type	Net
MAT-1	27.00
MAT-2	30.00
MAT-3	36.00
MAT-4	39.00
MAT-5	$10.80
MAT-6	9.00
•MAT-7	25.80
•MAT-8	28.80
•MAT-9	34.50
•MAT 10	37.50
•MAT-11	10.05

MINIDUCTORS

Type	Net
MH-1	8.10
MH-2	8.10
MH-3	8.40
MH-4	8.40
•MH-5	8.70
•MH-6	8.70
•MH-7	9.00
•MH-8	9.00
ML-1	8.40
ML-2	8.40
ML-3	8.40
ML-4	8.40
ML-5	8.40
ML-6	8.40
ML-7	8.40
ML-8	8.40
ML-9	8.70
ML-10	9.90
MM-1	7.50
MM-2	7.50
MM-3	7.80
MM-4	7.80
•MM-5	8.10
•MM-6	8.10
•MM-7	8.40
•MM-8	8.40

MQ TOROIDS

Type	Net
MQA-1	7.50
MQA-2	7.80
MQA-3	8.10
MQA-4	8.40
MQA-5	8.70
MQA-6	9.00
MQA-7	9.30
MQA-8	9.60
MQA-9	9.90
MQA-10	10.20
MQA-11	10.50
MQA-12	10.80
MQA-13	11.10
MQA-14	11.40
MQA-15	12.00
MQA-16	12.90
MQA-17	13.80
MQA-18	15.00
MQA-19	18.00
•MQA-20	20.70
MQB-1	12.90
MQB-2	13.20
MQB-3	13.50
MQB-4	13.80
MQB-5	14.10
MQB-6	14.40
MQB-7	14.70
MQB-8	15.00
MQB-9	15.90
MQB-10	16.80
MQB-11	18.00
MQB-12	19.20
•MQB-13	21.00
•MQB-14	24.00
•MQD-0	14.50
MQD-1	15.00
MQD-2	15.60
MQD-3	16.20
MQD-4	16.80
MQD-5	18.00
MQD-6	21.00
•MQD-7	22.80
•MQE-0	6.90
MQE-1	7.20
MQE-2	7.50
MQE-3	7.80
MQE-4	7.80
MQE-5	8.10
MQE-6	8.40
MQE-7	8.40
MQE-8	8.70
MQE-9	8.70
MQE-10	9.00
MQE-11	9.00
MQE-12	9.30
MQE-13	9.90
MQE-14	10.80
MQE-15	12.00
•MQE-16	13.50

LOW FREQU. COILS

Type	Net
MQL-0	30.00
MQL-1	$30.00
MQL-2	30.00
MQL-3	30.00
MQL-4	31.50
MQL-5	33.00

OUNCER

Type	Net
O-1	7.80
O-2	7.80
O-3	7.50
O-4	6.60
O-5	6.60
O-6	7.50
O-7	7.50
O-8	7.80
O-9	7.80
O-10	8.40
O-11	7.80
O-12	7.80
O-13	6.30
O-14	7.50
O-15	7.50
O-16	10.20
O-17	1.50
O-18	7.80
O-19	7.80
O-20	6.30
O-21	5.40
O-22	5.40
O-23	5.10
O-24	5.10
•O-25	8.10
•O-26	8.10
•O-27	8.40
•O-28	8.40
•O-29	8.70
•O-30	8.10
•O-31	8.10
•O-32	8.10
•O-33	8.10

PLUG-IN

Type	Net
P-1	9.00
P-2	9.00
P-3	8.40
P-6	8.40
P-7	8.40
P-8	9.00
P-9	9.00
P-10	9.00
P-11	9.00
P-12	9.00
P-15	9.00
P-16	11.40

PHOTO-FLASH

Type	Net
PF-1	8.40
PF-3	6.00
•PF-5	8.40
•PF-6	5.10
•PF-7	3.60

REPLACEMENT TYPE

Type	Net
R-14	1.95
R-15	1.95
R-16	1.95
R-17	2.25
R-18	2.52
R-19	3.00
R-20	3.60
R-21	3.60
R-41	5.70
R-42	6.00
R-43	6.90
R-44	8.40
R-45	12.00
R-46	24.00
R-47	10.20
R-48	11.70
R-49	12.00
R-55	1.65
R-64	45.00
R-72	7.20
R-73	9.00
R-74	15.00
R-75	24.00
R-76	42.00
R-77	84.00
R-78	17.70
R-79	18.90
R-80	22.80
R-81	33.00
R-86	33.00
R-97	15.00
R-101	7.20
R-102	7.50
R-103	8.40
R-104	9.00
R-105	11.40
R-110	$7.20
R-111	7.50
R-112	9.00
R-113	13.20
•R-220	4.20

SPECIAL SERIES

Type	Net
S-1	4.80
S-2	6.00
S-3	4.50
S-5	5.10
S-6	4.50
S-8	6.60
S-9	8.70
S-10	6.60
S-11	5.10
S-12	5.40
S-13	7.80
S-14	6.60
S-15	7.20
S-16	8.40
S-17	12.00
S-18	7.20
S-19	9.30
S-20	15.00
S-21	21.00
S-22	33.00
S-23	4.50
S-24	5.10
S-25	3.90
S-26	3.90
S-27	5.10
S-28	6.30
S-29	5.10
S-30	5.10
S-31	6.90
S-32	6.90
S-33	9.30
S-34	9.60
S-35	12.00
S-36	12.00
S-37	15.00
S-38	15.00
S-39	16.50
S-40	18.00
S-41	18.00
S-42	19.50
S-44	25.80
S-45	21.00
S-46	24.00
S-47	33.00
S-48	39.00
S-49	36.00
S-50	60.00
S-51	12.00
S-52	15.60
S-53	6.30
S-54	5.70
S-55	5.40
S-57	9.00
S-58	9.90
S-59	9.30
S-60	13.20
S-61	10.20
S-62	9.30
S-63	13.20
S-64	10.80
S-67	10.20
S-68	10.50
S-70	10.20
S-71	15.00
S-72	11.40
•S-75	6.00
•S-76	9.00
•S-77	10.20
•S-78	30.00
•S-80	3.90
•S-81	6.00

SIGNAL

Type	Net
SC-3	7.50
SC-4	9.00
SC-5	14.40

SUBOUNCER

Type	Net
SO-1	3.60
SO-2	3.30
SO-3	3.30
SO-4	3.30
SO-5	3.00
SO-6	3.90
SO-7	3.00
SO-8	3.60
SO-9	3.60
SO-10	3.60
•SO-11	4.20
•SO-12	4.20
•SO-13	4.20
•SO-14	4.20
•SO-CH	.30

SUB-SUB OUNCER

Type	Net
SSO-1	$4.50
SSO-2	4.80
SSO-3	4.20
SSO-4	3.90
SSO-5	3.90
SSO-6	4.20
SSO-7	3.30
SSO-8	3.90
SSO-9	3.00
SSO-10	3.00
SSO-11	3.00
SSO-12	3.00
SSO-13	4.50
SSO-14	4.20
SSO-15	4.20
SSO-16	3.00
SSO-17	3.30
SSO-18	3.30
SSO-19	3.30
SSO-20	3.30
SSO-21	4.80
SSO-22	3.90
SSO-23	3.00
SSO-24	3.00
•SSO-25	5.10
•SSO-26	5.10
•SSO-CH	.30

TAPPED TOROIDS

Type	Net
TQA-1	9.00
TQA-2	9.30
TQA-3	9.60
TQA-4	9.90
TQA-5	10.20
TQA-6	10.50
TQA-7	10.80
TQA-8	11.10
TQA-9	11.40
TQA-10	11.70
TQA-11	12.00
TQA-12	12.30
TQA-13	12.60
TQA-14	12.90
TQA-15	13.50
TQA-16	14.70
TQA-17	15.90
TQA-18	17.40
TQA-19	21.00
•TQA-20	23.40

TAPPED VARIDUCTORS

Type	Net
TVC-1	11.10
TVC-2	11.10
TVC-3	11.10
TVC-4	11.10
TVC-5	11.10
TVC-6	11.10
TVC-7	11.70
TVC-8	11.70
TVC-9	11.70
TVC-10	12.90
TVC-11	14.10
TVC-12	15.30

VIC VARIDUCTORS

Type	Net
VIC-1	6.60
VIC-2	6.60
VIC-3	6.60
VIC-4	6.60
VIC-5	6.60
VIC-6	6.60
VIC-7	6.60
VIC-8	6.90
VIC-9	6.90
VIC-10	6.90
VIC-11	6.90
VIC-12	7.20
VIC-13	7.20
VIC-14	7.20
VIC-15	7.50
VIC-16	7.50
VIC-17	7.50
VIC-18	7.80
VIC-19	7.80
VIC-20	8.40
VIC-21	9.00
VIC-22	12.00

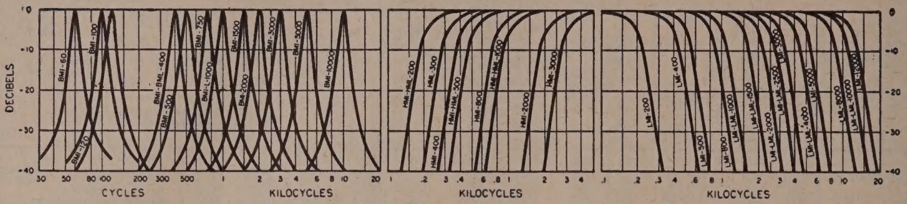
VOLTAGE ADJUSTERS

Type	Net
V-1	20.00
V-1-M	35.00

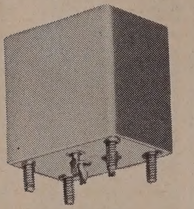
STANDARD INTERSTAGE and LINE FILTERS

Hermetically sealed to MIL-T-27A and MIL-F-18327A Specs.

UTC makes a wide range of specialized filters covering bands ranging from .1 cycle to 400 megacycles. A group of standardized filters have been developed covering the more common mid-range frequencies, which take care of many filter requirements with stock units. All of these standard filters are in drawn hermetically sealed cases shielded to reduce hum pick-up. Special frequencies to order.



TYPICAL RESPONSE CURVES OF STANDARD FILTERS



FILTER CASE M

Base	$1\frac{5}{16}$" x $1\frac{11}{16}$"
Mtg.	¾" x 1¼"
Mtg. Studs (stainless)	6-32
Cutout	⅞" dia.
Height, BMI, LMI, BML	1⅝"
Height, HMI, HML, LML	2½"
Weight	6 oz. and 9 oz.

BMI units (BAND PASS) have 2:1 gain. They are sharply peaked, having approximately 2db attenuation at plus or minus 3% from center frequency and attenuation of 40 db per octave as shown. Input 10,000 ohms, output to grid. **BMI units are MIL type FR4RX22YY.**

BTI are same as **BMI** but with 10,000 ohms output for transistor application. **BTI units are same MIL type as BMI.**

HMI units (HIGH PASS) have a loss of less than 6 db at cutoff frequency, and an attenuation of 35 db at .67 cutoff frequency. Input and output 10,000 ohms. **HMI units are MIL type FR4RX33YY.**

LMI units (LOW PASS) have a loss of less than 6 db at cutoff frequency, and an attenuation of 35 db at 1.5 cutoff frequency. Input and output 10,000 ohms. **LMI units are MIL type FR4RX11YY.**

HML (HIGH PASS) and **LML** (LOW PASS) filters are similar to the interstage filters, in all characteristics, except that they are intended for an input and output impedance of 500/600 ohms. **HML units are MIL type FR4RX33YY, LML units are MIL type FR4RX11YY.**

BML (BAND PASS) have input of 500/600 ohms, output to grid. **BML units are MIL type FR4RX22YY.**

STANDARD FILTERS . . . STOCK FREQUENCIES

BMI-60
BMI-100
BMI-120
BMI-400
BMI-500
BMI-750
●BMI-800
BMI-1000
BMI-1500
BMI-2000
BMI-3000
BMI-4000
BMI-5000
BMI-10000
BTI-60
BTI-100
BTI-120
HMI-200
HMI-400
HMI-500
HMI-800
HMI-1000
HMI-2000
HMI-3000
LMI-200
LMI-400
LMI-500
LMI-800
LMI-1000
LMI-1500
LMI-2000
LMI-2500
LMI-3000
LMI-4000
LMI-5000
LMI-10000
BML-400
BML-1000
HML-200
HML-300
HML-500
HML-1000
LML-1000
LML-1500
LML-2000
LML-2500
LML-4000
LML-8000
LML-10000
LML-12000

MINIATURE INTERSTAGE and LINE FILTERS MINIFILTERS

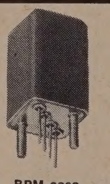
Hermetically sealed to MIL-T-27A and MIL-F-18327A Specs.

The UTC stock interstage filters on the above page have been an industry standard for over a decade. The new UTC MINIFILTERS provide almost the same characteristics in an extremely miniaturized package. Attenuation of these MINIFILTERS is only slightly less than their larger counterparts, as is operating level. Special filters can be supplied for any frequency above the minimum shown for each group, at $48.00 net. Straight pin terminals are provided for printed or standard circuits.

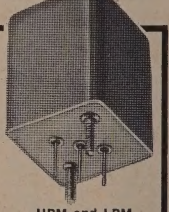
BPM units (BAND PASS) have 2:1 gain. Attenuation is approximately 2 db ± 3% from center frequency, and 35 db per octave as shown. Input 10,000 ohms, output to grid, tapped for 10,000 ohms to provide for transistor circuits. For tube circuits continuity is on grid side, for transistor use continuity is on input side. Special filters with center frequency of 30 KC or higher are available with 10,000 ohms output only. **BPM units are MIL type FR4RX22AF.**

HPM units (HIGH PASS) are down less than 6 db at cutoff frequency, and more than 30 db at .67 cutoff frequency, 40 db at .6 cutoff frequency. Input and output 10,000 ohms. **HMP units are MIL type FR4RX33AG.**

LPM units (LOW PASS) are down less than 6 db at cutoff frequency, and more than 30 db at 1.5 cutoff frequency, 40 db at 1.65 cutoff frequency. Input and Output 10,000 ohms. **LPM units are MIL type FR4RX11AG.**



BPM case
(MIL AF)
¾ x ¾ x 1⅛"
Weight......1 oz.

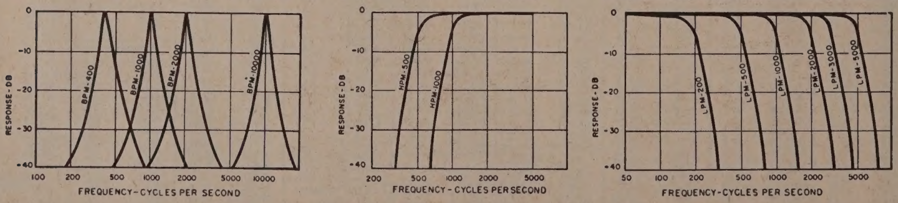


HPM and LPM
case (MIL AG)
1 x 1 x 1⅜"
Weight......2¼ oz.

INTERSTAGE and LINE MINIFILTERS

BPM—400
●BPM—440
●BPM—500
●BPM—600
BPM—750
BPM—1000
BPM—1500
BPM—2000
●BPM—3000
●BPM—4000
●BPM—5000
BPM—10000
HPM—500
HPM—1000
LPM—200
LPM—500
LPM—1000
LPM—2000
LPM—3000
LPM—5000

TYPICAL RESPONSE CURVES OF MINIATURE FILTERS



● NEW ITEM

AND SPECIAL UNITS TO YOUR SPECIFICATIONS

TELEMETERING BAND PASS FILTERS STANDARD

Hermetically sealed to MIL-T-27A, in full accordance with MIL-F-18327A Specs., . . . all units MIL type FR4RX22YY.

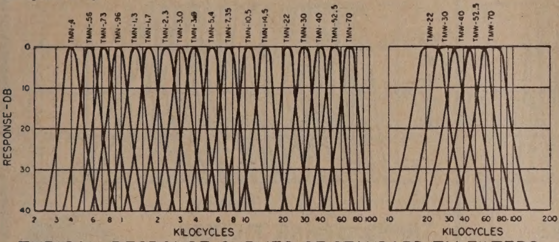
The standard group of UTC telemetering filters described below incorporates extreme miniaturization with maximum stability, a complete set of 18 filters taking a volume of approximately 19 cubic inches. Both TMN and TMW types are designed for 100K input and output impedance and have an insertion loss of less than 6 db. Four pin hermetic header matches small Winchester socket.

TMN filters are down less than 3 db at ± 7.5% of center frequency. They are down more than 18 db at ± 25% of center frequency. Attenuation is greater than 40 db beyond 1.75 F_c and .58 F_c.

TMW filters are down less than 3 db at ± 15% of center frequency. They are down more than 20 db at ± 50% of center frequency. Attenuation is greater than 40 db beyond 2.5 F_c and .4 F_c.

TMN-.4 thru TMN-1.7
1¹⁄₁₆ x 1⁵⁄₃₂ x 2 inches
Weight ......3.5 oz.

TMN-2.3 thru TMW-70
²³⁄₃₂ x ²³⁄₃₂ x 1³⁄₈ inches
Weight ......1.2 oz.



TYPICAL RESPONSE. CURVES OF STANDARD TM FILTERS

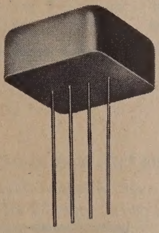
Type No.	Center Frequency KC	Band Width ±
TMN-.4	.4	7½%
TMN-.56	.56	7½%
TMN-.73	.73	7½%
TMN-.96	.96	7½%
TMN-1.3	1.3	7½%
TMN-1.7	1.7	7½%
TMN-2.3	2.3	7½%
TMN-3.0	3.0	7½%
TMN-3.9	3.9	7½%
TMN-5.4	5.4	7½%
TMN-7.35	7.35	7½%
TMN-10.5	10.5	7½%

Type No.	Center Frequency KC	Band Width ±
TMN-14.5	14.5	7½%
TMN-22	22	7½%
TMN-30	30	7½%
TMN-40	40	7½%
TMN-52.5	52.5	7½%
TMN-70	70	7½%
TMW-22	22	15%
TMW-30	30	15%
TMW-40	40	15%
TMW-52.5	52.5	15%
TMW-70	70	15%

MINIATURE TELEMETERING BAND PASS FILTERS MINIFILTERS

Hermetically sealed to MIL-T-27A and MIL-F-18327A Specs., . . . all units MIL type FR5RX22ZZ

UTC Telemetering Minifilters provide the same performance as the standard telemetering filters above, except that they are extremely miniaturized. These units are slanted toward use with transistors (input and output impedance 10,000 ohms), and are ideally suited to printed circuits. No mounting facilities are employed, since the straight pin terminals adequately support these light weight units. A complete set of 18 filters occupies approximately 9½ cubic inches, and weighs approximately 14 ounces. Corresponding discriminator units to specific circuit needs are available on production order . . . approximately same size.



MNF-.4 thru MNF-5.4
1³⁄₁₆" Sq. x ½" high
Weight......1 oz.

MNF-7.35 thru MWF-70
²³⁄₃₂" Sq. x ½" high
Weight......⅓ oz.

Type No.	Center Frequ'cy KC	Band Width ±
●MNF- .4	.4	7½%
●MNF- .56	.56	7½%
●MNF- .73	.73	7½%
●MNF- .96	.96	7½%
●MNF-1.3	1.3	7½%
●MNF-1.7	1.7	7½%
●MNF-2.3	2.3	7½%
●MNF-3.0	3.0	7½%
●MNF-3.9	3.9	7½%
●MNF-5.4	5.4	7½%
●MNF-7.35	7.35	7½%
●MNF-10.5	10.5	7½%
●MNF-14.5	14.5	7½%
●MNF-22	22	7½%
●MNF-30	30	7½%
●MNF-40	40	7½%
●MNF-52.5	52.5	7½%
●MNF-70	70	7½%
●MWF-22	22	15%
●MWF-30	30	15%
●MWF-40	40	15%
●MWF-52.5	52.5	15%
●MWF-70	70	15%

VIC STANDARD VARIDUCTORS

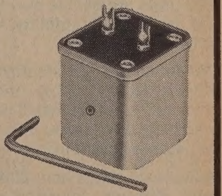
UTC type VIC variable inductors offer a convenient approach to the problem of tuned audio circuits. By adjusting a set screw in the side of the case, an inductance value of +85%, −45% from mean value is obtainable. Range is covered in 600° rotation. Setting is positive. Effective Q for a wide frequency range and variation of inductance with applied AC voltage are shown on the illustrated curves, for a typical VIC unit.

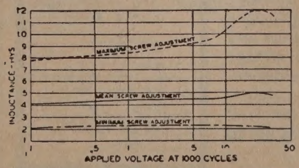
The VIC inductor is housed in a rugged die cast case 1¹¹⁄₃₂" long, 1¼" wide and 1⁷⁄₁₆" high with mounting centers on terminal board side ¹³⁄₁₆" by ²⁹⁄₃₂", tapped for 4-40 screw. Weight is 5½ oz.

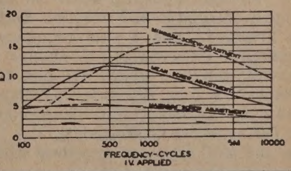
Type	Mean Hys.	DC Ma*
VIC-1	.0085	75
VIC-2	.013	60
VIC-3	.021	50
VIC-4	.034	40
VIC-5	.053	35
VIC-6	.084	30
VIC-7	.13	25
VIC-8	.21	21
VIC-9	.34	18
VIC-10	.54	15
VIC-11	.85	12

Type	Mean Hys.	DC Ma*
VIC-12	1.3	10
VIC-13	2.2	8
VIC-14	3.4	7
VIC-15	5.4	6
VIC-16	8.5	5
VIC-17	13	4
VIC-18	21	3.5
VIC-19	33	3
VIC-20	52	2
VIC-21	83	1.5
VIC-22	130	1

*DC MA shown is maximum recommended . . . will effect some reduction in inductance and Q.







AND SPECIAL UNITS TO YOUR SPECIFICATIONS

● NEW ITEM

TELEGRAPH TONE CHANNEL FILTERS

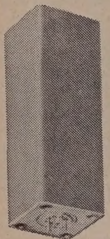
Hermetically sealed to MIL-T-27A and MIL-F-18327A Specs.

UTC band pass filters for multiplex transmitting and receiving provide maximum stability in miniature sizes. Stock filters cover all standard transmit and receive bands. All units employ 7 terminal header matching subminiature 7 pin socket.

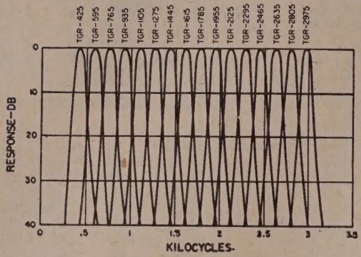
TGR (receiving) filters are 600 ohms in and out. They are down less that 3 db at ± 42.5 cycles from center frequency and down more than 30 db at ± 170 cycles. Attenuation is greater than 15 db at adjacent channel crossover. **TGR units are MIL type FR4RX22YY.**

TGT (transmitting) filters are 600 ohms in and out. They are down less than 3 db at ± 42.5 cycles from center frequency and down more than 16 db at ± 170 cycles. Attenuation is greater than 7.5 db at adjacent channel crossover. **TGT units are MIL type FR4RX22YY.**

TYPICAL RESPONSE CURVES OF STANDARD TG FILTERS

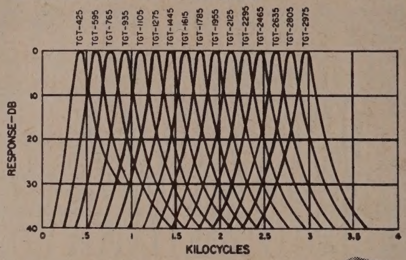


TGR CASE
1½ x 1½ x 4¼"
Mtg.....1 1/16 x 1 1/16"
Screws 6-32
Weight.... ...15 oz.



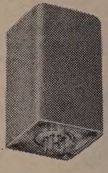
RECEIVING FILTERS

Type No.	Center Frequency (Cyc.)	Type No.	Center Frequency (Cyc.)
TGR-425	425	TGR-1785	1785
TGR-595	595	TGR-1955	1955
TGR-765	765	TGR-2125	2125
TGR-935	935	TGR-2295	2295
TGR-1105	1105	TGR-2465	2465
TGR-1275	1275	TGR-2635	2635
TGR-1445	1445	TGR-2805	2805
TGR-1615	1615	TGR-2975	2975



TRANSMITTING FILTERS

Type No.	Center Frequency (Cyc.)	Type No.	Center Frequency (Cyc.)
TGT-425	425	TGT-1785	1785
TGT-595	595	TGT-1955	1955
TGT-765	765	TGT-2125	2125
TGT-935	935	TGT-2295	2295
TGT-1105	1105	TGT-2465	2465
TGT-1275	1275	TGT-2635	2635
TGT-1445	1445	TGT-2805	2805
TGT-1615	1615	TGT-2975	2975



TGT CASE
1½ x 1½ x 2½"
Mtg.....1 1/16 x 1 1/16"
Screws 6-32
Weight..........8 oz.

VARIDUCTORS

HVC AND TVC HERMETIC VARIDUCTORS

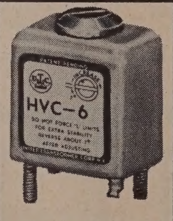
Variable inductors hermetically sealed to MIL-T-27A Specs., all units MIL type TF4RX20YY.

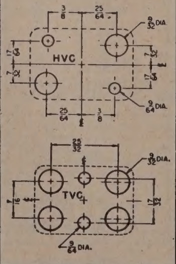
UTC Varidutors have served as a simple solution to tuned circuit problems for over 15 years . . . for oscillators, equalizers, filters, etc.

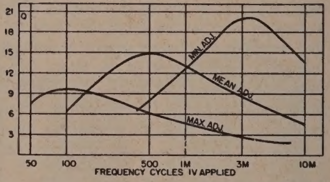
HVC Inductors are hemetically sealed to MIL-T-27A and provide exceptionally wide inductance range with high Q in an extremely compact unit. HVC units are usable over a wide frequency range and have high stability with temperature and voltage change.

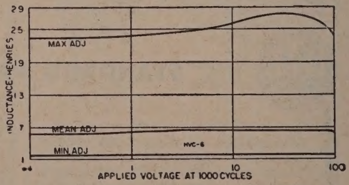
TVC Inductors are identical to the HVC units but provide taps at 30% and 50% of total turns. They are ideal for oscillator circuits, impedance matching, and phase inversion where high Q and adjustable inductance are required.

Inductance range is +200%, —70% of nominal value through adjusting screw on top of case. Range is covered in 900° rotation. Setting is positive. Effective Q over a wide frequency range and variation of inductance with applied AC voltage are illustrated for a typical HVC unit. Case dimensions are 1⅛" long, 25/32" wide, 17/32" high . . . weight 2 ounces. Chassis cutout dimensions for HVC and TVC units are illustrated, 9/64" dia. holes are to clear the 4-40 stainless mounting studs.









Type No.	Min. Hys.	Mean Hys.	Max. Hys.	DC* Ma.	Tapped Type No.
HVC-1	.002	.006	.02	100	TVC-1
HVC-2	.005	.015	.05	60	TVC-2
HVC-3	.011	.040	.11	40	TVC-3
HVC-4	.03	.1	.3	30	TVC-4
HVC-5	.07	.25	.7	20	TCV-5
HVC-6	.2	.6	2	15	TVC-6
HVC-7	.5	1.5	5	10	TVC-7
HVC-8	1.1	4	11	7	TVC-8
HVC-9	3	10	30	5	TVC-9
HVC-10	7	25	70	3.5	TVC-10
HVC-11	20	60	200	2	TVC-11
HVC-12	50	150	500	1.5	TVC-12

Choosing Type No.: If frequency is above 100 cycles, use type providing required inductance between mean and min. values.

AND SPECIAL UNITS TO YOUR SPECIFICATIONS

Refer to Page 1439 for UTC Prices.

MAXIMUM Q
MAXIMUM STABILITY
MINIMUM SIZE

UTC

NEW "M" TYPE TOROIDS

Hermetically sealed to MIL-T-27A Specs., . . . all units MIL type TF4RX20YY

UTC Permalloy Dust Toroids have been the standard of the industry for 20 years. The MQ series of coils provide the highest Q factor in their class (see curves below) with miniaturized dimensions. All units are hermetically sealed to MIL-T-27A Specifications . . . laboratory adjusted to 1% tolerance—0 DC. Uncased and molded toroids available on production orders.

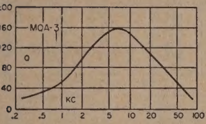
The stability is excellent. For the MQE-7 the inductance change is less than 1% for voltages from .1 to 3 volts. The MQA-13 change is less than 1% for applied voltages from .1 to 20 volts. The MQB-5 change is less than 1% for applied voltages from .1 to 50 volts. DC is permissible through the coil (values listed below). Inductance is virtually independent of frequency, temperature and vibration.

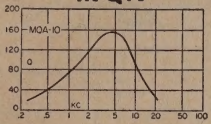
Hum pickup is extremely low due to the toroidal winding structure, with windings uniformly spread over the core. The case is of high permeability, affording additional shielding such that close spacing of units can be effected, the coupling attenuation being approximately 80 db.

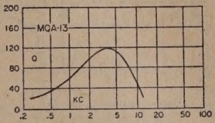
TQA units are similiar to MQA but centertapped for oscillator applications, etc. They employ an extremely stabilized structure for wide temperature range. Q is slightly lower than MQA.

TYPICAL Q CURVES

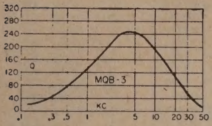
MQA

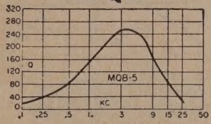


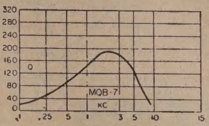




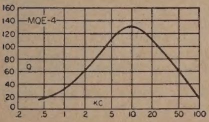
MQB

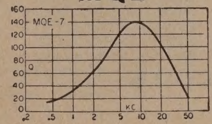


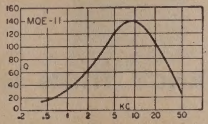




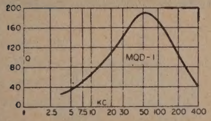
MQE

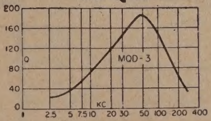


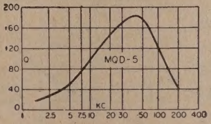


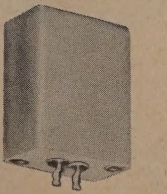


MQD



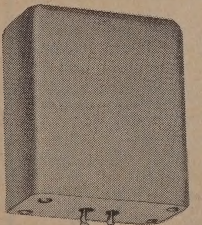






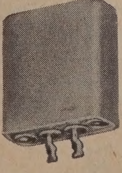
MQA, MQD, TQA CASE

Length	$1\frac{9}{32}$"
Width	$\frac{11}{16}$"
Height	$1\frac{23}{32}$"
Mounting	$\frac{7}{8} \times \frac{9}{32}$"
Screws	4-40
Cutout	$\frac{5}{16} \times \frac{1}{2}$" (TQA, $\frac{5}{16} \times \frac{3}{4}$")
Unit Weight	4 oz.



MQB CASE

Length	$2\frac{9}{16}$"
Width	$1\frac{3}{16}$"
Height	$2\frac{13}{16}$"
Mounting	$2\frac{1}{16} \times \frac{11}{16}$"
Screws	6-32
Cutout	$\frac{7}{8} \times \frac{1}{2}$"
Unit Weight	14 oz.



MQE CASE

Length	$1\frac{1}{16}$"
Width	$\frac{1}{2}$"
Height	$1\frac{7}{32}$"
Mounting	$\frac{3}{4}$"
Screws	4-40
Cutout	$\frac{5}{16} \times \frac{1}{2}$"
Unit Weight	1.5 oz.

MQA and TQA TYPES

Type No.	Inductance (0 DC)	DC MA Max.	Center Tapped Type No.
MQA-1	7 mhy.	250	TQA-1
MQA-2	12 mhy.	200	TQA-2
MQA-3	20 mhy.	150	TQA-3
MQA-4	30 mhy.	125	TQA-4
MQA-5	50 mhy.	100	TQA-5
MQA-6	70 mhy.	80	TQA-6
MQA-7	120 mhy.	60	TQA-7
MQA-8	.2 hy.	50	TQA-8
MQA-9	.3 hy.	40	TQA-9
MQA-10	.5 hy.	30	TQA-10
MQA-11	.7 hy.	25	TQA-11
MQA-12	1 hy.	20	TQA-12
MQA-13	1.5 hy.	17	TQA-13
MQA-14	2.5 hy.	13	TQA-14
MQA-15	4 hy.	10	TQA-15
MQA-16	6 hy.	9	TQA-16
MQA-17	10 hy.	7	TQA-17
MQA-18	15 hy.	5	TQA-18
MQA-19	22 hy.	4	TQA-19
● MQA-20	35 hy.	3	TQA-20 ●

MQB TYPES

Type No.	Inductance (0 DC)	DC MA Max.
MQB-1	10 mhy.	400
MQB-2	30 mhy.	250
MQB-3	70 mhy.	170
MQB-4	120 mhy.	120
MQB-5	.5 hy.	60
MQB-6	1 hy.	40
MQB-7	2 hy.	30
MQB-8	3.5 hy.	22
MQB-9	7.5 hy.	16
MQB-10	12 hy.	11
MQB-11	18 hy.	9
MQB-12	25 hy.	8
● MQB-13	40 hy.	6
● MQB-14	60 hy.	4

MQE TYPES

Type No.	Inductance (0 DC)	DC MA Max.
● MQE-0	4 mhy.	160
MQE-1	7 mhy.	135
MQE-2	12 mhy.	100
MQE-3	20 mhy.	80
MQE-4	30 mhy.	65
MQE-5	50 mhy.	50
MQE-6	70 mhy.	40
MQE-7	100 mhy.	35
MQE-8	150 mhy.	30
MQE-9	.25 hy.	22
MQE-10	.4 hy.	17
MQE-11	.6 hy.	14
MQE-12	.9 hy.	12
MQE-13	1.5 hy.	9
MQE-14	2 hy.	8
MQE-15	2.8 hy.	7.2
● MQE-16	4 hy.	5

MQD TYPES

These high frequency coils are extremely stabilized type for temperature range from —40° C to +85° C.

	Inductance (0 DC)
● MQD-0	1 mhy.
MQD-1	2 mhy.
MQD-2	3 mhy.
MQD-3	5 mhy.
MQD-4	7 mhy.
MQD-5	12 mhy.
MQD-6	20 mhy.
● MQD-7	30 mhy.

All DC MA Max. shown will drop the coil inductance slightly.

AND SPECIAL UNITS TO YOUR SPECIFICATIONS

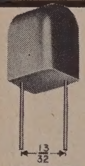
● NEW ITEM

Refer to Page 1439 for UTC Prices.

MINIDUCTORS *Hermetically sealed to MIL-T-27A Specs., . . . all units MIL type TF5RX20ZZ*

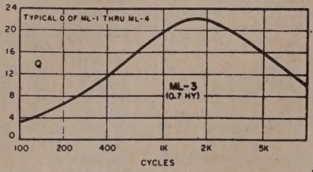
UTC Miniductors are ideal for transistor and printed circuit applications, providing high Q in miniature form. The ML-1 to 4 units are for medium low frequencies, adjusted to ± 3% at 1 V. 1 KC. The ML-5 thru 10 series are for lower frequencies, adjusted to ± 3% at 1 V. 400 cycles. The MM and MH units are for medium and high frequencies, adjusted to a tolerance of ± 2%.

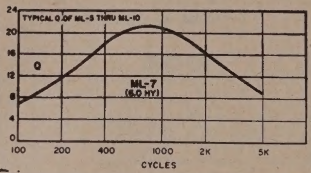
Temperature stability is excellent on all Miniductors, from —55° C. to + 100° C. The ML units are in a Hipermalloy shield case . . . the MM and MH coils are symmetrical toroids . . . for high coupling attenuation and low hum pickup. The DCMA MAX. shown is for approximately 5% drop in inductance.

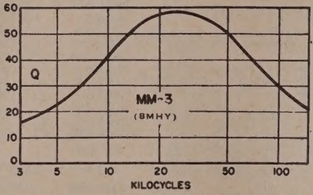


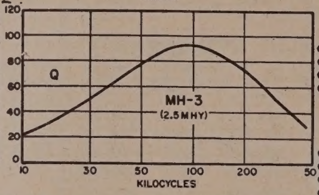
ML CASE
7/16 x 31/64 x 9/16" high
Weight.... .2 oz.

MM, MH CASE
7/16" Dia. x 1/4" high
Weight.... .07 oz.





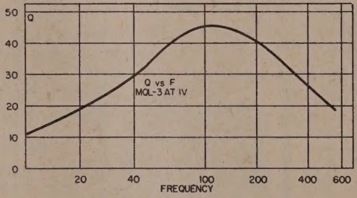


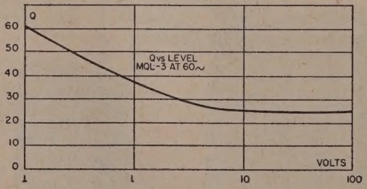


Type No.	Inductance (0 DC)	DC MA Max.
ML-1	.25 Hy.	9
ML-2	.4 Hy.	7
ML-3	.7 Hy.	5
ML-4	1.4 Hy.	3
ML-5	2.5 Hy.	1
ML-6	4.0 Hy.	.7
ML-7	6.0 Hy.	.6
ML-8	10 Hy.	.5
ML-9	25 Hy.	.3
ML-10	60 Hy.	.2
MM-1	3 Mhy.	50
MM-2	5 Mhy.	40
MM-3	8 Mhy.	30
MM-4	12.5 Mhy.	25
● MM-5	20 Mhy.	20
● MM-6	30 Mhy.	16
● MM-7	60 Mhy.	11
● MM-8	120 Mhy.	8
MH-1	.6 Mhy.	90
MH-2	1.5 Mhy.	57
MH-3	2.5 Mhy.	44
MH-4	6 Mhy.	28
● MH-5	10 Mhy.	22
● MH-6	15 Mhy.	18
● MH-7	25 Mhy.	14
● MH-8	40 Mhy.	11

LOW FREQUENCY HIGH Q COILS *Hermetically sealed to MIL-T-27A Specs., . . . all units MIL type TF4RX20YY*

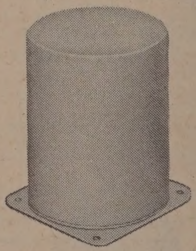
Permalloy dust toroids are not suited to providing high Q at low frequencies. The MQL series of laminated Hipermalloy coils were specifically designed for this class of service. The unique structure employed provides exceptional Q and stability. Inductance values are laboratory adjusted to 2% tolerance at 1 volt, 60 cycles. Stability with voltage is excellent, for MQL-3 inductance variation is less than 1% from .1 V. to 1 V. 60 cycles. Temperature stability is exceptional, total inductance swing being less than 3.5% for the wide range of —55°C to +85°C. A hum reducing lamination structure plus heavy Hipermalloy shielding provide very low hum pickup . . . 240 microvolts/gauss for MQL-3 series connected. Two identical windings brought out to four terminals permit series, parallel, center tapped, or transformer type connections.





Type No.	Series Henries (0 DC)	Parallel Henries (0 DC)
MQL-0	1	.25
MQL-1	10	2.5
MQL-2	20	5
MQL-3	200	50
MQL-4	400	100
MQL-5	2500	625

(For 60 cycles and lower)



MQL CASE

Diameter	1 13/16"
Height	2 1/2"
Mounting	1 1/2 x 1 1/2"
Screw	6-32
Cutout	1 1/2" dia.
Weight	1 lb.

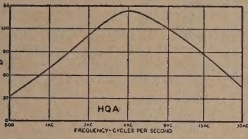
● NEW ITEM

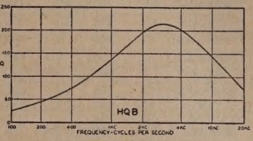
AND SPECIAL UNITS TO YOUR SPECIFICATIONS

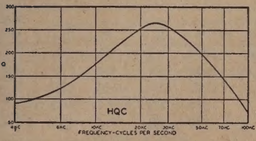
HIGH Q TOROID INDUCTORS

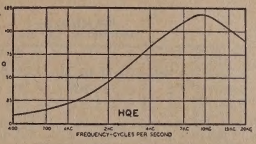
Hermetically sealed to MIL-T-27A Specs., . . . all units MIL type TF4RX20YY

Favorites for over fifteen years, UTC HQ Toroids are only excelled by the preferred new "M" series on page 1443. As typical Q curves, show, HQ coils are available for applications from 100 cycles to 100 KC. Adjusted to 1%, the inductance is virtually independent of frequency, temperature, and vibration. Voltage stability is excellent, and shielding case assures 80 db coupling attenuation.



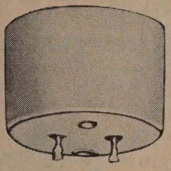






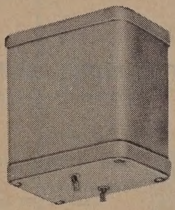
Type No.	Inductance (0 DC)	DC MA Max.
HQA-1	5 mhy.	400
HQA-2	12.5 mhy.	260
HQA-3	20 mhy.	200
HQA-4	30 mhy.	160
HQA-5	50 mhy.	130
HQA-6	80 mhy.	100
HQA-7	125 mhy.	85
HQA-8	200 mhy.	65
HQA-9	300 mhy.	50
HQA-10	.5 hy.	40
HQA-11	.75 hy.	35
HQA-12	1.25 hy.	26
HQA-13	2 hy.	20
HQA-14	3 hy.	16
HQA-15	5 hy.	13
HQA-16	7.5 hy.	10
HQA-17	10 hy.	9
HQA-18	15 hy.	8
HQB-1	10 mhy.	410
HQB-2	30 mhy.	240
HQB-3	70 mhy.	170
HQB-4	120 mhy.	120
HQB-5	.5 hy.	60
HQB-6	1 hy.	41
HQB-7	2 hy.	30
HQB-8	3.5 hy.	22
HQB-9	7.5 hy.	16
HQB-10	12 hy.	11
HQB-11	18 hy.	9
HQB-12	25 hy.	8
HQC-1	1 mhy.	
HQC-2	2.5 mhy.	
HQC-3	5 mhy.	
HQC-4	10 mhy.	
HQC-5	20 mhy.	
HQE-1	5 mhy.	
HQE-2	10 mhy.	
HQE-3	50 mhy.	
HQE-4	100 mhy.	
HQE-5	200 mhy.	

The DC MA Max. shown will drop coil inductance slightly.



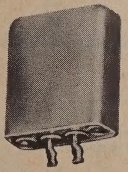
HQA and HQC CASE

Diameter	1 13/16"
Height	1 3/16"
Mounting	1 1/8"
Screws	6-32
Cutout	9/16 x 1 3/16"
Weight	5 oz.



HQB CASE

Length	2 5/8"
Width	1 5/8"
Height	2 5/8"
Mounting	1 11/64 x 2 11/64"
Screws	6-32
Cutout	9/16 x 1 1/8"
Weight	14 oz.



HQE CASE

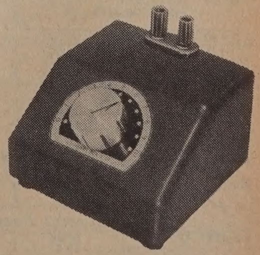
Length	1 1/16"
Width	1/2"
Height	1 7/32"
Mounting	3/4"
Screws	4-40
Cutout	5/16 x 1/2"
Weight	1.5 oz.

HIGH Q PRECISION INDUCTANCE DECADES

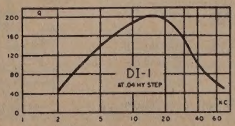
UTC DI inductance decades are invaluable instruments for design and experimental work with tuned circuits, wave filters, and equalizers. They set new standards of Q, stability, frequency range, and convenience. The low hum pickup toroid coils employ a new permalloy dust core which, combined with special winding methods, provides very high Q, excellent voltage and temperature stability, and high self resonance frequency.

The switch employed is a new low capacity type which lab tests have proven for low contact resistance after 100,000 operations. The inductance values are laboratory adjusted to better than 1% precision, with calibration noted on base.

DI inductance decades are housed in a compact, rugged, die cast case with control on a sloping panel, ideally suiting these units to laboratory use.



Type No.	Induct. Henries	Optimum Range	Max. Q	Max. ACMA	Ins. Test Volts RMS
DI-1	10 x .01	2-60 KC	200	500	500
DI-2	10 x .1	.25-20 KC	200	150	500
DI-3	10 x 1	.25-10 KC	200	50	500
DI-4	10 x 10	.2-1.5 KC	100	15	500



DI CASE

Length	4 1/2"
Width	4 3/8"
Height	2 3/8"
Weight	2 lbs.

AND SPECIAL UNITS TO YOUR SPECIFICATIONS

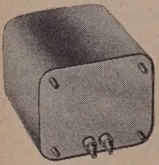
HERMETIC SEALED FILTER REACTORS

TUBE and TRANSISTOR TYPE

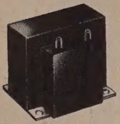
Hermetically sealed to MIL-T-27A Specs.

The multiple ratings for the "H" series of filter chokes suit these units for the complete gamut of military and industrial applications. Transistor supply units are swinging type to enhance regulation. MIL case dimensions on page 1447. H-79 terminals opposite mounting.

*Relates to ripple voltage, in input filter circuits only.



METAL CASED TF4 TYPE



LIGHT WEIGHT MOLDED MIL TYPE TF5SX04ZZ

MIL-T-27A RATINGS IN REGULAR TYPE, **INDUSTRIAL RATINGS IN BOLD TYPE**

Type No.	MIL Type	Ind. Hys.	@ MA DC	Ind. Hys.	@ MA DC	Ind. Hys.	@ MA DC	Ind. Hys.	@ MA DC	Res. Ohms	Max. DCV* Ch. Input	Test V. RMS	MIL Case
H-70	TF4RX04AH	20	20	18	25	14.5	30	10	35	925	350	1000	AH
H-71	TF4RX04FB	20	40	18.5	50	15.5	60	10	70	350	500	2500	FB
H-72	TF4RX04GB	13	70	11.5	85	9.5	105	7	125	215	500	2500	GB
H-73	TF4RX04HB	11	100	9.5	125	7.5	150	5.5	175	150	700	2500	HB
H-74	TF4RX04JB	11	150	10	170	8.5	195	**6.5**	**215**	135	700	2500	JB
H-75	TF4RX04KB	11	200	10	230	8.5	250	**6.5**	**300**	90	700	2500	KB
H-76	TF4RX04LB	11	200	10	230	8.5	250	**6.5**	**300**	85	1500	4500	LB
H-77	TF4RX04MB	10	300	9	350	**8**	**390**	**6.5**	**435**	60	2000	5500	MB
H-78	TF4RX04OA	7	400	**6.5**	**430**	**6**	**465**	**5.5**	**500**	48	2500	7000	OA
H-79	TF4RX04YY	7	800	6.5	900	6	1000	**5.5**	**1250**	20	3000	9000	7x7x8
●**H-170**	TF4RX04GB† (2 wdgs.) *	.18 .045	125 250	.14 .035	250 500	25‡ 6.5‡	1.25A 2.5A	11‡ 3‡	2.5A 5.0A	.6 .15		1000	GB
●**H-171**	TF4RX04JA† (2 wdgs.) *	9‡ 2.25‡	.75A 1.5A	5‡ 1.25‡	1.5A 3A	2.2‡ .55‡	7.5A 15A	1.6‡ .4‡	15A 30A	.03 .0075		1000	JA

Type No.	Inductance Henries @ DC MA.	DCR, Ohms	Test Volts	L	W	H	Wgt. Lbs.
H-105	2.5 @ 25 MA, 2 @ 35 MA, 1.5 @ 45 MA.	225	1000	1¼	15/16	15/16	.1
H-106	2.25 @ 60 MA, 1.75 @ 80 MA, 1.25 @ 100 MA.	110	1000	1⅝	1 5/16	1⅜	.28
H-107	2 @ 120 MA, 1.5 @ 160 MA, 1 @ 200 MA.	55	2500	2⅛	1¾	1 55/64	.9
H-108	2 @ 220 MA, 1.5 @ 270 MA, 1 @ 325 MA.	35	2500	2⅞	2½	2 17/32	1.7
H-109† (2 wdgs.)*	.2 @ 150 MA, .025 @ 1.25A, .011 @ 2.5A. .06 @ 250 MA, .0065 @ 2.5A, .003 @ 5A.	.6 .15	750	2⅞	2½	2 17/32	1.7

† Split winding in series
* Split winding in parallel
‡ Rated in millihenries

HERMETIC SEALED TRANSISTOR/FILAMENT SUPPLY TRANSFORMERS

Hermetically sealed to MIL-T-27A Specs.

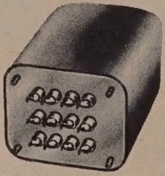
Primary: 105/115/210/220 volts, 50/60 cycles, except H-130, H-137, H-138, H-140 (115v.) and H-131 (115/220v.) Suited to 400/1000 cycle service.

MIL-T-27A RATINGS IN REGULAR TYPE,
INDUSTRIAL RATINGS IN BOLD TYPE.

Type No.	MIL Type	Sec. Volts	Amps. (MIL)	Amps. (Indust.)	Sec. Test Volts RMS	MIL Case
H-120	TF4RX01GB	2.5	10	**12**	4000	GB
H-121	TF4RX01JB	2.5	10	**12**	10000	JB
H-122	TF4RX01KB	2.5	20	**26**	10000	KB
H-123	TF4RX01NB	2.5 2.5 2.5	5 5 10	**7.5** **7.5** **15**	10000	NB
H-124	TF4RX01FB	5	3	**3**	2000	FB
H-125	TF4RX01KB	5	10	**12**	10000	KB
H-126	TF4RX01LA	5	20	**25**	10000	LA
H-127	TF4RX01NA Term. Opp. Mtg.	5	20	**30**	21000	NA
H-128	TF4RX01YY Term. Opp. Mtg.	5	60	**75**	21000	Pg. 1447
H-129	TF4RX01YY Term. Opp. Mtg.	5 5 5	10 10 20	**12** **12** **24**	21000	Pg. 1447
H-130	TF4RX01AJ	6.3CT	.6	**.75**	1500	AJ
H-131	TF4RX01FB	6.3CT	2	**2.5**	2500	FB
H-132	TF4RX01JA	6.3CT 6.3CT	6 6	**7** **7**	2500	JA
H-133	TF4RX01HB	6.3CT	7	**8**	2500	HB
H-134	TF4RX01HA	6.3CT	10	**12**	2500	HA
H-135	TF4RX01JB	10 CT	10	**13**	2500	JB
H-136	TF4RX01LA	14, 12, 11 CT	10	**14**	2500	LA
●**H-137**	TF4RX01EB	6.3 6.3	.6 .6	**.75** **.75**	1500	EB
●**H-138**	TF4RX01GA	12.6 12.6	2 2	**2.5** **2.5**	1500	GA
	400 CYCLE TYPES					
●**H-139***	TF4RX01FA Pri. 400 cyc. 57.5,99.7,115V	12.6CT 12.6	2 2	**2.5** **2.5**	1500	FA
●**H-140**	TF4RX01YY Pri. 400 Cyc.	6.3	.6	**.75**	500 RC-25 (Pg. 1451)	

● NEW ITEM

*Two H-139's Scott connected provide 26 volt two phase from 115V. three phase 400 cycle input.

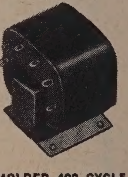


METAL CASED TF4 TYPE (Dim. Pg. 1447)

400 CYCLE MOLDED TYPES

PRIMARY 105/115 VOLTS 380-1000 CYCLES
SEC: 6.3 VCT 2500V RMS TEST

Type No.	Sec. Amp.	L In.	W In.	H In.	Wt. Lbs.
H-101	3.5	1 25/32	1 21/32	2	.3
H-102	5.5	1¾	2	2¼	.44
H-103	10	2 5/16	2⅛	2½	.8
H-104	25	2⅞	2½	3 1/32	1.5

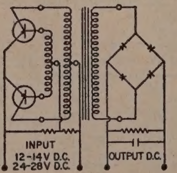


MOLDED 400 CYCLE TYPE TF5SX01ZZ

TRANSISTOR INVERTER TRANSFORMERS

Hermetically sealed to MIL-T-27A specs., TypeTF4SX40.

UTC inventer transformers high reliability (layer insulated) types providing high efficiency in small size. Units are in drawn MIL cases. Circuit details supplied with transformer. With 6 V. input instead of 12 V., output voltage is halved, current rating remains the same. Dimensions on page 1447.



FOR 12/14 OR 24/28 VOLT BATTERY

Type No.	DC output, when used in circuit shown	MIL Case
H-97	250V.- 60MA	AH
H-98	375V.-100MA	AJ
H-99	425V.-175MA	FA
H-100	550V.-200MA	GB

AND SPECIAL UNITS TO YOUR SPECIFICATIONS

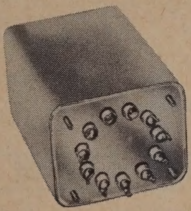
HERMETIC SEALED POWER AND PLATE TRANSFORMERS

Hermetically sealed to MIL-T-27A Specs.

Power transformers: primary 115V, 60 cycles suited to 50*-1000 cycles service. Plate transformers: primary 105/115/210/220 volts, 50/60 cycles. "L" ratings are choke input . . . "C" ratings are condenser input.

The "H" series of hermetic power transformers are suited to a wide variety of electronic applications in both military and industrial service. Conservative design provides maximum reliability through low temperature rise and high insulation safety factors. All units are in MIL cases with rugged internal construction.

The tapped high voltage winding provides either of two secondary voltages for greatest versatility. The listings indicate DC voltages and permissible currents for both choke and condenser input filters, as well as for military and industrial applications.



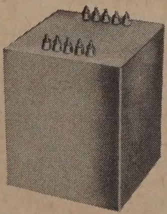
MIL CASES, INCHES

Mil Case	W	H	L
AH	1 5/16	1 5/16	1 3/4
AJ	1 5/8	1 5/8	2 3/8
FA	2 5/16	2 1/16	3 1/8
FB	2 5/16	2 1/16	2 1/2
GB	2 3/4	2 3/8	2 13/16
HA	3 1/16	2 5/8	4 1/4
HB	3 1/16	2 5/8	3 5/16
JA	3 9/16	3 1/16	4 7/8
JB	3 9/16	3 1/16	3 7/8
KA	3 15/16	3 3/8	5 1/4
KB	3 15/16	3 3/8	4 5/16
LA	4 5/16	3 11/16	5 5/16
LB	4 5/16	3 11/16	4 1/2
MB	4 11/16	4	4 15/16
NA	5 1/16	4 5/16	6 13/16
NB	5 1/16	4 5/16	5 1/2
OA	5 1/2	4 1/2	6 3/4

UTC CASES, INCHES

Type No.	W	H	L
H-79	7	7	8
H-113	6	5 1/8	6 3/4
H-114	6 3/4	6 1/2	8
H-115	6 3/4	6 1/2	8
H-116	9 3/4	8 1/2	10 1/4
H-117	11	11	14 3/4
H-128	6 1/2	5 1/2	7 3/4
H-129	6 1/2	5 1/2	7 3/4

H-114, H-115, H-117 have terminals opposite mounting.



MIL-T-27A RATINGS IN REGULAR TYPE, **INDUSTRIAL RATINGS IN BOLD TYPE**

Type No.	MIL Type	HV Sec. C. T.	Approx. DC Volts	DC MA	Fil. Wdg.	**Approx. DC Volts**	**MA DC**	**Fil. Wdg.**	MIL Case
H-80	TF4RX03FA	450	C 240	30	6.3VCT-2A	**C 215**	**38**	**6.3VCT-2.5A**	FA
H-81	TF4RX03HA	500	L 170	95		**L 160**	**110**		HA
			C 270	55	6.3VCT-3A	**C 245**	**75**	**6.3VCT-3A**	
		550	L 200	85	5V-2A	**L 180**	**105**	**5V-2A**	
			C 310	50		**C 280**	**65**		
H-82	TF4RX03JB	550	L 180	145		**L 160**	**190**		JB
			C 290	90	6.3VCT-4A	**C 270**	**115**	**6.3VCT-4.5A**	
		600	L 215	135	5V-2A	**L 190**	**180**	**5V-2A**	
			C 330	85		**C 315**	**100**		
H-83	TF4RX03JA	600	L 215	165		**L 200**	**210**		JA
			C 315	100	6.3V-5A	**C 320**	**120**	**6.3V-6A**	
		670	L 250	150	5V-2A	**L 230**	**200**	**5V-2A**	
			C 400	90		**C 380**	**110**		
H-84	TF4RX03KA	700	L 245	225		**L 240**	**255**		KA
			C 390	135	6.3V-5A	**C 375**	**160**	**6.3V-6A**	
		750	L 275	205	6.3V-1A	**L 270**	**230**	**6.3V-1.5A**	
			C 430	125	5V-3A	**C 410**	**150**	**5V-4A**	
H-85	TF4RX03LA	700	L 245	300		**L 230**	**370**		LA
			C 390	190	6.3V-6A	**C 355**	**230**	**6.3V-6A**	
		750	L 270	280	6.3V-1,5A	**L 250**	**350**	**6.3V-2A**	
			C 425	170	5V-3A	**C 395**	**210**	**5V-4A**	
H-86	TF4RX03MB	720	L 270	310		**L 250**	**360**		MB
			C 425	180	6.3V-6A	**C 395**	**225**	**6.3V-7.5A**	
		790	L 295	300	6.3V-2A	**L 280**	**350**	**6.3V-2A**	
			C 475	160	5V-3A	**C 440**	**210**	**5V-4A**	
H-87	TF4RX03NB	730	L 245	420		**L 230**	**515**		NB
			C 390	275	6.3V-6A	**C 390**	**300**	**6.3V-6A**	
		800	L 275	400	6.3V-2A	**L 275**	**480**	**6.3V-2A**	
			C 440	250	5V-4A	**C 430**	**290**	**5V-6A**	
H-89	TF4RX03OA	850	L 305	430		**L 275**	**550**		OA
			C 460	280	6.3V-8A	**C 445**	**340**	**6.3V-10A**	
		1050	L 400	400	6.3V-4A	**L 370**	**500**	**6.3V-5A**	
			C 600	260	5V-6A	**C 575**	**320**	**5V-6A**	
H-91	TF4RX03KA	900	L 340	200	6.3V-5A	**L 330**	**220**	**6.3V-6A**	KA
		1000	L 390	190	6.3V-1A 5V-3A	**L 385**	**195**	**6.3V-1.5A 5V-4A**	
H-92	TF4RX03MB	900	L 340	265	6.3V-6A	**L 330**	**310**	**6.3V-8A**	MB
		1050	L 400	240	6.3V-2A 5V-4A	**L 395**	**290**	**6.3V-2A 5V-4A**	
H-93	TF4RX03OA	1000	L 370	300	6.3V-8A	**L 340**	**390**	**6.3V-10A**	OA
		1200	L 465	265	6.3V-4A 5V-6A	**L 455**	**350**	**6.3V-5A 5V-6A**	
H-194**	TF4RX03HA	200	L 170	140	6.3V-3.5A	**L 160**	**155**	**6.3V-4A**	HA
			C 275	85		**C 260**	**95**		
		235	L 200	125		**L 190**	**135**		
			C 325	75		**C 310**	**85**		
H-195**	TF4RX03JA	215	L 185	285	6.3V-5A	**L 175**	**300**		JA
			C 300	180		**C 285**	**195**	**6.3V-6A**	
		265	L 230	240		**L 220**	**255**		
			C 375	150		**C 360**	**165**		
H-196**	TF4RX03KA	230	L 200	445	6.3V-5A	**L 190**	**480**		KA
			C 320	280	6.3V-1.5A	**C 300**	**300**	**6.3V-6A**	
		285	L 250	380		**L 240**	**420**	**6.3V-2A**	
			C 400	235		**C 380**	**260**		
H-197**	TF4RX03MB	260	L 230	500	6.3V-6A	**L 220**	**550**		MB
			C 360	320	6.3V-2A	**C 340**	**350**	**6.3V-7A**	
		320	L 280	420		**L 270**	**470**	**6.3V-2A**	
			C 450	260		**C 430**	**290**		
●**H-198**	TF4RX03HA	No CT							HA
Highly shielded		800	1000	5	1.25 V—.2A connected to one				
Scope transformer		1600	2000	5	end of HV winding.				
		2400	3000	5	6.3 V—.6A 5.2 KV RMS test voltage				
H-110	TF4RX02MB	1050	L 365	300		**L**	**400**		MB
		1200	L 430	275		**L**	**385**		
H-111	TF4RX02NA	1050	L 415	500		**L**	**600**		NA
		1200	L 480	450		**L**	**550**		
H-112	TF4RX02NA	1500	L 615	320		**L**	**385**		NA
		1900	L 790	275		**L**	**330**		
H-113	TF4RX02YY	2500	L 1050	310		**L**	**375**		See insert
		3000	L 1275	275		**L**	**330**		
H-114	TF4RX02YY	2500	L 1050	475		**L**	**525**		See insert
		3000	L 1265	425		**L**	**475**		
H-115	TF4RX02YY	3500	L 1500	275		**L**	**375**		See insert
		4400	L 1900	235		**L**	**320**		
H-117	TF4RX02YY	5000	L 2125	950		**L**	**1150**		See insert
		6000	L 2550	850		**L**	**1050**		

*For 50 cycles, secondary current ratings reduced by 10%. **DC ratings for bridge rectifier circuits.

AND SPECIAL UNITS TO YOUR SPECIFICATIONS

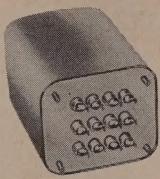
● NEW ITEM

UNIVERSAL TRANSISTOR SUPPLY TRANSFORMERS

LOW VOLTAGE DC SUPPLY . . . TELEPHONE SUPPLY . . .
BIAS SUPLY . . . BATTERY CHARGERS . . . PLATING RECTIFIERS

/ *Hermetically sealed to MIL-T-27A specs. Type TF4RX02.*

UTC silicon rectifier transformers are high reliability units in drawn MIL cases. The chart below shows the secondary voltages available and the approximate DC voltages which result in typical silicon rectifier circuits (at MIL currents shown). Primary taps can modify nom. AC voltages by —6%, +6%, and +12%. Since the capacitor following the rectifier affects the DC voltage, values used (in 1000 mfd) are shown, in parenthesis ( ), after each current rating. Case dimensions on page 1447.



PRIMARY 115 VOLTS, 50/60 CYCLES
NOMINAL SEC. VOLTS, 8.25 to 40.5

Type No.	MIL DC Range	Indust. DC Range	MIL CASE
H-94	6V-3A to 53V-1A	**6V-4A to 50V-1.2A**	HA
H-95	6V-7.5A to 53V-2.5A	**6V-9A to 50V-3A**	KA
H-96	6V-18A to 53V-6A	**6V-23A to 50V-7.5A**	OA

MIL-T-27A RATINGS IN REGULAR TYPE, **INDUSTRIAL RATINGS IN BOLD TYPE**

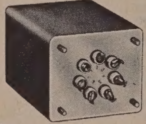
	← FULL WAVE BRIDGE SILICON RECTIFIER							→	← FULL WAVE C.T.		→
Nom. AC Volts*	40.5	32.25	28.5	24	20.25	16.5	12	8.25	40.5 CT	24 CT	16.5 CT
Approx. DC Volts*	53	41	34	25	24	18	12	6	24	12	6.6
H-94 DC Amp.	1. (.5)	1.1(.5)	1.2(.5)	1.3(.5)	2 (1)	1.5(1)	2.5(2)	3 (2)	1.5(1)	1.8(1)	2.3(2)
H-94 **DC Amp.**	**1.2**(.5)	**1.5**(.5)	**1.5**(.5)	**1.6**(.5)	**2.5**(1)	**2** (1)	**3** (2)	**3.8**(2)	**2** (1)	**2.2**(1)	**2.8**(2)
H-95 DC Amp.	2.5(1)	3 (1)	3 (1)	3.5(1)	5 (2)	3.7(2)	6 (4)	7.5(4)	3.7(2)	4.5(2)	5.5(4)
H-95 **DC Amp.**	**3** (1)	**3.5**(1)	**3.8**(1)	**4** (1)	**6** (2)	**4.5**(2)	**7.5**(4)	**9** (4)	**4.5**(2)	**5.5**(2)	**6.7**(4)
H-96 DC Amp	6 (4)	7 (4)	7.5(4)	8 (4)	12 (6)	9 (6)	15 (12)	18 (12)	9 (6)	11 (6)	13.5(12)
H-96 **DC Amp.**	**7.5**(4)	**8.5**(4)	**9.5**(4)	**10** (4)	**15** (6)	**11** (6)	**19** (12)	**23** (12)	**11** (6)	**13.5**(6)	**17** (12)

*Nom. AC and DC volts are at 115 volt input . . . primary taps can modify —6%, +6%, and +12%.

TRANSISTOR SUPPLY TRANSFORMERS

Hermetically sealed to MIL-T-27A specs.

Primary 115V. 50/60 cycles (tapped on H-143 thru H-146 for dual secondary voltages). DC ratings are approximate, based on silicon bridge rectifier (except H-141, H-142 also shown F.W.CT.). Choke input DCV is based on 10% voltage drop in choke. Condenser value, C, is in 1000 mfd. H-141, H-142, H-147 listing under "Secs in parallel" is single winding.

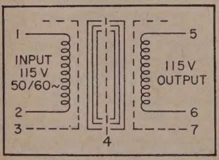


				← Sec. in Parallel				→	← Sec. in Series				→	
Type No.	**MIL Type**	**Sec. V Rms**	**Sec. A Rms**	**Choke DCV**	**Input DCA**	**Cond. DCV**	**Input DCA**	**C**	**Choke DCV**	**Input DCA**	**Cond. DCV**	**Input DCA**	**C**	**MIL Case**
●**H-141**	TF4RX02EB Full wave C.T.	20 CT	.3	16.5 8	.3 .43	26 12	.2 .3	.2 .5						EB
●**H-142**	TF4RX02EA Full wave C.T.	20 CT	.6	16.5 9	.6 .85	26 13	.4 .6	.4 1						EA
●**H-143**	TF4RX02HA	17/21.5 17/21.5	1.5 1.5	14/17.5	3	18.5/25	2	1	28/35	1.5	43/56	1	.5	HA
●**H-144**	TF4RX02LA	17/21.5 17/21.5	4 4	14/17.5	8	18.5/25	5	2	28/35	4	43/56	2.5	1	LA
●**H-145**	TF4RX02YY	17/21.5 17/21.5	9 9	14/17.5	18	18.5/25	12	6	28/35	9	43/56	6	4	RC-175 Pg. 1459
●**H-146**	TF4RX02YY	34/43 34/43	4.5 4.5	28/35	9	43/56	6	4	56/70	4.5	85/110	3	1	RC-175 Pg. 1459
●**H-147**	TF4RX02KA	10	20	8.2	20	10	13	12						KA

ULTRASHIELDED POWER-LINE ISOLATION TRANSFORMERS

Hermetically sealed to MIL-T-27A Specs. . . . Type TF4RX01YY

SIMULATES BATTERY OPERATION FOR CRITICAL CIRCUITS REQUIRING EXTREME ISOLATION FROM POWER LINE.



MIL-T-27A RATINGS IN REGULAR TYPE
INDUSTRIAL RATINGS IN BOLD TYPE

PRIMARY 115 V 50/60 CYCLES
SECONDARY 115 V

Type No.	Power Watts	**Power Watts**	Case Size
●HIT-1	50	**60**	4x4x3" high
●HIT-2	200	**250**	5x5x4½" high
●HIT-3	475	**600**	7¾x6½x5½" high

UTC hermetically sealed shielded isolation transformers are designed to give the ultimate in isolation for line-powered equipment. Isolation, which formerly could only be obtained from battery power, can now be realized by the use of these transformers. The effective capacity coupling between primary and secondary windings is less than 0.1 MMFD. (Even this minute capacitance can be substantially reduced by optimum circuit design suited to the individual application.) For this purpose shields are individually terminated to allow maximum flexibility. Input and output terminals are brought out on opposite sides of a special housing in order to maintain the excellent isolation between line and load.

● NEW ITEM

AND SPECIAL UNITS TO YOUR SPECIFICATIONS

MAGNETIC AMPLIFIERS FOR SERVO MOTOR APPLICATIONS

Hermetically sealed to MIL-T-27A Specs., . . . all units MIL type TF4SY40YY

VACUUM TUBE TYPE

The MAT 1-4 Magnetic Amplifiers are exceptionally stable units designed for the control of 2 phase, 115V., 400 cycle servo motors. They are compact . . . hermetically sealed . . . magnetically shielded . . . and meet MIL-T-27A and MIL-E-5400 Specifications. The output is sinusoidal, amplitude variable, and phase reversible. Control is provided by a dual triode such as 12AU7 operating with a plate voltage of 115 volts, 400 cycles, or higher. The signal to the triode grids can be polarity reversible DC or phase reversible 400 cycles with or without suppressed carrier modulation. These units eliminate DC power requirements as well as temperature sensitive dry disc rectifiers. The high input impedance provides minimum loading on sensing elements and high power gain. Ringing at low load level has been reduced to a minimum through high internal damping factors. The power output figures are conservative . . . power gain of the **Magnetic Structure** is approximately 40 . . . response time approximately 7.5 milliseconds. The maximum null voltage is 3 volts RMS. For single phase supply voltage the load capacitor should effect 90° phase shift with motor load . . . for 3 phase, 30° phase unit.

For AC signal control the circuit of Figure 1 is employed. For DC signal control Figure 2 applies. Figure 3 shows the use of a power transformer (MAT-5) which provides higher plate voltages (230 volt supply data of chart) and eliminates the input transformer (MAT-6). The typical response curve of Figure 4 applies to all units, the larger units feeding heavier loads.

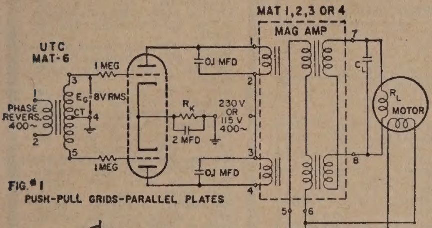

MAT 1,2,3 OR 4
MAG AMP
UTC
MAT-6
1 MEG
.01 MFD
PHASE
REVERS.
400~
E_G=8V RMS
CT
R_K
230 V
OR
115 V
400~
2 MFD
.01 MFD
1 MEG
C_L
R_L
MOTOR
1
2
3
4
5
6
7
8
115V 400~

FIG. 1
PUSH-PULL GRIDS-PARALLEL PLATES

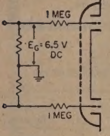

1 MEG
E_G=6.5 V
DC
1 MEG

FIG. 2
GRID CIRCUIT MODIFICATION FOR DC INPUT

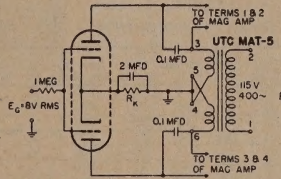

TO TERMS 1 & 2
OF MAG AMP
UTC MAT-5
0.1 MFD
2 MFD
1 MEG
E_G=8V RMS
R_K
115 V
400~
0.1 MFD
TO TERMS 3 & 4
OF MAG AMP
1
2
3
4
5
6

FIG. 3
PARALLEL GRIDS-PUSH-PULL PLATES

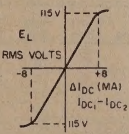
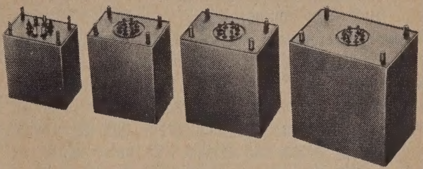


FIG. 4



Type No.	MAT-1	MAT-2	MAT-3	MAT-4
230 Volt Supply				
Power output	4 W.	8 W.	11 W.	18 W.
RL, ohms	3300	1600	1200	720
CL, mfd.	.2	.3	.5	.7
115 Volt Supply				
Power output	2 W.	4 W.	6 W.	9 W.
RL, ohms	6500	3300	2200	1450
CL, mfd.	.13	.2	.3	.45
Reson. Freq.	40 cyc.	35 cyc.	35 cyc.	20 cvc.
Log-Decr.	.18	.23	.03	.65
Cont. Wdg. Res.	6200Ω	8450Ω	4750Ω	5650Ω
Case. Length, In.	1¼	1½	1¾	2⅛
Width, In.	115/16	2⅛	2½	3⅛
Height, In.	2 5/16	2¾	2 15/16	3⅜
Mtg. Dim., In.	1 3/16 x 1½	1 x 1⅝	1⅛ x x1⅞	1½ x 2½
Studs, stainless	4-40	6-32	8-32	8-32
Cutout, In.	1	1	1	1
Unit Weight, lbs.	.67	1.1	1.7	2.75

MAT-5 115V.-400 cyc. to 460 VCT; provides 230V. 48 MA DC or 460V. 24 MA DC. RC-37 Case . . . 1⅜ x 1⅜ x 1⅝ . . . ⅛ mtg. holes 1⅛ x 1⅛ . . . 6 oz. MIL type TF4SY02YY.

MAT-6 Input . . . 10,000 ohms pri. . . . 1:15 C.T. ratio . . . phase shift under 1° . . . RC-25 case. Pg. 1451. MIL type TF4RX10YY.

TRANSISTOR TYPE

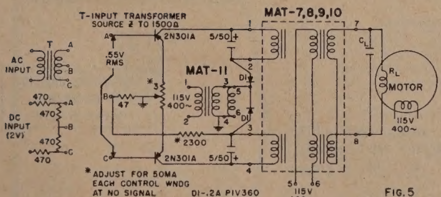

T-INPUT TRANSFORMER
SOURCE Z TO 1500Ω
MAT-7,8,9,10
T
A
AC
INPUT
B
C
.55V
RMS
2N301A
5/50
MAT-11
115V
400~
DI
DI
470
470
DC
INPUT
(2V)
470
470
47
*2300
2N301A
5/50
C_L
R_L
MOTOR
115V
400~
1
2
3
4
5
6
7
8
115V
400~
*ADJUST FOR 50MA
EACH CONTROL WNDG
AT NO SIGNAL
DI-.2A PIV360

FIG. 5

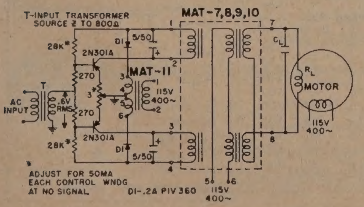

T-INPUT TRANSFORMER
SOURCE Z TO 800Ω
MAT-7,8,9,10
28K*
DI
5/50
2N301A
270
MAT-11
115V
400~
T
AC
INPUT
.6V
RMS
270
2N301A
28K*
DI
5/50
C_L
R_L
MOTOR
115V
400~
1
2
3
4
5
6
7
8
115V
400~
*
ADJUST FOR 50MA
EACH CONTROL WNDG
AT NO SIGNAL
DI-.2A PIV 360

FIG. 6

UTC transistor MAT units are identical to their vacuum tube counterparts, but designed for low impedance control. Typical applications are illustrated in Figures 5 and 6. The input transformer may be chosen by impedance ratio rather than precise rated impedance. For example, the DO-T11 can be used as the input in Figure 5 (7500 ohms to 1500 ohms) and would have 2.3° phase shift . . . the H-14 used as the input (3750 ohms to 1500 ohms) would have a phase shift of .6°.

Type No.	●MAT-7	●MAT-8	●MAT-9	●MAT-10
Power output	4 W.	8 W.	11 W.	18 W.
R_L, ohms	3300	1600	1200	720
C_L, mfd, approx.	.2	.3	.5	.7
Cont. Wind. Res.	38 Ω	52 Ω	30 Ω	36 Ω
Case Length, In.	2 5/16	2½	2¾	2 29/32
Width, In.	1 13/16	2¼	2½	2 29/32
Height, In.	1 17/32	1 11/16	2	2¼
Mtg. Dim., In.	1⅜ x 1⅞	1 13/16 x 2	1 15/16 x 2 3/16	2⅜ x 2⅜
Studs, stainless	4-40	6-32	8-32	8-32
Cutout, In.	1	1	1	1
Weights, lbs.	.65	1.1	1.7	2.75

●**MAT-11** 115V.-400 cyc. to two 28 Volt 2 A. windings for 56 VCT- .2 A. or 28 V- .4 A. RC-37 (pg. 1459) case. MIL type TF4SY02YY.

AND SPECIAL UNITS TO YOUR SPECIFICATIONS

● NEW ITEM

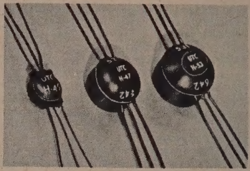
PRECISION MINIATURE WIDE APPLICATION PULSE TRANSFORMERS

Individually adjusted to parameters shown in table

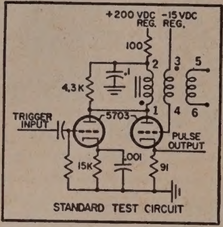
Hermetically sealed to MIL-T-27A Specs., . . . all units MIL type TF5SX36ZZ

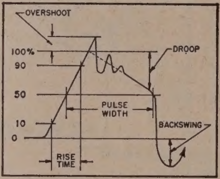
VACUUM TUBE PULSE TRANSFORMERS

UTC miniature, wound core, pulse transformers are individually precision adjusted in standard test circuits to close tolerances. They are high reliability units, hermetically sealed by vacuum molding and suited for service from —70° C. to +130° C. Wound core structure provides excellent temperature stability (unlike ferrite). Designs are high inductance type to provide minimum of droop and assure true pulse width, as indicated on chart below. If used for coupling circuit where minimum rise time is important, use next lowest type number. Rise time will be that listed for this lower type number . . . droop will be that listed multiplied by ratio of actual pulse width to value listed for this type number. Blocking oscillator data listed is obtained in standard test circuits shown. Coupling data was obtained with H. P. 212A generator (correlated for H-55,56,57) and source/load impedance shown. 1:1:1 ratio.



For Spring Clip Mounting, use Augat No. 6016-8A for H-47 thru 52 . . . No. 6014-20A for H-53 thru 57.





DEFINITIONS

Amplitude: Intersection of leading pulse edge with smooth curve approximating top of pulse.

Pulse width: Microseconds between 50% amplitude points on leading and trailing pulse edges.

Rise Time: Microseconds required to increase from 10% to 90% amplitude.

Overshoot: Percentage by which first excursion of pulse exceeds 100% amplitude.

Droop: Percentage reduction from 100% amplitude a specified time after 100% amplitude point.

Backswing: Negative swing after trailing edge as percentage of 100% amplitude.

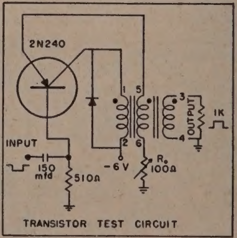
	APPROX. DCR, OHMS			BLOCKING OSCILLATOR PULSE					COUPLING CIRCUIT CHARACTERISTICS							DIMENSIONS		
Type No.	1-2	3-4	5-6	Width µ Sec.	Rise Time	% Over Shoot	Droop %	% Back Swing	P Width µ Sec.	Volts Out	Rise Time	% Over Shoot	Droop %	% Back Swing	Imp. in, out, ohms	L In.	W In.	Wt. Grams
H-45	3	3.5	4	.05	.022	0	20	10	.05	17	.01	20	0	35	250	⅜	⅜	1
H-46	5.5	6.5	7	.10	.024	0	25	10	.10	19	.01	30	10	50	250	⅜	⅜	1
H-47	3.7	4.0	4	.20	.026	0	25	8	.20	18	.01	30	15	65	500	9/16	9/16	4
H-48	5.5	5.8	6	.50	.03	0	20	5	.50	20	.01	30	20	65	500	9/16	9/16	4
H-49	8	8.5	9	1	.04	0	20	10	1	24	.02	15	15	65	500	9/16	9/16	4
H-50	20	21	22	2	.05	0	20	10	2	27	.05	10	15	35	500	9/16	9/16	4
H-51	28	31	33	3	.10	1	20	8	3	26	.07	10	10	35	500	9/16	9/16	4
H-52	36	41	44	5	.13	1	25	8	5	23	.15	10	10	45	1000	9/16	9/16	4
H-53	37	44	49	7	.28	0	25	8	7	24	.20	10	10	50	1000	⅝	⅝	6
H-54	50	58	67	10	.30	0	20	8	10	24	.25	10	10	50	1000	⅝	⅝	6
H-55	78	96	112	16	.75	0	20	10	16	23	.40	5	15	20	1000	⅝	⅝	6
H-56	93	116	138	20	1.25	0	25	10	20	23	.6	5	10	10	1000	⅝	⅝	6
H-57	104	135	165	25	2.0	0	30	10	25	24	1.5	5	10	10	1000	⅝	⅝	6
H-58	Pulse transformer kit. Consists of one of each of the above units in a partitioned plastic case.																	

TRANSISTOR PULSE TRANSFORMERS

Individually adjusted to parameters shown in table

UTC miniature transistor pulse transformers are precision, wound core units, similar to the tube types listed above, but specifically designed for transistor applications. All types are similar in size to the H-45 . . . ⅜ x ⅜, 1 gram. Ratio 4:4:1. Data based on 1 V. input trigger.

	APPROX. DCR, OHMS			BLOCKING OSCILLATOR PULSE					COUPLING CIRCUIT CHARACTERISTICS						
Type No.	1-2	3-4	5-6	Width µ Sec.	Rise Time	% Over Shoot	Droop %	% Back Swing	P Width µ Sec.	Volts Out	Rise Time	% Over Shoot	Droop %	% Back Swing	Imp. in, out, ohms
H-60	.124	.14	.05	.05	.016	0	0	30	.05	9.3	.012	0	0	20	50
H-61	.41	.48	.19	.1	.016	0	0	30	.1	8.2	.021	0	0	15	50
H-62	.78	.94	.33	.2	.022	0	0	18	.2	7.4	.034	0	5	12	100
H-63	1.86	2.26	.70	.5	.027	2	10	20	.5	7.5	.045	0	20	25	100
H-64	3.73	4.4	1.33	1	.033	0	12	25	1	7	.078	0	15	23	100
H-65	6.2	7.3	2.22	2	.066	0	15	25	2	6.6	.14	0	10	20	100
H-66	10.2	12	3.6	3	.087	0	18	30	3	6.8	.17	0	10	20	100
H-67	14.5	17.5	5.14	5	.097	0	23	28	5	7.9	.2	0	18	28	200
H-68	42.3	52.1	14.8	10	.14	0	15	28	10	6.5	.4	0	15	30	200
H-69	Transistor pulse transformer kit, consists of H-60 thru H-68 in plastic case.														



AND SPECIAL UNITS TO YOUR SPECIFICATIONS

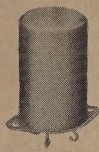
Use Index Page 1 for Quick, Easy Location of ALL Products

HERMETIC AUDIO COMPONENTS / *Hermetically sealed to MIL-T-27A Specs.*
TRANSISTOR and TUBE TYPES

The stock audio units listed below provide the high reliability which has made UTC the principal supplier of military transformers for almost 30 years.

The frequency response ratings are based on military requirements. Units that do not carry DC are appreciably better in response than the range shown. Most are within 2 db from 30 to 20,000 cycles.

The level ratings are for low distortion at the lowest frequency specified. For higher frequencies considerably higher levels are permissible. For example, the H-3 will handle +21 dbm at 400 cycles. Transformers can be used for applications differing considerably from those shown, keeping in mind that impedance ratio is constant. Units may be used reversed, input to secondary.



RC-25 CASE

Length	$1\frac{13}{32}$"
Width	$\frac{61}{64}$"
Height	$1\frac{7}{16}$"
Mtg. (slot center)	$1\frac{1}{8}$ to $1\frac{7}{32}$"
Screws	4-40 Fil.
Cutout	$\frac{7}{8}$" Dia.
Unit Weight	1.5 oz.

MINIATURE AUDIO UNITS . . . RC-25 CASE

Type No.	Application	MIL Type	Pri. Imp. Ohms	Sec. Imp. Ohms	Pri. Unbal. DC MA	Response ±2 db (Cyc.)	Max. Level
H-1	Mike, Unit, line to grid	TF4RX10YY	50, 200 CT, 500 CT*	50,000	0	50-10,000	+ 5 dbm
H-2	Mike to grid	TF4RX11YY	82	135,000	50	250-8,000	+18 dbm
H-3	Plate to single grid	TF4RX15YY	15,000	60,000	0	50-10,000	4 MW
H-4	Plate to single grid DC in Pri.	TF4RX15YY	15,000	60,000	4	200-10,000	25 MW
H-5	Plate to PP grids	TF4RX15YY	15,000	95,000 CT	0	50-10,000	3 MW
H-6	Plate to PP grids DC in Pri.	TF4RX15YY	15,000	95,000 split	4	200-10,000	12 MW
H-7	Plate or PP to line	TF4RX13YY	20,000 CT	150/600	4	200-10,000	125 MW
H-8	Mixing and matching	TF4RX16YY	150/600	600 CT	0	50-10,000	+ 8 dbm
H-9	82/41:1 input to grid	TF4RX10YY	150/600	1 meg.	0	200-3,000 (4 db.)	+10 dbm
H-10	10:1 plate to grid	TF4RX15YY	10,000	1 meg.	0	200-3,000 (4 db.)	10 MW
H-11	Reactor	TF4RX20YY	300 Hys.-0 DC, 50 Hys.-3 Ma. DC, 6,000 Ohms.				
H-12	Mike, line to PP grids	TF4RX10YY	50,200 CT, 500 CT*	50,000 CT	0	50-10,000	+ 5 dbm
H-13	Transistor Interstage	TF4RX13YY	10K/2.5K, Split	2K/.5K split	4	100-10,000	100 MW
H-14	Transistor Interstage	TF4RX13YY	10K/2.5K, Split	4K/1K split	4	100-10,000	100 MW
H-15	Transistor to line	TF4RX13YY	1,500 CT	500/125 split	8	100-10,000	100 MW
H-16	Transistor to V.C.	TF4RX13YY	2,000 CT 4,000 CT	8 16	4	100-10,000	100 MW
●H-17	Transistor input	TF4RX16YY	600/150 Split	2000/500 split	0	50-20,000	+15 dbm
●H-18	Transistor Interstage	TF4RX13YY	10,000 CT	500/125 split	4	100-20,000	100 MW
●H-219	Transistor Interstage	TF4RX13YY	50,000 CT	500/125 split	2	100-20,000	100 MW
●H-220	Transistor Interstage	TF4RX13YY	500/125 Split	500/125 split	20	100-20,000	****
●H-221	Transistor Interstage	TF4RX13YY	500/125 Split	150/37.5 split	20	100-20,000	****

RC-50 CASE

Length	$1\frac{5}{8}$"
Width	$1\frac{5}{8}$"
Height	$2\frac{5}{16}$"
Mounting	$1\frac{5}{16}$"
Screws	#6-32
Cutout	$1\frac{1}{2}$" Dia.
Unit Weight	8 oz.

COMPACT AUDIO UNITS . . . RC-50 CASE

Type No.	Application	MIL Type	Pri. Imp. Ohms	Sec. Imp. Ohms	Pri. Unbal. DC MA	Response ±2 db (Cyc.)	Max. Level
H-19A	Balanced line to grid 1:14, multiple (75 db) shielding	TF4RX10YY	250 CT 500 CT	50,000 100,000 CT	0	30-20,000	+ 6 dbm
H-20	Plate or PP to PP grids	TF4RX15YY	15,000 split	80,000 split	0	30-20,000	15 MW
H-21	Plate to PP grids DC in Pri.	TF4RX15YY	15,000	80,000 split	8	100-20,000	200 MW
H-22	Plate to line	TF4RX13YY	15,000	50/200, 125/500**	8	50-20,000	200 MW
H-23	PP plates to line	TF4RX13YY	30,000 split	50/200, 125/500**	0	30-20,000	80 MW
H-24	Reactor	TF4RX20YY	450 Hys.-0 DC, 250 Hys.-5 Ma. DC, 6000 ohms 65 Hys.-10 Ma. DC, 1500 ohms				
H-25	Mixing or trans. to line	TF4RX17YY	500 CT	500/125 split	20	40-20,000	1 watt
H-26	Transistor Interstage	TF4RX13YY	10,000/2,500 (split)	2,000/500 split	8	40-20,000	1 watt
H-27	Transistor to V.C.	TF4RX17YY	500 CT	16/4 split	20	40-20,000	1 watt
H-280	Transistor driver	TF4RX17YY	200 CT	400/100 split	20	40-20,000	1 watt
H-281	Transistor to V.C.	TF4RX17YY	48 CT	16, 8, 4	750 Bal	40-20,000	5 watts
H-282	Transistor to V.C. RC-62 case, Pg. 1459.	TF4RX17YY	20 CT	16, 8, 4	1000 Bal	70-20,000	10 watts

SM CASE

Length	$\frac{11}{16}$"
Width	$\frac{1}{2}$"
Height	$\frac{29}{32}$"
Screw	4-40 Fil.
Unit Weight	.8 oz.

SUBMINIATURE AUDIO UNITS . . . SM CASE

Type No.	Application	MIL Type	Pri. Imp. Ohms	Sec. Imp. Ohms	Pri. Unbal. DC MA	Response ±2 db (Cyc.)	Max. Level
H-30	Input to grid	TF4RX10YY	50	62,500	0	150-10,000	+13 dbm
H-31	Plate to single grid	TF4RX15YY	10,000	90,000	0	300-10,000	20 MW
H-32	Single plate to line	TF4RX13YY	10,000***	200	3	300-10,000	20 MW
H-33	Single plate to low imp.	TF4RX13YY	30,000	50	1	300-10,000	30 MW
H-35	Reactor	TF4RX-20YY	100 Henries-0 DC, 50 Henries-1 Ma. DC, 4,400 ohms.				
H-36	Transistor Interstage	TF4RX15YY	25,000 (DCR800)	1,000 (DCR110)	.5	300-10,000	10 MW
H-37A	Transistor output	TF4RX17YY	500CT(DCR50)	50 (DCR5)	3.5	300-10,000	30 MW
H-38	Transistor Interstage	TF4RX13YY	10,000 CT (DCR600)	1,200 CT	2	300-10,000	30 MW
H-39	Transistor Interstage	TF4RX13YY	10,000 CT (DCR600)	2,000 CT	2	300-10,000	30 MW
H-40A	Transistor output	TF4RX17YY	500 CT (DCR26)	600 CT	10	300-10,000	30 MW
H-41A	Transistor output	TF4RX13YY	1,500 CT (DCR71)	600 CT	7	300-10,000	30 MW
●H-42A	Isolation or Transistor Interstage	TF4RX13YY	10,000 CT	10,000 CT	1	300-10,000	100 MW

* 200 ohm termination can be used for 150 ohms or 250 ohms, 500 ohm termination for 600 ohms.

** 200 ohm termination can be used for 150 ohms or 250 ohms, 125/500 ohm termination for 150/600 ohms.

*** Can be used for 500 ohm load . . . 25,000 ohm primary impedance . . . 1.5 Ma. DC.

**** 250 MW @ 100 cycles, 1 Watt @ 200 cycles.

CHOPPER TRANSFORMERS (60/400 Cycles) / *Hermetically sealed to MIL-T-27A specs. Type TF4RX10YY.*

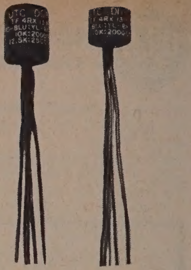
Type No.	½ Pri. Imp. Ohms	Sec.Imp. Ohms	Turns Ratio ½ Pri. to Sec.	Max. Volts ½ Pri. -60∼	Min. L Pri. 1V-60∼	Pri. Res. Ohms	Sec. Res. Ohms	Case
●H-290	2500	100,000	6.4	2.75	90 Hy.	450	3,250	RC-50 (Pg.1451)
	High electrostatic shielding plus triple magnetic shield.							
●H-291	2000/500	312,000	25/50	3.4/1.7	30/7.5 Hy.	320/80	16,000	RC-62 (Pg.1459)
	Exceptional electrostatic shielding (10 db greater than H-290) plus hum-bucking structure and triple magnetic shield.							

AND SPECIAL UNITS TO YOUR SPECIFICATIONS

● NEW ITEM

NEW* UTC Revolutionary† DO-T and DI-T TRANSISTOR TRANSFORMERS

FROM STOCK—Hermetically Sealed to MIL-T-27A Specs.



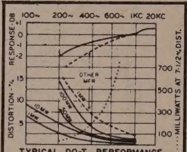
TRANSFORMERS PICTURED ACTUAL SIZE
DO-T: 5/16 Dia. x 13/32", 1/10 Oz.; DI-T: 5/16 Dia. x 1/4", 1/20 Oz.

Conventional miniaturized transistor transformers have inherently poor electrical characteristics, perform with insufficient reliability and are woefully inadequate for many applications. The radical design of the new UTC DO-T and DI-T transistor transformers provide unprecedented power handling capacity and reliability, coupled with extremely small size.

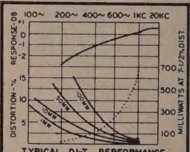
To fully appreciate DO-T and DI-T transistor transformers, the curves shown indicate their performance compared to that of similar size units now on the market. Special units available to your specs. for production applications. Available with leads at both ends on production order. Electrostatic shielding available on production orders.

Units can be used for different impedances than those shown, keeping in mind that impedance ratio is constant. Lower source impedance will improve response and level ratings . . . higher source will reduce them. Units may be used reversed, input to secondary.

The exceptional reliability of DO-T and DI-T units is basic in their unique structure. The units are rugged, full hermetic seal, **metal cased** to MIL-T-27A grade 4. The bobbin is completely rigid eliminating stress and wire movement. The turns are circular in shape rather than square, eliminating turn corner stress and effecting uniform wire lay. The coil wire and external lead are rigidly anchored terminal board fashion employing no tapes and brought out through strain relief.



TYPICAL DO-T PERFORMANCE
SOURCE: RATED PRI. IMP. AND D.C.
LOAD : RATED SEC. IMP.



TYPICAL DI-T PERFORMANCE
SOURCE: RATED PRI. IMP. AND D.C.
LOAD RATED SEC. IMP.

High Power Rating	up to 100 times greater.
Excellent Response	twice as good at low end.
Low Distortion	reduced 80%
High Efficiency	up to 30% better . . . compare DCR.
Moisture Proof	hermetically sealed to MIL-T27A.
Rugged	completely metal cased.
Anchored Leads	will withstand 10 pound pull test.
Printed Circuit Use	(solder melting) plastic insulated leads.
Suited to Clip Mounting	use Augat #6009-8A clip.

DO-T No.	Pri. Imp.	D.C. Ma.‡ in Pri.	Sec. Imp.	Pri. Res. DO-T	Pri. Res. DI-T	Mw. Level	DI-T No.
DO-T1	20,000 30,000	.5 .5	800 1200	850	815	50	**DI-T1**
DO-T2	500 600	3 3	50 60	60	65	100	**DI-T2**
DO-T3	1000 1200	3 3	50. 60	115	110	100	**DI-T3**
DO-T4	600	3	3.2	60		100	
DO-T5	1200	2	3.2	115	110	100	**DI-T5**
DO-T6	10,000	1	3.2	790		100	
DO-T7	200,000 500	0 0	1000 100,000	8500 —		25	
	Reactor 2.5 Hys./2 Ma., .9 Hy./4 Ma				630		**DI-T8**
DO-T8	" 3.5 Hys./2 Ma., 1 Hy./5 Ma.			630			
DO-T9	10,000 12,000	1 1	500 CT 600 CT	800	870	100	**DI-T9**
DO-T10	10,000 12,500	1 1	1200 CT 1500 CT	800	870	100	**DI-T10**
DO-T11	10,000 12,500	1 1	2000 CT 2500 CT	800	870	100	**DI-T11**
DO-T12	150 CT 200 CT	10 10	12 16	11		500	
DO-T13	300 CT 400 CT	7 7	12 16	20		500	
DO-T14	600 CT 800 CT	5 5	12 16	43		500	
DO-T15	800 CT 1070 CT	4 4	12 16	51		500	
DO-T16	1000 CT 1330 CT	3.5 3.5	12 16	71		500	
DO-T17	1500 CT 2000 CT	3 3	12 16	108		500	
DO-T18	7500 CT 10,000 CT	1 1	12 16	505		500	
DO-T19	300 CT	7	600	19	20	500	**DI-T19**
DO-T20	500 CT	5.5	600	31	32	500	**DI-T20**
DO-T21	900 CT	4	600	53	53	500	**DI-T21**
DO-T22	1500 CT 600	3 5	600 1500 CT	86 —	87	500	**DI-T22**
DO-T23	20,000 CT 30,000 CT	.5 .5	800 CT 1200 CT	850	815	100	**DI-T23**
DO-T24	200,000 CT 500 CT	0 0	1000 CT 100,000 CT	8500 —		25	
DO-T25	10,000 CT 12,000 CT	1 1	1500 CT 1800 CT	800	870	100	**DI-T25**
	Reactor 4.5 Hys./2 Ma., 1.2 Hys./4 Ma.				2300		**DI-T26**
DO-T26	" 6 Hys./2 Ma., 1.5 Hys./5 Ma.			2100			
	Reactor .9 Hy./2 Ma., .5 Hy./6 Ma.				105		**DI-T27**
DO-T27	" 1.25 Hys./2 Ma., .5 Hy./11 Ma.			100			
	Reactor .1 Hy./4 Ma., .08 Hy./10 Ma.				25		**DI-T28**
DO-T28	" .3 Hy./4 Ma., .15 Hys./20 Ma.			25			
DO-T29	120 CT 150 CT	10 10	3.2 4	10		500	
DO-T30	320 CT 400 CT	7 7	3.2 4	20		500	
DO-T31	640 CT 800 CT	5 5	3.2 4	43		500	
DO-T32	800 CT 1000 CT	4 4	3.2 4	51		500	
DO-T33	1060 CT 1330 CT	3.5 3.5	3.2 4	71		500	
DO-T34	1600 CT 2000 CT	3 3	3.2 4	109		500	
DO-T35	8000 CT 10,000 CT	1 1	3.2 4	505		100	
DO-T36	10,000 CT 12,000 CT	1 1.	10,000 CT 12,000 CT	950	970	100	**DI-T36**
***DO-T37**	2000 CT 2500 CT	3 3	8000 Split 10,000 Split	195		100	
***DO-T38**	10,000 CT 12,000 CT	1 1	2000 Split 2400 Split	560		100	
***DO-T39**	20,000 CT 30,000 CT	.5 .5	1000 Split 1500 Split	800		100	
***DO-T40**	40,000 CT 50,000 CT	.25 .25	400 Split 500 Split	1700		50	
***DO-T41**	400 CT 500 CT	8 6	400 Split 500 Split	46		500	
***DO-T42**	400 CT 500 CT	8 6	120 Split 150 Split	46		500	
***DOT-43**	400 CT 500 CT	8 6	40 Split 50 Split	46		500	
***DO-T44**	80 CT 100 CT	12 10	32 Split 40 Split	9.8		500	
DO-TSH	Drawn Hipermalloy shield and cover 20/30 db						**DI-TSH**

‡ DCMA shown is for single ended useage (under 5% distortion—100MW—1KC) . . . for push pull, DCMA can be any balanced value taken by .5W transistors (under 5% distortion—500MW—1KC)

† DO-T & DI-T units designed for transistor application only. Pats. Pend.

* DO-T37 thru DO-T44 newly added to series.

AND SPECIAL UNITS TO YOUR SPECIFICATIONS

OUNCER AUDIO UNITS / STANDARD AND PLUG-IN TYPES

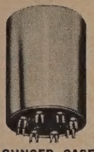
TRANSISTOR and TUBE TYPES

UTC OUNCER components represent the acme in compact quality transformers. These units, which weigh one ounce, are fully impregnated and sealed in a drawn aluminum housing ⅞″ diameter . . . mounting opposite terminal board. Hermetic Ouncers (RC-25 case) listed on page 1451.

Ouncer items are ideal for portable broadcast, hearing aid, aircraft, concealed service, and similar applications. High fidelity characteristics are provided.

"P" series units are identical to the UTC OUNCER units but are sealed in bakelite housings with plug-in base to fit standard octal socket. While of submersion proof design, these units weigh but two ounces. Oversize pins in the base make it impossible to dislodge these units from their sockets.

Hermetic Ouncers are listed on page 1451.

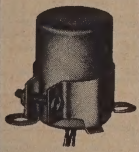


OUNCER CASE

Dia. ....⅞″
Ht. ....1³⁄₁₆″
Term proj. ....⁵⁄₃₂″
Mtg. ....¹¹⁄₁₆″
Scr. 2-56
Wt. ....1 oz.

PLUG-IN CASE

Dia. ....1³⁄₃₂″
Ht. ....1¹⁵⁄₃₂″
Skt. ....St. Oct.
Wt. ....2 oz.

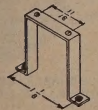


0-16 CASE

Dia. ....1¹⁄₁₆″
Ht. ....1½″
Mtg. ....1½″
Scr. 6-32
Wt. ....3 oz.
Clamp....1⁵⁄₁₆ x 1⅞″

P-16 CASE

Dia. ....1³⁄₁₆″
Ht. ....2¾″
Wt. ....4 oz.



Ouncer chassis mount bracket available on production orders

INPUT AND MIXING TRANSFORMERS

Type No.	Application	Pri. Imp. Ohms	Unbal. MA D.C.	Sec. Imp. Ohms	±1 db Cycles	Max. Level dbm	Pri. Resis. Ohms	Plug-in Type No.
0-1	Low imp to grid	50, 200/250, 500/600		50,000	30-20,000	+8	52	P-1
0-2	Low imp. to PP grids	50, 200/250, 500/600		50,000 C.T.	30-20,000	+8	52	P-2
0-3	Low imp. to grid	7.5/30		50,000	30-20,000	+8	4.5	P-3
0-11	Crystal to line	50,000		50, 200/250, 500/600	30-20,000	+8	3900	P-11
0-12	Mixing, matching	50, 200/250		50, 200/250, 500/600	30-20,000	+8	12	P-12
0-14	50:1 Low imp./grid	200		½ Megohm	50-5000	+8	10	
0-16	Low imp. to grid	250 C.T.		50,000	30-20,000	+8	40	
	This transformer provides very low hum pickup . . . employs two heavy gauge hipermalloy shields plus orientable mounting. Primary centertap is balanced to 1%. Can be used for 150, 200, 250, 500, or 600 ohm sources . . . 200:1 impedance ratio. 3 oz.							
	Same as 0-16 but with nine pin plug-in socket. 1³⁄₁₆ diam. x 2¾ high, 4 oz.							P-16
●0-25	Transistor input	600/150 split		2000/500 split	50-20,000	+15	70	

INTERSTAGE TRANSFORMERS

Type No.	Application	Pri. Imp. Ohms	Unbal. MA D.C.	Sec. Imp. Ohms	±1 db Cycles	Max. Level MW	Pri. Resis. Ohms	Plug-in Type No.
0-4	Plate to grid	15,000		60,000	30-20,000	6.3	710	
0-5	Plate to grid	15,000,	4 MA	60,000	200-10,000	6.3	710	
0-6	Plate to PP	15,000		95,000 C.T.	30-20,000	6.3	690	P-6
0-7	Plate to PP	15,000,	4 MA	95,000 C.T.	200-10,000	6.3	690	P-7
0-15	10:1 Pl. to grid	15,000		1 Megohm	100-3,000	6.3	330	P-15
0-18	Transistor Int.	10K/2.5K split,	4 MA	2000/500 split	100-20,000	100	800	
0-19	Transistor Int.	10K/2.5K split,	4 MA	4K/1K split	100-20,000	100	800	
●0-26	Transistor Int.	10,000 C.T.,	4 MA	10,000 C.T.	100-20,000	100	700	
●0-27	Transistor Int.	10,000 C.T.,	4 MA	500/125 spilt	100-20,000	100	750	
●0-28	Transistor Int.	50,000 C.T.,	2 MA	500/125 spilt	100-20,000	100	3200	
●0-29	" Int. or chopper	100,000 C.T.,	1 MA	500/125 spilt	100-20,000	100	3200	
●0-30	Transistor Int.	500/125 split,	20 MA	500/125 spilt	100-20,000	1W*	37	
●0-31	Transistor Int.	500/125 split,	20 MA	150/37.5 split	100-20,000	1W*	35	
●0-32	Transistor Int.	500/125 split,	20 MA	50/12.5 split	100-20,000	1W*	37	
●0-33	Transistor Int.	100/25 Split,	40 MA	40/10 split	100-20,000	1W*	9	

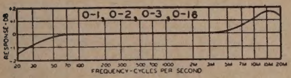
OUTPUT TRANSFORMERS

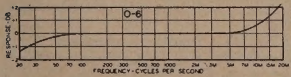
Type No.	Application	Pri. Imp. Ohms	Unbal. MA D.C.	Sec. Imp. Ohms	±1 db Cycles	Max. Level MW	Pri. Resis. Ohms	Plug-in Type No.
0-8	Plate to line	15,000		50, 200/250, 500/600	30-20,000	6.3	950	P-8
0-9	Plate to line	15,000,	4 MA	50, 200/250, 500/600	200-10,000	6.3	950	P-9
0-10	P.P. to line	30,000 C.T.		50, 200/250, 500/600	30-20,000	6.3	2000	P-10
0-20	Transistor to line	1500 C.T.,	8 MA	500/125 split	100-20,000	100	100	
0-21	Transistor to voice coil	2000 C.T., 4000 C.T.	4 MA	8 16	100-20,000	100	200	
0-22	Transistor to voice coil	400 C.T., 500 C.T.	20 MA	3.2 4	100-20,000	1W*	35	

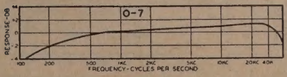
REACTORS

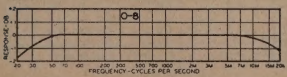
Type No.		
0-13	Reactor	300 Hys. @ 0 DC; 50 Hys. @ 3 MA DC; 6000 ohms
0-23	Reactor	7 Hys. @ 3 MADC; 3.5 Hys. @ 10 MADC; 230 ohms
0-24	Reactor	1.6 Hys. @3 MADC; .8 Hys. @ 10 MADC; 25 ohms
0-17	Hipermalloy shield, slip fit over ouncer, 1″ O.D., provides 25 db shielding.	

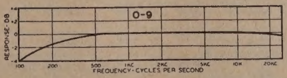
*At 200 cycles, ¼ watt at 100 cycles.

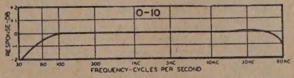


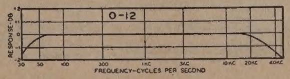


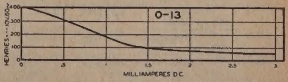


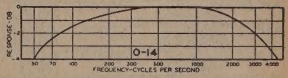


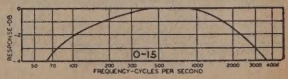












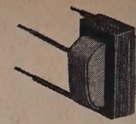
AND SPECIAL UNITS TO YOUR SPECIFICATIONS

● NEW ITEM

SUB-SUBOUNCER UNITS

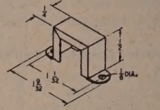
TRANSISTOR AND TUBE TYPES

UTC Sub-subouncer units are ideal miniaturized components having high efficiency and wide frequency response. Through the use of special nickel iron core materials and winding methods, these miniature units provide exceptional performance and reliability. Four inch color coded flexible leads are employed, securely anchored mechanically. Units are supplied without mounting facilities to provide maximum flexibility in location. However, suitable channels are available as a separate item (SSO-CH) which readily fit over the units. Units are vacuum processed and double (water proof) sealed. The curves below indicate the excellent frequency response. Hermetic-SSO units (SM case) listed on page 1451. Units can be used for impedances, other than those shown, keeping in mind that the impedance ratio is constant. Units may be used reversed, input to secondary.

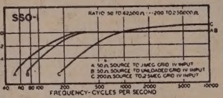


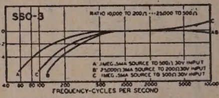
SUB-SUBOUNCER UNIT
Dimensions ......7/16 x 3/4 x 43/64"
Weight .... .02 lb.

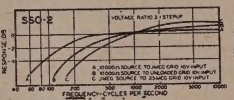
Type	Application	Max. Level	Pri. Imp. ohms	Unbal. MA D.C. in Pri.	Sec. Imp. ohms	Pri. Res. ohms	Sec. Res. ohms
SSO-1	Input	+7 dbm	200 50	0	250 K 62.5 K	13.5	3600
SSO-2	Interstage/3:1	30 MW	10K	0-.25	90 K	710	3150
SSO-3	Plate to Line	100 MW	10K 25K	3 1.5	200 500	2500	34
SSO-4	Output	100 MW	30K	1.0	50	2875	4.6
SSO-5	Reactor 50 Hy. at 1 mil. D.C. 4400 ohms D.C. Res.						
SSO-6	Output	100 MW	100K	.5	60	3500	3.3
SSO-7	Transistor Interstage	100 MW	20K 30K	.5 .5	800 1200	800	110
SSO-8	Transistor to PP Sec.	100 MW	10K	1	2000 CT	1200	45
SSO-9	Transistor to V.C.	100 MW	10K	2	16	800	2.7
SSO-10	Transistor to V.C.	100 MW	10K	2	3.2	800	.65
SSO-11	Transistor Output	100 MW	500 600	3.5 3.5	50 60	50	5
SSO-12	Transistor Output	100 MW	1000 1200	3 3	50 60	90	5
SSO-13	Crystal to Transistor	+7 dbm	200K	0	1000	4000	190
SSO-14	Transistor Interstage	100 MW	10K CT 25K CT	2 1	200 CT 500 CT	650	22
SSO-15	Transistor Interstage	100 MW	20K CT 30K CT	1 1	800 CT 1200 CT	800	110
SSO-16	Output	100 MW	1200 1500	3 3	3.2 4	70	.45
SSO-17	Output or driver	100 MW	10K 12.5K	2 2	500 CT 600 CT	800	95
SSO-18	Single or P.P. Output	100 MW	7.5K CT 9.4K CT	4 4	3.2 4	770	.73
SSO-19	Output matching	100 MW	500 CT	10	600 CT	26	70
SSO-20	Output	100 MW	1.5K CT	7	600 CT	70	65
SSO-21	Crystal/Chopper	+7dbm	200K CT	0	1000 CT	4000	200
SSO-22	Interstage	100 MW	10K CT 12K CT	4 4	1500 CT 1800 CT	800	300
SSO-23	Reactor 8 Hys. @ 2 MA D.C., 4 Hys. @ 5 MA D.C. 650 ohms						
SSO-24	Reactor 3.5 Hys. @ 2 MA D.C., 1.5 Hys @ 5 MA D.C. 160 ohms						
●SSO-25	Transistor Interstage	100 MW	10K CT 12K CT	1	10K CT 12K CT	560	650
●SSO-26	Transistor Interstage	100 MW	40K CT 50K CT	.5	400 split 500 split	1900	43
●SSO-CH	Mounting channel for any of above SSO units						

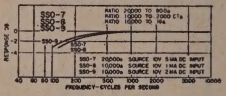


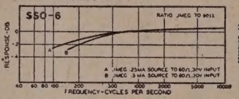
SSO-CH CHANNEL

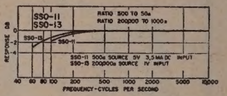


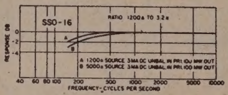


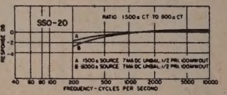








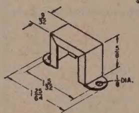




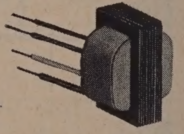
SUBOUNCER UNITS

TRANSISTOR AND TUBE TYPES

UTC Subouncer units have high efficiency and frequency range in miniature size, handle higher level than SSO units above. The constructional details are identical, and similarly, separate channels (SO-CH) can be provided. Available hermetically sealed on production orders (SOM case 11/16 x 13/16 x 1⅛", 1.2 oz.).



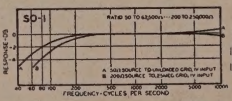
SO-CH CHANNEL

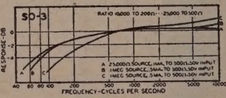


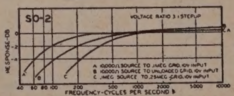
SUBOUNCER UNIT
Dimensions ....19/32 x 43/64 x 7/8"
Weight .... .03 lb.

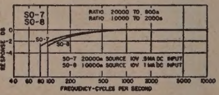
Type	Application	Max. Level	Pri. Imp. ohms	Unbal. MA D.C. in Pri.	Sec. Imp. ohms	Pri. Res. ohms	Sec. Res. ohms
*SO-1	Input	+10 dbm	200 50	0	250 K 62.5 K	16	2500
SO-2	Interstage/3:1	100 MW	10K	0-.25	90 K	215	1850
*SO-3	Plate to Line.	200 MW	10K 25K	3 1.5	200 500	1225	30
SO-4	Output	200 MW	30K	1.0	50	1850	3.8
SO-5	Reactor 50 Hy. at 1 mil. D.C. 2675 ohms D.C. Res.						
SO-6	Output	200 MW	100K	.5	60	3400	3.7
*SO-7	Transistor Interstage	200 MW	20K 30K	.5 .5	800 1200	450	32
SO-8	Transistor to PP Sec.	200 MW	10K	1	2000 CT	1000	40
SO-9	PP Transistor to V.C.	250 MW	500 CT	0	3.2	15	.35
*SO-10	Transistor output to voice coil	250 MW	2000 CT 4000 CT	4 2	8 16	290	2
●SO-11	Transistor Interstage	250 MW	400 CT 500 CT	8	400 split 500 split	20	45
●SO-12	Transistor Interstage	250 MW	400 CT 500 CT	8	120 split 150 split	20	12.6
●SO-13	Transistor Interstage	250 MW	400 CT 500 CT	8	40 split 50 split	20	4.5
●SO-14	Transistor Interstage	250 MW	80 CT 100 CT	16	32 split 40 split	4.9	3.2
●SO-CH	Mounting channel for any of above SO units						

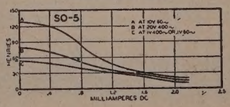
*Impedance ratio is fixed. 1250:1 for SO-1, etc. Any impedance between the values shown may be employed.

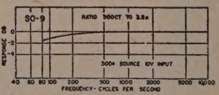












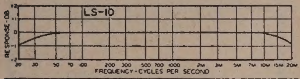
● NEW ITEM

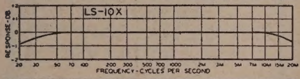
AND SPECIAL UNITS TO YOUR SPECIFICATIONS

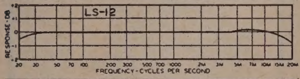
Refer to Page 1439 for UTC Prices.

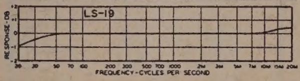
LINEAR STANDARD AUDIO TRANSFORMERS

The ever increasing use of wide range equipment has reached the point where the major limiting factor is the frequency range of the transformers employed. UTC Linear Standard components represent the closest approach to the ideal transformer from the standpoint of uniform frequency response, low wave form distortion, high efficiency, thorough shielding, and dependability. L-S case dimensions on page 1456.



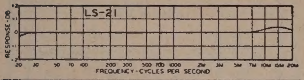


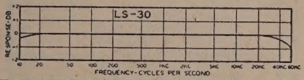


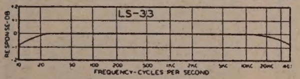


LOW IMPEDANCE TO GRID AND MIXING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max. Level dbm	Relative* hum	Unbal. DC in primary	Case No.
LS-10	Low impedance mike, pickup, or multiple line to push pull grids	50, 125/150, 200, 250, 333, 500/600 ohms	60,000 ohms in two sections	20-20,000	+19	—74 DB	.5 MA	LS-1
LS-10X	As above	As above	50,000 ohms	20-20,000	+17	—92 DB-Q	.5 MA	LS-1
LS-12	Low impedance mike, pickup or multiple line to push pull grids	50, 125/150, 200, 250, 333, 500/600 ohms	120,000 ohms overall, in two sections	20-20,000	+19	—74 DB	.5 MA	LS-1
LS-12X	As above	As above	80,000 ohms overall, split	20-20,000	+17	—92 DB-Q	.5 MA	LS-1
LS-14X	Low impedance mike, pickup, or parallel mixer to grid	2.5, 5.5, 10, 15, 22, 30, 38, 60 ohms	50,000 ohms	20-20,000	+17	—92 DB-Q	.5 MA	LS-1
LS-26	Bridging line to single or push pull grids	5,000 ohms	60,000 ohms in two sections	15-20,000	+23	—74 DB	0 MA	LS-1
LS-30**	Mixing, low impedance mike, pickup or multiple line to multiple line	50, 125/150, 200, 250, 333, 500/600 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	7-50,000	+23	—74 DB	.5 MA	LS-1
LS-30X**	As above	As above	As above	20-20,000	+20	—92 DB-Q	.3 MA	LS-1
LS-31	Three isolated lines or pads to multiple line	30, 50, 200, 250 ohms each primary	50, 125/150, 200, 250, 333, 500/600 ohms	20-20,000	+23	—74 DB	.5 MA	LS-1
LS-32	Mixing, low impedance mike, pickup or parallel mixer to multiple line	2.5, 5.5, 10, 15, 22, 30, 38, 60 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	20-20,000	+23	—74 DB	.5 MA	LS-1

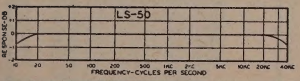


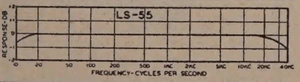


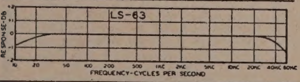


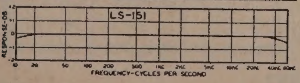
INTERSTAGE AND DRIVER TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max. Level	Relative* hum	Unbal. DC in primary	Case No.
LS-19	Plate to PP grids like 6L6, 5881 Split secondary	15,000 ohms	95,000 ohms 1.25:1 each side	20-20,000	100 MW	—50 DB	0 MA	LS-1
LS-21	Plate to PP grids Split pri. and sec.	15,000 ohms	135,000 ohms; 3:1 overall	10-20,000	100 MW	—74 DB	0 MA	LS-1
LS-40	Plate to PP grids Split secondary	15,000 ohms	135,000 ohms; 3:1 overall	30-18,000 (± 2 db)	100 MW	—74 DB	8 MA	LS-1
LS-25	PP plates to PP grids Med. level split pri. and sec.	30,000 ohms plate to plate	50,000 ohms; turn ratio 1.3:1 overall	20-20,000	200 MW	—74 DB	1 MA	LS-1
LS-47	Driver from push pull 2A3's, or sim. to class B828's, 805's, or ZB120's	5,000 ohms plate to plate	.1 pri. impedance turns ratio, Pri./½ Sec. 3.2:1	20-20,000	20 Watts		5 MA	LS-2
LS-48	Driver trans. push pull 845's to 805 grids in class B	12,000 ohms plate to plate	.038 pri. impedance turns ratio, Pri./½ Sec. 5.1:1	20-20,000	40 Watts		15 MA	LS-3









HYBRID AND REPEAT COILS

Type No.	Application	Pri and Sec. Impedances	± 1 db from	Max. Level dbm	Relative* hum	Max. Unbal. DC in primary	Case No.
LS-140	Line to line for isol. balanced and unbal. cir.; bal. for max. cross talk 70 DB	500/600 ohms split 500/600 ohms split	30-20,000	+18	—92 DB-Q	0 MA	LS-1
LS-141	Three sets of bal. wind. for hybrid service, centertapped	500/600 ohms 500/600 ohms	30-15,000	+18	—74 DB	0 MA	LS-1

The values of unbalanced DC shown will effect approximately 1.5 DB loss at 30 cycles.
* Comparison of hum balanced unit with shielding to normal uncased type. Q = Multiple alloy magnetic shields.
** High electrostatic shielding.

AND SPECIAL UNITS TO YOUR SPECIFICATIONS

LINEAR STANDARD AUDIO TRANSFORMERS

PLATE, CRYSTAL, PHOTOCELL, AND BRIDGING TO LINE TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max. Level	Relative* hum	Unbal. DC in primary	Case No.
LS-27	Single pl. to multiple line	15,000 ohms	50, 125/150, 200, 250, 333, 500/600	30-15,000	200 MW	—74 DB	8 MA	LS-1
LS-50	Single pl. to multiple line	15,000 ohms	50, 125/150, 200, 250, 333, 500/600	10-40,000	200 MW	—74 DB	0 MA	LS-1
LS-51	Push pull low level pl. to multiple line	30,000 ohms plate to plate	50, 125/150, 200, 250, 333, 500/600	10-40,000	250 MW	—74 DB	1 MA	LS-1
LS-150	Bridging from 50 to 500 ohm line to line	4,000 ohms, bridging	50, 125/150, 200, 250, 333, 500/600	7-50,000	200 MW	—74 DB	1 MA	LS-1
LS-151	Bridging from 50 to 500 ohm line to line	16,000 ohms, bridging	50, 125/150, 200, 250, 333, 500/600	7-50,000	400 MW	—74 DB	1 MA	LS-1

HIGH LEVEL MATCHING TRANSFORMERS

No. Type	Application	Primary Impedance	Secondary Impedance	±1 db from	Max. Level	Case No.
LS-33	High level line matching	50, 125/150, 200, 250, 333 500/600 ohms	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125/150, 200, 250, 333, 500/600	10-40,000	20 watts	LS-2
LS-34	High level line matching	50, 125/150, 200, 250, 333, 500/600 ohms	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125/150, 200, 250. 333, 500/600	10-40,000	40 watts	LS-3

OUTPUT TRANSFORMERS TO LINE AND VOICE COIL

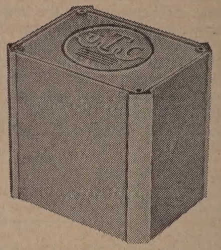
Type No.	Primary will match typical tubes	Primary Impedance	Secondary Impedance	±1 db from	Max. Level	Case No.
LS-52	Push pull 6AQ5, 6V6, 6L6, 5881, 6BQ5, 7189A	8,000 ohms	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	7-50,000	20 watts	LS-2
LS-54	Same as above	8,000 ohms	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	7-50,000	20 watts	LS-2
LS-55	Push pull 300B, 6L6's, 6AS7G, 6080, 7581, 7355	5,000 ohms plate to plate and 3,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	7-50,000	20 watts	LS-2
LS-57	Same as above	5,000 ohms plate to plate and 3,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	7-50,000	20 watts	LS-2
LS-58	Push pull parallel as above	2,500 ohms plate to plate and 1,500 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	10-50,000	40 watts	LS-3
LS-61	Push pull triode; 6AS7G, 6080, 6L6, 5881, KT-66, 807, 1614	10,000 ohms pl. to plate and 6,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	7-50,000	20 watts	LS-2
LS-63	Same as above	10,000 ohms pl. to plate and 6,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	7-50,000	20 watts	LS-2
LS-6L1	Self bias push pull 6L6's, 5881, KT-66, 6146 triode, 6159 triode	9,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	7-50,000	30 watts	LS-3
LS-6L4	Push pull 6146, 6159, 6L6's fixed bias or push pull parallel 6L6's self bias, 7581	4,500 ohms plate to plate and 3,800 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	12-50,000	55 watts	LS-3
LS-35	EL-34 in AB-feedback (see circuit pg. 21)	5,000 ohms CT 43% screen taps	4, 8, 16	7-50,000	35 watts	LS-3
LS-65	6550's in AB_1 feedback (see circuit pg. 21)	3,300 ohms CT 40% screen taps	4, 8, 16	7-50,000	60 watts	LS-3
● LS-666	Push pull transistors class B (2N277 or equiv.) (see circuit pg. 22)	8 ohms split	500 ohms split	7-50,000	50 watts	LS-3
● LS-667	Push pull transistors class B (2N277 or equiv.) (see circuit pg. 22)	8 ohms split	4, 8, 16	7-50,000	50 watts	LS-3

MODULATION TRANSFORMERS

Type No.	Primary will match typical tubes	Primary Impedance	Secondary Impedance	±1 db from	Max. Level	Case No.
LS-56	Push pull 6A5G's, 300B's, 6AS7G, 6L6 6080, 7335, 7581	5,000 ohms plate to plate and 3,000 ohms plate to plate	6000, 5000, 4000, 1800, 1500, 1000, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	10-50,000	20 watts	LS-2
LS-691	Class B, 833A, 250TH	10,400 ohms plate to plate	4500, 4000, 3500, 2750, 2000	20-40,000	1000 watts	LS-6
LS-692	Class B push pull parallel 833A's	4,750 ohms plate to plate	2500, 2000, 1750, 1500, 1250	20-40,000	2500 watts	LS-6

● NEW ITEM

AND SPECIAL UNITS TO YOUR SPECIFICATIONS



LINEAR STANDARD HIGH SHIELDING DIE CAST CASES TOP & BOTTOM MTG.

LS-1 CASE

Length	3⅛"
Width	2⅝"
Height	3¼"
Mounting	1 15/16 x 2 7/16"
Screws	6-32
Cutout	1⅞" dia.
Unit Weight	3 lbs.

LS-2 CASE

Length	4 7/16"
Width	3½"
Height	4 3/16"
Mounting	2 11/16 x 3 11/16"
Screws	8-32
Cutout	2¾" dia.
Unit Weight	7.5 lbs.

LS-3 CASE

Length	5 13/16"
Width	5"
Height	4 11/16"
Mounting	4 3/16 x 5 1/32"
Screws	10-24
Cutout	3¾" dia.
Unit Weight	15 lbs.

LS-6 CASE

Length	15¾"
Width	13"
Height—LS-691	24"
Height—LS-692	28"
Mounting Dimen	7⅜ x 14 15/16"
Mounting Hole	⅜" dia.
Unit Weight	350 lbs.
Unit Weight—LS-691	370 lbs.
Unit Weight—LS-692	520 lbs.

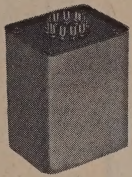
UTC HIPERMALLOY TRANSFORMERS

The UTC Hipermalloy audio and power transformers are specifically designed for portable and compact service. While light in weight, neither dependability nor fidelity has been sacrificed. The frequency characteristic of the Hipermalloy audio units is uniform from 30 to 20,000 cycles. They incorporate a Hipermalloy nickel iron core and hum balanced coil structure. The rugged die cast case is of high conductivity alloy finished in grey, arranged for mounting with the terminals either up or down. DC in Primary shown is maximum unbalanced.

LOW IMPEDANCE TO GRID AND MIXING TRANSFORMERS

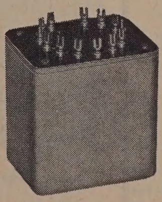
Type No.	Application	Primary Imp. (ohms)	Secondary Impedance	± 1 db from	Max. Level dbm	Unbal. DC in Prim'y	Case No.
HA-100	Low impedance, mike, pickup, or multiple line to grid	50, 125/150, 200, 250, 333, 500/600	60,000 ohms overall, split	30-20,000	+18	.5 MA	H-1
HA-100X	Same as above but with multiple alloy shields to effect very low hum pickup				+16		H-1
HA-101	Low impedance mike, pickup, or multiple line to P.P. grids	50, 125/150, 200, 250, 333, 500/600	120,000 ohms overall, split	30-20,000	+18	.5 MA	H-1
HA-101X	As above but with multiple alloy shield to effect very low hum pickup		80,000 ohms overall, split	30-20,000	+16	.5 MA	H-1
HA-103A	Low impedance mike, pickup, or parallel mixer to grid	2.5, 5.5, 10 ,15, 22, 30, 38, 60	60,000 ohms overall, split	30-20,000	+18	.5 MA	H-1
HA-108*	Mixing, low impedance mike, pickup, or multiple line	50, 125/150, 200, 250, 333, 500/600	50, 125/150, 200, 250,333,500/600	20-50,000	+20	.5 MA	H-1
HA-108X*	Same as above but with multiple alloy shield to effect very low hum pickup				+18		H-1
HA-130X	Three isolated lines or pads to one or two grids with tri-alloy internal shields	30, 50, 200, 250 each primary	60,000 ohms overall, split	30-20,000	+18	.5 MA	H-1

* High electrostatic shielding.



TYPE H-1 CASE

Length ....2⅜″
Width ....1$\frac{15}{16}$″
Height ....3⅛″
Mounting ....1⅜ x 1$\frac{13}{16}$″
Screws 6-32
Cutout ....1$\frac{13}{16}$″ dia.
Unit Weight ....2 lbs.



TYPE H-2 CASE

Length ....3$\frac{9}{16}$″
Width ....2$\frac{13}{16}$″
Height ....3½″
Mounting ....2 x 2¾″
Screws 6-32
Cutout ....2$\frac{11}{16}$″ dia.
Unit Weight ....5 lbs.

INTERSTAGE AUDIO TRANSFORMERS

Type No.	Application	Primary Imp.	Secondary Impedance	± 1 db from	Max. Level	Unbal. DC in Prim'y	Case No.
HA-104	Single plate to P.P. grids like 2A3, 6L6 (split secondary)	15,000 ohms (split)	95,000 ohms 2.5:1	30-20,000	100 MW	0 MA	H-1
HA-105	Single plate to single grid	15,000 ohms	60,000 ohms 2:1 turn ratio	30-20,000	100 MW	0	H-1
HA-106	Single plate to push pull grids (split secondary)	15,000 ohms (split)	135,000 ohms 3:1 ratio overall	30-20,000	100 MW	0	H-1
HA-107	Push pull plates to push pull grids (split primary and secondary)	30,000 ohms plate to plate	80,00 ohms 1.6:1 turn ratio overall	30-20,000	600 MW	.25 MA	H-2
HA-137	Push pull plates to push pull grids (split Pri. and Sec.)	30,000 ohms plate to plate	68,000 ohms 1.5:1 turn ratio	30-20,000	100 MW	0	H-1

PLATE TO LINE TRANSFORMERS

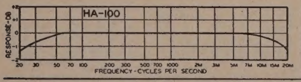
Type No.	Application	Primary Imp.	Secondary Imp. ohms	± 1 db from	Max. Level	Unbal. DC in Prim'y	Case No.
HA-113	Single plate to multiple line	15,000 ohms (split)	50, 125/150, 200, 250, 333, 500/600	30-40,000	125 MW	0 MA	H-1
HA-114	Push pull low level plates to multiple line	30,000 ohms plate to plate	50, 125/150, 200, 250, 333, 500/600	30-40,000	200 MW	1 MA	H-1
HA-133	Single plate to multiple line (D.C. in Pri.)	15,000 ohms (split)	50, 125/150, 200, 250, 333, 500/600	30-40,000	160 MW	8 MA	H-1

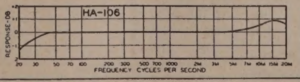
OUTPUT TRANSFORMERS

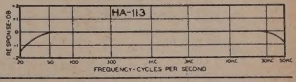
Type No.	Application	Primary Imp.	Secondary Imp. Ohms	± 1 db from	Max. Level	Case No.
HA-134	Push pull, 6L6, 6050, 7355, 7581 to line	5000/9400 ohms plate to plate	50, 125/150, 200, 250, 333, 500/600	10-50,000	15 watts	H-2
HA-135	As above except to voice coil	3000/5000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	10-50,000	18 watts	H-2
HA-136	5881's (KT-66's) in AB-feed back	6,600 ohms CT 43% screen taps	4, 8, 16	10-50,000	20 watts	H-2

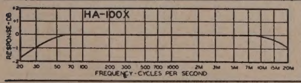
POWER TRANSFORMERS

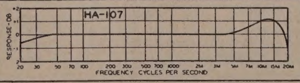
Type No.	Application	Primary Voltage 50/60 cycles	High Voltage	Filament Windings	Case No.
HP-122	Pre-amp. power supply using 6x4, 6X5GT rectifier	115	220-0-220 15 MA	6.3 V.C.T.-.6A 6.3 V.C.T.-1.2A	H-1
HP-123	Pre-amp. or tuner power supply using 6X4, 6X5GT rectifier	115	275-0-275 35 MA	6.3 V.C.T.-.6A 6.3 V.C.T.-2A	H-2

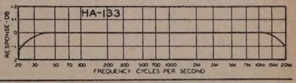


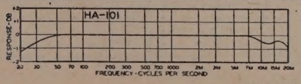


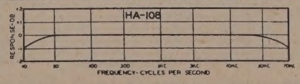


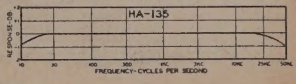












AND SPECIAL UNITS TO YOUR SPECIFICATIONS

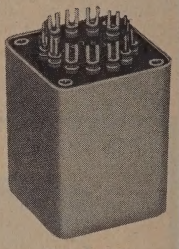
ULTRA COMPACT AUDIO UNITS
TRANSISTOR AND TUBE TYPES

The UTC Ultra compact audio units are small and light in weight, ideally suited to remote amplifier and similar compact equipment. High fidelity is obtainable in all individual units, the frequency response being ± 2 db from 20 to 20,000 cycles, except where noted. Hermetic equivalents (RC-50 case) are listed on page 1451. All units except those carrying DC in Primary employ a true hum balancing coil structure, which combined with a high conductivity outer case, effects good inductive shielding. The die-cast case provides for top or bottom mounting.

INPUT TRANSFORMERS

Type No.	Application	Primary Imp. Ohms	Unbal D.C.	Secondary Imp. Ohms	±2 db from	Pri Res. Ohms	Max Level
A-10	Low imp. to grid	50, 125/150, 200/250 333, 500/600	0	50,000 (split)	20-20,000	59	+15 dbm
A-11*	Low imp. to 1 or 2 grids	50, 200, 500	0	50,000 CT	20-20,000	52	+ 5 dbm
A-12	Low imp. to PP grids	50, 125/150, 200/250 333, 500/600	0	80,000 (split)	20-20,000	60	+15 dbm
A-20†	Mixing, matching	50, 125/150, 200/250 333, 500/600	0	50, 125/150, 200/250 333, 500/600	10-50,000	64	+15 dbm
A-21*†	Mixing, matching	50, 200/250, 500/600	0	50, 200/250, 500/600	30-30,000	28	+15 dbm
A-27	Xtal/hi. imp. to line	100,000 (split)	0	50, 125/150, 200/250 333, 500/600	30-20,000 meas. with res. source	3700	+15 dbm
●A-39*	Line to transistors	600/150 (split)	0	2000/500 (split)	20-20,000	70	+10 dbm

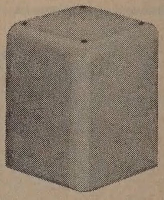
* = Multiple alloy shield for extremely low hum pickup † = High electrostatic shielding



TYPE A CASE
Length ....1½″
Width ....1½″
Height ....2″
Mounting ....1 5/32″ sq.
Screws 4-40
Cutout ....1⅜″ dia.
Unit Weight ....½ lb.

INTERSTAGE AND OUTPUT TRANSFORMERS

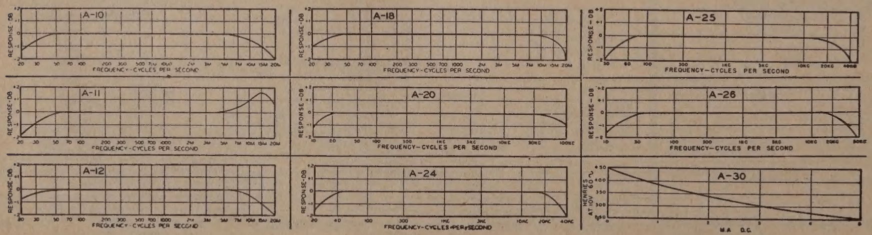
Type No.	Application	Primary Imp. Ohms	Unbal D.C.	Secondary Imp. Ohms	±2 db from	Pri Res. Ohms	Max Level
A-15	Transistor interstage	10,000/2500 (split)	8 MA	2000/500 (split)	40-20,000	600	1 watt
A-16	Plate to grid	15,000	0	60,000	20-20,000	800	30 MW
A-17	Plate to grid	15,000	8 MA	60,000	40-20,000	3340	30 MW
A-18	Single or PP plates to PP grids	15,000 (split)	0	80,000 (split)	20-20,000	1040	30 MW
A-19	Plate to PP grids	15,000	8 MA	80,000 (split)	40-20,000	2900	30 MW
A-22	Tr. intstg. or output	500 CT	20 MA	500/125 (split)	40-20,000	36	1 watt
A-23	Tr. intstg. or output	500 CT	20 MA	16/4 (split)	40-20,000	36	1 watt
A-24	Single or PP plates to line	15,000 (split)	0	50, 125/150, 200/250 333, 500/600	20-40,000	1430	30 MW
A-25	Plate to line	15,000	8 MA	50, 125/150, 200/250 333, 500/600	40-20,000	1580	30 MW
A-26	Single or PP plates to line	30,000 (split)	0	50, 125/150, 200/250 333, 500/600	20-40,000	2520	30 MW
A-28	Transistor to V.C.	48 ct	750 MA Bal	16 (split) 8, 4	40-20,000	5	5 watts
●A-34	Transistor interstage	25,000/6250 (split)	3 MA	500/125 (split)	30-20,000	1620	1 watt
●A-35	Transistor interstage	10,000/2500 (split)	8 MA	500/125 (split)	30-20,000	610	1 watt
●A-36	Transistor interstage	500/125 (split)	20 MA	150/37.5 (split)	40-20,000	36	1 watt
●A-37	Transistor interstage	500/125 (split)	20 MA	50/12.5 (split)	40-20,000	36	1 watt
●A-38	Transistor interstage	100/25 (split)	40 MA	40/10 (split)	40-20,000	6.2	1 watt



A-33 SHIELD
1 19/32 x 1 19/32 x 2 1/32″

REACTORS AND FILAMENT/TRANSISTOR SUPPLY TRANSFORMERS

Type No.	Application	
A-30	Audio choke	450 Hys. @ 0 MA, 250 Hys. @ 5 MA, 6000 ohms D.C.; 65 Hys. @ 10 MA, 15,000 ohms D.C.
A-32	Filter choke	60 Hys. @ 15 MA, 2000 ohms D.C.; 15 Hys. @ 30 MA, 500 ohms D.C.
●A-40	Power transformer	115V 60 cycles to two 6.3V CT —.2A Secs.
●A-41	Filter choke	240 Mhy. @ .2A, 6 ohms D.C.; 60 Mhy. @ .4A, 1.5 ohms D.C.
A-33	Hipermalloy shield, slip fit over "A" case, provides approximately 20 db shielding	



● NEW ITEM

AND SPECIAL UNITS TO YOUR SPECIFICATIONS

COMMERCIAL GRADE COMPONENTS

The Commercial Grade series of transformers incorporate conservative design and rugged construction to assure dependability under continuous service operation in commercial grade equipment. These units are mounted in uniform drawn cases finished in light grey enamel, and intended for chassis mounting. All items are poured with special sealing compound in addition to vacuum impregnation of coil structures.

All audio components are linear ±1½ db from 40 to 10,000 cycles (no unbalanced D.C.), except CVL and CVM units . . . 40 to 6000 cycles. CG-134, 135 and 136 are of the hum-bucking type to assure low hum pick-up. Parallel feed low level interstage units with 50,000 ohms and .25 mfd.; 200 ohm windings on input transformers are balanced and may be used for 150 to 250 ohm circuits.

INPUT, INTERSTAGE, MIXING AND LOW LEVEL OUTPUT TRANSFORMERS

Type No.	Application	Primary Impedance Ohms	Max. Level dbm	Secondary Impedance Ohms	Case No.
CG-131	1 plate to 1 grid	15,000	+28	135,000 1:3 ratio	**RC-50**
CG-132	1 plate to 2 grids	15,000	+30	135,000 split 1:3 ratio overall	**RC-62**
CG-133	2 plate to 2 grids	30,000 P to P	+32	80,000 overall 1:1.6 ratio overall	**RC-75**
CG-134	Line to 1 grid hum-bucking	50, 200, 500	+30	80,000	**RC-50**
CG-135	Line to 2 grids hum-bucking	50, 200, 500	+30	120,000 overall	**RC-50**
CG-235	Line to 1 or 2 grids, hum-bucking; multiple alloy shielded for low hum pickup	50, 200, 500	+28	80,000 overall	**RC-75**
CG-136	Single plate and low impedance mike or line to 1 or 2 grids hum-bucking	15,000, 50, 200	+30	80,000 overall	**RC-62**
CG-137	Mixing	50, 200, 500	+28	50, 200, 500	**RC-50**
CG-140	Triode plate to line	15,000	+30	50, 200, 500	**RC-50**
CG-141	PP triode plates to line	30,000 P to P	+32	50, 200, 500	**RC-50**
CG-233	PP 6C5, 12AU7, similar triodes to AB 45's, 2A3's, 6L6's, etc.	30,000 P to P	+35	25,000 overall 1:.9 ratio overall	**RC-87**
CG-333	PP 6C5, 12AU7, similar triodes to fixed bias 6L6's	30,000 P to P	+35	3,300 overall 1:.33 ratio overall	**RC-87**
CG-433	PP 45, 2A3, similar tubes to fixed bias 2 or 4 6L6's	5,000 P to P	10W.	800 overall 1:.4 ratio overall	**RC-100**

OUTPUT TRANSFORMERS

Secondary Impedances: 500, 200, 16, 8, 5, 3, 1.5 ohms

Type No.	Imped. P. P. Ohms, Overall	Typical Tubes	Max. Watts	Case No.
CG-15	8,000	6V6, 6AQ5, 6BQ5, 7189A	20	**RC-100**
CG-16	3,000/5,000	6AS7G, 6L6, 6080, 7581	20	**RC-100**
CG-19	6,000/10,000	6L6, 5881, 6DZ7	20	**RC-100**
CG-710	14,000/20,000	7B5, 6AK6, 6K6GT	20	**RC-100**
CG-2L6	9,000	6L6's, AB1, 5881	30	**RC-125**

FEEDBACK OUTPUT TRANSFORMERS

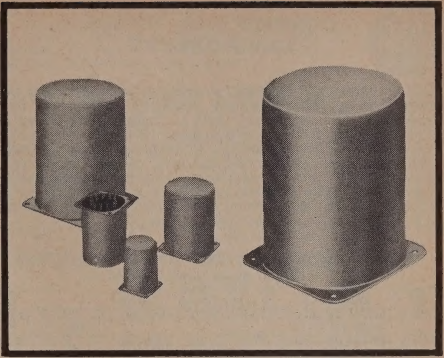
Secondary Impedances: 4, 8, 16 ohms and 70 Volt line.

Type No.	Primary Impedance	Typical Tubes	Audio Watts	Case No.
CG-20	5,000 CT, 43% screen taps	EL-34 in AB	25	**RC-125**
CG-21	3,300 CT, 40% screen taps	6550's in AB_1	50	**RC-150**

CG VARIMATCH OUTPUTS FOR P. A.

Universal units designed to match any tubes within the rated output power, to line or voice coil. Output impedance 500, 200, 50, 16, 8, 5, 3, 1.5 ohms. Primary impedance 3,000, 5,000, 6,000, 8,000, 10,000, 14,000 ohms, center tapped.

Type No.	Audio Watts	Typical Tubes	Case No.
CVP-1	12	6V6, 6AQ5, 6BQ5, 6DZ7, 7189	**RC-100**
CVP-2	30	6L6, 6V6, 807, 5881, 6DZ7, 7189, 7355, 7581	**RC-125**
CVP-3	60	300B's, 6L6's, 807, 1614, 5881, 1625	**RC-150**
CVP-4	125	807's, 4-6L6's, 845's, 4-1614's, 6146, 6159	**RC-152**
CVP-5	300	242A's, 838's, ZB-120's	**RC-175**



COMMERCIAL GRADE CASE

Case No.	Base Dim. (Sq.)	Mounting Dim. (Sq.)	Mounting Screw	Height +⅛,—1/16	Cutout Dia.	Unit Weight Lbs.
RC-37	1⅜	1⅛	4-40	1⅝	1¼	.35
RC-50	1⅝	1 5/16	6-32	2¼	1½	½
RC-62	1 13/16	1½	6-32	2½	1½	1
RC-75	2 3/16	1 13/16	8-32	2⅞	1⅞	1½
RC-87	2 9/16	2 3/32	8-32	3¼	2	2½
RC-100	3	2⅜	8-32	3¾	2⅝	3½
RC-112	3 7/16	2 11/16	10-32	4⅛	2⅞	5
RC-125	3¾	3	10-32	4½	3	6½
RC-150	4½	3 9/16	12-28	5½	3¾	11
RC-152	5⅛	4⅛	12-28	5½	4	15½
RC-175	5¾	4⅞	¼-20	7⅛	4	22

CG VARIMATCH LINE TO VOICE COIL TRANSFORMERS

The UTC VARIMATCH line to voice coil transformers will match any voice coil or group of voice coils to a 500 ohm line. More than 50 voice coil combinations can be obtained, as follows:

.2, .4, .5, .62, 1, 1.25, 1.5, 2, 2.5, 3, 3.3, 3.8, 4, 4.5,
5, 5.5, 6, 6.25, 6.6, 7, 7.5, 8, 9, 10, 11, 12, 14, 15,
16, 18, 20, 25, 28, 30, 31, 40, 47, 50, 63, 69, 75 ohms.

Type No.	Audio Watts	Primary Impedance	Secondary Impedance	Case No.
CVL-1	15	500 ohms	.2 to 75 ohms	**RC-87**
CVL-2	40	500 ohms	.2 to 75 ohms	**RC-125**
CVL-3	75	500 ohms	.2 to 75 ohms	**RC-150**

CG VARIMATCH DRIVER TRANSFORMERS

Type No.	Primary	Typical Output Tubes	Max. Level Watts	Case No.
CG-51AX	All single tubes like: 6C5, 6C4, 12AU7, 2A3, 5814A Ratios 2.8:1, 3.1:1, Pri. to ½ sec.	2A3, 6L6	5	**RC-87**
CG-53AX	P. P. tube like: 2A3, 6L6, Ratios 2:1, 3:1, Pri. to ½ sec.	841, 801A, 800, 838, 805	20	**RC-112**
CG-59AX	50, 200, 500 ohm line Ratios 1:1, 1.4:1, Pri. to ½ sec.	805, 838, ZB-120, 100TH, 800, 55T	20	**RC-112**

CG VARIMATCH MODULATION UNITS

Will match any modulator tubes to any RF load.

The UTC Varimatch transformer eliminates the power loss and high distortion caused by imprecise matching of RF load to a class B modulation through the use of a combination of tapped windings affording an extremely wide range in impedance matching. Designs provide that for any load impedance employed, full class C plate current can be carried by secondary winding.

Primary impedances from 500 to 20,000 ohms.
Secondary impedances from 30,000 to 300 ohms.

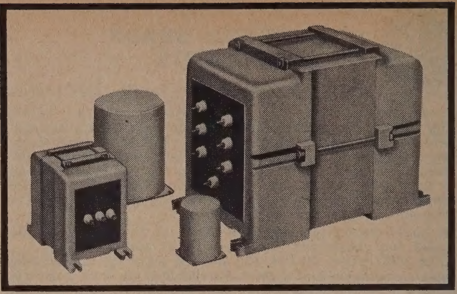
Type No.	Max. Audio Watts	Max. Class C Imput	Typical Modulator Tubes	Case No.
CVM-0	12	25	6BQ5, 6DZ7, 6V6, 7189	**RC-100**
CVM-1	30	60	6V6, 6L6, 807, 5881, 7189, 7355, 7581	**RC-125**
CVM-2	60	125	6L6, 809, T-20, 1608, 6159	**RC-150**
CVM-3	125	250	807, 845, TZ-20, RK-30, 35-T	**RC-152**
CVM-4	300	600	805, 838, T-55, ZB-120, 4-65A, 100TH	**RC-175**
CVM-5	600	1200	805, HF-300, HK-354, 205TH, 810, 4-125A	**7x12x9H 60 lbs.**

AND SPECIAL UNITS TO YOUR SPECIFICATIONS

Refer to Page 1439 for UTC Prices.

COMMERCIAL GRADE COMPONENTS

UTC CG power transformers, Varimatch units and chokes are designed to A.I.E.E. commercial standards. Ratings are conservative for continuous duty. Units are tested for breakdown at twice maximum working voltage plus 1000 volts and surge tested at 250% normal voltage. All items are vacuum impregnated and sealed with special insulating compound. The co servative design and manufacturing procedure of these units make them suitable for virtually all types of commercial equipment as well as ideally suited for quality amateur and public address service. Case dimensions on page 1459.



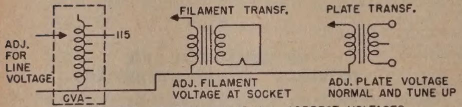
ULTRASONIC TRANSFORMERS

Frequency Range 10 KC to 50 KC

Type No.	Application	Pri. Imp. PP Ohms	Max. Watts	Sec. Imp. Ohms	Case No.
CGU-1	Driver, PP 5881's to PP 6156's	7000	25	4150 G-G	**RC-62**
CGU-2	Driver, PP 6550's to PP 5868's	5000	100	2400 G-G	**RC-62**
CGU-3	Output, PP 6550's	5000	100	300/170/75/18.75	**RC-62**
CGU-4	Output, PP 6155's, 4-125's	7200	300	300/170/75/18.75	**RC-87**
CGU-5	Output, PP 6155's, 4-125's	7200	300	30/17/7.5/1.88	**RC-87**
CGU-6	Output, PP 6156's 250TH's	4500	600	300/170/75/18.75	**RC-125**
CGU-7	Output, PP 6156's 250TH's	4500	600	30/17/7.5/1.88	**RC-125**
CGU-8	Output, PP 6156's	9200	1000	300/170/75/18.75	**RC-175**
CGU-9	Output, PP 5868's	10200	2000	300/170/75/18.75	**5¼x5⁹⁄₁₆x8**

VARIPOWER AUTO-FORMERS

Boosting/Voltage Adjustment


FILAMENT TRANSF.
PLATE TRANSF.
115
ADJ. FOR LINE VOLTAGE
CVA-
ADJ. FILAMENT VOLTAGE AT SOCKET
ADJ. PLATE VOLTAGE NORMAL AND TUNE UP

ONE CVA-UNIT CAN PROVIDE FOR ALL CORRECT VOLTAGES

Type No.	Watts Output	Case No.
CVA-1	150	**RC-112**
CVA-2	250	**RC-125**
CVA-3	500	**RC-150**
CVA-4	1000	**RC-152**
CVA-5	2000	**RC-175**

Designed for line voltage control, filament control and reduced power operation. Output voltage from 0 to 130 volts, 50/60 cycles. Varipower units permit control of filament voltage at the tube socket to within 2½% of desired value simultaneously with line voltage control and plate voltage control. Can be used to reduce or increase voltages on filament transformers. Taps at 25, 55, 75, 95, 100, 105, 110, 115, 120, 125 and 130 volts permit output voltages from 0 to 130 volts in 5 volt steps . . . from 115 v. 50/60 cycles.

POWER AND BIAS TRANSFORMERS

Primary 115 volts 50/60 cycles

(DC MA is for choke input. Reduce to 70% for condenser input.)

Type No.	High Voltage	DC MA.	Fil. 1	Fil. 2	Fil. 3	Fil. 4	Case No.
CG-422	435-365-0-365-435 125-0-125	125 25	5V-3A	5V-2A	6.3 VCT-3A	2.5 VCT-5A	**RC-150**
CG-428	500-0-500 80-0-80	250 100	5V-3A	5V-2A	6.3 VCT-4A	6.3 VCT-3A, tapped 2.5 VCT-3A	**RC-152**
CG-429	600-525-0-525-600	250	5V-3A	6.3VCT-3-A	7.5 VCT-3A, tapped 6.3 VCT-4A		**RC-152**
CG-431	500-400-0-400-500 80-0-80	500 100	.5V-6A	5V-2A	6.3 VCT-5A	6.3 VCT-3A	**RC-175**
CG-315	Tapped for any DC voltage from 15 to 100 volts within 6%—250 MA						**RC-125**
CG-316	Tapped for any DC voltage from 75 to 400 volts within 6%—250 MA						**RC-152**

TRANSISTOR/FILAMENT SUPPLY TRANSFORMERS

Primary 115 volts 50/60 cycles

			In Parallel				In Series				
			Choke in		C in		Choke in		C in		
Type No.	Sec. V RMS	Sec. A RMS	DCV	DCA	DCV	DCA	DCV	DCA	DCV	DCA	Case No.
●**CG-30**	17/21.5 17/21.5	1.5 1.5	14/17.5	3	18.5/25	2	28/35	1.5	43/56	1	RC-112
●**CG-31**	34/43 34/43	4.5 4.5	28/35	9	43/56	6	56/70	4.5	85/110	3	RC-175
●**CG-32**	6.3VCT	1.2									RC-62

● NEW ITEM

CG PLATE TRANSFORMERS

Primaries for 105, 115, 220, 230 volts, 50/60 cycles. For reduced power, secondary voltages can be reduced to half by using 220V. Pri. on 110 volts. These transformers may be used on 25 to 43 cycles if 220V. Pri. is used on 110 volts; secondary voltage is simultaneously halved.

Type No.	High Voltage	DC Voltage	DC MA	Case No.
CG-300	625-515-0-515-625	500/400	200	**RC-150**
CG-301	580-530-300-0-300-530-580	475/425/250	420	**RC-152**
CG-302	950-750-0-750-950	760/610	360	**RC-175**
CG-303	1500-1235-400-0-400-1235-1500	1250/1000 300	260* 175	**RC-175**

* 300MA, if used without load on low voltage winding.

END CASTING UNITS

Type No.	High Voltage	DC Voltage	DC MA	L	W	H	Mtg. Dim.	Wt. Lbs.
CG-304	1500-1235-0-1235-1500	1250/1000	800	15	8½	10⅜	7¼x13⅝	100
CG-305	2400-1750-0-1750-2400	2000/1500	300	10½	4¾	6⅞	3⅞x9⁹⁄₁₆	50
CG-306	2400-1750-0-1750-2400	2000/1500	500	15	8½	10⅜	7¼x13⅜	100
CG-307	3500-3000-2400-0-2400-3000-3500	3000/2500 2000	300	14½	8½	10⅜	7¼x12⅜	90
CG-308	3500-3000-2400-0-2400-3000-3500	3000/2500 2000	500	16½	8⅛	10⅜	7¼x14⅛	125
CG-309	3500-3000-2400-0-2400-3000-3500	3000/2500 2000	1000	21	10	13¼	8½x19	185
CG-310	4600-4050-3500-0-3500-4050-4600	4000/3500 3000	600	19	10	13¼	8½x16¼	150
CG-311	1500-1235-0-1235-1500	1250/1000	500	10½	4¾	6⅞	3⅞x9⁹⁄₁₆	50
CG-312	1800-1500-0-1500-1800	1500/1250	400	10½	4¾	6⅞	3⅞x9⁹⁄₁₆	50

FILTER REACTORS

INDUCTANCE SHOWN IS AT RATED DC MA

Type No.	Inductance Henrys	DC MA	DC Res. Ohms	Test Volts RMS	Case No.
CG-40	10	200	110	1750	**RC-112**
CG-44	30	100	400	1750	**RC-100**
CG-45	250	15	5000	1750	**RC-87**
CG-48C	75	50	2200	1750	**RC-87**
CG-100	12	150	110	2500	**RC-125**
CG-102	12	250	100	3000	**RC-150**
CG-104	10	350	90	5000	**RC-152**
CG-108	10	500	52	7000	**RC-175**
CG-1S	10	1000	40	9000	11½x4¾x 6⅞ H, 40 lb.

SWINGING INPUT REACTORS

INDUCTANCE SHOWN IS FROM 100% TO 10% OF RATED DC MA

Type No.	Inductance Henrys	DC MA	DC Res. Ohms	Test Volts RMS	Case No.
CG-101	25/5	150	110	2500	**RC-125**
CG-103	25/5	250	100	3000	**RC-150**
CG-105	25/5	350	90	5000	**RC-152**
CG-109	25/5	500	52	7000	**RC-175**
●**CG-111†** **(2 Wdgs.)***	100/10 Mhy 25/2.5 Mhy	2.5A 5A	.6 .15	1500	**RC-87**
CG-1C	25/5	1000	40	9000	Same as CG-1S

† Split winding in series   * Split winding in parallel

FILAMENT/TRANSISTOR SUPPLY TRANSFORMERS

Primary 105, 115, 210, 220, 230 volts, 50/60 cycles, except CG-34 . . . 105, 115, 220, 230. These transformers may be used on 25 to 43 cycles if 220 volt primary is used on 110 volts. Secondary voltage is simultaneously reduced to half.

Type No.	Sec. Volts C. T.	Sec. Amps.	Working Voltage	Sec. Test Volts RMS	Case No.
CG-33	6.3	4	500	2000	**RC-75**
CG-34	2.5	10	2500	6000	**RC-112**
CG-120	2.5	10	5000	11000	**RC-125**
CG-121	5	25	5000	11000	**RC-150**
CG-122	7.5/6.3	10	1500	4000	**RC-125**
CG-124	10	10	1500	4000	**RC-150**
CG-125	14/12/11	10	1500	4000	**RC-150**
CG-126	14/11/10 14/11/10	10 10	1500	4000	**RC-152**

AND SPECIAL UNITS TO YOUR SPECIFICATIONS

Refer to Page 1439 for UTC Prices.

SPECIAL SERIES AUDIO & POWER COMPONENTS

UTC Special Series units are specifically designed for amateur and popular-priced PA service. They are finished in a rich, commercial type medium gray enamel. The universal windings provided on driver, matching and output transformers assure a maximum of flexibility. Large components are housed in formed cases with top or bottom mounting. All units are vacuum impregnated—compound filled, recommended for ICAS use.

For case dimensions see bottom of page 1463

CLASS A INPUT TRANSFORMERS

Type No.	Application	Ratio	Case
S-1	1 plate* to 1 grid	3½:1	G-2
S-2	1 plate* to 2 grids	2:1 4:1	G-2
S-3	1 plate* to 1 or 2 grids compact type	4:1	G-1
S-5	Single or double button mike or line to 1 grid hum-bucking type	16:1	G-2
S-6	Single or double button mike or line to 1 grid, compact type	16:1	G-1

* Will match tubes like 6J5, 6C4, 12AU7. etc. Can be used with high mu triodes with loss in low frequencies.

UNIVERSAL DRIVER TRANSFORMERS

(See Modulator chart for tube types, ratios are Pri. to ½ sec.)

Type No.	Application	Max. Watts	Case
S-8	Single driver plate to pushpull grids, 2.66:1, 5:1 ratios	5	G-3
S-9	Pushpull driver plates to grids of class B tubes up to 400 watts output, 2.25:1, 3.6:1, 5:1 ratios	20	G-4
S-10	12AU7 or similar plates to 5881 or 6L6's, self or fixed bias, 2.25:1 ratio	5	G-3

MATCHING TRANSFORMERS

Type No.	Application	Pri. Ohms	Sec. Ohms	Case
S-11	Single 6J5, 6C4, 12AU7 or similar tube to line	15,000	200/500	G-2
S-12	Line to speaker 15 watts	500, 2000, 4000	2, 4, 8, 15	G-2
S-13	Line to speaker 30 watts	500, 2000, 4000	2, 4, 8, 15	G-4

UNIVERSAL OUTPUT TRANSFORMERS TO LINE AND VOICE COIL

(Secondary Impedances: 500, 15, 8, 2 ohms)

Type No. Max. Watts	Primary Impedance	Typcial Tubes	Case
	SINGLE-ENDED TUBES		
S-14 10 W.	2500 ohms 4000 ohms 7000 ohms 10,000 ohms	35L6GTG, 6V6, 12A6, 6AC5 2A3, 6B4, 6L6, 6Y6, 25L6GT 6F6, 7B5, 6K6GT, 1G5, 3C5 6A4, 6N7, 7189A, 7581, 7355	G-2
	PUSH-PULL TUBES		
S-15 12 W.	4000 ohms 5000 ohms 10,000 ohms	6Y6, 25L6GT 2A3, 6AS7G 6080, 6BN8	G-2
S-16 30 W.	3000 ohms 6000 ohms 9000/10000 ohms	6AS7G, 6L6, 6DZ7 7189A, 7355, 7581 807-triode	G-4
S-17 55 W.	3800 ohms 4500/5000 ohms	6L6's 809, 6146, 7355, 7581	G-5

UNIVERSAL MODULATION TRANSFORMERS

Secondary carries class C current
Any modulator tubes to any RF load. (See chart)

Type No.	Audio Power	Case
S-18	12 watts	G-3
S-19	30 watts	G-4
S-20	55 watts	G-5
S-21	110 watts	G-7
S-22	250 watts	G-9

FILTER, SWINGING, AND AUDIO CHOKES

Type No.	Service	Induct-ance	Current	Resistance	Test Volts Rms	Case No.
S-23	Audio	300 Hy.	5 Ma.	5000 ohms	1500 V.	G-2
S-24	P. P. Choke	500 Hy. C. T.	3 Ma.	6000 ohms	1500 V.	G-2
S-25	Filter	30 Hy.	30 Ma.	800 ohms	1500 V.	G-2
S-26	Filter	12 Hy.	60 Ma.	250 ohms	1500 V.	G-2
S-27	Filter	25 Hy.	75 Ma.	350 ohms	1500 V.	G-4
S-28	Filter	20 Hy.	100 Ma.	350 ohms	1500 V.	G-4
S-29	Filter	6 Hy.	175 Ma.	90 ohms	1500 V.	G-4
S-30	Swinging	20/4 Hy.	175 Ma.	90 ohms	1500 V.	G-4
S-31	Filter	6 Hy.	225 Ma.	100 ohms	2700 V.	G-5
S-32	Swinging	20/4 Hy.	225 Ma.	100 ohms	2700 V.	G-5
S-33	Filter	8 Hy.	300 Ma.	100 ohms	4000 V.	G-7
S-34	Swinging	20/4 Hy.	300 Ma.	100 ohms	4000 V.	G-7
S-35	Filter	8 Hy.	400 Ma.	60 ohms	5000 V.	G-8

Continued on top of following column.

FILTER, SWINGING, AND AUDIO CHOKES

Continued from bottom of preceding column.

Type No.	Service	Induct-ance	Current	Resistance	Test Volts Rms	Case No.
S-36	Swinging	20/4 Hy.	400 Ma.	60 ohms	5000 V.	G-8
S-37	Filter	8 Hy.	550 Ma.	60 ohms	6000 V.	G-8
S-38	Swinging	20/4 Hy.	550 Ma.	60 ohms	6000 V.	G-8
●S-80	Swinging	50/10 Mhy.	1.75A.	.5	500 V.	G-1
●S-81	Swinging† (2 Wdgs.)*	100/8 Mhy. 25/2 Mhy.	2.5A. 5A.	.6 .15	1500 V.	G-3

† Split winding in series   * Split windings in parallel

COMBINED PLATE AND FILAMENT UNITS

Primary 115 V.—50/60 Cycles

Type No.	Voltage	Voltages* D. C.	Fil. Rectifier	Fil. No. 1	Fil. No. 2	Case No.
S-39	490-400-0-400-490 175 Ma.	400/310	5 V.-3A	2.5 V.C.T. -6A	6 3 V.C.T. 4A	G-7
S-40	525-425-0-425-525 250 Ma.	400/310	5 V.-3A	6.3 V.C.T. -3A	6.3 V.C.T. 3A	G-7
S-41	600-0-600 200 Ma.	475	5 V.-3A	7.5 V. tapped 6.3 V.-3A	6.3 V.C.T. 2A	G-7
S-42	600-525-0-525-600 300 Ma.	480/400	5 V.-6A	7.5 V. tapped 6.3 V. 3A	6.3 V.C.T. 3A	G-8

* Based on two section filter, choke input.

PLATE TRANSFORMERS—BIAS TRANSFORMERS

Primary 115 V.—50/60 Cycles

Type No.	High Voltage	DC Voltages*	DC Current	Case No.
S-44	575-525-0-525-575	470/430	500 Ma.	G-9
S-45	900-750-0-750-900	750/620	200 Ma.	G-8
S-46	1000-750-0-750-1000	825/600	300 Ma.	G-9
S-47	1500-1250-1000-0-1000-1250-1500	1275/1050/825	300 Ma.	G-10
S-48	1500-1250-1000-0-1000-1250-1500	1300/1075/850	500 Ma.	G-11
S-49	2100-1800-1500-0-1500-1800-2100	1815/1540/1275	300 Ma.	G-11
S-50	3000-2500-0-2500-3000	2625/2175	300 Ma.	G-12
S-51	Will supply any bias voltage from 15 to 100 volts DC within approximately 6% of desired value.		200 Ma.	G-5
S-52	will supply any bias voltage from 75 to 400 volts DC within approximately 6% of desired value.		200 Ma.	G-7

* Based on two section filter for 200 Ma. ano 300 Ma. units, single section filter for 500 Ma. units, both choke input.

† 200 Ma. if used alone.   ‡ 300 Ma. if used alone.

FILAMENT TRANSFORMERS

Primary Tapped 105, 115 Volts—50/60 Cycles

Type No.	Secondary Volts	Secondary Current	Test Volts Rms	Case No.
S-53	2.5 VCT	10 A.	1500 V.	G-3
S-54	5 VCT	4 A.	2500 V.	G-3
S-55	6.3 VCT	3 A.	1500 V.	G-3
S-57	2.5 VCT	10 A.	10,000 V.	G-5
S-58	2.5 VCT	20 A.	10,000 V.	G-5
S-59	5 to 5.25 VCT	13 A.	5000 V.	G-5
S-60	5 to 5.25 VCT	22 A.	10,000 V.	G-7
S-61	7.5 VCT tapped 6.3 VCT	10 A.	3000 V.	G-5
S-62	10 VCT	10 A.	3000 V.	G-5
S-63	14 VCT tapped 12 VCT and 11 VCT	10 A.	5000 V.	G-7

Type No.	Fil. 1	Fil. 2	Fil. 3	Test Volts	Case No.
S-64	2.5 VCT-5A	2.5 VCT-5A	5 VCT-6A	3000 V.	G-5
S-65	2.5 VCT-5A	5 VCT-4A	6.3 VCT-3A	3000 V.	G-5
S-67	5 VCT-6A	6.3 VCT-5A		3000 V.	G-5
S-68	5 VCT-3A	6.3 VCT-4A	7.5 VCT-5A	3000 V.	G-5
S-70	6.3 VCT-5A	6.3 VCT-5A		3000 V.	G-5
S-71	2.5 VCT-6A	2.5 VCT-6A	2.5 VCT-12A	10000 V.	G-7
S-72	5 VCT-3A	5 VCT-3A	5 VCT-6A	5000 V.	G-5

TRANSISTOR/FILAMENT SUPPLY TRANSFORMERS

Primary 115 V. 50/60 cycles, tapped on S-77 and S-78 for dual secondary voltages.

DC voltages are approximate, based on Silicon bridge rectifier and 10% choke drop in choke input filter circuit.

C in condenser input values is in 1000 Mfd.

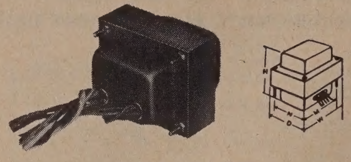
			← Secs. in parallel →					← Secs. in series →					
			Choke Inp.		Cond. Inp.			Choke Inp.		Cond. Inp.			
Type No.	Sec. V RMS	Sec. A RMS	DCV	DCA	DCV	DCA	C	DCV	DCA	DCV	DCA	C	Case No.
●S-75	6.3 6.3	.6 .6	5.2	1.2	7	0.80	5	10	0.6	14	0.40	1	G-1
●S-76	12.6 12.6	2 2	10	4	12.6	3	3	20	2	26	1.4	1	G-4
●S-77	17/21.5 17/21.5	1.5 1.5	14/17.5	3	18.5/25	2	1	28/35	1.5	43/56	1	.5	G-5
●S-78	34/43 34/43	4.5 4.5	28/35	9	43/56	6	4	56/70	4.5	85/110	3	1	G-9

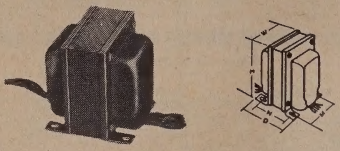
AND SPECIAL UNITS TO YOUR SPECIFICATIONS

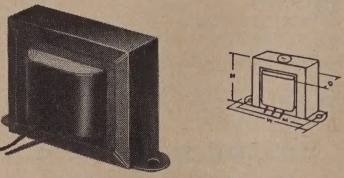
● NEW ITEM

REPLACEMENT TYPE COMPONENTS

UTC replacement type transformers (Pri. 117 V. 50/60 cycles) provide the highest reliability in this field. All units are low temperature rise, vacuum sealed against humidity with special impregnating materials to prevent corrosion and electrolysis. Shells are finished in attractive high lustre black enamel.


DOUBLE SHELL TYPE


VERTICAL SHELL TYPE


CHANNEL FRAME TYPE

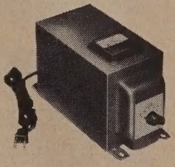
LINE VOLTAGE ADJUSTERS WITH METER

The perfect answer to abnormal or fluctuating line voltage. Adjust switch so that meter reads at red line and you know that your equipment is working at correct voltage.

These units combine a tapped auto-transformer with a switch and meter in a compact, rugged assembly.

The nine tap switch provides for line voltage of 60 to 140 volts on 115 volts output models and 160 to 240 volts on 230 volt output model.

All units are designed for 50/60 cycle service and come complete with 6 foot input cord and plug and outlet receptacle.



Type No.	Primary Voltage	Volts Sec.	Watts Rating	L	W	H	Wgt. Lbs.
R-78	60, 70, 80, 90, 100, 110, 120, 130, 140	115	150	7	4	4¾	6
R-79	60, 70, 80, 90, 100, 110, 120, 130, 140	115	300	7	4	4¾	9
R-80	60, 70, 80, 90, 100, 110, 120, 130, 140	115	600	10¼	4	4¾	13
R-81	60, 70, 80, 90, 100, 110, 120, 130, 140	115	1200	10¼	4	4¾	21
R-86	160, 170, 180, 190, 200, 210, 220, 230, 240	230	1200	10¼	4	4¾	21

DOUBLE SHELL POWER TRANSFORMERS

Type No.	High V.	DC MA.	5V. Fil.	6.3 VCT Fil.	W	D	H	M	N	Wt. Lbs.
R-101	275-0-275	50	2A	2.7A	3	2½	3	2½	2 1/16	2½
R-102	350-0-350	70	3A	3A	3	2½	3⅝	2½	2 1/16	3½
R-103	350-0-350	90	3A	3.5A	3⅜	2⅞	3 15/16	2 13/16	2¼	4½
R-104	350-0-350	120	3A	5A	3¾	3⅛	3⅞	3⅛	2½	5½
R-105	385-0-385	160	3A	5A	3¾	3⅛	4 5/16	3⅛	2½	7

VERTICAL SHELL POWER TRANSFORMERS

Type No.	High V.	DC MA.	5V. Fil.	6.3 VCT Fil.	W	D	H	M	N	Wt. Lbs.
R-110	300-0-300	50	2A	2.7A	2½	2 13/16	3¼	2	1¾	2½
R-111	350-0-350	70	3A	3A	2½	3 7/16	3¼	2	2⅜	3½
R-112	350-0-350	120	3A	5A	3¼	3 11/16	4	2½	2 5/16	5½
R-113	400-0-400	200	3A	6A	3⅞	4 5/16	4⅝	3	3⅛	8

CHANNEL FRAME FILTER REACTORS

Inductance Shown is at Rated D.C.M.A.—Test Volts RMS: 1500

Type No.	Induct. Hys.	Current	Resistance Ohms	W	Dimensions, in. D	H	M	Wt. Lbs.
R-55	6	40MA	300	2⅜	1⅜	1⅜	2	½
R-14	8	40MA	250	2⅞	1½	1 11/16	2⅜	¾
R-15	12	30MA	450	2⅞	1½	1 11/16	2⅜	¾
R-16	15	30MA	630	2⅞	1½	1 11/16	2⅜	¾
R-17	20	40MA	850	3 5/16	1⅝	2	2 13/16	1
R-18	8	80MA	250	3 5/16	1⅝	2	2 13/16	1
R-19	14	100MA	450	3¾	1⅞	2 5/16	3⅛	1½
R-20	5	200MA	90	4⅛	2¼	2⅝	3 9/16	2½
R-21	15/3	200MA	90	4⅛	2¼	2⅝	3 9/16	2½
●R-220	100/8 Mhy. 25/2 Mhy.	2.5A 5A	.6 .16	3¾	1⅞	2 5/16	3⅛	1½

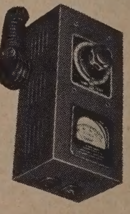
CHANNEL FRAME FILAMENT/TRANSISTOR TRANSFS.

Pri. 115 V. 50/60 Cycles—Test Volts RMS: 1500

Type No.	Secondary	W	D	H	M	Lbs.
FT-1	2.5 VCT-3A	2⅞	1½	1 11/16	2⅜	¾
FT-2	6.3 VCT-1.2A	2⅞	1½	1 11/16	2⅜	¾
FT-3	2.5 VCT-6A	3 5/16	1⅞	2	2 13/16	1
FT-4	6.3 VCT-3A	3 5/16	1⅞	2	2 13/16	1
FT-5	2.5 VCT-10A	3¾	2⅛	2 5/16	3⅛	1½
FT-6	5 VCT-3A	3¾	2⅛	2 5/16	3⅛	1½
FT-7	7.5 VCT-3A	3¾	2⅛	2 5/16	3⅛	1½
FT-8	6.3 VCT-8A	4⅛	2½	2⅝	3 9/16	2½
FT-10	24 VCT-2A or 12V-4A	4⅛	2⅝	2⅝	3 9/16	2½
●FT-11	24 VCT-1A 12 VCT-2A	3¾	2⅛	2 5/16	3⅛	1½
●FT-12	36 VCT-1.3A 18 VCT-2.6A	4⅛	2⅝	2⅝	3 9/16	2½

VARITRAN VOLTAGE ADJUSTERS

Input 115 volts 50/60 cycles. Output continually adustable from 0-130 Volts through roller contact on exposed autotransformer winding. Regulation and efficiency are excellent, no wave form distortion. Output voltage is independent of load. Complete with line cord, switch, and receptacle . . . for loads up to 570 Watts . . . 5 A.



Type No.		L	W	H	Wt. Lbs.
V-1-M	with meter	4⅞	9⅞	3⅝	14
V-1	without meter	4⅞	8	3⅝	12

● NEW ITEM

AND SPECIAL UNITS TO YOUR SPECIFICATIONS

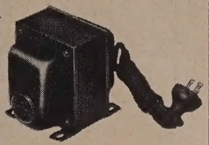
Refer to Page 1439 for UTC Prices.

STEP DOWN AUTO-TRANSFORMERS

220/240 Volt to 110/120 Volts, 50/60 Cycles.

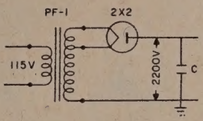
All units have 6 foot cord and female receptacle, except R-64.

Type No.	Rating Watts	L	W	H	Mtg. Dim.	Wgt. Lbs.
R-41	85	3 3/16	2⅝	3⅛	2x1⅞	4
R-42	125	3½	3	3½	2¼x2 1/16	5
R-43	175	3¾	3¼	3⅞	2½x2¼	5½
R-44	250	4⅜	3¼	3⅞	2½x2⅞	6½
R-45	500	4⅝	3⅞	4⅝	3x3¼	12
R-46	1200	6⅞	3⅞	4⅝	3x5½	18
R-64	2500	10½	4¾	6¾	3⅞x9⅞	30



STANDARD PHOTOFLASH TRANSFORMERS

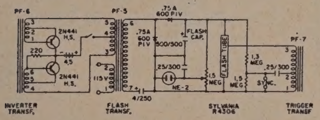
Can be used for either standard (Amglo type) or trigger (Sylvania type) multiple flash tubes. Circuit details included with transformer.



PF-1 Primary for 115 volts, 50/60 cycles. Secondaries for power supply delivering 2200 volts DC to condenser up to 100 Mfd. Compound sealed in G-3 case 2 5/32 x 2¾ (3¾ including flanges) x 2½ inches high. Weight 2 lbs.

PF-3 Trigger Transformer 15 KV peak. ⅞ O.D. x 3 long. Weight 2 oz.

TRANSISTOR PHOTOFLASH TRANSFORMERS



PF-5

These are miniaturized light weight units for transistor type photoflash supply.

PF-6

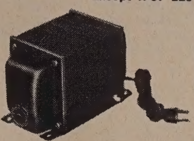
- ●**PF-5** Primary for 115 volts 50/60 cycles or for 4½ V. battery switched by PF-6 inverter transformer. Output delivers 400 V. DC when used in voltage doubler circuit to charge photoflash capacitor (typically 40 watt-Sec.). G-1 case.
- ●**PF-6** Inverter transformer transforms 4½ V. DC from battery to input for PF-5 stepup transformer. Ouncer case (See Pg. 1453).
- ●**PF-7** Trigger transformer. Shorting .25 mfd. capacitor (changed to approx. 225 V. DC) across terminals 1-2 produces 6 KV pulse at terminal 3 for triggering flash tube. ⅞" Dia. x 1 5/16"; Wt. ½ oz.

PF-7

ISOLATION TRANSFORMERS

Ideal for isolating line noise. AC-DC sets, etc. Excellent electrostatic shielding 1500 volt breakdown test. Six foot cord and female receptacle, except R-77.

Primary 110-120 volts 50/60 cycles—Secondary 110-120 volts Except R-97 220 volt Primary—120 volt Sec.

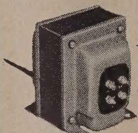


Type No.	Rating Watts	L	W	H	Mtg. Dim.	Wgt. Lbs.
R-72	40	3⅛	2⅝	3⅛	2x1⅞	4
R-73	100	3¾	3¼	3⅞	2½x2⅜	6
R-74	250	4⅞	3⅞	4⅝	3x3½	12
R-75	600	7⅜	3⅞	4⅝	3x6	20
R-76	1200	8½	4½	5⅞	3⅝x6⅝	30
R-77	2500	12	7	9	6x11	70
R-97	250	4⅞	3⅞	4⅝	3x3½	12

SIGNALLING AND CONTROL TRANSFORMERS

Primary 110-120 volts, 50/60 cycles—Secondary 4/8/12/16/20/24 volts

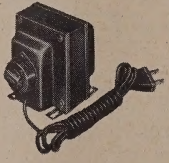
High power transformers suitable for operating relays, sirens, horns, gongs, etc. from 115 V. 50/60 cycle line. These units have four secondary terminals providing 4, 8, 12, 16, 20 and 24 volt output. The volt ampere rating is based on the 24 volt secondary tap with corresponding reduction at the lower voltages. Underwriters' approved primary leads are employed, and screw-type binding posts.



Type No.	Rating Watts	L	W	H	Mtg. Dim.	Wgt. Lbs.
SC-3	50	3	3½	3 9/16	1⅞ x 2¼	3
SC-4	100	3¼	4	4	2⅛ x 2½	5
SC-5	250	4	5	4¾	3¼ x 3	10

EXPORT VOLTAGE ADAPTER

Complete with cord and plug and special locking switch providing for line voltages of 105, 115, 125, 135, 150, 210, 230, 250 volts; 42 to 60 cycles. Output voltage 115.



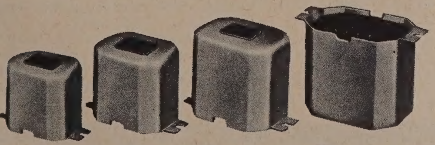
Type No.	Rating Watts	L	W	H	Mtg. Dim.	Wgt. Lbs.
R-47	85	4⅝	3	3½	2¼x2¼	4½
R-48	150	4⅝	3¼	4	2½x2¼	5½

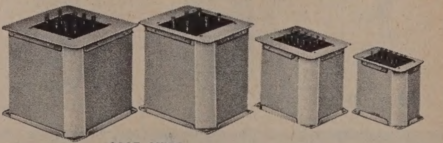
TV VOLTAGE REGULATOR

Complete with cord, plug, and special locking switch. Permits operation of 115 volt 50/60 cycle TV sets on line voltages of 85, 90, 95, 100, 105, 110, 120, 125V.

Type No.	Rating Watts	L	W	H	Mtg. Dim.	Wgt. Lbs.
R-49	350	5	3¼	4	2½x2¾	5

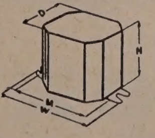
DIMENSIONS FOR G-1 thru G-12 CASES





CASE SIZES

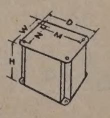
Type No.	H	W	D	M	Wt. Lbs.
G-1	1⅞	2 11/16	1¾	2⅜	1
G-2	2 5/16	3⅜	1 15/16	2⅞	1½
G-3	2½	3¾	2 5/32	3¼	2
G-4	2 15/16	4⅛	2 5/16	3⅝	3



CASE SIZES

(Will take 12-28 Mtg. Screw)

Type No.	H	W	D	M	N	Wt. Lbs.
G-5	3¾	3⅛	4½	3⅞	2 7/16	4½
G-7	4⅝	4⅝	5½	4 27/32	3 25/32	8
G-8	4⅝	5⅜	5⅜	4 25/32	4¾	12
G-9	5⅞	5⅜	6¾	6 3/32	4 19/32	21
G-10	5⅞	6⅛	6⅝	5 15/16	5 13/32	24
G-11	5⅞	6½	7⅜	6 21/32	5 29/32	31
G-12	10¼	7⅜	9¼	8½	6⅝	52



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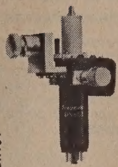
electron tubes

HELPFUL CHARTS & LITERATURE FREE: Write for CONDENSED TUBE CATALOG, information at a glance, rapid tube data reference tables, 31 pages of condensed information arranged for quick reference. Address your distributor or Amperex direct.

5868


DX151

6961

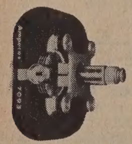
6757

5551A

2N1516

5894

7377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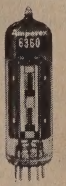
6360

6939

18517

18515

6977

6688

6BQ5/EL84

7459

COMMUNICATION

INDUSTRIAL

RECTIFICATION

SPECIAL PURPOSE

RADIATION DETECTION

AMATEUR

ELECTRO-MEDICAL

SEMICONDUCTORS
(SEE FOLLOWING PAGE)

Detailed Data Sheets on any of these tubes, and applications engineering service are yours for the asking.

RADIATOR CREDIT FOR FORCED AIR-COOLED TUBES

Tube Type	Users Allowance
889RA	$20.00
891R, 892R	30.00
5604	75.00
5667	20.00
6445	30.00
6447	30.00
6757	75.00
6801	75.00

**Price on request.
‡Price includes 10% Fed. Excise Tax.
ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●

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about AMPLIFRAME tubes

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HICKSVILLE, L. I., N. Y.
IN CANADA: ROGERS ELECTRONIC TUBES & COMPONENTS, 116 VANDERHOOF AVE., TORONTO 17, ONT.

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6146	5.00
6159	5.00
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Type No.	Price
6339	$44.50

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90CB	27.00
90NB	27.00
90NB4	27.00
100C	54.00
100CB	58.00
100HB	54.00
100N	43.50
100NB	46.00
120C	90.00
120CB	95.00
120N	90.00
120NB	95.00
150N	61.00
150NB	66.00
153C	91.00
160G	66.00
170G	110.00
180G	50.00
200C	67.00
200CB	71.00
200HB	67.00
200N	56.00
200NB	58.50
230C	43.00
230N	41.00
240C	43.00
240N	41.00
912NB	53.00
18503	28.00
18508	127.00
18509-01	22.40
18510	127.00
18515	186.50
18516	206.25
18517	373.00
18518	412.50

COUNTER, DECADE

Type No.	Price
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DIODE, DAMPER

Type No.	Price
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TWIN DIODE

Type No.	Price
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DIODE, VTVM

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5552A/651	99.00
5553B/655	245.00
5555/653B	316.00
5822A	116.00

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4J47	**
4J57	**
4J58	**

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5657	417.00
5780A	**
6589	**
6972	325.00
7091	**
7093	**

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‡6BQ5/EL84	1.30
‡6CA7/EL34	2.88
‡6CW5/EL86	1.43
‡6EH7/EF183	1.45
‡6EJ7/EF184	1.45
‡8BQ5/XL84	1.30
828	27.60
‡45B5/UL84	1.45
5654/E95F	2.85
*5847/E182F	14.90
6007/5913	1.25
6008/5911	1.25
6083	14.25
6084/E80F	3.00
6227/E80L	3.05
‡6267/EF86	1.38
6375	8.40
6686/E81L	4.10
6687/E91H	1.30
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*6688A	6.86
6689/E83F	3.60
‡7189	1.80
7693/E90F	3.25
E99F	3.25
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TETRODES

Type No.	Price
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*‡3ER5	1.40
4-125A	36.00
4-250A	46.50
4-400A	48.00
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*‡4ER5	1.40
4X150A	33.15
4X150D	33.15
4X250B	42.50
4X250F	42.50
4X500A	128.50
*‡6ER5/EC95	1.40
6075	250.00
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6079	60.00
6155	36.00
6156	46.50
6883	5.00
6979	42.50
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6252	25.00
6360	5.15
6907	25.00
6939	12.00
7377	25.00
7378	**

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632B	36.00
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5684/C3JA	19.80
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AX260	150.00

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6279	45.00

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5559	23.00
5560/FG95	33.00
5869	25.00
5870	100.00
6786	200.00
AX105/FG105	53.33

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5544	30.50
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*3FY5	2.90
*6FY5	2.90
‡6GM8/6GM8	2.28
‡6Q4/EC80	3.00
‡6R4/EC81	2.55
356	660.00
450TH	77.00
450TL	77.00
501R/5759	225.00
502/5760	210.00
502R/5761	235.00
504R	245.00
805	20.10
810	25.65
811A	6.90
812A	6.90
833A	47.90
834	19.30
838	20.00

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Type No.	Price
845	20.80
849	185.00
849A	185.00
880	595.00
889A	221.00
889RA	347.00
891	275.00
891R	430.00
892	270.00
892R	425.00
5604	570.00
5619	423.00
5658	565.00
5666	280.00
5667	370.00
5771	660.00
5823/Z900T	1.95
*5842	14.90
5866	20.00
5867	30.00
5868	55.00
5923	165.00
5924	231.00
5924A	275.00
6333	290.00
6445	455.00
6446	305.00
6447	465.00
6756	388.00
6757	535.00
6758	173.00
6759	206.00
6800	350.00
6801	505.00
6960	150.00
6961	210.00
7092	125.00
7237	180.00
7459	230.00
HF200	49.50
HF201A/468	34.50
HF300	40.50
ZB3200	395.00

TRIODE, INDICATOR

Type No.	Price
6977/DM170	$2.50

TWIN TRIODES

Type No.	Price
*‡4ES8/XCC189	$2.28
*‡5ES8	2.28
‡6AQ8/ECC85	1.45
‡6DJ8/ECC88	2.28
*‡6ES8/ECC189	2.28
‡6J6/ECC91	1.40
9AQ8/PCC85	1.55
‡12AT7/ECC81	1.53
‡12AU7/ECC82	1.23
‡12AX7/ECC83	1.28
‡17EW8/HCC85	3.50
5920/E90CC	2.40
6085/E80CC	3.00
6201/E81CC	2.95
6211	2.35
6463	2.95
*6922/E88CC	4.75
7062/E180CC	2.10
7119/E182CC	2.95
7316	1.40
E92CC	2.00

TRIGGER TUBES COLD CATHODE

Type No.	Price
Z50T	$1.75
Z70U/7710	1.56
Z300T	4.00
Z804U/7713	3.45

HEPTODE

Type No.	Price
6687/E91H	$1.30

BEAM DEFLECTION TUBE

Type No.	Price
6218/E80T	$15.00

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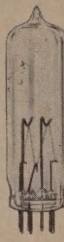
about electronic tubes and semiconductors for every industrial and communications application.

AUTOMATIC AMPERITE REGULATOR

BALLAST TUBE FOR AUTOMATIC REGULATION OF CURRENT AND VOLTAGE

AMPERITE
REGULATOR

STANDARD



MINIATURE

AUTOMATIC REGULATION

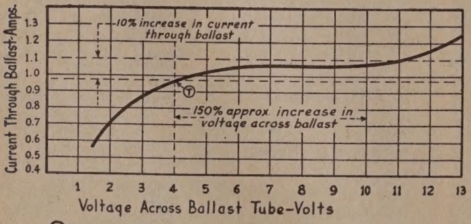
What It Is!

The *AMPERITE Ballast-Regulating Tube* is an automatic "rheostat" designed to keep the current in a circuit at a definite value, for example, 0.5 amps.

Should the supply voltage increase, this Ballast-Regulating Tube will automatically increase in resistance to take up the increase in supply voltage.

Being a constant current device, the AMPERITE Ballast-Regulating Tube can be used only to regulate a constant load—fixed wattage. Thermostatic relays can sometimes be included in these regulators to reduce initial surge.

We strongly recommend that you send us your specifications on special problems, and let us recommend the BALLAST TUBE you need.



Ⓣ= Threshold Current & Voltage

Characteristic curve of a typical Amperite. Approximate curve of any other Amperite can be obtained by multiplying or dividing the current or voltage scale by any number.

Standard Types of Amperite Ballast Tubes......List $3.00
Amperite NE70V Neon Lamp......List $3.00

D6-1E
*D6T4
**D6TK7
**D6TF10
**D6TF30
D7-20
D7H4
*D7HT4
*D7HT11
1A10
**1TF10
1-15
*1HT2
*1HT4
1H10
**1HTF10
*1HT11
**1HTF11

1H20
1H22
**2TK7
2A10
2A12
2A20
*2HT2
2H4
*2HT4
**2HTF4
2H10
3-2
**3TF2
**3TK2
3-4
3H-1-7
3H4
**3HTF4

*3T4
*3T4A
**3TF4A
**3TF4
**3TFV4
3V4
3-7
**3TF7
3A10
3-11
3H11
*3T11
3TF11
**3TF12
3-14
3-16
3A20
3H-25
3-38A
3-50A

4A10
4-12
4H3
4H4
4H4C
**4HTF4
**4HTF7
4H10
4H11
5E1
**5TF2
5-4
**5TF4
5A10
5-11
5-16
5H3
5H4
5H10
5H11

6-3
6-4
6-4A
6-4B
*6T4
*6T4F
**6TF4
6-7
**6TF7
6-8B
6A10
6-11
6-12
6-13
6A15
6-36
6H4
**6HTF4
6H6

7-4
**7TF4
7A10
7-11
**7HTF2
**7HTF3
**7HTF4
7H4
7H4B
7H7
7H11
**8TF2
8-3B
8-4
8A10
**9TF2
9-3
9-4

9-4A
9-7
9-8
9A10
10T1
**10TF2
10-3
10-4A
10-4B
10-4C
10-4D
10-4E
10A10
10A12
10-25
11-3
11-4
11A10
11-11

12-4
12-7
12A10
12-11
13-4
15-2
15-4
16-4
17-3
20-3
20-4
22-4
24-3
34-2
35-4
40-6E
41-7E
55-1
55-4

*T denotes T5½ bulb-7 pin miniature, e.g., 3T4.
**TF denotes T6½ bulb-9 pin miniature, e.g., 3TF4.
Base Wiring: Octal, 7 and 9 pin miniature—prongs 2-7.

AMPERITE NEON LAMP TYPE NE70V . List $3.00

ADVANTAGES

Light . . . Compact . . . No Moving Parts (Will withstand vibrations of 15G min.) (Not affected by altitude or humidity changes) . . . Can Be Changed as Easily as a Radio Tube . . . Operates Equally Well on AC or DC . . . Inexpensive.

CAPACITIES AVAILABLE

Current values of 60 ma. to 5 amps; threshold voltage 0.4 to 40 V. Maximum dissipation per **AMPERITE** 60w per tube (ST19 bulb). Any number of **AMPERITES** with the same voltage range can be operated in parallel. **AMPERITES** should not be used in series.

AGEING

AMPERITE Ballast Tubes may change approximately up to 3% in current if aged for 4 to 8 hours, at maximum voltage. They will change very little thereafter.

LIFE EXPECTANCY

Average life if operated as recommended	**2000 Hours**
If operated continuously at maximum voltage	**1000 Hours**
If operated continuously at 80% maximum voltage	**5000 Hours**
If filament is operated below glow point	**5000 Hours up**

In operation, the *Amperite* filament starts to glow at one point; as the voltage is increased, the glow spreads over the entire filament. Like incandescent lamps, turning *Amperite* on and off reduces its life, especially if operating near its maximum voltage.

TIME LAG CHARACTERISTICS

Time lag encountered in an *Amperite Ballast Tube* depends upon the wattage consumed by the ballast and the size of the bulb. Where the wattage is small for the size of the bulb, the action can be made practically instantaneous — less than 1 second. In such cases the bulb will remain at practically ambient temperature. When the wattage is high enough to heat the bulb to a temperature uncomfortable to the hand (160°F) the lag might be as much as several minutes for final readings—but normally reaches within 10% of final readings within a few seconds.

AMPERITE NUMBERING SYSTEM

In general, the AMPERITE number approximately denotes the current—voltage threshold value. For example:

AMPERITE NUMBER	3-4	3H4	10-7	12-11	12H11
THRESHOLD CURRENT	0.3	0.35	1.0	1.2	1.25
THRESHOLD VOLTAGE	4.0	4.0	7.0	11.0	11.0

We strongly recommend that you send us your specifications on special problems, and let us recommend the BALLAST TUBE you need.

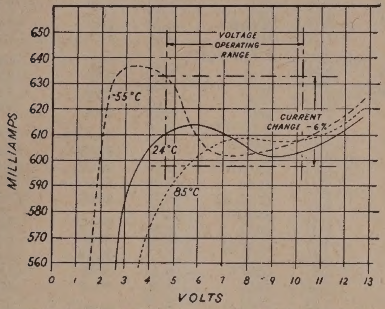
AUTOMATIC AMPERITE REGULATOR

BALLAST TUBE FOR AUTOMATIC REGULATION OF CURRENT AND VOLTAGE

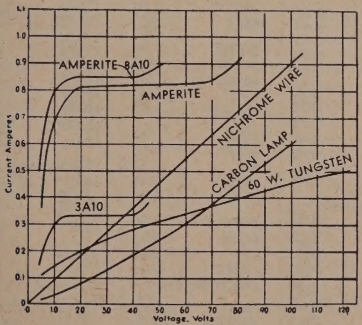
AMBIENT EFFECTS

Ambient temperature variation of —50° to +70° C will change the current value of an *Amperite* approximately 2% on regulating portion of curve as shown directly below. Being hermetically sealed the *Amperite* is not affected by altitude or humidity changes.

We strongly recommend that you send us your specifications on special problems, and let us recommend the BALLAST TUBE you need.



Amperite Ballast-Type 6-4 current voltage characteristic under ambient conditions of —55°, 24°, and 85°C. The percentage change with ambient is approximately the same with all type *Amperite* ballasts.

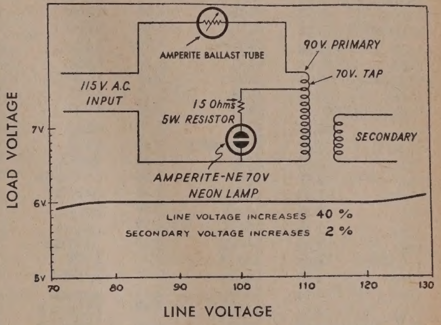


This diagram illustrates far superior regulating characteristics of the *Amperite* Ballast-Regulating Tube.

STANDARD SIZES available for various wattage consumption . . . For good regulation, a bulb should not be required to dissipate more than 50% of maximum wattage.

BATTERY CHARGING AND DISCHARGING

Amperite Ballast Tubes are very successfully used for keeping the current constant in charging and discharging batteries. Any number of *Amperites* of the same voltage range can be placed in parallel to obtain proper current. The current can be kept to ± 1%. Advise voltage variation and currents desired.


AMPERITE BALLAST TUBE
90 V. PRIMARY
70V. TAP
115 V. A.C. INPUT
15 Ohms 5W. RESISTOR
SECONDARY
AMPERITE-NE 70V NEON LAMP
LOAD VOLTAGE
7V
6V
5V
LINE VOLTAGE INCREASES 40 %
SECONDARY VOLTAGE INCREASES 2 %
70
80
90
100
110
120
130
LINE VOLTAGE

A light, compact, and inexpensive method of obtaining close regulation is to use an *Amperite Ballast Tube* with an *Amperite* Neon Lamp—type NE70V. Base octal-base wiring-prongs 2-5. One NE70V is used for all loads up to 100W.

POWER SUPPLIES

We strongly recommend, for any particular application, to fill in and return one of our special problem sheets (ASP 343) and permit us to recommend the most suitable AMPERITE.

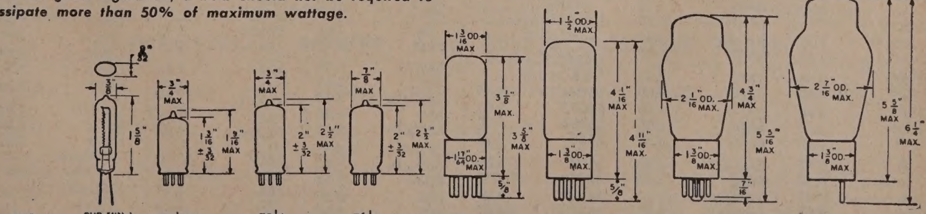
Power Supply	Dry Cells	6 Volts	12 Volts	26 Volts	115 Volts
Supply Variation	2.2-3.0V	5.5-7.5V	10.0-14.0V	22.0-30.0V	105-125V
Desired on Load	1.8-2.0V	3.9-4.1V	6.1- 6.4V	17.5-18.5V	90- 95V
Required on **AMPERITE**	0.4-1.0V	1.6-3.4V	3.9- 7.6V	4.5-11.5V	15- 30V
Current Variation	.29-.32a	.29-.31a	.29-.31a	.29-.32a	.29-.32a

The above chart shows the maximum load voltage for the given supply to obtain ± 2% current regulation on load. Better regulation is obtainable by increasing the voltage across the **AMPERITE**. Up to a point, the higher the percent of the supply voltage taken up by the **AMPERITE**, the better the regulation.

Radio tube filament loads—have low cold resistance which causes a high initial surge. For such loads we recommend a bleeder of 20 to 50% prox. of load and the corresponding **Amperite**. e.g.

FILAMENT LOAD	USE AMPERITE	TOTAL CURRENT
0.3a	4HTF4	0.45a
0.6a	8-4	0.8a
0.7a	9-4	0.9a

On Radio tube filament loads the bleeder will also improve the regulation.


8/32"
3/8"
1 5/8"
3/4" MAX.
1 3/16" ± 3/32
1 9/16" MAX
3/4" MAX
2" ± 3/32
2 1/2" MAX
7/8" MAX
2" ± 3/32
2 1/2" MAX.
1 3/16 OD. MAX
3 1/8" MAX.
3 5/8" MAX
1 17/64" OD. MAX
5/8"
1 1/2 OD. MAX
4 1/16" MAX
4 11/16" MAX.
1 3/8" OD. MAX.
5/8"
2 1/16 OD. MAX.
4 3/4" MAX
5 5/16" MAX
1 3/8" OD. MAX.
7/16"
2 7/16" OD. MAX.
5 5/8" MAX
6 1/4" MAX.
1 3/8" OD. MAX

SIZE	SUB. MIN. L	T5½S	T5½L	T6½L	T9	T-12	ST-16	ST-19
MAX WATTS	2 W	3	8	8	12	20	30	60
WT PER TUBE	2 GMS.	7 GMS.	8 GMS.	8 GMS.	1 OZ.	2¼ OZ.	2½ OZ.	2¾ OZ.

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CBS tubes

CBS ELECTRONICS SALES CORPORATION

Main Office: Danvers, Massachusetts
A Division of Columbia Broadcasting System, Inc.

RECEIVING TUBES

TYPE	LIST PRICE
OZ4	2.15
OZ4G	2.35
1A5GT	3.20
1A7GT	3.70
1AG4(N)	6.85
1AJ5	3.20
1AX2	3.05
1B3GT	2.90
1DN5	2.20
1G3GT/1B3GT	2.90
1H5GT	3.05
1J3	2.90
1K3	2.90
1L4(N)	2.65
1L6	3.35
1LA6	4.10
1LB4	4.45
1LC5(D)	4.05
1LC6	4.10
1LD5	4.25
1LE3	4.25
1LH4	3.95
1LN5	3.95
1N5GT	3.65
1R5	2.55
1S2A	3.00
1S4	3.65
1S5	2.55
1T4	2.40
1U4	2.35
1U5	2.10
1V2	2.00
1X2B	3.05
2A3	6.30
2AF4A	4.05
2BN4A	2.55
2CY5	2.85
3A2	3.50
3A3	3.40
3AF4A	4.05
3AL5	1.85
3AU6	2.15
3AV6	1.75
3B2	6.25
3BA6	2.15
3BC5 (Order 3CE5/3BC5)	
3BE6	2.25
3BN6	3.00
3BU8	2.85
3BY6	2.35
3BZ6	2.30
3CB6	2.30
3CE5/3BC5	2.35
3CF6	2.55
3CS6	2.40
3CY5	2.85
3DK6	2.40
3DT6	2.20
3LF4	4.20
3Q4	2.75
3Q5GT	3.60
3S4	2.45
3V4	2.35
4AO1 (Order 3A3)	
4AU6	2.15
4BC5 (Order 4CE5/4BC5)	
4BC8	4.05
4BN6	3.00
4BQ7A	4.00
4BS8	3.85
4BU8	2.85
4BZ6	2.25
4BZ7	4.05
4CB6	2.30
4CE5/4BC5	2.35
4CS6	2.35
4DE6	2.50
4DT6	2.20
5AM8	3.30
5AN8	3.55
5AQ5	2.20
5AS4A	2.15
5AS8	3.40
5AT8	3.25
5AU4	3.40
5AV8	4.05
5AW4	2.80
5AZ4	2.65
5B8	3.95
5BE8	3.30
5BK7A	3.40
5BQ7A	4.00
5BR8	3.30
5BT8	3.30
5CG8	3.20
5CL8A	3.15
5CM8	3.55
5CQ8	3.40
5CZ5	2.85
5DH8	4.05
5J6	2.85
5T8	3.40
5U4GB	2.10
5U8	3.30
5V3	3.65
5V4GA	3.30
5V6GT	2.20
5X8	3.25
5Y3GT	1.75
5Y4GA	2.35
5Y4GT	2.35
5Z3	3.05
5Z4	5.25
6A7	4.65
6A8	5.25
6A8GT	4.80
6AB4	2.15
6AB7(D)	5.50
6AC5GT	4.35
6AC7	4.85
6AF3	2.90
6AF4	4.00
6AF4A	4.00
6AG5	2.60
6AG7	5.60
6AH4GT	3.30
6AH6	4.70
6AK5(N)	4.20
6AK6(N)	2.90
6AL5	1.85
6AL7GT(N)	5.75
6AM4	5.90
6AM8A	3.25
6AN4	4.95
6AN8	3.50
6AQ5A	2.15
6AQ6	2.20
6AQ7GT	4.00
6AR5	2.65
6AS5	2.40
6AS8	3.40
6AT6	1.90
6AT8A	3.20
6AU4GTA	3.40
6AU5GT	4.30
6AU6A	2.10
6AU8A	3.50
6AV5GA	3.80
6AV6	1.65
6AW8A	3.55
6AX4GT	2.65
6AX4GTA	2.65
6AX4GTB	2.65
6AX5GT	2.95
6AZ8	4.20
6B7(D)	3.70
6BA6	2.00
6BA7	3.70
6BA8A	3.55
6BC5 (Order 5CE5/6BC5)	
6BC7	3.80
6BC8	4.00
6BD6	2.30
6BE6	2.20
6BF5	3.55
6BF6	1.80
6BG6GA	6.50
6BH6	2.70
6BH8	3.50
6BJ6	2.60
6BJ7	2.95
6BJ8	2.85
6BK4	7.10
6BK5	3.50
6BK7A	3.40
6BK7B	3.40
6BL7GTA	3.95
6BN4A	2.50
6BN6	2.95
6BN8	2.70
6BQ5	2.35
6BQ5(Md.Pr.)	6.80
6BQ GA (Order 6CU6)	
6BQ6GT (Order 6BQ6GTB)	
6BQ6GTA (Order 6BQ6GTB)	
6BQ6GTB	4.35
6BQ7A	3.95
6BR8A	3.30
6BS8	3.75
6BU8	2.80
6BV8	3.15
6BW8	3.25
6BX7GT	4.00
6BY5GA	4.20
6BY6	2.35
6BY8	2.65
6BZ6	2.25
6BZ7	4.00
6BZ8	4.25
6C4	1.85
6C5	3.15
6C5GT(D)	2.90
6C8G(D)	5.10
6CB5A	7.50
6CB6A	2.25
6CD6GA	5.80
6CE5/6BC5	2.30
6CF6	2.55
6CG7	2.45
6CG8A	3.15
6CH8	3.60
6CK4	2.80
6CL6	3.75
6CL8A	3.15
6CM6	2.55
6CM7	2.75
6CN7	2.60
6CQ8	3.30
6CR6	2.40
6CS6	2.35
6CS7	2.80
6CU5	2.35
6CU6	4.35
6CU8	3.65
6CX8	3.65
6CY5	2.75
6CY7	2.95
6CZ5	2.85
6D6	4.35
6DA4	2.70
6DB5	2.70
6DC6	2.75
6DE6	2.45
6DE7	2.95
6DG6GT	2.50
6DJ8 (See ECC88/6DJ8)	
6DK6	2.35
6DN6	6.25
6DN7	3.50
6DQ5	7.70
6DQ6A	4.15
6DR7	2.95
6DS5	2.65
6DT5	3.05
6DT6	2.15
6E5(N)	3.00
6EA8	3.15
6EB8	3.70
6EH8	3.15
EM5	3.05
6ES5	2.95
6EW6	2.30
6F5	3.65
6F5GT(D)	3.10
6F6	4.20
6F6G(D)	3.65
6F6GT	3.65
6F8G(D)	5.60
6GK6	2.55
6H6	3.50
6J5	3.10
6J5GT	2.55
6J6	2.80
6J6A	2.80
6J7	4.55
6J7GT(D)	4.00
6K6GT	2.35
6K7	4.35
6K8	4.70
6L6	7.00
6L6GB	4.20
6L6GC	4.20
6L6GC(Md.Pr.)	9.80
6L7	5.00
6N7	4.55
6N7GT(D)	4.35
6R7(D)	4.35
6R7GT(D)	3.50
6S4A	2.05
6S7G(D)	4.10
6S8GT	2.90
6SA7	3.90
6SA7GT	3.25
6SB7Y	5.35
6SC7	3.80
6SF5	3.10
6SF7	4.75
6SG7	4.20
6SH7	4.05
6SJ7	3.70
6SJ7GT	3.20
6SK7	3.55
6SK7GT	3.05
6SL7GT	3.30
6SN7GTB	2.60
6SQ7	3.30
6SQ7GT	2.70
6SR7	3.25
6SS7	4.20
6T4	4.35
6T8A	3.40
6U5(N)	3.15
6U8A	3.30
6V3A	4.35
6V6	5.00
6V6GT	2.15
6V6GT(Md.Pr.)	6.30
6V6GTA	2.20
6W4GT	2.40
6W6GT	2.85
6X4	1.65
6X5GT	2.10
6X8	3.15
6Y6G	3.45
6Y6GA	3.45
7A4	3.25
7A7	3.50
7A8	4.70
7AF7(D)	3.85
7AG7	3.85
7AH7(D)	3.85
7AU7	2.60
7B5	4.75
7B6	3.25
7B7	3.50
7B8	3.55
7C5	3.50
7C6	3.50
7C7	3.20
7E7(D)	4.45
7F7	3.85
7F8	4.60
7H7(D)	3.95
7N7	3.55
7Q7	4.10
7V7(D)	4.90
7X7	5.85
7Y4	2.95
7Z4	2.75
8AU8	3.55
8AW8A	3.65
8BA8A	3.65
8BQ5	2.40
8CG7	2.50
8CM7	2.85
8CN7	2.60
8CS7	2.95
8CX8	3.70
8EB8	3.75
9CL8	3.15
9U8A	3.30
10C8	4.25
10DE7	2.95
11CY7	3.00
12A8GT	4.75
12AB5	2.45
12AC6	2.20
12AD6	2.30
12AE6	2.00
12AE6A	2.00
12AE7	3.75
12AF3	2.90
12AF6	2.35
12AJ6	2.00
12AL5	1.90
12AL8	3.95
12AQ5	2.40
12AT6	1.70
12AT7	3.05
12AU6	2.15
12AU7A	2.45
12AV5GA	3.85
12AV6	1.65
12AV7	3.20
12AX4GTA	2.70
12AX7	2.55
12AX7A	2.55
12AZ7A	2.75
12B4A	2.70
12BA6	2.00
12BA7	3.95
12BD6	2.25
12BE6	2.15
12BF6	2.10
12BH7A	3.05
12BK5	3.80
12BL6	2.30
12BQ6GA (Order 12CU6)	
12BQ6GT (Order 12BQ6GTB)	

N-Non-Taxable (D) Type being discontinued . . . available only to extent of present inventories.

Reliable products through Advanced Engineering

CBS tubes (continued)

RECEIVING TUBES (Cont'd)

TYPE	LIST PRICE
12BQ6GTA (Order 12BQ6GTB)	
12BQ6GTB	4.55
12BR7	2.60
12BV7	3.05
12BY7A	3.05
12BZ7	3.05
12C5/12CU5	2.35
12CA5	2.50
12CN5	2.45
12CR6	2.40
12CT8	4.05
12CU5 (Order 12C5/12CU5)	
12CU6	4.45
12CX6	2.50
12D4	2.75
12DB5	2.75
12DL8	3.50
12DQ6	4.20
12DQ6A	4.20
12DQ7	3.30
12DS7	3.35
12DV8	3.50
12DZ6	2.50
12EA6	2.65
12ED5	2.50
12EG6	2.30
12EK6	2.50
12EL6	2.00
12EM6	3.10
12EN6	3.05
12F8	2.75
12FM6	1.95
12FT6 (Order 12AE6A)	
12GA6	2.30
12H6	3.30
12J5GT	2.70
12J7GT(D)	4.20
12J8	3.30
12K5	2.70
12K8	5.70
12L6GT	2.45
12Q7GT(D)	3.35
12R5	2.60
12SA7	3.90
12SA7GT	3.25
12SC7(D)	3.80
12SF5(D)	3.20
12SF7	4.75
12SG7	4.20
12SH7	4.15
12SJ7	3.70
12SJ7GT	3.20
12SK7	3.55
12SK7GT	3.05
12SL7GT	3.75
12SN7GT	2.70
12SN7GTA	2.70
12SQ7	3.30
12SQ7GT	2.65
12U7	2.65
12V6GT	2.15
12W6GT	3.00
12X4	1.90
13DE7	2.95
14A7	3.65
14AF7	3.80
14B6	3.50
14F7(D)	4.05
14F8(D)	4.60
14Q7	4.10
17AX4GT	2.70
17D4	2.75
17DQ6A	4.20
17H3	2.15
18A5	4.15
19AU4	3.45
19AU4GTA	3.45
19BG6G	6.50
19BG6GA	6.50
19J6	3.15
19T8	3.40
24A(D)	4.15
25AV5GA	4.15
25AX4GT	2.90
25BK5	3.65
25BQ6GA (Order 25CU6)	
25BQ6GT (Order 25BQ6GTB)	
25BQ6GTA (Order 25BQ6GTB)	
25BQ6GTB	4.60
25C5	2.15
25CA5	2.50
25CD6GB	5.85
25CU6	4.60
25DN6	5.55
25EC6	5.70
25EH5	2.30
25F5	2.35
25L6GT	2.25
25W4GT	2.70
25Z5	2.90
25Z6GT	2.90
27(D)	4.35
35A5	3.50
35B5	2.65
35C5	2.15
35L6GT	2.40
35W4	1.40
35Y4	2.75
35Z3	2.75
35Z4GT	2.35
35Z5GT	1.85
41(D)	3.50
42	3.50
47(D)	8.70
50A5	3.95
50B5	2.65
50C5	2.15
50DC4	1.55
50EH5	2.30
50FY8	4.20
50L6GT	2.40
50X6	3.20
50Y6GT	2.95
50Y7GT	3.05
58(D)	4.35
75	5.10
78	5.10
80	2.90
84	2.65
117L7/M7GT	10.15
117Z3	2.50
117Z6GT	4.40
5642	5.00
5881 (Mtchd. Pr.)	15.70
6550 (Mtchd. Pr.)	21.10
6973	4.50
7025	2.95
7189	4.35
7189 (Mtchd. Pr.)	10.15
7247	2.85
FOREIGN REPLACEMENT TYPES	
EM34/6CD7	3.80
EABC80/6T8A	3.40
EM80/6BR5	2.95
EBF80/6N8	3.25
ECL80/6AB8	3.25
ECC81	3.05
ECH81/6AJ8	3.25
ECC82	2.45
ECL82/6BM8	3.05
ECC83	2.55
EL84	2.35
XL84	2.40
EM84/6FG6	3.25
ECC85/6AQ8	2.75
EF86/6267	2.70
ECC88/6DJ8	4.60
EF89/6DA6	2.55
EBF89/6DC8	3.20
EB91/EAA91	1.85
EC92/6AB4	2.15

N-Non-Taxable (D) Type being discontinued . . . available only to extent of present inventories.

CBS SILVER VISION PICTURE TUBES

NUMBER	LIST PRICE
8DP4	30.00
10ABP4B	23.25
10BP4A	21.25
12KP4A	28.80
12LP4A	24.80
14BP4/14CP4/14EP4	26.70
14RP4	29.25
*14RP4A	34.30
*14WP4	34.30
*14XP4A	35.50
16AEP4	33.00
16AP4A	54.40
16DP4A	32.50
16GP4B	57.60
16JP4A	42.00
16KP4/16RP4	27.60
*16KP4A/16RP4A	31.00
16LP4A/16ZP4	32.40
16TP4	27.60
16WP4A	33.80
17ATP4/17AVP4	34.30
*17ATP4A/17AVP4A	38.60
*17BJP4	38.60
17BP4A/17JP4	30.50
17BP4B	35.30
*17BRP4	43.30
*17BSP4	39.50
*17BVP4	44.50
*17BWP4	44.50
*17BZP4/17CAP4/17CKP4	43.30
*17CEP4	39.50
*17CFP4	38.60
*17CLP4	39.50
*17CNP4	39.50
17CP4	57.20
17GP4	59.70
*17HP4/17RP4	32.90
17HP4B/17RP4C	37.20
*17LP4/17VP4	32.70
17LP4A/17VP4B	36.20
17QP4/17UP4/17YP4	31.00
*17QP4A	35.30
17TP4	61.50
19AP4B	62.70
20CP4/20DP4	37.75
20CP4A/20DP4A	36.70
*20CP4B/20DP4B	43.80
*20CP4D/20DP4C	43.80
20HP4	39.50
20HP4A/20LP4/20MP4	38.60
*20HP4C	41.00
*20HP4D	41.00
21ALP4	39.50
*21ALP4B/A	45.50
21AMP4/21ACP4	37.80
*21AMP4A/21ACP4A/21BSP4	43.80
21AP4	70.70
*21ATP4A/21ATP4	45.50
*21AUP4	42.90
*21AUP4B/A-21AVP4B/A	45.50
*21AWP4	43.80
*21BTP4	45.70
*21CBP4/21CBP4A	45.70
*21CEP4	50.00
*21CQP4	51.50
*21CZP4	51.50
*21DAP4	50.00
*21DEP4	50.00
21EP4A	38.60
*21EP4B	44.00
21FP4	36.00
21FP4A	36.00
*21FP4C	39.10
21MP4	73.40
21WP4	37.40
*21WP4A	44.40
21XP4/21AYP4	39.50
*21XP4A	45.50
21YP4	39.50
*21YP4A	44.80
21ZP4A	37.40
*21ZP4B	43.80
*23CP4	76.50
*23HP4	76.50
*24AEP4	65.70
*24AHP4	70.50
*24ALP4	72.00
*24CP4A/24VP4A/24TP4/24ADP4	63.30
*24DP4A/24YP4	65.50
*27EP4	111.00
*27RP4	111.00
21AXP22A	160.00
205 CBS Columbia Conversion Kit	41.50

# Check with your CBS Distributor for information on CBS Palomar economy line. *Aluminized type

INDUSTRIAL, POWER, AND SPECIAL-PURPOSE TUBES

NUMBER	USER PRICE	NUMBER	USER PRICE	NUMBER	USER PRICE	NUMBER	USER PRICE	NUMBER	USER PRICE	NUMBER	USER PRICE
OA2	1.46	*1AH4	1.35	1P33	5.34	*1V6	1.90	2D21	1.25	3A4	1.25
OA2WA	3.65	CE-1C	3.32	1P35	18.24	CE-2A/B	9.98	2E24	5.25	3A5	1.78
OA3	1.54	1C21	4.15	1P36	9.04	2A4G	2.40	2E25A	7.15	3B	9.90
OA4G	1.86	CE-1D	2.68	1P37	3.75	CE-2C	7.08	2E26	3.85	3B4	2.75
OB2	1.44	C1K/6014	12.90	1P39	2.15	2C39B	32.15	2E30	2.95	3B22/222	8.40
OB2WA	3.00	1C4	1.27	1P40	3.60	2C40	27.50	CE-2VA/B	9.98	3B25	7.75
OB3	1.65	1P23	2.68	1P41	3.80	2C40A	30.85	CE-2VC	7.66	3B28	6.00
OC3	1.50	1P30	7.08	CE-1V-A/B	10.08	2C43	24.55	CE-2VD	5.26	CE-3C	9.04
OD3	1.44	1P31	5.26	CE-1VC	4.91	2C51	5.25	2X2A	2.90	3C23	11.98
CE-1A/B	5.96	1P32	2.68	CE-1VD	4.27	CE-2D	5.47	CE-3A/B	12.25	CE-3D	5.26

Reliable products
through Advanced Engineering

CBS tubes (continued)

INDUSTRIAL, POWER, AND SPECIAL-PURPOSE TUBES

NUMBER	USER PRICE
3D21B	11.90
3E29	19.00
C3P14	39.60
C3R14	40.44
CE-4A/B	9.98
4B26	5.34
4B28/225	5.34
4B31	35.25
CE-4C	9.04
CE-4D	7.04
CE-4V-A/B	13.36
CE-4VC	9.44
4X150A	33.15
4X150D	33.15
CE-5	18.24
CR-5	14.76
5B21	6.50
C5F14	43.20
5R4GY	2.03
5Y3WGTA	4.10
5Y3WGTB	5.75
C6A	38.58
*6AH6	2.35
6AJ5	4.25
6AK6	1.40
6AS6	3.43
6AS7G	4.93
6AS7GA	4.93
6AU6WA	2.90
6B	13.00
*6BQ5†	3.40
6C	19.58
6CF	19.50
6D4	2.85
C6J/5C21	28.90
C6J/K	29.40
6J4	4.19
6J6WA	5.60
*6L6GC†	9.80
6L6WGB	5.25
C6M	37.08
6SL7WGT	2.95
6SN7WGT	2.65
6SN7WGTA	4.90
6V6GT†	3.15
6V6GTY	1.45
6X4W	1.60
CE-7C	15.60
CE-11V-C	6.13
UX-CV11	16.72
CE-12.	7.08
12A6	2.10
12AT7WA	3.05
12AY7	2.42
CE-21C	6.23
CE-21D	5.34
KY-21A	25.00
RX-21A	24.64
CE-22	5.16
CE-B22-A/B	8.57
CE-B22C	5.16
CE-B22D	3.83
CE-B22V-A/B	7.13
CE-B22VC	3.83
CE-B22VD	3.02
CE-23A/B	5.80
CE-23C	4.42
CE-23D	2.23
CE-25A/B	14.62
CE-25C	4.90
CE-25D	3.56
CE-25V-A/B	16.03
CE-25VC	4.80
CE-25VD	3.29
CE-B25A/B	15.12
CE-B25C	4.90
CE-B25D	3.56
26A7GT	7.00
CE-26A/B	11.76
CE-26C	9.04
CE-26D	5.34
CE-A26	7.30
FG-27A	40.25
CE-29Q	5.80
CE-29R	2.23
CE-30A/B	6.23
CE-30C	2.93
CE-30D	1.80
CE-A30	3.77
CE-30V-A/B	9.88
CE-30VC	3.54
CE-30VD	3.20
CE-31V-A/B	33.00
CE-31VC	16.08
CE-31VD	8.90
CE-34Q	14.24
CE34R	5.34
CE-36-A/B	26.88
CE-36C	6.72
CE-36D	3.19
CE-36VC	6.12
CE-B36	6.72
T-40	10.20
TZ-40	10.20
SR-50	14.40
CE-52V	18.00
SR-53	14.40
T-55	11.50
CE-59R	2.98
HF-60	13.75
SK-60	14.40
T-60	15.00
CE-61R	18.50
SK-63	14.40
CE-64Q	8.90
CE-64R	4.45
HY-69	7.95
CE-72Q	8.60
CE-75V	18.60
CE-77	49.20
*ECC81/12AT7	1.53
*ECC82/12AU7	1.23
83	1.72
*ECC83/12AX7	1.30
EL84/6BQ5	1.18
CE-84Q	12.42
CE-84R	5.78
CE-86A/B	14.24
CE-86C	4.96
CE-86D	3.56
*ECC88/6DJ8	2.30
CE-91Q	15.12
CE-91R	6.72
FG97	56.50
FG105	53.33
172	82.35
200A	17.90
T-200	32.45
201A	18.50
202B	44.52
203/623	13.44
205	14.24
206	9.43
210A	9.94
211D	13.50
213A	8.90
T-218	17.00
220/72	9.08
226	3.53
235	6.22
235A	6.22
249C	10.68
258B	13.88
T-300	39.00
302	21.80
304	81.00
311	11.98
320A	14.65
323B	13.00
393	13.00
460	29.50
468	29.50
575A	22.15
627	27.00
673	22.15
CE(‡) 701A(§)	13.00
CE(‡) 701C(§)	10.00
CE(‡) 701D(§)	7.50
CE(‡) 702A(§)	13.00
CE(‡) 702C(§)	10.00
CE(‡) 702D(§)	7.50
CE(‡) 704A(§)	15.65
CE(‡) 704C(§)	10.85
CE(‡) 704D(§)	10.85
CE 705A(§)	13.00
CE 705C(§)	10.00
CE 705D(§)	7.50
CE(‡) 706A(§)	13.00
CE(‡) 706C(§)	10.00
CE(‡) 706D(§)	7.50
CE(‡) 711A(§)	13.00
CE(‡) 711C(§)	10.00
CE(‡) 711D(§)	7.50
801A	10.90
802	10.90
805	20.10
807	3.00
809	7.40
810	25.65
811A	6.90
812A	6.90
813	21.10
814	23.60
815	23.60
816	2.95
822	21.35
826	23.60
828	27 60
829B	19.00
832A	15.90
833A	47.80
836	10.15
837	8.65
838	20.00
845	20.80
857	240.00
866A	2.90
866JR	2.15
868	3.75
869B	160.00
872A	10.65
873	18.30
875A	22.26
884	2.28
892R	455.00
902A	19.70
917	5.50
918	4.30
919	5.50
920	6.40
921	3.45
922	3.00
923	3.30
927	3.75
929	2.00
930	3.00
931A	11.00
934	4.15
955	4.95
HY1269	7.95
1612	4.15
1614	3.77
1616	12.60
1620	6.99
1621	2.60
1622	3.45
1624	5.75
1625	4.30
1635	2.60
2050	2.37
5514	11.90
5516	7.95
5528/C6L	38.88
5544	32.50
5550/FG415	49.00
5551A	65.00
5552A	99.00
5553B	245.00
5555/FG238B	316.00
5556/PJ8	21.00
5557/FG17	9.50
5558/FG32	17.50
5559/FG57	23.00
5560/FG95	33.00
5561/FG104	45.75
5581	3.40
5583	4.90
5632/C3J	14.10
5636	7.80
5651	2.11
5653	1.95
5654	3.05
5654/6AK5W	3.05
5654/6AK5W/6096	4.35
5670	3.70
5670WA	3.95
5672	2.45
5675	14.50
5684/C3JA	19.80
5685/C6JA	29.30
5686	3.37
5687	4.25
5691	8.75
5692	8.25
5693	6.60
5696	1.90
5718	4.25
5719	3.85
5720/FG33	34.75
5725	3.80
5725/6AS6WA	3.80
5726	1.55
5726/6AL5W	1.55
5726/6AL5W/6097	1.55
5727	2.90
5727/2D21W	2.90
5749	2.20
5749/6BA6W	2.20
5750	3.45
5750/6BE6W	3.45
5751	2.95
5751WA	2.95
5763	2.53
5812	3.10
5814	3.35
5814A	3.35
5814WA	3.35
5823	1.72
5855	70.00
5876	14.95
5879	1.75
5881	3.50
5581†	7.85
5894	24.75
5902	5.75
5915	1.65
5963	1.54
5964	1.54
5965	2.20
6004	5.05
6005	3.95
6005/6AQ5W	3.95
6011/710	13.00
6012	7.65
6021	4.80
6044	36.00
6072	3.90
6073	3.00
6074	3.45
6080	5.33
6080WA	11.40
6099	13.95
6100	2.49
6100/6C4WA	2.49
6101	5.35
6101/6J6WA	5.35
6111	5.40
6112	5.40
6135	2.40
6136	2.80
6146	5.00
6161	115.00
6186/6AG5WA	3.85
6189/12AU7WA	3.85
6197	3.05
6201	2.95
6202	2.85
6211	2.35
6216	3.50
6278	49.08
6293	6.40
6463	2.05
6478	15.80
6484/3C	12.20
6485	2.05
6524	16.00
6550	4.95
6550†	10.55
6591	22.35
6624	67.00
6626	4.40
6626/OA2WA	4.40
6627	4.20
6627/OB2WA	4.20
6660/6BA6	1.01
6661/6BH6	1.32
6662/6BJ6	1.26
6663/6AL5	.92
6669/6AQ5	1.05
6677/6CL6	1.85
6678/6U8	1.60
6679/12AT7	1.46
6680/12AU7	1.19
6681/12AX7	1.22
6792	7.55
6807	29.30
6830	1.72
6831	1.82
6860/C6JF	29.40
6883	5.00
6893	4.25
6883	4.25
6955	11.15
7189†	10.15
7229	17.75
7230	34.80
7318	13.00
7439	18.25
7440	22.10
7441	39.65
7548	11.20
7595	47.50
7596	35.50
7597	50.00
7598	42.65
7599	39.45
7600	40.80
7602	44.45
8000	20.45
8005	16.25
8008	10.65
8013A	15.55
8020	24.00
9001	5.10
9002	3.60
9003	5.10
9006	2.55

CBS FOREIGN REPLACEMENT TYPE	
7721 (D3a)	$24.05
E81L/6686	5.16
E88CC/6922	4.68
E235L/7751	6.70
E280F/7722	13.89
ECC88/6DJ8	4.60
EL34/6CA7	3.60
PCC88/7DJ8	2.33

*F.E.T. included in price. †Matched pair. ‡Prefixes (A, C, or E) indicate grid sizes §Suffixes (1, 2, 3, or 4) indicate dark resistance classes, available within each type group. Pries for any possible type-number combination, within each group, are the same; e.g., CE-A701A2, CE-C701A3, CE-E701A4, etc. all have the same price.

Tube Selection Guide

EL THYRATRON AND EL RECTIFIER TUBES

This brief summary of important ratings is intended as a guide to tube types available within given broad requirements. The Engineering Manual and Catalog should be consulted for complete information before commencing the design of equipment.

TUBE TYPE	OTHER DESIGNATION	MAX. CONT. AVERAGE OUTPUT CURRENT (Amps. D. C.)	MAX. INST. PEAK ANODE CURRENT (Amps. Inst.)	MAX. INST. PEAK FORWARD VOLTAGE	MAX. INST. PEAK INVERSE VOLTAGE	MAX. OVERALL LENGTH (Inches)	HEATER OR FILAMENT VOLTAGE	NOMINAL HEATER OR FILAMENT CURRENT (Amps.)	REMARKS
RECTIFIERS									
EL 1C	3B22	1.0	4.0	....	725	6	2.5	6.0	Full-wave (2 anodes)
EL 3B	6013	2.5	20.0	....	920	5½	2.5	9.0	Half-wave
EL 3C	4B24	2.5	10.0	....	725	7	2.5	11.5	Full-wave (2 anodes)
EL 3C/L	6982	2.5	10.0	....	725	7¾	2.5	11.5	Full-wave (2 an'd's) lug base
EL 6B	5892	6.4	40.0	....	920	8¾	2.5	21.0	Half-wave
EL 6B/L	6983	6.4	40.0	....	920	9¼	2.5	21.0	Half-wave; lug base
EL 6C	....	6.4	25.6	....	725	8	2.5	17.0	Full-wave (2 anodes)
EL 6F	6015	6.4	40.0	....	920	8	2.5	21.0	Half-wave; bracket mount
EL 16F	....	16.0	96.0	....	620	15¾	2.5	36.0	Half-wave; bracket mount
THYRATRONS									
EL C1B	3C31	1.0	8.0	525	700	4¾	2.5	6.3	
EL C1B/A	5664	1.0	8.0	750	1250	4¾	2.5	6.3	
EL C1K	6014	1.0	8.0	1000	1250	4¼	2.5	6.3	Replaces EL C1J or EL C1J/A
EL C1K/B	7319	1.0	8.0	2000	2000	4⅜	2.5	6.3	
EL C3J	5632	2.5	30.0	900	1250	6	2.5	9.0	
EL C3J/A	5684	2.5	30.0	1000	1250	6	2.5	9.0	
EL C3J/L	7216	2.5	30.0	900	1250	6¾	2.5	9.0	Lug base
EL C4J	6984	4.0	40.0	900	900	9½	2.5	21.0	
EL C4J/F	6985	4.0	40.0	900	900	8¾	2.5	21.0	Bracket mount
EL C4J/L	6986	4.0	40.0	900	900	10	2.5	21.0	Lug base
EL C5F14	6231	5.0	30.0	500	500	5 11/16	14.0	2.55	Flexible lead connections
EL C6J	5C21	6.4	77.0	750	1250	9½	2.5	21.0	
EL C6J/A	5685	6.4	77.0	1000	1250	9½	2.5	21.0	
EL C6J/F	6860	6.4	77.0	1000	1250	8¾	2.5	21.0	Bracket mount
EL C6J/K	6864	6.4	77.0	1000	1250	8¾	2.5	21.0	High commutation factor
EL C6J/KF	6871	6.4	77.0	1000	1250	8	2.5	21.0	High commutation factor; bracket mount
EL C6J/KL	6989	6.4	77.0	1000	1250	9¼	2.5	21.0	High commutation factor; lug base
EL C6J/L	6988	6.4	77.0	750	1250	10	2.5	21.0	Lug base
EL C6C	6987	6.4	77.0	2000	4000	11½	2.5	24.0	
EL C16J	5665	{16.0 {18.0	160.0} 100.0}	1000	1250	10½	2.5	31.0	Bracket mount
EL C16J/A	....	{16.0 {18.0	160.0} 100.0}	1250	1250	10½	2.5	31.0	Bracket mount

Write for complete Engineering
Manual and Catalog
or for Applications
Engineering information.

ELECTRONS, INCORPORATED
NEWARK 3, N. J.

Reliable Thyratrons

Eimac First for Reliability in Power Electron Tubes

DIODES AND RECTIFIERS

	U.S.A. Price	Filament Voltage Volts	Filament Current Amps	Peak Inverse Voltage Volts	Peak Plate Current Amps	Average Plate Current ma	Plate Dissipation Watts
2-01C	$ 18.50	5.0	0.35	1,000	......	1	0.1
2-25A	16.45	6.3	3.0	25,000	1.0	50	15
2-50A	17.70	5.0	4.0	30,000	1.0	75	30
2-150D	38.55	5.0	12.5	30,000	3.0	250	90
2-240A	42.85	7.5	11.7	25,000	4.0	500	150
2-450A	100.75	7.5	26.5	30,000	8.0	1000	450
2-2000A	228.00	10.0	23.5	75,000	12.0	750	1200
250R	32.15	5.0	10.5	60,000	2.5	250	150
8020(100R)	12.85	5.0	6.5	40,000	1.5	100	60
2X1000A	127.50	26.5	2.1	25,000	25.0[6]	1250[6]	1000
2X3000F	149.00	7.5	51.0	25,000	20.0	3000	3000
KY21A	26.75	2.5	10.0	11,000	3.0	750	....
RX21A	25.75	2.5	10.0	11,000	3.0	750	....

PREFORMED CONTACT FINGER STOCK

A prepared strip of silver-plated spring material, slotted and formed into a series of fingers designed to make sliding contact.

Single Edge	Width	U.S.A. Price per Pc.
CF-100	17/32"	$4.95
CF-300	31/32"	5.40
CF-500	1 3/8"	6.00
CF-900	31/64"	4.95

Double Edge	Width	U.S.A. Price per Ft.
CF-200	13/16"	$6.30
CF-400	1 17/32"	7.65
CF-600	2 1/4"	8.85

Klystron Types	Width	U.S.A. Price per Ft.
CF-700	17/32"	$5.70
CF-800	13/32" x 7/16"	5.55

Used as contact between klystrons and externally-tuned cavities. Available in 3-foot lengths only.

PULSE MODULATORS

	U.S.A. Price	Plate Dissipation Watts	Plate Voltage Volts	Plate Current ma	Grid Dissipation Watts	Screen Voltage Volts	Screen Dissipation Watts	Filament Voltage Volts	Filament Current Amps	Amplification Factor
4PR60A	$100.00	60	20,000	18,000[3]	....	1500	8	26.0	2.1	....
4PR400A	60.00	400	20,000	4,000[3]	10	2500	35	5.0	14.0	....
4PR1000A	145.00	1000	30,000	8,000[3]	25	2500	75	7.5	21.3	....
6C21	82.50	300	30,000	15,000[3]	50	....	....	8.2	17.06	30

HEAT DISSIPATING CONNECTORS

Type	Hole Diameter	U.S.A. Price
HR-1	.052	$ .60
HR-2	.062	.77
HR-3	.072	.77
HR-4	.102	.80
HR-5	.127	.80
HR-6	.367	.80
HR-7	.127	1.60
HR-8	.575	1.60
HR-9	.569	3.00
HR-10	.510	1.60

TUBE EXTRACTOR

A spring-steel extractor for use with the 4X150 series, 4X250 series and 2C39 series tubes. SK-604 U.S.A. Price $ .57

VACUUM SWITCHES

Single-pole double-throw switch within a high vacuum adaptable for high-voltage switching. Contact spacing .015". Switch will handle R-F potentials as high as 20 Kv. In D-C switching will handle approximately 1.5 Amps. at 5 Kv.

Type	U.S.A. Price
VS-2	$23.93
VS-4	29.00
VS-5	38.55
VS-6	34.25

Coils	U.S.A. Price
12V	$10.29
24V	10.29

100 IG IONIZATION GAUGE

For measuring pressures from 10^{-3} to less than 10^{-8} mm of mercury. U.S.A. Price $71.45

HV-1 DIFFUSION PUMP

Triple-jet, air-cooled vacuum pump of the oil-diffusion type. Capable of reaching an ultimate vacuum of 4 x 10^{-7} mm of mercury when used with suitable forepump. U.S.A. Price $292.50

AIR SYSTEM SOCKETS

	U.S.A. Price	Tube	Screen By-Pass Capacitor uuf	Special Characteristics
SK-300	$107.15	4CX5000A; 4CW10,000A	none	
SK-400	17.65	4-400A; 4-250A; 4-125A	none	
SK-500	20.70	4-1000A	none	
SK-600	11.90	4X150A; 4X150D; 4X250B; 7580; 4CX250F; 4CX250B; 4W300B	2700	No terminals grounded.
SK-602	11.90	4X150A; 4X150D; 4X250B; 7580; 4CX250F; 4CX250B; 4W300B	2700	No terminals grounded. (Special SK-600)
SK-610	12.65	4X150A; 4X150D; 4X250B; 7580; 4CX250F; 4CX250B; 4W300B	2700	Cathode terminals grounded.
SK-620	16.80	4X150A; 4X150D; 4X250B; 7580; 4CX250F; 4CX250B; 4W300B	1100	No terminals grounded. Screen by-pass capacitor plastic sealed.
SK-630	18.85	4X150A; 4X150D; 4X250B; 7580; 4CX250F; 4CX250B; 4W300B	1100	Cathode terminals grounded. Screen by-pass capacitor plastic sealed.
SK-640	5.35	4X150A; 4X150D; 4X250B; 7580; 4CX250F; 4CX250B; 4W300B	none	No terminals grounded.
SK-650	8.60	4X150A; 4X150D; 4X250B; 7580; 4CX250F; 4CX250B; 4W300B	none	
SK-655	5.86	(Screen by-pass capacitor for use with SK-650)	1100	Plastic sealed.
SK-700	21.45	4CX300A; 4CN15A; 4CX125C	1100	1 heater grounded.
SK-710	21.45	4CX300A; 4CN15A; 4CX125C	1100	1 heater and cathode grounded.
SK-740	9.80	4CX300A; 4CN15A; 4CX125C	none	No terminals grounded.
SK-760	9.80	4CX300A; 4CN15A	none	Integral chimney. No terminals grounded.
SK-770	9.80	4CX300A; 4CN15A	none	Integral chimney, screen terminals grounded.
SK-800A	55.70	4CX1000A; 4CW2000A	1500	No terminals grounded.
SK-810	55.70	4CX1000A; 4CW2000A	1500	1 heater and cathode grounded
SK-900	68.55	4X500A	650	

CHIMNEYS

	U.S.A. Price
SK-306	$ 6.45
SK-406	8.60
SK-506	12.85
SK-606	.65
SK-626	.80
SK-636	6.45
SK-806	8.55
SK-906	10.70

[1] Waveguide Output Fitting
[2] Coaxial Output Fitting
[3] Pulse
[4] Convection liquid cooled
[5] Cathode Current
[6] Clipper diode service only
[7] TV Peak-Synchronizing Level
[8] Plus 2250 watts bombarder power
[10] 15 Mc Bandwidth, 3 db points.

All prices subject to change without notice

EITEL-McCULLOUGH, INC.
SAN CARLOS • CALIFORNIA
SAN BRUNO • CALIFORNIA

POWER AMPLIFIER KLYSTRONS

		TYPICAL OPERATION				MAXIMUM RATINGS	
	U.S.A. Price	Output Power, Watts CW	Output Power, Watts Pulse	Power Gain db	Frequency Range Mc	Beam Voltage Volts	Beam Current Amps
3K2500LX	$ 2,360.00	1,320	....	25	980-1200	7,000	0.6
3K2500SG	2,950.00	1,300	....	25	1700-2400	7,000	0.6
3K3000LQ	2,360.00	2,400	....	25	610-985	10,000	0.75
3K50,000LA	4,200.00	10,000	12,000[7]	25	400-600	20,000	2.5
3K50,000LF	4,200.00	10,000	12,000[7]	25	570-720	20,000	2.5
3K50,000LQ	4,200.00	10,000	12,000[7]	25	720-985	20,000	2.5
3KM3000LA	2,470.00	2,300	....	30	385-585	10,000	0.75
3KM4000LT	1,880.00	....	38,200	30	960-1215	28,000[3]	6.0[3]
3KM50,000PA	11,000.00	20,000	50,000	35	225-400	30,000[3]	2.5
4K50,000LQ	4,560.00	11,200	....	55	600-985	20,000	2.5
4KM3000LQ	3,750.00	2,000	....	30	710-985	10,000	0.75
4KM3000LR	2,420.00	2,000	....	45	610-985	10,000	0.75
4KM50,000LA	4,230.00	10,000	....	55	400-610	20,000	2.5
4KM50,000LQ	3,760.00	10,000	....	55	610-985	20,000	2.5
4KM50,000SG	10,000.00	11,400	....	40	1700-2400	18,000	2.0
4KM170,000LA	23,500.00	75,000	....	45	300-500	35,000	5.0
4KMP10,000LF	10,800.00	....	400,000	55	570-630	70,000[3]	16.5[3]
6K50,000LQ	8,250.00	9,000	....	30	720-980	20,000	2.5
X-626		....	1,250,000	26	400-450	110,000[3]	36.5[3]

REFLEX KLYSTRON OSCILLATORS

		MAXIMUM RATINGS				ELECTRICAL CHARACTERISTICS			
	U.S.A. Price	Resonator Voltage Volts	Resonator Dissipation Watts	Cathode Current ma	Reflector Voltage Volts (Typical)	Heater Voltage Volts	Heater Current Amps	Frequency Range Mc	Power Output Watts
1K015CA[2]	$618.00	350	20	55	—250	6.3	0.8	5,350 to 5,950	0.070
1K015CG[1]	618.00	350	20	55	—250	6.3	0.8	5,350 to 5,950	0.070
1K20XD[1]	475.00	350	20	55	—175	6.3	0.8	10,000 to 10,700	0.075
1K20XK[1]	475.00	350	20	55	—160	6.3	0.8	9,200 to 10,000	0.075
1K20XS[1]	475.00	350	20	55	—140	6.3	0.8	8,500 to 9,200	0.075
1K75CH[2]	810.00	850	75	100	—350	6.3	1.1	4,300 ± 50	1.0
1K75CK[1]	810.00	850	75	100	—350	6.3	1.1	4,300 ± 50	1.0
1K125CA[1]	298.00	1,000	125	110	—285	6.3	1.2	3,700 to 4,400	1.25
1K125CB[1]	298.00	1,000	125	110	—335	6.3	1.2	4,400 to 5,000	1.8
1K125CC[1]	730.00	1,000	125	110	—335	6.3	1.2	4,400 to 5,000	2.0

TETRODES

		MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS		
	U.S.A. Price	Plate Dissipation Watts	Plate Voltage Volts	Plate Current ma	Grid Dissipation Watts	Screen Voltage Volts	Screen Dissipation Watts	Filament Voltage Volts	Filament Current Amps	Amplification Factor
4-65A	$ 26.75	65	3,000	150	5	600	10	6.0	3.5	......
4-125A	36.00	125	3,000	225	5	600	20	5.0	6.5	......
4-250A	46.50	250	4,000	350	10	600	35	5.0	14.0	......
4-400A	48.00	400	4,000	350	10	800	35	5.0	14.0	......
4-1000A	132.00	1,000	6,000	700	25	1,000	75	7.5	21.0	......
4CN15A	55.00	15	2,500	250	2	400	12	6.0	2.7	......
4CW2000A	210.00	2,000	3,000	1,000	....	400	12	6.0	10.5	......
4CW10,000A	625.00	10,000	7,500	4,000	75	1,500	250	7.5	75.0	......
4CX125C	55.00	125	2,500	250	2	400	12	6.0	3.0	......
4CX250BA (7580)	45.00	250	2,000	250	2	500	12	6.0	2.6	......
4CX250B	45.00	250	2,000	250	2	400	12	6.0	2.6	......
4CX250F	45.00	250	2,000	250	2	400	12	26.5	.56	......
4CX250K	64.25	250	2,000	250	2	400	12	6.0	2.6	......
4CX250M	72.15	250	2,000	250	2	400	12	26.5	.60	......
4CX300A	55.00	300	2,500	250	2	400	12	6.0	3.0	......
4CX1000A	156.00	1,000	3,000	1,000	....	400	12	6.0	10.5	......
4CX5000A	495.00	5,000	7,500	4,000	75	1,500	250	7.5	75.0	......
4W300B	52.86	300	2,000	250	2	400	12	6.0	2.6	......
4W20,000A	1,850.00	20,000	8,000	15,000	60	1,500	200	10.0	30.0[9]	......
4X150A	29.35	250	2,000	250	2	400	12	6.0	2.6	......
4X150D	29.35	250	2,000	250	2	400	12	26.5	0.57	......
4X150G	58.00	150	1,250	250	2	400	12	2.5	6.8	......
4X250B	42.50	250	2,000	250	2	400	12	6.0	2.6	......
4X500A	128.50	500	4,000	350	10	500	30	5.0	13.0	......

PENTODE

		Plate Dissipation Watts	Plate Voltage Volts	Plate Current ma	Grid Dissipation Watts	Screen Voltage Volts	Screen Dissipation Watts	Filament Voltage Volts	Filament Current Amps	Amplification Factor
4E27A/5-125B	$ 42.85	125	4,000	200	5	750	20	5.0	7.56	......

TRIODES

		Plate Dissipation Watts	Plate Voltage Volts	Plate Current ma	Grid Dissipation Watts	Screen Voltage Volts	Screen Dissipation Watts	Filament Voltage Volts	Filament Current Amps	Amplification Factor
2C39A	$ 22.50	100	1,000	125[5]	2	....	......	6.3	1.0	100
2C39WA	30.00	100	1,000	125[5]	2	....	......	6.3	1.0	100
3C24	16.05	25	2,000	75	7	....	......	6.3	3.0	24
3CPN10A5	32.15	10	3,500[3]	3.0[3]	2	....	......	6.0	1.0	100
3CX100A5	32.15	100	1,000	125[5]	2	....	......	6.0	1.0	100
3W5000A1	210.00	5,000	6,000	2,500	50	....	......	7.5	51.0	5
3W5000A3	198.00	5,000	6,000	2,500	150	....	......	7.5	51.0	20
3W5000F1	210.00	5,000	6,000	2,500	50	....	......	7.5	51.0	5
3W5000F3	198.00	5,000	6,000	2,500	150	....	......	7.5	51.0	20
3X100A5	25.00	100	1,000	125[5]	2	....	......	6.3	1.0	100
3X2500A3	198.00	2,500	6,000	2,500	150	....	......	7.5	51.0	22
3X2500F3	198.00	2,500	6,000	2,500	150	....	......	7.5	51.0	22
3X3000A1	198.00	3,000	6,000	2,500	50	....	......	7.5	51.0	5
3X3000F1	198.00	3,000	6,000	2,500	50	....	......	7.5	51.0	5
25T	16.10	25	2,000	75	7	....	......	6.3	3.0	24
35T	21.40	50	2,000	150	15	....	......	5.0	4.0	39
75TH	28.00	75	3,000	225	16	....	......	5.0	6.2	20
75TL	28.00	75	3,000	225	13	....	......	5.0	6.2	12
100TH	23.60	100	3,000	225	20	....	......	5.0	6.2	38
100TL	23.60	100	3,000	225	15	....	......	5.0	6.2	14
250TH	35.40	250	4,000	350	40	....	......	5.0	10.5	37
250TL	35.40	250	4,000	350	35	....	......	5.0	10.5	14
304TH	60.50	300	3,000	900	60	....	......	5 or 10	25 or 12.5	20
304TL	60.50	300	3,000	900	50	....	......	5 or 10	25 or 12.5	12
450TH	77.00	450	6,000	600	80	....	......	7.5	12.0	38
450TL	77.00	450	6,000	600	65	....	......	7.5	12.0	18
592/3-200A3	42.50	200	3,500	250	25	....	......	10.0	5.0	25
750TL	137.50	750	10,000	1,000	100	....	......	7.5	21.0	15
1000T	137.50	1,000	7,500	750	80	....	......	7.5	15.5	35
1500T	261.00	1,500	8,000	1,250	125	....	......	7.5	23.5	24
2000T	340.00	2,000	8,000	1,750	150	....	......	10.0	23.5	23

RF DUMMY LOAD

	Frequency Range Mc	Maximum Input Power Watts	Maximum VSWR	Coolant	RF Connecter
WL-110	450 to 1200	15,000	1.3 to 1	Liquid	3⅛″ Coaxial Line
WL-120	600 to 1200	20,000	1.1 to 1	Liquid	3⅛″ Coaxial Line
WL-130	400 to 1200	20,000	1.1 to 1	Liquid	3⅛″ Coaxial Line
WL-140	200 to 1200	20,000	1.2 to 1	Liquid	3⅛″ Coaxial Line
WL-200	1700 to 2400	24,000	1.1 to 1	Liquid	RG-104/U Waveguide

RECEIVING TUBES

Effective July 1, 1960

Type	List Price
OZ4	$2.15
OZ4A	2.15
OZ4G	2.10
1A5GT	3.20
1A7GT	3.70
1AX2	3.05
1B3GT	2.90
1C5GT	3.65
1DN5	2.20
1G3GT	2.90
1H2	3.05
1H5GT	3.05
1J3	2.90
1K3	2.90
1L4	2.65
1L6	3.50
1LA6	4.10
1LH4	3.95
1LN5	3.95
1R5	2.55
1S2A	3.00
1S4	3.65
1S5	2.55
1T4	2.40
1U4	2.35
1U5	2.05
1V2	2.00
1V6	3.80
1X2A	3.05
1X2B	3.05
2A3	6.30
2AF4A	4.05
2AF4B	4.05
2BN4	2.55
2CY5	2.80
2EN5	2.00
2ER5	2.80
2FH5	2.55
2V2	4.65
3A2	3.50
3A3	3.40
3A8GT	5.90
3AF4A	4.05
3AL5	1.85
3AU6	2.15
3AV6	1.75
3B2	6.25
3BA6	2.15
3BC5	2.35
3BE6	2.25
3BN4	2.55
3BN6	3.00
3BU8	2.80
3BY6	2.35
3BZ6	2.25
3C2	4.50
3C6/XXB	3.80
3CB6	2.25
3CE5/3CB5	2.35
3CF6	2.55
3CS6	2.40
3CY5	2.85
3DK6	2.40
3DT6	2.20
3Q4	2.75
3Q5GT	3.60
3S4	2.45
3V4	2.35
4AU6	2.20
4BC8	4.05
4BN6	3.00
4BQ7A	4.00
4BS8	3.85
4BU8	2.80
4BZ6	2.25
4BZ7	4.05
4CB6	2.25
4CE5	2.35
4CS6	2.35
4CY5	2.85
4DE6	2.65
4DT6	2.20
4ES8	4.65
4EW6	2.35
5AM8	3.30
5AN8	3.55
5AQ5	2.20
5AS4A	2.15
5AS8	3.40
5AT8	3.25
5AU4	3.40
5AV8	4.05

Type	List Price
5AW4	2.80
5AZ4	2.65
5B8	4.10
5BE8	3.30
5BK7A	3.40
5BQ7A	4.00
5BR8	3.30
5BT8	3.30
5BW8	3.40
5BZ7	3.80
5CG8	3.20
5CL8A	3.15
5CQ8	3.35
5CZ5	2.85
5DH8	4.05
5EA8	3.15
5EU8	3.20
5J6	2.80
5T4	7.25
5T8	3.40
5U4GA/B	2.10
5U4GB	2.10
5U8	3.30
5V3	3.65
5V4G	3.30
5V4GA	3.30
5V6GT	2.20
5X8	3.25
5Y3GT	1.75
5Y4GT	2.35
5Z3	3.05
6A7	4.65
6A8	4.90
6A8GT	4.80
6AB4	2.15
6AC5GT	4.35
6AC7	4.90
6AD7G	5.90
6AF3	2.80
6AF4	4.00
6AF4A	4.00
6AF6G(N)	3.65
6AG5	2.60
6AG7	5.90
6AG7Y	5.05
6AH4GT	3.30
6AH6	4.65
6AH7GT	2.45
6AJ4	9.80
6AK5	4.20
6AK6	2.90
6AL3	2.95
6AL5	1.85
6AL7GT(N)	5.75
6AM4	5.90
6AM8A	3.25
6AN4	4.95
6AN8A	3.50
6AQ5A	2.15
6AQ6	2.20
6AQ7GT	4.00
6AR5	2.60
6AR8	4.35
6AS5	2.40
6AS8	3.35
6AT6	1.90
6AT8	3.20
6AU4GTA	3.35
6AU5GT	4.30
6AU6	2.10
6AU6A	2.10
6AU8A	3.50
6AV5GA	3.80
6AV6	1.65
6AW8A	3.55
6AX4GTA	2.65
6AX4GTB	2.65
6AX5GT	2.95
6AZ8	4.20
6B7	3.50
6B8	4.85
6BA6	2.00
6BA7	3.70
6BA8A	3.55
6BC5	2.35
6BC7	3.80
6BC8	4.00
6BD6	2.30
6BE6	2.20
6BF5	3.55
6BF6	1.80
6BG6GA	6.50
6BH6	2.70

Type	List Price
6BH8	3.50
6BJ6	2.60
6BJ7	2.95
6BJ8	2.80
6BK4	7.10
6BK5	3.50
6BK7A	3.35
6BK7B	3.35
6BL7GT	3.95
6BL7GTA	3.95
6BN4	2.50
6BN6	3.00
6BN8	2.70
6BQ5	2.40
6BQ6GA	4.35
6BQ6GTB	4.35
6BQ7A	3.95
6BR8A	3.50
6BS8	3.75
6BU5	5.50
6BU8	2.80
6BV8	3.20
6BW4	2.05
6BW8	3.30
6BX7GT	4.00
6BY5GA	4.20
6BY6	2.35
6BY8	2.80
6BZ6	2.25
6BZ7	4.00
6BZ8	4.45
6C4	1.85
6C5	2.85
6C5GT	2.90
6C6	4.35
6C7	3.55
6C8G	5.10
6CA5	2.50
6CB5A	7.50
6CB6	2.25
6CB6A	2.25
6CD6GA	5.80
6CE5/6BC5	2.35
6CF6	2.55
6CG7	2.45
6CG8A	3.15
6CH8	3.60
6CK4	2.80
6CL6	3.75
6CL8	3.15
6CM6	2.55
6CM7	2.75
6CN7	2.60
6CQ8	3.30
6CR6	2.40
6CS6	2.35
6CS7	2.95
6CU5	2.35
6CU6	4.35
6CU8	3.65
6CX8	3.65
6CY5	2.80
6CY7	2.95
6CZ5	2.80
6D6	4.35
6DA4	2.70
6DB5	2.60
6DE4	2.80
6DE6	2.45
6DE7	2.95
6DG6GT	2.50
6DK6	2.35
6DN7	3.50
6DQ5	7.65
6DQ6A	4.10
6DS5	2.65
6DT6	2.15
6DT8	3.75
6E5	3.00
6EA7	3.50
6EA8	3.20
6EB8	3.70
6EH8	3.20
6EM5	3.05
6EM7	3.65
6ER5	2.80
6ES5	2.95
6ES8	4.65
6EU8	3.15
6EW6	2.30
6EX6	5.70
6EY6	3.00
6EZ8	3.80
6F5	3.20
6F6	3.75

Type	List Price
6F6GT	3.65
6FG7	3.00
6FH5	2.50
6FM8	3.00
6G6G	3.75
6GH8	3.20
6H6	3.50
6J5	3.10
6J5GT	2.55
6J6	2.80
6J7	4.55
6K6GT	2.35
6K7	4.35
6K7GT	3.80
6K8	4.45
6K8GT	4.45
6L6	6.10
6L6GC	3.80
6N7	4.55
6Q6	2.90
6Q7	3.50
6Q7GT	3.20
6S4A	2.05
6S7	4.10
6S7G	3.65
6S8GT	4.40
6SA7	3.90
6SA7GT	3.40
6SB7Y	4.95
6SC7	3.80
6SD7GT	3.95
6SF5	2.80
6SF7	4.05
6SG7	4.25
6SH7	4.05
6SJ7	3.75
6SK7	3.55
6SL7GT	3.30
6SN7GTB	2.60
6SQ7	3.30
6SR7	2.80
6SS7	3.50
6ST7	2.95
6SV7	3.65
6SZ7	3.00
6T4	4.35
6T8	3.35
6T8A	3.35
6U5	3.15
6U6GT	2.45
6U7G	2.40
6U8	3.30
6U8A	3.30
6V3A	4.35
6V6	4.50
6V6GT	2.15
6W4GT	2.40
6W6GT	2.80
6X4	1.65
6X5G	2.05
6X5GT	2.05
6X8	3.15
6X8A	3.15
6Y6G	3.45
6Y6GT	3.45
7A4	3.25
7A6	3.15
7A7	3.50
7A8	4.70
7AF7	3.85
7AG7	3.85
7AU7	2.60
7B4	3.05
7B5	4.75
7B6	3.25
7B7	3.50
7B8	3.55
7C4	5.00
7C5	3.50
7C6	3.50
7C7	3.20
7EY6	3.00
7F7	3.15
7F8	4.60
7H7	3.90
7J7	5.15
7K7	4.45
7L7	4.25
7N7	3.55
7Q7	4.10
7R7	5.15
7S7	4.75
7V7	4.65
7W7	4.75

Type	List Price
7X7/XXFM	5.85
7Y4	2.95
7Z4	2.75
8AU8A	3.55
8AW8A	3.65
8BA8A	3.55
8BH8	3.45
8BQ5	2.45
8CG7	2.50
8CM7	2.80
8GN7	2.60
8CS7	2.95
8CX8	3.70
8EB8	3.80
8EM5	3.10
9AU7	2.80
9BR7	2.75
9CL8	3.15
9U8A	3.30
10C8	4.25
10DE7	2.95
11CY7	3.00
12A4	3.45
12A6	4.35
12A8GT	4.75
12AB5	2.45
12AC6	2.20
12AD6	2.30
12AE6	2.05
12AF3	2.80
12AF6	2.35
12AG6	1.90
12AJ6	2.05
12AL5	1.90
12AL8	4.00
12AQ5	2.40
12AT6	1.65
12AT7	3.05
12AU6	2.15
12AU7A	2.45
12AV5GA	3.85
12AV6	1.65
12AV7	3.20
12AW6	2.95
12AX4GTA	2.70
12AX7	2.55
12AZ7A	2.70
12B4A	2.70
12BA6	2.00
12BA7	3.95
12BD6	2.25
12BE6	2.15
12BF6	2.10
12BH6	2.00
12BH7A	3.05
12BK5	3.80
12BL6	2.30
12BN6	3.05
12BQ6GA	4.45
12BQ6GTB	4.45
12BR7	2.75
12BV7	3.05
12BW4	1.75
12BY7A	3.05
12BZ7	3.05
12C5	2.35
12C8	5.65
12CA5	2.50
12CN5	2.25
12CR6	2.40
12CT8	4.05
12CU6	4.45
12CX6	2.50
12D4	2.75
12DB5	2.75
12DE8	3.35
12DK7	2.85
12DL8	3.55
12DQ6	4.20
12DQ6A	4.20
12DQ7	3.30
12DS7	3.40
12DT8	3.75
12DU7	3.35
12DV8	3.55
12DZ6	2.50
12EA6	2.65
12ED5	2.50
12EG6	2.30
12EK6	2.50
12EN6	3.05

G-E RECEIVING TUBES — *continued*

Type	List Price
12F8	2.75
12FM6	2.05
12FQ8	3.00
12G8	2.40
12H6	2.85
12J5	3.30
12J5GT	2.70
12J8	3.30
12K5	2.95
12K7GT	4.05
12K8	4.80
12L6GT	2.45
12Q7GT	3.35
12R5	2.60
12SA7	3.90
12SA7Y	3.55
12SC7	3.45
12SF5	2.65
12SF7	4.10
12SG7	4.25
12SH7	3.65
12SJ7	3.75
12SK7	3.55
12SK7GT	3.05
12SK7Y	3.15

Type	List Price
12SL7GT	3.75
12SN7GTA	2.70
12SQ7	3.30
12SR7	2.65
12V6GT	2.15
12W6GT	3.00
12X4	1.95
13DE7	3.00
13DR7	3.00
14A4	3.95
14A7/12B7	3.65
14AF/XXD	3.80
14B6	3.50
14B8	3.60
14C5	4.05
14C7	3.35
14F7	3.05
14F8	4.60
14GT8	3.00
14N7	3.80
14Q7	4.10
14R7	5.15
14S7	4.60
14W7	4.75

Type	List Price
17AV5GA	3.75
17AX4GT	2.70
17D4	2.75
17DQ6A	4.20
17H3	2.15
18A5	4.10
18FX6	2.15
19AU4GTA	3.45
19BG6G	6.50
19BG6GA	6.50
19J6	3.15
19T8	3.35
19X8	3.80
21EX6	5.55
24A	4.15
25AV5GA	4.10
25AV5GT	4.10
25AX4GT	2.85
25BK5	3.65
25BQ6GA	4.60
25BQ6GTB	4.60
25C5	2.15
25CA5	2.50
25CD6GB	5.85

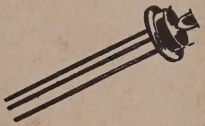
Type	List Price
25DN6	5.55
25DQ6	4.20
25EC6	5.70
25L6GT	2.25
25W4GT	2.70
25W6GT	3.10
25Y5	3.20
25Z5	2.90
25Z6GT	2.90
EL-34/6CA7	5.20
GZ-34/5AR4	4.50
35/51	4.35
35A5	3.50
35B5	2.65
35C5	2.15
35DZ8	3.10
35GL6	2.30
35L6GT	2.40
35W4	1.40
35Y4	2.75
35Z3	2.75
35Z5GT	1.85
36AM3	1.50
42	3.50
50A5	4.15

Type	List Price
50B5	2.65
50C5	2.15
50DC4	1.50
50L6GT	2.40
50X6	3.20
50Y6GT	2.95
50Y7GT	3.05
75	5.10
80	2.90
EM-81/DA5	2.45
EZ-81/6CA4	1.95
83(N)	3.50
84/6Z4	2.60
117L7	10.15
117N7GT	9.30
117Z3	2.50
117Z6GT	4.40
5642	5.00
6973	4.50
7025	2.90
7027	5.90
7355	2.70
7581	3.75

SEMICONDUCTOR PRODUCTS

GERMANIUM • SILICONE

DIODES • TRANSISTORS • RECTIFIERS



Type	Suggested User Price
RECTIFIER CELLS	
IN91	.80
IN92	1.91
IN93	2.70
USN-IN93	3.45
IN94	Order IN158
IN151	2.15
IN152	2.70
IN153	3.60
IN158	5.50
IN253	2.20
IN254	2.55
IN255	5.10
JAN-IN255	5.85
IN256	10.35
IN315	3.00
USAF-IN315	3.75
IN332	9.25
IN333	9.25
IN334	6.95
IN335	6.95
IN336	4.80
IN337	4.80
IN339	3.50
IN340	3.50
IN341	6.35
IN342	6.35
IN343	4.25
IN344	4.20
IN345	2.85
IN346	2.80
IN348	2.10
IN368	2.55
IN440/B	2.20

Type	Suggested User Price
IN441/B	2.55
IN442/B	3.15
IN443/B	4.45
IN444/B	6.30
IN445/B	8.90
IN536	1.05
IN537	1.20
IN538	1.60
USAF-IN538	4.30
IN539	2.00
IN540	3.00
USAF-IN540	8.90
IN573	1.55
IN575	1.95
IN576A	1.50
IN584	3.00
IN10008	1.50
IN1016	3.00
IN1024	1.50
IN1095	5.25
IN1096	7.50
IN1115	2.20
IN1116	2.55
IN1117	3.15
IN1118	5.10
IN1119	7.35
IN1120	10.35
IN1487	.75
IN1488	1.30
IN1489	1.30
IN1490	1.65
IN1491	2.20
IN1492	2.75
IN1692	.70
IN1693	.90
IN1694	1.10
IN1695	1.30
IN2154	5.20
IN2155	6.80
IN2156	9.60
IN2157	13.60

Type	Suggested User Price
TRANSISTORS	
2N43	4.15
2N43A	4.15
USAF-2N43A	5.25
2N44	2.95
2N45	3.10
2N76	Order 2N190
2N78A	3.10
2N81	Order 2N43
2N107	1.00
2N123	3.65
2N135	2.55
2N136	6.20
2N137	5.80
2N164A	Order 2N168A
2N165	Order 2N169
2N166	Order 2N170
2N167	6.25
2N168	Order 2N293
2N168A	2.06
2N169	1.88
2N169A	2.40
2N170	1.30
2N186	1.83
2N186A	1.95
2N187	Order 2N187A
2N187A	1.50
2N188	1.90
2N188A	1.90
2N189	1.75
2N190	1.44
2N191	1.64
2N192	1.78
2N241	1.80
2N241A	1.80
2N265	1.87
2N292	1.45
2N293	1.88
2N313	Order 2N292
2N319	1.50

Type	Suggested User Price
2N320	1.71
2N321	1.80
2N322	1.44
2N323	1.64
2N324	1.78
2N333	9.15
2N335	11.20
2N394	1.05
2N395	1.12
2N396	2.95
2N397	4.50
2N448	1.24
2N449	1.72
2N450	2.10
2N489	8.90
2N490	9.60
2N491	9.15
2N492	10.50
2N493	12.45
2N494	12.60
2N508	1.87
2N518	6.00
2N524	2.80
2N525	3.00
2N526	3.30
2N527	3.90
2N634A	4.80
2N635A	6.40
2N636A	9.60
2N1086	1.69
2N1086A	1.82
2N1087	1.88
2N1097	1.34
2N1098	1.20
2N1121	1.91
2N1144	1.34
2N1145	1.20
2N1277	8.75
2N1278	10.80
2N1279	13.05
2N1288	5.25
2N1289	5.80
3N36	8.05
3N37	9.20
4JD1A17	6.05
4JD3B1	10.75

Type	Suggested User Price
4JA60A, B, C, F, G, H 4JA61A, B, C, F, G, H 4JA62A, B, C, D, F, G, H, J 4JA63A, B, C, D, F, G, H, J	Series

Prices for these series of Rectifiers available on request.

SILICON RECTIFIERS

C-35A, B, C, D, F, G, H, U
C-36A, B, C, D, F, G, H, U
Prices available on request.

GERMANIUM TUNNEL DIODES

IN2939	9.15
IN2940	7.50
IN2941	6.25
IN2969	7.05

GALLUM ARSENIDE TUNNEL DIODES

IN3114	13.50
IN3115	27.00
IN3116	12.50
IN3117	25.10
IN3118	10.00
IN3119	20.00
IN3120	7.50

VAC-U-SEL DOUBLE DIODES

6GC1	.84
6GD1	.84
6GX1	.84

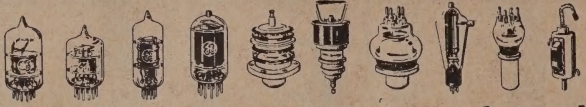
RECTIFIER STACKS

4JA211A, B, C, F 4JA211D 4JA411A, B, C, F 4JA411E, M 4JA3011 4JA6011 4JA6211	Series

Prices for the above series of Rectifier Stacks available on request.

Transistor Manual	1.00

INDUSTRIAL *tubes*



for Communications and Industry

Type	Suggested User Price
OA2	1.50
OA3/VR-75	1.55
OA4G	1.90
OB2	1.45
OB3/VR-90	1.65
OC3/VR-105	1.50
OD3/VR-150	1.45
KC-1	850.00
1AD4	2.80
1AG4	3.05
1AH4	1.35
1AJ5	1.55
GL-1L21	25.00
GL-1L31	26.50
GL-1L33	46.00
GL-1L36	18.50
GL-1L38	33.25
GL-1P21	54.50
GL-1P39	2.15
GL-1P40	3.60
1V6	1.90
2AP1-A	15.75
GL-2B22	28.00
GL-2B23	68.20
2BP1	19.05
GL-2C39B	32.15
GL-2C40	29.30
GL-2C40A	30.85
GL-2C42	26.50
GL-2C43	26.95
GL-2C46	37.40
2D21	1.30
2E24	5.25
2E26	3.85
2E30	2.95
GL-2H21	270.00
2X2A	2.90
KC-3	627.00
3AP1A	27.40
GL-3B24W	10.55
3BP1A	18.60
GL-3C23	11.98
3KP1	19.50
3MP1	26.30
GL-3X2500A3	193.00
KC-4	GL-5625/KC4
GL-4-65A	26.50
GL-4-400A	55.00
GL-4-1000A	135.00
GL-4D21/4-125A	36.00
GL-4X150A	33.15
GL-4-250A/5D22	46.50
5AUP24	130.00
GL-5C24	45.00
5CP1-A	21.45
5QP4A	67.70
5R4GYA	1.90
5UP1	14.75
5Y3WGTB	5.75
FA-6	GL-5627/FA-6
6AC7WA	5.70
6AN5	3.75
6AS6	3.15
6AS7GA	4.65
6AU6WB	2.80
6D4	2.85
6J4	3.95
6SK7WA	2.85
6X4WA	2.85
GL-7C29	189.50
GL-7D21	595.00
GL-8D21	1650.00
PJ8	GL-5556/PS-8
12AT7WB	2.80
12AY7	2.42
FA-13	GL-5628/FA-13
14UP4	70.10
FA-14	GL-5629/FA-41
FA-15	GL-5626/FA-15
FG-17	GL-5557/FG-17

Type	Suggested User Price
PJ-23	GL-868/PJ-23
FG-27A	52.00
FG-32	GL-5558/FG-32
FG-41	GL-5830/FG-41
B-47	GL-5623/B-47
FG-57	GL-5559/FG-57
FG-67	GL-5728-FG-67
FG-81A	32.50
FG-83	3.25
FG-95	GL-5560/FG-95
FG-97	62.00
FG-98A	77.00
GL-100TH	20.50
FG-104	GL-5561/FG-104
FG-105	59.00
FG-154	108.00
FG-172	106.00
GL-207	300.00
FG-238B	GL-5555/238B
GL-242C	33.00
FG-259B	GL-55554/FG-259B
FG-280	90.00
GL-393A	13.25
FP-400	71.45
GL-411	478.75
GL-414	188.00
GL-415	GL-5550/GL-415
GL-441	4.50
502A	2.30
GL-506	GL-6228/GL-506
GL-575A	20.15
GL-592	37.50
GL-627	27.00
GL-672A	39.85
GL-673	20.15
GL-678	49.50
GL-801A	10.90
GL-802	10.90
GL-803	41.80
GL-805	20.10
807	3.00
GL-809	7.40
GL-810	25.65
GL-811A	6.90
GL-812A	6.90
GL-813	21.10
GL-814	23.60
GL-815	23.60
GL-816	2.95
GL-828	27.60
GL-829B	19.50
GL-832A	15.90
GL-833A	55.00
GL-836	10.15
GL-837	8.65
GL-838	20.00
GL-845	20.80
GL-851	717.00
GL-857B	218.50
GL-862A	1713.25
GL-866A	2.65
GL-868/PJ-23	3.75
GL-869B	160.00
GL-870A	1982.00
GL-872A/872	10.65
GL-880	595.00
884	1.85
GL-889A	235.00
GL-889RA	370.00
GL-892	290.00
GL-892R	455.00
GL-891R	460.00
GL-898A	1713.25
GL-917	5.50
GL-918	4.30
GL-919	5.50
GL-920	6.40
GL-921	3.45
GL-922	3.00

Type	Suggested User Price
GL-923	3.30
GL-927	3.75
GL-929	2.00
GL-930	3.00
GL-931A	11.00
1612	4.15
1614	3.77
GL-1616	12.60
1619	4.15
1620	6.36
GL-1672/441	4.50
2050	1.85
GL-5513	500.00
GL-5516	7.95
GL-5518	890.00
GL-5544	32.50
GL-5549	653.50
GL-5550/GL-415	49.00
GL-5551A	65.00
GL-5551A/P	65.00
GL-5552A	99.00
GL-5552A/P	99.00
GL-5553B	245.00
GL-5553B/P	245.00
GL-5554/FG-259B	195.00
GL-5555/FG-238B	316.00
GL-5556/PJ-8	27.60
GL-5557/FG-17	9.50
GL-5558/FG-32	17.50
GL-5559/FG-57	23.00
GL-5560/FG-95	33.00
GL-5561/FG-104	59.00
GL-5563A	50.00
GL-5564/GL-507	740.00
GL-5575/100	237.00
GL-5581	3.40
GL-5588	190.00
GL-5593	270.00
GL-5610	1.05
GL-5620/FB-50	22.25
GL-5621/B-6	25.50
GL-5623/B-47	25.00
GL-5625/KC-4	225.00
GL-5626/FA-15	76.75
GL-5627/FA-16	72.50
GL-5628/FA-13	56.50
GL-5629/FA-14	45.50
GL-5630	1800.00
GL-5632/C3J	14.10
5636	7.80
5642	2.42
5651	1.78
5654*	2.85
5654/6AK5W*	2.85
5654/6AK5W/6096	4.35
5662	1.45
5663	2.10
GL-5665/C16J	56.90
5670*	3.40
5670WA	3.40
GL-5674	209.00
GL-5675	14.50
GL-5681	1,780.00
5686*	3.40
5687*	4.00
5687WA*	7.80
5691	8.45
5692	8.15
5693	6.40
5696	1.90
5718*	4.25
5719*	3.85
GL-5720/FG-33	34.75
5725*	3.35
5725/6AS6W	3.35
5726*	1.41
5726/6AL5W	1.41
5726/6AL5W/6097	1.55
5727*	2.70

Net

(continued)

INDUSTRIAL tubes

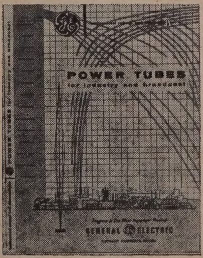
- FIVE STAR
- THYRATRON
- CATHODE RAY
- PHOTOTUBE
- IGNITRON
- RECTIFER
- KLYSTRON
- COMMUNICATION
- INDUSTRIAL RECEIVING

Type	Suggested User Price
5727/2D21W	2.70
GL-5728/FG-67	74.00
GL-5736	190.00
GL-5740/FP-54	209.00
5749*	2.05
5749/6BA6W	2.05
5750/6BE6W	3.45
5750*	3.45
5751*	2.85
5751WA	2.85
GL-5762/7C24	230.00
5763	2.37
GL-5779	200.00
GL-5788	476.25
5814A	3.20
5814WA	3.20
GL-5819	56.50
GL-5820	1200.00
GL-5822A	116.00
GL-5823	2.20
5824	3.60
GL-5830/FG-41	425.00
5840*	6.25
5844	2.30
GL-5855	70.00
5879	1.85
5881	3.50
GL-5894	25.00
5896*	4.45
5899*	6.55
5902*	5.75
5963	1.55
5964	1.40
5965	2.20
GL-5973	478.80
6005*	3.70
6005/6AQ5W	3.70
6005/6AQ5W/6095	3.70
GL-6012	7.10
GL-6011	13.00
GL-6014/CIK	12.90
GL-6019	751.75
6021*	4.80
GL-6039	1117.50
6046	1.55
6072*	3.90
6080*	5.25
6087*	5.75
6100/6C4WA	2.50
6111*	5.40
6112*	5.40
6134	5.70
6135*	2.40
6136*	2.80
6137*	2.85
6146	5.00
GL-6161	115.00
GL-6166	1020.00
GL-6181	925.00
GL-6182	2100.00
GL-6189/12AU7WA*	3.85
6201*	2.80
6202*	2.85
6203*	4.10
6205*	6.40
6206*	2.35
6211	2.35
6222*	8.50
GL-6228/GL-506	3696.25
GL-6251	2300.00
6265*	4.10
GL-6299	52.50
GL-6346	70.00
GL-6347	104.50
GL-6348	250.00
6360	5.15
6386*	7.40
6397	8.30
6414*	6.70
GL-6442	39.25
6485	2.05
GL-6511	156.90
GL-6512	259.80
GL-6513	347.00
GL-6514	509.00
GL-6515	806.50
6525	2.15
6660/6BA6△	1.05
6661/6BH6△	1.35
6662/6BJ6△	1.30
6663/6AL5△	.95
6669△	1.05
6677△	1.85
6778△	1.60
6679/12AT7△	1.50
6680/12AU7△	1.20
6681/12AX7△	1.25
GL-6807	29.30
GL-6808	29.40
GL-6809	29.80
6829*	6.10
GL-6856/740	19.40
GL-6857/740P	20.10
GL-6858/760	28.90
GL-6859/760P	29.40
GL-6860/C6J/F	29.40
6883	5.45
GL-6897	32.15
GL-6907	24.75
GL-6919	1.35
GL-6930/635P	14.40
GL-6942	855.00
GL-7007	1120.00
7025/12AX7	2.90
7036	1.50
GL-7038	205.00
7054	1.55
7056	1.20
7057	1.95
7058	1.30
7059	1.75
7061	1.30
7077	25.00
GL-7171	81.50
GL-7085/356	600.00
GL-7398	770.00
7167	1.85
7266	21.50
7296	31.00
7462	25.00
7486	25.00
GL-7629	2525.00
GL-8000	26.45
GL-8002	394.00
GL-8002R	588.00
GL-8005	16.25
GL-8008	10.65
GL-8013A	15.55
GL-8020	24.00
GL-8025A	21.95
9001	5.10
9002	3.60
9003	5.10

*Five-Star Types
△ Communication Types

THERMOSTAT KITS FOR IGNITIONS

KIT NUMBER	SUGG. USER PRICE	KIT NUMBER	SUGG. USER PRICE	KIT NUMBER	SUGG. USER PRICE	KIT NUMBER	SUGG. USER PRICE
N15272AA	$7.30	N15273AA	$5.15	N15286AA	$9.30	N15287AA	$8.00



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Ask for — ETX-10J For Complete Descriptions and Ratings

- FIVE STAR
- IGNITRONS
- PHASITRON
- GLOW TUBES
- THYRATRONS
- PHOTOTUBES
- BALLAST TUBES
- HIGH ALTITUDE DEVICES
- PHANOTRONS
- LIGHTHOUSE TUBES
- CATHODE-RAY TUBES
- MICROWAVE RADAR
- TRANSMITTING
- KENOTRONS
- TV CAMERA TUBES

Prices and other data subject to change without notice.

TELEVISION PICTURE TUBES

Effective August 1, 1960

ALL PRICES LISTED ARE SUBJECT TO CHANGE WITHOUT NOTICE

Type	List Price	Description	
		Envelope	Faceplate
5TP4	$60.00	Round, Glass	Clear
‡7JP4	28.00	Round, Glass	Clear
8AP4-A	19.00	Round, Metal	Filter, Spherical
9QP4-A	33.00	Rectangular, Glass	Filter, Spherical
10BP4-A	21.00	Round, Glass	Filter, Spherical
*10FP4-A	28.00	Round, Glass	Filter, Spherical, Aluminized
*12KP4-A	29.00	Round, Glass	Filter, Spherical, Aluminized
12LP4-A	25.00	Round, Glass	Filter, Spherical
12UP4-B	27.00	Rectangular, Glass	Filter, Etched, Spherical
*14AJP4	40.00	Rectangular, Glass	Aluminized
14ATP4	32.00	Rectangular, Glass	Aluminized
14WP4	34.00	Rectangular, Glass	Aluminized
†14CP4/EP4	25.00	Rectangular, Glass	Filter, Spherical
*14QP4A	24.00	Rectangular, Glass	Filter, Spherical
*†14RP4A	34.00	Round, Glass	Filter, Spherical, Aluminized
16AP4-A	54.00	Round, Glass	Filter, Spherical
16DP4-A	30.00	Round, Metal	Filter, Spherical
16GP4	45.00	Round, Metal	Filter, Spherical
16GP4-B	45.00	Rectangular, Glass	Filter, Etched, Spherical
*16KP4/16RP4	28.00	Rectangular, Glass	Filter, Spherical
*16KP4-A/16RP4A	31.00	Round, Glass	Filter, Spherical, Aluminized
16LP4-A/ZP4	32.00	Rectangular, Glass	Filter, Spherical
16RP4	28.00	Rectangular, Glass	Filter, Spherical
16TP4	28.00	Round, Glass	Filter, Spherical
16WP4-A	34.00	Rectangular, Glass	Filter, Spherical
*†17AVP4A/ATP4A	39.00	Rectangular, Glass	Filter, Spherical, Aluminized
17BJP4	39.00	Rectangular, Glass	Filter, Spherical, Aluminized
17BWP4/CSP4	45.00	Rectangular, Glass	Filter, Spherical, Aluminized
17CDP4	53.00	Rectangular, Glass	Aluminized
17DKP4	45.00	Rectangular, Glass	Aluminized
17BP4-A/JP4	31.00	Rectangular, Glass	Aluminized, Filter, Spherical
17BP4-B	35.00	Rectangular, Glass	Aluminized, Filter, Spherical
17CP4	50.00	Rectangular, Glass	Filter, Etched, Spherical
†17CFP4	39.00	Rectangular, Glass	Filter, Aluminized
17DAP4	53.00	Rectangular, Glass	Filter, Aluminized
†17FP4-A/FP4	34.00	Rectangular, Metal	Filter, Spherical
†17GP4	52.00	Rectangular, Glass	Filter, Etched, Spherical
*†17HP4B/RP4C	37.00	Rectangular, Glass	Filter, Spherical, Aluminized
*17LP4A/VP4B	36.00	Rectangular, Glass	Filter, Spherical, Aluminized
17QP4/UP4/YP4	31.00	Rectangular, Glass	Filter, Cylindrical Face
*†17Q4A	35.00	Rectangular, Glass	Filter, Aluminized
†17RP4/17HP4	33.00	Rectangular, Metal	Filter, Spherical
†17TP4	52.00	Rectangular, Glass	Filter, Etched, Spherical
†17VP4/17LP4	33.00	Rectangular, Glass	Filter, Cylindrical Face
19AP4-A	52.00	Round, Metal	Filter, Spherical
19AP4-B	52.00	Round, Metal	Filter, Etched, Spherical
*19ZP4	50.00	Rectangular, Glass	Aluminized
20CP4/DP4	37.00	Rectangular, Glass	Filter, Spherical
20CP4-A/DP4A	37.00	Rectangular, Glass	Filter, Spherical
*20CP4B/DP4B	44.00	Rectangular, Glass	Filter, Spherical, Aluminized
*20CP4D/DP4C	44.00	Rectangular, Glass	Filter, Spherical, Aluminized
20DP4-A	37.00	Rectangular, Glass	Filter, Spherical
*20DP4B	44.00	Rectangular, Glass	Filter, Spherical, Aluminized
*20DP4C	44.00	Rectangular, Glass	Filter, Spherical, Aluminized
†20HP4-A/LP4/MP4	39.00	Rectangular, Glass	Filter, Spherical
*†20HP4C	41.00	Rectangular, Glass	Filter, Spherical, Aluminized
*†20HP4D	39.00	Rectangular, Glass	Filter, Spherical, Aluminized
21ACP4/21AMP4	37.00	Rectangular, Glass	Filter, Spherical
21ACP4/21AMP4-A/BSP4	44.00	Rectangular, Glass	Filter, Spherical, Aluminized
†21ALP4	39.00	Rectangular, Glass	Filter, Spherical
*†21ALP4B/A	46.00	Rectangular, Glass	Filter, Spherical, Aluminized
21AP4	65.00	Rectangular, Metal	Filter, Etched, Spherical
*†21ATP4/21ATP4A	46.00	Rectangular, Glass	Filter, Spherical, Aluminized
*†21AUP4B/A	46.00	Rectangular, Glass	Filter, Spherical, Aluminized
*†21AVP4B/A	46.00	Rectangular, Glass	Filter, Spherical, Aluminized
*21AWP4	44.00	Rectangular, Glass	Filter, Spherical, Aluminized
*21AXP22A	160.00	Round, Metal	
*21BTP4	46.50	Rectangular, Glass	Aluminized
*†21CBP4/CBP4A	46.00	Rectangular, Glass	Filter, Aluminized
*†21CMP4	46.00	Rectangular, Glass	Filter, Aluminized
*†21CQP4	52.00	Rectangular, Glass	Filter, Aluminized
*†21CXP4	46.00	Rectangular, Glass	Filter, Aluminized
21CWP4	46.00	Rectangular, Glass	Filter, Aluminized
21DQP4	46.00	Rectangular, Glass	Filter, Aluminized
21EP4-A	39.00	Rectangular, Glass	Filter, Cylindrical Face
*21EP4-B	43.00	Rectangular, Glass	Filter, Cyl. Face, Aluminized
21EAP-4	63.00	Rectangular, Glass	Filter, Aluminized
†21FP4-A	35.00	Rectangular, Glass	Filter, Cylindrical Face
*†21FP4-C	39.00	Rectangular, Glass	Filter, Cyl. Face, Aluminized
†21MP4	66.00	Rectangular, Metal	Filter, Etched, Spherical
*21WP4A	45.00	Rectangular, Glass	Filter, Spherical, Aluminized
21XP4/AYP4	39.00	Rectangular, Glass	
*†21XP4-A	46.00	Rectangular, Glass	Filter, Spherical, Aluminized
*†21YP4	39.00	Rectangular, Glass	Filter, Spherical
21YP4-A	45.00	Rectangular, Glass	Filter, Spherical, Aluminized
21ZP4-A	37.00	Rectangular, Glass	Filter, Spherical
*21ZP4-B	44.00	Rectangular, Glass	Filter, Spherical, Aluminized
23KP4	68.00	Rectangular, Glass	Filter, Spherical
23KP4A	70.00	Rectangular, Glass	Aluminized
*24ALP4	70.00	Rectangular, Glass	Filter, Aluminized
*24AEP4	65.00	Rectangular, Glass	Filter, Aluminized
*24CP4-A/TP4/VP4A/ADP4	64.00	Rectangular, Glass	Filter, Spherical, Aluminized
*†24DP4A/24YP4	65.00	Rectangular, Glass	Filter, Spherical, Aluminized
*27EP4	111.00	Rectangular, Glass	Filter, Spherical, Aluminized
*27RP4	111.00	Rectangular, Glass	Filter, Spherical, Aluminized

†Electronic Focus ‡Electrostatic Focus and Deflection *Aluminized All unmarked types Electromagnetic Focus

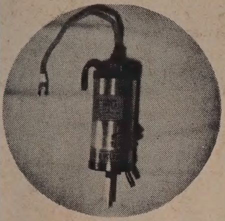
TRADE DISCOUNT APPLIES TO *LIST* PRICES ONLY

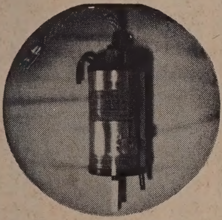
NATIONAL ELECTRONICS, INC.

GENEVA • ILLINOIS • U.S.A.

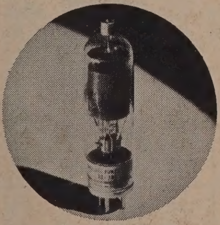
A Subsidiary of Eitel-McCullough, Inc.

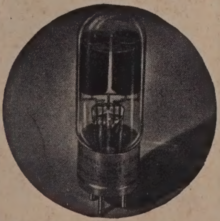
ELECTRONIC TUBES FOR INDUSTRY


NL-1051A IGNITRON


NL-1052A IGNITRON

NL-3C23 THYRATRON


NL-740 THYRATRON


NL-604 RECTIFIER

IGNITRONS

TYPE NUMBER	VOLTS	MAXIMUM RATINGS: Maximum Demand	Corresponding Current DC-Amps	Maximum Current DC-Amps	Corresponding Demand	TYPE OF COOLING
NL-1001	250 - 600	150 Kva	4.9	9.0	50 Kva	Convection
NL-1005	250 - 600	600 Kva	30.2	56	200 Kva	Forced air
NL-1009	250 - 600	1700 Kva	120	220	570 Kva	Water
NL-1011A	250 - 600	600 Kva	30.2	56	200 Kva	Water
NL-1012A	250 - 600	1200 Kva	75.6	140	400 Kva	Water
NL-1013A	250 - 600	2400 Kva	192.	355	800 Kva	Water
NL-1014	250 - 600	4800 Kva	486.	900	1600 Kva	Water
NL-1022A	1500 peak	1200 peak	16	56	336 peak	Water
NL-1051A	250 - 600	600 Kva	30.2	56	200 Kva	Water
NL-1052A	250 - 600	1200 Kva	75.6	140	400 Kva	Water
NL-1053A	250 - 600	2400 Kva	192	355	800 Kva	Water
NL-1054	250 - 600	4800 Kva	486	900	1600 Kva	Water
NL-5550	250 - 600	300 Kva	12.1	22.4	100 Kva	Water clamp

THYRATRONS

TYPE NUMBER	GAS FILLING	DC OUTPUT AMPS.	PEAK RATING AMPS	PEAK INVERSE VOLTS	FILA-MENT VOLTS	FILA-MENT AMPS	TYPE OF COOLING
NL-3C23	Gas & Merc.	1.5	6	1250	2.5	7	Convection
NL-632B	Mercury	2.5	30	1500	5.0	5	Convection
NL-710L	Gas & Merc.	2.5	30	1500	2.5	9	Convection
NL-710/6011	Gas & Merc.	2.5	30	1500	2.5	9	Convection
NL-714	Gas & Merc.	1	3	1250	2.5	5	Convection
NL-715/5557	Mercury	1	3	5000	2.5	5	Convection
NL-716	Gas & Merc.	1	8	1250	2.5	6.3	Convection
NL-720,L	Gas & Merc.	2.5	30	1500	2.5	9	Convection
NL-732	Gas & Merc.	30	225	1500	2.5	55	Convection
NL-740,L,P	Gas & Merc.	4	50	1500	2.5	16	Convection
NL-760,L,P	Gas & Merc.	6.4	77	1500	2.5	21	Convection
NL-778,L,P	Gas & Merc.	6.4	110	1500	2.5	21	Convection
NL-5560/FG95	Mercury	2.5	15	1000	5.0	4.5	Convection
NL-5632/C3J,L	Inert Gas	2.5	30	1250	2.5	9	Convection
NL-5665/C16J	Inert Gas	18.0	160	1250	2.5	31	Convection
NL-5684/C3J/A,L	Inert Gas	2.5	30	1250	2.5	9	Convection
NL-6014/C1K	Inert Gas	1	8	1250	2.5	6.3	Convection

HALF WAVE RECTIFIERS

NL-615	Mercury	2.5	10	2000	2.5	7	Convection
NL-617	Mercury	5	20	1000	2	12	Convection
NL-618,L,P	Inert Gas	6.4	40	900	2.5	18	Convection
NL-619	Mercury	6	20	300	2	12	Convection
NL-623	Mercury	15	45	500	2.5	20	Convection
NL-635,L,P	Gas & Merc.	6.4	77	1000	2.5	18	Convection
NL-643	Mercury	15	90	700	2.5	23	Convection
NL-649/5834	Mercury	2	10	900	2.5	7	Convection
NL-653/5835	Mercury	3	12	900	2.5	10	Convection
NL-664L	Gas & Merc.	10	120	1000	2.5	25	Convection

FULL WAVE RECTIFIERS

NL-604,L	Gas & Merc.	2.5	10	900	2.5	11.5	Convection
NL-606,L	Gas & Merc.	6.4	25.6	900	2.5	17	Convection

WRITE FOR INDIVIDUAL TUBE DATA SHEETS FOR FULL DETAILS.

Mullard

Trade Mark 'Mullard Ltd.'

Mullard ELECTRON TUBES

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MULLARD PREFERRED ENTERTAINMENT TYPES

Mullard Type	EIA Type	Sugg. User Price	Mullard Type	EIA Type	Sugg. User Price	Mullard Type	EIA Type	Sugg. User Price
DAF96	1AH5	$3.00	ECF80	6BL8	3.80	EM34	6CD7	3.75
DCC90	3A5	4.60	ECF82	6U8	3.75	EM81	6DA5	2.60
DF96	1AJ4	3.15	ECH81	6AJ8	3.40	EM84	6FG6	3.10
DK96	1AB6	3.50	ECL80	6AB8	3.95	EY81	6R3	2.80
DM70	1M3	1.95	ECL82	6BM8	3.00	EZ35	6X5	3.40
EABC80	6AK8	3.55	ECL83		4.40	EZ80	6V4	1.50
EAF42	6CT7	3.15	EF40		4.25	EZ81	6CA4	2.10
EB91	6AL5	1.75	EF80	6BX6	3.15	EZ90	6X4	1.50
EBC90	6AT6	1.85	EF85	6BY7	3.15	GZ30		3.90
EBC91	6AV6	1.60	EF86	6267	2.50	GZ32		4.45
EBF80	6N8	3.50	EF89	6DA6	2.85	GZ33		4.25
EBF89	6DC8	3.25	EF91	6AM6	3.15	GZ34	5AR4	4.20
EC90	6C4	3.40	EF93	6BA6	2.00	HBC90	12AT6	1.85
EC91	6AQ4	5.50	EF94	6AU6	2.00	HBC91	12AV6	1.60
EC92		2.30	EF95	6AK5	4.50	HF93	12BA6	2.00
EC95	6ER5	3.05	EK90	6BE6	2.25	HK90	12BE6	2.10
ECC33		5.20	EL34	6CA7	5.85	HL92	50C5	2.10
ECC35	6SG7	4.05	EL37		5.75	HY90	35W4	1.35
ECC40		4.50	EL38	6CN6	7.20	PCC85	9AQ8	3.00
ECC81	12AT7	2.85	EL41	6CK5	3.05	PCL82	16A8	4.40
ECC82	12AU7	2.35	EL81	6CJ6	4.65	UCL82	50BM8	3.00
ECC83	12AX7	2.35	EL84	6BQ5	2.30	UF86		3.25
ECC84	8CW7	3.90	EL86	6CW5	2.70	UL84	45B5	2.75
ECC85	6AQ8	2.60	EL90	6AQ5	2.15	XC95	2ER5	3.05
ECC88	6DJ8	4.40	EL91	6AM5	3.15	7025	7025	2.60
ECC91	6J6	2.65	EL95	6DL5	2.15	7189	7189	2.90
ECC189	6ES8	4.40	EL822	6CH6	1.70	7247		2.85

EL34
6CA7

EL84
6BQ5

ECC83
12AX7

ECL82
6BM8

GZ34
5AR4

MULLARD PREFERRED INDUSTRIAL TYPES

Mullard Type	EIA Type	Description	Mullard Type	EIA Type	Description
DM160	6977	Indicator Tube	M8162	12AT7WA	Double Triode
E180CC	7062	Twin Triode	TD03-10	5861	Disc Sealed Triode
E180F	6688	Pentode	QV06-20	6146	Beam Power Tube
E182CC	7119	Twin Triode	Z300T	1267	Cold Cathode Trigger
E1T	6370	Decade Counter	Z302C		Cold Cathode Counter
E80CC	6085	Twin Triode	Z303C		Cold Cathode Decade Counter
E80F	6084	Pentode	Z803U	6779	Cold Catrode Inert
E80L	6227	Pentode	Z900T	5823	Glow Discharge Triode Min.
E81L	6686	Pentode	61SV		Photo Conductor Cell
E83F	6689	Pentode	75C1		Stabilizing Tube
E88CC	6922	Twin Triode	85A1	OE3	Voltage Reference Tube
E90CC	5920	Twin Triode	85A2	OG3	Voltage Reference Tube
E91H	6687	Heptode	90AV		Vacuum Photocell
EN32	2050	Inert Gas-Filled Tetrode	90C1		Stabilizing Tube
EN91	2D21	Inert Gas Thyratron	90AG		Gas Filled Photocell
EN93	6D4	Thyratron	90CV		Vacuum Photocell
EY84	6D374	Half-Wave Rectifier			

INTERNATIONAL ELECTRONICS CORP.
New York 12, N. Y.

Mullard
Trade Mark Mullard Ltd.

Mullard ELECTRON TUBES

for HIGH FIDELITY • AM-FM • TELEVISION
INDUSTRY • FOREIGN REPLACEMENT

Mullard
Trade Mark 'Mullard Ltd.'

Mullard Type	EIA Type
AF22-10	
AF31-10	
AL13-36	
AL22-10	
AL31-10	
AN1	
AW13-36	
AW17-20	
AW21-80	
AW22-10	
AW36-48	
AW36-80	
AW43-80	17BTP4
AW53-80	
AZ31	
BA3-30	
BA9-20	
BA16-10	
CBL31	
CCH35	
CL33	
CXT1	
CXT2	
CY31	
DA90	1A3
DAC32	1H5GT
DAF91	1S5
DAF96	1AH5
DB4-1	
DB4-2	
DB7-5	
DB7-6	
DB7-36	3WP11
DB13-2	5CP11
DB13-34	5ADP11
DB-16-22	7AHP11
DC70	6375
DC90	
DCC90	3A5
DF33	1N5GT
DF60	5678
DF61	6611
DF62	1AD4
DF63	
DF64	
DF66	
DF91	1T4
DF92	
DF96	1AJ4
DF97	1AN5
DG4-1	
DG4-2	
DG7-5	3ALP1
DG7-6	
DG7-31	
DG7-32	3AMP1
DG7-36	3WP1
DG13-2	5CP1A
DG13-34	5ADP1
DG16-22	7AHP1
DH3-91	1CP1
DH7-91	3AFP1
DH10-78	
DH10-94	4EP1
DH13-97	5BKP1
DHM10-93	
DK32	1A7GT
DK91	1R5
DK92	1AC6
DK96	1AB6
DL33	3Q5GT
DL35	
DL64	
DL66	
DL68	
DL69	
DL70	6373
DL73	
DL92	3S4
DL93	3A4
DL94	3V4
DL96	3C4
DL98	3B4
DL620	5672
DM70	1M3
DM160	6977
DP4-1	
DP4-2	
DP7-5	
DP7-6	
DP7-91	3AFP7
DP10-78	
DP10-94	
DP13-2	5CP7A
DP13-34	5ADP7
DP13-97	
DP16-22	7AHP7
E1T	6370
E80CC	6085
E80F	6084
E80L	6227
E81L	6686
E83F	6689
E88CC	6922
E90CC	5920
E91H	6687
E92CC	
E180CC	7062
E180F	6688
E181CC	7118
E182CC	7119
EA50	
EA52	6923
EA76	6489
EABC80	6AK8
EAC91	
EAF41	
EAF42	6CT7
EB34	
EB41	
EB91	6AL5
EBC33	
EBC41	6CV7
EBC90	6AT6
EBC91	6AV6
EBF80	6N8
EBF83	6DR8
EBF89	6DC8
EBL21	
EBL31	
EC56	
EC57	
EC70	6778
EC71	
EC81	6R4
EC90	6C4
EC91	6AQ4
EC92	
ECC33	
ECC34	
ECC35	6SL7GT
ECC40	
ECC70	
ECC81	12AT7
ECC82	12AU7
ECC83	12AX7
ECC84	6CW7
ECC85	6AQ8
ECC86	
ECC88	6DJ8
ECC91	6J6
ECF80	6BL8
ECH21	
ECH35	
ECH41	
ECH42	6CU7
ECH81	6AJ8
ECH83	6DS8
ECL80	6AB8
ECL82	6BM8
ECL83	
EF37A	
EF39	
EF40	
EF41	6CJ5
EF42	
EF50	
EF54	
EF55	
EF70	6487
EF71	
EF72	
EF73	6488
EF74	6391
EF80	6BX6
EF85	6BY7
EF86	6267
EF89	6DA6
EF91	6AM6
EF92	6CQ6
EF93	6BA6
EF94	6AU6
EF95	6AK5
EF97	6ES6
EF98	6ET6
EF730	
EF731	
EF732	
EF734	
EFP60	
EK90	6BE6
EL31	
EL32	
EL33	
EL34	6CA7
EL36	6CM5
EL37	
EL38	6CN6
EL41	6CK5
EL42	
EL71	
EL81	6CJ6
EL83	6CK6
EL84	6BQ5
EL85	6BN5
EL86	6CW5
EL90	6AQ5
EL91	6AM5
EL95	6DL5
EL360	
EL821	6CH6
EL822	
EM34	6CD7
EM81	6DA5
EM84	
EN31	
EN32	2050
EN70	5643
EN91	2D21
EN92	5696
EN93	6D4
EQ80	6BE7
EY51	6X2
EY70	
EY81	6R3
EY84	6374
EY86	6S2
EY88	
EY91	
EZ35	6X5GT
EZ40	6BT4
EZ41	
EZ80	6V4
EZ81	6CA4
EZ90	6X4
FC4	
FW4-500	
FW4-800	
GZ30	5Z4GT
GZ32	
GZ33	
GZ34	5AR4
GZ37	
HBC90	12AT6
HBC91	12AV6
HF93	12BA6
HK90	12BE6
HL92	50C5
HY90	35W4
IOG-1	
IOG-2	
JN2-2-5A	7091
JN2-2-5W	7292
JP2-0-2	7090
JP8-02	
JP9-01	
JP9-02	
JP9-2-5	7028
JP9-7	2J42
JP9-7A	
JP9-7B	
JP9-7D	
JP9-15	2J42A
JP9-50	2J56
JP9-75	6972
JP9-80	4J52A
JP9-80A	
JP9-250	4J50
JP9-250A	4J78
JP16-40	
JP35-30	
JPT6-01	
JPT8-01	
JPT9-01	
JPT9-02	
JPT9-60	2J51A
KL35	
KS7-1C	
KS7-85	2K26
KS7-85A	5976
KS9-20	723A/B
KS9-20A	2K25
KT9-2	
KT9-150W	
KU25	KU25
LA4-2	
LB4-8	
LA4-250	
LA6-3	
LA6-200	
LA9-3	
LB4-2	
LB6-12	
LSD14	
LSD15	
LSD17	
LSD18	
M8079	6058
M8080	6100/6C4WA
M8081	6101/6J6WA
M8082	6516
M8083	6064
M8091	6443
M8096	6062
M8097	
M8098	
M8099	
M8100	5654/6AK5W/6096
M8132	
M8133	
M8136	6189/12AU7WA
M8137	6057
M8140	
M8141	
M8142	
M8144	
M8149	
M8157	
M8161	6065
M8162	12AT7WA
M8163	
M8167	7001
M8178	
M8179	
M8180	
M8184	
M8190	5783WA
M8195	
M8196	5725/6AS6W
M8204	5727/2D21W
M8206	
M8207	
M8208	
M8212	5726/6AL5W/6097
M8214	
M8223	0A2WA
M8224	0B2WA
M8225	
M8232	6J4WA
M8234	
M8237	
M8245	6005/6AQ5W
MB13-1	5FP11
MB22-75	
MC6-16	
MC13-16	
ME1200	
ME1200AA	
ME1201	
ME1201AA	
ME1400	
ME1401	5802
ME1402	
ME1403	5889
ME1404	
MF13-1	5FP7A
MF22-75	
MF31-22	
MF31-55	
MF31-95	
MF41-10	
ML31-22	
MM13-10	
MP31-55	
MS1005	
MW6-2	3NP4
MW13-35	5FP4A
MW22-22	
MW36-44	
MW36-67	
MW43-67	
MW43-69	17BQP4
MW43-80	
MW53-80	
MY3-275	212E
MZ1-75	
MZ1-100	
MZ2-200	
OA5	
OA7	
OA10	
OA31	
OA47	
OA70	1N87
OA73	1N616
OA79	1N541
2-OA79	1N542
OA81	1N476
OA85	1N478
OA86	1N480
OA91	1N617
OA95	1N618
OA200	
OA202	
OA210	
OA211	
OA214	
OA250	
OA251	
OA252	
OAZ200	
OAZ201	
OAZ202	
OAZ203	
OAZ204	
OAZ205	
OAZ206	
OAZ207	
OAZ208	
OAZ209	
OAZ210	
OAZ211	
OAZ212	
OAZ213	
OC16	2N115
2-OC16	2N116
OC22	
OC23	
OC24	
OC30	
OC41	
OC42	
OC44	
OC45	
OC51	
OC65	
OC66	
OC70	2N279
OC71	2N280
OC72	2N281
2-OC72	2N282
OC73	2N283
OC75	
OC76	2N284
OC77	2N284A
OC139	
OC170	
OC200	
OC201	
OC202	
OCP71	2N577
ORP10	
ORP11	
ORP90	
PABC80	9AK8
PCC84	7AN7
PCC85	9AQ8
PCC88	7DJ8
PCC89	
PCF80	9A8
PCF82	
PCL82	16A8
PCL83	
PCL84	15DQ8
PEN36C	
PENA4	
PL33	
PL36	25E5
PL38	
PL38M	
PL81	21A6
PL82	16A5
PL83	15A6
PL84	
PL820	
PY31	
PY32	
PY80	19X3
PY81	17Z3
PY82	19Y3
PY88	26AE6
PZ30	
QQV02-6	6939
QQV03-10	6360
QQV03-20A	6252
QQV04-15	832A
QQV06-40A	5894
QQV07-40	829B
QQV5-P10	3E29
QQZ04-15	5895
QV03-12	5763
QV04-7	
QV04-7R	
QV05-25	807
QV06-20	6146
QV08-100	
QV1-150A	4X150A
QV10-P8	
QV12-P10	
QV20-P18	4PR60A
QY2-100	813
QY3-65	4-65A
QY3-125	6155
QY4-250	6156
QY4-400	4-400A
QY4-500A	4X500A
QY5-500	6079
QY5-3000A	6076
QY5-3000W	6075
QYS50-P40	
RG1-240A	
RG3-250	
RG3-250A	866A
RG3-1250	
RG4-1000	
RG4-1250	
RG4-3000	6693
RR3-250	3B28
RR3-1250	4B32
RR3-1250A	
RR3-1250B	
RY12-100	8020
TD03-5	
TD03-10	5861
TD03-10F	
TD04-20	
TD1-100A	2C39A
TD2-300A	7004
TD2-400A	
TD45-10	
TX10-4000	
TX12-12W	
TY2-125	5866
TY3-250	5867
TY4-350	833A
TY4-500	5868
TY4-500B	
TY5-500	
TY6-12A	
TY6-12W	
TY6-800	7097
TY6-5000A	5924
TY6-5000W	5923
TY7-6000A	6961
TY7-6000W	6960
TY8-15A*	
TY12-15A	
TY12-20A	
TY12-20W	
TY12-25A	6618
TY12-25W	6617
TY12-50W	6078
TY12-50W	6077
TYS2-250	
TYS4-500	
TYS5-1000	
TYS5-2000	
TYS5-3000	
UABC80	
UAF42	12S7
UB41	
UBC41	14L7
UBC81	
UBF80	17C8
UBF89	
UBL21	
UC92	
UCC84	
UCC85	
UCF80	
UCH21	
UCH42	14K7
UCH81	19D8
UCL82	50BM8
UCL83	
UF41	12AC5
UF42	
UF80	
UF85	
UF86	
UF89	
UL41	45A5
UL44	
UL46	
UL84	45B5
UM80	
UR1C	
UY1N	
UY41	31A3
UY85	38A3
VP4B	
XG1-2500	5559
XG2-12	
XG2-25	
XG2-500	
XG2-6400	
XG5-10	6786
XG5-500	5557
XG15-12	
VGQ2-6400	
XH3-045	3C45
XH8-100	4C35
XH16-200	5C22
XH25-500	5949/1907
XR1-12	5855
XR1-1600	5796
XR1-3200	5544
XR1-6400	5545
XR1-6400A	6807
Z300T	0A4G
Z302C	
Z303C	
Z502S	
Z503M	
Z700U	
Z701U	
Z803U	6779
Z804U	
Z900T	5823
20CG	
20CV	
50AVP	
51UVP	
52AVP	
52CG	
53AVP	
53CG	
53CV	
53UVP	
54AVP	
55AVP	
55CG	927
56AVP	
58CG	
58CV	
61RV	
61SV	
63TV	
75B1	
75C1	
83A1	
85A1	0E3
85A2	0G3
90AG	
90AV	
90CG	
90CV	
90C1	
95A1	
108C1	0B2
150B2	6354
150B3	
150C3	0D3
150C4	0A2
5636	5636
5644	5644
5651	5651
5718	5718
5820	5820
5840	5840
5899	5899
5902	5902
6021	6021
6080	6080
6205	6205
6211	6211
6463	6463
7475	
13201A	

Mullard
Trade Mark Mullard Ltd

INTERNATIONAL ELECTRONICS CORP.

New York 12, N. Y.

Net

PENTA HIGH-EFFICIENCY POWER TUBES

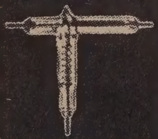
PL-172 Beam Pentode

PL-5C22/HT-415 Hydrogen Thyratron

PL-4-400A Tetrode

PL-165A Hydrogen Thyraton

PL-6549 Beam Pentode


PL-169A Vacuum Switch

Type	Fil. Volts	Fil. Current Amps.	Plate Diss. Max. W.	Plate Volt Max.	Plate Current Ma., Max.	Screen Voltage Max.	Price
BEAM PENTODES							
PL-172*†	6.0	8.2	1000	3,000	1000	600	$135.00
PL-175A*	5.0	14.5	400	4,000	350	800	50.00
PL-177A*	6.0	3.3	75	2,000	175	600	25.00
PL-6549	6.0	3.3	75	2,000	175	600	25.00
PL-4E27A	5.0	7.5	125	4,000	200	750	40.00
TETRODES							
PL-4D21 (4-125A)	5.0	6.5	125	3,000	225	600	36.00
PL-4D21A	5.0	6.5	175	3,000	225	600	37.50
PL-5D22 (4-250A)	5.0	14.5	250	4,000	350	800	46.50
PL-4-400A	5.0	14.5	400	4,000	350	800	48.00
TRIODES *(Grounded-Grid Types)*							
PL-6569	5.0	14.5	250	4,000	300	μ=45	37.50
PL-6580	5.0	14.5	400	4,000	350	μ=45	45.00
HIGH-VOLTAGE RECTIFIER							
PL-250R	5.0	10.5	...	60,000**	250	...	30.50
HYDROGEN THYRATRONS *(Low-Jitter Types)*							
PL-5C22/HT415	6.3	10.5	...	16,000	325 amp	...	36.00
PL-161	6.3	10.5	...	16,000	325 amp	...	48.00
PL-165A	6.3	7.8	...	12,000	225 amp	...	48.00
PL-174/6587	6.3	10.5	...	16,000	325 amp	...	48.00

*Zero-suppressor Voltage Type **Peak Inverse Voltage Rating †External Anode Type

VACUUM SWITCHES, Single-pole, Double-throw

Type	Voltage, Maximum	Current Max. Amperes AC or DC	Current Max. Amperes Pulse	Coil	Price
PL-R1	21,000	6	150	Not supplied; requires 1100 Amp.—Turns	$33.00
PL-169A	21,000	30	500	Not supplied; requires 1900 Amp.—Turns	40.00
PL-186	21,000	6	...	Not supplied; requires 1000 Amp.—Turns	36.00
PL-187	21,000	30	500	Integral, 28 V, 500 Ma. D-C	58.00
PL-190	21,000	6	150	Integral, 28 V, 250 Ma. D-C	58.00
PL-191	21,000	6	...	Not supplied; requires 1000 Amp.—Turns	18.00

ACCESSORIES

Type	Description	Price
PL-C1	Glass Chimney for PL-4-400A and PL-175	$ 6.00
PL-184	Socket for PL-172, including chimney, built-in screen-grid and suppressor-grid by-pass capacitors	38.75
PL-184A	Socket for PL-172, including chimney and built-in screen-grid by-pass capacitors. Suppressor-grid grounded.	38.75
PL-C184	Plastic chimney, only, for PL-172	3.00

Penta ®

PENTA LABORATORIES, INC.

SANTA BARBARA, CALIFORNIA

Sales Representatives in Principal Cities

RCA ELECTRON TUBES

ENTERTAINMENT RECEIVING TYPES

RESALE PRICE SCHEDULE • JUNE 29, 1960

RCA TYPE	LIST PRICE*
OZ4	2.15
OZ4G	2.35
1A3	3.40
1A5GT	3.50
1A7GT	3.70
1AX2	3.05
1B3GT	2.90
1C5GT	3.65
1DN5	2.20
1G3GT/ 1B3GT	2.90
1H5GT	3.05
1J3	2.90
1K3	2.90
1L4 (See Industrial Type)	
1L6	3.50
1LA6	4.10
1LB4	4.45
1LC6	4.10
1LD5	4.25
1LE3	4.25
1LG5	4.05
1LH4	3.95
1LN5	3.95
1N5GT	3.65
1R5	2.55
1S4	3.65
1S5	2.55
1T4	2.40
1U4	2.35
1U5	2.10
1V	4.05
1V2	2.00
1X2A	3.05
1X2B	3.05
2A3	6.95
2AF4A	4.05
2BN4	2.55
2CY5	2.85
2EN5	2.00
2FH5	2.55
3A2	3.65
3A3	3.40
3AF4A	4.05
3AL5	1.85
3AU6	2.15
3AV6	1.75
3B2	6.25
3BC5	2.35
3BN4	2.55
3BN6	3.05
3BU8	2.85
3BY6	2.35
3BZ6	2.35
3CB6	2.30
3CF6	2.55
3CS6	2.45
3CY5	2.85
3DK6	2.40
3DT6	2.20
3LF4	4.20
3Q4	2.75
3Q5GT	3.60
3S4	2.45
3V4	2.35
4AU6	2.15
4BC5	2.35
4BC8	4.05
4BN6	3.05
4BQ7A	4.00
4BS8	3.85
4BU8	2.85
4BZ6	2.25
4BZ7	4.05
4CB6	2.30
4CS6	2.35
4DE6	2.65
4DT6	2.25
4EW6	2.35
5AM8	3.30
5AN8	3.60
5AQ5	2.20
5AS4A	2.15
5AS8	3.50
5AT8	3.25
5AV8	4.05
5AZ4	2.65
5B8	4.15
5BE8	3.30
5BK7A	3.40
5BQ7A	4.05
5BR8	3.30
5BT8	3.30
5CG8	3.25
5CL8A	3.15
5CM8	3.55
5CQ8	3.35
5CZ5	3.05
5J6	2.85
5T4	8.70
5T8	3.40
5U4G	2.10
5U4GB	2.10
5U8	3.30
5V3	3.65
5V4GA	3.30
5V6GT	2.20
5X4G	2.95
5X8	3.30
5Y3GT	1.75
5Y4GT	2.45
5Z3	3.00
5Z4	5.25
6A7	5.10
6A8	5.80
6A8G	4.80
6A8GT	4.80
6AB4	2.15
6AB5/6N5	4.05
6AB7	6.05
6AC5GT	4.80
6AC7	4.85
6AD7G	6.50
6AF3	2.90
6AF4	4.00
6AF4A	4.00
6AF6G	3.70
6AG5	2.60
6AG7	5.90
6AH4GT	3.30
6AH6	4.70
6AK5	4.20
6AK6 (See Industrial Types)	
6AL5	1.85
6AL7GT	5.75
6AM4	5.90
6AM8A	3.25
6AN4	4.95
6AN8	3.50
6AQ5A	2.15
6AQ6	2.20
6AQ7GT	4.00
6AR5	2.65
6AS5	2.40
6AS8	3.35
6AT6	1.90
6AT8A	3.20
6AU4GTA	3.40
6AU5GT	4.30
6AU6	2.10
6AU8	3.50
6AV5GA	3.80
6AV6	1.65
6AW8	3.65
6AW8A	3.55
6AX4GT	2.65
6AX5GT	2.95
6AX8	3.50
6AZ8	4.20
6B8	5.55
6BA6	2.00
6BA7	3.70
6BA8A	3.70
6BC4	4.90
6BC5	2.30
6BC7	3.80
6BC8	4.00
6BD6	2.30
6BE6	2.20
6BF5	3.55
6BF6	1.80
6BG6G	6.50
6BH6	2.70
6BH8	3.50
6BJ6	2.60
6BJ7	2.95
6BJ8	2.90
6BK4	7.55
6BK5	3.50
6BK7B	3.40
6BL7GTA	3.95
6BN4	2.50
6BN4A	2.50
6BN6	3.05
6BN8	2.70
6BQ5	2.35
6BQ6GTB/ 6CU6	4.35
6BQ7A	3.95
6BR8	3.50
6BR8A	3.50
6BS8	3.75
6BU8	2.80
6BW4	2.05
6BX7GT	4.00
6BY5GA	4.20
6BY6	2.35
6BY8	2.85
6BZ6	2.25
6BZ7	4.00
6BZ8	4.45
6C4	1.85
6C5	3.15
6C5GT	2.90
6C6	4.80
6C8G	5.10
6CA4	1.95
6CB5A	7.50
6CB6	2.25
6CB6A	2.25
6CD6GA	5.80
6CF6	2.55
6CG7	2.45
6CG8A	3.15
6CH8	3.60
6CK4	2.80
6CL6	3.75
6CL8A	3.15
6CM6	2.55
6CM7	2.75
6CM8	3.55
6CN7	2.60
6CQ8	3.30
6CR6	2.40
6CS6	2.35
6CS7	2.95
6CU5	2.35
6CU6	(See 6BQ6GTB/6CU6)
6CU8	3.70
6CW8	2.45
6CX8	3.65
6CY5	2.75
6CY7	2.95
6CZ5	3.00
6D6	4.35
6DA4	2.70
6DC6	3.00
6DE4	2.80
6DE6	2.45
6DE7	2.95
6DG6GT	2.55
6DK6	2.35
6DN6	6.25
6DN7	3.50
6DQ5	7.70
6DQ6A	4.15
6DR7	2.95
6DS5	2.70
6DT5	3.05
6DT6	2.15
6DT6A	2.15
6DT8	3.80
6E5	3.00
6EA8	3.15
6EB8	3.70
6EH5	2.35
6EH8	3.15
6EM5	3.05
6EM7	3.40
6ER5	3.00
6EU7	2.60
6EV7	2.50
6EW6	2.30
6F5	3.65
6F6	4.20
6F6G	3.80
6F6GT	3.65
6F7	7.25
6F8G	5.60
6FG6	(See EM84/ 6FG6
6FH5	2.50
6FH8	3.30
6FW8	9.20
6FV6	2.75
6G6G	4.50
6GH8	3.15
6GM6	2.40
6H6	3.55
6J5	3.10
6J5GT	2.70
6J6	2.80
J6J7	4.55
6J7GT	4.05
6K6GT	2.35
6K7	4.60
6K7GT	3.80
6K8	4.70
6L6	6.35
6L6GC	3.80
6L7	5.00
6N5	(See 6AB5/ 6N5)
6N7	4.35
6N7GT	4.35
6Q7	3.95
6Q7GT	3.20
6R7	4.35
6S4A	2.05
6S7	5.05
6S8GT	2.90
6SA7	3.95
6SA7GT	3.25
6SB7Y	5.35
6SC7	3.85
6SF5	3.10
6SF5GT	3.20
6SF7	4.75
6SG7	4.20
6SH7	4.05
6SJ7	3.75
6SJ7GT	3.20
6SK7	3.60
6SK7GT	3.05
6SL7GT	3.30
6SN7GTB	2.60
6SQ7	3.30
6SQ7GT	2.70
6SR7	3.25
6SS7	4.20
6T4	4.35
6T8A	3.40
6U5	3.20
6U8A	3.30
6V3A	4.35
6V6	5.00
6V6GT	2.15
6W4GT	2.40
6W6GT	2.85
6X4	1.65
6X5GT	2.10
6X8	3.15
6Y6G	3.45
6Y6GA	3.45
7A4	3.25
7A5	3.85
7A6	3.15
7A7	3.50
7A8	4.70
7AD7	6.45
7AF7	3.85
7AG7	3.85
7AH7	3.85
7AU7	2.60
7B4	3.05
7B5	4.75
7B6	3.25
7B7	3.50
7B8	3.55
7C5	3.50
7C6	3.50
7C7	3.20
7E7	4.45
7F7	3.85
7F8	4.60
7G7	4.00
7H7	3.95
7J7	5.15
7K7	4.45
7N7	3.60
7Q7	4.10
7R7	5.15
7V7	4.90
7W7	4.75
7X7	5.85
7Y4	2.95
7Z4	2.75
8AU8	3.55
8AW8A	3.70
8BH8	3.55
8BN8	2.95
8BQ5	2.40
8CG7	2.50
8CM7	2.90
8CN7	2.60
8CX8	3.70
8EB8	3.75
8EM5	3.10
9AU7	2.80
9BR7	2.75
9CL8	3.15
9U8A	3.30
10C8	4.25
10DE7	2.95
11CY7	3.00
12A8GT	5.30
12AB5	2.45
12AC6	2.20
12AD6	2.40
12AE6 (5/60)	1.85
12AE6A	2.05
12AF3	2.90
12AF6	2.35
12AH7GT	4.20
12AJ6	2.05
12AL5	1.90
12AL8	4.25
12AQ5	2.60
12AT6	1.85
12AT7	3.05
12AU6	2.15
12AU7A	2.45
12AV5GA	3.85
12AV6	1.65
12AV7	3.40
12AW6	3.30
12AX4GTA	2.70
12AX7	2.55
12AY7	5.00
12AZ7	2.75
12B4A	2.70
12BA6	2.00
12BA7	3.95
12BD6	2.25
12BE6	2.15
12BF6	2.10
12BH7A	3.05
12BK5	3.80
12BL6	2.30
12BQ6GTB/ 12CU6	4.45
12BR7	2.75
12BV7	3.05
12BY7A	3.05
12BZ7	3.05
12C5	(See 12BQ6GTB/12CU6)
12C8	6.80
12CA5	2.50
12CN5	2.45
12CR6	2.40
12CT8	4.05
12CU5/12C5	2.35
12CU6	(See 12BQ6GTB/12CU6)
12CX6	2.50
12D4	2.75
12DB5	2.75
12DL8	4.05
12DQ6A	4.20
12DQ7	3.30
12DS7	3.40
12DT5	3.05
12DT8	3.80
12DV8	3.55
12DZ6	2.55
12EA6	2.65
12ED5	2.50
12EG6	2.30
12EH5	2.35
12EK6	2.55
12EL6	2.00
12EM6	3.10
12EN6	3.05
12F8	2.85
12FK6	2.10
12FM6	2.00
12H6	3.30
12J5GT	2.95
12J7GT	4.60
12J8	3.30
12K5	2.95
12K7GT	4.05
12K8	5.70
12L6GT	2.50
12Q7GT	3.65
12R5	2.60
12SA7	3.95
12SA7GT	3.25
12SC7	3.80
12SF5	3.20
12SF7	4.75
12SG7	4.20
12SH7	4.00
12SJ7	3.75
12SK7	3.60
12SK7GT	3.05
12SL7GT	3.75
12SN7GT	2.70
12SQ7	3.30
12SQ7GT	2.70
12SR7	3.30
12U7	2.65
12V6GT	2.15
12W6GT	3.00
12X4	1.90
13DE7	2.95
14A7	3.65
14AF7	3.80
14B6	3.30
14C7	3.40
14F7	4.05
14F8	4.60
14Q7	4.10
14R7	5.35
17AX4GT	2.70
17BQ6GTB	5.00
17D4	2.75
17DE4	2.85
17DQ6A	4.25
17H3	2.15
18A5	4.15
18FW6	2.00
18FX6	2.15
18FY6	1.65
19AU4	3.50
19BG6GA	6.50
19J6	3.45
19T8	3.40
19X8	3.70
22DE4	2.85
24A	4.55
25AV5GA	4.25
25AX4GT	2.90
25BK5	3.65
25BQ6GTB/ 25CU6	4.65
25C5	2.15
25CA5	2.50
25CD6GB	5.85
25CU6	(See 25BQ6GTB/25CU6)
25DN6	5.55
25EH5	2.30
25L6	6.40
25L6GT	2.25
25W4GT	2.70
25Z5	3.15
25Z6GT	2.90
27	4.35
32ET5	2.20
35A5	3.50
35B5	2.65
35C5	2.15
35EH5	2.30
35L6GT	2.40
35W4	1.40
35Y4	2.75
35Z3	2.75
35Z4GT	2.35
35Z5GT	1.85
36AM3	1.50
41	3.85
42	3.85
43	4.75
47	9.15
50A5	4.15
50B5	2.65
50C5	2.15
50DC4	1.55
50EH5	2.30
50FE5	3.65
50L6GT	2.40
50X6	3.20
50Y6GT	2.95
50Y7GT	3.05
60FX5	2.35
70L7GT	10.15
75	5.10
78	5.10
80	2.90
84/6Z4	2.95
117L7GT/ 117M7GT	10.15
117M7GT	(See 117L7GT/117M7GT)
117N7GT	10.25
117P7GT	10.25
117Z3	2.50
117Z6GT	4.40
5879	4.05
5881	6.40
6973	4.50
7025	2.95
7027A	5.30
7189	4.35
7199	3.30
7543	2.20
EM84/6F6G	3.25

INDUSTRIAL TYPES FOR DEALER SERVICE

RCA TYPE	LIST PRICE*
0A2	2.05
0A3	2.20
0A4G	2.65
0B2	2.05
0C3	2.10
0D3	2.05
1L4	2.83
1P40	4.25
2D21	1.85
2E24	6.15
2E26	4.55
2X2A	3.40
3A5	2.50
3AQP1	28.25
5R4GY	2.85
5R4GYB	2.85
5UP1	16.70
6AK6	2.90
6AL5	(See 6663/6AL5)
6AQ5A	(See 6669/6AQ5A)
6AS6	4.85
6BA6	(See 6660/6BA6)
6BH6	(See 6661/6BH6)
6CL6	(See 6667/6CL6)
6J4	5.90
6U8A	(See 6678/6U8A)
12A6	3.25
12AT7	(See 6679/12AT7)
12AU7A	(See 6680/12AU7A)
12AX7	(See 6681/12AX7)
12SW7	2.10
12SX7GT	2.45
12SY7	2.75
83	2.45
807	3.50
811A	8.10
812A	8.10
816	3.45
866A	3.40
868	4.45
884	3.20
885	2.75
991	1.20
1614	5.30
1620	9.80
1635	3.65
2050	3.35
5651	3.00
5763	3.55
6005	5.55
6146	5.90
6159	5.90
6417	3.55
6660/6BA6	1.45
6661/6BH6	1.85
6662/6BJ6	1.80
6663/6AL5	1.30
6669/6AQ5A	1.50
6677/6CL6	2.50
6678/6U8A	2.20
6679/12AT7	2.05
6680/12AU7A	1.70
6681/12AX7	1.75
6883	5.90
6893	5.20

*Optional. Prices higher in Hawaii and Alaska. Prices include Federal Excise tax where applicable. All prices subject to change or withdrawal without notice.

Use Index Page 1 for Quick, Easy Location of ALL Products

TRADE DISCOUNT APPLIES TO *LIST* PRICE ONLY

RCA PICTURE TUBES

RCA TELEVISION PICTURE TUBES (Black & White)

LIST PRICE* SCHEDULE—JUNE 10, 1960

RCA TYPE	LIST PRICE*
10BP4A	$21.00
10FP4A	27.60
12KP4A	28.80
12LP4A	24.80
14ATP4	31.50
14EP4/14CP4/14BP4	26.70
14HP4	28.10
14QP4A	31.90
14RP4	31.50
14RP4A	34.30
14WP4/14ZP4	34.30
16AP4A	39.10
16DP4A	31.50
16GP4B	39.50
16LP4A	32.40
16RP4/16KP4	27.60
16RP4A/16KP4A	31.00
16TP4	27.60
16WP4A	33.80
17AVP4/17ATP4	34.30
17AVP4A/17ATP4A	38.60
17BJP4	38.60
17DP4A/17JP4	30.50
17BP4B	35.30
17BP4/17CAP4/17CKP4/17BRP4	43.30

RCA TYPE	LIST PRICE*
17CFP4	38.60
17CP4	46.70
17DAP4	53.10
17DKP4	44.80
17GP4	48.60
17HP4/17RP4	32.90
17HP4B/17RP4C	37.20
17LP4/17VP4	32.70
17LP4A/17VP4B	36.20
17QP4/17UP4/17YP4	31.00
17QP4A	35.30
17TP4	48.60
19AP4B	48.10
20DP4A/20CP4A	36.70
20DP4C/20CP4D	43.80
20HP4A/20LP4/20MP4	38.60
20HP4D	41.00
21ACP4A/21BSP4/21AMP4A	43.80
21ALP4B/21ALP4A	45.50
21AP4	58.10
21ATP4A/21ATP4	45.50
21AVP4/21AUP4	42.90
21AVP4B/21AUP4B/21AVP4A/21AUP4A	45.50
21AWP4	43.80
21BTP4	45.70

RCA TYPE	LIST PRICE*
21CBP4A/21CBP4/21CMP4	45.70
21CEP4/21CEP4A	50.00
21CXP4	45.40
21DAP4	50.00
21DEP4A/21DEP4/21CZP4	50.00
21DLP4/21DQP4	45.30
21EAP4	62.90
21EP4A	38.60
21EP4B	42.90
21FP4A	35.70
21FP4C	39.10
21MP4	60.20
21WP4	37.40
21WP4A	44.40
21XP4A	45.50
21YP4	39.00
21YP4A	44.80
21ZP4A	37.40
21ZP4B	43.80
24ADP4/24VP4A/24CP4A/24TP4	63.30
24AEP4	65.70
24AHP4	70.50
24DP4A/24YP4	65.50
27MP4	147.00

RCA TELEVISION PICTURE TUBES (Color)

LIST PRICE* SCHEDULE—JUNE 10, 1960

RCA TYPE	LIST PRICE
21AXP22A/21AXP22	$127.00
21CYP22	127.00
21CYP22A	127.00

* Optional. Prices higher in Alaska and Hawaii. Prices include Federal Excise tax where applicable.

BOLD type indicates Aluminized type. All prices subject to change or withdrawal without notice.

RCA PICTURE TUBES

RCA offers two lines of black and white picture tubes:

1. RCA Silverama—RCA's line of premium picture tubes made of all-new glass and all-new parts.
2. RCA Television Picture Tube—RCA's line of standard picture tubes, containing reused envelopes.

RCA manufactures two lines of color picture tubes:

1. RCA Colorama—RCA's line of premium picture tubes made of all-new glass and all-new parts.
2. RCA Television Picture Tube—RCA's full-color line of standard picture tubes containing used materials.

RCA SILVERAMA (Black & White—All-New, Premium)

LIST PRICE* SCHEDULE—JUNE 10, 1960

RCA TYPE	LIST PRICE*
5TP4	$86.90
7JP4	34.80
8DP4	37.40
10BP4A	31.70
10FP4A	39.80
12KP4A	40.30
12LP4A	35.50
14ATP4	44.60
14EP4/14CP4/14BP4	37.00
14HP4	39.10
14QP4A	44.60
14RP4	43.30
14RP4A	47.20
14WP4/14ZP4	44.60
16AP4A	58.40
16DP4A	52.20
16GP4B	57.60
16LP4A/16ZP4	52.20
16RP4/16KP4	42.50
16RP4A/16KP4A	46.50
16TP4	42.50
16WP4A	52.20
17AVP4/17ATP4	46.40
17AVP4A/17ATP4A	50.70
17BJP4	50.70
17BP4A/17JP4	43.30
17BP4B	47.30
17BVP4	55.50
17BZP4/17CAP4/ 17CKP4/17BRP4	55.50
17CDP4	55.50
17CFP4	50.70
17CP4	57.20
17CYP4	50.70
17DAP4	65.50
17DKP4	59.30
17DSP4	59.30
17DXP4	59.30
17GP4	59.70
17HP4/17RP4	45.20
17HP4B/17RP4C	49.40
17LP4/17VP4	45.90
17LP4A/17VP4B	50.30
17QP4/17UP4/17YP4	42.80
17QP4A	47.30
17TP4	61.50
19AFP4	60.00
19AP4B	62.70
19XP4	55.70
20DP4A/20CP4A	50.70
20DP4C/20CP4D	54.80
20HP4A/20LP4/20MP4	52.20
20HP4D	56.90
21ACP4A/21BSP4/ 21AMP4A	56.40
21ALP4B/21ALP4A	59.20
21AP4	70.70
21ATP4A/21ATP4	59.20
21AVP4/21AUP4	56.00
21AVP4B/21AUP4B/ 21AVP4A/21AUP4A	60.70
21AWP4	56.50
21BTP4	58.90
21CBP4A/21CBP4/ 21CMP4	59.90
21CEP4/21CEP4A	63.40
21CQP4	63.60
21CXP4	58.30
21DAP4	63.40
21DEP4A/21DEP4/ 21CZP4	63.40
21DFP4	63.40
21DLP4/21DQP4	58.30
21DSP4	58.30
21EAP4	77.20
21EMP4	64.90
21EP4A	53.20
21EP4B	57.40
21EQP4	64.90
21FP4A	54.60
21FP4C	59.30
21MP4	73.40
21WP4	53.10
21WP4A	57.20
21XP4A	59.50
21YP4	54.20
21YP4A	58.10
21ZP4A	51.90
21ZP4B	55.90
23CP4	85.00
23EP4	85.00
23MP4	73.30
24ADP4/24VP4A/ 24CP4A/24TP4	83.10
24AEP4	84.60
24AHP4	90.70
24ATP4	84.60
24AUP4	84.60
24BAP4	90.70
24DP4A/24YP4	86.00
27EP4	124.80
27RP4	124.80
17DXP4	59.30
19AFP4	60.00
19XP4	55.70
23MP4	73.30

RCA COLORAMA PICTURE TUBES (Color—All-New, Premium)

LIST PRICE* SCHEDULE—MAY 25, 1960

RCA TYPE	LIST PRICE*
15GP22	$160.00
21AXP22A	160.00
21CYP22	160.00
21CYP22A	160.00

* Optional. Prices higher in Alaska and Hawaii. Prices include Federal Excise tax where applicable. All prices subject to change or withdrawal without notice.

RCA ELECTRON TUBES

FOR INDUSTRY AND COMMUNICATIONS

DIRECT REPLACEMENT TYPES

RCA types shown below are direct replacements under all circumstances for corresponding types to be replaced. Tube types covered include: Vacuum Power Tubes, Rectifier Tubes, Thyratrons, Ignitrons, Voltage Regulators, Phototubes, Cathode-Ray Tubes, and Special Types.

Type to be Replaced	Replace by RCA Type	Type to be Replaced	Replace by RCA Type	Type to be Replaced	Replace by RCA Type	Type to be Replaced	Replace by RCA Type
OA3/VR75	OA3	WT-210-0003	884	5557/715	5557	WT-210-0006	6H6
OC3/VR105	OC3	ZP-572	2C39-A	GL-5558/FG-32	5558	WT-210-0008	866-A
OD3/VR150	OD3	WT-606	2D21	WL-5558/32	5558	WT-210-0009	84/6Z4
1P29/FJ-401	1P29	WL-630	2050	GL-5559/FG-57	5559	WT-210-0011	OC3
1P32	927	WL-630A	2050	WL-5559/57	5559	WT-210-0012	80
2AP1	2AP1-A	WL-631	5559	5560/FG-95	5560	WT-210-0013	5Z3
2B4	885	WL-632A	632-B	GL-5561/FG-104	5561	WT-210-0015	5557
2C38	2C39-A	KU-634	677	WL-5561/104	5561	WT-210-0018	OD3
2C39	2C39-A	WL-651/656	5552-A	WL-5563	5563-A	WT-210-0019	83
2C39-B	2C39-A	WL-652/657	5551-A	GL-5632	C3J/5632	WT-210-0021	6X5-GT
2C51	5760	WL-653B	5555	GL-5632/C3J	C3J/5632	WT-210-0025	117Z6-GT
2X2/879	2X2-A	WL-655/658	5553-B	5636-A	5636	WT-210-0027	872-A
3-50G2	834	672	672-A	WL-5665	C16J/5665	WT-210-0028	3Q5-GT
3AP1	3AP1-A	WL-681/686	5550	GL-5665/C16J	C16J/5665	WT-210-0029	6C5
3BP1	3BP1-A	WT-699	5550	5684	C3JA/5684	WT-210-0031	902-A
3C45	6130/3C45	NL-715/5557	5557	WL-5685	C6J-A/5685	WT-210-0037	117L7/M7-GT
3D22	3D22-A	ML-728	5557	5685/C6J	C6J-A/5685	WT-210-0038	172
3X100A5	2C39-A	WL-735	868	5718-A	5718	WT-210-0040	6X4
3X100A11	2C39-A	WL-741	923	5719-A	5719	WT-210-0042	5Y3-GT
4-125A/6155	6155/4-125A	801	801-A	5762	5762/7C24	WT-210-0043	C3J/5632
4-250A	4-250A/5D22	811	811-A	5794-A	6562/5794-A	WT-210-0044	575-A
4-250A/6156	6156/4-250A	812	812-A	5814	5814-A	WT-210-0045	892
4D21	4-125A/4D21	814/RK47	814	5822	5822-A	WT-210-0048	5U4-G
4X250F	7204/4CX250F	829	829-B	5897	5718	WT-210-0052	2AP1-A
5-125B	4E27A/5-125B	829-A	829-B	5898	5719	WT-210-0053	3AP1-A
5BP1	5BP1-A	UE-830	830-B	5899-A	5899	WT-210-0056	5559
5C21/C6J	C6J/5C21	832	832-A	6014	C1K/6014	WT-210-0057	5560
5CP1	5CP1-A	833	833-A	6014/C1K	C1K/6014	WT-210-0058	676
5CP7	5CP7-A	857	857-B	6095	6005/6AQ5-W/6095	WT-210-0060	OZ4
5D22	4-250A/5D22	866	866-A	GL-6096	5654/6AK5-W/6096	WT-210-0062	5557
5FP7	5FP7-A	866-A/866	866-A	GL-6097	5726/6AL5-W/6097	WT-210-0069	5557
WT-6	6L6	GL868/PJ-23	868	6130	6130/3C45	WT-210-0070	5550
6AG5-WA	6186/6AG5-WA	869-A	869-B	6155	6155/4-125A	WT-210-0071	5551-A
6AK5-W	5654/6AK5-W	872	872-A	6156	6156/4-250A	WT-210-0072	5552-A
6BA6-W	5749/6BA6-W	872-A/872	872-A	6294	6294-A	WT-210-0073	5553-A
6J6-A	6101/6J6-A	T-875-A	575-A	6342	6342-A	WT-210-0074	105
6Q5-G	884	879	2X2-A	6474/1854	6474	WT-210-0077	5727
7BP7	7BP7-A	889	889-A	6562	6562/5794-A	WT-210-0078	172
7C24	5762/7C24	889-R	889R-A	6626	6626/OA2-WA	WT-210-0079	105
7JP1	7VP1	893	893-A	6660	6660/6BA6	WT-210-0081	6SJ7
PJ-8	5556	902	902-A	6661	6661/6BH6	WT-210-0082	6V6
G-9	868	UE-905	805	6662	6662/6BJ6	WT-210-0083	7K7
10Y	801-A	906-P1	3AP1-A	6663	6663/6AL5	WT-210-0084	6N7
BW-11	834	908	908-A	6665	6665-A	WT-210-0084	6N7-GT
RK-11	1623	UE-930	830-B	6669	6669/6AQ5-A	WT-210-0085	50B5
CE11V-C	917	UE-930B	830-B	6677	6677/6CL6	WT-210-0086	833-A
12AU7-WA	6189/12AU7-WA	931	931-A	6678	6678/6U8-A	WT-210-0087	6K8
12DP7	12DP7-A	938	838	6679	6679/12AY7	WT-210-0088	6J5
FG-17	5557	UE-945	845	6680	6680/12AU7-A	WT-210-0088	6J5-GT
WL-17	5557	UE-966	866-A	6681	6681/12AX7	WT-210-0089	6G6-G
RK-20A	804	UE-966-A	866-A	6810	6810-A	WT-210-0090	6C6
CE21 (C-D)	920	UE-967	5557	7027	7027-A	WT-210-0091	OA4-G
PJ-23	868	UE-972	872-A	8016	1B3-GT/8016	FG-235A	5552-A
CE23 (C-D)	923	UE-972-A	872-A	8020/100R	8020	FG-238B	5555
RK-25	802	NU-975-A	575-A	EL-C1K	C1K/6014	WT-245	884
RK-25B	802	NL-1051	5551-A	EL-C3J	C3J/5632	WT-246	2050
RK-28	803	NL-1052	5551-A	EL-C6J	C3J-A/5684	HK-257(B)	4E27/8001
RK-28A	803	NL-1053	5553-B	EL-C6J/A	C6J/5C21	FG-258-A	5553-B
CE29	929	1640	6405/1640	EL-C3J/A	C6J-A/5685	WT-261	6H6
CE29Q	5653	1701	5557	EL-C16J	C16J/5665	WT-262	866-A
CE29R	929	1802-P1	5BP1-A	WT-T-100	6X4	WT-263	84/6Z4
CE-30V (C-D)	925	1849	1850-A	WT-T-102	5Y3-GT	WT-269	OC3
RK-30	800	1850	1850-A	WT-T-103	6H6	WT-270	80
CE-31V (C-D)	919	1852	6AC7	WT-T-104	575-A	WT-270X	5Z3
FG-32	5558	1853	6AB7	WT-T-105	892	FG-271	5551-A
WL-32	5558	1854	6474	WT-T-111	5559	WT-272	5557
RK-33	2C21/1642	2051	2050	WT-T-112	5560	WT-274B	5R4-GY
CE-34	934	2525A5	5BP1-A	WT-T-113	676	WT-294	OD3
CE-34R	934	GL-5550/GL-415	5550	WT-T-114	OZ4	WT-301	83
RK-39	807	WL-5550/681/686	5550	WT-T-115	117N7-GT	UE-303A	203A
CE-41	921	5550/681	5550	WT-T-117	5557	WE-304A	834
CE-42	922	5551	5551-A	WT-T-118	105	F-307A	207
KU-42	6130/3C45	AX-5551/652	5551-A	WT-T-119	172	WT-308	6X5-GT
RK-44	837	GL-5551/FG-271	5551-A	WT-T-122	6SJ7	CE-309	5557
RK-47	814	WL-5551-A/652	5551-A	WT-T-123	6V6	CE-311	3C23
UH-50	834	5552	5552-A	WT-T-124	7K7	UE-317C	217-C
FG-57	5559	GL-5552/FG-235-A	5552-A	WT-T-125	6N7-GT	322A	803
RK-57	805	5552/651	5552-A	WT-T-126	50B5	331A	805
WL-57	5559	5553	5553-B	WT-T-127	833-A	350A	807
RK-58	838	GL-5553/FG-258A	5553-B	WT-T-128	6K8	366-A	866-A
CE-59	5581	5553/655	5553-B	WT-T-129	6J5-GT	WT-377	117Z6-GT
HY-61/807	807	5553-A	5553-B	WT-T-130	6G6-G	ML-381	2C39-A
CE-91R	1P37	5553-B/655	5553-B	WT-T-131	6C6	WT-389	3Q5-GT
FG-95	5560	GL-5555/FG-238B	5555	WT-T-132	OA4-G	WT-390	6C5
CE-98	5582	AX-5555/653-B	5555	WT-T-135	5U4-G	FJ-401	1P29
100R	8020	GL-5556/PJ-8	5556	WT-T-136	2AP1-A	403-A	6AK5
FG-104	5561	GL-5557/FG-17	5557	WT-T-137	3AP1-A	GL-415	5550
WL-104	5561	WL-5557/17	5557	WT-T-149	172	GL-451	8020
WT-210-0001	2D21	AX-5557/FG-17/1701	5557	WT-210-0004	2050		

‡ Except in high-altitude service.

NOTE: For additional replacement data on RCA Tubes for Industry and Communications, refer to the 24-page RCA Interchangeability Directory (Form ID-1020B) which lists 2700 tube type numbers used by 26 manufacturers.

For complete technical information on RCA Tubes, see your RCA Industrial Tube Distributor or write: Commercial Engineering, RCA Tube Division, Harrison, New Jersey.

RCA ELECTRON TUBES

FOR INDUSTRY AND COMMUNICATIONS

RESALE PRICE SCHEDULE • JUNE 29, 1960

INDUSTRIAL RECEIVING/POWER/CATHODE RAY/PHOTO

RCA Type	Dist Resale Price Sched.*
OA2	1.46
OA2WA	3.65
OA3	1.54
OA4G	1.86
OB2	1.44
OB2WA	3.00
OC2	1.50
OC3	1.50
OD3	1.44
1C21	4.15
1EP1	20.50
1EP2	22.85
1L4	1.37
1EP11	22.85
1P21	54.50
1P22	14.75
1P28	27.30
1P29	4.65
1P37	3.75
1P39	2.15
1P40	3.60
1P41	3.80
1P42	13.75
2AP1-A	15.75
2BP1	19.05
2BP11	20.60
2C39A	22.50
2C39WA	30.00
2C40	27.50
2C40A	30.85
2C43	24.55
2D21	1.29
2D21W	2.70
2E24	5.25
2E26	3.85
2F21	240.00
2K26	53.00
2S21	240.00
2X2-A	2.90
3A4	1.25
3A5	1.78
3AP1-A	24.15
3AQP1	23.10
3B25	7.75
3B28	6.00
3BP1-A	16.25
3C23	11.98
3C33	23.80
3C45	(See Type 6130/3C45)
3D22A	21.25
3E22	8.30
3E29	19.00
3JP-1	20.50
3JP7	23.60
3KP1	19.50
3KP4	19.90
3KP7	19.90
3KP11	20.15
3KP16	42.20
3RP1	14.25
3RP1A	20.75
3RP4	20.00
3WP1	24.70
3WP2	27.60
3WP11	27.60
4-65A	25.00
4-125A/4D21	36.00
4-250A/5D22	46.50
4-1000A	132.00
4E27/8001	40.00
4E27A/5-125B	40.00
4X150A	33.15
4X150D	33.15
4X500A	121.00
5ABP1	29.70
5ABP4	39.35
5ABP7	36.40
5ABP11	36.95
5ADP1	28.30
5AHP7	31.85
5AHP7A	38.65
5AUP24	130.00
5AYP4	58.00
5AZP4	125.00
5BP1-A	23.30
5C21	(See C6J/5C21)
5CP1A	21.45
5CP7A	28.60
5CP11A	28.15
5CP12	28.55
5FP4-A	24.35
5FP7-A	21.35
5FP14A	25.80
5FP15A	30.00
5R4-GY	2.03
5R4-GYB	2.03
5UP1	14.25
5UP7	22.90
5UP11	24.05
5WP11	85.80
5WP15	85.80
5ZP16	82.95
6AC7-W	4.20
6AG7-Y	2.65
6AK6	1.40
6AS6	3.43
6AS7G	4.93
6AU6WA	2.90
6F4	7.00
6J4	4.19
6J4WA	5.60
6J6-WA	6.15
6L4	6.45
6SJ7-Y	1.80
6SK7-Y	......
7BP7-A	36.20
7C24	(See Type 5762/7C24)
7CP1	41.35
7CP4	46.80
7MP7	34.35
7NP4	1025.00
7QP4	39.35
7TP4	60.10
7VP1	25.30
7WP4	1050.00
8D21	1650.00
8HP4	42.90
9C21	1285.00
9C22*	1720.00
9C25*	1280.00
10KP7	42.90
10SP4	71.50
12A6	2.30
12AT7WA	2.95
12DP7-A	57.20
12SW7	1.49
12SX7GT	1.72
12SY7	1.95
16ADP-7	100.00
26A6	3.05
26A7-GT	7.00
26C6	2.30
26D6	2.80
83	1.72
105	53.33
172	82.35
207	300.00
217-C	21.17
502-A	2.03
575-A	20.15
579-B	20.50
604/7014	11.80
615/7018	9.75
627	27.00
629	16.50
632-B	36.00
635/7019	13.00
672-A	39.85
673	20.15
676	58.00
677	58.00
710/6011	13.80
714/7021	9.50
716/6855	12.50
760/6858	28.10
800	11.50
801-A	10.90
802	10.90
803	41.80
804	27.20
805	20.10
806	34.25
807	3.00
808	22.85
809	7.40
810	25.65
811-A	6.90
812-A	6.90
813	21.10
814	23.60
815	23.60
816	2.95
826	23.60
827-R	300.00
828	27.60
829-B	19.00
830-B	15.75
832-A	15.90
833-A	47.90
834	19.30
836	10.15
837	8.65
838	20.00
841	4.85
845	20.80
857-B	240.00
860	40.25
861	260.00
865	14.75
866-A	2.90
868	3.75
869-B	160.00
872-A	10.65
878	16.70
880	595.00
884	2.28
885	2.00
889-A	235.00
889R-A	370.00
891	295.00
891-R	460.00
892	290.00
892-R	455.00
893-A	800.00
893A-R	1340.00
902-A	17.95
908-A	24.30
917	5.50
918	4.30
919	5.50
920	6.40
921	3.45
922	3.00
923	3.30
924	3.60
925	3.65
926	3.75
927	3.75
928	5.25
929	2.00
930	3.00
931-A	11.00
931VA	11.55
934	4.15
935	10.80
954	8.25
955	4.95
956	8.75
957	5.95
958-A	9.75
959	10.50
991	.87
1609	14.50
1612	4.15
1613	2.65
1614	3.77
1616	12.60
1619	4.15
1620	6.99
1621	2.60
1622	3.45
1623	4.05
1624	5.75
1625	4.30
1626	2.20
1629	1.90
1631	3.45
1635	2.60
1640	(See Type 6405/1640)
1645A	7.95
1699	
1818-P1	850.00
1818-P11	1350.00
1818-P27	850.00
1819-P22	
1850-A	790.00
1858	430.00
1904	......
1946	13.65
1947	15.10
1949	13.95
1950	10.50
2020	85.00
2022	3.50
2029	9100.00
2039	on request
2041 (3/60)	9000.00
2041A	9000.00
2050	2.37
4009	1755.00
4010	1755.00
4011-A	1375.00
4015	3330.00
4401	1700.00
4401-VI	1400.00
4403	2.85
4404	2.85
4406	11.95
4600	495.00
5550	49.00
5551A	65.00
5552-A	99.00
5553-B	245.00
5555	316.00
5556	21.00
5557	9.50
5558	17.50
5559	23.00
5560	33.00
5561	45.75
5563-A	50.00
5581	3.40
5582	5.50
5583	4.90
5584	5.90
5588	190.00
5592	1415.00
†5604A	570.00
5618	5.42
5632	(See Type C3J/5632)
5636	7.80
5639	6.55
5642	2.42
5651	2.11
5651WA	4.20
5652	6.65
5653	1.95
5654	3.05
5654/6AK5W (Mil-E-1/4A)	3.05
5654/6AK5W/6096	4.35
5665	(See Type C16J/5665)
5670	3.70
5670WA	3.95
5671*	1335.00
5675	14.50
5684	(See Type C3JA/5684)
5685	(See Type C6JA/5685)
5686	3.37
5687	4.25
5690	14.10
5691	8.75
5692	8.25
5693	6.60
5696	2.10
5713	260.00
5718	4.25
5719	3.85
5725	3.80
5726	1.55
5726/6AL5W	1.55
5726/6AL5W/6097	1.55
5727	2.90
5727/2D21W	2.90
5734	20.30
5749	2.20
5749/6BA6W	2.20
5750	3.45
5751	2.95
5751WA	2.95
5762/7C24	230.00
5763	2.53
5770	995.00
5771	660.00
5786	155.00
5814-A	3.35
5814WA	3.35
5819	56.50
5820	1200.00
5822A	116.00
5823	1.72
5825	20.95
5840	6.25
5876	14.95
5876A	20.95
5893	19.15
5896	4.45
5899	6.55
5902	5.75
5915	1.65
5946	125.00
5963	1.54
5964	1.54
5965	1.93
6005	3.93
6005/6AQ5W	3.95
6005/6AQ5W/6095	3.95
6012	7.65
6014	(See Type C1K/6014)
6021	4.80
6026	2.40
6032	122.00
6032-A	130.00
6072	3.90
6073	3.00
6073/OA2	3.00
6074	3.45
6074/OB2	3.45
6080	5.33
6080WA	11.40
6082	5.60
6099	
6101	6.15
6101/6J6WA	6.15
6111	5.45
6112	5.45
6130/3C45	17.80
6136	2.75
6146	5.00
6155/4/125A	36.00
6156/4-250A	46.50
6159	5.00
6161	115.00
6166	1020.00
6166A	1120.00
6173	13.70
6181	925.00
6186	3.85
6186/6AG5WA	3.85
6189/12AU7WA	3.85
6197	3.05
6198	220.00
6198A (4/60)	230.00
6199	52.00
6201	2.95
6205	6.40
6206	8.55
6211	2.40
6217	72.00
6263; 6264A	ea. 19.80
6293	6.40
6236; 6326A	ea. 515.00
6328	11.90
6336A	20.20
6342A	60.10
6350	1.95
6381	130.00
6383	130.00
6405/1640	7.30
6417	2.53
6448	5700.00
6472	12.40
6474	1700.00
6499	380.00
6521	590.00
6524	16.00
6562 (2/60)	7.45
6562/5794A	10.65
6570	9.10
6571	71.50
6626/OA2WA	4.45
6655-A	60.00
6660/6BA6	1.01
6661/6BH6	1.32
6662/6BJ6	1.26
6663/6AL5	.92
6669/6AQ5A	1.05
667/6CL6	1.76
6678/6U8A	1.57
6679/12AT7	1.46
6680/12AU7A	1.19
6681/12AX7	1.22
6694A	5.60
6806	7300.00
6810A	225.00
6814	5.90
6816	60.00
6849	1425.00
6850	16.00
6861	940.00
6865A	1525.00
6866	1480.00
6883	5.00
6884	60.00
6887	1.25
6893	4.45
6894	25.00
6895	25.00
6897	32.15
6903	370.00
6914	145.00
6914A	145.00
6922	4.75
6929	140.00
6949	22,200.00
6952	9770.00
6953	3.00
6957	3.70
7008	1720.00
7029	605.00
7034/4X150A	25.00
7035/4X150D	27.90
7038	205.00
7043	4.60
7044	3.20
7046	570.00
7054	1.45
7055	1.00
7056	1.20
7057	1.95
7058	1.30
7059	1.75
7060	1.95
7061	1.30
7086	220.00
7094	31.95
7102	110.00
7111	1640.00
7117	11.90
7163	2.85
7183	1230.00
7198	2095.00
7200	205.00
7203/4CX250B	46.25
7204/4X250F	46.25
7212	8.40
7213	465.00
7214	485.00
7223	12.90
7224	9.15
7262	310.00
7262A	310.00
7263	615.00
7264	265.00
7265	425.00
7270	19.70
7271	19.70
7295A	1600.00
7315	925.00
7326	410.00
7357	9.15
7358	10.30
7360	3.80
7389A	1600.00
7404	370.00
7412	2.15
7448	925.00
7457	70.00
7467	9.00
7513	1810.00
7533	13.95
7536	2.15
7539	1720.00
7551	3.50
7552	40.85
7553	57.10
7554	42.05
7558	3.50
7580	47.90
7586	3.30
7649	70.00
7650	290.00
7651	305.00
7735	225.00
7746	200.00
7764	115.00
7767	135.00
8000	26.45
8005	16.25
8008	10.65
8013-A	15.55
8020	24.00
8025-A	21.95
9001	5.10
9002	3.60
9003	5.10
9004	4.60
9005	5.00
9006	2.55
C1K/6014	13.10
C3J/5632	13.80
C3JA/5684	14.50
C6J/5C21	28.90
C6JA/5685	29.30
C16J/5665	56.90
MW-4900	325.00

FOOTNOTES

* Optional prices higher in Alaska and Hawaii.

(G) Sales limited to government end use.

Prices shown do not include any State or local sales and similar taxes.
† Price includes Federal Excise Tax.
All prices subject to change or withdrawal without notice.

RAYTHEON

RAYTHEON

RECEIVING AND PICTURE TUBES • SEMICONDUCTOR PRODUCTS
MECHANICAL COMPONENTS • RAYTHEON/MACHLETT POWER TUBES
VOLTAGE REGULATORS • CAPTIVE HARDWARE • MICROWAVE TUBES

INDUSTRIAL CONTROL TUBES

Ignitrons, thyratrons, half-wave rectifiers and full wave rectifiers. Raytheon offers a complete line of more than seventy types to satisfy virtually all control needs.

CATHODE RAY AND STORAGE TUBES

Over sixty types to meet your design or replacement needs. Oscillograph, radar indicator, video recorder, and flying spot scanners. Available in aluminized and standard faceplates, metal and glass types.

MICROWAVE AND POWER TUBES

The Raytheon line includes magnitron oscillators, klystron oscillators, amplitrons, stabilitrons, traveling wave tube amplifiers and backward wave oscillators.

RAYTHEON/MACHLETT POWER TUBES

A complete line available including low, medium and high power transmitting tubes, high frequency oscillators, high voltage rectifiers, television camera tubes, image orthicons, photosensitive and storage tubes.

RECEIVING AND PICTURE TUBES

Raytheon has a full line of the finest quality receiving and picture tubes available. Manufactured under strict quality control standards, these performance proved tubes have complete user confidence based on the sure knowledge of outstanding performance in actual service.

SEMICONDUCTORS

A wide variety of germanium and silicon diode and transistor types for virtually all applications in standard and subminiature packages. NPN and PNP, general purpose switching and entertainment transistors.

SUBMINIATURE TUBES

When reliability is essential, specify Raytheon. Approved subminiatures for guided missiles, computers, communication radar, radiation measuring instruments and many other military applications.

INDUSTRIAL TUBES

Whether for voltage stabilizing, rectifying or controlling, there's a Raytheon Industrial tube to match your toughest requirements. Types available include voltage regulators, low power transmitting tubes and special purpose tubes.

RELIABLE AND RUGGED TUBES

Designed and constructed to assure reduced vibration output after shock, tighter limits and greater resistance to shock, fatigue and other environmental factors, these tubes mean top performance and reliability.

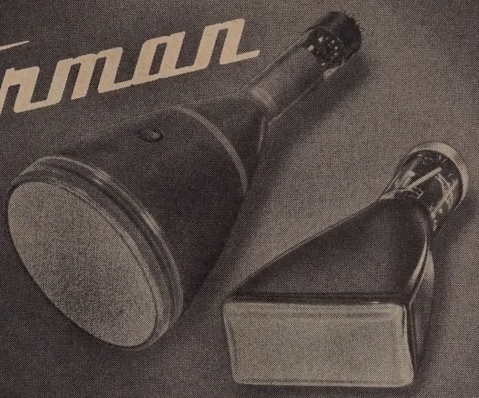
RAYTHEON

Excellence in Electronics

See appropriate section for full listing of Mechanical Components and Voltage Regulators. For complete information on all products write:

RAYTHEON COMPANY • Distributor Products Division, Dept. RM6 • Westwood, Massachusetts

SEE Waterman FIRST FOR YOUR CATHODE RAY TUBE NEEDS



TYPICAL CHARACTERISTICS OF RAYONIC® CATHODE RAY TUBES

TUBE TYPE		PHYSICAL DATA			TYPICAL OPERATING DATA				PRICE* P1
					ANODE#3	ANODE#2	DEFL. Factor V/IN.		
TUBE*	JAN	FACE	LEN.	BASE†	VOLTS	VOLTS	H	V	PHOSPHOR
2BP1		2″ Round	7⅝″	12 Pin SD		1000	135	87	$18.75
2FP1**		2″ Round flat	7⅝″	8 Pin N		1000	60	34	20.05
3ACP1A		3″ Round flat	10″	12 Pin MD	4000	2000	190	148	25.60
3AHP1		1½″ x 3″	9⅛″	12 Pin SD		1000	86	30	29.00
3AQP1		3″ Round	9⅛″	12 Pin SD		1000	86	30	23.10
3ASP1		1½″ x 3″ flat	8¹⁵⁄₁₆″	8 Pin N		2000	80	33	32.00
3JP1	3JP1,2,7	3″ Round	10″	12 Pin MD	3000	1500	150	111	25.50
3KP1		3″ Round	11½″	11 Pin MM		1500	89	67	23.50
3MP1		3″ Round	8″	12 Pin SD		1000	130	125	25.50
3RP1	3RP1	3″ Round	9⅛″	12 Pin SD		1000	86	61	17.65
3RP1A	3RP1A	3″ Round flat	9⅛″	12 Pin SD		1000	86	61	24.25
3SP1	3SP1	1½″ x 3″	9⅛″	12 Pin SD		1000	86	61	26.70
3WP1		3″ Round flat	11½″	12 Pin SD		1500	69	47	24.70
3XP1	3XP1	1½″ x 3″	8⅞″	Loctal		2000	80	33	34.50
3YP1		1½″ x 3″	7″	Loctal		1000	80	52	30.00
5ABP1/5ADP1	5ADP1	5″ Round flat	16¾″	12 Pin MD	3000	1500	46	33	35.00
5BTP1		5″ Round flat	12″	12 Pin SD	1600	800	51	27	39.25
5DEP1		5″ Round	14¾″	12 Pin SD		1500	42	24	14.25
5UP1		5″ Round	14¾″	12 Pin SD		1500	50	41	14.25

NOTE: Most tubes also available with integral magnetic shield.
*P2, P7 and P11 phosphors also available at slight additional cost.
**Includes integral magnetic shield.

†SD—Small Duodecal; MD—Medium Diheptal; MM—Medium Magnal; N—Neo-eightar

Prices and specifications subject to change without notice.

CATHODE RAY TUBE SHIELDING & MOUNTING KITS

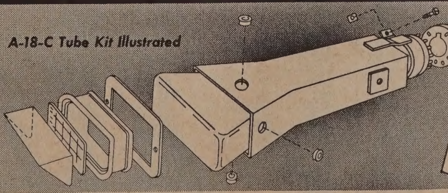
Ideal for prototypes and small production runs

Stock Number	Applicable to	Price
A-18-C	3SP or 3AHP	$23.90
A-18-J	3RP or 3AQP	23.90
A-18-K	Two 3SP or 3AHP	23.90
A-18-L	3XP	26.90
A-18-M	3MP	23.90
A-18-R	3JP	39.90
A-18-T	Two 3XP	26.90
A-18-V	3YP	23.90
A-18-W**	5BTP	19.90

**Less Escutcheon

NOW... 3ATP1 $60.00

A-18-C Tube Kit Illustrated



See page for Waterman Oscilloscopes

Engineering data sheets available with complete descriptions

WATERMAN PRODUCTS CO., INC.

Philadelphia 25, Pa.
Cable Address: Poketscope, Phila. 25, Pa.

WATERMAN PRODUCTS

SYLVANIA INDUSTRIAL TUBES

Type	Sugg. User Price
C1K/6014	$ 12.90
C3J/5632	13.80
C3J/A/5684	14.50
C6J/5C21	28.10
C6J/A/5685	29.00
C16J/5665	56.90
*OA2	1.46
GB-OA2WA	3.65
OA3	1.54
*OA4G	1.86
OA5	6.96
*OB2	1.44
***OB2WA**	3.00
GB-OB2WA	3.00
*OB3	1.65
*OC3	1.50
*OD3	1.44
VG1A	15.04
1AD5 (†)	2.13
*1B24A	21.35
*1B37A	8.80
*1B44	24.55
*1B63A	29.55
1C/3B22	10.85
1D21/SN4	7.10
1P39	2.15
1P40	3.60
1S6 (†)	1.54
2C36	38.72
*2C37	39.32
2C39A	22.50
2C39B	32.15
2C39WA	30.00
2C40	29.30
2C41	26.50
2C43	24.55
2C51	3.65
2C53	9.45
2D21	1.25
2D21W	2.70
2E24	5.25
2E26	3.85
*2J42	122.70
*2J42H	129.80
2X2A	2.90
3A4	1.25
3A5	1.78
3B28	6.00
3C23	11.98
3CX100A5	32.15
3E29	19.00
3X2500A3	198.00
3X2500F3	198.00
4-65A	25.00
4-125A	36.00
4X150A	33.15
4X150D	38.95
4X150G	54.00
4-250A	46.50
4X250B	42.50
4-400A	48.00
4X500A	121.00
4-1000A	132.00
SN5	12.50
5R4GY	2.03
***5Y3WGTA**	4.05
GB-5Y3WGTA	4.05
6AD4 (†)	3.50
*6AJ5	3.85
6AK4 (†)	3.10
*6AN6	3.75
6AS6	3.43
6AS7G	4.93
***6AU6WA**	2.90
***6AU6WB**	2.90
6AZ5 (†)	3.85
6BA4	32.37
6BA4 (RT 469)	41.10
6BA5 (†)	4.45
***6BF7W**	4.20
*6D4	2.85
6DJ8	2.05
*6J4	4.19
***6J4WA**	5.60
GB-6J4WA	5.60
***6J6WA**	5.60
***6SJ7WGT**	2.55
GB-6SJ7WGT	2.55
***6SL7WGT**	3.15
GB-6SL7WGT	3.15
***6SN7WGT**	2.35
GB-6SN7WGT	2.35
***6SN7WGTA**	4.90
***6V6GTY**	1.45
***6X4W**	1.60
6X4WA	2.85
GB-6X4WA	2.85
6X5WGT	1.55
GB-6X5WGT	1.55
***7AK7**	7.45
GB-7AK7	7.45
7C25	170.00
***7F8W**	6.35
GB-7F8W	6.35
***12AT7WA**	3.05
12AY7	2.45
***28D7**	2.55
***28D7W**	$ 10.40
GB-28D7W	10.40
FG-97	62.00
102A	176.00
141	110.00
142	74.00
148	152.00
199	350.00
212E	210.00
232B	670.00
241B	210.00
250TH	33.00
279A	415.00
298A	1485.00
SA-309	20.00
SA-309A	20.85
322	25.25
S-340	56.00
WG342	27.60
342A	670.00
342AA	775.00
354	1750.00
356	635.00
357B	170.00
WG369	25.30
379A	440.00
WG382	9.60
GB-407A	5.90
GB-408A	4.95
S-413	15.00
414	135.00
WG416	21.50
481B	10.90
502A	2.03
GM514	58.40
TW534	1150.00
TW538	3220.00
575A	22.15
579B	18.00
WG586	11.10
TW591	3220.00
S-597	26.75
604	11.86
604L	13.00
606	20.80
606L	21.90
610	28.00
TW613	1150.00
615	9.75
TW620A	1825.00
TW622	2640.00
BW623	1040.00
624	72.00
627	27.00
628	41.00
629	16.50
632B	33.00
635	13.00
635L	13.50
642	17.00
672A	39.85
673	22.15
676	58.00
677	58.00
678	47.00
S696	23.15
S706	15.00
740	19.40
740L	21.40
760	28.10
760L	31.70
801A	10.90
*807	3.00
810	25.65
811A	6.90
812A	6.90
813	21.10
815	23.60
816	2.95
828	27.60
829B	19.00
832A	15.90
833A	47.90
S836	16.70
837	8.65
S838	16.70
S840	20.00
845	20.80
857B	218.50
860	40.20
861	245.00
866A	2.90
869B	138.00
872A	10.65
880	595.00
884	2.28
885	2.00
891	295.00
891R	460.00
892	290.00
892R	455.00
893A	880.00
893AR	1340.00
921	3.45
922	3.00
923	3.30
927	3.75
929	$ 2.00
930	3.00
931A	11.00
R1111	12.70
R1111M	22.50
R1130B (1B59)	20.40
R1131C	19.20
R1166	19.60
R1168	24.00
R1169	21.50
GB-1216	2.38
GB-1217	1.55
1219/5670	3.70
1222A	2.45
1229	6.40
1237	9.86
1247	6.00
1273 (†)	1.50
1280 (†)	1.50
1319	115.00
1614	3.77
1616	12.60
1620/6J7	6.99
1622	3.45
1624	5.75
BW1757	6350.00
BW1779	9200.00
2050	2.37
TW4002	1670.00
TW4006	2300.00
TW4007	2080.00
SP4019	3.09
M4063	1643.00
M4064	1410.10
M4155A	1410.10
M4163	1528.10
M4164	1652.00
R4306	4.35
R4307	5.60
R4330	29.10
R4336	64.20
R4340	60.50
R4350	29.10
5530	330.00
5530-H	330.00
5531	630.00
5541	500.00
5550/681	49.00
5551A/652	65.00
5552A	99.00
5553B/655	245.00
5557	9.50
5558	17.50
5559	23.00
5560/FG95	33.00
5575/100	235.00
5576/200	266.00
5604	600.00
5606	288.00
5619	443.00
***5636**	7.80
***5636A**	7.80
***5639**	6.55
***5639A**	6.55
***5641**	7.55
***5641A**	7.55
5642 (†)	2.42
***5643**	9.05
***5644**	9.90
***5644A**	9.90
***5647**	8.65
***5647A**	8.65
5651	1.90
GB-5654	3.05
***5654/6AK5W**	3.05
***5654/6AK5W/6096**	4.35
5658	595.00
5666	280.00
5667 (889RA)	370.00
5668	330.00
5669	490.00
***5670**	3.70
GB-5670	3.70
***5670WA**	3.95
5679	1.35
5680	190.00
5681	1875.00
5682	2625.00
5687	4.00
5691	8.75
5692	8.25
5693	6.60
5696	1.90
5713	270.00
***5718**	4.25
***5718A**	4.25
***5719**	3.85
***5719A**	3.85
***5722**	6.40
GB-5725	3.80
***5725/6AS6W**	3.80
GB-5726	1.55
***5726/6AL5W**	1.55
***5726/6AL5W/6097**	1.55
GB-5727	2.90
***5727/2D21W**	2.90
5736	$ 190.00
GB-5749	2.20
***5749/6BA6W**	2.20
GB-5750	3.45
***5751**	2.95
GB-5751	2.95
***5751WA**	2.95
5762/7C24	230.00
5763	2.53
5764	39.32
5765	39.32
5767	44.77
*5768	32.37
5789	914.50
5796	17.25
***5814A**	3.35
GB-5814A	3.35
***5814WA**	3.35
5820	1200.00
5822A	116.00
5823	1.72
***5840**	6.25
***5840A**	6.25
5845	9.25
5855	70.00
5879	1.95
5881	3.50
5894	24.75
***5896**	4.45
***5896A**	4.45
***5899**	6.55
***5899A**	6.55
***5902**	5.75
***5902A**	5.75
***5903**	12.35
***5904**	10.60
***5905**	14.85
***5906**	10.70
***5907**	12.35
***5908**	19.80
***5916**	24.75
***5931**	6.80
GB-5931	6.80
***5932**	11.30
GB-5932	11.30
***5933**	12.35
GB-5933	12.35
***5933WA**	16.50
5934	20.50
5936	1145.00
***5963**	1.54
GB-5963	1.54
GB-5964	1.54
GB-5965	1.95
5966	38.00
***5977**	6.55
***5977A**	6.55
5986	1050.00
***5987**	11.10
5996	210.00
GB-6005	3.95
***6005/6AQ5W**	3.95
***6005/6AQ5W/6095**	3.95
6009	228.00
6011	13.00
6012	7.65
***6021**	4.80
***6021A**	4.80
6027 (2J42A)	165.20
6027H	212.40
6080	5.33
GB-6101	5.35
***6110**	8.05
***6111**	5.45
***6111A**	5.45
***6112**	5.45
***6112A**	5.45
***6135**	2.40
GB-6135	2.40
GB-6136	2.90
GB-6145	12.45
6146	5.00
6159	5.00
6163	28.40
6164	64.90
6166	1020.00
GB-6186	3.85
GB-6189	3.70
***6189/12AU7WA**	3.70
6198	230.00
GB-6201	2.95
***6205**	6.40
***6205A**	6.40
***6206**	8.55
***6206A**	8.55
GB-6211	2.35
6217	72.00
6256	240.00
6257	252.00
6258	280.00
***6308**	8.25
GB-6350	2.35
***6352**	9.85
6366	170.00
6367	185.00
6399	170.00
6400	199.00

SYLVANIA INDUSTRIAL TUBES

Type	Sugg. User Price
6420	$ 360.00
6421	425.00
6421-F	440.00
6422	385.00
6423	495.00
6423-F	510.00
6424	455.00
6425	580.00
6425-F	600.00
6426	675.00
6427	830.00
6476	13.37
6476A	14.95
6481 (RT434)	38.30
6483	3.09
6493	805.00
6496	1065.00
6503	65.82
6550 (†)	4.95
6551	1032.00
6559	800.00
6576	680.00
6591	20.55
6623	205.00
6660/6BA6	1.05
6661/6BH6	1.35
6662/6BJ6	1.30
6663/6AL5	.95
6669/6AQ5A	1.05
6677/6CL6	1.76
6678/6U8A	1.57
6679/12AT7	1.50
6680/12AU7	1.20
6681/12AX7	1.25
6696	1090.00
6697	1310.00
6698	1810.00
6699	1270.00
6752	750.00
6753	805.00
6788	11.95
6799	2537.00
6800	370.00
6801	535.00
6802	11.43
6807	29.40
GB-6814	5.90
6846	3.02
6873	10.59
6874 (M-561)	1239.00
6879 (CT-854)	13.37
6883	5.00
6887	1.25
GB-6888	6.90
6902	6350.00
6909 (CT-923)	11.43
6910 (CT-924)	13.37
***6943**	12.35
***6944**	12.35
***6945**	12.35
***6946**	12.35
***6947**	12.35
***6948**	12.35
7006	1050.50
7007	1120.00
7038A	230.00
GB-7044	3.20
7072	2080.00
7098	1239.00
***7137**	7.10
GB-7137	7.10
7155	13.37
7291A	375.00
GB-7327	12.45
*7503	1239.00
8008	10.65
8020	24.00
9001	5.10
9002	3.60
9003	5.10

KLYSTRONS**

Type	Sugg. User Price
SK220A (K4033)	160.00
SK220B (K4160)	160.00
SK220C (K4034)	160.00
SK220D (K4161)	$ 160.00
SK220E (K4162)	160.00
SK220F (K4035)	160.00
SK220G (K4202)	160.00
SK220Z (K4036)	360.00
SK222A (K4183)	165.00
SK222B (K4184)	165.00
SK222C (K4185)	165.00
SK222D (K4186)	165.00
SK222E (K4188)	165.00
SK222F (K4189)	165.00
SK222G (K4187)	165.00
SK222Z (K4182)	365.00
K839B	143.75
K840B	143.75
K841B	143.75
K4009	202.00
K4010	202.00
K4011	202.00
K4012	202.00
K4013	202.00
K4014	202.00
K4015	202.00
K4208	202.00
6468	202.00
6468/K526	202.00
6469	202.00
6469/K470	202.00
6470	202.00
6470/K524	202.00
*6BL6	43.75
*6BM6	61.50
*6BM6A	75.00
5836	78.50
5837	78.50
6974/K709	403.00

**In quantities of 1-9

FERRITE ISOLATORS

Type	Sugg. User Price
FD-151P	425.00
FD-492	225.00
FD-502	225.00
FD-512	225.00
FD-522	220.00
FD-531A	288.00
FD-911	235.00
FD-1522W	270.00

INDUSTRIAL and MILITARY CATHODE RAY TUBES

Type	Sugg. User Price
2AP1A	15.90
2BP1	18.65
2BP11	18.65
*3ACP1A	28.60
*3ACP2A	28.60
*3ACP7A	28.60
*3ACP11A	28.60
3ACP12A	28.60
*3ADP1	39.90
3ADP2	39.90
3ADP7	42.00
3ADP11	39.90
3AP1A	21.25
3ASP1	32.00
3ASP2	32.00
3ASP11	32.00
3BEP1	37.00
3BGP1	50.40
3BGP2	50.40
3BGP7	50.40
3BGP11	50.40
3BMP1	47.05
3BMP2	47.05
3BMP7	48.75
3BMP11	47.05
3BMP12	47.05
*3BP1A	17.50
*3FP7A	27.50
*3JP1	21.45
*3JP2	24.15
*3JP7	24.15
*3JP12	30.80
*3KP1	19.05
3KP4	$ 19.05
3KP7	19.50
3KP11	19.75
3KP16	41.30
3MP1	21.80
*3RP1	13.95
3RP1A	20.30
3RP4	19.60
*3SP1	25.20
3SP2	25.20
3SP4	25.20
3SP5	25.20
3SP11	25.20
*3WP1	26.60
3WP2	27.65
3WP11	27.65
4MP1	72.25
5ABP1	29.05
5ABP4	38.50
5ABP7	35.70
5ABP11	37.80
*5ADP1	27.65
*5ADP2	31.85
*5ADP7	35.00
5ADP11	35.00
5AHP2	40.50
5AHP2A	38.85
*5AHP4A	38.85
*5AHP7	31.15
5AHP7A	38.85
5AHP14	31.15
5AHP14A	38.85
5AHP19	31.15
5AHP19A	38.85
5AHP25	31.15
5AHP25A	38.85
5AMP1	47.60
5AMP2	47.60
5AMP7	49.00
5AMP11	49.00
5AQP1	35.00
5AQP1A	35.00
5AQP2	35.70
5AQP2A	35.70
5AQP7	39.90
5AQP7A	39.90
5AQP11	35.70
5AQP11A	35.70
5AXP4	19.75
5BCP1	37.00
5BCP4	37.00
5BCP7	38.70
5BCP11	38.70
5BGP1	92.50
5BGP2	92.50
5BGP5	92.50
5BGP7	92.50
5BGP11	92.50
5BGP15	92.50
5BHP1	92.50
5BHP2	92.50
5BHP5	92.50
5BHP7	92.50
5BHP11	92.50
5BHP15	92.50
5BNP16	22.00
*5BP1A	23.30
*5CP1A	21.70
*5CP1B	31.80
*5CP7A	30.80
5CP11A	28.00
*5CP12	30.80
5CVP1	142.80
5CVP7	142.80
5CVP19	142.80
5FP4A	26.20
*5FP7A	22.75
5FP11A	31.45
*5FP14A	22.75
5RP1A	119.00
5RP2A	119.00
5RP4A	119.00
5RP5A	119.00
5RP7A	119.00
5RP11A	119.00
*5UP1	13.65
5UP7	$ 24.65
5UP11	25.20
5WP11	101.00
5WP15	101.00
5ZP15	115.00
5ZP16	112.00
5ZP24	115.00
7ABP7	38.85
*7ABP7A	48.65
7ABP14	46.70
7ABP14A	55.55
7ABP19	47.80
7ABP19A	46.70
7AEP1	52.05
7AEP2	52.75
7AEP7	53.75
7AEP11	52.75
7AUP4	29.40
7AUP7	31.10
7BP2A	41.05
*7BP7A	36.45
7JP1/7VP1	29.00
7JP7	35.00
7MP7	35.70
7MP14	43.60
7UP7	37.80
7UP25	38.00
8CP1	37.80
8CP2	48.30
8CP4 (†)	48.30
8CP5	48.30
8CP7	40.30
8CP11	48.30
8FP4	43.15
8KP4	23.25
8XP4	22.00
8YP4	29.50
10AKP7	45.40
*10KP7	38.50
*10KP7A	47.80
10KP7B	58.80
10NP11	137.50
10SP4	70.00
10VP7	53.65
10VP15	49.00
*10WP7	32.85
10WP7A	37.00
10WP14	50.40
10WP14A	58.80
10WP19	50.40
10WP19A	50.40
12ABP7	60.00
12ABP7A	47.80
12ABP14	58.80
12ABP14A	68.50
12ABP19	68.50
12ABP19A	75.60
*12DP7A	61.60
12DP7C	82.65
12SP7	38.80
12SP7B	60.50
*12SP7D	57.70
SC-2558-P1	135.00
SC-2558-P4	135.00
SC-2558-P7	135.00
SC-2782	420.00
SC-2809	920.00
SC-2812-P1	35.05
SC-2830-P1	50.50
SC-2854	49.00

NOTE: Other screen phosphors for Industrial and Military Cathode Ray Tubes are available upon request.

Types listed in Bold Face are Sylvania Gold Brand Tubes.

GB – Manufactured to Commercial and Industrial Specifications.

*Indicates Military Type Approval.

(†) Federal Excise Tax included in price.

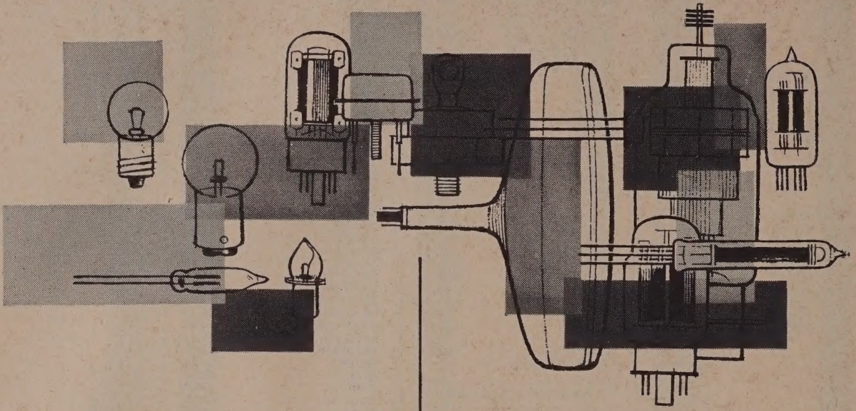
For high quality Industrial or Entertainment Receiving Type Tubes and Picture Tubes — Specify Sylvania

ELECTRONIC TUBES DIVISION · SYLVANIA ELECTRIC PRODUCTS INC., NEW YORK, N.Y.

SYLVANIA

Subsidiary of ***GENERAL TELEPHONE & ELECTRONICS***

TUNG-SOL
ELECTRONIC COMPONENTS



Tung-Sol/Chatham Military, Industrial, Special-Purpose Tubes

In today's exacting military, industrial and commercial applications where there can be no compromise in quality and reliability, Tung-Sol/Chatham tubes deliver peak-efficiency, trouble-free, long-life operation. From subminiature to mammoth, these tubes meet the toughest military specifications.

- RECTIFIERS
- VOLTAGE REFERENCE TUBES
- TELEPHONE TUBES
- TWIN TRIODES
- HYDROGEN THYRATRONS
- VOLTAGE REGULATORS
- POWER PENTODES
- THYRATRONS
- PENTODES
- VHF TRIODES
- POWER TRIODES
- INDICATOR THYRATRONS
- TRANSMITTING TUBES

Tung-Sol's dynamic combination of R&D capabilities and unexcelled production standards enable Tung-Sol component experts to fulfill the most demanding SPECIAL PURPOSE TUBE requirements. If you have special socket needs, Tung-Sol/Chatham will analyze your requirements and design and manufacture a high performance tube to meet your specifications.

Tung-Sol Entertainment Tubes

Tung-Sol entertainment tubes fulfill the peak-quality demands of modern entertainment electronics. No matter what the requirement . . . cathode ray, series string, hybrid auto radio, TV, stereo, hi-fi and radio . . . Tung-Sol tubes provide an ideal combination of the most sought-after characteristics. Tung-Sol is also packing more of its audio tube line in factory-matched pairs. Dynamically balanced 6550's, 5881's, 6V6GTA's, and 6BQ5's bring you the finest in full-fidelity reproduction.

Tung-Sol Germanium Transistors

For audio, industrial, commercial or military applications, there's a Tung-Sol transistor that offers distinct advantages over similar competitive types. Exclusive design features plus Tung-Sol's unexcelled quality control combine to give designers unmatched operational reliability and broader design flexibility. Wide interchangeability permits the use of Tung-Sol transistors for most any application. Tung-Sol transistors are produced in one of three standard JEDEC packages: TO-5 (medium power); TO-3 (power); TO-36 (high power).

Tung-Sol Silicon Rectifiers

Tung-Sol Silicon Rectifiers assure the utmost in uniformity and electrical and mechanical stability. Ranging from 250 ma to 100 amps, these outstanding units operate with undiminished reliability over a −65 to +150° C case temperature range. Tung-Sol silicon rectifiers feature low forward voltage drop . . . low reverse leakage . . . low thermal resistance . . . and high surge handling ability. They are built with extra heavy ruggedness for rough-and-tough industrial and military applications.

Tung-Sol Miniature Lamps

There's a Tung-Sol miniature lamp to provide the exact type of illumination your product must have. Initial equipment manufacturers have long learned to depend upon Tung-Sol not only to supply lamps of superior quality but also to meet the strictest delivery schedules.

Tung-Sol Electric Inc.
Newark 4, N. J.

SALES OFFICES: Atlanta, Ga.; Columbus, Ohio; Culver City, Calif.; Dallas, Texas; Denver, Colo.; Detroit, Mich.; Irvington, N. J.; Melrose Park, Ill.; Newark, N. J.; Philadelphia, Pa.; Seattle, Wash. Canada: Toronto, Ontario.

ts TUNG-SOL®

Check the following pages for complete listings ►

TUNG-SOL

Industrial tubes • Special purpose tubes • Entertainment tubes
Picture tubes • Semiconductors • Lamps

Industrial & Special Purpose Tubes

SGR-2
0A2
0A2WA
0A3
0A4G
0B2
0B2WA
0B3
0C3
0C3W
0D3
0D3W
1AD4
1AH4
1AJ5
1L4
1P39
1P40
1S22
1V6
1Z2
2C51
2D21
2D21W
2E22
2E22 Mil Spec.
2E24
2E26
2X2A
3A4
3A5
3B25
3B28
3B29
3C23
4B32
4X150A
5A6
5AT4A
5R4GYA
5R4WGA
5R4WGB
6AJ5
6AK5WB
6AR6
6AS6
6AS7G
6AU6WA
6AU6WB
6D4
6H6WGT
6J4
6J4WA
6L6WGB
6SC7GTY
6SL7WGT
6SN7WGT
6SN7WGTA
6SU7GTY
6X4W
12A6
12AT7WA
12AY7
25Z6WGT
26E6WG
26Z5W
53
83
TS-231
TS-239
TS-300
313C
323B
338A
393A
394A
395A
396A
407A
408A
426A
TS-433C
481B
576A
579B
583
610
624
627
629
632B
672A
676
677
678
807
810
811A
812A
813
829B
857B
866A
869B
872A
884
885
892
921
927
CH-1046
CH-1068
CH-1122
1257
1258
1620
2050
2050W
2399
5517
5544
5550
5551A
5552A
5553B
5555
5558
5560
5594
5636
5639
5642
5643
5651
5651WA
5654
5654/6AK5W
5654/6AK5W/6096
5670
5670WA
5672
5676
5678
5685/C6JA
5687
5687WA
5691
5692
5693
5696
5725
5725/6AS6W
5725/6AS6W/6187
5726
5726/6AL5W
5726/6AL5W/6097
5727/2D21W
5736
5749
5749/6BA6W
5751
5751WA
5763
5783
5783WA
5796
5814
5814A
5814WA
5822A
5823
5829WA
5840
5844
5851
5875
5879
5881
5881 (Matched Pair)
5896
5948/1754
5948A
5949/1907
5949A
5963
5964
5965
5966
5998
6000
6005
6012
6021
6028/408A
6074
6080
6080WA
6080WB
6082
6098/6AR6WA
6111
6136
6146
6188/6SU7WGT
6189/12AU7WA
6201
6202
6211
6245
6293
6327
6336A
6345
6350
6388/443A
6394A
6485
6520
6528
6542
6550
6550 (Matched Pair)
6627/0B2WA
6660/6BA6
6661/6BH6
6662/6BJ6
6663/6AL5
6669/6AQ5
6678/6U8
6679/12AT7
6680/12AU7
6681/12AX7
6883
6893
6901
7099
7105
7190
7191
7192
7236
7240
7241
7242
7323
7400
7401
9001
9002
9003

Entertainment Tubes

0Z4
0Z4G
1A4P
1A6
1A7GT
1AB5
1AX2
1B3GT
1B4P
1B5
1B7GT
1C5GT
1C6
1C7G
1D5GP
1D7G
1DN5
1E5GP
1E7G
1E7GT
1F4
1F5G
1G3GT/1B3GT
1H5GT
1H6G
1J3GT
1J6G
1K3
1L6
1LA4
1LA6
1LH4
1LN5
1N5GT
1P5GT
1R5
1S4
1S5
1T4
1U4
1U5
1V2
1X2B
2A3
2AF4
2AF4A
2BN4A
2CY5
2EN5
3A2
3A3
3A8GT
3AF4A
3AL5
3AU6
3AV6
3B2
3BA6
3BC5
3BE6
3BN4
3BN6
3BU8
3BY6
3BZ6
3CB6
3CF6
3CS6
3CY6
3DK6
3DT6
3Q4
3Q5GT
3S4
3V4
4AU6
4BC5
4BC8
4BN6
4BQ7A
4BS8
4BU8
4BZ6
4BZ7
4CB6
4CS6
4CY5
4DE6
4DT6
5AM8
5AN8
5AQ5
5AS4A
5AS8
5AT8
5AU4
5AV8
5AW4
5B8
5BE8
5BK7A
5BQ7A
5BR8
5BT8
5CG8
5CL8A
5CQ8
5CZ5
5DH8
5EA8
5J6
5T8
5U4GB
5U8
5V3
5V4GA
5V6GT
5X4G
5X8
5Y3GT
5Y4GT
5Z3
5Z4
6A7
6A8
6AB4
6AC7
6AF3
6AF4
6AF4A
6AG5
6AG7
6AH4GT
6AH6
6AK5
6AK6
6AL5
6AL7GT
6AM4
6AM8A
6AN8
6AQ5A
6AQ6
6AQ7GT
6AR5
6AS5
6AS8
6AT6
6AT8A
6AU4GTA
6AU5GT
6AU6
6AU6A
6AU7
6AU8
6AV5GA
6AV6
6AW8A
6AX4GT
6AX5GT

TUNG-SOL

Industrial tubes • Special purpose tubes • Entertainment tubes
Picture tubes • Semiconductors • Lamps

Entertainment Tubes (cont.)

6AX8
6AZ8
6B8
6BA6
6BA7
6BA8A
6BC5
6BC8
6BD6
6BE6
6BF5
6BF6
6BG6GA
6BH6
6BH8
6BJ6
6BJ7
6BJ8
6BK4
6BK5
6BK7A
6BK7B
6BL7GTA
6BN4A
6BN6
6BN8
6BQ5/EL84
65Q5 (Matched Pair)
6BQ6GTB/6CU6
6BQ7A
6BR8A
6BS8
6BU8
6BV8
6BW4
6BW8
6BX7GT
6BY5GA
6BY6
6BY8
6BZ6
6BZ7
6BZ8
6C4
6C5
6CB5A
6CB6
6CB6A
6CD6GA
6CE5
6CF6
6CG7
6CG8
6CG8A
6CH8
6CL6
6CL8A
6CM6
6CM7
6CM8
6CN7
6CQ8
6CR6
6CS6
6CS7
6CU5
6CU8
6CX8
6CY5
6CY7
6CZ5
6D8G
6DA4
6DB5
6DB6
6DC6
6DE4
6DE6
6DE7
6DG6GT
6DK6
6DN6
6DN7
6DQ5
6DQ6A
6DQ6B
6DR7
6DS5
6DT5
6DT6
6E5
6EA7
6EA8
6EB8
6EH5
6EM5
6ES5
6EU8
6EW6
6F5
6F6
6F6G
6F6GT
6FV6
6GH8
6H6
6J5
6J5GT
6J6A
6J7
6K6GT
6K7
6K8
6L6GB
6L7
6L7G
6N7
6P5GT
6Q7
6Q7GT
6S4A
6S7G
6S8GT
6SA7
6SA7GT
6SB7Y
6SC7
6SF5
6SF5GT
6SF7
6SG7
6SH7
6SJ7
6SK7
6SK7GT
6SL7GT
6SN7GTB
6SQ7
6SQ7GT
6SR7
6SS7
6T4
6T8A
6U5
6U8
6U8A
6V3A
6V6
6V6GTA
6V6GTA (Matched Pair)
6W4GT
6W6GT
6X4
6X5GT
6X8
6Y6G
6Y6GA
7A4
7A6
7A7
7A8
7AD7
7AF7
7AG7
7AU7
7B6
7B7
7B8
7C5
7C6
7C7
7F7
7F8
7H7
7L7
7N7
7Q7
7V7
7W7
7Y4
7Z4
8AU8
8AW8A
8BQ5
8CG7
8CM7
8CN7
8CX8
8EB8
9BR7
9CL8
9U8A
10C8
10DE7
11CY7
12AB5
12AC6
12AD6
12AE6
12AE6A
12AF3
12AF6
12AJ6
12AL5
12AL8
12AQ5
12AT6
12AT7
12AU6
12AU7A
12AV5GA
12AV6
12AV7
12AX4GTA
12AX7
12AX7A
12AY7
12AZ7A
12B4A
12BA6
12BA7
12BD6
12BE6
12BF6
12BH7A
12BK5
12BL6
12BQ6GA/12CU6
12BQ6GTB/12CU6
12BR7
12BV7
12BY7A
12BZ7
12C5/12CU5
12CA5
12CN5
12CR6
12CT8
12CX6
12D4
12DB5
12DE8
12DL8
12DQ6A
12DS7
12DT5
12DV8
12DZ6
12EG6
12EK6
12EL6
12EZ6
12F8
12FM6
12FR8
12FX8
12H6
12J5GT
12J7GT
12J8
12K5
12K7GT
12L6GT
12R5
12S8GT
12SA7
12SA7GT
12SF5GT
12SF7
12SG7
12SJ7
12SJ7GT
12SK7
12SK7GT
12SL7GT
12SN7GTA
12SQ7
12SQ7GT
12U7
12V6GT
12W6GT
12X4
12Z3
13DE7
14A5
14A7
14AF7
14B6
14E6
14F7
14Q7
14R7
14S7
14W7
14Y4
17AX4GT
17BQ6GTB
17C5
17D4
17DQ6A
17H3
17L6GT
17W6GT
18A5
18FW6
18FY6
19
19AU4GTA
19BG6G
19T8
19X8
25AV5GA
25AX4GT
25BK5
25BQ6GT
25BQ6GTB/25CU6
25C5
25CA5
25CD6GB
25DN6
25EH5
25L6GT
25W4GT
25Z5
25Z6GT
26
31
32L7GT
33
34
35
35A5
35B5
35C5
35L6GT
35W4
35Y4
35Z3
35Z5GT
38
42
45Z3
46
47
50
50A5
50B5
50C5
50EH5
50L6GT
50X6
50Y6GT
50Y7GT
55
70L7GT
75
80
81
117L/M7GT
117Z3
117Z6GT
5881
5881 (Matched Pairs)
6550
6550 (Matched Pairs)

TUNG-SOL

Industrial tubes • Special purpose tubes • Entertainment tubes
Picture tubes • Semiconductors • Lamps

Picture Tubes

7JP4
10ABP4B
10BP4A
10HP4
10MP4A
12KP4A
12LP4A
12UP4A
12UP4B
12VP4A
14AJP4
14AUP4
14BP4/14CP4/14EP4
14CP4
14EP4
14NP4A/14SP4
14QP4
14QP4A
14RP4A
14SP4
14WP4
14XP4A
16AP4A
16EP4A
16GP4B
16JP4A
16KP4/16RP4
16KP4A/16RP4A
16LP4A/16ZP4
16RP4
16RP4A
16TP4
16WP4A
16ZP4
17ATP4/17AVP4
17ATP4A/17AVP4A
17AVP4
17AVP4A
17BJP4
17BP4A/17JP4
17BP4B
17BRP4
17BVP4
17BWP4
17BZP4/17CAP4/17CKP4
17CAP4
17CFP4
17CKP4
17CLP4
17CNP4
17CP4
17CRP4
17CSP4
17CTP4
17DAP4
17DKP4
17DQP4
17DTP4
17FP4/17FP4A
17GP4
17HP4/17RP4
17HP4B/17RP4C
17JP4
17LP4/17VP4
17LP4A/17VP4B
17QP4/17UP4/17YP4
17QP4A
17RP4
17RP4C
17TP4
17UP4
17VP4
17VP4B
17YP4
19AP4B
20CP4/20DP4
20CP4A/20DP4A
20CP4B/20DP4B
20CP4D/20DP4C
20DP4
20DP4A
20DP4B
20DP4C
20HP4
20HP4A/20LP4/20MP4
20HP4C
20HP4D
20LP4
20MP4
21ACP4A
21ALP4
21ALP4A/B
21AMP4A/21ACP4A/21BSP4
21AP4
21ATP4A
21ATP4B
21AUP4/21AVP4
21AUP4A/21AUP4B/21AVP4A/21AVP4B
21AUP4B
21AVP4
21AVP4A
21AVP4B
21AWP4
21AYP4
21BSP4
21BTP4
21CBP4/21CBP4A
21CBP4A
21CEP4
21CMP4
21CQP4
21CUP4
21CVP4
21CWP4
21CXP4
21DAP4/21DEP4
21DEP4
21DEP4A
21DHP4
21DLP4
21DQP4
21EAP4
21EP4
21EP4A
21EP4B
21FP4
21FP4A
21FP4C
21MP4
21WP4
21WP4A
21XP4/21AYP4
21XP4A
21YP4
21YP4A
21ZP4
21ZP4A
21ZP4B
23CP4
24ADP4
24AEP4
24AHP4
24ALP4
24ANP4
24AVP4
24CP4A/24TP4/24VP4A/24ADP4
24DP4A/24YP4
24TP4
24VP4A
24YP4
27EP4
27LP4
27RP4

Semiconductors

GERMANIUM TRANSISTORS

2N63
2N64
2N65
2N173
2N174
2N174A
2N242
2N277
2N278
2N307
2N307A
2N378
2N379
2N380
2N381
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SILICON RECTIFIERS

Tung-Sol line of silicon rectifiers ranges from 250 ma to 100 amperes.
Full details are available on request.

Miniature Lamps

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PR4
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PR6
SM6A
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For further information contact: TUNG-SOL ELECTRIC Inc., Newark 4, New Jersey

MIL-W-76A—Plastic Wire

TYPE MW—UNCOVERED PLASTIC

MEDIUM WALL 1000 Volt Rating ■STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

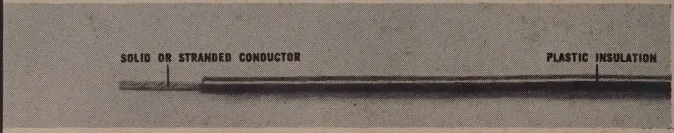
DESCRIPTION:

Single conductor stranded or solid tinned copper, thermoplastic insulation.

*** STOCK COLORS**

1—WHITE
2—BLACK
3—RED
4—GREEN
5—YELLOW
6—LIGHT BLUE
7—BROWN
8—ORANGE
9—GRAY (slate)
10—VIOLET (purple)
11—TAN
12—PINK
13—DARK BLUE
14—WHITE/BLACK
15—WHITE/RED
16—WHITE/GREEN
17—WHITE/YELLOW
18—WHITE/BLUE
19—WHITE/BROWN
20—WHITE/ORANGE
21—WHITE/GRAY
22—WHITE/VIOLET
23—WHITE/BLACK/RED
24—WHITE/BLACK/GREEN
25—WHITE/BLACK/YELLOW
26—WHITE/BLACK/BLUE
27—WHITE/BLACK/BROWN
28—WHITE/BLACK/ORANGE
29—WHITE/BLACK/GRAY
30—WHITE/BLACK/VIOLET

NOTE: Available with heavy (double) tinning for use with high frequency induction soldering equipment.



STRANDED

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1550	MW-C 24(7)U	24	7/32	.016″	.059″	1 thru 30
1551	MW-C 22(7)U	22	7/30	.016″	.064″	1 thru 30
1553	MW-C 20(10)U	20	10/30	.016″	.073″	1 thru 30
1555	MW-C 18(16)U	18	16/30	.016″	.084″	1 thru 30
1557	MW-C 16(26)U	16	26/30	.016″	.095″	1 thru 30
1559	MW-C 14(41)U	14	41/30	.016″	.110″	1 thru 30
1560	MW-C 12(65)U	12	65/30	.016″	.125″	1 thru 30

SOLID

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1561	MW-C 22(1)U	22	1	.016″	.060″	1 thru 30
1563	MW-C 20(1)U	20	1	.016″	.066″	1 thru 30
1565	MW-C 18(1)U	18	1	.016″	.074″	1 thru 30
1567	MW-C 16(1)U	16	1	.016″	.083″	1 thru 30

MIL-W-76A—Plastic Wire

TYPE MW—SHIELDED

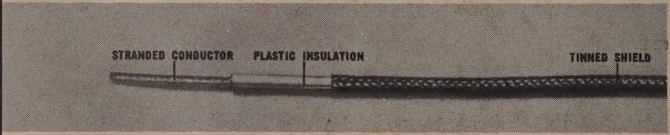
MEDIUM WALL 1000 Volt Rating ■STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

DESCRIPTION:

Single conductor stranded tinned copper, thermoplastic insulation, tinned copper shield overall.

*** STOCK COLORS**

1—WHITE
2—BLACK
3—RED
4—GREEN
5—YELLOW
6—BLUE
7—BROWN
8—ORANGE
9—GRAY
10—VIOLET



ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1350	MW-C 24(7)S	24	7/32	.016″	.075″	1 thru 10
1351	MW-C 22(7)S	22	7/30	.016″	.085″	1 thru 10
1352	MW-C 20(10)S	20	10/30	.016″	.095″	1 thru 10
1353	MW-C 18(16)S	18	16/30	.016″	.105″	1 thru 10
1354	MW-C 16(26)S	16	26/30	.016″	.120″	1 thru 10
1355	MW-C 14(41)S	14	41/30	.016″	.135″	1 thru 3
1356	MW-C 12(65)S	12	65/30	.016″	.155″	1 thru 3

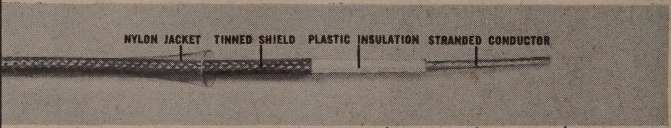
MIL-W-76A—Plastic Wire

TYPE MW—SHIELDED—NYLON JACKET

MEDIUM WALL 1000 Volt Rating ■STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

DESCRIPTION:

Single conductor stranded tinned copper, white thermoplastic insulation, braided tinned copper shield, clear nylon jacket overall.



ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	WALL THICKNESS	NOMINAL JACKET	NOMINAL O.D.
1371	MW-C 22(7)SJ	22	7/30	.016″	.007″	.100″
1372	MW-C 20(10)SJ	20	10/30	.016″	.007″	.110″
1373	MW-C 18(16)SJ	18	16/30	.016″	.007″	.120″
1374	MW-C 16(26)SJ	16	26/30	.016″	.008″	.135″

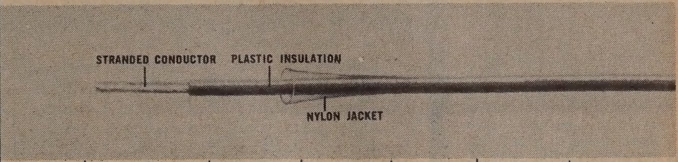
MIL-W-76A—Plastic Wire

TYPE MW—NYLON JACKET

MEDIUM WALL 1000 Volt Rating ■STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

DESCRIPTION:
Single conductor stranded tinned copper, medium wall thermoplastic insulation, clear nylon jacket overall.

*** STOCK COLORS**
1—WHITE
2—BLACK
3—RED
4—GREEN
5—YELLOW
6—BLUE
7—BROWN
8—ORANGE
9—GRAY
10—VIOLET
11—WHITE/BLACK
12—WHITE/RED
13—WHITE/GREEN
14—WHITE/YELLOW
15—WHITE/BLUE
16—WHITE/BROWN
17—WHITE/ORANGE
18—WHITE/GRAY
19—WHITE/VIOLET



ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1504	MW-C 22(7)J	22	7/30	.016″	.075″	1 thru 19
1505	MW-C 20(10)J	20	10/30	.016″	.090″	1 thru 19
1506	MW-C 18(16)J	18	16/30	.016″	.103″	1 thru 19
1507	MW-C 16(26)J	16	26/30	.016″	.115″	1 thru 19
1508	MW-C 14(41)J	14	41/30	.016″	.125″	1 thru 6
1509	MW-C 12(65)J	12	65/30	.016″	.140″	1 thru 3

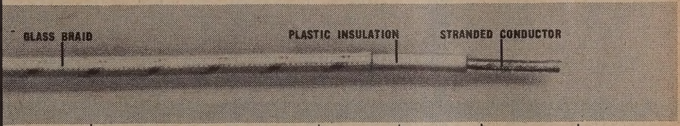
MIL-W-76A—Plastic Wire

TYPE MW—GLASS BRAID

MEDIUM WALL 1000 Volt Rating ■STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

DESCRIPTION:
Single conductor stranded tinned copper, thermoplastic insulation, lacquered glass braid overall.

*** STOCK COLORS**
1—WHITE
2—WHITE/BLACK
3—WHITE/RED
4—WHITE/GREEN
5—WHITE/YELLOW
6—WHITE/BLUE
7—WHITE/BROWN
8—WHITE/ORANGE
9—WHITE/GRAY
10—WHITE/VIOLET
11—BLACK
12—RED
13—GREEN
14—YELLOW
15—BLUE
16—BROWN
17—ORANGE
18—GRAY
19—VIOLET



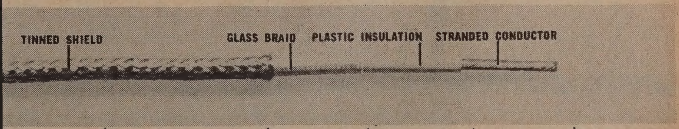
ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1590	MW-C 22(7)B	22	7/30	.016″	.080″	1 thru 19
1591	MW-C 20(10)B	20	10/30	.016″	.090″	1 thru 19
1592	MW-C 18(16)B	18	16/30	.016″	.100″	1 thru 19
1593	MW-C 16(26)B	16	26/30	.016″	.115″	1 thru 19
1594	MW-C 14(41)B	14	41/30	.016″	.125″	1 thru 10
1595	MW-C 12(65)B	12	65/30	.016″	.140″	1 thru 10

MIL-W-76A—Plastic Wire

TYPE MW—GLASS BRAID—SHIELDED

MEDIUM WALL 1000 Volt Rating ■STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

DESCRIPTION:
Single conductor stranded tinned copper, white thermoplastic insulation, lacquered glass braid, tinned copper shield overall.



ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	WALL THICKNESS	NOMINAL O.D.
1361	MW-C 22(7)BS	22	7/30	.016″	.095″
1362	MW-C 20(10)BS	20	10/30	.016″	.108″
1363	MW-C 18(16)BS	18	16/30	.016″	.124″
1364	MW-C 16(26)BS	16	26/30	.016″	.133″
1365	MW-C 14(41)BS	14	41/30	.016″	.144″
1366	MW-C 12(65)BS	12	65/30	.016″	.168″

MIL-W-76A—Plastic Wire

TYPE LW—UNCOVERED PLASTIC

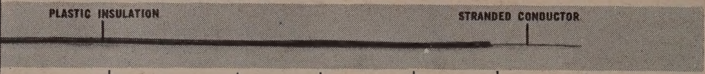
LIGHT WALL 300 Volt Rating ■STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

DESCRIPTION:

Single conductor stranded tinned copper, light wall thermoplastic insulation.

*** STOCK COLORS**
1—WHITE
2—BLACK
3—RED
4—GREEN
5—YELLOW
6—LIGHT BLUE
7—BROWN
8—ORANGE
9—GRAY (Slate)
10—VIOLET (Purple)
11—WHITE/BLACK
12—WHITE/RED
13—WHITE/GREEN
14—WHITE/YELLOW
15—WHITE/BLUE
16—WHITE/BROWN
17—WHITE/ORANGE
18—WHITE/GRAY
19—WHITE/VIOLET

NOTE: Available with heavy (double) tinning for use with high frequency induction soldering equipment.



ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1685	LW-C 30(7)U	30	7/38	.010″	.033″	1 thru 19
1686	LW-C 28(7)U	28	7/36	.010″	.035″	1 thru 19
1687	LW-C 26(7)U	26	7/34	.010″	.039″	1 thru 19
1688	LW-C 24(7)U	24	7/32	.010″	.044″	1 thru 19
1689	LW-C 22(7)U	22	7/30	.010″	.049″	1 thru 19
1690	LW-C 20(7)U	20	7/28	.010″	.060″	1 thru 19

MIL-W-76A—Plastic Wire

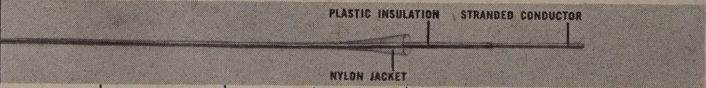
TYPE LW—NYLON JACKET

LIGHT WALL 300 Volt Rating ■STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

DESCRIPTION:

Single conductor stranded tinned copper, light wall thermoplastic insulation, clear nylon jacket overall.

*** STOCK COLORS**
1—WHITE
2—BLACK
3—RED
4—GREEN
5—YELLOW
6—LIGHT BLUE
7—BROWN
8—ORANGE
9—GRAY (Slate)
10—VIOLET (Purple)
11—WHITE/BLACK
12—WHITE/RED
13—WHITE/GREEN
14—WHITE/YELLOW
15—WHITE/BLUE
16—WHITE/BROWN
17—WHITE/ORANGE
18—WHITE/GRAY
19—WHITE/VIOLET



ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1675	LW-C 30(7)J	30	7/38	.010″	.036″	1 thru 19
1676	LW-C 28(7)J	28	7/36	.010″	.042″	1 thru 19
1677	LW-C 26(7)J	26	7/34	.010″	.048″	1 thru 19
1678	LW-C 24(7)J	24	7/32	.010″	.053″	1 thru 19
1679	LW-C 22(7)J	22	7/30	.010″	.061″	1 thru 19
1680	LW-C 20(7)J	20	7/28	.010″	.065″	1 thru 19

MIL-W-76A—Plastic Wire

TYPE HW—UNCOVERED PLASTIC

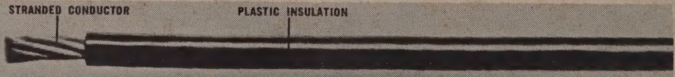
HEAVY WALL ■STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

DESCRIPTION:

Single conductor stranded tinned copper, heavy wall thermoplastic insulation.

*** STOCK COLORS**
1—WHITE
2—BLACK
3—RED
4—GREEN
5—YELLOW
6—LIGHT BLUE
7—BROWN
8—ORANGE
9—GRAY (Slate)
10—VIOLET (Purple)

NOTE: Available with heavy (double) tinning for use with high frequency induction soldering equipment.



ALPHA NO.	TYPE DESIGNATION	COND. SIZE	COND. STRAND	WALL THICKNESS	VOLTAGE RATING	NOMINAL O.D.	* STOCK COLORS
1571	HW-C 22(7)U	22	7/30	.032″	2500	.095″	1 thru 10
1573	HW-C 20(10)U	20	10/30	.032″	2500	.103″	1 thru 10
1575	HW-C 18(16)U	18	16/30	.032″	2500	.114″	1 thru 10
1577	HW-C 16(26)U	16	26/30	.032″	2500	.134″	1 thru 3
1579	HW-C 14(41)U	14	41/30	.045″	600	.170″	1 thru 3
1651	HW-C 12(65)U	12	65/30	.045″	600	.190″	1 thru 3
1653	HW-C 10(105)U	10	105/30	.045″	600	.215″	1 thru 3
1655	HW-C 8(133)U	8	133/29	.045″	600	.265″	1 thru 3
1657	HW-C 6(133)U	6	133/27	.045″	600	.310″	1 thru 3

MIL-W-76A—Plastic Wire

TYPE HW—GLASS BRAID

HEAVY WALL 600 Volt Rating ■STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

DESCRIPTION:

Single conductor stranded tinned copper, heavy wall thermoplastic insulation, lacquered glass braid overall.

*** STOCK COLORS**
1—WHITE
3—WHITE/RED
2—WHITE/BLACK

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1598	HW-C 10(105)B	10	105/30	.045″	.235″	1 thru 3
1599	HW-C 8(133)B	8	133/29	.045″	.290″	1 thru 3
1599/6	HW-C 6(133)B	6	133/27	.045″	.315″	1 thru 3

MIL-W-16878C—Plastic Wire

TYPE B—UNCOVERED PLASTIC

600 Volt Rating ■ STANDARD PUT-UP: 100 FT., 500 FT., 1000 FT.

DESCRIPTION:

Type B—Single conductor stranded tinned copper, .010″ vinyl thermoplastic insulation. 105°C.

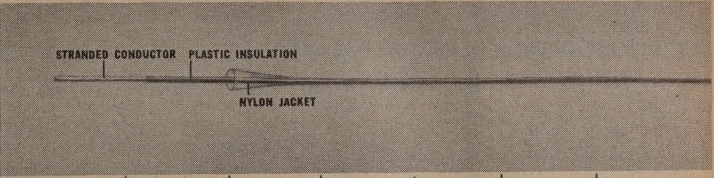
*** STOCK COLORS**

1—WHITE	11—WHITE/BLACK
2—BLACK	12—WHITE/RED
3—RED	13—WHITE/GREEN
4—GREEN	14—WHITE/YELLOW
5—YELLOW	15—WHITE/BLUE
6—BLUE	16—WHITE/BROWN
7—BROWN	17—WHITE/ORANGE
8—ORANGE	18—WHITE/GRAY
9—GRAY	19—WHITE/VIOLET
10—VIOLET	

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1850	B-32	32	7/40	.010″	.028″	1 thru 19
1851	B-30	30	7/38	.010″	.032″	1 thru 19
1852	B-28	28	7/36	.010″	.035″	1 thru 19
1853	B-26	26	7/34	.010″	.038″	1 thru 19
1854	B-24	24	7/32	.010″	.043″	1 thru 19
1855	B-22	22	7/30	.010″	.049″	1 thru 19
1856	B-20	20	7/28	.010″	.060″	1 thru 19
1857	B-18	18	7/26	.010″	.071″	1 thru 19
1858	B-16	16	19/29	.010″	.081″	1 thru 19

TYPE B—NYLON JACKET

600 Volt Rating ■ STANDARD PUT-UP: 100 FT., 500 FT., 1000 FT.



DESCRIPTION:

Type B—Nylon—Same as above except clear nylon jacket overall. 115°C.

*** STOCK COLORS**

1—WHITE	11—WHITE/BLACK
2—BLACK	12—WHITE/RED
3—RED	13—WHITE/GREEN
4—GREEN	14—WHITE/YELLOW
5—YELLOW	15—WHITE/BLUE
6—BLUE	16—WHITE/BROWN
7—BROWN	17—WHITE/ORANGE
8—ORANGE	18—WHITE/GRAY
9—GRAY	19—WHITE/VIOLET
10—VIOLET	

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1860	B-32	32	7/40	.010″	.032″	1 thru 19
1861	B-30	30	7/38	.010″	.036″	1 thru 19
1862	B-28	28	7/36	.010″	.039″	1 thru 19
1863	B-26	26	7/34	.010″	.042″	1 thru 19
1864	B-24	24	7/32	.010″	.047″	1 thru 19
1865	B-22	22	7/30	.010″	.053″	1 thru 19
1866	B-20	20	7/28	.010″	.065″	1 thru 19
1867	B-18	18	7/26	.010″	.075″	1 thru 19
1868	B-16	16	19/29	.010″	.085	1 thru 19

TYPE C—UNCOVERED PLASTIC

1000 Volt Rating ■ STANDARD PUT-UP: 100 FT., 500 FT., 1000 FT.

DESCRIPTION:

Type C—Single conductor stranded tinned copper, .016″ vinyl thermoplastic insulation. 105°C.

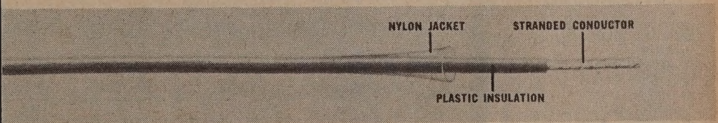
*** STOCK COLORS**

1—WHITE	
2—WHITE/BLACK	11—BLACK
3—WHITE/RED	12—RED
4—WHITE/GREEN	13—GREEN
5—WHITE/YELLOW	14—YELLOW
6—WHITE/BLUE	15—BLUE
7—WHITE/BROWN	16—BROWN
8—WHITE/ORANGE	17—ORANGE
9—WHITE/GRAY	18—GRAY
10—WHITE/VIOLET	19—VIOLET

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1830	C-24	24	7/32	.016″	.058″	1 thru 10
1831	C-22	22	7/30	.016″	.064″	1 thru 19
1832	C-20	20	7/28	.016″	.072″	1 thru 19
1833	C-18	18	7/26	.016″	.082″	1 thru 19
1834	C-16	16	19/29	.016″	.091″	1 thru 10
1835	C-14	14	19/27	.016″	.105″	1 thru 10

TYPE C—NYLON JACKET

1000 Volt Rating ■ STANDARD PUT-UP: 100 FT., 500 FT., 1000 FT.



DESCRIPTION:

Type C—Nylon—Same as above except clear nylon jacket overall. 115°C.

*** STOCK COLORS**

1—WHITE	
2—WHITE/BLACK	11—BLACK
3—WHITE/RED	12—RED
4—WHITE/GREEN	13—GREEN
5—WHITE/YELLOW	14—YELLOW
6—WHITE/BLUE	15—BLUE
7—WHITE/BROWN	16—BROWN
8—WHITE/ORANGE	17—ORANGE
9—WHITE/GRAY	18—GRAY
10—WHITE/VIOLET	19—VIOLET

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1840	C-24	24	7/32	.016″	.065″	1 thru 10
1841	C-22	22	7/30	.016″	.072″	1 thru 19
1842	C-20	20	7/28	.016″	.079″	1 thru 19
1843	C-18	18	7/26	.016″	.090″	1 thru 19
1844	C-16	16	19/29	.016″	.099″	1 thru 10
1845	C-14	14	19/27	.016″	.114″	1 thru 10

MIL-W-16878C—Plastic Wire

TYPE D—UNCOVERED PLASTIC

3000 Volt Rating ■STANDARD PUT-UP: 100 FT., 500 FT., 1000 FT.

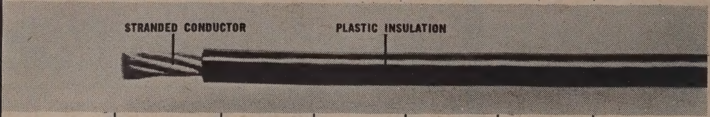
DESCRIPTION:

Type D—Single conductor stranded tinned copper, .032" vinyl thermoplastic insulation. 105°C.

*** STOCK COLORS**

1—WHITE
2—WHITE/BLACK
3—WHITE/RED
4—WHITE/GREEN
5—WHITE/YELLOW
6—WHITE/BLUE
7—WHITE/BROWN
8—WHITE/ORANGE
9—WHITE/GRAY
10—WHITE/VIOLET
11—BLACK
12—RED
13—GREEN
14—YELLOW
15—BLUE
16—BROWN
17—ORANGE
18—GRAY
19—VIOLET

NOTE: Available with heavy (double) tinning for use with high frequency induction soldering equipment.



ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1870	D-24	24	7/32	.032"	.085"	1 thru 10
1871	D-22	22	7/30	.032"	.092"	1 thru 19
1872	D-20	20	7/28	.032"	.095"	1 thru 19
1873	D-18	18	7/26	.032"	.102"	1 thru 19
1874	D-16	16	19/29	.032"	.116"	1 thru 10
1875	D-14	14	19/27	.032"	.130"	1 thru 10
1876	D-12	12	19/25	.032"	.163"	1 thru 10
1877	D-10	10	37/25	.032"	.182"	1 thru 10
1878	D- 8	8	133/29	.032"	.245"	1 thru 10
1879	D- 6	6	133/27	.032"	.290"	1 thru 10

MIL-W-16878C—Teflon* Wire 200°C

TYPE E—EXTRUDED & SPIRAL WRAPPED

600 Volt Rating ■STANDARD PUT-UP: 10 FT., 25 FT., 50 FT., 100 FT., 250 FT., 500 FT., 1000 FT.

APPLICATIONS:

Guided missiles. Telemetering equipment. Leads to hermetically sealed and potted components. Slip-ring assemblies. U.H.F. apparatus. Computers. Sub-miniaturized equipment.

DESCRIPTION:

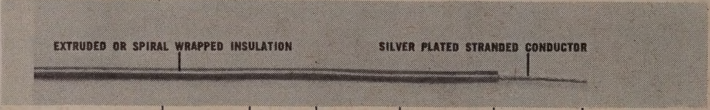
Single conductor stranded silver plated copper, extruded or spiral wrapped Teflon insulation.

CHARACTERISTICS:

Excellent dielectric properties. Heat resistance—capable of continuous service at 260°C. Tough and flexible at temperatures to —90°C. Chemical inertness. Outdoor durability.

*** STOCK COLORS**

1—WHITE
2—BLACK
3—RED
4—GREEN
5—YELLOW
6—BLUE
7—BROWN
8—ORANGE
9—GRAY
10—VIOLET


EXTRUDED OR SPIRAL WRAPPED INSULATION
SILVER PLATED STRANDED CONDUCTOR

— ALPHA NUMBERS —		TYPE DESIGNATION	COND. SIZE	COND. STRAND	WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
EXTRUDED	WRAPPED						
2851	2881	E-30	30	7/38	.010"	.032"	1 thru 10
2852	2882	E-28	28	7/36	.010"	.036"	1 thru 10
2853	2883	E-26	26	7/34	.010"	.040"	1 thru 10
2854	2884	E-24	24	19/36	.010"	.045"	1 thru 10
2855	2885	E-22	22	19/34	.010"	.051"	1 thru 10
2856	2886	E-20	20	19/32	.010"	.059"	1 thru 10
2857	2887	E-18	18	19/30	.010"	.070"	1 thru 10
2858	2888	E-16	16	19/29	.010"	.083"	1 thru 10
2859	2889	E-14	14	19/27	.010"	.097"	1 thru 6

MIL-W-16878C—Teflon* Wire 200°C

TEFLON CABLES—SHIELDED & UNSHIELDED

STANDARD PUT-UP: 100 FT., 500 FT., 1000 FT.

DESCRIPTION:

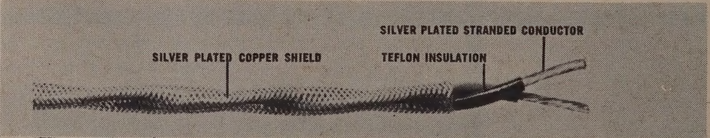
Each conductor stranded silver plated copper, Type E .010" extruded Teflon insulation per MIL-W-16878C. 600 volt rating. When shielded, a closely woven silver-plated copper shield is braided over the conductor(s). When braided, a Teflon* impregnated Fiberglass yarn is woven over the conductor(s) or shield.

STOCK COLORS OF SINGLE CONDUCTOR ITEMS

1—WHITE
2—BLACK
3—RED
4—GREEN
5—YELLOW
6—BLUE
7—BROWN
8—ORANGE
9—GRAY
10—VIOLET

COLORS OF CONDUCTORS OF MULTI-CONDUCTOR ITEMS

1—WHITE
2—BLACK
3—RED
4—GREEN



SIZE AND STRANDING	OUTER COVERING	ALPHA NUMBERS			
		1 COND.	2 COND.	3 COND.	4 COND.
#24—19/36	Shield	2809	2809/2	2809/3	2809/4
#24—19/36	Braid	2810	2810/2	2810/3	2810/4
#24—19/36	Shield & Braid	2811	2811/2	2811/3	2811/4
#22—19/34	Shield	2812	2812/2	2812/3	2812/4
#22—19/34	Braid	2813	2813/2	2813/3	2813/4
#22—19/34	Shield & Braid	2814	2814/2	2814/3	2814/4
#20—19/32	Shield	2815	2815/2	2815/3	2815/4
#20—19/32	Braid	2816	2816/2	2816/3	2816/4
#20—19/32	Shield & Braid	2817	2817/2	2817/3	2817/4

*DuPont's Tetrafluoroethylene Resin

MIL-W-5086A & MIL-C-7078A

AIRCRAFT HOOK-UP WIRE

■STANDARD PUT-UP: 100 FT., 500 FT., 1000 FT.

APPLICATIONS:

Use wherever a single conductor, 600 volt insulated, aircraft electrical wire is needed. Resistant to: abrasion, moisture, cold, heat, flame, fungus, oil, salt water.

DESCRIPTION:

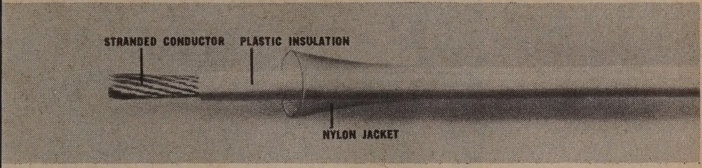
MIL-W-5086A — Type 2 — AN-22 thru AN-12 — Single conductor stranded tinned copper, white plastic insulation, glass braid, nylon jacket overall.

MIL-W-5086A — Type 2 — AN-10 thru AN-00 — Single conductor stranded tinned copper, white plastic insulation, glass braid, nylon lacquered nylon braid overall.

MIL-C-7078A — Single conductor stranded tinned copper, white plastic insulation, nylon jacket, braided tinned copper shield overall.

Available to order.

Type No. 2 with overall braided tinned copper shield per MIL-C-7078A.



UNSHIELDED (MIL-W-5086A)

ALPHA NO.	MIL TYPE DESIGNATION	SPECIFICATION TYPE	CONDUCTOR SIZE	CONDUCTOR STRAND	VOLTAGE RATING	NOM. O.D.
1381	AN-22	NO. 1	22	19/34	600	.075″
1382	AN-20	NO. 1	20	19/32	600	.085″
1383	AN-18	NO. 1	18	19/30	600	.095″
1384	AN-16	NO. 1	16	19/29	600	.105″
1385	AN-14	NO. 1	14	19/27	600	.125″
1386	AN-12	NO. 1	12	19/25	600	.143″
2381	AN-22	NO. 2	22	19/34	600	.068″
2382	AN-20	NO. 2	20	19/32	600	.078″
2383	AN-18	NO. 2	18	19/30	600	.088″
2384	AN-16	NO. 2	16	19/29	600	.098″
2385	AN-14	NO. 2	14	19/27	600	.117″
2386	AN-12	NO. 2	12	19/25	600	.137″
1387	AN-10	NO. 2	10	49/27	600	.189″
1388	AN-8	NO. 2	8	133/29	600	.240″
1389	AN-6	NO. 2	6	133/27	600	.293″
1389/4	AN-4	NO. 2	4	133/25	600	.355″
1389/2	AN-2	NO. 2	2	665/30	600	.425″
1389/0	AN-0	NO. 2	0	1045/30	600	.525″
1389/00	AN-00	NO. 2	00	1330/30	600	.590″

SHIELDED (MIL-C-7078A)

ALPHA NO.	MIL TYPE DESIGNATION	SPECIFICATION TYPE	CONDUCTOR SIZE	CONDUCTOR STRAND	VOLTAGE RATING	NOM. O.D.
1391	AN-22	NO. 1	22	19/34	600	.100″
1392	AN-20	NO. 1	20	19/32	600	.110″
1393	AN-18	NO. 1	18	19/30	600	.125″
1394	AN-16	NO. 1	16	19/29	600	.140″
1395	AN-14	NO. 1	14	19/27	600	.155″
1396	AN-12	NO. 1	12	19/25	600	.165″

"ALMAG" Magnet Wire

APPLICATIONS:

Radio and audio frequency coils; transformers; chokes; speaker field coils; tuners; armatures; short wave coils; etc.

DESCRIPTION:

Plain Enamel—Single conductor round bare copper covered with a continuous insulating film of enamel. Type T per Specification MIL-W-583A. 105°C.

Heavy Formvar—Single conductor round bare copper, baked film insulation from a varnish based on a vinyl acetal resin. Type T2 per Specification MIL-W-583A. 105°C.

* Largest available put-up: 1 lb.
‡ Largest available put-up: 5 lb.

SPECIFICATION MIL-W-583A

■STANDARD PUT-UP: ¼ LB., ½ LB., 1 LB., 5 LB., 10 LB.

PLAIN ENAMEL (PE)						HEAVY FORMVAR (HF)					
ALPHA NO.	**NOM. O.D.**	**SIZE**	**ALPHA NO.**	**NOM. O.D.**	**SIZE**	**ALPHA NO.**	**NOM. O.D.**	**SIZE**	**ALPHA NO.**	**NOM. O.D.**	**SIZE**
PE-44	.0023″	44 *	**PE-26**	.0169″	26	**HF-44**	.0026″	44 *	**HF-26**	.0180″	26
PE-42	.0028″	42 *	**PE-24**	.0212″	24	**HF-42**	.0032″	42 *	**HF-24**	.0224″	24
PE-40	.0034′	40 *	**PE-22**	.0266″	22	**HF-40**	.0038″	40 *	**HF-22**	.0277″	22
PE-38	.0044″	38 ‡	**PE-20**	.0332″	20	**HF-38**	.0049″	38 ‡	**HF-20**	.0346″	20
PE-36	.0055″	36 ‡	**PE-18**	.0416″	18	**HF-36**	.0060″	36 ‡	**HF-18**	.0432″	18
PE-34	.0069″	34 ‡	**PE-16**	.0522″	16	**HF-34**	.0075″	34 ‡	**HF-16**	.0539″	16
PE-32	.0087″	32	**PE-14**	.0657″	14	**HF-32**	.0095″	32	**HF-14**	.0673″	14
PE-30	.0108″	30	**PE-12**	.0825″	12	**HF-30**	.0116″	30	**HF-12**	.0842″	12
PE-28	.0135″	28	**PE-10**	.1037″	10	**HF-28**	.0144″	28	**HF-10**	.1056″	10

ALPHLEX® Tubing & Sleeving

STANDARD PACKAGING

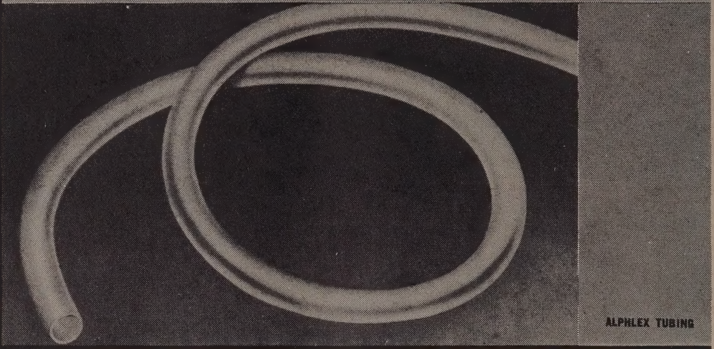
# 24 thru #15	1,000 ft. spools
#14 thru #5	500 ft. spools
#4 thru ⅜"	250 ft. coils
7⁄16" thru ⅝"	100 ft. coils
¾" and larger	50 ft. coils

Small lengths cut to order

ELECTRICAL & PHYSICAL CHARACTERISTICS

Dielectric Strength **800V/Mil**
Temperature Rating ....**105°C.**
Low Temperature Flexibility — **—30°C.**
Flammability ......**Non-Flammable**
Tensile Strength ....**2500 PSI**
Ultimate Elongation **300%**
Insulation Resistance — **over 1,000,000 megs**
Corrosion Resistance....**Excellent**
Oil Resistance — **Flexibility indefinite**

*** STOCK COLORS**
1—CLEAR
2—BLACK
3—RED
4—YELLOW
5—GREEN
6—WHITE
7—BROWN
8—ORANGE



105°C EXTRUDED PLASTIC TUBING (PVC)

■ **ALPHLEX PVC-105** Plastic Tubing is designed and manufactured specifically for electronic, aircraft and electrical applications involving temperatures as high as 105°C. It conforms to Specifications **MIL-I-631C, ASTM-D876, ASTM-D922** and is approved by **Underwriters' Laboratories.**

■ PVC-105's exceptional integration of desirable qualities endows it with excellent versatility and durability. Its dielectric strength is high and remains unaffected by increasing temperature throughout its range. It displays high resistance to the agents of heat, oil, chemicals, corrosion, fungi and even abrasion with no loss in tensile strength, non-flammability—or flexibility.

■ Under all the above adverse conditions, PVC-105 will retain its ability to hug and protect irregular-shaped objects, will "snake" beautifully, and will always be easy to handle.

■ To achieve this combination of advantages, special care is taken in the making of PVC-105. It is compounded with only first-grade quality non-migratory resinous type plasticizers. From laboratory to production line, from raw material to finished product, strict quality control prevails. Behind it are the same engineering and production know-how that have made the name Alpha famous in the electronic industry for over thirty-five years.

ALPHLEX NO.	SIZE	WALL THICKNESS	NOM. I.D.	* STOCK COLORS	ALPHLEX NO.	SIZE	WALL THICKNESS	NOM. I.D.	* STOCK COLORS
PVC-105-24	24	.012"	.022"	1 thru 8	**PVC-105-2**	2	.020"	.263"	1 thru 6
PVC-105-22	22	.012"	.027"	1 thru 8	**PVC-105-1**	1	.020"	.294"	1, 2
PVC-105-20	20	.016"	.034"	1 thru 8	**PVC-105-5/16"**	5/16"	.025"	.312"	1, 2
PVC-105-19	19	.016"	.038"	1 thru 8	**PVC-105-0**	0	.020"	.330"	1, 2
PVC-105-18	18	.016"	.042"	1 thru 8	**PVC-105-3/8"**	3/8"	.025"	.375"	1, 2
PVC-105-17	17	.016"	.047"	1 thru 8	**PVC-105-7/16"**	7/16"	.025"	.438"	1, 2
PVC-105-16	16	.016"	.053"	1 thru 8	**PVC-105-1/2"**	1/2"	.025"	.500"	1, 2
PVC-105-15	15	.016"	.059"	1 thru 8	**PVC-105-9/16"**	9/16"	.030"	.562"	1, 2
PVC-105-14	14	.016"	.066"	1 thru 8	**PVC-105-5/8"**	5/8"	.030"	.625"	1, 2
PVC-105-13	13	.016"	.076"	1 thru 8	**PVC-105-3/4"**	3/4"	.035"	.750"	1, 2
PVC-105-12	12	.016"	.085"	1 thru 8	**PVC-105-7/8"**	7/8"	.035"	.875"	1, 2
PVC-105-11	11	.016"	.095"	1 thru 6	**PVC-105-1"**	1"	.035"	1.000"	1, 2
PVC-105-10	10	.016"	.106"	1 thru 6	**PVC-105-1-1/8"**	1-1/8"	.035"	1.125"	1, 2
PVC-105-9	9	.016"	.118"	1 thru 6	**PVC-105-1-1/4"**	1-1/4"	.040"	1.250"	1, 2
PVC-105-8	8	.020"	.133"	1 thru 6	**PVC-105-1-3/8"**	1-3/8"	.040"	1.375"	1, 2
PVC-105-7	7	.020"	.148"	1 thru 6	**PVC-105-1-1/2"**	1-1/2"	.045"	1.500"	1, 2
PVC-105-6	6	.020"	.166"	1 thru 6	**PVC-105-1-3/4"**	1-3/4"	.055"	1.750"	1, 2
PVC-105-5	5	.020"	.186"	1 thru 6	**PVC-105-2"**	2"	.060"	2.000"	1, 2
PVC-105-4	4	.020"	.208"	1 thru 6	**PVC-105-2-1/4"**	2-1/4"	.065"	2.250"	1, 2
PVC-105-3	3	.020"	.234"	1 thru 6	**PVC-105-2-1/2"**	2-1/2"	.070"	2.500"	1, 2

PLASTIC IMPREGNATED FIBERGLASS (PIF)

ELECTRICAL & PHYSICAL CHARACTERISTICS

Class .... **B**
Grade **B-1**
Dielectric Strength **4000V**
Temperature Rating ...... **130°C.**
Low Temperature Flexibility **—30°C.**
Flammability .... **Non-Flammable**
Insulation Resistance **over 1,000,000 megs.**
Oil Resistance .... **Good**
Corrosion Resistance....**Excellent**

*** STOCK COLORS** 1—BLACK 2—RED 3—YELLOW 4—GREEN

STANDARD PACKAGING

#24 thru #15	(1) 1000 Ft. Spools (2) 36" lengths (1000 Ft/Pkg)
#14 thru #8	(1) 500 Ft. Spools (2) 36" lengths (500 Ft/Pkg)
#7 thru #2	(1) 250 Ft. Spools (2) 36" lengths (250 Ft/Pkg)
#1 and larger	(1) 100 Ft. Coils (2) 36" lengths (125 Ft/Pkg)

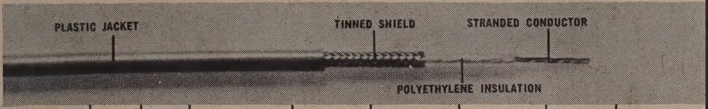
■ **ALPHLEX PIF-130** is a Class B insulation combining the advantages of an inorganic fiberglass base sleeving with the most desirable characteristics of a heat-resistant, very flexible plastic insulation. The plastic compound is formulated to provide the maximum in electrical characteristics, heat stability (130°C), flexibility and toughness. This tubing and sleeving conforms to the performance requirements of Specifications **MIL-I-3190, NEMA VS1, ASTM D372.**

ALPHLEX NO.	SIZE	NOM. I.D.	* STOCK COLORS	ALPHLEX NO.	SIZE	NOM. I.D.	* STOCK COLORS
PIF-130-24	24	.022"	1 thru 4	**PIF-130-7**	7	.148"	1 thru 4
PIF-130-22	22	.027"	1 thru 4	**PIF-130-6**	6	.166"	1 thru 4
PIF-130-20	20	.034"	1 thru 4	**PIF-130-5**	5	.186"	1 thru 4
PIF-130-19	19	.038"	1 thru 4	**PIF-130-4**	4	.208"	1 thru 4
PIF-130-18	18	.042"	1 thru 4	**PIF-130-3**	3	.234"	1 thru 4
PIF-130-17	17	.047"	1 thru 4	**PIF-130-2**	2	.263"	1 thru 4
PIF-130-16	16	.053"	1 thru 4	**PIF-130-1**	1	.294"	1 thru 3
PIF-130-15	15	.059"	1 thru 4	**PIF-130-0**	0	.330"	1 thru 3
PIF-130-14	14	.066"	1 thru 4	**PIF-130-3/8"**	3/8"	.375"	1 thru 3
PIF-130-13	13	.076"	1 thru 4	**PIF-130-7/16"**	7/16"	.438"	1 thru 3
PIF-130-12	12	.085"	1 thru 4	**PIF-130-1/2"**	1/2"	.500"	1 thru 3
PIF-130-11	11	.095"	1 thru 4	**PIF-130-5/8"**	5/8"	.625"	1 thru 3
PIF-130-10	10	.106"	1 thru 4	**PIF-130-3/4"**	3/4"	.750"	1 thru 3
PIF-130-9	9	.118"	1 thru 4	**PIF-130-7/8"**	7/8"	.875"	1 thru 3
PIF-130-8	8	.133"	1 thru 4	**PIF-130-1"**	1"	1.000"	1 thru 3

Shielded Microphone Cable

PLASTIC TYPE

■STANDARD PUT-UP: 25 FT., 50 FT., 100 FT., 250 FT., 500 FT., 1000 FT.



ALPHA NO.	NO. OF COND.	COND. SIZE	COND. STRAND	WALL THICKNESS	* CAPACITY NOM./FT.	TYPE OF SHIELD	NOMINAL JACKET	NOM. O.D.
1702	1	26	3/34 tinned copper 4/34 steel	.016″	38 mmf.	Spiral Wrapped	.020″	.110″
1703	1	24	10/34	.020″	35 mmf.	Braided	.030″	.145″
1704	1	24	10/34	.040″	23 mmf.	Braided	.030″	.200″
1706	1	20	26/34	.030″	36 mmf.	Braided	.030″	.175″
1710	2	22	16/34	.025″	31 mmf.	Braided	.030″	.235″
1713	3	20	26/34	.014″	45 mmf.	Braided	.035″	.250″
1715	4	20	26/34	.014″	45 mmf.	Braided	.035″	.255″
1716	5	20	26/34	.014″	45 mmf.	Braided	.035″	.275″
1717	6	20	26/34	.014″	45 mmf.	Braided	.035″	.300″

* Between one conductor and remaining conductors connected to shield.

APPLICATIONS: 1702-1706

All high impedance microphones—Lapel, Ribbon, Velocity, Crystal, Contact. Hi-Fi interconnecting cables.

APPLICATIONS: 1710-1717

All low impedance microphones—Carbon, Condenser, Dynamic.

DESCRIPTION:

Each conductor stranded tinned copper, polyethylene insulation, color coded, braided or spiral wrapped tinned copper shield, chrome colored vinyl plastic jacket overall. Where multi-conductors, conductors are twisted, cushioned with jute fillers, cotton wrap under tinned copper shield.

CHARACTERISTICS:

Oil and moisture resistant. Flexible. Will not stain or mark. Will resist aging and rough usage.
Capacitance—Low
Insulation Resistance—High
Attenuation—Low

COLOR CODE OF CONDUCTORS

1—WHITE
2—BLACK
3—RED
4—GREEN
5—YELLOW
6—BLUE

Shielded Microphone Cable

RUBBER TYPE

■STANDARD PUT-UP: 25 FT., 50 FT., 100 FT., 250 FT., 500 FT., 1000 FT.

RUBBER JACKET
TINNED SHIELD
RUBBER INSULATION
STRANDED CONDUCTOR
COTTON WRAP

ALPHA NO.	NO. OF COND.	COND. SIZE	COND. STRAND	WALL THICKNESS	* CAPACITY NOM./FT.	NOMINAL JACKET	NOM. O.D.
1248	1	20	26/34	.025″	40 mmf.	.030″	.175″
1249	1	20	26/34	.040″	30 mmf.	.030″	.245″
1249/18	1	18	41/34	.040″	45 mmf.	.030″	.250″
1250	2	20	26/34	.020″	70 mmf.	.035″	.275″
1250/18	2	18	41/34	.020″	75 mmf.	.035″	.305″
1251	3	20	26/34	.020″	80 mmf.	.035″	.285″
1251/18	3	18	41/34	.020″	85 mmf.	.035″	.325″
1252	4	20	26/34	.020″	90 mmf.	.035″	.305″
1252/18	4	18	41/34	.020″	64 mmf.	.035″	.335″

* Between one conductor and remaining conductors connected to shield.

APPLICATIONS: 1248-1249/18

All high impedance microphones. Broadcast and heavy duty studio use.

APPLICATIONS: 1250-1252/18

All low impedance microphones. Broadcast and heavy duty studio use.

DESCRIPTION:

Each conductor stranded tinned copper, rubber insulation, color coded, braided tinned copper shield, cotton wrap, tough black rubber jacket overall. It is extremely flexible and specially designed for heavy studio use.

1248-1249/18
COLOR CODE OF CONDUCTOR
BLACK

1250-1252/18
COLOR CODE OF CONDUCTORS
1—BLACK
2—WHITE
3—RED
4—GREEN

Shielded Plastic Jacketed Cable

SPIRAL WRAPPED

■STANDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.

PLASTIC JACKET
SPIRAL COPPER SHIELD
TINNED CONDUCTOR
PLASTIC INSULATION

ALPHA NO.	NO. OF COND.	COND. SIZE	COND. STRAND	WALL THICKNESS	NOMINAL JACKET	NOM. O.D.
2254	2	22	7/30	.016″	.020″	.175″
2255	2	22	1	.016″	.020″	.170″
2156	1	20	10/30	.016″	.020″	.130″
2256	2	20	10/30	.016″	.020″	.195″
3256	3	20	10/30	.016″	.020″	.210″
4256	4	20	10/30	.016″	.020″	.225″
2258	2	18	16/30	.016″	.020″	.230″
2260	2	16	26/30	.016″	.020″	.250″

APPLICATIONS:

For public address and sound systems. Recording Studios. Amateur radio transmitters. Paging and call systems.

DESCRIPTION:

Each conductor tinned copper, plastic insulation, color coded, conductors twisted, spiral wrapped copper shield, gray yinyl plastic jacket overall.

COLOR CODE OF CONDUCTORS

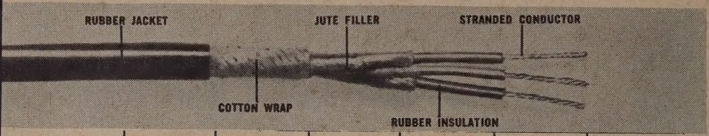
1—BLACK
2—RED
3—WHITE
4—GREEN

(See Page 1511 for Alpha Prices)

Unshielded Rubber Cable

MULTI-CONDUCTOR

■STANDARD SPOOL PUT-UP: 25 FT., 50 FT., 100 FT., 250 FT., 500 FT., 1000 FT.



ALPHA NO.	NO. OF COND.	COND. SIZE	COND. STRAND	WALL THICKNESS	NOMINAL JACKET	NOM. O.D.
1244	2	20	26/34	.020″	.035″	.280″
1245	3	20	26/34	.020″	.035″	.285″
1246	4	20	26/34	.020″	.035″	.300″
1247	5	20	26/34	.020″	.035″	.340″
1247/6	6	20	26/34	.020″	.035″	.360″
1247/7	7	20	26/34	.020″	.035″	.380″
1247/8	8	20	26/34	.020″	.035″	.400″
1247/10	10	20	26/34	.020″	.035″	.440″

APPLICATIONS:

Inter-rack connecting cable. Recording studio and broadcast. Remote control circuits. Rough usage electronic power cable. P.A. systems. Multiple speaker cable.

DESCRIPTION:

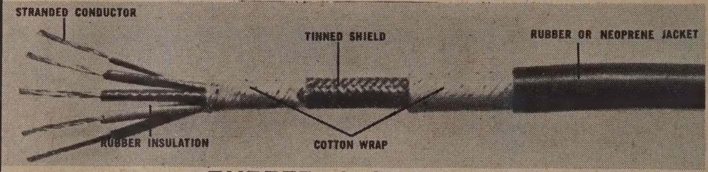
Each conductor 20 AWG stranded tinned copper, rubber insulation, color coded, conductors twisted, cushioned with cotton fillers, cotton wrap, tough black rubber jacket overall. It is extremely flexible and especially designed for heavy studio use.

COLOR CODE OF CONDUCTORS

1—BLACK
2—WHITE
3—RED
4—GREEN
5—YELLOW
6—BLUE
7—BROWN
8—ORANGE
9—PURPLE
10—SLATE

Shielded Multi-Conductor Cable

■STANDARD SPOOL PUT-UP: 25 FT., 50 FT., 100 FT., 250 FT., 500 FT., 1000 FT.



RUBBER JACKET

ALPHA NO.	NO. OF COND.	COND. SIZE	COND. STRAND	WALL THICKNESS	NOMINAL JACKET	NOM. O.D.
1253	5	20	26/34	.020″	.035″	.340″
1254	6	20	26/34	.020″	.035″	.365″
1254/18	6	18	41/34	.020″	.035″	.430″
1255	7	20	26/34	.020″	.035″	.405″
1255/8	8	20	26/34	.020″	.035″	.415″
1255/10	10	20	26/34	.020″	.035″	.440″

NEOPRENE JACKET

ALPHA NO.	NO. OF COND.	COND. SIZE	COND. STRAND	WALL THICKNESS	NOMINAL JACKET	NOM. O.D.
1449	1	18	41/34	.040″	.030″	.250″
1450	2	18	41/34	.020″	.035″	.305″
1451	3	18	41/34	.020″	.035″	.325″
1452	4	18	41/34	.020″	.035″	.335″
1454	6	18	41/34	.020″	.035″	.430″

APPLICATIONS

Shielded electronic power cable. Control circuits. Video and audio interconnecting cable. Broadcast and heavy duty studio use.

DESCRIPTION:

Each conductor stranded tinned copper, rubber insulation, color coded, conductors twisted, cotton wrap, braided tinned copper shield, cotton wrap, tough black rubber or neoprene, jacket overall.

COLOR CODE OF CONDUCTORS

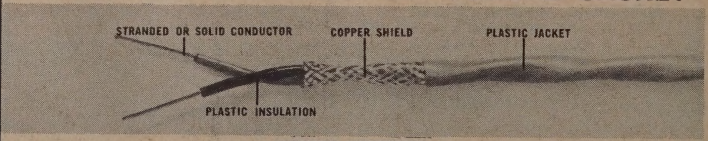
1—BLACK	6—BLUE
2—WHITE	7—BROWN
3—RED	8—ORANGE
4—GREEN	9—PURPLE
5—YELLOW	10—SLATE

CHARACTERISTICS OF NEOPRENE TYPE

Oil and acid resistant. Suitable for outdoor use and direct burial. Will resist aging and rough usage.

Shielded Audio Cable

2 CONDUCTOR—PLASTIC JACKET



STRANDED CONDUCTORS

ALPHA NO.	NO. OF COND.	COND. SIZE	COND. STRAND	WALL THICKNESS	NOMINAL JACKET	NOM. O.D.
1736	2	22	7/30	.016″	.020″	.185″
1741	2	20	10/30	.016″	.020″	.200″
1746	2	18	16/30	.016″	.020″	.222″

SOLID CONDUCTORS

1775*	2	22 Solid	1	.016″	.020″	.175″
1779	2	20 Solid	1	.016″	.020″	.193″
1783	2	18 Solid	1	.016″	.020″	.209″

* Supersedes 9775. Now with 22 AWG solid tinned copper ground wire under braided copper shield.

■STANDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.

DESCRIPTION:

Each conductor tinned copper, plastic insulation, color coded, conductors twisted, braided copper shield, gray vinyl plastic jacket overall. Suitable for outdoor installations.

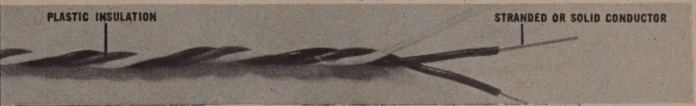
COLOR CODE OF CONDUCTORS
1—BLACK, 2—RED.

(See Page 1511 for Alpha Prices)

Unshielded Audio Cable

2 AND 3 CONDUCTOR

■STANDARD SPOOL PUT-UP: 25 FT., 50 FT., 100 FT., 250 FT., 500 FT., 1000 FT.



NO OUTER JACKET

APPLICATIONS:
Intercoms. Interconnecting cables. Remote control circuits. Telephones. Telemetering connecting cable. "Baby Sitter" intercom.

DESCRIPTION:
Each conductor tinned copper, plastic insulation, color coded, conductors twisted.

COLOR CODE OF CONDUCTORS
1—BROWN
2—TAN
3—GRAY

ALPHA NO.	NO. OF COND.	COND. SIZE	COND. STRAND	WALL THICKNESS	NOM. O.D.
9269	2	22 Solid	1	.016″	.114″
9270	3	22 Solid	1	.016″	.124″
9271	2	20 Solid	1	.016″	.128″
9272	3	20 Solid	1	.016″	.139″
9273	2	18 Solid	1	.016″	.145″
9274	3	18 Solid	1	.016″	.155″
9275	2	16 Solid	1	.016″	.166″
9276	3	16 Solid	1	.016″	.180″
9169	2	22 Stranded	7/30	.016″	.125″
9170	3	22 Stranded	7/30	.016″	.140″
9171	2	20 Stranded	10/30	.016″	.145″
9172	3	20 Stranded	10/30	.016″	.160″
9173	2	18 Stranded	16/30	.016″	.165″
9174	3	18 Stranded	16/30	.016″	.180″
9175	2	16 Stranded	26/30	.016″	.190″
9176	3	16 Stranded	26/30	.016″	.210″
9177	2	14 Stranded	41/30	.016″	.220″
9178	3	14 Stranded	41/30	.016″	.240″
9179	2	12 Stranded	65/30	.016″	.250″
9180	3	12 Stranded	65/30	.016″	.275″

PLASTIC JACKET

DESCRIPTION:
Each conductor tinned copper, plastic insulation, color coded, conductors twisted, gray vinyl plastic jacket overall. Suitable for outdoor installations.

COLOR CODE OF CONDUCTORS
1—BLACK
2—RED
3—WHITE

ALPHA NO.	NO. OF COND.	COND. SIZE	COND. STRAND	WALL THICKNESS	NOMINAL JACKET	NOM. O.D.
1793	2	22 Solid	1	.010″	.020″	.130″
1794	3	22 Solid	1	.010″	.020″	.140″
1795	2	20 Solid	1	.016″	.020″	.148″
1796	3	20 Solid	1	.016″	.020″	.159″
1797	2	18 Solid	1	.016″	.020″	.164″
1798	3	18 Solid	1	.016″	.020″	.176″
1893	2	22 Stranded	7/30	.010″	.020″	.135″
1894	3	22 Stranded	7/30	.010″	.020″	.145″
1895	2	20 Stranded	10/30	.016″	.020″	.180″
1896	3	20 Stranded	10/30	.016″	.020″	.190″
1897	2	18 Stranded	16/30	.016″	.020″	.200″
1898	3	18 Stranded	16/30	.016″	.020″	.210″

Shielded Audio Cable

2 CONDUCTOR

NO OUTER JACKET

■STANDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.

APPLICATIONS:
For public address and sound systems. Transmission line. Industrial paging and call systems. Recording equipment. Hospital and school sound installations. Broadcast and audio cable. Rack and panel wiring.

DESCRIPTION:
Each conductor tinned copper, plastic insulation, color coded, conductors twisted, braided tinned copper shield overall.

COLOR CODE OF CONDUCTORS
1—BLACK, 2—RED.

STRANDED CONDUCTORS

ALPHA NO.	NO. OF COND.	COND. SIZE	COND. STRAND	WALL THICKNESS	NOM. O.D.
1261/30	2	30	7/38	.010″	.085″
1261/28	2	28	7/36	.010″	.090″
1261/26	2	26	7/34	.010″	.095″
1261	2	24	16/36	.016″	.138″
1256/22V	2	22	7/30	.016″	.148″
1256V	2	20	10/30	.016″	.164″
1259V*	2	18	16/30	.016″	.170″
1260V	2	16	26/30	.020″	.210″
1260/14	2	14	41/30	.020″	.225″
1260/12	2	12	65/30	.025″	.295″
SOLID CONDUCTORS					
1267/22V	2	22 Solid	1	.016″	.135″
1267V	2	20 Solid	1	.016″	.153″
1267/18V	2	18 Solid	1	.016″	.170″

* 22 AWG solid tinned copper ground wire under braided copper shield.

Plastic Intercom Cable

■STANDARD PUT-UP: 50 FT., 100 FT., 250 FT., 500 FT., 1000 FT.

APPLICATIONS:

Balanced intercom systems. Annunciators. Telephones. "Nurses call" systems. Control circuit cable. Electronic computer cable. Multiple speaker cable. Signal systems. "Alarm" systems. Guided missiles.

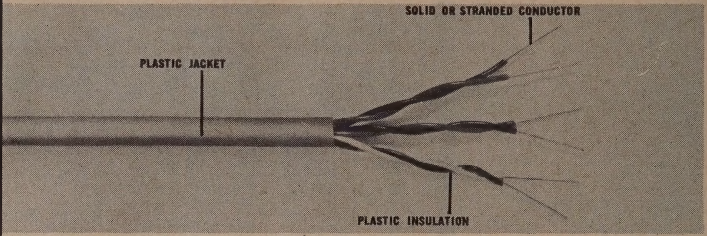
DESCRIPTION:

Each conductor 22 AWG tinned copper, plastic insulation, conductors color coded, twisted into pairs, gray vinyl plastic jacket overall. Suitable for outdoor installations.

PAIR NO. — COLOR COMBINATION

1—BLACK PAIRED WITH RED
2—BLACK PAIRED WITH WHITE
3—BLACK PAIRED WITH GREEN
4—BLACK PAIRED WITH BLUE
5—BLACK PAIRED WITH BROWN
6—BLACK PAIRED WITH YELLOW
7—BLACK PAIRED WITH ORANGE
8—RED PAIRED WITH GREEN
9—RED PAIRED WITH WHITE
10—RED PAIRED WITH BLUE
11—RED PAIRED WITH YELLOW
12—RED PAIRED WITH BROWN
13—RED PAIRED WITH ORANGE
14—GREEN PAIRED WITH BLUE
15—GREEN PAIRED WITH WHITE
16—GREEN PAIRED WITH BROWN
17—GREEN PAIRED WITH ORANGE
18—GREEN PAIRED WITH YELLOW
19—WHITE PAIRED WITH BLUE
20—WHITE PAIRED WITH BROWN
21—WHITE PAIRED WITH ORANGE
22—WHITE PAIRED WITH YELLOW
23—BLUE PAIRED WITH BROWN
24—BLUE PAIRED WITH ORANGE
25—BLUE PAIRED WITH YELLOW
26—BROWN PAIRED WITH ORANGE
27—BROWN PAIRED WITH YELLOW
28—PURPLE PAIRED WITH RED
29—PURPLE PAIRED WITH WHITE
30—PURPLE PAIRED WITH GREEN
31—PURPLE PAIRED WITH BLUE
32—PURPLE PAIRED WITH BROWN
33—PURPLE PAIRED WITH YELLOW
34—PURPLE PAIRED WITH ORANGE
35—PURPLE PAIRED WITH SLATE
36—PURPLE PAIRED WITH BLACK
37—SLATE PAIRED WITH RED
38—SLATE PAIRED WITH WHITE
39—SLATE PAIRED WITH GREEN
40—SLATE PAIRED WITH BLUE
41—SLATE PAIRED WITH BROWN
42—SLATE PAIRED WITH YELLOW
43—SLATE PAIRED WITH ORANGE
44—SLATE PAIRED WITH BLACK
45—WHITE/BLACK PAIRED W. RED
46—WHITE/BLACK PAIRED W. BLUE
47—WHITE/BLACK PAIRED W. BLUE
48—WHITE/BLACK PAIRED W. BROWN
49—WHITE/BLACK PAIRED W. YELLOW
50—WHITE/BLACK PAIRED W. ORANGE
51—WHITE/BLACK PAIRED W. PURPLE

* Bare copper conductors. Write for color code of individual conductors.



SOLID CONDUCTORS

ALPHA NO.	NO. OF PAIRS	NO. OF COND.	COND. SIZE	COND. STRAND	WALL THICKNESS	NOMINAL JACKET	NOM. O.D.
1300	1	2	22 Solid	1	.010″	.020″	.130″
1302	2	4	22 Solid	1	.010″	.020″	.198″
1304	3	6	22 Solid	1	.010″	.020″	.220″
1307	6	12	22 Solid	1	.010″	.020″	.274″
1307/7	7	14	22 Solid	1	.010″	.020″	.288″
1307/9	9	18	22 Solid	1	.010″	.020″	.310″
1308/11	11	22	22 Solid	1	.010″	.020″	.342″
1309	13	26	22 Solid	1	.010″	.025″	.385″
1309/15	15	30	22 Solid	1	.010″	.025″	.400″
1310	16	32	22 Solid	1	.010″	.025″	.420″
1313	27	54	22 Solid	1	.010″	.035″	.530″
1313/31	31	62	22 Solid	1	.010″	.035″	.555″
1313/41	41	82	22 Solid	1	.010″	.035″	.597″
1314	51	102	22 Solid	1	.010″	.045″	.675″
1315*	76	152	22 Solid	1	.010″	.070″	.970″
1315/101*	101	202	22 Solid	1	.010″	.080″	1.140″

STRANDED CONDUCTORS

ALPHA NO.	NO. OF PAIRS	NO. OF COND.	COND. SIZE	COND. STRAND	WALL THICKNESS	NOMINAL JACKET	NOM. O.D.
1316	1	2	22	7/30	.010″	.020″	.145″
1317	2	4	22	7/30	.010″	.020″	.226″
1318	3	6	22	7/30	.010″	.020″	.252″
1319	4	8	22	7/30	.010″	.020″	.279″
1320	5	10	22	7/30	.010″	.020″	.300″
1322	6	12	22	7/30	.010″	.020″	.320″
1323	9	18	22	7/30	.010″	.020″	.355″
1327	15	30	22	7/30	.010″	.025″	.460″
1329	27	54	22	7/30	.010″	.035″	.590″

Multi-Conductor Audio Cable

OUTER PLASTIC JACKET

■STANDARD SPOOL PUT-UP: 25 FT., 50 FT., 100 FT., 250 FT., 500 FT., 1000 FT.

APPLICATIONS:

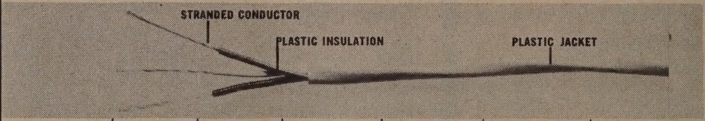
Unbalanced intercom systems. Low voltage relay control cable. P.A. systems. Signal systems. Electronic computer cable.

DESCRIPTION:

Each conductor 22 AWG stranded tinned copper, plastic insulation, color coded, conductors twisted, gray vinyl plastic jacket overall. Suitable for outdoor installations.

COLOR CODE OF CONDUCTORS

1—BLACK
2—RED
3—WHITE
4—GREEN
5—ORANGE
6—BLUE
7—BROWN
8—YELLOW
9—PURPLE
10—SLATE
11—PINK
12—TAN
13—RED/GREEN
14—RED/YELLOW
15—RED/BLACK



ALPHA NO.	NO. OF COND.	COND. SIZE	COND. STRAND	WALL THICKNESS	NOMINAL JACKET	NOM. O.D.
1172	2	22	7/30	.010″	.020″	.140″
1173	3	22	7/30	.010″	.020″	.145″
1174	4	22	7/30	.010″	.020″	.170″
1175	5	22	7/30	.010″	.020″	.175″
1176	6	22	7/30	.010″	.020″	.185″
1177	7	22	7/30	.010″	.020″	.190″
1178	8	22	7/30	.010″	.020″	.200″
1179	9	22	7/30	.010″	.020″	.225″
1180	10	22	7/30	.010″	.020″	.235″
1181	12	22	7/30	.010″	.020″	.255″
1181/15	15	22	7/30	.010″	.020″	.280″

Use Index Page 1 for Quick, Easy Location of ALL Products

(See Page 1511 for Alpha Prices)

Braided Tinned Copper

■STANDARD PUT-UP: 50 FT., 100 FT., 250 FT., 500 FT., 1000 FT.

APPLICATIONS:

Shielding insulated wire and cable. Bonding and ground straps. For applications requiring extreme flexibility such as pigtails, component leads, connecting moving parts, etc.

DESCRIPTION:

Very fine soft annealed tinned copper wires braided and rolled flat.

Tubular shielding per Spec. QQ-B-575 available to order.

SHIELDING

ALPHA NO.	APPROX. I.D.	NO. OF CARRIERS	NO. OF ENDS	SIZE OF STRANDS	TOTAL STRANDS	AWG EQUIVALENT
1221	.025″	8	1	36	8	26
1222	1/32″	16	1	36	16	24
1223	3/64″	24	1	36	24	23
1224	3/32″	16	3	36	48	19
2229	7/64″	24	3	36	72	18
1229	1/8″	24	3	36	72	18
1230	3/16″	24	5	36	120	15
1231	1/4″	24	7	36	168	14
1232	3/8″	48	6	36	288	11
1233/2	1/2″	48	8	36	384	10

BONDING STRAP

ALPHA NO.	APPROX. I.D.	SIZE OF STRANDS
1233	5/8″	36
1234	3/4″	36
2234	25/32″	36
1235	1″	36
1239	1-3/8″	36

Uninsulated Tinned Copper

SPECIFICATION MIL-W-3861 **SHIELDING** TYPE S & ASTM-B-33

■STANDARD PUT-UP:
100 FT., 500 FT., 1000 FT.

APPLICATIONS:

Winding of coils. Antennas. Point to point wiring.

DESCRIPTION:

Pure electrolytic solid copper properly annealed and tinned for quick soldering.

ALPHA NO.	CONDUCTOR SIZE	CIRCULAR MIL AREA	NOMINAL O.D.
299/7	38 AWG	15.72	.004″
299/6	36 AWG	25.00	.005″
299/5	34 AWG	39.75	.006″
299/4	32 AWG	63.21	.008″
299/3	30 AWG	100.5	.010″
299/2	28 AWG	159.8	.013″
299/1	26 AWG	254.1	.016″
299	24 AWG	404.0	.020″
298	22 AWG	642.4	.025″
297	20 AWG	1022	.033″
296	18 AWG	1642	.040″
295	16 AWG	2583	.051″
286	14 AWG	4107	.065″
289	12 AWG	6530	.082″
292	10 AWG	10380	.103″
292/8	8 AWG	16510	.129″
292/6	6 AWG	26250	.162″

Test Lead Wire

■STANDARD SPOOL PUT-UP: 25 FT., 50 FT., 100 FT., 250 FT., 500 FT., 1000 FT.

APPLICATIONS:

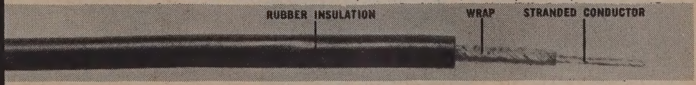
As test leads in analyzers, oscillators, multi-meters, and all other types of testing apparatus or wherever an Extra Flexible insulated wire is required. Heavy Duty type designed for television, therapeutic equipment, analyzers, oscillators, etc.

DESCRIPTION:

Single conductor extra flexible tinned soft annealed copper, concentric strand, wrap, rubber insulation, satin finish.

*** STOCK COLORS**

1—BLACK
2—RED
3—GREEN
4—YELLOW



STANDARD TYPE

ALPHA NO.	COND. SIZE	COND. STRAND	WALL THICKNESS	VOLTAGE BREAKDOWN	NOM. O.D.	* STOCK COLORS
1632	20	41/36	.040″	5,000‡	.125″	1 and 2
1634 *	20	41/36	.044″	8,500‡	.135″	1 and 2
1635	20	41/36	.047″	10,000‡	.140″	1 thru 4
1636	18	65/36	.047″	12,000‡	.140″	1 thru 3

* Supersedes 9635

‡ 60 CYCLES

HEAVY DUTY TYPE

1638	18	65/36	.109″	22,000‡	.235″	1 and 2

ALPHA WIRE CORPORATION

ALPHLEX® ZIPPER TUBING*

ALL-PURPOSE
To group, mark, protect — whatever your harnessing or cabling objective, Alphlex Zipper Tubing helps you do it faster, easier, at lower cost.

CONSTANT FLEXIBILITY
When conventionally laced and tied, wire often becomes "stiff" and hard to maneuver. However, when enclosed in one continuous tube of Alphlex Zipper Tubing, wires are always free to flex, easy to handle.

CUTS TIME AND LABOR
You need only a few seconds to use Alphlex Tubing — completely eliminates the necessity for dilating conventional tubing and sleeving — no pulling, no tugging, no straining of wires.

ACCESSIBILITY
The ease with which Alphlex Zipper Tubing may be unzipped and folded back to expose wires for special marking, soldering to terminations, etc., then re-folded and re-zipped, makes for faster, more efficient work at all locations along the cable.

CABLE MARKERS
The modern way to identify cables. Any type of Alphlex Zipper Tubing, any color, any length makes an effective cable marker. Alpha has the facilities to cut the Zipper Tubing to a desired length and permanently mark each piece to customer's specifications with any appropriate instruction or coding (letters and/or numbers). No tools needed. These lengths may be snapped around cables, hoses, pipes without the aid of a metal slider. Simply wrap the marker around the cable and close by manually interlocking the zipper tracks. If a permanent marker is desired, apply Alphlex PB-200, Compound Liquid Sealer before closing.

HARNESSING
Various sizes of Alphlex Zipper Tubing may be used to cover the main trunk and branches of a harness to obtain a neat, waterproof, and protective jacket.

CUSTOM CABLING
With Alphlex Zipper Tubing, there is no need for minimum orders, no costly set-up charges, because expensive extruding of a jacket is unnecessary. Just bunch, twist, or interweave the wires as desired, cover with Alphlex Zipper Tubing—that's it, a custom cable, any required length.

The first major break-through to modern harnessing and cabling

For bench work, we recommend the Alphlex Hand Tool. After laying the wires on the flat Zipper Tubing, insert the zipper tracks in the openings, where indicated, and pull the tool along the length of the cable. This Hand Tool will form the tube, close the tracks and permanently seal the jacket.

HIGH VERSATILITY
Any number of variations and adaptations are possible with Alphlex Zipper Tubing—lining its walls with various materials, covering one zipper tubing with another, perforating for ventilation, imprinting and cutting into short lengths for cable markers, eyeletting for hanging as flexible wire duct, color coding, etc.

REPLACEABLE OUTER JACKET
Alplex Zipper Tubing can be used very effectively as a secondary protective jacket on expensive cable for added insurance against abrasion, deteriorating chemicals and fumes, etc. The jacket may be replaced as needed, quickly, easily and at low cost.

EASY WIRE CHANGES
In the prototype or developmental stages, changes in coding or wiring, etc., may become necessary. This would render a conventional custom cable (with its extruded jacket) useless. With an Alphlex Zipper Tubing custom cable, you simply unzip, make the change, re-zip.

*Patents #RE24,613 and #2,558,367, and other patents

How to use Alphlex Zipper Tubing

1. Bend the zipper tubing into a circle with the zipper tracks on the left side facing up, and the tracks on the right side facing down.
2. Hold slider so that the largest end faces you and metal pull-tab is on top.
3. Place left side of zipper into lower opening of slider and right side into upper opening of slider.
4. Hold your thumb against the two sides just below the slider. Pull toward yourself, thus forcing the zipper tracks to interlock. The flap should lie on top of the wires, so as to prevent fouling of the zippers.
5. Alphlex Zipper Tubing can also be closed by forcing the tracks to interlock by pressing them together with your fingers.

How to permanently seal Alphlex Zipper Tubing

1. Apply Alphlex PB-200, Special Compound Liquid Sealer, to the zipper tracks by using the supplied brush.
2. The method recommended is to apply the PB-200 sealer a few inches at a time directly ahead of the slider. CAUTION—do not allow the sealer to dry before closing. The sealer dries quickly on the surface but requires at least 30 minutes to an hour for complete bonding.
3. When sealed, a Zipper Tubing jacket has the same properties as an extruded jacket, in that it is moisture-proof and water-proof. Should the wires inside the Zipper Tubing need repairing or modification, the jacket would have to be stripped as you would any conventional extruded type, and replaced with an additional Zipper Tubing jacket.

(See Page 1511 for Alpha Prices)

TYPES OF ZIPPER TUBING

Type ZIP-31 —fabricated from .020″ polyvinyl sheet made from MIL-I-631C materials. All purpose type for general applications to 105°C. Standard colors: Clear, Black, Yellow.

Type ZIP-31M—heavy duty construction. Similar to ZIP-31 type except nominal wall thickness of .040″. Standard colors: Clear, Black.

Type ZIP-44 —polyvinyl sheet made from MIL-I-7444B materials. Extremely flexible; for aircraft and low-temperature uses to —67°C. Standard colors: Clear (amber), Black.

Type ZIP-44M—heavy duty construction. Similar to ZIP-44 type except nominal wall thickness of .040″. Standard colors: Clear (amber), Black.

Type ZIP-50 —"sandwich" of aluminum foil laminated between two sheets of polyvinyl. For 100% RF shielding applications to 105°C. Standard color: Silver Grey.

Type ZIP-90 —polyvinyl bonded to woven fibreglass sheet per MIL-I-3190A. For rough usage, abrasion resistance, and high temperature uses to 130°C. Standard color: Black.

STANDARD SIZES FOR ALL TYPES OF ALPHLEX TUBING

Zipper Tubing Inside Diameter	Approx. Flat Width (From track to track—excluding flap)	Zipper Tubing Inside Diameter	Approx. Flat Width (From track to track—excluding flap)	Zipper Tubing Inside Diameter	Approx. Flat Width (From track to track—excluding flap)	Zipper Tubing Inside Diameter	Approx. Flat Width (From track to track—excluding flap)
*1/4″	1-5/16″	1″	3-9/16″	1-3/4″	5-5/8″	3″	9-5/8″
*3/8″	1-5/8″	1-1/8″	3-15/16″	1-7/8″	6″	3-1/4″	10-3/8″
1/2″	2″	1-1/4″	4-1/8″	2″	6-3/8″	3-1/2″	11-1/8″
5/8″	2-3/8″	1-3/8″	4-1/2″	2-1/4″	7-1/8″	3-3/4″	11-7/8″
3/4″	2-3/4″	1-1/2″	4-7/8″	2-1/2″	7-7/8″	4″	12-5/8″
7/8″	3-1/8″	1-5/8″	5-1/4″	2-3/4″	8-3/4″		

Standard Put-Up—25 Ft., 50 Ft., 100 Ft. Spools.
Longer lengths available to order.

*Because of small Inside Diameter, these sizes cannot be closed by using the slider. The tracks must be closed by manual pressure.

ZIPPER SPECIFICATIONS FOR ALL TYPES OF ALPHLEX ZIPPER TUBING

Material	**Polyvinyl Chloride**
Track Thickness (when closed)	**.095″**
Dielectric Strength V/mil	**759**
Tensile Strength P.S.I.	**3810**
Ultimate Elongation	**255%**
Operating Temperature, Upper Limit	**106°C**
Cold Brittleness	**—86°C**
Fungus-proof	**will not support fungus**
Flammability	**self-extinguishing**
Lateral Pull Strength (unsealed)	**42.7 pounds/inch**
Lateral Pull Strength (permanently sealed)	**59.8 pounds/inch**
Standard colors	**Black, Clear, Yellow**

Contrasting color combinations of zipper and body are available to order. The zipper portion can be supplied in any of the following colors: Black, Yellow, Clear, Blue, White, Brown, Purple, Red, Orange, Green, Slate.

ACCESSORIES

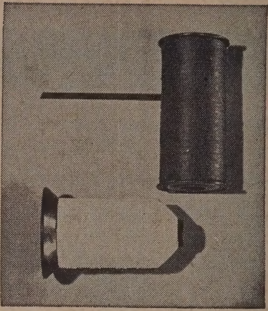
PB-200 Special Compound Liquid Sealer. Available in sizes: 1 oz., 2 oz., 4 oz., 1 pt., 1 qt., 1 gal. Each container is supplied with a brush for easy application of the sealer. 4 oz. of PB-200 will seal approximately 1000 feet.

AB-295 Metal Sliders. 1 supplied free with every 25 feet. Additional sliders may be ordered separately.

ORDERING INFORMATION

When Alphlex Zipper Tubing will be closed with a metal slider, specify a Zipper Tubing I.D. 1/4″ larger than the O.D. of the cable to be covered.
A tighter fitting jacket will result when using an I.D. of Zipper Tubing, the same size as, or to the nearest larger size of the O.D. of the cable to be covered. However, in this case, the Zipper Tubing must be closed by manually engaging the tracks.

ELECTRONIC LACING CORDS AND TAPES



Types of Lacing Cord

flat braided tape This construction was developed to prevent the "cold flow" that often is encountered in wire having plastic or rubber insulations. It has been specifically designed to create a wider contact area with the insulation, so that it does not flow away from the contact point. It is considerably more flexible and easier on the user's hands and is recommended for all types of harness work. Flat tapes do not appreciatively increase the diameter of the cable.

round twisted cord Available in various strands and thicknesses to produce different tensile strengths. This type, while it may be used for plastic and rubber insulated wire, is particularly suited for wires having a secondary insulation or those utilizing a textile as an insulating material. Round cords are available with diameters from .017″ for miniature and subminiature work to .050″.

Materials

nylon Synthetic fiber resistant to: fungus, flame, acids, abrasion. Excellent tensile strength, light weight, small size.

dacron A synthetic fiber which retains all the above characteristics of Nylon plus: less elongation, better resistance to acids, no appreciable discoloration.

fiberglass Fiberglass is particularly suited for high temperature applications up to 500°F. Alpha Fiberglass lacing tape has a Teflon finish to increase the tensile strength of the fiberglass and provide an abrasion resistant surface.

Finishes

ge	synthetic rubber-like resin
mw	micro-crystalline wax
am	thermoplastic synthetic resin
tf	Teflon resin
sr	fungistatic synthetic rubber

Round Lacing Cord

nylon

Tensile Strength	Finish	Nominal Diameter	Stock Colors	Yards per Pound	Standard Put-Up	ALPHA No.
10 lbs.	GE	.017″	White & Black	6,100	8 oz. tubes	LC-103
13 lbs.	GE	.017″	White & Black	4,250	8 oz. tubes	LC-104
25 lbs.	GE	.025″	White & Black	1,780	8 oz. tubes	LC-101
32 lbs.	MW	.030″	White & Black	1,180	8 oz. spls.	LC-115*
32 lbs.	GE	.030″	White & Black	1,180	8 oz. tubes	LC-112
32 lbs.	AM	.030″	White & Black	1,180	8 oz. spls.	LC-118
48 lbs.	MW	.035″	White & Black	750	8 oz. spls.	LC-114*
48 lbs.	GE	.035″	White & Black	750	8 oz. tubes	LC-111
48 lbs.	AM	.035″	White & Black	750	8 oz. spls.	LC-117
52 lbs	GE	.040″	White & Black	750	8 oz. tubes	LC-102
70 lbs.	MW	.050″	White & Black	560	8 oz. spls.	LC-113*
70 lbs.	GE	.050″	White & Black	560	8 oz. tubes	LC110
70 lbs.	AM	.050″	White & Black	560	8 oz. spls.	LC-116

*Meets Government Spec. MIL-T-713A, Type P

Flat Braided Lacing Tape

nylon

Width	Thickness	Tensile Strength	Finish	Stock Colors	Standard Put-Up	ALPHA No.
1/16″	.010″	30 lbs.	MW	White & Black	500 yd. spls.	LC-134
1/16″	.010″	30 lbs.	GE	White & Black	500 yd. tubes	LC-130
1/16″	.010″	30 lbs.	SR	White & Black	500 yd. spls.	LC-138
1/16″	.010″	30 lbs.	AM	White & Black	500 yd. spls.	LC-142
3/32″	.014″	50 lbs.	MW	White & Black	500 yd. spls.	LC-136*
3/32″	.014″	50 lbs.	GE	White & Black	500 yd. tubes	LC-132
3/32″	.014″	50 lbs.	SR	White & Black	500 yd. spls.	LC-140
3/32″	.014″	50 lbs.	AM	White & Black	500 yd. spls.	LC-143
1/4″	.014″	145 lbs.	MW	White & Black	200 yd. spls.	LC-137
1/4″	.014″	145 lbs.	GE	White & Black	200 yd. tubes	LC-133
1/4″	.014″	145 lbs.	SR	White & Black	200 yd. spls.	LC-141
1/4″	.014″	145 lbs.	AM	White & Black	200 yd. spls.	LC-144

*Meets Government Spec. MIL-T-713A, Type P

dacron

Width	Thickness	Tensile Strength	Finish	Stock Colors	Standard Put-Up	ALPHA No.
1/16″	.010″	30 lbs.	MW	White & Black	500 yd. spls.	LC-161
1/16″	.010″	30 lbs.	GE	White & Black	500 yd. tubes	LC-157
1/16″	.010″	30 lbs.	SR	White & Black	500 yd. spls.	LC-164
1/16″	.010″	30 lbs.	AM	White & Black	500 yd. spls.	LC-167
3/32″	.014″	50 lbs.	MW	White & Black	500 yd. spls.	LC-162
3/32″	.014″	50 lbs.	GE	White & Black	500 yd. tubes	LC-158
3/32″	.014″	50 lbs.	SR	White & Black	500 yd. spls.	LC-165
3/32″	.014″	50 lbs.	AM	White & Black	500 yd. spls.	LC-168
1/4″	.014″	130 lbs.	MW	White & Black	200 yd. spls.	LC-163
1/4″	.014″	130 lbs.	GE	White & Black	200 yd. tubes	LC-159
1/4″	.014″	130 lbs.	SR	White & Black	200 yd. spls.	LC-166
1/4″	.014″	130 lbs.	AM	White & Black	200 yd. spls.	LC-169

teflon — fiberglass

Width	Thickness	Tensile Strength	Finish	Stock Colors	Standard Put-Up	ALPHA No.
3/32″	.020″	140 lbs.	TF	White	250 yd. spls.	LC-171
1/4″	.028″	250 lbs.	TF	White	250 yd. spls.	LC-172

ALPHA WIRE CORPORATION

ALPHA WIRE • PRICE LIST

ALPHA No.	List Price Per 1000 Ft.
286	26.13
289	39.38
292	72.50
292/6	180.00
292/8	112.50
295	17.50
296	13.00
297	8.25
298	6.25
299	6.00
299/1	5.75
299/2	5.50
299/3	5.25
299/4	5.13
299/5	5.00
299/6	4.88
299/7	4.75
1172	34.63
1173	36.00
1174	47.13
1175	58.75
1176	90.13
1177	101.25
1178	109.88
1179	119.25
1180	137.50
1181	182.50
1181/15	230.00
1182	54.13
1183	76.13
1184	95.25
1185	119.00
1186	145.63
1187	167.25
1188	196.13
1189	217.63
1190	252.38
1192	297.13
1192/15	375.00
1192/20	495.00
1221	45.00
1222	46.25
1223	47.50
1224	50.00
1229	55.00
1230	64.00
1231	87.88
1232	149.00
1233	200.00
1233/2	190.00
1234	450.00
1235	477.50
1239	525.00
1244	120.00
1245	139.00
1246	167.50
1247	200.00
1247/6	247.50
1247/7	312.75
1247/8	333.75
1247/10	400.00
1248	102.50
1249	127.63
1249/18	154.50
1250	139.00
1250/18	185.88
1251	161.00
1251/18	300.00
1252	188.75
1252/18	332.50
1253	233.13
1254	288.63
1254/18	615.00
1255	308.00
1255/8	375.00
1255/10	497.50
1256V	70.00
1256/22V	55.25
1259V	85.00
1260V	135.00
1260/12	315.00
1260/14	175.00
1261	70.00
1261/26	75.00
1261/28	78.25
1261/30	81.25
1267V	65.00
1267/18V	74.50
1267/22V	51.00
1300	24.75
1302	45.80
1304	64.93
1307	94.38
1307/7	133.75
1307/9	138.75
1308/11	205.38
1309	252.50
1309/15	258.13
1310	312.50
1313	471.75
1313/31	730.00
1313/41	965.00
1314	1587.50
1315	2650.00
1315/101	3360.00
1316	35.00
1317	67.50
1318	95.00
1319	120.00
1320	129.50
1322	133.25
1323	197.13
1327	349.88
1329	638.25
1332	57.50
1334	59.50
1336	62.50
1337	65.25
1350	46.50
1351	47.50
1352	52.50
1353	65.00
1354	75.00
1355	108.75
1356	155.00
1361	62.50
1362	67.50
1363	77.00
1364	95.00
1365	126.50
1366	207.50
1371	62.50
1372	65.00
1373	80.00
1374	92.50
1381	25.50
1382	28.25
1383	35.00
1384	50.00
1385	63.00
1386	98.75
1387	157.50
1388	257.50
1389	400.00
1389/4	577.50
1389/2	895.00
1389/0	1375.00
1389/00	1890.00
1391	72.50
1392	80.00
1393	87.50
1394	115.50
1395	142.00
1396	166.50
1449	165.00
1450	230.00
1451	337.50
1452	375.00
1454	650.00
1504	20.75
1505	27.38
1506	36.75
1507	49.13
1508	71.00
1509	116.75
1550	11.50
1551	13.25
1553	17.25
1555	24.38
1557	35.75
1559	53.75
1560	90.00
1561	10.50
1563	14.13
1565	20.00
1567	28.50
1571	22.50
1573	27.75
1575	37.25
1577	53.75
1579	87.50
1590	26.50
1591	32.25
1592	40.75
1593	55.50
1594	47.00
1595	133.13
1598	202.50
1599	357.50
1599/6	490.00
1605	14.00
1606	10.88
1607	10.50
1609	11.00
1610	13.00
1632	29.18
1634	27.05
1635	30.25
1636	33.88
1638	51.38
1639	57.50
1641	31.88
1642	56.88
1645	112.50
1649	177.50
1651	117.50
1653	182.50
1655	320.00
1657	495.00
1675	15.25
1676	14.75
1677	15.13
1678	15.75
1679	18.50
1680	22.50
1685	11.25
1686	10.88
1687	11.50
1688	12.00
1689	13.50
1690	17.38
1702	45.00
1703	49.38
1704	70.75
1706	85.63
1710	98.25
1713	138.75
1715	166.50
1716	205.50
1717	300.00
1736	65.88
1741	87.13
1746	97.50
1775	69.13
1779	59.88
1783	85.00
1793	30.13
1794	46.13
1795	40.50
1796	61.50
1797	50.75
1798	70.50
1810	14.50
1811	13.25
1812	12.00
1813	12.50
1814	14.00
1815	17.25
1816	24.25
1830	12.88
1831	15.25
1832	19.63
1833	26.00
1834	33.25
1835	52.50
1840	18.38
1841	20.88
1842	25.88
1843	32.75
1844	41.75
1845	63.00
1850	14.13
1851	11.50
1852	11.25
1853	11.88
1854	12.50
1855	14.13
1856	18.25
1857	22.50
1858	28.63
1860	17.50
1861	15.50
1862	15.00
1863	15.63
1864	16.25
1865	18.75
1866	22.75
1867	28.38
1868	35.25
1870	20.50
1871	24.50
1872	29.75
1873	37.38
1874	44.00
1875	65.25
1876	97.75
1877	135.88
1878	266.00
1879	358.50
1880	27.88
1881	34.00
1882	38.88
1883	48.00
1884	58.00
1885	81.13
1886	122.88
1887	167.25
1888	316.50
1889	420.00
1893	34.63
1894	49.25
1895	46.75
1896	69.38
1897	58.25
1898	82.25
1931	103.00
1932	119.00
1932/3	149.52
1932/4	280.52
1933	140.52
1933/3	206.00
1933/4	327.52
1934	198.52
1934/3	248.00
1934/4	382.52
1935	225.52
1935/3	304.00
1935/4	463.00
1936	341.52
1936/3	488.52
1936/4	701.52
1937	488.00
1937/3	608.00
1937/4	888.52
1938	654.52
1938/3	911.52
1938/4	1098.52
1951	77.72
1952	93.20
1952/3	136.00
1952/4	255.00
1953	119.32
1953/3	183.00
1953/4	297.52
1954	178.52
1954/3	251.00
1954/4	355.00
1955	200.00
1955/3	314.52
1955/4	442.00
1956	319.00
1956/3	480.52
1956/4	688.52
1957	459.00
1957/3	646.00
1957/4	807.52
1958	637.52
1958/3	850.00
1958/4	999.00
2078	72.00
2080	50.00
2082	36.25
2156	46.75
2229	52.50
2234	462.50
2254	60.00
2255	53.25
2256	69.25
2258	85.00
2260	138.50
2334	75.00
2337	70.00
2606	25.50
2607	40.00
2809	275.00
2809/2	577.50
2809/3	825.00
2809/4	1072.50
2810	330.00
2810/2	605.00
2810/3	907.50
2810/4	1182.50
2811	440.00
2811/2	715.00
2811/3	1100.00
2811/4	1265.00
2812	302.50
2812/2	632.50
2812/3	880.00
2812/4	1210.00
2813	357.50
2813/2	660.00
2813/3	990.00
2813/4	1265.00
2814	467.50
2814/2	800.00
2814/3	1210.00
2814/4	1512.50
2815	357.50
2815/2	770.00
2815/3	1100.00
2815/4	1430.00
2816	440.00
2816/2	825.00
2816/3	1212.50
2816/4	1525.00
2817	550.00
2817/2	907.50
2817/3	1402.50
2817/4	1760.00
2851	127.50
2852	130.63
2853	133.13
2854	148.13
2855	172.50
2856	221.25
2857	266.25
2858	348.75
2859	423.75
2881	144.38
2882	149.63
2883	168.75
2884	186.38
2885	228.38
2886	267.75
2887	320.25
2888	393.75
2889	497.00
3256	100.50
3334	95.00
3337	87.50
3606	48.00
3607	62.50
4256	152.00
4334	116.25
4337	106.25
4606	67.50
4607	78.75
9169	25.50
9170	38.25
9171	34.00
9172	51.00
9173	46.75
9174	72.50
9175	70.13
9176	105.25
9177	104.13
9178	156.25
9179	148.75
9180	223.13
9269	20.00
9270	30.00
9271	31.50
9272	46.75
9273	41.00
9274	60.75
9275	65.00
9276	87.50
9635	Superseded by 1634
9775	Superseded by 1775

"ALMAG" Magnet Wire No.	List Price Per Lb.
PE-44	21.50
PE-42	15.03
PE-40	6.75
PE-38	4.93
PE-36	4.05
PE-34	3.60
PE-32	3.30
PE-30	3.08
PE-28	3.00
PE-26	2.85
PE-24	2.68
PE-22	2.63
PE-20	2.53
PE-18	2.38
PE-16	2.38
PE-14	2.38
PE-12	2.38
PE-10	2.38
HF-44	25.45
HF-42	14.65
HF-40	11.35
HF-38	8.50
HF-36	7.43
HF-34	6.35
HF-32	5.63
HF-30	4.68
HF-28	4.45
HF-26	4.00
HF-24	3.70
HF-22	3.50
HF-20	3.20
HF-18	3.05
HF-16	2.75
HF-14	2.75
HF-12	2.75
HF-10	2.75

Alphlex Plastic Tubing No.	List Price Per 1000 Ft.
PVC-105-24	24.00
PVC-105-22	24.00
PVC-105-20	24.50
PVC-105-19	25.00
PVC-105-18	25.25
PVC-105-17	25.50
PVC-105-16	26.75
PVC-105-15	27.76
PVC-105-14	28.76
PVC-105-13	29.50
PVC-105-12	31.50
PVC-105-11	32.50
PVC-105-10	34.50
PVC-105- 9	42.76
PVC-105- 8	44.26
PVC-105- 7	46.76
PVC-105- 6	52.26
PVC-105- 5	57.00
PVC-105- 4	62.52
PVC-105- 3	68.00
PVC-105- 2	74.00
PVC-105- 1	80.52
PVC-105-5⁄16″	104.52
PVC-105-0	87.52
PVC-105-3⁄8″	123.00
PVC-105-7⁄16″	139.00
PVC-105-1⁄2″	158.80
PVC-105-9⁄16″	207.00
PVC-105-5⁄8″	222.60
PVC-105-3⁄4″	302.60
PVC-105-7⁄8″	342.60
PVC-105-1″	390.00
PVC-105-1 1⁄8″	462.60
PVC-105-1 1⁄4″	542.60
PVC-105-1 3⁄8″	575.00
PVC-105-1 1⁄2″	705.00
PVC-105-1 3⁄4″	880.00
PVC-105-2″	1187.60
PVC-105-2 1⁄4″	1402.60
PVC-105-2 1⁄2″	1652.60

Alphlex Plastic Fibergl. No.	List Price Per 1000 Ft.
PIF-130-24	70.63
PIF-130-22	75.63
PIF-130-20	77.13
PIF-130-19	77.13
PIF-130-18	79.25
PIF-130-17	79.25
PIF-130-16	82.13
PIF-130-15	83.76
PIF-130-14	86.26
PIF-130-13	90.00
PIF-130-12	92.50
PIF-130-11	98.76
PIF-130-10	105.00
PIF-130- 9	110.00
PIF-130- 8	116.26
PIF-130- 7	122.50
PIF-130- 6	132.50
PIF-130- 5	146.00
PIF-130- 4	157.52
PIF-130- 3	176.20
PIF-130- 2	200.00
PIF-130- 1	227.52
PIF-130-0	267.52
PIF-130-3⁄8″	333.72
PIF-130-7⁄16″	442.52
PIF-130-1⁄2″	587.50
PIF-130-5⁄8″	724.00
PIF-130-3⁄4″	887.60
PIF-130-7⁄8″	1092.60
PIF-130-1″	1309.00

ALPHA electronic WIRE

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Trade No. & Lgth. In Ft.	Sugg. List Price. Ea.	Page No.
8000-50	1.50	1536
8000-75	2.00	1536
8000-100	2.63	1536
8000-1000	.03'	1536
8002-50	1.13	1536
8002-75	1.38	1536
8002-100	1.75	1536
8002-1000	.025'	1536
8008-100	4.25	1536
8008-200	7.75	1536
8008-500	.045'	1536
8009-100	2.88	1536
8009-200	5.50	1536
8009-500	.03'	1536
8011-100	3.50	1535
8011-1000	.035'	1535
8012-100	2.45	1535
8012-1000	.025'	1535
8013-100	1.85	1535
8013-1000	.02'	1535
8014-25	.63	1534
8014-500	.025'	1534
8018-50	1.50	1528
8018-500	.03'	1528
8018-1000	.03'	1528
8019-100	1.25	1535
8019-1000	.015'	1535
8020-100	1.00	1535
8020-1000	.015'	1535
8021-100	.88	1535
8021-1000	.015'	1535
*8022-100	.85	1535
*8022-1000	.015'	1535
*8023-100	.85	1535
*8023-1000	.015'	1535
*8024-100	.83	1535
*8024-1000	.015'	1535
*8025-100	.83	1535
*8025-1000	.015'	1535
*8026-100	.83	1535
*8026-1000	.015'	1535
*8027-100	.83	1535
*8027-1000	.015'	1535
8127-10	.63	1536
8127-500	.065'	1536
8200-100	2.75	1535
8200-500	.03'	1535
8200-1000	.03'	1535
8204-25	2.15	1521
8204-100	6.25	1521
8204-500	.09'	1521
8204-1000	.09'	1521
8205-25	1.38	1521
8205-100	4.15	1521
8205-500	.055'	1521
8205-1000	.055'	1521
8206-15	1.25	1531
8206-50	3.40	1531
8206-100	6.00	1531
8206-250	.08'	1531
8208-15	1.95	1520
8208-50	5.40	1520
8208-100	9.90	1520
8208-500	.13'	1520
8208-1000	.13'	1520
8209-15	1.95	1520
8209-50	5.40	1520
8209-100	9.90	1520
8209-500	.13'	1520
8209-1000	.13'	1520
8210-50	5.25	1527
8210-100	9.40	1527
8210-500	.105'	1527
*8211-500	.08'	1530
*8211-1000	.08'	1530
*8211-2000	.08'	1530
8212-100	8.90	1530
8212-500	.09'	1530
8212-1000	.09'	1530
*8212-2000	.09'	1530
8213-500	.19'	1530
8213-1000	.19'	1530
8213-2000	.19'	1530
8222-100	3.40	1527
8222-500	.035'	1527
8224-100	3.40	1527
8224-500	.035'	1527
8225-25	1.20	1526
8225-50	1.95	1526
8225-75	2.60	1526
8225-100	3.20	1526
8225-500	.045'	1526
8225-1000	.045'	1526
*8226-25	1.20	1526
*8226-50	1.95	1526
*8226-75	2.60	1526
*8226-100	3.20	1526
8227-100	15.00	1527
8227-250	.15'	1527
8227-500	.15'	1527
8230-25	1.30	1526
8230-50	2.05	1526
8230-75	2.85	1526
8230-100	3.55	1526
8230-500	.05'	1526
8230-1000	.05'	1526
8231-100	10.50	1530
8231-500	.105'	1530
8231-1000	.105'	1530
8232-100	15.25	1530
8232-500	.16'	1530
8232-1000	.16'	1530
*8232-2000	.16'	1530
8233-500	.28'	1530
8233-1000	.28'	1530
8233-1500	.28'	1530
*8233-2000	.28'	1530
8235-100	8.00	1526
8235-500	.08'	1526
8237-100	20.65	1528
*8237-250	.21'	1528
8237-500	.21'	1528
8237-1000	.21'	1528
8238-100	18.65	1528
*8238-250	.19'	1528
8238-500	.19'	1528
8238-1000	.19'	1528
8238-1500	.19'	1528
8239-100	13.75	1528
8239-500	.14'	1528
8239-1000	.14'	1528
8240-25	3.00	1529
8240-50	4.75	1529
8240-100	8.25	1529
*8240-250	.12'	1529
8240-500	.12'	1529
8240-1000	.12'	1529
8241-25	3.25	1529
8241-50	5.40	1529
8241-100	9.65	1529
*8241-250	.13'	1529
8241-500	.13'	1529
8241-1000	.13'	1529
8242-100	50.00	1528
8242-500	.50'	1528
8242-1000	.50'	1528
8245-100	12.50	1528
8245-500	.13'	1528
8245-1000	.13'	1528
8254-100	10.25	1529
8254-500	.105'	1529
8254-1000	.105'	1529
8257-100	16.25	1529
8257-500	.165'	1529
8257-1000	.165'	1529
8259-25	2.90	1528
8259-50	4.50	1528
8259-100	8.40	1528
8259-500	.12'	1528
8259-1000	.12'	1528
8260-100 ¶	37.50	—
8260-500¶	.38'	—
8260-1000¶	.38'	—
8261-100	24.25	1528
8261-500	.245'	1528
8261-1000	.245'	1528
8262-100	10.00	1529
8262-500	.10'	1529
8262-1000	.10'	1529
8263-100	11.25	1529
8263-500	.12'	1529
8263-1000	.12'	1529
8264-100	42.40	1528
8264-500	.43'	1528
8264-1000	.43'	1528
8267-100	25.75	1528
8267-500	.26'	1528
8267-1000	.26'	1528
8275-50	4.00	1526
8275-75	5.75	1526

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8275-100	7.15	1526
8275-500	.08'	1526
8275-1000	.08'	1526
8280	1.00'	1518
8281-100 ¶	27.50	1518 to 29
8281-500	.28'	1518 to 29
8281-1000	.28'	1518 to 29
8282-50	22.50	1518
8282-100	45.00	1518
8282-500	.45'	1518
8282-1000	.45'	1518
8283	3.75'	1518
8284	1.13'	1518
8285-50	4.75	1526
8285-75	7.00	1526
8285-100	9.00	1526
8285-500	.095'	1526
8285-1000	.095'	1526
8300-25 † ‡	2.50	1533
8300-50 † ‡	4.65	1533
8300-100 †•‡	8.75	1533
8300-250 †•‡	.10'	1533
8300-500 †•‡	.10'	1533
8300-1000†•‡	.10'	1533
8300-25 † §	2.90	1533
8300-50 † §	5.40	1533
8300-100 †•§	10.25	1533
8300-250 †•§	.12'	1533
8300-500 †•§	.12'	1533
8300-1000†•§	.12'	1533
8301-25 † ‡	2.75	1533
8301-50 † ‡	4.90	1533
8301-100 †•‡	9.15	1533
8301-250 †•‡	.12'	1533
8301-500 †•‡	.12'	1533
8301-1000†•‡	.12'	1533
8301-25 † §	3.15	1533
8301-50 † §	5.65	1533
8301-100 †•§	10.65	1533
8301-250 †•§	.13'	1533
8301-500 †•§	.13'	1533
8301-1000†•§	.13'	1533
8302-25 † ‡	2.75	1533
8302-50 † ‡	5.25	1533
8302-100 †•‡	10.00	1533
8302-250 †•‡	.12'	1533
8302-500 †•‡	.12'	1533
8302-1000†•‡	.12'	1533
8302-25 † §	3.15	1533
8302-50 † §	6.00	1533
8302-100 †•§	11.50	1533
8302-250 †•§	.13'	1533
8302-500 †•§	.13'	1533
8302-1000†•§	.13'	1533
8303-25 † ‡	3.25	1533
8303-50 † ‡	5.90	1533
8303-100 †•‡	11.25	1533
8303-250 †•‡	.13'	1533
8303-500 †•‡	.13'	1533
8303-1000†•‡	.13'	1533
8303-25 † §	3.65	1533
8303-50 † §	6.65	1533
8303-100 †•§	12.75	1533
8303-250 †•§	.15'	1533
8303-500 †•§	.15'	1533
8303-1000†•§	.15'	1533
8304-25 † ‡	3.15	1533
8304-50 † ‡	5:65	1533
8304-100 †•‡	10.75	1533
8304-250 †•‡	.13'	1533
8304-500 †•‡	.13'	1533
8304-1000†•‡	.13'	1533
8304-25 † §	3.50	1533
8304-50 † §	6.40	1533
8304-100 †•§	12.25	1533
8304-250 †•§	.14'	1533
8304-500 †•§	.14'	1533
8304-1000†•§	.14'	1533
8305-25 † ‡	3.75	1533
8305-50 † ‡	6.65	1533

Trade No. & Lgth. In Ft.	Sugg. List Price. Ea.	Page No.
8305-100 †•‡	12.50	1533
8305-250 †•‡	.15'	1533
8305-500 †•‡	.15'	1533
8305-1000†•‡	.15'	1533
8305-25 † §	4.15	1533
8305-50 † §	7.40	1533
8305-100 †•§	14.00	1533
8305-250 †•§	.165'	1533
8305-500 †•§	.165'	1533
8305-1000†•§	.165'	1533
8306-25 † ‡	3.75	1533
8306-50 † ‡	6.65	1533
8306-100 †•‡	12.50	1533
8306-250 †•‡	.15'	1533
8306-500 †•‡	.15'	1533
8306-1000†•‡	.15'	1533
8306-25 † §	4.15	1533
8306-50 † §	7.40	1533
8306-100 †•§	13.75	1533
8306-250 †•§	.165'	1533
8306-500 †•§	.165'	1533
8306-1000†•§	.165'	1533
8307-25 † ‡	4.40	1533
8307-50 † ‡	8.00	1533
8307-100 †•‡	15.00	1533
8307-250 †•‡	.175'	1533
8307-500 †•‡	.175'	1533
8307-1000†•‡	.17'	1533
8307-25 † §	4.75	1533
8307-50 † §	8.75	1533
8307-100 †•§	16.50	1533
8307-250 †•§	.19'	1533
8307-500 †•§	.19'	1533
8307-1000†•‡	.19'	1533
8308-25 † ‡	4.40	1533
8308-50 † ‡	8.00	1533
8308-100 †•‡	15.00	1533
8308-250 †•‡	.175'	1533
8308-500 †•‡	.175'	1533
8308-1000†•‡	.175'	1533
8308-25 † §	4.75	1533
8308-50 † §	8.75	1533
8308-100 †•§	16.50	1533
8308-250 †•§	.19'	1533
8308-500 †•§	.19'	1533
8308-1000†•§	.19'	1533
8309-25 † ‡	5.00	1533
8309-50 † ‡	9.40	1533
8309-100 †•‡	18.00	1533
8309-250 †•‡	.20'	1533
8309-500 †•‡	.20'	1533
8309-1000†•‡	.20'	1533
8309-25 † §	5.40	1533
8309-50 † §	10.15	1533
8309-100 †•§	19.50	1533
8309-250 †•§	.22'	1533
8309-500 †•§	.22'	1533
8309-1000†•§	.22'	1533
8310-25 † ‡	6.90	1533
8310-50 † ‡	13.75	1533
8310-100 †•‡	25.00	1533
8310-250 †•‡	.28'	1533
8310-500 †•‡	.28'	1533
8310-1000†•‡	.28'	1533
8310-25 † §	7.25	1533
8310-50 † §	14.50	1533
8310-100 †•§	26.50	1533
8310-250 †•§	.29'	1533
8310-500 †•§	.29'	1533
8310-1000†•§	.29'	1533
8320-25 † ‡	3.40	1533
8320-50 † ‡	6.40	1533
8320-100 †•‡	12.25	1533
8320-250 †•‡	.135'	1533
8320-500 †•‡	.135'	1533
8320-1000†•‡	.135'	1533
8320-25 † §	3.75	1533
8320-50 † §	7.15	1533
8320-100 †•§	13.75	1533
8320-250 †•§	.15'	1533

Trade No. & Lgth. In Ft.	Sugg. List Price. Ea.	Page No.
8320-500 †•§	.15'	1533
8320-1000†•§	.15'	1533
8321-25 † ‡	3.75	1533
8321-50 † ‡	7.00	1533
8321-100 †•‡	13.50	1533
8321-250 †•‡	.15'	1533
8321-500 †•‡	.15'	1533
8321-1000†•‡	.15'	1533
8321-25 † §	4.15	1533
8321-50 † §	7.75	1533
8321-100 †•§	15.00	1533
8321-250 †•§	.165'	1533
8321-500 †•§	.165'	1533
8321-1000†•§	.165'	1533
8322-25 † ‡	3.40	1533
8322-50 † ‡	6.25	1533
8322-100 †•‡	11.90	1533
8322-250 †•‡	.135'	1533
8322-500 †•‡	.135'	1533
8322-1000†•‡	.135'	1533
8322-25 † §	3.75	1533
8322-50 † §	7.00	1533
8322-100 †•§	13.35	1533
8322-250 †•§	.15'	1533
8322-500 †•§	.15'	1533
8322-1000†•§	.15'	1533
8323-25 † ‡	4.00	1533
8323-50 † ‡	7.50	1533
8323-100 †•‡	14.35	1533
8323-250 †•‡	.16'	1533
8323-500 †•‡	.16'	1533
8323-1000†•‡	.16'	1533
8323-25 † §	4.35	1533
8323-50 † §	8.25	1533
8323-100 †•§	15.85	1533
8323-250 †•§	.175'	1533
8323-500 †•§	.175'	1533
8323-1000†•§	.175'	1533
8324-25 † ‡	4.00	1533
8324-50 † ‡	7.50	1533
8324-100 †•‡	14.35	1533
8324-250 †•‡	.16'	1533
8324-500 †•‡	.16'	1533
8324-1000†•‡	.16'	1533
8324-25 † §	4.35	1533
8324-50 † §	8.25	1533
8324-100 †•§	15.85	1533
8324-250 †•§	.175'	1533
8324-500 †•§	.175'	1533
8324-1000†•§	.175'	1533
8325-25 † ‡	4.35	1533
8325-50 † ‡	8.15	1533
8325-100 †•‡	15.50	1533
8325-250 †•‡	.175'	1533
8325-500 †•‡	.175'	1533
8325-1000†•‡	.175'	1533
8325-25 † §	4.75	1533
8325-50 † §	8.90	1533
8325-100 †•§	17.00	1533
8325-250 †•§	.19'	1533
8325-500 †•§	.19'	1533
8325-1000†•§	.19'	1533
8326-25 † ‡	4.35	1533
8326-50 † ‡	8.25	1533
8326-100 †•‡	15.85	1533
8326-250 †•‡	.175'	1533
8326-500 †•‡	.175'	1533
8326-1000†•‡	.175'	1533
8326-25 † §	4.75	1533
8326-50 † §	9.00	1533
8326-100 †•§	17.40	1533
8326-250 †•§	.19'	1533
8326-500 †•§	.19'	1533
8326-1000†•§	.19'	1533
8327-25 † ‡	5.25	1533
8327-50 † ‡	10.00	1533
8327-100 †•‡	19.40	1533
8327-250 †•‡	.21'	1533
8327-500 †•‡	.21'	1533
8327-1000†•‡	.21'	1533

Trade No. & Lgth. In Ft.	Sugg. List Price. Ea.	Page No.
8327-25 † §	5.65	1533
8327-50 † §	10.75	1533
8327-100 †•§	20.90	1533
8327-250 †•§	.23'	1533
8327-500 †•§	.23'	1533
8327-1000†•§	.23'	1533
8328-25 † ‡	5.25	1533
8328-50 † ‡	10.25	1533
8328-100 †•‡	20.00	1533
8328-250 †•‡	.21'	1533
8328-500 †•‡	.21'	1533
8328-1000†•‡	.21'	1533
8328-25 † §	5.65	1533
8328-50 † §	11.00	1533
8328-100 †•§	21.50	1533
8328-250 †•§	.23'	1533
8328-500 †•§	.23'	1533
8328-1000†•§	.23'	1533
8329-25 † ‡	6.25	1533
8329-50 † ‡	11.50	1533
8329-100 †•‡	22.50	1533
8329-250 †•‡	.25'	1533
8329-500 †•‡	.25'	1533
8329-1000†•‡	.25'	1533
8329-25 † §	6.65	1533
8329-50 † §	12.25	1533
8329-100 †•§	24.00	1533
8329-250 †•§	.265'	1533
8329-500 †•§	.265'	1533
8329-1000†•§	.265'	1533
8330-25 † ‡	8.00	1533
8330-50 † ‡	15.65	1533
8330-100 †•‡	30.00	1533
8330-250 †•‡	.32'	1533
8330-500 †•‡	.32'	1533
8330-1000†•‡	.32'	1533
8330-25 † §	8.35	1533
8330-50 † §	16.35	1533
8330-100 †•§	31.50	1533
8330-250 †•§	.34'	1533
8330-500 †•§	.34'	1533
8330-1000†•§	.34'	1533
8401-15	1.45	1517
8401-25	2.00	1517
8401-50	3.90	1517
8401-100	7.15	1517
*8401-250	.095'	1517
8401-500	.095'	1517
8403-15	2.40	1517
8403-50	6.00	1517
8403-100	11.25	1517
8403-250	.16'	1517
8403-500	.16'	1517
8403-1000	.16'	1517
8404-15	2.50	1517
8404-50	6.75	1517
8404-100	12.75	1517
8404-250	.17'	1517
8404-500	.17'	1517
8404-1000	.17'	1517
8405-15	3.15	1517
8405-50	8.25	1517
8405-100	16.65	1517
8405-250	.16'	1517
8405-500	.16'	1517
8405-1000	.16'	1517
8410-15	2.25	1516
8410-25	3.50	1516
8410-50	6.50	1516
8410-100	12.25	1516
*8410-250	.15'	1516
8410-500	.15'	1516
8411-15	1.18	1517
8411-25	1.70	1517
8411-50	2.90	1517
8411-100	5.25	1517
*8411-250	.08'	1517
8411-500	.08'	1517
8412-15	2.55	1516

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8412-25	3.90	1516
8412-50	7.15	1516
8412-100	13.75	1516
*8412-250	.17'	1516
8412-500	.17'	1516
*8413-15	3.25	1516
*8413-25	4.90	1516
*8413-50	9.00	1516
*8413-100	17.50	1516
*8413-250	.22'	1516
*8413-500	.22'	1516
8414-50	5.90	1516
8414-500	.12'	1516
*8415	2.45	1516
8418-15	4.90	1516
8418-50	15.00	1516
8418-100	30.0	1516
8418-250	.32'	1516
8419-10	1.25	1525
8419-25	2.15	1525
8419-250	.13'	1525
*8420-15	2.50	1517
*8420-25	3.75	1517
*8420-50	6.90	1517
*8420-100	13.15	1517
*8420-250	.17'	1517
*8420-500	.17'	1517
8421-15	1.45	1525
8421-25	2.00	1525
8421-50	3.90	1525
8421-100	6.25	1525
*8421-250	.095'	1525
8421-500	.095'	1525
8422-15	1.90	1517
8422-25	2.90	1517
8422-50	5.35	1517
8422-100	9.75	1517
*8422-250	.13'	1517
8422-500	.13'	1517
8423-15	3.00	1516
8423-50	8.00	1516
8423-100	15.50	1516
8423-250	.20'	1516
8423-500	.20'	1516
8423-1000	.20'	1516
8424-15	3.25	1516
8424-50	9.35	1516
8424-100	17.65	1516
8424-250	.215'	1516
8424-500	.215'	1516
8424-1000	.215'	1516
8425-15	3.75	1516
8425-50	11.15	1516
8425-100	22.00	1516
8425-250	.25'	1516
8426-15	4.50	1516
8426-50	13.65	1516
8426-100	26.25	1516
8426-250	.30'	1516
8427-15	4.90	1516
8427-50	14.75	1516
8427-100	28.75	1516
2427-250	.32'	1516
8428-15 ▲	2.90	1516
8428-25 ▲	4.75	1516
8428-50 ▲	9.00	1516
8428-100▲	17.50	1516
8428-500▲	.19'	1516
8429-10	1.15	1525
8429-25	1.80	1525
8429-250	.12'	1525
8430-10	.90	1525
8430-25	1.15	1525
8430-250	.09'	1525
8431-10	.88	1525
8431-15	1.10	1525
8431-25	1.70	1525
8431-100	5.25	1525
8431-500	.09'	1525
8432-100	10.65	1520
8432-500	.11'	1520
8432-1000	.11'	1520
8433-100	13.00	—
8433-500	.13'	—
8434-100	7.75	1517
8434-500	.08'	1517
8434-1000	.08'	1517
8436-100	7.90	1519
8436-500	.08'	1519
8436-1000	.08'	1519
8437-100	6.40	1519
8437-500	.065'	1519
8437-1000	.065'	1519
8440-100	7.65	1519
8440-500	.08'	1519
8440-1000	.08'	1519
8441-100	7.50	1519
8441-500	.08'	1519
8441-1000	.08'	1519
8443-25	1.40	1521
8443-100	4.15	1521
8443-500	.06'	1524
8443-1000	.06'	1524
8444-25	1.65	1524
8444-100	5.00	1524
8444-500	.07'	1524
8444-1000	.07'	1524
8445-25	1.95	1524
8445-100	6.15	1524
8445-500	.08'	1524
8445-1000	.08'	1524
8446-15	1.75	1524
8446-100	9.00	1524
8446-500	.12'	1524
8446-1000	.12'	1524
8447-15	1.90	1524
8447-100	10.25	1524
8447-500	.13'	1524
8447-1000	.13'	1524
8448-15	2.00	1524
8448-100	10.65	1524
8448-500	.13'	1524
8448-1000	.13'	1524
8449-15	2.15	1524
8449-100	11.90	1524
8449-500	.14'	1524
8449-1000	.14'	1524
*8450-100	3.75	1519
*8450-500	.04'	1519
*8450-1000	.04'	1519
*8451-100	5.00	1519
*8451-500	.05'	1519
*8451-1000	.05'	1519
8452-15	1.63	1519
8452-25	2.50	1519
8452-50	4.15	1519
8452-100	7.40	1519
8452-250	.10'	1519
8452-500	.10'	1519
8452-1000	.10'	1519
8453-15	2.00	1519
8453-50	5.25	1519
8453-100	10.00	1519
8453-500	.13'	1519
8454-15	2.40	1519
8454-50	6.25	1519
8454-100	12.00	1519
8454-500	.16'	1519
8454-1000	.16'	1519
8455-15	2.50	1519
8455-50	6.75	1519
8455-100	12.75	1519
8455-250	.17'	1519
8460-100	3.75	1521
8460-500	.04'	1521
8460-1000	.04'	1521
8461-100	5.25	1521
8461-500	.055'	1521
8461-1000	.055'	1521
8462-25†	1.75	1519
8462-100†	4.95	1519
8462-250†	.07'	1519
8464-50	2.65	1526, 1527
8464-75	3.90	1526, 1527
8464-100	4.90	1526, 1527
8464-500	.06'	1526, 1527
8464-1000	.06'	1526, 1527
8470-100	4.75	1521
8470-500	.05'	1521
8470-1000	.05'	1521
8471-100	6.65	1521
8471-500	.07'	1521
8471-1000	.07'	1521
8472-25	3.15	1521
8472-50	6.25	1521
8472-100	11.90	1521
8472-250	.13'	1521
*8474-100	15.00	1521
*8474-250	.15'	1521
8478-25	2.75	1521
8478-50	4.90	1521
8478-100	9.00	1521
8478-250	.11'	1521
8478-1000	.11'	1521
*8481-100	2.15	1521
*8481-500	.025'	1521
*8481-1000	.025'	1521
8482-100	2.65	1521
8482-500	.03'	1521
8482-1000	.03'	1521
8483-100	3.25	1521
8483-500	.035'	1521
8483-1000	.035'	1521
8484-100	5.25	1527
8484-500	.06'	1527
8484-1000	.06'	1527
8485-100	6.15	1527
8485-500	.065'	1527
8485-1000	.065'	1527
8486-100	3.50	1521
8486-500	.035'	1521
8486-1000	.035'	1521
8487-100	4.40	1521
8487-500	.045'	1521
8487-1000	.045'	1521
8488-100	7.50	1527
8488-500	.08'	1527
8488-1000	.08'	1527
8492-100 †	3.00	1521
8492-500 †	.03'	1521
8492-1000†	.03'	1521
8493-100 †	3.75	1521
8493-500 †	.04'	1521
8493-1000†	.04'	1521
8500-100 † ‡	2.75	1532
8500-1000† ‡	.03'	1532
8500-100 † §	2.95	1532
8500-1000† §	.03"	1532
8501-100 † ‡	2.30	1532
8501-1000† ‡	.025'	1532
8501-100 † §	2.50	1532
8501-1000† §	.025'	1532
8502-100 † §	2.00	1532
8502-1000† ‡	.02'	1532
8502-100 † §	2.20	1532
8502-1000† §	.025'	1532
8503-100 † ‡	1.95	1532
8503-1000† ‡	.02'	1532
8503-100 † §	2.15	1532
8503-1000† §	.025'	1532
8504-100 † ‡	1.85	1532
8504-1000† ‡	.02'	1532
8504-100 † §	2.05	1532
8504-1000† §	.02'	1532
8505-100 † ‡	1.95	1532
8505-1000† ‡	.02'	1532
8505-100 † §	2.15	1532
8505-1000† §	.02'	1532
8506-100 † ‡	2.60	1532
8506-1000† ‡	.03'	1532
8506-100 † §	2.80	1532
8506-1000† §	.03'	1532
8507-100 † ‡	2.40	1532
8507-1000† ‡	.025'	1532
8507-100 † §	2.60	1532
8507-1000† §	.03'	1532
8508-100 † ‡	2.35	1532
8508-1000† ‡	.025'	1532
8508-100 † §	2.55	1532
8508-1000† §	.025'	1532
8509-100 † ‡	2.10	1532
8509-1000† ‡	.025'	1532
8509-100 † §	2.30	1532
8509-1000† §	.025'	1532
8510-100† ‡	3.30	1532
8510-1000† ‡	.035'	1532
8510-100 † §	3.50	1532
8510-1000† §	.035'	1532
8511-100 † ‡	2.70	1532
8511-1000† ‡	.03'	1532
8511-100 † §	2.90	1532
8511-1000† §	.03'	1532
8512-100 † ‡	2.45	1532
8512-1000† ‡	.025'	1532
8512-100 † §	2.65	1532
8512-1000† §	.03'	1532
8513-100 † ‡	2.30	1532
8513-1000† ‡	.025'	1532
8513-100 † §	2.50	1532
8513-1000† §	.025'	1532
8514-100 † ‡	2.15	1532
8514-1000† ‡	.025'	1532
8514-100 † §	2.35	1532
8514-1000† §	.025'	1532
8515-100 † ‡	2.20	1532
8515-1000† ‡	.025'	1532
8513-100 † §	2.40	1532
8515-1000† §	.025'	1532
8516-100 † ‡	3.00	1532
8516-1000† ‡	.035'	1532
8516-100 † §	3.20	1532
8516-1000† §	.035'	1532
8517-100 † ‡	2.80	1532
8517-1000† ‡	.03'	1532
8517-100 † §	3.00	1532
8517-1000† §	.03'	1532
8518-100 † ‡	2.70	1532
8518-1000† ‡	.03'	1532
8518-100 † §	2.90	1532
8518-1000† §	.03'	1532
8519-100 † ‡	2.35	1532
8519-1000† ‡	.025'	1532
8519-100 † §	2.55	1532
8519-1000† §	.025'	1532
8520-100 † ‡	3.35	1532
8520-1000† ‡	.035'	1532
8521-100 † ‡	2.65	1532
8521-1000† ‡	.03'	1532
8522-25 † ‡	.80	1532
8522-100 † ‡	2.05	1532
8522-1000† ‡	.035'	1532
8522-100 ‡ §	2.25	1532
8522-1000† §	.035'	1532
8523-25 † ‡	.80	1532
8523-100 † ‡	1.75	1532
8523-1000† ‡	.035'	1532
8523-100 † §	1.95	1532
8523-1000† §	.035'	1532
8524-25 † ‡	.65	1532
8524-100 † ‡	1.55	1532
8524-1000† ‡	.03'	1532
8524-100 † §	1.75	1532
8524-1000† §	.03'	1532
8525-100 † ‡	1.55	1532
8525-1000† ‡	.02'	1532
8525-100 † §	1.75	1532
8525-1000† §	.02'	1532
8526-100 † ‡¶	10.60	1532
8526-1000† ‡¶	.11'	1532

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Trade No. & Lgth. In Ft.	Sugg. List Price. Ea.	Page No.
8527-100 † ‡	4.45	1532
8527-1000† ‡	.05'	1532
*8528-100 † ‡	1.90	1532
*8528-1000† ‡	.03'	1532
8529-25 † ‡	.75	1532
8529-100 † ‡	1.60	1532
8529-1000† ‡	.03'	1532
8529-100 † §	1.80	1532
8529-1000† §	.03'	1532
8530-25 † ‡	.60	1532
8530-100 † ‡	1.25	1532
8530-1000† ‡	.025'	1532
8530-100 † §	1.45	1532
8530-1000† §	.025'	1532
8541-100 ¶	2.75	—
8541-1000¶	.03'	—
8542-100 ¶	3.00	—
8542-1000¶	.03'	—
8543-100 ¶	3.50	—
8543-1000¶	.035'	—
8544-100 ¶	4.00	—
8544-1000¶	.04'	—
*8573	2.20	1523
8650-100 ¶	.10'	—
8651-100 ¶	.075'	—
8652-100 ¶	.06'	—
8656-100 ¶	.09'	—
8660-10	.85	1535
8660-50	2.50	1535
8660-250	.085'	1535
8661-10	1.15	1535
8661-50	3.90	1535
8661-250•	.115'	1535
8662-10	2.65	1535
8662-50	11.75	1535
8662-250•	.27'	1535
8663-10	1.00	1535
8663-50	3.15	1535
8663-250	.10'	1535
8666-100	.10'	1535
8668-10	1.15	1535
8668-50	3.45	1535
8668-250	.10'	1535
8669-10	2.00	1535
8669-50	9.15	1535
8669-250•	.20'	1535
8673-100	16.25	1535
8673-500	.17'	1535
8675-100	11.50	1535
8675-500	.12'	1535
8677-100	9.00	1535
8677-500	.09'	1535
*8680-100	.24'	1535
*8681-100	.16'	1535
*8682-100	.09'	1535
*8683-100	.065'	1535
*8684-100	.045'	1535
*8685-100	.035'	1535
8722-100	8.75	1524
8722-500	.09'	1524
8722-1000	.09'	1524
8731-100	5.25	1521
8731-500	.055'	1521
8731-1000	.055'	1521
8732-100	7.50	1524
8732-500	.08'	1524
8732-1000	.08'	1524
8734-100	6.25	1524
8734-500	.065'	1524
8734-1000	.065'	1524
8735-15	1.45	1521
8735-50	3.80	1521
8735-100	7.15	1521
8735-500	.10'	1521
8735-1000	.10'	1521
8737-100	6.00	1520
8737-500	.06'	1520
8737-1000	.06'	1520
8738-100	4.25	1520
8738-500	.05'	1520
8738-1000	.05'	1520
8739-100	4.90	1520
8739-500	.05'	1520
8739-1000	.05'	1520
8740-100	3.00	1521, 1522
8740-500	.03'	1521, 1522
8740-1000	.03'	1521, 1522
8741-100	4.90	1522
8741-500	.05'	1522
8741-1000	.05'	1522
8742-100	6.50	1522
8742-500	.07'	1522
8742-1000	.07'	1522
8743-100	10.00	1522
8743-500	.10'	1522
8743-1000	.10'	1522
8744-100	13.50	1522
8744-500	.135'	1522
8744-1000	.135'	1522
8745-100	23.25	1522
8745-500	.24'	1522
8745-1000	.24'	1522
8746	.43'	1522
8747-100	13.75	1522
8747-500	.14'	1522
8747-1000	.14'	1522
8748-100	19.00	1522
8748-500	.19'	1522
8748-1000	.19'	1522
8749-100	32.50	1522
8749-500	.33'	1522
8749-1000	.33'	1522
8750	.58'	1522
*8751	1.38'	1522
8753-100	18.25	1522
8753-500	.19'	1522
8753-1000	.19'	1522
8754-100	20.65	1522
8754-500	.21'	1522
8754-1000	.21'	1522
8755-100	32.50	1522
8755-500	.33'	1522
8755-1000	.33'	1522
8756-100	38.75	1522
8756-500	.39'	1522
8756-1000	.39'	1522
*8757-500	.075'	1522
*8757-1000	.075'	1522
8758-100	5.00	1520
8758-500	.05'	1520
8758-1000	.05'	1520
8759-100	6.25	1520
8759-500	.07'	1520
8759-1000	.07'	1520
*8760-500	.07'	1520
*8760-1000	.07'	1520
*8761-500	.045'	1520
*8761-1000	.045'	1520
8762-100	5.75	1520
8762-500	.06'	1520
8762-1000	.06'	1520
8763-100	7.40	1524
8763-500	.08'	1524
8763-1000	.08'	1524
8764-100	30.00	1523
8764-500	.30'	1523
8764-1000	.30'	1523
*8765-100	33.75	1523
*8765-500	.34'	1523
*8765-1000	.34'	1523
8766-100	47.50	1523
8766-500	.48'	1523
8766-1000	.48'	1523
*8767-100	11.00	1523
*8767-500	.11'	1523
*8767-1000	.11'	1523
*8768-100	20.50	1523
*8768-500	.21'	1523
*8768-1000	.21'	1523
*8770-500	.08'	1521
*8770-1000	.08'	1521
*8771-500	.05'	1521
*8771-1000	.05'	1521
*8772-500	.065'	1521
*8772-1000	.065'	1521
8779-100	8.75	1520
8779-500	.09'	1520
8779-1000	.09'	1520
8780-100	9.50	1520
8780-500	.10'	1520
8780-1000	.10'	1520
8782-25	.88	1525
8782-50	1.30	1525
8782-100	2.05	1525
8782-500	.035'	1525
8782-1000	.035'	1525
8783-100	7.50	1525
8783-500	.08'	1525
8785-100	8.75	1525
8785-500	.09'	1525
8786-100	9.55	1525
8786-500	.10'	1525
8787-100	32.00	1525
8787-500	.32'	1525
8789-100	7.15	1520
8789-500	.075'	1520
8789-1000	.075'	1520
8790-100	7.40	1520
8790-500	.08'	1520
8790-1000	.08'	1520
8791-100	9.00	1521
8791-500	.09'	1521
8791-1000	.09'	1521
8799-100	7.50	1520
8799-500	.08'	1520
8799-1000	.08'	1520
*8800	1.15	1534
8817-100	.50	1536
8818	8.40	1534
8819	13.50	1534
8820	8.40	1534
8821	13.75	1534
8822	7.50	1534
8823	8.00	1534
8824	6.40	1534
8825	12.80	1534
8826	12.55	1534
8827	13.50	1534
8828	27.50	1534
8829	32.50	1534
8830	37.50	1534
8831	44.00	1534
8868-25 ▲	1.25	1531
8868-100▲	3.15	1531
8868-500▲	.05'	1531
8874	.63	1527
8875	.63	1527
*8878	2.75	1531
*8879	1.00	1531
*8884-100	6.75	1531
*8884-500	.07'	1531
8885-15	1.15	1531
8885-25	1.70	1531
8885-100	5.25	1531
8885-500	.08'	1531
8886-15	1.10	1531
8886-25	1.60	1531
8886-100	5.25	1531
8886-500	.07'	1531
8888-25 †	1.45	1519
8888-100 †	3.75	1519
8898-10 †	1.20	1531
8898-25 †	2.15	1531
8898-100 †	6.00	1531
8898-500 †	.12'	1531
8899-10 †	.80	1531
8899-14 †	1.00	1531
8899-25 †	1.38	1531
8899-100 †	4.00	1531
8899-500 †	.08'	1531
8899-1000†	.08'	1531
8916-100 †	4.65	1533
8916-500 †	.05'	1533
8917-100 †	3.50	1533
8917-500 †	.035'	1533
8918-100 †	2.75	1533
8918-1000†	.03'	1533
8919-100 †	2.25	1533
8919-1000†	.025'	1533
8920-100 †	2.05	1533
8920-1000†	.025'	1533
8933-100 †	5.75	1533
8933-500 †	.06'	1533
8934-100 †	3.75	1533
8934-500 †	.04'	1533
8935-100 †	3.15	1533
8935-1000†	.035'	1533
8936-100 †	2.50	1533
8936-1000†	.03'	1533
8937-100 †	2.30	1533
8937-1000†	.03'	1533
8938-100 †	4.90	1534
8938-500 †	.05'	1534
8941-25 †	1.05	1534
8941-100 †	2.70	1534
8941-1000†	.04'	1534
8942-100 †	3.65	1534
8942-1000†	.04'	1534
8943-25 †	1.05	1534
8943-100 †	2.75	1534
8943-1000†	.04'	1534
8945-25 †	1.00	1534
8945-100 †	2.90	1534
8945-1000†	.04'	1534
8947-25 †	1.05	1534
8947-100 †	3.15	1534
8947-1000†	.04'	1534

BELDENAMEL MAGNET WIRE

Size	¼-Lb. SPOOLS List Price	½-Lb. SPOOLS List Price
14	—	1.05
16	—	1.05
18	—	1.05
20	—	1.08
22	—	1.13
24	—	1.18
26	—	1.25
28	.78	1.35
30	.83	1.45
32	.85	1.54
34	.88	1.60
36	1.00	1.88
38	1.35	—
40	1.88	--

HNC NYLCLAD

Size	½-Lb. SPOOLS List Price	1-Lb. SPOOLS List Price
14	1.08	1.95
16	1.08	1.95
18	1.08	2.00
20	1.10	2.08
22	1.15	2.18
24	1.20	2.30
26	1.30	2.53
28	1.43	2.75
30	1.58	3.08
32	1.73	3.38
34	1.98	3.88
36	2.43	4.88
38	3.03	6.15
40	4.50	9.15

*** New Item** **† Specify Color.** **▲ New Construction.** **¶ To be Obsoleted** **‡ Item is solid** **§ Item is striped**

All Spools are One Piece unless otherwise indicated by (•).

• Spools may contain more than one piece, minimum length of any one piece is 25 ft.

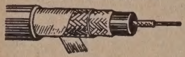
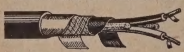
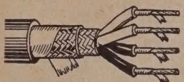
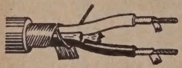
When priced per M ft. length may vary ± 10% from length shown; all other lengths are exact.

Prices for striped wire include one or two stripes. If three stripes are required please write for quotation.

Prices subject to change without notice

Belden Electronic Wires & Cables

RUBBER MICROPHONE AND SHIELDED POWER SUPPLY CABLES

DESCRIPTION	TRADE NUMBER	No. of Cond.	AWG (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Percent Shield Coverage	Suggested Working Voltage	Im-pedance (Ohms)	*Cap. (mmf/ft)	**Cap. (mmf/ft)	STANDARD Spool Lengths in ft
SINGLE CONDUCTOR  3 strands copper, 4 strands Copperweld†, tinned, cellulose yarn braid, rubber insulated, rayon braid, tinned copper braid shield, cotton wrap black rubber jacket.	8410	1	25 (7x33)	.063	.025	.245	78	3000	52	33	—	15, 25, 50, 100, 250, 500
MINIATURE 2 CONDUCTOR  Tinned cadmium bronze, cotton serve, rubber insulated, cabled with fillers, conductive textile serve, tinned copper braid shield, cotton serve, black rubber jacket.	NEW 8413	2	24 (45x40)	.015	.025	.185	100	300	—	38	71	15, 25, 50, 100, 250, 500
MULTIPLE CONDUCTOR  Tinned copper, cotton wrap, rubber insulated, rayon braid, tinned copper braid shield, cotton wrap, black rubber jacket.	8412	2	20 (26x34)	.020	.043	.268	85	600	—	42	68	15, 25, 50, 100, 250, 500
	8423	3	20 (26x34)	.020	.040	.277	84	600	—	50	85	15, 25, 50, 100, 250, 500, 1000
	8424	4	20 (26x34)	.020	.040	.295	81	600	—	55	95	15, 25, 50, 100, 250, 500, 1000
	8425	5	20 (26x34)	.020	.040	.323	76	600	—	44	80	15, 50, 100, 250
	8426	6	20 (26x34)	.020	.040	.349	91	600	—	40	78	15, 50, 100, 250
	8427	7	20 (26x34)	.020	.043	.360	91	600	—	40	75	15, 50, 100, 250
	8418	8	20 (26x34)	.020	.043	.386	89	600	—	42	75	15, 50, 100, 250
NEOPRENE HEAVY DUTY Tinned copper, cotton wrap, rubber insulated, cabled, rayon braid, tinned copper braid shield cotton wrap, black NEOPRENE jacket.	8428	2	18 (41x34)	.022	.038	.295	91	600	—	47	80	15, 25, 50, 100, 500
EXTRA LIMP  Tinned copper, cotton wrap, rubber insulated, cabled, conductive textile wrapped shield, stranded ground wire, black rubber jacket.	8414	2	20 (26x34)	.020	.043	.256	100	600	—	45	80	50, 500

* Capacitance between conductors (8401, 8410, 8411 between conductor and shield)
† Trademark of Copperweld Steel Company

**Capacitance between 1 conductor and remaining conductors connected to shield

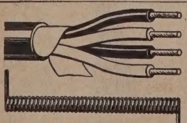
NEW MINIATURE MICROPHONE CABLES 8413 and 8420

Improved materials and methods of manufacture have enabled us to manufacture two premium quality Miniature Mike Cables — one in rubber and the other in plastic. Both have low capacitance, high flexibility and long flex life.

The small diameters of these cables are made possible without sacrifice of flex life, flexibility and tensile strength through the use of fine Cadmium Bronze stranded conductors.

8413 is recommended where extreme flexibility is required and 8420 is recommended for low capacitance applications. Both cables join the Belden family of audio cables that engineers rate as "Quiet Cables."

COILED 4 CONDUCTOR MICROPHONE CABLE

DESCRIPTION	TRADE NUMBER	AWG (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Suggested Working Voltage	STANDARD Put-ups
 Tinned cadmium bronze wire, rubber insulated, conductors cabled, paper tape wrap, Black neoprene jacket. As this cable is not shielded, no capacitance figures are listed. 9 feet 6 inches of cable. Retracted length 11 inches. Stretches to 6 feet.	NEW 8415	23 (21x36)	.015	.055	.250	.120	one

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Belden Electronic Wires & Cables

PLASTIC MICROPHONE AND SHIELDED POWER SUPPLY CABLES

DESCRIPTION	TRADE NUMBER	No. of Cond.	AWG (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Percent Shield Coverage	Suggested Working Voltage	Impedance (Ohms)	*Cap. (mmf/ft)	**Cap. (mmf/ft)	STANDARD Spool Lengths in ft
SINGLE CONDUCTOR 3 strands copper, 4 strands Copperweld†, tinned, cellulose yarn braid, polyethylene insulated, tinned copper braid shield, chrome vinyl jacket.	**8411**	1	25 (7x33)	.020	.020	.144	72	3500	52	34	—	15, 25, 50, 100, 250, 500
	8401	1	25 (7x33)	.043	.025	.200	74	5000	57	25	—	15, 25, 50, 100, 250, 500
MINIATURE 2 CONDUCTOR Tinned cadmium bronze, polyethylene insulated, cabled with fillers, rayon braid, tinned copper braid shield, chrome vinyl jacket.	**NEW 8420**	2	24 (45x40)	.015	.025	.178	77	500	—	20	35	15, 25, 50, 100, 250, 1000
MULTIPLE CONDUCTOR Tinned copper, polyethylene insulated, cabled, rayon braid, tinned copper braid shield, chrome vinyl jacket.	**8422**	2	22 (16x34)	.023	.023	.231	87	1000	—	18	32	15, 25, 50, 100, 250, 500
	8403	3	20 (26x34)	.013	.038	.245	94	600	—	25	45	15, 50, 100, 250, 500, 1000
	8404	4	20 (26x34)	.013	.038	.255	89	600	—	25	45	15, 50, 100, 250, 500, 1000
	8405	5	20 (26x34)	.013	.038	.275	84	600	—	25	45	250, 500, 1000
STRAIN GAUGE CABLE 3 strands copper, 4 strands Copperweld, tinned, polyethylene insulated, black and red conductors under BELDFOIL[1] aluminum-Mylar shield, stranded ground wire, green and white conductors under over-all BELDFOIL aluminum-Mylar♦ shield, chrome vinyl jacket.	**8434**	4	25 (7x33)	.013	.020	.169	100	400	—	25	40	100, 500, 1000

* Capacitance between conductors (8401, 8411 between conductor and shield)

**Capacitance between 1 conductor and remaining conductors connected to shield

CHOICE OF STRAIN GAUGE CABLES

To meet the requirements of the many types of Strain Gauges used under a variety of conditions, Belden offers several Strain Gauge Cables.

FOR GENERAL USE 8434 has a small diameter and light weight. The conductor contains Copperweld strands for improved tensile strength. The polyethylene insulation gives consistently low capacitance. Through the use of BELDFOIL aluminum Mylar shields, the two pairs are shielded from each other and from the outside to insure a stable signal.

FOR DC APPLICATIONS either 8424 or 8404 are recommended because of their larger conductor size. The rubber of 8424 makes it excellent for applications requiring limpness, abrasion resistance, and impact resistance. 8404, the vinyl type, has the best oil and ozone resistance and is lighter in weight.

FOR AC APPLICATIONS 8434 or 8404 is recommended for their lower capacitance, which will not vary with temperature change.

If several transducers are operating from a single cable, many customers have found that the multiple pair individually shielded cables, found on Page 9, help in reducing the bulk of cables required. Where unusual requirements exist, Belden would like to make individual recommendations.

COLOR CODING OF INDIVIDUAL CONDUCTORS FOR CABLES ON PAGES 2 and 3

Color Coding	No. of Conductors 1	2	3	4	5	6	7	8
White	X	X	X	X	X	X	X	X
Black		X	X	X	X	X	X	X
Red			X	X	X	X	X	X
Green				X	X	X	X	X
Blue					X	X	X	X
Brown						X	X	X
Yellow							X	X
Orange								X

RUBBER — PLASTIC — NEOPRENE

PLASTIC CABLES RECOMMENDED FOR: Lower capacitance, lower loss, greater ozone and oil resistance, lighter weight, smaller diameter.

RUBBER CABLES RECOMMENDED FOR: Greater abrasion and impact resistance, and extra limpness so cable will lie flat on stage or studio floor.

NEOPRENE CABLES RECOMMENDED FOR: Outside use. Resistant to effects of sun, oil, and ozone.

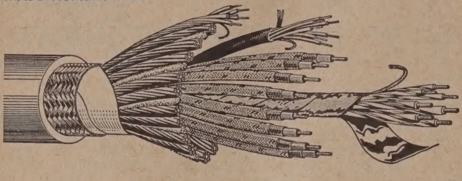
† Trademark of Copperweld Steel Company
♦ DuPont trademark
[1] Belden trademark

Belden Electronic Wires & Cables

TV CAMERA CABLES

Preferred by TV camera operators requiring dependable service under all conditions in which lighter weight, lower coefficient of friction, greater flexibility, and easier termination are essential. Correct electronic characteristics are assured at every stage from design engineering through final inspection.

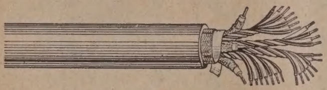
TRADE NUMBER 8283



82 CONDUCTOR TV COLOR CAMERA CABLE

4-14 AWG (19x27) tinned copper, vinyl plastic insulated, color coded
3-16 AWG (26x30) tinned copper, vinyl plastic insulated, color coded
BELDFOIL aluminum-Mylar wrapped shield around the above 7 conductors cabled with stranded tinned copper drain wire
8 coaxial cables. Nom. impedance 53.5 ohms, color coded
67-22 AWG (7x30) tinned copper, vinyl plastic insulated, color coded, 7 under conductive textile shield with stranded ground wire
Tinned copper braid shield
Chrome vinyl plastic jacket. 1.22" Nom. O.D.
§Cut to customers' specified length, maximum 1000 ft.

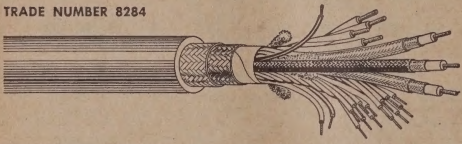
TRADE NUMBER 8280



28 CONDUCTOR TV CAMERA CABLE

4-18 AWG (16x30) tinned copper, vinyl insulated, color coded
21-22 AWG (7x30) tinned copper, vinyl insulated, cabled in 3 groups of 7, color coded
3 coaxial cables, Nom. impedance 51 ohms, color coded
Tinned copper braid shield
Chrome vinyl jacket. .750" Nom. O.D.
§Cut to customers' specified length, max 1500 ft.

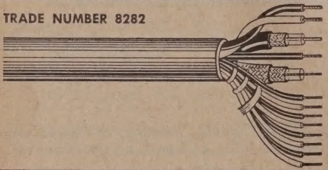
TRADE NUMBER 8284



24 CONDUCTOR TV CAMERA CABLE

17-22 AWG (7x30) tinned copper, vinyl insulated, color coded
4-16 AWG (26x30) tinned copper, vinyl insulated, color coded
3 coaxial cables. Nom. impedance 53.5 ohms, color coded
Tinned copper braid shield
Heavy cotton braid
Chrome vinyl plastic jacket. .800" Nom. O.D.
§Cut to customers' specified length, max 1000 ft.

TRADE NUMBER 8282



13 CONDUCTOR TV EYE CABLE

9-22 AWG (7x30) tinned copper, vinyl insulated, color coded
2-18 AWG (16x30) tinned stranded copper conductor vinyl insulated. Black and Red
1-RG-58A/U cable 50-ohm coax
1-72-ohm coax, stranded conductor, Mylar tape wrapped
Chrome vinyl jacket. .470" Nom. O.D.
Standard spool lengths 50', 100', 500', 1000'

CONTROL CABLES

In addition to the wide coverage shown above on standard camera cables, Belden is the principal supplier of cable to the manufacturers of various closed circuit television systems. Control cables, whether for camera, ITV, business systems, machinery control, or automation are a Belden specialty.

75 OHM VIDEO CABLE

TYPICAL APPLICATIONS: Video signal transmission in color and monochrome TV studios. Provides high quality carrier of video signal with superior picture definition and eliminates problems of periodicity. Cable is manufactured with rigid control of concentricity and all dimensional tolerances. Center conductor is maintained at same distance from shield through entire length of cable. The black polyethylene jacket is manufactured with a non-contaminating, non-migratory compound. 100% SWEEP TESTED.

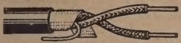
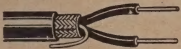
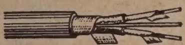
DESCRIPTION	TRADE NUMBER	AWG & (Stranding) Material	Nom. O.D. (Inch)	Percent Shield Coverage	Nom. Impedance (Ohms)	Nom. Velocity of Propagation	Nom. Cap. (mmf/ft)	Nom. Attenuation		STANDARD Spool Lengths in ft
								mc	db	
 Conductor, polyethylene insulated, tinned copper double braid shield, black polyethylene jacket.	**8281**	20 (Solid) copper	.304	93.5	75	65.2%	20.7	5	.55	500, 1000
								10	.8	
								20	1.3	
								100	2.7	
								300	5.1	
								500	6.8	
								700	8.4	

As a service to users of 8281 video cable, we can furnish, without charge, adapters for use with the PL259 plug.

Belden Electronic Wires & Cables

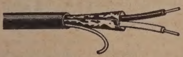
BROADCAST AUDIO CABLES

Spiral wrapped copper shields plus drain wire plus shield isolation eliminate current loops so often found troublesome in this service. Free stripping jackets, fast shield termination, and small diameters cut installation time and costs.

BROADCAST AUDIO CABLES	TRADE NUMBER	AWG & (Stranding) Inc. Drain Wire	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Suggested Working Voltage	Nominal Capacitance Between Cond. (mmf/ft)	Nominal Capacitance Between one Cond. & other Cond. Tied to Shield (mmf/ft)	STANDARD Spool Lengths in ft
ABC TYPE  Tinned copper, Celanese② wrap, Celanese braid lacquered, conductors cabled, tinned copper drain wire, tinned copper spiral wrapped shield, black vinyl jacket.	8436	22 (Solid)	.180	Blk, Red	90	100	31	52	100, 500, 1000
CBS TYPE  Tinned copper, vinyl insulated, conductors cabled, tinned copper drain wire, tinned copper braid shield, black vinyl jacket.	8437	22 (Solid)	.200	Blk, Red	88	200	48	85	100, 500, 1000
	8441	22 (16x34)	.210	Blk, Red	88	200	49	86	100, 500, 1000
STANDARD  Tinned copper, enameled, cotton wrap, cotton braid, conductors cabled, tinned copper drain wire, tinned copper spiral wrapped shield, chrome vinyl jacket.	8440	22 (Solid)	.185	Blk, Red	90	100	50	90	100, 500, 1000

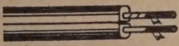
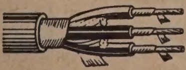
② Trademark of Celanese Corp.

MINIATURE BROADCAST AUDIO CABLES

BROADCAST AUDIO CABLES	TRADE NUMBER	AWG & (Stranding) Inc. Drain Wire	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Suggested Working Voltage	Nominal Capacitance Between Cond. (mmf/ft)	Nominal Capacitance Between one Cond. & other Cond. Tied to Shield (mmf/ft)	STANDARD Spool Lengths in ft
 Tinned copper, Polypropylene insulated, conductors cabled, tinned copper drain wire, spiral wrap BELDFOIL shield, Black vinyl jacket.	NEW 8450	22 (Solid)	.118	Blk, Red	100	200	40	76	100, 500, 1000
	NEW 8451	22 (7x30)	.135	Blk, Red	100	200	56	110	100, 500, 1000

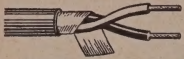
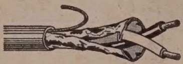
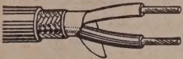
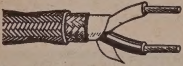
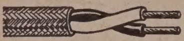
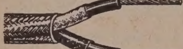
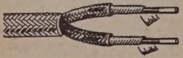
The new Belden miniature type Broadcast Audio Cables have 100% shield coverage against Electrostatic fields. The folded BELDFOIL Shield gives high cable reliability together with easy termination by means of the drain wire. A most important feature of these cables is that they occupy only one third to one half the space required for a Standard Broadcast Audio Cable.

RUBBER-VINYL MULTI-CONDUCTOR PORTABLE CORDAGE—300V-60C

DESCRIPTION	TRADE NUMBER	U.L. Type	Insulation	No. of Con-ductors	AWG & Stranding	Insulation Thickness (Inch)	Conductor Coding	Jacket Thickness (Inch)	Nominal O.D. (Inch)	Color	STANDARD Spool Lengths in ft
 Two conductors, stranded copper, parallel, insulated with one conductor polarity ribbed	8462	SP-1	Rubber	2	18 (41x34)	.031	Polarity Ribbed	—	.123 x .223	Brown or Ivory	25, 100, 250
	8888	SPT-1	Vinyl	2	18 (41x34)	.031	Polarity Ribbed	—	.110 x .207	Brn, Ivory, or Silver Gray	25, 100
 Stranded copper, rubber insulated, cabled with fillers, rubber jacket	8452	SV	Rubber	2	18 (41x34)	.016	Blk, Wht	.031	.245	Black	15, 25, 50, 100, 250, 500, 1000
	8478	SJ	Rubber	2	18 (41x34)	.031	Blk, Wht	.031	.299	Black	25, 50, 100, 250, 1000
	8472	SJ	Rubber	2	16 (65x34)	.031	Blk, Wht	.031	.325	Black	25, 50, 100, 250
	NEW 8474	—	Rubber	2	14 (41x30)	.031	Blk, Wht	.031	.355	Black	100, 250
	8453	SV	Rubber	3	18 (41x34) Tinned	.016	Blk, Wht Green	.031	.265	Black	15, 50, 100, 500
	8454	—	Rubber	4	18 (41x34) Tinned	.016	Blk, Wht, Brn, Red	.031	.265	Black	15, 50, 100, 500, 1000
	8455	—	Rubber	5	3—20 (26x34) Tinned 2—18 (41x34) Tinned	.015 .016 .016	Brn, Grn, White Blk, Red	.031	.280	Black	15, 50, 100, 250

Belden Electronic Wires & Cables

TWO CONDUCTOR—TWISTED PAIR—SHIELDED CABLES

TWISTED PAIRS #22 thru #16 Gauge	TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. *Cap. (mmf/ft)	Nom. **Cap. (mmf/ft)	Suggested Working Voltage	STANDARD Spool Lengths in ft
WITH JACKET  Tinned copper, vinyl insulated, tinned copper spiral wrapped shield, chrome vinyl jacket.	**8739**	22 (Solid)	.015	.025	.160	Blk, Red	90	38	66	350	100, 500, 1000
	8737	22 (7x30)	.015	.025	.170	Blk, Red	90	40	70	350	100, 500, 1000
	8759	20 (7x28)	.015	.025	.195	Blk, Red	90	47	79	350	100, 500, 1000
	8790	18 (7x26)	.020	.028	.231	Red, Wht	90	53	92	450	100, 500, 1000
	8780	16 (19x29)	.023	.030	.266	Blk, Wht	90	57	98	450	100, 500, 1000
 Tinned copper, polyethylene insulated, BELDFOIL aluminum-Mylar wrapped shield, stranded tinned copper ground wire, chrome vinyl jacket.	**NEW 8761**	22 (7x30)	.014	.025	.167	Blk, Wht	100	24	47	350	500, 1000
	8762	20 (7x28)	.014	.028	.184	Blk, Wht	100	27	49	350	100, 500, 1000
	NEW 8760	18 (16x30)	.018	.028	.222	Blk, Wht	100	24	44	450	500, 1000
 Tinned copper, rubber insulated, braided tinned copper shield, chrome vinyl jacket.	**8208**	18 (16x30)	.020	.025	.270	Red, Wht	69	46	77	200	15, 50, 100, 500, 1000
WITH COTTON BRAID  Tinned copper, rubber insulated, braided tinned copper shield, white cotton braid, treated for weather resistance.	**8209**	18 (16x30)	.020	—	.258	Red, Wht	69	51	89	200	15, 50, 100, 500, 1000
WITHOUT JACKET  Tinned copper, vinyl insulated, braided tinned copper shield.	**8738**	22 (Solid)	.015	—	.130	Blk, Red	72	35	61	350	100, 500, 1000
	8758	20 (7x28)	.015	—	.165	Blk, Red	63	42	72	350	100, 500, 1000
	8789	18 (7x26)	.020	—	.205	Blk, Wht	74	50	89	450	100, 500, 1000
	8779	16 (19x29)	.023	—	.225	Blk, Wht	83	63	112	600	100, 500, 1000
 Tinned copper, rubber insulated, cotton braid, lacquered, cabled, braided tinned copper shield.	**8432**	20 (10x30)	.016	—	.225	Blk, Red	90	46	86	150	100, 500, 1000
 Enameled copper, cotton wrap, cotton braid, cabled, braided tinned copper shield.	**8799**	18 (Solid)	—	—	.165	Blk, Wht	78	30	50	100	100, 500, 1000

See BROADCAST AUDIO CABLES for additional 2 conductor shielded cables.
* Capacitance between conductors.
**Capacitance between 1 conductor and other conductor connected to shield.

SHIELD SELECTION

Because the uses for shielded cables has grown rapidly in recent years, Belden has developed several types of shields to meet application requirements. The following information is provided to help you select the best shield for your particular requirements.

TINNED COPPER BRAID SHIELD: An excellent general purpose shield for audio and radio frequencies. It is recommended for microphone cables where there is considerable flexing, bending, and twisting. For proper termination, pigtail the shield and solder.

TINNED COPPER SPIRAL SHIELD: Particularly recommended for stationary service at audio frequencies. The shield is *not* recommended for use where there is intensive twisting or bending. Shield coverage is 95 per cent and termination is accomplished by unwrapping the shield, twisting the strands and soldering.

CONDUCTIVE COTTON PLUS DRAIN WIRE: The most flexible of all the shields. Excellent for audio frequencies. The 100 per cent shield coverage affords complete protection against 60 cycle interference. For termination, clip off the cotton and solder drain wire.

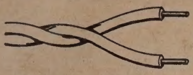
BELDFOIL ALUMINUM — MYLAR: The newest shield development. It is lighter in weight than other shields and has 100 per cent shield coverage which is excellent for stationary or limited flexing service at both audio and radio frequencies. See page 9 for complete BELDFOIL shield story.

Belden Electronic Wires & Cables

TWO CONDUCTOR — TWISTED PAIR — UNSHIELDED CABLES

TWISTED PAIRS
22 through 16 AWG

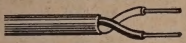
WITHOUT JACKET



Copper, vinyl insulated, twisted.

TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Cond. Color Coding	Nom. O.D. (Inch)	Suggested Working Voltage	STANDARD Spool Lengths in ft
NEW 8481	22 (Solid)	.015	—	Brn, Tan	.112	350	100, 500, 1000
8482	19 (Solid)	.015	—	Brn, Tan	.115	350	100, 500, 1000
8492	19 (Solid) Available Brown and White	.025	—	1 cond. tinned copper	.170	600	100, 500, 1000
8460	18 (7x26) tinned	.020	—	Blk, Wht	.175	405	100, 500, 1000
8470	16 (19x29) tinned	.023	—	Blk, Wht	.195	600	100, 500, 1000

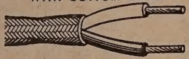
WITH JACKET



Copper, vinyl insulated, cabled, chrome vinyl jacket.

TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Cond. Color Coding	Nom. O.D. (Inch)	Suggested Working Voltage	STANDARD Spool Lengths in ft
8740	22 (Solid) tinned	.015	.025	Blk, Red	.150	200	100, 500, 1000
8205	20 (10x30) tinned	.018	.025	Blk, Red	.190	350	25, 100, 500, 1000
8486	19 (Solid)	.015	.025	Brn, Tan	.162	350	100, 500, 1000
8461	18 (7x26) tinned	.020	.028	Blk, Wht	.226	450	100, 500, 1000
8471	16 (19x29) tinned	.023	.030	Blk, Wht	.256	600	100, 500, 1000

WITH COTTON BRAID



TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Cond. Color Coding	Nom. O.D. (Inch)	Suggested Working Voltage	STANDARD Spool Lengths in ft
8204	18 (16x30)	.020	—	Red, Wht	.220	200	25, 100, 500, 1000

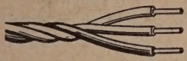
Tinned copper, rubber insulated, cabled, white cotton braid, treated for weather resistance.

For additional 2 conductor cables see PORTABLE CORDAGE and COIN OPERATED PHONOGRAPH CABLE.

THREE CONDUCTOR — UNSHIELDED CABLES

DESCRIPTION

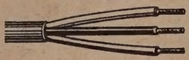
WITHOUT JACKET



Bare copper, vinyl insulated, cabled.

TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inches)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Suggested Working Voltage	STANDARD Spool Lengths in ft
8483	19 (Solid)	.015	—	.132	Brn, Gray, Tan	350	100, 500, 1000
8493	19 (Solid)	.025	—	.170	Brn, 1 condr. tinned. 1 condr, insul. is ribbed	600	1000

WITH JACKET



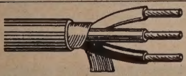
Copper, vinyl insulated, cabled, chrome vinyl jacket.

TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inches)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Suggested Working Voltage	STANDARD Spool Lengths in ft
8443	22 (7x30) tinned	.010	.025	.150	Blk, Grn, Red	200	25, 100, 500, 1000
8487	19 (Solid) Bare	.015	.025	.180	Brn, Gray, Tan	350	100, 500, 1000

For additional 3 conductor cables see PORTABLE CORDAGE and COIN OPERATED PHONOGRAPH CABLES.

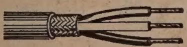
THREE CONDUCTOR SHIELDED CABLES

3 CONDUCTORS SHIELDED



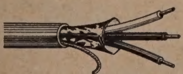
TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. *Cap. (mmf/ft)	Nom. **Cap. (mmf/ft)	Suggested Working Voltage	STANDARD Spool Lengths in ft
8731	22 (Solid)	.015	.025	.178	Blk, Red, Wht	90	36	63	350	100, 500, 1000
8791	18 (7x26)	.020	.028	.236	Blk, Red, Wht	90	47	84	450	100, 500, 1000

Tinned copper, vinyl insulated, conductors cabled, tinned copper spiral wrapped shield, chrome vinyl jacket.



TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. *Cap. (mmf/ft)	Nom. **Cap. (mmf/ft)	Suggested Working Voltage	STANDARD Spool Lengths in ft
8735	22 (7x30)	.015	.025	.199	Blk, Red, Wht	70	34	60	350	15, 50, 100, 500, 1000

Tinned copper, vinyl insulated, conductors cabled, tinned copper braid shield, chrome vinyl jacket.



TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. *Cap. (mmf/ft)	Nom. **Cap. (mmf/ft)	Suggested Working Voltage	STANDARD Spool Lengths in ft
NEW 8771	22 (7x30)	.014	.025	.175	Blk, Red, Wht	100	23	41	350	500, 1000
NEW 8772	20 (7x28)	.014	.028	.200	Blk, Red, Wht	100	27	51	350	500, 1000
NEW 8770	18 (16x30)	.018	.028	.236	Blk, Red, Wht	100	24	48	450	500, 1000

Tinned copper, polyethylene insulated, conductors cabled, BELDFOIL aluminum-Mylar wrapped shield, stranded tinned copper ground wire (22 AWG for 8771, and 20 AWG for 8770 and 8772), chrome vinyl jacket.

Belden Electronic Wires & Cables

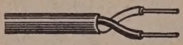
MULTIPLE PAIR UNSHIELDED INTERCOM CABLE

TYPICAL APPLICATIONS: Balanced line intercom systems.

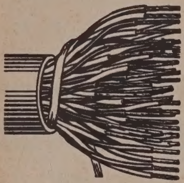
Made with 80C vinyl plastic compounds for high dielectric strength and the best physical properties, such as free stripping, small diameter, and tear resistance. It also resists the effects of water, sun, oil, grease, and ozone.

The conductors are paired with a short-lay twist for conductor balance, providing a quiet circuit, free from crosstalk.

1 to 27 PAIRS



#22 Tinned copper, vinyl insulated, cabled in pairs, chrome vinyl jacket. 200 Volts suggested working voltage.



TRADE NUMBER	No. of Pairs	Stranding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	STANDARD Spool Lengths in ft
8740	1	Solid	.015	.025	.150	100, 500, 1000
8741	2	Solid	.015	.028	.201	100, 500, 1000
8742	3	Solid	.015	.030	.240	100, 500, 1000
NEW 8757	4	Solid	.015	.030	.255	500, 1000
8743	6	Solid	.010	.035	.305	100, 500, 1000
8747	6	7x30	.010	.035	.340	100, 500, 1000
8744	9	Solid	.010	.037	.354	100, 500, 1000
8748	9	7x30	.010	.037	.389	100, 500, 1000
8753	11	Solid	.010	.037	.384	100, 500, 1000
8754	13	Solid	.010	.037	.409	100, 500, 1000
8745	15	Solid	.010	.040	.420	100, 500, 1000
8749	15	7x30	.010	.040	.425	100, 500, 1000
8755	19	Solid	.010	.040	.480	100, 500, 1000
8756	23	Solid	.010	.040	.510	100, 500, 1000
8746	27	Solid	.010	.045	.550	To customers' specified length. §
8750	27	7x30	.010	.045	.595	To customers' specified length. §

§ Plus or minus 25 ft., minimum 25 ft., maximum 1250 ft.

COLOR CODING FOR PAIRED INTERCOM CABLES

This color code chart applies to multiple pair unshielded and shielded intercom cables shown above and on page 9. It does not apply to 8751.

Pair Number	Color Combination	Pair Number	Color Combination	Pair Number	Color Combination
1	Black paired with Red	10	Red paired with Blue	19	White paired with Blue
2	Black paired with White	11	Red paired with Yellow	20	White paired with Brown
3	Black paired with Green	12	Red paired with Brown	21	White paired with Orange
4	Black paired with Blue	13	Red paired with Orange	22	White paired with Yellow
5	Black paired with Brown	14	Green paired with Blue	23	Blue paired with Brown
6	Black paired with Yellow	15	Green paired with White	24	Blue paired with Orange
7	Black paired with Orange	16	Green paired with Brown	25	Blue paired with Yellow
8	Red paired with Green	17	Green paired with Orange	26	Brown paired with Orange
9	Red paired with White	18	Green paired with Yellow	27	Brown paired with Yellow

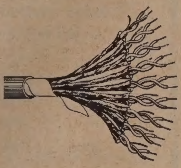
51 PAIR CABLE

DESCRIPTION	TRADE NUMBER	No. of Pairs	Conductors	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	STANDARD Spool Lengths in ft
#22 tinned copper, vinyl insulated, cabled in pairs, BELDFOIL Aluminum-Mylar wrapped shield with foil side out, #22(7 x 30) stranded drain wire running under jacket and over foil, chrome vinyl jacket. 200 Volts suggested working voltage. Color coding available on request.	**NEW 8751**	51	Solid TC	.010	.060	.745	To customers' specified length

§ Plus or minus 25 ft., minimum 25 ft., maximum 1250 ft.

Belden Electronic Wires & Cables

MULTIPLE PAIR INDIVIDUALLY SHIELDED INTERCOM CABLE

DESCRIPTION	TRADE NUMBER	No. of Pairs	Stranding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Nom. *Cap. (mmf/ft)	Nom. **Cap. (mmf/ft)	STANDARD Spool Lengths in ft
	**NEW 8767**	3	Solid	.013	.030	.298	40	77	100, 500, 1000
	NEW 8768	6	Solid	.013	.037	.394	40	77	100, 500, 1000
	8764	9	Solid	.013	.040	.425	40	77	100, 500, 1000
	NEW 8765	11	Solid	.013	.040	.485	40	77	100, 500, 1000
	8766	15	Solid	.013	.045	.510	40	77	100, 500, 1000

#22 tinned copper, vinyl insulated, cabled in pairs, each pair and its ground wire under BELDFOIL aluminum-Mylar shield, over-all chrome vinyl jacket. 300 Volts suggested working voltage.

Insulation resistance between shields......................1000 megohms/M'
Capacitance between adjacent shields..........................115 mmf/ft
Voltage breakdown between adjacent shields....................1500 volts
Working voltage between adjacent shields.........................50 volts

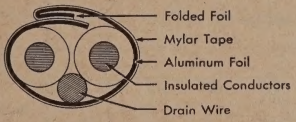
*Capacitance between conductors.
**Capacitance between 1 conductor and other conductor connected to shield.

BELDFOIL ALUMINUM MYLAR SHIELDED CABLES

BELDFOIL is a Belden development and a major breakthrough in the search for quiet cables. By laminating aluminum foil with Mylar, a shield with maximum effectiveness is combined with a high dielectric strength insulation.

1. For multi-paired cables with each pair separately shielded, the Mylar is applied *outside* with an *inward* folded edge† to obtain isolation between the shields on adjacent pairs. Diagram No. 1 below shows how each pair is shielded.

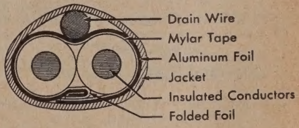
(Diagram No. 1)



Belden numbers 8767 (3 pair), 8768 (6 pair), 8764 (9 pair), 8765 (11 pair), and 8766 (15 pair) has the above type of BELDFOIL shield.

2. For certain two and three conductor BELDFOIL shielded cables, the Mylar is applied *inside* with an *outward* folded edge† which gives the table an additional 1500-volt insulation barrier. Diagram No. 2 illustrates this type of construction.

(Diagram No. 2)

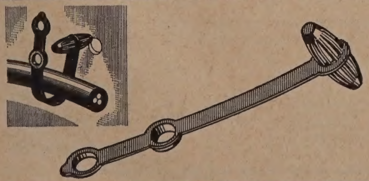


Belden numbers 8434 (page 1517), 8450 and 8451 (page 1519), 8760, 8761, and 8762 (page 1520), 8770, 8771, and 8772 (page 1521), and 8763 and 8722 (page 1524) have this type of BELDFOIL shield.

BELDFOIL shields are lighter in weight, require less space, give 100% shielding, and are usually lower in cost.

†Patent applied for.

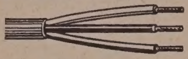
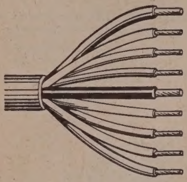
BELDEN STRAPLOCKS

NYLON CABLE CLAMPS	TRADE NUMBER	Number per Box
	**8573**	25 Straplocks plus one installation tool in plastic box.

For tying down wires or cables in the quickest possible time. Straplocks require only a ¼" stamped, punched or drilled mounting hole for installation. Eliminate bundling or lacing.

Belden Electronic Wires & Cables

MULTIPLE CONDUCTOR INTERCOM CABLES (NOT PAIRED)

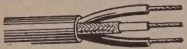
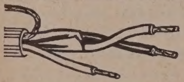
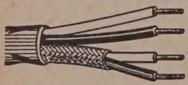
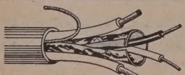
3 to 9 CONDUCTORS	TRADE NUMBER	No. of Cond.	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	STANDARD Spool Lengths in ft
	8443	3	22 (7x30)	.010	.025	.150	25, 100, 500, 1000
Tinned copper, vinyl plastic insulated, cabled, chrome vinyl jacket. 200 Volts suggested working voltage.	8444	4	22 (7x30)	.010	.025	.168	25, 100, 500, 1000
	8445	5	22 (7x30)	.010	.025	.180	25, 100, 500, 1000
	8446	6	4-22 (7x30) 2-18 (16x30)	.010 .018	.025	.222	15, 100, 500, 1000
	8447	7	5-22 (7x30) 2-18 (16x30)	.010 .018	.028	.246	15, 100, 500, 1000
	8448	8	6-22 (7x30) 2-18 (16x30)	.010 .018	.028	.251	15, 100, 500, 1000
	8449	9	7-22 (7x30) 2-18 (16x30)	.010 .018	.028	.261	15, 100, 500, 1000

COLOR CODING OF INDIVIDUAL CONDUCTORS FOR CABLES 8443 through 8449

Conductor	Color
1st	Black
2nd	Red
3rd	Green
4th	White
5th	Brown
6th	Blue
7th	Orange
8th	Yellow
9th	Purple

18 Gauge conductors in cables 8446 through 8449 are Black and Red.

SPECIAL INTERCOM AND SOUND CABLES

DESCRIPTION	TRADE NUMBER	No. of Cond.	AWG & (Stranding)	Cond. Color Coding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Percent Shield Coverage	Suggested Working Voltage	*Cap. (mmf/ft)	**Cap. (mmf/ft)	STANDARD Spool Lengths in ft
 Tinned copper, vinyl insulated, tinned copper braid shield over 1 conductor, 3 conductors cabled, chrome vinyl jacket.	8734	1 shielded 2 unshielded	22 (7x30) 22 (7x30)	Wht Blk, Red	.015 .015	.025	.194	82	350	—	79	100, 500, 1000
 Tinned copper, polyethylene insulated, BELDFOIL aluminum-Mylar wrapped shield over 2 conductors, #20 stranded tinned copper ground wire, chrome vinyl jacket.	8763	2 shielded 1 unshielded	20 (7x28) 20 (7x28)	Blk, Red Wht	.014 .014	.028	.210	100	350	26	48	100, 500, 1000
 Tinned copper, polyethylene insulated, tinned copper braid shield over 2 conductors, chrome vinyl jacket.	8732	2 shielded 2 unshielded	22 (7x30) 22 (7x30)	Blk, Wht Blk, Wht	.015 .015	.030	.188x .296	62	350	21	37	100, 500, 1000
 Tinned copper, vinyl insulated, BELDFOIL aluminum-Mylar wrapped shield over 2 conductors, #22 stranded tinned ground wire, chrome vinyl jacket.	8722	2 shielded 2 unshielded	20 (7x28) 20 (7x28)	Blk, Red Grn, Wht	.015 .015	.028	.260	100	350	60	99	100, 500, 1000

See COIN OPERATED PHONOGRAPH CABLES for additional special constructions.
*** Capacitance between conductors**
****Capacitance between 1 conductor and other conductor connected to shield**

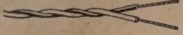
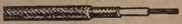
CONTROL CABLES

In addition to the wide coverage of cables shown as Standards in this catalog, Belden is a principal supplier of Control Cables whether for sound systems, business systems, machinery control or automation.

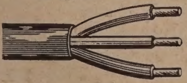
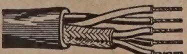
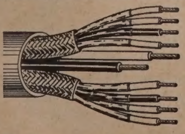
Control Cables are a Belden specialty. Where shielding is required, BELDFOIL shielding is particularly adaptable for complex cables.

Belden Electronic Wires & Cables

HI-FI, STEREO, AND PHONOGRAPH CABLES

DESCRIPTION	TRADE NUMBER	No. of Cond.	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Nom. Cap. between condrs. (mmf/ft)	Nom. Cap. condr. to other condr. & shield (mmf/ft)	STANDARD Spool Lengths in ft
PHONO PICK-UP ARM CABLES  Tinned copper, vinyl insulated, twisted pair.	**8430**	2	32 (7x40)	.009	—	.050	Blk, Red	21	—	10, 25, 250
		4	use two 8430s for maximum channel isolation, one for each channel.							
 Tinned copper, vinyl insulated, twisted pair, tinned copper braid shield.	**8429**	2	32 (7x40)	.009	—	.057	Blk, Red	22	38	10, 25, 250
	8419	3	32 (7x40)	.009	—	.063	Blk, Red, Wht	30	50	10, 25, 250
	→	4	use two 8429s for maximum channel isolation, one for each channel.							
 Tinned copper, rubber insulated, tinned copper braid shield, brown cotton braid.	**8431**	1	24 (16x36)	.015	—	.095	—	96	—	10, 15, 25, 100, 500
HI-FI CONNECTING CABLE 3 strands tinned copper and 4 tinned Copperweld, cellular polyethylene insulated, tinned copper, spiral wrapped shield, chrome vinyl jacket.	**8421**	1	25 (7x33)	.052	.025	.180	—	18	—	15, 25, 50, 100, 250

COIN OPERATED PHONOGRAPH CABLES

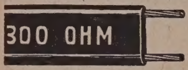
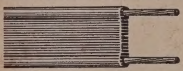
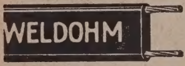
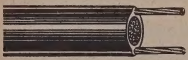
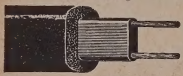
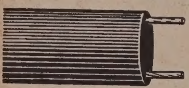
DESCRIPTION	TRADE NUMBER	No. of Cond.	AWG & (Stranding)	Cond. Color Coding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Suggested Working Voltage	STANDARD Spool Lengths in ft
SPEAKER CABLE Copper conductors parallel, chrome vinyl insulated.	**8782**	2	24 (7x32)	1 Conductor tinned	.017	—	.058x.115	300	25, 50, 100, 500, 1000
CONTROL CABLES  Tinned copper, vinyl insulated, conductors cabled, chrome vinyl jacket.	**8783**	3	1—20 (10x30) 2—16 (26x30)	Blue, Grn, Org	.020 .020	.025	.250	450	100, 500
 Tinned copper, vinyl insulated, 3 conductors twisted under tinned copper braid shield, 2 conductors twisted unshielded, chrome vinyl jacket.	**8785**	5 (2 unshielded) (3 shielded)	22 (7x30) 22 (7x30)	Blue, Yel Blk, Grn, Red	.015 .015	.028	.211x.316	350	100, 500
 Tinned copper, vinyl insulated, 4 conductors twisted under tinned copper braid shield, 2 conductors twisted unshielded, chrome vinyl jacket.	**8786**	6 (2 unshielded) (4 shielded)	22 (7x30) 24 (7x32)	Blu, Wht Blk, Grn, Red, Yel	.015 .015	.028	.211x.316	350	100, 500
 Tinned copper, polyethylene insulated, nylon covered; cabled in 2 quads individually tinned copper braid shielded; plus 2 unshielded conductors; paper tape; chrome vinyl jacket.	**8787**	10 (4 shielded) (4 shielded) (2 unshielded)	24 (7x32) 24 (7x32) 22 (7x30)	Gry, Wht, Blu, Grn Red, Brn, Yel, Org Wht, Blu	.012 .012 .012	.027	.330	350	100, 500

(See Belden Price List and Index on Pages 1512-1515)

Belden Electronic Wires & Cables

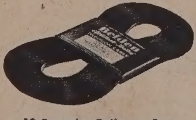
300 OHM TRANSMISSION LINE CABLES

TWIN LEAD WIRES

DESCRIPTION	TRADE NUMBER	AWG & (Stranding)	Color	Nom. O.D. (Inch)	Nom. Velocity of Propagation	Nom. Capacitance (mmf/ft)	Nom. Attenuation per 100′ mc	db	STANDARD Package Lengths in ft
 Bare copper, 2 conductors parallel, polyethylene insulated.	8225	20 (7x28)	Brown	.058 x .400	80%	4.4	100 200 300 400 500 700 900	1.1 1.7 2.2 2.7 3.1 3.7 4.5	25, 50, 75, 100 pancake coils in a sleeve 500, 1000 spools
		Brown polyethylene for the best weathering.							
 Bare copper, 2 conductors parallel, polyethylene insulated.	NEW 8226	20 (7x28)	Ivory	.058 x .400	80%	4.4	Same as 8225		25, 50, 75, 100 pancake coils in a sleeve
		Recommended for indoor use, only.							
WELDOHM▣  Copperweld; 2 conductors parallel, polyethylene insulated.	8230	20 (7x28)	Brown	.072 x .400	80%	4.4	100 200 300 400 500 700 900	1.1 1.7 2.2 2.7 3.1 3.7 4.5	25, 50, 75, 100 pancake coils in a sleeve 500, 1000 spools
		WELDOHM▣ This cable is 1½ times stronger and 2½ times more flexible than the equivalent twin lead with all copper conductors, without changing the RF electrical characteristics. Tests prove its superior resistance to the pulling, whipping, and twisting that is so important to a long lasting installation.							
CELLULINE⊛  Copperweld; 2 conductors parallel, polyethylene jacket with inert gas filled unicellular polyethylene core.	8275	20 (7x28)	Brown	.300 x .400	80%	4.6	100 200 300 400 500 700 900	1.05 1.64 2.12 2.5 2.98 3.62 4.3	50, 75, 100 coils in counter dispenser 500, 1000 spools
		CELLULINE⊛ Maintains uniform electrical characteristics by eliminating all possible moisture between conductors. Installation is easier as no end-sealing is necessary. Losses are lower because of its lower dielectric constant (1.5). The thick outer wall of brown polyethylene protects the cable from abrasion and sun damage, and the round shape offers less wind resistance. The result is a longer lasting, more efficient line which helps maintain a strong UHF or VHF picture.							
PERMOHM⊛  Copperweld, 2 conductors parallel, orange polyethylene insulation and web between conductors, cellular polyethylene oval jacket.	8285	22 (7x30)	Brown	.255 x .468	73.3%	5.3	100 300 500 700 900	1.4 2.8 3.8 4.8 5.6	50, 75, 100 coils in counter dispenser 500, 1000 spools
		PERMOHM⊛ Encapsulated twin lead for strong, clear signals on all channels despite salt spray, industrial contamination, rain, ice and fringe area reception. An excellent color, UHF or VHF cable.							
 Bare copper, 2 conductors parallel, polyethylene insulated.	8235	18 (7x26)	Brown	.185 x .520	77%	5.0	100 200 300 400 500 700 900	.85 1.35 1.80 2.20 2.60 3.25 3.85	100, 500 spools
		Amateur transmitting and receiving twin lead—1KW(RF) rated.							

▣Belden Trademark, Reg. U.S. Pat. off. ⊛Belden Trademark, Reg. U.S. Pat. off. and Belden Patents — U.S. 2,782,251 and 2,814,666.

BELDEN MERCHANDISERS



10 Pancake Coils per Box

300 OHM LINE PACKAGE COILS
8225
8226 (New Indoor Ivory)
8230 (Weldohm)
Put-ups 25′, 50′, 75′, 100′

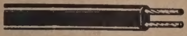
ANTENNA ROTOR CABLE
8464 (4 conductor, flat)
Put-ups 50′, 75′, 100′

300 OHM LINE COILS
8275 (Celluline)
8285 (Permohm)
Put-ups 50′, 75′, 100′

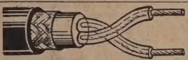
10 Coils per box

Belden Electronic Wires & Cables

150 AND 72 OHM TRANSMISSION LINE CABLES

DESCRIPTION	TRADE NUMBER	AWG & (Stranding)	Nom. O.D. (Inch)	Nom. Velocity of Propagation	Nom. Capacitance (mmf/ft)	Nom. Attenuation per 100' mc	db	STANDARD Spool Lengths in ft
150 OHM LINE  Bare copper, 2 conductors parallel, brown polyethylene insulated.	8224	20 (7x28)	.075 x .182	76%	9.5	100 200 300 400	2.8 4.2 5.4 6.4	100, 500
72 OHM LINE Bare copper, 2 conductors parallel, brown polyethylene insulated.	8222	20 (7x28)	.075 x .128	69%	20.3	100 200 300 400	7.7 11.0 13.6 15.9	100, 500
72 OHM 1 KW (RF) RATED Bare copper, 2 conductors parallel, brown polyethylene insulated.	8210	13 (7x21)	.166 x .278	68%	21.0	100 200 300 400 500 700 900	3.8 6.0 7.8 9.3 11.0 13.7 16.0	50, 100, 500

SHIELDED 100 OHM IMPEDANCE LINE

DESCRIPTION	TRADE NUMBER	AWG & (Stranding)	Nom. O.D. (Inch)	Nom. Vel. of Prop.	Percent Shield Coverage	Nom. Cap. (mmf/ft)	Nom. Attenuation db/100 ft at 100mc	200mc	300mc	400mc	STANDARD Spool Lengths in ft
 One conductor tinned, one bare copper, polyethylene insulated, cabled, polyethylene jacket, tinned copper braid shield, black vinyl jacket.	8227	20 (7x28)	.325	62%	83	15.5	4.1	6.4	8.4	10.2	100, 250, 500

ANTENNA ROTOR CABLE

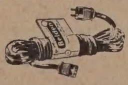
DESCRIPTION	TRADE NUMBER	No. of Cond.	AWG & (Stranding)	Cond. Coding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Suggested Working Voltage	STANDARD Package Lengths in ft
Bare copper, parallel, chrome vinyl insulated.	8464	4	20 (7x28)	1 cond. tinned and insulation ribbed	—	—	.070 x .390	200	50, 75, 100 pancake coils 500, 1000 spools
Bare copper, vinyl insulated, cabled, chrome vinyl jacket.	8484	4	20 (7x28)	Blk, Grn, Red, Wht	.010	.020	.180	200	100, 500, 1000 spools
	8485	5	20 (7x28)	Blk, Grn, Red, Wht, Yel	.010	.020	.190	200	100, 500, 1000 spools
	8488	8	22 (7x30)	Blk, Blu, Brn, Grn, Org, Red, Wht, Yel	.010	.020	.205	200	100, 500, 1000 spools

ALUMINUM GROUND WIRE

Packaged in counter dispensers of 10-50' connected coils, or spools of 500 and 1000 ft. Wire on spools is marked every 100' for easy measuring.

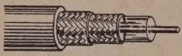
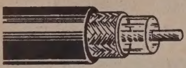
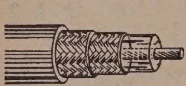
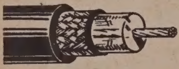
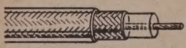
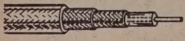
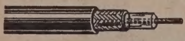
DESCRIPTION	TRADE NUMBER	Nom. O.D. (Inch)	STANDARD Package Lengths in ft
8 AWG solid, soft annealed aluminum.	8018	.128	500 in 10-50 connected coils 500, 1000 spools

TV AND CHEATER CORDS

DESCRIPTION	TRADE NUMBER	Length in ft	STANDARD Package
CHEATER CORD SP-1 brown rubber parallel cord with male plug and TV connector.	8874	6	Hanked in a descriptive sleeve
CHEATER EXTENSION CORD  SPT-1 red plastic parallel cord with male and female TV connectors.	8875	6	Hanked in a descriptive sleeve

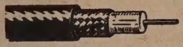
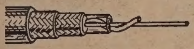
Belden Electronic Wires & Cables

RG/U TRANSMISSION LINE CABLES

DESCRIPTION	TRADE NUMBER	RG No.	AWG & (Stranding) Material	Insulation	No. of Shields & Material	Jacket	Nom. O.D. (Inch)	Nom. Imp. (Ohms)	Nom. Vel. of Prop.	Nom Cap. (mmf/ft)	Nom. Attenuation per 100' mc	db	STANDARD Spool Lengths in ft
	**8264** JAN-C-17A	5A/U	16 (Solid) silver coated copper	Poly-ethylene	2 silver-coated copper	Gray non-contaminating vinyl	.328	50	66%	28.5	100 200 400	2.40 3.50 5.25	100 500 1000
	**8237** JAN-C-17A	8/U	13 (7x21) bare copper	Poly-ethylene	1 bare copper	Black vinyl	.405	52	66%	29.5	100 200 400	2.10 3.30 4.50	100 250, 500 1000
	8267 MIL-C-17B	8A/U or 213/U	13 (7x21) bare copper	Poly-ethylene	1 bare copper	Black non-contaminating vinyl	.405	50	66%	28.5	100 200 400	2.10 3.30 4.50	100 500 1000
	**8242** JAN-C-17A	9/U	13 (7x21) silver coated copper	Poly-ethylene	2 inner-silver-coated copper outer-bare copper	Gray non-contaminating vinyl	.420	51	66%	30.0	100 200 400	2.10 3.30 4.50	100 500 1000
	**8238** JAN-C-17A	11/U	18 (7x26) tinned copper	Poly-ethylene	1 bare copper	Black vinyl	.405	75	66%	20.5	100 200 400	1.90 2.85 4.35	100 250, 500 1000, 1500
	8261 MIL-C-17B	11A/U	18 (7x26) tinned copper	Poly-ethylene	1 bare copper	Black non-contaminating vinyl	.405	75	66%	20.5	100 200 400	1.90 2.85 4.35	100 500 1000
	**8239** JAN-C-17A	54A/U	18 (7x.0152) bare copper	Poly-ethylene	1 tinned copper	Clear poly-ethylene	.245	58	66%	26.5	100 200 400	3.10 4.40 6.70	100 500 1000
	**8245** JAN-C-17A	55/U	20 (Solid) bare copper	Poly-ethylene	2 tinned copper	Clear poly-ethylene	.201	53.5	66%	28.5	100 200 400	4.10 6.20 9.50	100 500 1000
	**8259** JAN-C-17A	58A/U	20(19x.0071) tinned copper	Poly-ethylene	1 tinned copper	Black vinyl	.195	50	66%	28.5	100 200 400	5.30 8.20 12.60	25, 50 100, 500 1000

Belden Electronic Wires & Cables

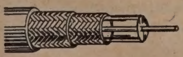
RG/U TRANSMISSION LINE CABLES—Continued

DESCRIPTION	TRADE NUMBER	RG No.	AWG & (Stranding) Material	Insulation	No. of Shields & Material	Jacket	Nom. O.D. (Inch)	Nom. Imp. (Ohms)	Nom. Vel. of Prop.	Nom. Cap. (mmf/ft)	Nom. Attenuation per 100′ mc	db	STANDARD Spool Lengths in ft
	8240 **JAN-C-17A**	58/U	20 (Solid) bare copper	Poly-ethylene	1 tinned copper	Black vinyl	.193	53.5	66%	28.5	100 200 400	4.10 6.20 9.50	25, 50, 100 250, 500 1000
	8262 **MIL-C-17B**	58C/U	20(19x.0071) tinned copper	Poly-ethylene	1 tinned copper	Black non-contaminating vinyl	.195	50	66%	28.5	100 200 400	5.30 8.20 12.60	100, 500 1000
	**8241** **JAN-C-17A**	59/U	22 bare Copperweld	Poly-ethylene	1 bare copper	Black vinyl	.240	73	66%	21.0	100 200 400	3.75 5.60 8.30	25, 50, 100 250, 500 1000
	8263 **MIL-C-17B**	59B/U	.023 bare Copperweld	Poly-ethylene	1 bare copper	Black non-contaminating vinyl	.241	75	66%	20.5	100 200 400	3.75 5.60 8.30	100, 500 1000
	8254 **JAN-C-17A**	62/U	22 bare Copperweld	Semi-solid Poly-ethylene	1 bare copper	Black vinyl	.238	93	84%	13.5	100 200 400	3.10 4.40 6.30	100 500 1000
	**8257** **JAN-C-17A**	71/U	22 bare Copperweld	Semi-solid Poly-ethylene	2 tinned copper	Clear Poly-ethylene	.245	93	84%	13.5	100 200 400	3.10 4.40 6.30	100 500 1000

Production quantities of other RG/U types quoted on request.

75 OHM VIDEO CABLE

TYPICAL APPLICATIONS: Video signal transmission in color and monochrome TV studios. Provides high quality carrier of video signal with superior picture definition and eliminates problems of periodicity. Cable is manufactured with rigid control of concentricity and all dimensional tolerances. Center conductor is maintained at same distance from shield through entire length of cable. The black Polyethylene jacket is manufactured with a non-contaminating, non-migratory compound. 100% SWEEP TESTED.

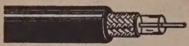
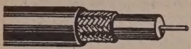
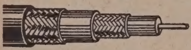
DESCRIPTION	TRADE NUMBER	AWG & (Stranding) Material	Nom. O.D. (Inch)	Percent Shield Coverage	Nom. Impedance (Ohms)	Nom. Velocity of Propagation	Nom. Cap. (mmf/ft)	Nom. Attenuation MC	db	STANDARD Spool Lengths in ft
 Conductor, polyethylene insulated, tinned copper double braid shield, black polyethylene jacket.	**8281**	20 (Solid) copper	.304	93.5	75	65.2%	20.7	5	.55	500, 1000
								10	.8	
								20	1.3	
								100	2.7	
								300	5.1	
								500	6.8	
								700	8.4	

As a service to users of 8281 video cable, we can furnish, without charge, adapters for use with the PL259 plug.

Belden Electronic Wires & Cables

COMMUNITY AND MULTIPLE SET TV ANTENNA CABLES

All cables in this group are Sweep Tested.

DESCRIPTION	TRADE NUMBER	AWG & (Stranding) Material	Percent Shield Coverage	Nom. O.D. (Inch)	Nom. Impedance (Ohms)	Nom. Velocity of Propagation	Nom. Cap. (mmf/ft)	Nom. Attenuation per 100' mc	db	STANDARD Spool Lengths in ft
 Conductor, polyethylene insulated, bare copper shield, black vinyl jacket.	**8231**	21 (Solid) Tinned copper	96.1	.274	75	66%	20.5	50 100 200 300 400	1.8 2.2 3.8 4.8 5.9	100, 500, 1000
 Conductor, cellular polyethylene insulated, bare copper braid shield, black polyethylene jacket.	**NEW 8211**	22 (Solid) Copperweld Fits the same connectors as RG59/U	94.6	.242	80	78%	16.3	50 100 200 300 400	2.4 3.4 4.8 5.8 6.7	500, 1000, 2000
	8212	20 (Solid) Copperweld	93.8	.242	75	78%	17.3	50 100 200 300 400	2.3 3.2 4.5 5.5 6.3	100, 500, 1000, 2000
	8213	14 (Solid) copper	96.8	.405	75	78%	17.3	50 100 200 300 400	1.0 1.5 2.3 2.9 3.4	500, 1000, 2000
 Conductor, cellular polyethylene insulated, bare copper braid shield, polyethylene insulated, bare copper braid shield, black polyethylene jacket.	**8232**	20 (Solid) Copperweld	93.8 (inner shield)	.315	75	78%	17.3	50 100 200 300 400	2.3 3.2 4.5 5.5 6.3	100, 500, 1000, 2000
	8233	14 (Solid) copper	92.5 (inner shield)	.475	75	78%	17.3	50 100 200 300 400	1.0 1.5 2.3 2.9 3.4	500, 1000, 2000

SWEEP TESTING

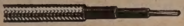
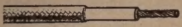
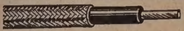
For satisfactory transmission of a signal through a cable at any frequency, Belden Sweep Tests every foot of its Community TV Cables at all channels in the VHF Frequency range on an oscilloscope.

Sweep Testing, when performed by trained technicians using the most modern equipment, prevents unsatisfactory program reception due to imperfections in the cable acting as "Filter Traps" at some frequencies.

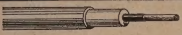
The Black Polyethylene Jackets on Belden numbers 8211, 8212, 8213, 8232, and 8233 are manufactured with a non-contaminating, non-migratory compound specially formulated for superior weather resistance.

Belden Electronic Wires & Cables

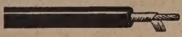
SHIELDED HOOK-UP and GRID WIRES

DESCRIPTION	TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Suggested Working Voltage	Breakdown Voltage	Insulation Resistance megohms per 1000 feet	Cap. (mmf/ft)	STANDARD Spool Lengths in ft
 Tinned copper, rubber insulated, cellulose acetate braid, lacquered, tinned copper braid shield.	**8885**	20 (10x30)	.015	.117	1500	4000	300	80	15, 25, 100, 500
 Tinned copper, vinyl insulated, tinned copper braid shield.	**8886**	20 (19x32)	.030	.124	3000	7000	1500	82	15, 25, 100, 500
	NEW 8884	16 (26x30)	.031	.150	3000	7000	1500	98	100, 500
 Tinned copper, rubber insulated, tinned copper braid shield.	**8206**	18 (7x27)	.040	.156					15, 50, 100, 250

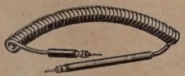
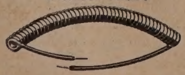
HIGH VOLTAGE CATHODE-RAY TUBE LEAD

DESCRIPTION	TRADE NUMBER	AWG & (Stranding)	Insulation Thick. (Inch)	Jacket Thick. (Inch)	Nom. O.D. (Inch)	Break-down Voltage	Suggested Working Voltage	STANDARD Spool Lengths in ft
 Tinned copper, conductive polyethylene, polyethylene insulated, red vinyl jacket. The new construction greatly improves working and breakdown voltage, reduces corona, and adds service life.	**8868**	22 (7x30)	.045	.015	.150	50,000	25,000	25, 100, 500

TEST PROD WIRE

DESCRIPTION	TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Break-down Voltage	Suggested Working Voltage	STANDARD Spool Lengths in ft
 Tinned copper, separator, rubber insulated, red or black. Extreme limpness and flexibility combined with high dielectric strength.	**8899**	18 (65x36) * 7′ of red and 7′ of black.	.045	.144	20,000	5,000	10, 14*, 25, 100, 500, 1000
	8898	18 (65x36)	.088	.230	29,000	10,000	10, 25, 100, 500

COILED TEST PROD WIRE

DESCRIPTION	TRADE NUMBER	AWG (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Breakdown Voltage	Suggested Working Voltage	STANDARD Package
WITH PRODS  Tinned copper, separator, rubber insulated, red or black. 7′ 9″ of cable. Retracted length 8″. Stretches to 5′.	**8878**	20 (42x36)	.063	.170	20,000	5,000	1 pair Red and Black
WITHOUT PRODS  Tinned copper, separator, rubber insulated, red or black. 7′ 9″ of cable. Retracted length 8″. Stretches to 5′.	**8879**	20 (42x36)	.063	.170	20,000	5,000	1 pair Red and Black

Belden Electronic Wires & Cables

MILITARY SPECIFICATION HOOK-UP WIRES

Belden Mil Spec wire regularly exceeds the rigid requirements of Military Specifications. Consistent, high quality of the product is possible because Belden is a basic wire manufacturer. This provides complete control of materials as well as each step of manufacturing from wire drawing to the finished product.

Continuous inspection is made in every operation. The finished wire is then laboratory-tested for compliance with the requirements of applicable military specifications by skilled engineers using the most modern test equipment.

The constant surveillance assures the recognized high quality of Belden products, which means the utmost in reliability and performance for all electronic or electrical applications.

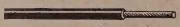
COLOR CODING

Stock colors. First color in stripe combination is body color and second or third colors are stripes (White/Black/Red).

Code No.	Color Combination
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Light Blue
7	Violet (purple)
8	Gray (slate)
9	White
10	Black
11	Tan
12	Pink
13	Dark Blue
14	White/Black
15	White/Red
16	White/Green
17	White/Yellow
18	White/Blue
19	White/Brown
20	White/Orange
21	White/Gray
22	White/Violet
23	White/Black/Red
24	White/Black/Green
25	White/Black/Yellow
26	White/Black/Blue
27	White/Black/Brown
28	White/Black/Orange
29	White/Black/Gray
30	White/Black/Violet

MIL-W-76 A TYPE MW-VINYL 1000V-80C

Formerly Type SRIR JAN-C-76



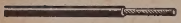
Tinned copper, vinyl insulated.

The extruded vinyl insulation is flame and ozone resistant and is inert to most chemicals, oils, and solvents.

TRADE NUMBER	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 25′	100′	1000′
8525	MW-C-24-(7)-U	24 (7x32)	.017	.058	....	1 Thru 30	1 Thru 30
8530	MW-C-22-(1)-U	22 (Solid)	.017	.059	1 Thru 13	1 Thru 22	1 Thru 22
8524	MW-C-22-(7)-U	22 (7x30)	.017	.064	1 Thru 13	1 Thru 30	1 Thru 30
8529	MW-C-20-(1)-U	20 (Solid)	.017	.066	1 Thru 13	1 Thru 22	1 Thru 22
8523	MW-C-20-(7)-U	20 (10x30)	.017	.072	1 Thru 13	1 Thru 30	1 Thru 30
NEW 8528	MW-C-18-(1)-U	18 (Solid)	.017	.074	....	1 Thru 10	1 Thru 10
8522	MW-C-18-(16)-U	18 (16x30)	.017	.081	1 Thru 13	1 Thru 22	1 Thru 22
8521	MW-C-16-(19)-U	16 (19x29)	.020	.096	....	1 Thru 10	1 Thru 10
8520	MW-C-14-(19)-U	14 (19x27)	.020	.111	....	1 Thru 6, 9, 10	1 Thru 6, 9, 10
8527	MW-C-12-(19)-U	12 (19x25)	.020	.130	....	1 Thru 6, 9, 10	1 Thru 6, 9, 10

See page 1535 for non-military vinyl wires and heavier sizes.

MIL-W-16878C TYPE B—VINYL 600V-105C



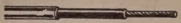
Tinned copper, vinyl insulated.

Type B wire is suitable for general purpose wiring where excellent resistance to moisture and solvents may be required.

Standard Spools: 100 feet and 1000 feet

TRADE NUMBER	Military Type	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors
8505	B-26	26 (7x34)	.010	.039	9 & 14 Thru 22
8509	B-24	24 (19x36)	.010	.045	9 & 14 Thru 22
8504	B-24	24 (7x32)	.010	.044	9 & 14 Thru 22
8508	B-22	22 (19x34)	.010	.051	9 & 14 Thru 22
8503	B-22	22 (7x30)	.010	.050	1 Thru 10 & 14 Thru 22
8507	B-20	20 (19x32)	.010	.059	9 & 14 Thru 22
8502	B-20	20 (7x28)	.010	.058	9 & 14 Thru 22
8506	B-18	18 (19x30)	.010	.069	9 & 14 Thru 22
8501	B-18	18 (7x26)	.010	.068	9 & 14 Thru 22
8500	B-16	16 (19x29)	.010	.077	9 & 14 Thru 22

MIL-W-16878C TYPE B—VINYL-NYLON 600V-115C



Tinned copper, vinyl insulated, nylon jacket.

Type B with vinyl insulation and nylon jacket can be used to provide exceptional service with added abrasion resistance.

Standard Spools: 100 feet and 1000 feet

TRADE NUMBER	Military Type	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors
8515	B-26	26 (7x34)	.010	.0025	.044	9 & 14 Thru 22
8519	B-24	24 (19x36)	.010	.0025	.050	1 Thru 10 & 14 Thru 22
8514	B-24	24 (7x32)	.010	.0025	.049	1 Thru 10 & 14 Thru 22
8518	B-22	22 (19x34)	.010	.0025	.057	1 Thru 10 & 14 Thru 22
8513	B-22	22 (7x30)	.010	.0025	.055	1 Thru 10 & 14 Thru 22
8517	B-20	20 (19x32)	.010	.0025	.065	1 Thru 10 & 14 Thru 22
8512	B-20	20 (7x28)	.010	.0025	.063	1 Thru 10 & 14 Thru 22
8516	B-18	18 (19x30)	.010	.0025	.075	9 & 14 Thru 22
8511	B-18	18 (7x26)	.010	.0025	.073	9 & 14 Thru 22
8510	B-16	16 (19x29)	.010	.0025	.082	9 & 14 Thru 22

Belden Electronic Wires & Cables

MILITARY SPECIFICATION HOOK-UP WIRES

MIL-W-16878C TYPE E—TEFLON* 600V-200C

Concentrically stranded silver-coated copper, Teflon insulated.

Standard Spools: 25, 50, 100, 250, 500 and 1000 feet

TRADE NUMBER	Military Type	AWG & (Stranding)	Nom. O.D. (Inch)	Stock Colors
8300	E-30	30 (7x38)	.033	1 Thru 10
8301	E-28	28 (7x36)	.036	1 Thru 10
8302	E-26	26 (7x34)	.041	1 Thru 10
8303	E-24	24 (19x36)	.046	1 Thru 10
8304	E-24	24 (7x32)	.045	1 Thru 10
8305	E-22	22 (7x30)	.051	1 Thru 10
8306	E-22	22 (19x34)	.052	1 Thru 10
8307	E-20	20 (19x32)	.060	1 Thru 10
8308	E-20	20 (10x30)	.060	1 Thru 10
8309	E-18	18 (19x30)	.072	1 Thru 10
8310	E-16	16 (19x29)	.085	1 Thru 10

*Teflon: DuPont trade name for Tetrafluorethylene Resin.

MIL-W-16878C TYPE EE—TEFLON* 1000V-200C

Concentrically stranded silver-coated copper, Teflon insulated.

Standard Spools: 25, 50, 100, 250, 500 and 1000 feet

TRADE NUMBER	Military Type	AWG & (Stranding)	Nom. O.D. (Inch)	Stock Colors
8320	EE-30	30 (7x38)	.043	1 Thru 10
8321	EE-28	28 (7x36)	.046	1 Thru 10
8322	EE-26	26 (7x34)	.050	1 Thru 10
8323	EE-24	24 (19x36)	.056	1 Thru 10
8324	EE-24	24 (7x32)	.055	1 Thru 10
8325	EE-22	22 (7x30)	.061	1 Thru 10
8326	EE-22	22 (19x34)	.062	1 Thru 10
8327	EE-20	20 (19x32)	.070	1 Thru 10
8328	EE-20	20 (10x30)	.070	1 Thru 10
8329	EE-18	18 (19x30)	.081	1 Thru 10
8330	EE-16	16 (19x29)	.090	1 Thru 10

UL TYPE HOOK-UP AND LEAD WIRES

UL-600V-90C

Tinned copper, vinyl insulated, cotton braid, lacquered.

TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors	STANDARD Spool Lengths in ft
8937	22 (7x30)	.016	.091	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8936	20 (10x30)	.017	.098	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8935	18 (16x30)	.017	.113	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8934	16 (26x30)	.017	.126	1, 2, 3, 4, 5, 9, 10, 13	100, 500
8933	14 (41x30)	.031	.177	1, 2, 3, 4, 5, 9, 10, 13	100, 500

UL-600V-105C (CSA 600V-90C)

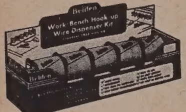
Tinned copper, vinyl insulated.

TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors	STANDARD Spool Lengths in ft
8920	22 (7x30)	.031	.095	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8919	20 (10x30)	.031	.102	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8918	18 (16x30)	.031	.112	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8917	16 (26x30)	.031	.126	1, 2, 3, 4, 5, 9, 10, 13	100, 500
8916	14 (41x30)	.031	.141	1, 2, 3, 4, 5, 9, 10, 13	100, 500

See Page 1532 for Color Coding

Belden Electronic Wires & Cables

KITS—HOOK-UP WIRE ON RACKS



Specify Trade Number 8800 for Rack only

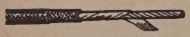
R and D Labs
Engineers . . .
Servicemen . . .
Hobbyists . . .

Each kit contains an assortment of Hook-Up Wire colors and types plus a portable metal dispenser rack for workbench or wall mounting. The dispenser rack provides a complete, compact, and convenient wire department for every working area.

TRADE NUMBER	No. of Spools	Spool Lengths	Type of Wire	Colors in Kit
8818	8	25′	20 solid, cellulose acetate (8941-25)	1, 2, 3, 4, 5, 6, 9, 10
8819	5	100′	20 solid, cellulose acetate (8941-100)	2, 5, 6, 9, 10
8820	8	25′	20 stranded, cellulose acetate (8943-25)	1, 2, 3, 4, 5, 6, 9, 10
8821	5	100′	20 stranded, cellulose acetate (8943-100)	2, 5, 6, 9, 10
8822	10	25′	20 solid, Type MW vinyl (8529-25)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
8823	5	100′	20 solid, Type MW vinyl (8529-100)	2, 5, 6, 9, 10
8824	8	25′	20 stranded, Type MW vinyl (8523-25)	1, 2, 3, 4, 5, 6, 9, 10

TRADE NUMBER	No. of Spools	Spool Lengths	Type of Wire	Colors in Kit
8825	5	100′	20 stranded, MIL-W-16878C vinyl (8507-100)	9, 14, 15, 16, 17
8826	5	100′	22 stranded, MIL-W-16878C vinyl (8508-100)	9, 14, 15, 16, 17
8827	5	100′	22 stranded, MIL-W-16878C vinyl-nylon (8518-100)	2, 5, 6, 9, 10
8828	10	25′	26 stranded, MIL-W-16878C Type E Teflon (8302-25)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
8829	10	25′	24 stranded, MIL-W-16878C Type E Teflon (8303-25)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
8830	10	25′	22 stranded, MIL-W-16878C Type E Teflon (8306-25)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
8831	10	25′	20 stranded, MIL-W-16878C Type E Teflon (8307-25)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10

GENERAL-PURPOSE HOOK-UP WIRES

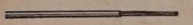


Tinned copper, cellulose acetate wrap, cellulose acetate braid lacquered.

Nom. d-c Insulation Resistance — 200 megohms/ft. Nom. Breakdown Voltage—1000.

TRADE NUMBER	AWG & (Stranding)	Nom. O.D. (Inch)	Stock Colors	STANDARD Spool Lengths in ft
8941	20 (Solid)	.072	1, 2, 3, 4, 5, 6, 9, 10	25, 100, 1000
8943	20 (10x30)	.076	1, 2, 3, 4, 5, 6, 9, 10	25, 100, 1000
8945	18 (Solid)	.080	2, 4, 5, 6, 9, 10	25, 100, 1000
8947	18 (16x30)	.087	2, 4, 5, 6, 9, 10	25, 100, 1000
8942	16 (26x30)	.099	2, 5, 10	100, 1000
8938	14 (41x30)	.115	2, 10	100, 500

INDOOR ANTENNA WIRE



Tinned copper, chrome vinyl insulated.

TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	STANDARD Spool Lengths in ft
8014	25 (13x36)	.010	.044	25, 500

COLOR CODING

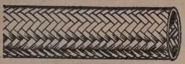
Stock Colors. First color in stripe combination is body color and second or third colors are stripes (White/Black/Red)

Code No.	Color Combination	Code No.	Color Combination
1	Brown	16	White/Green
2	Red	17	White/Yellow
3	Orange	18	White/Blue
4	Yellow	19	White/Brown
5	Green	20	White/Orange
6	Light Blue	21	White/Gray
7	Violet (purple)	22	White/Violet
8	Gray (slate)	23	White/Black/Red
9	White	24	White/Black/Green
10	Black	25	White/Black/Yellow
11	Tan	26	White/Black/Blue
12	Pink	27	White/Black/Brown
13	Dark Blue	28	White/Black/Orange
14	White/Black	29	White/Black/Gray
15	White/Red	30	White/Black/Violet

(See Belden Price List and Index on Pages 1512-1515)

Belden Electronic Wires & Cables

SHIELDING AND BONDING CABLES



Braided tinned copper.

TRADE NUMBER	Stranding	Nom. I.D. (Inch)	STANDARD Spool Lengths in ft
8660	96x34	⅛	10, 50, 250
8668	120x34	11/64	10, 50, 250
8663	160x34	¼	10, 50, 250
8661	192x34	⅜	10, 50, 250
8669	336x34	½	10, 50, 250
8662	576x34	25/32	10, 50, 250

For additional sizes, see current BRAIDED AND STRANDED COPPER CABLE CATALOG

PRIMARY WIRE—MARINE AND AUTO SAE Type 1

Bare copper, vinyl insulated.

TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Color	STANDARD Spool
NEW 8685	16 (19x29)	.023	.102	Black	100
NEW 8684	14 (19x27)	.023	.117	Green	100
NEW 8683	12 (19x25)	.026	.142	Red	100
NEW 8682	10 (19x23)	.031	.175	White	100
NEW 8681	8 (19x21)	.037	.219	Chrome	100
NEW 8680	6 (37x21)	.043	.290	Chrome	100

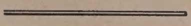
DUPLEX PRIMARY WIRE

Tinned copper, vinyl insulated, conductors parallel, chrome vinyl jacket.

Standard Spools: 100 and 500 feet

TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Color Coding
8677	16 (19x29)	.032	.022	164 x .276	Brn, Red
8675	14 (19x27)	.037	.022	189 x .326	Brn, Red
8673	12 (19x25)	.040	.022	213 x .384	Brn, Red

BUS BAR WIRE



Solid Tinned Copper

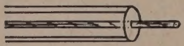
TRADE NUMBER	AWG	Nom. O.D. (Inch)	STANDARD Spool Lengths in ft
NEW 8027	34	.006	100, 1000
NEW 8026	32	.008	100, 1000
NEW 8025	30	.010	100, 1000
NEW 8024	28	.012	100, 1000
NEW 8023	26	.016	100, 1000
NEW 8022	24	.020	100, 1000
8021	22	.025	100, 1000
8020	20	.032	100, 1000
8019	18	.040	100, 1000
8013	16	.050	100, 1000
8012	14	.064	100, 1000
8011	12	.080	100, 1000

LEAD-IN WIRE

Tinned copper, black rubber insulated.

TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	STANDARD Spool Lengths in ft
8200	18 (7x27)	.040	.126	100, 500, 1000

7 MM IGNITION WIRE



Tinned Copperweld, POLYSIL* clear plastic insulation.
* Belden Trademark

Standard Spool: 100 feet

TRADE NUMBER	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Color Coding
8666	20 (7x28)	.121	.274	Clear

Belden Electronic Wires & Cables

MAGNET WIRE

Belden
WIRES CABLES CORDS
NYLCLAD

Nylclad magnet wire combines the most desirable features of Formvar with the well-known toughness and solvent resistance of Nylon enamel.

For difficult and exacting windings, these plus values may represent the difference between low and high rejections.

Nylclad will out-perform all other A.I.E.E., Class A, film-coated wires with respect to: (1) ability to withstand winding abuse and forming operations; (2) resistance to the solvent action of insulating varnishes and all types of thinners; (3) resistance to softening at elevated temperatures; (4) solvent crazing; (5) windability.

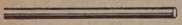
BELDENAMEL* (E)

Size	¼ Pound Spool		½ Pound Spool		Turns per Linear Inch	Turns per Square Inch
	TRADE NUMBER	Approx. Length (Feet)	TRADE NUMBER	Approx. Length (Feet)		
14	.....	....	**8047**	40	15.2	231
16	.....	....	**8048**	63	19.1	365
18	.....	....	**8049**	100	23.9	571
20	.....	....	**8050**	160	29.9	894
22	.....	....	**8051**	254	37.4	1399
24	.....	....	**8052**	404	46.9	2200
26	.....	....	**8053**	645	59.0	3481
28	**8040**	510	**8054**	1020	73.8	5446
30	**8041**	807	**8055**	1615	92.2	8501
32	**8042**	1257	**8056**	2515	114.0	12996
34	**8043**	2030	**8057**	4060	144.0	20736
36	**8044**	3200	**8058**	6400	180.0	32400
38	**8045**	5070	.....	....	225.0	50625
40	**8046**	8050	......	....	290.0	84100

NYLCLAD* (HNC)

Size	½ Pound Spool		1 Pound Spool		Turns per Linear Inch	Turns per Square Inch
	TRADE NUMBER	Approx. Length (Feet)	TRADE NUMBER	Approx. Length (Feet)		
14	**8059**	40	**8073**	80	14.9	222
16	**8060**	63	**8074**	126	18.6	346
18	**8061**	100	**8075**	199	23.2	538
20	**8062**	157	**8076**	315	28.9	835
22	**8063**	250	**8077**	501	36.0	1296
24	**8064**	396	**8078**	793	44.7	1998
26	**8065**	630	**8079**	1260	55.7	3102
28	**8066**	995	**8080**	1990	69.4	4816
30	**8067**	1570	**8081**	3140	86.2	7430
32	**8068**	2440	**8082**	4880	106.0	11236
34	**8069**	3930	**8083**	7860	133.0	17689
36	**8070**	6200	**8084**	12400	167.0	27889
38	**8071**	9700	**8085**	19400	206.0	42436
40	**8072**	16050	**8086**	32100	263.0	69169

SOLID FORMVAR ANTENNA WIRE



Copper, HF Formvar insulated.

TRADE NUMBER	AWG & (Stranding)	Nom. O.D. (Inch)	STANDARD Spool Lengths in ft
8009	14 (Solid)	.067	100, 200, 500
8008	12 (Solid)	.084	100, 200, 500

STRANDED BARE ANTENNA WIRE

Stranded bare copper

TRADE NUMBER	AWG & (Stranding)	Nom. O.D. (Inch)	STANDARD Spool Lengths in ft
8002	16 (7x24)	.060	50, 75, 100, 1000
8000	14 (7x22)	.076	50, 75, 100, 1000

LITZ WIRE

Copper, Celenamel* insulated, nylon wrap.

TRADE NUMBER	Stranding	Nom. O.D. (Inch)	STANDARD Spool Lengths in ft
8817	5x44	.008	100

VOICE COIL LEAD WIRE

Braided bare copper wire.

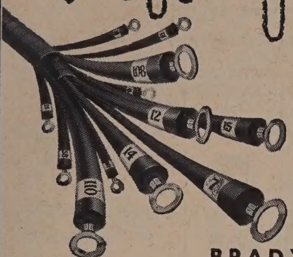
TRADE NUMBER	AWG & (Stranding)	Nom. O.D. (Inch)	STANDARD Spool Lengths in ft
8127	25 (32x40)	.024	10, 500

* Belden Trademark Reg. U. S. Pat. Off.

(See Belden Price List and Index on Pages 1512-1515)

BRADY *Self-Sticking* WIRE MARKERS

• COMMUNICATION • INSTALLATION • REPAIR



Quick, permanent "around-the-wire" identification in a wide variety of materials that resist heat, moisture, chemicals . . . in vinyl cloth, all-vinyl, *Mylar**, aluminum foil, acetate cloth or glass cloth. Stick tight to all wires — tell which wire goes where. Ask your jobber for Bulletin 130 listing more than 2000 stock markers Specials made to order.

**DuPont's Registered Trademark*

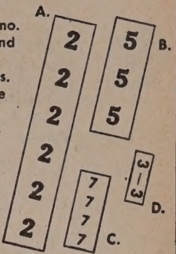
FOUR SIZES:

A. 1½" long for no. 10 gauge wires and larger.

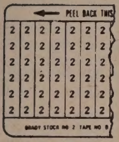
B. ¾" long for nos. 12, 14 and 16 gauge wires.

C. ½" long for no. 18 gauge wires and smaller.

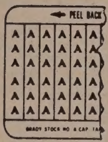
D. 5/16" long — only 5/16" x 5/64" — for flagging sub-miniature components.



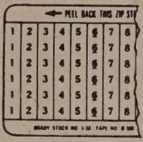
BRADY PERMA-CODE WIRE MARKERS


PEEL BACK THIS
BRADY STOCK NO. 2 TAPE NO. B

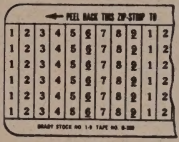
SOLID NUMBERS


PEEL BACK
BRADY STOCK NO. A-CAP TAPE

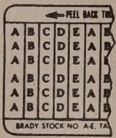
SOLID CAP LETTERS


PEEL BACK THIS ZIP STRIP
BRADY STOCK NO. 1-33 TAPE NO. B-500

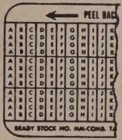
CONSECUTIVE NUMBERS


PEEL BACK THIS ZIP-STRIP TO
BRADY STOCK NO. 1-9 TAPE NO. B-500

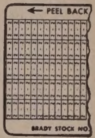
CONSECUTIVE NUMBERS REPEATED


PEEL BACK TH
BRADY STOCK NO. A-E TA

CONSECUTIVE LETTERS


PEEL BAC
BRADY STOCK NO. MM-COMB. T

MINIATURE MARKERS



MICRO-MARKERS

VINYL-CLOTH MARKERS (#B-500)

Solid Numbers

Stock No.	Legend	Markers Per Card	
		¾"	1½"
0	0	72	36
1	1	72	36
2	2	72	36
3	3	72	36
and so on thru			
97	97	72	36
98	98	72	36
99	99	72	36
100	100	50	25
101	101	50	25
102	102	50	25
103	103	50	25
and so on thru			
598	598	50	25
599	599	50	25
600	600	50	25

Solid Capital Letters

Stock No.	Legend	Markers Per Card	
		¾"	1½"
A-CAP	A	72	36
B-CAP	B	72	36
C-CAP	C	72	36
and so on thru			
Z-CAP	Z	72	36

Consecutive Numbers

Stock No.	Legend	Markers Per Card	
		¾"	1½"
1-33	1–33	66	33
34-66	34–66	66	33
67-99	67–99	66	33
and so on thru			
225-249	225–249	50	25
250-274	250–274	50	25
275-299	275–299	50	25
300-324	300–324	50	25
and so on thru			
1975-1999	1975–1999	50	25

VINYL-CLOTH MARKERS (CON'T.)

Consecutive Numbers Repeated

Stock No.	Legend	Markers Per Card	
		¾"	1½"
1-3	1–3	72	36
1-4	1–4	72	36
1-5	1–5	70	35
1-6	1–6	72	36
1-8	1–8	64	32
1-9	1–9	64	32
0-9	0–9	54	27
1-10	1–10	60	30
0-10	0–10	60	30
1-12	1–12	72	36
1-16	1–16	64	32
1-18	1–18	72	36
19-36	19–36	72	36

Consecutive Letters Repeated

Stock No.	Legend	Markers Per Card	
		¾"	1½"
A-E	A thru E	70	35
F-J	F thru J	70	35
K-O	K thru O	70	35
P-T	P thru T	70	35
U-Z	U thru Z	72	36

MINIATURE MARKERS (#B-395)

Solid Numbers

Stock No.	Legend	½" long
MM-0	0	150
MM-1	1	150
MM-2	2	150
and so on thru		
MM-99	99	150
MM-100	100	99
MM-101	101	99
and so on thru		
MM-498	498	99
MM-499	499	99
MM-500	500	99

MINIATURE MARKERS (CON'T)

Solid Capital Letters

Stock No.	Legend	Markers Per Card ½"
MM-A-CAP	A	150
MM-B-CAP	B	150
MM-C-CAP	C	150
and so on thru		
MM-Z-CAP	Z	150

Consecutive Numbers

Stock No.	Legend	Markers Per Card ½"
MM-0-49	0 thru 49	150
MM-50-99	50 thru 99	150
MM-100-132	100 thru 132	99
MM-133-165	133 thru 165	99
MM-166-198	166 thru 198	99
MM-199-231	199 thru 231	99
MM-232-264	232 thru 264	99
MM-265-297	265 thru 297	99
MM-298-330	298 thru 330	99
MM-331-363	331 thru 363	99
MM-364-396	364 thru 396	99
MM-397-429	397 thru 429	99
MM-430-462	430 thru 462	99
MM-463-495	463 thrn 495	99

Combination Card—Stock No. MM-Comb.

Includes Numbers 0-15; Letters A-Z; and Symbols below, all on one card:

FIL GRD B+ PRI SEC PLA

You get 3 complete sets on each card.

VINYL MICRO-MARKERS (#B-330)

Solid Numbers

Stock No.	Legend	5/16" long
MXM-0	0	250
MXM-1	1	250
MXM-2	2	250
MXM-3	3	250
	and so on thru	
MXM-24	24	250
MXM-25	25	250

Consecutive Numbers

Stock No.	Legend	5/16" long
MXM-0-49	0, 1, 2, 3, thru 49	250
MXM-50-99	50, 51, 52 thru 99	250

Consecutive Numbers Repeated

Stock No.	Legend	5/16" long
MXM-1-5	1 thru 5	250
MXM-1-10	1 thru 10	250
MXM-11-20	11 thru 20	250
MXM-1-25	1 thru 25	250

NET PRICES

QUANTITY	VINYL-CLOTH #B-500 STOCK CARDS NET PRICE	MINIATURE #B-395 STOCK CARDS NET PRICE	VINYL MICRO-MARKERS (#B-330) STOCK CARDS NET PRICE
25 to 99 Cards	$20.00/C	$27.00/C	$50.00/C
100 to 499 Cards	16.00/C	21.60/C	40.00/C
500 to 999 Cards	14.00/C	18.90/C	35.00/C
1000 to 2499 Cards	13.00/C	17.55/C	32.50/C
2500 to 4999 Cards	12.50/C	16.88/C	31.25/C
5000 to 9999 Cards	12.00/C	16.20/C	30.50/C
Over 10000 Cards	Write for Quotation	Write for Quotation	Write for Quotation
	Specify 1½" or ¾" marker length.	*Markers are ½" long.*	*Markers are 5/16" long.*

W. H. BRADY CO. Manufacturers of Quality Pressure-Sensitive Tape Products. Est. 1914

70A

Birnbach

INSULATING TUBING & SLEEVING

BIRACO, BIRFLEX, VINYL COATED FIBERGLASS

BIRNBACH

BIRACO PLASTIC TUBING

UL APPROVED FOR 105° C. OPERATION — MEETS MIL-I-631C SPECS.

A quality plastic Vinyl tubing designed for electronic and electrical insulation work. Has high dielectric strength, extreme flexibility, non-flammability, abrasion resistance, impervious to oil, water, alkalies, alcohol, solvents, etc., high heat stability and resistance to aging. Meets all A.S.T.M. specifications, Mil. Spec. (Type F, Form U, Grades A and C, Class 2, Category 1).

BIRACO TUBING

Put up on convenient 100′ Spools or Coils.

LONGER LENGTHS AVAILABLE

Cat. No.	B & S Gauge Size No.	Approx. I.D.	Lgth. Spool
308BC..	24...	.022"...	100′
311BC..	22...	.027"...	100′
313BC..	20...	.034"...	100′
314BC..	18...	.042"...	100′
315BC..	16...	.053"...	100′
316BC..	14...	.066"...	100′
317BC..	12...	.085"...	100′
325BC..	10...	.106"...	100′
318BC..	8...	.135"...	100′
326BC..	6...	.166"...	100′
319BC..	4...	.208"...	100′
320BC..	2...	.263"...	100′
321BC.	5/16"..	.3125"..	100′
322BC..	3/8"..	.375"...	100′
323BC..	1/2"..	.500"...	100′
324BC..	5/8"..	.625"...	100′
*327BC..	3/4"..	.750"...	100′
*360BC..	7/8"..	.875"...	100′
*361BC..	1"..	1.000"...	100′
*362BC..	1¼"..	1.250"...	50′
*363BC..	1½"..	1.500"...	50′
*328BC..	1¾"..	1.750"...	100′
*329BC..	2"..	2.000"...	50′
*364BC..	2¼"..	2.250"...	100′
*365BC..	2½"..	2.500"...	100′

SPECIAL SPOOLS BIRACO TUBING

Cat. No.'s 36" Lgths.	Cat. No.'s Spec. Spools	B & S Gauge Size No.	Approx. I.D.	Lgth. Spool
......	308B...	24....	.022"....	25′
......	311B...	22....	027"....	25′
313...	313B...	20....	034"....	25′
314...	314B...	18....	.042"....	25′
315...	315B...	16....	.053"....	25′
316...	316B...	14....	.066"....	25′
317...	317B...	12....	.085"....	25′
325...	325B...	10	.106"....	15′
318...	318B...	8....	.135"....	15′
326...	326B...	6....	.166"....	15′
319...	319B...	4....	.208"....	10′
320...	320B...	2....	.263"....	10′
321...	—	...5/16....	.3125"...	—
322...	—	...3/8....	.375"....	—
323...	—	...1/2....	.500"....	—
324...	—	...5/8....	.625"....	—

Standard package 36" lengths 25 each color:

In addition to Spools and Coils noted above the standard packaging is as follows on stock colors.

#24 Thru #15 ______ 1,000′
Soft Wound Spools
#14 Thru #8 ______ 500′
Soft Wound Spools
#7 Thru #2 ______ 250′
Soft Wound Spools
#1 Thru #½ — Coils ______ 250′
#9/16 Thru #7/8 — Coils ______ 100′
Larger Sizes ____ Coils ____ 50-100′

COLORS AVAILABLE FROM STOCK:

Black, Red, Green, White, Yellow, Blue, Brown, Orange, Clear.

*Cat. Nos. 360BC, 361BC, 362BC, 363BC, 364BC, 328BC, 329BC, 365BC available in **Black, White and Clear** from stock.

DIMENSIONAL TOLERANCES OF BIRACO

Sz.	Approx. I.D., Ins.	ASTM Tolerances, Ins.	Wall Thickness Inches
24	.022	.020 — .027	.012±.002
22	.027	.025 — .032	.012±.002
20	.034	.032 — .039	.016±.003
19	.038	.044 — .036	.016±.003
18	.042	.040 — .049	.016±.003
17	.047	.054 — .045	.016±.003
16	.053	.051 — .061	.016±.003
15	.059	.067 — .057	.016±.003
14	.066	.064 — .072	.016±.003
13	.076	.080 — .072	.016±.003
12	.085	.081 — .089	.016±.003
11	.095	.101 — .091	.016±.003
10	.106	.102 — .112	.016±.003
9	.118	.124 — .114	.020±.003
8	.133	.129 — .141	.020±.003
7	.148	.158 — .144	.020±.003
6	.166	.162 — .178	.020±.003
5	.186	.198 — .182	.020±.003
4	.208	.204 — .224	.020±.003
3	.234	.249 — .229	.020±.003
2	.263	.258 — .278	.020±.003
1	.294	.311 — .289	.020±.003
0	.330	.347 — .325	.020±.003
5/16	.315	.3125 — .334	.025±.003
3/8	.375	.375 — .399	.025±.003
7/16	.438	.462 — .438	.025±.003
1/2	.500	.500 — .524	.025±.003
9/16	.562	.592 — .562	.030±.003
5/8	.625	.625 — .655	.030±.005
3/4"	.750	.750 — .786	.035±.005
7/8	.875	.875 — .911	.035±.005
1"	1.000	1.000 — 1.036	.035±.005
1¼"	1.250	1.250 — 1.286	.040±.005
1½"	1.500	1.500 — 1.536	.045±.005
1¾"	1.750	1.812 — 1.750	.055±.008
2"	2.000	2.000 — 2.070	.060±.010
2¼"	2.250	2.250 — 2.330	.065±.010
2½"	2.500	2.500 — 2.590	.070±.010

TABLE OF PHYSICAL & ELECTRICAL PROPERTIES

BIRACO TUBING

Tensile Strength—2500 Psi **(Minimum Average)**

Flammability—Non-Flammable

Ultimate Elongation—340%

Recommended for Temperatures to—105° C.

Cold Bend— -40° C.

Dielectric Strength .020" Wall—800 V/Mil

Varnish Baking—Good

Water Absorption

Weight Increase (1 Week)—0.1%

Oil Resistance—Indefinitely flexible when immersed in oil

ALL THE ABOVE TUBING CAN BE ORDERED CUT AND MARKED TO YOUR SPECIFICATIONS

BIRFLEX VINYL COATED FIBERGLASS TUBING

(ASTM, NEMA Grade B-B-1) MEETS MIL-1-3190 SPECS.

Quality Electronic and Electrical Tubing. It is Class B Insulation that combines the best features of the inorganic fiberglass base sleeving with heat resistant, flexible plastic insulation. The plastic compound provides the highest electrical properties, heat stability (130° C.), flexibility and toughness. Meets performance requirements of specs. MIL-I-3190 A, NEMA VSI, ASTM D 372.

SPECIAL SPOOLS VINYL COATED FIBERGLASS

Cat. No.	B & S Gauge Size	Apx. I.D.	Lgth. Spool
291V	20	.034	25′
293V	18	.042	25′
294V	16	.053	25′
295V	14	.066	25′
300V	12	.085	25′
307V	10	.106	20′
301V	8	.135	15′
302V	6	.166	10′
305V	4	.208	10′
306V	2	.263	10′

*VINYL COATED FIBERGLASS

30" Lengths

Cat. No.	B & S Gauge Size	Apx. I.D.
291....	20....	.034
293....	18....	.042
294....	16....	.053
295....	14....	.066
300....	12....	.085
307....	10....	.106
301....	8....	.135
302....	6....	.166
297....	3/16....	.208
298....	1/4....	.263

36" Lengths

Cat. No.	B & S Gauge Size	Apx. I.D.
*303...	5/16...	.3125
*304...	3/8...	.375
*299...	1/2...	.500
*296...	5/8...	.625

*VINYL COATED FIBERGLASS

Put up on convenient 100′ Spools or Coils.

Cat. No.	B & S Gauge Size	Apx. I.D.	Lgth Spool
289VC	24	.022	100′
290VC	22	.027	100′
291VC	20	.034	100
293VC	18	.042	100′
294VC	16	.053	100′
295VC	14	.066	100′
300VC	12	.085	100′
307VC	10	.106	100′
301VC	8	.135	100′
302VC	6	.166	100′
305VC	4	.208	100′
306VC	2	.263	100′
*303VC	5/16	.3125	100′
*304VC	3/8	.375	100′
*299VC	1/2	.500	100′
*296VC	5/8	.625	100′

DIMENSIONAL TOLERANCES OF VINYL COATED FIBERGLASS

Size	Apx. I.D.	N.E.M.A. Tolerances Inches
24	.022	.020-.027
22	.027	.025-.032
20	.034	.032-.039
18	.042	.040-.049
16	.053	.051-.061
14	.066	.064-.072
12	.085	.081-.089
10	.106	.102-.112
8	.133	.129-.141
6	.166	.162-.178
3/16, 4	.208	.204-.224
¼, 2	.263	.258-.278
5/16	.3125	.312-.328
3/8	.375	.375-.399
½	.500	.500-.524
5/8	.625	.625-.655

PHYSICAL & ELECTRICAL PROPERTIES BIRFLEX VINYL COATED FIBERGLASS

Class B
Grade B-1
Dielectric Strength.................4000 V.
Temperature Rating..................130° C.
Low Temp. Flexibility...............—30° C.
Non-Flammable
Ins. Resistance..........Over 1,000,000 MEGS.
Corrosion Resistance ....Excellent
Oil Resistance ....Good

COLORS:

Black, Red, White, Yellow, Brown, Orange, Green, Blue, Gray, Purple

Additional Sizes Available

Other types of Biraco, Birflex, Birflon Tubing and sleeving available. Write for new Comprehensive Catalog on Tubing and Sleeving.

ALL THE ABOVE TUBING CAN BE ORDERED CUT AND MARKED TO YOUR SPECIFICATIONS

See Pages 1556-1559 for Birnbach Prices for Above Items

Birnbach

NEW THIN WALL BIRFLON T-500
TEFLON* SPAGHETTI TUBING

BIRNBACH

Birflon T-500 Tubing is extruded from DuPont Tetrafluoroethylene Resin. Used in electronic and electrical equipment for connection of components. Its flexibility, ease of handling has established it as the best and most popular insulation sheathing. This high temperature Class C insulation does not melt and flow as the conventional thermoplastic materials. Birflon T-500 Teflon has unique electrical, chemical and mechanical properties unmatched by any other type tubing for use in applications requiring high frequencies and high temperatures. Because of Teflon's continuous service temperature of 250° C., which is more than 100° C. above other materials, the soldering technique is simplified since "Teflon" is not harmed by the hot barrel of the soldering iron — therefore, the assembly of aircraft, missile and electronic communication equipment is greatly speeded up. Thin Wall flexible Teflon Tubing can be processed easily into flexible and rigid printed circuits. As a thin, flexible insulation, it permits miniaturization and compactness of design never before possible.

TABLE OF PROPERTIES

Test	ASTM Method	Result
Tensile Strength, 73°F.	D638-52T	1500-3000 Lb/Sq. In.
Elongation, 73°F.	D638-52T	100-200%
Deformation Under Load—122°F.		
1200 Lb/Sq. In., 24 Hrs.	D621-51	4-8%
2000 Lb/Sq. In., 24 Hrs.	D621-51	25%
Hardness Durometer	D676-49T	D50-D65
Heat Distortion Temp., 66 Lb/Sq. In.	D648B-45T	250°F.
Dielectric Strength, .080"	D149-44	400-500 V/MIL
Surface Arc-Resistance	D495-48T	Sec.
Volume Resistivity	D257-52T	10^{15} Ohm-CM
Surface Resistivity, 100% R.H.	D257-52T	3.6×10^{6} Megohms
Dielectric Constant, 60 to 10^{8} Cycles	D150-54T	2.00
Power Factor, 60 to 10^{8} Cycles	D150-54T	0.0003
Specific Gravity	D792-50	2.1-2.2

Thin Wall Birflon T-500 Teflon* Tubing Dimensional Specifications

AWG Size	Nom. O.D.	Nom. I.D.	Nom. Wall Thickness	AWG Size	Nom. O.D.	Nom. I.D.	Nom. Wall Thickness
32	.028"	.011"	.0085"	7	.178"	.148"	.015"
30	.030"	.012"	.009"	6	.196"	.166"	.015"
28	.033"	.015"	.009"	5	.216"	.186"	.015"
26	.038"	.018"	.010"	4	.238"	.208"	.015"
24	.042"	.022"	.010"	3	.264"	.234"	.015"
22	.047"	.027"	.010"	2	.293"	.263"	.015"
20	.058"	.034"	.012"	1	.324"	.294"	.015"
19	.062"	.038"	.012"	0	.360"	.330"	.015"
18	.066"	.042"	.012"	3/8"	.430"	.390"	.020"
17	.071"	.047"	.012"	7/16"	.493"	.453"	.020"
16	.077"	.053"	.012"	1/2"	.565"	.515"	.025"
15	.083"	.059"	.012"	9/16"	.633"	.583"	.025"
14	.090"	.066"	.012"	5/8"	.700"	.640"	.030"
13	.100"	.076"	.012"	3/4"	.825"	.765"	.030"
12	.109"	.085"	.012"	7/8"	.950"	.895"	.030"
11	.119"	.095"	.012"	1"	1.085"	1.025"	.030"
10	.130"	.106"	.012"	1⅛"	1.210"	1.150"	.030"
9	.148"	.118"	.015"	1¼"	1.335"	1.275"	.030"
8	.163"	.133"	.015"				

Tolerance — Nos. 32 thru 0 — ± .003" on Wall
Tolerance — Nos. ⅜" thru 1¼" — .020" on I.D., .006" on Wall

ADDITIONAL ADVANTAGES OF BIRFLON T-500 TEFLON*

- **ELECTRICAL:** Low power factor, low dielectric constant, high volume and surface resistivity, good dielectric strength (500 to 1000 volts/MIL) constant over wide ranges of temperatures and frequencies. Dielectric constant of 2.0 and dissipation factor of 0.0002 are lowest of any solid dielectric.
- **THERMAL:** No change of electrical properties with temperature (25°C. to 250°C.) or frequency (60 CPS to 100 MC). Class C insulation — capable of continuous service at temperatures to 250° C. Has color stability.
- **TOUGHNESS AND FLEXIBILITY:** Has high impact strength. Is tough and flexible over the broad temperature range of —90° C. to 250°C. Service range —320°F. to 500° F.
- **CHEMICAL INERTNESS:** Completely inert to all chemicals and solvents except molten alkali metals and fluorine at elevated temperatures and pressures. Non-corrosive to all metals.
- **MOISTURE ABSORPTION:** Zero moisture absorption. Completely sun and weather resistant.
- **NON-FLAMMABLE** • **LOWEST COEFFICIENT OF FRICTION**
- **FUNGI RESISTANCE:** Inert to all fungi growths.
- **SIZES:** Birflon T-500 Teflon Tubing available in sizes to fit B & S gauge wires. Thin wall available from stock, in sizes No. 32 thru 1¼" I.D. Additional sizes and wall thicknesses made to order.

Birflon T-500 is made from high molecular weight virgin "Teflon" and meets AMS 3651B, 3653 and MIL-C-17B specifications.

NOTE: When cutting Teflon Tubing, use single edge razor blade for clean unpinched cut.

"Teflon"* DuPont Trade Name for Tetrafluoroethylene Resin

NO EXTRA CHARGE FOR SOLID COLORS
SMALL PIECE CUTTING AVAILABLE TO ORDER

STOCK COLORS: Natural, Red, Black, Blue, Brown, Green, Orange, Yellow, Gray, Violet, White. Nos. 8020 thru 8029 available in Natural. Additional Colors, Sizes Made To Order

Teflon Tubing can be ordered cut to your specifications.

Tracer Colors Available
We Invite Your Inquiries For Your Special Requirements
WIRE — CABLE — TUBING DIVISION

NEW THIN WALL BIRFLON T-500 TEFLON* SPAGHETTI TUBING

Cat. No.	Spool or Coil Put-Up	B & S Size No.
8013	*1000'	32
8013	500'	32
8013	100'	32
8014	*1000'	30
8014	500'	30
8014	100'	30
8015	*1000'	28
8015	500'	28
8015	100'	28
8016	*1000'	26
8016	500'	26
8016	100'	26
8000	*1000'	24
8000	500'	24
8000	100'	24
8000	50'	24
8000	25'	24
8001	*1000'	22
8001	500'	22
8001	100'	22
8001	50'	22
8001	25'	22
8002	*1000'	20
8002	500'	20
8002	100'	20
8002	50'	20
8002	25'	20

Cat. No.	Spool or Coil Put-Up	B & S Size No.
8003	*1000'	18
8003	500'	18
8003	100'	18
8003	50'	18
8003	25'	18
8004	*1000'	16
8004	500'	16
8004	100'	16
8004	50'	16
8004	25'	16
8005	1000'	14
8005	* 500'	14
8005	100'	14
8005	50'	14
8005	25'	14
8006	1000'	12
8006	* 500'	12
8006	100'	12
8006	50'	12
8006	25'	12
8007	1000'	10
8007	* 500'	10
8007	100'	10
8007	50'	10
8007	25'	10
8008	1000'	8
8008	* 500'	8
8008	100'	8
8008	50'	8
8008	25'	8

Cat. No.	Spool or Coil Put-Up	B & S Size No.
8009	1000'	6
8009	* 500'	6
8009	100'	6
8009	50'	6
8009	25'	6
8010	1000'	4
8010	500'	4
8010	* 100'	4
8010	50'	4
8010	25'	4
8011	1000'	2
8011	500'	2
8011	* 100'	2
8011	50'	2
8011	25'	2
8012	1000'	0
8012	500'	0
8012	* 100'	0
8012	50'	0
8012	25'	0
8020	1000'	3/8"
8020	500'	3/8"
8020	* 100'	3/8"
8020	50'	3/8"
8021	1000'	7/16"
8021	500'	7/16"
8021	* 100'	7/16"
8021	50'	7/16"
8022	1000'	1/2"
8022	500'	1/2"
8022	* 100'	1/2"
8022	50'	1/2"
8022	25'	1/2"

Cat. No.	Spool or Coil Put-Up	Nom. I.D.
8023	1000'	9/16"
8023	500'	9/16"
8023	* 100'	9/16"
8023	50'	9/16"
8023	25'	9/16"
8024	1000'	5/8"
8024	500'	5/8"
8024	* 100'	5/8"
8024	50'	5/8"
8024	25'	5/8"
8025	1000'	3/4"
8025	500'	3/4"
8025	* 100'	3/4"
8025	50'	3/4"
8025	25'	3/4"
8026	1000'	7/8"
8026	500'	7/8"
8026	* 100'	7/8"
8026	50'	7/8"
8026	25'	7/8"
8027	1000'	1"
8027	500'	1"
8027	* 100'	1"
8027	50'	1"
8027	25'	1"
8028	1000'	1⅛"
8028	500'	1⅛"
8028	* 100'	1⅛"
8028	50'	1⅛"
8028	25'	1⅛"
8029	1000'	1¼"
8029	500'	1¼"
8029	* 100'	1¼"
8029	50'	1¼"
8029	25'	1¼"

*PREFERRED PUT-UP

Extruded virgin Teflon rod sizes ⅛" thru 3⅛" diam. available. Also "O" rings, washers, balls, etc.

See Pages 1556-1559 for Birnbach Prices for Above Items

Birnbach

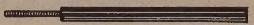
GOV'T SPEC. HOOK-UP WIRE

MIL-W-16878 C MIL-W-5086A . MIL-C-7078A

BIRNBACH

BIRFLON EXTRUDED & SPIRAL WRAPPED TEFLON* HOOK-UP WIRE

SPECIFICATION MIL-W-16878C



TYPE E—600 VOLT

HIGH TEMPERATURE RATING —90° TO +250°C (TYPE EE-1000V AVAILABLE)

Chemically inert, non-flammable, excellent flexibility, easy stripping, high dielectric strength, unaffected by fungus. Exceeds Class H insulation requirements. Unaffected by high or low temperature. Outstanding for its dependability and long life under all operating conditions indoors or outdoors. Teflon permits miniaturization and compactness in electronic designs of sub-miniature components, computers, UHF equip., slip ring assemblies, leads to hermetically sealed and potted components, telemetering equip. and guided missiles.

Description: single conductor silver plated copper wire concentrically stranded and insulated with extruded or Spiral Wrapped Teflon insulation.

Cat. Nos. Extruded	Cat. Nos. Wrapped	Spool	Size AWG	Mil Type Designation	Strand	Nom. Insul.	Volt Rating	Diameter Over Insulation Max.
8532	8552	1000′	32	E-32	7/40	010″	600	033″
8532-1	8552-1	100′	32	E-32	7/40	010″	600	033″
8530	8550	1000′	30	E-30	7/38	010″	600	036″
8530-1	8550-1	100′	30	E-30	7/38	010″	600	036″
8528	8548	1000′	28	E-28	7/36	010″	600	039″
8528-1	8548-1	100′	28	E-28	7/36	010″	600	039″
8526	8546	1000′	26	E-26	7/34	010″	600	043″
8526-1	8546-1	100′	26	E-26	7/34	010″	600	043″
8524	8544	1000′	24	E-24	19/36	010″	600	048″
8524-1	8544-1	100′	24	E-24	19/36	010″	600	048″
8522	8542	1000′	22	E-22	19/34	010″	600	054″
8522-1	8542-1	100′	22	E-22	19/34	010″	600	054″
8520	8540	1000′	20	E-20	19/32	010″	600	062″
8520-1	8540-1	100′	20	E-20	19/32	010″	600	062″
8518	8538	1000′	18	E-18	19/30	010″	600	074″
8518-1	8538-1	100′	18	E-18	19/30	010″	600	074″
8516	8536	1000′	16	E-16	19/29	010″	600	087″
8516-1	8536-1	100′	16	E-16	19/29	010″	600	087″
8514	8534	1000′	14	E-14	19/27	010″	600	097″
8514-1	8534-1	100′	14	E-14	19/27	010″	600	097″
8512		1000′	12	E-12	19/25	010″	600	120″
8512-1		100′	12	E-12	19/25	010″	600	120″

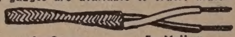
***Duponts Tetrafluoroethylene Resin. Cat. No's 8534 thru 8552 available Per MIL-W-7139A TEFLON AIRCRAFT SPEC.**

Colors: Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray, White. Additional special custom constructions available to order. Wrapped extruded with or without shielding, glass braid, nylon braid, silicone and in miniature multi-conductors. Price and delivery on request.

TEFLON* CABLES—Shielded and Unshielded

DESCRIPTION: One or more conductors, each conductor stranded silver plated concentrically stranded copper, type E extruded or spiral wrapped insulation. When shielded, a closely woven silver plated copper shield is braided over conductor(s). When braided, a Teflon* impregnated fiberglass is woven over the conductor(s) or shield.

Additional variations and gauges are available to order. Multi-conductor color code:



1—White
2—Black
3—Red
4—Green
5—Yellow

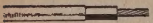
BIRNBACH CAT NUMBERS 1 Cond.	2 Cond.	3 Cond.	4 Cond.	5 Cond.	Size and Stranding		Outer Covering
8704	8704/2	8704/3	8704/4	8704/5	#24	19/36	Shield
8705	8705/2	8705/3	8705/4	8705/5	#24	19/36	Braid
8706	8706/2	8706/3	8706/4	8706/5	#24	19/36	Shield & Braid
8707	8707/2	8707/3	8707/4	8707/5	#22	19/34	Shield
8708	8708/2	8708/3	8708/4	8708/5	#22	19/34	Braid
8709	8709/2	8709/3	8709/4	8709/5	#22	19/34	Shield & Braid
8710	8710/2	8710/3	8710/4	8710/5	#20	19/32	Shield
8711	8711/2	8711/3	8711/4	8711/5	#20	19/32	Braid
8712	8712/2	8712/3	8712/4	8712/5	#20	19/32	Shield & Braid
8713	8713/2	8713/3	8713/4	8713/5	#18	19/30	Shield
8714	8714/2	8714/3	8714/4	8714/5	#18	19/30	Braid
8715	8715/2	8715/3	8715/4	8715/5	#18	19/30	Shield & Braid

AIRCRAFT PLASTIC HOOK-UP WIRE

SPECIFICATIONS MIL-W-5086A and MIL-C-7078A (105°C Rating)

NYLON JACKET

Used where a single conductor, 600 volt insulated wire, is required. This aircraft electrical wire is resistant to effects of salt water, oils, aircraft engine fuels, alcohol, fungus, heat, cold, salt water, abrasion, meets -65°F temperature test.



No. 7351

DESCRIPTION: Type I MIL-W-5086A One conductor stranded tinned copper with plastic insulation, nylon jacket overall. Type 2 MIL-W-5086A—one conductor stranded tinned copper, plastic insulation, nylon lacquered glass braid. Color: White.

No. 7371

MIL-W-5086A UNSHIELDED (Supersedes AN-J-C-48A)

600 Volt Rating

Cat. No.	Size AWG	Mil. Type	Type	Cond. Strand.	Nom. O.D.
7351	22	AN-22	No. 1	19/34	070″
7353	20	AN-20	No. 1	19/32	080″
7355	18	AN-18	No. 1	19/30	090″
7357	16	AN-16	No. 1	19/29	100″
7359	14	AN-14	No. 1	19/27	125″
7361	12	AN-12	No. 1	19/25	140″
7362	10	AN-10	No. 1	49/27	180″
7363	8	AN-8	No. 2	133/29	240″
†7364	6	AN-6	No. 2	133/27	297″
†7365	4	AN-4	No. 2	133/25	355″
†7365/2	2	AN-2	No. 2	665/30	412″
†7365/0	0	AN-0	No. 2	1045/30	518″
†7365/00	00	AN-00	No. 2	1330/30	588″
7351 NB	22	AN-22	No. 2	19/34	068″
7353 NB	20	AN-20	No. 2	19/32	078″
7355 NB	18	AN-18	No. 2	19/30	088″
7357 NB	16	AN-16	No. 2	19/29	098″
7359 NB	14	AN-14	No. 2	19/27	117″
7361 NB	12	AN-12	No. 2	19/25	137″
7362 NB	10	AN-10	No. 2	49/27	189″

† Nylon lacquered glass braid over plastic insulation. 1,000′ Spools

MIL-C-7078A SHIELDED (Supersedes An-C-168)

Cat. No.	Size AWG	Mil. Type	Type	Cond. Strand.	Nom. O.D.
7371	22	AN-22	No. 1	19/34	100″
7372	20	AN-20	No. 1	19/32	110″
7373	18	AN-18	No. 1	19/30	124″
7374	16	AN-16	No. 1	19/29	139″
7375	14	AN-14	No. 1	19/27	158″
7376	12	AN-12	No. 1	19/25	177″

DESCRIPTION: One conductor stranded tinned copper with plastic insulation, nylon jacket with tinned copper shielded braid overall. Color: White under shield. 1,000′ Spools.

ALL WIRE ON THIS PAGE CAN BE CUT AND STRIPPED TO YOUR SPECIFICATION

Birnbach

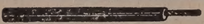
GOV'T SPEC. HOOK-UP WIRE

SPECIFICATION MIL-W-16878 C

TYPES GLASS BRAID
NYLON JACKET SHIELDED

PLASTIC HOOK-UP WIRE

SPECIFICATION MIL-W-16878C



TYPE B — HIGH TEMPERATURE
TYPE B — NYLON JACKET

Suitable for general purpose wiring for miniature high temperature hook-ups in aircraft, electronic instruments, devices, etc., where excellent resistance to moisture and solvents may be required.

DESCRIPTION: One conductor stranded tinned copper with rated -55°C to +105°C high temperature thermoplastic light wall insulation. The letter "N" after Catalog Number designates clear Nylon Jacket overall. 115° C.

Cat. No.	Spool	Size AWG	Mil-W-16878C Type Designation	Conductor Strand	Nom. Wall	Volt Rating	Nom. O.D.
7190	1000′	32	B-32	7/40	.010″	600	.028″
7191	1000′	30	B-30	7/38	.010″	600	.030″
7192	1000′	28	B-28	7/36	.010″	600	.033″
7193	1000′	26	B-26	7/34	.010″	600	.037″
7194	1000′	24	B-24	7/32	.010″	600	.043″
7195	1000′	22	B-22	7/30	.010″	600	.048″
7196	1000′	20	B-20	7/28	.010″	600	.057″
7197	1000′	18	B-18	7/26	.010″	600	.067″
7198	1000′	16	B-16	19/29	.010″	600	.077″
7190N	1000′	32	B-32	7/40	.010″	600	.032″
7191N	1000′	30	B-30	7/38	.010″	600	.036″
7192N	1000′	28	B-28	7/36	.010″	600	.039″
7193N	1000′	26	B-26	7/34	.010″	600	.042″
7194N	1000′	24	B-24	7/32	.010″	600	.047″
7195N	1000′	22	B-22	7/30	.010″	600	.053″
7196N	1000′	20	B-20	7/28	.010″	600	.065″
7197N	1000′	18	B-18	7/26	.010″	600	.075″
7198N	1000′	16	B-16	19/29	.010″	600	.085″

STOCK COLORS: Black, Red, Brown, Blue, Orange, White, Yellow, Green, Gray, Purple

White/Black
White/Red
White/Green
White/Yellow
White/Blue
White/Brown
White/Orange
White/Gray
White/Violet

SPECIFICATION MIL-W-16878C

TYPE C — HIGH TEMPERATURE

DESCRIPTION: One Conductor Similar To Type B—Heavier Wall Hi-Temp Thermoplastic Insulation

Cat. No.	Spool	Size AWG	Mil-W-16878C Type Designation	Minimum Strand	Nom. Wall	Volt Rating	Nom. O.D.
7170	1000′	24	C-24	7/32	.016″	1000	„890'
7171	1000′	22	C-22	7/30	.016″	1000	.064″
7172	1000′	20	C-20	7/28	.016″	1000	.085″
7173	1000′	18	C-18	7/26	.016″	1000	.095″
7174	1000′	16	C-16	19/29	.016″	1000	.109″
7175	1000′	14	C-14	19/27	.016″	1000	.073″

STOCK COLORS: Black, Red, Brown, Blue, Orange, White, Yellow, Green, Gray, Purple. Also available in tracer colors. Additional types available to order.

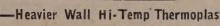
SPECIFICATION MIL-W-16878C

TYPE C — NYLON JACKET

Description: Type C-NYLON—Same as above except extruded clear Nylon Jacket overall. 115°C.

Cat. No.	Spool	Size AWG	Type Designation	Min. Strand	Nom. Wall	Volt Rating	Nom. O.D.
7170N	1000′	24	C-24	7/32	.016″	1000	.065″
7171N	1000′	22	C-22	7/30	.016″	1000	.072″
7172N	1000′	20	C-20	7/28	.016″	1000	.079″
7173N	1000′	18	C-18	7/26	.016″	1000	.090″
7174N	1000′	16	C-16	19/29	.016″	1000	.099″
7175N	1000′	14	C-14	19/27	.016″	1000	.114″

SPECIFICATION MIL-W-16878C



TYPE D — HIGH TEMPERATURE

DESCRIPTION: One Conductor Stranded Similar To Type C—Heavier Wall Hi-Temp Thermoplastic Insulation.

Cat. No.	Spool	Size AWG	Mil-W-16878C Type Designation	Cond. Strand	Nom. Wall	Volt Rating	Nom. O.D.
7180	1000′	24	D-24	7/32	.032″	3000	.084″
7181	1000′	22	D-22	7/30	.032″	3000	.089″
7182	1000′	20	D-20	10/30	.032″	3000	.097″
7183	1000′	18	D-18	16/30	.032″	3000	.107″
7184	1000′	16	D-16	26/30	.032″	3000	.116″
7185	1000′	14	D-14	41/30	.032″	3000	.130″
7186	1000′	12	D-12	65/30	.040″	3000	.163″
7187	1000′	10	D-10	105/30	.040″	3000	.182″
7188	1000′	8	D- 8	133/29	.040″	3000	.247″
7189	1000′	6	D- 6	133/27	.040″	3000	.291″

MIL-W-16878B Type D Available with Nylon Jacket.

Birnbach

GOV'T SPEC. HOOK-UP WIRE

SPECIFICATION MIL-W-76A TYPES MW, LW, HW, GLASS BRAID

PLASTIC HOOK-UP WIRE

SPECIFICATION MIL-W-76A TYPE MW (MEDIUM WALL) PLASTIC HOOK-UP WIRE TYPE MW 1000 VOLTS (FUNGUS PROOF) SUPERSEDES JAN-C-76 TYPE SRIR

STRANDED

Cat. No.	Spool	Size AWG	MIl-W-76A Type Designation	Conductor Strand	Nom. Wall	Volt Rating	Nom. O.D.
7024	1000′	24	MW-C 24(16)U	16/36	.015″	1000	.055″
7024-1	100′	24	MW-C 24(16)U	16/36	.015″	1000	.055″
7024-S	1000′	24	MW-C 24(16)U	16/36	.015″	1000	.055″
7024-1S	100′	24	MW-C 24(16)U	16/36	.015″	1000	.055″
7001	1000′	22	MW-C 22(7)U	7/30	.017″	1000	.066″
7001-1	100′	22	MW-C 22(7)U	7/30	.017″	1000	.066″
*† 7001-S	1000′	22	MW-C 22(7)U	7/30	.017″	1000	.066″
*† 7001-1S	100′	22	MW-C 22(7)U	7/30	.017″	1000	.066″
7003	1000′	20	MW-C 20(10)U	10/30	.017″	1000	.074″
7003-1	100′	20	MW-C 20(10)U	10/30	.017″	1000	.074″
*† 7003-S	1000′	20	MW-C 20(10)U	10/30	.017″	1000	.074″
*† 7003-1S	100′	20	MW-C 20(10)U	10/30	.017″	1000	.074″
7005	1000′	18	MW-C 18(16)U	16/30	.017″	1000	.085″
7005-1	100′	18	MW-C 18(16)U	16/30	.017″	1000	.085″
*7005-S	1000′	18	MW-C 18(16)U	16/30	.017″	1000	.085″
*7005-1S	100′	18	MW-C 18(16)U	16/30	.017″	1000	.085″
7007	1000′	16	MW-C 16(26)U	26/30	.017″	1000	.098″
7007-1	100′	16	MW-C 16(26)U	26/30	.017″	1000	.098″
7009	1000′	14	MW-C 14(41)U	41/30	.017″	1000	.114″
7009-1	100′	14	MW-C 14(41)U	41/30	.017″	1000	.114″
7011	1000′	12	MW-C 12(65)U	65/30	.017″	1000	.132″
7011-1	100′	12	MW-C 12(65)U	65/30	.017″	1000	.132″

SOLID

Cat. No.	Spool	Size AWG	MIl-W-76A Type Designation	Conductor Strand	Nom. Wall	Volt Rating	Nom. O.D.
7000	1000′	22	MW-C 22(1)U	1	.017″	1000	.061″
7000-1	100′	22	MW-C 22(1)U	1	.017″	1000	.061″
7002	1000′	20	MW-C 20(1)U	1	.017″	1000	.068″
7002-1	100′	20	MW-C 20(1)U	1	.017″	1000	.068″
7004	1000′	18	MW-C 18(1)U	1	.017″	1000	.075″
7004-1	100′	18	MW-C 18(1)U	1	.017″	1000	.075″

STOCK COLORS: White, Yellow, Lt. Blue, Black, Violet (purple), Blue, Brown, Lt. Green, Pink, Red, Green, Tan, Orange, Gray (slate).

***SINGLE SPIRAL TRACER COLORS AVAILABLE:**

White/Black
White/Brown
White/Red
White/Orange
White/Yellow
White/Green
White/Blue
White/Purple
White/Gray

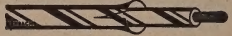
†DOUBLE SPIRAL TRACER COLORS AVAILABLE:

White/Black/Red
White/Black/Green
White/Black/Yellow
White/Black/Blue
White/Black/Brown
White/Black/Orange
White/Black/Gray
White/Black/Purple

Additional spiral tracer combination available, to order, for all numbers.

SPECIFICATION MIL-W-76A TYPE MW (Medium Wall)—NYLON JACKET 1000 VOLT (Fungus Proof) (Supersedes Jan-C-76 Types SRIR and WL Nylon Jacket)

DESCRIPTION: One conductor stranded tinned copper with thermoplastic insulation and extruded nylon jacket overall.



Cat. No.	Spool	Size AWG	MIl-W-76A Type Designation	Conductor Strand	Nom. Wall	Volt Rating	Nom. O.D.
7224	1000′	24	MW-C 24(16)J	16/36	.015″	1000	.068″
7224-1	100′	24	MW-C 24(16)J	16/36	.015″	1000	.068″
*7222	1000′	22	MW-C 22(7)J	7/30	.017″	1000	.075″
*7222-1	100′	22	MW-C 22(7)J	7/30	.017″	1000	.075″
*7220	1000′	20	MW-C 20(10)J	10/30	.017″	1000	.087″
*7220-1	100′	20	MW-C 20(10)J	10/30	.017″	1000	.087″
*7218	1000′	18	MW-C 18(16)J	16/30	.017″	1000	.100″
*7218-1	100′	18	MW-C 18(16)J	16/30	.017″	1000	.100″
7216	1000′	16	MW-C 16(26)J	26/30	.017″	1000	.112″
7216-1	100′	16	MW-C 16(26)J	26/30	.017″	1000	.112″
7214	1000′	14	MW-C 14(41)J	41/30	.017″	1000	.122″
7214-1	100′	14	MW-C 14(41)J	41/30	.017″	1000	.122″
7212	1000′	12	MW-C 12(65)J	65/30	.017″	1000	.140″
7212-1	100′	12	MW-C 12(65)J	65/30	.017″	1000	.140″
7210	1000′	10	HW-C 10(105)J	105/30	.045″	600	.240″
7210-1	100′	10	HW-C 10(105)J	105/30	.045″	600	.240″

STOCK COLORS: White, Orange, Purple, Black, Yellow, Gray, Brown, Green, Red, Blue

White/Black
White/Brown
White/Red
White/Orange
White/Yellow
White/Green
White/Blue
White/Purple
White/Gray
White/Black/Red
White/Black/Yellow
White/Black/Blue
White/Black/Green
White/Black/Orange
White/Black/Brown
White/Black/Gray

*In addition Nos. 7218, 7220, 7222, available in Red/Black and Black/White. Nos. 7212, 7210 available solid colors only.

ALL WIRES ON THIS PAGE CAN BE ORDERED CUT & STRIPPED TO YOUR SPECIFICATIONS.

Also multi-conductors can be formed to order twisted, shielded with or without plastic jacket overall.

SHIELDED PLASTIC HOOK-UP WIRE

SPECIFICATION MIL-W-76A

TYPE MW (Medium Wall) — SHIELDED

DESCR.: One conductor stranded tinned copper with thermoplastic insulation and tinned copper shielded braid overall.

(Supersedes Jan-C-76 Type SRIR Shielded)

Cat. No.	Spool	Size AWG	MIl-W-76A Type Designation	Minimum Strand	Nom. Wall	Volt Rating	Nom. O.D.
7074	1000′	24	MW-C 24(16)S	16/36	.015″	1000	.074″
7074-1	100′	24	MW-C 24(16)S	16/36	.015″	1000	.074″
7072	1000′	22	MW-C 22(7)S	7/30	.017″	1000	.084″
7072-1	100′	22	MW-C 22(7)S	7/30	.017″	1000	.084″
7070	1000′	20	MW-C 20(10)S	10/30	.017″	1000	.094″
7070-1	100′	20	MW-C 20(10)S	10/30	.017″	1000	.094″
7068	1000′	18	MW-C 18(16)S	16/30	.017″	1000	.106″
7068-1	100′	18	MW-C 18(16)S	16/30	.017″	1000	.106″
7067	1000′	16	MW-C 16(26)S	26/30	.017″	1000	.121″
7067-1	100′	16	MW-C 16(26)S	26/30	.017″	1000	.121″
*7066	1000′	14	MW-C 14(41)S	41/30	.017″	1000	.137″
*7065	1000′	12	MW-C 12(65)S	65/30	.017″	1000	.155″

STOCK COLORS: (Underneath Shield) Black, White, Red, Yellow, Brown, Green, Blue, Gray. *Nos. 7066, 7065, available from stock in Black, White or Red.

ALL WIRES ON THIS PAGE CAN BE ORDERED CUT AND STRIPPED TO YOUR SPECIFICATIONS

Also multiconductor can be formed to order twisted shielded, with or without plastic Jacket overall. ***TEFLON**—Dupont Reg. TM for Tetrafluorethylene.

See Pages 1556-1559 for Birnbach Prices for Above Items

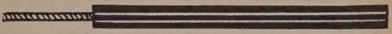
Birnbach

GOV'T SPEC. HOOK-UP WIRE

SPECIFICATION MIL-W-76A TYPES MW, LW, HW, GLASS BRAID

PLASTIC HOOK-UP WIRE

SPECIFICATION MIL-W-76A TYPE LW (Light Wall) TYPE LW — 300 VOLTS



DESCRIPTION: One conductor stranded tinned copper with light wall of primary thermoplastic insulation.

Cat. No.	Spool	Size AWG	Mil-W-76A Type Designation	Conductor Strand	Nom. Wall	Volt Rating	Nom. O.D.
7330	1000′	30	LW-C 30(7)U	7/38	.010″	300	.033″
7330-1	100′	30	LW-C 30(7)U	7/38	.010″	300	.033″
7328	100′	28	LW-C 28(7)U	7/36	.010″	300	.035″
7328-1	1000′	28	LW-C 28(7)U	7/36	.010″	300	.035″
7326	1000′	26	LW-C 26(10)U	10/36	.010″	300	.040″
7326-1	100′	26	LW-C 26(10)U	10/36	.010″	300	.040″
7324	1000′	24	LW-C 24(7)U	7/32	.010″	300	.044″

SPECIFICATION MIL-W-76A TYPE LW—NYLON JACKET

Description: Same as above except clear NYLON JACKET overall.

Cat. No.	Spool	Size AWG	Mil-W-76A Type Designation	Conductor Strand	Nom. Wall	Volt Rating	Nom. O.D.
7330N	1000′	30	LW-C 30(7)J	7/38	.010″	300	.036″
7328N	1000′	28	LW-C 28(7)J	7/36	.010″	300	.039″
7326N	1000′	26	LW-C 26(7)J	7/34	.010″	300	.042″
7324N	1000′	24	LW-C 24(7)J	7/32	.010″	300	.047″

STOCK COLORS: Black, Brown, Red, White, Green, Orange, Yellow, Gray, Blue, Purple. Additional sizes, colors available to order.

SPECIFICATION MIL-W-76A TYPE HW (Heavy Wall) — 2500 VOLTS (Fungus Proof) (SUPERSEDES Jan-C-76 Type SRHV)

DESCRIPTION: Similar to type MW. One conductor stranded tinned copper with larger wall of primary thermoplastic insulation to take 2500 V RMS.

Cat. No.	Spool	Size AWG	Mil-W-76A Type Designation	Conductor Strand	Nom. Wall	Volt Rating	Nom. O.D.
7322	1000′	22	HW-C 22(7)U	7/30	.033″	2500	.105″
7322-1	100′	22	HW-C 22(7)U	7/30	.033″	2500	.105″
7320	1000′	20	HW-C 20(10)U	10/30	.033″	2500	.112″
7320-1	100′	20	HW-C 20(10)U	10/30	.033″	2500	.112″
7318	1000′	18	HW-C 18(16)U	16/30	.033″	2500	.122″
7318-1	100′	18	HW-C 18(16)U	16/30	.033″	2500	.122″
7316	1000′	16	HW-C 16(26)U	26/30	.033″	2500	.135″
7316-1	100′	16	HW-C 16(26)U	26/30	.033″	2500	.135″
7314	1000′	14	HW-C 14(41)U	41/30	.045″	600	.175″
7314-1	100′	14	HW-C 14(41)U	41/30	.045″	600	.175″
7312	1000′	12	HW-C 12(65)U	65/30	.045″	600	.195″
7312-1	100′	12	HW-C 12(65)U	65/30	.045″	600	.195″
*7013	1000′	10	HW-C 10(105)U	105/30	.045″	600	.217″
*7013-1	100′	10	HW-C 10(105)U	105/30	.045″	600	.217″
*7015	1000′	8	HW-C 8(133)U	133/29	.045″	600	.268″
*7015-1	100′	8	HW-C 8(133)U	133/29	.045″	600	.268″
*7017	1000′	6	HW-C 6(133)U	133/27	.045″	600	.315″
*7017-1	100′	6	HW-C 6(133)U	133/27	.045″	600	.315″

STOCK COLORS: White, Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray. Additional sizes, colors available to order.

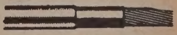
SPECIFICATION MIL-W-76A TYPE MW (Medium Wall) — GLASS BRAID 1000 VOLTS (Supersedes Jan-C-76 Types SRIR and WL Glass Braid)

DESCRIPTION: One conductor stranded tinned copper with thermoplastic insulation and lacquered glass braid overall.

Cat. No.	Spool	Size AWG	Mil-W-76A Type Designation	Conductor Strand	Nom. Wall	volt Rating	Nom. O.D.
7022	1000′	22	MW-C 22(7)B	7/30	.017″	1000	.079″
7022-1	100′	22	MW-C 22(7)B	7/30	.017″	1000	.079″
7020	1000′	20	MW-C 20(10)B	10/30	.017″	1000	.084″
7020-1	100′	20	MW-C 20(10)B	10/30	.017″	1000	.084″
7018	1000′	18	MW-C 18(16)B	16/30	.017″	1000	.100″
7018-1	100′	18	MW-C 18(16)B	16/30	.017″	1000	.100″
7016	1000′	16	MW-C 16(26)B	26/30	.017″	1000	.116″
7016-1	100′	16	MW-C 16(26)B	26/30	.017″	1000	.116″
*7014	1000′	14	MW-C 14(41)B	41/30	.017″	1000	.129″
*7014-1	100′	14	MW-C 14(41)B	41/30	.017″	1000	.129″
*7012	1000′	12	MW-C 12(65)B	65/30	.017″	1000	.149″
*7012-1	100′	12	MW-C 12(65)B	65/30	.017″	1000	.149″

STOCK COLORS: White, Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray, White/Brown, White/Black, White/Orange, White/Yellow, White/Green, White/Blue, White/Red, White/Gray, White/Purple, White/Black/Red, White/Black/Yellow, White/Black/Blue, White/Black/Green, White/Black/Orange, White/Black/Brown, White/Black/Gray. * Nos. 7014, 7012, available stock in solid colors.

TYPE HW (Heavy Wall) — GLASS BRAID (Supersedes Jan-C-76 Type SRHV — Glass Braid)



Cat. No.	Spool	Size AWG	Mil-W-76A Type Designation	Conductor Strand	Nom. Wall	Volt Rating	Nom. O.D.
7010	1000′	10	HW-C 10(105)B	105/30	.045″	600	.237″
7010-1	100′	10	HW-C 10(105)B	105/30	.045″	600	.237″
7008	1000′	8	HW-C 8(133)B	133/29	.045″	600	.293″
7008-1	100′	8	HW-C 8(133)B	133/29	.045″	600	.293″
7006	1000′	6	HW-C 6(133)B	133/27	.045″	600	.340″
7006-1	100′	6	HW-C 6(133)B	133/27	.045″	600	.340″

STOCK COLORS: White, Black. Also multi-conductors can be formed to order twisted, shielded with or without plastic jacket overall.
ALL WIRES ON THIS PAGE CAN BE ORDERED CUT AND STRIPPED TO YOUR SPECIFICATIONS.

See Pages 1556-1559 for Birnbach Prices for Above Items

Birnbach

HIGH VOLTAGE, SILICONE HOOK-UP WIRE
KEL-F HOOK-UP, CATHODE RAY, 105° UL

BIRNBACH

200° C. BIRSIL SILICONE RUBBER HOOK-UP LEAD WIRE 600 VOLT

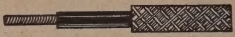
This Birsil Silicone Rubber Hook up lead wire withstands extreme temperature range and flexibility from —104° C. to +400° F. with retention of physical properties and is highly resistant to flex cracking at temperature extremes; fungus resistant; corona resistant; engineered for high-heat and hi-frequency applications; low power factor; acid-alkali-oil resistant; low dielectric constant; insulation appproaching mica. Approved by U. L. but consumer must apply for Underwriter's Laboratories approval for individual product.

Cat. No.	Spool	Size AWG	Strand	Nom. Ins. Wall	Volt Rating	Breakdown Voltage AC	Nom. O.D.
7622	1000′	22	7/30	1/32″	600	11,500	.105″
7622-1	100′	22	7/30	1/32″	600	11,500	.105″
7620	1000′	20	10/30	1/32″	600	18,000	.121″
7620-1	100′	20	10/30	1/32″	600	18,000	.121″
7618	1000′	18	16/30	1/32″	600	21,000	.128″
7618-1	100′	18	16/30	1/32″	600	21,000	.128″
7616	1000′	16	26/30	1/32″	600	20,000	.144″
7616-1	100′	16	26/30	1/32″	600	20,000	.144″
7614	1000′	14	41/30	1/32″	600	15,500	.165″
7614-1	100′	14	41/30	1/32″	600	15,500	.165″
7612	1000′	12	65/30	1/32″	600	14,500	.185″
7612-1	100′	12	65/30	1/32″	600	14,500	.185″
7610	1000′	10	65/28	3/64″	600	20,000	.240″
7610-1	100′	10	65/28	3/64″	600	20,000	.240″

Additional sizes and colors available to order. Types F and FF per MIL-W-16878C available to order.

DESCRIPTION:

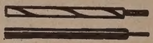
One conductor, tinned copper strands, silicone rubber insulation, glass braid, lacquered. Color: White.



BIRFLENE* KEL-F HOOK-UP WIRE
—125° C. to +175° C. MEETS MIL-W-12349-SPEC

PERFORMANCE SPECIFICATIONS:
Continuous: —60° to +175° C. **Operating Voltage:** 1000 volts RMS. **Spark Test:** 7500 volts. **Dielectric Strength:** 5000 volts at 60° C. for 1 minute. **Insulation Resistance:** Greater than 5000 Meg Ohms/1000 Ft. at 60° C. **Moisture Absorption:** Nil. **Flammability:** Non-flammable. **Resistance to Chemicals:** All solvents and acids. **Aging:** Outdoor, 1 year; no detectable change.

Cat. No.	Spool	Size AWG	Strand	Nom. Ins. Wall	Nom. O.D.
7130	1000′	30	7/38	.006″	.029″
7130-1	100′	30	7/38	.006″	.029″
7128	1000′	28	7/36	.006″	.032″
7128-1	100′	28	7/36	.006″	.032″
7126	1000′	26	7/34	.008″	.037″
7126-1	100′	26	7/34	.008″	.037″
7124	1000′	24	7/32	.008″	.043″
7124-1	100′	24	7/32	.008″	.043″
7122	1000′	22	7/30	.008″	.050″
7122-1	100′	22	7/30	.008″	.050″
7120	1000′	20	7/28	.010″	.060″
7120-1	100′	20	7/28	.010″	.060″
7118	1000′	18	16/30	.010″	.070″
7118-1	100′	18	16/30	.010″	.070″
7116	1000′	16	19/29	.010″	.079″
7116-1	100′	16	19/29	.010″	.079″



DESCRIPTION:

One conductor silver plated copper stranded, insulation — Monochlorotrifluoroethylene (Birflene Kel-F).

COLORS: White, Red, Green, Gray, Black, Orange, Dk. Blue, Lt. Blue, Brown, Yellow, Purple

Available in Spiral Tracers.

*Made with Kellogg Co. Kel-F or Bakelite Co. Fluorothene.

HI-VOLTAGE and CATHODE RAY CABLE

Used for 10,000, 20,000, 40,000, 60,000 volt applications as for cathode ray tubes in TV receivers, oscilloscopes and other electronic devices. Has dielectric constant of 2.7 and power factor of .002. Shielded Hi-Voltage type used to shield RF radiation in X-Ray, diathermy, medical equipment, and in transmitters.

UNSHIELDED

Cat. No.	Spool	Size AWG	Strand	Nom. Ins. Wall	Suggested Working Voltage	Nom. O.D.
7402	1000′	20	10/30	.047″	10,000	.125″
7402-1	100′	20	10/30	.047″	10,000	.125″
7412	1000′	20	10/30	.068″	20,000	.169″
7412-1	100′	20	10/30	.068″	20,000	.169″
7418	1000′	18	16/30	.047″	10,000	.135″
7418-1	100′	18	16/30	.047″	10,000	.135″
7428	1000′	18	16/30	.069″	20,000	.179″
7428-1	100′	18	16/30	.069″	20,000	.179″
7448	1000′	18	16/30	.095″	40,000	.231″
7448-1	100′	18	16/30	.095″	40,000	.231″
7449	1000′	18	16/30	.123″	60,000	.285″
7449-1	100′	18	16/30	.123″	60,000	.285″
SHIELDED						
7458	1000′	18	16/30	.095″	40,000	.256″
7458-1	100′	18	16/30	.095″	40,000	.256″

DESCRIPTION:

One conductor stranded copper tinned rulan (flame retarding type) polyethylene insulation. Available white/red tracer. Temp. Rating: 105°C

Shielded: Same as above with tinned copper braided shield overall.

Special constructions available to order.

PLASTIC INSULATED HOOK-UP WIRE

Designed for the chassis, sub-chassis wiring of radio and television receivers and transmitters inside or outside the chassis. UL approved for 105° C. (221° F.) operating temperature.

105° C. — 600 VOLT RATING UL APPROVED (CSA 600V-90°C)

Cat. No.	Spool	AWG	Stranding	Nom. Wall	Volt. Breakdown	DC Ins. Res. Megs./Ft.	Max. O.D.
7201	1000′	22	7/30	.032″	18000	5000	.100″
7201-1	100′	22	7/30	.032″	18000	5000	.100″
7203	1000′	20	10/30	.032″	18000	5000	.104″
7203-1	100′	20	10/30	.032″	18000	5000	.104″
7205	1000′	18	16/30	.032″	18000	5000	.112″
7205-1	100′	18	16/30	.032″	18000	5000	.112″
7207	1000′	16	26/30	.032″	18000	5000	.129″
7207-1	100′	16	26/30	.032″	18000	5000	.129″
7202	1000′	22	Solid	.032″	18000	5000	.095″
7202-1	100′	22	Solid	.032″	18000	5000	.095″
7204	1000′	20	Solid	.032″	18000	5000	.102″
7204-1	100′	20	Solid	.032″	18000	5000	.102″

COLORS: Black, Red, Green, Yellow, Blue, Brown, White, Orange, Gray, Purple

DESCRIPTION:

One Conductor stranded annealed copper tinned, plastic insulation.

ALL WIRES ON THIS PAGE CAN BE ORDERED CUT & STRIPPED TO YOUR SPECIFICATIONS.

Also multi-conductors can be formed to order twisted, shielded with or without plastic jacket overall.

See Pages 1556-1559 for Birnbach Prices for Above Items

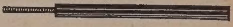
Birnbach MINIATURE, SUBMINIATURE, HIGH TEMP.
SHIELDED & MULTICONDUCTOR

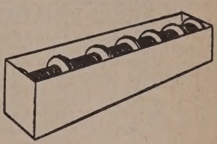
MINIATURIZATION HOOK-UP WIRE and CABLE

HIGH TEMPERATURE 105°C. UNSHIELDED — ONE CONDUCTOR

Used in miniaturized equipment Phono-pickup lead computers transistor circuits, electro-medical and electro therapeutic apparatus, instrumentation projects, miniaturization programs, where fine sizes are required with high operating temperature.
For "Lab" requirements Miniaturization Hook-Up Wire and Cable assortments—WRITE for information.

Cat. No	Spool	No. of Cond.	Size AWG	Conductor Strand	Nom. Wall	Nom. O.D.
7534	1000′	1	34	4/40	.010″	.027″
7534-500	500′	1	34	4/40	.010″	.027″
7532	1000′	1	32	7/40	.010″	.029″
7532-500	500′	1	32	7/40	.010″	.029″
7530	1000′	1	30	7/38	.010″	.030″
7530-500	500′	1	30	7/38	.010″	.030″
7529	1000′	1	29	5/36	.010″	.030″
7529-500	500′	1	29	5/36	.010″	.030″
7528-	1000′	1	28	7/36	.010″	.035″
7528-500	500′	1	28	7/36	.010″	.035″
7527	1000′	1	27	7/35	.010″	.037″
7527-500	500′	1	27	7/35	.010″	.037″
7526	1000′	1	26	10/36	.010″	.038″
7526-500	500′	1	26	10/36	.010″	.038″
7524	1000′	1	24	16/36	.015″	.055″
7524-500	500′	1	24	16/36	.015″	.055″



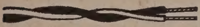


DESCRIPTION:

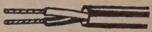
One conductor stranded tinned copper with 105°C. high temperature thermoplastic insulation overall.

STOCK COLORS: Black, Red, Green, Yellow, Blue, Brown, White, Orange, Gray, Purple

SUB-MINIATURE MULTI-CONDUCTOR CABLE (Super Flexible)



DESCRIPTION: Multi-Cond. tinned copper stranded 105° C high temperature P.V.C. thermoplastic insulation. When jacketed clear P.V.C. thermoplastic used over cabled wire.



NO OUTER JACKET

Cat. No.	Spool	No. of Cond.	Size AWG	Cond. Strand	Nom. Wall	Nom. O.D.
7652	1000′	2	30	7/38	.010″	.059″
7652	500′	2	30	7/38	.010″	.059″
7653	1000′	3	30	7/38	.010″	.065″
7653	500′	3	30	7/38	.010″	.065″
7654	1000′	4	30	7/38	.010″	.072″
7654	500′	4	30	7/38	.010″	.072″

CONDUCTOR COLOR CODE CHART:
1 Black, 2 White, 3 Red, 4 Green

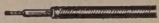
CLEAR VINYL JACKET OVERALL

Cat. No.	Spool	No. of Cond.	Size AWG	Cond. Strand	Nom. Wall Jacket	Nom O.D.
7668	1000′	2	28	7/36	.010″	.079″
7668	500′	2	28	7/36	.010″	.079″
7669	1000′	3	28	7/36	.010″	.086″
7669	500′	3	28	7/36	.010″	.086″
7670	1000′	4	28	7/36	.010″	.095″
7670	500′	4	28	7/36	.010″	.095″

CONDUCTOR COLOR CODE CHART:
1 Black, 2 White, 3 Red, 4 Green

SUB-MINIATURE SHIELDED HOOK-UP WIRE (Super Flexible)

Cat. No	Spool	No. of Cond.	Size AWG	Conductor Strand	Nom. Wall	Nom. O.D.
7538	1000′	1	30	7/38	.010″	.053″
7538	500′	1	30	7/38	.010″	.053″
7535	1000′	1	28	7/36	.010″	.058″
7535	500′	1	28	7/36	.010″	.058″
7537	1000′	1	26	10/36	.010″	.061″
7537	500′	1	26	10/36	.010″	.061″
7536	1000′	1	24	16/36	.015″	.075″
7536	500′	1	24	16/36	.015″	.075″

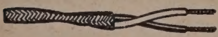


DESCRIPTION:

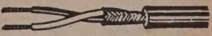
One or multi-conductor stranded tinned copper with 105°C. high temperature thermoplastic insulation and tinned copper shielded braid overall.

STOCK COLOR: White (under shield)

SUB-MINIATURE MULTI-CONDUCTOR CABLE SHIELDED (Super Flexible)



DESCRIPTION: Multi-conductor, tinned copper stranded 105° C high temperature P.V.C. thermoplastic insulation, tinned copper shield. When jacketed clear P.V.C. Thermoplastic jacket used over tinned copper shield.



NO OUTER JACKET

Cat. No.	Spool	No. of Cond.	Size AWG	Cond. Strand	Nom. Wall	Nom. O.D.
7542	1000′	2	24	16/36	.015″	.114″
7542/3	1000′	3	24	16/36	.015″	.123″
7542/4	1000′	4	24	16/36	.015″	.144″

CONDUCTOR COLOR CODE CHART:
1 Black, 2 White, 3 Red, 4 Green

CLEAR VINYL JACKET OVERALL

Cat. No.	Spool	No. of Cond.	Size AWG	Cond. Strand	Nom. Wall Jacket	Nom. O.D.
7552	1000′	2	28	7/36	.010″	.137″
7552/3	1000′	3	28	7/36	.010″	.145″
7552/4	1000′	4	28	7/36	.010″	.163″

CONDUCTOR COLOR CODE CHART:
1 Black, 2 White, 3 Red, 4 Green

ALL WIRES ON THIS PAGE CAN BE ORDERED CUT & STRIPPED TO YOUR SPECIFICATIONS.
Also multi-conductors can be formed to order twisted, shielded with or without plastic jacket overall.

Birnbach PLASTIC and RUBBER MICROPHONE CABLE MULTI-CONDUCTOR — ARMORED CABLE

Microphone Cables with Birnbach's NEW "VI-CON" SHIELD

HI-FLEXIBILITY ● LONG FLEX LIFE ● EASY WORKING

This series of cable is Birnbach's new outstanding shield in combination with vinyl plastic that is conductive thereby providing 100% shield coverage. Easy handling; lighter in weight than comparative types; extremely flexible; #24 Stranded Bare Tinned Wire is used for grounding termination; this is in continuous contact with the "Vi-Con" Shield.

Cat. No.	Spool	Cond.	Size No. AWG	Stranding	Nom. O.D.
1800	500′	1	25	7/33	.125″
1801	500′	1	25	7/33	.160″
1802	500′	2	22	16/34	.225″

PLASTIC MICROPHONE CABLE

Designed to stand up under physical abuse and is resistant to oil, moisture and aging for long life. These cables have low capacitance, high insulation resistance and low attenuation at audio frequencies. Will not stain or mark.
#1839 is used for high impedance microphone, lapel, contact, crystal, ribbon, velocity and Hi-Fi interconnecting cable.
#1840 is used for high impedance lapel microphones.
#1841 is used for crystal, ribbon and other impedance microphones.
Above recommended for Hi-Fi installations because of low loss and low capacitance.

PLASTIC — ONE-CONDUCTOR MICROPHONE CABLE

Nos. 1839, 1840, 1841

DESCRIPTION:
Single Conductor Stranded
3 strands #33 copper tinned, and 4 strands #33 (steel-tinned 1840 and 1841) cellulose yarn braid, Polyethylene insulation, tinned copper shielded braid, with chrome vinyl plastic jacket overall.

Cat. No.	Spool	Cond.	Size No. Awg.	Stranding	Nom. Cap./Ft.	Nom. O.D.
1839	500′	1	20	26/34	39MMF	.175″
1840	500′	1	25	7/33*	34MMF	.144″
1841	500′	1	25	7/33*	25MMF	.200″

*3X33 Copper, 4X33 Steel (All tinned)

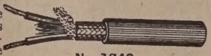
SPIRAL SHIELDED MICROPHONE CABLE

Constructed with tinned copper spiral wrapped concentric shield. Extremely flexible, smaller size.

Cat. No.	Spool	Cond.	Size No. Awg.	Stranding	Nom. Cap./Ft.	Nom. O.D.
1835	500′	1	25	7/33	25MMF	.159″
1836	500′	1	25	7/33	33MMF	.125″

PLASTIC — MULTI-CONDUCTOR MICROPHONE CABLE

Used with carbon and all low impedance microphones.


No. 1842

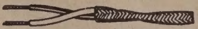
DESCRIPTION:
Each conductor tinned copper, Polyethylene insulation—color coded. Multi conductors are cushioned with jute fillers, cotton wrapped under tinned copper shield, chrome vinyl jacket overall.

Cat. No.	Spool	Cond.	Size No. Awg.	Stranding	Nom. Cap./Ft.	Nom. O.D.
1842	500′	2	22	16/34	31MMF	.231″
1843	500′	3	20	26/34	39MMF	.295″
1844	500′	4	20	26/34	43MMF	.320″
1845	500′	5	20	26/34	48MMF	.345″
1846	500′	6	20	26/34	54MMF	.370″

CONDUCTOR COLOR CODE: 1—White, 2—Black, 3—Red, 4—Green, 5—Yellow, 6—Blue

2 CONDUCTOR SHIELDED

(Twisted Pair)



Used for transmission line, P. A. and sound systems, school, hospital sound installations, industrial paging systems, broadcast and audio cable, paging and rack panel wiring.

DESCRIPTION:
Each conductor copper tinned, plastic insulation, color coded twisted, tinned copper shield overall.

Cat. No.	Spool	Conds.	Size AWG	Strand	Insul.	NOM O.D.
826/30	500′	2	30	7/38	.010″	.085″
826/28	500′	2	28	7/36	.010″	.090″
826/26	500′	2	26	7/34	.010″	.100″
826	500′	2	24	16/36	.015″	.120″
825	500′	2	22	7/30	.017″	.140″
972S	500′	2	20	10/30	.017″	.155″
827	500′	2	18	16/30	.017″	.180″
828	500′	2	16	26/30	.020″	.210″
829	500′	2	14	41/30	.020″	.235″
830	500′	2	12	65/30	.025″	.295″
830/10	500′	2	10	105/30	.025″	.375″
3 CONDUCTOR SHIELDED						
973S	500′	3	20	10/30	.017″	.192″
2 CONDUCTOR SHIELDED WAXED COTTON BRAID OVER SHIELD						
972B	500′	2	20	10/30	.017″	.180″
SOLID CONDUCTORS						
1701	500′	2	22 Solid	1	.017″	.135″
1702	500′	2	20 Solid	1	.017″	.145″
1703	500′	2	18 Solid	1	.017″	.170″

CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White

RUBBER MICROPHONE CABLE

Especially Designed for Heavy Studio Use

RUBBER CRYSTAL MICROPHONE CABLE

Designed for long service life and low loss. Use with crystal, ribbon, dynamic and velocity microphones and photoelectric cells. Birnbach #1870 is used widely for lapel microphones and phono pick ups.

No 870

No. 872

DESCRIPTION:
Single Conductor, 26 Strands
#34 extra flexible tinned copper, special low loss rubber compound, tinned copper braid shield, cotton wrap, tough black rubber jacket overall.

Cat. No.	Spool	Cond.	Size No. Awg.	Stranding	Nom. Cap./Ft.	Nom. O.D.
870	100′	1	20	26/34	40 Mmf	.175″
1870	250′	1	20	26/34	40 Mmf	.175″
872	100′	1	20	26/34	30 Mmf	.245″
1872	250′	1	20	26/34	30 Mmf	.245″

RUBBER OR NEOPRENE MICROPHONE CABLE

Nos. 772 to 778

DESCRIPTION:
Each Conductor, extra flexible **stranded** tinned copper, insulated with a .022″ wall special low capacity rubber, color coded, conductors twisted, jute filler cotton wrap, tinned copper braided shield, cotton wrap with tough weatherproof black rubber or neoprene jacket overall.
Used for indoor and outdoor crystal, carbon and condenser microphones and for public address systems.

RUBBER JACKET

Cat. No.	Spool	Cond.	Size Awg.	Strand.	Nom. Cap. Between 1-Cond. & Shield	Nom. Cap. Between 1-Cond. & Others Connected to Shield	Nom. Cap. Between 1-Cond. & Others	Nom. O.D.
772	100′	2	20	26/34	65 Mmf	68 Mmf	43 Mmf	.280″
1772	250′	2	20	26/34	65 Mmf	68 Mmf	43 Mmf	.280″
772/18	100′	2	18	41/34	70 Mmf	73 Mmf	48 Mmf	.300″
773	100′	3	20	26/34	68 Mmf	72 Mmf	55 Mmf	.290″
1773	250′	3	20	26/34	68 Mmf	72 Mmf	55 Mmf	.290″
773/18	100′	3	18	41/34	68 Mmf	72 Mmf	55 Mmf	.350″
774	100′	4	20	26/34	68 Mmf	74 Mmf	57 Mmf	.300″
1774	250′	4	20	26/34	68 Mmf	74 Mmf	57 Mmf	.300″
774/18	250′	4	18	41/34	68 Mmf	74 Mmf	57 Mmf	.335″
775	100′	5	20	26/34	70 Mmf	76 Mmf	58 Mmf	.330″
1775	250′	5	20	26/34	70 Mmf	76 Mmf	58 Mmf	.330″
776	100′	6	20	26/34	71 Mmf	80 Mmf	60 Mmf	.350″
1776	250′	6	20	26/34	71 Mmf	80 Mmf	60 Mmf	.350″
777	100′	7	20	26/34	72 Mmf	85 Mmf	62 Mmf	.365″
1777	250′	7	20	26/34	72 Mmf	85 Mmf	62 Mmf	.365″
778	100′	8	20	26/34	74 Mmf	90 Mmf	65 Mmf	.390″
778/10	100′	10	20	26/34	75 Mmf	92 Mmf	67 Mmf	.440″

For longer lengths and alternate put-ups—Specify.

NEOPRENE JACKET

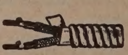
No.	Spool	Cond.	Size AWG	Strand.	Wall Thickness	Nom. Jacket	Nom. O.D.
1781	500′	1	18	41/34	.040″	.030″	.250″
1782	500′	2	18	41/34	.020″	.035″	.305″
1783	500′	3	18	41/34	.020″	.035″	.325″
1784	500′	4	18	41/34	.020″	.035″	.335″
1786	500′	6	18	41/34	.020″	.035″	.430″

MICROPHONE CABLE COLOR CODE CHART

1—Black
2—White
3—Red
4—Green
5—Yellow
6—Blue
7—Brown
8—Orange

ARMORED INDUSTRIAL CABLE

Used for P.A. systems on speaker extensions, oil burner installations, auto wiring, etc.



Two Conductors Parallel #18 16/30 Stranded Tinned Copper, rubber insulation, lacquered cotton braid color coded, spiral galvanized steel armor overall.

Cat. No.	Spool	Size AWG	Strand	O.D.
1111	250′	18	16/30	.155″ x .240″
1112	500′	18	16/30	.155″ x .240″
1113	1000′	18	16/30	.155″ x .240″

FOR LONGER LENGTHS AND ALTERNATE PUT-UPS—SPECIFY.

See Pages 1556-1559 for Birnbach Prices for Above Items

Birnbach

BROADCAST AUDIO—FLEXIBLE TWISTED PAIR INTER-COM—MULTI-COND. CABLES—"VI-CON"

BIRNBACH

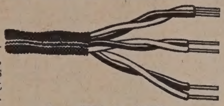
PLASTIC INTERCOMMUNICATING CABLES

TWISTED PAIRS—SOLID CONDUCTORS

Used in connecting Intercommunicating and Sound Systems, Telephones, Annunciators, Nurses Hospital Call Systems, Electronic Computers, Guided Missiles.

DESCRIPTION:

Each Conductor #22 Solid Copper Tinned, .010" Wall Vinyl Plastic Insulation, conductors color coded, twisted pairs cabled, tubed gray Vinyl plastic jacket overall. Suitable for outdoor installations.



No. 4701 to 4729

Cat. No.	Spool	Pairs	Cond.	Size No. AWG	Nom. Jkt.	Nom. O.D.
4701	500′	1	2	22 Solid	.020"	.145"
4702	500′	2	4	22 Solid	.020"	.205"
4703	500′	3	6	22 Solid	.020"	.215"
4706	500′	6	12	22 Solid	.020"	.250"
4709	500′	9	18	22 Solid	.020"	.310"
4711	500′	11	22	22 Solid	.020"	.350"
4711/13	500′	13	26	22 Solid	.025"	.385"
4715	500′	15	30	22 Solid	.025"	.390"
4716	500′	16	32	22 Solid	.025"	.405"
4727	500′	27	54	22 Solid	.035"	.495"
4727/31	500′	31	62	22 Solid	.035"	.555"
4727/41	500′	41	82	22 Solid	.035"	.630"
4729	500′	51	102	22 Solid	.045"	.750"
4729/76*	500′	76	152	22 Solid	.070"	.970"
4729/101*	500′	101	202	22 Solid	.080"	1.140"

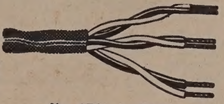
* Bare copper conductors.

For longer lengths and alternate put-ups—Specify.

TWISTED PAIRS—STRANDED CONDUCTORS

DESCRIPTION:

Each Conductor #22 7/30 Stranded Tinned Copper, .010" Vinyl plastic insulation, twisted pairs cabled, conductors color coded, tubed gray Vinyl plastic jacket overall.



No. 4731 to 4747

Cat. No.	Spool	Pairs	Cond.	Size No. AWG	Strand	Nom. O.D.
4731	500′	1	2	22	7/30	.145"
4732	500′	2	4	22	7/30	.210"
4733	500′	3	6	22	7/30	.225"
4734	500′	4	8	22	7/30	.235"
4735	500′	5	10	22	7/30	.245"
4736	500′	6	12	22	7/30	.270"
4739	500′	9	18	22	7/30	.325"
4745	500′	15	30	22	7/30	.455"
4747	500′	27	54	22	7/30	.570"

For longer lengths and alternate put-ups—Specify.

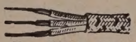
SHIELDED MULTI-CONDUCTOR CABLE

Used indoors for permanent or portable work to prevent interference pickup on P.A. systems, recording equipment, photo electric circuits, etc

TINNED COPPER SHIELD OVERALL

DESCRIPTION:

Each Conductor #20 10/30 Stranded Tinned Copper, 1/64" pvc wall, waxed cotton braid color coded, twisted conductors, tinned copper shield overall. No. 1972 with cotton braid overall.



Nos. 972 to 978

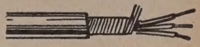
Cat. No.	Spool	Conds.	Size AWG	Strand	Insul.	Cap/Ft. Bet. Cond. & Shield	Cap/Ft. Bet. Conds.	Nom. O.D.
972	100′	2	20	10/30	1/64	65 Mmf	43 Mmf	.215"
973	100′	3	20	10/30	1/64	68 Mmf	55 Mmf	.220"
974	100′	4	20	10/30	1/64	69 Mmf	57 Mmf	.250"
975	100′	5	20	10/30	1/64	70 Mmf	58 Mmf	.280"
976	100′	6	20	10/30	1/64	71 Mmf	60 Mmf	.290"
977	100′	7	20	10/30	1/64	72 Mmf	62 Mmf	.315"
978	100′	8	20	10/30	1/64	74 Mmf	65 Mmf	.350"
1972	100′	2	20	10/30	1/64	65 Mmf	43 Mmf	.225"

CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White, 4—Green, 5—Brown, 6—Yellow, 7—Blue, 8—Orange

SPIRAL WRAPPED SHIELDED AUDIO and MULTI-CONDUCTOR CABLE

Plastic Jacketed—with Spiral wrapped copper shield

Designed for P. A. and sound systems, installations in schools, hospitals, and institutions, recording studios, transmitters, paging and call systems.



DESCRIPTION:

Each conductor copper tinned, 1/64 plastic insulation, color coded, twisted, spiral wrapped tinned copper shield, gray plastic jacket overall.

Cat. No.	Spool	Conds.	Size AWG	Strand	Nom. Insul.	Nom. Jacket	O.D.
941	500′	2	22	7/30	.017"	.020"	.171"
941/1	500′	1	22	7/30	.017"	.020"	.120"
950	500′	2	22	1	.017"	.020"	.169"
942	500′	2	20	10/30	.017"	.020"	.190"
943	500′	3	20	10/30	.017"	.020"	.208"
944	500′	4	20	10/30	.017"	.020"	.222"
947	500′	2	18	16/30	.017"	.020"	.230"
948	500′	2	16	26/30	.017"	.020"	.250"

CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White, 4—Green

NEW Sound Cable with "VI-CON" Shield

"VI-CON" Shield is the new Birnbach conductive vinyl plastic shield that provides:

● HI-FLEXIBILITY ● LONG FLEX LIFE ● EASY WORKING
● 100% SHIELDING COVERAGE

No. 24 Solid Tinned ground wire used for ground termination

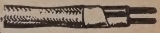
Cat. No.	Spool	Conds.	AWG Size No.	Strand	Nom. O.D.
1812	500′	2	22	7/30	.160
1813	500′	2	20	7/28	.190
1814	500′	2	18	16/30	.220

SHIELDED TWO WIRE SPEAKER CABLE

Used extensively for master control sound systems, photo electric circuits, P.A. systems, etc.

DESCRIPTION:

#972A—2 Cond. #18-16/30 Tinned Copper, 1/32" wall special low capacity rubber, color coded, twisted, paper wrap, closely woven tinned copper shield overall.



No. 972A

#1972A—Similar to #972A with a waxed cotton braid over shield.

TINNED SHIELD OVERALL

Cat. No.	Spool	Cond.	Size AWG	Strand	Insul.	Cap/Ft. Bet. Cond. & Shield	Cap/Ft. Bet. Conds.	O.D.
972A	500′	2	18	16/30	1/32	65	43	250"

WAXED COTTON BRAID OVER SHIELD

1972A	500′	2	18	16/30	1/32	65	43	275"

CONDUCTOR COLOR CODE: Black and Red

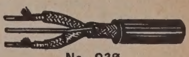
For longer lengths and alternate put-ups—Specify.

SHIELDED BROADCAST AUDIO CABLE

Designed to provide maximum performance on all equipment. Conductors twisted correctly assures quiet, clear operation which eliminates interference and cross talk. Used by Broadcast studios, for P. A. and sound systems, rack wiring, etc.

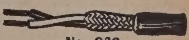
DESCRIPTION:

#938—#22 Solid Tinned Copper Conductor, enameled, heavy cellulose acetate yarn wrap, cotton braid waxed; cabled with #22 AWG solid tinned copper wire laid parallel to twisted pair under tinned copper braid shield; tubed-on Vinyl plastic jacket overall.



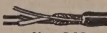
No. 938
CBS, ABC TYPE

#939—#22-7/30 Stranded Tinned Copper, plastic insulation, color coded, twisted, copper braid shield, tubed-on Vinyl plastic jacket overall.



No. 939

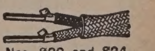
#940—2 Conductors #22 solid plastic insulation, color coded, twisted with #22 AWG solid tinned copper ground wire under tinned copper shield with vinyl plastic jacket overall.



No. 940

#940/1 same construction as #940 however with tinned copper spiral wrapped shield.

#822 and **#824** have solid enameled copper wire, cotton wrap, cotton braid waxed twisted pair, bare copper braid overall.



Nos. 822 and 824

No. Cat.	Spool	Conds.	AWG Size No.	Strand	O.D. Nom.
938	500′	2	22	Solid	210"
939	500′	2	22	7/30	170"
940	500′	2	22	Solid	160"
940/1	500′	2	22	Solid	160"
822	500′	2	22	Solid	125"
824	500′	2	19	Solid	145"
927	500′	2	20	Solid	210"
928	500′	2	18	Solid	220"

CONDUCTOR COLOR CODE: Black and Red

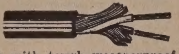
For larger lengths and alternate put-ups—Speciry.

Birnbach RUBBER JACKETED CABLE — JUKE BOX CABLE, SERVICE CORDS ANTENNA, COAXIAL, TV, DIATHERMY.

RUBBER JACKETED MULTI-CONDUCTOR CABLE

(NOT SHIELDED)

Used for permanent or portable P.A. systems, sound recording, indoor or outdoor speakers, interconnecting cable for all electronic uses.



DESCRIPTION:
Each conductor, extra flexible stranded tinned copper, insulated with a .022″ wall special low capacity rubber, color coded, conductors twisted, jute filler, cotton wrap with tough weatherproof black rubber jacket overall.

CONDUCTOR COLOR CODE CHART

1—Black	3—Red	5—Yellow	7—Brown
2—White	4—Green	6—Blue	8—Orange

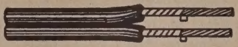
Cat. No.	Spool	Cond.	Size No. AWG	Strand	Cap. Bet. 1 Cond. & Others	Nom. O.D.
788	100′	2	20	26/34	40 Mmf	.275″
789	250′	2	20	26/34	40 Mmf	.275″
790	100′	3	20	26/34	50 Mmf	.285″
791	250′	3	20	26/34	50 Mmf	.285″
792	100′	4	20	26/34	53 Mmf	.305″
793	250′	4	20	26/34	53 Mmf	.305″
794	100′	5	20	26/34	56 Mmf	.335″
795	250′	5	20	26/34	56 Mmf	.335″
796	100′	6	20	26/34	58 Mmf	.355″
797	250′	6	20	26/34	58 Mmf	.355″
798	100′	7	20	26/34	60 Mmf	.370″
749	100′	8	20	26/34	63 Mmf	.395″
749/10	100′	10	20	26/34	65 Mmf	.435″

For longer lengths and alternate put-ups—Specify.

RIP-STRIP LAMP CORD

TYPE SP-1 (POSJ-64) — UL APPROVED
TYPE SPT-1 (POT) — UL APPROVED

All purpose approved cords SP-1 (rubber) SPT-1 (Plastic) for line cord on lamps, radios, clocks, small electronic instruments and appliances.



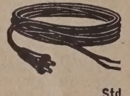
DESCRIPTION:
Two Conductors Parallel, #18—41/34 Extra Flexible Copper, rubber or plastic jacket slit for easy separation.

Cat. No.	Spool	Cond.	Size AWG	Strand	Insul. Type	UL Tpe	Nom. O.D.
570	100′	2	18	41/34	Rubber	SP-1 (POSJ)	.130″ x .235″
572	250′	2	18	41/34	Rubber	SP-1 (POSJ)	.130″ x .235″
573	500′	2	18	41/34	Rubber	SP-1 (POSJ)	.130″ x .235″
569	500′	2	18	41/34	Plastic	SPT-1 (POT)	.130″ x .235″

Colors: (Rubber) Brown, Black, White.
(Plastic) Brown, Black, Ivory, Gray, Pink, Light Blue, Yellow, Green.

HEAVY DUTY SERVICE CORD—UL APPROVED

Used for heavy duty replacement on refrigerators, washing machines, machinery, tools and electronic devices.



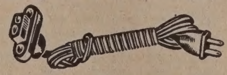
DESCRIPTION:
Two and Three Conductors, Stranded Bare Copper, cotton serve, rubber insulation, jute filler, cotton wrap, tough rubber jacket overall, molded rubber plug one end, free end stripped and tinned for easy attachment—Hanked.

No. 346 and 347 Same as above with 3 prong plug.

Cat. No.	Length Ft.	Conds.	Size AWG	Type	Strand	O.D.	Std. Pkg.
348	8	2	16	S.J.	65/34	.325″	25
346	8	3	16	S.J.	65/34	.355″	25
347	8	3	18	S.J.	41/34	.330″	25
309	9	2	18	S.V.	41/34	.250″	25
312	12	2	18	S.V.	41/34	.250″	25

TV POWER SUPPLY CORD—UL APPROVED

Used extensively as replacement of damaged or worn out TV cords.

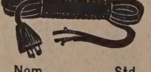


DESCRIPTION:
Six Foot Rip Strip TV U.L. Approved Safety Cord. 2-cond. No. 18 SP-1 (POSJ) brown rubber cord with molded male plug and TV molded-on connector on other end.

Cat. No.			Std. Pkg.
815	Television Power Supply Cord	6 Feet	100

SERVICE LINE CORDS—UL APPROVED

An all purpose approved power supply cord for radios, record players, lamps, and small appliances.



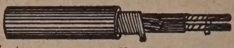
DESCRIPTION:
Two Conductors Rubber Parallel SP-1 (POSJ) with Molded-on Male Plug, double brass blades, conductor end stripped and tinned, hanked. Available in Black and Brown.

Cat. No.	Lgth. Ft.	Conds.	Size No. AWG	Strand	Nom. O.D.	Std. Pkge.
816	6	2	18	41/34	.130″ x .235″	100
817	7½	2	18	41/34	.130″ x .235″	100
819	10	2	18	41/34	.130″ x .235″	50

RUBBER & NEOPRENE SERVICE CORD

(HEAVY DUTY) — UL APPROVED

For power line requirement where rough usage is indicated as for amplifiers, sound systems, speakers, vacuum cleaners, washing machines, trouble lights, refrigerators, etc. Color coded. Underwriters approved. Neoprene construction recommended for equipment exposed to oil, acids, outdoor use, direct burial, etc.



DESCRIPTION:
Each Conductor Stranded Bare Copper, cotton serve, rubber insulation color coded, conductors twisted, jute fillers, cotton wrap, tough rubber jacket overall.

Cat. No.	U/L Type	Cat. No.	U/L Type	Std. Put-ups	Conds.	Size No. AWG.	Strand	Amp Rating	Volt Rating	Nom. O.D.
701	SV	690	SVO	250′	2	18	41/34	7	300	.250″
*701/3	SV	690/3	SVO	250′	3	18	41/38	7	300	.265″
574	SJ	691	SJO	250′	2	18	41/34	7	300	.300″
575	SJ	692	SJO	250′	3	18	41/34	7	300	.330″
575/4	SJ	692/4	SJO	250′	4	18	41/34	7	300	.360″
578	SJ	693	SJO	250′	2	16	65/34	10	300	.325″
578/3	SJ	693/3	SJO	250′	3	16	65/34	10	300	.365″
578/4	SJ	693/4	SJO	250′	4	16	65/34	10	300	.395″
702	S	694	SO	250′	2	18	41/34	7	600	.390″
702/3	S	694/3	SO	250′	3	18	41/34	7	600	.405″
702/4	S	694/4	SO	250′	4	18	41/34	7	600	.435″
703	S	695	SO	250′	2	16	65/34	10	600	.410″
703/3	S	695/3	SO	250′	3	16	65/34	10	600	.430″
703/4	S	695/4	SO	250′	4	16	65/34	10	600	.485″
704	S	696	SO	250′	2	14	41/30	15	600	.540″
704/3	S	696/3	SO	250′	3	14	41/30	15	600	.560″
704/4	S	696/4	SO	250′	4	14	41/30	15	600	.605″
705	S	697	SO	250′	2	12	65/30	20	600	.605″
705/3	S	697/3	SO	250′	3	12	65/30	20	600	.635″
705/4	S	697/4	SO	250′	4	12	65/30	20	600	.665″
706	S	698	SO	250′	2	10	103/30	25	600	.640″
706/3	S	698/3	SO	250′	3	10	103/30	25	600	.690″
706/4	S	698/4	SO	250′	4	10	103/30	25	600	.745″

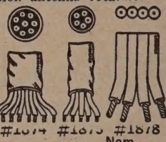
Additional Conductors Available

* 701/3 has tinned copper wire

CONDUCTOR COLOR CODE: 1—White, 2—Black, 3—Green, 4—Red

ANTENNA CONTROL ROTOR CABLE

Developed for remote control of television antenna rotators.



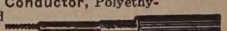
DESCRIPTION:
#1874—4 Conductors flat parallel polyethylene plastic insulation — One outer conductor tinned, balance bare copper.
#1875 — 5 Conductors twisted, color coded. Vinyl plastic jacket overall.
#1878 — 8 Conductors twisted, color coded. Vinyl plastic jacket overall.

Cat. No.	Spool	Cond.	Size AWG	Strand	Nom. O.D.
1874	1000′	4	20	7/28	.072″ x .390″
1874A	500′	4	20	7/28	.072″ x .390″
1875	1000′	5	20	7/28	.180″
1875A	500′	5	20	7/28	.180″
1878	1000′	8	22	7/30	.205″
1878A	500′	8	22	7/30	.205″

CONDUCTOR COLOR CODE CHART FOR #1875, #1878

1—Black	3—Red	5—Yellow	7—Brown
2—White	4—Green	6—Blue	8—Orange

RG/U COAXIAL TRANSMISSION CABLE



DESCRIPTION: One and Two Conductor, Polyethylene plastic insulation, copper braid shield, plastic jacket overall.

Cat. No.	Spool	Type	Nom. Imped.	Nom. Mmfd./Ft.	Size AWG	Strand	Nom. O.D.
901	500′	RG-8/U	52	29.5	13	7/21 Bare	.405″
902	500′	RG-9/U	51	30	13	7/21S	.420″
903	500′	RG-11/U	75	20.5	18	7/26 Tinned	.405″
904F	500′	RG-11/U	75	16.5	15	Solid	.405″
904DS	500′	RG-11/U	75	20.5	18	7/26 T	.470″
904DSF	500′	RG-11/U	75	16.5	15	Solid	.470″
912	500′	RG-22/U	95.0	16.0	18	2 Cond. 7/.0152	.405″
907	1000′	RG-29/U	53.5	28.5	20	Solid	.174″
909	1000′	RG-54A/U	58	26.5	18	7/.0152″	.250″
905	1000′	RG-58A/U	50	29.0	20	19/.0068 Tinned	.195″
906	1000′	RG-58/U	53.5	28.5	20	Solid	.195″
910	1000′	RG-59/U	73	21.0	22	Solid Copperweld	.242″
914	1000′	RG-62/U	93	13.5	22	Solid	.242″
916	1000′	RG-108A/U	78	23.5	20	2 Cond. 7/28T	.235″

Additional RG numbers available including double shields, non-contaminating jackets—all conforming to MIL-C-17B specifications. Also, "TEFLON" dielectrics available for hi. temp. miniaturization.

No. 904F is RG-11/U with Poly-cell foam; No. 904 DSF has double shield Poly-cell dielectric constant of 1.50 solid Polyethylene 2.25.

DIATHERMY CABLE

Cat. No.	Spool	Size AWG	Strand	Ins.	Nom. O.D.
756	100′	14	104/34	3/64″	.300″
757	1000′	14	104/34	3/64″	.300″

See Pages 1556-1559 for Birnbach Prices for Above Items

Birnbach SHIELDED — MULTI — TWO WIRE SPEAKER CABLE TWISTED PAIR CABLES

Multiple Pair Individually Shielded Intercom Cable

Useful where several mikes are operated from a single cable. This series is helpful in reducing the bulk of required cables.

DESCRIPTION: Multi-pairs #22 solid tinned copper, vinyl insulated .013″ cabled in pairs. Each pair and ground wire is under aluminum foil mylar shield overall grey vinyl jacket; Nom. Cap. between Conds. 40Mmft//ft; Nom. Cap. between 1 Cond. and others connected to shield—77Mmft/ft.

Cat. No.	Spool	Pairs	Cond.	Nom. Jkt.	Nom. O.D.
4800/3	500′	3	6	.030	.298
4800/6	500′	6	12	.037	.394
4800/9	500′	9	18	.040	.425
4800/11	500′	11	22	.040	.485
4800/15	500′	15	30	.045	.510

Multi-Conductor Industrial Cable

PLASTIC JACKET OVERALL

DESCRIPTION:
#18 solid tinned copper plastic insulation, color coded, twisted conductors. Gray vinyl jacket overall. Used for inter-com systems, speaker cable, alarm, signal, P. A. systems, thermostats, remote control circuits. Suitable for outdoor installations.

Cat. No.	Spool	Conds.	Size AWG	Insul.	Jacket	O.D.
4752	500′	2	18 solid	.017″	.020″	.185″
4753	500′	3	18 solid	.017″	.020″	.190″
4754	500′	4	18 solid	.017″	.020″	.235″
4755	500′	5	18 solid	.017″	.020″	.240″
4756	500′	6	18 solid	.017″	.020″	.275″

CONDUCTOR COLOR CODE:
1—Black, 2—Red, 3—White, 4—Green, 5—Orange, 6—Blue

Unshielded Audio Cable Stranded and Solid Cond. (2 & 3)

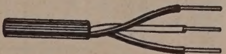
Widely used for connecting sound and inter-com systems, audio hookups, indoors—outdoors. Telephones, telemetering connections. For Baby Sitter Intercoms.

FOR INDOOR USE Without Outer Jacket

DESCRIPTION:
Stranded & Solid Tinned Copper Conductors, vinyl plastic insulation, color coded, conductors twisted.

Cat. No.	Spool	Conds.	Size AWG		Nom. Insul.	Nom. O.D.
931	1000′	2	22 Solid		.016″	.100″
933	1000′	3	22 Solid		.016″	.115″
981	1000′	2	20 Solid		.016″	.120″
983	1000′	3	20 Solid		.016″	.140″
985	1000′	2	18 Solid		.016″	.145″
987	1000′	3	18 Solid		.016″	.155″
989	1000′	2	16 Solid		.016″	.175″
989/3	1000′	3	16 Solid		.016″	.190″
990	1000′	2	22 Stranded	7/30	.016″	.125″
990/3	1000′	3	22 Stranded	7/30	.016″	.140″
991	1000′	2	20 Stranded	10/30	.016″	.145″
991/3	1000′	3	20 Stranded	10/30	.016″	.160″
992	1000′	2	18 Stranded	16/30	.016″	.165″
992/3	1000′	3	18 Stranded	16/30	.016″	.180″
993	1000′	2	16 Stranded	26/30	.016″	.190″
993/3	1000′	3	16 Stranded	26/30	.016″	.210″
994	1000′	2	14 Stranded	41/30	.016″	.220″
994/3	1000′	3	14 Stranded	41/30	.016″	.240″
995	1000′	2	12 Stranded	65/30	.016″	.250″
995/3	1000′	3	12 Stranded	65/30	.016″	.275″

FOR OUTDOOR USE With Plastic Jacket Overall



DESCRIPTION:
Solid and Stranded Tinned Copper Conductors, vinyl plastic insulation, color coded, conductors twisted with weatherproof plastic jacket overall.

Cat. No.	Spool	Conds.	Size AWG		Insul.	Jacket	O.D.
932	1000′	2	22 solid		.010″	.020″	.125″
934	1000′	3	22 solid		.010″	.020″	.130″
982	1000′	2	20 solid		.016″	.020″	.170″
984	1000′	3	20 solid		.016″	.020″	.180″
986	1000′	2	18 solid		.016″	.020″	.185″
988	1000′	3	18 solid		.016″	.020″	.190″
921	1000′	2	22 Stranded	7/30	.010″	.020″	.130″
921/3	1000′	3	22 Stranded	7/30	.010″	.020″	.140″
922	1000′	2	20 Stranded	10/30	.016″	.020′	.175″
922/3	1000′	3	20 Stranded	10/30	.016″	.020″	.185″
923	1000′	2	18 Stranded	16/30	.016″	.020″	.195″
923/3	1000′	3	18 Stranded	16/30	.016″	.020″	.205″

For longer lengths and alternate put-ups—Specify.
COLOR CODE: 1—Brown 2—Tan 3—Gray

Multi-Conductor Flexible Cable

RUBBER INSULATED — Cotton Braid Overall

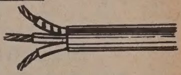
DESCRIPTION:
Each Conductor, #20 — 10/30 Tinned Copper Stranded, 1/64″ low capacity rubber, cotton braid color coded, conductors twisted, closely woven brown cotton braid overall.
Used for multiple circuit hookups, connecting speakers, remote control units, analyzers, etc.

Cat. No.	Spool	Conds.	Size AWG	Strand	Ins.	Nom. O.D.
172	100′	2	20	10/30	1/64”	.205″
173	100′	3	20	10/30	1/64″	.245″
174	100′	4	20	10/30	1/64″	.265″
175	100′	5	20	10/30	1/64″	.290″
176	100′	6	20	10/30	1/64″	.310″
177	100′	7	20	10/30	1/64″	.325″
178	100′	8	20	10/30	1/64″	.360″
179	100′	9	20	10/30	1/64″	.395″
180	100′	10	20	10/30	1/64″	.425″
182	100′	12	20	10/30	1/64″	.440″

CONDUCTOR COLOR CODE:

1—Black	5—Orange	9—White/Black Tracer
2—White	6—Blue	10—Red/Black Tracer
3—Red	7—Brown	11—Green/Black Tracer
4—Green	8—Yellow	12—Orange/Black Tracer

MULTI-CONDUCTOR FLEXIBLE CABLE Plastic Jacket Overall



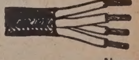
DESCRIPTION:
Each conductor #22 7/30 tinned copper stranded 1/64″ thermoplastic insulation, color coded, conductors twisted, gray vinyl plastic jacket overall. Used for signal, P.A. systems. Electronic computer cable, suitable for outdoor use.

Cat. No.	Spool	Conds.	Size AWG	Strand	Nom. Insul.	Nom. Jacket	Nom. O.D.
156	500′	2	22	7/30	.010″	.020″	.140″
157	500′	3	22	7/30	.010″	.020″	.145″
158	500′	4	22	7/30	.010″	.020″	.170″
159	500′	5	22	7/30	.010″	.020″	.175″
160	500′	6	22	7/30	.010″	.020″	.185″
161	500′	7	22	7/30	.010″	.020″	.190″
162	250′	8	22	7/30	.010″	.020″	.200″
163	250′	9	22	7/30	.010″	.020″	.225″
164	250′	10	22	7/30	.010″	.020″	.235″
165	250′	12	22	7/30	.010″	.020″	.255″
165/15	250′	15	22	7/30	.010″	.020″	.280″

For longer lengths and alternate put-ups—Specify.

CONDUCTOR COLOR CODE:
1—Black 2—Red 3—White 4—Green 5—Orange 6—Blue 7—Brown 8—Yellow 9—Violet 10—Slate 11—Pink 12—Tan 13—Red/Green 14—Red/Yellow 15—Red/Black

THERMO-PLASTIC INSULATED — Cotton Braid Overall



Each Conductor #22 — 7/30 Tinned Copper Stranded, 1/64″ Thermoplastic insulation, color coded, conductors twisted, closely woven brown cotton braid overall.

Cat. No.	Spool	Conds.	Size AWG	Strand	Ins.	Nom. O.D.
263	100′	3	22	7/30	1/64″	.160″
264	100′	4	22	7/30	1/64″	.170″
265	100′	5	22	7/30	1/64″	.195″
266	100′	6	22	7/30	1/64″	.210″
267	100′	7	22	7/30	1/64″	.230″
268	100′	8	22	7/30	1/64″	.245″
269	100′	9	22	7/30	1/64″	.260″
270	100′	10	22	7/30	1/64″	.295″
272	100′	12	22	7/30	1/64″	.325″

For longer lengths and alternate put-ups—Specify.

CONDUCTOR COLOR CODE: 1—Black, 2—White, 3—Red, 4—Green, 5—Orange, 6—Blue, 7—Brown, 8—Yellow, 9—Purple, 10—Pink, 11—Gray, 12—Dk. Blue

Twisted Pair Transmission Cable

WEATHERPROOF BRAID

DESCRIPTION:
No. 952—Two Conductors, #22-7/30 Tinned Copper Stranded, special low loss rubber insulation, color coded, twisted conductors, cotton braid overall with rugged weatherproof finish.
No. 919, 920—Two Conductors, #18-16/30 Tinned Copper Stranded, same construction as above.
Used for low loss transmission coupling between antenna and receiver as doublet twisted lead-in wire for inter-com. setup.

Cat. No.	Spool	Size AWG	Strand	Insul.	Nom. O.D.
952	500′	22	7/32	1/32″	.180″
919	500′	18	16/30	1/32″	.195″
920	1000′	18	16/30	1/32″	.195″

For longer lengths and alternate put-ups—Specify.

See Pages 1556-1559 for Birnbach Prices for Above Items

Birnbach

KINKLESS TEST LEAD WIRE — SHIELDED CABLE
PHONO PICKUP WIRE — SERVICE and POWER CORDS

BIRNBACH

KINKLESS TEST LEAD WIRE

Used with portable test equipment; as tested, leads in analyzers, oscillators, instruments; wherever extreme flexibility and limpness is required. Has excellent dielectric properties.

DESCRIPTION:
Nos. 61, 62—#20—41/36 extra flexible annealed tinned copper, stranded.

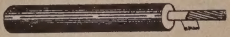
COLORS: Red, Black

Nos. 66, 67—#18—65/36 extra flexible annealed tinned copper stranded; paper serve; 3/64″ special low capacity rubber, wax finish.

Cat. No.	Spool	Size AWG	Strand	Ins.	Puncture Voltage	Nom. O.D.
61	100′	20	41/36	3/64″	20,000 Volts	.137″
62	500′	20	41/36	3/64″	20,000 Volts	.137″
66	100′	18	65/36	3/64″	22,000 Volts	.145″
67	500′	18	65/36	3/64″	22,000 Volts	.145″

Types WS-16/U Black, WS-17/U Red, per MIL-W-13169 Specification available same construction as Birnbach #67 except compound per specification.

HEAVY DUTY HI-VOLTAGE TYPE



DESCRIPTION:
Nos. 68, 69—#18—65/36 extra flexible annealed tinned copper; stranded; paper serve; 5/64″ special low capacity rubber, wax finish.

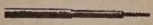
Used for oscillators, analyzers, TV, therapeutic instruments, etc.; wherever an extremely flexible high voltage lead is indicated.

Cat. No.	Spool	Size AWG	Strand	Ins.	Puncture Voltage	Nom. O.D.
68	100′	18	65/36	5/64″	29,000 Volts	.210″
69	500′	18	65/36	5/64″	29,000 Volts	.210″

For longer lengths and alternate put-ups—Specify.

SHIELDED PHONO WIRE

Used where small diameter, limpness and extreme flexibility is necessary as for phono pickup arms and grid wire.



DESCRIPTION:
#1822—Single Conductor #22-7/30 Tinned Copper Strands, Vinyl plastic insulation, close tinned copper shield braided overall.
#1824—Single Conductor #24-16/36 Extremely Flexible Tinned Copper Strands, special plastic insulation, close tinned copper shield braided overall.
#1825—Same construction as #1824 except with fine cotton braid overall.
See Page 11 for miniature and subminiature shielded wires suitable for wiring phono arm from cartridge to amplifier.

TINNED COPPER SHIELD OVERALL

Cat. No.	Spool	Strand	Cond.	Size AWG	Insul.	Nom. O.D.
1824	500′	1	24	16/36	.010″	.080″
1824M	1000′	1	24	16/36	.010″	.080″
1822	100′	1	22	7/30	.010″	.080″
1822B	500′	1	22	7/30	.015″	.090″
1822C	1000′	1	22	7/30	.015″	.090″

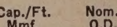
COTTON BRAID OVER SHIELD

Cat. No.	Spool	Strand	Cond.	Size AWG	Insul.	Nom. O.D.
1825	500′	1	24	16/36	.010″	.095″
1825M	1000′	1	24	16/36	.010″	.095″

For longer lengths and alternate put-ups—Specify.

SHIELDED GRID LEAD WIRE

Used to reduce loss in grid lead use, also to reduce interference caused by motors, high tension wires, X-ray machines, etc.



DESCRIPTION:
#820—Single Conductor #20—10/30, #818—16/30 Stranded Tinned Copper, low loss rubber insulation, cotton braid lacquered, closely woven tinned copper shield overall.

Cat. No.	Spool	Size AWG	Strand	Ins. Under Shield	Cap./Ft. Mmf.	Nom. O.D.
820	100′	20	10/30	.085″	70	.140″
818	100′	18	16/30	.085″	75	.150″

For longer lengths and alternate put-ups—Specify.

7MM HIGH TENSION CABLE

Used as hi voltage leads in electronic equipment and instruments, photo electric cell leads, automotive, etc.

No. 1600

DESCRIPTION:
#1600 — Unshielded One Conductor #16-19/29 stranded tinned copper wire, rubber insulation, cotton braid highly lacquered.

No. 781

DESCRIPTION:
#781 — Shielded Same construction as #1600 plus a closely woven tinned copper shield overall.

Cat. No	Spool	Size AWG	Strand	Insul.	Nom. O.D.
1600	100′	16	19/29	3/32″	.275″
781	100′	16	19/29	3/32″	.295″

Used for auto and aircraft ignition systems where grounding is required for elimination of interference.
For longer lengths and alternate put-ups—specify.

New Plastic Kinkless Test Lead Wire

New formulation vinyl compound insulation allows maximum flexibility; rough treatment; extreme variation in climatic conditions; excellent abrasion resistance; greater temperature stability from —80°C to +115°C; fungus resistant; self extinguishing-flame proof; smooth surface. Resists exposure to gasoline and oil.
DESCRIPTION: one conductor tinned copper stranded, special formulation vinyl insulation.

Cat. No.	Size AWG	Strand.	Ins.	Nom. O.D.
1922	22	26/36	.032″	.100″
1920	20	26/34	.032″	.104″
1918	18	65/36	.032″	.112″
1916	16	65/34	.032″	.129″

Standard Package: 100′, 500′, 1000′ spools.

For portable test equipment; as test leads for instrumentation exceeds the requirements for Mil-I-3930A type JP(PVC). It is superior to synthetic rubber spec MIL-R-6855 Class II Grade 60.

HI VOLTAGE LACQUERED WIRE

Used as primary wiring as for automobiles, tail, dashboard, horn, etc. Instrument leads, high voltage and primary voltage requirements

DESCRIPTION:
One Conductor tinned copper annealed stranded, rubber insulation, highly lacquered braid, oil, heat, and moisture resistant.

Cat. No.	Spool	Size AWG	Strand	Ins.	Puncture V.	Nom. O.D.
2818	100′	18	16/30	.022″	9500	.117″
2816	100′	16	19/29	.022″	9500	.127″
2814	100′	14	19/27	.022″	9500	.148″
2812	100′	12	19/25	.027″	9500	.171″
2810	100′	10	19/23	.031″	9500	.202″

For longer lengths and alternate put-ups—Specify.

LACQUERED HOOK-UP WIRE

Used in transformers, amplifiers, hook-ups, leads, etc. Strips easily for soldering.

DESCRIPTION:
No. 3462—#20-10/30 **Single Conductor** stranded tinned copper, low loss free stripping rubber insulation, cotton braid highly lacquered.
No. 3600—#18-16/30 **Single Conductor** stranded tinned copper, 1/32″ low loss free stripping rubber insulation, rayon braid highly lacquered.

Cat. No.	Spool	Size AWG	Strand	Insul.	Punct. Volt.	DC Ins. Res./Ft. Meg.	Nom. O.D.
3461	100′	20	10/30	1/64″	7000	390	.090″
3462	500′	20	10/30	1/64″	7000	390	.090″
3460	100′	18	16/30	1/32″	9000	460	.125″
3600	500′	18	16/30	1/32″	9000	460	.125″

COLORS: Black, Red, Green, Yellow, Brown, Blue, White
For longer lengths and alternate put-ups—Specify.

SHIELDED HOOK-UP & LEAD-IN WIRE

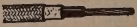
Used to prevent and reduce interference caused by motors, hi-tension cables, X-ray machines and various units radiating electrical impulses. Useful in grid circuits.

TINNED COPPER SHIELD OVER RUBBER INSULATION

DESCRIPTION:
Single Conductor, Tinned Copper Stranded, low loss rubber insulation, closely woven tinned copper shield overall.

Cat. No.	Spool	Size AWG	Strand	Ins.	Cap./Ft. Mmf.	Nom. O.D.
810	500′	20	10/30	.015″	105	.095″
803	250′	18	16/30	.015″	125	.125″
802	250′	16	26/30	.031″	90	.145″

TINNED COPPER SHIELD OVER LACQUERED BRAID



DESCRIPTION:
Single Conductor, Tinned Copper Stranded, low loss Vinyl insulation, highly lacquered glass braid, closely woven tinned copper shield overall.

Cat. No.	Spool	Size AWG	Strand.	Wall Thickness	Nom. O.D.
831	1000′	22	7/30	.016″	.095″
832	1000′	20	10/30	.016″	.105″
833	1000′	18	16/30	.016″	.125″
834	1000′	16	26/30	.016″	.135″
835	1000′	14	41/30	.016″	.155″
835/12	1000′	12	65/30	.016″	.175″
835/10	1000′	10	105/30	.025″	.200″

For longer lengths and alternate put-ups—Specify.

PUSHBACK — HEAVY FORMVAR — MAGNET WIRE
PLAIN ENAMEL — DCC — DNC — SOLID TINNED

Birnbach

ALL BIRNBACH MAGNET WIRES PER MIL-W-583A SPECIFICATIONS

HEAVY FORMVAR, PLAIN ENAMEL, DOUBLE COTTON, DOUBLE NYLON, SOLID TINNED MAGNET WIRE

HEAVY FORMVAR

Has new tough abrasion resisting film. Replaces enamel and fabric insulations for certain applications requiring exceptional abrasion resistance. Stable under heat. High dielectric strength. Infinite resistance to water and moisture. Does not fail after two hours at 105°C. Takes up less winding space. **Symbol HF Type T2**

ALL MAGNET WIRE AVAILABLE IN LARGER PUT-UPS

¼ lb. SPOOL		½ lb. SPOOL		1 lb. SPOOL	
Size B&S	Ft.	Size B&S	Ft.	Size B&S	Ft.
10	8	10	16	10	32
12	12	12	25	12	50
14	20	14	39	14	78
16	31	16	62	16	124
18	49	18	99	18	198
20	78	20	156	20	313
22	125	22	250	22	501
24	200	24	399	24	798
26	300	26	600	26	1200
28	500	28	1000	28	1999
30	800	30	1600	30	3200
32	1225	32	2450	32	4900
34	1988	34	3975	34	7950
36	3200	36	6400	36	12800
38	5050	38	10100	38	20200
40	7975	40	15850	40	31700
42	12375	42	24750	42	49500
44	14500	44	29000	44	58000

PLAIN ENAMEL

Symbol PE Type T1

¼ lb. SPOOL		½ lb. SPOOL		1 lb. SPOOL	
Size B&S	Ft.	Size B&S	Ft.	Size B&S	Ft.
10	8	10	16	10	32
12	12	12	25	12	50
14	20	14	40	14	80
16	32	16	63	16	126
18	50	18	100	18	201
20	80	20	160	20	320
22	127	22	254	22	508
24	201	24	403	24	806
26	320	26	640	26	1280
28	507	28	1015	28	2030
30	805	30	1610	30	3220
32	1282	32	2564	32	5128
34	2037	34	4075	34	8150
36	3221	36	6443	36	12887
38	5132	38	10246	38	20492
40	8143	40	16286	40	32573
42	12803	42	25605	42	51211
44	20455	44	40910	44	81819

DOUBLE NYLON

Symbol DN

¼ lb. SPOOL		½ lb. SPOOL		1 lb. SPOOL	
Size B&S	Ft.	Size B&S	Ft.	Size B&S	Ft.
12	12	12	24	12	49
14	19	14	39	14	78
16	31	16	62	16	125
18	49	18	99	18	198
20	78	20	157	20	314
22	123	22	247	22	495
24	195	24	390	24	781
26	303	26	606	26	1212
28	478	28	956	28	1912
30	739	30	1479	30	2958
32	1136	32	2272	32	4545
34	1712	34	3424	34	6849
36	2551	36	5102	36	10204
38	3770	38	7541	38	15082
40	5040	40	10080	40	20161

DOUBLE COTTON

Symbol DC

¼ lb. SPOOL		½ lb. SPOOL		1 lb. SPOOL	
Size B&S	Ft.	Size B&S	Ft.	Size B&S	Ft.
10	8	10	16	10	31
12	12	12	24	12	49
14	19	14	39	14	78
16	31	16	62	16	123
18	48	18	97	18	194
20	78	20	157	20	304
22	119	22	238	22	477
24	134	24	269	24	538
26	284	26	568	26	1136
28	435	28	871	28	1742
30	641	30	1284	30	2569
32	976	32	1953	32	3906
34	1365	34	2735	34	5470
36	1827	36	3654	36	7309
38	2738	38	5476	38	10952
40	3405	40	6811	40	13623

SOLID TINNED (Soft Drawn)

Symbol TC

¼ lb. SPOOL		½ lb. SPOOL		1 lb. SPOOL	
Size B&S	Ft.	Size B&S	Ft.	Size B&S	Ft.
10	8	10	16	10	32
12	12	12	25	12	50
14	20	14	40	14	80
16	32	16	63	16	126
18	50	18	100	18	201
20	80	20	160	20	320
22	127	22	254	22	508
24	201	24	403	24	806
26	320	26	640	26	1280
28	507	28	1015	28	2030
30	805	30	1610	30	3220
32	1282	32	2564	32	5128
34	2037	34	4075	34	8150
36	3221	36	6443	36	12887
38	5132	38	10246	38	20492
40	8143	40	16286	40	32573

ALL SOLID TINNED COPPER AVAILABLE IN 1000 FT. SPOOLS
BARE COPPER — SOFT DRAWN AVAILABLE FROM STOCK

BIRNBACH
RADIO WIRES AND CABLES

BIRNBACH DOUBLE BRAID SLIPBACK HOOK-UP WIRE

Has a double cotton braid over the conductor, brightly color coded, saturated with paraffin. This construction will not cause the cotton insulation to fray or bunch up when pushed back. Has high dielectric strength and will withstand all climatic changes without breakdown.

COLORS: Black, Red, Blue, Yellow, Green, White, Brown, Orange.

SOLID

Cat. No.	Put-Up	Size	Strands	Puncture V. 60-cy. AC	O.D.
380	100′ Spool	20	Solid	2000	.090″
382	100′ Spool	18	Solid	2100	.098″
384	100′ Coil	16	Solid	2100	.108″
386	100′ Spool	14	Solid	2100	.122″
388	100′ Spool	12	Solid	2200	.135″
580	1000′ Spool	20	Solid	2000	.090″
582	1000′ Spool	18	Solid	2100	.098″
584	1000′ Spool	16	Solid	2100	.108″
586	1000′ Spool	14	Solid	2100	.122″
588	1000′ Spool	12	Solid	2200	.135″

STRANDED

Cat. No.	Put-Up	Size	Strands	Puncture V. 60-cy. AC	O.D.
381	100′ Spool	20	10/30	2100	.093″
383	100′ Spool	18	16/30	2200	.103″
385	100′ Spool	16	26/30	2200	.118″
387	100′ Spool	14	41/30	2200	.135″
389	100′ Spool	12	65/30	2300	.155″
581	1000′ Spool	20	10/30	2100	.093″
583	1000′ Spool	18	16/30	2200	.103″
585	1000′ Spool	16	26/30	2200	.118″
587	1000′ Spool	14	41/30	2200	.135″
589	1000′ Spool	12	65/30	2300	.155″

BIRNBACH BIRNTEX SLIPBACK WIRE

This wire is constructed of quality materials and carefully insulated with a cotton wrap over which a cotton braid is closely woven, and then saturated with paraffin. Pushes back easily.

SOLID

Cat. No.	Put-Up	Size	Strands	Puncture V. 60-cy. AC	O.D.
72	100′ Spool	22	Solid	1500	.060″
76	1000′ Spool	22	Solid	1500	060″
84	100′ Spool	20	Solid	1500	.065″
86	100′ Spool	18	Solid	1500	.075″
92	1000′ Spool	20	Solid	1500	.065″
94	1000′ Spool	18	Solid	1500	.075″

STRANDED

Cat. No.	Put-Up	Size	Strands	Puncture V. 60-cy. AC	O.D.
73	100′ Spool	22	7/30	1500	.065″
77	1000′ Spool	22	7/30	1500	.065″
85	100′ Spool	20	10/30	1500	.070″
87	100′ Spool	18	16/30	1500	.080″
93	1000′ Spool	20	10/30	1500	.070″
95	1000′ Spool	18	16/30	1500	.080″

See Pages 1556-1559 for Birnbach Prices for Above Items

Birnbach COPPERWELD ENAMEL, TINNED AND BARE COPPER BUS BAR, BRAIDED TINNED COPPER SHIELDING

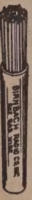
TINNED COPPER WIRE — BUS BAR

Pure Electrolytic, Copper, annealed, tinned for quick soldering

MIL—W—3861 type S, ASTM—B—33 specifications

Cat. No.	Put-Up	Size AWG	Area Circular Mils	O.D.
1433/4	100′ Coil	4	41,740	.204″
1433/6	100′ Coil	6	26,250	.162″
1433	100′ Coil	8	16,510	.129″
1402	100′ Coil	10	10,380	.103″
1403	1000′ Spool	10	10,380	.103″
1406	100′ Coil	12	6,530	.082″
1407	1000′ Spool	12	6,530	.082″
1410	100′ Coil	14	4,107	.065″
1411	1000′ Spool	14	4,107	.065″
1414	100′ Coil	16	2,583	.051″
1415	1000′ Spool	16	2,583	.051″
1418	100′ Coil	18	1,624	.040″
1419	1000′ Spool	18	1,624	.040″
1422	100′ Coil	20	1,022	.033″
1423	1000′ Spool	20	1,022	.033″
1434	1000′ Spool	22	624.4	.025″
1424	1000′ Spool	24	404.0	.020″
1426	1000′ Spool	26	254.1	.016″
1428	1000′ Spool	28	159.8	.013″
1430	1000′ Spool	30	100.5	.010″
1430/32	1000′ Spool	32	63.21	.008″
1430/34	1000′ Spool	34	39.75	.006″
1430/36	1000′ Spool	36	25.00	.005″
1430/38	1000′ Spool	38	15.72	.004″

See Magnet Wire Section For Additional Sizes



BUS BAR WIRE (Hard Drawn)

MIL—W—3861 type S, ASTM—B—33 specifications

For hooking up all types of transmitters, especially ultra short wave equipment. All bus wire is made of hard drawn copper, tinned, straightened, and cut in 2 ft. lengths.

Cat. No.	No.		
2010	10	Round	Tinned
2012	12	Square	Tinned
2013	12	Round	Tinned
2014	14	Square	Tinned
2015	14	Round	Tinned
2016	16	Round	Tinned
2018	18	Round	Tinned

(100 to Std. Package)

TINNED COPPER SHIELDING

Used for shielding and bonding on aircraft, marine and auto radio wires and cables. Shields speaker leads, lead-ins, amplifier wires. Extremely flexible, slides over wires and cables.

EXTREMELY FLEXIBLE SHIELDING PER QQ—B—575 AVAILABLE TO ORDER

DESCRIPTION:

No. 853 thru 856/2—Composed of extremely flexible fine soft annealed copper tinned wires closely woven, braided and **Rolled Flat.**

No. 860—Composed of extremely flexible fine soft annealed copper wires closely woven, braided and **Rolled Flat.**

TINNED

Cat. No.	Size & No. of Wires	Inside Diam. Flattened	Approx. O.D. Flattened	Spool
853	12 x 2/36	1/32″	3/64″	1000′
854	12 x 2/36	3/64″	1/16″	1000′
855	16 x 3/36	1/16″	5/64″	50′
858	24 x 5/36	1/8″	5/32″	50′
859	24 x 5/36	3/16″	7/32″	50′
863	24 x 7/36	1/4″	9/32″	50′
864	48 x 4/36	3/8″	15/32″	50′
868	48 x 7/36	1/2″	19/32″	50′
865	48 x 8/36	5/8″	23/32″	50′
865/1	48 x 11/36	3/4″	13/16″	50′
857	48 x 19/36	25/32″	27/32″	50′
856	48 x 19/36	1″	1-1/16″	50′
856/1	48 x 19/36	1-3/8″	1-7/16″	50′
856/2	48 x 19/36	1-1/2″	1-9/16″	50′

BARE

Cat. No.	Size & No. of Wires	Inside Diam. Flattened	Approx. O.D. Flattened	Spool
860	24 x 10/36		1/4″	50′

For longer lengths and alternate put-ups—Specify.

COPPER WIRE—SOLID—STRANDED

STRANDED TINNED COPPER WIRE

Cat. No.	Put-Up	Size AWG	Strand	O.D.
495	100′ Coil	12	7/20	.102″
1671	100′ Coil	14	7/22	.076″
1638	1000′ Spool	14	7/22	.076″
1674	100′ Coil	15	7/23	.069″
1633	1000′ Spool	15	7/23	.069″
1628	1000′ Spool	16	7/24	.062″

#1671 meets H4.4—1940 type W—1

COIL LEAD, JUMPER CABLE

PURE ELECTROLYTIC, COPPER, annealed, tinned for quick soldering
MIL—W—3861 Type B, ASTM—B—33 Specifications

Cat. No.	Class Description	Put-Up	Size AWG	Strand	O.D.
1622	K	1000′ Spool	22	7/30	.030″
1620	K	1000′ Spool	20	10/30	.037″
1618	K	1000′ Spool	18	16/30	.045″

BARE COPPER WIRE (Soft Drawn)

QQ—W—341A specifications

Cat. No.	Put-Up	Size AWG	Area Circular Mills	O.D.
1560	100′ Coil	8	16,510	.1285″
1562	100′ Coil	10	10,380	.102″
1563	1000′ Spool	10	10,380	.102″
1566	100′ Coil	12	6,530	.081″
1567	1000′ Spool	12	6,530	.081″
1570	100′ Coil	14	4,107	.064″
1571	1000′ Spool	14	4,107	.064″
1574	100′ Coil	16	2,583	.051″
1575	1000′ Spool	16	2,583	.051″

SILICON BRONZE AERIAL WIRE

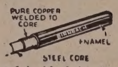
Especially designed for ships, airports, short wave and transmitting antennas where high tensile strength and resistance to the elements are important.

Cat. No.	Put-Up	Size AWG	Strand	Breaking Strength	O.D.
529*	100′	4	7/12	3670 lbs.	.240″
528*	100′	6	7/14	2140 lbs.	.190″
527	100′	8	7/16	1600 lbs.	.150″
499	100′	10	7/18	1000 lbs.	.122″
524	100′	12	7/20	650 lbs.	.100″
526	100′	14	7/22	420 lbs.	.075″

#528 and #499 meets MIL—W—13074; #524 meets MIL—W—13276

For longer lengths and alternate put-ups—Specify.

* 1000 feet on deposit reels



COPPERWELD ENAMEL ANTENNA WIRE

Used where high tensile strength is required as for short wave and transmitting aerials. Has low R.F. resistance and is ideal for transmitting doublet and directional antennas. Will maintain frequency characteristics because of its stretchless qualities.

Cat. No.	Put-Up	Size AWG	Tensile Strength	O.D.
710-100	100′ Spool	10	1130 lbs.	.103″
710-250	250′ Spool	10	1130 lbs.	.103″
710-500	500′ Spool	10	1130 lbs.	.103″
710-1000	1000′ Spool	10	1130 lbs.	.103″
710-2500	2500′ Spool	10	1130 lbs.	.103″
712-100	100′ Coil	12	720 lbs.	.082″
712-250	250′ Coil	12	720 lbs.	.082″
712-500	500′ Spool	12	720 lbs.	.082″
712-1000	1000′ Spool	12	720 lbs.	.082″
712-2500	2500′ Spool	12	720 lbs.	.082″
714-100	100′ Coil	14	400 lbs.	.065″
714-250	250′ Spool	14	400 lbs.	.065″
714-500	500′ Spool	14	400 lbs.	.065″
714-1000	1000′ Spool	14	400 lbs.	.065″
714-2500	2500′ Spool	14	400 lbs.	.065″

SOLID ENAMEL COPPER WIRE

Cat. No.	Put-Up	Size AWG	O.D.
497	100′ Coil	10	.103″
1497	1000′ Spool	10	.103″
492	100′ Coil	12	.083″
492A	150′ Coil	12	.083″
492B	200′ Coil	12	.083″
1492	1000′ Spool	12	.083″
490	100′ Coil	14	.066″
490A	150′ Coil	14	.066″
490B	200′ Coil	14	.066″
1490	1000′ Spool	14	.066″

STRANDED BARE COPPER WIRE

Cat. No.	Put-Up	Size AWG	Strand	O.D.
493	100′ Coil	12	7/20	.100″
1670	100′ Coil	14	7/22	.075″
1639	1000′ Spool	14	7/22	.075″
1673	100′ Spool	15	7/23	.068″
1634	1000′ Spool	15	7/23	.068″
1680	100′ Coil	16	7/24	.060″
1647	1000′ Spool	16	7/24	.060″
681	100′ Coil	18	7/26	.050″
1648	1000″ Spool	18	7/26	.050″
700	100′ Coil	19	7/27	.041″
1741	1000′ Spool	19	7/27	.041″

See Pages 1556-1559 for Birnbach Prices for Above Items

Birnbach RETRACTILE KINKLESS CORD SETS

BIRNBACH COILED RETRACTILE (KINKLESS) CORD AND CORD SETS

This series of Birnbach Coiled Kinkless Retractile Cords are permanently coiled into a spring-like shape without the use of metal springs or elastic bands. They have inherent "Recovery" properties. These Retractile cords extend approximately six times its retracted length, returning to its exact original shape and length when released. Always as long as you need them and no longer, they will not kink, tangle, trail, knot or dangle on the floor or bench and cause accidents.

RETRACTILE TEST LEAD WIRE

Stretch coiled kinkless test lead wire description: 12″ coil—stretches to approx. 6 feet. One conductor #20 stranded copper rubber insulation .165 OD. Colors: Red, Black.

Cat. No.			Std. Pkge.
64..12″	Retracted—Approx.	6′ Extended	6
65..24″	Retracted—Approx.	12′ Extended	6

RETRACTILE (KINKLESS) POWER CORD RUBBER, NEOPRENE AND PLASTIC

DESCRIPTION 2, 3, 4 conductor UL approved, retractile (kinkless) power cords supplied in 36″ long mandrel lengths, which customer cuts to desired length.

Std. Pkg. 5

Additional conductors and sizes available.

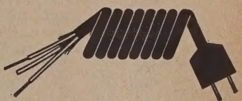
Cat. No.	Retracted Length	Approx. Length Extended	Conds.	Size AWG	UL Type	Strand	Amp. Rating	Volt Rating	Nom O.D.
886	36″	18 FT.	2	18	SVO	41/34	7	300	.250″
887	36″	18 FT.	2	18	SVT	41/34	7	300	.250″
889	36″	18 FT.	2	18	SJO	41/34	7	300	.310″
889/3	36″	18 FT.	3	18	SJO	41/34	7	300	.330″
889/4	36″	18 FT.	4	18	SJO	41/34	7	300	.360″
890	36″	18 FT.	2	18	SJT	41/34	7	300	.310″
891	36″	18 FT.	2	16	SJO	65/34	10	300	.330″
891/3	36″	18 FT.	3	16	SJO	65/34	10	300	.365″
891/4	36″	18 FT.	4	16	SJO	65/34	10	300	.395″
893	36″	18 FT.	2	14	SO	41/30	15	600	.535″
893/3	36″	18 FT.	3	14	SO	41/30	15	600	.560″
893/4	36″	18 FT.	4	14	SO	41/30	15	600	.605″
894	36″	18 FT.	2	12	SO	65/30	20	600	.605″
894/3	36″	18 FT.	3	12	SO	65/30	20	600	.635″
894/4	36″	18 FT.	4	12	SO	65/30	20	600	.665″

CONDUCTOR COLOR CODING: 1-Black, 2-White, 3-Green, 4-Red

RETRACTILE (KINKLESS) POWER CORD SETS

Excellent for portable use. All mobile equipment and office equipment wherever the device application is synonymous with repetitive movement. The "Answer" to most tough hazard problems.

2 and 3 conductors SVO and SJO Retractile Kinkless Neoprene Service Cord Sets with Molded Male Plug one end, other end stripped and tinned ready for application.



Cat. No.	Retracted Length	Approx. Length Extended	Conds.	Size AWG	UL Type	Strand	Std. Pkg.
880	18″	9 FT.	2	18	SVO	41/34	10
881	18″	9 FT.	2	18	SJO	41/34	10
881/3	18″	9 FT.	3	18	SJO	41/34	10
882	18″	9 FT.	2	16	SJO	65/34	10
882/3	18″	9 FT.	3	16	SJO	65/34	10

CONDUCTOR COLOR CODING: 1-Black, 2-White, 3-Green

RETRACTILE COILED COMMUNICATION CORD

Multi-conductors stranded communication cord No. 23 AWG. Tinned copper wire neoprene jacketed. 18′ lengths can be cut to exact requirement. Nom. cond. resistance .022 ohms per linear foot. Maximum working voltage 120 volts. Current carrying capacity 1 ampere.

Cat. No.	Retracted Length	Approx. Length Extended	Conds.	Size AWG	Strand	OD	Std. Pkg.
875	36″	18 FT.	2	23	21/36	200″	10
876	36″	18 FT.	3	23	21/36	210″	10
877	36″	18 FT.	4	23	21/36	240″	10
878	36″	18 FT.	5	23	21/36	285″	10
878/6	36″	18 FT.	6	23	21/36	305″	10
878/7	36″	18 FT.	7	23	21/36	320″	10

CONDUCTOR COLOR CODING: 1-Black, 2-White, 3-Red, 4-Green, 5-Blue, 6-Yellow, 7-Brown.
Additional conductors and sizes available.

RETRACTILE (KINKLESS) COILED SHIELDED MICROPHONE CABLES

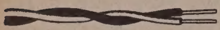
DESCRIPTION: Single and multi-conductor shielded microphone cable neoprene jacketed. This cable remains neat and compact with no danger of tripping or of the wire becoming entangled in equipment. Also suitable for stereo and additional speaker extensions.

Cat. No.	Retracted Length	Approx. Length Extended	Cond.	Size AWG	Nom. O.D.	Std. Pkg.
895	48″	25′	1	#24 Shielded	160″	10
895A	12″	6′	1	#24 Shielded	160″	10
895B	6″	3′	1	#24 Shielded	160″	10
896	48″	25′	2	(1-#23 (1-#24 Shielded	200″	10
896A	12″	6′	2	(1-#23 (1-#24 Shielded	200″	10
897	48″	25′	3	(2-#23 (1-#24 Shielded	240″	10
897A	12″	6′	3	(2-#23 (1-#24 Shielded	240″	10
899	48″	25′	2	(2-#24 Shielded	210″	10
899A	12″	6′	2	(2-#24 Shielded	210″	10
898	48″	25′	4	(2-#23 (2-#24 Shielded	270″	10
898A	12″	6′	4	(2-#23 (2-#24 Shielded	270″	10

Additional conductors and sizes available. CONDUCTORS ARE COLOR CODED.

Birnbach STEREO MONAURAL WIRE AND CABLE

NEW STEREO MONAURAL WIRE AND CABLE



The following items were specifically developed for use in recording and playback equipment including all stereo cartrdges; ceramic, magnetic, crystal and tone arms. Designed for extremely low hum and noise pickup. Individual conductors are #32 AWG, 7 strands #40 AWG tinned copper, .010″ wall. Special formulation PVC +80° C to —40° C operation allowing ease of stripping and soldering. When shielded ..#40 AWG tinned copper, 30% coverage for maximum flexibility, minimum weight and diameter and for quick pushback.

TWISTED — UNSHIELDED

CAT NO.	SPOOL	COND.	SIZE AWG	STRAND	NOM. WALL	NOM. O. D.
7571	1000′	1	32	7/40	.010″	.028″
7571	500′	1	32	7/40	.010″	.028″
7572	1000′	2	32	7/40	.010″	.047″
7572	500′	2	32	7/40	.010″	.047″
7573	1000′	3	32	7/40	.010″	.053″
7573	500′	3	32	7/40	.010″	.053″
7574	1000′	4	32	7/40	.010″	.061″
7574	500′	4	32	7/40	.010″	.061″
7575	1000′	5	32	7/40	.010″	.069″
7575	500′	5	32	7/40	.010″	.069″

TWISTED — SHIELDED

CAT NO.	SPOOL	COND.	SIZE AWG	STRAND	NOM. WALL	NOM. O. D.
7581	1000′	1	32	7/40	.010″	.040″
7581	500′	1	32	7/40	.010″	.040″
7582	1000′	2	32	7/40	.010″	.067″
7582	500′	2	32	7/40	.010″	.067″
7583	1000′	3	32	7/40	.010″	.072″
7583	500′	3	32	7/40	.010″	.072″
7584	1000′	4	32	7/40	.010″	.080″
7584	500′	4	32	7/40	.010″	.080″
7585	1000′	5	32	7/40	.010″	.089″
7585	500′	5	32	7/40	.010″	.089″
7580	1000′	2	32 (Ind. Shielded)	7/40	.010″	.080″

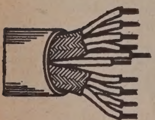
CONDUCTOR COLOR CODE: 1-WHITE, 2-RED, 3-BLACK, 4-GREEN, 5-YELLOW.

STEREO VOLUME CONTROL CABLE

ESPECIALLY DESIGNED FOR STEREO COIN OPERATED MACHINES

Description: Ten conductors containing 2 quads individually shielded with tinned copper braid; 2 conductors not shielded; chrome vinyl jacket overall.

Cat. No.	Spool	Nom. Jacket	Nom. O.D.
4520	500′	.025″	.325″



4 Shielded #24 (7 x 32)
4 Shielded #24 (7 x 32)
2 Unshielded #22 (7 x 30)

CONDUCTOR COLOR CODE: GRAY, WHITE, BLUE, GREEN (SHIELDED), RED, BROWN, YELLOW, ORANGE (SHIELDED), WHITE, BLUE (UNSHIELDED)

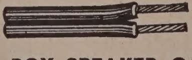
SHIELDED JUKE BOX CONTROL CABLE

DESCRIPTION:

5 Conductor cable. Three cond. twisted color coded, black, green red with tinned copper shielded braid overall. Two conductor twisted color coded blue, yellow and chrome vinyl jacket overall.

6 Conductor Cable: 4 cond. twisted tinned copper shielded braid, conductor color code black, green, red, yellow; 2 cond. unshielded color code white, blue.

Cat. No.	Spool	Conds.	Size AWG #22	Strand	Nom. Insul.	Nom. Jacket	Nom. O.D.
4515	500′	5	3 (shielded) 2 (unshielded)	7/30	.015″	.020″	200″x.300″
4516	500′	6	2 unshielded #22 (7 x 30) 4 shielded #24 (7 x 32)		.015″	.025″	205″x.310″



JUKE BOX SPEAKER CABLE

Small, compact diamter. Useful. Practical. Ideal for rear auto speaker extension cable

DESCRIPTION:

Composed of 7 strand #32-1 Bare—copper conductor, 1 tinned copper conductor, 2 conductors parallel chrome vinyl plastic insulation.

Cat. No.	Spool	Conds.	Size AWG	Strand	Nom. Insul.	Nom. O.D.
4500	1000′	2	24	7/32	.015″	.058″ x .115″

JUKE BOX CONTROL CABLE

Used as replacement cable in Juke Boxes.

DESCRIPTION:

Two Conductors #16 stranded vinyl insulation tinned copper, color coded green-orange. One conductor #20 stranded tinned copper, vinyl insulation. Color coded Blue; 3 conductors cable with .020″ chrome vinyl plastic jacket overall.

Cat. No.	Spool	Conds.	Size AWG	Strand	Nom. Insul.	Nom. Jacket	Nom. O.D.
4510	500′	3	2—#16 1—#20	26/30 10/30	.020″ .020″	.020″	.240″

Birnbach ALUMINUM—NYLON—CABLE—CLAMPS
1000°F HOOK-UP WIRE
BIRNBACH

BIRNBACH BB-1000 HOOK-UP WIRE
Continuous Service at 1000° F

This superior insulation is unharmed at temperatures which cause glass to melt and asbestos to pulverize.

This combination of inorganic material offers good abrasion resistance; can be handled without special precautions; does not become carbonaceous, conducting or embrittled at elevated temperatures; offers continuous service at 1000°F, intermittent service up to 1800°F (depending on application), braid and fiberous insulation withstands 2000°F without decomposing or melting.

CABLE IS NOT ADVERSELY AFFECTED BY HIGH INTENSITY NUCLEAR RADIATION.

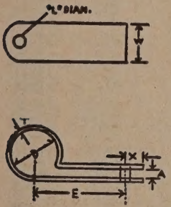
DESCRIPTION: Each conductor stranded stainless steel clad copper, wall of "Refrasil" fused quartz, color coded (solid colors) available.

Cat. No.	Put-Ups	Size AWG	Strand	Nom. Ins. Wall	Nom. O.D.
7716	1000′	16	26/30	.092″	.240″
7716	250′	16	26/30	.092″	.240″
7718	1000′	18	19/30	.084″	.215″
7718	250′	18	19/30	.084″	.215″
7720	1000′	20	10/30	.076″	.190″
7720	250′	20	10/30	.076″	.190″
7722	1000′	22	19/34	.068″	.165″
7722	250′	22	19/34	.068″	.165″
7724	250′	24	10/34	.063″	.150″
7724	1000′	24	10/34	.063″	.150″

Typical Characteristics of BB-1000 Size #18—#7718
ADDITIONAL DATA
Weight: 17 lbs./1000 ft. **Dielectric Strength: 9000 Volts** **After 5 hrs. at 1600° F.: 3500 Volts**

NYLON CABLE CLAMPS MADE OF DUPONT NYLON FORMULA FM 10001

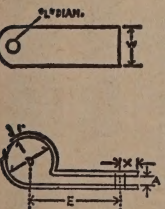
MEETS MIL-P-20693



Used as a clamp, strain relief, clip hanger, fastener, strap, these nylon cable clamps are light and tough. Have smooth, non-abrasive surfaces, rounded edges will not chafe conductors or cause shorts or grounds in cable. Insoluble in solvents, oils, gasoline, alcohol, hydraulic fluids, alkalies, acids. Temperature resistant from -60°F to +300°F. Do not support combustion. Moisture and heat resistant. Inside matte finish surfaces prevent slippage under vibration and are self aligning when tightened by screw. Snaps onto cable. Meets MIL-P-20693 specs. Fungus resistant.

CAT. NO.	PUT-UP	TO FIT SIZE	D	E	W	T	L	X	A
725	100	1/8″	.125	.316	3/8	.050	.177	.227	.062
726	100	3/16″	.187	.378	3/8	.050	.177	.227	.062
727	100	1/4″	.250	.409	3/8	.050	.177	.227	.062
728	100	5/16″	.312	.441	3/8	.050	.177	.227	.062
729	100	3/8″	.375	.471	3/8	.050	.177	.227	.062
730	100	7/16″	.437	.519	3/8	.050	.177	.227	.062
731	100	1/2″	.500	.550	3/8	.050	.177	.227	.062
732	100	5/8″	.625	.634	1/2	.060	.177	.227	.062
733	100	3/4″	.750	.718	1/2	.060	.177	.227	.062
734	100	7/8″	.875	.760	1/2	.060	.177	.227	.062
735	100	1″	1.000	.802	1/2	.060	.177	.227	.062
736	100	1 1/8″	1.125	.968	1/2	.062	.204	.250	.125
737	100	1 1/4″	1.250	1.156	1/2	.062	.204	.250	.125
738	100	1 1/2″	1.500	1.188	5/8	.070	.204	.250	.125

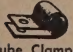
ETHYL CELLULOSE PLASTIC CABLE CLAMPS



Recommended for general use. They withstand age, shock and vibration. Moisture and corrosion. This tough, lightweight and durable clamp withstands temperatures from —60° to +175° F. Approved 7-21-44 Army-Navy aeronautical AN-742. Approved for inside-outside, hi-tension, primary and secondary. Standard pkge. 100, 1000.

CAT. NO.	TO FIT SIZE	D	E	W	T	L	X	A
715	⅛″	.125	.325	½	.060	.204	7/32	.062
715A	3/16″	.188	.390	½	.060	.204	7/32	.062
715B	¼″	.250	.421	½	.060	.204	7/32	.062
715C	5/16″	.313	.457	½	.060	.204	7/32	.062
715D	⅜″	.375	.483	½	.060	.204	7/32	.062
715E	7/16″	.438	.531	½	.060	.204	7/32	.062
716	½″	.500	.562	½	.060	.204	7/32	.062
716A	9/16″	.563	.625	½	.060	.204	7/32	.062
716B	⅝″	.625	.610	½	.060	.204	7/32	.062
716C	11/16″	.688	.666	½	.060	.204	7/32	.062
716D	¾″	.750	.766	½	.060	.204	7/32	.062
716E	⅞″	.875	.813	½	.060	.204	7/32	.062
717	1″	1.000	.906	½	.060	.204	7/32	.062
717A	1⅛″	1.125	.969	½	.060	.204	7/32	.062
717B	1¼″	1.250	1.156	½	.060	.204	7/32	.062
717C	1½″	1.5	1.0625	⅝	.070	.204	7/32	.062
717D	2″	2.0	1.313	⅝	.070	.204	7/32	.062
717E	2½″	2.5	1.563	⅝	.070	.204	7/32	.062

BIRNBACH TUBE CLAMPS



These Tube Clamps are made of hard drawn aluminum and are found to be extremely desirable when mounting resonant lines, or elements of directive beam antennas. The ⅛″ thru ⅝″ clamps have a clearance for No. 10 Screw. The ¾″ to the 1¼″ clamps have a clearance for ¼″ bolts.

Cat. No.	To Fit Tube	Width	Length	Thickness	Std. Pkg.
51A	⅛″	½″	13/16″	.050″	100
51	¼″	½″	⅞″	.050″	100
52	5/16″	½″	15/16″	.050″	100
53	⅜″	½″	1″	.050″	100
54	½″	½″	1⅛″	.050″	100
54A	⅝″	½″	1¼″	.050″	50
55	¾″	¾″	1 5/16″	.090″	50
57	⅞″	¾″	1⅝″	.090″	50
56	1″	¾″	1¾″	.090″	50
56A	1⅛″	¾″	1⅞″	.090″	50
56B	1¼″	¾″	2″	.090″	50

See Pages 1556-1559 for Birnbach Prices for Above Items

BIRNBACH PRICE LIST

Cat. No.	Sug. List Price
00-C	18.50/C
1-M	10.73/M
1-C	1.32/Ea.
1-50	.66/Ea.
2-M	10.73/M
2-C	1.32/Ea.
2-50	.66/Ea.
3-M	10.73/Ea.
3-C	1.32/Ea.
3-50	.66/Ea.
3-A-M	10.73/Ea.
4-M	41.25/M
5-M	55.00/M
6-C	13.20/C
T-6-C	20.00/C
T-7	.50/Ea.
8	13.75/C
10	13.75/C
T-10	8.00/C
11	19.25/C
T-14	.70/Ea.
T-14-A	.80/Ea.
15	7.70/C
T-15	25.00/C
T-15-A	40.00/C
T-15-C	2.50/C
16	27.50/C
T-16	25.00/C
T-16-A	25.00/C
17	60.00/C
T-17	24.00/C
18	100.00/C
T-18	24.00/C
19	.45/Ea.
T-19-¾	9.50/C
T-19-1"	9.50/C
T-19-1½	13.50/C
20	.90/Ea.
20-A	.75/Ea.
T-20	.80/Ea.
21-M	13.75/M
21-C	1.65/Ea.
21-35	.66/Ea.
22-M	32.45/M
22-15	.66/Ea.
22-C	3.52/Ea.
23	16.00/C
24	17.00/C
26	17.00/C
27	11.00/C
27-C	21.00/C
27-R	19.50/C
28	11.00/C
29	17.00/C
30	36.15/C
31	15.00/C
31-C	21.00/C
31-R	11.00/C
31-S	16.00/C
32	3.00/C
32-A	2.25/C
33	14.00/C
34	1.40/Ea.
35	1.40/Ea.
36	1.40/Ea.
37	1.40/Ea.
38	1.40/Ea.
39	1.40/Ea.
40	1.40/Ea.
41	1.40/Ea.
42	1.40/Ea.
T-42	7.00/C
43	7.00/M
44	8.00/C
T-44	10.00/C
45	1.40/Ea.
46	14.00/C
T-46	28.00/C
47	1.40/Ea.
48	33.50/C
T-48	48.00/C
49	1.40/Ea.
D-50	4.95/M
115	12.00/C
51	17.50/C
51-A	17.50/C
52	17.50/C
53	17.50/C
54	17.50/C
54-A	18.00/C
55	20.00/C
56	22.50/C
56-A	30.00/C
56-B	32.50/C
57	22.50/C
58	1.50/Ea.
59	1.80/Ea.
61-C	4.00/Ea.
62-E	17.50/Ea.
64	1.40/Ea.
65	2.50/Ea.
66-C	4.50/Ea.
67-E	25.50/Ea.
68-C	7.50/Ea.
69-E	35.00/Ea.
72-C	2.60/Ea.
73-C	3.05/Ea.
76-M	23.65/Ea.
77-M	26.70/Ea.
84-C	3.05/Ea.
85-C	3.35/Ea.
86-C	3.65/Ea.
87-C	4.00/Ea.
92-M	26.65/Ea.
93-M	29.75/Ea.
94-M	32.45/Ea.
95-M	6.30/Ea.
96-M	11.83/M
96-40	.66/Ea.
96-C	1.32/Ea.
97-M	11.83/M
97-40	.66/Ea.
97-C	1.32/Ea.
98-M	13.75/M
98-35	.66/Ea.
98-C	1.65/Ea.
99-M	13.75/M
99-35	.66/Ea.
99-C	1.54/Ea.
100-M	22.00/M
100-20	.66/Ea.
100-C	2.47/Ea.
R-100	5.60/M
T-100	10.00/C
T-101	10.00/C
T-102	10.00/C
102	.90/Ea.
103	.90/Ea.
104	1.50/Ea.
105	1.50/Ea.
T-105/14	9.45/Ea.
T-105/16	11,25/Ea.
T-105/17	12.95/Ea.
T-105/19R	18.50/Ea.
T-105/20	18.85/Ea.
T-105/21	20.00/Ea.
T-105/24	38.50/Ea.
T-105/27	39.50/Ea.
106	.90/Ea.
107	1.50/Ea.
108	2.05/Ea.
109	2.75/Ea.
113	125.00/C
114	11.00/C
115	12.00/C
116	13.00/C
117	27.50/C
118	25.00/C
119	22.00/C
120	2.75/Ea.
121	.60/Ea.
122	.90/Ea.
123	1.00/Ea.
124	1.15/Ea.
125	2.75/Ea.
126	2.30/Ea.
127	2.75/Ea.
128	3.35/Ea.
130	.70/Ea.
131	.85/Ea.
132	.40/Ea.
133	.45/Ea.
134	.60/Ea.
135	.45/Ea.
136	.35/Ea.
149	6.75/Ea.
151	.60/Ea.
155-H	45.00/Ea.
156-E	18.00/Ea.
157-E	25.00/Ea.
158-E	32.50/Ea.
159-E	41.25/Ea.
160-E	50.00/Ea.
161-E	55.00/Ea.
162-D	30.00/Ea.
163-D	35.00/Ea.
164-D	40.00/Ea.
165-D 250′	47.50/Ea.
166/15-D	60.00/Ea.
172-C	8.50/Ea.
172-E	42.50/Ea.
172-M	85.00/Ea.
173-C	11.75/Ea.
173-E	58.75/Ea.
173-M	117.50/Ea.
174-C	16.00/Ea.
174-E	80.00/Ea.
174-M	160.00/Ea.
175-C	18.75/Ea.
175-E	93.75/Ea.
175-M	187.50/Ea.
176-C	21.00/Ea.
176-E	105.00/Ea.
176-M	210.00/Ea.
177-C	26.50/Ea.
178-C	32.50/Ea.
179-C	37.50/Ea.
180-C	40.00/Ea.
182-C	48.00/Ea.
184	27.00/C
185	23.00/C
186	25.00/C
193	15.00/M
194	15.00/M
195	15.00/M
196	18.00/M
197	18.00/M
200	10.00/M
201-1000	13.75/M
201-35	.66/Ea.
201-100	1.54/Ea.
202	8.50/M
203	.65/Ea.
203-A	3.75/Ea.
203-H	3.75/Ea.
204	.65/Ea.
204-A	3.75/Ea.
204-H	3.75/Ea.
205	.65/Ea.
205-H	3.75/Ea.
206	.65/Ea.
206-A	3.75/Ea.
206H	3.75/Ea.
207	.65/Ea
207-H	3.75/Ea.
208	.65/Ea.
208-H	3.75/Ea.
209	.65/Ea.
209-H	3.75/Ea.
212-A	3.75/Ea.
220	8.00/Ea.
220-A	6.75/Ea.
221	1.80/Ea.
221-A	1.40/Ea.
226	4.00/Ea.
231-MC	35.00/C
232-FC	53.00/C
233-CC	38.00/C
234-CLC	60.00/C
239-FC2	6.20/Ea.
245-MFC	6.20/Ea.
246	40.00/C
248	8.00/C
248-S	8.00/C
249	11.00/C
T-250	16.00/C
T-251	20.00/C
251	80.00/C
252	120.00/C
253	110.00/C
257	50.00/C
258	57.00/C
259	60.00/C
260	75.00/C
263-C	9.00/Ea.
263-E	44.50/Ea.
263-M	89.00/Ea.
264-C	11.60/Ea.
264-E	57.50/Ea.
264-M	115.00/Ea.
265-C	14.00/Ea.
265-E	69.50/Ea.
265-M	139.00/Ea.
266-C	16.30/Ea.
266-E	81.00/Ea.
266-M	162.00/Ea.
267-C	18.50/Ea.
267-E	91.00/Ea.
267-M	182.00/Ea.
268-C	20.50/Ea.
268-E	102.00/Ea.
268-M	204.00/Ea.
269-C	23.75/Ea.
269-E	118.25/Ea.
269-M	236.50/Ea.
270-C	26.25/Ea.
270-E	130.75/Ea.
270-M	261.50/Ea.
272-C	32.55/Ea.
274	60.00/C
275	70.00/C
276	70.00/C
278	40.00/C
279	30.00/C
287	.49/Ea.
288	12.25/Ea.
289-VC-C	6.00/Ea.
290-VC-C	6.00/Ea.
291	.22/Ea.
291-V 25′	1.90/Ea.
291-VC-C	6.60/Ea.
293	.22/Ea.
293-V 25′	1.95/Ea.
293-VC-C	7.05/Ea.
294	.22/Ea.
294-V 25′	2.00/Ea.
294-VC-C	7.50/Ea.
295	.22/Ea.
295-V 25′	2.05/Ea.
295-VC-C	7.75/Ea.
296	2.10/Ea.
296-VC-C	60.00/Ea.
297	.48/Ea.
298	.55/Ea.
299	1.75/Ea.
299-VC-C	50.00/Ea.
300	.22/Ea.
300-V 25′	2.15/Ea.
300-VC-C	8.35/Ea.
301	.40/Ea.
301-V 15′	1.95/Ea.
301-VC-C	11.00/Ea.
302	.45/Ea.
302-V 10′	1.55/Ea.
302-VC-C	13.20/Ea.
303	.75/Ea.
303-VC-C	25.00/Ea.
304	.90/Ea.
304-VC-C	30.00/Ea.
305-V 10′	1.75/Ea.
305-VC-C	14.25/Ea.
306-V 10′	1.85/Ea.
306-VC-C	18.25/Ea.
307	.30/Ea.
307-V 20′	1.85/Ea.
307-VC-C	9.00/Ea.
308-B 25′	.75/Ea.
308-BC-C	2.75/Ea.
309	1.70/Ea.
310	18.00/C
310-C	23.00/C
310-S	19.00/C
310 B	35.00/C
311-B 25′	.75/Ea.
311-BC-C	2.75/Ea.
312	2.00/Ea.
313	.17/Ea.
313-B 25′	.75/Ea.
313-B 25′	.75/Ea.
314-B 25′	.75/Ea.
315	.18/Ea.
315-B 25′	.75/Ea.
315-BC-B	2.75/Ea.
316 10′	.19/Ea.
316-B 25′	.80/Ea.
316-BC-C	3.00/Ea.
317	.19/Ea
317-B 25′	.80/Ea.
317-BC-C	3.00/Ea.
318 10′	.40/Ea.
318-B 15′	.75/Ea.
318-BC-C	4.70/Ea.
319	.45/Ea.
319-B 10′	.75/Ea.
319-BC-C	6.75/Ea.
320	.50/Ea.
320-B 10′	.75/Ea.
320-BC-C	6.75/Ea.
321	.60/Ea.
321-BC-C	8.50/Ea.
322	.65/Ea.
322-BC-C	14.00/Ea.
323	1.00/Ea.
323-BC-C	22.50/Ea.
324	1.10/Ea.
324-BC-C	27.50/Ea.
325	.35/Ea.
325-B 15′	.75/Ea.
325-BC-C	4.40/Ea.
326	.40/Ea.
326-B 15′	.75/Ea.
326-BC-C	5.00/Ea.
327-BC-C	26.75/Ea.
328-BC-C	80.00/Ea.
329-BC-C	108.25/Ea.
330	25.00/C
330-A	22.00/C
331	25.00/C
331-A	17.00/C
332	18.00/C
332-A	2.00/C
333	27.00/C
334	55.00/C
335	65.00/C
336	65.00/C
337	70.00/C
340	11.00/C
341	65.00/C
341-B	100.00/C
342	475.00/C
342-B	525.00/C
343	.60/Ea.
343-A	20.00/C
344	.55/Ea.
345	.60/Ea.
345-A	25.00/C
346	3.00/Ea.
347	3.60/Ea.
348	2.00/Ea.
350	1.50/Ea.
351	1.50/Ea.
352	1.50/Ea.
353	1.50/Ea.
354	5.55/Ea.
359	1.50/Ea.
360-BC	32.50/Ea.
361-BC-C	35.00/Ea.
362-BC 50′	22.50/Ea.
363-BC 50′	30.00/Ea.
364-BC-C	127.50/Ea.
365-BC-C	138.00/Ea.
366	17.00/C
367	22.00/C
368	2.50/C
369	2.50/C
370	5.00/C
371	3.00/C
372	2.50/C
373	6.50/C
377	.48/Ea.
378	.63/Ea.
379	.68/Ea.
380-C	3.46/Ea.
381-C	3.85/Ea.
382-C	3.85/Ea.
382-C	3.85/Ea.
383-C	4.25/Ea.
384-C	4.75/Ea.
385-C	5.25/Ea.
386-C	6.40/Ea.
387-C	7.60/Ea.
388-C	10.30/Ea.
389-C	10.90/Ea.
391	25.00/C
392	77.00/C
392-A	55.00/C
392-B	110.00/C
393	70.00/C
393-A	70.00/C
394	50.00/C
395	50.00/C
396	50.00/C
396-B	90.00/C
397	55.00/C
397-B	95.00/C
398	50.00/C
398-B	85.00/C
399	50.00/C
399-A	55.00/C
400	25.00/C
400-A	25.00/C
400-B	40.00/C
401	25.00/C
401-B	40.00/C
402	4.40/C
402-A	5.50/C
402-B	11.50/C
403	17.00/C
404	35.00/C
404-A	30.00/C
404-B	45.00/C
404-BC	60.00/C
404-CB	50.00/C
404-S	30.00/C
405	1.65/Ea.
406	22.00/C
407	22.00/C
408	3.15/Ea.
409	25.00/C
410	.55/Ea.
411	1.32/Ea.
412	33.00/C
413	1.75/Ea.
414	25.00/C
415	25.00/C
416	22.00/C
417	.55/Ea.
418	.60/Ea.
419	40.00/C
420	1.45/Ea.
420-A	22.00/C
421	1.45/Ea.
422	1.45/Ea.
423	1.45/Ea.
426	27.00/C
426-A	27.00/C
430	.36/Ea.
431	.44/Ea.
431-J	.64/Ea.
432	.80/Ea.
432-J	1.25/Ea.
433	1.56/Ea.
433-J	2.25/Ea.
434	2.87/Ea.
435	2.15/Ea.
436	.60/Ea.
437	.65/Ea.
438	.75/Ea.
439	.40/Ea.
440	2 .00/C
440-A	29.00/C
440-B	34.00/C
440-C	39.00/C
440-E	46.00/C
440-F	49.00/C
441	17.25/C
441-A	17.25/C
441-B	17.25/C
442	17.20/C
442-A	18.00/C
443	20.00/C
443-A	24.00/C
444	21.00/C
444-A	21.00/C
444-B	21.00/C
444-C	22.00/C
445	21.00/C
445-A	21.00/C
445-B	21.00/C
445-C	22.00/C
445-D	34.00/C
445-E	39.00/C
445-F	46.00/C
445-G	54.00/C
446	23.75/C
446-A	23.75/C
446-B	39.00/C
446-C	46.00/C
447	23.75/C
447-B	64.00/C
447-D	79.00/C
447-E	89.00/C
448	33.35/C
449	55.00/C
450	.59/Ea.
451-J	.77/Ea.
451	.71/Ea.
451-J	.71/Ea.
452	.77/Ea.
452-J	1.00/Ea.
453	1.37/Ea.
453-J	1.58/Ea.
454	1.80/Ea.
454-J	2.14/Ea.
455	30.00/C
455-BC	40.00/C
457	.75/Ea.
458	.32/Ea.
462	.25/Ea.
463	.50/Ea.
464	.35/Ea.
465	30.00/C
465-B	50.00/C
466	30.00/C
466-A	40.00/C
467	50.00/C
467-B	70.00/C
468	.60/Ea.
469	.60/Ea.
470	1.00/Ea.
471	1.40/Ea.
472	.45/Ea.
473	.23/Ea.
474	.20/Ea.
475	1.47/Ea.
476	1.10/Ea.
478	.45/Ea.
478-J	.54/Ea.
479	.78/Ea.
479-J	.95/Ea.
490-C	3.15/Ea.
490-M	31.50/Ea.
490-A 150′	4.72/Ea.
490-B 200′	6.30/Ea.
492-C	4.60/Ea.
492-M	46.00/Ea.
492-A 150′	6.90/Ea.
492-B 200′	9.20/Ea.
493-C	4.50/Ea.
493-M	45.00/Ea.
495-C	5.00/Ea.
495-M	50.00/Ea.
497-C	7.95/Ea.
497-M	79.00/Ea.
499-C	14.60 /Ea.
499-M	139.00/Ea.
501	4.20/Ea.
503	3.90/Ea.
505	3.35/Ea.
506	.39/Ea.
507	.40/Ea.
508	.41/Ea.
510	.40/Ea.
511	.40/Ea.
512	.40/Ea.
514	.39/Ea.
515	.39/Ea.
516	.41/Ea.
518	.40/Ea.
519	.41/Ea.
520	.49/Ea.
521	.50/Ea.
522	.56/Ea.
523	.75/Ea.
524-C	10.00/Ea.
524-M	93.50/Ea.
526-C	7.50/Ea.
526-M	68.25/Ea.
527-C	21.75/Ea.
527-M	211.75/Ea.
528-C	32.50/Ea.
528-M	319.00/Ea.
529-C	51.60/Ea.
529-M	489.50/Ea.
531	27.00/C
531-A	40.00/C
532	27.00/C
533	27.00/C
534	27.00/C
535	27.00/C
536	27.00/C
537	27.00/C
538	33.00/C
538-A	30.00/C
539	33.00/C
540	.33/Ea.
541	.66/Ea.
542	.50/Ea.
543	.25/Ea.
544	.50/Ea.
545	.60/Ea.
546	.40/Ea.
546-A	.40/Ea.
547	.55/Ea.
550	.25/Ea.
550-A	.25/Ea.
550-B	.30/Ea.
550-C	.30/Ea.
551	.55/Ea.
552	.65/Ea.
553	.75/Ea.
554	1.00/Ea.
555	2.50/Ea.
556	1.95/Ea.
557	2.50/Ea.
558	.95/Ea.
559	1.45/Ea.
559-A	.80/Ea.
560	2.50/Ea.
561	2.50/Ea.
562	6.60/Ea.
564	4.85/Ea.
569-E	21.00/Ea.
570-C	5.60/Ea.
572-D	13.00/Ea.
573-E	25.00/Ea.
574-D	25.25/Ea.
575-D	36.00/Ea.
575/4-D	63.70/Ea.
578-D	34.00/Ea.
578/3-D	46.50/Ea.
578/4-D	73.50/Ea.
580-M	32.00/Ea.
582M	35.20/Ea.
582-M	35.20/Ea.
583-M	39.60/Ea.
584-M	42.35/Ea.
585-M	53.35/Ea.
586-M	53.35/Ea.
587-M	60.50/Ea.
588-M	96.00/Ea.
589-M	106.50/Ea.
590	30.00/C
591	35.00/C
592	30.00/C
593	1.50/C
595	25.00/C
597	12.00/C
598	11.00/C
600	11.00/C
601	50.00/C
603	40.00/C
604	30.00/C
605	40.00/C
606	30.00/C
607	90.00/C
608	100.00/C
609	110.00/C
610	120.00/C
611	22.50/C
613	15.00/C
616	1.40/Ea.
617	30.00/C
618	2.25/Ea.
619	.45/Ea.
621	.35/Ea.
625	23.00/C
626	.56/Ea.
628	.28/Ea.
629	8.50/C
631	25.00/C
632	25.00/C
633	25.00/C
634	25.00/C
635	25.00/C
636	25.00/C
650	.50/Ea.
653-8	1.45/Ea.
653-12	1.55/Ea.
653-24	1.65/Ea.
653-36	1.75/Ea.
655-8	1.50/Ea.
655-12	1.50/Ea.
655-24	1.60/Ea.
655-36	1.70/Ea.
663	22.80/Ea.
664	19.50/Ea.
666	18.50/C
667	45.00/Ea.
668	.35/Ea.
669	18.00/C
675	95.00/C
676	105.00/C
677	120.00/C
678	135.00/C
681-C	1.45/Ea.
690-D	27.00/Ea.
691-D	32.50/Ea.
692-D	45.00/Ea.
692/4-D	69.50/Ea.
693-D	41.75/Ea.
693/3-D	52.50/Ea.
693/4-D	82.00/Ea.
694-D	52.50/Ea.
694/3-D	62.50/Ea.
694/4-D	95.00/Ea.
695-D	59.00/Ea.
695-/3-D	75.90/Ea.
695/4-D	114.00/Ea.
696-D	85.00/Ea.
696/3-D	122.60/Ea.
696/4-D	173.50/Ea.
697-D	122.50/Ea.
697/4-D	220.00/Ea.
698-D	162.50/Ea.
698/3-D	227.50/Ea.
698/4-D	274.00/Ea.
700-C	1.25/Ea.
701-D	21.00/Ea.
702-D	44.00/Ea.
702/3-D	62.00/Ea.
702/4-D	85.00/Ea.
703-D	50.00/Ea.
703/3-D	75.00/Ea.
703/4-D	100.00/Ea.
704-D	79.50/Ea.
704/3-D	117.50/Ea.
704/4-D	170.00/Ea.
705-D	112.50/Ea.
705/3-D	160.00/Ea.
705/4-D	200.00/Ea.
706-D	158.00/Ea
706/3-D	210.00/Ea.
706/4-D	245.00/Ea.
710-C	9.79/Ea.
710-D	24.20/Ea.
710-E	48.40/Ea.
710-M	92.40/Ea.
710-F	226.88/Ea.
712-C	6.35/Ea.
712-D	15.20/Ea.
712-M	59.05/Ea.
712-F	146.75/Ea.
714-C	3.85/Ea.
714-D	9.45/Ea.
714-E	18.90/Ea.
714-M	36.70/Ea.
714-F	89.80/Ea.
715	3.90/C
715	32.00/M
715-A	4.00/C
715-A	33.00/M
715-B	4.30/C
715-B	36.00/M
715-C	4.75/C
715-C	40.00/M
715-D	5.00/C
715-D	42.00/M
715-E	5.50/C
715-E	46.00/M
716	6.00/C
716	50.00/M
716-A	7.00/C

TRADE DISCOUNT APPLIES TO LIST PRICES ONLY

BIRNBACH PRICE LIST

Cat. No.	Sug. List Price
716-A	57.00/M
716-B	7.50/C
716-B	66.00/M
716-C	8.00/C
716-C	71.00/M
716-D	8.50/C
716-D	74.00/M
716-E	9 00/C
716-E	80.00/M
717	9.50/C
717	86.00/M
717-A	10.00/C
717-A	91.00/M
717-B	10.50/C
717-B	97.00/M
717-C	22.50/C
717-C	180.00/M
717-D	24.50/C
717-D	200.00/M
717-E	28.00/C
717-E	240.00/M
725-100	6.50/Ea.
725-500	29.25/Ea.
725-1000	58.00/Ea.
726-100	7.50/Ea.
726-500	33.75/Ea.
726-1000	67.00/Ea.
727-100	8.50/Ea.
727-500	38.25/Ea.
727-1000	76.00/Ea.
728-100	8.95/Ea.
728-500	40.25/Ea.
728-1000	80.00/Ea.
729-100	9.35/Ea.
729-500	42.00/Ea.
729-1000	84.00/Ea.
730-100	9.90/Ea.
730-500	45.00/Ea.
730-1000	90.00/Ea.
731-100	10.50/Ea.
731-500	47.50/Ea.
731-1000	95.00/Ea.
732-100	14.00/Ea.
732-500	63.00/Ea.
732-1000	125.00/Ea.
733-100	15.00/Ea.
733-500	67.50/Ea.
733-1000	135.00/Ea.
734-100	16.00/Ea.
734-500	72.00/Ea.
734-1000	144.00/Ea.
735-100	17.50/Ea.
735-500	78.75/Ea.
735-1000	157.50/Ea.
736-100	20.00/Ea.
736-500	90.00/Ea.
736-1000	180.00/Ea.
737-100	32.00/Ea.
737-500	140.00/Ea.
737-1000	280.00/Ea.
738-100	48.00/Ea.
738-500	215.00/Ea.
738-1000	430.00/Ea.
749-C	34.50/Ea.
749-E	165.00/Ea.
749-M	330.00/Ea.
756-C	22.50/Ea.
756-E	110.00/Ea.
757-M	210.00/Ea.
762	20.00/C
763-3	30.00/Ea.
763-5	38.00/Ea.
763-7	85.00/Ea.
764	.35/Ea.
765	.90/Ea.
766	.59/Ea.
766-J	.88/Ea.
768	.70/Ea.
769	1.40/Ea.
770	2.50/Ea.
771	16.75/Ea.
772-C	14.75/Ea.
772-D	35.75/Ea.
772-E	71.25/Ea.
772-M	142.50/Ea.
772/18-C	20.00/Ea.
772/18-D	49.00/Ea.
772/18-E	95.00/Ea.
772/18-M	190.00/Ea.
773-C	17.00/Ea.
773-D	42.50/Ea.
773-E	83.50/Ea.
773-M	167.00/Ea.
773/18-C	31.25/Ea.
773/18-D	76.50/Ea.
773/18-E	150.00/Ea.
773/18-M	300.00/Ea.
774-C	21.00/Ea.
774-D	49.50/Ea.
774-E	97.50/Ea.
774-M	195.00/Ea.
774/18-C	34.50/Ea.
774/18-D	85.00/Ea.
774/18-E	170.00/Ea.
774/18-M	338.00/Ea.
775-C	26.00/Ea.
775-D	60.00/Ea.
775-E	120.00/Ea.
775-M	240.00/Ea.
776-C	31.00/Ea.
776-D	73.00/Ea.
776-E	145.00/Ea.
776-M	290.00/Ea.
777-C	34.00/Ea.
777-D	80.00/Ea.
777-E	159.50/Ea.
777-M	319.00/Ea.
778-C	40.00/Ea.
778-D	97.50/Ea.
778-E	195.00/Ea.
778-M	385.00/Ea.
781-C	23.50/Ea.
786	30.00/Ea.
787	43.00/Ea.
788-C	12.50/Ea.
788-D	30.50/Ea.
788-E	60.00/Ea.
788-M	120.00/Ea.
789-D	30.50/Ea.
790-C	14.25/Ea.
790-D	35.25/Ea.
790-E	69.00/Ea.
790-M	138.00/Ea.
791-D	35.25/Ea.
792-C	17.40/Ea.
792-D	42.50/Ea.
792-E	83.50/Ea.
792-M	167.00/Ea.
793-D	42.50/Ea.
794-C	20.65/Ea.
794-D	50.65/Ea.
794-E	100.00/Ea.
794-M	200.00/Ea.
795-D	50.65/Ea.
796-C	26.50/Ea.
796-D	63.00/Ea.
796-E	125.00/Ea.
796-M	248.50/Ea.
797-D	63.00/Ea.
798-C	32.50/Ea.
798-D	79.40/Ea.
798-E	156.25/Ea.
798-M	312.50/Ea.
802-D	26.40/Ea.
803-D	22.00/Ea.
810-E	39.00/Ea.
811	2.25/Ea.
812	75.00/C
813	16.75/C
813-T	75.00/C
814 T	15.00/C
815	.84/Ea.
816	.57/Ea.
817	.72/Ea.
818-C	14.60/Ea.
818-E	73.00/Ea.
818-M	146.00/Ea.
819	.75/Ea.
820-C	12.65/Ea.
820-E	63.25/Ea.
820-M	126.50/Ea.
822-E	44.00/Ea.
824-E	52.25/Ea.
825-E	31.60/Ea.
826-M	75.00/Ea.
826/30-E	44.00/Ea.
826/28-E	42.50/Ea.
826/26-E	40.00/Ea.
827-E	50.00/Ea.
828-E	74.00/Ea.
829-E	91.00/Ea.
830-E	160.00/Ea.
831-C	7.25/Ea.
831-E	35.00/Ea.
831-M	70.00/Ea.
832-C	8.00/Ea.
832-E	38.50/Ea.
832-M	77.00/Ea.
833-C	9.00/Ea.
833-E	43.75/Ea.
833-M	87.50/Ea.
834-C	11.00/Ea.
834-E	52.50/Ea.
834-M	105.00/Ea.
835-C	14.00/Ea.
835-E	66.00/Ea.
835-M	130.00/Ea.
853-C	5.25/Ea.
853-E	25.00/Ea.
853-M	48.50/Ea.
854-C	5.25/Ea.
854-E	25.00/Ea.
854-M	48.50/Ea.
855-50′	2.90/Ea.
855-C	5.50/Ea.
855-E	25.65/Ea.
855-M	50.00/Ea.
856-50′	25.00/Ea
856-C	48.50/Ea.
856-E	241.00/Ea.
856-M	478.00/Ea.
856/1-50′	28.00/Ea.
856/1-C	54.00/Ea.
856/1-E	265.00/Ea.
856/1-M	525.00/Ea.
856/2-50′	47.00/Ea.
856/2-C	90.50/Ea.
856/2-E	360.00/Ea.
856/2-M	710.00/Ea.
857-50′	24.00/Ea.
857-C	47.00/Ea.
857-E	233.00/Ea.
857-M	463.00/Ea.
858-50′	3.25/Ea.
858-C	6.50/Ea.
858-E	30.50/Ea.
858-M	61.00/Ea.
859-50′	3.50/Ea.
859-C	6.75/Ea.
859-E	33.00/Ea.
859-M	64.50/Ea.
860-50′	4.45/Ea.
860-C	8.90/Ea.
860-E	44.25/Ea.
860-M	88.50/Ea.
863-50′	5.25/Ea.
863-C	10.50/Ea.
863-E	50.00/Ea.
863-M	100.00/Ea.
864-50′	8.25/Ea.
864-C	16.50/Ea.
864-E	80.00/Ea.
864-M	160.00/Ea.
865-50′	11.50/Ea.
865-C	23.00/Ea.
865-E	110.00/Ea.
865-M	220.00/Ea.
865/1-50′	24.00/Ea.
865/1-C	46.50/Ea.
865/1-E	230.00/Ea.
865/1-M	458.00/Ea.
866	.265/Ea.
866-J	.35/Ea.
866-SJ	.81/Ea.
867	.42/Ea.
867-J	.53/Ea.
868-50′	10.00/Ea.
868-C	19.75/Ea.
868-E	96.00/Ea.
868-M	192.00/Ea.
870-C	11.00/Ea.
870-D	26.50/Ea.
870-E	52.50/Ea.
870-M	103.00/Ea.
872-C	13.50/Ea.
872-D	32.50/Ea.
872-E	63.75/Ea.
872-M	127.00/Ea.
875	4.50/Ea.
876	5.50/Ea.
877	6.75/Ea.
878	8.00/Ea.
878/6	11.10/Ea.
878/7	14.50/Ea.
880	5.50/Ea.
881	6.25/Ea.
881/3	9.15 /Ea.
882	6.75/Ea.
882/3	10.10/Ea.
885	5.50/Ea.
886	7.10/Ea.
877	6.75/Ea.
888	7.25/Ea.
889	8.25/Ea.
889/3	11.50/Ea.
889/4	13.60/Ea.
890	9.50/Ea.
891	9.75/Ea.
891/3	14.50/Ea.
891/4	14.75/Ea.
893	25.00/Ea.
893/3	27.00/Ea.
893/4	31.00/Ea.
894	32.00/Ea.
894/3	36.00/Ea.
894/4	41.00/Ea.
895	12.75/Ea.
895-A	3.50/Ea.
895-B	1.50/Ea.
896	26.50/Ea.
896-A	7.50/Ea.
897	27.75/Ea.
897-A	7.75/Ea.
898	28.50/Ea.
898-A	8.70/Ea.
901-E	135.00/Ea.
902-E	200.00/Ea.
903-E	125.00/Ea.
904F-E	130.00/Ea.
904DSF-E	210.00/Ea.
904DS-E	200.00/Ea.
905-M	97.25/Ea.
906-M	97.00/Ea.
907-M	110.00/Ea.
909-M	167.50/Ea.
910-M	97.00/Ea.
912-E	210.00/Ea.
914-M	150.00/Ea.
916-M	200.00/Ea.
919-E	42.50/Ea.
920-M	85.00/Ea.
924-C	8.50/Ea.
924-E	40.00/Ea.
924-M	79.00/Ea.
925-C	11.25/Ea.
925-E	53.00/Ea.
925-M	105.00/Ea.
931-E	11.00/Ea.
931-M	21.00/Ea.
932-E	17.50/Ea.
932-M	35.00/Ea.
933-E	18.75/Ea.
933-M	37.50/Ea.
934-E	23.50/Ea.
934-M	47.00/Ea.
938-C	11.50/Ea.
938-E	48.80/Ea.
938-M	97.35/Ea.
939-C	9.25/Ea.
939-E	42.50/Ea.
939-M	87.50/Ea.
940-E	44.50/Ea.
940/1-E	35.00/Ea.
941-E	35.00/Ea.
941/1-E	29.50/Ea.
942-E	36.50/Ea.
943-E	51.50/Ea.
944-E	77.00/Ea.
947-E	52.50/Ea.
948-E	72.50/Ea.
952-E	32.50/Ea.
963	14.00/C
964	19.50/C
965	.20/Ea.
966	.20/Ea.
966-J	.20/Ea.
967	45.00/C
972-C	15.75/Ea.
972A-C	15.50/Ea.
972A-E	76.00/Ea.
972A-M	150.00/Ea.
972B-C	15.25/Ea.
972BE	75.50/Ea.
972B-M	150.00/Ea.
972S-C	12.50/Ea.
972S-E	55.00/Ea.
972S-M	110.00/Ea.
973-C	16.00/Ea.
973S-C	14.00/Ea.
973S-E	66.00/Ea.
973S-M	132.00/Ea.
974-C	20.00/Ea.
975-C	27.50/Ea.
976-C	30.25/Ea.
977-C	36.85/Ea.
978-C	41.25/Ea.
981-M	32.75/Ea.
982-M	42.50/Ea.
983-M	49.50/Ea.
984-M	64.50/Ea.
985-M	42.50/Ea.
986-M	53.00/Ea.
987-M	63.50/Ea.
988-M	74.50/Ea.
989-M	67.50/Ea.
989/3-M	89.50/Ea.
990-M	27.50/Ea.
990/3-M	41.00/Ea.
991-M	36.50/Ea.
991/3-M	53.50/Ea.
992-M	49.00/Ea.
992/3-M	75.00/Ea.
993-M	72.50/Ea.
993/3-M	110.00/Ea.
994-M	109.00/Ea.
994/3-M	160.00/Ea.
995-M	155.00/Ea.
995/3-M	240.00/Ea.
1013	2.75/Ea.
1014	5.25/Ea.
1015	10.00/Ea.
1017-M	38.50/M
1017-C	4.24/Ea.
1017-10	.66/Ea.
1025	1.35/Ea.
1050	2.50/Ea.
1051	4.50/Ea.
1052	35.00/Ea.
1053	.75/Ea.
1054	1.40/Ea.
1055	2.75/Ea.
1056	21.00/Ea.
1057	1.45/Ea.
1058	2.90/Ea.
1059	5.00/Ea.
1060	40.00/Ea.
1070	15.00/Ea.
1071	15.00/Ea.
1072	16.00/Ea.
1073	2.95/Ea.
1074	5.15/Ea.
1075	9.75/Ea.
1076	2.75/Ea.
1077	4.75/Ea.
1078	9.00/Ea.
1079	2.95/Ea.
1080	4.75/Ea.
1081	9.00/Ea.
1082	2.95/Ea.
1083	4.75/Ea.
1084	9.00/Ea.
1085	2.95/Ea.
1086	4.75/Ea.
1087	9.00/Ea.
1101	5.00/Ea.
1111-D	37.50/Ea.
1112-E	75.00/Ea.
1113-M	145.00/Ea.
1120	5.50/C
1121	3.00/C
1122	6.00/C
1123	2.50/C
1124	2.50/C
1125	5.50/C
1125-T	6.50/C
1126	7.25/C
1126-T	8.25/C
1127	8.80/C
1127-T	10.00/C
1128	10.50/C
1128-T	12.00/C
1129	12.00/C
1129-T	13.75/C
1130	5.50/C
1130-T	6.50/C
1131	7.25/C
1131-T	8.25/C
1132	8.80/C
1132-T	10.00/C
1133	10.50/C
1133-T	12.00/C
1134	12.00/C
1134-T	13.75/C
1135	8.80/C
1136	10.50/C
1137	12.00/C
1138	13.75/C
1139	15.50/C
1140	8.80/C
1141	10.50/C
1142	12.00/C
1143	13.75/C
1144	15.50/C
1145	6.50/C
1146	8.25/C
1147	10.00/C
1148	12.00/C
1149	6.50/C
1150	8.25/C
1151	10.00/C
1152	12.00/C
1153	1.50/C
1154	1.80/C
1155	2.00/C
1156	2.25/C
1157	2.50/C
1180	50.00/C
1182	60.00/C
1184	55.00/C
1190	65.00/C
1192	90.00/C
1194	70.00/C
1220	16.60/Ea.
1220-A	12.50/Ea.
1260	25.00/C
1261	25.00/C
1262	25.00/C
1263	44.00/C
1264	50.00/C
1265	60.00/C
1266	69.00/C
1352	4.00/C
1352-A	4.50/C
1352-B	5.50/C
1352-C	5.25/C
1353	5.50/C
1353-A	6.00/C
1354	6.50/C
1354-A	6.90/C
1354-B	7.50/C
1355	8.75/C
1355-A	8.75/C
1355-B	9.50/C
1356	10.00/C
1356-A	10.25/C
1356-B	11.00/C
1357	11.00/C
1358	11.00/C
1359	13.00/C
1360	13.50/C
1372	13.00/C
1373	18.00/C
1374	22.00/C
1375	30.00/C
1376	35.00/C
1377	38.00/C
1378	42.00/C
1379	44.00/C
1380	48.00/C
1382	3.00/C
1382-A	3.25/C
1382-B	3.90/C
1382-C	3.75/C
1383	4.00/C
1383-A	4.00/C
1384	5.50/C
1384-A	5.90/C
1384-B	6.10/C
1385	6.25/C
1385-A	6.50/C
1385-B	7.25/C
1386	8.25/C
1386-A	9.00/C
1386-B	10.75/C
1387	10.75/C
1388	9.75/C
1389	10.75/C
1390	10.95/C
1402-C	7.90/Ea.
1403-M	72.50/Ea.
1406-C	4.25/Ea.
1407-M	40.00/Ea.
1410-C	2.90/Ea.
1411-M	26.25/Ea.
1414-C	2.00/Ea.
1415-M	17.75/Ea.
1418-C	1.55/Ea.
1419-M	13.25/Ea.
1422-C	1.10/Ea.
1423-M	8.30/Ea.
1424-M	6.00/Ea.
1426-M	5.80/Ea.
1428-M	5.60/Ea.
1430-M	5.25/Ea.
1433-C	12.00/Ea.
1433-M	112.50/Ea.
1443/4-C	30.00/Ea.
1433/4-M	290.00/Ea.
1433/6-C	19.00/Ea.
1433/6-M	185.00/Ea.
1434-M	6.25/Ea.
1490-M	31.50/Ea.
1492-M	46.00/Ea.
1497-M	79.00/Ea.
1516	28.50/Ea.
1560-C	14.85/Ea.
1560-M	148.50/Ea.
1562-C	7.65/Ea.
1563-M	70.00/Ea.
1566-C	4.85/Ea.
1567-M	46.00/Ea.
1570-C	3.30/Ea.
1571-M	30.00/Ea.
1574-C	2.15/Ea.
1575-M	19.30/Ea.
1600-C	14.75/Ea.
1600-M	147.00/Ea.
1618-M	15.75/Ea.
1620-M	10.40/Ea.
1622-M	8.25/Ea.
1628-M	21.50/Ea.
1633-M	27.00/Ea.
1634-M	22.50/Ea.
1638-M	33.50/Ea.
1639-M	27.25/Ea.
1647-M	47.15/Ea.
1648-M	15.25/Ea.
1670-C	3.00/Ea.
1671-C	3.60/Ea.
1673-C	2.35/Ea.
1674-C	2.75/Ea.
1680-C	1.90/Ea.
1716	42.00/Ea.
1741-M	12.50/Ea.
1772-D	35.75/Ea.
1773-D	42.50/Ea.
1774-D	49.50/Ea.
1775-D	60.00/Ea.
1776-D	73.00/Ea.
1777-D	80.00/Ea.
1822-C	7.10/Ea.
1822B-E	31.50/Ea.
1822C-M	58.80/Ea.
1824-C	5.75/Ea.
1824-E	27.50/Ea.
1824M-M	54.00/Ea.
1825-C	6.00/Ea.
1825-E	29.00/Ea.
1825M-M	56.50/Ea.
1835-E	32.00/Ea.
1836-E	29.50/Ea.
1839-E	45.00/Ea.
1839-M	90.00/Ea.
1840-C	7.00/Ea.
1840-M	66.75/Ea.
1841-C	9.25/Ea.
1841-E	44.00/Ea.
1841-M	88.00/Ea.
1842-C	13.00/Ea.
1842-E	63.00/Ea.
1842-M	126.00/Ea.
1843-C	17.50/Ea.
1843-E	82.50/Ea.
1843-M	165.00/Ea.
1844-C	17.00/Ea.
1844-E	84.00/Ea.
1844-M	167.00/Ea.
1845-E	110.00/Ea.
1845-M	215.00/Ea.
1846-E	150.00/Ea.
1846-M	300.00/Ea.
1870-D	26.50/Ea.
1872-D	32.50/Ea.
1874-M	69.00/Ea.
1874A-E	36.10/Ea.
1875-M	86.10/Ea.
1875A-E	45.00/Ea.
1878-M	111.00/Ea.
1878A-E	58.35/Ea.
1963	6.00/C
1964	10.00/C
1965	10.00/C
1967	20.00/C
1968	10.00/Ea.
1972-C	13.90/Ea.
1972-D	31.00/Ea.
1972-E	61.25/Ea.
1972-M	132.00/Ea.
1972A-C	15.00/Ea.
1972A-E	75.00/Ea.
1972A-M	150.00/Ea.
2000-M	15.00/Ea.
2010	15.30/Ea.
2012	12.70/Ea.
2013	10.90/Ea.
2014	9.90/Ea.
2015	8.10/Ea.
2016	6.60/Ea.
2018	6.25/Ea.
2025-25′	1.35/Ea.
2050-50′	2.50/Ea.
2051-C	4.50/Ea.
2052-M	28.00/Ea.
2100	1.65/Ea.
2125	.45/Ea.
2500-E	7.50/Ea.
2611	45.00/C
2617	60.00/C
2650	.56/Ea.
2810-C	15.68/Ea.
2810-E	78.25/Ea.
2812-C	10.50/Ea.
2812-E	52.00/Ea.
2814-C	7.30/Ea.
2814-E	36.00/Ea.
2816-C	6.05/Ea.
2816-E	30.00/Ea.
2818-C	5.00/Ea.
2818-E	24.50/Ea.
3000	
TO	
3024	1.55/Ea.
3025	1.35/Ea.
3050	2.50/Ea.
3051	4.50/Ea.
3052	28.00/Ea.
3460-C	5.23/Ea.
3461-C	3.85/Ea.
3462-E	18.15/Ea.
3600-E	24.75/Ea.
4025	.85/Ea.
4050	1.60/Ea.
4051	2.80/Ea.
4052	25.00/Ea.
4125	.50/Ea.
4125-J	.58/Ea.
4175	1.15/Ea.
4175-J	1.65/Ea.
4176	.73/Ea.
4176-J	.97/Ea.
4233	1.15/Ea.
4234	1.25/Ea.
4235	2.95/Ea.
4236	3.25/Ea.
4237	3.45/Ea.
4238	4.50/Ea.
4275	.70/Ea.
4275-J	1.16/Ea.
4276	1.50/Ea.
4276-J	1.75/Ea.
4450	1.38/Ea.
4450-J	1.80/Ea.
4451	1.17/Ea.
4451-J	1.55/Ea.
4452	2.15/Ea.
4452-J	2.50/Ea.
4500-M	21.00/Ea.
4510-E	50.00/Ea.
4515	56.00/Ea.
4516-E	62.50/Ea.
4520-E	215.00/Ea.
4701-C	4.00/Ea.
4701-E	17.50/Ea,
4701-M	32.50/Ea.
4702-C	6.00/Ea.
4702-E	25.00/Ea.
4702-M	50.00/Ea.
4703-C	8.00/Ea.
4703-E	35.00/Ea.
4703-M	70.00/Ea.
4706-C	14.00/Ea.
4706-E	70.00/Ea.
4706-M	137.50/Ea.
4709-C	22.50/Ea.
4709-E	100.00/Ea.
4709-M	200.00/Ea.
4711-C	26.25/Ea.
4711-E	125.00/Ea.
4711-M	235.00/Ea.
4711/13E	126.25/Ea.
4715-C	30.00/Ea.
4715-E	145.00/Ea.
4715-M	290.00/Ea.
4716-C	32.40/Ea.
4716-E	160.00/Ea.
4716-M	320.00/Ea.
4727-C	51.75/Ea.
4727-E	258.75/Ea.
4727-M	515.00/Ea.
4727-E	365.00/Ea.
4727/41E	485.00/Ea.
4729-E	790.00/Ea.
4729/76E	132.00/Ea.
4729/101-E	1675.00/Ea.
4731-C	425.00/Ea.
4731-E	17.75/Ea.
4731-M	35.25/Ea.
4732-C	8.10/Ea.
4732-E	37.50/Ea.
4732-M	75.00/Ea.
4733-C	10.60/Ea.
4733-E	50.00/Ea.
4733-M	100.00/Ea.
4734-C	13.50/Ea.
4734-E	62.50/Ea.
4734-M	125.00/Ea.
4735-C	16.00/Ea.
4735-E	76.25/Ea.
4735-M	152.50/Ea.
4736-C	20.00/Ea.
4736-E	90.00/Ea.
4736-M	180.00/Ea.
4739-C	26.00/Ea.
4739-E	126.00/Ea.
4739-M	252.50/Ea.
4745-C	36.00/Ea.
4745-E	175.00/Ea.
4745-M	350.00/Ea.
4747-C	72.50/Ea.
4747-E	350.00/Ea.
4747-M	700.00/Ea.
4752-C	6.25/Ea.
4752-E	27.50/Ea.
4752-M	55.00 Ea.
4753-C	8.00/Ea.
4753-E	38.50/Ea.

BIRNBACH PRICE LIST

Cat. No.	Sug. List Price
4753-M	77.00/Ea.
4754-C	10.75/Ea.
4754-E	51.00/Ea.
4754-M	100.00/Ea.
4755-C	13.50/Ea.
4755-E	65.00/Ea.
4755-M	130.00/Ea.
4756-C	16.00/Ea.
4756-E	76.00/Ea.
4756-M	152.00/Ea.
5000	1.65/Ea.
5002	1.75/Ea.
5003	2.40/Ea.
5004	.75/Ea.
5005	.85/Ea.
5006	1.50/Ea.
5007	.90/Ea.
5008	1.25/Ea.
5009	1.50/Ea.
5010	4.25/Ea.
5011	4.25/Ea.
5012	6.00/Ea.
5040	.23/Ea.
5041	.23/Ea.
5042	.24/Ea.
5043	.24/Ea.
5044	.24/Ea.
5045	.24/Ea.
5046	.24/Ea.
5047	.23/Ea.
5050	.35/Ea.
5051	.55/Ea.
5052	.56/Ea.
5053	.50/Ea.
5070	.50/Ea.
5071	.50/Ea.
5075	.30/Ea.
5076	.30/Ea.
5080	.50/Ea.
5081	.50/Ea.
5085	.50/Ea.
5086	.50/Ea.
5090	.55/Ea.
5091	.55/Ea.
5095	.36/Ea.
5096	.35/Ea.
5105	.45/Ea.
5106	.60/Ea.
5110	.60/Ea.
5111	.60/Ea.
5130	.20/Ea.
5131	.20/Ea.
5132	.25/Ea.
5133	.25/Ea.
5134	.25/Ea.
5140	.25/Ea.
5141	.40/Ea.
5142	.25/Ea.
5143	.60/Ea.
5160	.23/Ea.
5161	.25/Ea.
5165	.30/Ea.
5166	.30/Ea.
5170	.50/Ea.
5171	.30/Ea.
5180	.55/Ea.
5181	.55/Ea.
5185	.30/Ea.
5190	.17/Ea.
5191	.17/Ea.
5195	.55/Ea.
5200	.55/Ea.
5300	1.15/Ea.
5301	1.35/Ea.
5302	1.45/Ea.
5304	1.55/Ea.
5305	2.10/Ea.
5306	2.30/Ea.
5307	2.60/Ea.
5308	1.40/Ea.
5309	1.60/Ea.
5310	1.85/Ea.
5311	2.75/Ea.
5312	3.15/Ea.
5313	3.35/Ea.
5314	1.15/Ea.
5315	1.35/Ea.
5316	1.75/Ea.
5317	2.05/Ea.
5318	3.65/Ea.
5319	4.50/Ea.
5320	1.35/Ea.
5321	1.60/Ea.
5322	2.10/Ea.
5323	2.60/Ea.
5324	4.25/Ea.
5325	5.40/Ea.
5326	1.60/Ea.
5327	1.80/Ea.
5328	1.80/Ea.
5329	1.35/Ea.
5330	2.10/Ea.
5331	4.50/Ea.
5332	1.60/Ea.
5333	2.60/Ea.
5334	5.40/Ea.
5335	1.40/Ea.
5336	1.60/Ea.
5337	.80/Ea.
5338	.90/Ea.
5339	.60/Ea.
5340	.65/Ea.
5341	2.20/Ea.
5342	2.20/Ea.
5343	3.85/Ea.
5344	3.85/Ea.
5345	5.40/Ea.
5346	7.15/Ea.
5347	8.60/Ea.
5360	2.80/Ea.
5361	3.10/Ea.
5362	3.10/Ea.
5363	3.40/Ea.
5364	3.40/Ea.
5365	3.65/Ea.
5366	3.65/Ea.
5367	3.65/Ea.
5370	2.10/Ea.
5371	2.30/Ea.
5372	2.30/Ea.
5373	2.45/Ea.
5374	2.45/Ea.
5375	2.70/Ea.
5376	2.70/Ea.
5377	2.70/Ea.
5380	3.75/Ea.
5381	4.50/Ea.
5382	4.50/Ea.
5383	4.50/Ea.
5384	4.50/Ea.
5385	4.90/Ea.
5386	4.90/Ea.
5387	4.90/Ea.
5390	2.50/Ea.
5391	2.80/Ea.
5391A	2.80/Ea.
5392	2.80/Ea.
5393	2.80/Ea.
5394	3.25/Ea.
5395	3.25/Ea.
5396	3.25/Ea.
5400	6.45/Ea.
5401	7.70/Ea.
5402	7.70/Ea.
5410	8.30/Ea.
5411	7.40/Ea.
5412	11.15/Ea.
5413	10.40/Ea.
5414	9.45/Ea.
5415	10.40/Ea.
5416	9.45/Ea.
5417	12.45/Ea.
5418	12.45/Ea.
5420	8.25/Ea.
5421	7.60/Ea.
5422	10.30/Ea.
5423	9.35/Ea.
5424	10.30/Ea.
5425	9.35/Ea.
5426	11.15/Ea.
5427	10.55/Ea.
5428	11.15/Ea.
5429	10.55/Ea.
5430	12.40/Ea.
5431	11.50/Ea.
5432	12.40/Ea.
5433	11.50/Ea.
5434	12.40/Ea.
5435	11.50/Ea.
5460	15.75/Ea.
5461	15.75/Ea.
5462	15.75/Ea.
5463	15.75/Ea.
5464	15.75/Ea.
5465	15.75/Ea.
5466	15.75/Ea.
5470	21.50/Ea.
5471	21.50/Ea.
5472	21.50/Ea.
5473	21.50/Ea.
5474	21.50/Ea.
5475	21.50/Ea.
5476	21.50/Ea.
5480 K1	10.10/Ea.
5480 K2	11.40/Ea.
5480 K3	11.40/Ea.
5480 K4	10.10/Ea.
5480 K5	10.10/Ea.
5480 K6	11.40/Ea.
5480 K7	10.10/Ea.
5481 K1	12.60/Ea.
5481 K2	14.70/Ea.
5481 K3	14.70/Ea.
5481 K4	12.60/Ea.
5481 K5	12.60/Ea.
5481 K6	14.70/Ea.
5482 K7	12.60/Ea.
6100	.65/Ea.
6102	.70/Ea.
6103	.84/Ea.
6104	.88/Ea.
6105	3.10/Ea.
6110	2.20/Ea.
6111	2.50/Ea.
6112	3.15/Ea.
6113	3.45/Ea.
6114	.35/Ea.
6115	.35/Ea.
6180	2.55/Ea.
6184	2.25/Ea.
6184A	2.25/Ea.
6185A	2.60/Ea.
6185	2.60/Ea.
6186	3.10/Ea.
6190	1.85/Ea.
6191	1.85/Ea.
6192	2.15/Ea.
6193	2.80/Ea.
6194	2.80/Ea.
6195	3.10/Ea.
6200	1.15/Ea.
6201	1.40/Ea.
6202	1.45/Ea.
6202A	1.55/Ea.
6203	1.80/Ea.
6204	2.10/Ea.
6205	2.40/Ea.
6206	2.40/Ea.
6207	2.65/Ea.
6208	.09/Ea.
6208A	.09/Ea.
6210	1.45/Ea.
6211	1.95/Ea.
6212	1.75/Ea.
6213	2.30/Ea.
6214	2.40/Ea.
6215	2.90/Ea.
6216	2.70/Ea.
6217	3.30/Ea.
6220	1.15/Ea.
6221	1.45/Ea.
6221A	1:55/Ea.
6222	2.10/Ea.
6223	2.40/Ea.
6224	1.60/Ea.
6225	2.20/Ea.
6225A	2.20/Ea.
6225B	2.20/Ea.
6225C	2.20/Ea.
6226	3.30/Ea.
6227	8.15/Ea.
6228	12.55/Ea.
6229	16.75/Ea.
6230	2.55/Ea.
6233	1.28/Ea.
6234	1.39/Ea.
6235	1.78/Ea.
6236	2.39/Ea.
6231A	3.10/Ea.
6231	3.10/Ea.
6231B	3.45/Ea.
6232	.40/Ea.
6238	3.30/Ea.
6238B	3.50/Ea.
6238C	3.50/Ea.
6238D	3.30/Ea.
6239	.10/Ea.
6240	2.50/Ea.
6241	2.20/Ea.
6242	3.45/Ea.
6244	1.30/Ea.
6244A	1.30/Ea.
6244B	1.65/Ea.
6244C	1.65/Ea.
6244D	1.70/Ea.
6244E	1.70/Ea.
6245	.25/Ea.
6245S	.40/Ea.
6246	.25/Ea.
6246S	.48/Ea.
6247	.36/Ea.
6248	.36/Ea.
6249	2.45/Ea.
6250	2.05/Ea.
6251	2.34/Ea.
6251C	2.70/Ea.
6251V	2.40/Ea.
6252	2.95/Ea.
6252M	3.55/Ea.
6253	3.20/Ea.
6261	2.80/Ea.
6262	3.15/Ea.
6263	3.45/Ea.
6270	2.10/Ea.
6271	2.45/Ea.
6272	2.50/Ea.
6273	2.80/Ea.
6274	2.80/Ea.
6280	1.55/Ea.
6280A	2.20/Ea.
6281	1.85/Ea.
6281A	2.50/Ea.
6282	2.25/Ea.
6282A	3.15/Ea.
6283	2:60/Ea.
6283A	3.45/Ea.
6284	1.90/Ea.
6300	6.25/M
6301	6.75/M
6302	7.00/M
6303	8.10/M
6304	7.00/M
6305	7.54/Ea
6306	8.50/Ea
6307	7.40/M
6307	7.40/M
6308	7.40/M
6309	8.40/M
6310	32.00/M
6311	55.00/M
6312	10.50/M
6313	10.75/M
6314	11.50/M
6315	14.50/M
6316	26.00/M
6317	29.10/M
6318	32.00/M
6318-A	38.25/M
6319	73.00/M
6319-A	73.00/M
6320	52.00/M
6320-A	95.00/M
6320-B	120.00/M
6320-C	136.00/M
6321	6.25/M
6322	6.75/M
6323	7.25/M
6324	8.00/M
6325	8.65/M
6326	9.30/M
6327	11.00/M
6328	11.50/M
6329	16.50/M
6330	9.00/M
6331	9.00/M
6332	8.60/M
6333	8.80/M
6334	9.70/M
6335	11.50/M
6336	20.00/M
6337	27.50/M
6338	35.00/M
6339	50.00/M
6350	10.00/M
6350-A	10.00/M
6351	10.00/M
6351-A	10.00/M
6352	10.00/M
6352-A	10.00/M
6353	11.00/M
6353-A	11.00/M
6354	13.50/M
6354-A	13.50/M
6355	8.25/M
6356	7.70/M
6357	7.70/M
6358	5.50/M
6359	5.50/M
6360	5.75/M
6361	6.00/M
6362	7.75/M
6363	13.00/M
6400	10.00/M
6401	12.00/M
6402	13.25/M
6403	16.00/M
6404	19.50/M
6405	14.00/M
6406	14.00/M
6407	15.00/M
6408	16.50/M
6409	19.00/M
6410	26.40/M
6410-A	29.50/M
6411	30.00/M
6412	33.50/M
6413	19.50/M
6414	21.50/M
6415	25.00/M
6416	28.50/M
6417	35.00/M
6418	36.00/M
6420	6.75/M
6421	7.30/M
6422	7.75/M
6423	8.25/M
6424	8.75/M
6425	10.00/M
6426	8.35/M
6427	8.27/M
6428	9.60/M
6429	10.00/M
6430	11.15/M
6431	12.65/M
6432	16.50/M
6433	9.60/M
6434	10.00/M
6435	11.20/M
6436	12.50/M
6437	13.25/M
6438	15.00/M
6439	19.00/M
6440	10.30/M
6441	12.00/M
6442	10.30/M
6443	16.50/M
6444	18.50/M
6445	15.90/M
6446	21.00/M
6447	27.50/M
6448	8.75/M
6449	9.25/M
6450	9.50/M
6460	3.70/Gr.
6461	3.96/Gr.
6462	4.90/Gr.
6463	5.50/Gr.
6464	7.65/Gr
6465	8.55/Gr.
6466	9.40/Gr.
6470	2.30/Gr.
6471	2.50/Gr.
6471	2.50/Gr.
6471-A	2.55/Gr.
6472	2.60/Gr.
6473	2.70/Gr.
6474	3.00/Gr.
6475	3.70/Gr.
6476	4.00/Gr.
6477	3.30/Gr.
6478	3.30/Gr.
6479	4.80/M
6480	5.50/M
6480-A	4.80/M
6481	6.00/M
6482	9.10/M
6483	15.00/M
6484	4.95/M
6485	4.65/M
6486	5.20/M
6487	5.20/M
6488	7.50/M
6490	5.50/M
6491	5.50/M
6492	6.00/M
6493	7.75/M
6494	13.00/M
6494/1	13.00/M
6494/2	13.00/M
6500	2.00/Gr.
6501	2.50/Gr.
6502	2.75/Gr.
6503	3.05/Gr.
6504	3.35/Gr.
6505	3.60/Gr.
6506	3.90/Gr.
6507	4.25/Gr.
6510	2.75/Gr.
6511	2.80/Gr.
6512	3.20/Gr.
6513	3.20/Gr.
6514	3.20/Gr.
6515	3.35/Gr.
6516	3.50/Gr.
6517	3.60/Gr.
6518	3.20/Gr.
6519	3.90/Gr.
6525	1.55/Gr.
6526	1.55/Gr.
6527	1.55/Gr.
6528	1.55/Gr.
6529	1.55/Gr.
6530	1.55/Gr.
6531	1.55/Gr.
6532	1.55/Gr.
6533	1.55/Gr.
6534	3.35/Gr.
6540	3.05/Gr.
6541	2.65/Gr.
6542	3.75/Gr.
6543	3.90/Gr.
6549	35.00/M
6549-A	35.00/M
6549-B	37.00/M
6549-C	40.00/M
6549-D	45.00/M
6550	6.30/C
6550	56.50/M
6550-C	28.00/C
6550-M	250.00/M
6551	6.30/C
6551	56.50/M
6551-A	6.30/C
6551-A	56.50/M
6551-C	29.60/C
6551-M	263.00/M
6562	5.75/C
6552	52.00/M
6552-A	5.75/C
6552-A	52.00/M
6552-B	5.75/C
6552-B	.52/M
6552-C	16.10/C
6552-M	146.00/M
6553	5.60/C
6553	51.00/M
6553-C	16.70/C
6553-M	147.50/M
6554	5.60/C
6554	51.00/M
6554-C	20.00/C
6554-M	178,50/M
6555	5.60/C
6555	51.00/M
6555-C	18.25/C
6555-M	154.75/M
6556	5.60/C
6556	51.00/M
6556-C	18.75/C
6556-M	162.00/M
6557	5.75/C
6557	52.00/M
6557-C	18.90/C
6657-M	163.25/M
6558	5.75/C
6558	52.00/M
6558-C	22.95/C
6558-M	203.00/M
6559	5.75/C
6559	52.00/M
6559-C	19.50/C
6559-M	167.50/M
6560	5.75/C
6560	52.00/M
6560-C	21.50/C
6560-M	185.50/M
6561	25.50/C
6561	222.50/M
6561-C	25.50/C
6561-C	222.50/M
6562	5.75/C
6562	52.00/M
6562-C	21.00/C
6562-M	183.50/M
6563	5.75/C
6563	52.00/M
6563-C	20.50/C
6563-M	180.50/M
6564	5.75/C
6564	52.00/M
6564-C	16.50/C
6564-M	161.75/M
6565	5.75/C
6565	52.00/M
6565-C	17.75/C
6565-M	154.25/M
6666	5.75/C
6566	52.00/M
6566-C	23.95/C
6566-M	210.00/M
6567	5.75/C
6567	52:00/M
6567-C	23.50/C
6567-M	206.00/M
6568	5.75/C
6568	52.00/M
6568-C	21.50/C
6568-M	185.50/M
6569	5.75/C
6569	52.00/M
6569-C	19.60/C
6569-M	170.50/M
6570	26.85/C
6570	235.50/M
6570-C	26.85/C
6570-M	235.50/M
6571	26.85/C
6571	235.50/M
6571-C	21.65/C
6571-M	189.25/M
6572	8.00/C
6572	70.00/M
6572-A	8.00/C
6572-A	70.00/M
6572-B	8.00/C
6572-C	29.40/C
6572-M	257.75/M
6573	41.00/C
6573	370.00/M
6573-A	41.00/C
6573-A	370.00/M
6573-C	30.95/C
6573-M	272.25/M
6574	22.50/C
6574	196.50/C
6574-C	22.50/C
6574-M	196.50/M
6575	27.50/C
6575	249.00/M
6575-C	24.40/C
6575-M	213.25/M
6576	27.50/C
6576	249.00/M
6576-C	21.25/C
6576-M	185.40/M
6577	27.75/C
6577	250.00/M
6577-C	27.25/C
6577-M	239.50/M
6578	36.50/C
6578	340.00/M
6578-C	33.75/C
6578-M	296.00/M
6579	36.50/C
6579	340.00/M
6579-C	31.00/C
6579-M	272.00/M
6585	10.00/C
6585	91.00/M
6585-C	14.95/C
6585-M	129.50/M
6586	10.00/C
6586	91.00/M
6586-C	16.25/C
6586-M	144.00/M
6587	10.00/C
6587	91.00/M
6587-C	18.00/C
6587-M	161.00/M
6588	10.50/C
6588	95.00/M
6588-C	19.15/C
6588-M	270.00/M
6589	11.00/C
6589	100.00/M
6589-C	24.00/C
6589-M	214.50/M
6590	13.00/C
6592	3.35/C
6592	25.00/M
6593	3.35/C
6593	25.00/M
6594	3.10/C
6594	26.00/M
6595	3.40/C
6595	28,00/M
6596	3.70/C
6596	30.00/M
6597	5.00/C
6597	44.00/M
6600	6.00/M
6601	7.00/M
6602	8.00/M
6603	9.75/M
6604	8.00/M
6605	9.75/M
6606	10.25/M
6607	12.25/M
6608	9.75/M
6609	10.25/M
6610	12.00/M
6611	12.00/M
6611-A	14.50/M
6612	11.00/M
6613	11.00/M
6614	12.00/M
6640	6.00/C
6640	54.00/M
6640-A	6.00/C
6640-A	54.00/M
6640-B	6.00/C
6640-B	54.00/M
6441	6.25/C
6641	55.50/M
6641-A	6.25/C
6641-A	55.50/M
6641-B	6.25/C
6641-B	55.50/M
6643	5.50/C
6643	50.00/M
6643-A	5.50/C
6643-A	50.00/M
6643-B	5.50/C
6643-B	50.00/M
6644	5.60/C
6644	51.00/M
6644-A	5.60/C
6644-A	51.00/M
6644-B	5.60/C
6644-B	51.00/M
6646	5.60/C
6646	51.00/M
6646-A	5.60/C
6646-A	51.00/C
6646-B	5.60/C
6646-B	51.00/M
6648	5.95/C
6648	53.00/M
6648-A	5.95/C
6648-A	53.00/M
6648-B	5.95/C
6648-B	53.00/M
6650	5.60/C
6650	51.00/M
6650-A	5.60/C
6650-A	51.00/M
6650-B	5.60/C
6650-B	51.00/M
7000-1000′-M	10.60/Ea.
7000-1-100′-C	1.33/Ea.
7001-1000′-M	13.30/Ea.
7001-1-C	1.59/Ea.
7001-S-M	15.15/Ea.
7001-1S-C	1.72/Ea.
7002-M	14.15/Ea.
7002-1-C	1.70/Ea.
7003-M	17.30/Ea.
7003-1-C	2.00/Ea.
7003-S-M	19.15/Ea.
7003-1S-	2.12/Ea.
7004-M	20.00/Ea.
7004-1-C	2.30/Ea.
7005-M	24.40/Ea.
7005-1-C	2.72/Ea.
7005-S-M	26.25/Ea.
7005-1S-C	2.83/Ea.
7006-M	490.50/Ea.
7006-1-C	50.00/Ea.
7007-M	35.80/Ea.
7007-1-C	3.85/Ea.
7008-M	3.49/Ea.
7008-1-C	35.00/Ea.
7009-M	54.00/Ea.
7009-1-C	5.65/Ea.
7010-M	202.75/Ea.
7010-1-C	20.90/Ea.
7011-M	90.00/Ea.
7011-1-C	9.25/Ea.
7012-M	133.15/Ea.
7012-1-C	13.97/Ea.
7013-M	182.25/Ea.
7013-1-C	18.80Ea.
7014-1000′-M	85.00/Ea.
7014-1-C	8.60/Ea.
7015-M	320.00/Ea.
7015-1-C	32.50/Ea.
7016-M	55.45/Ea.
7016-1-C	5.75/Ea.
7017-M	449.00/Ea.
7017-1-C	45.00/Ea:
7018-M	40.70/Ea.
7018-1-C	4.30/Ea.
7020-M	32.20/Ea.
7020-1-C	3.45/Ea.
7022-M	26.50/Ea.
7022-1-C	2.90/Ea.
7024-M	15.00/Ea.
7024-1-C	1.70/Ea.
7024-S-M	17.00/Ea.
7024-1S-C	2.00/Ea.
7028	3.00/Ea.
7029	5.00/Ea.
7030	45.00/Ea.
7032	.95/Ea.
7033	5.95/Ea.
7034	15.00/C
7036	10.00/C
7037	10.00/C
7038	9.00/C

Use Index Page 1 for Quick, Easy Location of ALL Products

TRADE DISCOUNT APPLIES TO LIST PRICES ONLY

BIRNBACH PRICE LIST

Cat. No.	Sug. List Price
7043-1	7.50/C
7043-1½	7.75/C
7043-2	8.00/C
7043-3	10.00/C
7049	.85/Ea.
7049-A	.85/Ea.
7049-B	.85/Ea.
7050	.90/Ea.
7061	1.55/Ea.
7062	3.00/Ea.
7063	14.00/Ea.
7064	25.00/Ea.
7065-M	165.00/Ea.
7065-1-C	17.50/Ea.
7066-M	115.00/Ea.
7066-1-C	11.55/Ea.
7067-M	85.00/Ea.
7067-1-C	8.90/Ea.
7068-M	70.00/Ea.
7068-1-C	7.90/Ea.
7070-M	58.50/Ea.
7070-1-C	6.65/Ea.
7072-M	50.00/Ea.
7072-1-C	6.00/Ea.
7074-M	40.50/Ea.
7074-1-C	5.50/Ea.
7080	1.68/Ea.
7081	1.68/Ea.
7082	2.10/Ea.
7083	4.75/Ea.
7084	2.10/Ea.
7086	2.10/Ea.
7088	2.10/Ea.
7089	4.00/Ea.
7116-M	280.00/Ea.
7116-1-C	31.00/Ea.
7118-M	225.00/Ea.
7118-1-C	25.00/Ea.
7120-M	185.00/Ea.
7120-1-C	20.50/Ea.
7122-M	125.00/Ea.
7122-1-C	13.75/Ea.
7124-M	110.00/Ea.
7124-1-C	12.10/Ea.
7126-M	100.00/Ea.
7126-1-C	11.00/Ea.
7128-M	75.00/Ea.
7128-1-C	8.50/Ea.
7130-M	74.00/Ea.
7130-1-C	8.40/Ea.
7170-M	13.90/Ea.
7170-1-C	1.60/Ea.
7171-M	15.00/Ea.
7171-1-C	1.85/Ea.
7172-M	20.00/Ea.
7172-1-C	2.30/Ea.
7173-M	27.75/Ea.
7173-C	3.00/Ea.
7174-M	33.50/Ea.
7174-1-C	3.65/Ea.
7175-M	52.75/Ea.
7175-1-C	5.55/Ea.
7180-M	20.00/Ea.
7180-1-C	2.40/Ea.
7181-M	24.50/Ea.
7181-1-C	2.70/Ea.
7182-M	29.50/Ea.
7182-1-C	3.20/Ea.
7183-M	35.00/Ea.
7183-1-C	4.00/Ea.
7184-M	42.50/Ea.
7184-1-C	4.50/Ea.
7185-M	64.00/Ea.
7185-1-C	6.90/Ea.
7186-M	97.00/Ea.
7187-M	125.00/Ea.
7188-M	250.00/Ea.
7189-M	340.00/Ea.
7190-M	15.00/Ea.
7190-1-C	1.75/Ea.
7191-M	13.50/Ea.
7191-C	1.45/Ea.
7193-1000'-M	13.00/Ea.
7193-1-C	1.50/Ea.
7194-M	13.25/Ea.
7194-1-C	1.60/Ea.
7195-M	14.50/Ea.
7195-1-C	1.70/Ea.
7196-M	19.00/Ea.
7196-C	2.15/Ea.
7197-M	25.00/Ea.
7197-1-C	2.75/Ea.
7198-M	32.50/Ea.
7198-1-C	3.50/Ea.
7201-M	26.50/Ea.
7201-1-C	3.10/Ea.
7202-M	23.75/Ea.
7202-1-C	2.75/Ea.
7203-M	30.25/Ea.
7203-1-C	3.65/Ea.
7204-M	26.75/Ea.
7204-1-C	3.15/Ea.
7205-M	39.25/Ea.
7205-1-C	4.60/Ea.
7207-M	52.75/Ea.
7207-1-C	6.00/Ea.
7210-M	175.00/Ea.
7210-1-C	20.50/Ea.
7212-M	117.00/Ea.
7212-1-C	12.10/Ea.
7214-M	73.50/Ea.
7214-1-C	8.00/Ea.
7216-M	50.50/Ea.

Cat. No.	Sug. List Price
7216-1-C	6.00/Ea.
7218-M	39.50/Ea.
7218-1-C	4.50/Ea.
7220-M	30.00/Ea.
7220-1-C	3.50/Ea.
7222-M	25.00/Ea.
7222-1-C	2.75/Ea.
7224-M	29.00/Ea.
7224-1-C	3.25/Ea.
7312-M	118.25/Ea.
7312-1-C	12.65/Ea.
7314-M	90.00/Ea.
7314-1-C	9.50/Ea.
7316-M	57.50/Ea.
7316-1-C	6.00/Ea.
7318-M	40.00/Ea.
7318-1-C	4.35/Ea.
7320-M	31.50/Ea.
7320-1-C	3.35/Ea.
7322-M	26.25/Ea.
7322-1-C	2.85/Ea.
7326-M	15.25/Ea.
7326-1-C	2.20/Ea.
7328-M	14.65/Ea.
7328-1-C	1.90/Ea.
7330-M	14.25/Ea.
7330-1-C	1.75/Ea.
7351-M	36.75/Ea.
7351-1-C	3.75/Ea.
7353-M	40.00/Ea.
7353-1-C	4.15/Ea.
7355-M	46.00/Ea.
7355-1-C	4.85/Ea.
7357-M	65.00/Ea.
7357-1-C	6.88/Ea.
7359-M	85.00/Ea.
7359-1-C	9.40/Ea.
7361-M	112.50/Ea.
7361-1-C	11.50/Ea.
7362-M	160.00/Ea.
7362-1-C	17.50/Ea.
7363-M	260.00/Ea.
7363-1-C	28.50/Ea.
7364-M	400.00/Ea.
7365-M	625.00/Ea.
7365/2-M	1000.00/Ea.
7365/0-1000'	1500.00/Ea.
7365/00-1000'	2000.00/Ea.
7371-M	75.00/Ea.
7371-1-100'-C	8.25/Ea.
7372-1000'-M	85.00/Ea.
7372--1-100'-C	9.00/Ea.
7373-1000'-M	92.50/Ea.
7373-1-100'-C	9.50/Ea.
7374-1000'-M	138.90/Ea.
7374-1-100'-C	14.50/Ea.
7375-1000'-M	162.50/Ea.
7376-1000'-M	195.00/Ea.
7389	235.00/Ea.
7389	235.00/Ea.
7390	1525.00/Ea.
7390-D	145.00/Ea.
7398-1M'	31.00/Ea.
7398-2M	165.00/Ea.
7398-3M	43.00/Ea.
7400	625.00/Ea.
7400-D	45.00/Ea.
7402-M	37.50/Ea.
7402-1-C	3.95/Ea.
7412-M	57.00/Ea.
7412-1-C	6.00/Ea.
7418-M	60.50/Ea.
7418-1-C	6.70/Ea.
7428-M	93.50/Ea.
7428-1-C	9.90/Ea.
7448-M	112.50/Ea.
7448-1-C	11.50/Ea.
7449-M	135.00/Ea.
7449-1-C	17.50/Ea.
7458-M	210.00/Ea.
7458-1-C	22.00/Ea.
7524-M	14.50/Ea.
7524-E	7.50/Ea.
7526-M	13.50/Ea.
7526-E	7.00/Ea.
7527-M	13.00/Ea.
7527-E	6.75/Ea.
7528-M	12.50/Ea.
7528-E	6.50/Ea.
7529-M	18.00/Ea.
7529-E	9.50/Ea.
7530-M	12.00/Ea.
7530-E	6.25/Ea.
7532-M	15.00/Ea.
7532-E	7.75/Ea.
7534-M	18.00/Ea.
7534-E	9.50/Ea.
7535-M	60.00/Ea.
7535-E	30.50/Ea.
7536-M	65.00/Ea.
7536-E	33.25/Ea.
7537-M	62.50/Ea.
7537-E	32.00/Ea.
7538-M	59.00/Ea.
7538-E	30.00/Ea.
7542-M	70.00/Ea.

Cat. No.	Sug. List Price
7542/3-M	87.50/Ea.
7542/4-M	105.00/Ea.
7552-M	76.50/Ea.
7552/3-M	97.50/Ea.
7552/4-M	116.00/Ea.
TK-1	84.25/Ea.
TK-2	91.75/Ea.
7571-M	15.75/Ea.
7571-E	9.00/Ea.
7572-M	47.75/Ea.
7572-E	25.00/Ea.
7573-M	71.00/Ea.
7573-E	36.75/Ea.
7574-M	90.50/Ea.
7574-E	46.50/Ea.
7575-M	130.00/Ea.
7575-E	72.50/Ea.
7580-M	136.00/Ea.
7581-M	60.00/Ea.
7581-E	31.50/Ea.
7582-M	89.00/Ea.
7582-E	46.25/Ea.
7583-M	110.00/Ea.
7583-E	58.25/Ea.
7584-M	130.00/Ea.
7584-E	68.50/Ea.
7585-M	179.00/Ea.
7585-E	94.00/Ea.
7610-M	550.00/Ea.
7610-1-C	60.00/Ea.
7612-M	320.00/Ea.
7612-1-C	35.00/Ea.
7614-M	250.00/Ea.
7614-1-C	27.50/Ea.
7716-M	195.00/Ea.
7616-1-C	22.50/Ea.
7618-M	165.00/Ea.
7618-1-C	17.50/Ea.
7620-M	142.50/Ea.
7620-1-C	15.75/Ea.
7622-M	125.00/Ea.
7622-1-C	13.50/Ea.
7652-M	37.00/Ea.
7652-E	19.00/Ea.
7653-M	65.00/Ea.
7753-E	33.00/Ea.
7654-M	85.00/Ea.
7654-E	43.00/Ea.
7668-M	35.00/Ea.
7668-500'-E	17.75/Ea.
7669-M	50.00/Ea.
7669-E	25.00/Ea.
7670-M	60.00/Ea.
7670-E	30.00/Ea.
7716-1000'	2250.00/Ea.
7716-250'	625.00/Ea.
7718-1000'	2050.00/Ea.
7718-250'	550.00/Ea.
7720-1000'	1825.00/Ea.
7720-250'	510.00/Ea.
7722-1000'	1725.00/Ea.
7722-250'	475.00/Ea.
7724-1000'	1625.00/Ea.
7724-250'	435.00/Ea.
8000-M	159.00/Ea.
8000-E	80.00/Ea.
8000-C	16.00/Ea.
8000-50'	10.00/Ea.
8000-25'	6.00/Ea.
8000-M	178.00/Ea.
8001-E	93.00/Ea.
8001-C	20.00/Ea.
8001-50'	11.00/Ea.
8001-25'	6.50/Ea.
8002-M	265.00/Ea.
8002-E	136.50/Ea.
8002-C	28.50/Ea.
8002-50'	15.00/Ea.
8002-25'	8.00/Ea.
8003-M	325.00/Ea.
8003-E	165.00/Ea.
8003-C	35.75/Ea.
8003-50'	19.00/Ea.
8003-25'	10.00/Ea.
8004-M	365.00/Ea.
8004-E	185.00/Ea.
8004-C	40.00/Ea.
8004-50'	22.00/Ea.
8004-25'	13.00/Ea.
8005-M	407.50/Ea.
8005-E	209.00/Ea.
8005-C	48.00/Ea.
8005-50'	27.20/Ea.
8005-25'	15.50/Ea.
8006-M	475.00/Ea.
8006-E	242.00/Ea.
8006-C	57.00/Ea.
8006-50'	32.00/Ea.
8006-25'	18.00/Ea.
8007-M	625.00/Ea.
8007-E	317.50/Ea.
8007-C	66.00/Ea.
8007-50'	36.75/Ea.
8007-25'	20.50/Ea.
8008-M	1045.10/Ea.
8008-E	527.50/Ea.
8008-C	106.00/Ea.
8008-50'	61.50/Ea.
8008-25'	32.50/Ea.
8009-M	1240.00/Ea.
8009-E	625.00/Ea.
8009-C	125.00/Ea.
8009-50'	74.00/Ea.
8009-25'	40.00/Ea.

Cat. No.	Sug. List Price
8010-1000'-M	1490.00/Ea.
8010-E	750.00/Ea.
8010-C	150.00/Ea.
8010-50'	88.50/Ea.
8010-25'	46.50/Ea.
8011-M	1800.00/Ea.
8011-E	907.50/Ea.
8011-C	181.50/Ea.
8011-50'	106.50/Ea.
8011-25'	56.00/Ea.
8012-M	2250.00/Ea.
8012-E	1130.00/Ea.
8012-C	226.00/Ea.
8012-50'	124.25/Ea.
8012-25'	65.00/Ea.
8013-M	155.50/Ea.
8013-E	80.55/Ea.
8013-C	17.00/Ea.
8014-M	155.50/Ea.
8014-E	80.55/Ea.
8014-C	17.00/Ea.
8015-M	163.90/Ea.
8015-E	85.00/Ea.
8015-C	18.00/Ea.
8016-M	167.50/Ea.
8016-E	87.50/Ea.
8016-C	18.50/Ea.
8020-M	3000.00/Ea.
8020-E	1500.00/Ea.
8020-C	310.00/Ea.
8020-50'	165.00/Ea.
8021-M	3500.00/Ea.
8021-E	1750.00/Ea.
8021-C	360.00/Ea.
8021-50'	190.00/Ea.
8022-M	4750.00/Ea.
8022-E	2375.00/Ea.
8022-C	485.00/Ea.
8022-50'	252.50/Ea.
8022-25'	127.50/Ea.
8023-M	5500.00/Ea.
8023-E	2750.00/Ea.
8023-C	560.00/Ea.
8023-50'	290.00/Ea.
8023-25'	146.50/Ea.
8024-M	6800.00/Ea.
8024-E	3400.00/Ea.
8024-C	690.00/Ea.
8024-50'	355.00/Ea.
8024-25'	178.50/Ea.
8025-M	8100.00/Ea.
8025-E	4050.00/Ea.
8025-C	820.00/Ea.
8025-50'	420.00/Ea.
8025-25'	211.50/Ea.
8026-M	8675.00/Ea.
8026-E	4337.50/Ea.
8026-C	877.50/Ea.
8026-50'	448.75/Ea.
8026-25'	225.50/Ea.
8027-M	11250.00/Ea.
8027-E	5625.00/Ea.
8027-C	1135.00/Ea.
8027-50'	577.75/Ea.
8027-25'	290.00/Ea.
8028-M	11650.00/Ea.
8028-E	5825.00/Ea.
8028-C	1175.00/Ea.
8028-50'	597.50/Ea.
8028-25'	300.00/Ea.
8029-M	12900.00/Ea.
8029-500'-E	6450.00/Ea.
8029-100'-C	1300.00/Ea.
8029-50'	660.00/Ea.
8029-25'	331.50/Ea.
8514-M	425.00/Ea.
8514-1-C	51.00/Ea.
8516-M	348.50/Ea.
8516-1-C	41.75/Ea.
8518-M	266.00/Ea.
8518-1-C	31.90/Ea.
8520-M	221.00/Ea.
8520-1-C	26.50/Ea.
8522-M	172.50/Ea.
8522-1-C	20.60/Ea.
8524-M	148.25/Ea.
8524-1-C	17.75/Ea.
8526-M	133.25/Ea.
8526-1-C	16.00/Ea.
8528-M	130.00/Ea.
8528-1-C	15.50/Ea.
8530-M	125.00/Ea.
8530-1-C	15.00/Ea.
8532-M	127.00/Ea.
8532-1-100'-C	15.25/Ea.
8534-M	600.00/Ea.
8534-1-C	65.00/Ea.
8536-M	500.00/Ea.
8536-1-C	55.00/Ea.
8538-M	375.00/Ea.
8538-1-C	40.00/Ea.
8540-M	320.00/Ea.
8540-1-C	35.00/Ea.
8542-M	260.00/Ea.
8542-1-C	28.50/Ea.
8544-M	225.00/Ea.
8544-1-C	24.00/Ea.
8546-M	175.00/Ea.
8546-1-C	20.50/Ea.

Size	Ft.	List Price Each
8548-M		155.00/Ea.
8548-1-C		18.00/Ea.
8550-M		145.00/Ea.
8550-1-C		17.50/Ea.
8552-M		145.00/Ea.
8552-1-C		17.50/Ea.
8704-M		272.50/Ea.
8704/2-M		575.00/Ea.
8704/3-M		825.00/Ea.
8704/4-M		1070.00/Ea.
8704/5-M		1390.00/Ea.
8705/1-M		330.00/Ea.
8705/2-M		600.00/Ea.
8705/3-M		905.00/Ea.
8705/4-M		1180.00/Ea.
8705/5-M		1490.00/Ea.
8706-M		439.50/Ea.
8706/2-M		712.50/Ea.
8706/3-M		1095.00/Ea.
8706/4-M		1260.00/Ea.
8706/5-M		1550.00/Ea.
8707-M		300.00/Ea.
8707/2-M		630.00/Ea.
8707/3-M		877.50/Ea.
8707/4-M		1208.00/Ea.
8707/5-M		1527.50/Ea.
8708-M		355.00/Ea.
8708/2-M		660.00/Ea.
8708/3-M		985.00/Ea.
8708/4-M		1320.00/Ea.
8708/5-M		1655.00/Ea.
8709-M		465.00/Ea.
8709/2-M		798.00/Ea.
8709/3-M		1205.00/Ea.
8709/4-M		1510.00/Ea.
8709/5-M		1815.00/Ea.
8710-M		365.00/Ea.
8710/2-M		767.50/Ea.
8710/3-M		1090.00/Ea.
8710/4-M		1425.00/Ea.
8710/5-M		1785.00/Ea.
8711-M		438.00/Ea.
8711/2-M		820.00/Ea.
8711/3-M		1210.00/Ea.
8711/4-M		1520.00/Ea.
8711/5-M		1865.00/Ea.
8712-M		550.00/Ea.
8712/2-M		905.00/Ea.
8712/3-M		1400.00/Ea.
8712/4-M		1757.50/Ea.
8712/5-M		2120.00/Ea.

Size	Ft.	List Price Each
	HF HEAVY FORMVAR MAGNET WIRE	
	¼ Lb. Spools	
10	8	$ .88
12	12	.89
14	20	.90
16	31	.91
18	49	.95
20	78	.98
22	125	1.00
24	200	1.05
26	300	1.10
28	500	1.20
30	800	1.25
32	1225	1.50
34	1988	1.70
36	3200	1.95
38	5050	2.35
40	7975	3.05
42	12375	4.00
44	14500	6.95
	½ Lb. Spools	
10	16	$1.45
12	25	1.46
14	39	1.47
16	62	1.50
18	99	1.68
20	156	1.78
22	250	1.80
24	399	1.90
26	600	2.10
28	1000	2.30
30	1600	2.40
32	2450	2.90
34	3975	3.25
36	6400	3.80
38	10100	4.40
40	15850	5.80
42	24750	7.70
44	29000	13.25
	1 Lb. Spools	
10	32	$2.68
12	50	2.69
14	78	2.70
16	124	2.75
18	198	3.00
20	313	3.15
22	501	3.40
24	798	3.60
26	1200	3.90
28	1999	4.25
30	3200	4.50
32	4900	4.50
34	7950	6.25
36	13800	7.25
38	20200	8.50
40	31700	11.25
42	49500	14.50
44	29000	13.25

Size	Ft.	List Price Each
	PE PLAIN ENAMEL MAGNET WIRE	
	¼ Lb. Spools	
10	8	$ .68
12	12	.69
14	20	.70
16	32	.71
18	50	.72
20	80	.73
22	127	.79
24	201	.79
26	320	.82
28	507	.87
30	805	.89
32	1282	.94
34	2037	1.00
36	3221	1.10
38	5132	1.30
40	8143	1.70
42	12803	4.00
44	20455	5.65
	½ Lb. Spools	
10	16	$1.25
12	25	1.26
14	40	1.27
16	63	1.28
18	100	1.28
20	160	1.30
22	254	1.35
24	403	1.40
26	640	1.45
28	1015	1.55
30	1610	1.60
32	2564	1.70
34	4075	1.85
36	6443	2.05
38	10246	2.60
40	16286	3.40
42	25605	7.65
44	40910	10.90
	1 Lb. Spools	
10	32	$2.34
12	50	2.35
14	80	2.36
16	80	2.36
18	201	2.38
20	320	2.50
22	508	2.65
24	806	2.70
26	1280	2.85
28	2030	3.00
30	3220	3.10
32	5128	3.30
34	8150	3.60
36	12887	4.10
38	20492	4.95
40	32573	6.75
42	51211	15.00
44	81819	22.50
	SOLID TINNED WIRE	
	¼ Lb. Spools	
10	8	$ .68
12	12	.69
14	20	.71
16	32	.71
18	50	.72
20	80	.73
22	127	.79
24	201	.79
26	320	.82
28	507	.87
30	805	.89
32	1282	.94
34	2037	1.00
36	3221	1.10
38	5132	1.30
40	8143	1.70
42	12803	4.00
44	20455	5.65
	½ Lb. Spools	
10	16	$1.25
12	25	1.26
14	40	1.27
16	63	1.28
18	100	1.28
20	160	1.30
22	254	1.35
24	403	1.40
26	640	1.45
28	1015	1.55
30	1610	1.60
32	2564	1.70
34	4075	1.85
36	6443	2.05
38	10246	2.60
40	16286	3.40
42	25605	7.65
44	40910	10.00
	1 Lb. Spools	
10	32	$2.34
12	50	2.35
14	80	2.36
16	126	2.36
18	201	2.38
20	320	2.50
22	508	2.65
24	806	2.70
26	1280	2.85
28	2030	3.00
30	3220	3.10
32	5128	3.30
34	8150	3.60
36	12887	4.10
38	20492	4.95
40	32573	6.75
42	51211	15.00
44	81819	22.50

Size	Ft.	List Price Each
	DNC DOUBLE NYLON MAGNET WIRE	
	¼ Lb. Spools	
12	12	$1.32
14	19	1.38
16	31	1.56
18	49	1.68
20	78	1.92
22	123	2.22
24	195	2.40
26	303	2.88
28	478	3.12
30	739	3.72
32	1136	4.68
34	1712	6.48
36	2551	10.80
38	3770	15.00
40	5040	26.64
	½ Lb. Spools	
12	24	$2.52
14	39	2.58
16	62	2.88
18	99	3.18
20	157	3.66
22	247	4.08
24	390	4.56
26	606	5.52
28	956	6.00
30	1479	7.08
32	2272	9.00
34	3424	12.72
36	5102	21.00
38	7541	29.10
40	10080	50.60
	1 Lb. Spools	
12	49	$4.80
14	78	4.92
16	125	5.10
18	198	5.58
20	315	6.60
22	495	7.20
24	781	9.00
26	1212	11.10
28	1912	12.00
30	2958	13.80
32	4545	17.86
34	6849	24.96
36	10204	40.80
38	15082	55.80
40	20161	98.40
	DCC DOUBLE COTTON MAGNET WIRE	
	¼ Lb. Spools	
10	8	$1.01
12	12	1.01
14	19	1.03
16	31	1.09
18	48	1.18
20	78	1.34
22	110	1.50
24	134	1.66
26	284	1.86
28	435	2.16
30	641	2.64
32	976	3.18
34	1365	4.68
36	1827	5.46
38	2738	9.60
40	3405	13.80
	½ Lb. Spools	
10	16	$1.60
12	24	1.60
14	39	1.62
16	62	1.70
18	97	1.90
20	157	2.30
22	220	2.64
24	235	2.82
26	568	3.30
28	871	4.20
30	1284	5.04
32	1953	6.00
34	2735	8.70
36	3654	10.46
38	5476	15.71
40	6811	23.52
	1 Lb. Spools	
10	31	$2.80
12	49	2.80
14	78	3.00
16	123	3.25
18	194	3.60
20	304	4.28
22	477	4.98
24	538	5.52
26	1136	6.30
28	1742	7.80
30	2569	9.30
32	3906	11.40
34	5470	16.20
36	7309	19.65
38	10952	29.40
40	13623	43.68

TRADE DISCOUNT APPLIES TO LIST PRICES ONLY

Columbia

PERMALINE TV TRANSMISSION LINES

COLUMBIA is first to offer a television transmission line with an insulation so good that it can be GUARANTEED IN WRITING to give a service life far beyond the normal life of brown Polyethylene television lines. PERMALINE is a high molecular weight Polyethylene containing carbon black for maximum resistance to sunlight, which has been proven the chief factor in deterioration of ordinary television lines. The insulation value of 50 Mils of PERMALINE is equal to over 150 Mils of conventional brown Polyethylene.

Electrical characteristics of PERMALINE are very similar to Brown Polyethylene television lines but as there is no deterioration. Attenuation remains constant instead of increasing as is the case with brown Polyethylene, which becomes brittle and cracks. This is truly the first new development in television transmission lines in ten years.

25 YEAR WARRANTY

80 Mil 20 Ga. Str. PERMALINE Television Transmission Line
.080 x .395

CAT NO.	
5050M	1,000 Ft. Metal Spool
5050D	500 Ft. Metal Spool
5050C	100 Ft. Coil } 12 coils come packed in FREE counter
5050S	65 Ft. Coil } display

15 YEAR WARRANTY

50 Mil 20 Ga. Str. PERMALINE Television Transmission Line
.050 x .385

5150M	1,000 Ft. Metal Spool
5150D	500 Ft. Metal Spool
5150C	100 Ft. Coil } 12 coils come packed in FREE counter
5150S	65 Ft. Coil } display

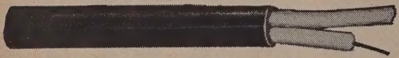
Highly resistant to:

• SUNLIGHT • MOISTURE • FAR BELOW ZERO TEMP. • CHEMICAL FUMES • OIL REFINERY FUMES • SALT AIR & SALT SPRAY • ABRASION

Tensile Strength — 2300 lbs. per Sq. In.

Separate Warranty Certificate with every spool or package of Permaline Television Transmission Line.

PERMALINE VHF-UHF TV TRANSMISSION LINE



Since the introduction of this cable in May, 1956 it has been proven beyond any doubt that this cable has no equal for reliability over the entire range of VHF and UHF channels under the most adverse conditions, such as salt spray, sunlight, extremes of heat and cold, stress cracking, chemical fumes, whipping in high winds, etc. In many areas throughout the country where other cables have failed due to salt deposits on transmission lines, this cable has given satisfactory reception at all times. Foam polyethylene tubes provide excellent low loss dielectric and require no sealing. 22 gauge solid copperweld conductors mean high tensile strength so necessary where whipping of cable is a problem. Heavy duty jacket of high molecular weight BLACK PERMALINE POLYETHYLENE is a protection against all hazards. We believe this is the finest all-purpose television transmission line available today. Impedance is 270 ohms, nominal attenuation is 3.2 D/B at 500 M/C and 4.6 D/B at 900 M/C. Cable size is approximately .295 x .402.

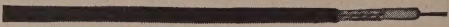
15 Year Written Guarantee Certificate

CAT. NO.	
5684C	100 Ft. Carton
5684D	500 Ft. Spool
5684M	1000 Ft. Spool

PERMAFOAM LOW LOSS COAXIAL CABLES

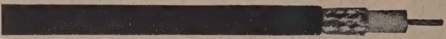
PERMAFOAM is a new type of coaxial cable for television systems, communication work, and all other co-ax applications. A foam polyethylene dielectric replaces the conventional solid polyethylene thus providing far lower capacity and attenuation. In fact, attenuation is approximately 25% lower than standard coaxial cables of same type. Overall jacket is our PERMALINE high molecular weight polyethylene. This non-contaminating jacket is unaffected by salt air, chemical fumes, damp rot, fungus, acids, alkalis, etc., and is remarkably resistant to all extreme weather conditions. Moisture resistance is so high that this insulation is now used on submarine cables. Will withstand severe temperature extremes and is immune to the deteriorating effects of sunlight and other ultra violet. Note: In addition to the PERMAFOAM cables listed below, any other RG U cable is available with a foam polyethylene dielectric on special order.

PERMAFOAM 72-75 OHM COAXIAL CABLE



R.G. No.	Nom. Imp.	Attenuation 100 Ft. 100 MC	Wire Size	O.D.	Spool Size	Cat. No.
RG 59 U	73	2.95 DB.	22 Cpwld.	.240	500 Ft. 1000 Ft.	5035D 5035M
RG 11 U	75	1.50 DB.	14 Solid	.405	500 Ft. 1000 Ft.	5025D 5025M
RG 34 D/U	72	.780 DB.	10 Solid	.675	1000 Ft.	5088
RG 35 D/U	72	.675 DB.	8 Solid	.870	1000 Ft.	5094

PERMAFOAM 52-53 OHM COAXIAL CABLE



R.G. No.	Nom. Imp.	Attenuation 100 Ft. 100 MC	Wire Size	O.D.	Spool Size	Cat. No.
RG 58 U	53	3.10 DB.	20 Solid	.195	100 Ft. 500 Ft. 1000 Ft.	5045C 5045D 5045M
RG 8 U	52	1.50 DB.	7/21	.405	100 Ft. 500 Ft. 1000 Ft.	5015C 5015D 5015M
RG 17 U	52	.712 DB.	5 Solid	.870	100 Ft. 500 Ft. 1000 Ft.	5090C 5090D 5090M

COLUMBIA STANDARD COAXIAL CABLES

Premium quality standard coaxial cable. Meets all specifications. Black vinyl jacket.

R.G. No.	Nom. Imp.	Nom. Mmfd. Ft.	Wire Size	Overall Jacket	Spool Size	Cat. No.
RG 59 U	73.0	21.0	22 C Weld	Black Vinyl .240 O.D.	100 Ft. 500 Ft. 1000 Ft.	1104C 1104D 1104M
RG 8 U	52.0	29.5	7/21	Black Vinyl .405 O.D.	100 Ft. 500 Ft. 1000 Ft.	1154C 1154D 1154M
RG 11 U	75.0	20.5	7/26	Black Vinyl .405 O.D.	100 Ft. 500 Ft. 1000 Ft.	1160C 1160D 1160M
RG 58 U	53.5	28.5	20 Ga.	Black Vinyl .195 O.D.	100 Ft. 500 Ft. 1000 Ft.	1166C 1166D 1166M
RG 58 A/U	50.0	29.0	19/.0068	Black Vinyl .159 O.D.	100 Ft. 500 Ft. 1000 Ft.	1178C 1178D 1178M

Long Lengths of Any Co-ax Available Upon Request

WRITE TO YOUR LOCAL PARTS DISTRIBUTOR FOR COMPLETELY ILLUSTRATED COLUMBIA WIRE & SUPPLY CO. CATALOG

Columbia

FLEXFOAM ULTRA LOW CAPACITANCE MICROPHONE CABLES — EXCLUSIVE WITH COLUMBIA

Another Columbia first is a complete line of microphone cables with capacity as much as 35% lower than the best regular microphone cables available today. This drastic lowering of capacity has been made possible by the use of foamed polyethylene as the inner dielectric instead of solid polyethylene as normally used. This low capacitance means that lengths of microphone cable can be increased as much as 50%. These cables are also ideal for Hi-Fi and high quality sound work because of the extremely low attenuation, particularly at the higher audio-frequencies. The use of a special flexible vinyl as an outer jacket provides flexibility practically as good as rubber yet has much greater abrasion resistance. Color—Grey.

FLEXFOAM MIKE CABLE WITH BRAIDED SHIELD

			250 Ft. Spool	500 Ft. Spool
Crystal Size	(.190" O.D.)	16 MMF Per Ft.	No. 1399T	1399D
Lapel Size	(.140" O.D.)	19 MMF Per Ft.	No. 1379T	1379D

FLEXFOAM MIKE CABLE WITH SPIRAL SHIELD

Crystal Size	(.190" O.D.)	16 MMF Per Ft.	No. 1389T	1389D
Lapel Size	(.140" O.D.)	19 MMF Per Ft.	No. 1369T	1369D
Miniature	(.085" O.D.)	35 MMF Per Ft.	No. 1359T	1359D

TWO CONDUCTOR PLASTIC MICROPHONE CABLE — .230 O.D.

250 Ft. Spool	22 Ga.	16/34 Stranding	1322T
500 Ft. Spool	22 Ga.	16/34 Stranding	1322D

Nominal Capacitance 30 MMF Per Ft. Between 1 Cond. and Remaining Cond. Connected to Shield

ECONOMY SPIRAL SHIELDED MICROPHONE CABLES

Plastic insulated with wrapped concentric spiral shield for more effective shielding. Cables are more flexible and of smaller size.

CRYSTAL MICROPHONE CABLE .160 O.D.

25 Ga. 7 x 33 Str.

CAT. NO.		
1314T	250 Ft. Spool	Nominal Cap. 25 MMF Per Ft.
1314D	500 Ft. Spool	Nominal Cap. 25 MMF Per Ft.

LAPEL MICROPHONE CABLE .125 O.D.

25 Ga. 7 x 33 Str.

1366T	250 Ft. Spool	Nominal Cap. 33 MMF Per Ft.
1366M	250 Ft. Spool	Nominal Cap. 33 MMF Per Ft.

HEAVY DUTY MICROPHONE CABLE

Heavy duty studio type plastic insulated microphone cable that will withstand abrasion and rough usage.

18 Ga. Str. 41 x 34 Tinned Copper Conductors.
Jute Fillers T/C Shield
.295 O.D.

		CAT. NO.
100 Ft. Spool	Color—Black	3302C
500 Ft. Spool	Color—Black	3302D

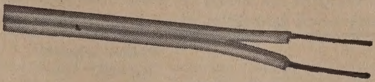
Nominal Capacitance 75 MMF. Per Ft.

H'VY GAUGE JUKE BOX-H.F. SPKR CABLE

FOR LONG RUNS—LESS LOSS

This cable is similar to the 24 ga. juke box speaker cable listed in our general catalog, except that the 21 ga. conductors in this cable reduce the line loss to exactly half. Ridge in insulation over one conductor plus one tinned and one bare conductor provide double indication of polarity.

COLORS: Clear, Grey, Brown, White



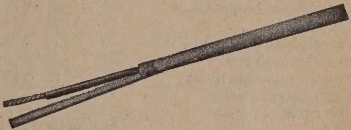
.180" x .090"

2 COND. 21 GA. STR. 10/31

No. 1360C	100 Ft. Spool
No. 1360D	500 Ft. Spool
No. 1360M	1000 Ft. Spool

COTTON BRAID JUKE BOX SPEAKER CABLE ABSORBS SHOCK OF STAPLES

This cable is similar to the 24 ga. juke box speaker cable listed in our general catalog except that the insulation is cotton braid over plastic insulated conductors. The cotton is less likely to be damaged by staples.



2 COND. 24 GA. STR. 7/32. .060" x .120"

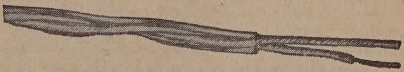
No. 4356C	100 Ft. Spool
No. 4356D	500 Ft. Spool
No. 4356M	1000 Ft. Spool

COLORS — Brown, Grey

CLEARFLEX SOUND CABLES

Transparent Cable Matches any Interior Decorating Scheme

Color is always a problem since many sound customers want the color of the wire to match the color of the wall. CLEARFLEX wire will match any color. Note that both the insulation over the conductor as well as the outer jacket is crystal clear. One conductor is tinned—one is bare to indicate polarity.



2 COND. CLEARFLEX — 22 GA. STRANDED 7/30

6363D	500 Ft. Spool
6363M	1000 Ft. Spool

.165 O.D.

2 COND. CLEARFLEX — 20 GA. STRANDED 10/30

6365D	500 Ft. Spool
6365M	1000 Ft. Spool

.185 O.D.

2 COND. CLEARFLEX — 20 GA. STRANDED 16/30

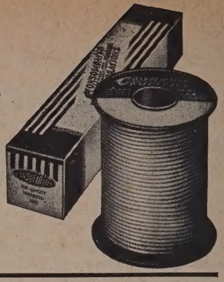
6367D	500 Ft. Spool
6367M	1000 Ft. Spool

.215 O.D.

WRITE TO YOUR LOCAL PARTS DISTRIBUTOR FOR COMPLETELY ILLUSTRATED COLUMBIA WIRE & SUPPLY CO. CATALOG

CONSOLIDATED

MAGNET WIRE



Popular, profitable specialty wire packaged for easy selling in radio-electrical, department, specialty and hardware stores. Wide variety of sizes and insulations. Keeps stock in perfect order, always saleable. Supplied on Spool as shown and in Heavier Weights for whatever weight desired. Here is a handy and convenient way to stock small quantities of wire. It prevents wire from matting or tangling.

VARIOUS OTHER INSULATIONS

Film	Technical Classification
ENAMEL	oleoresinous
FORMVAR	poly vinyl acetal
SODEREZE	polyurethane
THERMALEZE	epoxide polyester
NYFORM	formvar, nylon sheath
NYLON	
BONDEZE	
GRIPEZE	
LECTRON	acrylic
ISONSEL	terephthalic polyester
ALKANVAR	terephthalic polyester
SYLKYD ENAMELED	
COTTON AND COMBINATIONS	
SILK AND COMBINATIONS	
CELANESE AND COMBINATIONS	
GLASS AND COMBINATIONS	
PAPER AND COMBINATIONS	

Larger Quantities At Same Per Pound List

SPECIAL MAGNET WIRES

In addition to the standard listing shown here, we maintain an extensive stock of all other sizes in round, rectangular and square magnet wire.

PLAIN ENAMEL MAGNET WIRE

Size	¼ lb.	½ lb.	1 lb.
14	$0.45	$0.75	$1.39
15	.45	.80	1.40
16	.50	.84	1.42
17	.50	.87	1.44
18	.50	.89	1.45
19	.55	.92	1.49
20	.55	.94	1.50
21	.55	.95	1.59
22	.55	.97	1.70
23	.58	.99	1.75
24	.60	1.00	1.87
25	.65	1.10	1.95
26	.65	1.10	2.03
27	.70	1.15	2.14
28	.73	1.20	2.25
29	.75	1.25	2.30
30	.80	1.30	2.35
31	.89	1.35	2.45
32	.90	1.40	2.50
33	.95	1.50	2.65
34	1.00	1.70	2.75
35	1.09	1.84	3.14
36	1.29	2.00	3.50
37	1.45	2.25	4.00
38	1.70	2.50	4.50
39	1.87	3.00	5.00
40	2.50	3.75	6.00
41	3.00	5.63	8.48
42	3.48	6.60	12.89
43	4.35	8.25	15.75
44	4.88	9.38	18.45

DOUBLE COTTON COVERED MAGNET WIRE

Size	¼ lb.	½ lb.	1 lb.
14	$0.55	$0.95	$1.87
15	.58	.98	1.90
16	.60	1.00	1.95
17	.60	1.05	2.00
18	.60	1.10	2.05
19	.65	1.15	2.28
20	.65	1.25	2.34
21	.77	1.34	2.50
22	.82	1.39	2.64
23	.88	1.50	2.75
24	.94	1.60	3.00
25	.95	1.65	3.14
26	1.00	1.75	3.39
27	1.15	1.89	3.64
28	1.20	2.14	4.00
29	1.30	2.39	4.50
30	1.32	2.50	4.75
31	1.50	2.75	5.00
32	1.75	3.00	5.64
33	1.89	3.37	6.25
34	2.14	3.89	7.00
35	2.39	4.25	7.50
36	2.75	4.89	8.65
37	2.25	6.25	11.40
38	4.75	8.65	16.50
39	6.00	11.50	20.00
40	8.00	15.00	28.15

SINGLE FORMVAR MAGNET WIRE

Size	¼ lb.	½ lb.	1 lb.
14	$0.66	$1.12	$2.07
15	.66	1.20	2.10
16	.75	1.25	2.14
17	.75	1.30	2.15
18	.75	1.34	2.17
19	.83	1.39	2.23
20	.83	1.40	2.25
21	.83	1.42	2.37
22	.83	1.45	2.56
23	.89	1.49	2.62
24	.90	1.50	2.80
25	.97	1.65	2.92
26	.99	1.65	3.05
27	1.05	1.74	3.20
28	1.10	1.80	3.37
29	1.14	1.87	3.46
30	1.20	1.95	3.52
31	1.34	2.02	3.67
32	1.35	2.10	3.75
33	1.42	2.25	3.95
34	1.50	2.55	4.12
35	1.64	2.81	4.70
36	1.92	3.00	5.26
37	2.17	3.37	6.00
38	2.55	3.75	6.76
39	2.80	4.50	7.50
40	3.75	5.64	9.00
41	3.75	6.75	12.60
42	4.28	7.40	13.43
43	5.18	7.88	14.25
44	6.60	11.70	22.58

BARE COPPER WIRE

Size	¼ lb.	½ lb.	1 lb.
14	$0.53	$0.97	$1.54
15	.57	1.00	1.60
16	.60	1.10	1.83
17	.52	1.12	1.87
18	.63	1.14	1.90
19	.65	1.17	1.95
20	.67	1.20	2.00
21	.68	1.20	2.07
22	.70	1.24	2.14
23	.70	1.27	2.17
24	.70	1.30	2.20
25	.72	1.30	2.20
26	.73	1.34	2.27
27	.75	1.37	2.30
28	.77	1.40	2.40
29	.77	1.42	2.47
30	.77	1.42	2.47
31	.77	1.44	2.53
32	.77	1.44	2.60
33	.78	1.47	2.68
34	.80	1.50	2.77
35	.82	1.55	2.90
36	.84	1.60	3.04
37	.92	1.75	3.22
38	1.00	1.90	3.40
39	1.02	1.97	3.45
40	1.04	2.04	3.50

HEAVY FORMVAR MAGNET WIRE

Size	¼ lb.	½ lb.	1 lb.
14	$0.73	$1.24	$2.27
15	.73	1.34	2.33
16	.84	1.39	2.35
17	.84	1.44	2.37
18	.84	1.47	2.39
19	.92	1.52	2.45
20	.92	1.54	2.51
21	.92	1.55	2.61
22	.92	1.60	2.80
23	.97	1.64	2.87
24	1.00	1.65	3.07
25	1.15	1.97	3.50
26	1.19	1.98	3.64
27	1.25	2.07	3.84
28	1.34	2.15	4.04
29	1.37	2.24	4.14
30	1.44	2.34	4.22
31	1.67	2.52	4.58
32	1.69	2.63	4.67
33	1.77	2.81	4.94
34	1.87	3.19	5.16
35	2.04	3.46	5.88
36	2.39	3.75	6.58
37	2.72	4.20	7.50
38	3.17	4.69	8.45
39	3.50	5.64	9.38
40	4.69	7.04	11.27
41	5.18	7.59	13.65
42	5.78	8.15	14.72
43	6.00	8.63	15.08
44	7.43	11.40	23.33

TINNED COPPER WIRE

Size	¼ lb.	½ lb.	1 lb.
14	$0.67	$1.13	$1.75
15	.73	1.27	1.92
16	.80	1.40	2.00
17	.84	1.44	2.03
18	.87	1.47	2.08
19	.90	1.50	2.12
20	.94	1.53	2.17
21	.95	1.53	2.24
22	.97	1.57	2.30
23	.98	1.58	2.34
24	1.00	1.60	2.37
25	1.00	1.60	2.37
26	1.00	1.60	2.37
27	1.05	1.67	2.64
28	1.10	1.75	2.90
29	1.13	1.84	2.94
30	1.17	1.92	2.97
31	1.20	2.00	3.04
32	1.24	2.09	3.10
33	1.27	2.17	3.19
34	1.30	2.25	3.27
35	1.32	2.30	3.40
36	1.34	2.34	3.54
37	1.36	2.42	3.72
38	1.38	2.50	3.90
39	1.39	2.50	3.95
40	1.40	2.67	4.00

BARE NICKEL CHROMIUM WIRE

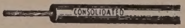
No. 2000

Recommended for electrical heating appliances and other devices where the highest quality in performance is required, whose operating temperatures do not exceed 1850° F. Particularly suited for heavy duty rheostats and controls which require compact resistance.

ON PROTECTA-METAL SPOOLS

Size	1 Oz.	¼ Lb.	1 Lb.
14	....	$1.52	$5.56
15	....	1.56	5.65
16	....	1.58	5.73
17	....	1.63	5.80
18	....	1.67	5.87
19	....	1.71	6.02
20	$0.67	1.76	6.17
21	.71	1.85	6.49
22	.72	1.93	6.79
23	.74	2.08	7.44
24	.76	2.22	8.09
25	.82	2.37	8.74
26	.87	2.53	9.39
27	.89	2.57	9.96
28	$0.92	$2.84	$10.53
29	1.00	2.98	11.18
30	1.09	3.11	11.83
31	1.14	3.28	12.28
32	1.18	3.43	12.73
33	1.31	3.79	14.73
34	1.44	4.16	16.73
35	1.58	4.55	17.71
36	1.71	4.94	18.69
37	2.22	6.50	23.86
38	2.74	8.05	29.03
39	2.86	8.39	31.62
40	2.98	8.95	34.20

TEST PROD WIRE



A Specially Constructed High Grade Wire For Use On Laboratory Test Equipment, Bench Analyzers, Etc.

SPECIFICATIONS: Extra flexible tinned copper; cotton wrap; red or black; live rubber insulation.

1001	5,000 volts	20	41 x 36	.043	.140
1006	10,000 volts	18	65 x 36	.088	.230

LEAD COVERED CABLE

CONSOLIDATED

FOR FREEDOM FROM INTERFERENCE, CORROSION AND DAMPNESS.

SPECIFICATIONS: Tinned copper wire; heavy rubber insulation and cotton braid; heavy lead sheath.

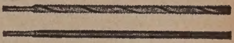
1453	2 cond.	18	Solid	1/32	.240 x .200
1454	3 cond.	18	Solod	1/32	.420

Military Types . . . . A ROME CABLE PRODUCT

CONSOLIDATED

SEND FOR A COMPLETE ELECTRONIC WIRE CATALOG

THERMOPLASTIC INSULATED HOOK-UP WIRE SPECIFICATION MIL-W-76A (SUPERSEDES JAN. C-76)



This specification has been approved by the Departments of the Army, Navy, and Air Force. Insulation possesses high dielectric strength. Impervious to oils, acids, alkalies, moisture and flame. The following types and colors are available for shipment from stock—
*See other sizes, types and covering over insulated wire.

SPECIFICATION MIL-W-76A

TYPE HW Single Conductor, Solid or Stranded Conductor as indicated. Tinned Copper. Thermoplastic Insulation. No further covering. (SUPERSEDING SRIR—SPECIFICATION JAN-C-76). Ins. Nom., .016″; Max. R.M S. Voltage, 1000; Stand. Spool, 1000 ft.

TYPE MW Single Conductor, Solid or Stranded Conductor as indicated. Tinned Copper. Thermoplastic Insulation. No further covering. (SUPERCEDING SRHV—SPECIFICATION JAN-C-76). Ins. Nom., .031″; Max. R.M.S. Voltage, 2500 Stand. Spool, 1000 ft.

CAT. NO.	MIL-W-76A TYPE DESIGNATION	SIZE	STRANDING	O.D.	MAX. COLORS
707	MW-C 22(1) U	22	Solid	.062″	1 thru 13
717	MW-C 20(1) U	20	Solid	.069″	1 thru 13
727	MW-C 18(1) U	18	Solid	.077″	1 thru 13
737	MW-C 22(7) U	22	7/.010	.070″	1 thru 22
747	MW-C 20(7) U	20	7/.0216	.078″	1 thru 22
757	MW-C 18(16) U	18	19/.0092	.089″	1 thru 22
637	HW-C 22(1) U	22	Solid	.098″	1 thru 13
642	HW-C 20(1) U	20	Solid	.105″	1 thru 13
647	HW-C 18(1) U	18	Solid	.113″	1 thru 13
667	HW-C 22(7) U	22	7/.010	.106″	1 thru 22
672	HW-C 20(7) U	20	7/.0126	.114″	1 thru 22
677	HW-C 18(16) U	18	19/.0092	.125″	1 thru 22

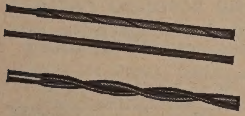
AVAILABLE COLORS—(COLOR CODE)
*COVERING OVER INSULATED WIRE

1—Black (0)	12—Pink		Symbol	Type
2—Brown (1)	13—Dark Blue		U	None
3—Red (2)	14—White/Black Tr.	(90)	J	Jacket (Nylon)
4—Orange (3)	15—White/Red	(92)	B	*Braid
5—Yellow (4)	16—White/Green	(95)	S	*Shield
6—Green (5)	17—White/Yellow	(94)	JS	Jacket and Shield (Nylon)
7—Blue (6)	18—White/Blue	(96)	BS	**Braid and Shield
8—Violet (Purple) (7)	19—White/Brown	(91)	SJ	Shield and Outer Jacket (Nylon)
9—Gray (Slate) (8)	20—White/Orange	(93)	JSJ	Jacket, Shield, Outer Jacket
10—White (9)	21—White/Gray	(98)	BSJ	**Braid, Shield, Outer Jacket
11—Tan				

**Specify, Synthetic, or Glass Yarn

*Other color combinations and sizes on special production order. *Available on factory order: Spec. MIL-W-76A, Types LW & HF with above coverings. We are also prepared to furnish wires to Military Specifications MIL-W-1687A—Types B, C, D, E, EE, FF, N. Quoted on request. Write for the Rome Cable Corporation TR-5 catalogue, complete with Military Specifications for Electronic Instrumentation and Sub-Miniature Wires, Multi-Conductor and Co-Axial Cables. Underwriter's Laboratory Approved—Rome High Temp®—Rome Synthinol®—Registered®.

Rome Synthinol . . . . A ROME CABLE PRODUCT THERMOPLASTIC INSULATED HOOK-UP WIRE



Rome Synthinol is a polyvinyl chloride type of thermoplastic insulation impervious to oils, acids, alkalies, moisture and flame, and Approved by Underwriters' Laboratories where exposed to temperatures not exceeding 80° Centigrade.

U/L Voltage Rating — 300 Volts Max.
Single and Two-Conductor Twisted Cable:
Color Coded

Rome Synthinol is specially designed for the chassis and sub-chassis wiring of radio and television receivers and transmitters as well as all other types of electronic equipment. It has physical and electrical characteristics of unusual permanency.

Typical Test Results

Breakdown Voltage:
1/64″ Synthinol ....over 10000 volts
1/32″ Synthinol ....over 18000 volts
Insulation Resistance:
1/32″ Synthinol ....over 5000 megohms feet

STANDARD SPOOL PUT-UP: 25 FT., 100 FT., 500 FT., 1000 FT. Colors: Black, Blue, Brown, Green, Orange, Pink, Purple, Red, Slate, White, Yellow.

CAT. NO.	SIZE AWG.	STRANDING	NOM. INS. THCKNS.	VOLTS	MAX. DIA. INCHES
801	22	Solid	1/64	300	.065
811	20	Solid	1/64	300	.071
841	18	Solid	1/64	300	.080
821	22	7 x No. 30	1/64	300	.069
831	20	10 x No. 30	1/64	300	.078
846	18	16 x No. 30	1/64	300	.085
851	22	Solid	1/32	600	.097
856	20	Solid	1/32	600	.104
861	18	Solid	1/32	600	.112
866	22	7 x No. 30	1/32	600	.102
871	20	0 x No. 30	1/32	600	.110
876	18	16 x No. 30	1/32	600	.119
881	20—2 condr.	10 x No. 30	.025	300	.170

Rome Hi-Temp . . . . A ROME CABLE PRODUCT RUBBER INSULATED HOOK-UP WIRE

ROME HI-TEMP
ROME CABLE
ROME N.Y.

Underwriters' approved and labeled* for 75°C.—300 volts

The result of extensive laboratory development and proved by a decade of service—Rome Hi-Temp is offered for radio and electronic circuits where resistance to moisture and heat is required.

SPECIFICATIONS

Conductors: Annealed tinned, solid or stranded copper conforming to A.S.T.M. Specification B 33 and/or Underwriters' Standards.
In order to provide maximum flexibility and prevent unraveling of the strands a short lay stranding is used as follows:
No. 22 Awg. .33 inch max.
No. 20 Awg. .50 inch. max.

Insulation: Rome Hi-Temp—a high quality, free-stripping heat-resistant rubber insulation approved by Underwriters' Laboratories.

Typical Test Results

Breakdown Voltage (1/32″ Hi-Temp)..10500 volts
Insulation Resistance...Over 10000 megohms feet
*Only factory length reels are furnished with U/L's labels.

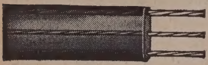
STANDARD SPOOL PUT-UP:
25 FT., 100 FT., 500 FT., 1000 FT.

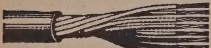
CAT. NO.	SIZE	STRANDING	INSULATION THICKNESS	DIAMETER (INCHES)
901	No. 22	Solid	1/32″	.075
911	No. 20	Solid	1/32″	.086
921	No. 22	7 x No. 30	1/32″	.085
931	No. 20	10 x No. 30	1/32″	.090

CONSOLIDATED

SEND FOR A COMPLETE ELECTRONIC WIRE CATALOG

TELEVISION CABLE





No.	Type	Size & Stranding	Specifications and General Applications	Nominal Diameter (in.)	Frequency (mc)	Attenuation Per 100 ft.	Impedance (ohms)	Velocity of Propagation (%)	Capacitance Per Ft. (mmf)
					Nominal Electrical Properties				
4500	2 condr.	22 7x30	USE: Receiving antenna at high frequencies.	.055 x .365	50 100 200 300 400 500	.72 1.1 1.7 2.2 2.7 3.1	300	85	4.6
4503	2 condr.	20 7x28	Same as 4500	.072 x .400	Same as 4500	Same as 4500	300	85	4.6
4504	2 condr.	20 7x28	Same as 4500	.080 x .400	Same as 4500	Same as 4500	300	85	4.6
4506	2 condr.	20 7x28	Same as 4500	.100 x .400	Same as 4500	Same as 4500	300	85	4.6
4527	2 condr. round	20 7x28	USE: For UHF and VHF.	.350			300	84	5.6
4507	3 condr.	20 7x28	USE: Same as 4503.	.072 x .365	Same as 4500	Same as 4500	300	85	4.6
4508	4 condr.	22 7x30	USE: Rotor Aerials.	.072 x .345	Same as 4500	Same as 4500	300	85	4.6
4509	4 condr.	20 7x28	Same as 4508 Except brown vinyl plastic.	.072 x .400	Same as 4500	Same as 4500	300	85	4.6
4510	4 condr.	20 7x28	Same as 4508	.072 x .400	Same as 4500	Same as 4508	300	85	4.6
4515	4 condr.	22 7x30	Color coded with gray jacket overall. USE: Rotor Aerials.	.160					
4521	8 condr.	22 7x30	Same as 4515	2.05					

MULTIPLE CONDUCTOR COTTON BRAIDED CABLE

For speakers, testers, battery hook-up, etc.

CONSOLIDATED

SPECIFICATIONS: Tinned flexible copper; colored plastic insulation; bunched individual conductors; heavy brown cotton braid overall; color coded. Size 20; Stranding 10x30; Insulation Thickness 1/64".

TYPE NO.	TYPE	FINISHED O.D. (Inches)	TYPE NO.	TYPE	FINISHED O.D. (Inches)
1481	1 condr.	.150	1487	7 condr.	.275
1482	2 condr.	.175	1488	8 condr.	.300
1483	3 condr.	.200	1489	9 condr.	.310
1484	4 condr.	.275	1490	10 condr.	.325
1485	5 condr.	.250	1494	11 condr.	.335
1486	6 condr.	.260	1495	12 condr.	.350

CONSOLIDATED

MULTIPLE CONDUCTOR TINNED COPPER SHIELD CABLE.

SPECIFICATIONS: Tinned flexible copper, 912E20, Stranding 10x30 — 1/64" plastic Insulation, color coded, Braided tinned copper shield.

TYPE NO.	TYPE	FINISHED O.D. (Inches)
No. 1471	1 conductor	.110
No. 1472	2 conductors	.190
No. 1473	3 dondultors	.200
No. 1474	4 conductors	.220
No. 1475	5 conductors	.235
No. 1476	6 conductors	.250
No. 1477	7 conductors	.265

ANALYZER CABLE

SPECIFICATIONS: Extra flexible tinned copper; plastic insulation; color coded; Brown cotton braid overall.

	TYPE	SIZE	STRANDING	INSULATION THICKNESS (Inches)	FINISHED O.D. (Inches)
1501	8 condr.	2-14	41 x 30	1/64	.300
		6-18	16 x 30		
1502	9 condr.	2-14	41 x 30	1/64	.320
		7-18	16 x 30		

SHIELDING AND BONDING CABLE

DESIGNED FOR SHIELDING INSULATED WIRES AND CABLES . . . BONDING AND MANY OTHER USES

STANDARD SPOOL PUT-UP:
50 FT., 100 FT., 250 FT., 500 FT., 1000 FT.

NO.	APPROX. I.D.	SIZE & NUMBER OF WIRES	APPROX. AWG.	CARRYING CAPACITY IN AMPERES
1386	1/32"	24x36	24	7
1387	3/64"	24x36	23	7
1388	3/32"	48x36	19	12
1389	7/64"	72x36	18	14
1390	⅛"	96x36	18	15
1391	3/16"	120x36	15	23
1392	¼"	168x36	14	30
1393	⅜"	288x36	11	50
1394	½"	386x36	10	55
1395	⅝"	396x36	10	61
1396	¾"	832x36	7	80
1397	25/32"	832x36	7	80
1398	1"	832x36	7	84
1399	1⅜"	912x36	7	105

TINNED COPPER BUS BAR WIRE

SOLID SOFT DRAWN COPPER AND BRIGHTLY TINNED FOR ALL TYPES OF SOLDERING CONNECTIONS AND OTHER APPLICATIONS

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT.

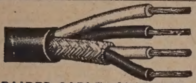
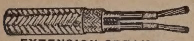
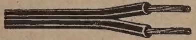
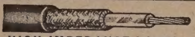
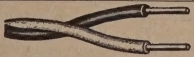
NO.	NOMINAL DIAMETER	SIZE SOLID	CIRCULAR MIL. AREA
3845	.129"	8	16510
3841	.102"	10	10380
3831	.082"	12	6530
3821	.064"	14	4110
3815	.051"	16	2583
3816	.040"	18	1624
3817	.032"	20	1022
3818	.025"	22	642
3819	.020"	24	404
3846	.016"	26	254.1
3847	.013"	28	159.8
3848	.010"	30	100.5

(Use Index Page 1 for Quick, Easy Location of ALL Products)

SEND FOR A COMPLETE ELECTRONIC WIRE CATALOG

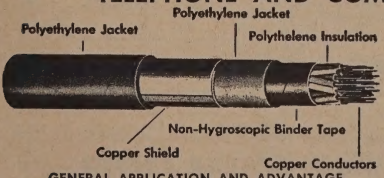
INTERCOMMUNICATING AND SOUND SYSTEM CABLES

STANDARD SPOOL PUT-UP: 10 FT., 25 FT., 50 FT., 100 FT., 500 FT., 1000 FT.

	NO.	TYPE	Size & Stranding	INSULATION THICKNESS (INCHES)	SPECIFICATION AND GENERAL APPLICATION	NOMINAL DIAMETER (INCHES)
STATION-TO-STATION EXTENSION WIRING SHIELDED	5501	2 Condr.	22 Solid	.015	Tinned copper vinyl plastic insulation, wires twisted together condr. red 1 condr. black—closely woven braided tinned copper shield.	.110
	5506	3 Condr.	22 Solid	.015	Same as 550+condr. red—1 condr. black—1 condr. blue.	.145
	5521	2 Condr.	20 Solid	.015	Tinned copper vinyl plastic insulation, wires twisted together—1 condr. red—1 condr. black—closely woven braided tinned copper shield.	.155
EXTENSION WIRING SHIELDED—PLASTIC JACKET	5511	2 Condr.	22 Solid	.015	Tinned copper vinyl plastic insulation, wires twisted together—1 condr. red—1 condr. black—and a spiral tinned copper shield with .020″ tubed gray vinyl plastic jacket.	.170
 PAIRED CABLE—SHIELDED PLASTIC JACKET	5516	2 Pair 4 Condr	22 7x30	.015	Stranded tinned copper vinyl plastic insulation. 2 pair cabled (4 conductors—1 pair black & white with braided tinned copper shield—1 pair black & brown unshielded—both pair bunched and .020″ gray vinyl plastic jacket overall.	.168x.276
 EXTENSION-SPEAKERS SHIELDED FOR LONG RUNS	5526	2 Condr.	20 10x30	.015	Tinned copper vinyl plastic insulation, wires twisted together—1 condr. red—1 condr. black—closely woven tinned copper shield.	.215
	5531	3 Condr.	20 10x30	.015	Same as 5526—1 condr. red—1 condr. black—1 condr. blue.	.230
	5536	2 Condr.	18 16x30	.015	Stranded tinned copper vinyl plastic insulation, wires twisted together. 1 condr. red—1 condr. white, closely woven braided tinned copper shield.	.235
EXPANSION-SPEAKERS SHIELDED—PLASTIC JACKET	5568	2 Condr.	22 7x30	.015	Tinned copper vinyl plastic insulation. 2 condrs.—cabled black and red—tinned copper spiral wrapped shield .023″ chrome vinyl plastic jacket.	.166
	5569	3 Condr.	22 7x30	.015	Tinned copper vinyl plastic insulation, 3 condrs.—cabled black, red, whiet—tinned copper spiral shield—chrome vinyl plastic jacket.	.193
	5538	2 Condr.	18 16x30	.015	Stranded tinned copper vinyl plastic insulation, wires twisted together. 1 condr. red. 1 condr. white. Spiral tinned copper shield and .020″ gray vinyl plastic jacket overall.	.225
	5543	2 Condr.	20 10x30	.015	Same as 5538 1 condr. Red. 1 condr. Black.	.185
	5541	2 Condr.	18 16x30	.015	Stranded tinned copper vinyl plastic insulation, wires twisted together. 1 condr. red—1 condr. white, closely woven braided tinned copper shield and .020″ gray vinyl plastic jacket overall.	.260
 JUKE BOX SPEAKER CABLE	5547	2 Condr.	24 7x32	.015	Stranded 1 condr. bare copper—1 condr. tinned copper—2 condrs. parallel gray vinyl plastic insulation.	.058x.115
 HIGH IMPEDANCE LAPEL MICROPHONES	5551	1 Condr.	24 16x34	.020	Stranded tinned copper polyethylene insulation closely woven braided tinned copper shield with .020″ gray vinyl jacket.	.125
 INTER COMMUNICATING SOUND SYSTEM	5556	2 Condr.	19 Solid	.015	Bare copper vinyl plastic insulation, wires twisted together—1 condr. brown—1 condr. tan.	.115
	5561	3 Condr.	19 Solid	.015	Same as 5556—1 condr. brown—1 condr. tan—1 condr. gray.	.132
INTER COMMUNICATING WEATHER-PROOF	5566	2 Condr.	22 Solid	.015	Bare copper .015 rubber insulation with a black cotton braid weatherproof finish. Conductors coded for easy identification. Ideal for exterior or interior communication installations.	.131x.203

TELEPHONE AND COMMUNICATION CABLE DIRECT BURIAL TYPE

FULLY COLOR CODED



GENERAL APPLICATION AND ADVANTAGE

APPLICATION: Communication and Telephone Cable for use in **direct burial installations** provides a high quality product similar to that used for aerial and duct systems, but with the addition of protective armoring. This minimizes the possibility of damage to the cable from rodents and insects and, correctly installed, reduces the dangers to the cable from sharp stones and other hazards of underground burial installations.

ADVANTAGE: The lightweight, but rugged construction of direct burial Communication and Telephone Cable permits fast and economical underground installation of communication systems with the assurance of dependable and enduring service. This is made possible through utilization of the same high quality polyethylene compounds that are used in its counterpart for aerial and duct type installations, with the added protection of copper armoring tapes and a durable, high-molecular weight, polyethylene jacket.

SPECIFICATIONS

Solid bare annealed copper 22 Awg. gauge conductors; thin wall, color coded, polyethylene insulation; conductors twisted to form pairs with symmetrically varying lays to minimize cross-talk; cabled (for 6 thru 50 pairs) by stranding pairs in concentric layers, or (for 75 thru 400 pairs) by stranding pairs into concentrically formed units, which are in turn cabled to form the complete assembly; non-hygroscopic binder tape furnishing high dielectric strength between shield and individual conductors; continuous copper shielding tape; high-molecular weight, polyethlene jacket.

NO.	NO. OF PAIRS	NO. OF COND.	COND. SIZE	NOMINAL JACKET THICKNESS, MILS		NOMINAL O. D. (Inches)
				INNER	OUTER	
6006	6	12	22 Solid	40	40	.430
6012	12	24	22 Solid	40	40	.500
6018	18	36	22 Solid	40	40	.560
6025	25	50	22 Solid	40	40	.630
6050	50	100	22 Solid	40	40	.820
6075	75	150	22 Solid	50	50	.990
6100	100	200	22 Solid	50	50	1.20
6150	150	300	22 Solid	50	50	1.30
6200	200	400	22 Solid	50	50	1.50
6300	300	600	22 Solid	50	60	1.80
6400	400	800	22 Solid	50	60	2.00

CONSOLIDATED

RG TYPE COAXIAL CABLES

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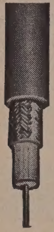
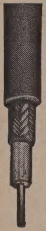
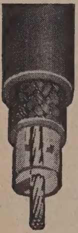


Non-Contaminating Low Temp. Black Jacket		Vinyl & Poly. Jackets				Shields							
No. RG/U	Cat. No.	No. RG/U	Cat. No.	Jacket O.D.	Vinyl Jacket	Outer	Inner	Dielectric O.D.	Center Conductor	V.P. %	Cap. Mmfd. /Ft.	Max. Oper. Volts Rms.	Nom. Imp. Ohms
		5	4431	.332	Black	C	C	.185	16	65.9	28.5	3000	52.5
5B	4432			.332	Black	S	S	.185	.053S	65.9	29.5	3000	50
6A	4433			.332	Black	C	S	.185	21CW	65.9	20.	2700	75
		7	4434	.370	Black	—	C	.250**	19	84	12.5	1000	97
		8	4415	.405	Black	—	C	.285	7/21	65.9	29.5	4000	52
8A	4435			.405	Black	—	C	.285	7/.0296	65.9	30.5	4000	50
		9	4436	.420	Grey	C	S	.280	7/21S	65.9	30	4000	51
9A	4437			.420	Grey	S	S	.280	7/21S	65.9	30	4000	51
9B	4438			.425	Black	S	S	.285	7/.0296S	65.9	30.5	4000	50
10A	4439			.405	Black	—	C	.285	7/.0296	65.9	30.5	4000	50
		11	4419	.405	Black	—	C	.285	7/26T	65.9	20.5	4000	75
11A	4440			.405	Black	—	C	.285	7/26T	65.9	20.5	4000	75
12A	4441			.405	Black	—	C	.285	7/26T	65.9	20.5	4000	75
		13	4442	.425	Black	C	C	.285	7/26T	65.9	20.5	4000	75
13A	4443			.425	Black	C	C	.285	7/26T	65.9	20.5	4000	75
14A	4467			.545	Grey	C	C	.370	10	65.9	29.5	5500	52
14A	4468			.545	Black	C	C	.370	.106	65.9	30	5500	50
		21	4444	.322	Grey	S	S	.185	16N	65.9	29	2700	53
21A	4445			.332	Black	S	S	.185	.053N	65.9	30	2700	50
		29	4446	.184	Poly	—	T	.116	20	65.9	28.5	1900	53.5
		54A	4469	.250	Poly	—	T	.178	7/.0152	65.9	26.5	3000	58
		55	4447	.206	Poly	T	T	.116	20	65.9	28.5	1900	53.5
55A	4448			.216	Black	S	S	.116	.035S	65.9	29.5	1900	50
		58	4405	.195	Black	—	T	.116	20	65.9	28.5	1900	53.5
58A	4449			.195	Black	—	T	.116	19/.0071T	65.9	29.5	1900	50
58C	4450			.195	Black	—	T	.116	19/.0071T	65.9	29.5	1900	50
		59	4401	.242	Black	—	C	.146	22CW	65.9	21	2300	73
59A	4451			.242	Black	—	C	.146	.023CW	65.9	20.5	2300	75
59B	4470			.242	Black	—	C	.146	.023CW	65.9	20.5	2300	75
		62	4452	.242	Black	—	C	.146**	22CW	84	13.5	750	93
62A	4453			.242	Black	—	C	.146**	22CW	84	13.5	750	93
		63	4454	.405	Black	—	C	.285**	22CW	84	10	1000	125
63B	4455			.405	Black	—	C	.285**	22CW	84	10	1000	125
		71	4456	.250	Poly	T	T or C	.146**	22CW	84	13.5	750	93
71A	4466			.245	Black	T	T or C	.146**	22CW	84	13.5	750	93
		108	4464	.235	Black	—	T	.079 ea.	Twq 7/28T	68	23.5	1000	78
108A	4465			.235	Black	—	T	.079 ea.	Two7/287	65.9	23.5	1000	78
122	4457			.160	Black	—	T	.096	27/36T	65.9	29.5	1900	50

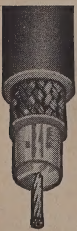




MINIATURE COAXIAL CABLE

	4458	.150	Black	—	.100	7/.0056CW	20	75
174	4459	.105	Black	—	.060**	7/.0063CW	30	50

TRIAXIAL CABLE DOUBLE SHIELD DOUBLE JACKET



Triaxial 58A	4463	50	.285	Black	T	T	.116	19.007IT	65.9	28.5	1,900
Triaxial 59	4460	73	.325	Black	C	C	.146	22CW	65.9	21.0	2,300
Triaxial 11	4461	75	.460	Black	C	C	.285	7 26T	65.9	20.5	4,000
Triaxial 8	4462	52	.490	Black	C	C	.285	7 21C	65.9	29.5	4,000

**Semi-Solid Dielectric N—Nichrome C—Copper S—Silvered Copper
CW—Copperweld T—Tinned Copper F—Formvar

INTERCOMMUNICATING AND SOUND SYSTEM CABLES

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SEND FOR A COMPLETE ELECTRONIC WIRE CATALOG

PAIRED PLASTIC CONDUCTORS

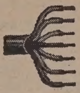
SPECIFICATIONS AND GENERAL APPLICATIONS Tinned copper conductor .010″ vinyl plastic insulation. Cabled .202″ gray vinyl plastic Jacket overall

NO.	TYPE	SIZE AND STRANDING	NOMINAL DIAMETER (Inches)
5201	1 Pr. 2 Condr.	22 Solid	.145
5205	2 Pr. 4 Condr.	22 Solid	.190
5211	3 Pr. 6 Condr.	22 Solid	.230
5221	5 Pr. 10 Condr.	22 Solid	.250
5226	6 Pr. 12 Condr.	22 Solid	.265
5231	7 Pr. 14 Condr.	22 Solid	.280
5236	8 Pr. 16 Condr.	22 Solid	.300
5241	9 Pr. 18 Condr.	22 Solid	.320
5251	11 Pr. 22 Condr.	22 Solid	.360
5271	15 Pr. 30 Condr.	22 Solid	.390
5286	27 Pr. 54 Condr.	22 Solid	.510

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

MULTIPLE CONDUCTORS FULLY COLOR CODED

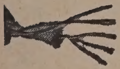
SIZE & STRANDING 22 - 7x30 SPECIFICATION AND GENERAL APPLICATION Tinned copper conductor .010″ vinyl plastic insulation. Cabled .020″ gray vinyl plastic Jacket overall

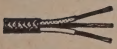


NO.	TYPE		NOMINAL DIAMETER (Inches)
5400	2 Condr.	22 7x30	
5401	3 Condr.	22 7x30	.140
5406	4 Condr.	22 7x30	.158
5411	5 Condr.	22 7x30	.170
5416	6 Condr.	22 7x30	.212
5421	7 Condr.	22 7x30	.230
5426	8 Condr.	22 7x30	.235
5431	9 Condr.	22	.245
5434	12 Condr.	22 7x30	

STANDARD SPOOL PUT-UP: 10 FT., 15 FT., 25 FT., 100 FT., 500 FT., 1000 FT.

PHONOGRAPH MULTIPLE CABLE STANDARD SPOOL PUT-UP: 500 FT., 1000 FT.





TYPE No.	SIZE	SPECIAL USE	SPECIFICATIONS	STRANDING	FINISHED O.D. (Inches)
5103	3-22	Same as 5030	3 condrs. No. 22 with 1/64″ thermoplastic insulation, all individually color coded. All conductors grouped into cable form with a treated cotton braid overall lacquered.	7 x 30	.125
5123	2-16 1-18	Same as 5030	2 condrs. No. 16 1/64″ thermoplastic insulation. 1 condr. No. 18 1/32″ thermoplastic insulation, all individually color coded. All conductors grouped into cable form with gray vinyl plastic jacket.	2-26 x 30 1-16 x 30	.215
5135	22 5 condr.	Same as 5030	5 condr. No. 22 with 1/64″ thermoplastic insulation; 3 condr. twisted together with a braided tinned copper shield; 2 condr. twisted; all condr. grouped into cable form with a brown cotton braid overall.	5-7 x 30	.225
5124	4-18	Same as 5030	No. 18 solid 4 condr. color coded gray plastic jacket overall.	Solid	.225

CONSOLIDATED

MICROPHONE CABLE

CONDUCTOR COLOR CHART: 1—Black; 2—White; 3—Red; 4—Green; 5—Yellow; 6—Blue; 7—Brown.

STANDARD SPOOL PUT-UP: 9 FT., 10 FT., 25 FT., 50 FT., 100 FT., 250 FT., 500 FT., 1000 FT.

SHIELDED; Weatherproof rubber jacket for all microphone or weatherproof extension work. (Longer continuous lengths if desired.)

No.	TYPE	SIZE	SPECIAL USE	SPECIFICATIONS	STRANDING	FINISHED O. D. (Inches)	NOMINAL CAPACITY per ft. (mmf)
1461	1 conductor	22	Lapel microphone	Tinned copper polyethylene insulation with a closely woven tinned copper shield. Grey vinyl plastic jacket.	16 x 34	.125	34.
1457	1 conductor	22	Crystal, Ribbon and other high impedance microphones	Same as 1461 except heavier polyethylene insulation on conductor.	16 x 34	.200	25.
					26 x 34	.175	40.
1458	2 conductor	22	Low impedance microphones	Tinned copper conductors polyethylene insulation conductors; black and white. Cabled with fillers closely woven tinned copper shield. Gray vinyl plastic jacket.	16 x 34	.231	32.
1459	1 conductor	20	Lapel microphone	Tinned Copper Wire, with polyethylene to .087″ O.D. with a closely woven tinned copper shielded braid, and a heavy black plastic jacket overall.	26 x 34	.240	33.
1460	1 conductor	20	Crystal microphone	Tinned copper, yarn serve; wall of live rubber; tinned copper braid shield; rubber jacket overall.	26 x 34	.240	68.
1462	2 conductor	20	Carbon microphones	Same as 1460; color coded		.268	
1456	2 conductor	18	Heavy duty studio cable	Same as 1460; color coded	41 x 34	.295	80.
1463	3 conductor	20	Carbon microphones	Same as 1460; color coded	26 x 34	.277	85.
1464	4 conductor	20	Carbon microphones	Same as 1460; color coded	26 x 34	.295	95.
1465	5 conductor	20	Carbon microphones	Same as 1460; color coded	26 x 34	.323	
1466	6 conductor	20	Carbon microphones	Same as 1460; color coded	26 x 34	.350	
1467	7 conductor	20	Carbon microphones	Same as 1460; color coded	26 x 34	.360	
1455	8 conductor	20	Same as 1465	Same as 2460; color coded	26 x 34	.386	

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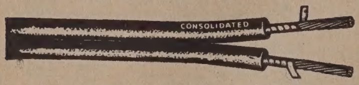
ELECTRICAL CORDAGES
UNDERWRITERS APPROVED

SUPPLIED ON ATTRACTIVE TRI-COLOR LITHOGRAPHED METAL SPOOLS

RUBBER HANDYCORD CENTERSTRIP

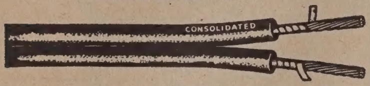


STANDARD SPOOL PUT-UP: 25 FT., 50 FT., 100 FT., 250 FT., 500 FT., 1000FF.

NO.	NO. OF COND.	SIZE AWG.	U. L. TYPE	STRAND-ING	NOM. INS. THICKNESS	NOM. O. D.
4072	2	18	SP(P.O.S.J.)	41 x 34	1/64″	.235 x .130
4074	2	16	SP(P.O.S.J.)	65 x 34	1/32″	.300 x .160

Colors: Black, Brown, White, Gray.

PLASTIC HANDYCORD CENTERSTRIP

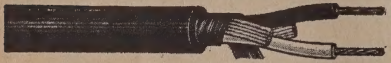


STANDARD SPOOL PUT-UP: 25 FT., 50 FT., 100 FT., 250 FT., 500 FT., 1000 FT.

NO.	NO. OF COND.	SIZE AWG.	U. L. TYPE	STRAND-ING	NOM. INS. THICKNESS	NOM. O. D.
4077	2	18	SPT(P.O.T.)	41 x 34	1/64″	.235 x .130
4079	2	16	SPT(P.O.T.)	65 x 34	1/32″	.300 x .160

Colors: Black, Brown, White, Gray.

RUBBER SHEATHED SERVICE CORD
UNDERWRITERS APPROVED



SPECIFICATIONS AND APPLICATION

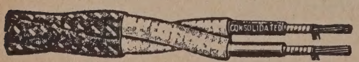
Extra flexible bare copper cotton served. 1/32″ rubber insulation color coded conductors cabled with fillers, cotton wrap and black, tough rubber jacket.

For all electronic equipment, household appliances, garden and power tools.

STANDARD PUT-UP: 25 FT., 50 FT., 100 FT., 250 FT.

NO.	NO. OF COND.	SIZE AWG.	U. L. TYPE	CURRENT CARRYING CAPACITY	VOLTAGE RATING	NOM. O. D.
4202	2	18	SV	5 Amps.	300	.250″
4207	2	18	SJ	5 Amps.	300	.310″
4212	3	18	SJ	5 Amps.	300	.345″
4214	4	18	SJ	5 Amps.	300	.360″
4217	2	16	SJ	7 Amps.	300	.340″
4222	3	16	SJ	7 Amps.	300	.375″
4224	4	16	SJ	7 Amps.	600	.395″
4227	2	18	S	5 Amps.	600	.390″
4232	3	18	S	5 Amps.	600	.405″
4234	4	18	S	5 Amps.	600	.435″
4237	2	16	S	7 Amps.	600	.410″
4242	3	16	S	7 Amps.	600	.430″
4244	4	16	S	7 Amps.	600	.485″
4247	2	14	S	15 Amps.	600	.540″
4252	3	14	S	15 Amps.	600	.560″
4254	4	14	S	15 Amps.	600	.605″
4257	2	12	S			
4262	3	12	S	20 Amps.	600	.635″
4264	4	12	S	20 Amps.	600	.665″
4267	2	10	S	25 Amps.	600	.640″
4272	3	10	S	25 Amps.	600	.690″
4274	4	10		25 Amps.	600	.745″

NEOPRENE SHEATHED SERVICE CORD
UNDERWRITERS APPROVED



SPECIFICATIONS AND APPLICATION

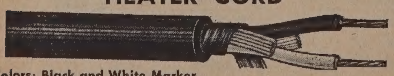
Same specifications as 4200 Series except black Neoprene jacket.

For all types of equipment exposed to oils, acid and excessive moisture.

STANDARD PUT-UP: 25 FT., 50 FT., 100 FT., 250 FT.

NO.	NO. OF COND.	SIZE AWG.	U. L. TYPE	CURRENT CARRYING CAPACITY	VOLTAGE RATING	NOM. O. D.
4307	2	18	SJO	5 Amps.	300	.310″
4312	3	18	SJO	5 Amps.	300	.345″
4314	4	18	SJO	5 Amps.	300	.360″
4317	2	16	SJO	7 Amps.	300	.340″
4322	3	16	SJO	7 Amps.	300	.375″
4324	4	16	SO	7 Amps.	600	.395″
4327	2	18	SO	5 Amps.	600	.390″
4332	3	18	SO	5 Amps.	600	.405″
4334	4	18	SO	5 Amps.	600	.435″
4337	2	16	SO	7 Amps.	600	.410″
4342	3	16	SO	7 Amps.	600	.430″
4344	4	16	SO	7 Amps.	600	.485″
4347	2	14	SO	15 Amps.	600	.540″
4352	3	14	SO	15 Amps.	600	.560″
4354	4	14	SO	15 Amps.	600	.605″
4357	2	12	SO	20 Amps.	600	.605″
4362	3	12	SO	20 Amps.	600	.635″
4364	4	12	SO	20 Amps.	600	.665″
4367	2	10	SO	25 Amps.	600	.640″
4372	3	10	SO	25 Amps.	600	.690″
4374	4	10	SO	25 Amps.	600	.745″

HEATER CORD



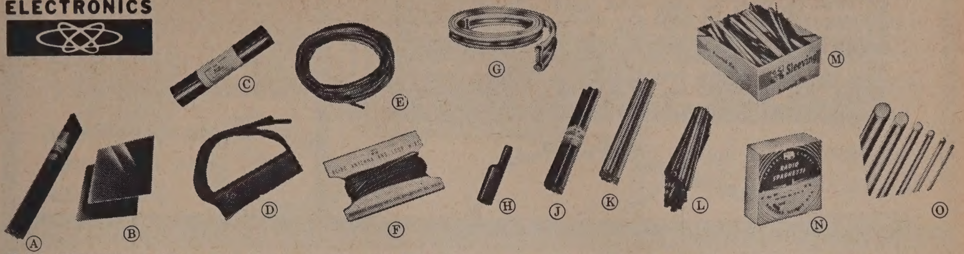
Colors: Black and White Marker.

STANDARD SPOOL PUT-UP: 100 FT., 250 FT.

NO.	NO. OF COND.	SIZE AWG.	U. L. TYPE	STRAND-ING	NOM. INS. THICKNESS	NOM. O. D.
4087	2	16	HPD	65 x 34	1/32″	.275
4092	2	18	HPD	41 x 34	1/32″	.250

GC ELECTRONICS

ELECTRONIC COMPONENTS



(A) G-C INSULATING CAMBRIC—Dry yellow varnished cambric for field coils, transformers, chokes, resistors, motors, etc.
Cat. No. 549 .010"—Roll over 210 sq. in. List **$1.30**

(B) G-C LAMINATED PHENOLIC PLASTIC PANELS—Black laminated panels. 1/16" thick stock. Black color.
Cat. No. 590 6"x6"x1/16" List **$ .70**
591 6"x12"x1/16" **1.35**
592 12"x12"x1/16" **2.65**

(C) G-C FYBEROID FISH PAPER—Fish paper has many uses around the shops for repair jobs where electrical insulation is required.
Cat. No. 560 .010"-240 sq. in. roll List **$. 75**

(D) G-C BATTERY CONNECTOR STRIP—Used for connecting 67½ volt "B" batteries, such as Eveready 455, 466; Burgess XX30, XX45.
Cat. No. 8115 List **$ .30**

(E) G-C SHIELDED PHONO PICK-UP WIRE—Handy packages of shielded phono pick-up wire, very handy for new installations or replacements.
Cat. No. 1738-E Envelope List **$ .65**

(F) G-C AC-DC INDOOR ANTENNA WIRE—Antenna lead wire for indoor type AC-DC sets. Flexible copper wire covered with brown plastic insulation.
Cat. No. 840 25 Ft. coil List **$ .60**

(G) G-C 300-OHM LINE PROTECTIVE TUBING—Clear plastic tubing will fit over 300-ohm flat lines and will protect the line from grounding and rubbing on corners of buildings, eaves, etc. It actually protects and waterproofs the line.
Cat. No. 625 Box of 8 ft. List **$1.25**
626 250 ft. coil **26.50**
627 1000 ft. **89.00**

(H) G-C ALLIGATOR-CLIP INSULATORS—High quality vinyl plastic insulators fit all alligator clips. Positive insulation against grounding and shock.
Cat. No. 9376 Red List **$ .12**
9376-C **7.50**
9377 Black **.12**
9377-C **7.50**

(J) G-C GENFLEX PLASTIC TUBING—High grade extremely flexible plastic tubing for radio and electronic insulation work. Highly resistant to cold or heat. High dielectric strength, average 8,000 volts. Colors: Black, Red, Green and Clear (Specify Color).
Cat. No. 603 18 B-S Gauge, .042 I.D., 20 ft. Package List **$1.35**
605 16 B-S Gauge, .053 I.D., 20 ft. Package List **$1.35**
607 14 B-S Gauge, .066 I.D. 20 ft. Package List **$1.35**
609 12 B-S Gauge, .085 I.D., 20 ft. Package List **$1.35**
611 10 B-S Gauge, .106 I.D., 15 ft. Package List **$1.35**
613 8 B-S Gauge, .133 I.D., 15 ft. Package List **$1.35**
616 6 B-S Gauge, .166 I.D., 10 ft. Package List **$1.35**
617 4 B-S Gauge, .208 I.D., 10 ft. Package List **$1.35**
620 2 B-S Gauge, .263 I.D., 10 ft. Package List **$1.35**

G-C PLASTIC TUBING KITS—Handy kits of assorted colors and sizes. Ideal for experimenters and servicemen.
Cat. No. 635 Kit of 25 ft. assorted. Sizes 18 to 10 Genflex Tubing. List **$1.35**

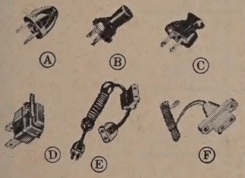
(K) G-C HI-VOLT PLASTIC TUBING ASSORTMENT—Kit of high voltage plastic tubing in assorted sizes. 7½" long bundles—over 200" in bundle.
Cat. No. 9177 List **$ .45**

(L) G-C ASSORTED SPAGHETTI KIT—An assortment of 7½" lengths of spaghetti sleeving. 26 lengths to the kit. Sizes include from No. 17 wire to 3/8" I.D.
Cat. No. 550 Kit of 26 Lengths. List **$ .60**

(M) SPAGHETTI AND SLEEVING ASSORTMENT—A variety of sizes, and colors are included of high grade varnish tubing. Put up in attractive box.
Cat. No. 551 List **$1.50**

(N) G-C SPAGHETTI IN BOXES—Best grade varnished tubing put in convenient 20-ft. lengths. Will fit wire from No. 12 to No. 18. Colors: Black, Red, Yellow, Green and Blue.
Cat. No. 499 List **$1.85**

(O) G-C RADIO SPAGHETTI—High grade spaghetti for radio-television work. Average dielectric strength 4000 volts. Very flexible. Smoothly coated with best grades of varnish. Material is approved by A. S. T. M. Colors: Black, Brown, Red, Green and Yellow (Specify Color). 30" Lengths.
Cat. No. 500 No. 20, fit 20 wire List **$ .20**
503 No. 17, fit 18 wire **.22**
506 No. 14, fit 14 wire **.24**
508 No. 12, fit 12 wire **.26**
512 1/8" I.D. **.38**
515 3/16" I.D. **.38**
518 1/4" I.D. **.55**
521 3/8" I.D. (resist. size) **.99**
522 7/16" I.D. Red & Black **1.15**
523 1/2" I.D. Red & Black **1.32**



(A) G-C STREAMLINE ATTACHMENT CAP—Made of rubber. Brass blades. Spring type. U.L. approved.
Cat. No. 865 List **$ .35**

(B) G-C SPRING ACTION CAP—Heavy-duty type. Made of rubber. Brass blades. U.L. approved.
Cat. No. 861 List **$ .25**

(C) G-C SPRING ACTION CAP—Flat plastic type. Brass blades. U.L. approved. Cat. No. 860 List **$ .25**

(D) G-C ANGLE PLUG—Plastic angle plug that assembles in a jiffy. It has no screws and requires no soldering.
Cat. No. 8360-E Brown List **$ .25**
8361-E Ivory **.25**

(E) SERVICEMAN'S CHEATER CORD—Special "cheater cord" for extending the standard interlock safety cord supplied with the TV set.
Cat. No. 8948 List **$1.30**

(F) INTERLOCK CABLE CORD—Replacement cord for RCA, Philco, G-E, Admiral and others.
Cat. No. 8200 Reg. TV Cord List **$ .75**
8201 Spec. Zenith Cord **1.00**

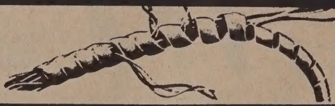
NEW G-C INSULATING TUBING OF TEFLON*

—Exceptionally tough and flexible. Withstands temperatures from 450° below zero F. to 500° above zero F. Will not melt near solder joints. Outstanding dialectric properties—zero moisture absorption. Chemically inert. Completely weatherproof. Wires can be inserted much more easily than in any other tubing.

*Registered trademark Du Pont Co.

Part No.	Feet Per Spool	Color	Gauge	I.D. (Inches)	Wall Thickness	List Price Per Spool
7980-7	10	Nat	24	.022	.010	$2.22
7980-7C	100	Nat	24	.022	.010	16.26
7980-1	10	Red	24	.022	.010	2.22
7980-1C	100	Red	24	.022	.010	16.26
7980-4	10	Blue	24	.022	.010	2.22
7980-4C	100	Blue	24	.022	.010	16.26
7981-7	10	Nat	22	.027	.012	2.45
7981-7C	100	Nat	22	.027	.012	20.71
7981-1	10	Red	22	.027	.012	2.45
7981-1C	100	Red	22	.027	.012	20.71
7981-4	10	Blue	22	.027	.012	2.45
7981-4C	100	Blue	22	.027	.012	20.71
7982-7	10	Nat	20	.034	.012	3.06
7982-7C	100	Nat	20	.034	.012	30.44
7982-1	10	Red	20	.034	.012	3.06
7982-1C	100	Blue	20	.034	.012	30.44
7982-4	10	Nat	18	.042	.012	3.75
7982-4C	100	Blue	20	.034	.012	3.06
7983-7	10	Red	20	.034	.012	30.44
7983-7C	100	Nat	18	.042	.012	34.80
7983-1	10	Red	18	.042	.012	3.73
7983-1C	100	Red	18	.042	.012	34.80
7983-4	10	Blue	18	.042	.012	3.73
7983-4C	100	Blue	18	.042	.012	34.80
7984-7	10	Nat	16	.053	.012	4.43
7984-7C	100	Nat	16	.053	.012	41.70
7984-1	10	Red	16	.053	.012	4.43
7984-1C	100	Red	16	.053	.012	41.70
7984-4	10	Blue	16	.053	.012	4.43
7984-4C	100	Blue	16	.053	.012	41.70
7985-7	10	Nat	14	.066	.012	4.87
7985-7C	100	Nat	14	.066	.012	47.30
7985-1	10	Red	14	.066	.012	4.87
7985-1C	100	Red	14	.066	.012	47.30
7985-4	10	Blue	14	.066	.012	4.87
7985-4C	100	Blue	14	.066	.012	47.30
7986-7	5	Nat	12	.085	.014	3.06
7986-7C	100	Nat	12	.085	.014	57.13
7986-1	5	Red	12	.085	.014	3.06
7986-1C	100	Red	12	.085	.014	57.13
7986-4	5	Blue	12	.085	.014	3.06
7986-4C	100	Blue	12	.085	.014	57.13
7987-7	5	Nat	10	.106	.014	3.61
7987-7C	100	Nat	10	.106	.014	65.89
7987-1	5	Red	10	.106	.014	3.61
7987-1C	100	Red	10	.106	.014	65.89
7987-4	5	Blue	10	.106	.014	3.61
7987-4C	100	Blue	10	.106	.014	65.89

SPIRAL WRAP



Illumitronic has the most complete line of PLASTIC ROD, TUBING and SHEET.

Also HARNESSING and CABLING materials:

Spiral Wrap is spirally cut plastic tubing with many uses. It is ideal for bundling wires into compact and flexible cables. Spiral Wrap is also used to prevent abrasion, to insulate, and to hold wires, cables and tubing, etc. Spiral Wrap is available in 5 types of plastic—each with properties for specific applications. For general purpose applications Polyethylene Spiral Wrap (SWP) is recommended. It will withstand temperatures to 220°F. Nylon Spiral Wrap (SWN) is tough and has excellent abrasion characteristics along with excellent temperature characteristics to 300°F. Rulan Spiral Wrap (SWR) is intended for applications where a flame-retardant material is required. Both Irradiated Polyethylene (SWI) and Teflon Spiral Wrap (SWT) have extremely good temperature characteristics. SWT will stand temperatures to 500°F. Teflon Spiral Wrap also has chemical inertness and is non-burning

					NET/FT	NET/100 FT	
NEW NO.	OLD NO.	OD	WALL	COLOR	1-99'	100-999'	1000-UP
POLYETHYLENE							
SWP-1/8	197-2	1/8	.031	1	.05	3.60	3.00
3/16	-3	3/16	.031	1	.07	5.30	4.95
-1/4	-4	1/4	.058	1,2,3,4	.08	6.00	5.55
-1/4XT	-4A	1/4	.032	1	.08	5.80	5.25
-3/8	-6	3/8	.058	1,2,3,4	.13	9.50	8.40
-1/2*	-8	1/2	.058	1	.16	14.50	13.00
NYLON							
SWN-1/8	193-2	1/8	.016	1	.09	7.50	6.90
-1/4	-4	1/4	.030	1	.16	15.50	14.60
-3/8	-6	3/8	.030	1	.38	36.40	35.10
-1/2*	-8	1/2	.030	1	.45	44.00	43.00
FLAME RETARDANT (RULAN)							
SWR-1/4	198-4	1/4	.058	1,2	.10	9.00	7.90
-3/8	-8	3/8	.058	1,2	.15	13.00	11.40
IRRADIATED POLYETHYLENE							
SWI-1/4	196-4	1/4	.058	2	.58	54.00	44.60
TEFLON**							
SWT-1/8	199-2	1/8	.030	1	1.35	117.00	
-1/4	-4	1/4	.030	1	1.50	139.00	
-3/8	-6	3/8	.030	1	2.95	261.00	
-1/2	-8	1/2	.030	1	4.20	380.00	

AGGREGATION: Sizes, colors and types may be aggregated.

AVAILABLE IN
3' (10/Box)
25' (1/Box)
100' Spool
500' Spool

COLOR: 1-Natural (white), 2-Black, 3-Red, 4-Blue.
Black polyethylene is excellent for outdoor use.
Additional colors and sizes available on request.

**Available in 3' and 25' lengths subject to plus or minus 10%
*1/2" o.d. available in 3', 25', 100' and 250' spool.

illumitronic i engineering

sunnyvale, california

VINYL SLEEVING

ILLUMITRONIC
VINYL
SLEEVING
SUNNYVALE

Illumitronic has the most complete line of PLASTIC ROD, TUBING and SHEET.

Also HARNESSING and CABLING materials:

PROPERTIES

Temperature rating ....105°C
Flexibility (low temp.)...........—30°C
Dielectric Strength ....800 V/Mil
Flammability ....non-flammable
Tensile Strength·.............2500 PS1

STANDARD COLORS:

Clear, Black, Red, Yellow, Green, Blue, Brown, White, Orange, Violet.

SLV-105 conforms to spec. MIL-1-631C, grade C, ASTM-D876, ASTM-D9222 and is U/L approved.

Sizes #24 thru #1 available in all standard colors
Sizes 0 thru 2 1/2" available in clear and black.

OLD# V105			SHORT LENGTHS NET PER LENGTH				QUANTITY PRICE IF PURCHASED IN LENGTHS SHOWN, SIZES MAY BE AGGREGATED	NET PER 1000 FT		
CAT # SIZE	ID	WALL	25'	50'	100'	500'		LESS THAN 1000'	1000'-4999'	5000'- & over
SLV 105 - 24	.022	.012			1.96	8.80	1000	16.10	13.00	10.80
- 22	.027	.012			1.97	8.85	1000	16.20	13.10	10.90
- 20	.034	.016			2.01	8.98	1000	16.60	13.40	11.10
- 19	.038	.016			2.06	9.30	1000	17.10	13.50	11.30
- 18	.042	.016			2.08	9.40	1000	17.30	13.80	11.40
- 17	.047	.016			2.11	9.55	1000	17.60	14.00	11.50
- 16	.053	.016			2.20	9.85	1000	18.50	14.60	12.10
- 15	.059	.016			2.27	9.90	1000	19.20	14.90	12.30
- 14	.066	.016			2.34	9.95	500	19.90	15.40	12.80
- 13	.076	.016		1.37	2.39	10.20	500	20.40	16.00	13.10
- 12	.085	.016		1.42	2.49	10.70	500	21.40	16.60	13.80
- 11	.095	.016		1.46	2.56	11.05	500	22.10	17.20	14.50
- 10	.106	.016		1.51	2.66	11.55	500	23.10	18.50	15.50
- 9	.118	.020		1.92	3.49	15.70	500	31.40	24.60	20.80
- 1/8	.125	.020		2.00	3.65	16.85	500	33.85	26.55	22.25
- 8	.133	.020		2.05	3.74	16.95	500	33.90	26.60	22.30
- 7	.148	.020		2.16	3.97	18.10	500	36.20	28.30	23.50
- 6	.166	.020		2.31	4.26	19.55	500	39.10	30.20	25.10
- 5	.186	.020		2.47	4.58	21.15	200	42.30	32.30	26.80
- 4	.208	.020		2.64	4.93		200	45.80	34.70	28.40
- 3	.234	.020		2.80	5.25		200	49.00	36.90	30.40
- 1/4	.250	.020		2.95	5.55		200	53.35	39.95	33.15
- 2	.263	.020		3.02	5.69		200	53.40	40.00	33.20
- 1	.294	.020		3.24	6.12		200	57.70	43.10	35.60
- 5/16	.312	.025		4.07	7.79		200	62.30	46.40	38.90
- 0	.330	.020		3.47	6.58		200	74.40	55.40	46.40
- 3/8	.375	.025	2.40	4.65	8.59		100	85.90	64.10	54.90
- 7/16"	.438	.025	2.66	5.18	9.65		100	96.50	72.50	62.00
- 1/2	.500	.025	2.91	5.67	10.64		100	106.40	80.70	68.70
- 9/16	.562	.030	3.79	7.44			50	141.70	107.70	90.70
- 5/8	.625	.030	4.08	8.00			50	153.00	117.30	98.30
- 3/4	.750	.035	5.53	10.91			50	211.20	160.90	134.40
- 7/8	.875	.035	6.19	12.22			50	237.40	183.80	153.10
- 1"	1.000	.035	6.88	13.62			50	265.30	205.20	170.00
- 1 1/8	1.125	.040	8.70				25	347.90	265.10	219.70
- 1 1/4	1.250	.040	9.20				25	367.80	285.80	238.90
- 1 3/8	1.375	.040	9.83				25	393.10	302.90	253.30
- 1 1/2	1.500	.045	11.92				25	476.70	367.80	311.10
- 1 3/4	1.750	.055	14.86				25	594.30	461.10	392.70
- 2"	2.000	.060	20.42				25	816.70	626.20	531.20
- 2 1/4	2.250	.065	24.28				25	971.00	738.80	628.20
- 2 1/2	2.500	.070	28.78				25	1,151.20	873.00	740.60

SLV 105-S1 25 Assorted 1' Lengths, Assorted colors (up to "0")......... .99
SLV 105-S2 10 Assorted 1' Lengths, Assorted colors (1/4 to 1")............. 1.49

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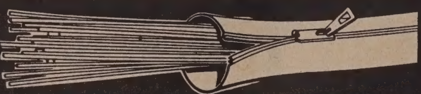
ZIPPERTUBING



- **MAKE YOUR OWN CUSTOM CABLES**
  As many conductors and types as you want—group them together—zip it up.
  No expensive minimums.
  You can make exactly what you want!

- **HARNESS WIRES EASILY**
  Use perforated Zippertubing.

- **MAKE YOUR OWN SHIELDED CABLES**
  Provides a jacket and a shield for wires in one application.
  Gives 100% coverage and provides equal or better than any other type of shielding. Ideal for Hi-Fi shielding.

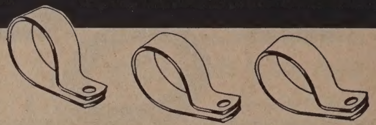
- **CUTS TIME**
  Applies in seconds.
  No pulling — tugging.

"JOBBER PAK" available in **5′**, **10′** and **20′** Spools
For larger quantities or other types see OEM sheets

NET PER FOOT

DIAMETER	GENERAL PURPOSE #GP20—	PERFORATED #PGP20—	SHIELDED #SH—
⅜″	.335	.365	.525
½″	.34	.37	.54
⅝″	.345	.38	.57
¾″	.35	.385	.60
⅞″	.36	.39	.645
1″	.365	.395	.68
1⅛″	.37	.41	.71
1¼″	.38	.415	.74
1⅜″	.39	.425	.77
1½″	.395	.43	.80
1⅝″	.40	.44	.83
1¾″	.405	.445	.86
1⅞″	.41	.45	.89
2″	.42	.455	.92
2¼″	.43	.47	1.01
2½″	.445	.485	1.08
2¾″	.46	.505	1.16
3″	.475	.515	1.24
3¼″	.485	.53	1.29
3½″	.50	.545	1.32
3¾″	.515	.565	1.37
4″	.53	.575	1.41
STANDARD COLORS	CLEAR BLACK BROWN	CLEAR	GREY

PLASTIC CLAMPS



ETHYL CELLULOSE CLAMPS

The Ethylene Cellulose Clamps are tough and will withstand moisture, age and vibration and eliminate corrosion. They can be used within a temperature range of from −40°F to +185°F.

NEW # DIA.	OLD #	100 PAK COST/100	BULK PAK COST/1000*
ETHYL CELLULOSE			
CLE - 1/8	241E - 1/8	.99	8.68
- 3/16	- 3/16	1.02	9.00
- 1/4	- 1/4	1.09	9.59
- 5/16	- 5/16	1.20	10.61
- 3/8	- 3/8	1.26	11.13
- 7/16	- 7/16	1.38	12.22
- 1/2	- 1/2	1.47	12.99
- 9/16	- 9/16	1.71	15.19
- 5/8	- 5/8	1.78	15.79
- 11/16	- 11/16	1.97	17.43
- 3/4	- 3/4	2.12	18.73
- 7/8	- 7/8	2.21	19.57
- 1	- 1	2.39	22.04
- 1 1/8	- 1 1/8	2.55	23.50
- 1 3/16	- 1 3/16	2.67	24.45
- 1 1/4	- 1 1/4	2.73	25.06
- 1 5/16	- 1 5/16	3.28	28.98
- 1 3/8	- 1 3/8	3.65	32.27
- 1 7/16	- 1 7/16	3.79	33.36
- 1 1/2	- 1 1/2	4.06	35.59
CLE - S1 (Assortment) 50 Pak		1.33/Pak	

NYLON CLAMPS

Molded of DuPont "Zytel" 101 Nylon Resin, the Nylon Clamps will withstand severe temperature and mechanical conditions. The wide temperature range is from −60°F to +300°F, along with strength and toughness and the fact that they do not support combustion, allow Illumitronic Nylon Clamps to meet the most rigid specifications.

NYLON			
CLN - 1/8	241N - 1/8	1.49	13.13
- 3/16	- 3/16	1.59	13.95
- 1/4	- 1/4	1.72	15.23
- 5/16	- 5/16	1.90	16.73
- 3/8	- 3/8	2.00	17.65
- 7/16	- 7/16	2.11	18.66
- 1/2	- 1/2	2.24	19.85
- 9/16	- 9/16	2.79	24.68
- 5/8	- 5/8	3.27	28.88
- 11/16	- 11/16	3.51	31.01
- 3/4	- 3/4	3.71	32.76
- 7/8	- 7/8	4.11	36.26
- 1	- 1	4.23	37.45
CLN - S1 (Assortment) 50 Pak		1.67/Pak	

*MINIMUM TO AGGREGATE: 500 EA. SIZE.

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TEFLON SLEEVING

Illumitronic has the most complete line of PLASTIC ROD, TUBING and SHEET.

Also HARNESSING and CABLING materials:

Illumitronic Teflon sleeving is used extensively where temperature extremes exist. This material will withstand temperatures of from minus 450° to 500°F. The material is chemically inert—is completely weatherproof—has excellent dielectric strength (480)—extremely low water absorption—is non-burning—and has a low coefficient of friction.

			SHORT LENGTHS COST PER LENGTH			MIN. LGTH. TO AGGREGATE	STANDARD FULL LENGTHS NET/100 FT	
NO.	ID	WALL*	10FT	50FT	100FT	⇩	200'-499'	500'-& Over
SLT-30	.012	.009	1.24	4.95	8.25	200	5.50	4.65
-28	.015	.009	1.31	5.22	8.70	200	5.80	5.05
-26	.018	.009	1.31	5.22	8.70	200	5.80	5.20
-24	.022	.012	1.31	5.22	8.70	200	5.80	5.20
-22	.027	.012	1.67	6.66	11.10	200	7.40	6.30
-20	.034	.012	2.45	9.81	16.35	200	10.90	9.25
-19	.038	.012	2.68	10.67	17.78	200	11.85	10.00
-18	.042	.012	3.01	12.02	20.03	200	13.35	11.40
-17	047	.012	3.25	13.01	21.68	200	14.45	12.40
-16	.053	.012	3.58	14.31	23.85	200	15.90	12.90
-15	.059	.012	3.66	14.63	24.38	200	16.25	13.55
-14	.066	.012	3.93	15.71	26.18	200	17.45	14.55
-13	076	.012	4.29	17.15	28.58	200	19.05	15.75
-12	.085	.012	4.61	18.45	30.75	200	20.50	16.95
-11	.095	.012	5.11	20.43	34.05	200	22.70	18.80
-10	.106	.012	5.32	21.29	35.48	200	23.65	19.40
- 9	.118	.015	6.41	25.65	42.75	200	28.50	26.10
- 8	.133	.015	7.08	28.31	47.18	200	31.45	28.85
- 7	.148	.015	7.70	30.78	51.30	200	34.20	31.60
- 6	.166	.015	8.33	33.30	55.50	200	37.00	33.95
- 5	.186	.015	9.15	36.59	60.98	100	40.65	37.35
- 4	.208	.015	10.01	40.05	66.75	100	44.50	40.80
- 3	.234	.015	10.93	43.70	72.83	100	48.55	44.80
- 2	.263	.015	12.41	49.64	82.73	100	55.15	50.65
- 1	.294	.015	13.86	55.44	92.40	100	61.60	56.50
- 0	.330	.015	15.35	61.38	102.30	100	68.20	62.50

Aggregation: Sizes may be aggregated if purchased in standard full lengths shown above.

*Tolerances:
#30-#22 .002"
#20-#10 .003"
9-# 0 .004"

**May not be continuous

Standard Color: Natural (White) - other colors on request.

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NATIONAL LOS ANGELES, CALIF.

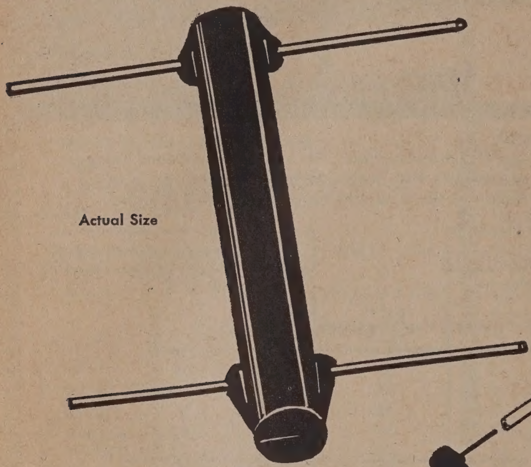
WIRE & CABLE CORPORATION

See "File-O-Matic"
for
our complete line

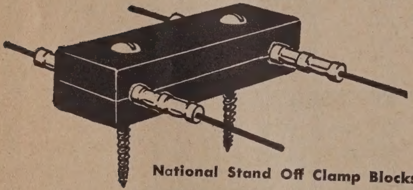
NATIONAL OPENLINE

DESIGNED FOR COMMERCIAL TV DISTRIBUTION SYSTEMS AND RF POWER TRANSMISSION

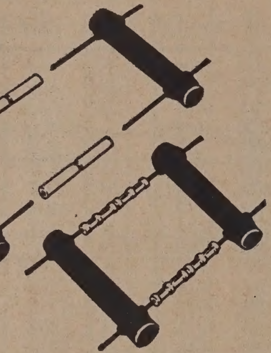
Specifications: two inch spacing between conductors . . . 12 or 14 ga. copperweld . . . 470 or 500 ohm impedance . . . attenuation: 150 mc 0.25 DB PER 100 FEET, AT 30 mc 0.1 DB per 100 FEET. Velocity factor 0.975 . . . copperweld steel for maximum strength and electrical stability, and to insure permanent uniform performance . . . Spreaders are brown polystyrene, spaced at average five foot intervals, staggered slightly to avoid spurious resonances.



Actual Size

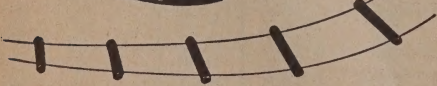


National Stand Off Clamp Blocks



National Connector Sleeves

Nicopress connector sleeve Crimping Tool



CATALOG #N-470-300: TAPERED-LINE impedance matching transformer for 2 inch OPENLINE. Matches 470 ohm line to 300 ohms.

NATIONAL
OPENLINE

NATIONAL OPENLINE domestic television lead-in. Solid copper, Formvar coated.

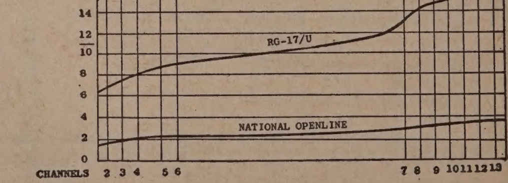
Catalog #N-470-1

1 inch spacing between conductors . . . Spreaders at 6 inch intervals . . . Impedance 470 ohms . . . Standard put-up 250 feet reels, 12 reels per carton.
Shipping weight 50 lbs.

Catalog #N-300-½

½ inch spacing between conductors . . . Spreaders at 6 inch intervals . . . Impedance 300 ohms (approx.) . . . Standard put-up 250 foot reels, 20 reels per carton. Shipping weight 75 lbs.
NATIONAL 1 inch and ½ inch OPENLINE is available on 100, 75, 60 and 50 foot reels and is also available in Copperweld.

Charts showing the db loss per 1000 feet of NATIONAL OPENLINE with comparison to RG-8/U and RG-17/U.



CHANNELS

2	3	4	5	6	7	8	9	10	11	12	13
1.67	1.82	1.90	2.03	2.11	2.94	3.09	3.14	3.19	3.25	3.30	3.34
16.	17.	18.	19.	19.5	30.	32.	32.4	32.6	33.	33.5	34.
7.	7.3	8.	8.75	9.	13.	14.5	14.75	15.	15.5	16.	16.25

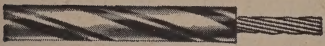
NATIONAL

LOS ANGELES, CALIF.

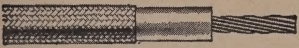
WIRE & CABLE CORPORATION

Immediate source for "MIL and Jan-Spec" wires!

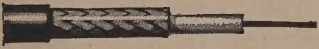
MIL-W-76



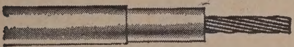
Type MW *(Medium Wall)*



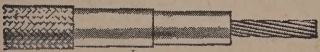
Type MW-B *(Medium Wall — Braided)*



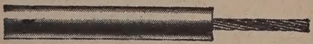
Type MW-S *(Medium Wall — Shielded)*



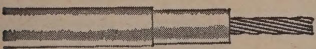
Type MW-J *(Medium Wall — Nylon Jacket)*



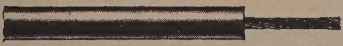
Type MW-JS *(Medium Wall — Jacketed and Shielded)*



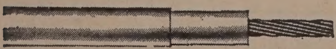
Type HW *(Heavy Wall)*



Type HW-J *(Heavy Wall — Nylon Jacket)*



Type LW *(Light Wall)*

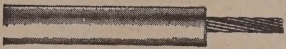


Type LW-J *(Light Wall — Nylon Jacket)*

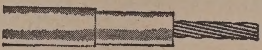
MIL-W-5086 Type I, II, III

MIL-W-7078 & 7078A Type I & II

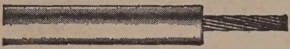
MIL-W-16878



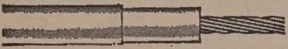
Type B



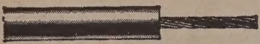
Type B-Nylon



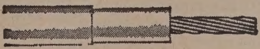
Type C



Type C-Nylon

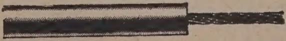


Type D



Type D-Nylon

TEFLON



Type E
Type EE

H.Q.

FOR ALL YOUR WIRE AND CABLE NEEDS!

National has the largest electronic and aircraft wire and cable inventory west of Chicago. Your immediate source for "Mil & Jan-Spec" wires, co-axial cables and vinyl sleeving.

Special color coded, shielded, shielded and jacketed combinations of hookup wire and multi-conductor cables made to your specifications and delivered promptly without delay.

**PHONE,
WRITE or
WIRE FOR
FAST
SERVICE**

NATIONAL WIRE & CABLE CORP.

LOS ANGELES 31, CALIF.

Synkote WIRE
CATALOG 57
PLASTOID Corporation HAMBURG NEW JERSEY

Send for
Latest
Catalog

Synkote®

SYMBOL OF THE FINEST and NEWEST DEPENDABLE WIRE and CABLE

TV twin-leads, coaxial cable, hook-up wire, rotor antenna cable, custom-engineered multi-conductor cable. For prices, samples and technical data, contact your nearest Plastoid representative.

CAA-SIGNAL & CONTROL CABLE
(Thermoplastic Insulation and Jacket)

COAXIAL CABLES
Spec JAN-C-17A & MIL-C-17B
Including Low-Temperature, Non-Contaminating Jackets
Double Shielded & Jacketed Coaxial Cable

SPECIAL PURPOSE CABLES
Meteorlogical Survey Cable
Underwater Sound Equipment Cable
Geophysical Cable
Fire Control Wire & Cable

Electronic Computer Wire & Cable
Inside Telephone Cable
Special Design High Frequency Cable
Thermostat Cable 2-7 conductors
(Twisted and Thermoplastic Jacketed)
Microphone Cables
Sound & Intercommunication Wire & Cable
Rotor Antenna Cable

TEFLON INSULATED WIRE & CABLE
MIL-W-16878A TYPES "E" & "EE"
Multi-conductor Cables
Teflon Coaxial Cables
MIL-W-7139A

RADIO AND ELECTRONIC HOOK-UP WIRE
MIL-W-76A (superseding JAN-C-76)
MIL-W-16878B (types B, C & D, with & without nylon jackets)
Underwriters Laboratory — 80°; 90°; 105°
(PVC insulation, nominal walls of .008; .015; .031; .047 & with braided outercovering or extruded nylon jacket)

AIRCRAFT WIRE & CABLE
MIL-W-5086A
MIL-W-5274A
MIL-C-7078A
MIL-W-7072A
MIL-W-8777A

NAVY SHIPBOARD CABLE
MIL-C-915A & MIL-C-2194B

REA TELEPHONE CABLE
(Spec PE-14)

MULTI PAIR RURAL DISTRIBUTION WIRE

TRAFFIC CONTROL CABLES
(Specs IMSA 19 & 20)

POWER CONTROL CABLES
(Specs IPCEA & IMSA)
(Thermoplastic Insulation and Jacket)

AIRPORT LIGHTING CABLE

COMMUNITY TV COAXIAL CABLE

PLASTOID Corporation

Synkote Insulated Wire and Cable is "Manufactured by the mile-tested by the inch"

Plant: HAMBURG, N. J. • Offices: Long Island City, N. Y.

HOOK-UP WIRE

MIL-W-76A

Type MW

(Medium Wall)

Tinned Copper Conductor
Voltage Rating: 1000 volts
Tempertaure Rating: —40°C +80°C
Put-Up 1,000 Ft. Spool*

Type MW-J

(Medium Wall—Nylon Jacket)

Tinned Copper Conductor
Overall Extruded Nylon Jacket
Voltage Rating: 1000 Volts
Temperature Rating: —40°C +90°C
Put-Up: 1,000 Ft. Spool*

Type MW-B

(Medium Wall—Braided)

Tinned copper conductor
Overall fungus resistant glass braid and flame-proof lacquer
Voltage Rating: 1000 Volts
Temperature Rating: —40°C +90°C
Put-Up: 1,000 Ft. Spool*

Type MW-S

(Medium Wall—Shielded)

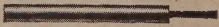
Specification MIL-W-76A supersedes JAN-C-76.

This broader classification covers wider hook up applications for electronic devices and instruments; aircraft radio and radar transmitters and receivers.

Type MW-JS

(Medium Wall—Jacketed and Shielded)

Tinned copper conductor
Extruded Nylon Jacket
Overall Tinned Copper Shield
Voltage Rating: 1000 Volts
Temperature Rating: —40°C +90°C
Put-up: 1,000 Ft. Spool*



Type HW

(Heavy Wall)

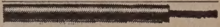
Tinned Copper Conductor
Voltage Rating: 2500 volts—22 to 16 sizes
600 volts—14 to 6
Temperature Rating: —40°C +90°C
Put-up: 1,000 Ft. Spool*

Type HW-J

(Heavy Wall—Nylon Jacket)

Tinned Copper Conductor
Overall Extruded Nylon Jacket
Voltage Rating: 2500 volts—24 to 16 sizes
600 volts—14 to 6
Temperature Rating: —40°C +90°C
Put-up: 1,000 Ft. Spool*

Temperature rating −40° C +80° C. Synkote insulation offers high dielectric strength, flexibility at high and low temperatures and is impervious to acids and alkalis.



Type LW

(Light Wall)

Tinned Copper Conductor

Type LW-J

(Light Wall—Nylon Jacket)

Tinned Copper Conductor
Overall Extruded Nylon Jacket
Voltage Rating: 300 volts
Temperature Rating: —40°C +90°C
Put-up: 1,000 Ft. Spool*

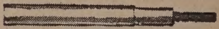
MIL-W-16878-B (Navy)

Type B

"Syntherm" electrical high temp. hook-up wire conforms to Navy spec. MIL-W-16878-B. For the internal wiring of meters, panels and electronic equipment.

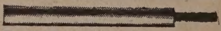
Tinned Copper Conductor
Base Color: White. Helical striping for color coding.
Voltage Rating: 600 volts
Temperature Rating: —54°C +105°C
Put-up: 1,000 Ft. Spool*

MIL-W-16878-B (Navy)



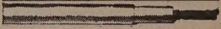
Type B-Nylon

Tinned Copper Conductor
Overall Extruded Nylon Jacket
Base Color: White. Helical striping for color coding.
Voltage Rating: 600 volts
Temperature Rating: —54°C +105°C
Put-up: 1,000 Ft. Spool*



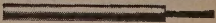
Type C

Tinned Copper Conductor
Base Color: White. Helical striping for color coding.
Voltage Rating: 1000 volts
Temperature Rating: —54°C +105°C
Put-up: 1,000 Ft. Spool*



Type C-Nylon

Tinned Copper Conductor
Overall Extruded Nylon Jacket
Base Color: White. Helical striping for color coding.
Voltage Rating: 1000 volts
Temperature Rating: —54°C +105°C
Put-up: 1,000 Ft. Spool*

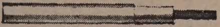


Type D

Tinned Copper Conductor
Voltage Rating: 3000 volts
Temperature Rating: —54°C +105°C
Put-up: 1,000 Ft. Spool*

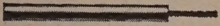
MORE SYNKOTE CABLES ON FOLLOWING PAGES →

MIL-W-16878-B
(Navy)



Type D-Nylon

Tinned Copper Conductor
Overall Extruded Nylon Jacket
Voltage Rating: 3000 volts
Temperature Rating: —54°C +105°C
Put-up: 1,000 Ft. Spool*

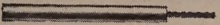


Type E-Extruded Teflon

600 Volts
Temperature Rating +200°C

1. Silver coated copper conductor.
2. Extruded teflon insulation — ten solid color per spec. Also with contrasting helical color coding in single and double combinations.
3. May be supplied in single or multiple conductor cables with or without shields—consisting of silver coated, tinned or bare copper as required.

Plastoid Part	Spec. Designation	AWG Size & Stranding	Max. O.D.	Approx. Wt. #/M'
PP12003	E-26	26/7x34	.043"	2.0
PP12004	E-24	24/7x32	.048"	3.0
PP12024	E-24	24/19x36	.048"	3.0
PP12005	E-22	22/7x30	.054"	4.0
PP12025	E-22	22/19x34	.054"	4.0
PP12006	E-20	20/7x28	.062"	5.5
PP12026	E-20	20/10x32	.062"	5.5
PP12027	E-18	18/19x30	.074"	8.0
PP12008	E-16	16/19x29	.087"	11.0
PP12009	E-14	14/19x27	.101"	15.0



Type EE-Extruded Teflon

1000 Volts
Temperature Rating +200°C

1. Silver coated copper conductor.
2. Extruded teflon insulation — ten solid colors per spec. Also with contrasting helical color coding in single and double combinations.
3. May be supplied in single or multiple conductor cables with or without shields — consisting of silver coated, tinned or bare copper as required.

Plastoid Part	Spec. Designation	AWG Size & Stranding	Max. O.D.	Approx. Wt. #/M'
PP12015	EE-26	26/7x34	.053"	2.5
PP12016	EE-24	24/7x32	.058"	3.5
PP12028	EE-24	24/19x36	.058"	3.5
PP12017	EE-22	22/7x30	.064"	5.0
PP12029	EE-22	22/19x34	.064"	5.0
PP12018	EE-20	20/7x8	.072"	6.5
PP12030	EE-20	20/19x32	.072"	6.5
PP12031	EE-18	18/19x30	.084"	10.0
PP12020	EE-16	16/19x29	.095"	13.5
PP12021	EE-14	14/19x27	.113"	18.0

MIL-W-7139A

Extruded Teflon

Voltage Rating 600
Temperature Rating 400°F
Conforms to Dept. of Navy Bureau of Aeronautics requirements.

1. Silver Coated Copper Conductor
2. Teflon Insulation
3. Glass Braid 4. Dacron Braid

MIL. Part No.	Plastoid Part No.	AWG Size & Stranding	Diel. O.D.	Nom. O.D.
RM-22	PP12,051	22/19x.0063	.059	.088
RM-20	PP12,052	20/19x.0079	.068	.098
RM-18	PP12,053	18/19x.0100	.080	.110
RM-16	PP12,054	16/19x.0113	.088	.118
RM-14	PP12,055	14/19x.0142	.108	.138
RM-12	PP12,056	12/19x.0179	.132	.162

Outer Covering Conforms with
Para. 3.2.3 MIL-W-7139A

TEFLON* MINIATURE COAXIAL CABLE

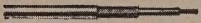
DESCRIPTION: Plastoid "Teflon" miniature coaxial cables are about ¼ the outside diameter of comparable RG types, yet provide the same impedance characteristics as standard types. In three widely used impedance ranges (50, 70 and 93 ohms) these "Teflon" miniature cables exhibit stable characteristics when operated up to 200°C and can be used successfully in confined areas and where high ambient temperatures are present. These miniature coaxial cables may be applied with any desired outer coating, and will withstand temperatures up to 250°C, when supplied with an impregnated fiber glass jacket.

CONSTRUCTION: Both conductor and braid usually employ silver plated wire. Standard jacket material is "Teflon". Any desired jacketing such as Nylon, Fiberglass, Teflon Coated Fiberglass, KEL-F or other suitable jackets are available to meet unique conditions and specifications.

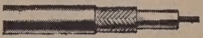
APPLICATIONS: Plastoid "Teflon" miniature coaxial cables are the ultimate in space conservation as compared to standard RG types. Because of their rugged construction, they are an important contribution to such varied applications as aircraft and guided missiles, plants or laboratories where instrument hook-ups are subjected to chemical corrosion or abrasive treatment.

DESIGN FEATURES: Plastoid "Teflon" miniature coaxial cables have many advantages, a few of which are: Miniature size with some impedance as comparable RG types; ability to withstand high temperature and corrosive or abrasive conditions; high voltage characteristics and excellent flexibility at temperatures as low as —65°C. The uniform OD of these light weight cables makes it possible to use the same size connector for each of the three impedance ranges.

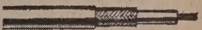
TYPICAL CONSTRUCTION



PP15,251



PP15,256



PP15,254

Plastoid Part Number	Imp. Ohms	Conductor	Diel.	Braid	Jacket* O.D.	Jacket Type	Cap. Mmfd. /ft.	V.P. %
12,270	50	1x.0385 SC	.109	Silver Copper Double	.167	Glass Braid, Silicone Saturant	29.0	70
15,251	50	1x.011 SCW	.035	Silver Copper	.063	Nylon	29.0	70
15,252	50	7x.010 SCW	.095	Silver Copper	.125	Nylon	29.0	70
15,253	50	1x.012 SCW	.036	Silver Copper	.064	Nylon	29.0	70
12,310	70	7x.004 SCW	.060	Silver Copper	.095	Glass Braid, Silicone Saturant	21.0	70
15,254	70	7x.0063 SCW	.095	Silver Copper	.125	Nylon	21.0	70
4,692	70	7x.004 SCW	.070	Silver Copper	.105	Glass Braid, Teflon Saturant	21.0	70
15,255	70	1x.011 SCW	.056	Silver Copper	.084	Nylon	21.0	70
12,221	93	7x.004 SCW	.103	Silver Copper	.131	Nylon	16.0	70
12,341	93	7x.004 SB	.104	Silver Copper	.138	Fused Teflon Tape	16.0	70
15,256	93	7x.004 SCW	.095	Silver Copper	.125	Nylon	16.0	70
12,279	94	1x.011 NCW	.096	Silver Copper	.118	Nylon	15.3	70
12,282	94	1x.011 SCW	.096	Silver Copper	.122	Nylon	15.3	70
12,280	94	1x.011 SCW	.095	Silver Copper	.140	Nylon Braid over PVC	15.3	70
15,257	94	1x.011 SCW	.095	Silver Copper	.140	Nylon, over PVC	15.3	70

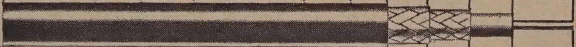
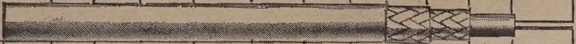
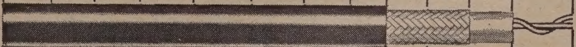
LEGEND Center Conductor:
SCW — Silver Coated Copperweld
NCW — Nickel Coated Copperweld
SC — Silver Coated Copper
SB — Silver Coated Berrylium
*Jacket may be altered to meet any special requirements.

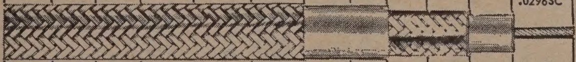
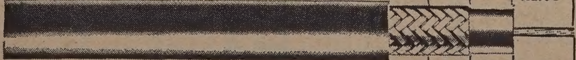
*duPont's trade name for Polytetrafluoreothylene

MORE SYNKOTE CABLES ON FOLLOWING PAGES ⟶

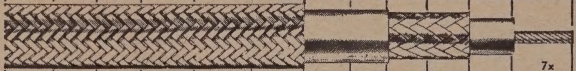
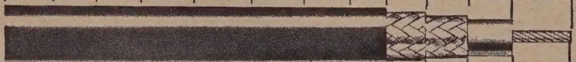
SPECIFY **SYNKOTE** FOR SURE PERFORMANCE

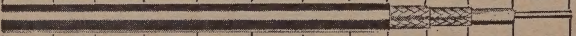
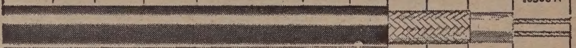
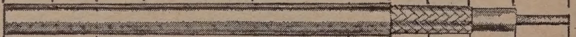
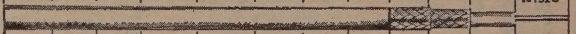
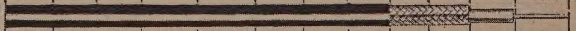
RG TYPE COAXIAL CABLE–Polyethylene Dielectric

Military Number RG-/u	Plastoid Part Number	V.P. %	Cap. Mmfd. /ft.	Max. Oper. Volts RMS	Nominal Imp. Ohms	Armor O.D.	Jacket O.D.	Type Jacket	Shields		Dielect. O.D.	Center Cond.	Applicable Spec.
									Outer	Inner			
5	4600	65.9	28.5	3000	52.5		.332	I	C	C	.185	.0508C	JAN-C-17A
5A	4601	65.9	29.0	3000	50.0		.328	II	SC	SC	.181	.0508SC	JAN-C-17A
5B	4602	65.9	29.0	3000	50.0		.328	IIa	SC	SC	.181	.0510SC	MIL-C-17B
212	15151	65.9	29.0	3000	50.0		.332	IIa	SC	SC	.185	.0556SC	MIL-C-17B
6	4603	65.9	20.0	2700	76.0		.332	II	SC	SC	.185	.0285CW	JAN-C-17A
6A	4604	65.9	20.0	2700	76.0		.332	IIa	SC	SC	.185	.0285CW	MIL-C-17B
7	4605	84.0	12.5	1000	97.0		.370	I		C	.250*	.0359C	JAN-C-17A
8	4606	65.9	29.5	5000	52.0		.405	I		C	.285	7x .0285C	JAN-C-17A
8A	4607	65.9	29.5	5000	52.0		.405	IIa		C	.285	7x .0285 C	MIL-C-17B
213	15152	65.9	30.5	5000	50.0		.405	IIa		C	.285	7x .0296C	MIL-C-17B
9	4608	65.9	30.0	5000	51.0		.420	II	C	SC	.280	7x .0285SC	JAN-C-17A
9A	4609	65.9	30.0	5000	51.0		.420	II	SC	SC	.280	7x .0285SC	JAN-C-17A
9B	4610	65.9	30.5	5000	50.0		.420	IIa	SC	SC	.280	7x .0285SC	MIL-C-17B
214	15153	65.9	30.5	5000	50.0		.425	IIa	SC	SC	.285	7x .0296SC	MIL-C-17B
10	4611	65.9	29.5	5000	52.0	.475	.405	II		C	.285	7x .0285C	JAN-C-17A
10A	4612	65.9	29.5	5000	52.0	.475	.405	IIa		C	.285	7x .0285C	MIL-C-17B
215	15154	65.9	30.5	5000	50.0	.475	.405	IIa		C	.285	7x .0296C	MIL-C-17B
11	372	65.9	20.5	5000	75.0		.405	I		C	.285	7x .0159TC	JAN-C-17A
11A	4614	65.9	20.5	5000	75.0		.405	IIa		C	.285	7x .0159TC	MIL-C-17B

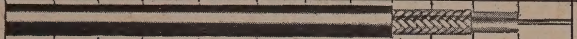
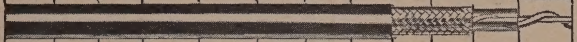
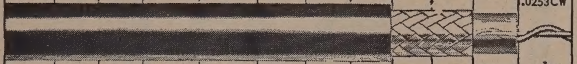
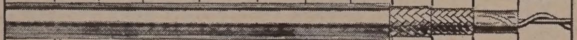
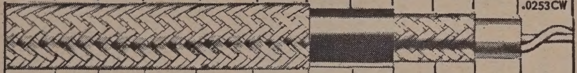
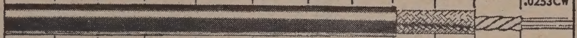
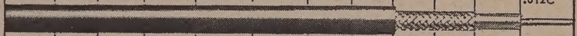






Military Number RG-/u	Plastoid Part Number	V.P. %	Cap. Mmfd. /ft.	Max. Oper. Volts RMS	Nominal Imp. Ohms	Armor O.D.	Jacket O.D.	Type Jacket	Shields		Dielect. O.D.	Center Cond.	Applicable Spec.
									Outer	Inner			
12	4615	65.9	20.5	5000	75.0	.475	.405	II		C	.285	7x .0159TC	JAN-C-17A
12A	4616	65.9	20.5	5000	75.0	.475	.405	IIa		C	.285	7x .0159TC	MIL-C-17B
13	4617	65.9	20.5	5000	75.0		.420	I	C	C	.285	7x .0159TC	JAN-C-17A
13A	4618	65.9	20.5	5000	74.0		.425	IIa	C	C	.285	7x .0159TC	MIL-C-17B
218	15155	65.9	20.5	5000	75.0		.425	IIa	C	C	.285	7x .0159TC	MIL-C-17B
14	4619	65.9	29.5	7000	52.0		.545	II	C	C	.370	1x .102C	JAN-C-17A
14A	4620	65.9	29.5	7000	52.0		.545	IIa	C	C	.370	1x .102C	MIL-C-17B
217	15156	65.9	30.5	7000	50.0		.545	IIa	C	C	.370	1x .106C	MIL-C-17B
21	4630	65.9	29.0	2700	53.0		.332	II	SC	SC	.185	1x .0508N	JAN-C-17A
21A	4631	65.9	29.0	2700	53.0		.332	IIa	SC	SC	.185	1x .0508 N	MIL-C-17B
22	4632	65.9	16.0	1000	95.0		.405	I		TC	.285	Two 7X .0152C	JAN-C-17A
22B	4634	65.9	16.0	1000	95.0		.420	IIa	TC	TC	.285	Two 7x .0152C	MIL-C-17B
54A	4640	65.9	26.5	3000	58.0		.250	III		TC	.178	7x .0152C	JAN-C-17A
55	4641	65.9	28.5	1900	53.5		.206	III	TC	TC	.116	1x .0320C	JAN-C-17A
55A	4684	65.9	30.5	1900	50.0		.216	IIa	SC	SC	.116	1x .035SC	MIL-C-17B
55B	15108	65.9	28.5	1900	53.5		.206	HM	TC	TC	.116	1x .0323C	MIL-C-17B
58	4644	65.9	28.5	1900	53.5		.195	I		TC	.116	1x .0320C	JAN-C-17A
58A	4645	65.9	28.5	1900	52.0		.195	I		TC	.116	19x .0066TC	JAN-C-17A
58B	4646	65.9	28.5	1900	53.5		.195	IIa		TC	.116	1x .0320C	MIL-C-17B
58C	4647	65.9	30.5	1900	50.0		.195	IIa		TC	.116	19x .0071TC	MIL-C-17B

(see legend on next page at bottom)

SPECIFY SYNKOTE FOR SURE PERFORMANCE

RG TYPE COAXIAL CABLE–Polyethylene Dielectric *(Continued)*

Military Number RG-/u	Plastoid Part Number	V.P. %	Cap. Mmfd. /ft.	Max. Oper. Volts RMS	Nominal Imp. Ohms	Armor O.D	Jacket O.D.	Type Jacket	Shields Outer	Shields Inner	Dielect. O.D.	Center Cond.	Applicable Spec.
													
59	423	65.9	21.0	2300	73.0		.242	I		C	.146	1x .0253CW	JAN-C-17A
59A	4649	65.9	20.5	2300	75.0		.242	IIa		C	.146	1x .0230CW	MIL-C-17B
59B	15109	65.9	20.5	2300	75.0		.242	IIa		C	.146	1x .0230CW	MIL-C-17B
													
62	4650	84.0	13.5	750	93.0		.242	I		C	.146*	1x .0253CW	JAN-C-17A
62A	4651	84.0	13.5	750	93.0		.242	IIa		C	.146*	1x .0253CW	MIL-C-17B
													
63	4652	84.0	10.0	1000	125.0		.405	I		C	.285*	1x .0253CW	JAN-C-17A
63B	4653	84.0	10.0	1000	125.0		.405	IIa		C	.285*	1x .0253CW	MIL-C-17B
													
71	4654	84.0	13.5	750	93.0		.250	III	TC	TC	.146*	1x .0253CW	JAN-C-17A
71B	15113	84.0	13.5	750	93.0		.250	HM	TC	C	.146	1x .0253CW	MIL-C-17B
													
79	4657	84.0	10.0	1000	125.0	.475	.405	I		C	.285*	1x .0253CW	JAN-C-17A
79B	4658	84.0	10.0	1000	125.0	.475	.405	IIa		C	.285*	1x .0253CW	MIL-C-17B
													
108	4661		20.0	1000	76.0		.245	II		TC	.079	Two 7x .012C	JAN-C-17A
108A	4662		20.0	1000	76.0		.235	IIa		TC	.079	Two 7x .012C	MIL-C-17B
													
122	4671	65.9	30.5	1900	50.0		.160	IIa		TC	.096	27x .005TC	MIL-C-17B

LEGEND

Center Conductor:
C — Bare Copper
SC — Silver Coated Copper
CW — Copperweld
TC — Tinned Copper
N — Nichrome

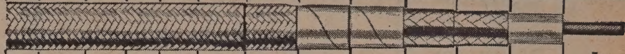
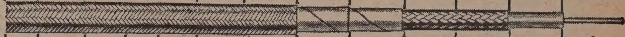
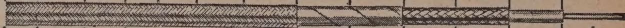
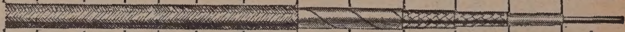
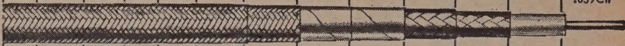
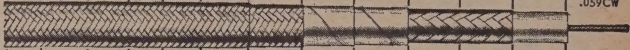
Shield:
C — Bare Copper
SC — Silver Coated Copper
TC — Tinned Copper

★ Semi-solid Dielectric

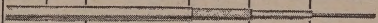
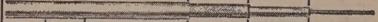
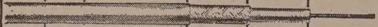
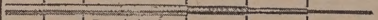
Jacket Material:
Type I — PVC Black withstands Cold Bend after 20 hrs. at —40°C.
Type II — PVC NEMA Gray non-contaminating — withstands Cold Bend after 20 hrs. at —25°C.
Type IIa — PVC Black non-contaminating withstands Cold Bend after 20 hrs. at —40°C.
Type III — Polyethylene-natural withstands Cold Bend after 20 hrs. at —40 C.
Type HM — High Molecular Polyethylene

Polyethylene Dielectric per Federal Spec. LP-590 Supersedes MIL-D-3054

RG TYPE COAXIAL CABLE Teflon* Dielectric *(made to spec. MIL-C-17B)*

Military Number RG-/u	Plastoid Part Number	V.P. %	Cap. Mmfd. /ft.	Max. Oper. Volts	Nom Imp. Ohms	Armor O.D.	Jacket Outer	Jacket Inner	Teflon Tape Outer	Teflon Tape Inner	Shields Outer	Shields Inner	Dielect. O.D.	Center Cond.
														
87A	4690	69.5	29.5	5000	50		.425				SC	SC	.280	7x .032SC
225	15164	69.5	29.5	5000	50		.430				SC	SC	.285	7x .0312SC
														
140	4691	69.5	19.5	2300	75			.233				SC	.146	1x .025SCW
														
141	4694	69.5	29.5	1900	50			.190				SC	.116	1x .0359SCW*
141A/U	15134	69.5	29.5	1900	50			.190				SC	.116	1x .039CW
														
142	4696	69.5	29.5	1900	50			.206			SC	SC	.116	1x .0359SCW*
142A	15136	69.5	29.5	1900	50			.206			SC	SC	.116	1x .039CW
														
143	4686	69.5	29.5	3000	50		.325				SC	SC	.185	1x .057SCW
143A	15137	69.5	29.5	3000	50		.325				SC	SC	.185	1x .059CW
														
144	15100	69.5	19.5	5000	75		.410					SC	.285	7x .0179SCW

Teflon Dielectric—made to specification MIL-C-17B—MINIATURE TYPE

Military Number RG-/u	Plastoid Part Number	V.P. %	Cap. Mmfd. /ft.	Max. Oper. Volts	Nom Imp. Ohms	Jacket	Shield	Dielect. O.D.	Center Cond.
									
187	4695	69.5	19.5	1200	75	Extruded Teflon or Fused Teflon Tape	SC	.060	7x .004SCW
									
188	4697	69.5	29.0	1200	50	Extruded Teflon or Fused Teflon Tape	SC	.060	7x .0067SCW
									
195	4698	69.5	15.0	1500	95	Extruded Teflon or Fused Teflon Tape	SC	.102	7x .004SCW
									
196	4699	69.5	29.0	1000	50	Extruded Teflon or Fused Teflon Tape	SC	.034	7x .004SCW

LEGEND

Center Conductor:
SC — Silver Coated Copper
C — Bare Copper
K — Karma
SCW — Silver Coated Copperweld

Shield:
SC — Silver Coated Copper
C — Bare Copper
K — Karma

Dielectric:
Type F-1 — Polytetrafluoroethylene

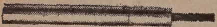
Jacket:
Type V — Fiberglass per MIL-G-1140

*Available with non-magnetic stranded silver plated copper center conductor

*duPont's trade name for Polytetrafluoreothylene

SPECIFY **SYNKOTE** FOR SURE PERFORMANCE

AIRCRAFT WIRE



MIL-W-5086A—Type 1

(Dated June 18, 1957
Superseding MIL-W-5086—Nov. 30, 1950)
600 Volts
Temp. Rating —55°C-+ 105°C
Synkote insulated electrical aircraft wire conforms to Mil. Spec. MIL-W-5086-A

1. Constructional Details
   (a) Concentric stranded tinned copper cond.
   (b) Synthetic resin insulation (105°C)
   (c) Extruded clear nylon jacket
2. Standard Packaging
   AN-22 & AN-20
   5,000′ non-returnable reel
   AN-18 & AN-16
   3,000′ non-returnable reel
   AN-14 & AN-12
   2,000′ non-returnable reel
3. Available with tinned copper shield and/or extruded nylon jacket over shield. Identified as Type 1 or Type 2 per spec. MIL-C-7078A
4. Standard Color: White
5. May be furnished in multiple cond. combinations—color coded as required.

MIL-C-7078A—Type 1

(Type I per MIL-W-5086A with overall shield)

600 Volts
Temp. Rating —55°C-+ 105°C

1. Constructional Details
   (a) Concentric stranded tinned copper cond.
   (b) Synthetic resin insulation (105°C)
   (c) Extruded clear nylon Jacket
   (d) Overall tinned copper shield
2. Stranded Put-Up 1000′/spool or reel. Larger packaging available.
3. This construction may be furnished with an overall extruded nylon jacket-recognized as Type 2 per spec. MIL-C-7078A

MIL-W-5086A—Type 2

(Dated June 18, 1957
Superseding MIL-W-5086—Nov. 30, 1950)
600 Volts
Temp. Rating —55°C-+ 105°C

1. Constructional Detail
   (a) Concentric stranded or rope-lay stranded tinned copper cond. as required by spec.
   (b) Synthetic resin insulation (105°C)
   (c) Glass braid—saturated
   (d) Extruded clear nylon jacket sizes AN-22 thru AN-12; braided nylon, impregnated with nylon lacquer sizes AN-10 thru AN-4/0
2. Standard Packaging
   AN-22 & AN-20
   5,000′ non-returnable reel
   AN-18 & AN-16
   3,000′ non-returnable reel
   AN-14 & AN-12
   2,000′ non-returnable reel
   AN-10 1,000′ non-returnable reel
   AN-8 thru AN-1
   500′ or 1,000′ non-returnable reel
   AN-0 thru AN-4/0
   500′ non-returnable reel
3. Available with tinned copper shield in all sizes. Also with extruded nylon jacket over shield in sizes AN-22 through AN-12 per spec. MIL-C-7078—Type 1 or Type 2 as required.
4. Standard Color: White
5. May be furnished in multiple cond. combinations — Color coded as required.

AIRCRAFT WIRE

MIL-C-7078A—Type 2

(Type 2 per MIL-W-5086A with overall shield)

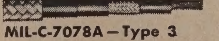
600 Volts
Temp. Rating—55°C + 105°C

1. Constructional Details
   (a) Concentric stranded or rope lay stranded tinned copper cond. as required by spec.
   (b) Synthetic resin insulation (105°C)
   (c) Glass braid—saturated
   (d) Extruded clear nylon jacket sizes AN-22 thru AN-12; braided nylon impregnated with nylon lacquer sizes AN-10, AN-8 and AN-6.
   (e) Overall tinned copper shield.
2. Standard put-up 1000′/spool or reel. Larger packing available.
3. May be furnished with extruded nylon jacket over shield in sizes AN-22 thru AN-12. Recognized as Type 2 per spec. MIL-C-7078A.

MIL-W-5086A—Type 3

(Dated June 18, 1957 superseding MIL-W-5086—Nov. 30, 1950)
600 Volts
Temp. Rating—55°C + 105°C

1. Constructional Details
   (a) Concentric stranded or rope lay stranded tinned copper cond. as required by spec.
   (b) Synthetic resin insulation
   (c) Glass braid saturated
   (d) Secondary synthetic resin insulation
   (e) Extruded clear nylon jacket sizes AN-22 thru AN-12; braided nylon impregnated with nylon lacquer sizes AN-10 thru AN 4/0.
2. Standard Package
   AN-22 and AN-20
   5000′ non-returnable reel
   AN-18 and AN-16
   3000′ non-returnable reel
   AN-14 and AN-12
   2000′ non-returnable reel
   AN 10
   1000′ non-returnable reel
   AN-8 thru AN-1
   500′ non-returnable reel
   AN-0 thru AN-4/0
   500′ non-returnable reel
3. Available with tinned copper shield in all sizes. Also with extruded nylon jacket over shield in sizes AN-22 thru AN-12 per spec. MIL-C-7078A—Type 1 or Type 2 as required.
4. Standard Color: White
5. May be furnished in multiple combination cond. — color coded as required.



MIL-C-7078A—Type 3

(Type 3 per MIL-W-5086A with overall shield)

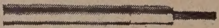
600 Volts
Temp. Rating—55°C + 105°C

1. Constructional Details
   (a) Concentric stranded or rope lay stranded tinned cond. as required per spec.
   (b) Synthetic resin insulation (105°C)
   (c) Glass braid—saturated
   (d) Secondary synthetic resin insulation (105°C)
   (e) Extruded clear nylon jacket AN-22 thru AN-12. Braided nylon impregnated with nylon lacquer, sizes AN-10, AN-8 and AN-6.
   (f) Overall tinned copper shield.
2. Standard put-up 1000′/spool or reel. Larger packaging available.
3. May be furnished with overall extruded nylon jacket over shield in sizes AN-22 thru AN-12. Recognized as Type 2 per spec. MIL-C-7078A.

AIRCRAFT WIRE

MIL-W-5274A
(USAF)

Synkote insulated aircraft wire to conform to Mil. spec. MIL-W-5274A (USAF). All wires under this classification are approved constructions and are made in strict compliance with the applicable spec.



Type 1—Class A

Tinned copper conductor
Overall extruded nylon jacket
Color Code: White
Voltage Rating: 600 Volts
Temp. Rating:—54°C + 100°C
Put-Up: 1,000 Ft. spool
Larger packaging available

Type 1 — Class A (Shielded)

(Shielding in accordance with specification MIL-C-7078A)

Tinned copper conductor
Extruded nylon jacket
Overall tinned copper shield
Color Code: White
Voltage Rating: 600 Volts
Temp. Rating:—54°C + 100°C
Put-Up: 1,000 Ft. spool
Larger packaging available

Type 2—Class A

Tinned copper conductor
Fungus resistant glass fiber braid
Overall Extruded nylon jacket
Color Code: White
Voltage Rating: 600 Volts
Temp. Rating:—54°C + 100°C
Put-Up: 1,000 Ft. spool
Larger packaging available

Type 2—Class A (Shielded)

(Shielding in accordance with specification MIL-C-7078A)

Tinned copper conductor
Fungus resistant glass fiber braid
Extruded nylon jacket
Overall tinned copper shield
Color Code: White
Voltage Rating: 600 Volts
Temp. Rating:—54°C + 100°C
Put-Up: 1,000 Ft. spool
Larger packaging available

Type 3—Class A

Tinned copper conductor
Fungus resistant glass fiber braid
Overall Extruded nylon jacket
Color Code: Light Red
Voltage Rating: 3000 Volts
Temp. Rating:—54°C + 100°C
Put-Up: 1,000 Ft. spool
Larger packaging available

Type 3—Class A (Shielded)

(Shielding in accordance with specification MIL-C-7078A)

Tinned copper conductor
Fungus resistant glass fiber braid
Extruded nylon jacket
Overall tinned copper shield
Color Code: Light Red
Voltage Rating: 3000 Volts
Temp. Rating:—54°C + 100°C
Put-Up: 1,000 Ft. spool
Larger packaging available

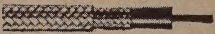
MIL-W-7072 A
Aluminum

Synkote insulated aluminum aircraft wire manufactured to conform to Mil. spec. MIL-W-7072A.

Type 1

Aluminum conductor
Fungus resistant glass fiber braid
Flame proof saturant and lacquer
Color Code: White
Voltage Rating: 600 Volts
Temp. Rating:—55°C + 100°C
Put-Up: 500 ft. and 1,000 ft. spool

AWG Size & Spec. Desig.	Cond. Stranding	Nom. O.D.	Approx. Wt. #/M
AL-8	41x24	.240″	31.0
AL-6	7x10x24	.308″	52.0
AL-4	7x15x24	.366″	71.0
AL-2	7x24x24	.440″	101.0
AL-1	7x30x24	.488″	124.0
AL-1/0	19x14x24	5.44″	150.0
AL-2/0	19x18x24	5.95″	190.0
AL-3/0	19x22x24	.664″	225.0
AL-4/0	19x28x24	.724″	275.0



Type 2

Aluminum conductor
Fungus resistant glass fiber braid
Flame proof saturant nylon braid
Flame proof saturant and lacquer
Color Code: White
Voltage Rating: 600 Volts
Temp. Rating:—55°C + 100°C
Put-Up:
Sizes 8 thru 2 —1,000 ft. spool
Sizes 1 thru 4/0— 500 ft. spool

AWG Size & Spec. Desig.	Cond. Stranding	Nom. O.D.	Approx. Wt. #/M
AL-8	41x24	.248″	32.0
AL-6	7x10x24	.312″	52.0
AL-4	7x15x24	.372″	74.0
AL-2	7x24x24	.444″	104.0
AL-1	7x30x24	.492″	128.0
AL-1/0	19x14x24	.550″	155.0
AL-2/0	19x18x24	.600″	195.0
AL-3/0	19x22x24	.668″	232.0
AL-4/0	19x28x24	.728″	283.0

For a more comprehensive showing of

Synkote

DEPENDABLE WIRE AND CABLE

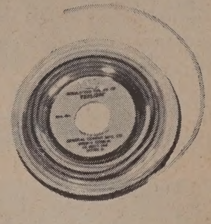
send for our latest catalog

PLASTOID CORPORATION
Long Island City, N. Y.

Walsco ELECTRONICS

INSULATING TUBING

WALSCO INSULATING TUBING OF TEFLON



TEFLON "spaghetti" has unsurpassed electrical and mechanical qualities. Withstands temperatures from 450° below zero F. to 500° above zero F. Will not melt near solder joints. Outstanding dialectric properties—zero moisture absorption. Chemically inert. Completely weatherproof. A big feature is the low co-efficient of friction.

Part No.	Feet Per Spool*	Color	Gauge	I.D. (Inches)	Wall Thickness	List Price Per Spool
690-1	10	Nat	24	.022	.010	**$ 2.22**
690-1C	100	Nat	24	.022	.010	**16.26**
690-4	10	Red	24	.022	.010	**2.22**
690-4C	100	Red	24	.022	.010	**16.26**
690-5	10	Blue	24	.022	.010	**2.22**
690-5C	100	Blue	24	.022	.010	**16.26**
691-1	10	Nat	22	.027	0.12	**2.45**
691-1C	100	Nat	22	.027	.012	**20.71**
691-4	10	Red	22	.027	.012	**2.45**
691-4C	100	Red	22	.027	.012	**20.71**
691-5	10	Blue	22	.027	.012	**2.45**
691-5C	100	Blue	22	.027	.012	**20.71**
692-1	10	Nat	20	.034	.012	**3.06**
692-1C	100	Nat	20	.034	.012	**30.44**
692-4	10	Red	20	.034	.012	**3.06**
692-4C	100	Red	20	.034	.012	**30.44**
692-5	10	Blue	20	.034	.012	**3.06**
692-5C	10	Blue	20	.034	.012	**30.44**
693-1	10	Nat	18	.042	.012	**3.73**
693-1C	100	Blue	20	.034	.012	**34.80**
693-4	10	Red	18	.042	.012	**3.73**
693-4C	100	Red	18	.042	.012	**34.80**
693-5	10	Blue	18	.042	.012	**3.73**
693-5C	100	Blue	18	.042	.012	**34.80**
694-1	10	Nat	16	.053	.012	**4.43**
694-1C	100	Nat	16	.053	.012	**41.70**
694-4	10	Red	16	.053	.012	**4.43**
694-4C	100	Red	16	.053	.012	**41.70**
694-5	10	Blue	16	.053	.012	**4.43**
694-5C	100	Blue	16	.053	.012	**41.70**
695-1	10	Nat.	14	.066	.012	**4.87**
695-1C	100	Nat	14	.066	.012	**47.30**
695-4	10	Red	14	.066	.012	**4.87**
695-4C	100	Red	14	.066	.012	**47.30**
695-5	10	Blue	14	.066	.012	**4.87**
695-5C	100	Blue	14	.066	.012	**47.30**
696-1	5	Nat	12	.085	.014	**3.06**
696-1C	100	Nat	12	.085	.014	**57.13**
696-4	5	Red	12	.085	.014	**3.06**
696-4C	100	Red	12	.085	.014	**57.13**
696-5	5	Blue	12	.085	.014	**3.06**
696-5C	100	Blue	12	.085	.014	**57.13**
697-1	5	Nat	10	.106	.014	**3.61**
697-1C	100	Nat	10	.106	.014	**65.89**
697-4	5	Red	10	.106	.014	**3.61**
697-4C	100	Red	10	.106	.014	**65.89**
697-5	5	Blue	10	.106	.014	**3.61**
697-5C	100	Blue	10	.106	.014	**65.89**

Std. Pack 10' and 5' Spools: 12

Std. Pack 100' Spools: 1

* BULK PRICES QUOTED ON REQUEST

WALSCO RAYOFLEX

Rayoflex combines the mechanical strength of synthetic lacquer to produce a tough, of fibreglas with the protective properties rugged insulating tubing. Rayoflex is more flexible and less affected by aging than conventional varnished tubing. Has a dielectric strength of 4,000 to 5,000 volts.

List per spool $1.35

Cat. No.	Size B&S Gauge No.	Approx. I.D. Inches	mm	Quantity Per Spool
630-(color)	18	.042	1	10 ft.
631-(color)	15	.059	1.5	8 ft.
632-(color)	12	.085	2	8 ft.
633-(color)	9	.118	3	5 ft.
634-(color)	6	.166	4	5 ft.

AVAILABLE IN BLACK, RED, BLUE and YELLOW COLORS. To specify COLOR add suffix to above catalog number as follows: -03 for Black, -04 for Red, -05 for blue and -06 for Yellow. Example:—630-03 is 18 gauge, Black.

WALSCO FLEXITUBE

Walsco Flexitube is the ideal supplemental insulation for most electronic and electrical applications. Flexitube is impervious to water, oil, alcohol, most acids and alkalies. Has an outstanding dielectric strength of 15,000 volts (average) before breakdown. Is not affected by temperature extremes.

List per spool $1.35

Cat. No.	Size B&S Gauge No.	Approx. I.D. Inches	mm	Quantity Per Spool
600-(color)	18	.042	1	20 ft.
601-(color)	16	.053	1.4	20 ft.
602-(color)	14	.066	1.6	18 ft.
603-(color)	12	.085	2	16 ft.
604-(color)	10	.106	2.7	14 ft.
605-(color)	8	.133	3.5	12 ft.
606-(color)	6	.166	4	10 ft.
607-(color)	4	.208	5	6 ft.
608-(color)	2	.263	6.5	6 ft.

AVAILABLE IN CLEAR, GREEN, BLACK and RED COLORS. To specify COLOR add suffix to above catalog number as follows: -01 for Clear, -02 for Green, -03 for Black and -04 for Red. Example: 600-01 for 18 gauge, Clear.

ROYAL ELECTRIC CABLES

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INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION
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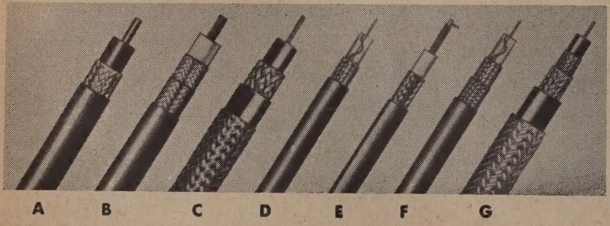
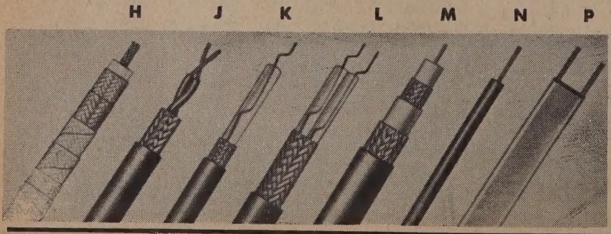
ROYAL COAXIAL CABLES

For constructions, see illustrations below

Cable Type	Construction Code	Nom. O. D. (Inch)	Nom. Imp. Ohms	Cable Type	Construction Code	Nom. O. D. (Inch)	Nom. Imp. Ohms	Cable Type	Construction Code	Nom. O. D. (Inch)	Nom. Imp. Ohms	Cable Type	Construction Code	Nom. O. D. (Inch)	Nom. Imp. Ohms
RG-6/U	B	.339	75	RG-55A/U	B	.216	50	RG-87A/U	H	.430	50	RG-219/U	C	.945	50
RG-6A/U	B	.339	75	RG-55B/U	B	.206	53.5	RG-94/U	H	.445	50	RG-220/U	A	1.12	50
RG-8/U	A	.405	52	RG-58/U	A	.195	53.5	RG-108A/U	J	.235	78	RG-221/U	C	1.195	50
RG-8A/U	A	.405	50	RG-58A/U	A	.195	52	RG-116/U	H*	.475	50	RG-222/U	B	.332	50
RG-9A/U	B	.420	50	RG-58C/U	A	.195	50	RG-117/U	H	.730	50	RG-223/U	B	.216	50
RG-9B/U	B	.425	50	RG-59/U	A	.242	75	RG-118/U	H*	.780	50	RG-224/U	H*	.615	50
RG-10A/U	C	.475	50	RG-59A/U	A	.242	75	RG-119/U	H	.465	50	RG-225/U	H	.430	50
		max.		RG-59B/U	A	.242	75.3	RG-120/U	H*	.525	50	RG-226/U	H	.500	50
RG-11/U	A	.405	75	RG-62/U	D	.242	93	RG-122/U	A	.160	50	RG-227/U	H*	.490	50
RG-11A/U	A	.405	75	RG-62A/U	D	.242	93	RG-140/U	H	.233	75	RG-228/U	H*	.795	50
RG-12A/U	C	.475	75	RG-62B/U	D	.242	93	RG-141/U	H	.190	50	K-14	A	.870	72
		max.		RG-63/U	D	.405	125	RG-141A/U	H	.190	50	K-109A	K	.275	160
RG-13A/U	B	.425	75	RG-63B/U	D	.405	125	RG-142/U	H	.206	50	K-111	L	.480x	300
RG-14A/U	B	.545	50	RG-65A/U	E	.405	950	RG-142A/U	H	.206	50			.290	
RG-17/U	A	.870	52	RG-71/U	F	.250	93	RG-143/U	H	.325	50	K-125	M	.460	75
RG-17A/U	A	.870	50			max.		RG-143A/U	H	.325	50	K-126	M	.315	75
RG-18/U	C	.945	52	RG-71A/U	F	.250	93	RG-144/U	H	.410	75	K-133	A	.242	75
		max.				max.		RG-211/U	H	.730	50	K-134	A	.405	75
RG-18A/U	C	.945	50	RG-71B/U	F	.250	93	RG-213/U	A	.405	50	K-135	M	.460	75
		max.		RG-74A/U	G	.615	50	RG-214/U	B	.425	50	K-136	M	.315	73
RG-22B/U	J*	.420	95			max.		RG-215/U	C	.475	50	K-137	A	.405	75
RG-34/U	A	.645	71	RG-79B/U	D*	.475	125	RG-216/U	B	.425	75	K-139	M	.460	75
RG-34A/U	A	.630	75	RG-86/U	P	.650x	200	RG-217/U	B	.545	50	K-404	A	.242	70
RG-55/U	B	.201	53.5			.300		RG-218/U	A	.870	50	K-1201	N	.185	....

* with variations





ROYAL "FOAMAX"

(foam dielectric coaxial cables)

Cable Type	RG equiv.	Construction Code	Nom. O. D. (Inch)	Nom. Imp. Ohms
K-436	11/U	A	.407	75
K-437	11/U(DS)	M	.460	75
K-440	59/U	A	.242	75

ROYAL MULTI-CONDUCTOR CABLES

With capability and capacity in both engineering and production, Royal is ready to quote on your multi-conductor cable needs. Call on Royal's skills and manufacturing resources for special communication and control cables, whether of simple or complex construction.

coaxial, communication and control . . .
portable cords . . . power supply cords

★ **manufactured to the latest specifications**
★ **precision-engineered and quality-controlled for dependable performance**

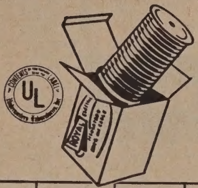
ROYAL LEAD-IN WIRE

Cable Type	Con-struc-tion Code	Descrip-tion	Dimen-sions (Inch)	Nom. Imp. Ohms
TV-1182	P	Heavy-Duty	.405 x .098	300
TV-9120	P	Standard	.350 x .055	300
TV-2000	P	Light-Duty	.335 x .055	300

ROYAL ANTENNA ROTOR CABLE

Cat. No. 9104—Four No. 20 7-strand conductors, thermoplastic insulation, twisted in BROWN vinyl tubed jacket.

ROYAL PORTABLE & FLEXIBLE CORDS

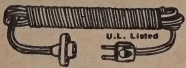
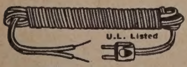
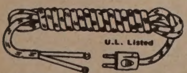


This listing shows only a very few of the complete line of wires and cords manufactured by Royal and sold through important distributors across the country. Complete listings on request.

Cord Type	Cat. No.	AWG Size & No. of Cond.	Insul. Thick.	Nom. O. D. (inches)	Current Carrying Cap. Amps.	Standard Put-up	Colors
SP	1522-13	18-2	SP-1 1/64	.127 x .235	7	250′ spool	Brown, Ivory, Black
SPT	1121-13	18-2	SPT-1 1/64	.127 x .215	7	250′ spool	Brown, Ivory, White, Black
SV	4428-13	18-2	1/64	.250	7	250′ spool	Black
SJ	4628-20	18-2	1/32	.305	7	250′ spool*	Black
SJ	4638-20	18-3	1/32	.330	7	250′ spool*	Black

* in corrugated "Handi-Pak" carton

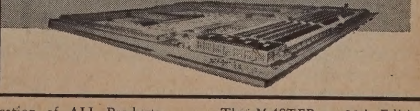
ROYAL CORD SETS

DESCRIPTION	LENGTH FEET	CAT. NO.	
		Rubber Cord	Vinyl Cord
 **TV CORD SET** UL listed, #18 SP-1 brown cord with molded-on vinyl television connector and cap.	6 9	K-3601 K-3602	K-3701 K-3702
 **REPLACEMENT CORD SET** UL listed, #18 SP-1 (rubber) or SPT-1 (vinyl) cord with molded-on vinyl cap. Vinyl in brown, ivory or black. Rubber, brown only.	6 9 12	K-2801 K-2802	K-2701 K-2702 K-2703
 **HEATER REPLACEMENT CORD SET** (for soldering irons, etc.) UL listed, #18 3000 cycle Type HPD glazed cotton heater cord with molded-on cap.	6	Braided Cord K-3000	

ROYAL is recognized throughout the electrical and electronic industries as the brand of maximum quality and dependability. These and other items in the broad Royal line of wiring materials are available through your wholesaler. Specify ROYAL when you order.

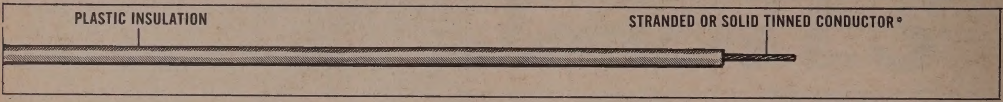
ROYAL ELECTRIC CORPORATION
an associate of International Telephone & Telegraph Corporation
PAWTUCKET • RHODE ISLAND

ROYAL ELECTRIC
...an associate of ITT



Hook-up Wire

PLASTIC TYPE


PLASTIC INSULATION
STRANDED OR SOLID TINNED CONDUCTOR°

SOLID CONDUCTOR

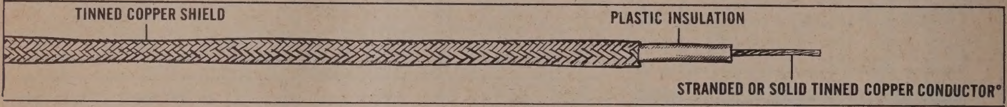
SAXTON NUMBER	CONDUCTOR SIZE	CONDUCTOR STRANDING	INSULATION THICKNESS	NOMINAL O.D.
1AD22	22	Solid	.016″	.061″
1AD20	20	Solid	.016″	.064″
1AD18	18	Solid	.016″	.072″

STRANDED CONDUCTOR

SAXTON NUMBER	CONDUCTOR SIZE	CONDUCTOR STRANDING	INSULATION THICKNESS	NOMINAL O.D.
1A24	24	7 x 32	.016″	.056″
1A22	22	7 x 30	.016″	.062″
1A20	20	10 x 30	.016″	.067″
1A18	18	16 x 30	.016″	.077″
1A16	16	26 x 30	.016″	.092″
1A14	14	41 x 30	.016″	.106″

Shielded Hook-up Wire

PLASTIC TYPE

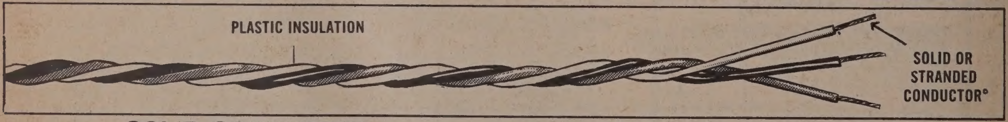

TINNED COPPER SHIELD
PLASTIC INSULATION
STRANDED OR SOLID TINNED COPPER CONDUCTOR°

STRANDED CONDUCTOR

SAXTON NUMBER	CONDUCTOR SIZE	CONDUCTOR STRANDING	INSULATION THICKNESS	NOMINAL O.D.
1AS22	22	7 x 30	.016″	.090″
1AS20	20	10 x 30	.016″	.100″
1AS18	18	16 x 30	.016″	.120″
1AS16	16	26 x 30	.016″	.130″
1AS14	14	41 x 30	.016″	.150″
1AS12	12	65 x 30	.016″	.170″
1AS10	10	105 x 30	.025″	.195″

Unshielded Audio Cable

2 AND 3 CONDUCTOR
NO OUTER JACKET


PLASTIC INSULATION
SOLID OR STRANDED CONDUCTOR°

SOLID CONDUCTOR

SAXTON NUMBER	CONDUCTOR NUMBER	CONDUCTOR SIZE	CONDUCTOR STRANDING	INSULATION THICKNESS	NOMINAL O.D.
2AD22	2	22	Solid	.016″	.100″
3AD22	3	22	Solid	.016″	.115″
2AD20	2	20	Solid	.016″	.120″
3AD20	3	20	Solid	.016″	.135″
2AD18	2	18	Solid	.016″	.145″
3AD18	3	18	Solid	.016″	.160″
2AD16	2	16	Solid	.016″	.175″
3AD16	3	16	Solid	.016″	.190″

STRANDED CONDUCTOR

SAXTON NUMBER	CONDUCTOR NUMBER	CONDUCTOR SIZE	STRANDING	INSULATION THICKNESS	NOMINAL O.D.
2A22	2	22	7 x 30	.016″	.125″
3A22	3	22	7 x 30	.016″	.140″
2A20	2	20	10 x 30	.016″	.145″
3A20	3	20	10 x 30	.016″	.160″
2A18	2	18	16 x 30	.016″	.165″
3A18	3	18	16 x 30	.016″	.180″
2A16	2	16	26 x 30	.016″	.190″
3A16	3	16	26 x 30	.016″	.210″

saxton
wire and cable division
NEW YORK, N. Y.

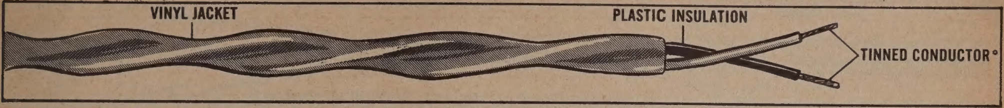
°*Bare conductors available.*

Use Index Page 1 for Quick, Easy Location of ALL Products

(See Saxton Price List on Page 1598)

Multi-Conductor Jacketed Cable

PLASTIC JACKET
.020″ Wall Thickness



SOLID CONDUCTOR

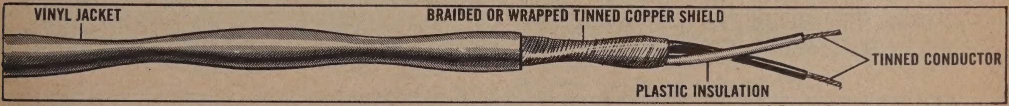
SAXTON NUMBER	CONDUCTOR			INSULATION THICKNESS	NOMINAL O.D.
	NUMBER	AWG	STRANDING		
2JD22	2	22	Solid	.015″	.140″
3JD22	3	22	Solid	.015″	.150″
4JD22	4	22	Solid	.015″	.170″
5JD22	5	22	Solid	.015″	.185″
6JD22	6	22	Solid	.015″	.190″
7JD22	7	22	Solid	.015″	.200″
8JD22	8	22	Solid	.015″	.210″
9JD22	9	22	Solid	.015″	.240″
10JD22	10	22	Solid	.015″	.250″
12JD22	12	22	Solid	.015″	.270″
15JD22	15	22	Solid	.015″	.300″
2JD20	2	20	Solid	.015″	.155″
3JD20	3	20	Solid	.015″	.165″
4JD20	4	20	Solid	.015″	.195″
5JD20	5	20	Solid	.015″	.220″
6JD20	6	20	Solid	.015″	.230″
7JD20	7	20	Solid	.015″	.240″
8JD20	8	20	Solid	.015″	.285″
9JD20	9	20	Solid	.015″	.300″
10JD20	10	20	Solid	.015″	.315″
12JD20	20	20	Solid	.015″	.330″
15JD20	15	20	Solid	.015″	.345″
20JD20	20	20	Solid	.015″	.400″
2JD18	2	18	Solid	.015″	.188″
3JD18	3	18	Solid	.015″	.208″
4JD18	4	18	Solid	.015″	.223″
5JD18	5	18	Solid	.015″	.233″
6JD18	6	18	Solid	.015″	.263″

STRANDED CONDUCTOR

SAXTON NUMBER	CONDUCTOR			INSULATION THICKNESS	NOMINAL O.D.
	NUMBER	AWG	STRANDING		
2J22	2	22	7 x 30	.015″	.145″
3J22	3	22	7 x 30	.015″	.160″
4J22	4	22	7 x 30	.015″	.185″
5J22	5	22	7 x 30	.015″	.190″
6J22	6	22	7 x 30	.015″	.195″
7J22	7	22	7 x 30	.015″	.215″
8J22	8	22	7 x 30	.015″	.225″
9J22	9	22	7 x 30	.015″	.245″
10J22	10	22	7 x 30	.015″	.260″
12J22	12	22	7 x 30	.015″	.285″
15J22	15	22	7 x 30	.015″	.340″
2J20	2	20	10 x 30	.015″	.175″
3J20	3	20	10 x 30	.015″	.185″
4J20	4	20	10 x 30	.015″	.205″
5J20	5	20	10 x 30	.015″	.230″
6J20	6	20	10 x 30	.015″	.250″
7J20	7	20	10 x 30	.015″	.260″
8J20	8	20	10 x 30	.015″	.305″
9J20	9	20	10 x 30	.015″	.320″
10J20	10	20	10 x 30	.015″	.325″
12J20	12	20	10 x 30	.015″	.345″
15J20	15	20	10 x 30	.015″	.365″
20J20	20	20	10 x 30	.015″	.420″
2J18	2	18	16 x 30	.015″	.210″
3J18	3	18	16 x 30	.015″	.230″
4J18	4	18	16 x 30	.015″	.245″
5J18	5	18	16 x 30	.015″	.260″
6J18	6	18	16 x 30	.015″	.275″

Multi-Conductor Shielded Cable

PLASTIC JACKET
.020″ Wall Thickness



SAXTON NUMBER	TYPE SHIELD	CONDUCTORS			INSULATION THICKNESS	JACKET THICKNESS	NOMINAL O.D.
		NUMBER	AWG	STRANDING			
2SSJ22	Wrap	2	22	7 x 30	.016″	.020″	.175″
2SSJD22	Wrap	2	22	Solid	.016″	.020″	.170″
1SSJ22	Wrap	1	22	7 x 30	.016″	.020″	.135″
2SSJ20	Wrap	2	20	10 x 30	.016″	.020″	.195″
3SSJ20	Wrap	3	20	10 x 30	.016″	.020″	.210″
4SSJ20	Wrap	4	20	10 x 30	.016″	.020″	.225″
2SSJ18	Wrap	2	18	16 x 30	.016″	.020″	.230″
2SSJ16	Wrap	2	16	26 x 30	.016″	.020″	.250″
2SJ22	Braid	2	22	7 x 30	.016″	.020″	.183″
2SJ20	Braid	2	20	10 x 30	.016″	.020″	.195″
2SJ18	Braid	2	18	16 x 30	.016″	.020″	.235″

**Bare conductors available. For additional constructions see page 4.*

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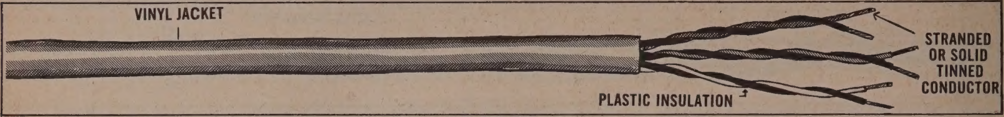
NEW YORK, N. Y.

(See Saxton Price List on Page 1598)

Intercom Cable

TWISTED PAIRS WITH PLASTIC JACKET


VINYL JACKET
STRANDED OR SOLID TINNED CONDUCTOR
PLASTIC INSULATION

SOLID

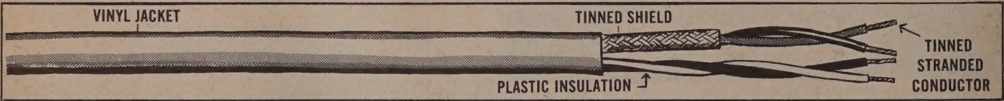
SAXTON NUMBER	NUMBER PAIRS	CONDUCTORS NUMBER	AWG	STRANDING	INSULATION THICKNESS	JACKET THICKNESS	NOMINAL O.D.
2PD22	1	2	22	Solid	.015″	.020″	.128″
4PD22	2	4	22	Solid	.015″	.020″	.205″
6PD22	3	6	22	Solid	.015″	.020″	.230″
12PD22	6	12	22	Solid	.015″	.020″	.330″
14PD22	7	14	22	Solid	.015″	.020″	.345″
18PD22	9	18	22	Solid	.015″	.020″	.370″
22PD22	11	22	22	Solid	.015″	.020″	.385″
26PD22	13	26	22	Solid	.015″	.025″	.415″
30PD22	15	30	22	Solid	.015″	.025″	.450″
32PD22	16	32	22	Solid	.015″	.025″	.470″
54PD22	27	54	22	Solid	.015″	.035″	.605″
62PD22	31	62	22	Solid	.015″	.035″	.630″
82PD22	41	82	22	Solid	.015″	.035″	.710″
102PD22	51	102	22	Solid	.015″	.045″	.845″

STRANDED

SAXTON NUMBER	NUMBER PAIRS	CONDUCTORS NUMBER	AWG	STRANDING	INSULATION THICKNESS	JACKET THICKNESS	NOMINAL O.D.
2P22	1	2	22	7 x 30	.015″	.020″	.155″
4P22	2	4	22	7 x 30	.015″	.020″	.220″
6P22	3	6	22	7 x 30	.015″	.020″	.245″
8P22	4	8	22	7 x 30	.015″	.020″	.275″
10P22	5	10	22	7 x 30	.015″	.020″	.320″
12P22	6	12	22	7 x 30	.015″	.020″	.340″
18P22	9	18	22	7 x 30	.015″	.020″	.375″
22P22	11	22	22	7 x 30	.015″	.020″	.415″
30P22	15	30	22	7 x 30	.015″	.025″	.485″
54P22	27	54	22	7 x 30	.015″	.035″	.645″

Audio Cable

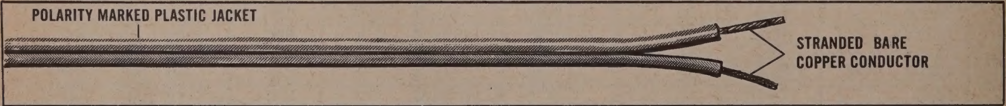
COMBINATION SHIELDED & JACKETED


VINYL JACKET
TINNED SHIELD
TINNED STRANDED CONDUCTOR
PLASTIC INSULATION

SAXTON NUMBER	CONDUCTORS NUMBER	AWG	STRANDING	INSULATION THICKNESS	JACKET THICKNESS	NOMINAL O.D.
4SJ22	4	22	7 x 30	.016″	.020″	.315″
	(2 Conductors Shielded . . . 2 Unshielded)					
3SJ22	3	22	7 x 30	.016″	.020″	.200″
	(1 Conductor Shielded . . . 2 Unshielded)					

Unshielded Speaker Wire

PLASTIC TYPE

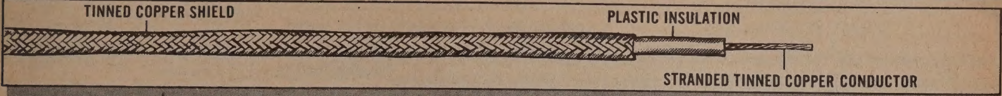

POLARITY MARKED PLASTIC JACKET
STRANDED BARE COPPER CONDUCTOR

SAXTON NUMBER	CONDUCTORS NO.	AWG	STRANDING	WALL THICKNESS	NOMINAL O.D.
2F24	2	24	7 x 32	.016″	.061″ x .137″
2F20	2	20	10 x 30	.016″	.105″ x .210″
2F18	2	18	41 x 34	.016″	.130″ x .215″
2F18A	2	18	16 x 30	.016″	.130″ x .215″
2F18B	2	18	41 x 34	.032″	.150″ x .285″
3F18	3	18	41 x 34	.032″	.120″ x .330″
2F16	2	16	65 x 34	.032″	.160″ x .300″

Phono Wire

2

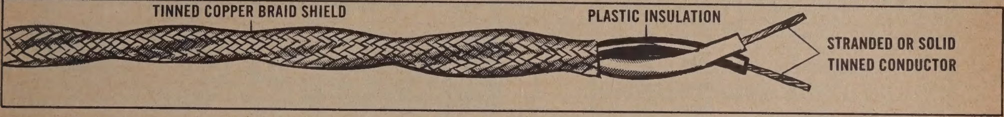
1 AND 2 CONDUCTOR SHIELDED - UNJACKETED


TINNED COPPER SHIELD
PLASTIC INSULATION
STRANDED TINNED COPPER CONDUCTOR

SAXTON NUMBER	CONDUCTORS			INSULATION THICKNESS	NOMINAL O.D.
	NUMBER	AWG	STRANDING		
1S24	1	24	16 x 36	.016	.080
2S24	2	24	16 x 36	.016	.125

Audio Cable

2 CONDUCTOR SHIELDED - UNJACKETED


TINNED COPPER BRAID SHIELD
PLASTIC INSULATION
STRANDED OR SOLID TINNED CONDUCTOR

SOLID

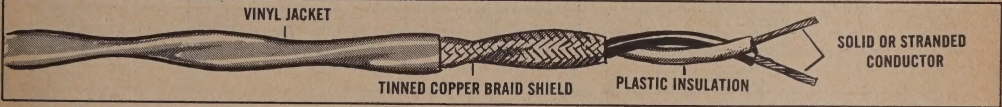
SAXTON NUMBER	CONDUCTORS			INSULATION THICKNESS	NOMINAL O.D.
	NUMBER	AWG	STRANDING		
2SD22	2	22	Solid	.016″	.132″
2SD20	2	20	Solid	.016″	.148″
2SD18	2	18	Solid	.016″	.175″

STRANDED

SAXTON NUMBER	CONDUCTORS			INSULATION THICKNESS	NOMINAL O.D.
	NUMBER	AWG	STRANDING		
2S24	2	24	16 x 36	.016″	.125″
2S22	2	22	7 x 30	.016″	.140″
2S20	2	20	10 x 30	.016″	.155″
2S18	2	18	16 x 30	.016″	.170″
2S16	2	16	26 x 30	.020″	.210″
2S14	2	14	41 x 30	.020″	.225″
2S12	2	12	65 x 30	.025″	.295″

Audio Cable

2 CONDUCTOR SHIELDED & JACKETED


VINYL JACKET
TINNED COPPER BRAID SHIELD
PLASTIC INSULATION
SOLID OR STRANDED CONDUCTOR

SOLID

SAXTON NUMBER	CONDUCTORS			INSULATION THICKNESS	JACKET THICKNESS	NOMINAL O.D.
	NUMBER	AWG	STRANDING			
2SDJ22	2	22	Solid	.016″	.020″	.172″
2SDJ20	2	20	Solid	.016″	.020″	.208″
2SDJ18	2	18	Solid	.016″	.020″	.218″

STRANDED

SAXTON NUMBER	CONDUCTORS			INSULATION THICKNESS	JACKET THICKNESS	NOMINAL O.D.
	NUMBER	AWG	STRANDING			
2SJ22	2	22	7 x 30	.016″	.020″	.183″
2SJ20	2	20	10 x 30	.016″	.020″	.195″
2SJ18	2	18	16 x 30	.016″	.020″	.235″

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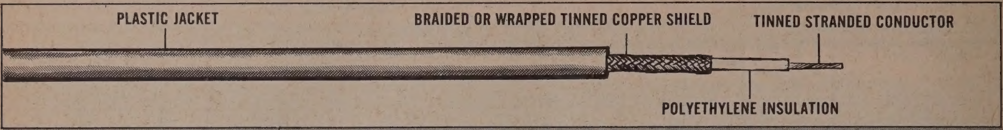
Audio Cable

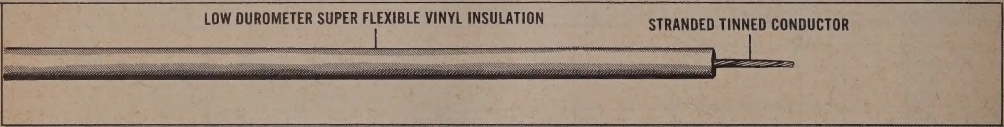
LOW LOSS - MICROPHONE AND INPUT CABLE


PLASTIC JACKET
BRAIDED OR WRAPPED TINNED COPPER SHIELD
TINNED STRANDED CONDUCTOR
POLYETHYLENE INSULATION

SAXTON NUMBER	NOMINAL CAPACITANCE/FT.	SHIELD TYPE	CONDUCTORS NUMBER	AWG	STRANDING	INSULATION THICKNESS	JACKET THICKNESS	NOMINAL O.D.
1SSJC26	38 mmf.	Wrap	1	26	7 x 34 Copperweld	.016″	.020″	.125″
1SJC24	35 mmf.	Braid	1	24	10 x 34	.016″	.030″	.145″
1SJC24A	23 mmf.	Braid	1	24	10 x 34	.040″	.030″	.200″
1SJC20	36 mmf.	Braid	1	20	26 x 34	.030″	.030″	.175″
2SJC22	31 mmf.	Braid	2	22	16 x 34	.025″	.030″	.230″
3SJC20	34 mmf.	Braid	3	20	26 x 34	.025″	.035″	.290″
4SJC20	36 mmf.	Braid	4	20	26 x 34	.025″	.035″	.315″
5SJC20	45 mmf.	Braid	5	20	26 x 34	.025″	.035″	.340″
6SJC20	45 mmf.	Braid	6	20	26 x 34	.025″	.035″	.365″

Test Lead Wire

SUPER FLEXIBLE VINYL INSULATION

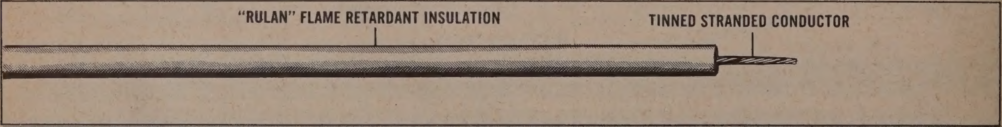

LOW DUROMETER SUPER FLEXIBLE VINYL INSULATION
STRANDED TINNED CONDUCTOR

SAXTON NUMBER	TYPE	CONDUCTORS AWG	STRANDING	WALL THICKNESS	BREAKDOWN VOLTAGE	NOMINAL O.D.
1C20	Standard	20	41 x 36	.040	5,000 V.	.120
1C20A	Standard	20	41 x 36	.044	8,500 V.	.130
1C20B	Standard	20	41 x 36	.047	10,000 V.	.135
1C18	Standard	18	41 x 34	.047	12,000 V.	.140
1C18A	Heavy Duty	18	41 x 34	.109	22,000 V.	.245

Specify Color—Red or Black

Hi Voltage Wire

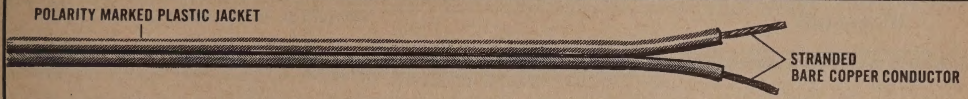
FLAME RETARDANT RULAN INSULATION


"RULAN" FLAME RETARDANT INSULATION
TINNED STRANDED CONDUCTOR

SAXTON NUMBER	TYPE	CONDUCTORS AWG	STRANDING	WALL THICKNESS	BREAKDOWN VOLTAGE	NOMINAL O.D.
1R20	Unshielded	20	10 x 30	.047	10,000 V.	.120
1R20A	Unshielded	20	10 x 30	.063	20,000 V.	.170
1R18	Unshielded	18	16 x 30	.095	40,000 V.	.240
1RS18	Shielded	18	16 x 30	.095	40,000 V.	.260

E-Z Zip Cord

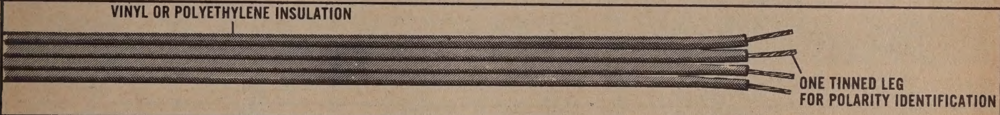
2 AND 3 CONDUCTOR



SAXTON NUMBER	CONDUCTORS NUMBER	CONDUCTORS AWG	STRANDING	WALL THICKNESS	U/L TYPE	NOMINAL O.D.
2F24	2	24	7 x 32	.016	—	.061 x .137
2F20	2	20	10 x 30	.016	—	.105 x .210
2F18	2	18	41 x 34	.016	SPT-1	.130 x .215
2F18A	2	18	16 x30	.016		.130 x .215
2F18B	2	18	41 x 34	.032	SPT-2	.150 x .285
2F18C	3	18	41 x 34	.016	SPT-1	.120 x .330
2F16	2	16	65 x 34	.032	SPT-2	.160 x .300

Rotor Cable

LOW LOSS FLAT TYPE
(FOR ROUND CONSTRUCTION—SEE PAGES 3 & 4)



SAXTON NUMBER	CONDUCTORS NUMBER	CONDUCTORS AWG	STRANDING	INSULATION MATERIAL	NOMINAL O.D.
4FC2	4	22	7 x 30	Polyethylene	.085 x .360″
4FC2A	4	22	7 x 30	Polyvinyl Chloride	.090 x .430″
4FC3	4	20	10 x 30	Polyethylene	.085 x .360″
4FC3A	4	20	10 x 30	Polyvinyl Chloride	.090 x .430″

MIL-C-3432A
MIL-C-3884

WITH CERTIFICATION

SAXTON NUMBER	SPECIFICATION DESIGNATION		CONSTRUCTION	SPECIFICATION No.	NOMINAL O.D.
2M18	CO-02	MGF	2/18 SJO (Shielded)	MIL-C-3432A	0.375
2M18A	CO-02	MGF	2/18	MIL-C-3432A	0.300
2M18B	CO-02	HGF	2/18	MIL-C-3432A	0.380
2M18C	CO-02	LGF	2/18	MIL-C-3432A	0.250
2M16	CO-02	HGF	2/16	MIL-C-3432A	0.405
2M16A	CO-02	MGF	2/16	MIL-C-3432A	0.338
2M14	CO-02	MGF	2/14	MIL-C-3432A	0.400
2M14A	CO-02	HGF	2/14	MIL-C-3432A	0.535
3M18	CO-03	MGF	3/18	MIL-C-3432A	0.330
3M16	CO-03	MGF	3/16 SJO (Shielded)	MIL-C-3432A	0.360
3M16A	CO-03	MGF	3/16	MIL-C-3432A	0.375
3M12	CO-03	HOE	3/12	MIL-C-3432A	0.635
5M20	CO-05	MGF	5/20	MIL-C-3432A	0.400
2M18D	COS		2/18	MIL-C-3884	0.290
3M18A	COS		3/18	MIL-C-3884	0.290
2M20	COS		2/20	MIL-C-3884	0.280
3M20	COS		3/20	MIL-C-3884	0.280

We carry — in stock — one of the most comprehensive inventories of MIL-C-3432A and MIL-3884 on the Eastern Seaboard. It is impossible to list all but the popular types. Your inquiries will receive prompt attention and service.

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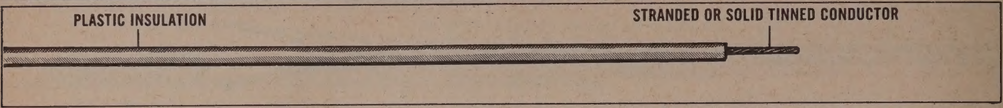
MIL-W-76A

WITH CERTIFICATION



TYPE MW - UNCOVERED PLASTIC - MEDIUM WALL - 1000V. RATING

SOLID

SAXTON NUMBER	SPECIFICATION DESIGNATION	AWG No.	INSULATION THICKNESS	NOMINAL O.D.
1MD22	MW-C 22(1)U	22	.016″	.061″
1MD20	MW-C 20(1)U	20	.016″	.064″
1MD18	MW-C 18(1)U	18	.016″	.072″
1MD16	MW-C 16(1)U	16	.016″	.083″

STRANDED

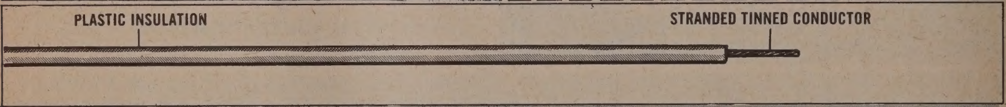
SAXTON NUMBER	SPECIFICATION DESIGNATION	AWG No.	STRANDING	INSULATION THICKNESS	NOMINAL O.D.
1M24	MW-C 24(7)U	24	7 x 32	.016″	.056″
1M22	MW-C 22(7)U	22	7 x 30	.016″	.062″
1M20	MW-C 20(10)U	20	10 x 30	.016″	.067″
1M18	MW-C 18(16)U	18	16 x 30	.016″	.077″
1M16	MW-C 16(26)U	16	26 x 30	.016″	.092″
1M14	MW-C 14(41)U	14	41 x 30	.016″	.106″
1M12	MW-C 12(65)U	12	65 x 30	.016″	.127″

TYPE HW - UNCOVERED PLASTIC - HEAVY WALL

SAXTON NUMBER	SPECIFICATION DESIGNATION	CONDUCTOR AWG	CONDUCTOR STRANDING	INSULATION THICKNESS	NOMINAL O.D.
1M22A	HW-C 22(7)U	22	7 x 30	.032″	.094″
1M20A	HW-C 20(10)U	20	10 x 30	.032″	.099″
1M18A	HW-C 18(16)U	18	16 x 30	.032″	.109″
1M16A	HW-C 16(26)U	16	26 x 30	.032″	.122″
1M14A	HW-C 14(41)U	14	41 x 30	.045″	.165″
1M12A	HW-C 12(65)U	12	65 x 30	.045″	.185″

MIL-W-16878C

WITH CERTIFICATION

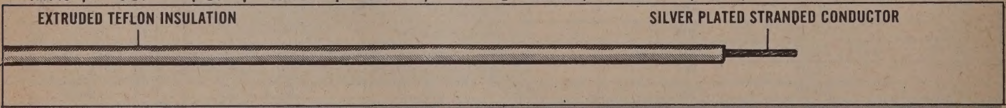


TYPE C UNCOVERED PLASTIC—1000 VOLT RATING

SAXTON NUMBER	SPECIFICATION DESIGNATION	AWG No.	STRANDING	INSULATION THICKNESS	NOMINAL O.D.
1M22C	C-22	22	7 x 30	.016″	.065″
1M20C	C-20	20	7 x 28	.016″	.073″
1M18C	C-18	18	7 x 26	.016″	.081″
1M16C	C-16	16	19 x 29	.016″	.092″
1M14C	C-14	14	19 x 27	.016″	.103″

TYPE D UNCOVERED PLASTIC—3000 VOLT RATING

SAXTON NUMBER	SPECIFICATION DESIGNATION	CONDUCTOR AWG	CONDUCTOR STRANDING	INSULATION THICKNESS	NOMINAL O.D.
1M22D	D-22	22	7 x 30	.032″	.097″
1M20D	D-20	20	7 x 28	.032″	.105″
1M18D	D-18	18	7 x 26	.032″	.113″
1M16D	D-16	16	19 x 29	.032″	.124″
1M14D	D-14	14	19 x 27	.032″	.135″



TYPE E EXTRUDED TEFLON—600 VOLT RATING

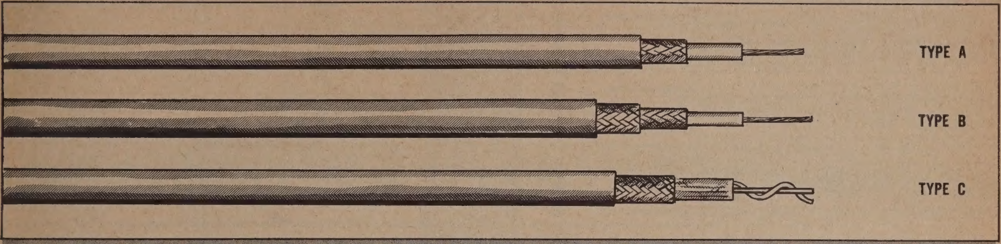
SAXTON NUMBER	SPECIFICATION DESIGNATION	CONDUCTOR AWG	CONDUCTOR STRANDING	INSULATION THICKNESS	NOMINAL O.D.
1M30E	E-30	30	7 x 38	.010″	.033″
1M28E	E-28	28	7 x 36	.010″	.036″
1M26E	E-26	26	7 x 34	.010″	.041″
1M24E	E-24	24	19 x 36	.010″	.046″
1M22E	E-22	22	19 x 34	.010″	.052″
1M20E	E-20	20	19 x 32	.010″	.060″
1M18E	E-18	18	19 x 30	.010″	.072″
1M16E	E-16	16	19 x 29	.010″	.084″
1M14E	E-14	14	19 x 27	.010″	.098″

TYPE EE EXTRUDED TEFLON—1000 VOLT RATING

SAXTON NUMBER	SPECIFICATION DESIGNATION	AWG No.	STRANDING	INSULATION THICKNESS	NOMINAL O.D.
1M30EE	EE-30	30	7 x 38	.015″	.043″
1M28EE	EE-28	28	7 x 36	.015″	.046″
1M26EE	EE-26	26	7 x 34	.015″	.050″
1M24EE	EE-24	24	19 x 36	.015″	.056″
1M22EE	EE-22	22	19 x 34	.015″	.062″
1M20EE	EE-20	20	19 x 32	.015″	.070″
1M18EE	EE-18	18	19 x 30	.015″	.081″
1M16EE	EE-16	16	19 x 29	.015″	.090″
1M14EE	EE-14	14	19 x 27	.015″	.104″

Co-Axial Cable

All below are "Commercial Types"— Quotations on cables to MIL-C-17B upon request. RG-8/U and RG-11/U with 15 AWG solid copper weld conductor upon request.

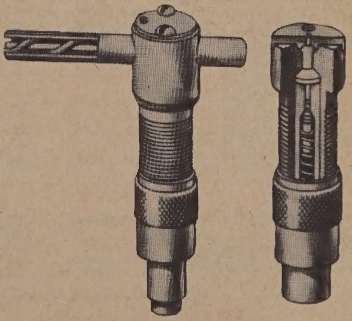


SAXTON NUMBER	TYPE DESIGNATION	ILLUSTRATION	INSULATION	NOM. IMP. OHMS	NOMINAL O.D.	JACKET	DESCRIPTION
1X14	K-14	A	Regular	72	.870	Non Cont. PVC	Community TV Cable
1X8	RG-8/U	A	Regular	52	.405	Black Polyeth	General Purpose
1X8A	RG-8/U	A	Foam	52	.405	Black PVC	
1X8B	RG-8A/U	A	Regular	50	.405	Non Cont. Polyeth	
1X11	RG-11/U	A	Regular	75	.405	Black PVC	Video & Communications
1X11A	RG-11/U	A	Foam	75	.405	Black PVC	
1X11B	RG-11A/U	A	Regular	75	.405	Non Cont. Polyeth.	
1X11C	RG-11/UDS	B	Regular	75	.465	Black PVC	Double Shielded
1X58	RG-58/U	A	Regular	53.5	.195	Black PVC	20 AWG Solid B.C.
1X58A	RG-58A/U	A	Regular	52	.195	Black PVC	19/.0071 TC
1X58B	RG-58C/U	A	Regular	50	.195	Non Cont. Blk Polyeth.	19/.0071 TC
1X59	RG-59/U	A	Regular	73	.242	Black PVC	Video Cable
1X59A	RG-59/UDS	B	Regular	73	.285	Black PVC	Double Shielded
1X59B	RG-59/U	A	Foam	73	.242	Black PVC	Video Cable
1X59C	RG-59/U	A	Regular	50	.170	Black PVC	Miniature "59/U"
1X59D	RG-59A/U	A	Regular	75	.242	Non Cont. Blk Polyeth.	.023 Copperweld
1X62	RG-62/U	C	Regular	93	.242	Black PVC	Small Size— Low Capacitance

Tee-Tap Co-Axial Cable Connector

The Saxton Tee Tap allows quick, electrically perfect connections to spirafil or coaxial cables without cutting the distribution lines and without necessity for re-insulation.

SAXTON NUMBER	DESCRIPTION
59T59	From RG-59/U to RG-59/U
11T59	From RG-11/U to RG-59/U
SFT59	From Spirafil to RG-59/U



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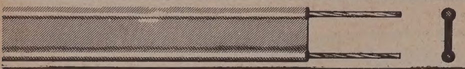
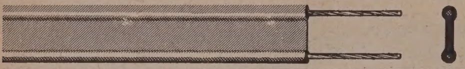
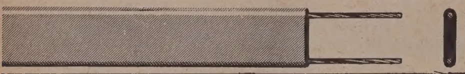
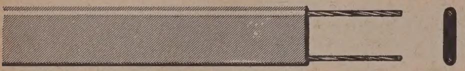
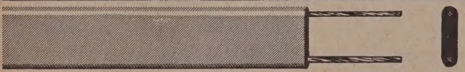
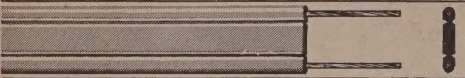
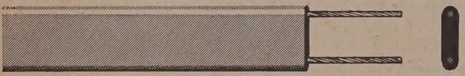
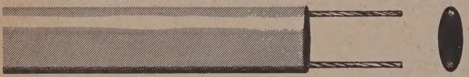
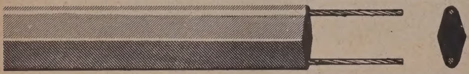
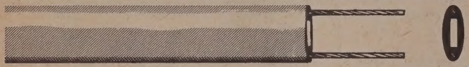
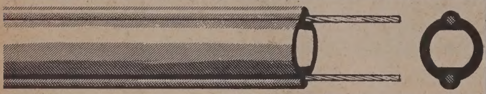
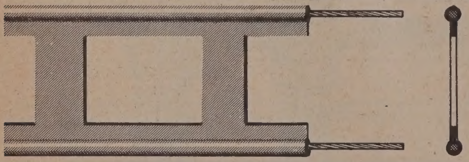
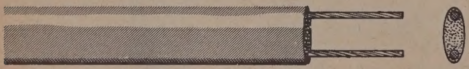
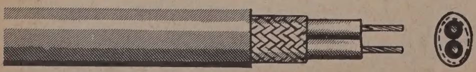
300 Ohm Twin Lead

VHF-UHF TRANSMISSION LINE

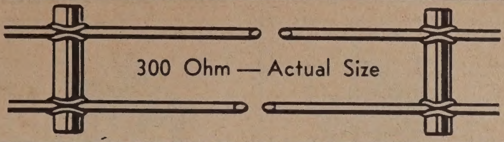
	CATALOG NO.	NAME	STRANDING	NOMINAL SIZE WEB - WIDTH
	**TL-40**	Economy	7	0.040 x 0.0375
	**TL-55**	Signal Sender	7	0.055 x 0.385
	**TL-80**	Trophy Line	10	0.080 x 0.385
	**TL-100**	Crusader	10	0.093 x 0.355
	**TL-100DL**	Top Notch	10	0.095 x 0.383
	**TL-100EZ**	E-Z Strip	10	0.080 x 0.370
	**TL-100SDL**	Double Ten	20	0.100 x 0.400
	**TL-125**	Classic	41	0.125 x 0.415
	**TL-150**	Hi-Fidelity	20	0.150 x 0.385
	**OTL**	Oval Twin Lead	10	0.160 x 0.445
	**TTL**	Tubular Twin Lead	10	0.310 x 0.332
	**INS-500**	Ladder Line	41	0.075 x 0.975
	**1016**	Saxton Spongee	7x28	Brown Foam 0.230 x 0.365
	**1017** no shield.	Saxton Sea Coaster	7	300 ohm, each No. 20 AWG Bare Solid Copper Wire foam insulated, tinned copper shield over both, Black Polyethylene jacket overall. 0.265 x 0.380
	1118	Non-Radiating Shield Type	Solid	

SAXTON PAGE 9

(See Saxton Price List on Page 1598)

Open Wire Transmission Line

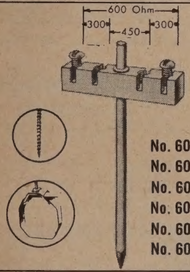
LOW LOSS AIR DIELECTRIC



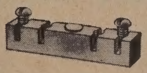
SAXTON NUMBER	CONDUCTOR	CONDUCTOR SPACING	IMPEDANCE	AWG No.	INSULATOR SPACING
2500	40% Copper Weld	1″	450 Ohm	18	6″
2501	40% Copper Weld	1″	450 Ohm	18	12″
2502	40% Copper Weld	7/16″	300 Ohm	18	6″
2507	Solid Copper	1″	450 Ohm	18	6″
2515	Solid Copper Formvar	1″	450 Ohm	18	6″
2517	Solid Copper Formvar	7/16″	300 Ohm	18	6″
2520	Solid Copper Formvar	1″	450 Ohm	16	6″
2522	Solid Copper Formvar	7/16″	300 Ohm	16	6″
2525	40% Copper Weld	Two Inch	475 Ohm	14	Random Spaced
2526	40% Copper Weld	Two Inch	450 Ohm	12	Random Spaced

Open Line Accessories

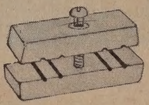
STANDOFFS & STRESS INSULATORS



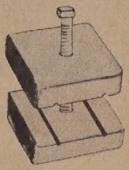
No. 6001
No. 6002
No. 6003
No. 6004
No. 6005
No. 6006



No. 6000



No. 6010



No. 6011

"TAPPEE" STANDOFF INSULATOR

A Standoff which is especially designed for use with open line transmission wire installations. To take up slack in line, tighten screws in slots after pulling taut. For use as ordinary spacer—partially tighten set screws (see illustrations). This will permit free movement of wire in the slots, thereby doing away with potential wire breaks due to backward and forward motion caused by wind. Ideal also for use as anchor point or spacer for "Fence Wire" installations. For use in 600 Ohm installations, use outside two slots. Particularly good for community installations, where random spacing of open line is desirable to avoid tuned circuits created by regular spacing. Permits inexpensive, time saving, trouble free installations. For use with gauges from No. 12 to No. 18. Block is high impact polystyrene; hardware is double dip galvanized steel.

Saxton No. 6001 5½″ Nail Type
Saxton No. 6002 7½″ Nail Type
Saxton No. 6003 5″ Wood Screw Type
Saxton No. 6004 7½″ Wood Screw Type
Saxton No. 6005 5″ Pole Clamp Type
Saxton No. 6006 7½″ Pole Clamp Type

"TAPPEE"— Heads

Saxton No. 6000

Blocks only without drive in hardware. Complete with two Parker Kalon plated screws for use as spacer block in making your own Open Line installations.

HEAVY DUTY OPEN LINE STRESS INSULATORS

Saxton No. 6010

Plastic blocks, slotted on either one or two inch centers complete with plated screw. For taking up slack and for use as anchor points in Open Line installations.

Saxton No. 6011

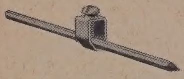
Same as above—Heavy duty. 2″ spacing to accommodate #12 AWG wires.

saxton wire and cable division NEW YORK, N. Y.

SAXTON PAGE 10

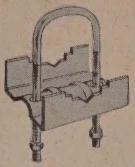
Antenna Accessories

AERIAL KITS & MAST EQUIPMENT



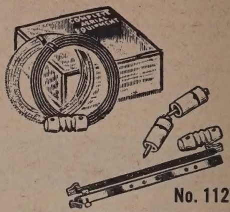
GROUND RODS

No. 1064	4 Foot Overall length
No. 1065	6 Foot Overall length
No. 1066	8 Foot Overall length



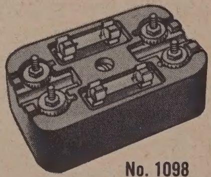
No. 1103
"U" BOLTS AND SADDLES

No. 1100
GROUND MAST CLAMP

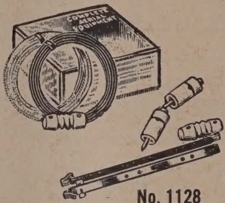


No. 1127
DELUXE AERIAL KIT

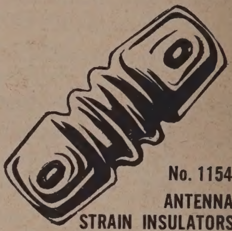
No. 1102
GROUND ROD CLAMP



No. 1098
LIGHTNING ARRESTOR



No. 1128
STANDARD AERIAL KIT



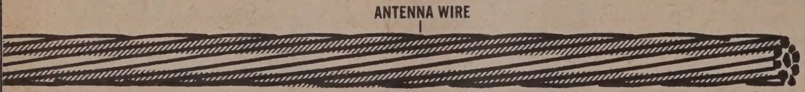
No. 1154
ANTENNA STRAIN INSULATORS

No. 1126

ANTENNA WINDOW STRAP

Antenna Wire

BARE, TINNED & ENAMELED COPPER



SAXTON NUMBER	AWG	STRANDING	CONDUCTOR TREATMENT	NOMINAL O.D.
A18	18	7 x 26	Bare	.045
A16	16	7 x 24	Bare	.060
A14	14	7 x 22	Bare	.075
AT14	14	7 x 22	Tinned	.075
ED14	14	Solid	Enameled	.065
ED12	12	Solid	Enameled	.081

Available on 1,000 ft. spools or 50 ft. & 100 ft. interconnected coils of 1,000 ft. total.

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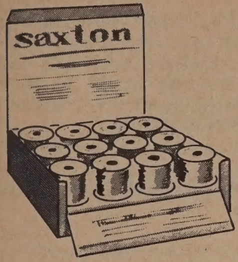
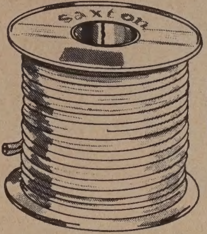
wire and cable division
NEW YORK, N. Y.

Promotional Merchandise

PROVEN SALES BUILDERS



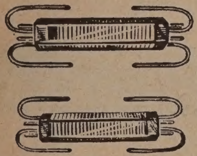
Self-Service Shipper/
Display carton for
Super Market impulse
buying!



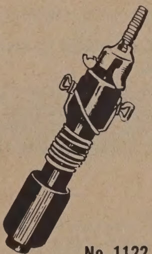
Handy counter quantity spools
No labor factor at busy counters
No wire 'shrinkage'.

Saxton Number	Product	Wire Description	Insulation Color	Packing
1055HP	E-Z Zip Cord	2 Conductor No. 20 AWG	Brown, Black, White or Asst.	100 Ft. Metal Spools 12 per Display Carton
1159HP	Miniature Zip Cord	2 Conductor No. 24 AWG	Clear Vinyl, Gray, White Brown, Black, Blue & Green	80 Ft. Metal Spools 24 per Display Carton

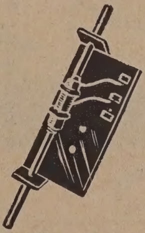
Note: All are 'ridge' marked for E-Z Vue E-Z Feel polarity.



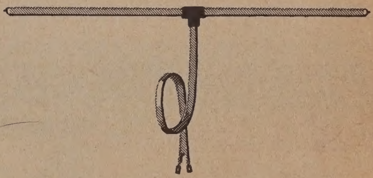
No. 1121
No. 1121A



No. 1122



No. 1123



No. 1124

TWIN LEAD FOLDED DIPOLE F.M. ANTENNA
No. 1124

54" 300 ohm dipole with 42" lugged lead-in. Center tap protected in beautiful molded plastic. Choice of Gold Twin Lead with ivory plastic tap or Clear Twin Lead with Gray plastic tap.

FERRITE ROD ANTENNA
No. 1123

Ferrite Rod Antenna with adjustable inductive section. Extra large ferrite rod provides enormous pick-up. Particularly good for reception in bad signal areas. Easily mounted and connected. Individually bagged, 24 bags per attractive display card.

FERRITE ANTENNA LOOP
No. 1122

Ferrite Antenna loop replaces flat loop or rod antenna. Efficient, tunable ferrite core plus progressive universal winding, provides wide range hi Q large signal pick-up. When external insulated hank is extended, additional omni-directional pick-up is obtained. Broadcast band only—535 to 1700 KC for use in all types of amplitude modulated radio receiving equipment. Complete with instructions. Individually bagged, 36 on attractive display card.

TV ANTENNA MATCHING "BALUN COILS"

Highly efficient, extremely versatile, lo loss balun coils. Eliminates standing waves and provides efficient matching as follows:—

1. 72 to 150 Ohms
2. 72 to 450 Ohms
3. 150 to 300 Ohms
4. 150 to 450 Ohms
5. 300 to 450 Ohms
6. 75 to 300 Ohms

Unique raised tooth construction allows minute coil contact losses since effect is similar to air dielectric. Each winding has an impedance of 150 ohms. Infinitely more efficient than resistive devices which have large power loss factor. Some suggested uses:—

- Antenna to line matching
- 4 set coupler
- 2 set coupler
- set to line, etc.
- 3 set coupler

No. 1121

36 bagged pairs on an attractive display card.

No. 1121A

BALUN COILS FORMS (Not wound)

Green Polystyrene forms only used for the above. Furnished with 1¼" Tinned Copper leads.

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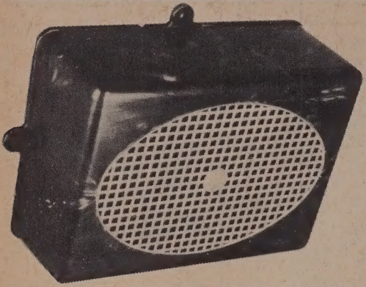
NEW YORK, N. Y.

(See Saxton Price List on Page 1598)

Promotional Merchandise

PROVEN SALES BUILDERS

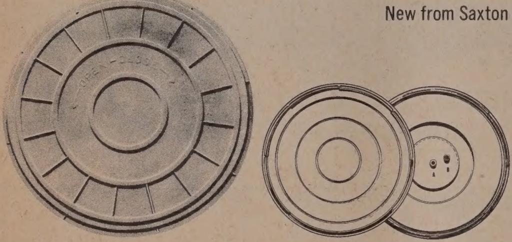


UNIVERSAL SPEAKER BAFFLE

Made of unbreakable Hi-Impact Styrene. Complete with mask, hardware and instruction sheet in Gray, Mahogany or Oak finish. Will house either 5″ x 7″ or 6″ x 9″ elliptical speakers, 5″ or 6″ round speaker. Individually boxed. Easily mounted, efficient, good to look at. Ideal for Paging & Monitoring Systems, Speaker extentions for Radio, Public Address, Hi-Fi or Juke Boxes—Commercial, Industrial, Boat, Truck and Station Wagon installations plus a thousand other uses.

No. 1205—As described above, decorative gold sprayed grille and mounting masks for all speaker sizes.

No. 1225—Speaker baffle as above with hardware but undecorated and without mask. For 6″ x 9″ speakers only.



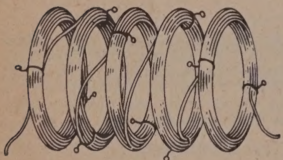
SELF LOCKING TAPE & FILM STORAGE CANS

New from Saxton a tape storage can designed to preserve and protect valuable tapes.

- Accommodates 5″ and 7″ reels.
- Unique Twist-Lok insures dust free and moisture proof storage of valuable tapes.
- Non Breakable. Fabricated of high impact styrene.
- Center and locking stud prevent reel movement and possible damage.
- Ideal shipping container.
- Built-in interlock for horizontal stacking.

No. 1230

PRE-PACKAGED WIRE IMPULSE SALES BUILDERS



ANTENNA WIRE

SAXTON NUMBER	STRANDING	MATERIAL	PACKING
1275	Solid	No. 12 AWG Enameled Solid Copper	1000′ Interconnected coils of 100′ ea.
1280	Solid	No. 14 AWG Enameled Solid Copper	1000′ Interconnected coils of 100′ ea.
1285	7 x 22	Bare Copper	1000′ Interconnected coils of 50′ ea.
1286	7 x 22	Bare Copper	1000′ Interconnected coils of 100′ ea.
1287	7 x 24	Bare Copper	1000′ Interconnected coils of 50′ ea.
1288	7 x 24	Bare Copper	1000′ Interconnected coils of 100′ ea.
1289	7 x 26	Bare Copper	1000′ Interconnected coils of 50′ ea.

ALUMINUM GROUND WIRE

No. 1240	No. 8 AWG	Solid Dead Soft Aluminum	1000 Ft. Spool
No. 1245	No. 8 AWG	Solid Dead Soft Aluminum	1M′ Interconnected coils of 50′ ea.
No. 1250	No. 8 AWG	Solid Dead Soft Aluminum	1M′ Interconnected coils of 100′ ea.
No. 1255	No. 6 AWG	Solid Dead Soft Aluminum	1000 Ft. Spool
No. 1260	No. 6 AWG	Solid Dead Soft Aluminum	1M′ Interconnected coils of 50′ ea.
No. 1265	No. 6 AWG	Solid Dead Soft Aluminum	1M′ Interconnected coils of 100′ ea.

SAXTON PRODUCTS
NEW YORK
STRANDED

HOOK-UP WIRE KITS

Five 40 foot rolls of hook up wire, assorted wire sizes and colors, solid and stranded. In attractive acetate boxes for easy identification.

No. 1440

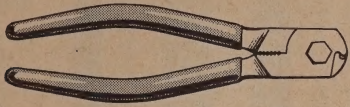
50 foot rolls of PVC covered hook up wire in plasticene bag. Assorted wire sizes and colors. Both solid and stranded.

No. 1450

Saxton Velvet Grip Tools

GENERAL AND SPECIAL PURPOSE HAND TOOLS

- **Induction hardened steel for maximum service life.**
- **Red Insulated Grips individually tested for 5,000 volt breakdown**
- **Unconditionally guaranteed by SAXTON against defects in workmanship or materials.**

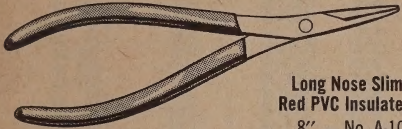


SAXTON Cable Cutter Red PVC Insulated Grips

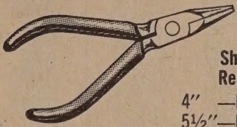
Hi leverage and replaceable cutting edges give this cable snapper long life.

6½″—No. 1958-6½

$6.75 ea.

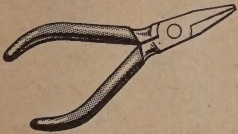


Long Nose Slim Line
Red PVC Insulated Grips
8″ — No. A-1082-8
$4.25 ea.

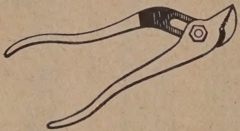


Short Chain Nose Pliers
Red PVC Insulated Grips

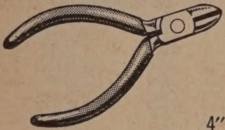
4″ —No. A-1512-4	**$2.90 ea.**
5½″—No. A-1512-5½	**2.85 ea.**
6½″—No. A-1542-6½	**3.20 ea.**



Flat Nose Pliers
Red PVC Insulated Grips
4″ — No. A-1612-4
$2.90 ea.

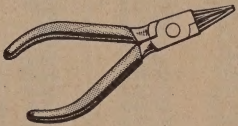


Slip Joint Magneto Pliers
4½″ — No. E-168-4½
$2.75 ea.

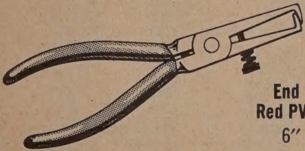


Diagonal Cutters
Red PVC Insulated Grips

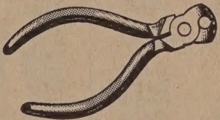
4″ — No. PW-772-4	**$3.10 ea.**
6″ — No. PW-772-6	**3.50 ea.**



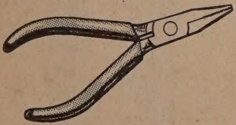
Round Nose Pliers
Red PVC Insulated Grips
4″ — No. A-1472-4
$2.90 ea.



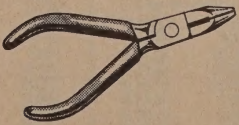
End Wire Strippers
Red PVC Insulated Grips
6″ — No. 1951-6
$3.85 ea.



End Cutting Nippers
Red PVC Insulated Grips
4″ — No. PW-622-4
$3.60 ea.



Tapered Flat Nose Pliers
Red PVC Insulated Grips
4″ — No. A-1422-4
$2.90 ea.



Short Chain Nose Pliers
with Sidecutters
Red PVC Insulated Grips
4″ — No. PW-752-4
$3.40 ea.

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wire and cable division
NEW YORK, N. Y.

Saxton Wire & Cable Price List

ALL ITEMS LISTED IN PAGE SEQUENCE

SAXTON PAGE NO. 1

NO.	List Price
1AD22	$ 8.61 M′
1AD20	10.70 M′
1AD18	16.68 M′
1A24	10.56 M′
1A22	10.98 M′
1A20	13.20 M′
1A18	17.76 M′
1A16	34.75 M′
1A14	46.42 M′
1AS22	47.26 M′
1AS20	51.43 M′
1AS18	58.38 M′
1AS16	70.89 M′
1AS14	95.91 M′
1AS12	20.22 M′
1AS10	294.68 M′
2A22	25.44 M′
3A22	37.53 M′
2A20	33.92 M′
3A20	50.74 M′
2A18	46.70 M′
3A18	72.28 M′
2A16	35.78 M′
3A16	104.95 M′
2AD22	16.65 M′
3AD22	24.88 M′
2AD20	31.41 M′
3AD20	31.41 M′
2AD18	46.70 M′
3AD18	60.60 M′
2AD16	64.89 M′
3AD16	86.18 M′

SAXTON PAGE NO. 2

NO.	List Price
2J22	$30.58 M′
3J22	36.14 M′
4J22	47.26 M′
5J22	58.94 M′
6J22	70.89 M′
7J22	82.85 M′
8J22	94.52 M′
9J22	122.32 M′
10J22	151.51 M′
12J22	189.04 M′
15J22	244.64 M′
2J20	45.04 M′
3J20	63.10 M′
4J20	83.40 M′
5J20	107.73 M′
6J20	152.90 M′
7J20	168.19 M′
8J20	205.72 M′
9J20	227.96 M′
1020	262.99 M′
12J20	305.80 M′
15J20	389.20 M′
20J20	528.20 M′
2J18	51.15 M′
3J18	77.15 M′
4J18	103.56 M′
5J18	143.17 M′
6J18	167.91 M′
2JD22	24.19 M′
3JD22	35.45 M′
4JD422	44.48 M′
5JD22	49.60 M′
6JD22	66.72 M′
7JD22	76.87 M′
8JD22	88.96 M′
9JD22	100.10 M′
10JD22	120.93 M′
12JD22	182.09 M′
15JD22	232.83 M′
2JD20	44.06 M′
3JD20	$59.08 M′
4JD20	64.64 M′
5JD20	99.39 M′
6JD20	142.61 M′
7JD20	159.85 M′
8JD20	193.49 M′
9JD20	216.84 M′
10JD20	235.19 M′
12JD20	278.00 M′
15JD20	361.40 M′
20JD20	486.50 M′
2JD18	52.82 M′
3JD18	75.06 M′
4JD18	102.86 M′
5JD18	132.05 M′
6JD18	158.46 M′
2SSJ22	61.02 M′
2SSJD22	44.34 M′
1SSJ22	45.87 M′
2SSJ20	77.84 M′
3SSJ20	86.18 M′
4SSJ20	127.88 M′
2SSJ18	83.40 M′
2SSJ16	115.37 M′
2SJ22	52.82 M′
2SJ20	68.11 M′
2SJ18	101.47 M′

SAXTON PAGE NO. 3

NO.	List Price
2PD22	$24.18 M′
4PD22	44.62 M′
6PD22	64.49 M′
12PD22	94.52 M′
14PD22	116.76 M′
18PD22	139.00 M′
22PD22	193.21 M′
26PD22	222.40 M′
30PD22	252.98 M′
32PD22	333.60 M′
54PD22	458.70 M′
62PD22	569.90 M′
82PD22	797.86 M′
102PD22	1034.16 M′
2P22	27.80 M′
4P22	51.15 M′
6P22	97.30 M′
8P22	126.49 M′
10P22	134.27 M′
12P22	147.34 M′
18P22	211.28 M′
22P22	255.76 M′
30P22	333.60 M′
54P22	639.40 M′
4SJ22	77.56 M′
3SJ22	70.89 M′
2F24 colors	$18.76 M′
2F24 clear	20.15 M′
2F20	26.41 M′
2F18	34.05 M′
2F18A	33.77 M′
2F18B	56.99 M′
3F18	72.28 M′
2F16	79.50 M′

SAXTON PAGE NO. 4

NO.	List Price
1S24	$36.14 M′
2S24	44.48 M′
2SD22	38.78 M′
2SD20	48.37 M′
2SD18	57.68 M′
2S24	44.48 M′
2S22	47.81 M′
2S20	49.90 M′
2S18	72.14 M′
2S16	$133.02 M′
2S14	186.81 M′
2S12	319.70 M′
2SDJ22	51.43 M′
2SDJ20	62.82 M′
2SDJ18	86.18 M′
2SJ22	52.82 M′
2SJ20	68.11 M′
2SJ18	101.47 M′

SAXTON PAGE NO. 5

NO.	List Price
1SSJC26	$48.65 M′
1SJC24	49.48 M′
1SJC24A	66.72 M′
1SJC20	94.52 M′
2SJC22	94.52 M′
3SJC20	122.32 M′
4SJC20	139.00 M′
5SJC20	180.70 M′
6SJ20	289.12 M′
1C20	25.15 M′
1C20A	26.27 M′
1C20B	29.74 M′
1C18	33.60 M′
1C18A	48.60 M′
1R20	34.05 M′
1R20A	43.09 M′
1R18	51.01 M′
1R18A	91.60 M′

SAXTON PAGE NO. 6

NO.	List Price
2F24 colors	$18.76 M′
2F24 clear	20.15 M′
2F20	26.41 M′
2F18	34.05 M′
2F18A	33.77 M′
2F18B	56.99 M′
2F18C	72.28 M′
2F16	79.50 M′
4FC2	30.16 M′
4FC2A	33.91 M′
4FC3	35.72 M′
4FC3A	39.47 M′
2M18	QUOTATIONS ON APPLICATION
2M18A	
2M18B	
2M18C	
2M16	
2M16A	
2M14	
2M14A	
3M18	
3M16	
3M16A	
3M12	
5M20	
2M18D	
3M18A	
2M20	
3M20	

SAXTON PAGE NO. 7

NO.	List Price
1M24	$ 9.73 M′
1M22	10.70 M′
1M20	13.34 M′
1M18	16.12 M′
1M16	21.12 M′
1M14	27.80 M′
1M12	38.92 M′
1MD22	25.71 M′
1MD20	31.27 M′
1MD18	39.19 M′
1MD16	46.14 M′
1M22A	14.03 M′
1M20A	17.09 M′
1M18A	$22.65 M′
1M16A	32.24 M′
1M14A	43.78 M′
1M12A	52.12 M′
1M22C	15.98 M′
1M20C	20.57 M′
1M18C	27.24 M′
1M16C	34.75 M′
1M14C	47.95 M′
1M22D	27.10 M′
1M20D	31.69 M′
1M18D	41.14 M′
1M16D	48.65 M′
1M14D	59.07 M′
1M30E	97.30 M′
1M28E	101.47 M′
1M26E	111.20 M′
1M24E	125.10 M′
1M22E	152.90 M′
1M20E	180.70 M′
1M18E	227.96 M′
1M16E	305.80 M′
1M14E	415.61 M′
1M30EE	136.22 M′
1M28EE	150.12 M′
1M26EE	166.80 M′
1M24EE	191.82 M′
1M22EE	222.40 M′
1M20EE	261.32 M′
1M18EE	319.70 M′
1M16EE	369.74 M′
1M14EE	853.46 M′

SAXTON PAGE NO. 8

NO.	List Price
1X14	$917.40 M′
1X8	225.04 M′
1X8A	230.04 M′
1X8B	252.98 M′
1X11	198.77 M′
1X11A	204.33 M′
1X11B	227.96 M′
1X11C	351.67 M′
1X58	87.15 M′
1X58A	88.96 M′
1X58B	100.08 M′
1X59	86.18 M′
1X59A	157.07 M′
1X59B	87.57 M′
1X59C	70.89 M′
1X59D	113.98 M′
1X62	101.47 M′
59T59	6.81 M′
11T59	5.47 M′
SFT59	5.47 M′

SAXTON PAGE NO. 9

All prices for brown.
Gold, silver and clear $2.78 M/extra.

NO.	List Price
TL-40	$15.15 M′
TL-55	16.54 M′
TL-80	19.32 M′
TL-100	18.76 M′
TL-100DL	20.15 M′
TL-100EZ	20.85 M′
TL-100SDL	25.42 M′
TL-125	43.78 M′
TL-150	34.05 M′
OTL	30.44 M′
TTL	31.97 M′
INS-500	69.50 M′
1016	49.76 M′
1017	82.70 M′
1118	159.85 M′

SAXTON PAGE NO. 10

NO.	List Price
2500	$45.59 M′
2501	36.66 M′
2502	45.87 M′
2507	56.29 M′
2515	$59.07 M′
2517	59.07 M′
2520	78.53 M′
2522	78.53 M′
2525	107.03 M′
2526	129.27 M′
6000	.1525 ea
6001	.195 ea
6002	.21 ea
6003	.215 ea
6004	.236 ea
6005	.275 ea
6006	.292 ea
6010	.778 ea
6011	1.17 ea

SAXTON PAGE NO. 11

NO.	List Price
1064	$ .93 ea
1065	1.525 ea
1066	2.00 ea
1098	2.78 ea
1100	.7225 ea
1102	.278 ea
1103	.3475 ea
1127	5.04 ea
1128	2.08 ea
1154	1.25 ea
A18	15.98 M′
A16	17.37 M′
A14	26.41 M′
AT14	41.00 M′
ED14	31.97 M′
ED12	46.56 M′

SAXTON PAGE NO. 12

NO.	List Price
1055HP	$2.64 ea
1159HP	2.05 ea
1121	1.39 ea
1121A	quotation on application
1122	.91 ea
1123	1.02 ea
1124	1.66 ea

SAXTON PAGE NO. 13

NO.	List Price
1205	$6.25 ea
1225	4.86 ea
1230	1.05 ea
1275	47.26 M′
1280	31.97 M′
1285	1.33 coil
1286	2.57 coil
1287	1.25 coil
1288	1.94 coil
1289	1.11 coil
1240	22.93 M′
1245	22.37 M′
1250	22.10 M′
1255	43.09 M′
1260	42.39 M′
1265	41.97 M′
1440	2.78 ea
1450	.69 ea

SAXTON PAGE NO. 14

NO.	List Price
1958-6½	$6.75 ea
A-1082-8	4.25 ea
A-1612-4	2.90 ea
PW-772-4	3.10 ea
PW-772-6	3.50 ea
1951-6	3.85 ea
A-1422-4	2.90 ea
A-1512-4	2.90 ea
A-1512-5½	2.85 ea
A-1542-6½	3.20 ea
E-168-4½	2.75 ea
A-1472-4	2.90 ea
PW-622-4	3.60 ea
PW-752-4	3.40 ea

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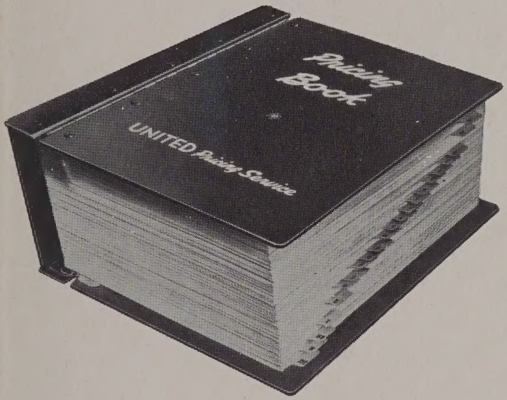

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